

# P A P E R S

D.—No. 1

RELATING TO

## THE CONSTRUCTION OF ROADS IN THE NORTH ISLAND.

I.—REPORTS AND CORRESPONDENCE.

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

---

WELLINGTON.

—  
1871.



# SCHEDULE OF CORRESPONDENCE.

D.—No. 1.

## EMPLOYMENT OF ARMED CONSTABULARY.

| No. | Date.             | From.           | To.                    | Subject.  |
|-----|-------------------|-----------------|------------------------|---|
| 1   | 1871.<br>April 12 | Mr. Knowles ... | His Honor J. D. Ormond | Terms on which the Armed Constabulary are employed on Public Works. |

## ROADS—WAIKATO DISTRICT.

|   |                  |                         |                        |   |
|---|------------------|-------------------------|------------------------|---|
| 2 | 1871.<br>March 8 | Lieut.-Colonel St. John | Hon. Defence Minister  | Memorandum on the roads in the Upper Waikato Districts.                             |
| 3 | Feb. 23          | Hon. D. McLean          | Officer Commanding     | Instructions for working parties to be put on Alexandra, Hamilton, and other roads. |
| 4 | June 23          | Lieut.-Colonel Lyon     | Mr. Knowles            | Forwarding general report, &c.  |
| 5 | May 11           | Mr. Knowles ...         | Hon. Dr. Pollen        | Authority to pay half cost of bridge over the Waikato, at Cambridge.                |
| 6 | June 3           | Hon. D. Pollen ...      | Hon. Minister of Works | Has paid £275 accordingly.  |

## BAY OF PLENTY DISTRICT, AND MAIN LINE FROM TAURANGA TO TAUPO.

|    |                  |                         |                                    |  |
|----|------------------|-------------------------|------------------------------------|--|
| 7  | 1870.<br>Oct. 28 | Hon. Mr. McLean ...     | Major Mair ...                     | Authorizing expenditure of £1,000 on roads, and tracks in the neighbourhood of Opotiki.  |
| 8  | 1871.<br>Jan. 24 | Mr. Turner ...          | Mr. Blackett ...                   | Report on roads in the neighbourhood of Opotiki, namely, Otara, Waioeka, Ohiwa, to Waimana, and Opape to Torere.   |
| 9  | Jan. 24          | Mr. Blackett ...        | Mr. Turner ...                     | To explore for best roads between Opotiki and Ohiwa, and from Opotiki to Poverty Bay—Archdeacon Williams and William King can give information. Bridge at Taheke authorized.                                 |
| 10 | 1870.<br>Nov. 18 | His Honor J. D. Ormond  | Hon. Native Minister               | Mr. Bold instructed to arrange with Rotorua Natives for portion of main line from Taupo to Tauranga.   |
| 11 | Dec. 23          | Mr. Heale ...           | Hon. Minister for Public Works     | Report on various routes for roads from Tauranga to Taupo, suggesting the Tapapa route for the permanent line.   |
| 12 | 1871.<br>Jan. 9  | His Honor J. D. Ormond  | Hon. Mr. Gisborne                  | Roads in progress and contemplated North of Taupo.   |
| 13 | Jan. 10          | Hon. Mr. Gisborne       | His Honor J. D. Ormond             | With reference to Nos. 11 and 12, is Mr. Heale's proposition to take road from Tauranga to Tapapa through narrow part of bush practicable and preferable.  |
| 14 | Jan. 14          | His Honor J. D. Ormond  | Hon. Mr. Gisborne                  | Mr. Heale's proposal is good professionally, but at present out of the question.   |
| 15 | Jan. 18          | Hon. Mr. McLean         | Hon. Mr. Gisborne                  | Tapapa route quite impracticable on account of Natives.  |
| 16 | Jan. 19          | Hon. Mr. McLean         | Hon. Mr. Gisborne                  | Has made careful enquiry with Mr. Blackett relative to Tapapa line; it is quite impracticable on account of Native difficulty.   |
| 17 | Jan. 19          | Hon. Mr. Gisborne       | Hon. Mr. McLean                    | Would it not be better to improve Maketu Road, and wait until the Tauranga to Taupo road can be taken via Tapapa.  |
| 18 | Jan. 20          | Hon. Mr. McLean         | Hon. Mr. Gisborne                  | Proposed line of road Tauranga to Taupo quite as good as Mr. Heale's, and it is of political importance to employ the Arawa in opening up the country.   |
| 19 | Jan. 20          | Hon. Mr. Gisborne       | Hon. Mr. McLean                    | Road Tauranga to Rotorua via Oropi, as recommended, be commenced.  |
| 20 | Jan. 17          | Mr. Blackett ...        | Mr. Jordan ...                     | Tender accepted for Taupo trunk road.  |
| 21 | Jan. 31          | Lieut.-Colonel St. John | Hon. Defence Minister              | Report on road operations in progress in the Bay of Plenty.  |
| 22 | Jan. 24          | His Honor J. D. Ormond  | Hon. Mr. Gisborne                  | Forwarding Mr. Bold's Reports and plans, road from Tapuacharuru (Taupo) to Rotorua. Arrangements will be made for bridge over Waikato at Niho o te Kio, Ngatiraikawa will undertake the road work.           |
| 23 | March 3          | Mr. Turner ...          | Mr. Blackett ...                   | Twenty miles roadway surveyed, from Puhirua (Rotorua) to Hemo Hemo ranges, and eighteen and three quarters ready to let out to Natives.  |
| 24 | March 3          | Mr. Turner ...          | Mr. Blackett ...                   | Defining boundary of his own and Mr. Bold's operations. Best site for crossing Waikato is at Niho o te Kio.  |
| 25 | Mar. 23          | Hon. Dillon Bell ...    | Mr. Cooper ...                     | The offer of the Natives to construct road between Oropi and Puhirua (Rotorua) at £200 a mile, is sanctioned.  |
| 26 | April 3          | Mr. Turner ...          | Mr. Blackett ...                   | Reporting arrangement entered into with Mr. Jordan, by desire of Natives, for one portion of road through Mangorewa Forest, and with Natives for second portion, embracing whole line from Oropi to Puhirua. |
| 27 | May 1            | Mr. Turner ...          | Mr. Knowles ...                    | Forwarding tracings road from Puhirua to Niho o te Kio, but the Natives have not yet come to terms. Tabular abstract of works in construction ready for letting out.   |
| 28 | May 17           | Mr. Turner ...          | Mr. Knowles ...                    | Natives anxious to crop land before taking contracts. Another route has been offered, but for reasons stated, proposes to let the works stand over for the present.  |
| 29 | June 12          | Mr. Clarke ...          | Under Secretary, Native Department | Report of his negotiations with Natives relative to contracts for road work.   |

NOTE.—For connection between this section and that following see note on page 20.

## SCHEDULE OF CORRESPONDENCE.

## EAST COAST DISTRICT.

| No. | Date.            | From.                  | To.                            | Subject.  |
|-----|------------------|------------------------|--------------------------------|---|
| 30  | 1870.<br>Sep. 24 | His Honor J. D. Ormond | Hon. Colonial Secretary        | Calling attention to those roads which appear to be of greatest importance. Mr. Bold's reports and estimates of roads from Tapuaeharuru to Runanga Bridge, and Runanga Bridge to Titiokura; Tapuaeharuru to Niho o te Kiore and thence to Rotorua. Mr. Heale's track, Paeroa to Opepe.  |
| 31  | Oct. 18          | His Honor J. D. Ormond | Hon. Mr. McLean ...            | Pohipi reports favourably of willingness of Natives to commence road work.  |
| 32  | Nov. 30          | His Honor J. D. Ormond | Hon. Minister for Public Works | Reports proceedings, bridle track from Murewai at Poverty Bay to the Mahia has been contracted for at cost of £400. Natives on Rotorua line want to work by the day; Natives elsewhere disinclined to work on terms offered.  |
| 33  | Dec. 5           | His Honor J. D. Ormond | Hon. Minister for Public Works | Further report. Natives on Rotorua line have accepted offer on line from Te Ngae to Niho o te Kiore.  |
| 34  | 1871.<br>Jan. 13 | His Honor J. D. Ormond | Hon. Minister for Public Works | Forwarding memorandum from Mr. Bold showing different contracts now being carried out; other works will be proceeded with as soon as a competent officer is engaged.  |
| 35  | Jan. 23          | His Honor J. D. Ormond | Hon. Minister for Public Works | Enclosing Mr. Bold's report on works in progress between Napier and Tapuaeharuru (Taupo). A similar report on works between Taupo and Rotorua is in preparation. When finished, specifications will be prepared for works required to open dray road to Te Haroto and Tarawera, and bridle track from thence to Runanga. Mr. Bold's report embraces roads to Titiokura, Titiokura to Mohaka Church Ferry, Mohaka to Tarawera, Tarawera to Runanga, Runanga to Tapuaeharuru. |
| 36  | Feb. 8           | Hon. Mr. Gisborne ...  | His Honor J. D. Ormond         | Acknowledging receipt, and expressing great satisfaction at progress Mr. Bold has made.   |
| 37  | Mar. 14          | His Honor J. D. Ormond | Hon. Minister for Public Works | Report on Taupo road works, and expressing his sense of Mr. Bold's zeal and practical ability.  |
| 38  | Mar. 21          | Mr. Cooper ...         | His Honor J. D. Ormond         | Acknowledging receipt, authorizing expenditure of £1,000 in addition to £7,000 already authorized, and conveying the conviction of the Government that the success attending the construction of the Taupo roads is entirely owing to zeal and energy displayed by His Honor and Mr. Bold.  |
| 39  | May 5            | His Honor J. D. Ormond | Hon. Minister for Public Works | Forwarding list of tenders for works between Mohaka and Tarawera. As tenders are excessive, Mr. Bold has been instructed to carry on the works by agreement with parties willing to undertake them.   |
| 40  | May 11           | Mr. Knowles ...        | His Honor J. D. Ormond         | Course adopted for carrying out works (No. 39) has been approved.   |
| 41  | July 19          | His Honor J. D. Ormond | Mr. Knowles ...                | Reports from officers, required for Assembly, are in course of preparation. General report prepared by himself will be sent with them.  |
| 42  | Mar. 1           | His Honor J. D. Ormond | Hon. Minister for Public Works | Forwarding copy of letter of instructions to Mr. Drummond relative to proposed works between Poverty Bay and Wairoa.  |
| 43  | Mar. 9           | Mr. Cooper ...         | His Honor J. D. Ormond         | Instructions to Mr. Drummond considered very judicious.   |
| 44  | April 29         | His Honor J. D. Ormond | Hon. Minister for Public Works | Mr. Drummond has laid out road between Te Kapu and Te Reinga. Contracts taken for formation of four miles twenty chains for £513.   |

NOTE.—For connection between the previous section and this see note on page 20.

## MANAWATU AND SEVENTY-MILE BUSH DISTRICT.

|    |                  |                 |                 |  |
|----|------------------|-----------------|-----------------|--|
| 45 | 1870.<br>Sept. 7 | Mr. Stewart ... | Mr. Cooper ...  | Work on Foxton to Oroua Bush, thirteen miles, has been confined to making detached swamps and difficult places available for light dray traffic; the intervening flats have, however, become very heavy for traffic during wet weather. About £250 required to partially form and drain the road over these parts. |
| 46 | Sept. 10         | Mr. Cooper ...  | Mr. Stewart ... | An advance of £75 will be made to meet expenditure caused by late heavy rains. The distinction between main trunk lines of road and intermediate or district roads to be kept in mind, as General Government will not be justified in spending money on latter, which are objects of local concern.                |
| 47 | Sept. 12         | Mr. Stewart ... | Mr. Cooper ...  | His expenditure has been wholly confined to main road or through line to East Coast, and will strictly attend to instructions in this respect.   |

# SCHEDULE OF CORRESPONDENCE.

V. D.—No. 1.

## MANAWATU AND SEVENTY-MILE BUSH DISTRICT—continued.

| No. | Date.             | From.                         | To.                            | Subject.  |
|-----|-------------------|-------------------------------|--------------------------------|---|
| 48  | 1870.<br>Sept. 24 | His Honor J. D. Ormond        | Hon. Colonial Secretary        | Considers road through seventy-mile bush to Manawatu and Wairarapa to be of the greatest political importance, and expresses his views as to best mode of survey.   |
| 49  | Oct. 7            | Hon. W. Fox ...               | Hon. Colonial Secretary        | Inspected Mr. Stewart's road work, and found a very good return for the amount expended. £250 authorized out of £30,000 road vote.  |
| 50  | Nov. 3            | Mr. Stewart ...               | Mr. Cooper ...                 | Report of an examination of part of the track through Seventy-Mile Bush country.  |
| 51  | Nov. 10           | His Honor J. D. Ormond        | Hon. Minister for Public Works | Mr. Weber has been sent to survey line from Rua Taniwha to Manawatu Gorge. A consultation between Mr. Weber and Mr. Stewart to be arranged.   |
| 52  | Nov. 11           | Mr. Blackett ...              | Mr. Weber ...                  | Calling his attention to three alternative lines for survey, and instructions as to curves and gradients.   |
| 53  | Dec. 14           | Mr. Stewart ...               | Mr. Cooper ...                 | Has examined the Gorge with a view of obviating the necessity of crossing at a considerable elevation. The southern bank of the river about five or six miles long is practicable at a small elevation. Will meet Mr. Weber on 6th January.     |
| 54  | Dec. 26           | Mr. Stewart ...               | Mr. Cooper ...                 | Met Mr. Weber on 16th, and both agree south bank is best. The road will be expensive, but permanent.  |
| 55  | 1871.<br>Jan. 2   | His Honor J. D. Ormond        | Hon. Minister for Public Works | Forwarding Mr. Weber's report of exploration. Line No. 1 is the only practicable one. Proposes to let the work in nine contracts. Estimate is £500 a mile; specification enclosed.  |
| 56  | Feb. 11           | Mr. Stewart ...               | Mr. Blackett ...               | Work very irregular in Gorge, and cannot possibly be got on with all at once.   |
| 57  | Feb. 24           | His Honor J. D. Ormond        | Hon. Minister for Public Works | Feels certain there will be no difficulty in finding persons willing to tender for Gorge works.   |
| 58  | Feb. 9            | Mr. Cooper ...                | His Honor J. D. Ormond         | Acknowledging receipt. Tenders will be called for in a few days for road through the Gorge.   |
| 59  | Feb. 27           | Mr. Stewart ...               | Mr. Cooper ...                 | Forwards description of work for Gorge Road. Suggests tenders may be now called for.  |
| 60  |                   | Tender of Clark, Dunn and Co. |                                | At £1,170 per mile. Approximate cost of whole work, £5,000.   |
| 61  | March 4           | His Honor J. D. Ormond        | Hon. Minister for Public Works | Forwards report of Mr. Weber on progress of works.  |
| 62  | March 22          | His Honor J. D. Ormond        | Hon. Minister for Public Works | Report of Mr. Weber. An alteration in the line of road near Manawatu Gorge has been necessary. Had met Mr. Stewart on 13th to arrange point of junction, the south side, at the eastern end, on close examination, not being found practicable. |
| 63  | March 31          | His Honor J. D. Ormond        | Hon. Minister for Public Works | Mr. Weber's report on exploration of two lines to connect with Mr. Stewart's.   |
| 64  | April 5           | Mr. Stewart ...               | Mr. Cooper ...                 | After accompanying Mr. Weber over portion of Line No. 1, agrees with him in recommending it.  |
| 65  | April 6           | His Honor J. D. Ormond        | Hon. Minister for Public Works | Owing to difficulty of getting up supplies to Seventy Mile Bush parties, £500 required for making line fit for horse traffic.   |
| 66  | April 14          | Mr. Knowles ...               | Mr. Weber ...                  | Authorized to incur above expenditure.  |
| 67  | May 4             | His Honor J. D. Ormond        | Hon. Minister for Public Works | Reporting Mr. Weber's arrangement with Natives for clearing bush on part of line at Manawatu Gorge.   |
| 68  | May 10            | Mr. Knowles ...               | His Honor J. D. Ormond         | Arrangement approved.   |

## TARANAKI DISTRICT.

|    |                  |                     |                                  |  |
|----|------------------|---------------------|----------------------------------|--|
| 69 | 1870.<br>Oct. 18 | Hon. Mr. McLean     | Mr. Parris ...                   | To commence road works between Stoney River, and Waingongoro. Contracts to be made with each hapu through whose land road goes.  |
| 70 | Oct. 19          | Mr. Parris ...      | Hon. Native and Defence Minister | Natives between Umuroa and Warea have not yet consented to undertake road works; the other Natives have.   |
| 71 | Oct. 21          | Mr. Cooper ...      | Mr. Parris ...                   | An outlay not exceeding £1,200 is authorized for road works (No. 69), and £400 from Stoney River southwards.   |
| 72 | Nov. 3           | Hon. Mr. McLean ... | Mr. Parris ...                   | Road from the outposts south of White Cliffs to the Waitara, to be taken in hand as speedily as possible. An estimate to be prepared. Armed Constabulary to be employed on a portion of the works. £500 authorized for immediate improvement of worst parts of road. |
| 73 | Nov. 9           | Mr. Parris ...      | Hon. Native and Defence Minister | Report on proposed road works.   |
| 74 | Nov. 23          | Mr. Parris ...      | Hon. Native and Defence Minister | The Volunteers from Waiiti, and four sections of Natives are at work. The contracts are spread over a hundred miles from Waiiti to Waingongoro. £700 required.   |

SCHEDULE OF CORRESPONDENCE.

TARANAKI DISTRICT—continued.

| No. | Date.            | From.              | To.                              | Subject.   |
|-----|------------------|--------------------|----------------------------------|--|
| 75  | 1870.<br>Dec. 2  | Mr. Elliott ...    | Mr. Parris ...                   | £700 sent. Anxious for road works to be pushed on, with a view to Cobb's Coach running.  |
| 76  | Dec. 15          | Mr. Blackett ...   | Hon. Minister for Public Works   | Report on works in Taranaki District.  |
| 77  | Dec. 28          | Mr. Parris ...     | Hon. Native and Defence Minister | Has visited the South for the purpose of examining the roads, and estimating the improvements necessary. Suggests road across Turangi Block. |
| 78  | 1871.<br>June 20 | Mr. Carrington ... | Under Secretary for Public Works | General report on road works, Patea to Taranaki.   |

KAI IWI TO PATEA.

|    |                  |                    |                                  |   |
|----|------------------|--------------------|----------------------------------|---|
| 79 | 1870.<br>Dec. 3  | Mr. Blackett ...   | Hon. Minister for Public Works   | Has inspected line from Wanganui to Waitotara ; it is unfit for tramway. The works required are, removing scrub from formation and clearing out water tables. £1,600 is estimated cost. Works authorized. |
| 80 | Dec. 15          | Mr. Blackett ...   | Hon. Minister for Public Works   | Work required on inland road ; Kai Iwi to Waitotara, has been advertised. Bridges are required over the Manutabi, Tangahoe, and Waingongoro Rivers, plans for which are in preparation.                   |
| 81 | 1871.<br>Jan. 24 | Mr. Carrington ... | Hon. Minister for Public Works   | Reports examination of line of road between Patea and Hawera.   |
| 82 | Jan. 30          | Mr. Hales ...      | Mr. Cooper ...                   | Forwards statement of contracts entered into on Wanganui and Patea line of road. Specifications have been prepared for sundry other works as mentioned.   |
| 83 | Jan. 16          | Mr. Blackett ...   | Mr. Hales ...                    | To call for tenders for gravelling road.  |
| 84 | Feb. 4           | Mr. Carrington ... | Hon. Mr. Gisborne                | Has inspected approaches to Whenuakura River.   |
| 85 | Feb. 13          | Mr. Blackett ...   | Mr. Carrington ...               | Instructions with reference to the various works.   |
| 86 | March 1          | Mr Hales ...       | Mr. Cooper ...                   | Forwarding schedule of tenders for metalling portion of Wanganui-Patea line of road, and for Kai Iwi and Okehu Bridges.   |
| 87 | April 25         | Mr. Hales ...      | Mr. Knowles ...                  | Specifications prepared for metalling eight miles forty-three chains between Pa Karaka and Turangaika, and for other works.   |
| 88 | April 28         | Mr. Knowles ...    | Mr. Hales ...                    | Works authorized. Expedition in completing them to be used.   |
| 89 | June 20          | Mr. Carrington ... | Under-Secretary for Public Works | General report on works under his charge in this district.  |

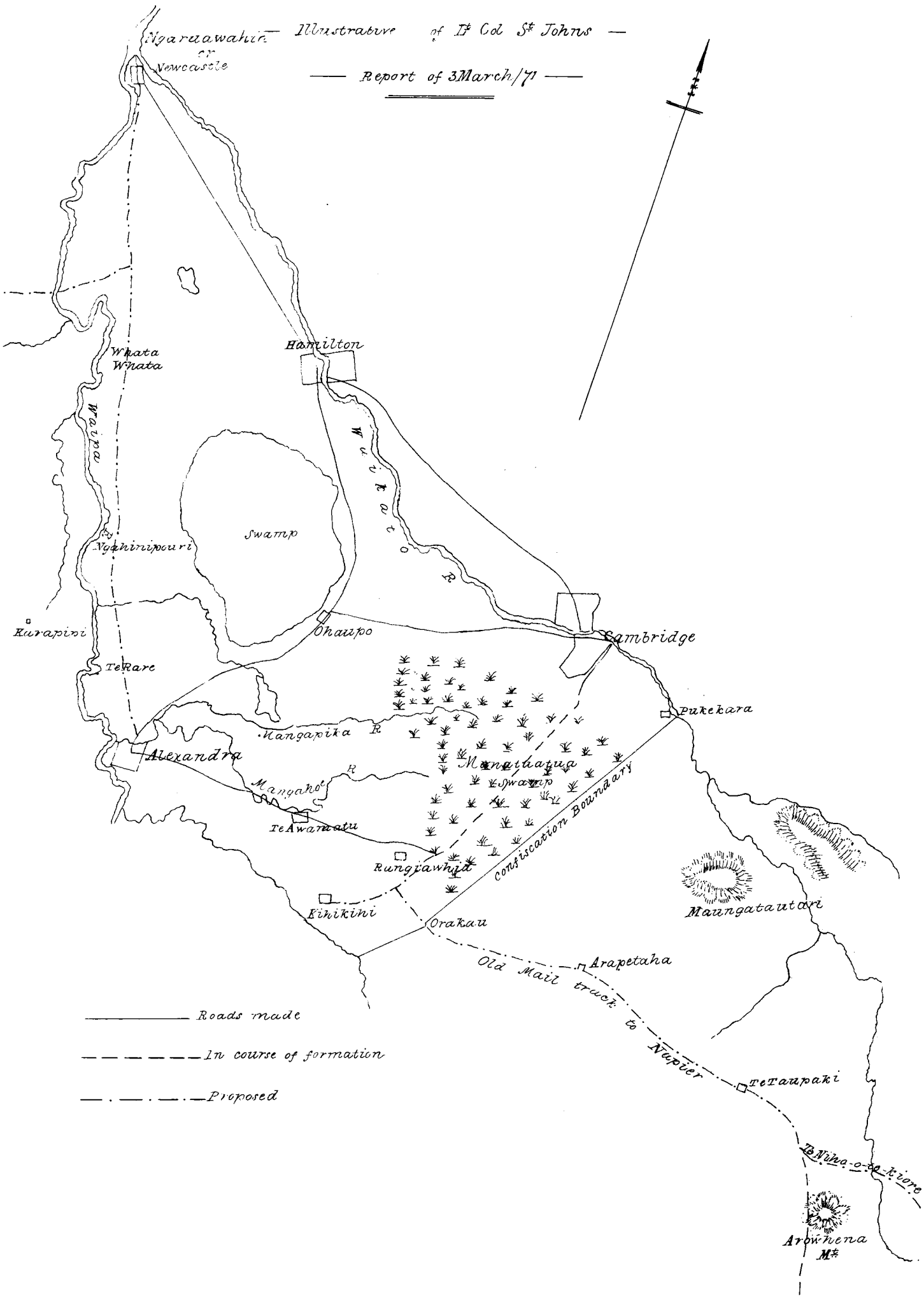
PLANS.

|  |     |     |         |
|--|-----|-----|---------|
| Waikato roads, illustrative of Lieut.-Colonel St. John's report of 3rd March, 1871   | ... | ... | No. 2.  |
| Rough diagram, illustrative of Mr. Turner's report of 24th January, 1871   | ... | ... | No. 8.  |
| Tauranga to Taupo, illustrative of Mr. Heale's report of 23rd December, 1870   | ... | ... | No. 11. |
| Main line of road, Tauranga to Taupo, illustrative of Mr. Heale's report of 23rd December, 1870  | ... | ... | No. 11. |
| Tapuaecharuru to Rotorua, illustrative of Mr. Bold's report of 21st January, 1871  | ... | ... | No. 22. |
| Sketch, illustrative of Mr. Blackett's instructions to Mr. Weber   | ... | ... | No. 52. |
| Lines explored by Mr. Weber, through Seventy Mile Bush   | ... | ... | No. 55. |
| Road in course of formation from Foxton to the Manawatu Gorge, showing line of communication between Wellington and Napier               | ... | ... | No. 62. |
| Sketch map of the Province of Taranaki and Coast Line to Wanganui, Nos. 1 and 2, illustrative of Mr. O. Carrington's report of 20th June | ... | ... | No. 78. |



— WAIKATO ROADS —

Illustrative of Lt Col St Johns  
Report of 3 March /71





# PAPERS RELATING TO THE CONSTRUCTION OF ROADS IN THE NORTH ISLAND.

## WAIKATO DISTRICT.

### No. 1.

#### REGULATIONS for the Employment of Armed Constabulary on Public Works.

[NOTE.—As the road work in the Waikato District has been wholly performed by the Armed Constabulary, and in some other districts partially so, the following letter to His Honor the Superintendent of Napier is inserted, containing the conditions under which the labour of the Armed Constabulary when required is now made available in all districts for Public Works.]

Mr. KNOWLES to His Honor J. D. ORMOND.

SIR,—

Public Works Office, Wellington, 12th April, 1871.

I have the honor, by direction of Mr. Gisborne, to acknowledge the receipt of your letter of the 28th ult., with reference to the mode of charging the pay of the members of the Armed Constabulary employed on road works at Taupo, and the supervision of such works by Mr. Bold.

In reply, I am to inform you that in future the whole of the ordinary pay of the Armed Constabulary will be provided out of Armed Constabulary votes, and the working pay, 1s. per diem, out of Public Works funds. Mr. Bold should give monthly estimates of the value of the work performed, and the amount of such estimates, minus the working pay, will be credited to Armed Constabulary vote out of the funds of this department.

Your Honor should certify to the correctness of the account; and, in doing so, take care that the works come within "The Immigration and Public Works Act, 1870."

Your proposition as to the manner in which Mr. Bold is to certify to the monthly estimates and returns from the Armed Constabulary is to be carried out.

I have, &c.,

JOHN KNOWLES,  
Under Secretary.

His Honor J. D. Ormond, Napier.

### No. 2.

#### MEMORANDUM on the Roads in the District of Waikato (Upper).

##### 1. *Ngaruawahia to Alexandra, via Whatawhata.—Distance about twenty-two miles.*

THE Newcastle Road Board have made part of the road through their own district, including several cuttings and three bridges. One of them is a very poor structure, another is rough but substantial, and the third is good; this latter cost £87, out of a grant of £100 given by the Provincial Council.

The Road Board complain that for three miles the road runs through suburban lands, still the property of the Government, which pay no rates.

On entering the Whatawhata District a great difference is seen, as there being no settlers no Road Board exists, and the bridges are all broken down.

The line I followed is practicable for horses only, and after a fresh is impassable. There is no difficulty in the way of this road, but the Mangapiko (Alexandra) Road Board propose another line instead of it: this would run nearer to the river, and would be shorter. It is a surveyed track, and Mr. Allwright, the Provincial Engineer, estimates its probable cost at £2,120, £300 of which, however, were meant for a bridge over the Mangapiko, which has been since finished. The rates give only about £100 per annum, apparently not sufficient to cover the expense of repairs.

The Harapipi settlers seem anxious to have the road running on their side, but this entails crossing the Waipa at Alexandra and again at Te Rore, besides which there are several nasty gullies on the line, and the communication would be exposed to an attack from the flanks of Pirongia.

##### 2. *Alexandra to Hamilton, by Ohaupo.—Distance, twenty-one miles.*

This is an important line, as at present it forms the only means of communication between Alexandra and Lower Waikato. One portion of it passes through a low level, which any continuous rains transforms into a difficult swamp: this requires draining.

The bridges are in charge of local Road Boards, but that of Hamilton West is repairing in a superficial manner, which will do little good.

##### 3. *Hamilton to Cambridge.—Distance, twelve miles.*

The Waikato is crossed by a flying bridge, and the whole road is good. A little above Cambridge a bridge has been thrown across the river, and requires only one arch for completion. Beyond this the road is practicable to the edge of the Moana Tua Tua Swamp, which Messrs. Douglas and Walker have undertaken to drain. They have already cut nearly one hundred miles of drains, and have commenced a causeway leading straight across to Rangiaowhia; this requires finishing, and about two miles more of swamp are yet untouched.

Once completed, this line, in conjunction with the one proposed from Rangiaowhia to Kihikihi would open direct communication all along the frontier, and between all the posts held by the Armed Constabulary.

The Rangiaowhia Road Board offered for this work a sum of £200, to be supplemented by an equal amount from the Government; but as the Defence Minister has given them the labour of the Armed Constabulary in lieu of the money, they propose leaving this swamp entirely to the Constabulary, and to expend the proposed money on the road between Rangiaowhia and Kihikihi.

4. *Alexandra to Rangiaowhia.—Distance twelve miles.*

The road is in fair order. There are, however, several bridges and culverts which require attention.

5. *Rangiaowhia to Kihikihi.—Distance two and a half miles.*

The surveyed road passes at present through a kahikatea swamp, but the settlers, should the Road Board's proposal be adopted, propose applying for permission to alter the direction.

6. *Kihikihi to Orakau.—Distance two miles.*

The road is in fair order. The soil of the Waikato—a rich loam—is very bad for road making, as any rain renders it greasy and slippery, but it dries rapidly. There is a paucity of metal; it can, however, be found in some places, such as Mr. W. Buckland's farm near Cambridge, not far from Orakau, and a little above Alexandra. The timber throughout the flat is kahikatea, but matai and rimu are to be found on the flanks of Pirongia: the difficulty is how to get it out of the bush.

The Road Boards in the district are shown under. The sums placed opposite the names represent the amounts awarded by the Provincial Council out of £12,400 allotted to Auckland by the General Government:—

|                               | £      | s. | d. |
|-------------------------------|--------|----|----|
| Cambridge                     | 184    | 16 | 3  |
| Kirikiroa (Hamilton West)     | 256    | 6  | 11 |
| Hamilton East                 | 281    | 7  | 7  |
| Mangapiko (Alexandra)         | 149    | 1  | 0  |
| Newcastle (Ngaruawahia)       | 70     | 7  | 3  |
| Rangiaowhia                   | 260    | 16 | 7  |
| Pirongia (opposite Alexandra) | 34     | 0  | 7  |
| Pukekura (above Cambridge)    | 95     | 10 | 0  |
|                               | £1,332 | 6  | 2  |

The works requisite on the road are roughly scheduled below:—

1. *Ngaruawahia to Alexandra.*

*Old Road.*—Eight bridges, with cuttings down to them. In every case the bridges must be well raised above the water level, as the Waipa freshens rapidly and drives up as back water a considerable amount of flood. Several embankments are required: these need solidity for the same reason.

*New Road.*—This I have not seen, but will speak with Mr. Allwright on the subject.

2. *Alexandra, by Ohaupo, to Hamilton.*

Drainage and construction through low-lying ground for about two miles. The levels ought to be taken before anything is done, so as to insure the fall being in the proper direction. Beyond this a divergence of road is necessary, as it passes, at present, through private property, and a bridge is wanted. As before mentioned, the repairs by the Hamilton Board are very superficial. I observed that new planking was being laid down on perfectly unsound beams.

3. *Cambridge to Rangiaowhia.*

The causeway in process of formation is composed of fascine work, lightly covered with earth: the side drains are of a good size. The remaining two miles will be constructed in the same fashion, and it will then be almost imperative to give the whole a coat of metal.

This can be procured from Mr. Buckland's farm.

4. *Alexandra to Rangiaowhia.—Distance eleven miles.*

There are on this two bridges, planking to be repaired, and some seventeen small culverts, almost all in a bad state. A few cuttings to ease the pinches in the gullies are also desirable. From Rangiaowhia to Kihikihi the line must be diverted, as there exists no difficulty except on the surveyed line, which runs through a kahikatea swamp.

The force in the Waikato having been raised to 200 Armed Constabulary, a number of them are available for works of improvement. Colonel Lyon has been directed by the Hon. the Defence Minister to detail half their number to road works. They will be under the supervision of Sub-Inspector Kenny, Armed Constabulary, and will be employed as follows:—Fifty men on the Alexandra and Hamilton Road, *via* Ohaupo; fifty men on the Moana Tua Tua Swamp Road from Cambridge to Rangiaowhia.

In addition to them, the garrison of Alexandra will be able to spare twenty-five men for work on the Whata Whata Road from Alexandra. All the work done is to be done by the piece, the officer in charge laying out the work to be done within a certain time, by different sections of each party. The men will receive an extra shilling per diem; but any remissness in working will at once be brought under the notice of the Officer Commanding the District.

*Lines of Future Roads.*

As the consent of Ngatiraukawa to the construction of roads through their territory gives a probability of communications being at no length of time established between Taupo and Waikato I took the opportunity, in my ride to Orakau, to have a look at the country beyond, in case this should be the terminus of the line. For many miles I could see that the character of the country was the same as that about the settlement. Mr. Ray, a settler, who accompanied me, informed me that he

had driven a dray for several miles in the direction of Arowhenua, on the old mail track, without the slightest difficulty.

I could see that above Cambridge the country became very rugged and broken, the Waikato, it seems, passing here through a gorge. As far as I could learn, the best line of road would be to follow the Tauranga Road from Tapuaeharuru as far Niho o te Kioire. Once across this, a turn to the left, leading parallel to the river, brings to a spot opposite Arowhenua. Crossing the river here, the broken ranges would be avoided, and the road be taken along the undulating plains of the delta.

Major Heaphy has gone over the three known tracks from the Waipa to Raglan, and has discovered a fourth, the adoption of which he recommends in preference to those previously in use.

Enclosed is a tracing of the delta, showing the roads made, in progress, and in contemplation.

J. H. H. ST. JOHN,

Alexandra, 8th March, 1871.

Inspector of Roads.

### No. 3.

#### MEMORANDUM for the Officer Commanding Waikato District.

UNDER the circumstances of the period it is necessary that easy communication should be established between the different posts, so that a rapid concentration of the force under your command could be effected on any threatened spot.

The 100 available men for reserve are to be divided into two working parties of 50 men each, the one to at once undertake the formation of the road by Ohaupo, from Alexandra to Hamilton, thus giving free communication in all weathers; the other to complete the unfinished part of the road to Rangiaowhia, through Messrs. Douglas and Walker's swamp, which would enable you to move at all times along the extent of your frontier line.

Alexandra, 23rd February, 1871.

DONALD McLEAN.

### No. 4.

Lieut.-Colonel LYON to Mr. KNOWLES.

SIR,—

Road Office, Hamilton, 23rd June, 1871.

I have the honor herewith to forward plans and tracings of the roads completed, and under completion, in the Waikato District to the end of May. The tabulated general report is to the 30th of April.

I have afforded the fullest information in my power, but allowance must be made for the short time this office has been established, and the absence of all plans and records.

I have, &c.,

WILLIAM C. LYON, Lt.-Col.,

Commanding Waikato District.

John Knowles, Esq., Wellington.

### Enclosure in No. 4.

#### ABSTRACT of Tabulated General Report forwarded in the above.

##### *Hamilton to Ohaupo.*

|                              |  | Chains. | Links. |
|------------------------------|--|---------|--------|
| Length completed to date ... | Clearing scrub, three-quarter chain wide ... | 82      | 57     |
|                              | Forming and draining, 26 feet wide ...       | 58      | 0      |
|                              | Fascining ...                                | 34      | 0      |
| Nature of country ...        | Open flat country, more or less swampy.      |         |        |

##### *Ohaupo to Alexandra.*

###### *First Portion.*

|                       |                           |   |    |
|-----------------------|---------------------------|---|----|
| Length completed ...  | Forming, 12 feet wide ... | 6 | 90 |
| Nature of country ... | Through hilly dry ground. |   |    |

###### *Second Portion.*

|                       |  |    |    |
|-----------------------|--|----|----|
| Length completed ...  | Forming, draining, and fascining, 26 feet wide ... | 12 | 19 |
| Nature of country ... | Low wet ground, parts of it very swampy.           |    |    |

###### *Third Portion.*

|                      |   |    |    |
|----------------------|---|----|----|
| Length completed ... | Formed 26 feet wide, through small scrub and fern ... | 18 | 87 |
|----------------------|---|----|----|

##### *Branch Road from Alexandra to Kahikatea and Rimu Bush.*

|                      |   | Chains. | Links. |
|----------------------|---|---------|--------|
| Length completed ... | Clearing scrub, 22 feet wide ...                        | 62      | 83     |
|                      | Forming, draining, and fascining, 14 feet wide ...      | 2       | 83     |
|                      | Through open dry fern land, with a small portion swamp. |         |        |

## PAPERS RELATIVE TO CONSTRUCTION OF

|  |   |     |    |   |
|--|---|-----|----|---|
| <i>Cambridge to Rangiaowhia.</i>   |   |     |    |   |
| Length completed ...   | ... Clearing scrub, 1 chain wide                      | ... | 28 | 0 |
|  | Falling bush  | ... | 2  | 0 |
|  | Forming and draining, 26 feet wide                    | ... | 18 | 0 |
|  | Forming, 26 feet wide                                 | ... | 10 | 0 |
| Nature of country ...  | Forming and corduroying                               | ... | 2  | 0 |
|  | ... Through the Monatuatua Swamp, and very difficult. |     |    |   |
| <i>Cambridge to Hamilton.</i>  |   |     |    |   |
| Length of old road reformed and gravelled, 26 feet wide                              |   |     | 20 | 0 |
| The whole of the above executed by the Armed Constabulary, at a cost of £654 5s. 9d. |   |     |    |   |

## No. 5.

Mr. KNOWLES to the Hon. Dr. POLLEN.

SIR,— Public Works Office, Wellington, 11th May, 1871.  
In reply to your letter of the 5th instant, No. 306, I am instructed by the Hon. Mr. Gisborne to inform you that the payment of £275 has been authorized, being, (as you state) one-half of the cost of a bridge over the Waikato River at Cambridge.

I am, however, to draw your attention to the terms of your letter of 19th May, 1870, to the Superintendent of Auckland, in which His Honor was informed that the Colonial Government would "contribute any sum not exceeding £275," and to request that you will be good enough to apply for an exact statement of the cost of erection, and contribute only so much as will amount to one moiety, and not exceeding the amount authorized.

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

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

## No. 6.

Hon. Dr. POLLEN to the Hon. the MINISTER for PUBLIC WORKS.

SIR,— General Government Offices, Auckland, 3rd June, 1871.  
With reference to Mr. Knowles' letter No. 247, of date 11th May ultimo, I have the honor to enclose copy of a letter from His Honor the Superintendent, and of its enclosure,—a statement of cost of bridge over the Waikato River at Cambridge,—and to inform you that I have certified the account for payment of the sum of £275, being the moiety of the expenditure shown as above mentioned.

The Hon. the Minister for Public Works,  
Wellington.

I have, &c.,  
DANIEL POLLEN.

## Enclosure in No. 6.

His Honor T. B. GILLIES to Dr. POLLEN.

SIR,— Superintendent's Office, Auckland, 31st May, 1871.  
In compliance with the request contained in your letter of the 23rd instant, I have the honor to transmit herewith a statement of the cost of the bridge over the Waikato River at Cambridge.

The Agent for the General Government,  
Auckland.

I have, &c.,  
THOMAS B. GILLIES,  
Superintendent.

## Sub-Enclosure to Enclosure in No. 6.

STATEMENT of Cost of Bridge over Waikato River at Cambridge.

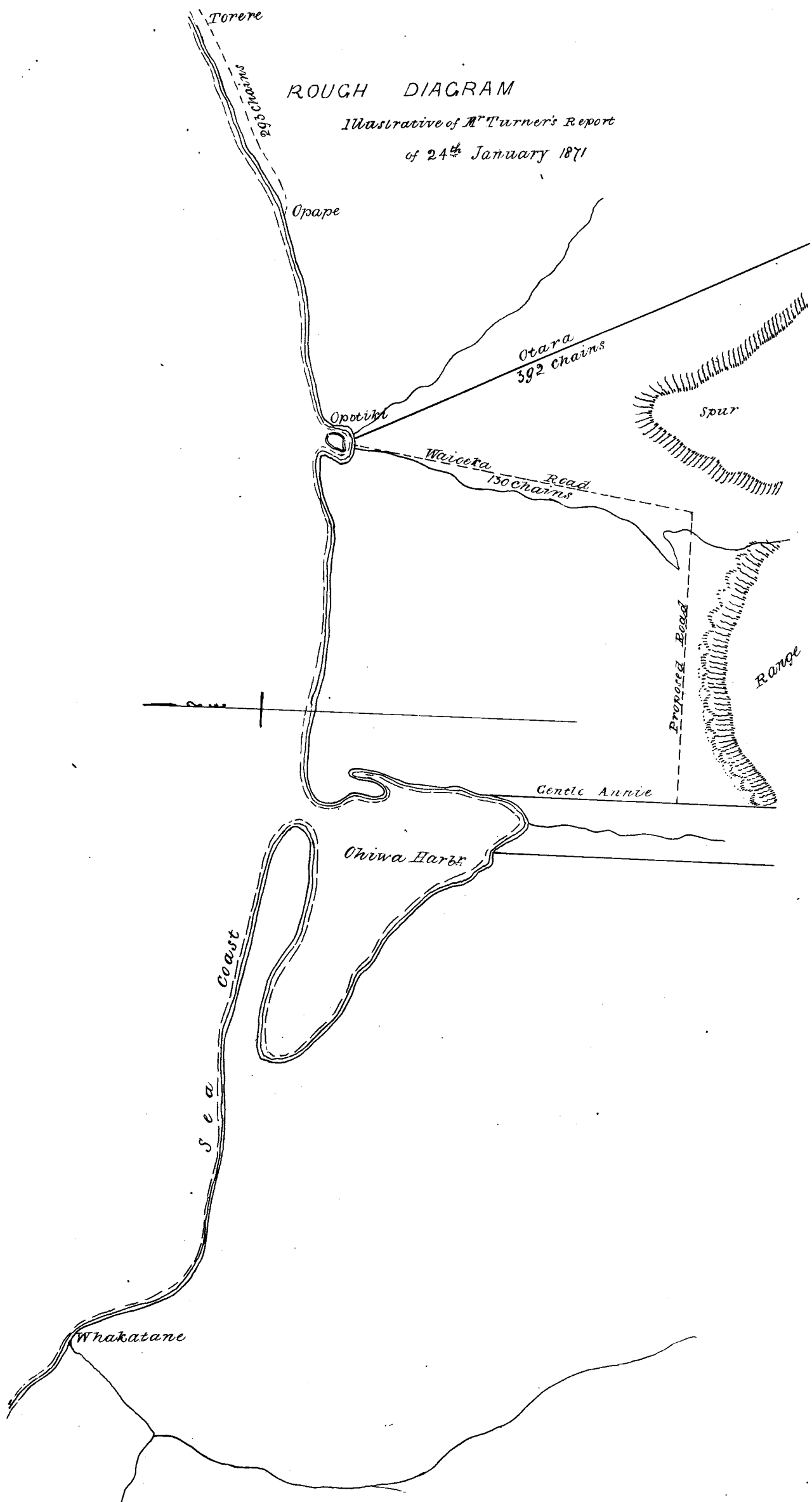
|  |     |          |   |   |
|--|-----|----------|---|---|
| To amount of contract for erection of bridge over Waikato River    | ... | £505     | 0 | 0 |
| Extra lengths of piles and additions for raising bridge three feet | ... | 40       | 0 | 0 |
| Extra braces with approaches                                       | ... | 5        | 0 | 0 |
|  |     | £550 0 0 |   |   |

H. ALLWRIGHT,  
Inspector of Works.



ROUGH DIAGRAM

Illustrative of M<sup>r</sup> Turner's Report  
of 24<sup>th</sup> January 1871



BAY OF PLENTY DISTRICT AND MAIN LINE FROM  
TAURANGA TO TAUPŌ

No. 7.

Hon. Mr. McLEAN to Major MAIR.

Colonial Defence Office, Wellington, 28th October, 1870.

SIR,—

The Government having decided on the construction of roads in the district of Opotiki, with a view to improving communication and giving a freer access to the interior, I have the honor to request that you will take immediate steps to carry out their views.

It is the ultimate intention of the Government to open out a system of roads leading to Waikare-Moana; but, in order to take every advantage of the present season, they have determined to commence subordinate works at once. It will be your duty to determine which will be the most profitable lines to be adopted.

I am given to understand that the completion of the surveyed road running from Opotiki to Otarā will be of great advantage to the settlers, by enabling them to cart posts and rails, &c. On this, to be made a cart road, the military settlers can be employed, taking the work by contract. The road to Waioeka, which will not require so much labour, can also be carried on.

It is highly desirable that the Native tracks along the coast eastward from Opotiki should be improved, so as to form bridle roads passable for horses at all seasons. You will therefore offer for contract to the Whakatohea and Ngaitae the line between Opape and Torere. I understand that Mr. Skeet has surveyed the country. With you will rest the adoption or rejection of this line.

With a view to giving access to the valley of the Waimana, the Arawa stationed at Ohiwa can be set to work to cut a horse track from the head of the harbour into the valley, either by Te Punawai or by "Gentle Annie," as you may think most advantageous, on the same conditions as the Torere Road. A line should be adopted here capable of expansion, at a future time, into a dray road.

In the prosecution of these works you will clearly understand that, whether they be carried on by Europeans or Natives, no daily pay will be allowed. In every case the roads will be made by contract. Where Natives are employed you will make arrangements for either the tribe, or the hapus of a tribe, to construct a certain portion for a fixed sum. In the case of the Otarā and Waioeka Roads, you may give out the whole of each to one contractor, or, if you deem that such a course will not insure the employment of every one of the settlers desirous of labour, you may divide them into parts, taking care that contiguous portions are being worked at the same time.

Where bridle tracks are in course of construction, you will remember that the avoidance of steep gradients is more to be regarded than an increase of distance caused by following the windings of leading spurs.

For these works you will be empowered to expend a sum of £1,000; and you are hereby authorized to give out tenders, and accept contracts for them, without reference to Government, in order to start them.

I must impress upon you the absolute necessity which exists for commencing without delay the roads above mentioned. You will also be careful, in accepting contracts, to confine the expenditure within proper limits.

For the works indicated I consider that £1,000 ought to be more than sufficient, but you can use the surplus in the further improvement of the coast line towards Raukohe, on the terms indicated above.

There is a supply of tools at Whakatane, which you can obtain for the use of the Natives; and should you require more, you can apply to Major Tisdall, in Auckland, forwarding him an extract from this letter.

Major Mair, Opotiki.

I have, &c.,  
DONALD McLEAN.

No. 8.

Mr. TURNER to Mr. BLACKETT.

SIR,—

Public Works Office, Tauranga, 24th January, 1871.

I have the honor to inform you that, immediately after receiving your instructions to me to report on the roads at Opotiki, I left in the Government steamer "Luna," and arrived at Opotiki on the morning of the 21st, and at once set to work to gather what information I could, and inspect the works.

The following are the roads for which a sum of £1,000 has been authorized:—The Otarā, Waioeka, and Ohiwa and Waimana. The first two are dray roads, 16 feet wide, now under construction; the latter a horse road, shortly to be let by contract to the Arawas stationed at Ohiwa.

*Otarā Road.*

The Otarā Road (distance of about 392 chains) has been divided into four sections, three of 95 chains each, and one of about 107 chains. This road commences at the Town Belt, and runs up the Otarā Gorge.

Section No. 1 (95 chains) has been let to John Richardson and John Delaney, at the following rate:—19s. a chain for formation, 30s. for each culvert, and 10s. a chain extra where fascines are required.

Section No. 2 (95 chains) has been let to John Rushton at 17s. 6d. a chain, and 14s. for each culvert.

Section No. 3 (95 chains), principally through forest, has been let to Mr. Angus Smith at 25s. 7d. per chain, including everything; bush to be cleared the width of formation.

Section No. 4 (107 chains, about), principally forest, has been let to Mr. Thomas Black, including everything, width of clearing the same as formation, for 27s. 6d. per chain.

*Waioeka Road.*

This road commences at Smith's Bridge, a short distance from the Town Belt, and runs up, in the direction of the Waioeka Gorge, for a distance of about 130 chains. This road has been let out by contract to Mr. Angus Smith for 23s. 9d. per chain; one bridge to be constructed for a sum of £11 5s., and an allowance of 6s. per chain for fascining, where required. Tenders for this work were received by Major Mair and contracts signed on the 17th November, to be completed on or before the 31st day of March, 1871.

*Ohiwa and Waimana Horse Track.*

This road leads from the head of the Ohiwa Harbour to Waimana. There are two lines of road already surveyed; one over the hill called "Gentle Annie," and the other by Tanawai; the latter Major Mair thinks the best. It is now some years since these roads were surveyed, and it will be necessary to have a surveyor to find these lines, as they are all grown over, and also decide which is the best to adopt.

The Otara and Waioeka Roads will cost about £700, which will leave a balance of about £300 to carry on the Ohiwa and Waimana Road. I cannot make up the exact cost of these roads, as my visit was limited, and I had not time to measure what fascining would be required, nor was I able to ascertain the exact number of culverts that would be wanted.

*Opape and Torere Road.*

The Opape and Torere horse road, for which a sum of £120 has been authorized, commences at Opape, at the foot of the west side of the range, and runs easterly, in the direction of Torere, a distance of about 293 chains. The first section (77 chains) was let out to the Whakatoeas for a lump sum of £58, and is now completed. Section No. 2 (216 chains) is now let to the Ngatai Tribe for a lump sum of £70, and will commence in a very short time. This road was let out by Major Mair, and surveyed by Captain Skeet.

I regret exceedingly that some practical overseer has not been appointed to lay off and superintend these works, as I have found several defects which it is now too late to alter. I would therefore respectfully suggest that I may be allowed to appoint an Inspector at once, as there is no one to look after the works, Major Mair being completely occupied in his official capacity.

It is very desirable that a dray road be made at the foot of the range between Opotiki and Ohiwa Harbour. This road would open up a large extent of country that has been allotted to military settlers, who at present have no access to their land, and I think it would also be very serviceable in a military point of view. This road will branch off from the Waioeka Road, opposite the foot of the ranges, and runs westerly until it strikes one of the proposed roads from Ohiwa to Waimana. This road will of course require some exploration. I therefore respectfully recommend this work for your consideration.

Below please find rough diagram to give you an idea where the roads are. I will send proper tracings as soon as they can be prepared.

John Blackett, Esq., Acting Chief Engineer,  
Wellington.

I have, &c.,  
A. C. TURNER.

No. 9.

Mr. BLACKETT to Mr. TURNER.

SIR,—

Public Works Office, Tauranga, 24th January, 1871.

I have the honor to acknowledge receipt of your report on Opotiki Roads of this day's date. In reference to those yet to be executed I have to request that you will cause them to be carefully explored and laid off before any work is done. This remark will apply to the road between Opotiki and Ohiwa, under the ranges, and also to the proposed road from Opotiki District to Poverty Bay. (Amount not yet authorized for this.)

It would appear, from information given by Archdeacon Williams, that the best line for this will be found starting from Torere, as being shorter and through country not so densely covered with bush as one further inland; also as affording a better line for branching to Waiapu, Tokomaru, and Tologa Bay.

It is said that the Native, William King, can, and will give every assistance in exploring this line. A simple exploration without instruments may be found sufficient at first, and on a good line being found, then a more careful inspection, with measurements and estimate of cost. You will please to have this exploration and a report completed as soon as possible.

You cannot, I think, too soon make arrangements to send a competent person to Opotiki to insure the works being done in a proper manner by his supervision.

It appears that a bridge is much needed at Taheke, on the Maketu Road, about 60 feet span. This you are authorized to set about at once, (estimate £250 to £300, and £100 for a long approach and side cutting,) and finish as soon as convenient. It is said that totara timber may be obtained near this place.

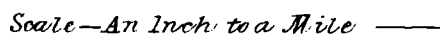
I have, &c.,  
JOHN BLACKETT,  
Acting Engineer-in-Chief.

A. C. Turner, Esq., C.E., Tauranga.

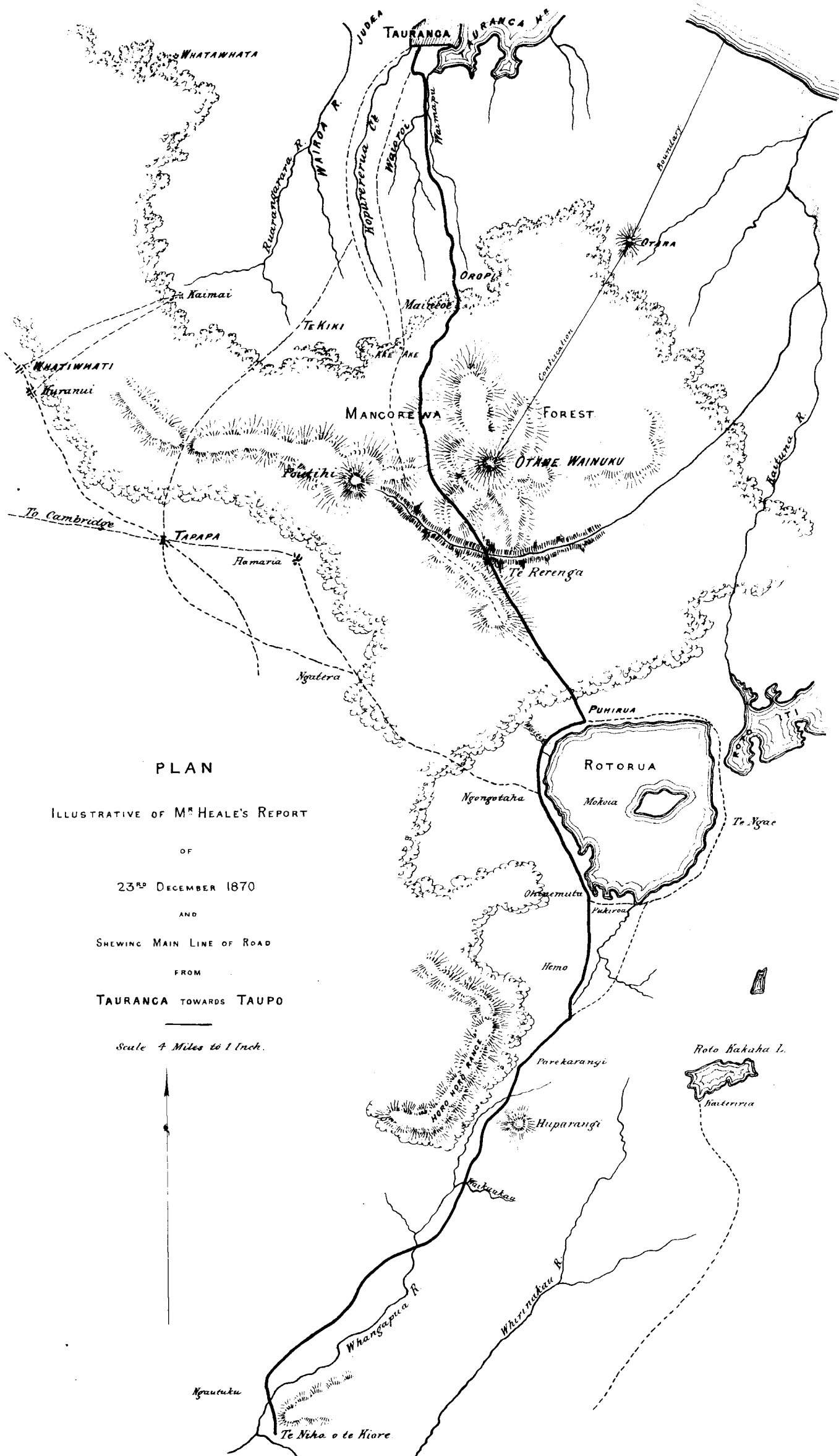




— 23<sup>rd</sup> December 1870 —







# PLAN

ILLUSTRATIVE OF M<sup>r</sup> HEALE'S REPORT

OF

23<sup>RD</sup> DECEMBER 1870

AND

SHewing MAIN LINE OF ROAD

FROM

TAUNANGA TOWARDS TAUPU

Scale 4 Miles to 1 Inch.

## No. 10.

His Honor J. D. ORMOND, to the Hon. the NATIVE MINISTER.

SIR,—

Napier, 18th November, 1870.

I have the honor to enclose, for your information, copy of instructions sent to Mr. Bold, desiring him to arrange with the Rotorua Natives for the formation of the part of the main line of road from Taupo to Tauranga, which is described in my telegram to Mr. Bold. You will observe that I have taken care to exclude the portion of road near Niho o te Kiore, in respect to which there might possibly be some objection raised by Ngatiraukawa.

I have, &amp;c.,

The Hon. the Native Minister, Wellington.

J. D. ORMOND.

## Enclosure in No. 10.

MEMORANDUM to Mr. BOLD, Taupo.

MR. LOCKE has handed me letter from Ngatiwhakaue and Tuhourangi, stating they have agreed to the road from Rotorua to Niho o te Kiore and on to Taupo, and asking for employment. I think we should take advantage of this, and start the work from Rotorua towards the Niho o te Kiore. At same time as this, telegrams go to the hapus before named, saying you will visit them, and start the work. I do not think it desirable to arrange for the construction of the whole road, so please contract with Natives for portion, say ten or twenty miles, according to the country, commencing at Rotorua, and coming towards Niho o te Kiore, and avoid for the present the part of the road near Niho o te Kiore, about which there might be question. You will understand what I mean.

Please have written agreements with Natives, and arrange for lump sum as in parts of road already contracted for. It will be desirable to employ both the hapus who have written, if they wish it. Te Manihera and Ohiwi are, I believe, the principal men. Mr. Maling will be available for this, as well as other works. I know you are getting your hands full of work, but I rely on your starting the Rotorua Road, as it is very important.

Napier, 18th November, 1879.

ORMOND.

## No. 11.

Mr. HEALE to the Hon. the MINISTER for PUBLIC WORKS.

SIR,—

Inspector of Surveys' Office, 23rd December, 1870.

Referring to my letter of the 5th instant, on the road from Tauranga to Taupo, and to my previous report on the same subject, in all of which I intimated doubt as to whether the line which has been adopted, rather in consequence of the posture of Native affairs at the time of its commencement, than on engineering grounds, would ultimately be the main line to Taupo, I have the honor to inform you that, having had occasion to make some stay in Tauranga on Native Land Court business, I took the opportunity, both by personal examination and by inquiry, to clear up some doubts I still entertained as to one or two topographical points, and I am now able to lay before you a definite report on the whole subject.

The shortest practicable route from Tauranga to Taupo would pass by the west side of Rotorua Lake, proceeding on by Parekarangi, Ohinemutu, and Niho o te Kiore, the distance being only seventy-six miles. To reach the west side of Rotorua Lake, near Puhirua, the choice lies between the three routes shown on the accompanying tracing. The first and most obvious of these is that by Pye's pa and Maenene, coloured brown; this only crosses one small stream, and a cart road already exists as far as Pye's pa, where a military station was kept up for several years, to which stores were always sent by dray. This old road required to be slightly diverted in two places, and a few cuttings and fillings to be made, and beyond the redoubt a considerable but not difficult gully had to be crossed. The whole of the works required for these would not have cost more than £1,600, which would have made it an excellent road to the edge of the forest, about thirteen miles. Within the forest it would proceed for about six miles over ground without particular difficulty, and there join the line which has been surveyed, by Oropi.

The second line, by Oropi, tinted pink, is the one which has been adopted. It involved two heavy side cuttings with gradients of 1 in 11, and an embankment across a deep swamp within three miles from the township, a bridge over the Waioroi River in the same vicinity, a considerable one over a branch of it at Whakapaukarakia, and then again over the Waioroi a short distance within the forest.

All the works on this road, as far as the first bridge over the Waioroi, have been completed by the military, and the remaining portions to the edge of the forest have, according to your directions through Mr. Clarke, been advertised for tender at Tauranga, the estimated cost of them being £1,850. With these works it will make a fair road, but by no means equal to one by Maenene.

The third line, tinted yellow, crosses the Kopurererua Bridge (completed) at Judea, and runs along a very level table land to the edge of the forest near Akeake, and, but for two considerable gullies which cross it, it would have been the best of the three; but since I now find, contrary to my original impression, that this road also would have to join the line surveyed by Oropi a few miles within the forest, or at all events to cross the Mangorewa River in the same difficult ravines, I am clear that it presents no advantage over the line by Maenene.

It will be seen, then, that all these tracks unite at a distance of about twenty miles from Tauranga township. From the point of junction the road runs for the most part over slightly undulating table land, of a light and dry, but exceedingly fertile character, having a pumiceous subsoil, and covered with very heavy forest of taua and rimu. Over such land roads may be made without difficulty, as very little drainage is required, and experience proves that the pumice subsoil stands a moderate wheel traffic perfectly well without metal; but unfortunately these level uplands are intersected by ravines of a very formidable character. The worst of these is the one in which the Mangorewa River runs: this is only 20 chains wide above, and is 460 feet deep, so that it is only by sharp turns and divergencies and considerable side cuttings (fortunately in soft tufa) that we have been enabled to find a crossing, with

slopes of about 1 in 11. I long had hopes that, by keeping further to the westward, nearer to Poutihi, a better crossing might be found, but extensive explorations and careful inquiries have now convinced me that this is not the case.

I now find that there are several small lakes near Poutihi, and I am led to the conclusion that the Mangorewa either rises in these or receives a large portion of its waters from them, and that the precipitous ravine eroded by it, extends from the vicinity of the Poutihi all the way to Kaituna.

This being the case, if the shortest road from Tauranga to Rotorua is the object sought, it is, I think, unlikely that any better line can be found in the forest portion of it than that which has already been most carefully and laboriously surveyed by Mr. Turner; and the only question remaining is, whether to persevere in completing the road to the forest by Oropi, on which so much has been done, or rather to adopt that by Maenene, which even now, would not cost more to make than to complete the other, and would be a better road. I am inclined, however, to think that it will be better on the whole to make no change in the line surveyed, since the time which would be lost in commencing the other, and the many inconveniences of departing from plans already so far carried out, would probably counter-balance the advantages of a change.

But the large consideration of the whole question which my investigations during the past six months have forced upon me, has led me to conclude that the direct line by Rotorua is not the best one for a main thoroughfare of the Island, nor even for access to Taupo. I find from careful inquiry, and especially from information given me by Captain G. Mair, that by crossing the forest from Te Kiki considerably to the west of Poutihi, to the vicinity of Tapapa, the valley of the Mangorewa and nearly all (if not all) of the ravines may be avoided. The part crossing by this line is less than half as long as the one surveyed, and from Tapapa an easy line up the Patetere Valley, over excellent open land, leads into the Taupo Plains, south of Horo Horo, and so would reach Lake Taupo by a route very little, if any, longer than the other, and avoiding its chief difficulties; while a branch from Tapapa, about twenty-five miles, would connect Tauranga with Cambridge, and a natural road, requiring scarcely anything but clearing timber, leads through excellent land to Rotorua. The lines which I have laid off on the accompanying map would establish excellent communication between all the settlements; they would open up some of the most available lands in the North Island, which are at present quite worthless and almost wholly unknown; they would bring Tauranga within an easy day's ride from Cambridge, through very good land the whole way; and from Tauranga to Taupo would be only eighty miles,—one-half the distance through superior lands for farm settlements, and the remainder through a good pastoral district, very superior to the eastern plains of Taupo.

I cannot but think, therefore, that this by Tapapa should be regarded as the permanent line of road, and that every opportunity should be seized for forwarding its survey and construction; and, if temporary Native difficulties should interpose to prevent its completion and impose the necessity of adopting the other line, that that should only be looked on as an useful road for opening up available country and for communication with Rotorua, but not as one of the arterial communications of the Colony.

I have, &c.,

THEO. H. HEALE,

Inspector of Surveys in charge of Taupo Road.

The Hon. the Minister for Public Works, Wellington.

## No. 12.

HIS HONOR J. D. ORMOND to the Hon. MR. GISBORNE.

(Telegram.)

Napier, 9th January, 1871.

IN reply to your telegram of this day (No. 195), the roads in progress under my charge north of Taupo extend from Tapuaeharuru to Te Ngae, distance about fifty miles. The following portions are contracted for and in progress, nearly finished:—Tapuaeharuru to Tuparahaki, 12 miles, Native contract, dray road 16 feet wide, £500; Tuparahaki to Niho o te Kiore, 8 miles, Native contract, dray road 18 feet wide, £650; Ngapuketurua to Hemo, near Rotorua, 6 miles, Native contract, let to Manihera and Tuhourangi, dray road 18 feet wide, £300. The remaining portions are likely to be contracted for and carried out on Mr. Bold's return to Taupo, very shortly. Niho o te Kiore to Ngapuketurua, near Horo Horo, 20 miles, dray road, will be let to Tuhourangi, ready to undertake it; estimated cost £1,250.

From Hemo to join road from Te Ngae, 4 miles, will be let to Ngatwhakane; estimate £120.

Branch roads—Tuparahaki to Kaiteriria, *via* Orakeikorako, 43 miles, bridle track 8 feet wide, portion offered Ngatitahu, not yet accepted; difficulty with Ngatitahu. Estimated cost £500.

The above are all works contemplated in my charge north of Taupo. Other works as approved going on this side Taupo. Reports on all works in course of preparation by Mr. Bold, and go by an early opportunity. His duties in field have prevented him preparing earlier. I have arranged to give him assistance at trifling cost.

Hon. W. Gisborne, Wellington.

ORMOND.

## No. 13.

THE HON. MR. GISBORNE to HIS HONOR J. D. ORMOND.

(Telegram.)

Wellington, 10th January, 1871.

LOOK at Heale's map of Taupo and Bay of Plenty. He proposes to take line from Tauranga to Tapapa through narrow part of bush, instead of by Rotorua from Tapapa to Niho o te Kiore, by west side of Horo Horo Range. Is this practicable, considering Native difficulties? Please state, briefly, the advantages of the two lines mentioned in your last telegram to me,—by Ngapuketurua *via* Niho o te Kiore, and by Kaiteriria *via* Orakeikorako. Whereabouts is Ngapuketurua on Heale's map?

HIS HONOR J. D. ORMOND, Napier.

W. GISBORNE.

## No. 14.

His Honor J. D. ORMOND to the Hon. Mr. GISBORNE.

(Telegram.)

Napier, 11th January, 1871.

IN reply yours just received, No. 249, I know about Heale's proposal, and believe he is right professionally. Route *via* Tapapa heads gorges and streams which are difficult on Tauranga-Taupo road. Line from Tauranga to Tapapa, and thence north to Alexandra and valley Thames, and south by Niho o te Kiore, is certain to be eventually the main line, and would run through splendid country most of the way. At present any road work there is out of the question. Niho o te Kiore is the very extreme point to which we can push works yet, and that gives daily trouble, but will, I hope, be carried through. My opinion is, present works should improve, where necessary, the dray road from Rotorua to Maketu. A line from Rotorua to Tauranga should be opened, but not an expensive one; a good bridle track would be sufficient, and the road to Tapapa looked to as the eventual road. With regard to the two lines named in my telegram to you of yesterday, the dray road from Taupo to Bay of Plenty is by Tuparahaki, Niho o te Kiore (bridge here over Waikato 30 feet span), Ngapuketuru (this place near Horo Horo), and between there and Huparangi (see Heale's map), thence by Hemo to Rotorua and Te Ngae. This is the dray road, and I believe a thoroughly good line. It is on it that all the work is now going on. The road by Orakeikorako to Rotorua, only fit for a bridle track, was authorized more to give employment to Ngatitahu and remove difficulties on Niho o te Kiore line than anything else. It is not begun, and perhaps not likely to be. It was authorized purely to meet Native jealousies.

Hon. W. Gisborne, Wellington.

ORMOND.

## No. 15.

The Hon. Mr. McLEAN to the Hon. Mr. GISBORNE.

(Telegram.)

Tauranga, 18th January, 1871.

THE road you refer to by way of Tapapa is quite impracticable on account of the Natives. The line may be a good one from the Waikato to Taupo, but it is difficult to say when it could be commenced. The road from Oropi through the forest would cost in cutting about £200 a mile by using Native labour. The distance to cut through forest is about nine miles. Blackett is out to-day looking after road works with Turner. I hope matters will be started here in a satisfactory manner.

Hon. W. Gisborne, Wellington.

DONALD McLEAN.

## No. 16.

The Hon. Mr. McLEAN to the Hon. Mr. GISBORNE.

(Telegram.)

Tauranga, 19th January, 1871.

I FIND after careful inquiry, in concert with Blackett, that the line proposed by Heale is quite impracticable on account of Native difficulty, and that, to get any work done this season, we must continue the line through forest from Oropi to Rotorua. Yesterday I gave distance through forest at nine miles, and £200 a mile for cutting a dray road. I ought to have stated seventeen miles, not nine, at the same rate per mile, £200, besides three miles of open country at £150 a mile. Heale's line goes through Hauhau territory. King would oppose road on the present line. Arawas will take contracts as it is through their land, and Clarke is arranging with them to carry out this object. Blackett will leave necessary instructions.

Hon. W. Gisborne, Wellington.

DONALD McLEAN.

## No. 17.

The Hon. Mr. GISBORNE to the Hon. Mr. McLEAN.

(Telegram.)

Wellington, 19th January, 1871.

I WANT to put you clearly in possession of my views as to Tauranga Road. The cost of road from Tauranga to Rotorua by Oropi will probably be £5,000 or £6,000. There is already a dray road by Maketu. It may turn out next year that the Tapapa proposed line is the right one, and that it can then be made without Native difficulties.

Under these circumstances, would it not be better to be content this year with the Maketu Road, until we can definitely decide which is the best line? Please take this and other circumstances of which I may perhaps not be aware, but which you know, into your careful consideration, and let me know the result.

Hon. D. McLean, Tauranga.

W. GISBORNE.

## No. 18.

The Hon. Mr. McLEAN to the Hon. Mr. GISBORNE.

(Telegram.)

Maketu, 20th January, 1871.

As regards the Tauranga Road, I think the proposed line quite as good as Heale's. He approved of the Oropi line as opening up a fine tract of country. It is of great political importance, also, to employ the Arawa in opening it up, as it is through their territory. They are anxious to work, and as they get large sums now from the Government for fighting, these should be utilised for road making.

Hon. W. Gisborne, Wellington.

DONALD McLEAN.

## No. 19.

The Hon. Mr. GISBORNE to the Hon. Mr. McLEAN.

(Telegram.)

Wellington, 20th January, 1871.

AFTER reading your telegram of this day I waive objection to road to Rotorua, *via* Oropi. The road through the forest should be commenced. Ask Blackett to let me have estimate. It should be done by contract. Can it be done this summer?

Hon. D. McLean, Maketu.

W. GISBORNE.

## No. 20.

TENDER of Mr. JORDAN for Construction of Road from Tauranga to Oropi, on Rotorua line of Road, with Mr. Blackett's acceptance thereof.

Tauranga, 27th December, 1870.

I, RICHARD COLES JORDAN, hereby tender to carry through and complete, according to plans and specifications shown me in the Government Surveyor's Office, Tauranga, the whole of the works on the Taupo Trunk Road, near Tauranga, viz., bridge, culvert, and earthworks, for which tenders are invited, for the sum of one thousand three hundred pounds sterling (£1,300), and to perform any extra work that may be found necessary at rates as per schedule following, viz:—For culverts, as per plan, 22s. 6d. per foot; for earthworks, 7½d. per cubic yard.

R. C. JORDAN.

THIS to be accepted. Time, four and a-half months. Security, £250.—JOHN BLACKETT, Acting Engineer-in-Chief.—17th January, 1871.

## No. 21.

MEMORANDUM for the Hon. the DEFENCE MINISTER, by Lieut.-Colonel St. JOHN, on Road Operations in progress in the Bay of Plenty.

THE object of the roads projected in the Bay of Plenty is twofold,—commercial and strategical. In most case a combination of both is effected.

The only purely strategical road in the Northern Island is that leading from Napier to Taupo, but in other parts of the country it has been found imperative to cut tracks, which, at present serving no further purpose than to protect settlements, by making communications easy, will, in course of time, become highways for traffic.

The roads in progress or consideration in the Bay of Plenty are as follows:—

1. Tauranga.—(a.) Trunk line to Taupo, *via* Oropi. (b.) Road from Matapihi through swamp to beach. (c.) Causeway and bridge to Judea, across the Kopurererua Swamp.
2. Maketu.—Dray road from Maketu to Te Taheke, on north side of the Kaituna River, at its exit from the Rotoiti Lake.
3. Ohiwa.—Horse track from Whakarai, on the south shore, into the Waimana Valley.
4. Opotiki.—(a.) Dray road up the Otara Valley. (b.) Dray road up the Waioeka Valley, with an intended prolongation to Mariotahi, some sixteen miles up the gorge of the river. (c.) Horse track along the coast towards the East Cape, connecting Native settlements. (d.) Horse track along the foot of the ranges south of Opotiki, connecting together the different military land settlements in the Opotiki, Waioetahi, Waimana, and Whakatano Valleys. (e.) Horse track joining Opotiki with Poverty Bay.

No. 1.—(a.) This has already been commenced: a portion of about four miles is complete, and a bridge is thrown across the Wairoi stream. The remaining portion as far as Oropi has been given out by contract for £1,300; Mr. Blackett having ridden over the whole line, and selected the tender for acceptance.

(b.) This has been finished by Native labour.

(c.) The bridge has been finished by contract, and the causeway begun by the Armed Constabulary, but the paucity of workmen has rendered the progress of the work very slow. It is now to be finished by a Native contractor.

2. Maketu—This road has been finished for some time, but a necessity exists for a bridge across the Kaituna at the Taheke. The matter is under consideration, with a view to its early completion.

3. Ohiwa.—This track has not yet been started.

4. Opotiki.—On (a) (b) and (c) of this, and on No. 3 above, an expenditure of £1,000 has been authorized. (a) and (b) have been let out in contracts to the military settlers, and are in course of completion, but the want of a supervising authority of experience was visible on inspection.

The prolongation of (b) to Mariotahi, which is only intended to be a track passable for troops during freshes in the river, is only in contemplation.

The Resident Magistrate at Opotiki has been directed to ascertain for what price the Whakatoheas would undertake this work.

(c) is carried on by Natives, the part in progress being between Opape and Torere, on which Mr. Turner does not report favourably, the workmen having made an error in following directly the line of pegs, and not making any sidings. (d) and (e) are only under consideration, the former being of extreme importance in a commercial point of view, the latter in a strategical.

The formation of horse track (d), heading the different swamps lying between the hills and the sea, and that of No. 3, will open up and render safe a large acreage of good land now lying waste.

Road (e) will place the Bay of Plenty within a day's journey of Poverty Bay: the addition of a cross line into it from Waiapu will give the utmost facilities for the rapid succour of any threatened point on the East Coast; and the communication thus afforded will deter hostile tribes from making raids, which might lead to their being taken in rear, and will eventually form the line of traffic between Hawke's Bay and the Bay of Plenty.

The cost of (d) and (e) has not yet been estimated, but the former cannot be high. For the

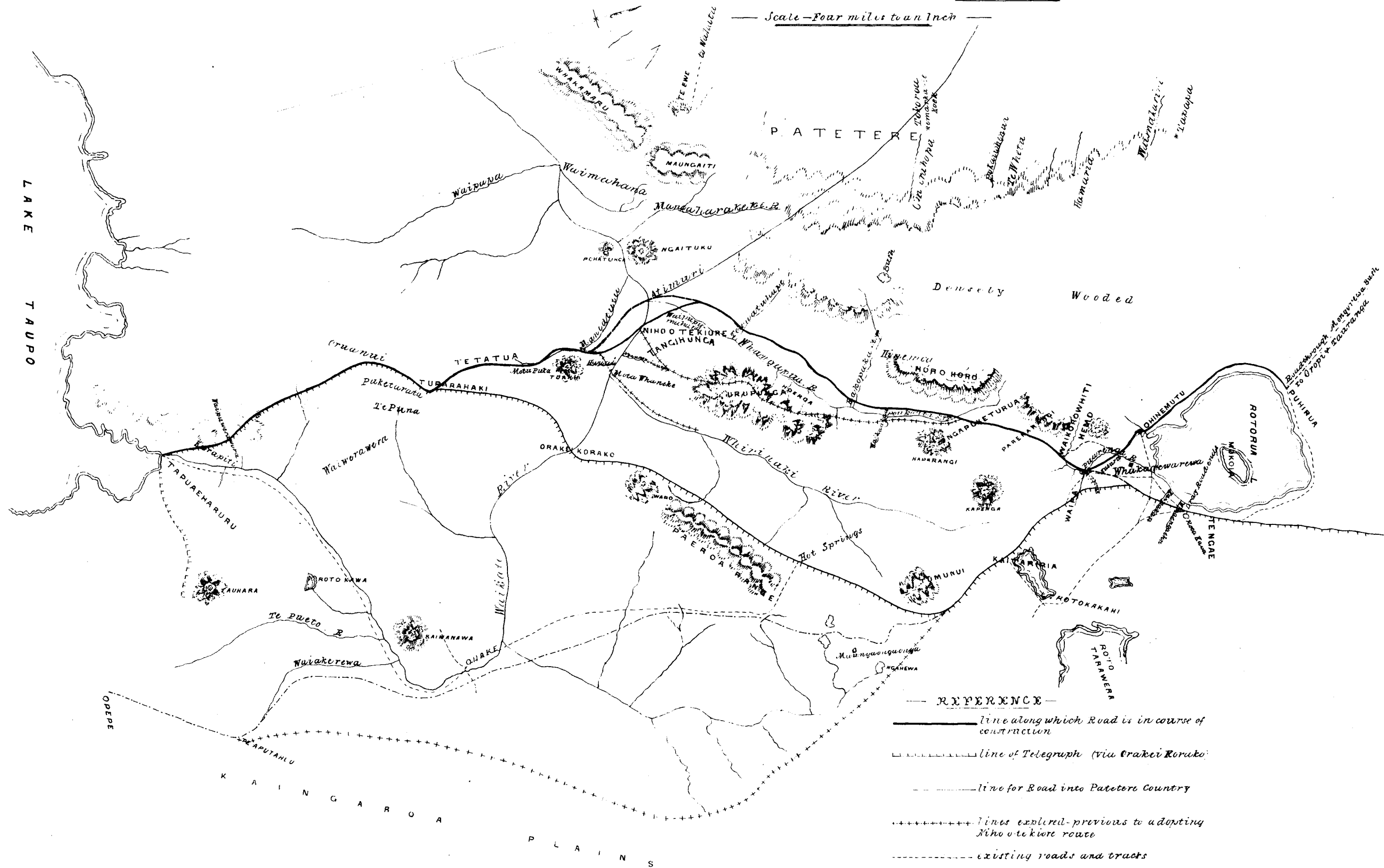


— ROAD from TAPUAEHARURU to ROTORUA —

— Illustrative of Mr Bolds Report of —

— 21<sup>st</sup> January 1871 —

— Scale—Four miles to an inch —





road (e) there are three points of departure from the Bay of Plenty,—one from Opotiki by the Otara River; one from Waiaua, four miles to east; one from Torere, eight miles further.

It will be absolutely necessary to have these three lines explored.

The visit of Mr. McLean to the Bay of Plenty has proved that, without professional knowledge being brought to bear upon the works, the expense attending them may be far in advance of what it ought to be.

Mr. Blackett strongly recommended the appointment of a Resident Engineer for the Bay of Plenty, who should be responsible that all went on correctly; and Mr. McLean approved of Mr. A. C. Turner, feeling confident that his knowledge of what was required, and of the prices which ought to be paid, would be the means, under Mr. Blackett's supervision, of getting the works economically performed.

The introduction of public works in this part of the Island has been productive of great good.

In the settlement of Opotiki it has had the effect of inspiring confidence and inducing the settlers to extend their cultivations beyond the town lots. Among the Natives it has created a degree of emulation, inciting them to resume their old habits of industry, and in each case the greatest anxiety is displayed in every tribe to get a share of the work in hand.

The constant use of the pick and shovel will gradually wean them from their ancestral warlike tastes, resuscitated within the last few years.

In conclusion, a direct communication between Poverty Bay and Whakatane, No. 4 (c) and (d), will do more to keep at a distance any hostile Native force than a large amount of troops scattered about in garrisons.

Auckland, 31st January, 1871.

J. H. H. ST. JOHN.

## No. 22.

HIS HONOR J. D. ORMOND to the Hon. Mr. GISBORNE.

SIR,—

Napier, 24th January, 1871.

I have the honor to transmit the documents hereinafter described, referring to the road between Taupo and Rotorua.

1. Mr. Bold's report on the line and works in progress.
2. Mr. Bold's report of explanations of different lines.
3. Copies of agreements with Native contractors.
4. Return of expenditure: months of November and December.
5. Plan, showing the lines of road.

As will be seen from the report, the road from Tapuaeharuru to Niho o te Kiore is contracted for, and the works are in a forward state.

The portion of the road near Rotorua is also arranged for, and the remainder, it is expected, will be let, the part near Niho o te Kiore to the Ngatiraukawa, and the rest to the Arawa. Arrangements will also be made for bridging the Waikato at Niho o te Kiore, and for joining the line to the present Maketu dray road, when dray communication with the Bay of Plenty will be opened, the importance of which it is unnecessary for me to point out.

Maihi Te Ngaru, the principal chief of Ngatiraukawa, and his son, are now on their way to Napier, and I hope to arrange with them to undertake the road work above mentioned, and have little doubt that now the Ngatiraukawa have ranged themselves on our side, we shall ere long be able to connect Taupo with Cambridge both by road and telegraph.

The Hon. the Minister for Public Works,  
Wellington.

I have, &c.,  
J. D. ORMOND.

## Enclosure in No. 22.

MR. BOLD to HIS HONOR J. D. ORMOND.

SIR,—

Napier, 21st January, 1871.

I have the honor to submit, for your Honor's information, the following report on the progress of the works in connection with road construction between Tapuaeharuru and Rotorua, together with a return showing the cost and extent of road formed and completed.

The accompanying tracing shows the several lines explored between the two places, descriptions of which are contained in the annexed memoranda.

The line selected, and on which the works hereinafter mentioned are in progress, is by way of Niho o te Kiore and Horo Horo, terminating at the nearest point of the dray road from the Bay of Plenty, near Te Ngae.

Owing to tribal jealousies, and to the desire of each hapu to have the road over their own land, some difficulty was experienced in reconciling and dealing with the various Native owners immediately interested. The line crosses the Waikato below the Niho o te Kiore, at Atimuri (referred to in a former report), which, besides affording a suitable site for an inexpensive bridge, will become ultimately an important position as the radiating point for branch roads to Cambridge and across the Patetere.

The total distance from Tapuaeharuru to Rotorua is about forty-eight miles, but four miles in addition to this will be required to effect a junction with the dray road from Maketu.

The construction of twenty-six miles has been let to contractors (Native owners of the land) at reasonable rates, and in sections averaging nine miles each. The supervision and carrying out of these contracts is in the hands of Mr. C. Maling.

Copies of all agreements concluded are appended to this report, showing exactly the nature and extent of the works in progress.

*Tapuaeharuru to Tuparahaki, twelve miles.*

This section, let to Hohepa Tamamutu, Poihipi, Reweti, and their people, is now nearly completed. The country the road passes over is undulatory, but, being of pumice formation, is

generally easy for construction. The work specified in agreement embraces the formation of a dray road, 16 feet wide, on easy curves and inclines, excavations of the necessary ditches, and the construction of all culverts and bridges. The whole is to be satisfactorily finished for the sum of £500.

The first few miles have not been faithfully performed, and before any certificate can be given, the contractor will be required to perform the labour necessary for proper completion. The latter portion of the section, Mr. Maling reports, is being better executed.

*Tuparahaki to Niho o te Kiore.*

The length of this section is about eight miles. The road line passes through about twenty chains of bush, and descends into the Tatua Valley, which, for two and a half miles at the Waikato end, requires deep sidings and rock cuttings. The erection of (and supply of timber for) two bridges, each 25 feet span, together with necessary culverts, are included in the contract. The work, four miles of which is complete, is being satisfactorily performed by Ngatitama and Hitiri's people.

*Niho o te Kiore to Ngapuketurua.*

The work on this section, about twenty miles in extent, has not yet been undertaken, but it is expected the whole will shortly be let to the Ngatiraukawa, and also to Ngatitawera and Tuhourangi, of Rotorua and Tarawera Moana respectively. The country is for the greater portion level, and does not present any striking difficulty to economical construction. The road will cross the Waikato at Atimuri (the narrow channel previously referred to), the span being about 35 feet. The approaches are excellent, and the flat-topped rocks projecting on both sides form natural abutments, and require but little labour to prepare them for the reception of the necessary superstructure.

The Rahopaka, with a span of about 35 to 40 feet, is the only important rivulet requiring to be bridged.

The remaining streams, about five in number, require only 15 to 20 feet bridges.

*Ngapuketurua to Waikorowhiti (Hemo).*

The length of this section is six miles, and the country is similar in features and formation to that between Tupuaeharuru and Tuparahaki. The construction of this portion has been offered to Manihera of Parekarangi, who has agreed to perform the work required, in the same manner as is specified in the contract concluded already with the Ngatitama, for the sum of £300. The necessary agreement has been forwarded to Manihera for signature, but the document has not yet been returned.

The remaining section, six miles in length, extends from Waikorowhiti to the Waengaehu Creek, at which point terminates the road from Te Ngae. The work to be done in opening communication includes side cuttings, scrub clearing, and ditching.

The bridges consist of one 30 feet long, across the Puarenga at Ruakiokoko, and two of 15 feet each across the Waikorowhiti and Waengaehu streams.

The earthwork required between Manihera's contract and the end of the road from Te Ngae is very little, and was offered to the Ngatiwhakaue of Ohinemutu, but they, preferring day labour, have not yet agreed to undertake the work.

The same facilities given to the Native parties employed near Tarawera and Te Haroto, with respect to the supply of tools and purchase of food, have been afforded to the people in this district.

His Hon. J. D. Ormond, Napier.

I have, &c.,  
EDWARD H. BOLD.

Sub-Enclosure in No. 22.

DESCRIPTION of Country examined between Tapuaeharuru and Rotorua for the Construction of a Dray Road.

*Line via Orakeikorako and Kaiteriria to Rotorua.*

THE examination of this route, recommended in my report dated 14th September, was accomplished during the month following, and the information then gathered was confirmatory of Mr. Heale's account, viz., "That, from the rough character of the country passed over, a line by this route would be greatly inferior, and more expensive for road construction, than the line *via* the Tatua Valley, or those divergent thereupon." It was therefore decided to confine further inspection to the several routes mentioned as existing near the course of the Poukaitu and the Whirinaki, shown on the sketch by coloured lines, for purposes of general traffic, and also, for telegraph maintenance, it was considered desirable to improve the present bridle track, and to this end the necessary preliminaries were arranged, and directions given for making the cuttings and laying off the work. The Ngatitahu, to whom the work was offered (and who at first had expressed an anxiety to have it), asked for such an exorbitant rate of remuneration as to make evident their total refusal. They profess to be chagrined at the preference given to the route by Niho o te Kiore. The real cause of their refusal and general discontent results from the evil counsels of a man named Hoani, recently come from the king country, and who, for purposes of extortion, impels them by his great influence to oppose and prevent all works of progress or advancement which he thinks the Government have in contemplation.

It is proposed to proceed with the improvement of the track at the Kaiteriria end, and to employ those Natives who may be interested in the land intersected by the road.

*Routes between the Tatua Valley and the Hemo, near Rotorua.*

These are: first the route by Horo Horo, commonly known as the Niho o te Kiore; secondly, the route *via* the Urupunga; and lastly, that *via* Motu Whaneke and the Whirinaki Valley. Each route was strongly recommended, but as such recommendations were generally made from interested Natives, it became necessary to thoroughly examine them in detail.

*Viâ Urupunga and Hoeroa.*

The advantages said by Manihera, the advocate for this route, were, directness and easy nature country for road construction. Its exploration commenced near Haparangi, and terminated near Niho o te Kiore.

The Urupunga Range is crossed in a pass at an elevation of about 1,500 feet. The ascent to, and descent from, this pass, being over broken country, constitutes the chief objection to the route. The Waikaukau is the principal stream to be crossed; it measured 35 feet at its junction with the Poukaitu, at which point we forded it. The line by this route could be improved, as regards gradients, by keeping nearer the Poukaitu, but this would sacrifice the advantage of directness, and necessitate bridging the numerous affluents of the last-mentioned stream, more numerous on this, than on the opposite side. Our progress was much retarded by the numerous boggy creeks and scrub.

The next route examined was recommended by Ihaia, and among its reputed advantages may be enumerated flat nature of the country, avoidance of dispute with King Natives (proprietaryship of land being unquestioned), and, most important of all (and the circumstance which led mainly to its examination), the crossing of Waikato at Motu Whaneke, described as practicable for a short bridge. On examination, the country was discovered to be rougher than had been represented, and was not so good, in my opinion, as that by Horo Horo.

At Motu Whaneke the river is divided by an island into two channels, the narrowest of which, on triangulation, was found to be 196 feet, or 150 feet more than was reported. The current above the island is uniform all the way across, and is suited for a self-acting ferry punt. Span is about 450 feet. Formerly there was a canoe kept here, and the Ngatitama (Ihaia's) people travelled this way to Kaiteriria. There is no doubt this route would have been best for the telegraph line, as, with little labour, a good bridle track could have been formed, sufficient for transport and hauling purposes.

On comparing the various lines just described, that by Niho o te Kiore was found to be superior to the rest. The first contract has been let to Ihaia, and the second to Manihera. The intermediate section (about twenty miles), it is expected, will be undertaken by some of the Ngatiraukawa and Tuhourangi.

Napier, 23rd January, 1871.

E. H. BOLD.

## No. 23.

Mr. TURNER to Mr. BLACKETT.

SIR,—

Public Works Office, Tauranga, 3rd March, 1871.

I have the honor to inform you that I have been inland inspecting the survey now being carried on by Mr. Haig, and I am happy to inform you that twenty miles are completed from Puhirua to south of Horo Horo Ranges, and eighteen miles and three-quarters are now ready to be let out to the Natives, the estimated cost being £2,126, including Inspector's pay. In no instance is there a grade as steep as 1 in 13, and so far the line is an excellent one.

The estimated cost seems large, but when 195 feet of bridging and fifty-seven culverts are taken into consideration, I think the amount not heavy. I telegraphed you on the 25th February, asking to get this amount authorized, but as yet I have had no reply.

This survey did not commence until the 3rd February, owing to certain Native arrangements having to be made by Mr. Hamlin, R.M.

From a little beyond Horo Horo Range there are two routes, one on the east of Whangapua, and the other on the west, leaving a range of hills between it and the river, and again joining the valley of the Whangapua a few miles north of Niho o te Kiore. I left instructions with Mr. Haig to have both these lines thoroughly explored before carrying on his survey further. These few miles will be the most difficult part of the survey. I expect Mr. Haig will have finished about the 20th instant.

I telegraphed to you on the 27th to get money to carry this survey on, particularly on account of the Maoris. As the line progresses, the different land owners claim the right of having their people employed while crossing their property. This causes constant changing of hands, and when the men are dismissed without getting their pay, they grumble frightfully. And as I promised these Maoris their money would be paid on my return, I again telegraphed on the 1st instant to get authority to draw upon Colonel Moule, as he will not pay any money except for contracts; and by my not taking the money in with me, there will be great trouble hereafter in paying, as the Maoris are so scattered.

John Blackett, Esq., Acting Engineer-in-Chief,  
Wellington.

I have, &c.,  
A. C. TURNER.

## No. 24.

Mr. TURNER to Mr. BLACKETT.

SIR,—

Public Works Office, Tauranga, 3rd March, 1871.

I have the honor to inform you that I met Mr. Bold, District Engineer for Napier, by appointment at Parekarangi on the 20th February last, owing to some misunderstanding regarding the boundary line of our respective districts.

It appears that some time since Mr. Bold had a small road survey made near to Parekarangi, and offered the construction of it to the Natives there, and the Maoris declined taking the work at the price. I was not aware of this, otherwise I would have communicated with him before starting the survey.

We have, however, arranged Waikato River (Niho o te Kiore) as our boundary, subject to your approval. This will conform with the instructions you gave me relative to the survey from Rotorua, now going on.

From what I can learn from Mr. Bold, who, I believe, gets his instructions from Mr. Ormond, he has been carrying on his work with a future view of taking the road to Alexandra, Tapapa, and Patetere, looking upon the Tauranga Road as a secondary consideration ; on the other hand, I having in view to get the best and shortest road to Taupo from here.

Relative to the Waikato crossing, there is a very narrow place at Atimuri, at the foot of Ngatuku Mountain, about 35 feet wide (a bridge of 40 feet would answer here), with rock sides. This Mr. Bold appears anxious to take advantage of, and very naturally so, when keeping in view Alexandra and Tapapa, as it would not lengthen the distance to these places. I am at present carrying on the survey down the east side of the Whangapua Valley, and hope to keep it as far as Niho o te Kiore without crossing the river. If this line turns out favourable, which I trust will be the case, and the bridge site decided to be at Atimuri, and not at Niho o te Kiore, it will necessitate a crossing of the Whangapua near where it empties itself into Waikato, requiring a bridge of about 52 feet span, and increase the distance about three miles. The approaches on this side of Waikato at Te Atimuri are not over good but quite practicable. In the event of this line being a failure, the survey must keep well to the west ; and should the crossing be at Atimuri, the River Whangapua will have to be crossed in two places near the mouth, increasing the distance nearly two miles ; and by crossing at Niho o te Kiore there would only be one crossing of the Whangapua, some distance from the mouth.

The Waikato at Niho o te Kiore is 210 feet wide and about 15 feet deep ; here a pile bridge could be built. This might be done after the road is completed to this place, when it would be handy to cart up a monkey and other pile-driving gear ; and in the meantime a ferry could be used ; or, if the Government thought proper, a punt could be built in lieu of a bridge, as the current is quite strong enough to propel it to and fro. The punt, of course, would necessitate a man constantly attending to it. I mention these particulars, as it is quite likely the matter will be referred to you.

I have, &c.,  
A. C. TURNER.

John Blackett, Esq., Acting Engineer-in-Chief,  
Wellington.

No. 25.

Hon. DILLON BELL to Mr. COOPER.

(Telegram.)  
Dunedin, 22nd March, 1871.

WITH regard to your telegram to Mr. Blackett, No. 158, Mr. Gisborne and I understand it to express the final arrangement for going on with the road between Oropi and Puhirua through the bush, which Mr. Gisborne sanctioned before coming down here, and that the only question is the formal sanction of that arrangement and acceptance of the Natives' offer, at the rate of £200 per mile. If we are correct in this interpretation of your telegram, then all that is necessary is for you to communicate to Mr. Clarke and Mr. Turner Mr. Gisborne's approval, and to make special arrangements for providing the funds for the monthly payments to the Natives.

Take care that this is done so that no risk shall occur of any trouble by delaying the payments to Natives, such as Mr. Turner points out. Colonel Moule must be instructed as to the specific sum he will have to disburse every month on Mr. Turner's requisition, say £400.

DILLON BELL.

No. 26.

Mr. TURNER to Mr. BLACKETT.

SIR,—  
Public Works Office, Tauranga, 3rd April, 1871.

I have the honor to inform you that Mr. Clarke, C.C., and myself proceeded to Rotorua, in the early part of last month, for the purpose of arranging with the Puhirua Natives (Ngatirangawewehi) for the construction of that portion of the Tauranga and Taupo Road from Te Rerenga to the end of the forest on the Rotorua side, a distance of eight miles, and also to let portion of the work beyond Rotorua, in the direction of Niho o te Kiore, to the Tuhourangi Tribes. The latter we could not do for want of authority from head-quarters, but since my return this has been granted, and I intend leaving as soon as I can arrange with Mr. Hamlin, R.M., to accompany me to make a final settlement with these people.

The eight miles from Te Rerenga to the edge of the forest we arranged with the Puhirua Natives to construct for £200 a mile (£1,600). To fall trees a chain wide, to properly clear centre of the track, and to form road 18 feet wide, according to diagram produced ; to build all small bridges and culverts, and to conform to grades to be laid off. The Government to allow them wheelbarrows, pickaxes, cross-cut saws, block and tackle, nails, bolts, and spikes for bridges, if required. All of these I have in store with the exception of nails, bolts, and spikes. On this section of the road there is 254 feet of bridging that requires skilled labour : this is not included in the contract. Below you will find my estimate for this work for European labour.

|   | £      | s. | d. |
|---|--------|----|----|
| Side cuttings in earth, 49,082 cubic yards, at 6d. ... ..                           | 1,227  | 1  | 0  |
| Formation of small cuttings and fillings, 13,600 cubic yards, at 6d. ... ..         | 340    | 0  | 0  |
| Soft rock in side cuttings, 7,918 cubic yards, at 2s. ... ..                        | 791    | 16 | 0  |
| 640 chains falling trees, one chain wide, and clearing centre of road, at £1 ... .. | 640    | 0  | 0  |
| Bridging, 254 feet at £3 10s. ... ..  | 889    | 0  | 0  |
|   | £3,887 | 17 | 0  |

According to this you will see that the work has been taken considerably lower than my estimate, but it must be borne in mind that it is doubtful if the Natives complete the work in the Mangorewa Valley, where the rock lies. They have agreed to try, and I trust, by our finding them some powder, that the work will be done by them, as the rock is very soft; in the event of their not succeeding, they are quite willing to allow Europeans to do it.

After our return here we endeavoured to arrange with the Ngaiteahi and Ngatimahine Tribes for this end of the forest, from Oropi to Te Rerenga,\* eight miles and three-quarters, but were not successful, as the Natives were very obstinate and determined, demanding 5s. a day, or £300 a mile. We of course could not give in to them, for by so doing the Natives on the Rotorua side would immediately make a similar demand, which would increase the price materially. Mr. Jordan, the contractor for the works this side of Oropi, asked if he could tender for this portion of the road. I informed him I could not exceed the £200 per mile; he subsequently put in a tender for the eight miles and three quarters, and the whole of the bridges through the forest (including those on the Rotorua side), for £3,180. This I thought a very good thing for the Government, and at once consulted with Mr. Clarke, who, after going into the calculations, perfectly agreed with me, and at once commenced a communication with Wellington on the subject, and I am happy to say the Government have agreed to it. My estimate for this portion of the work is as follows:—

|  | £      | s. | d. |
|--|--------|----|----|
| 45,600 cubic yards side cutting, at 6d. ... ..                         | 1,140  | 0  | 0  |
| Small cuttings, 18,400 ditto, filling and formation, at 6d. ...        | 460    | 0  | 0  |
| Chipping, 1 chain wide, and clearing centre of road, 700 chains, at £1 | 700    | 0  | 0  |
| Bridging, 106 feet, at £3 ... ..                                       | 318    | 0  | 0  |
|  | £2,618 | 0  | 0  |
| <i>European Labour.</i>  |        |    |    |
| Total estimate of work through forest from Oropi to Te Rerenga         | 2,618  | 0  | 0  |
| From Te Rerenga to Rotorua side ... ..                                 | 3,887  | 17 | 0  |
| Inspection ... ..  | 200    | 0  | 0  |
|  | 6,705  | 17 | 0  |
| Contract to Puhirua Natives ... ..                                     | £1,600 | 0  | 0  |
| Say for Maori tools, &c. ... ..  | 100    | 0  | 0  |
| Mr. Jordan's tender ... ..   | 3,180  | 0  | 0  |
| Inspection ... ..  | 100    | 0  | 0  |
| Amount required to be authorized ... ..                                | 4,980  | 0  | 9  |
| Amount less my estimate ... ..   | £1,725 | 17 | 0  |

These works are to be estimated as each mile is completed at the rate of 80 per cent.; the balance, 20 per cent., to be paid on the completion of the whole works.

These contracts will commence about the 10th instant. Will you please arrange and have the money for them. Mr. Jordan is sure to push on his end of the work.

I will make a specification, contract, and bond, for Mr. Jordan to sign as soon as possible.

John Blackett, Esq., C.E., Acting Engineer-in-Chief,  
Wellington.

I have, &c.,  
A. C. TURNER,  
Resident Engineer.

### No. 27.

MR. TURNER to MR. KNOWLES.

Public Works Office, Tauranga, 1st May, 1871.

SIR,—

I have the honor herewith to forward tracings of the survey of that portion of the Tauranga and Taupo Road from Puhirua (Rotorua) to Niho o te Kiore, together with schedule, showing amount of work now under contract and ready to let, and detail estimates for the same. Tracings from Oropi to Puhirua\* have been forwarded.

I am going inland on the 3rd instant, to try and settle with the Natives again. (The Hon. J. D. Ormond has instructed Mr. Maling to accompany me as interpreter, as he thinks it desirable arrangement should be made.) The Tuhourangi demands were very exorbitant, they refusing to take less than £4,000 for the work from Te Hemo to Niho o te Kiore, my estimate being £2,547.

The Ngatiwhakaue requested me to arrange with them from Waititi to the Hemo, but I could do nothing with them, as they wanted day pay. From what I can learn, there has been a clerical gentleman doing great harm with the Natives, saying they were working too low.

Should the Natives not come to terms, would the Government be willing to allow Mr. Jordan to take the work at the estimated cost? The Maoris have written and telegraphed, asking him to take it, and employ them by the day. Mr. Jordan has had a conversation with me on the subject, and states that, after he examines the line of road, and satisfies himself that the estimate is sufficient, he would take it. Should the Natives still hang back, I would advise this, as Mr. Jordan would have a few Europeans employed, as he now has on his new contract; and I feel sure that the work would be better done and bridges well built. This is work that cannot be left to competition, as the land belongs to Natives.

Will you reply to this, either one way or the other, to Rotorua; I will then know how to act. I fancy this letter will reach you before much can be done.

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

I have, &c.,  
A. C. TURNER.

P.S.—The span at Niho o te Kiore, Waikato, is 120 feet; very deep water, varying from 22 feet to 32 feet; banks, 4 feet on south side (rock), 22 feet on north side (very soft rock); 130 foot truss bridge would do here, of one span. There is very good building stone for abutments on the spot.—A. C. T.

\* For direction of road from Oropi through the Mangorewa Forest to Puhirua on to Rotorua Lake, see plan enclosed in Mr. Heale's report, page 10.

Enclosure in No. 27.  
ABSTRACT showing Amount of Work now under Construction and Ready for Letting Out.

| Division. | Section.            | From.                 | To.                         | Distance in Chains. | Estimated Cost. | Contract Price. | When to be completed. | Names of Contractors and Chiefs with whom arrangements must be made.                                     | How Payable.                                   | Remarks.   |
|-----------|---------------------|-----------------------|-----------------------------|---------------------|-----------------|-----------------|-----------------------|--|--|--|
| 1         | 1                   | WaioROI               | Oropi                       | 640                 | £ s. d.         | £ s. d.         | July 18, 1871         | R. C. Jordan   | 80 per cent. on value of work done             | This contract is now completed with the exception of the bridge, which is more than half up.<br>* These amounts have been authorized since work commenced.<br>£3,180 includes the construction of bridges on No. 4 Division; £889, estimated cost of bridges on No. 4 Division. This work is now progressing favourably.<br>£889, estimated cost of bridges, deducted, as it is included in Mr. Jordan's contract, No. 2 and 3 Division. £100 allowed for tools, &c., for Natives. |
| 2         | 1, 2, 3, 4, 5, 6, 7 |                       |                             |                     | 1,340 0 0       | 1,300 0 0       |                       |  |  |  |
|           |                     |                       |                             |                     | 21 0 0*         | 21 0 0*         |                       |  |  |  |
|           |                     |                       |                             |                     | 2 5 0*          | 10 10 0*        |                       |  |  |  |
| 3         | ...                 | Oropi                 | Te Rerenga                  | 700                 | 2,618 0 0       | 3,180 0 0       | Dec. 15, 1871         | R. C. Jordan   | 80 per cent. on value of work done             |  |
|           |                     |                       |                             |                     | 889 0 0         |                 |                       |  |  |  |
| 4         | 1                   | Te Rerenga            | End of Forest, Rotorua side | 685                 | 3,507 0 0       |                 |                       | Wi Katene, Te Taipa, Retimana, Wetini, of Ngatirangi-wewehi Tribe  | £160 to be paid on the completion of mile each |  |
|           |                     |                       |                             |                     | 3,887 17 0      | £200 per mile   | Jan., 1872 ...        | Same as above,   | ...  | Not let.   |
|           |                     |                       |                             |                     | 889 0 0         | 1,712 10 0      |                       | Wi Katene, &c.   | ...  | Not let.   |
|           |                     |                       |                             |                     | 2,998 17 0      | 100 0 0         |                       | Ditto  | ...  | Not let.   |
| 5         | 1                   | Rotorua end of Forest | Awahua at Puhirua (Rotorua) | 245                 | 342 10 0        | ...             |                       | Petera Pukua-tua, Te Tapihana, Arekatera, Te Puni, Ngahuruhuru, of Ngatiwhakaue and Ngati-raukawa Tribes | ...  |  |
|           | 2                   | Puhirua               | Waititi                     | 140                 | 145 0 0         | ...             |                       |  | ...  |  |
|           | 2                   | Waititi               | Ohinemutu Flat              | 324                 | 526 2 6         | ...             |                       |  | ...  |  |
|           |                     |                       |                             |                     |                 |                 |                       |  |  |  |
|           | 3                   | Ohinemutu Flat        | Hemo Gorge                  | 284                 | 646 19 0        | ...             |                       |  | ...  |  |
|           |                     |                       |                             |                     |                 |                 |                       |  |  |  |
| 6         | ...                 | Hemo Gorge            | Waikaukau                   | 659                 | 677 0 0         | ...             |                       | Te Kapa Rangipuwahē, Manihēra, Mahi Ka-hauparoa, Aporo Whakairi-kawēi, Tamati Paora, of Tuhourangi Tribe | ...  | Not let.   |

Public Works Office, Tauranga, 1st May, 1871. A. C. TURNER, Resident Engineer.



## No. 28.

Mr. TURNER to Mr. KNOWLES.

Public Works Office, Tauranga, 17th May, 1871.

SIR,—

I have the honor to inform you that I returned from the interior on the 10th instant, where I was endeavouring to negotiate with the Tuhourangi Tribe for the construction of that portion of the Tauranga and Taupo Road from Te Hemo to Niho o te Kio, but have been to a certain extent unsuccessful. From what I can learn, these Natives are very anxious to get their land ready for cropping before commencing to work: after they have done this, I think there will be no trouble in arranging matters with them.

The Ngatitawera have offered to build this road by another route, as they say, through their own land.

Mr. Clarke, Civil Commissioner, states that this would cause dissatisfaction and difficulty, as he thinks the Tuhourangi Tribe have a claim upon the property. I have, therefore, given up the idea of giving them the work. This portion of the road can very well stand over for a time, as it will be some months before the forest section will be completed, and the work can be done in a short space of time when once commenced. That section of the road from Waititi to Te Hemo, through the Ngatiwhakaue land, I did not succeed in arranging, although a large number of the tribe were willing, but were overruled by Temuera, Paora Te Amohau, Rotohiko, and Henare Pukuatua. Three of the former are receiving Government pay, and are the men who ought to assist instead of opposing the Government; but I trust before long they will come to terms.

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

I have, &amp;c.,

A. C. TURNER.

## No. 29.

Mr. CLARKE to the UNDER SECRETARY, Native Department.

SIR,—

Civil Commissioner's Office, Auckland, 12th June, 1871.

I have the honor to furnish, for the information of the Hon. the Native Minister, a full report of my negotiations with the Natives for the construction of that portion of the main line of road to Taupo lying between Tauranga and the western side of Rotorua Lake, and known by the Natives as the Mangorewa Forest Road.

The first difficulty with which I had to contend was the apparent reluctance of the Native owners of the soil to break through their traditional prejudices in regard to this particular track. In early days this belt of forest was the scene of several bloody encounters between the Rotorua and Tauranga Natives, in almost every instance with advantage to the attacking party, from the facility with which they could advance unperceived by their unsuspecting foes. These ambushes, massacres, and "kohurus" were so frequent, and so terrible in their results, that the perpetrators themselves became alarmed.

A meeting was, however, arranged between the contending parties, and a solemn compact entered into by the chiefs and "Tohungas" of the respective tribes, declaring that thenceforward no hostile party should pass over the Mangorewa Stream to attack the other, under the pains and penalties of the displeasure of the gods. Two large totara trees, standing on either side of the Mangorewa Valley, are pointed out as the witnesses to this treaty, and have served to keep succeeding generations in mind of the engagements made by their ancestors. It is said that this treaty has been religiously kept.

The Tauranga Natives would not allow Te Whaharoa to pass along that road to attack Rotorua, and the loss sustained by Colonel Fraser's mixed force of Europeans and Arawas, last year, is attributed to the violation of this tapu.

Then again, most of the Native owners of the soil (Ngatirangiwehi) have been hostile to the Government, and have been staunch supporters of the Waikato king party. The severe handling they got from our forces at Tapapa last year on the one hand, and the non-intervention in their behalf of the king party on the other, decided them in making their submission. This was certainly a strong point in our favour, but it must be borne in mind that they could not shake off in a day the theories they have been schooled in for the last twelve years. The making of this Mangorewa Forest Road was urged as a test of their sincerity.

After a great deal of argument, in which the chiefs wished to show the great advantages the Europeans would derive from having the road made,—and I, on the other hand, having pointed out the great benefit they would reap from making their settlement, instead of being as at present the most distant, the nearest, Arawa village to a good sea port, as well as throwing open their lands, which are of good soil, to beneficial occupation by Europeans,—I at last got them to yield, so far as to give a hesitating consent to allow the survey of the line to be made. The question of the remuneration for forming the road was discussed, but, as I had no authority to do so, I did not close with them, but a certain rate was named and forwarded for the approval of the Government. This was the position of the matter at the beginning of last winter.

During the winter, Mr. Turner, the now Resident Engineer in connection with the Public Works Department, with great perseverance forced through the survey, in spite of a wet and severe season and the obstacles raised by the most trying of all trying Arawa Tribes. I arranged a meeting with the Ngatirangiwehi and Ngatikereru Tribes, at Te Awahou (Puhirua), for the 8th of March last. Mr. Turner accompanied me. On the 9th the korero commenced, and I soon found that the lapse of time had produced a fruitful crop of objections, many of them most frivolous and absurd. These, and the extravagant demands made, so disgusted me that I very nearly lost all patience. I got up to depart. This had the desired effect, and they begged me to remain till they had discussed the matter amongst themselves. While this discussion was going on I was visited by the principal chief, who requested to be privately informed of my ultimatum; I told him, knowing that every word I said would be carried to the meeting.

In the evening I was sent for to the whare runanga, and I was asked my terms. I told them; and, after some discussion as to details, the following was agreed upon:—

1. The Natives to fell the bush one chain wide, and form road eighteen feet.
2. Natives to build all bridges except three, and the Government to find all necessary ironwork for the same.
3. The three bridges excepted to be built by Government, the Natives allowing necessary timber to be taken from the forest without charge.
4. The formation of road through Mangorewa Valley to be an open question, as there was a great deal of stone.
5. The Government to find pick-axes, crowbars, cross-cut saws, and tackle, if necessary.
6. For this work they would get at the rate of £200 per mile, and to be paid 80 per cent. as work advanced and was approved of.
7. The Government to give them assistance in preventing trespass by Europeans in the pigeon season (from 1st March to 1st August).
8. Work to commence as soon as they returned from Ohiwa.

After my return to Tauranga, I assembled the Natives interested on the Tauranga side of Mangorewa Forest. I told them that I could only repeat to them the arrangements I had made with the Ngatirangiwehi and Ngatikereru. They directly replied that every hapu was for itself: that if they succeeded in getting more advantageous terms than the Ngatirangiwehi, no one could complain. Thereupon commenced a long and tedious haggling, but I would not make the least concession.

The meeting then broke up, but I gave them to understand that if they did not come to terms soon, I should feel myself at liberty to arrange with others, either European or Native.

Shortly after this, Mr. Jordan, the person who had contracted to form the road between Waioroi and Oropi, called upon me, and asked if I had any objection to his making arrangements with the Natives, as he had been given to understand they were willing that he should do so. I replied that there could be no objection, provided he did not exceed the amount at which the work had been offered.

Mr. Jordan succeeded, in two or three days, in completing his arrangements, and stated his willingness to undertake the work at £200 per mile, provided the bridges of the whole line (including the three excepted from the agreement with the Ngatirangiwehi on the Rotorua side of the forest) were let out to him for construction. After exchanging telegrams, the Hon. the Premier was pleased to give his assent to the arrangements made.

Some time after this, the Tauranga Natives, upon reflection, thought that they had not made the best bargain possible for themselves, and got up a string of objections and difficulties which *were* to arise between themselves and the contractors; but, after an explanation from the contractor, I was satisfied that he intended carrying out his part of the agreement, and I told the Natives that I should hold them to theirs. Seeing this, and having full explanation from their employer, they agreed to go to work at once. This delay is to be regretted, inasmuch as one month of good fine weather has been lost.

\* \* \* \* \*

I have, &c.,  
H. T. CLARKE,  
Civil Commissioner.

The Under Secretary, Native Department,  
Wellington.

NOTE.—At one time the whole line of road from Tapuaeharuru, at the head of Lake Taupo, through Niho o te Kiore to Puhirua, at the head of Lake Rotorua, was under the direction of Mr. Bold, and several letters relating to this road will therefore be found in the first section of the East Coast District series. Subsequently, Mr. Bold's direction was arranged to terminate at Niho o te Kiore, the remainder northward being entrusted to Mr. Turner, Engineer in charge of the Bay of Plenty District.

## EAST COAST DISTRICT.

## I.—GENERAL REPORTS FROM HIS HONOR J. D. ORMOND AND MR. BOLD.

## No. 30.

His Honor J. D. ORMOND to the Hon. the COLONIAL SECRETARY.

SIR,—

Napier, 24th September, 1870.

As the season for profitably engaging in road-making operations is approaching, I hasten to call the attention of the Government to the roads in the district under my charge which appear to me of greatest importance, and I shall be obliged if you will advise me as soon as possible what sums can be devoted to the different lines I shall particularize, as the extent and character of the works to be undertaken must be regulated by the money available for each road, and it is desirable, before the works are commenced, to arrange in such manner as shall insure that the several roads will be opened for traffic with the money that may be apportioned to each. What I mean is, that on the amount available for each road must depend the class of works to be executed.

The roads which I recommend should be proceeded with are,—

The Taupo Road; the road through the Seventy Mile Bush to Manawatu and Wairarapa; the road connecting Wairoa and Poverty Bay; and the road from Wairoa to Waikare-Moana Lake.

1. The line from Napier to Taupo is of great importance as a military road, and a good deal has been done during the past year to improve it: still, a great deal yet remains to be done to make it even a passable bridle road. Such work as has been effected has been done by civilian labour employed at a high rate of wages; and in the case of that portion of the line between Runanga and Tapuaeharuru by Native labour, under contract with the Chief Poihipi, who opened that part of the road for carts. Very little has been done by the Constabulary, chiefly owing to the long continuance of active operations at Taupo, and, latterly, to the men being employed in improving the posts at which they are stationed. I trust, however, that their regular employment in road works during the coming summer will be sanctioned, and if so a very great deal should be effected by them.

I enclose herewith a report by Mr. Bold, Telegraph Surveyor (Enclosure No. 1), who has charge of the works on this line, and will now state my own general view of what should be done to make the line sufficiently good for the principal purpose it is at present required, namely, as the means of occupying Taupo and feeding a force there.

The road to Titiokura Saddle is now a summer dray road, and can, at no great expense, be considerably improved. From there to Te Haroto, a line available for drays can be made at comparatively little cost. From Te Haroto to Turangakumu a new line is now being opened by Natives of Paora Hapi's hapu, under contract, and when finished, and the road from there to Tarawera improved, drays can be taken to that post. From Tarawera to Runanga the country is very broken, and forming a dray road would, I consider, be too expensive to justify its being undertaken.

The bridging the Waipunga at its two crossings (timber for which is now ready), and the improvement of the line by several small bridges, and using better gradients for some of the side cuttings, will make it a good bridle track, and that is all I think that can at present be done with this portion of the line.

From Runanga to Tapuaeharuru the line is now used by horse carts, and very little labour is required to make, and keep it an excellent road. A bridge is wanted over the Rangitaiki, and the timber for it is now ready. One or two other small bridges require also constructing to make this part of the road really good.

Mr. Bold's report will indicate the expenditure he thinks will be needed over the line from the Napier made road to Tapuaeharuru. I think that the road on the Napier side of Titiokura should be improved by ordinary labour, and that most of the other work should be done by the Constabulary. I do not include bridging the different streams, some of which, such as the Waipunga, are large and require skilled labour, and I also do not refer to the portion of the road on which the Natives are now engaged. Estimating roughly, I think, provided the labour of the Constabulary is available, that £7,000 additional would enable a good and useful road, not liable to stoppage from floods, to be completed. I have directed Mr. Bold to lay out work at once in the vicinity of each of the posts on the line, and I hope at an early date to be able to report that the Constabulary are employed. It will be necessary, as the work proceeds, to shift the Constabulary along the line; but in summer this should be no bar to their employment. The carrying out of the works I recommend would make the Napier-Taupo line a really useful military road, capable of supplying any force that might be needed at Taupo, if other roads were at any time not available.

In connection with the road from Napier to Taupo, and in continuation of that part of my report, I beg to enclose a report by Mr. Bold (Enclosure No. 2), accompanied by a memorandum by Mr. Heale, on the line of road from Tapuaeharuru to Rotorua. This district is not under my agency, but I think Mr. Bold's services might be availed of for directing works as far as Rotorua on the line from Taupo to Tauranga; and I would strongly recommend that that line should be pushed on. So far as I can gather, the line of road by Oruanui and Niho o te Kioire is by far the easiest and best line, and passes entirely through the Arawa country: moreover it is the direct line to Tauranga, and can easily be connected at Rotorua with Kaiteiriria and the lines to Maketu and Matata. I see so little difficulty in carrying out this work, that I differ with Mr. Heale in thinking it advisable to open a line from Opepe to Kaiteiriria, by the late Captain St. George's station. The latter line passes through unoccupied country, and will require, so far as I can ascertain, almost as much expenditure to open it as the other line, which must be the permanent road. I have only to add that the Natives are anxious for employment on the

line by Oruanui and Niho o te Kiore, and that I would recommend the making that part of the line by Native labour under contract.

*Note.*—Section 2 of this letter, relating to the road through the Seventy Mile Bush to Manawatu, has been extracted, and will be found in that section of the papers.

3. The next road to which I will call attention is the road between Wairoa and Poverty Bay. It is very desirable to improve the communication between these places, and the roads connecting them are almost impassable. I say roads, for there are two; the one by the coast, and the other inland by Te Reinga, and both important as military roads.

A portion of the East Coast Road passes through heavy bush, which is reported to me as very bad indeed. The clearing a line through this bush, bridging a few of the creeks, and making side cuttings here and there, would improve this line as much as is necessary, and I think a sum of about £500 would be sufficient for the purpose.

The inland road from Wairoa to Poverty Bay, by Te Reinga, is the better line, and was generally used before the disturbances. Any work of importance on the line between Wairoa and Te Reinga would be on the road to Waikare-Moana, and might be given to the Wairoa Military Settlers, who were recommended assistance of this kind by the House of Representatives. A sum of £1,000 might be profitably expended on the road from Wairoa to Te Reinga and towards Waikare-Moana; and for the remainder of the road to Poverty Bay, including the main line through the inland portion of the Poverty Bay District, another sum of £1,000 would be well expended. If these roads are assented to I should propose to employ Mr. Whitty (the officer who did such good service lately in connection with the Waikare-Moana expedition), to superintend them, for which he is well suited, and knows the country thoroughly between Poverty Bay and Wairoa, and its road requirements.

I think I have in this report brought under notice the road works which are most important, and, when informed of the decisions of the Government in respect of them, can supply such fuller particulars as may be needed.

The Hon. the Colonial Secretary, Wellington.

I have, &c.,  
J. D. ORMOND.

### Enclosure 1 in No. 30.

Mr. BOLD to His Honor J. D. ORMOND.

SIR,—

Napier, September 14th, 1870.

I have the honor to submit, for your information, the following report on the road works in this district, with estimated cost of those in progress and those recommended to be undertaken.

#### *Tapuaeharuru to Runanga.*

The contract entered into with Poihipi for opening dray communication on this section is now determined and the final payment has been made. The portions I deemed incomplete have been finished as satisfactorily as could be expected, considering the difficulties under which the work was executed.

In future contracts it will, I think, be found advisable to fix a price for each kind of work at per chain or yard cube, &c.

The side cuttings, being chiefly through pumice, suffered from the late unusually heavy rains; those near Opepe have been restored by the Constabulary stationed there.

Near Runanga four creeks require bridging and two require new approaches: those at present existing have not been well laid off and are unnecessarily steep for drays. The item £120 is required for these works. The item £150 is intended to cover the cost of extraneous labour, either European or Native, required in maintaining cuttings and executing any work at a distance, and to which it may be found inconvenient to send Constabulary. The item £410 is the estimate cost of the two bridges across Rangitaiki and Waipunga; which sum includes supply of timber, ironwork, and carriage. The timber for these bridges is now in course of delivery by the bullock teams belonging to the Government. The recent bad weather has protracted the completion of these works, but it is anticipated they will now soon be ready for traffic.

With exception of the creeks near Runanga, the road will require but little labour to be kept in good order, and equal to traffic demands. A small party going over the entire length occasionally, would suffice to preserve it in good condition. In winter there are several portions which become very soft and swampy, and would be all the better if drained; but as the road is not confined in these places, they can very well be left until more pressing works are finished.

#### *Runanga to Titiokura.*

With reference to this section, I would propose that the road in the vicinity of Tarawera be laid off for a dray road. Same plan could be observed at Runanga. Of the thirty bridges, three-fourths are required south of Tarawera. The estimates for them contemplate bridges twelve feet wide, of squared and sawn heart of totara or matai. The large bridges across Waipunga (at lower crossing), Au Au, and Wainone Creeks, it is proposed should be dray bridges.

The erection of the Waipunga Bridge at the span named is dependent upon whether satisfactory gradients can be secured along a trial line, I propose cutting on the left bank. In case the line is successful, I would recommend that the bridge be constructed wide enough for drays. The cost of such a bridge would be covered by the sum named in estimate. If, on the contrary, the trial line proves unfeasible for road, then the erection of a bridle bridge of larger span is the alternative, at probably the same cost. The urgent demand for these bridges was lately evinced by the high floods in the rivers, which impeded traffic for a week at a stretch.

The erection of these works can only be satisfactorily performed by skilled labour, and as there happens to be now a competent class of competitors in the neighbourhood, it would be well to put the work in hand without loss of time. The work let in small contracts will be found more economical than in large contracts, as past experience here has shown.

The clearing of bush one chain wide between Te Haroto Block-house and Turangakumu has been let to the Natives at a reasonable rate, viz., 15s. per square chain. The tools necessary are lent to them by the Government, and food is supplied to them on payment. The price is the same paid to Akeho Natives for similar work during telegraph erection, and it ought to be remunerative if they are not idle. The Natives have huddled themselves near the work, and have ere this commenced. The tribe employed is that of the late Paora Hapi, numbering about twenty working men.

When the work of clearing has advanced a little it is proposed to mark out the cuttings, and let the earthwork to them at per cube yard, or, if found more convenient, at per lineal chain. Two bridges are included in the estimate for earthwork, which will extend to foot of Turangakumu, and is intended to be wide enough for drays.

The earthwork required between Te Haroto and Mohaka could very well be performed by men from Te Haroto post; that between Titiokura and Mohaka by men stationed at the former stockade; and it may, perhaps, be found necessary to establish an intermediate camp at Mohaka, as the work in the immediate vicinity of the river is very heavy cutting. Before any work is commenced, the road should be carefully set out and sectioned: there is then a reliable record, from which it is easy to restore levels should any mark become obliterated.

*Titiokura to Glengarry.*

As far as my examination of this line has gone I consider it the best line for a permanent road to connect Taupo Road with the Hawke's Bay permanent road. The leading range over which the proposed line runs is even, and the slopes easy for the greater part of the distance. A bridle track exists, and there is an entire absence of creeks. The estimate given is the nearest approximation which can be made from data in my possession at present.

I have omitted in the estimate furnished provision for the professional assistance which would become absolutely necessary should the works contemplated be at once proceeded with.

The best course would be to have the lines set out at once on the plan I have mentioned; they are then always available, as measures can be taken to prevent their obliteration.

I have, &c.,  
EDWARD BOLD.

His Honor J. D. Ormond,  
General Government Agent, Napier.

Sub-Enclosure 1 to Enclosure 1 in No. 30.

APPROXIMATE Estimates for Opening up Dray Communication and Improving Road between  
Glengarry and Rotorua.

|   |         |    |    |
|---|---------|----|----|
| Tapuaeharuru to Rotorua, <i>via</i> Niho o te Kiore and Haparangi, 46 miles, at £40 per mile,                           | £       | s. | d. |
| exclusive of bridges, by Native contract, labour  | 1,840   | 0  | 0  |
| <i>Tapuaeharuru to Runanga Bridge (Tohea).</i>  |         |    |    |
| Rangitaiki Bridge and the Waipunga Bridge   | £410    | 0  | 0  |
| Four small bridges  | 120     | 0  | 0  |
| Maintenance of cuttings and improvements  | 150     | 0  | 0  |
|   | 680     | 0  | 0  |
| <i>Runanga Bridge (Tohea) to Titiokura.</i>   |         |    |    |
| Thirty small bridges and culverts, 450 feet at £2 10s. per foot   | 1,125   | 0  | 0  |
| One bridge, 60 feet (?), Waipunga   | £300    | 0  | 0  |
| One bridge, 30 feet, Auau Creek   | 120     | 0  | 0  |
| One bridge, 30 feet, Wainone Creek  | 120     | 0  | 0  |
|   | 540     | 0  | 0  |
| Contract entered into with Natives between Te Haroto and Turangakumu, 240 chains bush cutting, at 15s. per square chain | 180     | 0  | 0  |
| Earthwork between Te Haroto and Wainone (proposed to be given to the Natives), 6 miles, at £240 per mile                | 1,440   | 0  | 0  |
| Tools for Natives   | 25      | 0  | 0  |
| <i>Remainder of Formation between Runanga and Titiokura by Constabulary.</i>  |         |    |    |
| Titiokura to Glengarry, to open dray communication, survey  | £130    | 0  | 0  |
| Earthwork, 23 miles, at £200 per mile   | 4,600   | 0  | 0  |
|   | 4,730   | 0  | 0  |
| Total   | £10,560 | 0  | 0  |

E. H. BOLD.

Sub-Enclosure 2 to Enclosure 1 in No. 30.

MEMORANDUM by Mr. BOLD for His Honor J. D. ORMOND.

*Distance from Tapuaeharuru to Niho o Te Kiore, twenty-two miles; thence to Rotorua, twenty-four miles. Total, forty-six miles.*

THESE distances are scaled on Mr. Heales' map, and will be under actual distance road would extend. A sketch is annexed. The road from line indicates (roughly) the course road would take. Country is more undulating and broken than that between Tapuaeharuru and Opepe, but, as formation is pumice, cuttings are easy to make. As there are long stretches where little or no work is required, I think estimate will be near the mark.

12th September, 1870.

E. H. BOLD.

## Enclosure 2 in No. 30.

MEMORANDUM by Mr. HEALE.

THERE can be no reasonable doubt that the permanent road from the Bay of Plenty to Taupo will be from Tauranga, passing west of Lake Rotorua, and continuing along the west side of the plain near Horo Horo, crossing the Waikato at Niho o te Kiore, where it will meet the road from Waikato; but this road cannot be available for traffic for a considerable time. As a line for immediate use, I am strongly of opinion that very little labour would suffice to open a dray road from Kaiteriria through the Kaingaroa Plain, near the station of the late Captain St. George, and not crossing the Waikato at all, and leading either direct to Opepe or to Tapuaeharuru. This line is so good and level that it will only be secondary to the other because it starts from the inferior ports of Maketu or Matata; and as it will always be useful for communication with those places and Opotiki, it would be much better to make improvements on this line rather than on that over the broken and swampy line by Orakeikorako, which would be abandoned as soon as the road by Niho o te Kiore is opened. I would strongly recommend immediate exploration of this route.

THEOP. HEALE,  
Inspector of Surveys.

17th September, 1870.

## Enclosure 3 in No. 30.

MEMORANDUM by Mr. BOLD to His Honor J. D. ORMOND.

THE track referred to by Mr. Heale, viz., from Paeroa to Opepe, *via* the late Captain St. George's station, I have been over. It is one of the lines I examined when exploring for the telegraph. The only drawback to the line of telegraph coming direct from Omaruti to Paeroa was the proximity of the line to the Urewera, and also the long stretch of uninhabited country which must be passed through, entirely devoid of the timber necessary for construction.

The objections to the line from Paeroa to Opepe (on right bank of Waikato) were chiefly the long distance to haul timber, and also the necessity of constructing hauling tracks, and, for the purpose of maintenance, bridging the numerous unfordable feeders of the Waioapu and Waikato. These streams occur between Te Aputahou Bush and the Paeroa Range: several can be avoided.

With regard to the construction of a road, from what I remember, the earthwork required would be small.

The most expensive item of work would be bridging the streams before referred to. Of these there are a considerable number. The spans average 25 feet. The Waioapu, where I crossed, would require a span of 45 to 50 feet.

Between the late Captain St. George's station and the Paeroa the rivers and creeks have low banks, and would therefore not require approaches. The timber for the bridges would have to be brought from Paeroa Range and from Te Aputahou. In each bush totara can be procured.

I have sketched on the tracing the track I travelled over between Paeroa and Opepe.

EDWARD H. BOLD,  
Telegraph Surveyor.

Napier, 21st September, 1870.

## Enclosure 4 in No. 30.

Mr. BOLD to His Honor J. D. ORMOND.

SIR,—

Napier, 14th September, 1870.

With reference to the proposed road between Tapuaeharuru and Rotorua, and to your intimations that it is intended mainly as an additional line of communication to be available for the conveyance of supplies and stores, etc., from the northern side of Taupo to the interior, should future military operations require, and also that it is in contemplation to make the line a practicable "summer dray track" only, and not to incur the greater expense contingent to the construction of a road more permanent in character, I have the honor to submit the following remarks on the routes which (so far as my present knowledge of the country extends) appear open for adoption.

I append a tracing made from Mr. Heale's map, on which are delineated the routes mentioned.\*

Assuming that it is concluded the road shall pass Tapuaeharuru and Oruanui, the line would run near the present bridle track. The labour required to open the first eleven or twelve miles for drays would be inconsiderable: it would consist chiefly of shallow sidings, through light soil and pumice drift. Three or four bridges of small size would also be required, and about a half mile of shallow draining.

At Oruanui the old mail track branches to Cambridge; the Waikato is crossed either at Waimahana or lower down the river. Following the track towards Rotorua, a patch of bush is reached, named Tuparahaki. It is here the track branches off to Niho o te Kiore, the main track leading to Orakeikorako. Up to this point, viz., Tuparahaki, the present bridle track will be common to all routes on the left bank of the Waikato, leading in direction of Rotorua or Patetere.

The Niho o te Kiore Road I travelled over and examined when exploring for the telegraph line. The country intersected by this track is gently undulating. For the major portion of its length the track courses parallel with streams tributary to the Waikato, a circumstance in favour of economical construction. I considered, at the time of examination, that a road by this route could be constructed at small cost. Should the line of road be completed for drays from Tauranga to the west side of Rotorua, *via* Otane Wainuku, the best line for permanent extension will no doubt be found near this route.

The road commonly used between Tapuaeharuru and Rotorua is by way of Orakeikorako. Along this track the telegraph line is in course of erection. As I have not travelled the whole length of this line I am unacquainted with the nature and magnitude of the obstacles said to be most obstructive to

\* See tracing attached to Mr. Bold's report, page 13.

cheap road formation along it. The difficulties, however, are said to exist between Orakeikorako and the Paeroa Range, where the track is described as intersecting alternately broken spurs and swamps. These objections may possibly, on inspection, be found less than are now represented.

Among the advantages possessed by the route *via* Niho o te Kiore may be mentioned the generally easy character of the country for road construction, the narrow channel in the Waikato River (at Otimuri),—eminently adapted as a site for an inexpensive bridge, span being only 30 to 35 feet,—and also the fact that this is the most direct line for the extension to Taupo of the Tauranga Road, *via* west side of Rotorua.

In deciding on which line the contemplated expenditure will be most judiciously incurred, it should be remembered that much of the work performed in the mere opening of dray communication will become inutile whenever the construction of a permanent road is decided upon. Regard should also be given to the important requirements of telegraph maintenance, and to the fact that dray communication is open, or on the point of being opened, to Kaiteriria, bringing to narrow limits the distance requiring improvements.

The road from west side of Rotorua could easily be made passable to the nearest point of Kaiteriria Road.

In conclusion, I would respectfully recommend that before any operations are initiated in the district beyond Tapuaeharuru, the Natives be convened and met by an officer of the Native Department, in order to arrange matters in connection with carrying on of works amicably, and to the preclusion of disagreements and stoppages like those of recent occurrence at Orakeikorako.

I have, &c.,

EDWARD H. BOLD,  
Telegraph Surveyor.

His Honor J. D. Ormond, Napier.

### No. 31.

His Honor J. D. ORMOND to the Hon. Mr. McLEAN.

(Telegram.)

18th October, 1870.

POIHIPI is back from Whakamaru. He reports favourably of feeling of Ngatiraukawa. A number of them, and also of West Taupo Natives, are to assemble at Tapuaeharuru on the 22nd instant, to talk about roads, &c. Mr. Locke and Mr. Bold start to-morrow to attend the meeting, and Mr. Hamlin remains at Tapuaeharuru until it is over. Mr. Bold accompanies Mr. Locke to mark out road work between Taupo and Kaiteriria, as I understand Natives are anxious to commence work at once. Mr. Hamlin informs me that the different Natives along the line, including Orakeikorako Natives, will readily undertake the work if let, as I propose, in lots of a few miles. I purpose giving a lump sum for each piece let. Reference will be made before arrangements are concluded. You have already advised me all this is in accordance with your wishes.

ORMOND.

### No. 32.

His Honor J. D. ORMOND to the Hon. the MINISTER for PUBLIC WORKS.

SIR,—

Napier, 30th November, 1870.

I regret that I am unable to report by this opportunity upon the progress of public works in this district, but in the absence of Mr. Bold, the officer under whose charge most of these works are, it is necessarily impossible for me to do so. I expect Mr. Bold back in a few days, and will not fail to supply you with full information after his return. The only new work that has been contracted for which I have not yet reported is the bridle track from Muriwai, at Poverty Bay, to the Mahia. An arrangement has been made with the Natives to open this line for a sum of £400, and a definite agreement has been concluded with them. Mr. Bousfield, surveyor, has been engaged to lay out this road and superintend it, for which he is to receive £50. I will forward a copy of the agreement with the Natives so soon as it reaches me. There is a good deal of bush cutting on this line, and I think the sum arranged for is very moderate considering the work that has to be done.

Mr. Bold has lately been laying out the dray road between Taupo and Rotorua. The first eleven miles of this road, commencing at Tapuaeharuru and extending to Tuparahaki, is let to Poihipi and Hohepa's people, and the work is progressing well. I am sorry to say I heard yesterday from Mr. Bold that he had failed to arrange with the Rotorua Natives for the portion of the road between Rotorua and Niho o te Kiore. The Natives express a wish for road work, but desire to be employed by the day. I think it better to let the work stand for a little, and they will probably then be glad to accept the terms offered them. I have received offers from the Ngatiraukawa to undertake the part of the road between Tuparahaki and Niho o te Kiore, and have directed Mr. Bold to see them, and, if they agree to perform the work on reasonable terms, to lay it out and start them. This he is now doing. I hope these Natives may be arranged with, as this is the only portion of the line respecting which any difficulty was expected from the anti-road Natives. I shall report to you as soon as I hear further from Mr. Bold, after he has seen the Natives.

In all cases where contracts are entered into, Mr. Bold goes over the line with the contracting parties, and explains the work required; an agreement is then executed, and the work is left in charge of Mr. Maling, who remains to overlook the work. He is a surveyor, and was sergeant in the Corps of Guides; a good man, and one who understands Natives. He receives pay at the rate of 14s. per diem.

A sum of £500 was authorized for the improvement of the bridle track by Orakeikorako to Kaiteriria, but the Natives, the same who obstructed the telegraph so long, declined the work on the terms offered them, and nothing has yet been done to that road.

On the road from Napier to Taupo two parties of Natives are at work between Tarawera and Runanga; they are both working on contracts, bush felling and clearing chiefly. Copies of the agreements with them and information as to the work they have done will be supplied on Mr. Bold's return.

A month ago I instructed Inspector Roberts to distribute the men at the different posts on the Taupo line so as to best avail of their labour on the road, and gave definite instructions thereon, which met the approval of the Hon. the Defence Minister. I have just received a telegram from Inspector Roberts, informing me that the distribution of the men has been delayed from their having to march to and from Pohue to exchange their arms, but that the force is now distributed in accordance with my directions, and that sixty men will be available in a day or two for regular work upon the roads.

In the case of the railway and road line through the Seventy Mile Bush, I have communicated to Mr. Weber your decision that the exploration of the three lines described by Mr. Blackett should be proceeded with and completed, and he is now engaged upon that duty.

Mr. Weber is also instructed to keep separate accounts of road and railway expenditure.

I have, &c.,

The Hon. the Minister for Public Works, Wellington.

J. D. ORMOND.

### No. 33.

His Honor J. D. ORMOND to the Hon. the MINISTER for PUBLIC WORKS.

SIR,—

Napier, 5th December, 1870.

On the 30th ultimo I had the honor of reporting to you on the road works in progress in the Taupo District, and promised fuller information on the return of Mr. Bold. As that officer is again delayed in returning, I now enclose telegrams from him, received since my letter was written, which will, I think, satisfy you as to the care that is being taken in exploring and selecting the best lines of road, and generally in the manner Mr. Bold is performing the duties entrusted to him. Mr. Bold of course acts on distinct instructions, and refers in regard to any points involving difficult negotiations with the Natives; but at the same time a great deal must depend upon the manner in which the arrangements with the Natives are carried out, and I consider Mr. Bold to be executing that part of the work with very great prudence and judgment.

I am glad to inform you that, as I expected, and stated in my letter of the 30th ultimo, the Rotorua Natives, who at first declined work altogether except on daily pay, have now accepted the offer of work made to them, and the work will now be continued from Te Ngae,—to which point, I believe, the Maketu Road is open for drays,—on to Niho o te Kiore, and thence to Taupo.

Mr. Bold will necessarily be delayed in starting these works somewhat longer than I expected, but no delay will occur in reporting to you after his return.

I have, &c.,

The Hon. the Minister for Public Works, Wellington.

J. D. ORMOND.

### Enclosure 1 in No. 33.

Mr. BOLD to His Honor J. D. ORMOND.

(Telegram.)

Tapuaeharuru, 30th November, 1870.

ARRIVED here. Could not close arrangements with Ngatiwhakaue, as they would not accept piece work: they want day work. The people at Parekarangi were offered six miles of road for £250. They asked £450. I increased offer to £300, and most of them were inclined to close; they, however, finally decided to have a meeting about it. I was loth to come away without starting them. Will report further.

J. D. Ormond, Esq., Napier.

E. H. BOLD.

### Enclosure 2 in No. 33.

Mr. BOLD to His Honor J. D. ORMOND.

(Telegram.)

Tapuaeharuru, 30th November, 1870.

I HAVE examined the country between Niho o te Kiore and Rotorua, by the route at present in use, and also by a route represented by Native Manihera to be favourable for road *via* Urupunga. The line is direct passing to west of Hapurangi. I spent two days in examination, and find no advantages are to be gained on the present route. There is a third route, crossing Waikato above Niho o te Kiore, and, coursing on right bank of Whirihaki, parallel with that river, passing Hapurangi on east side. This line I have seen for a greater part of distance, from other side of Waikato (from summit of Hapurangi). The Motupuka Natives speak very favourably of it. Ihaia, chief of Ngatitama, says he is anxious for road to commence, and will leave it to us to decide the route, whether by Niho o te Kiore or the crossing higher up *via* Whirihaki. Whichever we select, he and Perenara and Hitiri's people will do all they can to carry out the work. Any differences Ngatiraukawa create, Ihaia says, Hitiri will be expected to settle. From what we overheard at Orakeikorako, I conclude the sudden objections of Ngatiraukawa to road construction by Niho o te Kiore have been caused by Ngatitahu. Some of them left for Cambridge the morning we were at Orakeikorako.

Road work offered to Rotorua Natives, the dray road, being constructed, and passable for some miles past Te Ngae, I concluded best plan would be in meantime to extend that line of communication towards Niho o te Kiore, keeping in view the ultimate extension to Tauranga. I endeavoured to secure the line giving these advantages. I had difficulty at first in settling the proprietorship of localities, in order to give proper hapus the work. This settled, I offered Ngatitawera and Ngatiwhakaue the work from Waengahehu to Waikorowhiti, distance of five miles, for £110. Greater portion is over flat. Replied they wanted day work, and say they have 500 men ready to go to work. They seemed disappointed



there was not work enough to employ them all. I said this was certainly only a small piece, but probably there would be other works undertaken shortly. I asked them to allow me to arrange with other Natives for its construction. They replied, not at piece work; at day work, yes. The next six miles I offered, as previously reported, to the Natives at Parekarangi for £250, increased to £300, with the result reported. The portions offered did not include two bridges, cost £130 together. The section proposed would carry road to within one mile of Horo Horo.

I propose returning to Motupuka to-morrow, and inspecting the approach to upper crossing of Waikato. It is as well to examine all lines suggested by local inhabitants.

The road for eight or ten miles beyond Tuparahaki might be undertaken by Motupuka Natives. They say that as regards the road, Hitiri and themselves are one, but as regards land, that is another matter. I will give you a map containing all information of routes, with topography, &c.

J. D. Ormond, Esq., Napier.

E. H. BOLD.

### Enclosure 3 in No. 33.

MR. BOLD to His Honor J. D. ORMOND.

(Telegram.)

1st December, 1870.

I HAVE received telegram from Tuhourangi, signifying their decision to commence cutting the portion of road offered to them. Mr. Maling will go down when he has finished at Motupuka. I have not been able to get away to-day, but go to-morrow with Perenara. I will write to Natives as you desire, and will start work before I return, if possible.

J. D. Ormond, Esq., Napier.

E. H. BOLD.

### No. 34.

His Honor J. D. ORMOND to the Hon. the MINISTER for PUBLIC WORKS.

SIR,—

Napier, 13th January, 1871.

I regret that I am unable to furnish you, as I had expected, with full reports of the road works in progress under my agency, but Mr. Bold has been so much occupied in field work, that he has been unable to get his reports ready. He is now in Napier busy preparing full information, and filling up the printed returns called for by you.

It is my duty to state that Mr. Bold has been so fully occupied during the past few months that it has been impossible for him to get through more; and when you consider the great length of road he has had to explore and start works upon, viz., from here to Rotorua, you will, I am sure, agree with me, that he has shown great zeal in doing what he has done.

In order that you may have information as to the works in progress, I enclose a memorandum which Mr. Bold has prepared, showing the different contracts now being carried out, accompanied by information as to the works in each. I have before informed you separately as each of these contracts was entered upon.

It is my intention, so soon as Mr. Bold has prepared the reports and returns he is now engaged on, to confer with him as to the works most required on the lines of road under his charge; then to apportion the balance of the sum you have authorized, in such a way as to insure the greatest benefit being derived for the expenditure. The proposals we may arrive at will be duly submitted for your approval, and I should then like to call for tenders for the execution of the work.

The only other works for which arrangements have been completed are for the coast road from Muriwai to the Poverty Bay Plains, a contract for which has been undertaken by the Natives. The work has not yet been started, but I hope will be so immediately. The other road works authorized by you at Wairoa and Poverty Bay will also be proceeded with so soon as I receive authority to employ a competent officer to lay them out. There is a Mr. John Drummond here, who is strongly recommended by Mr. Bold and Mr. Charles O'Neill, and I think he would be very suitable. In a late telegram, I reported that Mr. Bousfield, who had been arranged with to lay out and supervise the coast road from Mahia to Poverty Bay, for £50, was too ill to undertake the duty. This was stated to me by Lieut.-Colonel St. John. I have, however, this day received a letter from Mr. Bousfield, stating that he is engaged in the work, so that, of course, the arrangement with him in respect to that road must stand.

No road work has as yet been commenced in the Seventy Mile Bush. Tenders for the whole line this side of the Manawatu Gorge come in on the 20th of this month, and, having your authority to proceed with the work, I trust to have the whole in progress at once.

I enclose a memorandum by Mr. Bold, giving an estimate of funds required to meet different contracts and works, amounting in the whole to £1,620. The whole of these amounts are due, and Mr. Bold will have to make the different payments as he next goes up the line, which will be in about one week from this date.

The advance of £260 for contingent labour and material, &c., for the month of December, Mr. Bold requires at once to pay men and accounts waiting for the same, and I shall be obliged if you will authorize that advance to Mr. Bold by telegraph.

I have, &c.,

The Hon. the Minister for Public Works, Wellington.

J. D. ORMOND.

### Enclosure in No. 34.

MEMORANDA and Particulars of Contracts and Agreements concluded for Road Construction, (Taupo District).

TE HAROTO to Tupurupuru and Turangakumu. Contract for clearing bush 66 feet wide, logs to be removed, together with all debris, to a distance of 15 feet on either side of centre line, 280 chains, at 15s. per square chain, £210; say, less for rations, £110.—Rawiri, contractor.

Tarawera towards Runanga. No limit fixed, but work will extend for distance of six miles. Contract for clearing, as described above, at 15s. per square chain. Liability, 480 chains, at 15s., £360.—Hamuera, contractor.

Contract for erecting Rangitaiki Bridge. (Runanga to Tapuaeharuru), £100.—J. McKenzie, contractor.

Tapuaeharuru to Rotorua, Section I. Tapuaeharuru to Tuparahaki. Contract for constructing dray road 16 feet wide, including culverts, bridges, and ditches. Distance, twelve miles, £500.—Hohepa Tamamutu, contractor.

Section II. Tuparahaki to Niho o te Kiore. Distance, eight miles. Contract to construct road 18 feet wide, inclusive of bridges, culverts, ditches, and bush clearing, for the sum of £650.—Ihaia and Perenara, contractors.

Section III. Not undertaken. Niho o te Kiore to Ngapuketurua, 20 miles.

Section IV. Ngapuketurua to Hemo (near Rotorua), 6 miles. Contract to construct road 18 feet wide, as described above, for the sum of £300.—Manihera, and Tokowaenga Tribe, contractors.

*Total Liabilities.*

|   | £      |
|---|--------|
| Rawiri ... ..   | 210    |
| Hamuera ... ..  | 360    |
| McKenzie ... ..   | 100    |
| Hohepa ... ..   | 500    |
| Ihaia ... ..  | 650    |
| Manihera ... ..   | 300    |
|   | <hr/>  |
|   | £2,120 |
| Expenses incurred in labour for Runanga Bridge: surveys and tools, and transport ... .. | 200    |
|   | <hr/>  |
|   | £2,320 |

13th January, 1871.

E. H. BOLD.

No. 35.

His Honor J. D. ORMOND to the Hon. the MINISTER for PUBLIC WORKS.

SIR,—

Napier, 23rd January, 1871.

I have the honor to enclose, for your information, Mr. Bold's report on the works in progress on the road between Napier and Tapuaeharuru, and also official returns to the 31st December, as called for by you, relating to the same road.

Mr. Bold's report divides the road into sections, and gives particulars as to the works on each. He is now preparing a similar report on the works going on between Taupo and Rotorua, which I hope to send by this opportunity. When that is done I propose that he shall prepare, with as little delay as possible, specifications of such works as are required to open the road as a dray road to Te Haroto, and to Tarawera if the funds will allow. The sum you have authorized will at any rate open a good dray road to Te Haroto, and, I hope, to Tarawera, as well as make a really good bridle track from Tarawera to Runanga. I am anxious to get the specifications for the works required, which are chiefly side cuttings and bridges, prepared without delay, so that contracts may be called for and the works prosecuted during the favourable season.

The Hon. the Minister for Public Works, Wellington.

I have, &c.,

J. D. ORMOND.

Enclosure 1 in No. 35.

Mr. BOLD to His Honor J. D. ORMOND.

SIR,—

Napier, 13th January, 1871.

I have the honor to submit, for your information, the following report on the progress of the works in connection with road construction between here and Tapuaeharuru (Taupo District), and to enclose returns showing the extent and cost of road completed since the date of statement furnished in June last year.

I should mention that the large amount of field work, embracing exploring, and initiating Native contract labour, has so engrossed my time that it has been impossible to furnish, as required, the regular returns monthly. The returns now submitted include, on single sheets, the work executed on each sub-divisional section during the past six months, and the information contained will, I trust, be found sufficiently explicit for the purpose required.

As the immediate supervisors of each party progress with their respective portions of road, and acquire the method of measuring and keeping the necessary accounts of cost, quantities, etc., etc., the required returns, together with statistical information, can be forwarded with the requisite detail and regularity.

*Road connecting Provincial with Colonial Government Road, Titiokura.*

Several routes for the purpose of effecting this junction have been examined and remarked upon in a separate report. I would urge the desirability of initiating the necessary survey and works during the good season of the year. The work on this section (whichever line may be fixed upon) is considerable, and, if let by European contract, it is very important that the road should be levelled and

sectioned, as otherwise it will be difficult to exercise proper control over construction. This applies to all heavy earthwork similarly let.

The distance it was contemplated the road would reach, to connect with Titikura by either Peturu or Glengarry, is about twenty-three miles. All circumstances carefully considered, it will be found, in my opinion, that the Peturu route will be of most utility to the Colony generally.

#### *Titikura to Mohaka Church Ferry.*

This is a short section, being only three miles in extent. It was anticipated, ere this, that a party of Natives would be available for carrying out the necessary labour, but as yet it has not been possible to finally arrange by this plan. It will probably be found advisable to seek European competition. Some deviations in the line marked off some time back are considered advisable. These occur in descending from Saddle and in the approach on left bank of river. This work will be executed at an early period.

During the past six months, occasional labour was necessary to keep in repair the bridle track and culverts along the left approach to the ferry. A substantial parapet fence has been erected, 500 feet in length. The River Mohaka has been explored for some distance above and below the present ferry, with the view of discovering a superior crossing place for the permanent road. None, however, can be found better adapted for the road from Titikura than the place selected near the site of the crossing now in use.

#### *Mohaka to Tarawera.*

The length of this section is about fourteen miles. The survey for bush clearing has been completed, and a considerable length of incline lock-spitting for the guidance of the several parties at work. On the deviation made in the road between Te Haroto and Tupurupuru (which saves one mile and a half of rough and expensive country) the work of felling and removing timber has been satisfactorily performed by Rawiri and people of the tribe of the late Paora Hapi. The clearing is 66 feet wide and  $3\frac{1}{2}$  miles long. It is expected that an agreement with Rawiri will shortly be concluded for the performance of the necessary earthwork on reasonable terms.

The men of the Armed Constabulary are engaged in constructing a dray road from Tarawera towards Te Haroto, and the work done hitherto is highly creditable. At Te Haroto the Constabulary commenced, at the beginning of the year, with road work from the bush to the Mohaka River. Their earlier employment has been prevented by other pressing duties.

A survey party has been employed, under my own supervision, in cutting the necessary lines through bush and fern, and in lock-spitting and marking out gradient lines. When not employed at survey they have, in bad weather, repaired the bridle track.

#### *Tarawera to Runanga.*

This section, the most difficult on the whole line, is about ten miles in length. In a former report were mentioned and described the several alternative routes open for adoption for extension of dray road to the plains, and it was stated that, as each appeared to possess equal advantages, selection became a perplexing matter. The question has, however, been finally decided by adopting the line on the left bank of Waipunga, crossing to that side at Omakahu, and re-crossing at Tohea, near Runanga.

After careful consideration of the numerous trial lines cut through the bush, the present line has been chosen.

An excellent site for a bridge, of an inexpensive design, has been fixed on at Omakahu (just mentioned). The line from this ascends by an easy gradient to the level of the alluvial terraces, and, in following the tops of these, heads a few side streams. The ascent from the level of the terraces to Pakiranui is accomplished on an incline of about 1 in 15.

From Pakiranui the range is contoured on easy grades, occasionally dipping and rising (for the purpose of avoiding outcrops of rock) to Ahi o nga Tane. The object of rising to the level of Pakiranui (600 feet above Waipunga) was to escape the precipitous bluffs occurring along the course of the Waipunga, and to secure an alluvial and easy slope for side cutting. Near the Tarawera end an agreement has been entered into with Hamuera and tribe for the bush clearing towards Te Ahi o nga Tane on similar terms to those concluded with Rawiri at Te Haroto.

Although I should like to see more men at work than are at present employed, I am glad to be able to report the Natives are making good progress with the work, and seem well satisfied. Every facility has been afforded them as regards acquisition of tools, and also in enabling them to procure provisions at the cheapest rates, in order that they may reap the full benefit of their employment.

The Constabulary stationed at Runanga are engaged in forming the road towards Tarawera, and are making (considering the time employed) excellent progress. The road is being formed an average width of 10 feet, which width it is proposed should be carried through the whole section, deferring the widening until it can be ascertained that, from sparsity of rock, the work can be done at a reasonable cost. The bridge across the Waipunga, near Runanga, has been erected by day labourers, two in number, occasionally helped, when heavy lifts were required, by men of the Armed Constabulary. This plan has effected a saving of at least 35 per cent. on the price contained in the lowest of the tenders received for the execution of this work. The earthwork portions of approaches will be executed by labour from the Armed Constabulary post.

On this section, as on that between Mohaka and Tarawera, the bridle track has been maintained, and in some instances reconstructed. Several new culverts have been built, and, during the bad season, frequent slips, which obstructed traffic, have been cleared away. The labour just referred to has been performed by men of the survey party.

#### *Runanga to Tapuacharuru.*

The only work noticeable on this section is the erection by contract of the Rangitaiki Bridge,—finished about a week ago. The approaches will be completed by men of the Armed Constabulary.

At Opepe and Tapuaeharuru some improvements required in immediate vicinity of posts have been indicated to the officers in charge of the respective posts.

At the Waikato, standards and windlass were erected for the establishment of a self-acting ferry, but, owing to the current being at this point impracticable, it has been necessary to remove them to a more suitable, although wider span. More cable had to be brought from the Mohaka Ferry: this is now on the ground, and the work of cutting approaches, and placing the ferry in working order, has been given to the Armed Constabulary.

His Honor J. D. Ormond.

I have, &c.,  
E. H. BOLD.

### No. 36.

Hon. Mr. GISBORNE to His Honor J. D. ORMOND.

SIR,—

Public Works Office, Wellington, 8th February, 1871.

I have the honor to acknowledge the receipt of your letter of the 23rd ultimo, forwarding Mr. Bold's report, dated 13th January, 1871, on the road works between Napier and Tapuaeharuru, and in reply, to request your Honor to express to Mr. Bold my great satisfaction at the progress he has made.

His Honor J. D. Ormond, Napier.

I have, &c.,  
W. GISBORNE.

### No. 37.

His Honor J. D. ORMOND to the Hon. the MINISTER for PUBLIC WORKS.

SIR,—

Napier, 14th March, 1871.

The unexpected arrival of the "Lord Ashley" prevents me from reporting as carefully and fully as I had intended on the Taupo Road works. I will, however, endeavour to convey to you by this opportunity a general description of what is being done, and what I propose to do, as I want your authority for a small increase in the sum authorized for this work before it can all be started, and I wish to do as much as possible during the favourable season.

Enclosed is a report from Mr. Bold on those sections of the works which are being executed by Natives by contract.

When the Taupo Road works were started, I received your authority for an expenditure of £7,000 on the line leading from Napier to Tapuaeharuru, and I understood the labour of the Constabulary could be availed of to supplement the above-named sum. Works have been carried on and a good deal done, for which great credit is due to Mr. Bold, the officer in charge of the works. Still, until the last month or two, there was a great difficulty in getting the Natives to undertake the work anywhere but close to their own homes; and, also, I could not get the Constabulary started until the commencement of the present year.

I will now state what has been done, and what I propose to do during the present season.

Commencing at the Kaiwhaka cutting, a very steep ascent, at present 1 in 6, and the first bad portion of the road, and extending from there to the Mohaka River, works have recently been contracted for, as separately reported to you, involving an expenditure of about £1,800. When completed, that portion of the line will be a fair dray or coach road.

From the Mohaka River to Tarawera there is, first, a piece of about three and three-quarter miles to Te Haroto. I propose to call for tenders for two and a half miles of this, which, it is estimated, will cost about £450; the remaining one and a quarter miles being left for the Constabulary.

From Te Haroto to the Wainone Stockade, a distance of five and a half miles, including a good deal of bush and heavy work, a portion has been done and the remainder is being executed by Rawiri Kahia and party, at a total cost of £1,400, of which the first contract, cost £400, is finished.

From the Wainone Stockade to Tarawera, three and three-quarter miles, about three-quarters of a mile are or will be done by the Constabulary, and I propose to call for tenders for the other three miles, the cost of which is estimated at £800 for cuttings, road formation, &c., and £200 for bridge.

From Tarawera to a place known as the Nunnery, about two and a half miles, it is intended to do by Constabulary labour, it being very convenient to Tarawera post.

From the Nunnery to Pukeranui, distance three miles, and from there for another two miles to within about two miles of Runanga, Hamuera and party are engaged, and it is expected a party of Poihipi's Natives will shortly join him on this part of the works. The cost of this five miles is estimated at £1,150, one contract of £350 out of this being nearly completed.

From this point to Runanga, two miles, the work is being done by Constabulary, who will finish it by winter.

From Runanga to Tapuaeharuru the road is now open for traffic, the work being done some time ago by Poihipi, at a cost of £450.

In addition to the above, bridges over the Rangitaiki and Waipunga have been built, at a cost of £400, and another bridge over the Waipunga is about to be built, at a cost of £240. Mr. Bold further estimates incidental road expenditure, including survey, and most of it spent, at £500, and supervision and contingencies at £250 more.

To summarize, then, the expenditure contracted for and proposed, and which it is estimated will open a dray and coach road from Napier to Taupo, it will stand as follows :—

|   | £      | s. | d. |
|---|--------|----|----|
| Contracts Nos. 1 to 6, Kaiwhaka cutting to Mohaka River ... ..  | 1,800  | 0  | 0  |
| Mohaka River, two and a half miles towards Haroto (proposed to call for tenders for)                          | 450    | 0  | 0  |
| Thence to Te Haroto by Constabulary.  |        |    |    |
| From Te Haroto to the Wainone Stockade, five and a half miles, Rawiri's party ...                             | 1,400  | 0  | 0  |
| From the Wainone towards Tarawera, three miles (tenders to be called for) ...                                 | 1,000  | 0  | 0  |
| Thence to Tarawera by Constabulary, three-quarters of a mile, nearly finished.                                |        |    |    |
| From Tarawera to the Nunnery, about two and a half miles, by Constabulary.                                    |        |    |    |
| Thence towards Runanga, about five miles, part of which done, and on which Hamuera's party are engaged ... .. | 1,150  | 0  | 0  |
| From thence to Runanga by Constabulary.   |        |    |    |
| From Runanga to Tapuaeharuru, done by Poihipi, under contract, distance about thirty-four miles ... ..        | 450    | 0  | 0  |
| Bridges over Rangitaiki and Waipunga, finished ... ..   | 400    | 0  | 0  |
| Second Bridge over Waipunga ... ..  | 240    | 0  | 0  |
| Incidental Road Expenditure ... ..  | 500    | 0  | 0  |
| Supervision and Contingencies ... ..  | 250    | 0  | 0  |
| Total ... ..  | £7,640 | 0  | 0  |

Perhaps if you would authorize me to incur an expenditure of £1,000 in addition to the £7,000 already sanctioned, it would allow for any unforeseen difficulty or under estimate. Considering the importance of the work, and the country through which the road goes, I think the opening a dray and coach road for such a sum is more than could have been expected.

Mr. Bold has just started for Taupo, to prepare specifications of the portions of the road for which contracts have to be called for ; and, on receiving your authority, I shall lose no time in pushing forward the works. Shortly after the Napier to Taupo road works were started, I asked your sanction to push on a road connecting Tapuaeharuru with the Bay of Plenty, and received your authority to do so. Since then, the road from Taupo as far as Niho o te Kiore has been contracted for, part of it is finished, and the remainder is rapidly approaching completion.

I have had a great deal of trouble and anxiety respecting this part of the works, in consequence of repeated attempts by the Waikato king party to stop them. I have, however, steadily supported the Natives employed, and, having been fortunate enough to engage the Ngatiraukawa on the portion of the work about which there was the greatest Native difficulty, it is, through their influence, being pushed to a completion, and will soon be finished. I had commenced negotiating for the continuance of the line from Niho o te Kiore to Rotorua, but fortunately Mr. Commissioner Clarke has now returned to the Bay of Plenty, and I have been glad to turn that part of the work over to him, having already almost more to do than I can get through. Timber is being prepared for a bridge over the Waikato at Niho o te Kiore, and I purpose to build the bridge at the point most convenient for the use of the road to Rotorua and Tauranga, and at the same time so that it will be available for the road to Cambridge by the Patetere Plains when that road can be opened.

In connection with the section of the road commencing at Tapuaeharuru, I should like to receive your authority for bridging the Waikato near the point where it leaves Taupo Lake, and which is necessary to complete the road for dray communication.

In concluding this report I cannot speak too highly of the zeal and practical ability displayed by Mr. Bold, the officer who has charge of these works, and whose correct eye and knowledge of what was requisite for carrying a road through a most difficult country, has enabled a comparatively small expenditure to go so far.

I have, &c.,  
J. D. ORMOND.

The Hon. the Minister for Public Works, Wellington.

### Enclosure in No. 37.

Mr. BOLD to His Honor J. D. ORMOND.

SIR,—

Napier, 8th March, 1871.

I have the honor to submit the following report on the progress of the road works on those sections in course of formation by Native contract labour.

#### *Rawiri Kahia and Party.*

This contract commences at the edge of the bush near Te Haroto, and terminates at the Wainone Creek (at foot of Turangakumu). The distance is about five and a half miles, and the work involved is principally "side cutting," and a little cutting through slate rock. The whole section has been undertaken by Rawiri for the lump sum of £1,000, which is, judging from the contracts recently concluded (near Napier), a very fair price.

The road is to be formed 16 feet wide, and the sum includes the necessary ditches, drains, and culverts, also small bridges up to 20 feet span. Three and a half miles is through the bush lately cleared by this party, and the remaining portion is a siding descending Turangakumu.

When Rawiri's section shall be completed, the heaviest work between Tarawera and Mohaka may be considered as accomplished.

The curves, grades, and slopes are marked off as the work proceeds. About forty Natives are at present engaged, and reinforcements are shortly expected which will increase the number to sixty men.

*Hamuera and Party.*

About fifteen men are at work under Hamuera clearing the bush 1 chain wide, commencing at the intended site of the proposed lower bridge across the Waipunga, and working towards Runanga. About two and a half to three miles have already been cleared, and, on completion of an additional mile, in which a very bad part of the road is included, Hamuera will return and proceed with the formation and earthwork. It is expected shortly that the strength of this party will be considerably augmented by recruits from Taupo.

*Hohepa and Poihipi and Parties.*

The section undertaken by these Natives between Tapuaharuru and Tuparahaki, and about twelve miles in extent, has been left in a very unsatisfactory state, and it became necessary to retain a balance of money in hand until such time as the road shall be finished properly.

Some trouble was experienced on account of a strong demonstration by the Natives to do the work in their own way: they now, however, have been led to see that it is absolutely necessary, before they can be paid in full, to fulfil the provisions of the agreement they have entered into. The action taken with reference to the matter just recited has had a very good effect on the remaining Native parties at work in the district.

*Ihaia and Perenara and Parties.*

Among these are included many of Hitiri's people from Titiraupenga and Waimahana. Their work, as has been before mentioned, reaches from terminus of Hohepa's contract at Tuparahaki to Niho o te Kiore, on Waikato. The work, together with that of the last contract, is in charge of Mr. Maling. Many of the cuttings are very well executed, but others are much too steep, partly arising from the laying off, and partly from want of barrows. The necessary instructions have been given to ease the cuttings and raise the embankments, and the contractors have signified their willingness to perform the work which shall be considered necessary for the due and proper completion of the road.

Arrangements have been made with Ihaia to get the timber for the bridge proposed to span the Waikato. The works beyond the Waikato are now in charge of Captain Turner, of Tauranga, whose party is engaged surveying from Rotorua towards Niho o te Kiore.

His Honor J. D. Ormond, Napier.

I have, &c.,

E. H. BOLD.

## No. 38.

Mr. COOPER to His Honor J. D. ORMOND.

SIR,—

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

I have the honor, by direction of Mr. Fox, in the absence of Mr. Gisborne, to acknowledge the receipt of your letter of the 14th instant, and to thank you for the valuable information contained therein relative to the Taupo Road Works.

The expenditure of a further sum of £1,000, in addition to the £7,000 already authorized, has been approved. I am to request you to submit an estimate of the cost of the bridge you propose to erect over the Waikato River, near the point where it leaves Taupo Lake, before any expenditure is authorized thereon.

The Government is fully aware that the success hitherto attending the construction of the roads in the Taupo District is entirely owing to the zeal and energy displayed by yourself and Mr. Bold.

I return you a copy of Mr. Bold's report, as you request.

His Honor J. D. Ormond, Napier.

I have, &c.,

G. S. COOPER.

## No. 39.

His Honor J. D. ORMOND to the Hon. the MINISTER for PUBLIC WORKS.

SIR,—

Napier, 5th May, 1871.

I have the honor to enclose a letter from Mr. Bold, containing explanations respecting the tenders for works on the Taupo line, which were opened on the 2nd instant; also a list of the tenders received for those works; a copy of the advertisement calling for the tenders; a list of the accepted tenders; and a memorandum showing the section of the road on which these works are.

I have only to add that, on finding the rates for some of the proposed contracts excessive, I declined to accept them, and have instructed Mr. Bold to arrange for carrying those works out by agreement with parties willing to undertake them.

This I believe he will be able to do at reasonable rates, both as regards the road making and the bridges. All such agreements are to be submitted for my approval before being completed, and I do not anticipate either difficulty or delay in the matter.

I thought it useless, under the circumstances, to call for fresh tenders. No doubt the season of the year has influenced the parties tendering.

The Hon. the Minister for Public Works, Wellington.

I have, &c.,

J. D. ORMOND.

## Enclosure in No. 39.

Mr. BOLD to His Honor J. D. ORMOND.

SIR,—

Napier, 5th May, 1871.

I have the honor to forward particulars of the tenders received for the public works in connection with the road from Napier to Taupo, as per advertisement annexed. The works were divided into eleven contracts, numbered progressively from 7 to 17.

The first six contracts include all the works necessary to complete road formation, earthwork, and box-drains between No. 6 contract at Mohaka and the commencement of the Constabulary work at Tarawera, excluding those portions reserved for construction by the party of Armed Constabulary stationed at Te Haroto, and the section in course of completion by Rawiri and party. The remaining five contracts embrace all the necessary bridges and large culverts between the same places.

Of the eleven contracts above referred to, tenders for those numbered as follows have been accepted:—7, 8, 11, 12, and 15. The tenders for the remaining contracts involved amounts considerably in excess of the estimated cost, and were accordingly rejected.

The great scarcity of labour at present prevalent here accounts in some measure for these high rates and small competition. In the timber work, the prices of contractors strange to the ground are materially increased by the items haulage and packing.

It is anticipated that when the works included in those contracts at present in hand are more advanced, contracts 9 and 10 will be undertaken at prices within those estimated.

The bridges, and culverts comprised in contracts Nos. 13, 14, 16, and 17 can be most economically erected by dividing the works in question into the separate items of sawing, squaring, and construction; each to form a small contract. The work of hauling and packing can be performed by the bullocks and horses in possession of the Government. By following this plan the work will be satisfactorily performed, and a considerable saving effected on the prices tendered. Experienced men accustomed to this class of work are on the ground, as also are the necessary tools and appliances.

The time which is allowed for the completion of contracts No. 7, 8, 11, and 12 is six weeks (cumulative), and for contract 15, twelve weeks.

His Honor J. D. Ormond, Napier.

I have, &c.,  
E. H. BOLD.

### Sub-Enclosure to Enclosure in No. 39.

List of Tenders accepted for Works between Mohaka and Tarawera, with approximate amounts of Contracts—

|  | £             | s.       | d.       |
|--|---------------|----------|----------|
| No. 7 Contract, 80 chains, at 20s. ... ..  | 80            | 0        | 0        |
| No. 8 Contract, 80 ditto, at 45s. ... ..   | 180           | 0        | 0        |
| No. 11 Contract, 80 ditto, Formation, 45s., £180; Bush, 30s., £15; Culverts, 25s., £15 ... ..          | 210           | 0        | 0        |
| No. 12 Contract, 70 chains, Formation, 95s., £332 10s. Bush, 35s., £17 10s. Culverts, 25s., £15 ... .. | 365           | 0        | 0        |
| No. 15 Contract, Waipunga Bridge, approx., 83 feet, at 75s. ... ..                                     | 311           | 5        | 0        |
|  | <u>£1,146</u> | <u>5</u> | <u>0</u> |

### Sub-Enclosure 2 to Enclosure in No. 39.

SECTION, Mohaka to Tarawera, showing subsections and divisions of labour, with approximate distances.

|                         |                   |
|-------------------------|-------------------|
| No. 7, 80 chains ... .. | Fitzgibbon.       |
| No. 8, 80 ditto ... ..  | Fitzgibbon.       |
| No. 9, 100 ditto ... .. | Not let.          |
| 50 ditto ... ..         | A.C., Te Haroto.  |
| 480 ditto ... ..        | Rawiri and party. |
| No. 10, 60 ditto ... .. | Not let           |
| No. 11, 80 ditto ... .. | W. Parsons.       |
| No. 12, 70 ditto ... .. | Ditto.            |

1,000 chains, or 12½ miles.

The survey for No. 10 contract was incomplete on the day tenders were receivable; it was accordingly withdrawn.

E. H. BOLD.

5th May, 1871.

### No. 40.

Mr. KNOWLES to His Honor J. D. ORMOND.

SIR,—

Public Works Office, Wellington, 11th May, 1871.

I have the honor, by direction of Mr. Gisborne, to acknowledge the receipt of your letter of the 5th instant, and, in reply, to inform your Honor that a general authority has been prepared for the payment of accepted contracts for road works on the Taupo line, in terms of the list forwarded with your letter. Accounts to be certified by Mr. Bold, and approved by your Honor, before payment is made.

The course adopted by your Honor for carrying out the works on those portions of the line for which you considered the tenders received were too high, has been approved.

I should feel obliged by your Honor informing me, at your earliest convenience, of the particulars of any agreements entered into under this authority.

His Honor J. D. Ormond, Napier.

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

## No. 41.

His Honor J. D. ORMOND to Mr. KNOWLES.

(Telegram.)

Napier, 19th July, 1871.

THE reports of the officers for you are in course of preparation, also Mr. Weber's.

No report worth referring to has been made by Mr. Bousfield. I will press them to finish as soon as possible. I propose to send with their reports, plans for a general report of my own on works in the district.

John Knowles, Esq., Wellington.

ORMOND.

NOTE.—The plans and reports alluded in the above telegram, not being received in sufficient time for this series of papers, will be published in a separate set.

## II.—REPORTS FROM HIS HONOR J. D. ORMOND AND MR. DRUMMOND, ON WAIROA AND POVERTY BAY ROADS.

## No. 42.

His Honor J. D. ORMOND to the Hon. the MINISTER for PUBLIC WORKS.

SIR,—

Napier, 1st March, 1871.

I have the honor to enclose copy of a letter of instructions to Mr. Drummond, who proceeds by steamer "Napier" to Poverty Bay, to lay out the proposed road works between that place and Wairoa by the inland line of road, authority for which you have conveyed to me.

\* \* \* \* \*

The Hon. the Minister for Public Works.

I have, &c.,  
J. D. ORMOND.

## Enclosure in No. 42.

His Honor J. D. ORMOND to Mr. DRUMMOND.

SIR,—

Napier, 22nd February, 1871.

Referring to my interview of this morning, I then described to you more minutely than I can do by letter the road to be laid out at Wairoa and Poverty Bay, and the apportionment of the expenditure over the proposed works. I will now briefly recapitulate what I wish you to carry out.

You will please proceed by the s.s. "Napier" to Wairoa, and lay out the road connecting the military settlement of Te Kapu with Wairoa, and prepare specifications of the work necessary to open dray communication between the two places. I should think a sum of, say, £500 would be sufficient for the purpose. You will please communicate from Wairoa the result of your examination of this part of the road, and put me in a position to call for tenders.

From Te Kapu the road will require exploring to Te Reinga, and I am led to believe a small expenditure will much improve the road, and avoid crossings of the river at present necessitated.

It will be desirable in any case to provide for the improvement of the road as far as Te Reinga; but I understand it is possible a line may be found from Papatatu to Wairoa, which would effect a large saving in distance between Wairoa and Poverty Bay, and be in all respects the most desirable inland road. It will, therefore, be necessary for you to explore this line, and if possible avail of it, in case it proves feasible at reasonable cost that line should be adopted, but if not, then you will require to examine the present inland track from Te Reinga to Poverty Bay, with a view to its improvement. Roughly, I should estimate that if £500 will complete the road from Wairoa to Te Kapu, and say £150 from there to Te Reinga, with £500 devoted to improving a main line through the Poverty Bay Plains, that the balance should be available for the inland road connecting the two places on the Poverty Bay Plains. It will be desirable to fix on one main line, and improve it so far as funds will permit.

There is also an expenditure of £150 authorized to connect Gisborne with the coast bridle road now being formed from Muriwai. The improvements principally called for are, I hear, clearing a piece of bush on the plains, and bridging a difficult creek named the Koraua.

The above generally indicates what has to be done, and I shall be glad to hear from you as your work progresses.

J. Drummond, Esq.

I have, &c.,  
J. D. ORMOND.

## No. 43.

Mr. COOPER to His Honor J. D. ORMOND.

SIR,—

Public Works Office, Wellington, 9th March, 1871.

I have the honor to acknowledge the receipt of your letter of the 1st instant, and to inform you that the Government consider your instructions to Mr. Drummond to be very judicious.



An advance of £50 has been authorized to Mr. Drummond, and a general authority has been sent in for the payment of his salary monthly on your certificate as you request.

I have, &c.,

G. S. COOPER,  
Under Secretary.

His Honor J. D. Ormond.

No. 44.

His Honor J. D. ORMOND to the Hon. the MINISTER for PUBLIC WORKS.

SIR,—

Napier, 29th April, 1871.

I have the honor herewith to enclose a schedule of contracts, and prices of same,\* entered into for road works between Te Kapu and Wairoa.

Mr. Drummond has partly finished laying out the road from Te Kapu to Te Reinga, but has now gone to Poverty Bay to lay out alterations in proposed works there, decided on by myself during my late visit, after which works will be let by contract. When Mr. Drummond has finished this, he returns to complete the road to Te Reinga, and thence to Poverty Bay.

\* \* \* \* \*

I have, &c.,  
J. D. ORMOND.

The Hon. the Minister for Public Works.

\* Four contracts: formation of 4 miles 20 chains road for £513.

## MANAWATU AND SEVENTY MILE BUSH DISTRICT.

No. 45.

Mr. STEWART to Mr. COOPER.

SIR,—

Manawatu, 7th September, 1870.

I have the honor to acknowledge the receipt of your letter of 29th August, No. 85-B, informing me that an advance of £565 10s. 9d. had been made to me for the month of June, and requesting me to preserve a distinction between the expenditure for the periods before and after the 30th June, 1870. In reply, I have to state that the above sum represented the amount required to meet contracts entered into and liabilities incurred for works commenced prior to 30th June, as nearly as I could estimate. I shall attend to your request to keep distinct the expenditure to that date.

On the line "Foxton to Oroua Bush," thirteen miles, the work, as I have before reported, has been confined to making the detached swamps, and difficult and impassable places, available for light dray traffic, leaving untouched considerable extents between these points thus constructed; I find, however, that these flats intervening, become very heavy traffic during wet weather.

I have gone over the line to examine this, and now propose to partially form and drain the road over these parts. The expenditure will be moderate considering the length of line, the amount required being £250. I consider this as exceedingly desirable to complete as a light traffic road, the distance mentioned, and I now submit this for your approval.

I have, &amp;c.,

JOHN T. STEWART,

Engineer in Charge of Road Works, Manawatu District.

G. S. Cooper, Esq., Under Secretary, Wellington.

No. 46.

Mr. COOPER to Mr. STEWART.

SIR,—

Colonial Defence Office, Wellington, 10th September, 1870.

In reply to your letter of the 3rd instant, I have the honor to inform you that an advance of £75 will be made to you, to enable you to meet the expenditure caused by the heavy rains in August last on the Foxton and Oroua Bush Road.

Mr. McLean desires me to impress upon you the necessity of keeping in mind the distinction between main trunk lines of road and intermediate or district roads, as the General Government will not be justified in expending any money on the latter, which are matters of local concern, and must be dealt with by local Road Boards in connection with the Provincial Government. The Colonial Government will therefore look to you to take care that funds provided by the whole Colony are not spent upon works which are the special concern of the local authorities of a Province.

I have, &amp;c.,

G. S. COOPER,

Under Secretary.

J. T. Stewart, Esq., Manawatu.

No. 47.

Mr. STEWART to Mr. COOPER.

SIR,—

Manawatu, 12th September, 1870.

I have the honor to acknowledge the receipt of your letter of 10th September, No. 91-B, in which you inform me of Mr. McLean's desire to you to impress on me the necessity of keeping in mind the distinction between main and district lines of road in regard to expenditure thereon.

In reply, I beg to state, for the information of the Hon. Mr. McLean, that the Colonial Government expenditure under my charge in this district has been wholly confined to one line, as directed by the Hon. the Premier when the work was commenced, viz., the main road line from the port of Manawatu, at Foxton, leading to the Upper Manawatu country, and being part of the through line to the East Coast; the two divisions referred to in my letter, viz., "Foxton to Oroua Bush," and "Ngawhakarau and Oroua Bush," being continuous portions of the same road line.

There have been no operations by any Road Board in connection with this main line. No part whatever of the amount has been expended on any other road line, and I shall at all times strictly attend to your instructions now sent in regard to this matter.

I have, &amp;c.,

JOHN T. STEWART,

Engineer in Charge of Roads, Manawatu District.

G. S. Cooper, Esq., Under Secretary, Wellington.

No. 48.

His Honor J. D. ORMOND to the Hon. the COLONIAL SECRETARY.

SIR,—

Napier, 24th September, 1870.

[The first and concluding portions of this letter relate to other roads, and will be found in the papers relating to Hawke's Bay and the East Coast Districts.]

\* \* \* \* \*

2. The road through the Seventy Mile Bush to Manawatu, on the West Coast, and to Wairarapa, are the next to which I shall address myself. These lines are, in my opinion, of the greatest political importance, and, in surveying and adopting the line of road, it is necessary to remember that it is in contemplation to carry lines of railroad through these districts. As, however, this is not decided upon, and as it is of importance that the rich district known as the Seventy Mile Bush should be opened up for settlement with the least possible delay, I propose that road works should at once be commenced, and that the road should be so laid out and the works so constructed as to be available for the railroad, should it be determined, at the next session of the General Assembly, to construct one.

What I would therefore recommend is, that the survey of a railroad line through the Seventy Mile Bush, from the open country at Rua Taniwha to the Lower Manawatu on the one side, and Wairarapa on the other, should at once be carried out. The work will require both energy and knowledge, and, being entirely through bush, will necessitate some considerable expense in exploration. To avoid unnecessary delay, and the loss of the good season of the year, in prosecuting the work, I should like to receive authority to employ an engineer to lay out that portion of the line on this side of the Ahuaturanga, and would urge that another officer be employed to lay out the line on the other side of the range to Lower Manawatu; afterwards, the line to Wairarapa, from whence the West Coast line would be joined by a Napier line, could be surveyed. So soon as the first line named is definitely fixed, I would propose to commence felling the bush on each side of the line two chains wide, and contracting with the parties to whom the felling of the bush might be let, to roll logs off and clear a space sufficient for a roadway and for a railroad. From inquiry, I believe contracts to fell the bush and clear a line of road 30 feet wide could be obtained at the rate of 22s. per chain, and, by following this plan, any expenditure incurred would be on the best procurable line, whether for road or railroad; and should the railroad be eventually decided on, a considerable advance would in this way be made towards its construction. I trust the Government will see its way to adopt this recommendation, and to devote as much of the road money to this work as can possibly be spared; and I should like to be informed what amount will be available for the purpose. The expense of surveying the bush line, which will, I believe, necessarily cost a good deal of money, would not, I anticipate, be borne by the Road Vote, but would be discharged out of Railway Funds. I will report more fully on these lines when further information of the intention of the Government reaches me; but I trust I shall receive early authority to commence the survey of the line.

\* \* \* \* \*

The Hon. the Colonial Secretary.

I have, &c.,  
J. D. ORMOND.

#### No. 49.

MEMORANDUM by the Hon. Mr. FOX for the Hon. the COLONIAL SECRETARY.

##### *Public Works.*

I INSPECTED the work done under superintendence of Mr. Stewart, between Foxton and Ngawhakarau (Manawatu District), as authorized by me last year, chargeable on the £30,000 North Island Roads Vote. I found a very good return for the amount expended, and the work very well done, chiefly by Maoris, under contracts, which were taken at low prices.

I authorized a further expenditure of £250 on the sand hill portion near Foxton, necessary to complete what is done. There is, I believe, a balance in hand of the £30,000 vote; if not, it must go against the £400,000 of this year.

When Mr. Stewart (who is in the Provincial Government service) undertook to lay off and check this work, I promised him reasonable professional remuneration. He has been employed about eight months, and suggests £50, which seemed to me reasonable, and I agreed.

Rangitikei, 7th October, 1870.

WILLIAM FOX.

#### No. 50.

Mr. STEWART to Mr. COOPER.

SIR,—

Wellington, 3rd November, 1870.

I have the honor to enclose copy of report of examination of part of the track through the Forty Mile Bush country between Manawatu and Wairarapa. This may be useful as information to the engineer exploring line of railway in this direction.

I have, &c.,

JOHN T. STEWART,  
Engineer in Charge of Roads, Manawatu.

G. S. Cooper, Esq., Under Secretary, Wellington.

#### Enclosure in No. 50.

Mr. STEWART to the PROVINCIAL SECRETARY, Wellington.

SIR,—

Provincial Engineer's Office, Wellington, 28th November, 1868.

I have to acknowledge the receipt of your letter, desiring me to facilitate the acquiring of information by Mr. Rees, Inspector of Telegraphs, in regard to line through the Forty [Seventy] Mile Bush from Masterton, in the Wairarapa, to Manawatu and Wanganui.

I have to report that, on the 17th November, I left Manawatu, in company with Mr. J. R. Rees and Mr. Morgan Carkeek, Assistant Surveyor, for the purpose of going through the Forty Mile Bush to the Wairarapa. I append notes of travel.

*Tuesday, 17th.*—Left Foxton, and rode up to Te Kairanga. Left horses there, crossed the River Manawatu at 4 p.m., and proceeded about four miles on the track over a gradually rising country, and camped at the foot of range at the Kahuterawa Stream at 6 p.m.

*Wednesday, 18th.*—Started at 6.30 a.m., and began ascent of the Tararua Range. The end of first rise is reached at Tirohanga, and is about 1,200 feet above foot of range at the Kahuterawa Stream. Then for some distance the route is pretty level, with one or two streams, and then rises 200 feet at six and three-quarter miles from the Manawatu River, and again rises 490 feet to summit at Tipakirikiri, which is thus between 1,800 and 1,900 feet above foot of range at Kahuterawa. The forest here diminishes to scrub 10 to 15 feet high. This point we reached at 9 a.m. From here the descent begins to the east, or Forty Mile Bush country. At 11.15 a.m. reached the more level ground at foot of range, with a descent from the summit of about 1,440 feet. Remained one hour here, and reached the Mongahao River at 1.30 p.m., with a further descent of 280 feet, making a total descent from the summit on the east side of range of about 1,700 feet.

The distance by this route from the Manawatu River to the Mangaohao River is twelve miles, and along this distance a horse track was cleared, under the direction of Mr. Morgan Carkeek, Assistant Surveyor, during the recent survey of the Mangaohao Native Block. It is easily passable for horses, and would, if cut through to the old Native track, shorten the distance from the Wairarapa to the West Coast at Manawatu by twenty-five or thirty miles, in comparison with the old track by the south side of the gorge of the Manawatu.

This track has not been cut beyond the Mangaohao River, so we had to diverge some way to Tutakara, a pa some four miles to east of the Mangaohao River, and on the bank of the Mangatainoko River, in a clear space of some 800 acres in extent. The land is nearly level from the Mangaohao River bank to the pa, which we reached at 4.30 p.m.

*Thursday, 19th November.*—Started from Tutakara pa at 6.45 a.m., and took the old Native track from Ahuriri to Wairarapa. In about four miles over a level country reached Te Hawero, another opening of some 300 acres. It is about here the continuation of the track referred to from Manawatu would, if cut on, strike the old track; and from here also a track goes to the Moroa or Alfredton.

At 11 a.m., four and a half miles on, over a similar country, crossed the Mangatainoko River, and followed its course on the shingle beds for some way. Stayed one and a half hours here. At 1.45 p.m. crossed the Mangaraupiu Stream, and went on over a nearly level country till about 3 p.m. When at eight and a half miles from Te Hawero clearing, the track rises a ridge for about 550 feet in height, and it then falls again for 250 feet. These ascents are tolerably easy for a horse track. The track now goes on over the table land, which is, say, ranging from 900 to 1,100 feet above the sea, crossing the Makaika Stream at about twelve and a half miles from Te Hawero, and the Mangatahake Stream half a mile further on. Camped at 6 p.m., some fourteen and a half miles from Te Hawero.

*Friday, 20th November.*—Started at 5.45 a.m. A mile on, crossed the Kahepurapura Stream, and at two miles on, another small creek. The descent and ascent towards these creeks average 100 feet fall or rise, but the slopes are good for a horse track. Crossed the Ahikauri Stream and Kahekaretau Stream, and reached the Makakahi River, which is about nineteen miles from Te Hawero clearing, at 8 a.m. Stayed here three-quarters of an hour. This river forms boundary between the Crown and Native lands, I was informed by the Native with us. At two miles on, crossed Mangahinau Stream, which goes into Makakahi River, and followed its course some little distance, and shortly after passed some rather boggy ground on the flat. One and a half miles further on, crossed the Mangahuarere Stream, which goes into the Mangahinau Stream. At 11.20 a.m. reached the last stream which goes into the Mangahinau Stream at about twenty-four miles from Te Hawero clearing. As the Makakahi flows into the Mangatainoko, which again flows into the Te Raumea River, a tributary of the Manawatu, the stream we had now reached flows at the foot of part of the dividing watershed between these waters and the Ruamahanga River, which flows through the Wairarapa.

The table land, formerly mentioned, along which the track goes, continues rising somewhat up to this point, and probably merges in the spurs of the Tararua Range to the west.

The various creeks named as having been crossed have hard gravelly bottoms, but the small blind creeks between them, which the track crosses, are many of them rather boggy.

The Native who came with us from Tutakara brought two horses, and the track is used by horsemen (Natives).

The bush all the way from Tutakara and Te Hawero to this point is remarkably open and free from supplejack, and would be easily cleared. The soil is good. There is totara timber mixed in the bush in the first seven or eight miles from Te Hawero. I did not observe totara after that. Good rimu timber is abundant.

After crossing the stream referred to as about twenty-four miles from Te Hawero clearing, the track ascends the hill dividing the Forty Mile Bush in this part from the Opaki. The ascent rises about 500 feet to a flat on top, which continues for, say, one and a half miles, and the track then descends, between 700 and 800 feet, to the crossing of the Ruamahanga River. This descent is steep.

Crossed the Ruamahanga at 1.30 p.m. This is about twenty-seven miles from Te Hawero, or forty-three miles from our crossing of the Manawatu River at Te Kairanga by the track. If the track was straightened in the Forty Mile Bush, some miles would be gained. At 7.30, after walking down the Opaki Plain, got to Masterton. The distance by this route may thus be stated approximately:—

|   | Miles. |   |
|---|--------|---|
| Masterton to Ruamahanga Crossing                                      | 14     | Open country.   |
| Ruamahanga to Palmerston, allowing five miles for straightening track | 43     | Bush (2 miles felled, 1 chain wide).                        |
| Palmerston to Rangitikei  | 19     | (8 miles bush felled, 1 chain wide, 11 miles open country). |
| Rangitikei to Wanganui  | 28     | Open country.   |
| Total, Masterton to Wanganui, by this route                           | 104    |   |

*Tuesday, 24th.*—Explored line to top of hill over Ruamahanga, and found a better track up by entering a valley about one and a half miles below the old track, and ascending a spur to left.

This spur rises north and north by west till it joins the old track, and gives a good slope for a horse road. By pursuing the valley to right or east of this spur, there is a probability of much of this rise being avoided.

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

JOHN T. STEWART,  
Provincial Engineer.

N.B.—The heights are approximate (by Aneroid); the distances estimated by time only in the Forty Mile Bush track.

### No. 51.

His Honor J. D. ORMOND to the Hon. the MINISTER for PUBLIC WORKS.

SIR,—

Napier, 10th November, 1870.

I have the honor to report for your information that, in conformity with arrangements made by telegraph by the Hon. Donald McLean, the survey of the railway line from Napier to Rua Taniwha, by Mr. Weber, has been postponed for the present, and that officer has proceeded to the Rua Taniwha end of the Seventy Mile Bush to prosecute the survey of the line from there to the Manawatu Gorge. As you are aware, this has been done in order that the formation of the road from Rua Taniwha to the West Coast, at Manawatu, may be proceeded with as early as possible. Mr. Weber thinks he will get the survey of the line through the bush at Tahoraita—about twenty miles—finished sufficiently to start the road works in about five or six weeks, and with that view I have called for tenders, to be sent in by Wednesday, the 21st December next, for felling the bush and clearing a roadway. Mr. Weber informs me he shall require an additional sum of £27 for survey labour for this month and December, the additional men being required for cutting bush lines. This will make the sum required for labour for the months of November and December, £61 10s. for each month, and contingencies £8 each month.

Mr. McLean informed me that you would acquaint me when Mr. Stewart would be ready to meet Mr. Weber at the Manawatu Gorge, and I have arranged to let Mr. Weber know when I hear from you.

It is very necessary that a consultation should take place as to the point at which the lines from Wellington, the West Coast, and Napier shall meet. Mr. Weber also hopes Mr. Stewart may be able to accompany him over the line from the Manawatu Gorge to Rua Taniwha, so that he may have his advice and opinion thereupon.

I have, &c.,

The Hon. the Minister for Public Works, Wellington.

J. D. ORMOND.

### No. 52.

Mr. BLACKETT to Mr. WEBER.

SIR,—

Public Works Office, Wellington, 11th November, 1870.

I am directed by the Minister for Public Works to forward to you instructions relative to the exploration for the proposed railway and road from Napier to the Manawatu Gorge.

This exploration should be as complete as possible, and, to assist you in this matter, I enclose a tracing of a portion of the country, showing the rivers, roads, &c. In a conference with the Board, it was suggested that we had choice of three lines:—First, a line lying between the main range and the Manawatu; second, a line lying between the Manawatu and the Puketoi; third, a line lying eastward of the northern portion of the same range, and crossing it at a point convenient for joining the line proposed to come through the gorge of the Manawatu.

These are marked on the tracing 1, 2, 3. It may probably be found that from the point A or A<sup>1</sup> on the present coach road, or thereabouts, the proposed extension of road might commence.

It is presumed that a geological section of the basin of the Upper Manawatu from east to west would show that gravel and shingle will be found west of the Manawatu, and limestone on the east of it. This will influence you in deciding between lines 1 and 2, as to which will be the most permanent road when formed, taking into account, also, the value of the land passed through as well as the facility of construction.

Mr. J. T. Stewart has instructions to proceed with the exploration and formation of the road on the west side of the main range, and through the gorge, and to confer with you as to the best means of getting through the latter, in which it is particularly desirable that a low level line should be obtained, if not at too great a cost, which may answer for the dray road in the first instance, and afterwards be used wholly or in part for a railway. You will have due notice when and where to meet Mr. Stewart.

The suggestion made in reference to this road, that it should be laid off on the future line of railway, is practicable only to a certain, probably only to a small extent, and the expense of making the dray road must not be augmented needlessly by making the lines conform where it can be carried on easy ground, and with sharper curves and gradients than would be allowed on the line of railway.

I propose that we should have gradients on the road not exceeding 1 in 13. It will, however, be advisable to make the exploration answer the double purpose of fixing the exact position of the dray road and the probable future line of railway.

You will please to report from time to time on your progress in this exploration, illustrating your report by rough sketches when necessary for explanation.

Your final report will contain recommendation of the best line for adoption, with a full statement of the character and particular merits of each; and before any work is commenced—that is, beyond the exploration—further instructions will be sent to you.

I have, &c.,

JOHN BLACKETT,  
Acting Engineer-in-Chief.

Charles Weber, Esq., Napier.

## No. 53.

Mr. STEWART to Mr. COOPER.

Camp, River Pohangina, Napier Track,  
Manawatu, 14th December, 1870.

SIR,—

I have the honor to report to you that to-day I went through the Manawatu Gorge with a view of seeing the advisability of taking the road and railway line through it, and so obviating the necessity of crossing the dividing range at a considerable elevation.

The southern or left bank of the Manawatu, in the gorge (which, roughly estimated, is five or six miles long), is I think practicable for the line at a small elevation above the river.

The north or right bank is not so good, being more broken by deep gullies and cliffs, particularly in the western part of its length.

Please communicate this to the Engineer on the Napier side. I make some further explorations, and will be ready to meet and consult with Mr. Weber, about the junction of our works, by the 6th January, if he can do so. Please inform me of place and time.

I have, &amp;c.,

JOHN T. STEWART,  
District Engineer.

G. S. Cooper, Esq., Under Secretary, Wellington.

## No. 54.

Mr. STEWART to Mr. COOPER.

Manawatu, 26th December, 1870.

SIR,—

I have the honor to report to you that, on the 15th instant, I went over the range to the Napier side, and next day met Mr. Weber, the Engineer in charge of the road line there. On the 19th he accompanied me through the gorge of the Manawatu to the west side of range. We have agreed that the best line for road and railway is through the Manawatu Gorge, keeping the south bank of the river, which bank is, as I have already reported to you, the best.

On both the Napier and Manawatu sides of the range, the road line affords no serious difficulty until the main range is reached. By taking advantage of the natural pass through the gorge of the Manawatu, a line across the range, practically level, or rising with the moderate rise of the river bed only, is obtained, and the alternative avoided of going over the Tararua Range on the side to the south, or the Ruahine Range on the side to the north, either involving a rise of some 1,000 or 1,200 feet over the country on the west side.

To accomplish this with practicable grades would involve a length of about seven miles additional on a road line over the length of that through the gorge, and a still greater additional length if for a railway line, besides the permanent objection to severe grades.

Although, therefore, the part of the road line through the gorge will be an expensive work, yet it will be a permanently better line, and the cost will be in a great measure compensated for by the saving of length; and as the rest of the whole line from Manawatu on the West Coast to Napier on the East Coast is over a country which does not necessitate heavy works, it would not seem so objectionable that the comparatively short length through the Manawatu Gorge be of a more costly nature.

The Manawatu line will meet the line from Napier to Wairarapa and Wellington at the east entrance to the gorge, probably near the Maungaatua Stream, which there runs from the north into the Manawatu River.

I have, &amp;c.,

JOHN T. STEWART,  
District Engineer.G. S. Cooper, Esq., Under Secretary,  
Public Works Office.

## No. 55.

His Honor J. D. ORMOND to the Hon. the MINISTER for PUBLIC WORKS.

SIR,—

Wallingford, Hawke's Bay, 2nd January, 1871.

I have the honor to enclose, under separate cover, Mr. Weber's report to the Engineer-in-Chief on the line from Rua Taniwha to the Manawatu Gorge.

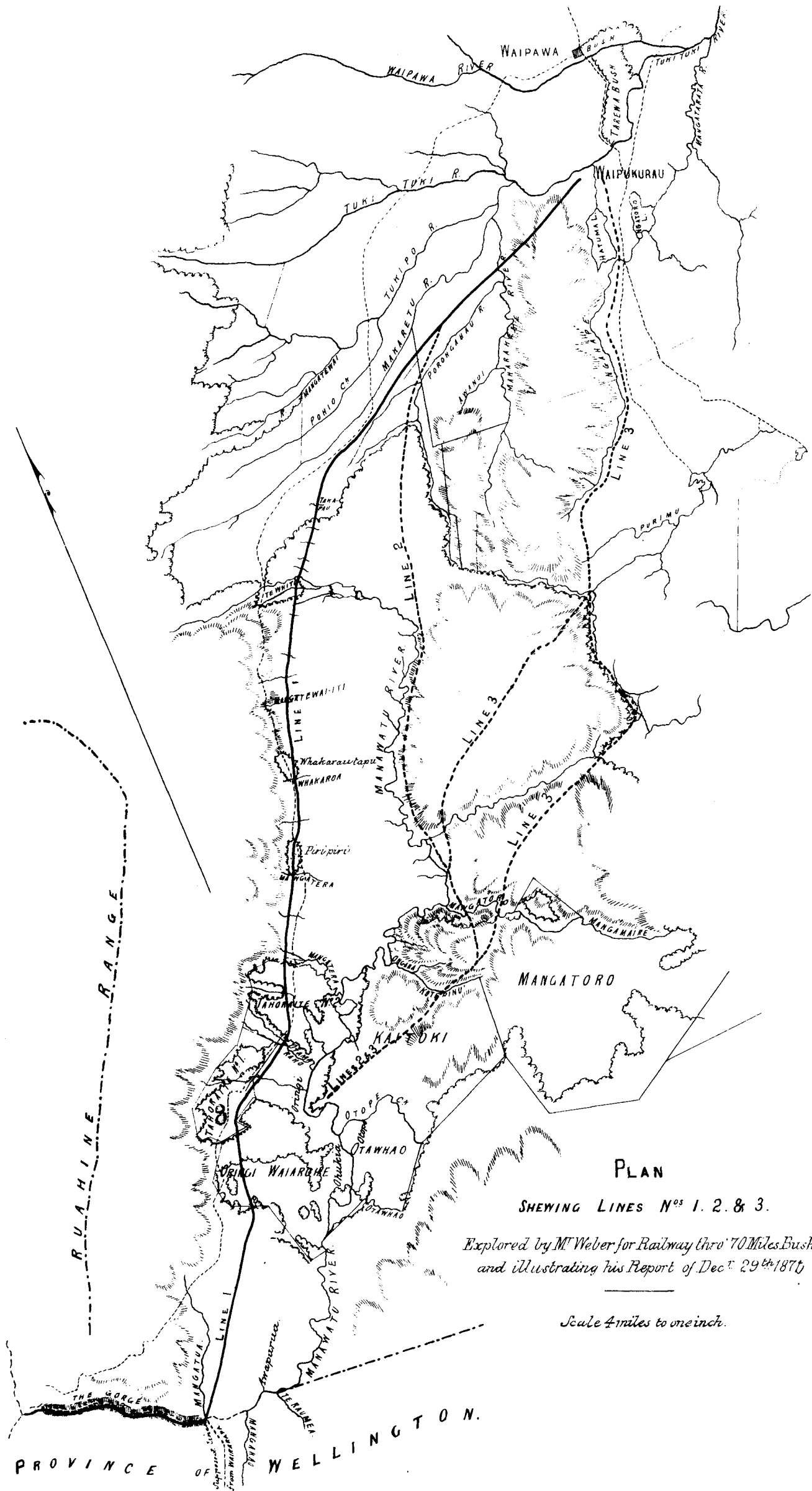
A perusal of that report will, I think, satisfy you that the line described as No. 1 is the only practicable line, and I shall hope to get an early authority from you to cause the road works upon that line to be proceeded with. Mr. Weber describes the line to me as really good. The height at the Takapau, where the road enters the bush, is about 900 feet above the sea level, and from there to the Manawatu Gorge, a distance of about thirty-five miles, the fall is about 600 feet, Messrs. Weber and Stewart fixing the height at the upper entrance of the Manawatu Gorge at 300 feet. I mention this to show that the natural facilities, for either road or railroad, of this line are extremely good. The principal difficulties found by Mr. Weber in exploring the line, arose from the gulches running from the Ruahine to the Manawatu River. These chasms were so great anywhere near the Manawatu River that the line is forced up to near the base of the Ruahine Ranges. On the line fixed upon there are five of these large gulches to cross, each from 115 to 130 feet deep, and from 4 to 5 chains wide at the top.

With the exception of these difficulties, the whole line is easy and good, and most of the road work would be available for railway, should such be hereafter determined upon.

In a former communication I advised you that I had called for tenders for forming the road and felling the bush from Ruahine to the gorge, and received your approval to what I had done.

I enclose the form of notice used, from which you will see that I proposed to divide the work into nine contracts, fell the bush one chain wide, and clear and stump a roadway 20 feet wide. This notice was given on the information then obtainable, and has had the effect desired, as it has drawn attention







to the proposed works, and men are now waiting ready to tender and enter upon the work at once. Now that the road line has been thoroughly explored, it is found necessary to make changes in the division of the work, and, in accordance with instructions issued by you, the character of the work is somewhat altered. I enclose herewith specification prepared by Mr. Weber in accordance with those instructions, and altering the division of the contracts into twelve portions in place of nine, as originally proposed.

I shall be much obliged if you will advise me, as soon as possible after the receipt of this letter, whether the new specification meets your approval, or in what respects you desire it amended. As you will observe, the date for sending in the tenders is fixed for the 17th January, and as I have already postponed the receipt of tenders once, I am desirous, if possible, of not having to do so again, as I fear the bushmen who are waiting for the work might be unable to continue to do so, and the advantage of being able to proceed at once with the work might be lost. I would also point out that the favourable season for carrying out such work economically and favourably is rapidly passing.

When I am authorized by you, which I hope to be in a few days, by telegraph, I will notify the alterations made, and the tenders would then be sent in in accordance with the amended notice.

Mr. Weber estimates the cost of the proposed work at about £500 per mile, including bridges and culverts, and there are twenty-eight miles of bush to be traversed from Takapau to the Manawatu Gorge. There are also seven to eight miles of road through open country, but very trifling expenditure will be required upon that part of the line.

I write this letter hastily, to send in time to catch the "Rangatira," leaving Napier for Wellington this day, and as I am at my inland station, and have no time or convenience for taking a copy, I shall be much obliged if you will cause a copy of this letter to be returned to me. The specifications I have copies of.

Hoping you will be able to authorize me at an early date as to specification and tenders.

I have, &c.,

J. D. ORMOND.

The Hon. the Minister for Public Works,  
Wellington.

#### Enclosure 1 in No. 55.

Mr. WEBER to Mr. BLACKETT.

SIR,—

Napier, 29th December, 1870.

In compliance with your instructions, No. 49 of the 11th ultimo, I have explored the three lines indicated for road and railway from Waipukurau (Point A on your tracing) to the Manawatu Gorge, viz.:—No. 1, between the Ruahine and the Manawatu; No. 2, between the Manawatu and the Puketoi Range; No. 3, east of the northern portion of the Puketoi Range, crossing the range at a point convenient for joining the line proposed to come through the gorge of the Manawatu. The last line, after crossing the Tuki Tuki, near Waipukurau, would have to follow generally the present line of road between Hatuma and Ngatoro Lakes to the Ngahape Stream, and follow up the rather narrow valley of that stream to its source, offering very trifling difficulties so far, but thence it would have either to cross the broken timbered northern spurs of the Puketoi in a westerly direction to the Manawatu, or the line would have to turn south, crossing a series of short spurs, to the southern portion of R. Collins' run, and thence over the main shoot of the Puketoi to the open country at Mangatoro, whence a leading valley can be obtained to the Manawatu at Otawhao. The only two breaks in this range, viz., that of the Mangatoro and of the Mangapoaka, are so tortuous and so precipitous, that the crossing of the range is unavoidable, and the face of the range, although it could be crossed at about 600 feet above the head of the Ngahape, is so broken on both sides, the limestone being laid bare in many places by gullies, that the cost for road or railroad would be, without question, too high.

Line No. 2, between the Manawatu and the Puketoi Range, would, after crossing the Tuki Tuki at Waipukurau, run over level country north of Lake Hatuma, through a break in the most northern spur of the Puketoi Range, over the Maraekake, by a bridge of about 80 feet span; then for seven miles over the upper portion of the Rua Taniwha without any obstacle excepting a bridge of 50 feet over the Porangahau, enter the Manawatu Bush at its north-eastern extremity, and follow up the left bank of the Manawatu to the open land at Mangatoro; thence over rather steep undulating country to Kaitoki, and by a leading valley to the Manawatu. This line offers no impediment until it strikes the Manawatu near the Great Southern bend of that river; but thence the spurs from the range run so close to the river that the line, for a distance of twelve miles, would be very expensive. The portion through the bush to the bend of the Manawatu is perfectly level, but the length of bush line exceeds No. 1 by about six miles, although there is a saving of about one mile in the whole distance to the gorge. For a road the line is objectionable, as the flat bush on the first six miles is so wet that, upon the greater part, planking or corduroy would have to be used.

Line No. 1, between the Ruahine and the Manawatu, is the one which, after general exploration of all three, appeared to me without question the most suited, and I have therefore explored it more in detail by cutting lines in different directions.

Upon examination of the whole country from a prominent spur of the Ruahine, and from the high bare ranges on the southern part of J. Johnston's run, it appeared to me clear that the Rua Taniwha basin extends between the present road track and the Manawatu to the open country at Matahiwi, where the spurs from the Ruahine seem to meet those from the Puketoi. From those points I could trace out a line nearly level from Takapau to Matahiwi. The first seven miles from the north-east point of the bush to the little clearing below Tawhiti appeared perfectly level, but, on examination, I found that the flat bush was so wet as to be (although best suited for a railway) unfit for a road without corduroy or planking.

Under these circumstances, I cut a line entering the bush about three miles east of the present road track, and striking the clearing Tawhiti nearly at the eastern extremity, and thence with an

average bearing of  $192^{\circ}$  to Mangatiwainui, at  $195^{\circ}$  to Piri Piri, thence  $207^{\circ}$  to Tahoraiti. In doing so the steep spurs from the Ruahine, which are crossed by the present track, have been avoided, and only few low very wet places have been met with.

The whole line as far as Tahoraiti is nearly level, and the only difficulties are the crossing of the watercourses, which have been worn out very deep and precipitous in the Ruahine gravel. The Manawatu, Mangatiwainui, the Mangatiwaiiti, the Whakaroa, and the Mangatera are all from 115 to 150 feet deep, and require long side cuttings for a road. For a railway they would require timber viaducts, as over the canons on the Sierra Nevada. The greater part of the line to Tahoraiti could be utilized for railway. About 80 chains of corduroy work, 22 bridges, 18 to 24 feet span, and 45 culverts, will be required on this portion of the line.

From Tahoraiti to Pukerangi, at Matahiwi, the line will run over level and undulating open country (about a quarter of a mile east of present track), with the exception of two belts of bush of two miles in the aggregate. Four small bridges and 20 chains side cuttings are required on this portion.

From Pukerangi a line is being now cut, bearing about S.S.W., so as to strike the upper end of the Manawatu Gorge, which will be distant about ten miles. I was induced to do so as, upon examination of the country conjointly with Mr. Stewart, who is well acquainted with the country about the gorge, we came to the conclusion that the only practicable line for road or railway to the West Coast can only be obtained by following the Manawatu Gorge.

The present track runs over the saddle at Te Ahua te Turanga, rising from Matahiwi about 800 feet, and from the Puhanga, on the West Coast, about 1,150 feet. This rise should not appear an insuperable difficulty, and would, under ordinary circumstances, be overcome; but the face of the hill on both sides is so broken that, to obtain the gradient of 1 in 13, a great many dips will be unavoidable, bringing up the aggregate rise to little under 2,000 feet, necessitating many bridges or viaducts over dry gullies, and several miles of side cuttings.

On the other hand, a very easy gradient appears to be obtainable from Matahiwi to the entrance of the gorge—no difficulties of any moment, as far as we could judge on viewing the line from a commanding position. The line would strike the Manawatu at the Mangahua, about 100 yards above the upper entrance of the gorge. The gorge is a fissure in the range, averaging about 60 yards in width at the bottom (in some places only 36 yards), nearly six miles in length, with general bearing of about west, through which the Manawatu flows with great velocity, over many rapids (one with 4 feet fall in 40 feet). The sides are Ruahine sandstone, from 200 to 600 feet high, with an average angle of about  $25^{\circ}$  from the perpendicular, but in many places like walls, and even overhanging. The sides are covered with scrub, fern, and scanty timber, very little soil being in crevasses and on shelves for larger growth. The rise of the river in heavy freshes seems to reach 24 feet in narrow parts. The west side (proper right bank of the river) being broken by five gullies, it would be necessary to make use of the east side for road or railway. This would necessitate a bridge of about 170 feet above the gorge, and one below the gorge; but as that below the gorge, under all circumstances, would be required for the line from Wairarapa, and as, in addition to this, probably the Puhanga would have to be crossed, the difference between a bridge over the Puhanga and that over the Manawatu above the gorge will only be required, which will be very trifling.

The line for the road would, for the most part, have to be cut into the solid, about forty feet above ordinary water level; and in some places, especially where the rock is overhanging, large masses will have to be removed, the greater part of which will have to be blasted. This necessarily will make the work expensive, and no dray road can be carried along the gorge under £10,000. Large as the amount may appear, it should be considered that the line, with improved curves, will do for the railway, and that the work will be a permanent one, requiring very little in the shape of maintenance, and that not unlikely the line from Wairarapa will have to be carried down the valley between the Puketoi and the Tararua, and will have to join the line above the gorge; the expensive work thus serving both lines. A line over Te Ahuaturanga, necessarily about eight miles in length, would, with bridges and side cuttings, probably cost £800 per mile, and would, when completed, be of very little use.

Practically the "Mountain" would be a barrier between both coasts, as very few teams would favour an up-hill pull of four miles. Nature has shown here the way, and although she may be an expensive guide in this instance, she is the only safe one.

The length of bush on Line 1 is about twenty-eight miles to the gorge. The soil along the bush line varies very much, from rich loam to poor shingle, the greater part being of very fair quality, and well suited for agriculture. The timber consists principally of rimu, totara, matai, white pine, black and white birch. Rimu is generally prevalent, while totara is principally in patches, but abundant. The trees are well grown, and underwood is generally light. The bush is well watered, running streams being rarely more than a mile apart. The larger streams carry heavy timber when flooded, and seem to be blocked up frequently by masses of large trees.

The road can cross the shingle-beds, but a centre span of about 100 feet will be required for a railway. This will make the viaducts across the wide gullies perfectly safe. All small watercourses have as a rule, soft bottoms, and require bridges.

In conclusion I may add that very rarely a dividing range will be crossed with less difficulties than that between the East and West Coasts by the line proposed.

John Blackett, Esq., Acting Engineer-in-Chief,  
Wellington.

I have, &c.,  
CHARLES WEBER.

#### Enclosure 2 in No. 55.

SPECIFICATION for Falling Timber and clearing it away, &c., of about Twenty-eight Miles of the Road through the Tamaki (Manawatu) Bush, between Takapau and the Manawatu Gorge.

THE work to be done has been divided in twelve contracts, as follows, viz:—

1. From entrance at Takapau, about three miles east nearer Mr. Grant's than the old road, to the open land at the small clearing, Tawhiti (the clearing not measured in), about two miles.

2. From the south entrance into the bush at Tawhiti to the north bank of the Mangatiwainui, about three and a quarter miles.

3. From the south bank of the Mangatiwainui to a peg marked No. 3, south of the Mangatiwaiiti, about two miles.

4. From Peg No. 3 to the clearing Whakaroatapu (exclusive of clearing), about two and a quarter miles.

5. From Whakaroatapu to the clearing Piri Piri (no open land measured on either clearing), about two and a quarter miles.

6. From Piri Piri to Tahoraiti, about three and a half miles.

7. Consists of two portions, viz., about half a mile between Tahoraiti and Orongi clearing, and one and a half miles between Orongi and Matahiwi clearing, about two miles.

8. From entrance into bush at Matahiwi, near Pukurangi, to Peg No. 8, running towards the Manawatu Gorge, two miles.

9. From Peg No. 8 to Peg No. 9, two miles.

10. From Peg No. 9 to Peg No. 10, two miles.

11. From Peg No. 10 to Peg No. 11, two miles.

12. From Peg No. 11 to Peg No. 12, at the Manawatu Gorge, about two miles.

The flag stakes on the cut lines indicate the centre of the line, and all trees through which the line passes have been blazed on both sides, while those on either side have been blazed at the respective sides.

The line will have to be cleared in the following manner, viz. :—

Thirty-three feet in the centre of the roadway of 1 chain have to be cleared of all timber and roots, so as to form a perfectly even surface.

On the 16½ feet on each side of the 33 feet, all timber and scrub has to be cut down to within 15 inches of the surface, and to be removed, with all fallen timber, so as to leave 66 feet in width clear of all timber or scrub.

On the 33 feet on the centre the trees may either be grubbed out or cut down level with the surface, and all roots protruding over the surface have either to be removed or pared down to the level of the surface.

The contractor may burn the timber if more convenient than moving it to the sides, but all sound totara, matai, and rimu, provided the trees do not exceed 14 feet girth measured 2 feet above the ground, should be preserved, and should not be cut into lengths of less than 9 feet.

Any timber partly within the 33 feet and the 66 feet to be considered as upon the line, and to be cleared away accordingly.

The Government shall have the power, through the officer in charge of the work, to make alterations on the line of road during the progress of the work without invalidating the contracts, and shall only pay an additional sum to the contract amount provided the contractor should be put to additional expense. The additional payment to be determined by arbitration, provided the parties cannot agree otherwise.

The Government shall have likewise the power to increase the width of the clearing from 1 chain to 1½ or 2 chains on sidings or otherwise, where such should appear necessary. Additional payment to be made at the contract rate for every square chain of additional work.

Each contract must be completed within three months from date of acceptance of tender, and must be done to the satisfaction of the officer in charge of the work, without whose certificate no payment will be made.

The contractor will be liable to a fine of £10 per week for every week, or portion of a week, during which the work may remain unfinished after the contract time has elapsed, which fine may be deducted from the contract amount.

Advance payments at the rate of 75 per cent. of the value of the work done will be made, if required, after half the work has been executed.

The contractor must be provided with two approved sureties, to enter conjointly with him and severally into a bond of £50 each for the due performance of the contract. Should the contractor fail to proceed with his contract to the satisfaction of the Government, the officer in charge shall be empowered to take the work out of his hands, and complete it at the contractor's and his sureties' risk and cost.

The lowest or any tender not necessarily to be accepted.

The contractor to provide tools, tents, labour, and all articles required for the execution of the contract.

Tenderers to state the number of contract for which the tender is meant, at per chain. The exact length of the contract will be determined, when the line has been cleared, by chaining, in the presence of the contractor.

Tenders to be addressed to the Agent of the General Government, Napier, and delivered not later than the 17th January, 1871, at noon.

General Government Napier, 29th December, 1870.

### No. 56.

EXTRACT from Letter from Mr. STEWART to Mr. BLACKETT.

SIR,—

Manawatu Gorge, 11th February, 1871.

\* \* \* \* \*

In regard to Gorge, I do not think it possible to expect the road to be opened before winter, but the work can go on in winter so as to be open, if possible, for next season's traffic. I put a party of men on as authorized, and will push on the work, and, if practicable, get it taken at per chain after a time. The work is very irregular, however, owing to rock cutting and spurs of rock projecting.

I am getting the line carried through, and the Natives are well on with the clearing off bush until which is done I can scarcely get details ready for contract or the line pegged out.

The angle of slope is about  $40^{\circ}$ , about 2 feet of soil, stones, and roots, and then rock, which seems to be workable by the pick, and much like the Rimutaka rock.

Rocky spurs, however, come down here and there, which will require blasting, and they are nearly perpendicular in many parts.

Will you kindly explain these matters as a reason why the work cannot possibly be gone on with at once all through the Gorge.

There is also some exploring still desirable about east end of Gorge, as I hope by doing so to avoid some difficult faces of rock there.

\* \* \* \* \*

John Blackett, Esq.

\* \* \* \* \*  
I have, &c.,  
J. T. STEWART.

### No. 57.

His Honor J. D. ORMOND to the Hon. the MINISTER for PUBLIC WORKS.

SIR,—

Napier, 24th February, 1871.

I have the honor to acknowledge and thank you for your letter of the 17th instant, enclosing an extract from a letter from Mr. Stewart to Mr. Blackett, having reference to the road through the Manawatu Gorge. I take so much interest in the Seventy Mile Bush Road that I was anxious to hear how the works on that side were progressing. From Mr. Stewart's letter I gather that he does not expect the work to be concluded at an early date, as he remarks, "so as to be open if possible for next season's traffic."

I believe the works on this side will be completed by the time specified in the contracts, viz., end of May, and I hope I shall not be considered intrusive if I suggest that the contract system on the work through the gorge would tend both to economy and despatch.

I see Mr. Stewart writes, "and if practicable get it taken at per chain after a time." From my experience on this side, I feel satisfied that were the survey completed, specifications for the whole work through the Gorge prepared, and tenders called for by advertisement, letting the work in sections suitable for twelve to twenty men to take, that a very large saving in cost would be effected, and the work completed at a much earlier date than under any other system.

I may mention, in support of this, the large number of tenders received for the work through the bush on this side, and the cheap rate at which it is being done.

The Hon. the Minister for Public Works, Wellington.

I have, &c.,  
J. D. ORMOND.

### No. 58.

Mr. COOPER to His Honor J. D. ORMOND.

SIR,—

Public Works Office, Wellington, 9th March, 1871.

I have the honor to acknowledge the receipt of your letter of the 24th ultimo, and to thank your Honor for your suggestions with reference to the formation of the road through the Manawatu Gorge.

The plan which your Honor suggests is the one which has been determined on by this department, but, as the country is much more difficult on the west than on the east side of the range, and the cuttings in the gorge are through hard rock, the progress of the work will be much slower than it is through the Seventy Mile Bush.

Besides, an obstacle has presented itself in the fact that part of the road close to the Gorge goes through private property, the owner of which refuses to accept reasonable compensation; \* steps will therefore have to be taken, under the 49th and 61st sections of "The Immigration and Public Works Act, 1870," which will cause additional delay.

Tenders will, however, be called for in a few days for the formation of the road through the gorge.

I have, &c.,

His Honor J. D. Ormond, Napier.

G. S. COOPER, Under Secretary  
(for the Minister for Public Works).

### No. 59.

Mr. STEWART to Mr. COOPER.

SIR,—

Manawatu, 27th February, 1871.

I have the honor to forward a description of work to be done at the Manawatu Gorge, and to suggest that it now be advertised for tender, if such a course is approved of.

I also enclose a note of proposed time for tenders to be given in, and other particulars for advertisement. The usual conditions and forms of tender will require to be sent to Manawatu, to attach to the descriptions lodged there.

I consider that the time to be given in conditions of contract should not be less than six months from date of acceptance of contract, as the place is difficult of access.

Please let me know should my attendance be required at time of receiving tenders.

I have, &c.,

G. S. Cooper, Esq., Under Secretary,  
Public Works Department.

JOHN T. STEWART,  
District Engineer.

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\* This has since been satisfactorily arranged.

## Enclosure in No. 59.

## SPECIFICATION of Work in Forming a Road at the Gorge of the Manawatu River.

THE present contract commences at peg No. 1, near the entrance to the gorge, on the west side, and continues up the south side of the gorge for a mile, more or less, to peg No. 2.

Tenders however may be given for one to two miles additional length of work, as specified hereafter, as the work to be done is of a similar nature throughout that distance, although of this the contractor must satisfy himself before tendering.

*Generally.*

The description of the work is a side cutting, running on a level along the side of the slope of hill. The face of the hill is steep, averaging from  $40^{\circ}$  to  $45^{\circ}$  (or  $\frac{1}{2}$  to 1), and in some parts steeper, while at intervals rocky spurs come down nearly perpendicularly. The rock appears to be of a similar nature to that on the Rimutaka Road, and on the Ngahauranga Road, near Wellington. There is a general surface of soil mixed with roots and loose stones lying over the rock, except where the rock shows bare at the surface. Underlying this the rock seems (from a trial pit made) not to be compact enough to prevent working with the pick, but the more solid portions and the rocky spurs will require blasting.

These remarks are for the general information of proposing contractors, but are in no way to be considered binding on the contracting parties in any respect, and the contractor must satisfy himself in all respects, and take all the responsibility, as to the nature and amount of work required in executing the contract before giving his tender. The bush has been cleared off the line of road, and the level of cutting marked by totara pegs, from pegs 1 to 2, and for the remainder of the length the line is being cleared of bush, and pegged out at formation level, and the formation to run fair and level throughout between these pegs.

*Side Cutting.*

The outside edge of road to be 6 inches higher than the inside, and a water channel to be formed along the inner side 9 inches wide and 6 inches deep. The slope of bank above road, where the material is earth or earth and stones, to be  $\frac{1}{2}$  to 1, and where the rock is not compact, to be 3 inches to a foot, but where the rock is firm and compact it may be left perpendicular. Where the upper part of bank consists of earth, earth and stones, or rock not compact, the slopes of such portion to be as above noted.

The width of a roadway to be, if in solid rock, 10 feet, but where the earth is partly earth and rock, the width to be 12 feet on the solid. In every half mile in length of road, half a chain in length is to be made 15 feet wide, and this width gradually contracted to width of adjoining formation, in a length not under 10 feet at each end of the said half-chain.

In the cutting at the rocky spurs, or where the natural surface bends quickly, the bend of centre line of finished formation not to be sharper than equal to a curve of half a chain radius in any case, and in such a turn, or where it is sharper than equal to a curve of 45 feet radius, the width to be 1 foot 6 inches more than that before specified for the different descriptions of material in cutting; and, where necessary, more of the bank must be cut away to allow of the curve mentioned as the sharpest to be made. All overhanging or dangerous roots, stones, &c., above top of bank to be removed, and all slips occurring before the contract is finished and passed, to be removed by the contractor, and no distance less than a mile of continuous finished road will be so passed.

*Tenders.*

The tender to be a sum per mile measured along centre line of formation after completion (no bridges to be measured in), and this sum to include all the excavation and work whatsoever required to form and complete the road as described (with the exception of culverts and bridges, which are hereinafter provided for), and any fractional part over a mile will be paid for at a proportionate rate.

*Bridges and Culverts.*

Box-culverts and bridges of a simple construction (not exceeding 30 feet span), to be placed where described by the Engineer, to be of the forms and dimensions and constructed as described by him during the progress of the work. To be all of heart of totara of best quality, sound, and free from injurious defects. A price to be given in tender for these at per 100 feet superficial (sawn timber measurement); also a price per cubic foot for axe-squared timber, including all nails, spikes, and workmanship, and also fixing and erecting. Also, a price per cubic yard for excavating for foundations, and for laying of culverts and bridges in earth, or earth and stones, and in rock. Also, a price per pound for any bolts (wrought iron screw bolts or pointed) ordered by Engineer.

This portion of the tender, viz., that for bridges and culverts and work in regard to them, need not necessarily be accepted, notwithstanding the tender for road formation should have been accepted. The contractor shall complete the whole work within six months from the date of the acceptance of his tender. Should the contractor neglect or fail to complete the work by the time specified, he shall pay to the General Government the sum of £10 per week for each and every week the work remains unfinished beyond the specified time; such money to be deducted from any moneys due or that may become due to the contractor under this contract.

Should the contractor not proceed with sufficient expedition in the performance of the works, or not execute the same in compliance with the terms of this specification, it will be in the power of the District Engineer, on behalf of the Government, to take the works wholly or in part out of the contractor's hands, and contract with other parties to complete the same at the contractor's sole charge and expense.

All tenders must be in the form attached, and be accompanied by a certified cheque, or money, to the value of £10, as a guarantee of good faith. The deposit of the accepted tenderer will be forfeited to the Government should he fail to take up the contract. The deposits of the other tenderers will be returned upon the signing of the contract. The deposit of the contractor will be retained as security for the due performance of the contract; or it may be returned to him on finding security by bond,

with two approved sureties, to the amount of £50. The lowest or any tender will not necessarily be accepted.

The whole work to be done to the satisfaction of the District Engineer, and under his supervision and that of the local Road Overseer. The decision of the District Engineer to be, in all matters connected with this contract, final and binding.

Payments to be due monthly on those portions only of the formation completed to the extent of 75 per cent. of value of the work done as estimated by the Engineer.

The work to begin at west end of contract and proceed continuously. A price to be given along with tender for any extra cutting, ordered in writing by the Engineer, per cubic yard for rock and for earth, or earth and stones.

No extra work of any kind will be allowed without it is ordered in writing by the Engineer.

The contractor is to find all tools, plant, and material for the work at his own cost.

JOHN T. STEWART,  
District Engineer.

Manawatu, 27th February, 1871.

No. 60.

SCHEDULE of Tender of Messrs. Clark Dunn and Co.

| Name.                  | Rate per Mile. | Bridges and Culverts per 100 feet superficial, sawn. | Bridges and Culverts per cubic foot axe-squared. | Bridges and Culverts. Excavations per cubic yard.              | Iron Bolts per lb. | Extra Excavations per cubic yard.                      |
|------------------------|----------------|--|--|--|--------------------|--|
| Clark Dunn and Co. ... | £1,170         | 25s. ...   | 2s. ...  | { 2s. 3d. Rock.<br>1s. 9d. Earth and Stones.<br>1s. 3d. Earth. | { 10d.             | { 2s. Rock.<br>1s. 6d. Earth and Stones.<br>1s. Earth. |

NOTE.—There were eleven tenders sent in, ranging from £1,170 per mile, as above, to £5,280 for the first mile. The lowest tender, that of Messrs. Clark Dunn and Co., was accepted, and is now being satisfactorily carried out. Approximate estimate for the whole of their contract is £5,000.

No. 61.

His Honor J. D. ORMOND to the Hon. the MINISTER for PUBLIC WORKS.

SIR,—

Napier, 4th March, 1871.

I have the honor herewith to forward a letter from Mr. Weber, relative to the progress of the road through the Seventy Mile Bush, and stating that the amounts named in the margin are required as advances for work performed, as also for survey, labour, and contingencies.

The Hon. the Minister for Public Works, Wellington.

I have, &c.,  
J. D. ORMOND.

Enclosure in No. 61.

MR. WEBER to His Honor J. D. ORMOND.

SIR,—

Waipawa, 1st March, 1871.

I have the honor to report that the contracts for clearing the Manawatu Bush Road are progressing favourably, there being now about 150 Europeans and about forty Natives employed, who average about 18 chains per day.

The following amounts are required as advances upon work done during the last month :—

|                      | £    | s.  | d.  |
|----------------------|------|-----|-----|
| Hudson and White ... | ...  | ... | ... |
| Jas. Dunbar ...      | ...  | ... | ... |
| M. Davis ...         | ...  | ... | ... |
|                      | £830 | 0   | 0   |

The sum of £76 is required in addition to the above for survey, labour, and contingencies.

Mr. Stewart has informed me yesterday, by letter, that it would be desirable to alter the terminus of my line at the conflux of the Mangaatua and the Manawatu above the gorge, which had been agreed upon as the junction of the line from Wairarapa with that from Napier.

It appears that, on closer examination of the gorge, the sides of which are covered with dense scrub, Mr. Stewart has found that the upper portion of the south side of the gorge (along which the road was proposed to be carried) offers very serious difficulties, and that it will be desirable that I should carry my line along the north side of the gorge, which he considers much preferable, to below the Auroa Rapid, a distance of about one and a half miles, and cross the Manawatu there and join on to the Wairarapa line.

In compliance with Mr. Stewart's proposition for a meeting at the gorge, I have written and telegraphed to him conveying my readiness, and I shall, after having arranged about the point of

£830  
£  
350  
360  
120  
£830  
£68  
8  
£76

SHAWING ROAD IN COURSE OF FORMATION

FOXTON - MANAWATU

CORCE

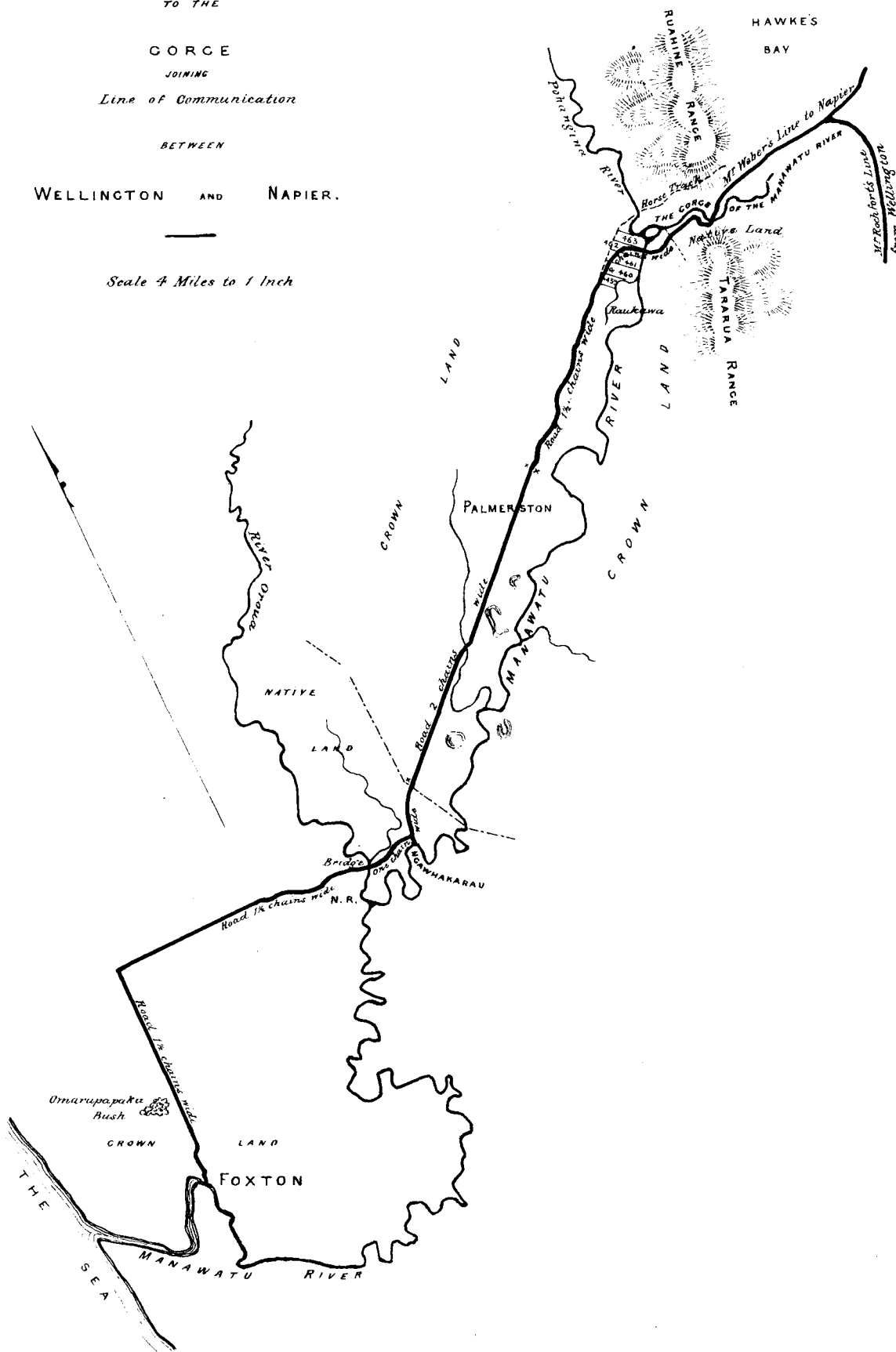
Line of Communication

BETWEEN

WELLINGTON AND NAPIER.

*Scale 4 Miles to 1 Inch*

PROVINCE  
OF  
HAWKE'S  
BAY







junction, lose no time in getting the line completed, when I shall do myself the honor to report fully upon it.

His Honor J. D. Ormond, Napier.

I have, &c.,  
CHARLES WEBER.

### No. 62.

His Honor J. D. ORMOND to the Hon. the MINISTER for PUBLIC WORKS.

SIR,—

Napier, 22nd March, 1871.

I have the honor to enclose copy of a report from Mr. Weber, respecting an alteration in the line of road near the Manawatu Gorge, which has been rendered necessary owing to Mr. Stewart altering his line through the gorge. As you will note, the alteration increases the works on this side, but Mr. Weber is taking steps to avoid any delay arising thereby.

I have authorized Mr. Weber to purchase the canoe and build the whare asked for, which are necessary, and the expenditure for which I have to ask your authority.

The Hon. the Minister for Public Works, Wellington.

I have, &c.,  
J. D. ORMOND.

### Enclosure in No. 62.

Mr. WEBER to His Honor J. D. ORMOND,

SIR,—

Waipukurau, 17th March, 1871.

I have the honor to report that, according to appointment, I have met Mr. Stewart at the mouth of the Puhangina, on the 13th instant, for the purpose of arranging with him about the point of junction of the Manawatu and Napier lines, he having found, on close examination, that the south face of the gorge on the eastern (Napier) end was less favourable for road and railway, as far as the Auroa Rapid, a distance of about one and a half miles, than the north face; and that, therefore, it would be desirable to carry my line to that point instead of to the mouth of the Mangaatua, as, in conformity with original arrangement, I had done.

We proceeded up the gorge to the ground, and I fully concur with Mr. Stewart that a saving of at least £700 will be effected by the proposed alteration, the face of the gorge not only offering a less broken surface, but the distance of rock cutting will also be reduced by about 18 chains, and the cutting will be less expensive, the rock on the north side being limestone as far as the Mangatiriri, while it is hard sandstone on the south side.

If the line from the Wairarapa could have been brought to the mouth of the Mangaohao, or nearly opposite the mouth of the Mangaatua, at the head of the gorge, it would have been questionable whether the river should not be bridged (as originally contemplated) above the gorge, and the line carried the whole way down the south face; but as the line from Wairarapa has to follow down the Tiraumea and cross the Manawatu even above their junction (about seven and a half miles above the gorge), the saving effected at the gorge will probably nearly pay for the additional bridge.

To bring the Napier line to the proposed junction, two ways appear to be open, viz., either to follow down the gorge, from the mouth of the Mangaatua, or to head the Marupiko Hill and to follow down the valley of the Mangatiriri, which is precipitous near the Manawatu. Of the two, the first appears the most likely, and would require only the altering of about 40 chains of the end of the line (now under contract), while the other would require probably the altering of about four miles. As both lines should be properly tested, and as, under present circumstances, no time was to be lost (the workmen being already on No. 10 contract), I have arranged for the cutting of the necessary trial lines, and I hope to be able to report shortly, and to have the new line completed in time to prevent any delay or inconvenience to the contractors.

A canoe being indispensable for the communication in the gorge, I beg leave to request that authority for the purchase of one may be granted, the cost of which will be between £3 and £5; and, likewise, that I may be allowed to have a small whare erected above the gorge, not only for my accommodation when there, but likewise for keeping tools and stores, as, during the winter season, communication with that part will, in all likelihood, be frequently interrupted for several days if not for weeks.

His Honor J. D. Ormond.

I have, &c.,  
CHARLES WEBER.

### No. 63.

His Honor J. D. ORMOND to the Hon. the MINISTER for PUBLIC WORKS.

SIR,—

Napier, 31st March, 1871.

I have the honor to enclose copies of letters from Mr. Weber on the subject of a piece of road at the Manawatu Gorge, thrown into the work on this side in consequence of Mr. Stewart's finding the south bank of the river impracticable. It is merely, however, doing work on this side which was before intended to have been done on the other side of the river. There can be little doubt that the line described by Mr. Weber, in his letter No. 1, is the best, and, according to his estimate, the least expensive.

I have authorized the clearing of the line of bush and scrub as proposed by Mr. Weber, which is to be gone on with at once, and, when finished, Mr. Weber will proceed to take the necessary levels, when I propose to call for tenders for the work, for which I shall require your authority. Meantime Mr. Weber goes on with the railway survey between here and the Seventy Mile Bush, attending as required to the works going on in the bush.

The Hon. the Minister for Public Works, Wellington.

I have, &c.,  
J. D. ORMOND.

## Enclosure 1 in No. 63.

Mr. WEBER to His Honor J. D. ORMOND.

SIR,—

Napier, 30th March, 1871.

On the 17th instant I had the honor to report that I had undertaken the exploration of the two lines offering for choice to connect the terminus of Mr. Stewart's line on the Manawatu Gorge with the line from Napier, viz. :—

1. By the north face of the gorge to the Auroa Rapid.
2. By heading the Marupiko Hill, and following down the valley of the Mangateriri to the Manawatu, and thence down the north face of the gorge to the point selected for the bridge near the Auroa Rapid.

The latter plan would have the advantage of avoiding about 60 chains of heavy limestone cuttings from the entrance into the gorge to the mouth of the Mangateriri.

On examination, I found that the Marupiko Hill is joined on the north to the Ahuaturanga Range by a saddle rising about 220 feet above the general level, which cannot be avoided, and that the valley of the Mangateriri is very narrow and precipitous for half a mile near its mouth, necessitating very heavy cuttings.

As the line, in addition to the above drawbacks, would have to be deflected for a considerable distance to the west, for the purpose of crossing the saddle, increasing the distance about 100 chains, I have no hesitation in recommending the adoption of the line by the gorge as cheaper and more direct.

I estimate the cost of the line through the gorge (No. 1) as follows, viz. :—

|  | £           | s. | d. |
|--|-------------|----|----|
| 106 chains clearing bush and scrub, at £2 5s. ... ..                                   | 238         | 10 | 0  |
| 60 chains heavy rock cuttings, at £20 ... ..   | 1,200       | 0  | 0  |
| Bridge over Te Mangateriri ... ..  | 150         | 0  | 0  |
| 46 chains light cuttings and formation between Mangateriri and terminus, at £12 ... .. | 552         | 0  | 0  |
|  | £2,140 10 0 |    |    |

No. 2 Line, leading through Marupiko Hill, as follows, viz. :—

|   |             |    |   |
|---|-------------|----|---|
| 160 chains bush clearing, at £3 ... ..  | 480         | 0  | 0 |
| 46 chains bush and scrub, at £2 5s. ... ..                                    | 103         | 10 | 0 |
| 100 chains side cuttings over Marupiko Saddle, at £4 ... ..                   | 400         | 0  | 0 |
| 40 chains side cuttings (very heavy—partly rock) near Manawatu, at £12 ... .. | 480         | 0  | 0 |
|   | £1,463 10 0 |    |   |
| 60 chains ordinary formation, at £2 ... ..                                    | 120         | 0  | 0 |
| Bridge over Mangateriri and three other smaller creeks ... ..                 | 320         | 0  | 0 |
| 46 chains lighter cuttings (mostly rock) in gorge, as above, at £12 ... ..    | 552         | 0  | 0 |
|   | £2,455 10 0 |    |   |

His Honor J. D. Ormond, Napier.

I have, &c.,  
CHARLES WEBER.

## Enclosure 2 in No. 63.

Mr. WEBER to His Honor J. D. ORMOND.

SIR,—

Napier, 30th March, 1871.

In my report of this date, upon the result of my late exploration of the two lines at the Manawatu Gorge, I have stated that the face of the gorge would have to be cleared, for a distance of about 106 chains, of timber and scrub, at a cost of about £2 5s. per chain, in the event of the direct line by the gorge being adopted.

I beg now leave to suggest that (in the event of the gorge line being made) the clearing of the scrub and bush be done in the same manner as has been done on the adjoining portions, viz., by letting it out in portions of 10 chains and upwards, at a rate of from £2 to £2 10s. per chain, according to the nature of the timber. This appears to me to be the cheapest and quickest plan, as the calling for tenders would not only cause considerable delay, but, as probably, tenders would be higher, the extent of the work being small, the distance considerable, and the difficulties of access great during the winter season.

Several parties of Natives now employed on the same work on the lower portion of the gorge, who will very shortly complete their pieces, are ready to take portions of the work; and the men employed by me in cutting the trial and survey lines at the gorge, and who are now upon the ground, are likewise ready to undertake portions, so that, if this plan should be adopted, the line would probably be ready for calling tenders for the rock cutting in five or six weeks.

His Honor J. D. Ormond, Napier.

I have, &c.,  
CHARLES WEBER.

## No. 64.

Mr. STEWART to Mr. COOPER.

(Telegram.)

5th April, 1871.

I ACCOMPANIED Mr. Weber through the gorge, and saw portion of the line No. 1, viz., by the north face of the gorge to the lower part of the Auroa Rapid, and to end of Mr. Stewart's line. From information thus gained, and from perusal of Mr. Weber's report, I agree with him in recommending the line No. 1, as above, as the best for adoption.

JOHN T. STEWART,  
District Engineer.

## No. 65.

His Honor J. D. ORMOND to the Hon. the MINISTER for PUBLIC WORKS.

SIR,—

Napier, 6th April, 1871.

I have the honor to enclose copy of a letter from Mr. Weber, calling attention to the difficulty already arising in the transport of food, &c., to the working parties in the Seventy Mile Bush. The wet season has made the present bush track almost impassable, whereas in ordinary seasons it would be good till July. To avail of the present road as it is opened, a small expenditure is necessary, and I should like to receive your early approval, so that I may call for tenders, and get the work in progress.

The formation of the first section of the proposed work is so necessary that I have called for tenders in anticipation of your approval.

The fourteen small bridges are scattered along the line, and are essential to a use of it as it gets opened.

The 115 chains of side cuttings are wanted to enable traffic to pass from one side to the other of the gulches I have in former reports described as the great difficulties in the bush road, and would, as Mr. Weber states, form part of the eventual side cutting the road would take. As these gulches are nearly precipices, you will understand that means of getting up and down them are essential to a rise of the line.

I am led to believe that the new line may be open for horse traffic within six weeks from the present time, and of course the improvements now proposed are necessary to its being available.

I have, &amp;c.,

The Hon. the Minister for Public Works, Wellington.

J. D. ORMOND.

## Enclosure in No. 65.

Mr. WEBER to His Honor J. D. ORMOND.

SIR,—

Napier, 4th April, 1871.

I have the honor to bring to your notice that, owing to the frequent and heavy rains during the last month, the old track from Takapau through the Manawatu Bush has become exceedingly heavy, causing great difficulty and consequently expense in the transport of the necessary supplies to the road parties. This is particularly felt as the wet season has set in so unusually early, and before the contractors have had time to lay in the stock necessary for the winter.

This evil may be remedied to a great extent by making the new line practicable for horse traffic as the work progresses, and avoiding in this manner the worst portions of the old line, especially that between Tawhiti and Maungaterawiti. The formation of about 12 chains at the Takapau entrance, and the bridging of the swampy creek, could be done upon the general plan contemplated for the road, and tenders could be invited for those portions from time to time as the present contracts progress.

In addition to the above, some outlay would have to be incurred in cutting narrow horse tracks along the face of the precipitous valleys of the Manawatu and the Maungatewaiiti. These temporary cuttings, if made in the proper line, will be so much labour saved to the contractor for completion of the road.

To undertake these cuttings, measuring at the Maungatewaiiti about 60 chains on the proper plan (refers to dray road), would take too long to be of any service for the traffic during the coming winter.

The only portion that can be undertaken at present, to advantage, is the forming and metalling of the 12 chains at the Takapau entrance, over very wet ground, which, if done, would confer a great boon upon the men employed in the works, and this piece is that which, under all circumstances, will have to be made first. I estimate the cost of this work (inclusive of culverts) as detailed below.

By the end of this month, the clearing of the line will have sufficiently progressed to invite tenders for building about fourteen small bridges over the worst creeks.

I have, &amp;c.,

His Honor J. D. Ormond.

CHARLES WEBER.

*Approximate Estimate.*

|  | £           | s.       | d.       |
|--|-------------|----------|----------|
| 1. 12 chains forming and metalling at Takapau, at £5 per chain ...           | 60          | 0        | 0        |
| 2. 14 small bridges, measuring in the aggregate 210 feet, at £2 per foot ... | 420         | 0        | 0        |
| 3. 115 chains cutting, temporary horse track, at 3s. 6d. per chain ...       | 20          | 2        | 6        |
|  | <u>£500</u> | <u>2</u> | <u>6</u> |

## No. 66.

Mr. KNOWLES to Mr. WEBER.

(Telegram.) Government Buildings, 14th April, 1871.  
*Re* Mr. Ormond's letter of 6th, covering copy of your letter of the 4th. You are authorized to call for tenders for work referred to therein; estimated cost, £500 2s. 6d. I communicate with you direct as Mr. Ormond is absent from Napier. Please let him know of this authority.

JOHN KNOWLES.

## No. 67.

His Honor J. D. ORMOND to the Hon. the MINISTER for PUBLIC WORKS.

SIR,—

Napier, 4th May, 1871.

I have the honor to enclose copy of a letter from Mr. Weber, reporting arrangements made with a party of Natives for clearing the bush on the part of the line at the Manawatu Gorge under his charge.

I am glad to see that opening the line has shown the work to be done in the way of side cuttings will be much less than was anticipated, and tenders will be called for as early as possible for that work.

I have, &amp;c.,

The Hon. the Minister for Public Works, Wellington.

J. D. ORMOND.

## Enclosure in No. 67.

Mr. WEBER to His Honor J. D. ORMOND.

SIR,—

Napier, 1st May, 1871.

I have the honor to report that, on my arrival at the Manawatu Gorge, I found a party of Rangitane (Peeti's people), who had just finished their contract, waiting for me, and anxious to undertake the clearing of the gorge line. After considerable delay they entered into a written agreement to clear the line from the entrance into the gorge to the proposed site for the bridge over the Manawatu (about 102 chains), at £2 10s. per chain, the clearing to be 1½ chains wide, which rate is considerably below the contract rates of the adjoining European contracts, making allowance for difference of timber. The Natives took the work in one contract, but being about forty in number, they made the condition that they should be allowed to subdivide it amongst themselves, and to be paid according to their subdivision, in the same way as this has been done in former contracts in the gorge; and further, they stipulated that the Government should provide them with tools as usual.

I wrote to Mr. Stewart, requesting of him the loan of the necessary tools from the Government store below the gorge, in his charge, which I have no doubt he will have granted, the Natives being responsible.

I am glad to be able to add that the rock cutting will be much lighter than it originally appeared, in fact, about 60 chains will be above the ledge of rock and merely easy side cutting; when only 20 chains of the whole distance will form really heavy work. The whole work should be done below the present contract rates for the lower portion of the gorge.

As the clearing is to be completed by the 5th June, the Natives having been made aware of the necessity of keeping to time, tenders for the cuttings may be called for by the end of this month.

I have, &amp;c.,

His Honor J. D. Ormond, Napier.

CHARLES WEBER.

## No. 68.

Mr. KNOWLES to His Honor J. D. ORMOND.

SIR,—

Public Works Office, Wellington, 10th May, 1871.

I have the honor, by direction of Mr. Gisborne, to acknowledge the receipt of your letter of the 4th instant, reporting arrangements made with a party of Natives for clearing the bush on the part of the line at the Manawatu Gorge under Mr. Weber's charge. In reply, I am to inform your Honor that a general authority has been issued for the payment of the accounts, when due, amounting to £255, being an estimate of 102 chains at £2 10s per chain. The vouchers to be certified by Mr. Weber and approved by your Honor.

I have, &amp;c.,

His Honor J. D. Ormond, Napier.

JOHN KNOWLES,

Under Secretary.

## TARANAKI DISTRICT.

No. 69.

MEMORANDUM by the Hon. Mr. McLEAN for Mr. PARRIS.

Wellington, 18th October, 1870.

MR. PARRIS will have the goodness to report on the road works which can be commenced at once in the districts between Waingongoro and Stoney River, that advantage may be taken of the Spring to get the works proceeded with.

In every case contracts should be made with each hapu through whose land the road goes, to complete the work within their respective boundaries.

DONALD McLEAN.

No. 70.

Mr. PARRIS to the Hon. the NATIVE and DEFENCE MINISTER.

SIR,—

Wellington, 19th October, 1870.

With reference to your memorandum of the 18th instant, as to the road works which can be proceeded with at once between Waingongoro and Stoney River, as I understand it is the intention of the Government to improve the line of road already opened, to make it available for Cobbs' coach, I beg to state that such improvements could be commenced at once from Waingongoro to Umuroa by the different sections of Natives who had the first contracts.

From Umuroa to Warea the Natives in occupation of the land have not yet consented to undertake the contracts for road work, but it is hoped their objections will soon be overcome, and that the road may be taken through to join the work commenced from Stoney River.

From Stoney River southward the unfinished part of the contract taken by the Ngamahanga will be proceeded with on my return to New Plymouth, and any improvements which may be deemed necessary could also be commenced on that part.

The Hon. the Native and Defence Minister,  
Wellington.

I have, &c.,  
R. PARRIS,  
Civil Commissioner.

No. 71.

Mr. COOPER to Mr. PARRIS.

SIR,—

Public Works Office, Wellington, 21st October, 1870.

In reply to your letter of the 19th instant, addressed to the Hon. the Native and Defence Minister, I have the honor, by direction of Mr. Gisborne, to inform you that it is desirable that you should have the present line of road from Waingongoro to Umuroa improved so as to make it available for "Cobb's Coach" at as early a date as possible. Mr. Gisborne has been given to understand that these improvements can be effected at an outlay not exceeding £1,200 and this amount will accordingly be advanced to you by instalments, from time to time, on your requisition. Mr. Blackett will be requested to inspect the portion of road from Umuroa to Warea before any work is commenced on it.

With reference to the last paragraph of your letter, I am to request you to lose no time in completing the road from Stoney River southwards, being the unfinished portion of the contract taken by the Ngamahanga. The sum of £400 has been authorized for this purpose, and it is considered that that amount will be sufficient to make the road available for Cobb's coach.

R. Parris, Esq., Wellington.

I have, &c.,  
G. S. COOPER,  
Under Secretary.

No. 72.

Hon. Mr. McLEAN to Mr. PARRIS.

SIR,—

Native Office, Wellington, 3rd November, 1870.

On the occasion of your last visit here, I informed you that it was desirable that the road from the outposts south of White Cliffs to the Waitara should be taken in hand as speedily as possible, in order to take every advantage of the season. The extent of road was to be divided and given out on contract to the military settlers and to such Native tribes as might choose to avail themselves of the opportunity of obtaining employment.

I am in hopes that you have already made a commencement. In case, however, that you have not done so, I have the honor to inform you that you are hereby authorized, after the line of road from the outposts south of White Cliffs to Waitara has been properly laid out by Mr. Carrington and yourself, to offer to the military settlers and to the Natives the opportunity of tendering for the completion of the different portions of the road.

For this work the sum of £500 will be at your disposal for the immediate improvement of the worst parts of the road, which you will divide into sections of, say, one mile length, and apportion alternately to Europeans and Natives, as you may think fit, on the acceptance of their tenders.

Meanwhile, you will prepare and send to the Office for Public Works a careful estimate of the expenditure requisite to render this road available for drays from the posts south of White Cliffs to Waitara.

The Armed Constabulary will be employed on a portion of the works, and will receive their instructions separately.

R. Parris, Esq., Civil Commissioner, Taranaki.

I have, &c.,

DONALD McLEAN.

### No. 73.

Mr. PARRIS to the Hon. the NATIVE and DEFENCE MINISTER.

SIR,—

New Plymouth, 9th November, 1870.

In reference to your verbal instructions to me whilst in Wellington, and also to your letter No. 38, of the 3rd instant, relating to arrangements for carrying on road work between the Waiti camp and Waitara, I have the honor to report that I and Mr. O. Carrington were engaged three days last week going through the district, examining the lines of road laid down on the surveys and the roads now in use, and getting information to enable me to report, as requested to do, upon the subject of employing the Volunteers, under Captain Messenger, and Natives who wish for employment, at road work in that district, and other information bearing upon the subject generally.

It would appear, Sir, from your letter, that you are under the impression that the men under Captain Messenger are military settlers, which is not the case, Captain Messenger himself being the only one of the sixty original Pukearuhe Military Settlers, and I am informed that all but three have sold their land, the whole of which is now owned by a few cattle owners, who are trying to buy out the last three, with a view, no doubt, of making the whole block a cattle run; and this being the case, the only necessity for making a road beyond the Mimi River is for carting supplies to the Waiti camps occupied by the Armed Constabulary and the Volunteers, there being no settlers in the district, and no practical line for a road beyond it.

From the Mimi to Urenui there is a block of land belonging to Natives, on which there are about 300 living and cultivating extensively; and I submit that it is desirable that a road should be made across the block, and the Natives who are anxious for employment will be offered the work in terms of your instructions. The Armed Constabulary have commenced the road on the Mimi side and on the Urenui side of this block, to enable drays to get up from the rivers on to the plain.

From Urenui to Tikorangi there was a rough road made two years ago, which requires improvement, being in a very dilapidated state, and which is provided for by your instructions authorizing the work to be done.

I have been in communication with Major Stapp and Inspector Tuke with respect to the before-mentioned works, and have proposed that the Armed Constabulary should undertake that part of the road from Urenui to the Waiti Redoubts, which wants improving. Inspector Tuke has consented to do so.

From Mimi to Urenui, I propose to give the returned Natives from the Chatham Islands, and those of William King's Natives who may wish for work, that part of the road, by contract, to be estimated for by Mr. O. Carrington, surveyor.

From Urenui to Tikorangi, I propose to give the work to the Volunteers under Captain Messenger, who will be required to form two parties, and work alternate months; but to carry out this it will be necessary for the working party to stop south of the Urenui, which has raised the question as to the propriety of reducing the strength of the redoubt occupied by the Volunteers at Waiti, which I have no hesitation in saying that I see no objection to, so far as the safety of the redoubts and the district (in which there are no settlers) are concerned.

With regard to the work being tendered for, I do not see how it can conveniently be carried out, as your object is to reduce the present expenditure at the Waiti camps by giving the Volunteers on pay there work on the roads; and, without competition, a tender from them would most likely be high. To meet this difficulty, I propose that Mr. Carrington should divide the work into sections of a mile each, or thereabouts, and estimate for the work necessary to be done, not exceeding the amount authorized, which, I presume, is not intended to include the work to be done by the Armed Constabulary under separate instructions.

Out of the £500 authorized to be expended, I propose to improve a road that has been opened seaward of the Tikorangi Road, rendered necessary by the frequently impassable state of the beach road. The Tikorangi-Urenui Road is not the one generally used in going from Waitara to Urenui and Waiti; and when the Waitara Bridge is up (the site for which is below the old Manukorihi Pa, within the Waitara Township, and the loan for building it has been raised in the place under an Ordinance passed for the purpose), it will be very desirable to have a road direct across the Ngatirahira and Onaero Blocks, owned by Natives; and I submit for your consideration whether, if the Natives would undertake the work, it is not a good time now to let them do it, for they may hereafter require payment for the land necessary for the road. The distance is about five miles by taking it into the Tikorangi Road, near the Onaero Bridge. I have ventured to throw out this hint for your consideration.

The Tikorangi-Urenui Road is an essential one, communicating between two settled districts which promise to be of some importance. The road from Tikorangi to the Waitara Township, from the nature of the ground, which is dry, requires nothing to be done to it at present.

With reference to your verbal authority to guarantee £200 towards the erection of a bridge over the Urenui River, I have not been able to ascertain what subscriptions could be raised towards it in the place, nor what the expense would be, but I am afraid it could not be done for less than £400. The bridge is very much to be desired, for it is the worst river in the district to cross, on account of its soft muddy bottom, in which drays laden frequently get stuck and cause a great deal of trouble. There is a flax mill working there, and a large number of Natives cultivating land in the district,—over 300.

When the road work authorized to be commenced has been estimated for, I will forward the estimates to the Office for Public Works, in obedience to your instructions, accompanied with a tracing.

The extent of road work now being resumed in this district renders it absolutely necessary to take on Mr. Nelson Carrington, which I have only your verbal authority for. I shall, therefore, be glad if you will kindly fix the rate of salary he is to receive when so employed, and cause authority to be sent to me from the Treasury to pay the same out of the Public Works Account, to avoid the necessity of sending his pay abstracts to Wellington for approval. Mr. O. Carrington has to go to Patea as soon as possible, to arrange some matters in reference to plans required for the Registrar, and to lay off a Ferry Reserve, and other work connected with the confiscated lands, as requested by Mr. Pharazyn.

I purpose going south in about a week's time to put the Natives to work improving the road between Umuroa and Waingongoro. I have written to them, requesting them to make haste and finish their planting.

An early answer will oblige, conveying your approval or otherwise of the proposals contained in this report.

I have, &c.,

R. PARRIS,

Civil Commissioner.

The Hon. the Native and Defence Minister, Wellington.

#### No. 74.

Mr. PARRIS to the Hon. the NATIVE and DEFENCE MINISTER.

SIR,—

New Plymouth, 23rd November, 1870.

I have the honor to apply for an advance of money, under your authority by letter No. 38 of the 3rd instant, for £500, and Mr. Cooper's letter No. 25, of 21st October last, for £1,600.

The Volunteers from Waiti and four sections of Natives north and south have commenced working, and at Christmas they will most likely want an advance of money upon their different contracts. I beg therefore to apply for the sum of £700 as an advance for payments on account of road work now being performed under the above authorities.

The different contracts are spread over a distance of one hundred miles from Waiti to Wain-gongoro, consequently it takes more time to prepare the estimates for the works than it would if the work was all in one district. In order, therefore, that no time should be lost at this favourable season of the year, I have induced the Natives south to commence working under Mr. N. Carrington before the estimates have been prepared, but I purpose leaving to-morrow, accompanied by Mr. O. Carrington, to point out the work to be done, and estimate for the whole; in doing which, permit me to assure you, Sir, that all possible economy shall be used, and as soon as we return, I will forward the estimates for the whole to the Office for Public Works.

I have, &c.,

R. PARRIS,

Civil Commissioner.

The Hon. the Native and Defence Minister, Wellington.

#### No. 75.

Mr. ELIOTT to Mr. PARRIS.

SIR,—

Public Works Office, Wellington, 2nd December, 1870.

I have the honor, by direction of Mr. Gisborne, to acknowledge the receipt of your letter of the 23rd ultimo, No. 277, and to inform you that the sum of £700 will be advanced to you for payments on account of road works now being executed under your supervision.

Mr. Gisborne desires me to state that he is anxious to have the road works pushed on during the fine weather, especially to the south, in order to enable, if possible (and if no Native interruption exists), Cobb's coach to run through to New Plymouth.

I have, &c.,

H. J. H. ELIOTT

(for the Under Secretary).

R. Parris, Esq., New Plymouth.

#### No. 76.

EXTRACT from Report from Mr. BLACKETT to the Hon. the MINISTER for PUBLIC WORKS.

SIR,—

Auckland, 15th December, 1870.

\* \* \* \* \*  
*Note.*—The first portion of this report relates to that portion of the road which is in the Wellington Province, and will be found in the Kai Iwi to Patea section of the papers.

The cutting on the south bank of the Patea is 50 chains long, and is unfinished. It will require a further expenditure to widen, improve, and drain it, which, with the metalling, will probably amount to £200.

Cuttings are being made at the Manutahi under contract by the Militia. These are rather heavy, and will be about 70 or 75 chains in length, including both banks.

The cutting on the north bank of the Whenuakura, 27 chains long, will require a further expenditure of about £70 to complete it properly.

I forwarded from Patea a requisition to the Hon. D. McLean (in your absence), for authority to expend this sum, the work to be done under contract by the Wairoa Rifles. The answer I requested to be sent to Mr. Hales, who would put the work in hand immediately if the amount of expenditure was authorized.

From Waingongoro northwards to Umuroa, a distance of twenty-six and a half miles, a considerable amount of work has been done in places along the road by Native labour, and I find that fresh contracts have been entered into to improve this length of road, in four sections, at a total cost of £828 11s. 3d.

An examination of the work already executed has led me to recommend to Mr. O. Carrington that fresh contracts be entered into to have the intended work done under an improved specification, and I have written to him and also to Mr. Parris on the subject, as well as to Mr. N. Carrington, under whose inspection the work is to be carried out, forwarding at the same time to the latter a copy of the general specifications for road work for his guidance.

The chief points in which I found the old work insufficient were as follows, viz:—The ditches generally are too small to be of any service in drying the road, and too near together. The culverts also are too small, and must be replaced by larger and more substantial ones, and good outfall drains must be provided to carry off the water.

The cuttings down to the rivers are mostly too steep and too narrow, and will require considerable alteration to fit them for coach traffic.

In reference to the construction of culverts, I have recommended, at the suggestion of Mr. Carrington, that an European be engaged for this work, if Mr. Parris can arrange for his employment along with the Natives. In this way we shall have the work much more substantially executed than by Native unskilled labour.

I find that for the above-described piece of road the sum of £1,200 has been allotted, and for the portion of road between Stoney River to Warea,  $4\frac{1}{2}$  miles 10 chains, the sum of £400.

It is quite probable that under the improved specification these sums will be found insufficient, but it will be absolutely necessary to have the swampy parts of the road ditched properly, or the work will be to a great extent thrown away. This remark will apply particularly to a section of road not yet described, viz., between Warea and Umuroa, a distance of about fifteen miles. Much of this is covered with flax and tutu, &c., and is of a wet swampy character, judging by the track now used.

I have written to Mr. Parris as to the selection of the line between these points, suggesting that it should be taken as far inland as possible, say two or three miles, to get a straighter and shorter line, and to increase the chance of procuring gravel for the road. It would also most probably be more suitable for a railway line than one nearer the coast.

Under the impression that nearly the whole length of this piece of road will require ditching (in many places double, and of a larger size), I have made an approximate estimate of the probable cost of opening it, and find that it amounts to about £200 to £220 per mile, which for fifteen miles would be from £3,000 to £3,300.

I do not consider that the present very rough and irregular track by the beach could be satisfactorily improved for coach traffic, or that, if it could be, it would be desirable to do so, an inland line being so much preferable from almost every point of view.

The above sum, then, represents the amount necessary, beyond those already authorized, to open the road to New Plymouth for summer traffic by coach; the part between that place and Stoney River, about 20 miles, being already opened, and the bridge across the river being completed.

In the above estimates no notice is taken of metalling, which will be a most expensive item in road work through such country. I find that in Taranaki, where the soil is of a similar light character, and where stone of any kind is scarce and gravel cannot be obtained, the metalling costs about £800 per mile.

I have, therefore, left out the consideration of this item, for the present, at all events, until we have the line opened throughout, when we shall have better opportunities of ascertaining the resources of the country through which the line may pass.

While in Taranaki I took the opportunity of visiting the Waitara District and river, and of inspecting the site of the proposed bridge, for which designs have been called for by the Provincial Government, as I found that their advertisement provided that the several designs sent in should be submitted to me for the purpose of deciding as to which should be chosen and receive the premium offered.

I have, &c.,

The Hon. W. Gisborne, Minister for Works.

JOHN BLACKETT.

## No. 77.

Mr. PARRIS to the Hon. the NATIVE and DEFENCE MINISTER.

SIR,—

New Plymouth, 28th December, 1870.

With reference to your instructions, when I was in Wellington, respecting road works in this Province, and subsequent authority for the expenditure of £500, by letter dated 3rd November, 1870, on the road between Waitara and Waiiti, and also authority from the Public Works Office, by letter dated 21st October, 1870, for the expenditure of £1,200 between Umuroa and Waingongoro, and £400 between Stoney River and Waiweranui, I have now the honor to report that on the 24th November I left for the south, accompanied by Mr. O. Carrington and Mr. N. Carrington, for the purpose of examining the roads and estimating for the improvements considered necessary to be done under the above authorities, and for making the necessary arrangements with the different sections of Natives to resume the work, which I induced the Natives to undertake by contract, as estimated for by Mr. O. Carrington, but not without some trouble, as they complained of the low price of the contract work which they did before when the road was opened, but after several days' discussion they gave way, and the work was commenced. Mr. N. Carrington was left to superintend and direct the four sections of Natives working between Waingongoro and Umuroa, and on the 3rd instant I and Mr. O. Carrington returned to New Plymouth.

On the 8th instant I again left for the south with the Hon. Mr. Gisborne, to show him the work in progress, and accompanied him as far as Patea. On arriving at Opunake we met Mr. Blackett, with whom I had a short conversation about road works in this district, which he fully went into with Mr.

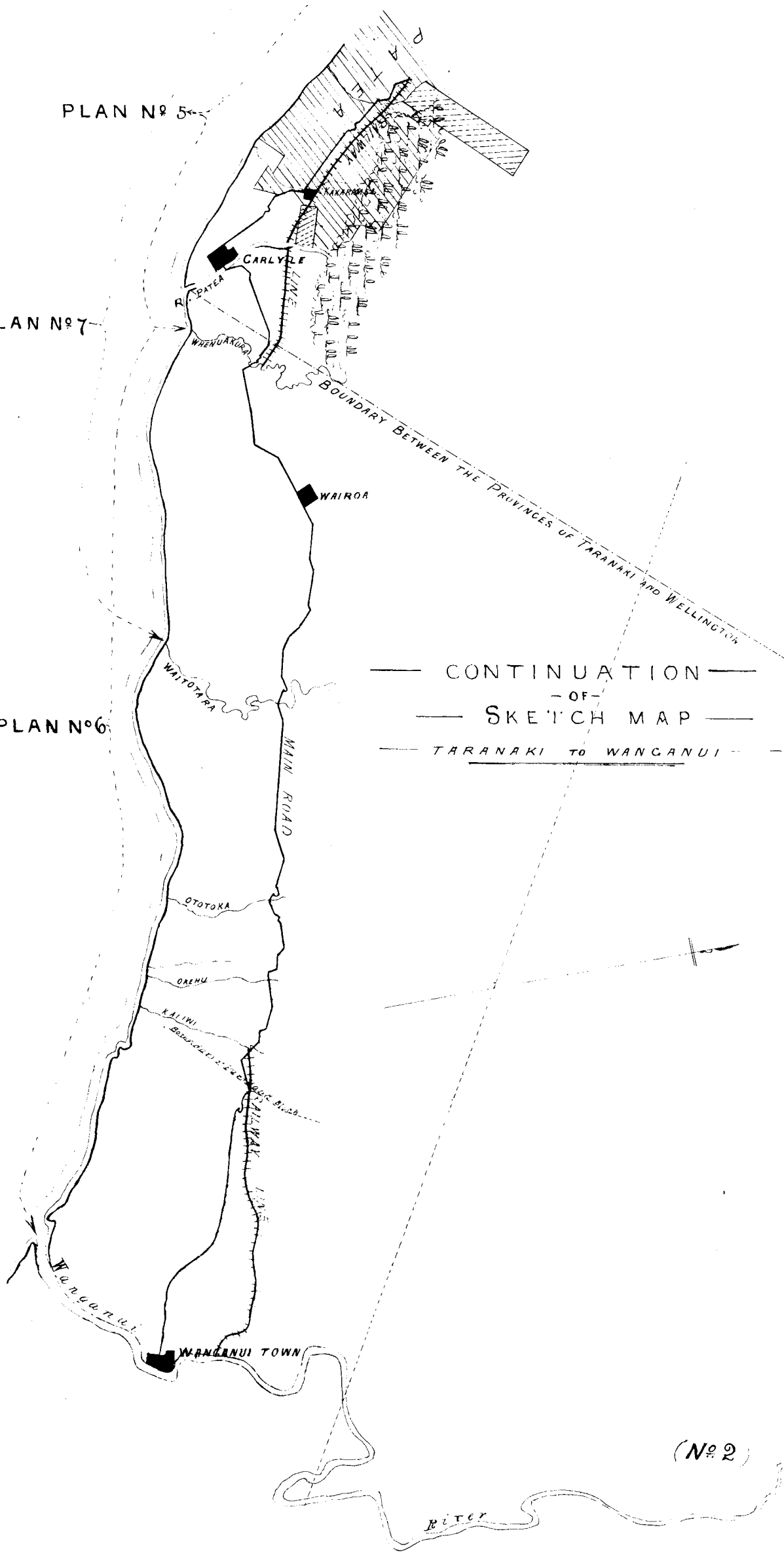




PLAN N<sup>o</sup> 5

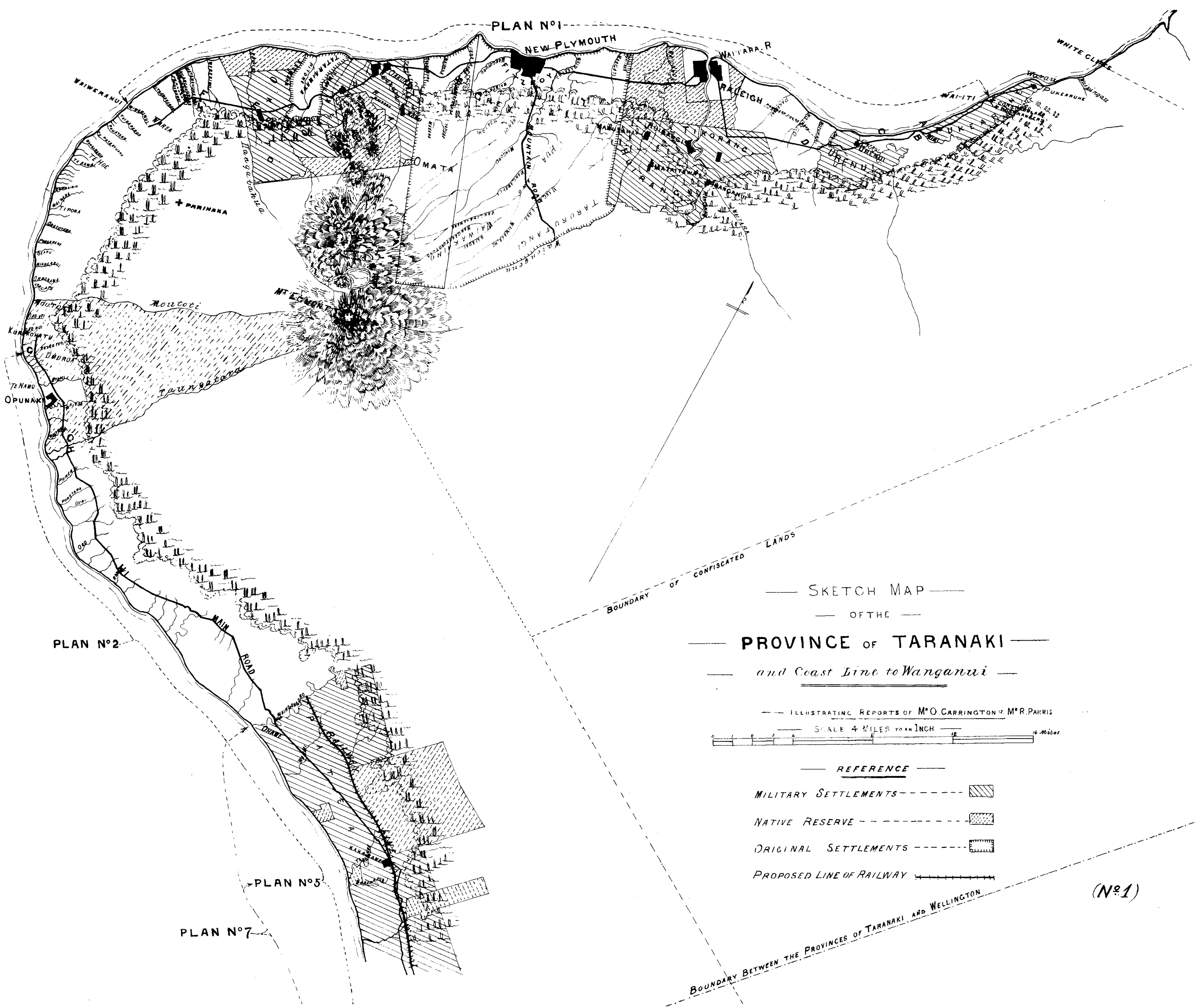
PLAN N<sup>o</sup> 7

PLAN N<sup>o</sup> 6



— CONTINUATION —  
— OF —  
— SKETCH MAP —  
— TARANAKI TO WANGANUI —

(N<sup>o</sup> 2)





O. Carrington during his stay here, and left him general instructions, which will involve additional expenditure, and new calculations over the whole line now in progress, before the estimates can be prepared by the surveyor.

The estimates for the work proposed under the first-mentioned authorities were calculated for, and amounted to the following sums:—From Waingongoro to Umuroa, £828 11s. 3d.; from Stoney River to Waiweranui, £320. These estimates have been superseded by Mr. Blackett's instructions to Mr. O. Carrington, copy of which I forward herewith.

When the new estimates have been prepared, they shall be forwarded to the Public Works Office; in the meantime the work is going on satisfactorily, and I have had to make advances to the Natives on account thereof, which perhaps is irregular before the estimates have been submitted to and approved by the Minister for Public Works, but it would have been bad policy to refuse the Natives an advance on account of work performed.

With reference to the work north of Waitara, the Armed Constabulary are doing that part from the Waiti camp to the Mimi River. From the Mimi River to the Urenui River the Natives have made the road, the contract for which was £60.

From Urenui to one mile south of the Onaero River, the Bushrangers did the work by contract for £96 7s. When the Hon. Mr. Gisborne was here, he instructed me to discontinue the road work in that part, consequently only £156 7s. have been expended under your authority for £500.

If the Natives could be induced to make a road across the Turangi Block (which is very desirable), the trunk line of road from New Plymouth to the Pukearuhe Block would then be complete. At present the road, after crossing the Waitara River, goes three miles direct inland to the Tikorangi settlement, from whence there is a road to Urenui. These latter are district roads, and not the main trunk line, as originally contemplated to run parallel with the coast through the different districts of the Province.

I enclose herewith a sketch plan showing the proposed trunk road across the Turangi Block, and the district roads from Waitara to Tikorangi, and from thence to Urenui.

I have, &c.,

The Hon. the Native and Defence Minister,  
Wellington.

R. PARRIS,  
Civil Commissioner.

### No. 78.

Mr. O. CARRINGTON to the UNDER SECRETARY, Public Works Department.

SIR,—

Public Works Office, Patea, 20th June, 1871.

In drawing your attention to this report, showing the progress of the road works under my charge, I have the honor to state that the district comprised within my duties extends from the Waitotara River on the south to the northern extremity of the confiscated lands, about twenty-nine miles north of New Plymouth.

For convenience of reference to documents accompanying this report, I will begin at the northern end of the district, and proceed southwards towards the Waitotara River, in the Province of Wellington, distance about one hundred and thirty-eight miles.

At Waiti (Pukearuhe District), twenty-seven miles north of New Plymouth, there are two camps, one occupied by Constabulary and the other by a party of Bushrangers.

From the camp towards the Mimi Hill, a distance of four miles, a very good track exists along the line of road, which has from time to time been improved, from this point (marked A on plan numbered 1, accompanying this report,) towards the Mimi River, a distance of half a mile. A party of Armed Constabulary was employed for some months on a portion of that part of the road, but in consequence of my report of the 26th April, 1871, the work was discontinued, and I received instructions to complete it by contract; but owing to the unsettled state of the weather (and as no inconvenience would be likely to arise, there being a good track for present traffic), I deemed it desirable to postpone this work for the present.

From the Mimi River (to where the Constabulary left off), about two miles of road (marked B on plan) were made by a party of Natives. The portion of road marked C, about a mile and a quarter, was made by the Constabulary previous to the road works being placed under my charge.

From the Urenui River towards Tikorangi, for a distance of four miles (marked D on plan), a party of Bushrangers from Waiti camp (struck off pay) was employed. This work was done by contract, and completed in a satisfactory manner, but as no steps have been taken to keep the line of road in repair, the work done is of little benefit. From this point to the Waitara River (Township of Raleigh), a distance of seven miles, there exists a very fair road; and thence to New Plymouth an excellent line of road for ten miles; one half has been metalled, and the other portion is being formed and being metalled.

A contract has been taken to erect a bridge over the Waitara River; the intermediate rivers between Waitara and New Plymouth are bridged.

The whole of the work from Tikorangi to New Plymouth (with the exception of about three miles, which was constructed by the late Engineering Surveyor, by General Cameron's orders) has been done by the Provincial authorities, and maintained as far as the rates levied on the land would allow.

From New Plymouth to the Hangatahua River, a distance of seventeen miles, there is an excellent line of road laid out; the first four miles were improved and metalled, also deviations made (where necessary) to the Oakura River, a distance of eight miles.

From thence to Tataraimaka district a new line of road was laid out by the late Engineering Surveyor, and subsequently continued to the Hangatahua River, at the time the surveys were made of the military settlers' lands. The rivers are all bridged between New Plymouth and the Hangatahua, with the exception of the Kaihihi, which should be bridged without loss of time. The attention of the Provincial authorities ought to be drawn to this matter at once.

The Hangatahua Bridge, known as contract E, marked E on the plans accompanying this report, was completed during the present financial year.

The portion of work between Hangatahua and Waiweranui, a distance of four miles and a half, known as contract No. 5, and marked F on the plans, was let to Natives belonging to the Ngamahanga hapu, represented by Komene and Minarapa. The work consists of clearing, ditching, side-cuttings, and culverts.

The line of road passes for the most part through a level fern district, crossing several considerable swamps. About one half of this work only has been completed. Since the contract was undertaken, several delays have occurred, in consequence of the Natives having to work at their cultivations, and frequent interruptions attending meetings, and of various other causes. The road is passable for traffic to Waiorongomai, a distance of three and a quarter miles, when it intersects the track leading to the coast track. From this point to Waiweranui, a distance of one and a quarter mile, the fern only has been cleared.

No examination as yet of the ground between Waiweranui and Umuroa, a distance of about twenty-three miles, has been made, in consequence of Native difficulties already brought to the notice of the Government; but from my own general knowledge of the country, the line of road will run parallel to the coast, for the most part through open flax and fern land, traversing a considerable extent of swampy ground, but crossing no formidable rivers. The road at present used by the coach is the Native track seaward, between Waiorongomai and Umuroa.

From Umuroa to Taungatara, a distance of five and three-quarter miles, several contracts have been entered into with the Natives of the Opunake district, described in the accompanying return as numbers 3, 4, 7, 8, marked G on the plans. A considerable portion of this part of the road is through very swampy ground, where parallel ditches have been and are now being cut; but on account of the unfavourable state of the weather the work has not progressed so expeditiously as I could have wished.

From Taungatara to Rawa, a distance of eight miles, several contracts have been let, numbered in return 2, 9, 11, and marked H on the plans. These works were undertaken by the Oeo Natives (represented by Hone Pihama and Ngahina) formerly living at Matangarara, Ketemarae, and other places in the Patea district. The principal portion of this line of road passes through open fern and flax land, although the line in general is through undulating ground, yet several portions are swampy, and require a considerable amount of drainage.

From Rawa to Waingongoro, a distance of twelve and three-quarter miles, contracts numbers 1 and 10, marked on plans I, were undertaken by the Kaupokonui Natives, represented by Manaia and Ruka. The line of road here passes through an open fern and grass country.

On reference to the plan numbered 2, it will be seen that the present line of road crosses the Mangawhero and Kaupokonui Rivers inland of their junction. As soon, however, as the bridge is erected over the Kaupokonui, and the deviation road formed, the inland road will not be required.

The telegraph line has been completed along the deviation, which will be seen on reference to plan. Section of the bridge site has been made; plans and specifications will be prepared and submitted for approval as soon as possible.

Contract numbered 6, marked J on plan, was undertaken by the Natives from Oeo. The work consisted in making the southern approach to the ford at the Waingongoro River, and clearing four miles of road from fern, half a chain wide, towards Hawera. But no contract has as yet been entered into for the formation of this road, and, as a passable coach track at present exists, I have deferred inviting tenders until the weather becomes more favourable. The first half-mile after crossing the river would be on the old track which is used by the coach, and, if broken up at the present time to form the new road, would not be so good during the wet season as the one now in use.

I should here wish to bring before the notice of the Government the many difficulties to be contended with in carrying out the work in Native districts. For instance, in contract work, where old men and boys, who only work when they feel inclined, receive on division of money the same amount as young able-bodied men, who have worked well; the consequence of such a system is that the daily rate of pay of each Native is but trifling. This gives rise to discontent and grumbling by the young men, who would prefer daily wages, and who, I believe, would work well if properly supervised.

A large amount of ditching and outlet drains are urgently required, and the Natives will undertake to perform the work, but what I wish to impress upon the Government is, that they will take their own time to finish it. Since taking charge of the works, though I have always been on the best terms with the Natives who have been employed, I yet find it utterly impossible, whatever arguments I use, to impress upon them the necessity of finishing without delay the work in hand.

Adverting to the culverts made, included in the original contracts, I would remark that they are more or less of a temporary character (with the exception of those near Hangatahua River, contract numbered 5, marked F on plans), and will have to be replaced as the work proceeds, which can be done without interfering with the traffic between Umuroa and Waingongoro. There are fourteen rivers which require bridging, all of which are formidable during the wet season, and affected simultaneously by freshets. As this would require an expenditure of about £4,000, and the rivers to be bridged during the ensuing summer, it is for the Hon. the Minister for Public Works to consider whether it would not be better to have the timber imported and landed at Opunake than to invite tenders, whereby European sawyers would necessarily be obliged to make arrangements with the Natives for timber situated at very inconvenient distances from the different sites. To complete the line of road, excluding the estimated amount previously mentioned for the erection of the fourteen bridges, I consider that it will require an outlay of about £140 per mile, exclusive of the amount already expended (which would give an average of £200 per mile) to complete the road between Umuroa and Waingongoro, independently of the cost of metalling; this would add very considerably to the cost, probably not less than £300 per mile.

Generally speaking, the road offers great facilities for gravelling, there being an abundant supply of good metal from the Hangatahua to the Waingongoro River.

At the Waingongoro River, contract has been entered into for the construction of a bridge, on the principle known as "Howe's Lattice Bridge," marked No. 14, on plan No. 7, accompanying this report. From thence, as already reported, to Hawera, a distance of about four miles, sections of the line of road have been taken, preparatory to contracts being invited when the season is more advanced; towards the Tangahoe, on the south of Hawera, sections have also been taken, ground pegged out, and specifications prepared for the formation of 28 chains, and 47 chains of road respectively.

These will shortly be advertised as contracts Nos. 15 and 16, and when completed will open up for traffic that portion of the main line of road between Hawera and the Tangahoe River, a distance of four miles.

Contract No. 8.—On the north bank of this river, 59 chains have been formed and gravelled, and the contractor is now engaged in erecting a bridge on the same principle as that at Waingongoro, and another to be erected at Manawapou, marked on the plans as contract No. 14.

Between the Tangahoe River and the township of Carlyle, a distance of about fourteen miles, six contracts are in progress, all of which will shortly be finished, representing a total formation of 252 chains of road.

Contract No. 3, Manutahi Gorge.—Formation of 38 chains near to Manutahi having been completed in May, is shown on plan, but not included with works in progress on this portion of the road.

Between Manutahi and Manawapou, working section of the line of road has been made, and the ground laid off.

\* \* \* \* \*

*Note.*—The remainder of this report refers to the line of road south of Patea, and will be found with the papers relating to the Kai Iwi to Patea section of the papers.

I have, &c.,

OCT. CARRINGTON,

In charge of Road Works, West Coast.

The Under Secretary, Public Works Department,  
Wellington.

## KAI IWI TO PATEA DISTRICT.

No. 79.

Mr. BLACKETT to the Hon. the MINISTER for PUBLIC WORKS.

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.

The works required are—cutting and removing scrub from formation, and clearing out water tables; also the erection of a few new culverts and small bridges, and the completion of the metalling. The estimated approximate cost of the work is about £1,600, Mr. Hales's original estimate being £1,300, which sum, however, did not include two large culverts and other works.

Authority will be required by Mr. Hales to expend this amount, as, although he was informed by letter that the Government would act on Mr. Stewart's recommendation that this line of road should be adopted, he was not authorized to commence work upon it. I should strongly recommend that this authority be given, and that the work be commenced forthwith. The specifications are already prepared, and tenders could be called for at once, the work to be done by contract, in short lengths.

The present coach road passes along the beach for a certain distance, which part can only be travelled when the tide is out. This renders the travelling on this part of the road very uncertain and irregular, and this disadvantage will be obviated by opening the inland line.

I have, &amp;c.,

Hon. Mr. Gisborne, Minister for Works,  
Wellington.

JOHN BLACKETT,  
Acting Engineer-in-Chief.

P.S.—Instructions given to Mr. Hales to proceed at once with this work.—J. BLACKETT, C.E., 5th December, 1870.

No. 80.

EXTRACT from Report from Mr. BLACKETT to the Hon. the MINISTER for PUBLIC WORKS.

SIR,—

Auckland, 15th December, 1870.

I have the honor to inform you that I arrived here to-day, having come from New Plymouth to Onehunga by the steamer "Taranaki," and beg to forward the following outline report of my proceedings since I left Wellington.

In reference to the survey of the railway line, I have left instructions with Mr. J. T. Stewart to proceed with that portion of it from the Manawatu Gorge to Wanganui, and have authorized him to engage a party to cut a line through the bush from near the gorge to the Oroua River, the party to consist of a surveyor and two men. This line will greatly assist and forward Mr. Stewart's operations.

I have given instructions to Mr. W. Hales to proceed with that part of the line from Wanganui northwards to Waingongoro. In this he will be assisted by Mr. Hogg, who is now employed in laying off road work; and, as regards the portion of the line from Waingongoro to New Plymouth, I have arranged that Mr. O. Carrington shall proceed with it, as soon as he is informed by Mr. Parris that he may do so. He will, of course, require the assistance of a surveyor, possibly more than one, as there is a long stretch of country in which progress will necessarily be slow.

*Inland Line of Road: Kai Iwi to Waitotara.*—The work necessary for opening this road was advertised for public tender in Wanganui before I left. Tenders to be received up to the 15th December, and work to be completed in six weeks from the date of the tenders. To accomplish this more readily, the work has been divided into several small contracts, the estimated cost of which, including two large culverts, is £1,600. This sum does not include the remainder of the metalling which will be required.

From the Waitotara to the Waingongoro the principal works required to open the road for dray or coach traffic are bridges over the Manutahi, the Tangahoe, and the Waingongoro Rivers. Sections of these and other rivers, which it seems desirable to bridge, southwards to the Kai Iwi, have been taken, and plans and estimates of the cost of each are now being prepared by Mr. Hales, including those on which punts are now at work (excepting the Patea), which will be submitted to you as soon as they are ready.

It will be also necessary to have metal put on all the cuttings during the summer, the principal being those to the Manutahi, Patea, Whenuakura, and Waitotara Rivers.

\* \* \* \* \*

*Note.*—The remainder of this report relates to the road between Patea and Taranaki, and will be found in the Taranaki section of the papers.

The Hon. the Minister for Public Works, Wellington.

I have, &amp;c.,

JOHN BLACKETT.



## No. 81.

Mr. O. CARRINGTON to the Hon. the MINISTER for PUBLIC WORKS.

SIR,—

Public Works Office, Taranaki, 24th January, 1871.

By direction of the Hon. Mr. Fox, I examined the line of road between Patea and Hawera, and have now the honor to report my opinion thereon.

At Manutahi (about eight miles from Patea) the line, as laid out, crosses the Manutahi Gorge at a place which would involve a very serious amount of work, expense, and loss of time. I therefore most strongly recommend that a deviation be made inland through allotments numbered 406, 405, 367, 366, and 350, Government reserve, and 348, shown on the enclosed tracing. I believe there will be no serious obstacle to the alteration, as the areas to which the holders are entitled are in excess of the quantity, with the exception of No. 348, which I suggest may be compensated by giving the part coloured pink, and the Government taking the remainder of the section separated by the road, coloured green. Any compensation (if necessary) on account of extra fencing could be given out of the Railway Reserve.

The only work that has been commenced, and now in hand, between Patea and Tangahoe, is at the Manutahi Gorge, before mentioned. The party employed there consists of a few militiamen, under the superintendence of Ensign Winchcomb, who receives his instructions from Mr. Hogg. I am unable to state exactly where Mr. Hogg has laid out the line, after crossing the Manutahi Gorge, but from the information pointed out to me by Lieutenant Middlemas (the officer in charge at Hawera), it appears that the line of road has been laid out with care. The crossing at the Hingahape is only about 30 feet wide, and there is timber within half a mile of the bridge site, the cutting of which ought to be proceeded with at once.

From Tangahoe to Hawera the line of road is partly on the old surveyed road line and Railway Reserve; the river at the bridge site is about 40 feet wide. Timber for the bridge can be had at Waihi, and ought to be prepared at once. The distance is about eight miles, but there is no difficulty about carting, as the track is available.

If these bridges were proceeded with without delay, and the road work pushed forward, the line would be ready for traffic by the time the bridges were erected. There is a working party of ten militiamen now employed near the Tangahoe Bridge site (on the Hawera side) who will have the work completed almost immediately, and I understand that they have taken the contract to do the work on the opposite bank. There is a track from Tangahoe to Hawera, running almost parallel with the road, which can be used while the permanent road is in progress.

I have, &amp;c.,

OCT. CARRINGTON.

The Hon. the Minister for Public Works, Wellington.

## No. 82.

Mr. HALES to Mr. COOPER.

SIR,—

Wanganui, 30th January, 1871.

I have the honor to transmit herewith a statement of contracts entered into by me on the Wanganui and Patea line of road up to this date; also voucher for £130 17s. 10d., final payment to O'Hara and Emery on account of gravelling 56 chains of road (from the top of the side cutting at Kaipo to the Ferry); also voucher for £3 12s. for payment of balance due to H. J. Reid on account of contract for forming 68 chains of road on the Waitotara Block at Hunter's. These works have been completed in a satisfactory manner.

Specifications have been prepared for gravelling the whole of the side cuttings and other formed portions of the road between the Kai Iwi and Waingongoro Rivers, which will be likely to be damaged by the winter rains, if not metalled.

There are 8 miles 30 chains of road between the Kai Iwi River and the top of the side cutting at Kaipo, which will require to be gravelled; this portion has been divided into six separate contracts, and specifications prepared for each. I estimate the value of the work approximately at £3 per chain; in all £2,010.

A piece of the road that has been fenced, at Williamson's, on the Waitotara Block, will require to be formed; the extent is 32 chains bush to be cleared, and road formed. I estimate the probable cost of the work at £50.

The formed portion of the road on the north-west side of the Waitotara River, from the river bank to the top of the side cutting, a distance of 70 chains, should be gravelled as soon as possible. The probable cost of this work is estimated at £210.

Fifty-nine chains of side cutting on the north-west side of the Tangahoe River, should be gravelled, and culverts put in; estimated value of work, £180.

Fifty-four chains of side cutting and flat formations at Oika, on the north-west side of the Whenuakura River, to be gravelled, and culverts put in; I estimate the probable cost of the work at £216.

Specifications have been prepared for the whole of these works, and I would beg to recommend that tenders be invited with as little delay as possible, so that the work may be executed, and the gravel have time to set before winter.

As directed by the Hon. Mr. Gisborne, I have instructed Mr. Hogg to place himself under Mr. Carrington's orders while employed upon the road works. I have employed Mr. Livingstone for the present to copy the plans and specifications of the various works, as it is necessary to have copies at Wanganui and Patea. The erection of the two large culverts at Puketotara and Ototoke, will be commenced immediately. It will be necessary to have some person always on the ground to see that the piles are driven in to the proper depth. Mr. Livingstone will be employed upon this work; from what I see of him, I think he will be found very useful.

I have, &amp;c.,

WILLIAM H. HALES,  
Engineer.

G. S. Cooper, Esq., Under Secretary.

## MEMORANDUM on the above.

ALL these cuttings will require to be gravelled, the material being soft, and liable to cut up very much in winter. I should recommend that the work be authorized at once.

JOHN BLACKETT, C.E.

## Enclosure in No. 82.

## LIST of Contracts on the Wanganui and Patea Road.

*Contract No. 1.*—James Reid, contractor; price, £207. Consists of 59 chains of side cutting, through cutting and embankment; width of road, 18 and 20 feet; 8 culverts, 30 feet long, 12 by 12, inside constructed of sawn timber, of the heart wood of matai; creek bridge, 15 feet. Began 24th August, and completed 5th November, 1870.

*Contract No. 2.*—Burrows and Green, contractors; price, £22. Consists of 11 chains, flat formation, and through cutting 20 feet wide; drain on upper side 5 feet wide, average depth 3 feet. Began 22nd September, and completed 15th October, 1870.

*Contract No. 3.*—Burrows and Green, contractors; price, £3 12. Consists of 6 chains clearing road line of stumps and roots, 33 feet wide. Began 22nd September, and completed 15th October, 1870.

*Contract No. 4.*—James Reid, contractor; price, £120. Consists of 68 chains of flat formation, through cutting and embankment, 33 feet wide; 1 culvert. Began 19th October, and completed 21st November, 1870.

*Contract No. 5.*—John Wilkie, contractor; price, £70. Consists of 27 chains of heavy side cutting, through cutting and embankment, 18 and 20 feet wide. Began 12th December, 1870, and completed 11th January, 1871. (The above work was opened up to within about four feet of the requisite width by the Wairoa Rifle Volunteers.)

*Contract No. 6.*—Hawera Militia, contractors, represented by Lieutenant Middlemass; price, £74 5s. 4d. Consists of 33–34 chains side cutting, 18 feet wide. Began 20th May, and completed 8th August, 1870. (The above sum is 50 per cent. of the value of the work done, in addition to which the contractors received their daily Militia pay).

*Contract No. 1.*—For opening up the Great North-Western Road between Kai Iwi and Tauranga-ika.—Thomas Potter and Co., contractors; price, £58. Consists of 100 chains 68 links of side cutting, from which all slips are to be removed, bush and other vegetation cleared off, culverts and drains opened, and the formation levels of surface to be dressed up, 16 feet wide. Began 17th December, 1870, completed 11th January, 1871.

*Contract No. 2.*—For opening up the Great North-Western Road.—Thomas Potter and Co., contractors; price, £53. Consists of 110 chains of side cutting, from which all bush and other vegetation is to be cleared off, all slips removed, drains and culverts opened, and the foundation levels of surface to be dressed up 16 feet wide. Began 17th December, 1870, and to be completed within forty-two days from date.

*Contract No. 3.*—For opening up the Great North-Western Road.—James Dally, contractor; price, £99 7s. 6d. Consists of 139 chains of side cutting to be opened up, from which all bush and other vegetation is to be cleared, all slips removed, the drains and culverts opened, and the formation levels of surface dressed up. Began 17th December, 1870, and to be completed within forty-two days from date.

*Contract No. 4.*—For the opening up of the Great North-Western Road.—Stephen Kennedy, contractor; price, £55. Consists of 128 chains of side cutting and flat formation, in nearly equal proportions, from which all bush and other vegetation is to be removed, all slips cleared off, drains and culverts opened, and surface levels dressed up 16 feet wide. Began 17th December, 1870, and to be completed within forty-two days from date.

*Contract No. 5.*—For the opening up of the Great North-Western Road.—Francis Norster, contractor; price, £58. Consists of 110 chains, being 60 chains flat formation and 50 chains of side cutting, from which all bush and other vegetation is to be removed, all slips cleared off, culverts and drains opened, surface levels dressed up, and three new culverts put in. Began 17th December, 1870, and to be completed within forty-two days from date.

*Contract No. 6.*—For opening up the Great North-Western Road at Puketotara.—William Robertson, contractor; price £50. Consists of 4 chains through cutting 40 feet wide; average depth 5 feet, and 2 chains of embankment, 18 feet wide on top; average depth 11 feet. Began 17th December, 1870, and to be completed within forty-two days from date.

*Contract No. 7.*—For opening up the Great North-Western Road at Ototoko.—Isaac Emery, contractor; price £139. Consists of 4 chains 80 links of side cutting and embankment, 18 feet wide at formation level; average depth of embankment 10 feet. Began 17th December, and to be completed within forty-two days from date.

*Contract No. 8.*—For the opening up of the Great North-Western Road.—John McPherson, contractor; price £45 4s. Length 113 chains, and consists of 76 chains and 65 links flat formation, and 36 chains 35 links cutting. All bush and other vegetation to be cleared off. All slips to be removed. Culverts and drains to be opened. Two new culverts to be put in, and surface levels dressed up. Began 17th December, 1870, and to be completed within forty-two days from date.

*Contract No. 9.*—For opening up the Great North-Western Road.—William Nixon, contractor; price, £138. Consists of the supplying the material for, and construction of and placing in position, 68 culverts, each 30 feet long, 10 by 12 inside, all sawn timber, heart of matai 2 inches thick. Began 17th December, 1870, and to be completed within three calendar months from date.

*Contract No. 10.*—For opening up the Great North-Western Road, Puketotara.—Denby, Nixon, and Lees, contractors; price £152. Culvert 87 feet long, 8 feet by 7 feet inside. Constructed of piles

driven into the ground, strongly framed, and planked with sawn timber, heart of matai. Contract made 26th December, 1870, and to be completed within fifty days from date.

*Contract No. 11.*—For opening up the Great North-Western Road.—Denby and Co., contractors; price, £215. Ototoko culvert, 109 feet long, 9 feet by 8 feet, constructed with piles driven in the ground, strongly framed and covered with planks of sawn timber of the heart of matai. Contract made 12th January, 1871, and to be completed in fifty days from date.

There is also a contract for a timber culvert at the Tangahoe side cutting. John Stephenson (Hawera Militia), contractor; price, £9. Culvert, made of matai timber, split, is 50 feet long and 2 feet square. Contract made on 28th July, 1870.

Besides these contracts, the Hawera Militia have opened up and nearly completed 21 chains of heavy side cutting, through cutting and embankment on the north-west side of the Tangahoe River, which will be measured up when completed, so as to value the work, which will be paid for under the 5 per cent. arrangement.

The Patea Militia are working at 46 chains of heavy side cutting in the Wai Papa Gully, of which about 8 chains are completed; this is to be paid for in the same way as the work at Tangahoe.

WILLIAM H. HALES, Engineer,  
Superintending Wanganui Roads.

30th January, 1871.

### No. 83.

Mr. BLACKETT to Mr. HALES.

(Telegram.)

Government Buildings, 16th February, 1871.

CALL for tenders for forming and gravelling road, authorized, in terms of your letter of 30th January. Letter to you by first mail.

BLACKETT.

### No. 84.

Mr. CARRINGTON to the Hon. Mr. GISBOERNE.

(Telegram.)

Patea, 4th February, 1871.

I HAVE inspected the line of road and approaches to Whenuakura. A great deal of work (side cutting) done on north bank—nearly finished. The site selected for bridge cannot now be improved. Continuation of line on south bank, taken by Mr. Hogg, is in the right place. Deviates very slightly from the original surveyed line.

O. CARRINGTON.

### No. 85.

Mr. BLACKETT to Mr. O. CARRINGTON.

SIR,—

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

I have the honor to inform you, in reference to the proposal for deviating the line of road into private lands, to avoid the heavy cuttings in the Manutahi Gorge, that it has been decided to finish those cuttings, as being the least expensive and quickest way of opening the road; you will therefore be pleased to take steps for letting by contract the remainder of the cuttings as early as possible, as well as the necessary work for crossing the gully beyond the Manutahi.

I have also to request that you will furnish, at your earliest convenience, to this office a tracing on cloth of the main road from the Waingongoro to the Kai Iwi, showing that road as it will eventually be made, and coloured pink on the tracing. This is to accompany the Proclamation defining the said road, and should be signed by yourself or some competent surveyor.

You are also authorized to proceed at once with the erection of the necessary bridges over the Waingongoro, Tangahoe, and Manawapou Rivers, and to request Mr. Hales to prepare the necessary plans and specifications. Should his other occupations prevent his attending to this at once, you must employ some one else in whom you may have confidence to prepare them.

Mr. Hales will have intimation to have the Okehu bridge built as soon as possible. Those over the Waitotara and Whenuakura will not be built yet. Where the spans are small, the ordinary and simplest form of bridge may be adopted, viz., that of four beams resting on sills on each bank, with cross joists on the beams, floored over longitudinally with the beams; and where the span is too great for single beams, the style of bridge common in New Plymouth (Howe's) may be adopted—all of totara, or, failing that, of matai: 12 feet wide will be sufficient.

I enclose sections of the Rivers Tangahoe, Manawapou, and Okehu. Should Mr. Hales be employed in this matter, you will please furnish him with a section of the Waingongoro River.

On the portions of the road further north, you may find it necessary, in order to keep the road open and safe for winter traffic, to bridge several smaller streams (now insignificant, but formidable in flood). Let this have your early attention, and, after selecting those which may be included in this list, have bridges erected over them without delay, taking care to keep them high enough to be out of the reach of floods. You are authorized to procure the necessary iron work, spikes, tools, &c., for these works without further reference to this office. You are also authorized to employ such labour as you may find necessary to keep the road (after being made) in good order, by clearing off slips, cleaning water tables, &c. This may be done by selecting persons living on or near the road, and intrusting them with certain lengths to keep in good order, by contract if possible; new cuttings in particular will require close attention.

I am directed to impress on you forcibly the great necessity for pushing on all these works under your charge as vigorously as possible, and, to save delay, you will accept all tenders for work (should they appear to be fair and reasonable) without reference to this office; but send by first opportunity lists of all tenders accepted, and also reports of work finished at every opportunity.

I have, &c.,

JOHN BLACKETT,  
Acting Engineer-in-Chief.

O. Carrington, Esq., in charge of Roads, West Coast.

### No. 86.

Mr. HALES to Mr. COOPER.

SIR,—

Wanganui, 1st March, 1871.

I have the honor to forward herewith a schedule of tenders received in this office on 27th February, for the metalling of portion of the Wanganui-Patea line of road.

The tender of Mr. John Paterson for No. 1 has been accepted; and as soon as the others are arranged with, you will be duly informed thereof.

Also schedule of tenders for the erection of Kai Iwi and Okehu Bridges.

The lowest tender, that of Mr. John Rankin (£525 for Kai Iwi and £125 for Okehu Bridges) will be accepted for both bridges, and the contract completed as soon as the necessary security has been procured.

I have, &c.,

WILLIAM H. HALES.

G. S. Cooper, Esq., Under Secretary for Public Works.

P.S.—The tenders for Nos. 7, 8, and 9 contracts have been referred to Mr. O. Carrington, as they are north of the Waitotara River.

### No. 87.

Mr. HALES to Mr. KNOWLES.

SIR,—

Wanganui, 25th April, 1871.

I have the honor to transmit herewith a voucher for £20, progress payment to Watson McDonald on account of No. 3 contract for opening up the inland road between Kai Iwi and Waitotara. The whole of the work is complete, except making up the embankments where the culverts were damaged by floods.

I have also to report that Watson McDonald has been contracted with to construct two stone culverts to replace those destroyed by floods. The price to be paid for this work is £50, which is much cheaper than timber culverts could be constructed for, besides being a more durable work.

Specifications have been prepared for metalling 113 chains of the formed road between Pa Karaka and Taurangaika, a distance of 8 miles 43 chains. This work would probably cost £4 per chain.

Sections and specifications have been prepared for forming the road between Taurangaika and the formed road at Hunter's, a distance of 76 chains; also for forming the portion between Williamson's fence and the bank at Kaipo, a distance of 31 chains. The probable cost would be £1 10s. per chain. These works would complete the whole of the formation between Kai Iwi and Waitotara, except a few chains to connect the side cutting at Kaipo.

I have, &c.,

WILLIAM H. HALES.

John Knowles, Esq., Under Secretary.

### No. 88.

Mr. KNOWLES to Mr. HALES.

(Telegram.)

Wellington, 28th April, 1871.

CALL for tenders for metalling 113 chains between Pa Karaka and Taurangaika, for which you state, in your letter of 25th instant, specifications have been prepared. Probable cost, £4 per chain. Also for formation of road between Taurangaika and formed road at Hunter's (76 chains), and for portion between Williamson's fence and the bank at Kaipo (31 chains). Estimated cost, 30s. per chain. These works are to complete the whole of the formation between Kai Iwi and Waitotara, except a few chains to connect side cutting at Kaipo. These few chains should be put in hand if necessary. Use all expedition in completing whole of these works, as the winter is coming on.

JOHN KNOWLES.

### No. 89.

EXTRACT from Report by Mr. O. CARRINGTON, dated Patea, 20th June, 1871.

SIR,—

*Note.*—The first part of this Report refers to the road north of Patea, and will be found in the Taranaki section of the papers.

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On the east bank of the Patea River, contract No. 2, 50 chains of road have been formed and gravelled. Part of the formation was completed by Militia and Constabulary previous to my taking charge.

On the west bank of the Whenuakura River, a further distance of four miles, there are 54 chains of road formed, the greater portion of which work was done by Constabulary and Wairoa Volunteers on Militia pay, in the early part of 1870, but was afterwards finished by contract,

On the east bank of the Whenuakura River, the formation of 72 chains of road, contract No. 1, is nearly completed. From thence to the Waitotara River there are at present no works in progress, but on the west bank of the Waitotara 70 chains of road have been formed; of these, 33 chains were completed by the Veteran Volunteers, and the remainder by contract.

Tenders have been received for metalling this portion of the road, which work will be undertaken when the weather is more favourable.

The general character of the country over which that portion of the road between Waingongoro and Waitotara Rivers is now being made, is undulating table land, intersected by deep gullies, through which the principal rivers and streams reach the sea; two of which, namely, the Manawapou and Whenuakura, are not less than two hundred feet below the general surface level.

The system adopted has been in the first instance to construct those portions of the road which have to cross these gullies, which could only be done by making lengthened sidings through hard blue clay and silt, and in most instances only to be removed by blasting. About seven and a half miles of these cutting, necessitating the moving of nearly (100,000) cubic yards of earth, and constituting nearly all the work of this heavy description that will have to be undertaken, will soon be completed.

There will thus remain to be formed, between the Waingongoro and Waitotara Rivers, thirty miles of road, consisting (with the exception of two deep gullies on the south of and near to Hawera) of light through cuttings and flat formation, with the usual culverts and drains.

The experience of the last few months has shown that it will be advisable to erect bridges over the Whenuakura and Waitotara Rivers, both subject to sudden and very heavy freshets; the Whenuakura, for instance, having on one occasion (15th May) risen nearly 20 feet in sixteen hours, whilst at the Waitotara the flood rose to about the same height, though not so suddenly.

At Patea, the ferry, in my opinion, will be sufficient for the wants of the district until it is more advanced, as the river there is not subject to heavy floods.

Between the Waingongoro and Waitotara Rivers, several excellent pits of gravel have been opened, and, from the frequent indications of gravel in this district, I have little doubt of finding sufficient metal to cover the whole line of road when formed.

The severity of the weather continuing during so many months has retarded all the road works, and on most contracts added very considerably to the amount of work undertaken by the contractors; but, with the exception of a slight deviation that will be necessary on contract No. 5, caused by a very heavy slip, there will be no addition, through bad weather, to the original cost of contract.

During the ensuing summer months, the whole of the formed portions of the road should be gravelled, in order to protect the work done, as well as for the convenience of traffic.

It may be as well to state here that in the conditions attached to contract for laying gravel at Waitotara (already referred to), provision has been made that the metal is only to be laid in fine weather, and when the roadway is sufficiently hard to receive it.

I have, &c.,

OCT. CARRINGTON,

In charge of Road Works, West Coast.

The Under Secretary, Public Works Department, Wellington.

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