1874.

NEW ZEALAND.

PUBLIC WORKS STATEMENT,

BY THE MINISTER FOR PUBLIC WORKS, THE HON. EDWARD RICHARDSON.

MR. SPEAKER,—

I propose in this Statement to endeavour to give to the House, as fully and clearly as circumstances will allow, an account of the proceedings of the Public Works Department during the year that has just closed. In so doing, I venture to hope that the House will share in the conviction that as much work has been put in hand as it was to the advantage of the country should be undertaken. Some few of the works contemplated last year have been allowed to remain in abeyance; but this has mainly arisen from the fact that the further forcing on of public works would have produced an unwise competition between the Government and private employers of labour, and by checking industrial enterprise have brought about results which would have been very unfavourable to the colony.

I think it right, Sir, to state—not by way of apology, but for the information of the House—that the delay caused by the unexampled prosperity of the country, and the very great demand for labour produced thereby, has been increased by the numerical insufficiency of the professional staff. While every endeavour has been made to remedy this, there has been no period during the year when the staff was sufficient to meet the requirements of the department As I have referred to delay in carrying out some of the works, it is necessary for me to remind Members that the expenditure during the year has been larger, and therefore the rate at which the works are progressing has been quicker than was originally contemplated when the construction of railways was proposed. My observations as to delay must be considered in connection with the fact that larger works within the year have been demanded than was at first intended.

Honorable members will find on reference to the Estimates that the increase made in the staff has been considerable, and that provision is made for a still larger increase. Very serious difficulty has been found in procuring Engineers who have had experience in railway surveying and construction. This difficulty was greater, owing to the unprecedented general prosperity of the colony enabling the several provinces to undertake many large works; the provinces, together with the numerous Road Boards and private companies also carrying out large works, were employing the best professional skill they could obtain.

Many works have been retarded for want of Engineers, and, I regret to say, in one or two instances it would have been better to have waited longer rather than employ those whom we did employ. It was deemed absolutely necessary to send to England for several Engineers, and during the past few weeks seven have arrived. These gentlemen have been distributed by the Engineer-in-Chief over

the various provinces; but even with this addition to the staff a further number are required, to insure the proper supervision of the works which have to be executed during the next two years. The House will, of course, bear in mind that a larger proportionate staff is required in this colony than elsewhere, owing to the necessity for carrying out so many comparatively small lengths of road or railway in every province at the same moment.

I took occasion last year to state that the officers of the department, from the Engineer-in-Chief downwards, had been called upon to use extraordinary exertions to get through the work necessary for the preparation of the many contracts which were let during the previous twelve months; and it now gives me great pleasure to state that they have shown equal energy during the past financial year.

The system adopted of employing a large number of Engineering Cadets in the department has been found to work well; and we have now growing up a set of officers who, in the course of a few years, will be of incalculable value to the Colony.

As I am not aware that the House has been informed of the plan on which Cadets are employed, I think it only fair to these gentlemen that it should be widely known.

The Cadets are not, as a rule, taken into the department under the age of eighteen, nor until they have passed the Junior Civil Service Examination. They receive a salary of £80 for the first year, and according to merit are promoted from one grade to another, with small increase of salary, to the end of the fourth year of their service, when, if found to have gained sufficient experience, they will be promoted to the class of Assistant Engineers. Several of the Cadets are proving themselves very valuable officers, and are earning their promotion year by year.

I take this opportunity of expressing my deep regret at the loss of two very promising Engineers of this department, Mr. R. Millett and Mr. R. Johnstone, who both died very suddenly. They had each been a considerable time in the employ of the General and Provincial Governments, and their valuable services could ill be spared.

Before dealing with the practical working of the department, I wish to inform honorable members that this year I propose to distribute, as appendices to the Statement I am about to make, the Annual Reports of the Engineer-in-Chief on Railways, the Assistant Engineer-in-Chief on Roads, the Colonial Architect on Public Buildings, and of Dr. Hector on Coal Fields Exploration, and other subsidiary papers. I do this for the convenience of having all the information honorable members may wish to refer to in one paper, and not, as heretofore, in numerous separate papers.

The Tables which are attached to this Statement will be in much the same form as last year, with additions necessary to meet the requests from several honorable members for further information; more particularly those referring to the traffic receipts on the various lines. Some of the traffic returns have been compiled from information kindly furnished by the Provincial Governments of Canterbury and Otago, and, although far from being as complete as I hope they will be in future, will doubtless be of much general interest.

There are also attached explanatory maps of the two islands. When compared with those issued by the department last Session, they will show at a glance the progress made in opening up the country during the past year.

RAILWAYS—NORTH ISLAND.

I shall now describe the position of the several lines of railway authorized by Parliament, taking them in the same order as I did last year.

And first I come to the railway between Kaipara and Riverhead. It will be in the recollection of honorable members that last year I referred to the difficulty that had occurred with the contractor, owing to the delay in the supply of the permanent way material. After considerable correspondence with the contractor, Mr. Edgar, an amicable arrangement was entered into to relieve him from the completion of the line, and pay him the value of the work done according to

his contract. The completion of the line has since been let to Mr. Fallon, who is to finish it in December next.

On this line there is a deficiency in the present appropriation, mainly owing to the advance in the cost of iron; and to enable the Government to complete the line with the necessary accommodation, the House will be asked to appropriate a further sum of £14,000.

This line will, with the sum now asked for, only cost £4,437 per mile, but it must be remembered that the ballast is of the most inferior description; and if there is much traffic on the line a still further sum will have to be spent upon it; the cost of good ballast being dependent on whether the line is extended from Riverhead to Auckland, for which extension the whole of the necessary plans and specifications were prepared early in the year.

The sixteenth clause of "The Railways Act, 1872," requires that, previously to commencing the construction of any railway, the Engineer-in-Chief shall report whether such railway is likely to pay its working expenses when completed, and on the nature of this report the authority to construct depends.

In the case of the Riverhead to Auckland line, the Engineer-in-Chief's report was unfavourable, and it was my duty to decline to proceed with the construction. The report is attached.

The Government are however of opinion that the Kaipara and Riverhead line will not pay until it is extended to Auckland, and that the extension ought to be made. They are convinced that the through line from Kaipara to Auckland will pay considerably more than its working expenses, although as individual lines neither of them probably would; and I shall therefore ask authority to construct the whole line at such early date as the position of the labour market may warrant its being put in hand.

The Auckland to Mercer line is progressing satisfactorily. The railway has been opened for some months between Auckland and Onehunga, and with a view of expediting the completion to Mercer, the Government have offered Messrs. Brogden a bonus of £500 per month for each month it is completed previously to the contract date (1st September, 1875). It is hoped that three or four months may thus be gained, and the colony obtain the use of the line proportionately early.

From Mercer southwards to Newcastle the line is in hand, partly by contract and partly by the Volunteer Engineer-Militia. At one time the Government had good reason to suppose that it was necessary to increase the available defence force in the Waikato, and it was determined to effect the twofold object of having an additional armed force in the district, and at the same time pushing on the construction of the line.

The force, numbering about 200, was rapidly organized by my honorable colleague Dr. Pollen, and commenced work in a very effective way during the month of December. The work done by it has been well done, and the progress made very satisfactory. The work is directed by the District Engineer, but the three companies have been kept under the control of their officers, Major Cooper being in charge. A sufficient amount of military drill and discipline has been exercised in order to assure their being available for defence in case of necessity. It is proposed to charge the difference in the cost of the work done in this way over that of ordinary contract work to the defence of the country.

The Waikato Bridge, adapted both for road and railway traffic, is on its way from England, and tenders are now being called for its erection, to be completed in eighteen months from the date of the acceptance of the tender, or about March, 1876.

Should the Engineer-Militia continue to improve in the results of their work, and the necessity for such organization still be found to exist, it is proposed to move them early in the ensuing summer across the Waikato, and to continue the formation of the line southward through the delta towards Alexandra. A very good line has been selected, and one which for nearly the whole length will be the best available line to Cambridge or Alexandra: that is to say, that the line as far as Ohaupo will in any case be part of the main trunk line southwards; and if the line should eventually go by Cambridge, it will only involve a short branch to reach Alexandra.

Further than this nothing has finally been determined; but I have lately received the most reliable information, that as far as the country is known—and a great deal of it is well known—there is, if non-professional opinions may be relied on, no engineering difficulty in the way of carrying the railway in a nearly direct line south from Alexandra behind Mount Egmont.

Following the order in which I took the railways last year, I next come to that from Napier to Waipukurau.

I regret to state that the contractors for the first portion of 18 miles of this line have not completed it within their contract time; the notices necessary to enforce the penalties incurred by them have been given, in case it may be thought advisable to do so. The contractors have had great difficulties to contend with in procuring sleepers and other timber, and the contract time will be exceeded on the first length by fully one year. A further length of this line, of 27 miles, is also under contract, and the works are progressing satisfactorily.

The works on the Waitara and New Plymouth line are in Messrs. Brogdens' hands; and although there is great difficulty in getting materials delivered there, I see no reason why their contract time should be exceeded.

It is to be regretted that on this line the Government have had to pay very considerably in excess of the Engineer's estimate for land; and indeed, had they had any idea that it was possible that claims for such rates would have been sustained by the Court, they would have delayed the commencement of the works until reasonable arrangements had been effected.

Nothing has been done towards the expenditure of the additional appropriation made by the House last year for continuing the line south. It was not thought prudent to do so until the road behind Mount Egmont had been cut through, and the feasibility of the route finally settled. This is now the case; a really good line has been found, and instructions have been given to complete a working survey from the present line southwards towards Hawera.

From Wanganui northwards we have found a very difficult line of country to traverse, instead of the favourable one we had been led to expect; and although every effort has been made to press on the survey, the progress made is not sufficient at present to warrant my fixing a date for the commencement of the formation of the line. It may be well to state that although on the first 30 miles of this line the works will be very heavy and the gradients severe, the remainder of the line through to New Plymouth will be of a more favourable nature.

On this line the bridge over the Wanganui River has been let for completion by March, 1876.

I now come to the Wanganui and Manawatu Railway. Two sections of this have been let, including the bridges over the Wangaehu and Turakina; and the surveys are well advanced for the remainder.

It will be remembered that by "The Railways Act, 1872," a further appropriation of £90,000 was taken to convert one-half of this line (which was at first proposed as a tramway) into a railway, still leaving the remaining portion from Rangitikei to Manawatu as a wooden tramway. As there is not now the slightest doubt that the traffic over the whole line will be far more than could be worked by tramway, and especially as the Feilding settlement is progressing so rapidly, the Government consider it necessary to take the earliest steps to obtain the assent of Parliament for the necessary appropriation for converting the portion from Rangitikei to Manawatu into a railway.

In connection with this line, the Government propose entering into a contract with Mr. Halcombe (the Corporation's agent) for the construction of 9 miles of railway, he having consented to waive the right the Company have, by their agreement with the Government, to demand employment for two hundred men at any time during the next three years,—a condition which in practice is found to be most embarrassing.

The last railway to be mentioned as in progress in the North Island is that from Wellington to Masterton. The first section of this line has been completed by Messrs. Brogden, and, after three months' maintenance, has been taken over from the contractors. Owing to the necessarily hurried manner in which the information was collected on which the estimates for this contract were based, the

Engineers and contractors were alike misled as to the nature of the stone in the hills alongside the railway. This was in practice found to be unfitted for the sea-facing, and the alteration in plan involved an additional cost of £3,098, bringing up the cost of the first eight miles, including all charges, with fair proportion of the charges for the Wellington terminus, to £49,713 9s. 7d.

A further length of 27 miles, including the Summit tunnel, is now under contract. Of this length, 6 miles have been very satisfactorily completed by Mr. McKirdy, and will shortly be ready to open for public traffic. The Engineer-in-Chief, and the Superintending Engineer for the North Island, have spent a great deal of time in endeavouring to select the best possible route for this railway, and more especially that portion which crosses the Rimutaka. It has been a work of the most arduous nature, and rendered more so by the necessity for bringing down the cost to the lowest possible amount compatible with a reasonable permanency. An inspection of the contract drawings in the head office will well repay any member who is curious about these matters, and will show how it is that the line is so costly.

The appropriation for this length of the line will be far short of the amount necessary for the completion to Masterton, but more than sufficient to go beyond Featherston, to which point we hope to have the line under contract before this time next year.

Before leaving the Railways of the North Island, I take the opportunity of stating that during the recess I visited the Waikato with the Engineer-in-Chief, and arranged with him that he should, in company with Mr. Mackay, examine the country between Cambridge and Manawatu, with a view to ascertain its adaptability as a route by which to complete the trunk line through the island. His report is attached, and the House will gather therefrom that it will be unadvisable to proceed, even with the preliminary surveys, until it is known absolutely whether the line can be taken to the westward of Lake Taupo, where it is understood the land over the whole line of country is of a very superior nature to that which would have to be traversed by a railway to the eastward of that lake.

RAILWAYS, MIDDLE ISLAND.

I now come to the Middle Island: and first we have the Picton and Blenheim Railway. During the past six months better progress has been made; and I have the assurance of the contractors that they will continue their exertions to complete the line with as little delay as is practicable. It is much behind the contract time.

The Nelson and Foxhill Railway works have progressed satisfactorily, and the date fixed for completion is November, 1875.

A preliminary survey has been made of the proposed trunk line from Foxhill to the Brunner. The works will be of a heavy nature, and the gradients very severe; but not more so than on some of the other lines now in hand. I shall refer again to this line presently.

The Westport and Mount Rochfort line has been somewhat delayed for want of a survey staff; but the first section to Fairdown is now about to be let, and the surveys for the completion to Ngakawau are in a forward state. I see no reason why the entire railway should not be completed by the end of 1875, and hope that before the middle of 1875 the permanent harbour works may be put in hand. The commencement of these works depends upon the completion of the contract for the first length, the date of which is August, 1875.

The Greymouth and Brunner line, including the suspension bridge over the Grey River, is in hand; but the railway works are not in such a forward state as was anticipated. This is not the fault of the contractor, but is owing to the necessity which has been found to exist for improving the line over a short length where heavy slips are threatened. The Engineer-in-Chief states that the steps he has taken are sufficient to insure the safety of the line, and the cost of the additions will be met out of the appropriation taken last year; the protective works undertaken have answered all expectations, and have stood the test of some very severe floods.

In Canterbury the first main line to be mentioned is that from North Kowai to Rangiora, including the very large bridge over the River Ashley. It is all under contract and is progressing satisfactorily; the whole work is in the hands of Mr. E. G. Wright. The line should be open to the South Kowai early next year.

We next have the extension southwards from the Rakaia to the south side of the Rangitata, including three large bridges and one of a smaller description over the Hinds.

The first section to the Ashburton has been worked with goods traffic for the past three months, under an arrangement with Mr. Wright, the contractor. This arrangement was made at the request of the Provincial authorities in compliance with the urgent demands of the public. It will be opened for general traffic in a few days.

It is proposed to open the line from thence to the Hinds River, about the 1st of January, and the completion through to the South Rangitata by the middle of 1875.

The continuation to Temuka is about to be let, and the time fixed for completing the Orari Bridge and the formation of the railway is next May, as it is also for the completion of the short length from Temuka to Young's Creek. The laying of the permanent way may then be proceeded with rapidly from both ends, and should be completed through from Christchurch to Timaru about August or September, 1875.

The Timaru to Young's Creek is now well advanced, and the rolling stock has been transported to Timaru, and is being fitted up. This length can be opened in about two months.

From Timaru south to the Waitaki the whole is ready for contract. The first length, to the Pareora, is let; and it is proposed at once to advertise the remainder, giving about eighteen months for completing the formation and bridges, making the time of completion for the whole about December next year.

Owing to the difficulty in landing materials required for the railways between Timaru and Oamaru, great delays take place, and it is impossible to calculate with certainty when these portions of the lines can be completed, but the dates I have given may, I think, be relied upon.

Before leaving Canterbury, I have to notice the branch line from Rangiora to Oxford. The completion of this has been delayed owing to the want of sleepers, but it is expected that it will be completed within the contract time—the end of November next.

The Racecourse and Southbridge line is under contract, and the date for completion is fixed for January next.

On the Rolleston and Malvern, and White Cliffs lines, the works are nearly completed, and the plate-laying of the last portion is expected to be done by December next.

All the station buildings for these branch lines are under contract, and will be ready in advance of the requirements.

Owing to the high price of iron, the appropriation for these branch lines will not be sufficient by about the amount required for the Waimate branch, and arrangements will have to be made to provide funds for that work.

All the rolling stock for these branch lines is in the colony, and that for the trunk lines is either here or its shipment has been advised.

We next have the Waitaki Bridge. The completion of this is under contract to Messrs. McGavin and Company, and should be finished about November, 1875. Every endeavour will be made to keep the contractors to their contract time, and a bonus is offered them to finish it earlier. It has been found necessary to add an extra six feet to all the cylinders, which are now on the way from England, and a further appropriation will be required to cover the cost. I alluded last year to the great delay caused by the alteration in England of the design for this bridge, and need not further allude to it, except to repeat my personal opinion that the original design would, at very much smaller cost, have answered the purpose.

We are now in Otago, and we have first the Waitaki and Oamaru line. Here the difficulty of supplying sleepers has been greatly felt. I hope that in the course

of the next two months we may see our way out of it; and if so, another two months will suffice to lay the line as far as it will be of much use until the Waitaki Bridge is completed, and will meet the branch line now in course of construction by the province. The railway from Oamaru to Moeraki is in Messrs. Brogdens' hands. The works are not in as satisfactory a state as they should be, but the Government are not free from blame in the matter. The Engineer over that line had to be removed in November last, and since then the works have been going on more satisfactorily. It is hoped that there will not be much if any delay beyond the contract date for completion.

A further difficulty has arisen near Moeraki, which might have been provided against had more time been taken with the survey; the works completed on half a mile of this portion will have to be abandoned, involving a loss of some two thousand pounds.

From Moeraki to Dunedin, the work which will take the longest time to construct is the tunnel near Port Chalmers through to Blueskin; this is under contract, and is progressing very satisfactorily. Contract plans and sections are prepared from Dunedin to Blueskin Bay, and the work will be immediately put in hand to be completed concurrently with the tunnel. The plans for the remainder between Moeraki and Blueskin Bay are in a forward state, and will be contracted for during this year. A further extension of the Port Chalmers Railway Jetty is contemplated during this year, to provide for the increase of traffic on the Dunedin and Clutha and Dunedin and Moeraki Railways.

The Dunedin and Clutha Railway has been recently opened to Green Island, about six miles. The works are progressing satisfactorily on the rest of the line, and with a view of expediting its completion the Government have offered Messrs. Brogden a bonus of £800 per month for every month they save in the completion of the line previously to 1st September next year.

The Tokomairiro and Lawrence Railway is all under contract, and the date for completion of the formation is 1st of next June. The line ought to be finished by 1st September, 1875, but the whole of this work depends on the completion of the Glenore Tunnel.

From Clutha to Mataura, the only work actually in hand is the large bridge over the Clutha River; but the contract plans are ready for the greater portion of the line, and it is intended to call for tenders for the section between Mataura and Clinton immediately, and the remainder as soon after as practicable.

Between Mataura and Invercargill, about 12 miles have been opened during the past year for traffic, and the remainder of the line is progressing very well, although not so forward as it should be. There has been some delay occasioned by a slip in the heavy cutting on this line, but I am assured that it will not take much beyond the contract time for completion.

From Winton to Kingston the contractor for the first section is not so far advanced as he ought to be with his work, owing to a delay for which he was not accountable. His contract time does not expire till 9th of next month, but it is not possible for him to have his work completed by that date. Every effort is being made to force him on with the construction. The next section of 28 miles is just let, and the remainder will be let as soon as the Government see their way to procure the material. Should the same difficulties which are said now to exist in the way of getting sleepers continue, it is not likely that the cost of this line can be kept within the appropriation. The Land Board wish, no doubt, to conserve the forests in the neighbourhood of the railway; but the Engineer, in estimating the cost of line, took it for granted that no restrictions would be put upon the free cutting of sleepers on Crown lands for this and all other railways.

RAILWAYS—SUMMARY.

To summarize the Railways now authorized,—

Auckland	166 miles 36 chains	Appropriation ...	£934,500
Taranaki	18 „ 13 „	„ ...	110,500
Hawke's Bay	45 „ 25 „	„ ...	220,000
Wellington	133 „	„ ...	644,000

Westland	7 miles 23 chains	Appropriation ...	£74,400
Nelson	38 „ 20 „	„ ...	222,000
Marlborough	18 „ 53 „	„ ...	126,000
Canterbury	251 „ 34 „	„ ...	1,160,000
Otago	332 „ 4 „	„ ...	2,065,000
General (Surveys) ...	... ...	... ...	10,000
Total	1,010 miles 48 chains ...	... ...	£5,575,400

Of which, there are—	89 miles 58 chains	open for traffic.
	57 „ 74 „	complete, ready for traffic.
	103 „ 65 „	plate-laying going on.
	421 „ 45 „	length under contract in course of completion.
Giving a total length undertaken of	673 miles 02 chains.	
In addition to which there are still to be let	337 „ 46 „	
Making a total, as stated above, of	1,010 miles 48 chains.	

The expenditure and liabilities incurred for railways completed or in hand amount to £3,660,881, leaving £1,914,519 for which no liabilities have yet been incurred.

This, Sir, I take leave to think, is a very satisfactory result for the working of the department so far; and although it might have been possible to have forced more work on the market, I think the House will agree with me in believing that it would have been very unadvisable in the interest of the colony to have done so.

Speaking generally, with reference to the cost of the railways authorized by Parliament, it has been found that, with few exceptions, the amount already appropriated will be found sufficient for their completion. Owing to the great fluctuation in the cost of iron in England, it may, however, be necessary to group the railways in each of the various provinces in order to make the appropriations cover the cost, as against some lines the permanent way has been charged altogether at the higher rates, whilst the others have obtained all the benefit of the lower rates.

Before leaving the subject of railways, there is the question of working the traffic on them to be referred to.

The first piece of line which is being worked by the Colonial Government is that from Auckland to Onehunga. This was opened before it was completed, and the best arrangement which was found practicable was made with Messrs. Brogden, who organized the staff and commenced to work the line. From the traffic receipts, the details of which will be found in the tables attached to this Statement, it will be seen that there is a large amount of traffic, and there is no doubt whatever that the line will pay very well; the receipts during seven months have been £4,834 9s. 3d.

The line from Wellington to the Hutt has been opened since April; and I think that, considering the present temporary terminus is so far out of the town and the line so short, it is astonishing that there should be so much traffic on it as there is.

There is no reason to doubt that this line will pay, and each section after the Hutt River is crossed will materially increase its paying capabilities.

The fragmentary portions of the lines which have been opened in the Provinces of Canterbury and Otago are for the present being respectively worked by the Provincial Governments. Attached are statements of the traffic, as furnished by those Governments, and with them the returns of the traffic on the Canterbury and Otago provincial railways. This information will, I trust, be found interesting to honorable members.

I will here add, Sir, that the erection of large workshops is being pressed forward in Auckland and Dunedin, and I trust in a few months the department will be in a position to execute not only repairs, but also to fit up and complete a considerable amount of rolling stock, which must meanwhile be imported from England.

It will be a matter hereafter to decide whether it will be advisable to undertake the manufacture in the colony of the rolling stock which will be required.

ROADS.

I shall now refer to the road works.

I do not propose to weary the House by going into details as to the various Road Works executed during the past year by this department.

The attached Report of the Assistant Engineer-in-Chief describes them all, and a reference to it and the tables appended to this Statement will give the fullest information.

The amount expended prior to 30th June, 1873, was—

	£	s.	d.
In Province of Auckland	66,395	9	4
„ Taranaki	37,608	6	9
„ Hawke's Bay	30,956	9	1
„ Wellington	79,081	13	5
Tools, Implements, &c., unapportionable	1,747	11	5
Making a total of	£215,789	10	0

During the past year there has been expended—

In the Province of Auckland,—			
Bay of Islands	16,730	5	6
North of Auckland	9,199	8	10
Mangere Bridge	9,409	15	4
Thames	...		
Waikato	7,451	17	6
Bay of Plenty	12,713	1	3
Poverty Bay	4,539	12	10
Taupo	1,225	9	10
Giving a total of	£61,269	11	1
In the Province of Taranaki,—			
Wai Iti to Patea	13,534	14	4
Hawera to New Plymouth	11,542	15	3
Giving a total of	£25,077	9	7
In the Province of Hawke's Bay,—			
Napier	3,645	3	0
Seventy-Mile Bush	23,412	11	6
Wairoa	124	15	0
Giving a total of	£27,182	9	6
In the Province of Wellington,—			
Wanganui to Patea	9,885	18	11
Wanganui to Taupo	1,968	14	4
Seventy-Mile Bush	10,331	13	9
Manawatu	9,376	14	0
Manawatu Tramway	7,748	18	2
Giving a total of	£39,311	19	2

This gives a total expended to 30th June, 1874,—

In Province of Auckland	127,665	0	5
„ Taranaki	62,685	16	4
„ Hawke's Bay	58,138	18	7
„ Wellington	118,393	12	7
Unapportionable	1,747	11	5
Total	£368,630	19	4

And there were liabilities on 30th June, 1874,—

In Province of Auckland	22,851	14	3
„ Taranaki	6,787	2	0
„ Hawke's Bay	6,771	15	0
„ Wellington	20,107	14	0
Total	£56,518	5	3

Which makes the account stand,—

Total expended	368,630	19	4
Total liabilities	56,518	5	3
Total	£425,149	4	7

against the vote of £400,000.

This has to be credited with the sum of £12,000, which has been expended for benefit of confiscated lands in various provinces.

At the end of the year 1872–73 there were 1,141 miles of dray roads opened and in progress, and of horse roads a total length of 470 miles; and on 30th June last there were 1,188 miles of dray roads opened or in progress, and a total length of horse roads of 526 miles constructed at a total expenditure, including all liabilities, of £425,149 4s. 7d.

On these roads, besides a very large number of culverts, there are completed 134 bridges, of spans exceeding 30 feet, of a total length of 11,358 feet, and 182 bridges of smaller spans of a total length of 2,874 feet, or 14,232 lineal feet in all.

ROADS—NELSON SOUTH-WEST GOLD FIELDS AND WESTLAND.

Last year I had to state that 33½ miles of metalled roads had been completed, and 9 miles made passable for heavy traffic. During the year ending 30th June, 1874, this mileage of metalled roads completed has been brought up to 66 miles, and horse roads to 36 miles.

In Westland there are completed 50 miles of dray roads, and in course of construction 104 miles of horse roads.

The bridges on the last two named roads number 36, and measure in all 2,318 lineal feet.

The amount expended on these roads is £130,679 8s. 3d., and the liabilities are £14,006 1s. 6d.

GOLD FIELDS WATER SUPPLY.

I now come to the Water Supply on the Gold Fields.

When alluding to this subject last year, I felt convinced that in some instances the amounts of the estimated cost of the works which the Government had undertaken were much under-estimated, and in almost every instance this has proved to be the case.

The estimates for these works were for the most part based on information supplied by the Provincial authorities, and a reference to the table accompanying this Statement will show that the whole amount of £300,000 authorized to be spent in works of this nature is already spent, or liabilities incurred which will absorb it. The great increases are on the Waimea, Nelson's Creek, and Thames Races.

The Provincial Government of Otago have superintended the carrying out of the Mount Ida Water Race and Sludge Channel. This forms a notable exception, inasmuch as it was the only one in reference to which we had anything approaching a reliable estimate, and it will be completed at a cost very little in excess.

The Government do not propose to undertake any further works of this nature till time has proved how far those now in hand have succeeded.

	£	s.	d.
The Amount expended is	95,937	2	0
And the Liabilities are	201,454	13	10

COAL MINES.

The mines on the West Coast of the South Island, on which the colony must chiefly depend for its future supply of bituminous coal adapted for its steam services, await only the completion of engineering works that are in progress for their full development.

These works are being proceeded with as rapidly as circumstances admit, and there is every reason to believe that in the course of a few years the colony may become to a great extent independent of imported coal.

The extent of the Grey Coal Field on the south side of the river, opposite to the Brunner Mine, has been practically tested during the past season, by a company to which an extensive leasehold has been granted, so that two mines will be in full working order by the time that the railway to the shipping port is opened for traffic.

At Westport the railway line has been surveyed and determined on, and the first portion is open for tender. This section will open communication with stone quarries, from which the material will be obtained for the formation of the wharfage which must be constructed, before it is possible to effect large shipments of coal without damaging severely the river banks. Meanwhile a thorough topographical survey is in progress of this most valuable and extensive coal field, with the view of facilitating its subdivision into mining areas that will afford the greatest facility for the economical working of the coal. The geological survey of the district is at the same time receiving attention; and during the past year the ascertained limits of the carboniferous area have been greatly extended.

The Collingwood Coal Field, where the natural facilities for shipment and the extent of the field are all that can be desired, unfortunately labours under the disadvantage, so far as yet known, of possessing only thin seams in comparison to the immense deposits further south. Nevertheless, seams sufficiently thick to be remunerative have been proved by exploratory works that have been in progress during the past two years, and which for the present may be considered as completed. Some further expenditure has been suggested for the construction of a short line and wharfage, and the application received due consideration.

The existence of valuable ironstone, together with other requisites for the manufacture of iron, will, it is urged, attract capital to the district; and the local demand for the coal thereby created may enable comparatively thin seams to be profitably worked.

In other parts of the country assistance has been given wherever there is a prospect of the coal seams being of material service to the colony; but the principle has been adhered to, that substantial assistance should only be given where the coal is adapted for steam-generating purposes.

Experiments made with the locomotives on the railways in Otago have shown that the deposits of brown coal which exist, not only in that province but in most other parts of the colony, may be depended upon for the supply of our railway system.

The expenditure on exploration for coal during the past year has been £2,405 12s. 10d., with a contingent liability of £1,236 2s. 11d.

NATIVE LAND PURCHASES.

The purchase of lands from the Natives was not under the control of the Public Works Department last year, the Honorable the Native Minister having been requested to take over its entire administration. In previous years it was mainly in name that it was dealt with by the Public Works Department.

PUBLIC DOMAINS AND BUILDINGS.

I have now to mention a branch of the service which was transferred to the control of the Public Works Department during the past year—that of Public Domains and Buildings. The Report of the Colonial Architect is attached.

If you, Sir, and honorable members will turn to that Report, you will find that the Colonial Architect has had very heavy work throughout the year; and it will be found, on reference to the Estimates, that a larger sum has been put down

for that office, to cover the expense of an Accountant and assistants. I have adopted this course in preference to taking the salaries of such officers out of Contingency Votes.

The extraordinary rise which took place towards the end of last year, both in skilled labour and in building materials, induced me to avoid pressing on some of the larger buildings which were authorized by this House last Session, and foremost among them was the block of buildings for new Government offices in Wellington.

Alternative designs for this block have been prepared, and before the Session is over the Government will bring down estimates for this and the other public buildings they consider necessary throughout the colony.

With regard to other buildings in various parts of the colony, wherever we have not had fair-priced tenders sent in, we have either re-advertised them or postponed their erection.

ADDITIONAL WORKS.

Now, Sir, with regard to the appropriation for Railways which it is proposed to ask the House to sanction this Session :—

1st. We require about £14,000 more for the Kaipara and Riverhead Railway.

2nd. We ask the House to vote £112,000, being the difference in the cost of the completion of the line from Wanganui to Manawatu as a railway instead of the tramway, now on the Railway Schedule.

The original vote was taken at a round sum of £2,000 per mile, without anything approaching to a reliable survey. The bridges over the Rangitikei and the Oroua are of a very extensive character, and I am advised that the above sum will not be more than sufficient; and that even if the line were kept as a tramway, which would, in face of the settlement now going on there, be a most wasteful course, a large sum would have to be asked for the purpose. The Government have no hesitation in requesting this amount.

3rd. We propose to convert the Foxton and Manawatu Tramway into a railway, owing to its being found that the tramway is not capable of doing more than accommodate the present traffic; the charges being in consequence kept very high to pay the working expenses and repairs. If the tramway is kept as it is, it will prevent the expansion of the large timber trade which is now taking place, not only in the Feilding Block but in the surrounding districts. The tramway is 25 miles long, and it will cost about £60,000 in all to complete it as a railway.

4th. A further sum of £30,000, to extend the railway southward from Waipukurau towards Manawatu; the object being to form the railway and lay down the permanent sleepers with a wooden rail to the heavy bush land which the main line traverses, and thus get at the timber, so much of which is wanted for the railway now in course of construction. The cost of laying these wooden rails will be very small in comparison with the advantage to be gained in getting at the timber, and the rails can be replaced in a year or two with iron ones with very little trouble.

5th. We ask for £15,000 to complete the Waitaki Bridge; and

6th. For £10,000 for the extension of the protective works at Greymouth.

The vote of £10,000 for preliminary surveys being nearly exhausted, we shall ask for a sufficient sum to enable us to have full and complete surveys made of the line through from Foxhill to Brunnerton, and thence to Canterbury, and from Greymouth to Hokitika, as well as for such other portions of the connecting links of the trunk lines as the staff at our command will enable us to do.

There will be no necessity to do more than this before the next Session.

It has been stated by my honorable colleague the Colonial Treasurer, in his Financial Statement, that the Government consider the railway scheme as adopted by Parliament embraces the main trunk line from Kaipara, in the North, to Auckland, thence by Mercer to Newcastle, and southwards to Wellington, the railways from Napier and Taranaki joining the trunk line at such points as on survey hereafter may be found to be the best.

Then from Nelson to Hokitika, the main trunk line running through the Valleys of the Buller and Grey and into the Amuri by the best routes procurable, and passing South through Canterbury and Otago to the Bluff, together with the line from Invercargill to Kingston, the line to Port Chalmers in Otago, and that from Christchurch to Lyttelton in Canterbury.

The only railway which I think it right now to call attention to is the connecting link with Blenheim. It has transpired during the survey of the Foxhill and Brunnerton Railway that a very easy line to construct can be got from a point about fifty miles from Nelson, on that railway down the Wairau Valley to Blenheim, which is in course of being connected with Picton.

I shall now, Sir, state what the Government propose with reference to the expenditure during this year on roads in the North Island. First, as I have already stated, we propose to convert the Manawatu Tramway into a railway, and to repay to the North Island Road Fund the amount which has been spent on its construction, £29,500. We further propose asking for an additional grant of £60,000, with a view of completing several of the roads now in hand, and some others which are considered necessary. This amount will enable the Government to meet all the liabilities which have been incurred up to the present time in connection with the North Island roads, and provide sufficient funds to construct all they now have in view.

The following are the principal roads on which it is proposed to expend this money: First, to complete and metal the road through from Opaki to the Manawatu Gorge; to form the road through from Tauranga to Cambridge, and from Taupo to Cambridge; and in the North of Auckland, the Victoria Valley Road, and that joining Hokianga with the East Coast, together with several others of minor importance.

It is proposed to make a similar contribution to the Middle Island; and the only road to be constructed out of it which the Government stipulate for is that between Hokitika and Canterbury. The cost of this road to be provided out of the share of the money falling to Canterbury and Westland. The remainder is, however, to be spent under the control of the department on whatever roads or railways may be approved of by the respective Governments.

The Colonial Treasurer has already informed the House that the Government have promised to ask Parliament to raise £50,000, to be spent on the Thames Gold Fields, taking direct security over the machinery and mines benefited by the expenditure. The security of the province, through which the money is advanced, is also to be taken.

This assistance, it is hoped, will be the means of enabling such of the mines as have almost been brought to a standstill, to be worked to a very much greater depth than has hitherto been done. If this hope is realized, it will be the means of providing a large amount of work on the Thames Gold Fields.

It would have been quite within the power of the Government to have devoted a portion of the £300,000 already voted for drainage and water supply on the gold fields for this purpose, but the whole was found to be wanted for the works already in hand.

I have endeavoured, Sir, as far as was possible, to fulfil the pledges given by the Government last year with regard to the extensions of the railways; the supply of labour was not sufficient to enable us to make the progress we anticipated, as it was thought better to wait than to unduly force up the rates of labour.

The delay has had one good result, inasmuch as it has given time for the arrival of the permanent way materials and rolling stock, full supplies of which are now coming to hand; and I have little doubt that there will be an even more

favourable account to be given next Session of the works executed during the year we have just entered upon.

I shall now, Mr. Speaker, only add a short statement of the expenditure under all heads by the Public Works Department.

Up to the 30th June, 1873, there was a total expenditure by the Public Works Department, exclusive of Immigration, of £1,649,921 2s. 11d., and the expenditure during the year 1873–74 was £1,554,446 4s. 10d. There are outstanding liabilities in England and the Colony of £1,873,688 16s. 4d.; making a total of expenditure and liabilities of £5,078,056 4s. 1d.

These are large figures, but, Sir, we have large results; and there are few who will be found now to assert that any of the railways which are proposed or undertaken will not, from the moment they are opened, return more than working expenses, and a fair depreciation fund, and, if economically worked will considerably contribute in course of time towards paying interest on the outlay. And with regard to the roads in the North Island, I do not imagine any one will deny the vast service they have been in opening up and bringing about the settlement of the country.

The Colony has undertaken a gigantic work, and it is incumbent on the Assembly to see that it is carried out to its legitimate end, and, Sir, I have no fear as to the result.

No. 1.—ROADS AND TRAMWAYS—NORTH ISLAND.

RETURN of Classified Expenditure for Survey and Construction, from 1st July, 1873, to 30th June, 1874.

Lines of Road.	By Contract and Piece-work.			By Day Labour.			Exploration, Survey, Cutting Tracks and Lines, Supervision, Tools, Materials, and Contingencies.	Totals.	Lines of Road.
	Colonial Forces.	Natives.	Others.	Colonial Forces.	Natives.	Others.			
AUCKLAND.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	AUCKLAND.
Bay of Islands :—									Bay of Islands :—
Mongonui—Victoria Valley ...	...	436 16 0	...	...	...	...	18 2 6	454 18 6	Mongonui—Victoria Valley.
Peria—Oruru ...	...	...	...	...	...	...	3 10 0	3 10 0	Peria—Oruru.
Port Albert—Kaiwaka ...	...	...	...	...	...	...	6 10 0	6 10 0	Port Albert—Kaiwaka.
Waimate—Waihau	...	149 0 0	162 0 0	...	...	...	...	311 0 0	Waimate—Waihau.
Wairoa—Kaikohe	...	1,748 14 11	341 4 9	...	10 17 0	190 2 0	366 11 6	2,657 10 2	Wairoa—Kaikohe.
Awanui—Ahipara	...	...	1,743 0 0	...	...	83 9 0	100 9 6	1,926 18 6	Awanui—Ahipara.
Mahurangi—Port Albert ...	...	...	1,922 6 0	...	...	...	524 13 5	2,446 19 5	Mahurangi—Port Albert.
Keri Keri—Mongonui... ...	...	310 5 0	393 0 0	...	...	40 15 0	167 4 0	911 4 0	Keri Keri—Mongonui.
Awanui—California	...	...	336 0 0	...	...	...	...	336 0 0	Awanui—California.
Okaihau—Utukura	...	382 11 0	...	...	...	...	...	382 11 0	Okaihau—Utukura.
Okaihau—Horeke	...	206 3 0	...	...	...	...	13 13 0	219 16 0	Okaihau—Horeke.
Kawa Kawa—Whangarei ...	...	686 5 3	3 0 0	...	...	...	324 14 4	1,013 19 7	Kawa Kawa—Whangarei.
Awanui—Victoria Valley ...	...	...	...	...	...	75 0 0	135 3 2	210 3 2	Awanui—Victoria Valley.
Waima—Herd's Point... ...	...	200 0 0	...	...	...	...	...	200 0 0	Waima—Herd's Point.
Herekino—Whangape... ...	...	...	...	...	...	67 16 0	...	67 16 0	Herekino—Whangape.
Waimate—Waikare	...	34 0 0	...	...	...	...	...	34 0 0	Waimate—Waikare.
Waitangi—Hokianga	...	1,462 4 6	2,681 10 6	...	30 10 0	33 0 0	106 6 6	4,313 11 6	Waitangi—Hokianga.
Ohaewae—Okaihau	...	7 0 0	105 10 0	...	...	...	...	112 10 0	Ohaewae—Okaihau.
Bay of Islands District ...	...	...	...	...	...	...	1,121 7 8	1,121 7 8	Bay of Islands District.
	...	5,622 19 8	7,687 11 3	...	41 7 0	490 2 0	2,888 5 7	16,730 5 6	
North of Auckland :—									North of Auckland :—
Shoal Bay—North Shore ...	...	...	343 0 0	...	...	...	...	343 0 0	Shoal Bay—North Shore.
Roads North of Auckland ...	...	...	7,630 12 8	...	...	137 12 0	1,088 4 2	8,856 8 10	Roads North of Auckland.
	...	...	7,973 12 8	...	...	137 12 0	1,088 4 2	9,199 8 10	
Mangare Bridge	...	...	9,221 7 6	...	...	...	188 7 10	9,409 15 4	Mangare Bridge.
Thames :—									Thames :—
Shortland—Ohinemuri ...	...	...	...	...	...	...	...	...	Shortland—Ohinemuri.
Waikato :—									Waikato :—
Mercer—Cambridge	...	...	4,491 0 6	...	...	803 16 6	1,534 15 9	6,829 12 9	Mercer—Cambridge.
Newcastle—Alexandra... ...	...	...	32 13 7	...	...	89 9 0	46 18 3	169 0 10	Newcastle—Alexandra.
Cambridge—Tapapa	...	...	...	...	...	...	...	...	Cambridge—Tapapa.
Waipa—Raglan	...	...	23 10 0	...	...	...	...	23 10 0	Waipa—Raglan.
Hamilton—Ohaupo	...	...	...	...	...	...	...	...	Hamilton—Ohaupo.
Moana Tua Tua	...	...	113 17 2	...	...	86 5 0	1 0 0	201 2 2	Moana Tua Tua.
Waikato District	...	...	...	...	...	48 13 6	179 18 3	228 11 9	Waikato District.
	...	...	4,661 1 3	...	...	1,028 4 0	1,762 12 3	7,451 17 6	

No. 1.—ROADS AND TRAMWAYS—NORTH ISLAND—*continued.*

RETURN of Classified Expenditure for Survey and Construction—*continued.*

Lines of Road.	By Contract and Piece-work.			By Day Labour.			Exploration, Survey, Cutting Tracks and Lines, Supervision, Tools, Materials, and Contingencies.	Totals.	Lines of Road.
	Colonial Forces.	Natives.	Others.	Colonial Forces.	Natives.	Others.			
AUCKLAND—*continued.*	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	AUCKLAND—*continued.*
Bay of Plenty:—									Bay of Plenty:—
Tauranga—Kati Kati	248 1 5	52 10 0	1,405 18 10	...	...	43 8 0	119 9 0	1,869 7 3	Tauranga—Kati Kati.
Tauranga—Te Papa	...	...	688 0 0	...	...	...	1 10 8	689 10 8	Tauranga—Te Papa.
Tauranga—East Cape	...	300 10 0	64 0 0	...	1 12 6	...	12 0 6	378 3 0	Tauranga—East Cape.
Horo Horo—Te Whetu	...	10 0 0	...	...	...	...	...	10 0 0	Horo Horo—Te Whetu.
Tauranga—Tapauaeharuru ...	198 12 6	1,430 3 1	2,004 9 2	...	62 14 0	116 13 6	281 10 6	4,094 2 9	Tauranga—Tapauaeharuru.
Rotorua—Tarawera	...	280 19 0	13 8 4	...	...	...	1 0 0	295 7 4	Rotorua—Tarawera.
Maketu—Rotorua	...	51 2 0	166 8 2	...	...	...	7 17 10	225 8 0	Maketu—Rotorua.
Ohinemutu—Branch Road ...	...	12 0 0	...	...	...	...	3 7 0	15 7 0	Ohinemutu—Branch Road.
Richmond—Galatea	184 9 2	228 3 0	42 4 0	...	3 2 0	15 4 0	19 12 8	492 14 10	Richmond—Galatea.
Whakatane—Te Teko	19 17 0	150 0 0	...	...	...	...	5 11 0	175 8 0	Whakatane—Te Teko.
Opotiki—Ohiwa	...	...	...	...	...	...	5 11 9	5 11 9	Opotiki—Ohiwa.
Ohiwa—Waimana	...	155 10 0	...	...	...	...	3 16 3	159 6 3	Ohiwa—Waimana.
Opotiki—Waioeka	62 14 0	...	77 2 3	...	...	...	3 16 3	143 12 6	Opotiki—Waioeka.
Opotiki—Gisborne	26 1 0	...	1,712 9 4	...	...	...	70 19 9	1,809 10 1	Opotiki—Gisborne.
Opotiki—Table Land	...	...	588 7 3	...	...	1 0 0	5 15 8	595 2 11	Opotiki—Table Land.
Ohinemuri—Branch Road ...	...	40 0 0	...	...	...	...	...	40 0 0	Ohinemuri—Branch Road.
Bay of Plenty District ...	...	...	...	...	...	...	1,714 8 11	1,714 8 11	Bay of Plenty District.
	739 15 1	2,710 17 1	6,762 7 4	...	67 8 6	176 5 6	2,256 7 9	12,713 1 3	
Poverty Bay:—									Poverty Bay:—
Gisborne—Hicks Bay	...	998 10 3	20 0 0	...	...	...	28 3 0	1,046 13 3	Gisborne—Hicks Bay.
Gisborne—Ormond	30 4 6	...	...	...	...	...	...	30 4 6	Gisborne—Ormond.
Te Kapu—Waikare Moana ...	...	692 10 0	1,069 11 10	...	...	52 13 0	91 16 2	1,906 11 0	Te Kapu—Waikare Moana.
Te Kapu—Gisborne	17 12 4	206 0 0	...	...	...	104 10 10	359 12 10	687 16 0	Te Kapu—Gisborne.
Poverty Bay	...	...	...	...	...	...	868 8 1	868 8 1	Poverty Bay.
	47 16 10	1,897 0 3	1,089 11 10	...	...	157 3 10	1,348 0 1	4,539 12 10	
Taupo:—									Taupo:—
Tarawera—Tapuaeharuru ...	282 8 7	119 2 4	357 1 0	...	...	316 14 0	14 0 5	1,089 6 4	Tarawera—Tapuaeharuru.
Tapuaeharuru—Tokano ...	...	...	...	...	...	...	136 3 6	136 3 6	Tapuaeharuru—Tokano.
	282 8 7	119 2 4	357 1 0	...	...	316 14 0	150 3 11	1,225 9 10	
HAWKE'S BAY.									HAWKE'S BAY.
Napier:—									Napier:—
Napier—Tarawera	102 11 0	...	347 18 5	...	...	1,829 15 3	1,354 18 4	3,635 3 0	Napier—Tarawera.
Ketapu—Meanee	...	...	...	...	...	...	...	...	Ketapu—Meanee.
Omahu—Owhiti	...	...	...	...	...	...	...	...	Omahu—Owhiti.
Wairoa—Mahia	...	...	...	...	...	...	10 0 0	10 0 0	Wairoa—Mahia.
	102 11 0	...	347 18 5	...	...	1,829 15 3	1,364 18 4	3,645 3 0	

No. 1.—ROADS AND TRAMWAYS NORTH ISLAND—*continued.*

RETURN of CLASSIFIED EXPENDITURE for SURVEY and CONSTRUCTION—*continued.*

LINES OF ROAD.	BY CONTRACT AND PIECE-WORK.			BY DAY LABOUR.			Exploration, Survey, Cutting Tracks and Lines, Supervision, Tools, Materials, and Contingencies.	TOTALS.	LINES OF ROAD.
	Colonial Forces.	Natives.	Others.	Colonial Forces.	Natives.	Others.			
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	
HAWKE'S BAY—*continued.*									
SEVENTY-MILE BUSH :—									SEVENTY-MILE BUSH :—
Takapau—Gorge	...	60 0 0	20,754 7 6	...	...	1,542 4 0	1,056 0 0	23,412 11 6	Takapau—Gorge.
WAIROA :—									WAIROA :—
Te Kapu—Wairoa	...	55 10 0	38 19 0	...	...	21 5 6	9 0 6	124 15 0	Te Kapu—Wairoa.
WELLINGTON.									WELLINGTON.
Wanganui—Patea	...	...	8,607 8 2	...	...	403 5 6	875 5 3	9,885 18 11	Wanganui—Patea.
Wanganui—Taupo	...	...	*1,234 5 0	...	...	105 18 0	213 8 10	1,553 11 10	Wanganui—Taupo.
Ranana—Murimotu	...	400 0 0	...	...	...	...	15 2 6	415 2 6	Ranana—Murimotu.
	...	400 0 0	1,234 5 0	...	...	105 18 0	228 11 4	1,968 14 4	
MANAWATU :—									MANAWATU :—
Foxton—Gorge	...	146 19 5	6,245 14 3	...	...	1,646 1 6	1,003 16 9	9,042 11 11	Foxton—Gorge.
Awahura—Feilding	...	...	...	...	...	...	25 14 0	25 14 0	Awahura—Feilding.
Otaki—Manawatu	...	184 0 0	15 0 0	...	...	...	24 4 0	223 4 0	Otaki—Manawatu.
Palmerston—Rangitikei ...	...	56 14 1	15 12 0	...	...	...	12 18 0	85 4 1	Palmerston—Rangitikei.
	...	387 13 6	6,276 6 3	...	...	1,646 1 6	1,066 12 9	9,376 14 0	
MANAWATU TRAMWAY :—									MANAWATU TRAMWAY :—
Foxton—Palmerston	...	11 16 6	4,962 15 7	...	103 18 3	1,585 17 4	1,084 10 6	7,748 18 2	Foxton—Palmerston.
OPAKI—MANAWATU GORGE :—									OPAKI—MANAWATU GORGE :—
Opaki Gorge	...	200 0 0	7,713 10 2	...	...	1,773 8 0	644 15 7	10,331 13 9	Opaki Gorge.
TARANAKI.									TARANAKI.
Patea—Wai-iti	...	501 13 6	8,680 19 4	...	840 9 6	2,023 12 9	1,487 19 3	13,534 14 4	Patea—Wai-iti.
New Plymouth—Mount Egmont	...	...	622 15 7	...	...	...	403 0 0	1,025 15 7	New Plymouth—Mount Egmont.
Hawera—Waitara	...	...	1,245 2 6	22 11 0	3,541 7 0	4,279 10 2	1,428 9 0	10,516 19 8	Hawera—Waitara.

No. 2.—ROADS AND TRAMWAYS—NORTH ISLAND.

RECAPITULATION of Classified Expenditure to 30th June, 1874.

Districts.	Periods.	By Contract and Piece-work.			By Day Labour.			Exploration, Survey, Cutting Tracks and Lines, Supervision, Tools, Materials, and Contingencies.	Total to 30th June, 1873.	During Year 1873-74.	Total to 30th June, 1874.	Districts.
		Colonial Forces.	Natives.	Others.	Colonial Forces.	Natives.	Others.					
AUCKLAND.		£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	AUCKLAND.
Bay of Islands ...	To 30 June, 1873	...	574 3 0	2,349 12 0	...	1,238 10 0	172 0 6	2,168 15 5	6,503 0 11	...	...	Bay of Islands.
	Year 1873-74	...	5,622 19 8	7,687 11 3	...	41 7 0	490 2 0	2,888 5 7	...	16,730 5 6	23,233 6 5	
North of Auckland ...	To 30 June, 1873	...	...	2,247 10 0	...	...	...	500 0 9	2,747 10 9	...	...	North of Auckland.
	Year 1873-74	...	...	7,973 12 8	...	...	137 12 0	1,088 4 2	...	9,199 8 10	11,946 19 7	
Mangare Bridge ...	To 30 June, 1873	...	...	...	...	...	...	227 17 8	227 17 8	...	...	Mangare Bridge.
	Year 1873-74	...	...	9,221 7 6	...	...	...	188 7 10	...	9,409 15 4	9,637 13 0	
Thames	To 30 June, 1873	...	...	75 2 9	...	...	...	...	75 2 9	...	...	Thames.
	Year 1873-74	...	...	...	...	...	...	...	...	...	75 2 9	
Waikato	To 30 June, 1873	2,050 2 5	205 10 0	2,367 1 0	245 17 8	39 15 0	99 19 0	824 3 10	5,832 8 11	...	...	Waikato.
	Year 1873-74	...	...	4,661 1 3	...	...	1 028 4 0	1,762 12 3	...	7,451 17 6	13,284 6 5	
Bay of Plenty	To 30 June, 1873	368 4 8	9,383 17 7	17,509 13 10	3,500 13 0	15 15 0	269 14 5	6,406 2 8	37,454 1 2	...	...	Bay of Plenty.
	Year 1873-74	739 15 1	2,710 17 1	6,762 7 4	...	67 8 6	176 5 6	2,256 7 9	...	12,713 1 3	50,167 2 5	
Poverty Bay	To 30 June, 1873	76 2 1	1,988 14 1	2,541 5 4	204 6 4	3 18 0	127 5 6	1,256 5 10	6,197 17 2	...	...	Poverty Bay.
	Year 1873-74	47 16 10	1,897 0 3	1,089 11 10	...	...	157 3 10	1,348 0 1	...	4,539 12 10	10,737 10 0	
Taupo	To 30 June, 1873	1,119 8 10	961 13 9	2,176 6 9	515 11 3	1 10 0	698 10 1	1,884 9 4	7,357 10 0	...	...	Taupo.
	Year 1873-74	282 8 7	119 2 4	357 1 0	...	...	316 14 0	150 3 11	...	1,225 9 10	8,582 19 10	
Total, Auckland ...	...	4,683 18 6	23,463 17 9	67,019 4 6	4,466 8 3	1,408 3 6	3,673 10 10	22,949 17 1	66,395 9 4	61,269 11 1	127,665 0 5	Total, Auckland.
HAWKE'S BAY.												HAWKE'S BAY.
Napier	To 30 June, 1873	733 10 8	1,681 19 7	6,239 1 3	417 6 3	...	1,544 14 10	2,811 19 0	13,428 11 7	...	...	Napier.
	Year 1873-74	102 11 0	...	347 18 5	...	...	1,829 15 3	1,364 18 4	...	3,645 3 0	17,073 14 7	
Seventy-Mile Bush ...	To 30 June, 1873	...	540 1 0	13,427 8 10	...	22 4 0	1,086 10 0	1,560 6 11	16,636 10 9	...	...	Seventy-Mile Bush.
	Year 1873-74	...	60 0 0	20,754 7 6	...	...	1,542 4 0	1,056 0 0	...	23,412 11 6	40,049 2 3	
Wairoa	To 30 June, 1873	...	324 3 4	336 18 9	37 8 0	...	5 6 0	187 10 8	891 6 9	...	...	Wairoa.
	Year 1873-74	...	55 10 0	38 19 0	...	...	21 5 6	9 0 6	...	124 15 0	1,016 1 9	
Total, Hawke's Bay	...	836 1 8	2,661 13 11	41,144 13 9	454 14 3	22 4 0	6,029 15 7	6,989 15 5	30,956 9 1	27,182 9 6	58,138 18 7	Total, Hawke's Bay.

No. 2.—ROADS AND TRAMWAYS—NORTH ISLAND—*continued.*

RECAPITULATION of Classified Expenditure to 30th June, 1874—*continued.*

Districts.	Periods.	By Contract and Piece-work.			By Day Labour.			Exploration, Survey, Cutting Tracks and Lines, Supervision, Tools, Materials, and Contingencies.	Total to 30th June, 1873.	During Year 1873-74.	Total to 30th June, 1874.	Districts.
		Colonial Forces.	Natives.	Others.	Colonial Forces.	Natives.	Others.					
WELLINGTON.		£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	**WELLINGTON.**
Wanganui—Patea ...	To 30 June, 1873	65 12 6	99 8 0	15,511 0 0	5,157 13 7	22 0 6	555 19 2	3,276 19 5	24,688 13 2	...	...	Wanganui—Patea.
	Year 1873-74	...	...	8,607 8 2	...	...	403 5 6	875 5 3	...	9,885 18 11	34,574 12 1	
Wanganui—Taupo ...	To 30 June, 1873	...	...	574 0 0	...	...	36 0 0	1,481 18 2	2,091 18 2	...	...	Wanganui—Taupo.
	Year 1873-74	...	400 0 0	1,234 5 0	...	...	105 18 0	228 11 4	...	1,968 14 4	4,060 12 6	
Seventy-Mile Bush ...	To 30 June, 1873	...	35 0 0	3,903 12 5	...	...	798 8 6	1,152 15 9	5,889 16 8	...	...	Seventy-Mile Bush.
	Year 1873-74	...	200 0 0	7,713 10 2	...	...	1,773 8 0	644 15 7	...	10,331 13 9	16,221 10 5	
Manawatu	To 30 June, 1873	...	2,443 7 3	15,207 5 11	...	9 19 0	3,863 2 9	3,230 11 0	24,754 5 11	...	...	Manawatu.
	Year 1873-74	...	387 13 6	6,276 6 3	...	...	1,646 1 6	1,066 12 9	...	9,376 14 0	34,130 19 11	
Manawatu Tramway ...	To 30 June, 1873	...	846 8 3	16,998 19 10	...	15 10 0	2,539 13 6	1,256 7 11	21,656 19 6	...	...	Manawatu Tramway.
	Year 1873-74	...	11 16 6	4,962 15 7	...	103 18 3	1,585 17 4	1,084 10 6	...	7,748 18 2	29,405 17 8	
Total, Wellington	...	65 12 6	4,423 13 6	80,989 3 4	5,157 13 7	151 7 9	13,307 14 3	14,298 7 8	79,081 13 5	39,311 19 2	118,393 12 7	Total, Wellington.
TARANAKI.												**TARANAKI.**
Wai-iti—Patea ...	To 30 June, 1873	1,133 9 6	4,271 6 1	19,315 1 11	5,107 13 9	485 6 0	2,375 10 4	3,714 6 6	36,402 14 1	...	...	Wai-iti—Patea.
	Year 1873-74	...	521 13 6	8,680 19 4	...	840 9 6	2,023 12 9	1,487 19 3	...	13,534 14 4	49,937 8 5	
New Plymouth — Mount Egmont	To 30 June, 1873	...	...	672 12 4	...	...	461 9 9	71 10 7	1,205 12 8	...	...	New Plymouth — Mount Egmont.
	Year 1873-74	...	...	622 15 7	...	...	...	403 0 0	...	1,025 15 7	2,231 8 3	
Hawera—Waitara ...	Year 1873-74	...	...	1,245 2 6	22 11 0	3,541 7 0	4,279 10 2	1,428 9 0	...	10,516 19 8	10,516 19 8	Hawera—Waitara.
Total, Taranaki ...	...	1,133 9 6	4,772 19 7	30,536 11 8	5,130 4 9	4,867 2 6	9,140 3 0	7,105 5 4	37,608 6 9	25,077 9 7	62,685 16 4	Total, Taranaki.
SUMMARY.												**SUMMARY.**
Auckland	...	4,683 18 6	23,463 17 9	67,019 4 6	4,466 8 3	1,408 3 6	3,673 10 10	22,949 17 1	66,395 9 4	61,269 11 1	127,665 0 5	Auckland.
Hawke's Bay ...	...	836 1 8	2,661 13 11	41,144 13 9	454 14 3	22 4 0	6,029 15 7	6,989 15 5	30,956 9 1	27,182 9 6	58,138 18 7	Hawke's Bay.
Wellington	...	65 12 6	4,423 13 6	80,989 3 4	5,157 13 7	151 7 9	13,307 14 3	14,298 7 8	79,081 13 5	39,311 19 2	118,393 12 7	Wellington.
Taranaki	...	1,133 9 6	4,772 19 7	30,536 11 8	5,130 4 9	4,867 2 6	9,140 3 0	7,105 5 4	37,608 6 9	25,077 9 7	62,685 16 4	Taranaki.
Unapportionable ...	...	...	...	...	...	...	...	1,732 18 6	1,732 18 6	...	1,732 18 6	Unapportionable.
Recoveries	...	...	...	...	...	...	...	14 12 11	14 12 11	...	14 12 11	Recoveries.
		6,719 2 2	35,322 4 9	219,689 13 3	15,209 0 10	6,448 17 9	32,151 3 8	53,090 16 11	215,789 10 0	152,841 9 4	368,630 19 4	

No. 3.—ROADS AND TRAMWAYS—NORTH ISLAND

RETURN of Expenditure and Liabilities for Survey and Construction, to 30th June, 1874.

Locality.	No. of Miles Constructed or in Progress.	Expenditure. 1869-70.	1870-71.	1871-72.	1872-73.	1873-74.	Total.	Liabilities on Contracts, &c., 30 June, 1874.	Total Expenditure and Liabilities.	No. of Miles Constructed or in Progress.	Locality.
	Miles. chs.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	Miles. chs.	
Province of Auckland:—											Province of Auckland:—
Bay of Islands	159 40	...	...	723 7 3	5,779 13 8	16,730 5 6	23,233 6 5	7,057 3 10	30,290 10 3	159 40	Bay of Islands.
North of Auckland ...	362 20	...	...	42 0 0	2,705 10 9	9,199 8 10	11,946 19 7	595 16 6	12,542 16 1	362 20	North of Auckland.
Mangere Bridge	...	...	...	...	227 17 8	9,409 15 4	9,637 13 0	5,775 12 6	15,413 5 6	...	Mangere Bridge.
Thames	20 0	...	...	...	75 2 9	...	75 2 9	...	75 2 9	20 0	Thames.
Waikato	34 40	303 6 0	340 17 0	1,871 16 11	3,316 9 0	7,451 17 6	13,284 6 5	...	13,284 6 5	34 40	Waikato.
Bay of Plenty	467 0	6,001 1 4	4,327 2 4	11,746 1 8	15,379 15 10	12,713 1 3	50,167 2 5	6,276 10 3	56,443 12 8	467 0	Bay of Plenty.
Poverty Bay	243 0	...	204 6 4	1,590 7 10	4,403 3 0	4,539 12 10	10,737 10 0	3,001 2 4	13,738 12 4	243 0	Poverty Bay.
Taupo	47 0	667 13 11	939 8 2	2,082 18 2	3,667 9 9	1,225 9 10	8,582 19 10	145 8 10	8,728 8 8	47 0	Taupo.
Total, Auckland ...	1,333 20	6,972 1 3	5,811 13 10	18,056 11 10	35,555 2 5	61,269 11 1	127,665 0 5	22,851 14 3	150,516 14 8	1,333 20	Total, Auckland.
Province of Hawke's Bay:—											Province of Hawke's Bay:—
Napier	30 0	732 0 5	3,416 3 0	6,484 18 0	2,795 10 2	3,645 3 0	17,073 14 7	3,376 2 6	20,449 17 1	30 0	Napier.
Seventy-Mile Bush ...	37 40	...	4,628 2 6	6,449 8 1	5,559 0 2	23,412 11 6	40,049 2 3	3,275 2 6	43,324 4 9	37 40	Seventy-Mile Bush.
Wairoa	43 0	...	335 7 0	403 0 8	152 19 1	124 15 0	1,016 1 9	120 10 0	1,136 11 9	43 0	Wairoa.
Total, Hawke's Bay ...	110 40	732 0 5	8,379 12 6	13,337 6 9	8,507 9 5	27,182 9 6	58,138 18 7	6,771 15 0	64,910 13 7	110 40	Total, Hawke's Bay.
Province of Taranaki:—											Province of Taranaki:—
New Plymouth, inland ...	7 40	350 8 0	149 12 0	...	353 14 8	1,025 15 7	2,231 8 3	...	2,231 8 3	7 40	New Plymouth, inland.
Hawera—Waitara ...	29 22	...	...	...	351 18 0	10,516 19 8	10,516 19 8	628 0 0	11,144 19 8	29 22	Hawera—Waitara.
Wai-iti—Patea	126 0	6,254 9 7	4,648 2 9	8,511 2 8	16,988 19 1	13,534 14 4	49,937 8 5	6,159 2 0	56,096 10 5	126 0	Wai-iti—Patea.
Total, Taranaki ...	162 62	6,604 17 7	4,797 14 9	8,511 2 8	17,694 11 9	25,077 9 7	62,685 16 4	6,787 2 0	69,472 18 4	162 62	Total, Taranaki.
Province of Wellington:—											Province of Wellington:—
Patea—Wanganui ...	38 0	6,791 16 1	22,52 10 9	8,186 8 8	7,457 17 8	9,885 18 11	34,574 12 1	2,187 8 4	36,762 0 5	38 0	Patea—Wanganui.
Wanganui—Taupo ...	24 40	489 13 9	445 17 5	414 9 11	741 17 1	1,968 14 4	4,060 12 6	303 0 0	4,363 12 6	24 40	Wanganui—Taupo.
Manawatu	46 0	1,416 3 8	5,596 16 10	11,316 15 8	6,424 9 9	9,376 14 0	34,130 19 11	6,913 3 3	41,044 3 2	46 0	Manawatu.
Manawatu Tramway ...	25 0	...	278 13 10	8,919 1 6	12,459 4 2	7,748 18 2	29,405 17 8	516 11 0	29,922 8 8	25 0	Manawatu Tramway.
Opaki—Manawatu Gorge ...	46 0	...	28 12 1	897 6 10	4,963 17 9	10,331 13 9	16,221 10 5	10,187 11 5	26,409 1 10	46 0	Opaki—Manawatu Gorge.
Total, Wellington ...	179 40	8,697 13 6	8,602 10 11	29,734 2 7	32,047 6 5	39,311 19 2	118,393 12 7	20,107 14 0	138,501 6 7	179 40	Total, Wellington.
SUMMARY.											SUMMARY.
Province of Auckland ...	...	6,972 1 3	5,811 13 10	18,056 11 10	35,555 2 5	61,269 11 1	127,665 0 5	22,851 14 3	150,516 14 8	...	Province of Auckland.
Hawke's Bay ...	...	732 0 5	8,379 12 6	13,337 6 9	8,507 9 5	27,182 9 6	58,138 18 7	6,771 15 0	64,910 13 7	...	Hawke's Bay.
Taranaki ...	...	6,604 17 7	4,797 14 9	8,511 2 8	17,694 11 9	25,077 9 7	62,685 16 4	6,787 2 0	69,472 18 4	...	Taranaki.
Wellington ...	...	8,697 13 6	8,602 10 11	29,734 2 7	32,047 6 5	39,311 19 2	118,393 12 7	20,107 14 0	138,501 6 7	...	Wellington.
Unapportionable—Tools, Implements, &c.	...	1,732 18 6	...	...	...	...	1,732 18 6	...	1,732 18 6	...	Unapportionable—Tools, Implements, &c.
Recoveries	...	14 12 11	...	...	...	...	14 12 11	...	14 12 11	...	Recoveries.
Totals	...	24,754 4 2	27,591 12 0	69,639 3 10	93,804 10 0	152,841 9 4	368,630 19 4	56,518 5 3	425,149 4 7	...	Totals.

No. 4.—ROADS—MIDDLE ISLAND.

RETURN of Classified Expenditure to 30th June, 1874.

Lines of Road.	Periods.	By Contract, &c.			By Day Labour.			Surveying, &c., &c.	Total to 30th June, 1873.	Total for Year 1873-74.	Total to 30th June, 1874.	Lines of Road.
		Colonial Forces.	Natives.	Others.	Colonial Forces.	Natives.	Others.					
WESTLAND.		£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	**WESTLAND.**
Greymouth—Okarito... ...	To 30 June, 1873	...	...	29,093 1 6	...	...	1,263 12 7	5,737 19 1	36,094 13 2	...	...	Greymouth—Okarito.
	Year 1873-74	...	...	21,443 6 11	...	...	247 5 0	1,203 9 1	...	22,894 1 0	58,988 14 2	
Christchurch Junction ...	To 30 June, 1873	...	...	3,667 0 0	...	...	...	256 9 5	3,923 9 5	...	...	Christchurch Junction.
	Year 1873-74	...	...	...	...	...	...	...	...	...	3,923 9 5	
South Creek Branch to Main Line	To 30 June, 1873	...	...	254 15 0	...	...	...	7 2 6	261 17 6	...	...	South Creek Branch to Main Line.
	Year 1873-74	...	...	20 0 0	...	...	...	...	...	20 0 0	281 17 6	
Greymouth—Arnould ...	To 30 June, 1873	...	...	2,380 12 5	...	...	579 10 10	881 15 0	3,841 18 3	...	...	Greymouth—Arnould.
	Year 1873-74	...	...	743 18 5	...	...	66 18 0	96 19 8	...	907 16 1	4,749 14 4	
Greenstone—Lake Brunner ...	Year 1873-74	...	...	...	...	...	64 10 0	22 4 6	...	86 14 6	86 14 6	Greenstone—Lake Brunner.
Marsden—Maori Creek ...	Year 1873-74	...	...	2,316 17 0	...	...	16 8 0	204 18 0	...	2,538 3 0	2,538 3 0	Marsden—Maori Creek.
Marsden—Paroa	Year 1873-74	...	...	663 5 0	...	...	...	135 3 0	...	798 8 0	798 8 0	Marsden—Paroa.
Still Water—Maori Gully ...	Year 1873-74	...	...	1,191 0 0	...	...	18 10 0	41 7 0	...	1,250 17 0	1,250 17 0	Still Water—Maori Gully.
Kanieri Forks—Kanieri Lakes	Year 1873-74	...	...	...	...	...	19 16 0	63 5 0	...	83 1 0	83 1 0	Kanieri Forks—Kanieri Lakes.
Hokitika—Blue Spur... ...	Year 1873-74	...	...	350 0 0	...	...	...	155 11 11	...	505 11 11	505 11 11	Hokitika—Blue Spur.
Kanieri Bridge	Year 1873-74	...	...	482 8 0	...	...	...	7 7 0	...	489 15 0	489 15 0	Kanieri Bridge.
Waimea Bridge	Year 1873-74	...	...	...	...	...	...	5 10 6	...	5 10 6	5 10 6	Waimea Bridge.
Westland, General	Year 1873-74	...	...	...	...	...	...	501 14 4	...	501 14 4	501 14 4	Westland, General.
		...	...	62,606 4 3	...	...	2,276 10 5	9,320 16 0	44,121 18 4	30,081 12 4	74,203 10 8	
NELSON.												**NELSON.**
Buller—Arnould	To 30 June, 1873	...	...	22,871 18 3	...	...	12,154 8 2	1,312 3 4	36,338 9 9	...	...	Buller—Arnould.
	Year 1873-74	...	...	7,336 7 0	...	...	922 14 0	371 0 6	...	8,630 1 6	44,968 11 3	
Ahaura—Amuri	To 30 June, 1873	...	...	...	...	...	...	128 5 0	128 5 0	...	...	Ahaura—Amuri.
	Year 1873-74	...	...	3,505 0 0	...	...	31 10 0	568 8 6	...	4,144 18 6	4,273 3 6	
Westport—Nine-Mile Bluff ...	To 30 June, 1873	...	...	...	...	...	...	104 0 0	104 0 0	...	...	Westport—Nine-Mile Bluff.
	Year 1873-74	...	...	5,500 11 0	...	...	204 10 0	94 3 4	...	5,799 4 4	5,903 4 4	
Westport—Lyell	Year 1873-74	...	...	1,221 9 0	...	...	55 12 0	53 17 6	...	1,330 18 6	1,330 18 6	Westport—Lyell.
		...	...	40,475 5 3	...	...	13,368 14 2	2,631 18 2	36,570 14 9	19,905 2 10	56,475 17 7	

No. 5.—ROADS—MIDDLE ISLAND.

RETURN of EXPENDITURE and LIABILITIES for SURVEY and CONSTRUCTION, to 30th June, 1874.

LINES OF ROAD.	MILES.		EXPENDITURE.					LIABILITIES ON CONTRACTS, 30TH JUNE, 1874.	TOTAL EXPENDITURE AND LIABILITIES.	MILES.		LINES OF ROAD.
	Surveyed and Surveying.	Completed and in course of Completion.	1870-71.	1871-72.	1872-73.	1873-74.	Total.			Surveyed and Surveying.	Completed and in course of Completion.	
WESTLAND.	Mls. chs.	Mls. chs.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	Mls. chs.	Mls. chs.	**WESTLAND.**
Greymouth—Arnould ...	4 69	4 69	...	1,073 7 5	2,768 10 10	907 16 1	4,749 14 4	...	4,749 14 4	4 69	4 69	Greymouth—Arnould.
Greymouth—Okarito ...	85 49	85 49	51 6 3	17,529 12 9	18,513 14 2	22,894 1 0	58,988 14 2	6,105 16 0	65,094 10 2	85 49	85 49	Greymouth—Okarito.
South Creek—Branch to Main Line	37	37	...	...	261 17 6	20 0 0	281 17 6	...	281 17 6	37	37	South Creek—Branch to Main Line.
Junction Line	5 65	5 65	...	3,817 13 5	105 16 0	...	3,923 9 5	...	3,923 9 5	5 65	5 65	Junction Line.
Greenstone—Lake Brunner	8 37·68	8 37·68	...	...	...	86 14 6	86 14 6	1,068 0 6	1,154 15 0	8 37·68	8 37·68	Greenstone—Lake Brunner.
Marsden—Maori Creek ...	5 50·60	5 50·60	...	...	...	2,538 3 0	2,538 3 0	...	2,538 3 0	5 50·60	5 50·60	Marsden—Maori Creek.
Marsden—Paroa ...	76·61	76·61	...	...	...	798 8 0	798 8 0	...	798 8 0	76·61	76·61	Marsden—Paroa.
Still Water—Maori Gully	6 15·47	6 15·47	...	...	...	1,250 17 0	1,250 17 0	609 10 0	1,860 7 0	6 15·47	6 15·47	Still Water—Maori Gully.
Kanieri Forks — Kanieri Lakes	4 53·87	4 53·87	...	...	...	83 1 0	83 1 0	...	83 1 0	4 53·87	4 53·87	Kanieri Forks—Kanieri Lakes.
Hokitika—Blue Spur ...	4 46·50	4 46·50	...	...	...	505 11 11	505 11 11	1,892 15 0	2,398 6 11	4 46·50	4 46·50	Hokitika—Blue Spur.
Kanieri Bridge	...	...	...	...	...	489 15 0	489 15 0	...	489 15 0	...	...	Kanieri Bridge.
Waimea Bridge ...	...	...	...	...	...	5 10 6	5 10 6	...	5 10 6	...	...	Waimea Bridge.
Westland, General ...	...	...	...	...	...	501 14 4	501 14 4	...	501 14 4	...	...	Westland, General.
	127 20·73	127 20·73	51 6 3	22,420 13 7	21,649 18 6	30,081 12 4	74,203 10 8	9,676 1 6	83,879 12 2	127 20·73	127 20·73	
NELSON.												**NELSON.**
Buller—Arnould ...	61 0	48 54	...	9,917 15 0	26,420 14 9	8,630 1 6	44,968 11 3	4,330 0 0	49,298 11 3	61 0	48 54	Buller—Arnould.
Westport—Nine-Mile Bluff	6 40	6 40	...	...	104 0 0	5,799 4 4	5,903 4 4	...	5,903 4 4	6 40	6 40	Westport—Nine-Mile Bluff.
Ahaura—Amuri ...	12 43	9 36	...	...	128 5 0	4,144 18 6	4,273 3 6	...	4,273 3 6	12 43	9 36	Ahaura—Amuri.
Westport—Lyell ...	31 0	31 0	...	...	...	1,330 18 6	1,330 18 6	...	1,330 18 6	31 0	31 0	Westport—Lyell.
	111 3	95 50	...	9,917 15 0	26,652 19 9	19,905 2 10	56,475 17 7	4,330 0 0	60,805 17 7	111 3	95 50	
SUMMARY.												**SUMMARY.**
WESTLAND	...	...	51 6 3	22,420 13 7	21,649 18 6	30,081 12 4	74,203 10 8	9,676 1 6	83,879 12 2	...	...	WESTLAND.
NELSON	...	...	...	9,917 15 0	26,652 19 9	19,905 2 10	56,475 17 7	4,330 0 0	60,805 17 7	...	...	NELSON.
	...	...	51 6 3	32,338 8 7	48,302 18 3	49,986 15 2	130,679 8 3	14,006 1 6	144,685 9 9	...	...	

No. 6.—RAILWAYS, BRIDGES, PLANT, AND ROLLING STOCK.

Classified Expenditure and Liabilities to 30th June' 1874.

Lines of Railway.	Period.	Recoveries.	Land. Cost.	Land. Expenses.	Surveys—Preliminary and Working.	Construction. Grading.	Construction. Bridges and Culverts.	Construction. Fencing.	Construction. Permanent Way, New Zealand.	Construction. Permanent Way, England.	Rolling Stock. New Zealand.	Rolling Stock. England.	Stations.	Engineering and Office.	Incidental.	Payments which cannot yet be Classified.	Total Expenditure to 30 June, 1873.	Total Expenditure during Year 1873-74.	Total Expenditure to 30 June, 1874.	Lines of Railway.
Auckland :—		£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	Auckland :—
Kawa Kawa Coal Mine ...	To 30 June, 1873	...	...	...	105 0 0	...	...	...	...	...	...	...	...	...	...	...	105 0 0	...	105 0 0	Kawa Kawa Coal Mine.
Thames—Waikato ...	To 30 June, 1873	...	...	...	279 1 2	...	...	...	...	...	...	...	...	...	...	...	279 1 2	...	346 10 11	Thames—Waikato.
	Year 1873-74	...	...	...	67 9 9	...	...	...	...	...	...	...	...	...	...	...	...	67 9 9		
Kaipara—Riverhead ...	To 30 June, 1873	...	...	160 10 2	689 1 0	10,052 6 0	2,729 4 0	101 10 0	999 0 0	...	...	...	630 0 0	2,325 4 7	109 12 11	...	17,796 8 8	...	39,880 4 8	Kaipara—Riverhead.
	Year 1873-74	16 5 10	...	...	86 12 0	2,318 19 8	2 13 0	207 4 0	2,057 11 0	15,410 16 9	...	694 17 2	430 11 8	758 15 5	115 15 4	...	...	22,083 16 0		
Riverhead—Auckland ...	To 30 June, 1873	...	...	...	550 8 9	..	...	...	...	...	...	...	...	...	0 3 6	...	550 12 3	...	1,592 1 11	Riverhead—Auckland.
	Year 1873-74	...	...	17 10 6	1,023 19 2	...	...	...	...	...	...	...	...	...	...	...	...	1,041 9 8		
Auckland—Mercer ...	To 30 June, 1873	140 13 0	21,800 0 0	126 2 6	2,619 16 6	60,129 14 6	6,970 6 10	...	6,275 10 4	10,585 2 0	1,090 10 6	1,423 9 4	5,398 7 9	6,651 4 5	232 0 2	...	123,302 4 10	...	253,450 5 9	Auckland—Mercer.
	Year 1873-74	246 12 7	2,223 2 6	324 15 8	251 5 0	38,853 5 10	17,865 19 8	533 8 1	7,912 19 7	22,539 3 7	5,938 13 10	18,342 5 3	12,421 14 2	2,902 18 6	38 9 3	...	...	130,148 0 11		
Mercer—Newcastle ...	Year 1873-74	...	20 0 0	...	1,768 17 4	13,233 4 8	472 0 2	...	42 12 11	...	...	...	1 14 0	523 15 6	168 18 9	...	...	16,231 3 4	16,248 6 4	Mercer—Newcastle.
Mercer—Cambridge ...	Year 1873-74																			Mercer—Cambridge.
	To 30 June, 1873	...	...	...	17 3 0	...	...	...	...	...	...	...	...	...	...	...	17 3 0	...	...	
Newcastle—Southwards ...	Year 1873-74	33 0 6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Newcastle—Southwards.
Cambridge—Taupo ...	Year 1873-74	...	...	...	432 4 5	...	...	...	...	...	...	...	...	46 0 0	...	...	...	478 4 5	478 4 5	Cambridge—Taupo.
Wellington :—																				Wellington :—
Wellington—Masterton ...	To 30 June, 1873	4 0 0	1,419 7 1	42 13 0	5,661 7 9	6,215 17 3	1,445 16 2	1,089 12 1	432 7 5	16,650 0 4	...	...	4 5 0	931 4 5	96 16 3	...	33,989 6 9	...	113,738 0 0	Wellington—Masterton.
	Year 1873-74	691 14 0	4,474 13 11	335 7 3	2,540 4 1	31,227 1 0	9,619 9 3	4,056 10 2	8,491 3 2	4,330 11 7	1,097 11 8	6,699 2 6	5,388 4 5	1,260 7 10	228 6 5	...	...	79,748 13 3		
Manawatu—Wanganui ...	To 30 June, 1873	...	15 0 0	...	3,086 4 3	713 3 2	...	...	...	...	...	...	...	...	...	...	3,814 7 5	...	27,060 1 8	Manawatu—Wanganui.
	Year 1873-74	56 14 4	16 17 6	6 0 0	2,043 2 4	3,818 18 0	1,561 7 6	255 7 0	33 13 3	14,818 15 7	...	1 4 0	...	593 2 2	97 6 11	...	...	23,245 14 3		
Wanganui—Patea ...	To 30 June, 1873	92 0 0	...	...	1,015 18 9	...	...	...	...	...	...	...	...	...	...	...	1,015 18 9	...	1,498 14 11	Wanganui—Patea.
	Year 1873-74	...	...	...	359 8 8	...	...	...	...	...	...	...	...	18 7 6	105 0 0	...	...	482 16 2		
Taranaki :—																				Taranaki :—
Patea—Waitara ...	To 30 June, 1873	...	...	...	899 8 3	...	...	...	...	...	...	...	...	...	8 18 0	...	908 6 3	...	25,030 18 4	Patea—Waitara.
	Year 1873-74	61 14 3	5,783 16 3	67 7 10	73 2 0	5,878 16 2	1,420 14 3	78 9 3	165 0 0	9,989 13 8	...	43 8 8	0 15 6	621 5 0	0 3 6	...	...	24,122 12 1		
Hawke's Bay :—																				Hawke's Bay :—
Takaana—Napier ...	Year 1873-74	...	...	...	20 16 0	...	...	...	...	...	...	...	...	...	...	...	...	20 16 0	20 16 0	Takaana—Napier.
Napier—Waipukurau ...	To 30 June, 1873	67 11 0	...	2 4 8	2,893 11 1	7,844 6 7	453 1 2	69 15 3	...	12,129 7 4	...	...	...	496 0 4	88 4 10	...	23,976 11 3	...	70,907 1 3	Napier—Waipukurau.
	Year 1873-74	4 17 5	100 0 0	...	648 8 4	7,525 3 7	6,703 6 4	385 8 6	4,910 10 1	16,707 14 3	1,397 12 3	6,475 16 1	927 9 4	1,015 8 4	133 12 11	...	...	46,930 10 0		
Waipukurau—Gorge ...	Year 1873-74	...	...	...	17 0 0	...	...	...	...	...	...	...	...	...	...	...	...	17 0 0	17 0 0	Waipukurau—Gorge.
Contingencies, North Island ...	To 30 June, 1873	...	...	...	...	...	...	...	...	...	...	...	...	45 2 6	...	...	45 2 6	...	184 15 6	Contingencies, North Island.
	Year 1873-74	...	...	...	...	...	...	...	...	...	...	...	...	112 10 6	27 2 6	...	...	139 13 0		
Total, North Island ...	...	1,905 2 11	35,852 17 3	1,082 11 7	27,149 9 7	187,810 16 5	49,243 18 4	6,777 4 4	31,320 7 9	123,161 5 1	9,524 8 3	33,680 3 0	25,203 1 10	18,301 7 0	1,450 11 3	...	205,800 2 10	344,757 18 10	550,558 1 8	Total, North Island.
Nelson :—																				Nelson :—
Nelson—Foxhill ...	To 30 June, 1873	12 4 0	57 17 6	...	1,215 3 3	198 16 3	111 18 6	...	1,344 9 2	743 16 0	...	...	...	210 2 8	18 15 6	...	3,900 18 10	...	38,703 14 3	Nelson—Foxhill.
	Year 1873-74	662 4 4	4,531 3 7	152 17 0	295 9 10	5,407 2 4	4,958 16 0	3,745 7 0	1,832 0 0	13,047 13 7	...	...	...	788 0 6	44 5 7	...	...	34,802 15 5		
Foxhill—Brunner ...	Year 1873-74	...	...	...	2,304 8 8	...	...	...	...	...	...	...	...	0 15 0	112 0 0	...	...	2,417 3 8	2,417 3 8	Foxhill—Brunner.
Westport—Mount Rochfort ...	Year 1873-74	...	...	...	1,092 14 4	...	...	...	11 0 4	...	...	...	...	20 8 6	2 0 0	...	...	1,126 3 2	1,126 3 2	Westport—Mount Rochfort.
Westland :—																				Westland :—
Brunner—Greymouth ...	To 30 June, 1873	45 0 0	...	...	728 5 3	5,900 0 11	...	...	...	...	...	...	...	187 14 10	69 2 5	...	6,885 3 5	...	41,269 10 11	Brunner—Greymouth.
	Year 1873-74	7 7 7	2,171 4 0	145 0 0	205 11 10	17,768 2 4	4,911 14 2	...	5 10 0	392 11 9	...	6,881 12 11	706 18 7	1,153 4 5	42 17 6	...	...	34,384 7 6		
Hokitika—Malvern ...	Year 1873-74	...	...	...	468 0 3	...	...	...	...	...	...	...	...	...	...	...	...	468 0 3	468 0 3	Hokitika—Malvern.
Marlborough :—																				Marlborough :—
Picton—Blenheim ...	To 30 June, 1873	61 16 0	1,648 15 9	88 11 6	1,381 7 6	24,271 12 6	3,246 12 7	178 8 10	72 0 0	1,057 14 2	...	246 3 10	...	878 0 10	68 7 5	...	33,137 14 11	...	74,135 9 4	Picton—Blenheim.
	Year 1873-74	3 19 7	2,938 18 1	177 12 6	163 5 1	8,850 15 5	7,822 10 1	79 19 8	1,939 7 0	9,721 16 2	884 0 0	6,372 18 11	1,005 8 3	1,022 5 8	18 17 7	...	...	40,997 14 5		
Canterbury :—																				Canterbury :—
Addington—Rangiora ...	To 30 June, 1873	3,017 7 5	13,499 3 2	1,297 2 10	1,507 18 6	7,681 10 10	12,021 1 4	6,900 4 8	18,514 14 4	29,348 12 2	...	4,196 18 5	2,863 8 2	2,619 2 6	507 14 8	...	100,957 11 7	...	166,542 11 10	Addington—Rangiora.
Rangiora—Kowai ...	To 30 June, 1873	242 17 9	1,136 3 10	6 19 4	913 6 9	1,258 18 6	3,192 0 3	1,650 0 3	4,029 8 8	2,456 5 0	...	...	2,497 8 6	798 2 1	116 19 0	...	18,055 12 2	...		Rangiora—Kowai.
Addington—Kowai ...	Year 1873-74	2,572 12 0	2,058 10 0	126 4 4	330 0 1	3,650 8 6	22,003 16 5	632 11 11	798 12 6	17,114 12 3	...	32 0 0	2 2 6	693 15 6	86 14 1	...	...	47,529 8 1		Addington—Kowai.
Rangiora—Oxford ...	To 30 June, 1873	8,625 12 8	...	2 12 6	668 8 3	505 17 10	468 0 4	31 2 6	1,674 18 1	16,358 14 7	...	...	...	42 11 1	20 4 10	...	19,772 10 0	...	48,970 5 10	Rangiora—Oxford.
	Year 1873-74	11,869 1 9	477 17 6	2 1 0	225 2 6	753 15 5	839 9 7	476 6 2	9,119 18 10	13,408 17 0	58 5 6	3,624 8 10	4 13 11	150 18 10	56 0 9	...	...	29,197 15 10		
Kaiapoi—Eyreton ...	To 30 June, 1873	225 14 9	...	...	210 13 1	...	...	...	...	20 5 0	...	...	...	21 15 0	16 17 6	...	269 10 7	...	6,115 17 4	Kaiapoi—Eyreton.
	Year 1873-74	13 2 6	...	...	391 17 6	...	...	...	26 17 6	5,402 3 3	...	...	...	5 7 6	20 1 0	...	...	5,846 6 9		
Rolleston—Malvern ...	To 30 June, 1873	1,547 19 3	710 16 11	2 12 6	777 3 2	475 6 4	...	...	2,464 14 3	9,196 16 7	...	...	...	161 1 0	21 4 9	...	13,809 15 6	...	44,844 14 0	Rolleston—Malvern.
	Year 1873-74	9,129 16 2	76 15 0	6 6 6	56 13 10	2,474 16 3	1,413 3 11	54 0 0	16,131 16 3	3,222 13 0	72 0 0	6,920 16 0	372 2 8	163 3 1	70 12 0	...	...	31,034 18 6		
Racecourse—Southbridge ...	To 30 June, 1873	371 2 9	462 18 9	...	785 0 3	147 0 0	101 16 0	15 0 0	47 14 0	...	...	...	...	43 19 6	33 16 1	...	1,637 4 7	...	46,622 9 4	Racecourse—Southbridge.
	Year 1873-74	10,850 7 5	2,424 6 8	46 3 2	60 10 7	1,760 13 0	7,104 5 2	3,579 3 1	6,920 5 7	22,069 6 3	...	98 17 10	306 6 8	550 7 8	64 19 1	...	...	44,985 4 9		
Canterbury Branch Lines—Unapportioned	Year 1873-74	...	...	...	...	...	...	...	...	15,252 3 9	...	22,425 11 0	...	...	...	...	...	37,677 14 9	37,677 14 9	Canterbury Branch Lines—Unapportioned.
Selwyn—Rakaia ...	To 30 June, 1873	42 5 9	150 0 0	...	30 10 0	2,693 6 6	33,052 2 6	2,174 18 6	11,063 9 3	13,850 1 4	...	...	1,654 2 0	888 19 8	88 3 10	...	65,645 13 7	...	73,322 16 1	Selwyn—Rakaia.
	Year 1873-74	1,332 18 7	3 4 0	...	15 4 8	259 16 4	826 3 4	...	3,591 2 11	277 13 10	...	74 19 6	2,614 10 11	11 11 6	2 15 6	...	...	7,677 2 6		
Rakaia—Ashburton ...	To 30 June, 1873	1 5 7	...	...	607 16 9	1,612 1 6	857 4 11	...	45 14 9	5,869 16 5	...	...	1 5 0	105 18 8	55 9 2	...	9,155 7 2	...	49,006 17 6	Rakaia—Ashburton.
	Year 1873-74	70 16 0	94 12 0	...	77 7 0	225 12 1	10,964 7 1	90 0 0	12,219 10 2	10,202 14 3	144 10 9	4,085 16 5	1,294 17 8	349 16 1	102 6 10	...	...	39,851 10 4		
Ashburton—Temuka ...	To 30 June, 1873	...	...	...	503 11 7	...	...	...	14 0 0	...	...	...	...	...	...	...	517 11 7	...	12,396 19 3	Ashburton—Temuka.
	Year 1873-74	...	...	...	317 4 8	405 0 0	944 12 3	...	...	9,865 12 7	...	164 17 2	...	65 15 0	116 6 0	...	...	11,879 7 8		
Temuka—Timaru ...	To 30 June, 1873	54 5 0	5,909 15 0	177 8 0	313 15 0	7,178 16 9	1,445 14 10	356 13 5	92 14 4	...	...	...	...	903 10 2	78 10 3	...	16,456 17 9	...	48,278 5 5	Temuka—Timaru.
	Year 1873-74	293 2 6	300 0 0	226 16 8	66 13 4	1,859 8 1	2,608 8 2	416 7 11	5,087 8 11	17,209 19 8	65 19 9	3,376 16 11	4 7 0	553 12 4	45 8 11	...	...	31,821 7 8		
Timaru—Waitaki ...	To 30 June, 1873	...	...	...	105 0 0	...	...	...	...	...	...	...	...	...	...	...	105 0 0	...	1,059 10 9	Timaru—Waitaki.
	Year 1873-74	...	...	...	922 10 9	...	...	...	...	...	...	...	...	32 0 0	...	...	...	954 10 9		
Canterbury Lines, General ...	To 30 June, 1873	...	...	59 16 5	28 7 6	...	30 7 3	...	126 0 0	...	...	...	...	818 5 8	496 12 3	...	1,559 9 1	...	4,866 10 0	Canterbury Lines, General.
	Year 1873-74	...	...	315 19 6	57 7 6	...	2 4 0	...	440 5 3	...	...	...	0 13 6	2,242 1 5	248 9 9	...	...	3,307 0 11		
Canterbury and Otago :—																				Canterbury and Otago :—
Waitaki Bridge ...	To 30 June, 1878	27 11 0	...	...	...	...	30,735 10 9	...	...	...	...	...	...	...	...	...	30,735 10 9	...	39,481 6 5	Waitaki Bridge.
	Year 1873-74	...	...	...	...	...	8,745 15 8	...	...	...	...	...	...	...	...	...	...	8,745 15 8		
Otago :—																				Otago :—
Waitaki—Moeraki ...	To 30 June, 1873	...	977 10 0	125 15 0	1,899 2 4	1,693 2 0	550 0 0	...	50 0 0	...	...	...	4,754 0 1	165 1 6	19 8 1	...	10,233 19 0	...	63,840 4 8	Waitaki—Moeraki.
	Year 1873-74	158 5 0	2,236 7 6	136 18 3	265 9 2	34,812 3 3	8,137 9 6	2,295 12 8	636 12 4	664 16 10	...	108 18 9	2,091 1 7	2,153 7 1	67 8 9	...	...	53,606 5 8		
Oamaru—Waireka ...	To 30 June, 1873	...	...	...	474 1 4	...	...	...	...	...	...	...	...	...	...	...	474 1 4	...	474 1 4	Oamaru—Waireka.
Dunedin—Moeraki ...	To 30 June, 1873	...	...	...	636 11 3	...	...	...	...	...	...	...	...	...	...	...	636 11 3	...	9,361 17 9	Dunedin—Moeraki.
	Year 1873-74	...	...	...	3,760 11 5	4,821 10 0	...	...	9 0 0	...	...	...	...	87 10 0	46 15 1	...	...	8,725 6 6		
Dunedin—Port Chalmers ...	To 30 June, 1873	273 10 0	...	...	...	...	...	...	...	...	2,500 0 0	...	73 5 2	104 11 10	10 11 0	84,578 15 0	87,267 3 0	...	100,090 16 6	Dunedin—Port Chalmers.
	Year 1873-74	30 0 0	...	31 0 0	...	...	...	...	...	...	...	...	6,151 7 5	166 16 8	75 9 6	6,398 19 11	...	12,823 13 6		
Dunedin—Clutha ...	To 30 June, 1873	628 10 8	11,362 6 8	1,652 17 3	1,221 9 3	55,900 16 3	16,049 0 2	5,303 11 4	5,595 6 4	35,702 11 10	150 0 0	7,436 7 4	3,517 11 10	4,033 1 11	403 7 7	...	148,328 7 9	...	253,915 4 1	Dunedin—Clutha.
	Year 1873-74	1,614 8 11	3,014 1 3	292 6 0	796 0 6	27,949 14 10	10,983 0 8	4,261 3 2	13,555 9 10	25,699 6 2	534 10 5	4,000 10 6	12,694 18 8	1,683 14 5	121 19 11	...	...	105,586 16 4		
Tokomairiro—Lawrence ...	To 30 June, 1873	...	...	...	616 2 1	...	...	...	...	...	...	...	...	...	31 13 6	...	647 15 7	...	35,852 15 5	Tokomairiro—Lawrence.
	Year 1873-74	153 6 11	1,067 18 3	81 16 8	161 2 8	22,896 18 8	6,240 0 10	341 4 8	581 12 2	1,565 6 6	...	1,104 16 7	19 2 2	1,068 19 8	76 1 0	...	...	35,204 19 10		
Clutha—Mataura ...	To 30 June, 1873	...	...	...	1,130 10 6	...	...	...	...	...	...	...	...	...	...	...	1,130 10 6	...	1,975 13 5	Clutha—Mataura.
	Year 1873-74	...	...	...	841 8 11	...	3 14 0	...	...	...	...	...	...	...	...	...	...	845 2 11		
Waipihi—Cromwell ...	To 30 June, 1873	...	...	...	100 0 0	...	...	...	...	...	...	...	...	...	...	...	100 0 0	...	100 0 0	Waipihi—Cromwell.
Mataura—Invercargill ...	To 30 June, 1873	127 10 0	696 1 3	180 12 8	1,521 19 3	13,169 2 4	2,835 5 11	3,022 14 9	2,768 19 9	10,850 0 5	...	115 19 8	...	1,273 15 7	66 7 5	...	36,500 19 0	...	100,874 14 10	Mataura—Invercargill.
	Year 1873-74	314 2 9	274 4 0	...	15 13 9	11,282 9 7	3,424 12 1	1,358 10 5	13,549 9 8	25,590 11 4	9 0 0	5,446 14 11	2,188 17 2	1,105 8 8	128 4 3	...	...	64,373 15 10		
Winton—Kingston ...	To 30 June, 1873	32 11 6	...	...	2,071 7 9	...	...	...	...	...	...	...	...	541 5 10	34 17 0	...	2,647 10 7	...	8,564 11 5	Winton—Kingston.
	Year 1873-74	...	...	...	78 8 0	4,188 5 6	520 1 3	273 0 0	27 4 7	...	...	...	554 1 0	235 10 0	40 10 6	...	...	5,917 0 10		
Otago Lines, General ...	To 30 June, 1873	...	...	148 4 4	...	...	0 19 6	...	...	...	...	...	...	228 10 3	74 16 6	...	452 10 7	...	3,372 9 2	Otago Lines, General.
	Year 1873-74	...	...	320 16 8	21 4 0	...	...	...	34 2 0	...	...	...	1 18 6	2,215 13 0	326 4 5	...	...	2,919 18 7		
Total, Middle Island ...	...	54,412 16 1	58,280 10 8	5,804 10 7	32,437 11 5	272,053 0 1	207,151 19 0	37,236 0 11	134,421 8 9	316,162 11 8	4,418 6 5	76,715 5 6	45,374 8 11	30,545 13 1	4,149 6 9	90,977 14 11	611,021 0 1	704,707 8 7	1,315,728 8 8	Total, Middle Island.
Unapportionable	Year 1871-72	...	...	...	...	...	...	...	...	...	...	...	...	641 9 7	...	...	641 9 7	...	641 9 7	Unapportionable.
SUMMARY.																				SUMMARY.
Railways, North Island ...	...	1,905 2 11	35,852 17 3	1,082 11 7	27,149 9 7	187,810 16 5	49,243 18 4	6,777 4 4	31,320 7 9	123,161 5 1	9,524 8 3	33,680 3 0	25,203 1 10	18,301 7 0	1,450 11 3	...	205,800 2 10	344,757 18 10	550,558 1 8	Railways, North Island.
„ Middle Island ...	...	54,412 16 1	58,280 10 8	5,804 10 7	32,437 11 5	272,053 0 1	207,151 19 0	37,236 0 11	134,421 8 9	316,162 11 8	4,418 6 5	76,715 5 6	45,374 8 11	30,545 13 1	4,149 6 9	90,977 14 11	611,021 0 1	704,707 8 7	1,315,728 8 8	„ Middle Island.
„ Unapportionable ...	...	...	...	...	...	...	...	...	...	...	...	...	...	641 9 7	...	...	641 9 7	...	641 9 7	„ Unapportionable.
„ Material ...	Year 1872-73	...	...	...	...	...	...	...	...	...	...	...	...	...	...	27,640 3 9	27,640 3 9	...	93,479 9 0	„ Material.
„ „ ...	Year 1873-74	...	...	...	...	...	...	...	...	...	...	...	...	...	...	65,839 5 3	..	65,839 5 3		„ „
Totals ...	...	56,317 19 0	94,133 7 11	6,887 2 2	59,587 1 0	459,863 16 6	256,395 17 4	44,013 5 3	165,741 16 6	439,323 16 9	13,942 14 8	110,395 8 6	70,577 10 9	49,488 9 8	5,599 18 0	184,457 3 11	845,102 16 3	1,115,304 12 8	1,960,407 8 11	Totals.

No. 7.—RAILWAYS, BRIDGES, PLANT, AND ROLLING STOCK.

RETURN of Expenditure and Liabilities for Survey and Construction, to 30th June, 1874.

Lines of Railway.	Miles. Surveyed and Surveying.	Miles. Completed or in course of Completion.	Expenditure. 1870-71.	1871-72.	1872-73.	1873-74.	Total.	Liabilities on 30 June, 1874.	Total Expenditure and Liabilities.	Lines of Railway.
NORTH ISLAND.	Mls. chs.	Mls. chs.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	**NORTH ISLAND.**
Province of Auckland:—										Province of Auckland:—
Kawa Kawa	8 0	...	...	...	105 0 0	...	105 0 0	...	105 0 0	Kawa Kawa.
Kaipara—Riverhead	...	15 68	...	10,465 10 6	7,330 18 2	22,083 16 0	39,880 4 8	24,399 6 1	64,279 10 9	Kaipara—Riverhead.
Riverhead—Auckland	22 47	...	...	100 0 0	450 12 3	1,041 9 8	1,592 1 11	...	1,592 1 11	Riverhead—Auckland.
Auckland—Mercer	...	46 0	920 0 0	19,451 14 1	102,930 10 9	130,148 0 11	253,450 5 9	116,200 13 10	369,650 19 7	Auckland—Mercer.
Mercer—Newcastle	...	34 1	...	...	17 3 0	16,231 3 4	16,248 6 4	65,933 16 2	82,182 2 6	Mercer—Newcastle.
Newcastle—Southwards	40 0	...	...	...	...	478 4 5	478 4 5	...	478 4 5	Newcastle—Southwards.
Thames—Waikato	60 0	...	...	...	279 1 2	67 9 9	346 10 11	...	346 10 11	Thames—Waikato.
Total, Auckland	130 47	95 69	920 0 0	30,017 4 7	111,113 5 4	170,050 4 1	312,100 14 0	206,533 16 1	518,634 10 1	Total, Auckland.
Province of Hawke's Bay:—										Province of Hawke's Bay:—
Napier—Tokaano	...	...	...	...	...	20 16 0	20 16 0	...	20 16 0	Napier—Tokaano.
Napier—Waipukurau	...	45 25	707 7 5	1,708 5 1	21,560 18 9	46,947 10 0	70,924 1 3	88,723 5 0	159,647 6 3	Napier—Waipukurau.
Total, Hawke's Bay	...	45 25	707 7 5	1,708 5 1	21,560 18 9	46,968 6 0	70,944 17 3	88,723 5 0	159,668 2 3	Total, Hawke's Bay.
Province of Taranaki:—										Province of Taranaki:—
Waitara—Patea	...	11 13	163 7 0	252 4 10	492 14 5	24,122 12 1	25,030 18 4	43,285 5 8	68,316 4 0	Waitara—Patea.
Province of Wellington:—										Province of Wellington:—
Wellington—Masterton	41 50	28 30	1,559 6 10	1,517 4 10	30,912 15 1	79,748 13 3	113,738 0 0	113,576 5 7	227,314 5 7	Wellington—Masterton.
Patea—Wanganui	20 0	...	157 17 0	394 2 9	463 19 0	482 16 2	1,498 14 11	...	1,498 14 11	Patea—Wanganui.
Wanganui—Manawatu	29 4	28 76	583 18 7	1,849 0 4	1,381 8 6	23,245 14 3	27,060 1 8	69,989 10 7	97,049 12 3	Wanganui—Manawatu.
Total, Wellington	90 54	57 26	2,301 2 5	3,760 7 11	32,758 2 7	103,477 3 8	142,296 16 7	183,565 16 2	325,862 12 9	Total, Wellington.
General Contingencies	...	...	...	...	45 2 6	139 13 0	184 15 6	...	184 15 6	General Contingencies.
MIDDLE ISLAND.										**MIDDLE ISLAND.**
Province of Westland:—										Province of Westland:—
Hokitika—Malvern	...	...	...	...	...	468 0 3	468 0 3	...	468 8 3	Hokitika—Malvern.
Brunner—Greymouth	...	7 23	...	1,391 19 4	5,493 4 1	34,384 7 6	41,269 10 11	31,486 5 4	72,755 16 3	Brunner—Greymouth.
Total, Westland	...	7 23	...	1,391 19 4	5,493 4 1	34,852 7 9	41,737 11 2	31,486 5 4	73,223 16 6	Total, Westland.
Province of Nelson:—										Province of Nelson:—
Brunner—Foxhill	142 63	...	...	...	...	2,417 3 8	2,417 3 8	...	2,417 3 8	Brunner—Foxhill.
Foxhill—Nelson	1 23	18 77	60 0 0	546 19 6	3,293 19 4	34,802 15 5	38,703 14 3	32,058 19 9	70,762 14 0	Foxhill—Nelson.
Westport—Mount Rochfort	10 25	7 55	...	...	...	1,126 3 2	1,126 3 2	34,086 0 0	35,212 3 2	Westport—Mount Rochfort.
Total, Nelson	154 31	26 52	60 0 0	546 19 6	3,293 19 4	38,346 2 3	42,247 1 1	66,144 19 9	108,392 0 10	Total, Nelson.
Province of Marlborough:—										Province of Marlborough:—
Picton—Blenheim	1 43	17 10	...	1,182 18 8	31,954 16 3	40,997 14 5	74,135 9 4	46,266 7 7	120,401 16 11	Picton—Blenheim.
Province of Canterbury:—										Province of Canterbury:—
Kowai—Rangiora	...	13 37	164 1 9	1,421 6 7	16,470 3 10	47,529 8 1	65,585 0 3	33,814 18 10	99,399 19 1	Kowai—Rangiora.
Rangiora—Addington	...	18 53	282 5 2	81,375 14 9	19,299 11 8	...	100,957 11 7	...	100,957 11 7	Rangiora—Addington.
Selwyn—Rakaia	...	12 39	...	11,348 11 3	54,297 2 4	7,677 2 6	73,322 16 1	387 0 0	73,709 16 1	Selwyn—Rakaia.
Rakaia—Ashburton	...	18 31	100 0 0	312 1 2	8,743 6 0	39,851 10 4	49,006 17 6	20,212 16 9	69,219 14 3	Rakaia—Ashburton.
Ashburton—Temuka	13 45	20 55	...	247 5 0	270 6 7	11,879 7 8	12,396 19 3	95,996 18 9	108,393 18 0	Ashburton—Temuka.
Temuka—Timaru	...	11 74	118 7 0	9,981 19 5	6,356 11 4	31,821 7 8	48,278 5 5	33,903 19 11	82,182 5 4	Temuka—Timaru.
Timaru—Waitaki	38 5	6 65	...	105 0 0	...	954 10 9	1,059 10 9	...	1,059 10 9	Timaru—Waitaki.
Rangiora—Oxford	...	21 15	...	367 0 3	19,405 9 9	29,197 15 10	48,970 5 10	16,282 0 7	65,252 6 5	Rangiora—Oxford.
Kaiapoi—Eyreton	...	14 40	...	71 15 3	197 15 4	5,846 6 9	6,115 17 4	10,006 0 0	16,121 17 4	Kaiapoi—Eyreton.
Rolleston—Malvern	...	35 40	120 0 0	496 10 0	13,193 5 6	31,034 18 6	44,844 14 0	13,245 6 10	58,090 0 10	Rolleston—Malvern.
Racecourse—Southbridge	...	26 8	...	205 6 6	1,431 18 1	44,985 4 9	46,622 9 4	22,731 3 7	69,353 12 11	Racecourse—Southbridge.
Waimate	6 0	...	...	...	...	...	...	...	...	Waimate.
Unapportioned	...	...	...	...	...	37,677 14 9	37,677 14 9	...	37,677 14 9	Unapportioned.
General Contingencies	...	...	...	36 19 10	1,522 9 3	3,307 0 11	4,866 10 0	...	4,866 10 0	General Contingencies.
Total, Canterbury	57 50	199 57	784 13 11	105,969 10 0	141,187 19 8	291,762 8 6	539,704 12 1	246,580 5 3	786,284 17 4	Total, Canterbury:—
Canterbury and Otago:—										Canterbury and Otago:—
Waitaki Bridge	...	0 71	153 17 6	10,106 3 8	20,475 9 7	8,745 15 8	39,481 6 5	30,611 14 3	70,093 0 8	Waitaki Bridge.
Province of Otago:—										Province of Otago:—
Waitaki—Moeraki	...	39 22	...	1,298 2 7	8,935 16 5	53,606 5 8	63,840 4 8	168,455 16 1	232,296 0 9	Waitaki—Moeraki.
Moeraki—Dunedin	50 67	1 13	...	...	636 11 3	8,725 6 6	9,361 17 9	59,155 17 2	68,517 14 11	Moeraki—Dunedin.
Dunedin—Clutha	...	51 8	5,582 3 4	42,104 2 4	100,642 2 1	105,586 16 4	253,915 4 1	114,389 13 3	368,304 17 4	Dunedin—Clutha.
Port Chalmers—Dunedin	...	8 0	...	...	87,267 3 0	12,823 13 6	100,090 16 6	110,331 6 3	210,422 2 9	Port Chalmers—Dunedin.
Clutha—Mataura	49 33	...	400 0 0	730 10 6	...	845 2 11	1,975 13 5	28,750 0 0	30,725 13 5	Clutha—Mataura.
Mataura—Invercargill	...	39 56	654 1 3	729 1 8	35,117 16 1	64,373 15 10	100,874 14 10	58,195 2 11	159,069 17 9	Mataura—Invercargill.
Oamaru—Waireka	...	...	...	...	474 1 4	...	474 1 4	...	474 1 4	Oamaru—Waireka.
Waipihi—Cromwell	...	...	...	...	100 0 0	...	100 0 0	...	100 0 0	Waipihi—Cromwell.
Tokomairiro—Lawrence	...	22 0	...	122 4 11	525 10 8	35,204 19 10	35,852 15 5	74,594 5 1	110,447 0 6	Tokomairiro—Lawrence.
Winton—Kingston	20 0	50 0	...	851 6 4	1,796 4 3	5,917 0 10	8,564 11 5	52,200 17 1	60,765 8 6	Winton—Kingston.
General Contingencies	...	...	...	...	452 10 7	2,919 18 7	3,372 9 2	...	3,372 9 2	General Contingencies.
Total, Otago	120 20	211 19	6,636 4 7	45,835 8 4	235,947 15 8	290,003 0 0	578,422 8 7	666,072 17 10	1,244,495 6 5	Total, Otago.
SUMMARY.										**SUMMARY.**
Auckland	130 47	95 69	920 0 0	30,017 4 7	111,113 5 4	170,050 4 1	312,100 14 0	206,533 16 1	518,634 10 1	Auckland.
Hawke's Bay	...	45 25	707 7 5	1,708 5 1	21,560 18 9	46,968 6 0	70,944 17 3	88,723 5 0	159,668 2 3	Hawke's Bay.
Wellington	90 54	57 26	2,301 2 5	3,760 7 11	32,758 2 7	103,477 3 8	142,296 16 7	183,565 16 2	325,862 12 9	Wellington.
Taranaki	...	11 13	163 7 0	252 4 10	492 14 5	24,122 12 1	25,030 18 4	43,285 5 8	68,316 4 0	Taranaki.
General Contingencies	...	...	...	...	45 2 6	139 13 0	184 15 6	...	184 15 6	General Contingencies.
Westland	...	7 23	...	1,391 19 4	5,493 4 1	34,852 7 9	41,737 11 2	31,486 5 4	73,223 16 6	Westland.
Nelson	154 31	26 52	60 0 0	546 19 6	3,293 19 4	38,346 2 3	42,247 1 1	66,144 19 9	108,392 0 10	Nelson.
Marlborough	1 43	17 10	...	1,182 18 8	31,954 16 3	40,997 14 5	74,135 9 4	46,266 7 7	120,401 16 11	Marlborough.
Canterbury	57 50	199 57	784 13 11	105,969 10 0	141,187 19 8	291,762 8 6	539,704 12 1	246,580 5 3	786,284 17 4	Canterbury.
Waitaki Bridge	...	0 71	153 17 6	10,106 3 8	20,475 9 7	8,745 15 8	39,481 6 5	30,611 14 3	70,093 0 8	Waitaki Bridge.
Otago	120 20	211 19	6,636 4 7	45,835 8 4	235,947 15 8	290,003 0 0	578,422 8 7	666,072 17 10	1,244,495 6 5	Otago.
Unapportionable	...	...	...	641 9 7	...	...	641 9 7	...	641 9 7	Unapportionable.
Sleepers	...	...	...	...	...	...	...	91,202 19 11	91,202 19 11	Sleepers.
Material, Insurance, &c.	...	...	...	...	27,640 3 9	65,839 5 3	93,479 9 0	...	93,479 9 0	Material, Insurance, &c.
Totals	555 5	672 45	11,726 12 10	201,412 11 6	631,963 11 11	1,115,304 12 8	1,960,407 8 11	1,700,473 12 10	3,660,881 1 9	Totals.

No. 8.—WATER RACES.

RETURN showing EXPENDITURE and LIABILITIES for SURVEY, CONSTRUCTION of, and SUBSIDIES for, WATER RACES on GOLD FIELDS, to 30th June, 1874.

Locality and Name of Company.	Distance. Miles.	Distance. Chains.	Expenditure. Survey and Construction, 1870-73.	Expenditure. Subsidies, 1870-73.	Expenditure. Survey and Construction, 1873-74.	Expenditure. Subsidies, 1873-74.	Expenditure. Totals.	Liabilities. Contract Liabilities.	Liabilities. Engineer's Estimate to Complete Work, including Lands, &c.	Liabilities. Subsidies.	Liabilities. Totals.	Total Expenditure and Liabilities.	Locality and Name of Company.
			£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	
AUCKLAND :—													AUCKLAND :—
Thames	11	70	1,456 18 11	...	27,252 7 10	...	28,709 6 9	18,389 1 3	13,000 0 0	...	31,389 1 3	60,098 8 0	Thames.
WESTLAND :—													WESTLAND :—
Hohonu	4	65	...	1,533 6 1	3 7 0	452 12 0	1,989 5 1	...	...	508 14 10	508 14 10	2,497 19 11	Hohonu.
Hibernian	4	36	...	1,426 14 3	7 18 10	573 5 9	2,007 18 10	...	...	...	...	2,007 18 10	Hibernian.
New River	4	52	...	1,892 16 6	18 12 6	1,029 8 0	2,940 17 0	...	...	2,077 15 6	2,077 15 6	5,018 12 6	New River.
Waimea	16	3	1,235 10 2	...	35,058 17 6	...	36,294 7 8	19,241 12 6	47,463 19 10	...	66,705 12 4	103,000 0 0	Waimea.
Mikonui	...	...	...	...	11 3 9	...	11 3 9	...	...	...	...	11 3 9	Mikonui.
Kanieri	...	...	...	...	1 5 6	3,135 0 10	3,136 6 4	...	...	6,864 19 2	6,864 19 2	10,001 5 6	Kanieri.
NELSON :—													NELSON :—
Nelson Creek ...	16	...	466 7 0	...	884 9 7	...	1,350 16 7	32,066 14 7	18,000 0 0	...	50,066 14 7	51,417 11 2	Nelson Creek.
Napoleon Hill ...	...	...	...	...	...	...	...	...	...	...	...	...	Napoleon Hill.
OTAGO :—													OTAGO :—
Mount Ida	64	44	2,375 8 0	...	10,776 17 5	...	13,152 5 5	23,847 0 0	3,000 14 7	...	26,847 14 7	40,000 0 0	Mount Ida.
Arrow	3	30	...	500 0 0	...	112 10 0	612 10 0	...	...	...	...	612 10 0	Arrow.
Golden Point ...	20	18	...	...	...	...	...	...	...	1,333 6 8	1,333 6 8	1,333 6 8	Golden Point.
Beaumont and Tuapeka	60	...	...	...	...	640 0 0	640 0 0	...	...	1,360 0 0	1,360 0 0	2,000 0 0	Beaumont and Tuapeka.
Carrick Range ...	17	20	...	...	...	1,550 0 1	1,550 0 1	...	...	2,449 19 11	2,449 19 11	4,000 0 0	Carrick Range.
Waipori	...	...	...	...	2,145 9 8	...	2,145 9 8	7,450 15 0	3,400 0 0	...	10,850 15 0	12,996 4 8	Waipori.
Mount Pisgah ...	...	...	...	...	...	...	...	...	...	1,000 0 0	1,000 0 0	1,000 0 0	Mount Pisgah.
DEPARTMENTAL :—													DEPARTMENTAL :—
Salaries, Travelling, Advertising, &c.	...	...	838 3 3	...	558 11 7	...	1,396 14 10	...	...	...	...	1,396 14 10	Salaries, Travelling, Advertising, &c.
Total ...	...	...	6,372 7 4	5,352 16 10	76,719 1 2	7,492 16 8	95,937 2 0	100,995 3 4	84,864 14 5	15,594 16 1	201,454 13 10	297,391 15 10	Total.

RETURN showing AMOUNT of SUBSIDIES, PAYMENTS on SUBSIDIES, PAYMENTS of INTEREST on SUMS ADVANCED, REFUNDS, &c.

—	Amount of Subsidy.	Payments on Subsidy.	Payments of Interest.	Amounts Refunded.	Balance.	—
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	
Hohonu	2,494 12 11	1,985 18 1	123 9 8	444 11 4	508 14 10	Hohonu.
Hibernian	2,000 0 0	2,000 0 0	128 11 5	...	...	Hibernian.
New River	5,000 0 0	2,922 4 6	184 7 4	...	2,077 15 6	New River.
Kanieri	10,000 0 0	3,135 0 10	...	...	6,864 19 2	Kanieri.
Arrow	612 10 0	612 10 0	32 3 6	...	...	Arrow.
Beaumont and Tuapeka	2,000 0 0	640 0 0	...	...	1,360 0 0	Beaumont and Tuapeka.
Carrick Range	4,000 0 0	1,550 0 1	...	...	2,449 19 11	Carrick Range.
Total	26,107 2 11	12,845 13 6	468 11 11	444 11 4	13,261 9 5	Total.

No. 9.—COAL MINES.

RETURN of EXPENDITURE and LIABILITIES for PROSPECTING for and DEVELOPING, to 30th June, 1874.

PROVINCE.	EXPENDITURE.				LIABILITIES.	TOTALS.	PROVINCE.
	Prospecting and Developing.			Totals.			
	1871–72.	1872–73.	1873–74.				
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	
AUCKLAND	24 3 9	150 0 0	943 5 2	1,117 8 11	300 0 0	1,417 8 11	AUCKLAND.
NELSON	233 4 2	459 16 6	1,040 7 5	1,733 8 1	906 2 11	2,639 11 0	NELSON.
WESTLAND	...	361 16 0	220 8 3	582 4 3	30 0 0	612 4 3	WESTLAND.
CANTERBURY	92 8 0	53 0 2	100 0 0	245 8 2	...	245 8 2	CANTERBURY.
OTAGO	193 9 9	44 0 0	83 10 0	320 19 9	...	320 19 9	OTAGO.
GENERAL EXPENSES	...	...	18 2 0	18 2 0	...	18 2 0	GENERAL EXPENSES.
TOTALS	543 5 8	1,068 12 8	2,405 12 10	4,017 11 2	1,236 2 11	5,253 14 1	TOTALS.

No. 10.—RAILWAY TRAFFIC RETURNS.

Auckland to Onehunga, 24th December, 1873, to 30th June, 1874.

Month.	Passengers.		Merchandise.		Monthly Total.
	Number.	£ s. d.	Tons. cwts. qrs. lbs.	£ s. d.	£ s. d.
December, 1873	2,977	128 9 9	...	...	128 9 9
January, 1874	22,664	1,312 12 6	...	...	1,312 12 6
February, „	10,454	461 1 7	...	...	461 1 7
March, „	11,891	533 8 6	...	...	533 8 6
April, „	13,715	667 6 8	...	388 18 0	1,056 4 8
May, „	10,629	651 11 8	...	114 18 2	766 9 10
June, „	8,177	437 18 2	...	138 4 3	576 2 5
Totals	80,507	4,192 8 10	No record of Tonnage.	642 0 5	4,834 9 3

Passengers, 80,507 ... £4,192 8 10, which includes fares to races and admission to grounds.
Merchandise ... ... 642 0 5 = £4,834 9 3

Tramway—Foxton to Palmerston.

Gross amount, 20th September, 1873, to 16th May, 1874	£2,030 11 7
Government dues thereon	571 14 6
Government dues, 18th May to 18th June	89 19 2

Wellington to Hutt, 14th April to 30th June, 1874.

Month.	Passengers.		Merchandise.		Monthly Total.
	Number.	£ s. d.	Tons. cwts. qrs. lbs.	£ s. d.	£ s. d.
April	6,587	300 11 11	...	8 14 7	309 6 6
May	9,362	394 2 8	...	24 7 7	418 10 3
June	7,449	308 4 6	...	28 4 6	336 9 0
Totals	23,398	1,002 19 1	No record of Tonnage.	61 6 8	1,064 5 9

Passengers, 23,398 ... £1,002 19 1
Merchandise ... ... 61 6 8 = £1,064 5 9
658 tons of Material have been conveyed over this line for extensions—Freight, £98 14s.

Receipts on Canterbury Railways for Nine Months ending 31st May, 1874.

Line.	—	—
	£ s. d.	£ s. d.
Lyttelton—Christchurch	36,838 7 8	
Christchurch—Selwyn	21,815 17 6	
Total Provincial		58,654 5 2
Christchurch—Rangiora	12,522 10 7	
Selwyn—Rakaia	304 17 6	
Total General		12,827 8 1
Total Fares and Freights	...	71,481 13 3
Storeage, Wharfage, &c.	...	6,206 12 8
Total Receipts	...	£77,688 5 11

On Rakaia and Ashburton Line, 2,700 tons have been conveyed, to 20 July—Freight, £955.

Dunedin to Port Chalmers, 30th April, 1873, to 31st March, 1874.

Months.	Passengers.		Merchandise.					Monthly Total.
	Number.	£ s. d.	Tons.	cwts.	qrs.	lbs.	£ s. d.	£ s. d.
April, 1873	5,469	533 0 6	2,112	19	0	0	476 13 8	1,009 14 2
May, „	8,039	789 17 9	2,838	13	3	6	638 6 4	1,428 4 1
June, „	6,117	597 16 5	3,981	2	0	0	893 18 5	1,491 14 10
July, „	6,123	598 8 11	3,742	0	3	0	839 0 1	1,437 9 0
August, „	5,269	513 1 3	2,159	7	2	0	549 19 1	1,063 0 4
September, „	6,579	643 19 10	3,592	15	0	0	808 6 4	1,452 6 2
October, „	8,574	843 10 0	6,769	14	0	9	1,521 18 11	2,365 8 11
November, „	7,867	772 17 1	4,682	1	2	0	1,054 2 9	1,826 19 10
December, „	10,374	1,024 10 6	4,883	9	1	0	1,112 0 3	2,136 10 9
January, 1874	12,416	1,227 13 5	7,677	3	2	13	1,706 9 3	2,934 2 8
February, „	5,632	549 5 2	5,538	16	0	0	1,230 14 11	1,780 0 1
March, „	11,315	1,116 6 11	5,209	17	2	0	1,135 16 2	2,252 3 1
Totals	93,774	9,210 7 9	53,188	0	0	0	11,967 6 2	21,177 13 11

Passengers, 93,774 ... £9,210 7 9
Merchandise, tons, 53,188 ... 11,967 6 2 = £21,177 13 11

No. 11.—TELEGRAPH EXTENSION.

RETURN showing the AMOUNT EXPENDED for TELEGRAPH PURPOSES out of PUBLIC WORKS and GENERAL PURPOSES LOANS, from the 1st July, 1873, to the 30th June, 1874.

No. of Miles Poles.	No. of Miles Wire.	Locality.	Amount. £ s. d.
36	36	Manukau Line*	1,419 1 2
	270	Grahamstown to Napier, third wire*	5,065 10 0
50	50	Poverty Bay Line, completed to Wairoa	6,713 7 8
50	50	Cambridge to Alexandra, reconstruction	1,836 17 9
54	54	Maketu to Opotiki	4,499 2 7
	26	Wellington to Wanganui, second wire completed from Wanganui to Bull's	642 0 9
	33	Palmerston to Dunedin, fourth wire	563 5 1
48	48	Tapanui to Switzers Line	1,678 16 1
32	32	Reefton to Lyell	6,064 15 9
	29	Christchurch to Blenheim, fourth wire completed to Leithfield	418 7 1
		RAILWAY WIRES.	
	33	Dunedin to Tokomairiro	858 4 9
	35	Hampden to Waitaki	392 4 2
	8	Auckland to Penrose	77 13 5
270	704		30,229 6 3
		New Stations, also sundry material lying in stock, and expenditure on Lines in course of construction not yet brought to charge	4,213 12 1
270	704		34,442 18 4

SUMMARY of TELEGRAPH EXPENDITURE out of PUBLIC WORKS LOAN.

Period.	Miles.		Amount.
	Poles.	Wire.	£ s. d.
To 30th June, 1872	801	1,260	58,297 8 9
" " 1873	170	559	32,998 3 3
Year, 1873–74	270	704	34,442 18 4
Totals	1,241	2,523	125,738 10 4

* In course of construction last year.

No. 12.—PUBLIC WORKS.

TOTAL Expenditure and Liabilities to 30th June, 1874.

	As per Return No.	Expenditure to 30th June, 1873.	Expenditure during Year ending 30th June, 1874.	Total Expenditure to 30th June, 1874.	Liabilities on 30th June, 1874, extending over a period of Years.	Total Expenditure and Liabilities.	
		£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	
Roads—North Island...	3	215,789 10 0	152,841 9 4	368,630 19 4	56,518 5 3	425,149 4 7	Roads—North Island.
Roads—Middle Island	5	80,692 13 1	49,986 15 2	130,679 8 3	14,006 1 6	144,685 9 9	Roads—Middle Island.
Railways, Bridges, Plant and Rolling Stock ...	7	845,102 16 3	1,115,304 12 8	1,960,407 8 11	1,700,473 12 10	3,660,881 1 9	Railways, Bridges, Plant and Rolling Stock.
Water Races on Gold Fields	8	11,725 4 2	84,211 17 10	95,937 2 0	201,454 13 10	297,391 15 10	Water Races on Gold Fields.
Coal Exploration and Mine Development ...	9	1,609 18 4	2,405 12 10	4,015 11 2	1,236 2 11	5,251 14 1	Coal Exploration and Mine Development.
Greymouth Protective Works		3,692 8 6	307 11 6	4,000 0 0	...	4,000 0 0	Greymouth Protective Works.
Telegraph Extension	10	91,295 12 0	34,442 18 4	125,738 10 4	...	125,738 10 4	Telegraph Extension.
Payments to Provinces and Road Boards		150,000 0 0	...	150,000 0 0	...	150,000 0 0	Payments to Provinces and Road Boards.
Departmental		38,325 7 3	14,182 8 3	52,507 15 6	...	52,507 15 6	Departmental.
Discount and Charges, Raising Loans		67,950 15 2	24,100 18 7	92,051 13 9	...	92,051 13 9	Discount and Charges, Raising Loans.
Interest and Sinking Fund		143,500 0 0	75,000 0 0	218,500 0 0	...	218,500 0 0	Interest and Sinking Fund.
Refunds of Stamp Revenue		148 13 10	50 8 4	199 2 2	...	199 2 2	Refunds of Stamp Revenue.
Refunds—Interest on Deposits		88 4 4	...	88 4 4	...	88 4 4	Refunds—Interest on Deposits.
Unauthorized		...	530 11 4	530 11 4	...	530 11 4	Unauthorized.
Totals		1,649,921 2 11	1,553,365 4 2	3,203,286 7 1	1,973,688 16 4	5,176,975 3 5	Totals.

Working Expenditure to 30th June, 1874, on Lines worked by General Government.

	£ s. d.
Tramway—Foxton-Palmerston	163 18 9
Railway—Auckland-Onehunga	646 2 5
„ Wellington-Hutt	731 16 0
	£1,541 17 2
Receipts on above	£2,422 5 0

Recoveries.

	£ s. d.
Roads, North Island, 1873-74 (including Penalties, £400)	6,371 19 4
Railways	44,113 15 0
Water Races—Refunds and Interest	723 4 11
Coal Prospecting	11 2 7
Greymouth Protective Works	750 0 0
Departmental Instruments, &c.	692 2 11
Telegraph Extension	842 15 8
	£53,505 0 5

APPENDICES TO THE PUBLIC WORKS STATEMENT, 1874.

APPENDIX A.

ANNUAL REPORT ON RAILWAYS BY THE ENGINEER-IN-CHIEF.

The Engineer-in-Chief to the Hon. the Minister for Public Works.

Sir,— Public Works Office, 6th July, 1874.

I have the honor to submit the following report for the financial year 1873-74, on the Railways under construction by the General Government.

The total sum appropriated by the Legislature for railway purposes is £5,575,400, which is distributed over the several provinces as follows:—

Auckland	166 miles 36 chains	Appropriation ..	£934,500
Taranaki	18 „ 13 „	„ ..	110,500
Hawke's Bay	45 „ 25 „	„ ..	220,000
Wellington	133 „	„ ..	644,000
Westland	7 „ 23 „	„ ..	74,400
Nelson	38 „ 20 „	„ ..	222,000
Marlborough	18 „ 53 „	„ ..	126,000
Canterbury	251 „ 34 „	„ ..	1,169,000
Otago	332 „ 4 „	„ ..	2,065,000
General (Surveys) ..	.. ..	.. .. ..	10,000
Total ..	1,010 miles 48 chains	.. .. ..	£5,575,400

The expenditure and liabilities incurred for works completed or in hand amount to £3,660,881, leaving £1,914,519 for which no liabilities have yet been incurred. This latter sum may be subdivided as follows:—

Rails and rolling stock to be ordered	£570,000
Lines authorized but not begun (exclusive of rails and rolling stock included in above)	646,370
Work to be done for the completion of railways begun ..	698,149
Total sum for which no liabilities have been incurred..	£1,914,519

The following table gives a comprehensive view of the position of the works as regards mileage:—

Lines.			Appropriations 1870-73.	Length authorized.	Open for Traffic.	A. Complete: ready for Traffic.	B. Platelaying in progress.	Total Length under Contract not yet opened, including columns A. and B.	Length still to be Let.	Field Work of Surveys completed beyond Work Let.
			£	M. ch.	M. ch.	M. ch.	M. ch	M. ch.	M. ch.	M. ch.
Kawa Kawa	Port		42,500	8 00	...	...	...	...	8 00	8 00
Kaipara	Riverhead		51,000	15 68	...	...	15 68	15 68	...	...
Riverhead	Auckland		127,000	22 47	...	...	...	...	22 47	22 47
Auckland	Mercer		344,000	46 00	8 00	7 00	...	38 00	...	...
Mercer	Newcastle		170,000	34 01	...	...	...	34 01	...	3 00
Newcastle	Southwards ...	*	200,000	40 00	...	...	...	...	40 00	...
Waitara	Patea £110,500	*	160,500	23 13	...	...	...	11 13	...	...
Patea	Wanganui 50,000				...	...	...	...	12 00	...
Wanganui	Manawatu		206,000	†58 00	...	...	...	28 76	29 04	...
Napier	Waipukurau		220,000	45 25	...	5 00	...	45 25	...	...
Masterton	Wellington		388,000	70 00	8 00	...	6 00	20 30	41 50	15 50
Greymouth	Brunnerton		74,400	7 23	...	...	...	7 23	...	...
Westport	Mount Rochfort ...		120,500	18 00	...	...	...	7 55	10 25	...
Foxhill	Nelson		101,500	20 20	...	...	...	18 77	1 23	...
Picton	Blenheim		126,000	18 53	...	...	7 00	17 10	1 43	1 43

* On account. † 28 miles to be a tramway.

Lines.		Appropriations 1870–73.	Length authorized.	Open for Traffic.	A. Complete: ready for Traffic.	B. Platelaying in progress.	Total Length under Contract not yet opened, including columns A. and B.	Length still to be Let.	Field Work of Surveys completed beyond Work Let.
		£	M. ch.	M. ch.	M. ch.	M. ch.	M. ch.	M. ch.	M. ch.
Kowai	Rangiora	95,000	32 11	18 54	0 69	...	13 37	...	...
Rangiora	Addington	102,000							
Rangiora	Oxford ...	283,000	21 51	...	8 40	...	21 51	...	...
Kaiapoi	Eyreton ...		14 40	...	...	...	14 40	...	...
Rolleston	Malvern ...		35 40	...	17 00	28 40	35 40	...	...
Racecourse	Southbridge ...		26 08	...	...	...	26 08	...	...
Waimate	Main Line ...		6 00	...	...	...	...	6 00	...
Selwyn	Rakaia	88,000	12 39	12 39	...	...	...	...	...
Rakaia	Ashburton	89,000	18 31	17 18	...	...	1 13	...	...
Ashburton	Temuka	188,000	34 20	...	...	...	20 55	13 45	13 45
Temuka	Timaru	74,000	11 74	...	1 45	10 29	11 74	...	...
Timaru	Waitaki	220,000	38 05	...	...	...	6 65	31 20	31 20
Waitaki Bridge	... ...	60,000	0 71	...	...	...	0 71	...	...
Waitaki	Moeraki	261,000	39 22	...	...	...	39 22	...	...
Moeraki	Dunedin	430,000	52 00	...	...	...	1 13	50 67	12 00
Port Chalmers	Dunedin	210,000	8 00	8 00	...	...	...	...	...
Tokomairiro	Lawrence	156,000	22 00	...	...	...	22 00	...	...
Dunedin	Clutha	326,000	51 08	6 00	18 00	27 08	45 08	...	...
Clutha	Mataura	260,000	49 43	...	...	...	...	49 43	...
Mataura	Invercargill	148,000	39 56	11 27	...	9 00	28 29	...	...
Winton	Kingston	244,000	70 00	...	...	...	50 00	20 00	20 00
Surveys ...	... ...	10,000	...	...	...	...	...	...	...
		5,575,400	1010 48	89 58	57 74	103 65	583 24	337 47	127 45

Rails and Rolling Stock.

Rails and rolling stock have been ordered for all the work which is now under contract; and although we have been delayed in some cases by not having a sufficiency of these on hand, the shipments now advised are so large that there is little fear of delay arising from this cause for the future.

Work in New Zealand.

Contracts have been entered into for work in New Zealand to the extent of £1,885,000 during the three years 1872, 1873, and 1874, of which £627,750 was during the eleven months ending 31st May, 1874. These have principally been with local contractors, who have generally done their work remarkably well. The sum paid during the past year for work done in New Zealand, *i.e.* exclusive of the cost of rails and rolling stock, has been £600,000 nearly. Labour has been scarce during the whole year, and wages have been above 7s. 6d. a day rather than below it.

Sleepers.

The Government have entered into contracts, since the beginning of 1873, for the delivery of little short of 1,000,000 sleepers, including an order for 200,000 of jarrah. The price paid for these latter (4s. 3d. each) is not high when account is taken of the superiority of jarrah to all New Zealand timber, except perhaps totara, which is not to be got in the quantity required.

Opened Lines.

The lines opened for public traffic during the past year have been as follows:—

Auckland to Mercer	8 miles.
Wellington to Masterton	8 „
Rakaia to Ashburton	17 „
Dunedin to Clutha	6 „
Mataura to Invercargill	11 „
Total	40 „

Owing to the difficulty of opening a part of a line for public traffic while the contractors still have the right of running on the same line, it was thought better to agree with Messrs. Brogden for the Onehunga branch of the Auckland and Mercer Railway, and with Mr. Wright for the Rakaia to Ashburton, to run trains for public convenience while the lines were still in their hands. This arrangement terminated on the 1st May for the Onehunga branch, and will terminate on the 15th July for the Rakaia and Ashburton.

The Wellington and Masterton line is being worked by the General Government, and the Otago lines by the Otago Provincial Government.

The following brief reports on each line the construction of which has been authorized, will show the position of the work throughout the colony.

Kawa Kawa Coal Railway.

The state of the mine does not yet warrant the construction of this line.

Kaipara to Riverhead.

An agreement was entered into by the Government with Mr. Edgar, the contractor, to determine his contract on account of delays in procuring rails, for which the contractor was held to be not responsible. Rails of the 40lb. pattern were substituted for the 35lb. rails specified, and tenders were invited for finishing the line. That of Mr. D. Falloon has been accepted.

The change in the weight of rails, and the great increase in the price of iron since the original contract was signed, have increased the cost of the line, so that the appropriation will not be sufficient, and a further sum will be required.

Riverhead to Auckland.

Instructions having been received from the Hon. the Minister for Public Works not to proceed with this line, it is now in abeyance.

Auckland to Mercer.

As above stated, the Onehunga branch has been opened, and the rest of the line is in a forward state, and will be finished by the contract date, if not sooner. A bonus of £500 a month has been offered to the contractors for completion earlier than the contract time.

Mercer to Newcastle.

The first section, 10 miles, is let by contract; the remaining 20 miles is being constructed by the Volunteer Militia, whose work has been done in a creditable and workmanlike manner.

The bridge over the Waikato will be advertised for tender immediately, the plans being prepared and copied, and the ironwork ordered from England.

Newcastle Southwards.

On this line I have written a separate report, which is attached hereto.

Waitara to New Plymouth.

This line is let to Messrs. Brogden, the time for completion being 1st April, 1875. The earthwork is well advanced, but the bridge work is behindhand.

Patea to Wanganui.

The surveys for this line were delayed on account of the difficulty of getting a competent railway surveyor, but are now in hand.

The ironwork for the bridge across the Wanganui was ordered from England, and a contract has been entered into for the wood work and erection.

The bridge will consist of 5 spans of 120 feet each. The piers are of cast-iron cylinders, 7 feet in diameter, filled with concrete, and the superstructure is a combination of wood and iron.

Wanganui to Manawatu.

The first section, 10 miles, has been let to Mr. W. Strachan; the second, of about the same length, to Mr. W. Pell; and the wood work and erection of the bridges over the Wangaehu and Turakina to Mr. R. S. Low.

On Mr. Strachan's contract, about one-third of the work has been done; the other works have been only lately let.

It is proposed to let about 9 miles of line, from the end of the Palmerston Tramway towards Wanganui, by private contract to Mr. Halcombe, as agent for Colonel Feilding.

Napier to Waipukurau.

The first section of 18 miles is under contract with Messrs. Brogden. It should have been completed in December last, but owing to the failure of the sub-contractors to whom Messrs. Brogden had intrusted the supply of timber and sleepers to fulfil their engagements, Messrs. Brogden have completely failed in carrying out their contract with the Government; and there is little prospect of the line being ready before the end of October, or nearly a year beyond the contract time.

The next section, of 8½ miles, has been submitted to public tender. Great delay was caused on this section by an error of judgment on the part of the engineer who surveyed the line, in selecting an unfavourable position.

The next length, of 9 miles, is let to Messrs. Brogden, who are going on satisfactorily with the work.

The Waipukerau contract, of about 5 miles in length, including the bridges over the Waipawa and Tuki Tuki Rivers, is let to Mr. D. Ross, who has commenced work.

A further contract for a tramway 14 miles long has been let to Messrs. Allan.

Wellington to Masterton.

The first section, of 8 miles, was opened for public traffic on 9th April.

The formation of the second section of 6 miles was creditably finished by Mr. McKirdy, and the plate-laying was let to the same contractor, who has also the contract for the "River Section," 5 miles in length, including a bridge over the Hutt River. This work is being energetically pushed on.

The Mungaroa section, 8 miles, is also let to Mr. McKirdy, who has begun work. This is the first contract in the mountain division of the line, where the ascent of the Rimutaka Range begins. The next section, of 6 miles in length, is being advertised for tender.

The Summit contract, about a mile in length, includes a tunnel 630 yards long. It has been let to Messrs. Collie, Scott, and Wilkinson, who have, however, done little more than preparatory work.

The total distance from Wellington to the end of the Summit contract, is 35 miles.

From the summit the descent into the Wairarapa Valley will be made by an incline of 2¼ miles in length, with a fall of 1 in 15.

The special engines and centre rail for working this incline have been ordered from England.

The surveys are completed as far as Featherston, and working drawings are in hand.

The contract time for completion of the work now let is July, 1876, and by the end of the same year the rails may be expected to be laid to Featherston. In setting out this line the radius of the sharpest curve has been increased from 3 chains to 5 chains; of course at a great increase in first cost, but with a more than corresponding increase in the efficiency of the line.

Greymouth to Brunnerton.

The formation of this line is let to Mr. Hungerford, who has carried on the work at a satisfactory rate; but owing to slips which have occurred, the contract is not yet completed. Steps have been taken to carry the line across the treacherous ground, but there will necessarily be delay.

The bridge across the Grey River at the Gorge is under contract. It is a suspension bridge of 300 feet clear span.

Westport to Mount Rochfort.

The first section of this line from Westport to Fairdown is advertised for tender. As soon as it is completed, stone will be brought for the protection of the banks of the Buller River, which are being washed away, to the great injury of the town. Without such protection it would be impossible to carry on the large export of coal which will arise as soon as means of conveying it from the mines to the port are available.

Nelson to Foxhill.

The formation of 13 miles is complete: the remainder of the work is let, including the bridges over the Wairoa and Eighty-eight Creek, the ironwork of which has arrived from England.

Picton to Blenheim.

The work on this line is progressing well except the bridge work, which is behindhand. Slips have occurred in some of the cuttings, which are causing delay.

Addington to Rangiora.

Opened for traffic before the beginning of present year.

Rangiora to Kowai.

This work is in the energetic hands of Mr. E. G. Wright, as contractor.

The whole of the piers for the Ashley Bridge are completed, and 18 spans, of 60 feet each, erected out of the total of 50 spans; the timber and iron for the others being delivered.

The Kowai Bridges are also in hand, and about 5 miles of formation completed.

BRANCH RAILWAYS.

Rangiora to Oxford.—The first length of 7 miles is completed. The remaining length is under contract.

Kaiapoi to Eyreton.—A contract has just been entered into for this work.

Rolleston to Malvern.—The plate-laying for the main line is complete, or nearly so. The White Cliffs Branch is nearly complete up to formation level; and contracts for platelaying will be at once entered into.

Racecourse to Southbridge.—The formation for 22 miles out of 26 is complete, and the contract for platelaying has been advertised.

Waimate Branch.—As this branch leaves the main line south of Timaru, where the main line itself has not yet been begun, it would be of course useless to begin the branch.

Selwyn to Rakaia.

Opened for traffic before beginning of present year.

Rakaia to Ashburton.

This line is opened for goods traffic, being worked by the contractor, Mr. E. G. Wright. It will be opened shortly for passenger traffic, and handed over to the Provincial Government.

The bridge over the Ashburton is well forward, nearly all the piles having been driven and three of the spans erected.

Ashburton to Temuka.

From the Ashburton, for 18 miles southwards to the Rangitata River, including the bridge over that river, the works have been let to Mr. E. G. Wright. The formation is mere scratching, the bridge, with its approaches, being the only works of any importance. The ironwork for the bridge has been ordered in England, and the timber from Australia.

Temuka to Timaru.

The rails are linked in for about 8 miles from Timaru, and rolling stock is being erected.

The bridges across the Temuka and Opihi are not yet begun, but arrangements for the delivery of timber have been made by the contractor, Mr. Wright.

Timaru to Waitaki.

The surveys for this line are completed, and tenders invited for the first section of 6 miles 65 chains.

Waitaki Bridge.

The cylinders for the piers of this bridge are being sunk into the shingle by the pneumatic process. Four air-locks have been furnished by the Government, but as the contractor has not yet got sufficient steam power on the ground to work them all, only two have as yet been in use. The cylinders are sunk the first few feet by means of Webb's Patent Excavator; but it is found that they cannot be sunk to the full depth by this process, and the work has to be finished up under air pressure.

Little more than a start has been made with the work, although a good many of the cylinders have been pitched and partly sunk.

Waitaki to Moeraki.

From Waitaki to Oamaru the work is done up to formation except two bridges, which are in hand. The work has been delayed by extra works shown to be necessary by recent floods.

From Oamaru to Moeraki the works are in the hands of Messrs. Brogden and Sons. I trust that both the Government and the contractors having changed their representatives there lately, the work will go on more satisfactorily than it has done. The bridges are all behindhand, absolutely no timber having been yet delivered. The earthworks are well advanced.

An important culvert near Oamaru was finished, and the bank 40 feet high carried on to it, and left with the tip just over the culvert, which stood this undue pressure for five weeks, when it rolled over. The culvert is now being rebuilt by the contractors.

Near Moeraki, after a period of wet weather, the hill sides began to slip, and an alteration of the line for half a mile will be required.

Moeraki to Dunedin.

The first section of 1 mile 13 chains was let to Messrs. McKenzie and Co., who began work within twenty-four hours of signing their contract, and have since pressed on the work with energy. It consists of a tunnel 1,400 yards long, and the approach cuttings and banks. The material of the hill is a hard breccia, as far as the headings have gone, but borings show that sandstone will be met further on. The surveys for the rest of the line are going on.

Dunedin to Port Chalmers.

The wharf at Port Chalmers is progressing well, and will be completed within the contract time, 23rd October.

Land has been reclaimed at Mussel Bay, which will be required for station room, which is at present very cramped indeed.

Dunedin to Clutha.

Six miles at the Dunedin end have been opened for traffic; the rails are laid for 18 miles more; and the formation of the rest of the line, exclusive of bridges, finished, except a short piece at Chain Hills Tunnel. The bridgework is here, as on most of Messrs. Brogden's contracts, behindhand, scarcely any timber having been yet delivered.

Tokomairiro to Lawrence.

This has been let in five sections, and all are going on well except the first, which is behind time. Three Fairlie locomotives have been ordered for this line.

Clutha to Mataura.

The ironwork for the bridge over the Clutha has been ordered and contracted for in England. The erection and woodwork have also been let in New Zealand. The surveys for the line are completed.

Mataura to Invercargill.

12 miles from Invercargill have been opened for traffic, and handed over to the Provincial Government. The remaining works are well forward.

Winton to Kingston.

The first length of 22 miles should have been completed on 23rd May last, but is still unfinished, and will not be ready until about the end of September. The next length, reaching to the 50th mile from Winton, has been lately let.

SURVEYS.

Browning's Pass.—A survey has been made by Mr. Browning of the pass at the head waters of the Rakaia known as Browning's Pass, to ascertain whether a railway could be carried from Hokitika to the East Coast. It will be seen from his report, which is attached, that a line, which may be described as only just practicable, might be made at a cost of about £810,000. Before anything should be undertaken to connect the East and West Coasts of the South Island by rail, some of the other passes should be explored, and I would recommend a trial of the Amuri Pass.

Foxhill to Buller.—Full trial surveys have been made of this line, but the office work is not yet sufficiently advanced to form estimates of cost. The line is very unfavourable, as gradients of 1 in 34 are necessary, and there will be about three miles of tunnelling, with other heavy works. I hope to have estimates prepared in about six weeks.

STAFF.

Before closing, I beg to express my thanks to the engineers and other officers of the department for the zealous assistance I have uniformly received, and without which the vast amount of work done during the past year could not have been got through. A very great deal of mechanical drafting work has been saved by the use of photo-lithography, which has been freely used in making copies of plans and maps. By its help a great saving of money, and still more of valuable time, has been made.

I have, &c.,
John Carruthers,
Engineer-in-Chief.

The Hon. the Minister for Public Works.

APPENDIX B.

ANNUAL REPORT ON ROADS BY ASSISTANT ENGINEER-IN-CHIEF.

The Assistant Engineer-in-Chief to the Hon. the Minister for Public Works.

Sir,— Public Works Office, Wellington, 30th June, 1874.

I have the honor to forward my annual report on road work executed in New Zealand, under the Immigration and Public Works Acts, up to 31st May.

The majority of the roads now reported onhaving been described in former reports as to their locality and character, I have in this report limited myself generally to a statement of the works executed on each, either in the way of extension, or of improvements and additions which have been found necessary from time to time, particulars of which have been supplied by the Engineers in charge.

The advancement will, I think, be found generally satisfactory, but there are two important works which call for special mention.

I refer first, to the lately-completed road through the northern section of the Seventy-Mile Bush, whereby easy communication is now established between the East and West Coasts, and by which coaches now run regularly between Napier and Foxton: this I consider one of the most important and satisfactory works yet executed under the Public Works Act. The other work referred to is the cutting of a main line of road through the forest at the back of Mount Egmont, which, although now only completed to the extent of felling the bush, and clearing a wide track throughout, must yet be regarded as a great step in advance, when we consider that the work has been carried on in thoroughly Native districts, and executed to a great extent by the Natives themselves. It will doubtless, in the future, form one of the most important links in the road and railway systems of New Zealand, and will, besides, open up for settlement one of the finest tracts of bush land in the country.

The road works north of Auckland are being steadily if slowly proceeded with, and great benefit already results from the works thus far completed. There are, however, many gaps yet to be filled up on the different lines of road, and until these are completed the full benefit of the works in hand will not be felt.

In Waikato probably less road work has been done than would have been the case had it not been determined to press on the construction of the railway through the Waikato, in extension of the line from Auckland to Mercer. This work, however, has been begun, and several contracts have been let in connection with it, as will be found described in the report on railways by the Engineer-in-Chief. In reference to future road work, I may be allowed to repeat the hope expressed in last year's report, that fresh surveys of better lines of road than those now existing may be made, with a view to the permanent improvement of the road system in the Waikato, and as a means of lessening to a great extent the cost of maintaining and of improving (as will certainly be found necessary) the old lines of road as now laid out.

As regards the Bay of Plenty district, the report will, I think, speak for itself. A gradual and steady progress has been made in the construction of new roads and the extension and improvement of those already begun, so that there are large areas of the district which may now be travelled over with comparative ease and safety; and it is to be hoped that before another year has been passed over that free communication will be established between this district and that of the Waikato at Cambridge, as well as with that of the Thames by way of Kati Kati.

The same may be said of the Hawke's Bay and Poverty Bay districts, although necessarily to a less extent; and in reference to the Coast road northwards to the East Cape, the work has been of a very isolated and patchy character, owing to the rugged and broken character of the coast line and the purely local requirements. It is, however, to be hoped that our expectations of finding a good inland line of road from Poverty Bay to the East Cape may be realized, on receipt of the special report shortly to be sent by the engineer in charge.

In remarking, as I have done above, on the great importance of the road recently opened through the northern end of the Seventy-Mile Bush, I should not omit to allude to that now being made through the southern extremity of the same bush, as being of equal importance, opening as it will do a communication between the Wairarapa and Napier, and westward through the Manawatu Gorge with the Manawatu and districts beyond. About one-third of its length (thirteen miles) has already been formed and bridged from Opaki at the southern end, and foot and horse traffic have for some time been carried on throughout. As before described, this line of road follows either exactly or very closely the line formerly laid out for a railway between Masterton and the Gorge, and consequently is generally of a very level and easy character for traffic, passing through large tracts of fine bush land.

In the Manawatu district, it will be seen that the work has consisted to a great extent of improvements on the roads already made, and the completion and extension of the tramway, together with the necessary station ground and buildings, and the erection of a wharf in connection with the tramway.

It will be seen that the road north of Wanganui to Carlyle is fast approaching completion as a first-class road, well formed, metalled, and substantially bridged throughout; whilst with that north of Carlyle to New Plymouth great progress in real improvements has been made, excepting in those parts where it has not yet been thought advisable to attempt works of any kind.

It is scarcely necessary to remark on the very great improvements which have been effected under the Public Works Act in Westland and the Nelson South-West Gold Fields, where the most substantial, well-built dray and coach roads have taken the place of rough and narrow horse and foot tracks, and where now in consequence there is real facility offered for travelling with comfort between all the more important places on the West Coast. In another year or two, under a similar wise expenditure, other places at great distances will be embraced in the road system proposed, and become

flourishing centres of industry, where now a few individuals struggle under all kinds of difficulties to maintain their existence.

The other portions of the report will, I think, be found sufficiently clear in detail to show fully the progress that has been made during the year.

ROADS NORTH OF AUCKLAND.

(T. Heale in charge.)

The works completed during the year may be enumerated as follows, viz.,—

1. Dray road from Kaitaia to Awanui portage, four miles, sections 1 and 2, including bridges respectively of 101 feet and 99 feet long.
2. Mahurangi Bridge, 161 feet long.
3. Section 1 of the Mahurangi and Port Albert Road, two miles.

The works in progress are as follows, viz.,—

1. Wangarei and Mongonui Road, section 1, being a little more than five and a half miles.
2. Mahurangi and Port Albert Road, 429 chains.
3. " " 329 "
4. " " 293 "
5. Hoteo Bridge and its approaches on the same line of road.

In addition to actual works, a large extent of road surveys has been executed, and plans and specifications prepared, viz.,—

1. Road through Victoria Valley, eighteen and a half miles. Advertised for tender on 22nd instant.
2. Oruru Bridge and approach, in continuation of the above towards Mongonui.
3. Road from Waitangi—Hokianga Road to Te Whau, nearly twelve miles. Tenders for this were received on the 8th, but the work has been postponed for a while.
4. Road in continuation of the Kaitaia Road to the deep water at the mouth of the Awanui River in Rangaunu Bay.
5. Road from the point on the Bay of Islands Road from which No. 3 starts, south through Pakaraka to Kawa Kawa.

There have also been exploratory surveys made of a line of road from the town of Mongonui to connect with the Victoria Valley Road by Oruru, and also the Whangaroa Road.

A complete survey has also been made of a line of road from the Bay of Islands Road by Pakaraka to Kawa Kawa. This would join at the north end with the Whangaroa and Mongonui Road, and at the south end with that being made from Wangarei to Kawa Kawa.

An exploratory survey has been made of the country between Awanui and the West Coast for a line of road in continuation of that from Mongonui to Awanui, so as to complete the communication between the East and West Coasts.

(H. Allright, Provincial Engineer, in charge.)

The works under Mr. Allright's charge were described generally in last year's report under fourteen heads, and he now reports that all the works are completed on these roads, with the exception of a small culvert on No. 10. The details completed and as at first planned for last year's work, are as follows, viz.,—

Section 1.—*Whau Bridge to Kaukapakapa.*—Thirty-one miles through open undulating fern country. Contract 1—Two-tressel bridges near Waikomiti Inn, each 24 feet; earthwork to ditto 2,250 cubic yards, ditching and forming 10 chains, fascining 7½ chains. Contract 2—Truss bridge over Canty's Creek, 55½ feet long; earthwork to ditto 712 cubic yards, forming and fascining 4 chains, clearing scrub and cutting ditches 7 chains. Contract 3—Truss bridge over Prior's Creek, 69 feet long; earthwork to ditto 1,500 cubic yards, forming 11 chains, fascining 3½ chains. Contract 4—Two log culverts and 60 cubic yards earthwork.

Section 2.—*North Shore to Mahurangi*, forty-six and a half miles, and *Lucas's Creek to Riverhead*, ten miles.—Fourteen miles of the former are in heavy bush, and the remainder in undulating fern land. The works are a tressel-bridge over a stream near Lucas's Creek, 46 feet long; earthwork to ditto 500 cubic yards, clearing high manuka 17 chains, fascining 1½ chain. Contract 1—Widening and clearing bush road 542 chains, one culvert, earthwork 300 cubic yards. Contract 2—Widening and clearing bush road 452 chains, fencing 5 chains. Contract 3—Two 20-feet culverts; repairing bridges and approaches. Contract 4—Cutting and clearing one mile and a half of bush 1 chain wide between Huston's landing and the Pahoi; clearing, ditching, and fascining 16 chains of bush road. Contract 5—On road to Riverhead, truss bridge over Rangitopuni Stream, 99 feet long; earthwork to ditto 700 cubic yards, forming and fascining 3 chains; and one 14-feet culvert.

Section 3.—*Kaukapakapa to Mahurangi*, twenty-three and a quarter miles, fifteen of which are through heavy bush, and the rest broken fern country. Contract 1—Tressel-bridges, 50 feet and 48 feet, over the Totara and Komakoriki Creeks; earthwork to ditto 220 cubic yards. Contract 2—Tressel-bridge over the Onehunga Creek 40 feet long, and truss-bridge over the Araparera Creek 75 feet long; earthwork to ditto 1,110 cubic yards, bush clearing 4 chains.

Section 4.—*Kaukapakapa to Port Albert*, thirty-nine miles, one-half of which is through heavy bush, and the remainder broken fern ranges.—One bridge over Wharehore Creek, 292½ feet long; earthwork to ditto 1,540 cubic yards; fascining two creeks and a swamp, 4 chains.

Section 5.—*Mahurangi to Mangawai*, twenty-nine and a half miles, one-fourth of which is in bush, the rest in broken fern ranges; also, *Mangawai to Port Albert*, twenty-one miles, through undulating fern country. Contract 1—Two tressel-bridges over Gleneden Creek and west branch Matakana Creek, 50 feet and 41 feet long; earthwork to these, 200 cubic yards; fascining 5 chains; widening and clearing bush road, Matakana to Omaha, 422 chains; and on Port Albert Road from Mangawai, 1,000 cubic yards earthwork and 5 chains fascining.

Section 6.—*Mangawai to Waipu*, fifteen and three-quarter miles, of which two and a half miles are in bush, the remainder fern and sandy beach; and *Mangawai to Paparao*, twenty-four and a half miles, of which ten miles are in bush, and the remainder fern ranges. On the first, one bridge over Mangawai River 101 feet long; earthwork to ditto 500 cubic yards; clearing bush 1 chain wide, with side cuttings for bridle track, 208 chains; and ten culverts. On the second, one pile-bridge over the Hakaru River 82½ feet long; earthwork to ditto 410 cubic yards, fascining 4 chains. On same road, Contract 1, clearing bush road 140 chains. Contract 2—Ditto, 101½ chains; logging and stumping 80 chains.

Section 7.—*One pile-bridge over Waipu River*, 216 feet long, and earthwork 400 cubic yards.

Section 8.—*Waipu to Mangapai*, sixteen and a half miles, five of which are bush, and the remainder in fern.—Clearing, logging, and improving three miles; bush clearing on new line four and three-quarter miles; side-cutting 137 chains, for bridle track. Three 20-feet log culverts, five 6-feet culverts, and six small diito. Rockwork not originally specified, but worth about £200.

Section 9.—*Paparoa to Matakohe, and Tokatoka and thence to Arapohue.*—Twenty-three and a quarter miles; one-third in heavy bush, the rest in undulating fern land. One truss bridge over Paparoa River 63 feet long; earthwork 300 cubic yards. Paving the ford at Matakohe Creek, 20 feet wide and 440 feet long, also 200 cubic yards earthwork approaches. Causeway and bridge over the Parirau Creek; bridge 20 feet, causeway 395 feet long, containing 3,220 cubic yards earthwork, 1,400 cubic yards of rough stone filling, and 965 superficial yards pitching on slopes. Contract 1—Cutting and clearing four miles thirty-two chains bush. Contract 2—Cutting three miles thirty-seven chains, fascining 10 chains.

Section 10.—*Maungaturoto and Mangapai.*—Twenty-five miles, ten of which are in bush, the remainder ti-tree, scrub, and fern, rather broken. Surveys executed, one mile bush cleared, with some earthworks and culverts.

Section 11.—*Otamatea to Maungaturoto* and inland settlements, eight and a half miles, four and a half of which are in bush, the rest in fern. Contract 1—Bush cutting 267 chains, one culvert 12 feet, ditching 10 chains. Contract 2—Bush cutting 84 chains, scrub and fern clearing four miles; ten culverts 4 to 15 feet long, five box ditto; earthworks 2,500 cubic yards, extra ditto 1,250 cubic yards. Contract 3—Two tressel-bridges over the Pahi and Whakaporau Creeks, 66½ and 56½ feet; earthwork to ditto 350 cubic yards, ditching 7 chains.

Section 12.—*Mangapai to Whangarei.*—Eight and a half miles, over broken fern ranges. No definite line of road having been acquired, the work has been of a temporary character, viz. two culverts put in and others repaired, also 30 chains of formation, and earthwork 963 cubic yards.

Section 13.—*Whangarei to Wharekohe.*—Seventeen and a half miles, of which one-third is in bush, the remainder over fern ranges. Survey only had been executed last year, as no right of road existed.

Section 14.—*Whangarei Heads to Whangarei.*—Twenty miles over a country of a very broken character. Contract No. 1—Clearing bush 210 chains. Contract 2—Ditto 420 chains; side cutting 200 cubic yards of earthwork.

Section 15.—*Whangarei to Mangawhero Creek.*—Ten miles, being portion of the road Whangarei to Kawa Kawa, twenty miles in all. One pile-bridge over the Mangaharuru Creek 52 feet long; earthwork to ditto 300 cubic yards, bush-clearing 2 chains; pile-bridge over the Mangawhero Creek 50 feet long, earthwork to ditto 150 cubic yards.

Besides the above-described works, others have since been undertaken and are given in detail in the list below, which shows also their state of forwardness, viz.,—

Section 1.—*Between Whau Bridge and Kaukapakapa.*—Clearing 97 chains road through Deacon's Bush, and ditching, forming, and fascining the same, completed; and four culverts, 800 yards earthwork, 19 chains fascining at Cobbler's Hill, near Riverhead, also completed. Pile-bridge over Kaukapakapa River, 102 feet long, 1,600 cubic yards earthwork for approaches, 4 chains fascining, £444 10s., in progress.

Section 2.—*North Shore to Mahurangi.*—Two bridges 10 feet and 20 feet long, two culverts, 29 chains forming, 98 chains ditching, 800 cubic yards earthwork, near Dairy Flat, completed.

Cutting and forming road over Lucas's Creek Hill; clearing scrub 121 chains; side cutting 3,200 cubic yards; through ditto 1,200 cubic yards; ditching 30 chains; forming 20 chains; 2 log culverts; fascining 20 chains; £320; in progress.

Pile-bridge over Orewa Creek, 60 feet long, 400 cubic yards earthwork approaches, 3 chains fascining, £178; completed.

Section 3.—*Kaukapakapa to Mahurangi.*—Three pile bridges, 20 feet, 22 feet, 20 feet; eight large culverts, 340 chains clearing bush and scrub, 3,500 cubic yards earthwork; £620; in progress.

Section 4.—*Kaukapakapa to Port Albert.*—Survey in progress.

Section 5.—*Mahurangi to Mangawai, and Port Albert to Mangawai.*—Contract 1—27½ chains side cutting, 2,200 cubic yards through cutting, 10 chains bush cutting, £276 16s. Contract 2—32½ chains side cutting, 1,050 cubic yards through cutting, 24 chains bush clearing, £288; both in progress.

Section 6.—*Mangawai to Waipu, and Mangawai to Matakohe.*—On the first, 144 chains side cutting, 15 chains bush clearing, £249 9s.; in progress. On the second, two log culverts, 600 cubic yards earthworks, 7 chains forming and ditching, £49; in progress.

Section 7.—*Waipu District.*—Pile-bridge over east branch of Waipu River 88 feet long, 400 cubic yards earthwork in approaches, £234 10s.; work just begun.

Section 13.—*Whangarei to Wharekohe.*—150 chains bush cutting, 85 chains side cutting and ditching, eleven culverts, £270 5s.; completed.

Section 14.—*Whangarei Heads to Whangarei.*—95 chains side cutting, 4 chains ditching, 675 cubic yards earthwork, twenty log culverts, £260 10s.; in progress.

Section 15.—*Whangarei to Kawa Kawa.*—Culvert, ditching, and earth cuttings, £19; completed.

The Shoal Bay Road is also reported as completed, being formed and gravelled at a total cost of £1,355 9s.

ROADS NORTH OF AUCKLAND—*continued.*

(J. J. WILSON in charge.)

Kawa Kawa to Whangarei.—The survey of this was completed about twelve months ago, and since then about eight miles through the bush have been felled a chain wide, and a width of 20 feet cleared and stumped in the centre. A few small bridge culverts have also been built, and all the work has been done by Natives, who also undertook to build some larger bridges to plan and specification, but, from lack of skill and experience, failed to carry out their good intentions, and the work was subsequently submitted to public tender.

The work on this road is still progressing, but slowly, the Natives being engaged on earthworks and small culverts. A bridge has been built by contract over the Papauru, one of the heads of the Wairua River, 44 feet long, with wing-walls and approaches, for £119; and several smaller bridges and a culvert are now submitted for tender. Besides these there will be required three bridges of a larger kind, as well as the drainage of a swamp. These and some other works, it is estimated, will occupy another year to complete them; meanwhile the road is practicable for horse traffic, though the crossings of the Wakapara are difficult at all times, and dangerous when flooded,—a state which is nearly continuous during the winter months.

The amount of work executed and the expenditure on this road are as follows, namely,—

	£	s.	d.
Bush and scrub felled and cleared	625	12	8
Side cuttings, drains, and small culverts	74	8	0
Earthworks in progress, now due	75	0	0
	£775	0	0

Wairoa and Kaikohe Road.—The portion of this line between the Hepera, Mangakahia, and the Wairoa River, a distance of about sixteen miles, lies through bush and scrub nearly the whole of the way. The clearing of this had been begun at date of last year's report, and nine miles have since been cleared by Native labour, and five and a quarter miles by contract at the Wairoa end of the line, the felling being 1 chain wide and the clearing 20 feet in the centre. Besides this, 50 chains of side cutting and grading have been completed, and the following bridges are now in hand, many of them in a forward state, namely,—The Maire, 42 feet; Waikopani, 44 feet; Waiwhakae, 20 feet; Te One, 50 feet; Parakao, 30 feet; Auha, 50 feet, a total length of 236 feet, which will cost about £290, and several small culverts to cost £25. These bridges will be built of heart of kauri, totara, or puriri, squared and of the best quality: the work being done by Natives who have already had experience in this kind of work at the northern end of this line under Mr. M. Clarke.

The expenditure on this road has in round numbers been as follows, namely,—

	£	s.	d.
Bush clearing, Natives and Europeans	1,000	0	0
Earthwork and side cuttings, &c., &c., ...	40	0	0
,, ,, due	200	0	0
Bridges, &c., described above	315	0	0
	£1,555	0	0

At the Wairoa end of the road there are two and a half miles of broken country, through which a survey has been made with a view to the road work being let by tender. It will be an expensive portion of the line, there being at least twenty-four streamlets to cross, and one river which will require a 40-feet bridge. An approximate estimate of the cost of making this section practicable for horse traffic and wheeled vehicles, is from £450 to £500.

Of the upper part of this line, Wairoa and Kaikohe, parts have been improved, namely, from Hepera to Parahake, by draining at the sides, erection of culverts, side cuttings, and a bridge now being built over the Opou Stream; and from Parahake to the open land near the Awarua the road has been cleared through the bush and bridged by Native labour, and offers a good horse track all the way to Kaikohe, with the exception of a few miles of scoria land at Punakitere, where the Native owners appear to object to any further improvements being made.

Kaikohe to Waitangi.—On this line three contracts are in progress, one near Kaikohe, one between Pekekaka and the junction with the Waimate and Waitangi line, and another near the Waitangi Falls, Haruru, the latter almost completed. Some of the work done on this line by Natives is of a very creditable character, as at Ohaewai, in the earthwork and the erection of very substantial stone culverts. Metal suitable for roads is abundant on this line, and it is suggested should be used in covering the softer parts of the road during next summer, which, should the traffic increase, will be necessary, and will make this a really serviceable road. A moderate expenditure for maintenance on this and other roads as they may be completed, will be required, and must be provided for to keep them in a fit state for traffic.

Mr. Wilson reports that he notices a general improvement in the Native people; that they are acquiring habits of industry, and appear to appreciate better than formerly the value of time, and that they generally clothe themselves better since they have been able to earn money by roadwork. Their contact with Europeans, however, has increased their love of gain, and they are always on the alert to obtain some advantage in their work, or to sell at high rates the timber needed for the bridges and culverts.

(M. CLARKE in charge.)

Mangakahia and Kaikohe Road.—On this line of road about one mile of side cuttings has been completed. A number of small culverts and nine bridges, varying from 6 feet to 45 feet span, have

been built, and a fordway is now being constructed. These are the principal works necessary on this, which is the worst section of the road. The swamp, 20 chains long, at Te Mata, has been drained and the road formed across it. Two small sections are still uncompleted, as the Natives ask too high a price for the work required.

On the section from Upper Mangakahia to the church, Lower Mangakahia, four miles in length, the following works have been completed, viz.,—116 chains of drains, 18 culverts, 26 chains of clearing, and 9 chains of formations; and the works in hand are two bridges, three culverts, a few chains of side cuttings and drains, and a culvert bridge, with filling in approaches at the Kotipu Swamp. When these are finished the road will be in a state to meet the requirements of the district. The whole of this line of road from Kaikohe to Nukutawhiti Forest lies within Native land, and will, when complete, make a good bridle road, which will suffice until European settlers are introduced.

Whangaroa to Black Bridge.—On this more than 70 chains of side cutting several culverts, and one bridge have been completed. The Natives are still at work, and will probably finish all the work required during the ensuing month. The continuation of this road from Te Whau to the Black Bridge has been advertised for tender: it forms part of the Great North Road, and will connect the Bay of Islands, Whangaroa, and Wanganui districts. The section between the Black Bridge and Whangaroa is not likely to be much used for dray traffic, as good water carriage exists within ten miles of any part of it, and there is steam communication weekly between the Bay, Whangaroa, and Auckland. The road lies almost entirely within sold land of a barren and worthless character.

Okaihu and Waimate Road.—The only works executed on this line of road have been one large culvert and approaches, and the deepening of the drains at the Kuhe-Kino Swamp. From Pukehemua (a mile and a half from Waimate) the road is in very good order, and is one of the best in the district; and at Okaihu the road has been cleared to the Upper Waihou Valley, which will be of great importance to the Okaihu settlement, as opening up good land in the Okaihu Blocks 1 and 2, and the best outlet for the land in the Waipapa Valleys. The line chosen, although not likely ever to make a really good dray road, is a great improvement in every way on that first proposed, and is useful as being the most direct to Hokianga. It is not improbable that these improvements will lead to the early settlement of the surrounding country, as the Canadians already settled there are anxious to bring out numbers of their friends, if the Government will deal liberally in allotting them land. Amongst the works completed are 100 chains of forest cleared, 25 chains side cutting and forming, three bridges and several culverts, and at the further end of the Okaihu settlement the road has been cleared to Toreke, and a number of bridges and culverts constructed.

The worst portion of the road between Okaihu and Waitangi landing-place is at the Waimate. A section here of 140 chains in length has just been surveyed, with a view to improvements.

Another section of 201 chains, commencing at the Waitangi landing-place and terminating at Waipuakakaho, is nearly completed, and includes bridges, culverts, and forming the road throughout; whilst that portion lying between Waiwhariki and Black Bridge, 180 chains, has been completed for some time, as well as that portion between the Black Bridge and Paremata (close to Waimate) a distance of 330 chains, the total length of road formed, bridged, and completed being thus nearly nine miles.

From the junction of the Waimate and Kaikohe Roads to the first angle beyond the Waipekekaka Stream, a length of 427 chains, work is in progress under contract (European), and will be completed during the summer.

From the end of this contract through the Native settlement to the Ohaewae Hotel, the road work is nearly finished. All the culverts and bridges have been built of the best dry puriri timber, and the work generally has been well executed by Native labour.

Between the Ohaewae Hotel and Kaikohe, the construction of the bridges has been let to Europeans, except that at Mangamutu, which will be made by Natives under contract. Much of the work in this neighbourhood has been greatly delayed by petty Native quarrels, which it may be expected will not subside for some time, and thus still further delay the work.

Kaikohe to Taheke.—Thirteen miles. On this line of road two bridges have been built, one 53 feet, truss, over the Mangatoa, and one 14 feet plain. The full length of road of which the above is the last or westernmost section, from the Waitangi landing-place to the Taheke (one of the navigable arms of the Hokianga), is thirty-two miles, of which the whole is used for dray traffic, and of which, when the present contracts are completed, one-half will be formed and bridged.

Although Kaikohe is three or four miles nearer to Taheke than Waitangi, the traffic from it flows to the latter, and is even occasionally carried right through from the former place to Waitangi, at which end of the road it is probable that a few miles will require metalling in consequence of it being used more than the other parts of the road.

From Taheke a rough line has been opened to the Heads at Hokianga, mostly, it would appear for the purpose of connecting the different Native settlements, as it is not laid out where a dray road, if ever needed, would be made.

In this district the completion of the following roads and parts of roads must be looked forward to, viz.,—One section of the Waimate and Waitangi and Okaihu Road at Waimate; two sections from Ohaewae to Kaikohe, and thence to Taheke; also the remaining sections between Kaikohe and Mangakahia.

Mangere Bridge.

This bridge is being constructed for general traffic between Onehunga and Mangere. It will consist of twenty spans of 40 feet each, connected to the main land at Onehunga and Mangere by embankments of earth, protected with a thick facing of rock. These are respectively 540 feet and 1,340 feet long, and 20 feet wide on the top. The former includes an overbridge, to allow for the passage of the railway below.

The time for completion expires about the end of September next, but the work, it is feared, will be delayed some considerable time, on account of the loss, in October last, of the vessel employed to

bring the piles. These, in order to secure durability, are specified to be of jarrah. Meanwhile the contractor is proceeding with the embankments and the framing of the trusses, in readiness for the arrival of the piles.

The value of the work already executed amounts to £9,637 13s., the contract sum being £14,997.

WAIKATO DISTRICT.

Great South Road.

(W. H. Clarke in charge.)

Great South Road.—Contracts No. 1 and 3 have been completed, and turn-outs made in No. 2 contract. Contract No. 1 was for forming and metalling 1 mile 2 chains of road, and replacing four culverts with stone; also, making small cutting to improve grade—of this 1 mile and 2 chains forming and metalling, and 3 culverts, were done during this year.

Contract No. 2.—Bank across the flat from Whangamarino to Meremere, 800 cubic yards of earthwork in turn-outs, completed.

Contract No. 3 was to provide and cart 1,600 yards of broken metal, greatest lead 100 chains. This has been completed; 50 chains of road metalled, and the remainder of the metal carted to convenient places for spreading when required. Two sideling roads have been cut through Taupiri Gorge to avoid hills in the old road, and also to make room for the railway, and the whole road formed throughout. An average number of four men has been employed maintaining the road, over a length of about thirty-eight miles.

About 16 chains of fascining and forming have been completed at Hopu Hopu, and about 10 chains without fascining.

Other works have been executed, as follows, viz.,—Karapera Bridge, one abutment was carried away by a flood, and a 20-feet span was added, and sheet piling driven to protect the new abutment.

Alexandra Bridge.—A new floor has been laid on, the abutments renewed, and a pier, which had given way, backed.

Tamawhere Bridge.—The old bridge was renewed, a service-road and bridge made, two creeks diverted which threatened the road, and a new bridge consisting of six spans of 20 feet each has been built.

The punt at Newcastle has been repaired, and new pulleys, gates, supports for landing stages, and crabs for adjusting them, taken from Rangiriri Bridge, were supplied and fixed.

The works required, and some of which now in hand, are the Great South Road repairs, wharf at Newcastle, bridges over Mangapiko, and earthwork across Moana-tua-tua Swamp.

Surveys.—A survey is at present being made of a road from Raglan to Aotea, on the West Coast, and of another from the Waipa Road to Alexandra. A frontier road has been laid out, and is in process of construction by military labour; and a set of levels was taken across the Paikuku Swamp for the purpose of preparing an estimate of the cost of a road across it.

The roads in this district not otherwise described, are generally in the same state as reported on last year—the Road Boards not having funds to make permanent improvements on them.

BAY OF PLENTY.

(A. C. Turner in charge.)

Tauranga to Taupo—Sixty-six and a half miles, formed 18 feet wide. In last year's report this road was stated to be open for traffic, and since that time the following improvements have been made:—

Bridges have been tarred and painted, of a total length of 875 lineal feet. Rock excavations to the extent of 940 cubic yards have been executed by Native Contingent at the Ateamuri Bridge approach (Waikato River); and 401 cubic yards in reducing angles on the side cuttings, and 2,564 cubic yards of earth have also been excavated in improving the turns. Culverts, 179 in number, have been built by the bridge carpenter, chiefly in the side cuttings. In the Mangorewa Forest, 36½ chains of metalling have been executed, 15 feet wide; and this work is now proceeding, as well as the removal of stumps, over a great length, to give greater width.

Over the whole length of this road have been executed since its commencement 1,005 lineal feet of truss and plain bridging, 281 culverts, and 21,289 cubic yards of rock removed.

Until very lately the road has been in good order, but since the wet season has commenced, that part of it through the forest has been much cut up with the traffic, and it will be necessary to metal the whole length through the forest, as well as to fell the bush to a greater width to let in the sun and wind. The remaining portion of the road is in very fair order, notwithstanding that the traffic is considerable, mostly of drays with very narrow wheels. The road is maintained by contract, partly by Europeans, and partly by Natives, excepting five miles at Ateamuri, which is maintained by the Native Contingent under Captain Mair.

Tauranga and Kati Kati.—In last year's report this was described as having been opened for nineteen and a half miles to Aongatete, and formed to a width of 6 feet only; the greater part has now been widened 10 feet, a work which was found to be absolutely necessary. Twenty-eight additional culverts have been fixed in the side cuttings, 197 cubic yards of rock excavated, also 22,089 cubic yards of earth from side cuttings, and 11,899 cubic yards from face cuttings and pits to form embankments over the deep swamps. Of this work 6,107 cubic yards were excavated by the Armed Constabulary, who are still at work widening the remainder of the road. The whole of the bridges were tarred and painted 254 lineal feet. A bridge is being built over the Wairoa, in twelve spans, of a total length of 425 feet, which, when complete, will open this line of road for dray traffic nineteen and a half miles.

The totals of work on this road are as follows, viz.,—Road formation, nineteen and a half miles 10 feet wide, 254 feet of truss and plain bridging, twenty-three large culverts, twenty-eight small culverts. The road is in excellent order, and is now maintained by contract.

The second division from Aongatete to Kati Kati, sixteen miles, has been surveyed, and plans and estimates are now being prepared.

Ohinemutu Branch Road.—Seventy-seven chains. This is being formed to give access to the Native settlement of Ohinemutu, south of Lake Rotorua from the main road to Taupo; the excavation and formation of this road are nearly completed, including 2,640 cubic yards of embankment, and 12 chains of fascining over the Utuhina Swamp, which have been done by Native labour. One plain bridge, 40 feet long, is nearly completed over the Utuhina River, and one 6 feet span over the Ngawha Creek.

Maketu and Rotorua Road.—The works executed on this line of road during the year have been the tarring and painting of the Taheke and Mourea Bridges, 137 feet; the erection of the Puheringa Bridge, 40-feet span, and of two substantial culverts; also 28 chains of heavy side cutting. The number in progress are four culverts, in the Waiwakareto side cutting, by the bridge carpenter.

The total works performed are,—Erection of Taheke and Puheringa truss bridges; Ngae plain bridge; re-erection of Mourea Bridge—in all 172 feet; four substantial culverts; painting 137 feet of bridging; forming approaches to Taheke Bridge, including 558 cubic yards rock, and 175 chains of heavy side cutting, and lessening grade in worst places. The road is about thirty-eight miles long (twenty-two of which were formed prior to 1871); it is not in good order, owing principally to the indisposition of the Natives to do any work, except at the most absurdly high prices.

Rotorua and Tapapa Horse Road.—Twenty-seven miles. The survey of this was reported last year as having been suspended on account of Native opposition and has not yet been resumed.

Horo Horo and Te Whetu Horse Road.—Seventeen miles. Last year this work was reported as nearly finished and in use; the only work done since then has been the erection of two small bridges over almost impassable creeks. This road has been a good deal used lately by tourists from Cambridge to the Hot Lakes.

Galatea and Ahikereru Horse Road.—Eighteen miles, towards Waikaremoana. No arrangements have yet been made with the Natives for the execution of this work. About two-thirds of its length will run through broken forest country.

Matata and Whakatane Horse Road.—Thirty-four miles, following nearly the coast line. During last year the only work done has been tarring and painting Otamarakau and Whakatane Bridges, 422 feet in all. The total of works consists of the Otamarakau plain bridge and two of the same character at Whakatane from the mainland to the island, in all 462 feet. The road is now in fair order for horse traffic. A deviation is required at Otamarakau, but the Natives still ask too much for their labour.

Matata and Te Teko.—Section 1, ten and a half miles. In last year's report this was described as a horse road; it has since been improved and widened to 12 feet for drays, including the lengthening of eight wooden and fifteen stone culverts 4 feet each, the erection of one small pile bridge and the removal of 10,398 cubic yards of earth.

Section 2.—Four and a half miles between Otakiri and Te Teko. This has been kept in repair by the Native Contingent.

The total work consists of fifteen miles of road formation, fifteen stone, eighteen wooden culverts, and six plain bridges of a length of 99½ feet in all. The road is now in good order.

Opotiki and Otara Road.—Five miles. The work during the year has been the re-erection of one culvert, and the total of work is five miles road formed 18 feet wide and metalled where necessary, including sixteen culverts. The road is in very good order, one of the best in the district, it is maintained by contract.

Opotiki and Ohiwa Horse Road.—Seven and a half miles.—Nothing has been done during last year on the road, but the erection of the two Waioeka Bridges (truss) is now being proceeded with, in all 370 feet, and the road will shortly be expanded into a dray road. It is now in fair order, but will be greatly improved by widening.

Ohiwa and Waimana Horse Road.—Eight and a half miles, proceeding inland. This was not completed at the time of last year's report. It has since been finished 8 feet wide; 15,600 cubic yards of earth have been moved and 200 cubic yards of rock; and six small bridges and seventeen culverts have been erected. The road is in good order excepting one swampy place, which is about to be repaired. A survey is about to be made from the northern end of the road to the landing place with a view to connecting these points.

Tauranga and Tapapa Road.—Thirty miles. During last year three-quarters of a mile of road has been formed, and a truss bridge over the Omanawa River has been erected. The totals of work executed are as follow:—Eight and three-quarter miles of road formed in places, 10 feet wide; one truss-bridge, 110 feet long; one small piled bridge, 6 feet span; and five culverts.

The road, which is suitable for dray traffic as far as completed, is getting out of repair and will need some expenditure for maintenance. The Natives still resist the extension of this road.

Opotiki and Poverty Bay Road.—Seventy-five to eighty miles of 8-feet road. In last year's report it was stated that thirty-three miles were completed or nearly so; there are now seventy miles, leaving thirty-seven as the length formed during the past year. At the Opotiki end, 33,087 cubic yards of earth have been moved and 7,754 cubic yards of rock, and thirty-four culverts and fourteen small bridges have been built, and this section of the road is in fair order; but the southern, or Poverty Bay section, is not so, and in many places the road has not been executed in a proper manner, and the contractor has been called upon to make the necessary alterations.

Tauranga and Judea Road.—Three-quarter-mile. During the past year the hill on the west side of the Kopurereroa was cut through to improve the grade, and 1,912 cubic yards of earth were removed, and two culverts were built. The total work consists of three-quarter-mile road, including a heavy embankment across the Kopurereroa Swamp and a plain pile-bridge over the river of the same name, 50 feet long.

This road is now in good order, and is maintained by the local Road Board.

Matapihi to Maketu Road,—Nineteen miles, coast line. No work done during past year. Total

work done, three and three-quarter miles formed 18 feet wide, with a large 5-feet culvert, 30 feet long. The road is in good order.

Opotiki and Waioeka Road.—Five miles. Fifty-five chains of this have been formed during the year, including 17,390 cubic yards of earth excavation, three small bridges erected, one of 16 feet and two of 8 feet span, and five culverts built by the Armed Constabulary.

Total work done, viz.,—Two miles thirty-seven chains of road formed; one truss-bridge over branch of Waioeka, 38 feet long; three plain bridges, 32 feet in all. The work has been at a standstill since November, 1873. The road is in good order as far as completed.

Whakatane and Ohape Horse Road.—Three and three-quarter miles of road including one 20-feet bridge. This was completed in 1871, and has since been maintained by the Armed Constabulary.

Ohineroa Horse Road.—Fifteen miles, branching from the Tauranga and Kati Kati Road at Rereatukahea, and running principally through forest over the range to the Thames Valley. It was expected that this work might have been proceeded with during the past year, but the Natives have maintained their opposition and no work has been done.

Te Teko and Galatea Road.—Thirty-one and a half miles. Five culverts have been erected, and 3,730 cubic yards of earth excavated in improving the grades by the Native Contingent under Captain Preece.

The total of work done amounts to twenty-one and a half miles of road, roughly formed; four totara bridges erected, in all 89½ feet; and five culverts built. This road will eventually form part of a road to Taupo across the Kaingaroa plains. It is in very fair order.

Whakatane and Te Teko Road.—Thirteen miles. In last year's report this was described as a horse road; it has since been decided to make it a dray road. The work was begun in January last by the Natives, and continued till April when it ceased, the Natives having to secure their crops. Nine miles thirty-nine chains have been completed, including 52,925 cubic yards of earth removed and nine culverts built. The line runs principally through swamp, and the work has consequently been of a very wet and disagreeable nature.

Rotorua and Tarawera Road.—Seven and three-quarter miles. Five and a half miles of this have been formed for dray traffic by Native labour and Native Contingent under Captain Mair, the latter having excavated 3,246 cubic yards of earth, out of a total of 16,344 cubic yards. Timber is being procured for building two bridges of 18 feet each over the Wairoa. The country on this line is mostly open but broken, and in one place half a mile of forest occurs.

Opotiki Table-land Road.—Two and three-quarter miles. The whole of this has been formed, including seven small bridges, six box culverts, and 8,000 cubic yards of earth excavation, and is now in good order.

Cambridge and Taupo Road.—About fifty-five miles, branching from the main road at Atiamuri. It was expected that a survey of this road would have been completed by this time, but the Natives are still opposed to any work being done. The line lies chiefly in open country, very broken in places. Estimate as given last year, £5,280.

Kaiteriria and Tarawera Horse Road.—Three miles formed, 8 feet wide. This was executed by Captain Mair's Native Contingent before June, 1873, but was not reported on last year. The line follows the side of the mountain near its base, on the south side of Rotokakahi Lake. It is in good order.

Opotiki and Torere Road, and on to East Cape.—Five and a half miles have been formed during the year by Native labour. The work included 21,773 cubic yards of earth excavation, 2,566 cubic yards of rock, forty culverts, and seven small bridges, and lay through dense forest and broken country. Altogether, twelve and a half miles of road have been formed 8 feet wide, eight miles of which are in bush, and the road being now in good order, can easily be travelled as far as Te Kaha, a distance of forty miles from Opotiki.

Whakatane Valley Road.—Thirteen and a half miles from Whakatane to the confiscated boundary. Two and a half miles of this are now being formed 18 feet wide, as far the schoolhouse, by the Armed Constabulary under Major Roberts; the remainder will be 8 feet wide. On the first portion 2,399 cubic yards of earth have been removed, and it is expected that a stronger force of men will be employed on it soon. On the further portions Native labour will be employed.

Kati Kati and Grahamstown: Telegraph Line.—This being reported as in a very bad state, repairs were ordered. Three small bridges were built, and the whole line repaired in the worst places. The work is still going on, one-half of the expense being borne by the Telegraph Department and one-half by the Public Works Department.

Grahamstown and Hikutaia.—About eighteen miles. It is probable that the survey of this line for a road may be proceeded with shortly, it being expected that no further opposition from the Natives is to be apprehended.

Tauranga and Cambridge Road.—About fifty miles. There has been no opportunity for making a survey of this road yet, but as the Native difficulties have been removed, the survey will now be proceeded with, and it is expected a good line of road will be formed.

Approaches from the Beach at Tauranga to the main inland roads to Taupo, Cambridge, and the Thames.—One hundred and seventy-two chains. A portion of this is now being formed 33 feet wide, and includes 2,850 cubic yards of earthwork, 54 chains of formations, two large pipe culverts, one being 18 inches by 70 feet long, and one 12 inches by 135 feet long; also six small box culverts. The Highway Board contributes one-sixth of the cost of this work.

NAPIER TO TAUPO, TAUPO TO ATIAMURI (WAIKATO), ALSO WAIROA AND POVERTY BAY AND EAST COAST DISTRICT.

(E. H. Bold in charge.)

Road, Napier to Taupo.—Section 1.—Taradale to Pohui (*viâ* Glengarry) twenty-three miles. Tenders were received for this on the 15th instant for the first ten and three-quarter miles, but all were too high to be accepted. It is proposed to let the work out in smaller contracts, as a means of getting it done at a more reasonable rate. The survey of the remaining twelve and a half miles is in progress.

Section 2.—Kaiwhaka to Taupo, ninety-five miles. To the middle of January last this section was maintained by day labour, eight men being employed on the work. Since then the maintenance of forty miles, Kaiwhaka to Runanga, has been executed under contract, but not so cheaply or so well as by day labour. It is suggested that an arrangement could be made by which the Armed Constabulary, who use the road as much or more than any others, should keep the whole of the road in repair.

Portions of this road had become very soft under traffic, and authority was given to metal them, under which one mile and three-quarters have been pitched and metalled at Titiokura and Mohaka, as well as in the Te Haroto Bush. It has been found that this work also can be done more economically by day labour than by contract, as was proved by experience after the tenders called for were declined. A contract has however been entered into for the further supply of 1,000 yards of metal to be used where required.

Several parts of the road on this section are very narrow, and require widening, as well as protection by a parapet on the edge of the bank at the most dangerous places. Until the end of May the road was in a good state of traffic, but since then the occurrence of heavy rains has brought down numerous slips, extensive enough in some places to close the road for a time. Tenders have been called for the erection of a bridge over the Mohaka, and the other bridges on the line have been all tarred and painted.

Schedule of works executed during the year, viz.,—Earthwork, 12,704 cubic yards; rock, 247 cubic yards; road formed 18 feet, 93 chains; drains, 14·62 chains, averaging 3 feet in section; timber culverts from 12 inches to 2½ feet square, 37 in number, in all 875 lineal feet; stone culverts two in number, 30 lineal feet; four bridges 14 feet wide, 82 lineal feet; sod walls, 30 cubic yards; stone walls, 30 feet; road fascined, 12 feet × 1½ feet, 11 chains; road corduroyed, 38 feet; ditto, metalled, 12 feet 72 chains; ditto, 14 feet 66 chains; road metal quarried and broken, contract 630 cubic yards; ditto, day labour 4,105 cubic yards; bush clearing, 30 feet wide, 16 chains; bridges painted and tarred, 310 lineal feet.

Section 3. *Taupo to Atiamuri*—Twenty-four miles. Since last year's report five bridges and one culvert have been erected, and the road repaired at places by Native labour. A new survey has been made with improved grades, and contracts have been entered into for the execution of the work by Natives.

Schedule of works executed, viz.,—Five bridges 14 feet wide, 92 lineal feet; one culvert 35 feet; nine box-culverts 210 feet; rockwork 592 cubic yards; earthwork 7,855 cubic yards; road formed 18½ chains; bridges painted and tarred 250 lineal feet; erection of truss bridge at Tapuaeharuru, one span, 86 feet.

Bridle Track, Tapuaeharuru to Tokaanu.—Thirty-three miles. This proceeds south from Tapuaeharuru along the eastern margin of Lake Taupo, to its southern extremity. The survey has been made, and the work marked off into sections to be let by contract to the resident Natives; it will consist principally of light side cutting in pumice soil, fern and scrub clearing, rock excavation (hard), and draining; the estimated cost is £895, exclusive of supervision and survey.

Schedule of work:—Thirty-three miles of road flagged and pegged off; quantities taken out and estimates prepared.

Wairoa District.

Wairoa to Opoiti.—Thirteen miles. This has been maintained by contract; the Scamperdown Bridge has been completed; the Hika-wai Bridge has been raised, and approaches altered to suit, and contracts are now in hand for draining the road between Te Kapu and Wairoa.

Schedule of works executed, viz.,—One truss bridge 14 feet wide 90 feet long over Scamperdown Creek; earthwork in slips, &c. 710 cubic yards; side drains 173½ chains 2,697 cubic yards; three box-drains 75 feet; road formed 120 chains.

Bridle Road, Tekapu to Waikaremoana.—Twenty-nine miles. This has also been maintained by contract, but it is thought the repairs may be left during the next year in the hands of the Armed Constabulary. It is proposed to erect a bridge for military purposes over the Waikaretaheke and plans are being prepared for it for consideration.

Road maintained, twenty-nine miles, also repairs to bridges; sections taken of Waikaretaheke and Wairoa Rivers for bridges or punts.

Bridle Road, Wairoa to Poverty Bay (inland *viâ* Te Reinga), Sections Opoti to Poverty Bay.—Forty-three miles.

The survey of this line has been made, and contracts let to Natives to the amount of £1,730; the work is all but completed to Konaki in a satisfactory manner, and the remainder will be commenced forthwith. It is expected that this track will be of great service to travellers, and for stock driving, and not subject to be stopped by floods.

Thirty-one miles surveyed and staked out, lines cut in bush, &c., earthwork in cuttings and embankments 11,889 cubic yards; rock ditto 190 cubic yards; fascining 7 feet wide 5 chains; one bridge 7 feet wide 11 feet; eight culverts 7 feet wide 48 feet: road formed ten miles.

Makaraka to Te Arai.—Four miles. This has been handed over to the local Road Board. The most eligible site for bridging the Waipoua River occurs on this line, and a special report on this

subject will be submitted by Mr. Bold. One culvert has been put in 16 feet long × 10 feet × 4½ feet; one culvert, 30 feet long × 2 feet.

Gisborne to Ormond.—Twelve miles. This has also been handed over to the Road Board, and search has been made for gravel to be used on the road, on which a report will be sent. The road runs through a valuable and well-peopled district, which could well afford to be rated for metalling.

Schedule of works during year (by Armed Constabulary):—Two culverts, 8 feet × 4 feet, 80 feet; drains 89 chains, average section 2·75 square feet; road formed 20 feet wide 36 chains; earthwork 375 cubic yards.

Bridle Road, Wairoa to Poverty Bay (*viâ* Mahia and Sea Beach).—On the section between Wairoa and Maraetaha, fifty-eight miles, the line has been kept in repair and cleared of timber by Natives under contract; and contracts have been let for the erection of a horse-bridge at Waimauna Creek, and the maintenance of a ferry-boat at Nuhaka. A piece of road three miles long has been laid off to avoid the dangerous bluff at Ureti near Waikokopu. This will be opened at the same time as the intended erection of the telegraph line.

Bridle Road, Gisborne to Hicks Bay.—One hundred and twelve miles. On this road about sixteen miles of track have been formed, and the work which has been done along the coast has much facilitated the communications between the different settlements. It is, however, now obvious that the coast line does not present the best route for a permanent or main road, but that an inland line would be better in every way. This would follow one of the feeders of the Uawa River (Tolago Bay River), thence inland to Tokomaru to a small branch of the Waiapu River. A sketch and description of this route will shortly be forwarded.

Schedule of works during year, viz.,—Bush clearing 180 square chains; ditto 30 feet wide 6 chains; drains 8·12 chains 67 cubic yards; culverts sixty-five, in all 525 feet; earthwork 26,931 cubic yards; road formed 18 miles 77 chains.

Sledge Road, Te Awanui to Te Horo.—Three miles. This was reported at first as being a suitable line for a dray road, but has since been found to be impracticable for that purpose, and a sledge road has been substituted, and is now being made, but very slowly, as the Natives here are very dilatory.

MANAWATU DISTRICT.

(J. T. Stewart in charge.)

Main Road, Foxton to Eastern Part of Manawatu Gorge, at Site of Bridge.—Thirty-eight and a half miles. This was described as being passable for dray traffic in last year's report, and all details of work were given, since which various improvements have been effected. Within the Gorge itself many of the projecting rocky points have been cut off to improve the curves, and other portions widened, sometimes by cutting away the bank and sometimes by adding substantial wooden platforms on the outer edge; so that this part of the road is now good for dray or coach traffic, and is so used. The softer parts have been metalled, and the deep through cutting forming the approach to the bridge has been finished. It is about 5 chains long and from 20 to 30 feet deep, passing through earth, boulder gravel, and small portions of rock.

The Gorge Bridge, designed for road and railway traffic, is now under construction by contract by Mr. H. McNeil, and is progressing favourably. The two main piers of rubble masonry in cement are nearly built to their full height, and the smaller piers are also nearly completed. Nearly all the timber work has been got out, and a large quantity brought to the site. The ironwork has arrived from England, and is now being landed in Wellington.

The two ferries across the Manawatu—one in the Gorge and one immediately below, have been maintained in good working order during the year.

On that portion of the road between the Gorge and Palmerston, the gravelling contracts, which were laid aside last year on account of the wet season, have all been completed.

The widening of the road alongside of the tramway between Palmerston and the Oroua Bridge, for a distance of four and a half miles, which remained at the time of last year's report, has been undertaken and is now nearly completed, and the road from end to end is in fair working order.

Tramway, Foxton to Palmerston.—At the time of last year's report this work was still in the hands of the contractor, and was handed over by him as complete on 20th September, 1873. After that date it was worked for general traffic up to 16th May, 1874, when the working, having been advertised for public tender, was let by contract to Mr. T. U. Cook, of Foxton. The system of working is this, viz., the payment of certain dues to the General Government on the quantity of materials passing over the line or landed at the wharf, the contractor finding motive power and being responsible for the repair of all rolling stock and stations, &c., and the Government being responsible for the maintenance of the tramway in good working order, except when the damage is due to the carelessness of the contractor or his men. The wear of the line has been satisfactory, and the wooden rails continue in fair condition with a moderate amount of repair. On the thirteen miles nearest to Foxton scarcely any rails have been renewed; on the next eleven and three-quarter miles to Palmerston, about one mile and a half have been replaced in all, and about 20 chains in another part of the line. Many of the old rails are used again for repairs, being cut into shorter lengths, and the rest are used for platforms, crossings, fencing, wharf planking, and sundry other uses, to all of which they were well adapted, being sound heart wood—matai and totara. The heavy repairs on that part of the line between Palmerston and the Oroua were due to the fact that all the gravel necessary for the laying of the tramway was brought over the line by the contractors. The wear and tear under ordinary traffic will be very much less.

Goods sheds have been erected at Foxton and Palmerston, and close-covered night-sheds also been erected at both places, where loaded trucks may stand in safety until starting or unloading.

The Tramway Wharf at Foxton was completed in September, 1873, and is found convenient for vessels; but it is almost certain that as the traffic increases the head of the wharf will require lengthening to accommodate more than one vessel at a time.

An additional siding has been found necessary in the Tramway Station at Foxton, and is now

being laid; and more space is being prepared for stowage of timber and cargo, by erecting a bre work and filling.

Stables are now being built at Foxton and Palmerston, and are nearly completed; also a feeding-shed for horses at the Oroua Bridge, which will be placed at the disposal of the contractor for the haulage.

After a heavy flood in June, 1873, it was considered advisable to increase the number of water openings across the line of tramway, and the work was done accordingly, evidently with good effect, and tending materially to lessen the chance of damage to the line in future floods.

Tramway Extension.—A contract has been let for the extension of the tramway from its present terminus, near Palmerston, to a point on the main line of railway, as laid out between Wanganui and Manawatu. The length of the extension will be 4 miles 56 chains; and the railway line itself will be proceeded with westwards across the Oroua and towards the Feilding Block, as will be more particularly described in the Engineer-in-Chief's Railway Report. The above extension will answer a twofold purpose, that of supplying the wants of all the population inland, and the means of carrying all railway material there needed, and also of providing an outlet for what must be for a long time the staple product of the district, viz., totara timber, which abounds in certain localities in the Manawatu.

The following is a list of the works in detail done during the past year in this district:—Nineteen box culverts fixed, in all 295 lineal feet; one open culvert, 132 lineal feet; two large culverts, 10 feet by 4 feet=37 lineal feet; five bridges, 12 feet wide, 80 lineal feet; one bridge, 23 feet wide, 14 feet long; eight bridges, 5 feet wide, for widening Gorge Road, 170 lineal feet; two bridges, 10 feet wide, 60 feet long; ten level-crossings on tramway, 200 lineal feet; footpath curbing Foxton and Palmerston Stations, 660 lineal feet; handrails fitted to all bridges, 1,000 lineal feet; additions to Foxton Wharf, one bay 16 feet by 15 feet; also one platform 15 feet wide by 48 feet long; breastwork 10 feet by 96 feet long, protective sheathing 7½ feet by 78 lineal feet; protective sheathing 5 feet by 20 feet; rata fenders and piles 90 feet; fencing 25 chains and 35 chains; goods platform 6 feet wide by 48 feet long; gravelling at various parts average 6′ thick, 206½ chains; rails relaid 120 chains; rails relaid 20 chains; sidings 12 chains; gravel ballast renewed 679 cubic yards over 520 chains; soil ballast 6′ thick, 960 chains; tramway staked where flooded 205 chains; road widened 20 feet, 270 chains; gravel bridge approaches 102½ cubic yards; through cutting at Gorge Bridge 12,500 cubic yards; earth cutting, new siding Foxton, 700 cubic yards; one turntable fixed at Foxton; one turntable fixed at Palmerston; goods sheds at Foxton 35′ × 20′ and 20′ × 16′; ditto over line 40′ × 20′ and 24′ × 13′; offices 10′ × 7′; goods sheds at Palmerston additions 43′ × 16′; ditto over line 79′ × 12½′; offices 10′ × 7′.

General maintenance of road Gorge to Palmerston fourteen miles; ditto tramway Palmerston to Foxton twenty-four and three-quarter miles, with rolling stock.

24,200 railway sleepers have also been passed and branded within the last six months in this district for different railways.

SEVENTY-MILE BUSH ROAD.

Northern Division—about Thirty-seven and a half Miles.

(D. Ross in charge till April, 1874; J. T. Stewart in charge after that date.)

Last year's report described this road in detail and as being in process of formation, with bridge and culvert building, &c. I have now great pleasure in reporting that with the exception of a part of some of the metalling contracts still in hand, the whole of the work has been most satisfactorily completed, and that there is now a good serviceable road through the Seventy-Mile Bush, well laid out and well bridged and drained. This opens out a large extent of very valuable land. The completion of this work, in connection with that between Foxton and the Manawatu Gorge, has rendered possible the establishment of a regular coach service between Napier and Foxton, which was commenced on or about the 1st of May last, and has been kept up with regularity since.

The following table will show what work in the shape of metalling yet remains to be done:—

Contracts, in Chains.	Done. Chains.	Nearly done. Chains.	Total metalled. Chains.	Remaining to be done. Chains.
800	329	264	593	207
78	...	...	78	...
465	...	...	347	118
640	...	...	640	...
90	...	...	55	35
			1,713 or 21 m. 33 ch.	360 or 4 m. 40 ch.

The gravelling contracts have been suspended, but will be resumed on the return of drier weather in the spring or summer.

Southwards of the Gorge, and in the direction of Masterton, about four miles of bush road have been cleared on the future line of main road between Napier and Wairarapa. This section extends to the crossing of the Manawatu River, where it joins that part of the road under charge of Mr. A. Munro, and a contract has been let for its formation at a cost of £1,876, the actual distance being 3 miles and 76 chains.

MASTERTON TO MANAWATU GORGE.

(Alex. Munro in charge.)

The felling and clearing of the bush on this road, one chain wide and about forty-two miles long, was completed in September, 1873; since which date the work of formation has been progressing, along with the erection of the necessary culverts and bridges. A length of about thirteen miles of formation is now nearly completed, the cost of the work averaging from 58s. to 115s. per chain, the latter price being paid for heavy side cutting. Owing to the scarcity of skilled labour amongst the settlers on this line of road, mostly Scandinavians, the work of bridge and culvert building has not progressed so rapidly as it otherwise might have done, but already ninety-seven box culverts, varying from 2 feet to 4 feet square, have been completed, and six large substantial bridge culverts, about 13 feet span each; as also five plain bridges, of 15 feet, 18 feet, 20 feet, 20 feet, and 25 feet in length, and one truss bridge, 38 feet span, with 10 feet spans at each end, with wings and heavy earth approaches. In three places where the river runs very near the road, it has been found necessary to build protection walls, to prevent encroachments by the river, the ground being soft, and easily washed away.

There are now in progress two large pile bridges, about 60 feet long each, for which the timber is prepared and delivered on the ground.

A small portion of the road has been gravelled where it was softer than usual, with material from the adjacent hills, and, judging from the manner in which this portion has stood traffic, there will be no difficulty in finding proper gravel for the road throughout.

A portion of this line of road has lately been surveyed and prepared for contract, viz. 803 chains, extending southwards from the crossing of the Manawatu River. This was submitted to public tender, and the lowest tender, amounting to £4,215, has been accepted; the work to be completed in five months. Other portions will be ready to be submitted to public competition as soon as the surveys which are now in progress can be executed. The line is carefully selected, and is well graded, the steepest inclination as yet being 1 in 14½ for a distance of four chains, and it is expected that if prosecuted with energy, and labour being obtainable, the whole length of this road may be opened for traffic in about nine months.

WANGANUI TO CARLYLE (PATEA), AND WANGANUI TO TAUPO.

(Wm. H. Hales in charge.)

Wanganui to Carlyle, Main North Road.—Between Wanganui and the northern boundary of the town of Carlyle there have been completed during the past year 13 chains of formation, 631½ chains of metalling, and 268 chains of re-metalling.

One cart bridge, 222 feet in length, completed, and two others, of 230 feet and 432 feet respectively, are in process of construction.

Of the metalling completed, 378 chains are portions of the various sections between Waitotara and Whenuakura, 249 chains between Whenuakura and Patea Rivers, and 4½ chains of approaches to the Waitotara Bridge. The formation completed is 9 chains, being part of a contract for 249 chains of formation between Whenuakura and Patea, and 4 chains of approaches to Waitotara Bridge, consisting of 2 chains of embankment at the south end of the bridge, and filling in an old watercourse and forming 2 chains of road at the south end of the bridge.

That part of the road which has been re-metalled is a portion of that first constructed between Wanganui and Waitotara River.

The whole of the main line of road from the town of Wanganui to the northern boundary of the town of Carlyle, a distance of 38 miles and 10 chains, has been completed in formation and metalling except 20 chains at the Patea River, and 6 chains at the Whenuakura River, which will form the approaches to the new bridges now in course of construction at these places. Throughout its whole length the road is in good order and condition for traffic.

Bridges.—During the year contracts have been let for erecting cart bridges over the Waitotara, Whenuakura, and Patea Rivers, one of which, the first named, has been completed and opened for traffic. The others are in a forward state, and when finished the road will be complete and bridged throughout.

The Waitotara Bridge, R. S. Low contractor, is 222 feet long and 46 feet high, having three spans of 60 feet each trussed, and two spans of 20 feet each plain. It was completed and opened for traffic on the 30th May. It is a strong substantial structure, and the work has been executed in a thoroughly satisfactory manner.

The Whenuakura Bridge, now being erected by the same contractor, will be 230 feet long and 53 feet high. It is composed of three spans of 60 feet each, and one span of 43 feet, all trussed. The work is in a forward state; all the piles are driven, the greater part of the piers erected, and about three-fourths of the trusses for the three long spans are fitted and ready to be placed in position. It is expected that this contract will be completed in about two months.

Patea Bridge was commenced by the contractors, Messrs. Rundell and Bassett, on the 9th February. It will be 432 feet long and 32 feet high above low water, and will consist of four spans of 60 feet each, trussed, two plain spans of 28 feet, four plain spans of 24 feet, and two plain spans of 16 feet each. Nearly all the material for this bridge is delivered at the site, and the work is being pushed on vigorously. The piles for the six single piers on the north bank are driven, and the first double or main pier is completed; while in the second main pier the piles are half driven and the upper framework fitted together ready for placing. All the corbels, stringers, joists, guards, and flooring planks of 116 feet of the north end are fixed in position.

The completion of these bridges will do away with the old punt service at the three rivers, which, although rendered very efficiently, was during times of flood carried out at great hazard, and was frequently extremely dangerous.

Wanganui and Taupo Horse Road.—The character of this road was described in last year's report, and a total length of thirty-two miles has now been surveyed. During the past year seventeen miles and nine chains have been completed, making a total of twenty-four and a half miles. The work has been done under contracts of about five miles long each, and the rate of progress during the year has been as follows, viz.,—Sections 1 and 2, 222 chains; section 3, 28 chains; section 4, 60 chains; section 5, 63 chains; section 6, 396 chains; section 7, 400 chains; section 8, 200 chains. On this last there are still about 200 chains to complete the contract, and when this is done tenders will be called for the next section. There have been several small slips on the side cuttings, which are being cleared away, and the finished portion of the road is in good order.

WEST COAST ROAD—PATEA TO PUKEARUHE.

(O. CARRINGTON in charge.)

Pukearuhe to New Plymouth.—Thirty miles. Very little roadwork has been done on this section since last year's report. Some of the Constabulary stationed at the former place have been employed on the approaches for the Mimi Bridge, and have also been sawing timber for that structure, which will be a plain piled bridge similar in construction to that built by the Constabulary over the Urenui. It has been found necessary to execute some additional work on the latter, as the piles in the two centre piers do not appear to have been driven deep enough in the first instance, and other and longer piles are now being driven to a hard bottom to secure a solid foundation.

Inland Road.—On this line of road the Mangaoraka Bridge has been erected, and three more, the Upland Road, the Mangonaia, and the Waiongona Bridges, are now in hand. 104 chains of this road have been formed, and 174 chains are in progress. A section has been made of the whole of this line; and as the cuttings proved to be heavy, it was found advisable to reduce the width of the cuttings to 10 feet and ordinary formation to 15 feet, which will however suffice for present traffic. The inland Waiwakaiho Suspension Bridge undertaken by the Provincial Government, assisted by a grant of £350 from the General Government, is in progress. All the timber and ironwork are delivered at the site, and both piers have been built; the mooring posts are fixed, and the chains are in their places, as well as some of the cross-beams.

Omata to Stony River.—On this section a dray bridge has been erected over the Kaihihi River, consisting of one centre span of 45 feet trussed, and two side spans plain of 20 feet each. Also about 386 chains of road have been formed and 212½ chains gravelled or metalled, and 93 chains of gravelling are still in progress. When this work is completed, the sum of £5,000 authorized will have been expended.

Stony River to Waiorongomai (one mile north of Waiweranui).—On this section two dray bridges have been erected, the Werekino and the Mataneuneu. The approaches to the latter are also completed, and those of the former nearly so. They and the bridge have been delayed considerably, owing to opposition from the Natives as to the exact site to be chosen.

120 chains of road have been formed, and 29 chains have been gravelled.

Waiorongomai to Umuroa.—No work has been done on this portion of the road, the Natives stil being adverse to it.

Umuroa to Waingongoro.—At the date of last year's report three bridges were in hand on this section, viz. the Waiaua, the Mangahume, and the Waiteika. These have now been completed and passed. 426 chains of road have been formed, and 140 chains have been gravelled. The approaches to the Waiaua, Mangahume, Waiteika, Taungatara, Motemote, Waiokura, Inaha, and Kapuni Bridges, some of which required heavy cutting through rocky formation, have been completed, and those of the Punehu and Otakeho Bridges are in progress. The latter has been much delayed owing to the Native contractors failing to complete their work, and leaving it half done.

Owing to the recurrence of such-like events, and the generally irregular manner in which Natives carry out work, it has been deemed advisable to gradually increase the number of European workmen on the road, and this has been attended with good results, and their relations with the Natives continue to be amicable. The Native mail contractor, Hone Pihama has, since he became so, been of considerable service in forwarding the work, more especially that of gravelling, in which he has assisted materially.

The Kaupokonui and Kapuni Bridges, erected last year, have been well examined and screwed up.

Waingongoro to Patea.—On this section, 592 chains of road have been gravelled and 94 chains have been formed, and the Waingongoro, Tangahoe, and Manawapou Bridges have been screwed up and painted.

All the metalled and gravelled portions of the above-described road are in good order; the unmetalled portions heavy on account of wet weather, and will continue so during the winter. That part between Waiorongomai and Umuroa is almost impassable in places.

Sundries.—The Marsland Hill Depôt, in New Plymouth, has been put in repair for the reception and accommodation of about 120 immigrants; if required, the amount of accommodation could be doubled by an addition to the internal fittings. The erection of a jetty at Opunake was called for; plans were prepared and tenders were called for, but, being too high, were declined.

In connection with this, a trial pile was driven in the bay to a depth of about 8 feet. The driving was hard but quite successful, and the pile, on being drawn, was found sound and uninjured.

Remarks as to future Expenditure.—Between Waingongoro and Umuroa, about twenty-four miles, no survey has yet been made. There are many streams which would require bridging, but the land is generally level, though swampy in parts. Probably it would cost about £350 a mile to form and bridge this section—say £8,400.

Between Umuroa and Waingongoro, about eleven and a half miles of formation are yet required which will cost about £160 per mile—the culverts have already been erected, say £1,840; and for gravelling twenty-three miles, at £320 a mile, £7,360. There are fifteen bridges which will require painting, and should be done next summer, say £350, making a total for this section of £9,550.

Between Waingongoro and Patea the road formation is completed, and the whole has been gravelled with the exception of the Manawapou Hill and the road deviation near Carlyle, together equal to 138 chains, which may be estimated at £6 a chain from the difficulty of obtaining suitable gravel, making £828; and a considerable sum will be required for maintenance, on account of the heavy traffic between Patea and Hawera—say from £400 to £500 a year.

Below is a return of the work executed in this district in the year, which I hope will be considered satisfactory, when it is remembered that very much of it has been carried out in Native districts, and in many cases under a considerable amount of active opposition and direct hindrance from the Natives.

RETURN of WORK from 1st JUNE, 1873, to 31st MAY, 1874.

LOCALITY.	Distance.	Length Surveyed.	COMPLETION.							IN PROGRESS.			REMARKS.
			Bridges.	Culverts.		Metalled or Gravelled.	Formed only.	Road Improved.	Cleared only.	Bridges.	Metalled or Gravelled.	Formed only.	
				Wood.	Stone.								
	Miles.	Miles.	No.	No.	No.	Chains.	Chains.	Chains.	Chains	No.	Chains.	Chains.	
White Cliffs to New Plymouth	30	...	...	...	...	...	...	...	...	...	...	...	See Report.
Inland Road	7½	2	1	12	...	...	104	...	...	3	...	174	See Schedule.
New Plymouth to Stony River	17	...	1	14	...	212½	386	...	...	...	93	...	See Schedule.
Stony River to Waingongoro	3½	...	2	3	...	29	120	...	...	...	...	...	See Schedule.
Waiorongomai to Umuroa	24	...	...	...	...	...	...	...	...	...	...	...	See Report.
Umuroa to Waingongoro	26½	4	3	16	2	140	426	...	...	...	35	32	See Schedule.
Waingongoro to Carlyle	21½	...	...	4	...	592	94	...	...	...	109	...	See Schedule.
Total for year ending 31st May, 1874 ...	...	6	7	49	2	973½	1,130	...	...	3	237	206	
Total 1870 to 31st May, 1873	...	56½	20	143	30	1,161	2,392	1,200	668	...	...	...	
Total under the Public Works Act ...	...	62½	27	192	32	2,134½	3,522	1,200	668	...	...	...	

SCHEDULE.

BRIDGES.

COMPLETED.				IN PROGRESS.			
Name.	Description.	Length.		Name.	Description.	Length.	
		Span.	Over all.			Span.	Over all.
		Feet.	Feet.			Feet.	Feet.
Mangaoraka	Plain	26	50	Upland Road	Plain	26	37
				Mangonaia	Plain	26	37½
				Waiongona	Truss	45	71½
Kaihiki	Truss	45	69				
Werekino	Plain	23	69				
Mataneuneu	Plain	30	66				
Waiaua	Truss	70	105				
Mangahume	Truss	40	73				
Waiteika	Truss	30	76				
Seven bridges completed.				Three bridges in progress.			

CULVERTS.

Number.		Length.	Size.	Number.		Length.	Size.
Wood.	Stone.			Wood.	Stone.		
		Feet.	Inches.			Feet.	Inches.
3	...	35	10 x 10	1	...	45	24 x 18
2	...	18	36 x 36	...	1	20½	12 x 12
1	...	16	36 x 36	...	1	20	10 x 10
2	...	20	36 x 36	1	...	24	45 x 45
1	...	28	36 x 36	1	...	35	44 x 48
1	...	20	36 x 24	1	...	24	20 x 24
1	...	36	36 x 36	1	...	22½	20 x 21
1	...	36	36 x 24	1	...	20½	12 x 12
2	...	30	10 x 10	1	...	20½	18 x 24
1	...	30	10 x 10	1	...	24	48 x 48
1	...	35	12 x 12	1	...	24½	20 x 26
1	...	30	10 x 10	1	...	25½	20 x 26
1	...	45	24 x 35	1	...	26	20 x 24
1	...	45	18 x 25	4	...	26	20 x 24
2	...	30	10 x 10	1	...	31½	21 x 24
1	...	25	24 x 31	1	...	29½	48 x 48
2	...	30	10 x 10	1	...	45	24 x 31
1	...	50	12 x 20	1	...	45	18 x 25
1	...	40	20 x 12	1	...	30	10 x 10
1	...	26	48 x 48	1	...	25	24 x 31
1	...	25	54 x 48				
				50	...	...	...

MOUNTAIN ROAD—BEHIND MOUNT EGMONT.

(R. T. Blake and C. W. Hursthouse in charge.)

In last year's report it was stated that this work had been commenced, and that several miles had been cleared one chain wide. Since then the work has been carried on at both ends, viz., from Hawera under Captain Blake, and from the northern end under Mr. C. W. Hursthouse, both with Native labour, the bush being felled fully one chain wide and a track of 15 to 16 feet wide cleared in or near the centre. Wherever necessary, substantial log culverts have been erected over the numerous streams which occur on this line, but many having hard stone bottoms have been left as fords, and approaches have been cut to these.

The northern party reached the tribal boundary about the middle of March, having opened about six and a half miles of road, but they declined to proceed beyond this line without an increase of wages; this, however, was objected to and tenders were called for, and 142 chains were let to Europeans, to be finished by 6th June. This contract would terminate at Waipuku, the point to which it was arranged that the work should be carried by Captain Blake, who, after working for some time with Native labour, also called for public tenders, and four contracts were let accordingly, viz., two of two miles each, one of 85·60 chains, and one of 60 chains, all of which were expected to be finished by the end of May. The Native working party were also expected to reach the point above mentioned (Waipuku) about the same time, after which it is intended that they should be employed in mending culverts, improving fords, and cutting approaches. The bush cutting executed under Capt. Blake's direction would thus amount altogether to about twenty-one miles, the commencement of the work being at the edge of the forest, about three miles inland from Hawera. The country along this new line of road is described as being very favourable for road or railway making, comparatively level, and without difficult features; also as very favourable for settlement. It is well watered, being intersected by numerous small streams, mostly with hard banks and gravelly or stony bottoms. The principal timber is rimu, of which there are large quantities, and in many places the kahikatea (white pine) is found in clumps in marshy places. The totara and matai are also found at intervals, and the rata is to be met with along the whole length of the line.

The course of this line of road is remarkably straight, and will measure about forty-one miles from the point where it leaves the main West Coast Road at Hawera to where it again strikes the main road a little to the west of Waitara. A plan attached to this report will show the general course and situation of the road, which lies generally to the eastward of the track cut by Major-General Chute during the Native war; this direction was chosen for the purpose of securing a more level line, and to avoid crossing a great number of streams and gullies which intersected the original track.

ROADS IN WESTLAND.

(F. H. Geisow in charge.)

Greymouth to Omotomoto.—Two miles eleven chains of dray road. This was increased in width during July and August, from 15 feet, with metal 10 feet wide and 10 inches thick, to 17 feet, with metal 12 feet wide and 12 inches thick, and was then handed over to the Province.

Greymouth to Marsden.—Dray road ten miles two chains. This was let in five contracts, and was completed in February, 1874. It is formed 17 feet wide, and metalled 12 feet wide by 12 inches thick. The traffic on this route is heavy, and will necessitate a large expenditure for maintenance, for which tenders have been called for twelve months. The work executed during the year consists of the following items, viz.,—477 chains moderate clearing in centre, 465 chains do. at outside; 66 chains

bush felling in centre, 66 chains do. at outside; 217·85 chains heavy bush felling in centre; 217·85 chains do. at outside; earthwork, 56,316 cubic yards; side drains, 402·57 chains; culvert covering, 371 lineal feet; bridging 821 lineal feet; forty-one box-drains; metalling 802 chains; eighty-five box-drains; one syphon-box; one race diversion, one creek do.; two tramway crossings.

Marsden to Hohonu.—Dray road, seven miles seventeen chains, formed and metalled as above, this was maintained by General Government up to 1st September, 1873, when it was handed over to the County of Westland.

Kanieri to Ross.—Dray road, fourteen miles fifty-nine chains, formed and metalled as above. This road for seven miles seventy-one chains at the northern end, was originally formed 12 feet wide and with metal 8 feet wide by 8 inches thick, but was afterwards altered as now described, the work being completed in June, 1873, and maintained until November, 1873, by the General Government, when it was transferred to the County Government.

Woolhouse Road.—One hundred and twenty-two chains, formed and metalled as before and maintained by General Government until 25th March, 1874, when it was handed over to the Province.

Bowen to Okarito.—Estimated at fifty miles in length, formations to be 10 feet wide and metalled 5 feet wide by 8 inches. This road lies nearly parallel with the coast line, from which it is distant about ten miles. The survey is not yet completed, but such grades are adopted as will admit of the road being widened hereafter for dray traffic if found necessary. As a preliminary to the actual survey, a line is now being blazed by men well acquainted with the country, and twenty miles of this work is now done. One contract for work has been let, 7 miles 15 chains long, from Bowen to Waitaha, and on this the following work has been executed, viz.,—126 chains clearing, 86 chains of forming, 65 chains of metalling.

Two surveyors are now employed on the survey, one working towards Okarito from the Waitaha River to the Wanganui River, and the other towards Bowen from the Okarito to the Wataroa River. The road from Okarito to Lake Mapouriki has also been surveyed, and is 8 miles 73·67 chains long. This will be formed 12 feet wide, and metalled 8 feet wide and 8 inches thick, and tenders are called for the work in two sections, 201 chains and 197 chains respectively; in each of these one bridge is included.

Hokitika to Blue Spur.—Four miles 46·50 chains. This road commences at the east of Hokitika, passing the Hau Hau diggings and extending to the Blue Spur township. It will probably in future form part of the road from Hokitika to Christchurch as being shorter than by way of the Arahura Bridge. It will be formed 12½ feet wide, and metalled 8 feet wide and 8 inches thick, and there will be 85 feet of bridging over tail races, one lattice truss bridge, one plain bridge, one level crossing, nine dams for creek diversions, and twenty-six turn-outs. The work has been divided into two contracts, one of 146½ chains, and one of 220 chains. The first is nearly completed, and comprises 146½ chains of clearing, 4,625 cubic yards earthwork, 52 chains of drains, 78 lineal feet culvert covering, fourteen box-drains, 146½ chains metalling, thirteen turn-outs.

Branch Roads: South Creek Road.—Thirty-seven chains. Formed and metalled as main roads, and maintained by the General Government up till 1st April, 1874, and then transferred to the Provincial Government.

Kanieri Forks to Lake.—Four miles 53·87 chains. To be formed 10 feet wide, with metal 5 feet wide and 8 inches thick, and with grades suitable for dray road if necessary. A contract was let on 2nd June, 1874, for construction; it includes thirteen creek crossings, fords, and one bridge 41 feet long.

Pounamu to Lake Brunner.—Eight miles 37·68 chains. To be formed 10 feet, with metal 5 feet wide and 8 inches thick. Has been surveyed with grades suitable for dray road, and divided into two contracts for construction, one of 4 miles 34 chains, and one of 4 miles 3·68 chains; the first being let on 3rd June, and the second under tender. There will be twenty-five level creek crossings on this road.

Marsden to Maori Creek.—Five miles 50·65 chains. This was originally opened by the county authorities; but it being found desirable to widen and improve it, contracts were let for the work on 26th November, 1873, in two sections, 223·30 chains and 227·38 chains respectively; it has been formed 12½ feet wide, and metalled 8 feet wide and 8 inches thick, the work being completed in May, 1874. The work comprises the following, viz.,—450 chains clearing, 450 chains forming and widening, 450 chains metalling, 16 chains side drains, eight box drains, 40 lineal feet culvert covering, twenty turn-outs, and two fords. A heavy slip fell just after completion, which is now being removed, and the road when this is done will be handed over to the province.

Stillwater to Maori Gully.—Six miles 15·47 chains. To be formed and metalled like the last, but it has been laid off with grades suitable for a dray road, if necessary. The work has been let in two contracts, one 222·30 chains, and one 273·27 chains, and work on these has been done to the extent of 466 chains clearing, 420 chains of forming, 250 chains of metalling, and 30 lineal feet of culvert covering.

Marsden to Paroa, connecting road.—Seventy-seven chains in length. This lies within the borough of Greymouth, and connects the Greymouth to Marsden and Marsden to Paroa roads. It has been formed 15 feet wide and metalled 10 feet wide by 12 inches thick, the work being done by contract and completed in April, 1874, after which it was handed over to the Provincial Government. The work consists of 76·61 chains clearing, forming, and metalling; 100 cubic yards cutting, 2,238 cubic yards embankment, 57 chains side drains, five box drains, 40 lineal feet of culvert covering, two turn-outs, three race diversions, one syphon, one creek diversion.

Bridges: Totara Dray Bridge, on the Kanieri to Ross Road.—This is a wooden bridge in three spans of 50 feet each, trussed, and its erection necessitated the construction of 3·75 chains of road deviation. Work completed in October, 1873.

Greenstone and Blackwater Bridges, Dray.—These are respectively 88 feet long and 62 feet long, each in one span, trussed, over the rivers of the same names on the Hohonu and Marsden Road. The former is strengthened by two galvanized wire ropes, and a breakwater 3 feet high and 3 chains long was built to prevent the Greenstone Creek running in time of flood into the Blackwater. The approaches consist of 23·50 chains of road diversion, and the whole of the work was completed in January, 1874.

Kanieri Bridge, Dray.—This is a plain bridge, 142 feet long, in four spans, over the Kanieri River, on Kokotahi Road. The approaches consist of 4·50 chains of road diversion, and the work was completed in May, 1874.

Waimea Bridge, Dray.—This is also a plain bridge, 113 feet long, in four spans over the Waimea Creek, near Big Dam. Tenders for its construction have been called for.

Nearly all the roads above described are reported to be in a good state for traffic, the exceptions being from Greymouth to Omotomoto, and Greymouth to Marsden, which are described as being only in a moderate state of repair; the state of the former being accounted for by the proximity of the Brunner Railway works, and that of the latter by the heavy traffic which ensued immediately on its being completed, and before the work was consolidated.

ROADS, NELSON SOUTH-WEST GOLD FIELDS.

(A. D. Dobson in charge.)

Arnould to Ahaura Dray Road.—During this year a length of 6 miles 6 chains has been completed, comprising sections 2, 5, and 6, and making a total of 12 miles 43 chains. This completes the dray-road from Greymouth to the Ahaura, and since being opened it has been kept in first-class condition for traffic.

Westport to Nine-Mile Creek, Dray Road.—This forms part of the main line of road up the Buller River, and has been completed for a distance of six miles thirty-eight chains, including felling and clearing, forming and metalling, and the erection of a bridge 120 feet long in 30-feet spans.

Dray Road, Christie's to Hughie's.—This is about seven miles long and forms another portion of the main Buller Road, commencing at the junction of the Inangahua, and proceeding down the river. A length of about four miles of this is formed, and is being metalled.

Buller Main Road.—Below the last described section, the bush has been felled a chain wide along the old horse road, preparatory for further improvements, over a length of twenty-four miles.

Amuri Stock Road.—This lies in the valley of the Ahaura, and the following works, which comprise the most difficult portions of the road, have been completed this year, viz.,—One mile and seventy chains at Starvation Point; two miles and forty-six chains at Ahaura Saddle, consisting chiefly of rocky side cuttings.

The totals of the work for the year are as follows, viz.,—

Dray roads formed and metalled, twelve miles forty-four chains.
Ditto in progress, seven miles.
Horse roads completed, formed, and metalled, six miles twenty-three chains.
Ditto improved over thirty miles.

Surveys.—Amuri Stock Road, from Matthews' to the Saddle, forty miles survey completed.

The totals of all works done in this district under The "Public Works Act, 1870," are as follows, viz.,—

Dray roads completed, formed, and metalled, forty-nine miles thirty-six chains.
Ditto improved, nine miles.
Ditto in progress, seven miles.
Horse roads completed, formed, and metalled, six miles twenty-three chains.
Ditto improved, thirty miles.
Roads surveyed, ninety-seven miles forty chains.

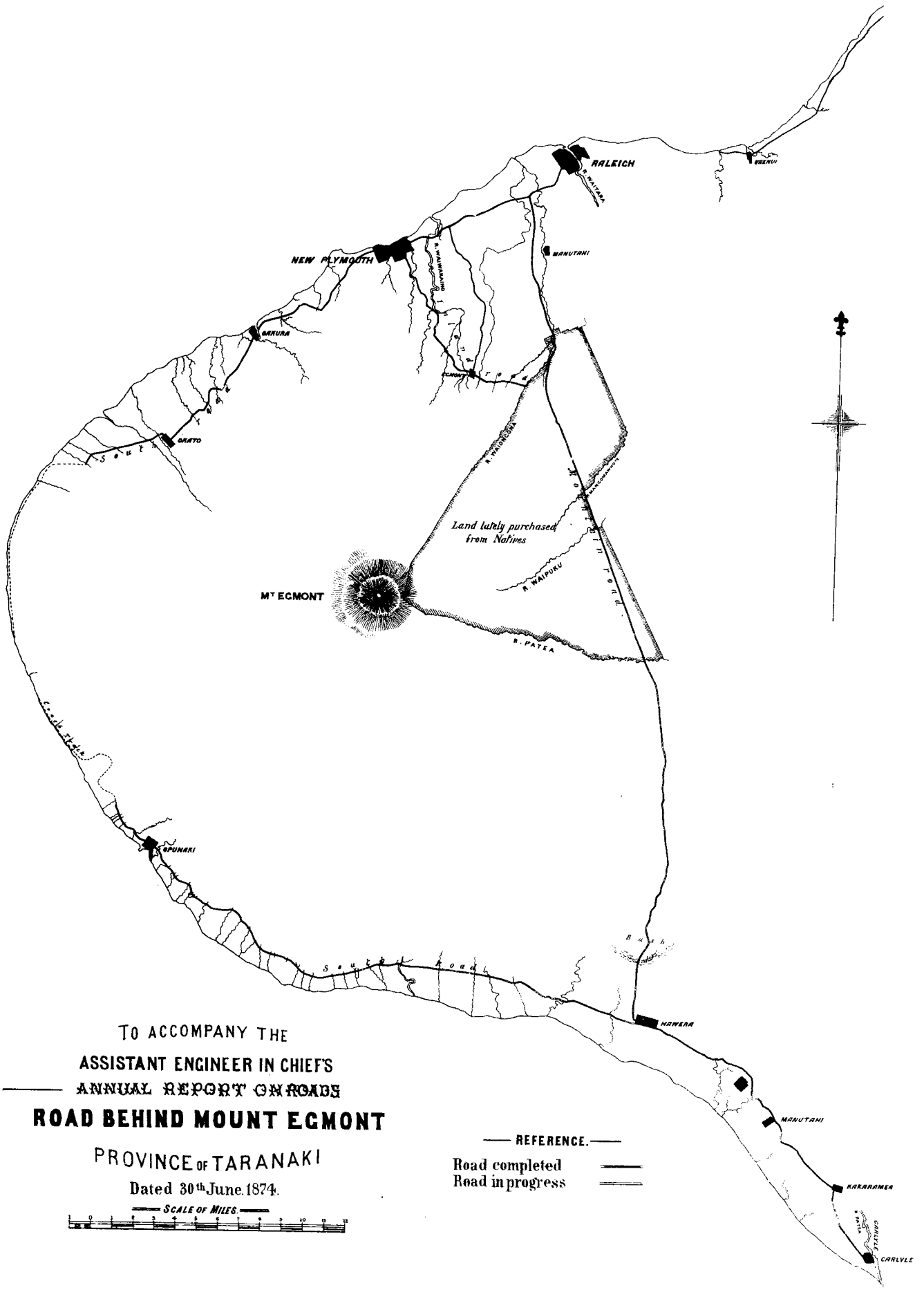
The details of all these roads were given in last year's report. The roads, when completed, are, in most cases, maintained in good order for six months, and then handed over to the Provincial Government.

The total cost up to date has been £50,800 17s. 6d.

Attached to this report are three maps, showing respectively, the road behind Mount Egmont, the road from Opaki to the Manawatu Gorge, and the roads lately authorized in Westland.

I have, &c.,

The Hon. Minister of Public Works. John Blackett.



TO ACCOMPANY THE

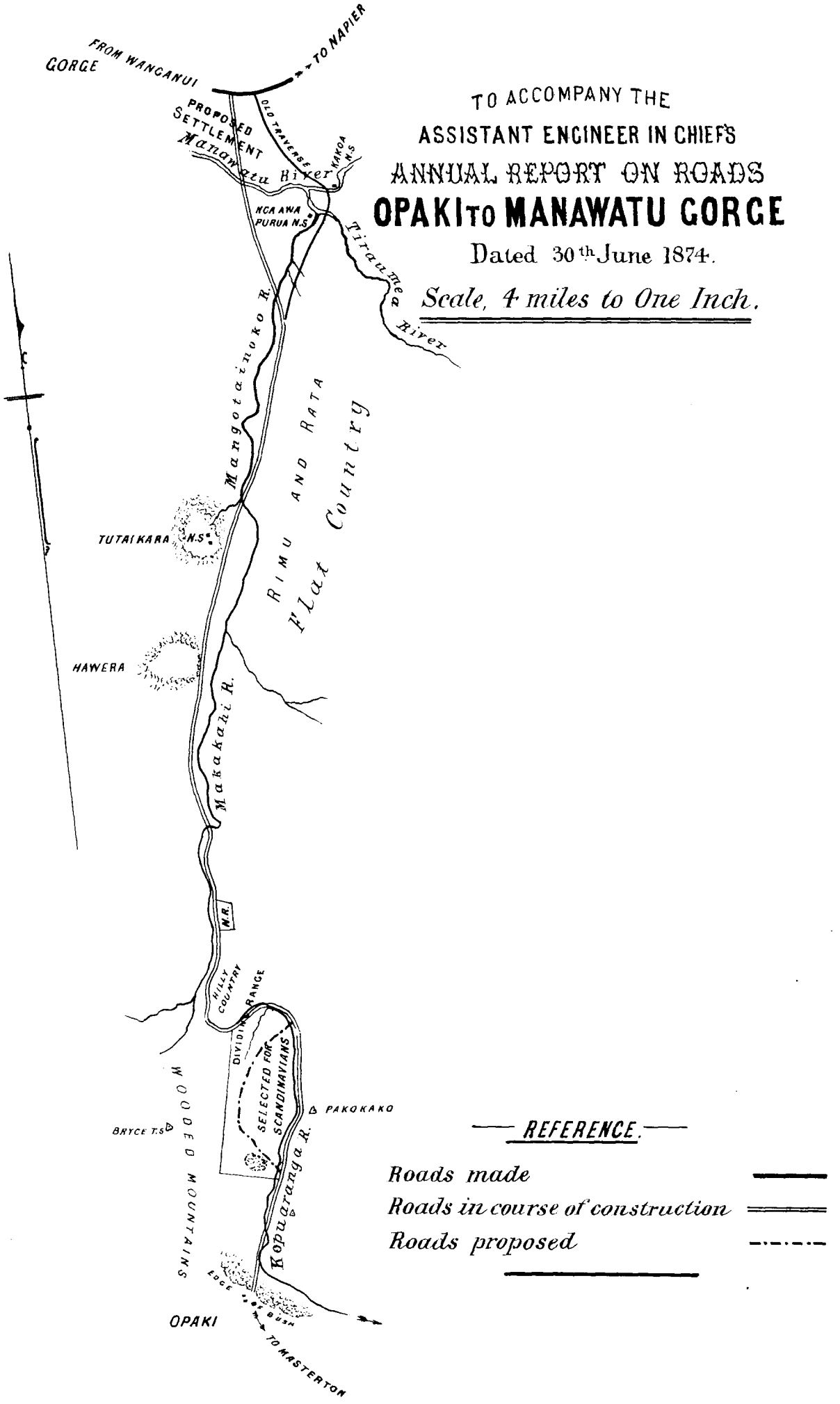
ASSISTANT ENGINEER IN CHIEF'S

ANNUAL REPORT ON ROADS

ROAD BEHIND MOUNT EGMONT

PROVINCE OF TARANAKI

Dated 30th June. 1874.



TO ACCOMPANY THE

ASSISTANT ENGINEER IN CHIEF'S

ANNUAL REPORT ON ROADS

OPAKI TO MANAWATU GORGE

Dated 30th June 1874.

Scale, 4 miles to One Inch.

— *REFERENCE.* —

Roads made ——

Roads in course of construction ═══

Roads proposed -·-·-·-

TO ACCOMPANY THE
ASSISTANT ENGINEER IN CHIEF'S
ANNUAL REPORT ON ROADS
PROVINCE OF WESTLAND
Dated 30th June 1874.

SCALE OF MILES.

1 M. 0 1 2 3 4 5 6 7 8 9 10 Miles

REFERENCE.

Road completed
Road in progress

APPENDIX C.

REPORT ON THE RIVERHEAD AND AUCKLAND RAILWAY BY THE ENGINEER-IN-CHIEF,

MADE IN COMPLIANCE WITH SECTION 16 OF "THE RAILWAYS ACT, 1872."

The Engineer-in-Chief to the Hon. the Minister for Public Works.

Sir,— Public Works Office, Wellington, 13th April, 1874.

This line is 22 miles 47 chains long, and unfavourable as to gradients and alignments, the steepest gradient being 1 in 35, and the sharpest curve has a radius of 5 chains. It is intended to connect the railway already made between Kaipara and Riverhead with Auckland.

The latter railway was undertaken by the Province of Auckland in order to open up the country on the West Coast of the province, by giving communication between the head of navigation in the Kaipara River, which flows into Kaipara Harbour, and the corresponding point in the Waitemata River, which flows into Auckland Harbour. The country lying between these points, and through which the Kaipara and Riverhead Railway runs, is not, for the most part, suitable for agriculture, as it consists of a barren white clay which was formerly covered with a kauri forest, as evidenced by the kauri gum still embedded in the soil; the line will therefore have to depend almost entirely on through traffic from the West Coast, which must be small until the country becomes more thickly settled than it is at present; in fact, the Kaipara Railway may be said to have been built rather to develop a trade than to accommodate one already existing. The same may be said of its extension to Auckland. It will give the settlers on the West Coast better communication with Auckland than the Kaipara Railway alone would do; but the traffic over it will be small until the Kaipara country becomes settled.

The principal traffic with the West Coast will, for the present, be in timber; but as there is a long navigation up the Kaipara River, which can only be carried on advantageously in small vessels, it is not likely that any timber will be sent over it except what is required for use in the town of Auckland The main export will be by sea, as at present.

Between Riverhead and Auckland the country is generally of the same barren character as between Riverhead and Kaipara, but there is some good land at the foot of the Waitakere Range, which is settled; the area is, however, relatively to the length of the line, very small. The few mills and manufacturing establishments along the line are placed either near Auckland, or else in positions which give them easy water carriage, so that very little revenue can be expected from them.

On the whole, I do not think either the Kaipara Railway or the extension of it to Auckland will pay working expenses; but the former having been already made, its usefulness will be increased by the construction of the latter.

The curves and gradients on the Kaipara Railway are still less favourable than on the extension, there being gradients of 1 in 33.

I have, &c.,
John Carruthers,
Engineer-in-Chief.

The Hon. the Minister for Public Works, Wellington.

APPENDIX D.

REPORTS ON VARIOUS WORKS BY THE ENGINEER-IN-CHIEF.

No. 1.

REPORT ON SURVEY BETWEEN HOKITIKA AND MALVERN.

The Engineer-in-Chief to the Hon. the Minister for Public Works.

Sir,— Public Works Office, Wellington, 20th April, 1874.

I have the honor to enclose Mr. Browning's report on the line of which he has made a reconnaisance survey for a railway from Hokitika to Malvern *via* Browning's Pass, at the head waters of the Arahura and Rakaia Rivers. From this report, and from information received *vivâ voce* from Mr. Browning, I am enabled to lay before you the following statement:—

The line leaving Hokitika would get into the valley of the Arahura either near the Kaukaka or by the Kokatahi to the south of Lake Kanieri, either line being tolerably favourable. This first section is 20 miles long. Then follows a length along the Arahura, 9 miles long, of rough country, to the junction with the Arahura of Keig's Creek, at the 29th mile. The height of the junction of Keig's Creek is 1,765 feet above sea level, and from this point to the summit Mr. Browning has taken barometric levels. The next length of 4 miles comes to Griffith's Creek at the 33rd mile, the height of which is 2,123 feet above sea level, showing an average gradient for this section of 1 in 56. The country is not unfavourable. From Griffith's Creek to the entrance to the tunnel at 36th mile, a distance of 3 miles, the country rises at a slope of about 1 in 15, and it would be necessary to make the railway follow the slope of the country, as the hill sides are too rough to allow a uniform gradient to be adopted. A centre rail would therefore be required for the three miles. Following in this way the slope of the country, it will not be expensive to make a railway over this section, but snow sheds will be required in parts. Then comes the tunnel, 3,400 yards long (or 1 mile 70 chains),—for the greater part through clay-slate. The mouth of the tunnel is 3,300, and the pass 4,767 feet above sea level. From the end of the tunnel to the Sebastopol Bluff at the 45th mile, a distance of 7 miles, the railway would have to follow the general slope of the valley, which is about 1 in 20 for the first mile, and 1 in 46 for the rest of the way. The height of the Wilberforce is 2,335 feet above sea level. A further distance of 36 miles—making in all 81 miles from Hokitika—brings us to the end of the Malvern Coal Railway.

The following figures will give an approximate idea of the cost of the line. It is of course little more than a guess, founded on Mr. Browning's description of the country, and is only intended to enable you to decide whether it is desirable to have further surveys made or not.

	£
From Hokitika to Twenty-Mile	100,000
„ Twenty-Mile to Griffith's Creek	92,000
„ Griffith's Creek to Sebastopol Bluff	246,000
„ Sebastopol Bluff to White Cliff	282,000
	£720,000
Contingencies 12½ per cent.	90,000
	£810,000

I have, &c.,
John Carruthers,
Engineer-in-Chief.

The Hon. the Minister for Public Works.

P.S.—A map is attached, showing the direction of line.

Enclosure.

REPORT ON TUNNEL LINE, BROWNING'S PASS.

Sir,— Hokitika, 31st March, 1874.

In pursuance of your instructions (P.W. 73-4106, No. 1917), "to ascertain if it be practicable to make a railway between Hokitika, Westland; and Malvern, Canterbury; at a moderate cost," I left Hokitika on December 8th, 1873, with a party of three men, and proceeded up the River Styx.

On examination of this valley I found the formation of the country, consisting of drift terraces, was in every part of such a loose nature as to render constructive works impracticable, unless at an almost fabulous cost, and in consequence proceeded to the valley of the Arahura River, leading directly up to the Pass.

As the country is not at present used for traffic, I found, in order to keep open communication, and for more economically obtaining supplies, it was necessary to clear out and make good the pack track which had been constructed seven years since up the Styx Valley, but which was quite grown up;

and I did not reach the Pass until January 8th, the work being greatly delayed by rain and consequent freshes.

Considering it most advisable to act on your suggestion "that the main difficulty would probably be found at the summit, where the chain of the Alps is passed," I proceeded at once to survey that part, and now submit to you a description of the locality, to facilitate your judgment of the results arrived at.

The so-called face of the Pass consists on the north of a perpendicular face of rock, very broken and irregular, about 600 feet in height, at the head of the Arahura Valley, which at that point is not more than 100 feet in width. A stream descending from the lake on the top of the Pass, and fed by the Mount Harman Range, falls over and between broken ledges of clay-slate, and sandstone rock, forming a junction with a large creek, flowing south-westerly through an immense chasm extending to the foot of the "Twin Peaks," a lofty mountain on the southward. The sides of this gorge rise nearly vertically to a height of 700 feet; the width is from 20 to 25 chains, and is separated from the eastern watershed by a narrow saddle, at an elevation of 5,300 feet above the sea. The section exposed on the north side and at its head, consists of slate with irregular bands of sandstone rock, dipping towards W. by N. about 75°, while on the Pass side the strata are vertical or else much contorted. On looking for the cause of this difference, I found that while the strata of the Twin Peak Range preserved the same dip generally, and, coming from the westward, struck across the south face of the Pass, that on the Mount Harman Range continued only to the western side of that hill, where a narrow belt of vertical strata shows itself, rising on a high peak marked on plan as Mount Axis, on the eastern side of which the strata of Mount Harman dip, about 70° E. by S. This line of vertical strata extends through the low ridge on the north side of the Pass, becoming more and more contorted towards the head of the chasm mentioned, where it is crossed by the strata of the Twin Peak Range.

The effect of this disturbance has been to render the rocks of which the Pass is composed so dislocated and full of joints, crossing in every direction, that the disintegration which takes place in this locality is immense. I append two sections—one on the line of the Mount Harman Range, the other on a line from Mount Axis to saddle at head of Great Chasm.

Although the narrow face at the north side of the Pass would appear to offer some facility for the mouth of a line of tunnel, the junction of the stream flowing from the Twin Peaks renders it impracticable on account of the immense quantity of snow which, collecting in the gorge of that stream in the winter, melts in the spring, bringing down avalanches of a large size.

For about 50 chains northerly, down the Arahura, the valley is only from 150 to 300 feet across, with high and steep faces at the foot of the spurs on each side; it then opens out, the sides on the right being nearly vertical, while on the left the spurs run up from the river bed at a general inclination of 8° or 10° to the foot of the steeper slopes of the range.

A 10-feet track, constructed nearly eight years ago along this side, is in good repair, except at the gully crossings, where but little work was originally attempted. The hill sides consist of yellow clay, containing boulders, small stones, and laminæ of slate and flaggy sandstone, with a surface soil of decayed vegetation of from 12 to 18 inches in depth, covered with alpine scrub, interspersed with Kawhaka, timber growing in many places to a fair size.

The south side of the Pass consists of a bold and steep face, extending from the Twin Peak Range on the westward to the Mount Harman Range on the eastward, in a continuous line for one mile and three-quarters. From its summit to about 800 feet, the rocks are very steep, and at its foot a talus has accumulated reaching to the river bed, which is 1,400 feet below, at a distance of only 40 chains from summit edge.

The only point available on this (Canterbury) side for constructive works is at a spot near the junction of the two streams forming the head waters of the Wilberforce branch of the Rakaia River. The talus here rests on a substratum of yellow clay, containing boulders, gravel, and laminæ of slate and sandstone, which rises to a height of 90 feet above the river bed, and is the only part on this side not liable to be swept by the *débris* brought down from the summit, the rocks of which are clay slates and sandstone, with felspar, in a high state of segregation—blue slates preponderating—the whole shattered to such an extent that large masses are brought down on the melting of the winter snows.

Finding the level on the Canterbury side thus fixed, I proceeded to collect data sufficient to enable me to run a line of direction across the Pass, and, on levelling, found that at the corresponding point on the Westland side a tunnel would run out about 30 chains below the north face in the narrow part of the valley before described, and immediately above a large slip on the hill side.

From previous observations at various seasons, and applying them now to the question of a railway line in this locality, I am of opinion that the valley for a distance of 50 chains from the north face will be subject to snow slips, more especially on the left-hand side where this outlet would be, owing to the steep face (rising at an angle of 44°) lying immediately under the upper slopes of the hills.

Assuming that in a long tunnel in a locality such as this a curve would be injudicious, I find that at the angle of intersection of the valley with tunnel line, the length of tangent to a curve of even a 10-chain radius would be 5·47 links, while the greatest distance obtainable from face of tunnel to the river bed would not be more than 300 links.

On the Canterbury side, owing to the more favourable angle made by the tunnel line and the greater width of the valley, there would be no great difficulty in getting away.

The next highest available point on the Westland side for the outlet of a tunnel is about 30 chains lower down the Arahura, in the more open part of the valley previously described; and on running line No. 2 for the purpose of obtaining a section, and checking the general accuracy of the work, I found that a point on the same level as that on the Canterbury side would be at such a height as to render it impracticable to construct any works except at an enormous expense, the gradient at the upper portion of this valley for the first three miles being exceedingly steep. Other circumstances being favourable, this probably might be overcome by a series of inclines traversing the left side,—which is of a formidable nature; but the increased cost of bridges and other works would be immense, and on account of the high elevation of the district above the sea, the depth of snow in winter would probably entail a considerable length of snow sheds.

Having ascertained these particulars, I considered them of so serious a nature, as affecting the construction of the work proposed, that I deemed it advisable to submit them for your consideration at once, and returned to Hokitika on the 16th March, discharging the hands.

I have the honor to forward the following plans, &c. :—

No. 1. Detailed Survey of Pass. 6 chains to an inch.
No. 2. Section of Pass on traverse lines. 6 chains to an inch.
No. 3. Section on line No. 2. 6 chains to an inch.
No. 4. Part section on line No. 1. 6 chains to an inch.
„ Reconnaissance Survey of Pass and adjacent valleys. 1 mile to inch.
„ Section of same.
„ Section of Mount Harman Range.
„ Section of Mount Axis to Twin Peak Saddle.
No. 5. Data (tabulated) connected with survey.

Awaiting further instructions,

I have, &c.,
JNO. S. BROWNING.

No. 2.

REPORT ON RAILWAY LINE FROM NEWCASTLE, SOUTHWARDS.

The ENGINEER-IN-CHIEF to the Hon. the MINISTER for PUBLIC WORKS.

SIR,— Public Works Office, Wellington, 30th June, 1874.

I have the honor to submit the following report on a journey made from Auckland to Wanganui, in March, with the view of ascertaining as far as possible, "The direction which the line of railway shall take after crossing the Waikato River."

Mr. James Mackay kindly accompanied me as far as Taupo, and Captain Turner, District Engineer, as far as Rakatipauna, where he left me to make an independent reconnaisance towards Napier, on which he has reported, and a copy of his report is attached.

The right direction for a railway to connect the north and south ends of the North Island, is well defined as far southwards from Auckland as Newcastle, where the Waipa River falls into the Waikato, and a railway to this point is now under construction.

From Newcastle southwards two lines are available, one ascending the Waikato, the other the Waipa.

My line of march followed the Waikato River to Lake Taupo, by the route selected by Messrs. Mackay and Edgar for a railway, and thence to the head of the Waikato, at the foot of Ruapehu; then down the Wangaehu and Turakina Valleys to the coast.

LINE *via* WAIKATO RIVER. (LINE A.)

The line from Newcastle follows the Valley of the Waikato pretty closely to Taupo, except where, to avoid a bend in the river, a short cut has been taken, ascending the Little Waipa or the Pokaiwhenua Rivers as may, under survey, prove to be more favourable, and again descending to the Waikato through the Whakamaru Range, either by Turner's or Mackay's Pass. The advisability of making this short cut is perhaps doubtful, as heavy gradients will be required, and some heavy work. The saving in distance is not easily ascertained, on account of the inaccuracy of the maps of the country; but it would probably be about ten miles.

Once back in the Waikato Valley, no difficulties of any moment occur up to Lake Taupo. The line then follows the east shore of the lake, close to the water. Protective works will be required for about two miles, but generally the line will not be expensive. At the south end of the lake a swamp near Tokano will be crossed, and the valley of the Southern Waikato will then be followed to its head. This valley is broad and even, but its inclination averages about 1 in 65 for 28 to 30 miles, and it is not likely that a railway line could be got with lighter gradients than 1 in 40. At the summit the level above the sea is about 3,500 feet, and there would be considerable trouble with snow in winter. From the summit the line would follow the Wangaehu Valley to near Rakatipauna.

Up to this point the direction of the line is fixed by the formation of the country; that is, if the Waikato River is followed at all, it must be followed to its source, and the Wangaehu Valley then followed for a few miles; but from near Rakatipauna southwards there would appear, from the accounts I received from the Maoris, to be a choice of lines, all unfortunately very difficult.

The country lying between the West Coast and the plains at the foot of Ruapehu is a wild mountainous region, densely wooded, through which the Rivers Wanganui, Wangaehu, Turakina, Rangitikei, and Manawatu break in a succession of gorges. A line following any one of these rivers would be very expensive. A glance at the map will show that the line *via* the Turakina River would give the shortest length of railway to be made in order to join the railway from Manawatu to Wanganui, and this would probably be also the cheapest, although it would be very costly indeed. A line from Rakatipauna, by way of the Hautapu, Orowa, and Pohangina Rivers, would be the shortest between Auckland and Wellington; and from information I have received from persons acquainted with those parts of the country which have been explored at all, I believe it will be found to be practicable.

The total length of the line from Newcastle to the junction with the Manawatu and Wanganui Railway at Turakina would be about 220 miles, of which forty miles would be very costly and the rest not above the average cost of New Zealand lines. If carried to Manawatu *via* the Pohangina, the length to be constructed would be ten miles longer, but a saving of about twenty-five miles in the total distance to Wellington would be made.

A very great drawback to this line is the height of the summit, 3,500 feet above sea level, over which the whole of the through traffic would have to be carried.

Mr. Mackay considered it undesirable to cross to the west bank of the Waikato, and I had very little opportunity of forming an opinion as to the suitability of the country for making a railway through it; but I believe a shorter line (as shown dotted on map) could be got by keeping to the west of Lake Taupo, which would have the advantage of easier gradients than the line we followed.

LINES *via* WAIPA RIVER.

This line would pass through what is now an almost unknown country, and I can only speak of it at second hand from the reports of persons who travelled through it some years ago, and whose attention was not specially directed to the question of making a railway.

Via Wanganui River (*Line B*).—There appears to be no difficulty whatever in reaching the head waters of the Waipa River; and the summit dividing its waters from those of the Mokau is, from all accounts, neither high nor broken. There seems also to be a low dividing ridge between the Waipa and the Wanganui Rivers, by which a line could probably be brought on the west of Taupo and Ruapehu to Rakatipauna, and thence, as on the Waikato line, by the Turakina. This would be a much shorter line than that *via* the Waikato (Line A), but would pass over the same high summit. If the line could be carried down the Wanganui, a great reduction of the summit level would be effected. I was informed that as far southwards as Ranana (London) the Wanganui Valley is not very rough, but that from Ranana to near Wanganui it is a continuous gorge.

Via Mokau River (*Line C*).—The country lying between Mokau River and the sea consists of limestone ranges, and is very broken and mountainous: on the east of the river it is more favourable. There would seem to be a few miles from the mouth of the river which would be very difficult, but this is described as only a few hours' journey, by canoe, in length. The rest of the distance to the Waipa is described as open and pretty level. From the mouth of the Mokau to Waitara, where the system of southern railways would be joined, some serious difficulties would be met, but the line would, on the whole, be a very much better one than that *via* the Waikato. It would require about a hundred miles less of new railway, and the summit level would be much lower. The total distance between Wellington and Auckland by this line would be about thirty miles longer than by that *via* the Waikato.

Line D.—There is still another line by which the southern and northern railway systems may perhaps be connected, viz., by a line parallel to the coast at Taranaki, and between it and the Wanganui River. It is believed that there is here a level stretch of country extending from Mount Egmont to the head waters of the Wanganui, Mokau, and Waipa, but I have no authentic information on the subject.

LINE *via* NAPIER.

As I heard a good deal, from the Maoris and others, of the possibility of getting a line from Rakatipauna to Napier, I requested Captain Turner to go that way and examine it, and at the same time to collect information as to the possibility of getting to the Manawatu Gorge by the Rangitikei and Pohangina Rivers. His report, enclosed, shows that a line by Napier is not practicable.

SUMMARY.

In conclusion, it may be stated, firstly, that a railway might be constructed *via* the Waikato and Turakina Rivers, by which the northern and southern railway systems of the North Island would be joined at a not unreasonable average cost per mile, although it would be unfavourable for working, on account of the height of the summit level and the steep gradients which would be required. Secondly, that if the country on the West Coast were open for survey, a much better line would in all probability be found either by the Mokau River or by the level country supposed to exist between the Wanganui River and the Taranaki coast. This line would require about a hundred miles less of new railway beyond that which it is intended in any case to construct, than the Waikato line, but would lengthen the distance between Wellington and Auckland by about thirty miles.

A map is attached, showing the different lines described.

I have, &c.,
JOHN CARRUTHERS,
Engineer-in-Chief.

Enclosure in No. 2.

Mr. A. C. TURNER to the ENGINEER-IN-CHIEF.

SIR,— Napier, 23rd March, 1874.

I have the honor to inform you that, in accordance with your instructions, I, on the 17th instant, proceeded to examine the country lying between the sources of the Rivers Wangaehu, Rangitikei, Taruarau, and Ngaruroro, known as the Patea District, with a view to ascertaining whether the pass between the Kaimanawa and Ruahine Ranges was practicable for a line of railway.

On reaching the valley of the Hautapu, I met Mr. Mackay, agent for the General Government, who had been delayed by floods between Tapuaeharuru and Tokano, and separated from our party. He joined me, and we proceeded together to examine the country above mentioned; at the same time we also directed our attention to that portion lying to the westward of Ruahine Range, between the Rangitikei, Oroua, and Pohangina Rivers, extending to the Manawatu Gorge, in case the pass between the Rangitikei and Ngaruroro should not be feasible, so as to give choice of another route.

I shall now proceed to report on the line of country travelled over by Mr. Mackay and myself.

Shortly after leaving Rakatipauna, the valley of the Hautapu (branch of the Rangitikei) is reached. This is practicable as far as the Native settlement known as Turangarere. Thence we crossed a comparatively low watershed between the Hautapu and Moawhango branches (branches of the Rangitikei), thence following a stream flowing to the Moawhango. On arriving at Moawhango we followed it to Te Rua Puhanga settlement. The country between Rakatipauna and Te Rua Puhanga is practicable, but would be rather expensive to construct a railway over. At the first glance at the sketch map herewith enclosed, it may appear that it would be easy to follow the valley of the Moa-

whango, and gradually rise to the level of the plateau lying between it and the Rangitikei River; but the hills in many places are very steep, often crowned with limestone cliffs, and are frequently cut up by lateral gullies generally 600 feet below the general level of the surrounding country.

With a view to surmount this obstacle, we endeavoured to find a feasible route between the points marked A and B on the sketch map, but this was found impracticable, partly from the rough character of the land on the banks of the Moawhango River, but principally from the steep descent to the Rangitikei River, which is about 800 feet in less than a mile. We next inspected the line traversed by Mr. Birch's road from the Rua Puhanga settlement to his woolshed at the Rangitikei River (marked C on the plan). The ascent from Rua Puhanga to Mr. Birch's station is about 500 feet; thence to the summit of the uplying plateau is 450 feet; thence there is a descent to the Rangitikei River at woolshed (marked C) of 740 feet. After crossing the river an ascent of 1,010 feet surmounts the highest point on the track between the Rangitikei and Taruarau Rivers. Shortly after this a descent of 960 feet has to be made to the Taruarau River. Between this point and the Ngaruroro River the country is very broken, and there is a descent of 600 feet to its bed, and on the opposite side an ascent of 450 feet. After this are further descents and ascents to and from the ridges between the branches of the Omahaki Stream, but these are of minor consideration. On arriving at Wharewhare there is but little difficulty in finding a good line to Napier. The distance between the Wangaehu and the practicable portion of the Ngarurou River is in a direct line about forty miles, and in my opinion it would be very difficult and expensive to make a railway through it. A dray-track can be made, but it would require a careful survey, and would be rather expensive at several points. With reference to the alternative line from Wangaehu crossing the Rangitikei and proceeding by the western side of the Ruahine Range to the Manawatu Gorge, we were not able to go over the country; but from a position from where we could see it, the principal difficulty appeared to be the broken limestone spurs between the heads of the streams falling from the main range into the Rangitikei and Oroua Rivers. South of the Oroua River the valley of the Pohangina seemed to offer some facilities; but this would require further exploration and survey before being able to form a correct opinion about it. From views obtained from the Kaimanawa Range, the most practicable line of country appeared to lie to the westward of our course, down either the valley of the Turakina, Wangaehu, or Wanganui. It certainly seemed much lower and less broken than that travelled by us.

I enclose herewith a sketch map showing the proposed line of railway from Lake Taupo to Rakatipauna. As the portion between Cambridge and the south end of Lake Taupo has already been shown on the map made by Mr. Mackay, and you have also inspected the country, I deem it unnecessary to take notice of that part, and have confined my report and sketch map to the district travelled over by Mr. Mackay and myself.

I have, &c.,

John Carruthers, Esq., C.E., Engineer-in-Chief, Wellington. A. C. Turner.

P.S.—I enclose rough sketch showing the relative position of the Rangitikei, Oroua, and Pohangina Rivers, on the western side of the Ruahine Range, and the line which it may be hereafter deemed necessary to explore.

No. 3.

REPORT ON THE OAMARU BREAKWATER.

The Engineer-in-Chief to the Hon. the Minister for Public Works.

Sir,— Public Works Office, Wellington, 14th July, 1874.

In accordance with your request that I should report on the present state of the Oamaru Breakwater, I have the honor to state that, although I examined the works closely when I was there, I took no measurements, and am therefore unable to report on the amount of work which has been done.

In October, 1871, before the work was begun, I had the honor to report to the Hon. the Minister for Public Works on the plans. It was at that time thought that enough shingle travelled round Cape Waonbrow from the south to render the breakwater unserviceable at a more or less distant date. I therefore carefully examined into this matter, and reported that I thought the beach to the south was stationary, and that "no shingle to speak of came from the south." Experience shows this opinion to have been correct. The contractors cannot now get any shingle from the south side of the breakwater, and it may be taken for granted that the works are perfectly safe from failure from this cause.

The breakwater is also designed of ample strength, and is being carried out in a manner highly creditable to the contractors and to all concerned in the supervision. As far as could be judged by what I saw, the work is being done as well as it is possible to do it. The cement used is of excellent quality, the concrete is well mixed, and the blocks are set in place in a very careful manner.

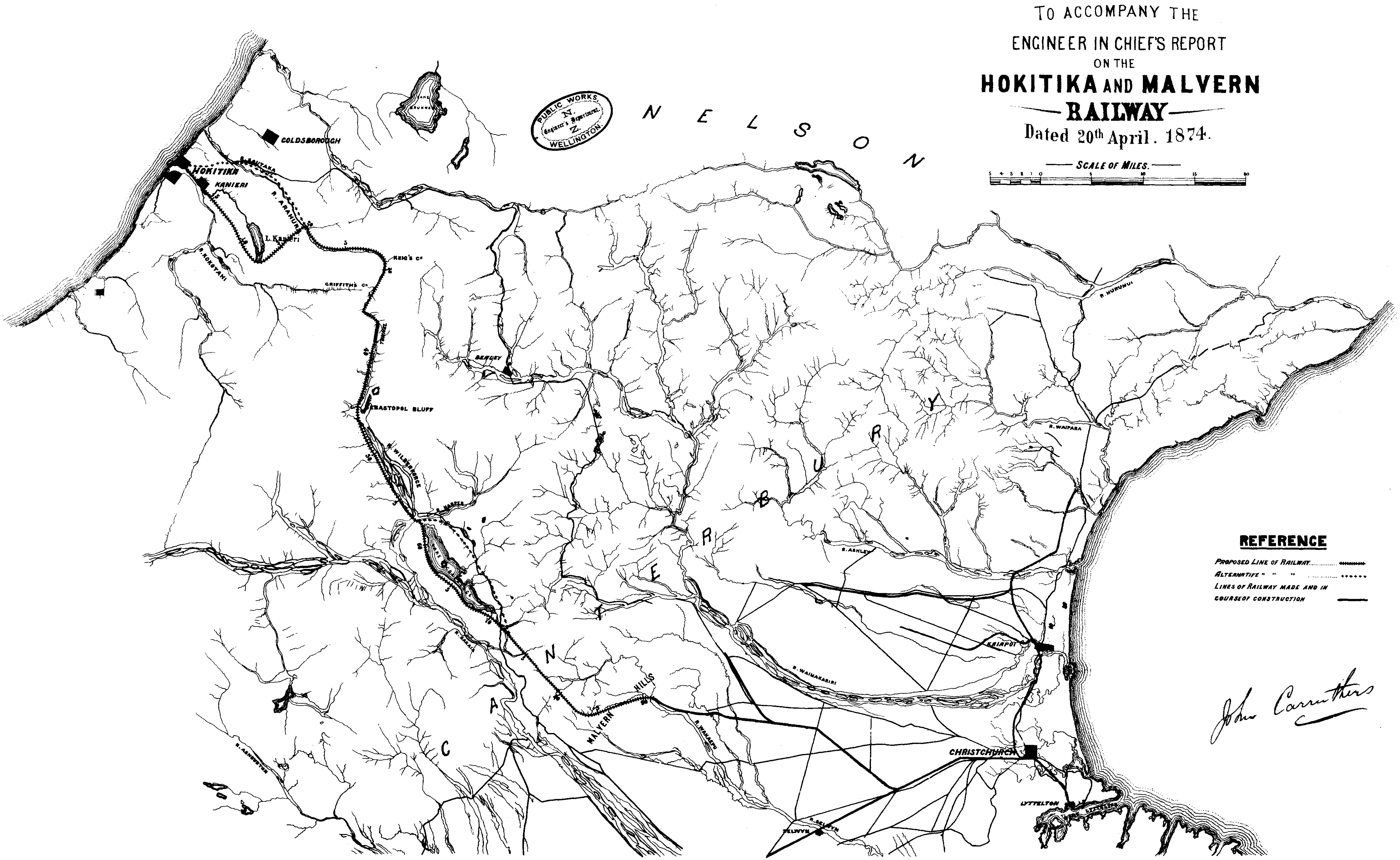
I have not in any respect changed the opinions I expressed in my former report—viz., that the present breakwater will much improve the harbour, but that eventually the northern pier will have to be built as well as the present one, on account of shingle from the north heaping up under the shelter of the southern pier. When this is done, the harbour will be protected from all winds, and will be a safe and useful work.

The rate of progress appears to me to have been slow; but I am not acquainted with the causes of delay, which have probably been unavoidable. With the magnificent plant now on the work, I have no doubt future progress will be more rapid.

I have, &c.,

John Carruthers,

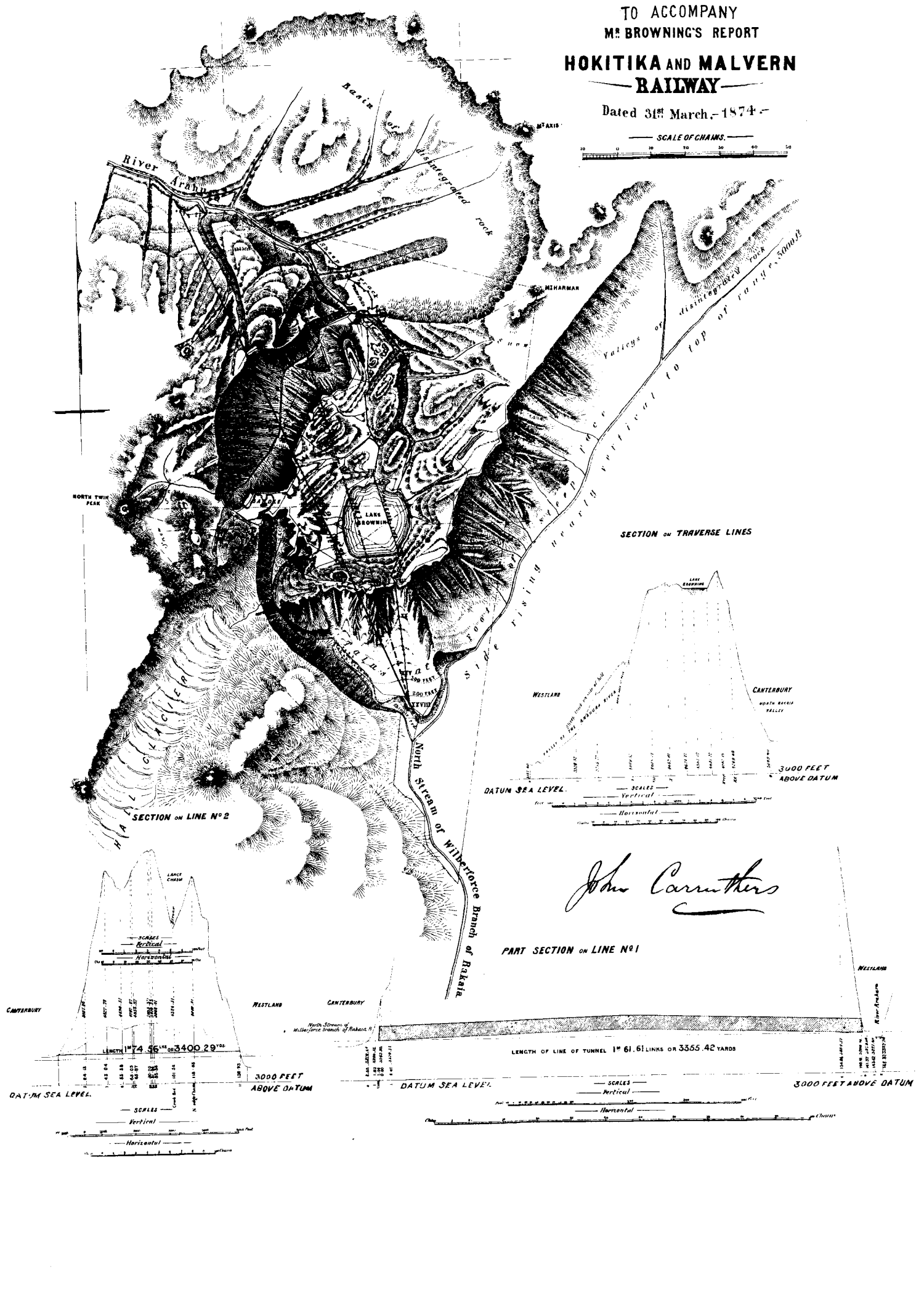
The Hon. the Minister for Public Works, Wellington. Engineer-in-Chief.


TO ACCOMPANY THE
ENGINEER IN CHIEF'S REPORT
ON THE
HOKITIKA AND MALVERN
RAILWAY
Dated 20th April. 1874.
SCALE OF MILES.
PUBLIC WORKS
N. Z.
Engineer's Department
WELLINGTON.
NELSON
CANTERBURY
REFERENCE
PROPOSED LINE OF RAILWAY
ALTERNATIVE " "
LINES OF RAILWAY MADE AND IN COURSE OF CONSTRUCTION
HOKITIKA
KANIERI
GOLDSBOROUGH
L. Kanieri
R. ARAHURA
R. KOKOTAHI
KEIG'S Cᴷ
GRIFFITHS Cᴷ
SEBASTOPOL BLUFF
R. WILBERFORCE
R. WAIPARA
R. HURUNUI
R. ASHLEY
R. WAIMAKARIRI
KAIAPOI
CHRISTCHURCH
LYTTELTON
R. SELWYN
SELWYN
MALVERN HILLS
R. ASHBURTON
John Carruthers

TO ACCOMPANY
Mr BROWNING'S REPORT

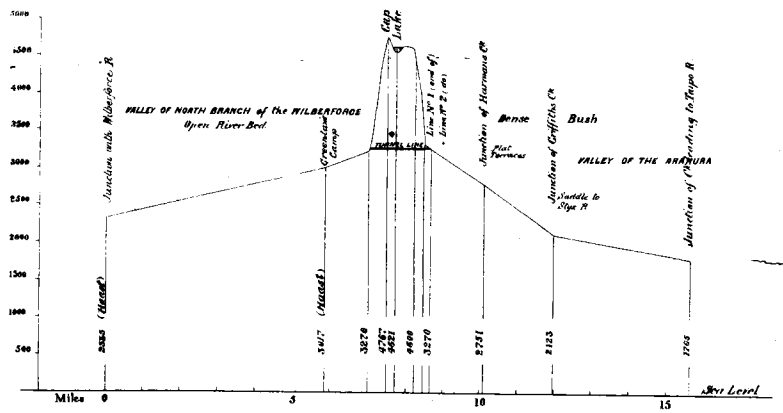
HOKITIKA AND MALVERN RAILWAY

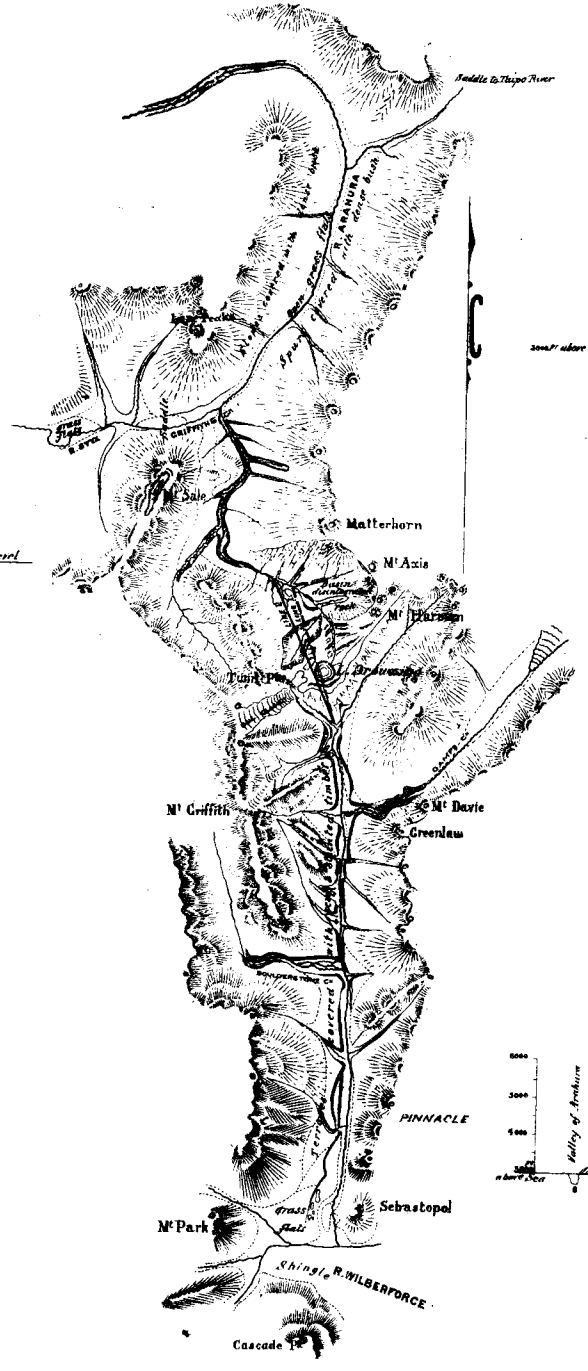
Dated 31st March, 1874.



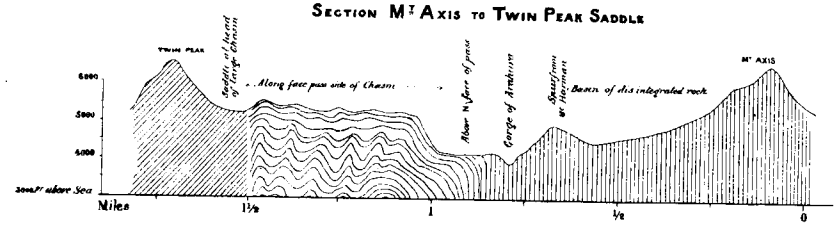
John Carruthers

SECTION OF NORTH RAKAIA PASS
and adjacent Valleys

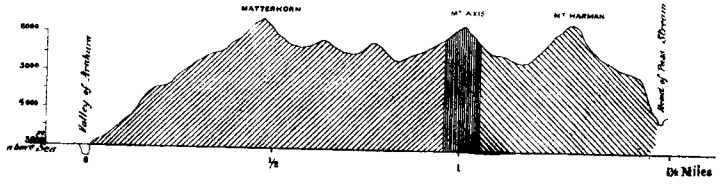




SECTION Mt AXIS TO TWIN PEAK SADDLE



SECTION OF Mt HARMAN RANGE



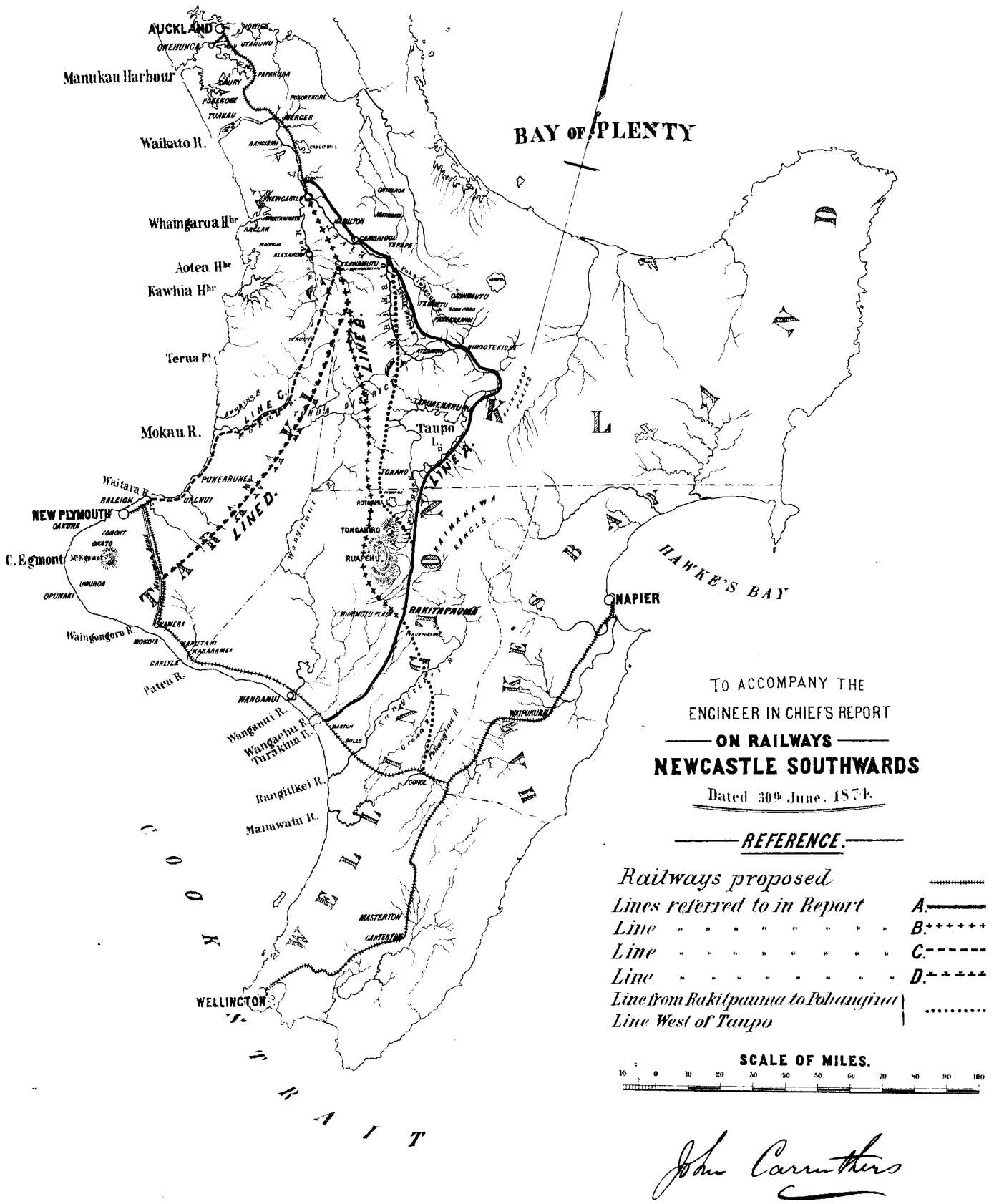
John Carruthers

TO ACCOMPANY
Mr BROWNING'S REPORT

HOKITIKA AND MALVERN RAILWAY

Dated 31st March,-1874.-

SCALE OF MILES.



TO ACCOMPANY THE
ENGINEER IN CHIEF'S REPORT
ON RAILWAYS
NEWCASTLE SOUTHWARDS
Dated 30th June. 1874.

REFERENCE.

Railways proposed	.....
Lines referred to in Report	A. ———
Line " " " " " " " "	B. +++++
Line " " " " " " " "	C. - - - - -
Line " " " " " " " "	D. — · — · —
Line from Rakitpauna to Pohangina	.....
Line West of Taupo	.....

SCALE OF MILES.
10 0 10 20 30 40 50 60 70 80 90 100

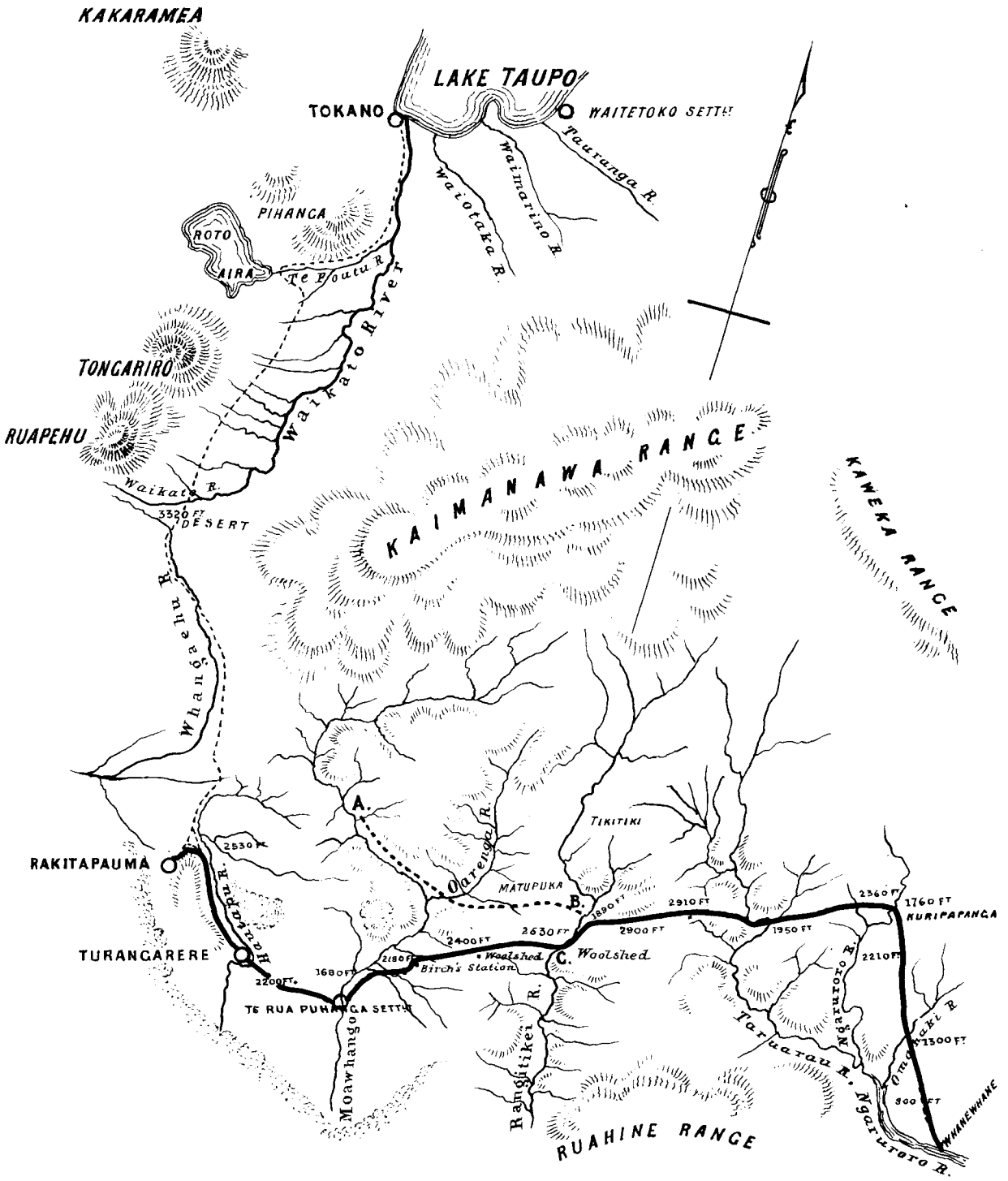
John Carruthers

ROUGH SKETCH ACCOMPANYING

CAPT.N TURNER'S REPORT ON

— RECONNAISSANCE FROM —

RAKITAPAUMA TO NAPIER.



— *Scale.- 8 miles to One Inch.* —

APPENDIX E.

REPORT ON THE COAL FIELDS OF NEW ZEALAND BY DR. HECTOR.

MEMORANDUM by Dr. HECTOR for the Hon. the MINISTER for PUBLIC WORKS.

I HAVE the honor to furnish, for your information, a brief abstract of the reports and correspondence relative to the development of Coal Fields during the past year.

J. HECTOR.

AUCKLAND.

Wangaroa.

THE exploration of the coal seams in the Kaeo district not having been effected for the reasons stated in my last report, a further grant of £200 was placed at the disposal of a Local Committee in October last.

On the 24th December, it was represented by the Committee that more favourable indications existed, in their opinion, close to Wangaroa Harbour, which they desired to explore; and in consequence, the grant was increased to £300, upon the understanding that both localities were to be explored.

On the 23rd May, the Chairman of the Committee reported as follows:—

"Hitherto our operations have not been attended with success, although the prospects continue to be encouraging, and the probability of ultimately finding a payable coal field in this district has been increased rather than diminished. We engaged, in February last, the services of Mr. Henworthy, a man who has had great experience in these matters, and placed in his hands the practical management of the operations to be carried out. A hole was put down on Bell's property, at a spot recommended by Dr. Hector, but when sunk to a depth of 65 feet—owing to continuous wet weather—it caved in and had to be abandoned. Another bore was commenced, and has reached a depth of 95 feet; but as the ground still continues to be of a very loose and yielding character, it has been found necessary to encase the hole with iron tubing throughout its whole depth. This is necessarily expensive work, and as we are anxious to expend our grant to the best advantage, it has been deemed advisable to delay further operations pending a visit of Dr. Hector, when the present hole may be continued or a fresh one commenced, as he recommends.

* * * * * * * * * * * *

"Efforts have been made to find coal in the Kaeo district, but hitherto without any successful result, although a reward has been offered for the discovery of a seam of coal there. The cost of the exploration referred to has not been ascertained."

The important results that would accrue from the discovery of coal in the vicinity of such an excellent harbour as Wangaroa, is the only reason for prosecuting the search, as the results obtained up to the present time have not been encouraging.

Kawa Kawa.

The borings formerly recommended, to prove the extent of this important coal field, have been carried out, under the direction of the Company, at an expenditure of £943 5s. 2d., and the result is stated in general terms to be favourable, but no details have been communicated to the department.

At Wangarei, Mangawai, and other localities in the north of Auckland, coal of moderately good quality has been discovered and reported on, but they await further examination before their value can be ascertained.

Coromandel.

Seams of coal have been long known to exist in this district, and samples from four localities were submitted to the Provincial Government, accompanied by the following memorandum by Mr. James Lowe, C.E.:—"The brown coal marked as from Kirita Bay is the only one of the samples which is valuable as fuel. That from Te Hunua Stream would be of valuable quality were it not for the large quantities of ash it contains, but the sample sent may have been exceptional in this respect." The analysis of these samples was included in the schedule attached to last year's report.

"*Te Hunua Stream.*—The outcrop of coal on Te Hunua Stream is about 1,200 yards from the junction of this stream with the Waiau River. The outcrop is exposed by a slip on the bank, and is about 20 feet above the bed of the stream, with a dip to the north-east of about 10°. This is a compact anhydrous coal, burns freely with a smoky flame, and does not cake. The seam at the outcrop is 2 feet 6 inches thick, with a bed of fireclay above and below the stream. From the formation and nature of the country, this is very likely to be a good workable coal.

"*Awakanae River.*—The outcrop of coal on the Awakanae River is about two miles from the beach. This outcrop is on the edge of the river, with a dip to the north-east of about 10°. This seam also crops out on a small stream lower down the river. The seam is composed of 12 inches of anthracite coal and 2 feet of shale, with a clay formation over and slate rock under the seam. There are several thin seams that crop out lower down the river. The coal burns slowly to a white ash.

"*Parawaha Creek.*—The outcrop of coal on Parawaha Creek, Manaia Harbour, is about 300 yards from the beach. The outcrop is at a fall on the creek, with a dip to the north-east of about 7°. The seam is 20 inches thick, and is an altered coal very much like charcoal, and burns to a red ash. The overlaying strata is a conglomerate of hard stone boulders.

"*Kirita Bay.*—The outcrop of coal in Kirita Bay is about 20 yards below high watermark. This seam of coal is thrown up by a greenstone or slate dyke, which runs across the bay with a dip to the north-east of about 45°. This is a glance coal, and burns freely, but does not cake. The seam at the outcrop is 12 inches, and thickens as it dips. The overlay on the beach is a conglomerate of sandstone boulders. This is very likely to be a good workable coal.

"On the Wairau River there is a mass of micaceous or shaly iron ore, with a face of about 100 feet to the river and 120 feet high, overlying the slate rock, which crops out at this point."

NELSON.

Collingwood.

The exploration of this important coal field has been continued, the principal work being the completion of the tunnel on the Collingwood Coal Company's leasehold. The progress of this work, and the circumstances which led to the substitution of an "uprise," instead of continuing the tunnel, as originally intended, and by which the whole thickness of the coal measures has been cut, is explained by the following extracts from my progress reports:—

12th January, 1874.

I have the honor to report that not having had an opportunity of inspecting the progress of the work at Collingwood on my last visit to Nelson, I obtained a statement on the subject from the legal manager, and also procured the weekly reports of the working manager, and from these made the following notes for your information:—

1. The tunnel is now 550 feet in length.
2. Owing to a change in the strike of the measures, it has been found necessary to alter the direction of the drive 20° from the straight course.
3. Three faults have been encountered, all of which have tended to shorten the distance which will have to be driven to reach the main coal seam.
4. On the other hand, the effect of the faults has been to flatten the dip of the strata, and also to cause the alteration of the strike above referred to.
5. Three groups of soft beds carrying coal seams have been cut in the tunnel, being A, B, and C, as shown in the accompanying section—

   A corresponds with the small seam exposed in the face of the fall half way up the shoot.

   B is not seen outside, unless it be the small seam with ironstone, mentioned in my report of 10th May last as cropping out in the gully by the foot of the ladder. No sign of B is, however, seen in the section exposed along the upper tramway, as it is cut out by a fault.

   C, which has been recently cut, contains over 4 feet of good coal, and, I am inclined to think, corresponds with the seam at the top of the shoot, in which case it shows a marked improvement.

Allowing for the flatter dip, I estimate that about 70 feet more will tap the chief group of coal and ironstone beds,—

   D, in which case the length of the tunnel will be only slightly in excess of the estimate given in my former report.

6. Having formerly reported that the excavation of the tunnel would be finished by Christmas, I now beg to state that the delay in the completion of the work beyond the time anticipated, is wholly due to the slow rate of progress, owing to closeness of the ground. The contractors tried the use of dynamite, but had to give it up on account of the poisonous nature of the vapour which it generated.

5th May, 1874.

I have the honor to forward two reports from the legal manager of the Collingwood Coal Mining Company, relative to the progress of the tunnel, in continuation of my letter of 12th January, 1874. It appears that, owing to a difference with the contractors, the driving of the tunnel was suspended on the 19th March at 600 feet, or 50 feet further than at the date of my last report. At that time I estimated that 70 feet would have to be driven before the soft band of strata underlying the coal seams would be reached. Instead of making a fresh contract for the tunnel, or proceeding with it by day labour, a vertical drift has since been made, to explore the strata, as being a more expeditious method than continuing the tunnel, owing to the flatness of the strata, which now dips at 1 in 8. This vertical drift has now been continued 26 feet, with, on the whole, favourable results, the No. 2 seam having been cut at 10 feet above the roof of the drive. As this vertical drift will not be of any service in the future working of the mine, I recommend that the Government should bear the whole cost of continuing it, so as to explore the measures up to the main coal, the total cost not to exceed the balance of the sum estimated to complete the tunnel, and this expenditure to be considered as in lieu of the assistance promised towards the tunnel work.

The following is a statement of the grants approved, and the payments which have been made by Government up to this date:—

	£	s.	d.
12th June, 1872.—Original grant	500	0	0
14th July, 1873.—Further grant	250	0	0
	£750	0	0
Payments on account up to February, 1873	£614	19	6
Balance	135	0	6

In my memorandum of 20th August last, at which time the further grant of £250 had not been drawn on, I estimated that the sum of £500 would still be required to complete the exploration, and I now recommend that the sum of £250 (being the balance of that estimate) be placed at the disposal of the Company. This amount, together with the balance of the sums already granted as above, will make a total of £385 0s. 6d. available for completing the exploration by the vertical drift.

15th July, 1874.

I have the honor to report, in continuation of my letter of 5th May, relative to the Collingwood Coal Mine, that the uprise which I referred to was completed on the 30th ultimo, and that the work assisted by the Government may be considered as finished. The uprise was continued for 61 feet 2 inches from the floor of the drive, and was then continued for 12 feet 8 inches further by a drill-hole, making a total of 73 feet 10 inches. I inspected the mine on the 11th ultimo, at which time all the coal seems which have been found had been cut either in the tunnel or the uprise, the work done since having exposed no other seams.

The tunnel was begun in September, 1872, and although every possible diligence has been used in the work, it has been much delayed, owing to the excessive hardness of the rock and the wet nature of the ground. The work has explored the same vertical thickness of strata that would have required a shaft of more than 600 feet in depth, had that method been adopted, and equal to a horizontal distance of 1,088 feet, 600 feet of which is by the tunnel, and the remainder by the uprise, which explored strata equal to a further length of tunnel of 488 feet. The total cost of the work has been £1,912 13s. 6d., of which the General Government has contributed £945 19s., the Provincial Government £250, and the Collingwood Coal Mining Company £716 14s. 6d., as shown in the enclosed statement by the legal manager. The total thickness of coal which has been cut is 16 feet 2 inches, in nine seams, four of which will probably be worked, either alone or in conjunction with ironstone layers, with which they are in contact. Comparing this with the coal seen outside, the result of the exploration must be considered as favourable, and showing an increase in the amount of coal as the measures are followed into the hill; the total thickness outside having been 10 feet of coal, in six seams, of which only two were workable. Coal might now be worked from two of the seams, marked C and D on the accompanying plan; but, unfortunately, the Company's tramway and other appliances for the conveyance of the coal to the shipping port have fallen out of repair, and a considerable expenditure will be necessary to restore them. Had it not been for this circumstance, the Company might have been selling coal since Christmas last. A recent survey has shown that it would be better to make a fresh line to the Ruatanawha, where there is deep water, and where the wharf would not be exposed to the floods in the Aorere River, than to attempt to reconstruct the old line. The cost of this reconstruction is estimated at about £1,500, and until it is done, the mine must stand idle. The quality of the coal from this mine is thoroughly established for ocean-going steamers, gas manufacture, and domestic use; and if it were once again in the market, there is reason to believe that a Company which has been formed for working the extensive iron deposits which occur in this district, would soon commence operations.

Pakawau.

The work in this district has been chiefly undertaken with the view of discovering outcrops of coal in the gullies north of the Collingwood mine, where the formation approaches the sea level, and any seams found would be worked under advantageous circumstances. The total expense of this exploration has been £71 6s. 7d. The work has been done under the supervision of Mr. Marshall, working manager for the Collingwood Coal Company, his services having been placed at my disposal for the purpose by the Company. Pakawau is seven miles north of the Collingwood Mine, and the coal formation, as fully described in previous reports, is continuous between the two places; but as the range is traversed at Pakawau by a valley almost at the sea level, the coal seams may be expected to be found there in a favourable position for working.

About fourteen years since, several shafts were sunk in this part of the district, but they were nearly all in the bottom of the valley, where the strata are much disturbed by slips and faults, which cause great irregularity in the distribution of the seams. The only exception was one on the south side of the valley, where, in Watts's shaft, it was reported that a 4-foot seam of clean coal has been struck. I therefore had this shaft cleaned out, with the following results, as reported by Mr. Marshall:—

"At a depth of 26 feet I found a seam of coal 1 foot thick, but so tender that it would not bear the slightest carriage. Underneath this there is a seam of fireclay, mixed with coal, 18 inches thick, which makes a formation altogether of 2½ feet.

"The shaft is 43 feet in depth from the strike board, and has been sunk upon a fault showing a 4-foot down-throw to the north. At the bottom of the shaft there is 3½ feet of coal and slate, which I do not think would pay to take out. I next went into the old workings, a down-set which Mr. Watts had put in, and after pumping out the water, and getting to the face, which is 70 feet from the outcrop, I found no improvement. There is a formation of a 3-foot seam, showing 20 inches of clean coal, but so mixed with slate that it would not pay to work. I next went to the landslip, about 250 yards towards the mouth of the valley from the old workings, where I discovered a seam of coal. The formation is 2 feet, with two bands of clean coal, measuring 10 inches each. I have driven 16 feet in it to the dip, the dip being 1 in 4, and underlays the seam that Mr. Watts worked. This seam crops out about 50 feet above where a level could be put in with safety from the creek in time of floods. If this seam increased to 2 feet to the dip it would pay to work, being easily mined, and a small amount of capital would put it in working order."

These results being favourable, Mr. Marshall was directed to proceed with the search in the gullies on the south side of the gorge, and to employ two men for the purpose. His further report was as follows:—"According to your instructions, I have prospected the gorge at the level of the old plumbago workings, and the thickest seam of coal I found there measured 1 foot 2 inches, clean, and of good quality. I next examined nine gullies emptying into the Pakawau Stream and rising to the south, and found seams of coal from 6 to 8 inches thick. I searched in the gullies rising to the north,

and thoroughly prospected all the gullies from the head of Wanganui Mud Flat through to Muddy Creek, and right back over the range to Tomatere Point, Golden Bay, and could find nothing better than 6-inch and 8-inch seams, until I came to the formation running on the strike of the Collingwood Mine, where I found seams from 12 to 15 inches, of better quality. After leaving the mouth of the Pakawau Gorge, the measures dip north-west about the same as Collingwood Coal Mine. From the examination I have made of the field, I hardly expect to find workable seams of coal higher than that lying on top of the first conglomerate; and if you intend prospecting further, I would strongly recommend putting in a drive at the landslip: the driving here would cost very little comparatively, and, should the seam improve to the dip, it could be worked easily and cheaply."

The next search was made in the gullies near to the Collingwood Mine. Mr. Marshall reports:—"The three men you instructed me to employ to prospect for coal in the gullies to the north of the coal mine, have found coal in all the three creeks or gullies, but the thickest seams are in the middle gully, and I made a personal examination of the outcrop on Monday and Tuesday last. I found them in a branch creek. The first outcrop I looked at measured 2 feet 4 inches; further down the creek, coal can be seen 2 feet 6 inches thick; and further down still, 2 feet 8 inches. I cannot say definitely that they are different seams, or simply the outcrop of one seam exposed in different places. They are dipping at a very sharp angle, viz., about 1 in 2, and have from 4 to 10 inches of shale in them, which makes the formation of the seams from 3 feet to 3 feet 6 inches thick. In another branch creek up the gully I found another seam measuring 21 inches of clean coal. The quality is similar to the coal in the drive.

"After being satisfied with the three creeks to the north of the coal mine, I thought I would like to cross the range over to Wanganui Mud Flat. I started from the mouth of our drive on the morning of the 22nd instant. About a quarter of a mile up the creek I found the dip of the measures change from the west to the north-west, and continue so to the sea beach. After leaving our seams, I could find nothing thicker than 6 or 8 inches. The gullies I passed through gave me a fine opportunity of seeing all the measures—sometimes for hundreds of feet in thickness—and a more natural lying country I never travelled before, so free from faults and dykes. The beds dip at an angle of about 1 in 7. On the top of our coal seams I found two beds of conglomerate. I travelled on in nearly a north-west direction, and got on to the flat opposite the Wanganui entrance, leaving 'House Roof Hill' to the south. The features of the country are very rough, but the formations lie very compact and natural. The journey occupied four days."

Mount Rochfort.

The expenditure in this district during the past year has been chiefly for a topographical survey of the coal field, at a cost of £911 11s. 5d., which was absolutely necessary to enable the position and extent of the coal seams to be defined. This survey will form the basis of an accurate mining plan, and greatly facilitate the selection of the best routes of communication for bringing the coal from the less accessible portions of the Mount Rochfort plateau to the shipping place at Westport. No real delay in the development of this coal field has been caused by this preliminary survey, as it will be impossible to ship coal to any large extent until the railway is completed and the wharfage works considerably advanced.

The geological examination of the district has been prosecuted during the past season, and an extension of the bituminous coal measures discovered in the southern direction, of which full particulars will be given in the geological reports.

The tunnel at Waimangaroa, which was made at the base of the spur from Mount Frederick, last year, for 130 feet, was continued for 50 feet further, as there appeared to be some doubt whether or not the proper position of the coal seam had been reached in the first exploration. However, nothing but a seam of soft coal twelve inches thick rewarded the further search.

The following is Mr. W. M. Cooper's report on the progress made towards a complete topographical survey of the Buller Coal Field:—

15th June, 1874.

"I commenced operations on the 14th November, 1873, and up to Christmas was working in that part of the coal field lying between the Whareatea and Waimangaroa Range. I did not return to it again, and the survey of this portion is still incomplete, as, in view of the immediate importance of the survey of the Ngakawau end of the coal field, I was instructed to proceed thither on my return in January. From that time to the present I have been engaged in surveying the block of coal-bearing country extending from the northern slope of Mount Frederick to the River Ngakawau, and reaching inland from the sea to the south branch of the Ngakawau at the north end, and to the main at the south end, and have the following information to give respecting it:—

"1. The ground has been divided into triangles of from twenty to forty chains in the side starting from base line forty chains in length, measured several times carefully with a standard chain. The trig. stations have been made in a permanent manner, so as not likely to be obliterated for a generation, unless purposely. At a few principal points they are constructed in the style shown in sketch A in margin, being circular hills of stones and surrounded by a ditch. In one or two cases where no stones were procurable, a 4-sided framework of logs, filled in with earth, was substituted, as per sketch B. The remainder are built of sods and stones, in the form shown in sketch C, circular and surrounded by a ditch like the

"2. The country was then intersected in all directions by traverse lines run with prismatic compass and chain, and tied on to the trig. stations, the angles being marked by pegs only. By these lines, and the offsets from them, all the features have been minutely taken.

"3. Readings were taken at short intervals with a good aneroid barometer, furnished me by Dr. Hector, which were checked by taking a reading at the camp before going out in the morning and after returning in the evening, and by readings of a mercurial barometer three times a day in Westport being taken and furnished to me by A. D. Dobson, Esq., Provincial Engineer. The heights of the several camps were carefully averaged from a number of observations taken between them and the

sea beach. The number of readings taken altogether was very large, so as to embrace every considerable inequality of ground, and to enable approximate sections to be made in any direction from the map alone."

"4. In the north and west the ground is covered with bush, some of it very dense, interposing so many obstacles to a feature survey, that I had to be content with less minuteness, or the time occupied would have been very great. I therefore cut lines along all the main ridges and creek beds, and sketched in the minor features. I travelled over so much of the ground, however, that I do not think that this part of the map will be much out."

"5. The survey has occupied considerably more time than was anticipated, owing to the extremely cut up nature of the country, the ridges and gullies being so numerous and irregular, and the latter so deep, that at least twice the amount of traverse lines that I expected had to be run, to attain anything like exactness, and nine trig. stations had also to be put up. To have attempted to do the work in any more rapid fashion would only have had two alternative results, viz., either to sacrifice accuracy or to consume more time eventually in having to go over portions a second time, to correct errors or omissions (the latter being the besetting weakness of this sort of survey) which would inevitably appear on plotting. At the same time, the nature of the country and of the work done, I think the cost will be considered very moderate, being on the average 1s. 3d. per acre, including maps and all other expenses.

"6. The same seam of coal, from 10 feet to 20 feet in thickness, and lying at an easy angle, appears to extend throughout almost the whole of the area surveyed. It is reduced in height by successive steps of faults from near the summit of Mount Frederick (3,600 feet) to about 300 feet above the sea level, and at the Albion Company's Mine to a level with or under the sea. It all appears to be of the same quality, the only difficulty in the way of an enormous export of coal from this locality being the carriage of it to the railway. There is also a large area of coal to the south, between the present survey and the Waimangaroa; in fact, joining on to the two surveys.

"*Orikaka Saddle.*—It was my intention, as instructed, on completion of the above-mentioned part of the survey of the Buller Coal Field, to have gone across from Mount Frederick plateau to the Orikaka River, ascertaining the height of the saddle between the head of it and an adjoining tributary of the Ngakawau; and thence proceed across the flattish country at the head of the Ngakawau to the watershed of the Mokihinui, with a view of ascertaining the qualifications of this route for a road or railway. I performed the first part of the journey, but found it impracticable to reach the Mokihinui with the provisions I had with me, and during the short days of June. What I saw, however, impressed me favourably. The country about the said tributary of the Ngakawau is mostly flat, and a considerable area of it (some 2,000 acres, at a guess) is open land, with fertile soil. I have been informed by diggers that there is a good deal of similar ground down the Orikaka. With regard to the country northward to the Mokihinui, all I can at present say is, that, viewed from a distance, the ground appears nearly flat right through, and not to rise much, if any, higher than the saddle between the Orikaka and the Ngakawau, or rather between two tributaries of these rivers, which I made with the aneroid to be about feet. I found a good seam of coal in the Ngakawau side of the said saddle. About 6 feet in thickness was visible, but it might be considerably more. It looked steady, and had a slight dip to the east. My impression is that a railway made here would open up a large area of coal, which will otherwise never pay to work for export."

Grey Coal Field.

The geological relations of this coal field have been worked during the past season and will be described elsewhere. The only circumstance to be reported at present is the successful opening of the Greymouth Coal Company's mine on the south side of the river, for the purpose of working the one marked "Workable Coal," on my plan dated April 7th, 1873. (See Parliamentary Papers.) The works are being executed under the management of Mr. Simpson, and are progressing satisfactorily. I am informed that the shaft is a circular one, 10 feet in diameter. From the surface to the coal is 80 feet, 60 feet of which is in sandstone and the remainder in surface soil. The upper part of the shaft is strongly timbered, but is intended ultimately to be brick-lined. The coal is 14 feet thick, and rests upon fireclay: it is bright and of good quality. In a preliminary bore, undertaken by the Company in a position more to the dip of the coal, it was found to be 17 feet thick at a depth of 220 feet from the surface.

Miscellaneous.

A small expenditure has been incurred for opening up a coal seam at Richmond, near Nelson. It has been shown to be of good quality, though much crushed and broken when laid open. An interesting point about this coal is that a coach-builder in Nelson uses black paint made from it. Thin seams of good coal have also been discovered, by the offer of a bonus, near Bruce Bay, in Westland, but their value has not yet been ascertained.

The following schedule gives an abstract of the composition of the coals from different parts of the colony which have been analyzed during the past year.

20th July, 1874. JAMES HECTOR.

SCHEDULE of NEW ZEALAND COALS which have been REPORTED ON by the GEOLOGICAL SURVEY DEPARTMENT, August, 1873, to July, 1874.

Locality.	Variety of Coal.	Evaporative Power.	Fixed Carbon.	Hydro-Carbon.	Watery.	Ash.	Nature of Ash.	Nature of Coke.	Laboratory Number.
AUCKLAND.									
Kawakawa	pitchy ...	4·7	35·72	20·43	15·12	28·73	...	non-caking	1509
Mongonui	brown ...	5·0	38·98	37·50	26·59	5·93	red & yellow	non-caking	1604
Mohunga River	brown ...	6·1	47·56	26·88	20·90	4·70	red	non-caking	1477
Waugarei	brown ...	6·5	50·75	35·95	12·11	1·16	red	non-caking	1557
WELLINGTON.									
Terawhua, above Masterton	brown ...	5·7	45·58	30·52	17·51	6·39	ferruginous	non-caking	1577
NELSON.									
Harwood	brown ...	5·2	42·03	33·92	18·90	5·15	ferruginous	non-caking	1453
Harwood	brown ...	4·8	39·01	36·55	21·43	3·01	...	...	1472
Collingwood	bituminous	7·2	55·82	36·74	1·45	5·99	gray	cakes hard	1481
Otamataura Creek ...	bituminous	7·2	55·50	40·20	1·91	2·39	red	coherent	1506
Mokihinui	bituminous	7·0	53·92	40·89	2·78	2·41	reddish	coherent	1513
Cascade Creek ...	bituminous	7·5	58·05	36·34	4·68	0·93	flesh colour	cakes strongly	1519
Ngakawau	...	8·6	66·73	19·10	1·45	12·72	white	cakes puff	1520
Karemea	brown ...	5·0	38·90	37·29	16·36	7·45	ferruginous	non-caking	1521
Mokihinui	bituminous	6·8	52·50	40·84	1·83	4·83	white	cakes strongly	1522[1]
Mokihinui	bituminous	6·7	51·51	45·40	0·91	2·18	ferruginous	cakes strongly	1522[2]
Mokihinui	bituminous	6·6	50·85	41·93	1·36	5·86	white	cakes strongly	1522[3]
Collingwood	bituminous	6·7	51·80	41·04	3·02	4·14	reddish buff	cakes strongly	1532
Richmond	bituminous	5·6	43·66	43·06	10·10	3·18	reddish	non-caking	1597
Fox River (Brighton) ...	bituminous	8·1	62·70	33·16	1·11	3·03	gray	cakes puff	1608
Ngakawau	bituminous	9·6	74·11	20·01	0·82	5·06	white	non-caking	1556
WESTLAND.									
Coal Reserve, Greymouth	brown ...	5·4	43·38	39·97	74·17	2·48	mottled	non-caking	1464
Piringa River	bituminous	8·0	61·98	28·01	1·66	8·35	pale buff	caking	1546
Grey Coal Field... ...	bituminous	6·6	50·75	42·68	4·13	2·44	buff	cakes strongly	1511[1]
Grey Coal Field... ...	bituminous	5·8	45·35	33·24	9·04	12·37	white	non-caking	1511[2]
Kanieri	bituminous	6·17	47·50	30·17	1·87	20·46	light gray	cakes strongly	1482
Omotumotu	bitum. shale	5·4	40·70	45·61	7·37	6·32	red	non-caking	1651
MARLBOROUGH.									
Pelorus Sound	bituminous	10·95	84·27	11·29	1·12	3·37	pale	non-caking	1484
Shakespeare Bay ...	bituminous	5·2	40·25	39·50	4·88	15·34	white	non-caking	1566
Bluff	brown ...	7·0	54·16	26·26	14·03	5·55	red	non-caking	1584
Shakespeare Bay ...	bituminous	5·2	40·25	39·58	4·83	15·34	nrly. white	frits a little	1602*a*
Shakespeare Bay ...	...	5·8	44·81	34·57	2·08	18·54	nrly. white	non-caking	1602*b*

APPENDIX F.

ANNUAL REPORT ON PUBLIC BUILDINGS AND OTHER WORKS, BY THE COLONIAL ARCHITECT.

The Colonial Architect to the Hon. the Minister for Public Works.

Sir,— Wellington, 1st July, 1874.

I have the honor to submit, for your information, the following report, under three heads, of the buildings and other works commenced, finished, or designed during the financial year 1873–74, in connection with the Colonial Architect's branch of the Public Works and Immigration Department.

Immediately after the prorogation of Parliament in 1873, a commencement was made to prepare the necessary drawings and specifications for carrying out the most pressing of the many works throughout the colony, for which, altogether, the House had been pleased to vote £91,965.

The largest and most important buildings decided upon were new departmental offices for the General Government in Wellington, for which preliminary sketches for timber buildings had been prepared, prior to the meeting of Parliament, to suit a site being the frontage in Molesworth Street of the Public Buildings Domain, from which an approximate estimate was made, amounting to £16,000.

Objections had been taken to the site; and a preferable one having been offered by the Provincial Government, by reclaiming a portion of the harbour at a cost of £3,771 16s., new plans became necessary not only to suit the new site, but also to provide increased accommodation that was found to be wanting. A hurried sketch was prepared, for the purpose of arriving at an estimate, when it was found necessary to ask for an increased vote of £7,000, but the application was too late: the original estimate of £16,000 had been voted on the previous evening.

The contract, plans, and specifications, containing about twenty more offices and other accommodation in fire-proof safes, &c., than the preliminary sketches provided, were nevertheless completed, and separate tenders were invited throughout the colony for the buildings, either in concrete or timber.

When the tenders were received, the lowest in concrete was £40,900, and in timber £29,975. These apparently excessive tenders as compared with the estimates, are to be, in a measure, accounted for by the fact that just before tenders were invited, the saw-mill proprietors advertised an increase of 2s. per hundred on the price of timber, carpenters had struck for 2s. per day increase of wages, and the labour market generally became so disturbed that high tenders were looked for.

The effect, however, was felt more in Wellington than in some other places; buildings in Napier and Tauranga, designed and estimated about the same time to cost £4,000 each, were both taken below the estimates.

The cost of building, in Wellington especially, still remains very high, and contractors are unwilling to tender without having a large margin for profit and contingencies.

Before closing this reference to the General Government Departmental Offices at the seat of Government, I desire most strongly to urge the advisability of erecting them in some indestructible materials, or some materials, at any rate, not susceptible of being easily reduced by fire. I would advance as a reason, the valuable papers and records contained within their walls, and the irremediable loss the colony would sustain in the event of their destruction by fire. To my mind, the circumstance that Wellington has been visited with earthquakes is not a sufficient reason to limit the chief materials of all buildings to timber. Are not Christchurch and Dunedin also liable to similar shocks?—Nor am I aware of any other city subject to quakes, besides Wellington, where the material used in houses is chiefly confined to wood. In San Francisco, buildings many stories high are constructed of brick, stone, or concrete, and where, I am told, shakes are more severe than in this colony.

Numerous buildings and other works have been completed or commenced during the year, of the usual character, consisting of Post and Telegraph Offices, Court Houses, Custom Houses, Departmental Offices, Ministerial Residences, Immigration Depôts, Quarantine Stations, &c., &c.; the total moneys paid during the year through this branch being £493,64 2s. 11d.

Enclosed is a list of the various works referred to, classified under three heads, and will be found to contain full information as regards the work performed.

Since the Colonial Architect's Department became a branch of the Public Works and Immigration Department, its administration has been greatly improved.

The country works have derived the advantage of a general supervision by the District Engineers, in addition to local inspection by officers temporarily appointed; and reliable information from these professional officers proved of great assistance and advantage.

The appointment of an Accountant, sanctioned by you, has also made the office work of a business-like character. All accounts are scheduled by this officer, and at a moment's notice the money expended or owing on any work can be ascertained, as well as the condition of every vote connected with Public Domains and Buildings.

The professional office work has been done by one permanent draftsman and a cadet, with temporary assistance when required; but if the work continues to increase in the same ratio, a second draftsman will be necessary.

In the last report, I pointed out that if the work done by me had been placed in the hands of private Architects, the cost during the first year would have amounted to £1,686 11s., the second year to £2,249 3s. 6d., the third year to £1,267 1s., the fourth year to £4,574 11s. 6d., and this year to £5,012.

In consequence of the increased work in connection with the Domains in Wellington, another man is required on the staff, which will then consist of two labourers and three gardeners, including the overseer or head gardener, but exclusive of Government House, Lowry Bay, and Auckland Domains.

I am fully confident of the advantage that will be derived from the employment of a jobbing carpenter permanently, which commenced under your authority from the 1st instant, upon the representations submitted by me. There is constant work for one if not two men. A workshop has been erected in a central position, and little time is lost in coming or going to any job requiring to be done.

I have, &c.,

The Hon. the Minister for Public Works. W. H. Clayton.

Enclosure.

Schedule A.

Buildings and other Works Finished since 1st July, 1873.

Description of Work.	Cost.			Payments during past Year.		
	£	s.	d.	£	s.	d.
Quarantine Barracks, Port Chalmers	3,873	7	7	649	18	6
Immigration Barracks, Caversham	1,104	14	9	1,104	14	9
Quarantine Barracks, Somes' Island	1,961	7	2	1,961	7	2
Enlarging House of Representatives	5,218	1	11	2,158	4	0
New Legislative Council Chamber	6,320	1	3	1,936	16	5
Additions, &c., to Government House...	2,805	5	8	2,482	3	8
Reclamation of a portion of Wellington Harbour, as a site for New Government Offices	3,771	16	0	3,771	16	0
Purchase of and additions to Ministerial Residence, Molesworth Street	2,488	15	0	2,488	15	0
Additions to Ministerial Residence, Tinakori Road	2,885	15	7	2,255	15	7
Concrete Tank, Tinakori Road	502	18	6	502	18	6
Tokomairiro Post and Telegraph Office	1,002	18	9	1,002	18	9
Malvern „ „	262	12	6	262	12	6
Clinton „ „	223	12	2	223	12	2
Rangiora Post and Telegraph Office	210	1	6	210	1	6
Te Awamutu „ „	304	3	10	304	3	10
Rakaia „ „	526	5	8	504	5	8
Hamilton „ „	580	2	3	555	13	3
Mosgiel „ „	399	5	8	380	2	8
Additions to Wellington Telegraph Office	358	13	6	358	13	6
Additions to Museum	471	0	7	471	0	7
Repairs to Cottage, Lowry Bay	58	10	0	58	10	0
Digging and grubbing 4 7-10 acres of Lowry Bay Domain, erecting Laundry, fencing Pigstyes, &c.	860	6	9	529	7	9
Wanganui Custom House	743	5	0	719	16	0
Marton Court	539	4	0	539	4	0
Native Hostelry repairs	223	15	0	223	15	0
Court House, Palmerston	220	7	6	220	7	6
Additions to Public Works Offices	604	5	0	572	6	0
Barrel Drain, Sydney Street	325	17	0	309	16	0
Alterations, &c., to the old Legislative Council Chamber ...	349	5	0	6	5	0
Additions to Printing Office	1,000	0	0	...		
Opotiki Court House	250	0	0	...		
Miscellaneous Works, &c.	10,965	2	5	10,965	2	5
	£51,410	17	6	£37,730	3	8

SCHEDULE B.

CONTRACTS ENTERED INTO and UNFINISHED.

Description of Work.	Cost, including estimated incidentals.	Payments during past Year.
	£ s. d.	£ s. d.
Tapanui Post and Telegraph Office	254 19 2	104 19 2
Roxburgh „ „	512 14 0	102 12 0
Newcastle „ „	384 14 3	...
Waikaia „ „	410 0 0	3 4 0
Pukorokoro „ „	363 0 0	18 6 7
Herbert „ „	611 0 0	11 7 11
Opotiki „ „	330 0 0	2 14 0
Napier Court House	3,437 0 0	1,092 19 10
Tauranga Public Buildings	3,818 18 0	1,351 14 9
Lyttelton „	4,390 0 0	29 8 3
Waipawa Court House	628 0 0	...
Auckland Public Buildings (E. Mahoney, architect)	17,681 10 0	8,310 1 9
Lawrence Public Buildings (D. Ross, architect)...	1,200 0 0	600 0 0
Repairs to Mount Cook Immigration Barracks	191 11 0	6 11 0
	£34,213 6 5	£11,633 19 3

SCHEDULE C.

WORKS not COMMENCED, but for which Sketches and Estimates have been prepared.

Description of Work.	Estimated Cost.
	£ s. d.
Wellington General Government Offices	50,000 0 0
Christchurch „ „ „	30,000 0 0
Invercargill „ „ „	10,000 0 0
Napier Post and Telegraph Offices	4,000 0 0
Greymouth „ „	2,000 0 0
Hokitika „ „	2,000 0 0
St. Bathan's „ „	500 0 0
Lyell „ „ „	500 0 0
Chief Entrance to the Houses of Parliament	8,000 0 0
Alexandra Court-house	600 0 0
Hamilton „	550 0 0
Ahipara „	120 0 0
Additions to Oamaru Court	450 0 0
	£108,720 0 0

SUMMARY.

	Works finished, in progress, and projected.	Payments during Year 1873-74.
	£ s. d.	£ s. d.
Schedule A	51,410 17 6	37,730 3 8
Schedule B	34,213 6 5	1,1633 19 3
Schedule C	108,720 0 0	...
	£194,344 3 11	£49,364 2 11

APPENDIX G.

CONTRACTS FOR CONSTRUCTION OF RAILWAYS.

RETURN MADE IN COMPLIANCE WITH CLAUSE 96, "IMMIGRATION AND PUBLIC WORKS ACT, 1870."

SCHEDULE of CONTRACTS for the CONSTRUCTION of RAILWAYS under "The Immigration and Public Works Act, 1870," from 1st July, 1873, to 30th June, 1874.

PROVINCE OF AUCKLAND.

	£ s. d.	£ s. d.
KAIPARA—RIVERHEAD:—		
D. Fallow, formation and permanent way, 15 m. 68 ch., with addition of 17 ch. siding, and 8 sets of points and crossings	14,877 0 0	
		14,877 0 0
MERCER—NEWCASTLE:—		
Martin and Briton, constructing Mercer contract, 10 m. 13 ch. ...	£21,529 10 3	
John Briton, Rangiriri contract (bridges only)	3,098 9 4	
J. Hambledon and Co., pneumatic apparatus, £625 (one-half Manawatu to Wanganui)	312 10 0	
		24,940 9 7

PROVINCE OF HAWKE'S BAY.

NAPIER—WAIPUKURAU:—		
J. Brogden and Sons, Waipawa contract, 8 m. 70 ch.	£9,469 7 9	
D. Ross, Waipukurau contract, 4 m. 62 ch. 93 lks.	23,410 0 0	
Allen and Co., Takapau Tramway, 13 m. 13 ch. 64 lks ...	13,108 10 4	
		45,987 18 1

PROVINCE OF WELLINGTON.

WELLINGTON—MASTERTON:—		
Chas. McKirdy, Mungaroa contract, 7 m. 78 ch., sidings 30 ch.	£55,752 0 0	
Collie, Scott, and Co., Summit contract, 1 m. 12 ch. tunnel ...	18,701 7 8	
Chas. McKirdy, plate-laying, Hutt contract, 5 m. 75 ch., sidings 10 ch.	2,125 0 0	
Chas. McKirdy, additions to Hutt contract	5,561 1 3	
Chas. McKirdy, River contract, including Hutt Bridge, 5 m. 25 ch., sidings 20 ch.	19,138 0 0	
J. Brogden and Sons, additions to Wellington contract ...	3,098 0 0	
		104,375 8 11
MANAWATU—WANGANUI:—		
W. Strachan, Wanganui contract, 9 m. 50 ch.	£16,372 4 8	
W. Pell, Wangaehu, 10 m. 8 ch.	19,959 11 0	
R. S. Low, Wangaehu (bridges)	5,930 0 0	
P. Stewart, Palmerston Tramway, 4 m. 56 ch., sidings 630 l. yds.	8,876 8 0	
J. Hambledon and Co., pneumatic apparatus, £625 (one-half Mercer to Newcastle)	312 10 0	
Rundle and Bassett, constructing the Wanganui Bridge ...	14,831 0 0	
		66,281 13 8

PROVINCE OF WESTLAND.

	£ s. d.	£ s. d.
BRUNNER—GREYMOUTH:—		
E. Butler, Greymouth wharf	10,709 19 6	
F. J. Gleeson, removal of old and erection of new Transit Shed	340 0 0	
F. J. Gleeson, additions to above	102 4 6	
W. Gardner, erecting offices at Greymouth	233 0 0	
W. Gardner, additions to above	20 15 0	
Jas. Templar, painting offices at Greymouth...	17 8 0	
E. B. Garven, constructing Grey Gorge Bridge	4,595 3 3	
		16,018 10 3

PROVINCE OF NELSON.

	£ s. d.	£ s. d.
NELSON—FOXHILL:—		
J. Gilbertson, Wairoa and Eightyeight bridges	£5,938 17 8	
Bray Bros., Nelson contract, 5 m. 49 ch. 70 lks.	11,125 19 8	
		17,064 17 4

PROVINCE OF MARLBOROUGH.

	£ s. d.	£ s. d.
PICTON—BLENHEIM:—		
J. Brogden and Sons, erection of rolling stock at Picton ...	£1,028 0 0	
		1,028 0 0

PROVINCE OF CANTERBURY.

	£ s. d.	£ s. d.
ADDINGTON—KOWAI:—		
E. G. Wright, Ashley and Amberley, 11 m. 76 ch. 50 lks. ...	£21,761 0 0	
E. G. Wright, Kowai Bridges	13,065 0 0	
E. G. Wright, Ashley Bridge, additions	3,334 1 8	
		38,160 1 8
RANGIORA—OXFORD:—		
J. Taylor, Oxford contract, 14 m. 37 ch. 32 lks.	£11,671 14 10	
D. Reese, No. 1 Station buildings	5,253 0 0	
E. G. Wright, Cust River, additions	103 6 0	
		17,028 0 10
ROLLESTON—MALVERN:—		
D. Reese, No. 2 Station buildings	£1,503 0 0	
D. Reese, No. 1 Stations	6,345 0 0	
		78,48 0 0
KAIAPOI—EYRETON:—		
Jas. Crawford, survey of line, at £16 per mile	£231 0 0	
E. G. Wright, Kaiapoi and Eyreton contract, constructing 14 m. 40 ch., including plate-laying, and sidings 120 ch. ...	10,006 0 0	
		10,237 0 0
RACECOURSE—SOUTHBRIDGE:—		
M. McNamara, Selwyn River to Southbridge, 10 m. 17 ch. 40 lks.	£9,189 17 6	
England Bros., No. 1 Station buildings, at Lincoln	309 0 0	
D. Reese, Station buildings, No. 2	4,970 0 0	
D. Reese, Station buildings, No. 3	5,085 0 0	
		19,553 17 6
SELWYN—RAKAIA:—		
D. Reese, broad-gauge engine-shed	£399 0 0	
D. Reese, broad-gauge engine-shed, additions	4 3 11	
D. Reese, station buildings	675 0 0	
D. Reese, station buildings, additions	68 0 0	
D. Reese, completion of engine-shed at Rakaia	350 0 0	
D. Reese, station buildings, additions	248 16 0	
D. Reese, goods shed at Dunsandel	330 15 0	
D. Reese, widening and lengthening platform at Rakaia; also, erecting spring buffer	387 0 0	
W. White, plate-laying and constructing approaches to Rakaia Bridge	294 4 9	
J. Taylor, up-river embankment	104 16 4	
J. Taylor, plate-laying contract, additions	152 15 0	
		3,014 11 0
RAKAIA—ASHBURTON:—		
D. Reese, No. 1 Station buildings	£1,661 13 0	
W. Langdown, making and erecting 100 high-sided goods wagons, at £23 10s. each	2,350 0 0	
		4,011 13 0
ASHBURTON—TEMUKA:—		
E. G. Wright, Rangitata contract, including two bridges over Rangitata Streams, 2 m. 27 ch.	£39,102 12 6	
E. G. Wright, Ashburton and Rangitata, 18 m. 27 ch. 59 lks. ...	12,501 16 0	51,604 8 6

	£ s. d.	£ s. d
TEMUKA—TIMARU:—		
E. G. Wright, Temuka contract, including bridges over Opihi and Temuka Rivers, 3 m. 14 ch.	30,890 5 8	
Allan and Stumbles, various works, Young's Creek	1,740 14 8	
Allan and Stumbles, Timaru and Washdyke, additions ...	657 13 9	
Gair and Spencer, conveyance of parts of engines and carriages from Ashburton to Timaru	162 10 0	
		33,451 4 1
TIMARU—WAITAKI:—		
Jas. Crawford, surveys Paeroa—Waitaki, 29½ miles, at £20 ...	£590 0 0	
		590 0 0

PROVINCES OF CANTERBURY AND OTAGO.

WAITAKI BRIDGE*:—		
G. McGavin, construction of bridge	£31,255 6 6	
Mills and Guthrie, conveyance of bridge material ex 'St. Kilda'	759 4 0	
J. Bain, erection of Inspector's cottage	250 0 0	
Sparrow and Co., air-locks and excavators	837 0 0	
G. Goff, painting girders	392 0 0	
McNab and Aimers, casting cover, &c., for air-lock	64 10 0	
		33,558 0 6

PROVINCE OF OTAGO.

WAITAKI—MOERAKI:—		
J. Brogden and Sons, Kakanui and Island Creek Bridges ...	£6,636 12 6	
Campbell, Oamaru Station	1,100 0 0	
Henry Guthrie, carriage of rails and fastenings ex "Asia," "W. Davie," and "Buckinghamshire," 562 tons 12 cwts., at £1 18s. per ton, from Port Chalmers to Oamaru ...	1,068 18 9	
		8,805 11 3
DUNEDIN—MOERAKI:—		
McKenzie and Co., Deborah Bay contract, 1 m. 13 ch. tunnel...	£35,227 7 2	
		35,227 7 2
DUNEDIN—PORT CHALMERS:—		
D. Proudfoot, Port Chalmers Wharf contract: timber wharf and reclamation of land	£16,408 6 3	
		16,408 6 3
DUNEDIN—CLUTHA:—		
J. Stumbles and Co., reclamation of Mussel Bay, for workshops	£2,800 0 0	
Procter and Whittaker, reclamation for Dunedin station ...	6,609 5 4	
A. J. Smyth, plate-laying, Clutha section, 10 m. 50 ch. ...	7,279 6 6	
J. Brogden and Sons, plate-laying, Chain Hills, additions ...	718 15 5	
Jno. Campbell, No. 1 carriage-shed at Dunedin	899 0 0	
John Campbell, constructing 100 high-sided goods wagons ...	2,462 10 0	
Meikle and Campbell, engine-shed at Dunedin	1,235 0 0	
Meikle and Campbell, Caversham Station	295 7 0	
Dey and Wedderspoon, station at Green Island	409 0 0	
W. L. Watts, Rangitata Station	445 0 0	
Bateman and Stait, repairing-shops at Hill Side	3,112 0 0	
R. S. Sparrow and Co., construction of 4 wagons	350 0 0	
Mills and Guthrie, conveyance of rails and joints ex "Dunfillan"	457 8 0	
Mills and Guthrie, additional on above	73 12 6	
Blair and Watson, Clutha section, additions	642 14 4	
Houghton and Co., conveyance of rails and fastenings ex "Carnatic"	633 9 4	
J. Brogden and Sons, constructing 12 ballast wagons, at £33 each	396 0 0	
Watson Brothers, constructing Clutha Bridge	15,652 13 9	
Gourlay, building turntable and engine pits	555 16 6	
		45,026 18 8
INVERCARGILL—MATAURA:—		
J. Brogden and Sons, constructing 20 ballast-wagons at £33 each	£660 0 0	
		660 0 0
		£615,758 18 3

SLEEPERS.

PROVINCE OF AUCKLAND.

	£ s. d.	£ s. d.
C. Dromgool, 4,000, at 1s. 11d., Waikato Extension Railway ...	383 6 8	
D. F. Scott, 10,000, at 2s. 11d. „ „ ...	1,458 6 8	
D. F. Scott, 10,000, at 2s. 3d. „ „ ...	1,125 0 0	
Jas. Moran, 5,000, at 2s. 11d. } Jas. Moran, 5,000, at 2s. 9d. } „ „ ...	1,416 13 4	
		4,383 6 8

* The cost of the Waitaki Bridge is to be equally divided between Canterbury and Otago.

PROVINCE OF HAWKE'S BAY.

	£ s. d.	£ s. d.
Mackay and Monteith, 5,000, at 3s. 5d., Napier and Waipukurau ...	854 3 4	
		854 3 4

PROVINCE OF WELLINGTON.

W. H. Brightwell, 5,000, at 3s. 5½d., Wellington and Masterton ...	£864 11 8	
J. Brogden and Sons, 1,000 jarrah, at 3s. 10d. „ „ ...	191 13 4	
E. Jones, 13,000, at 3s. 6d. „ „ ...	2,275 0 0	
Richter and Nannestad, 7,000 at 3s. 11d., Manawatu—Wanganui ...	1,370 16 8	
Brightwell and Co., 5,000 at 4s. „ „ ...	1,000 0 0	
		5,702 1 8

PROVINCE OF NELSON.

W. Page, 14,000, at 2s. 11d., Nelson—Foxhill	£2,041 13 4	
W. Page, 10,000, at 2s. 11d. „	1,458 6 8	
H. J. Tunnicliff, 7,000, at 2s. 11d. „	1,020 16 8	
W. Sigglekow, 10,000, at 3s. „	1,500 0 0	
Quane and Currie, 6,000, at 2s. 4d., Westport—Mount Rochfort ...	700 0 0	
C. Weitzel, 34,000, at 2s. 5½d. „ „ ...	4,179 3 4	
		10,900 0 0

PROVINCE OF CANTERBURY.

Montgomery and Co., 3,000 to 5,000, at 3s. 6d., to be delivered at rate of 300 to 400 per month	£525 0 0	
Geo. Holmes, 25,000, at 2s. 10d.	3,541 13 4	
E. C. Latter, 47,000, at 3s., £7,050 } E. C. Latter, 20,000, at 3s. 6d., £3,500 }	10,550 0 0	
Gamman and Davies, 15,000, at 3s. 9d....	2,812 10 0	
Hawkins and Co., as many as can be delivered within four months, at 3s. 6d. each.		
H. Palmer, 45,000, at £17 per 100	7,650 0 0	
Krull and Co., 40,000, at 4s. 3d., jarrah	8,500 0 0	
J. Lundon, 31,000, at 4s. 5d., kauri	6,485 16 8	
J. Lundon, 45,000, at 3s. 5d.	7,687 10 0	
W. White, 6,000, at 3s. 4d.	1,000 0 0	
Houghton and Co., 30,000 to 35,000, at 3s. 3d., red wood	4,875 0 0	
		53,627 10 0

PROVINCE OF WESTLAND.

Maher and O'Connor, 16,000, at 1s. 11d., Brunner—Greymouth ...	£1,533 6 8	
		1,533 6 8

PROVINCE OF OTAGO.

T. Pollock, 10,000, at 3s. 3d., Tokomariro—Lawrence	£1,625 0 0	
J. Murdoch, 16,000, at 3s., Winton—Kingston	2,400 0 0	
C. Cowan, 10,000, at 3s. „ „	1,500 0 0	
Blair and Smith, 10,000 jarrah, at 4s.	2,000 0 0	
J. Murdoch, 50,000, at 3s. 3½d., Winton—Kingston	8,229 3 4	
		15,754 3 4
		£92,754 11 8

SUMMARY.

		£ s. d.	£ s. d.
AUCKLAND :—			
Kaipara—Riverhead: Construction		14,877 0 0	
Mercer—Newcastle: Construction		24,940 9 7	
Sleepers		4,383 6 8	
			44,200 16 3
HAWKE'S BAY:—			
Napier—Waipukurau: Construction		£45,987 18 1	
Sleepers		854 3 4	
			46,842 1 5
WELLINGTON:			
Wellington—Masterton: Construction ...	£104,375 8 11		
Manawatu—Wanganui: Construction ...	66,281 13 8		
		170,657 2 7	
Sleepers		5,702 1 8	
			176,359 4 3

WESTLAND:—						£	s.	d.	£	s. d.
Brunner—Greymouth: Construction						16,018	10	3		
Sleepers						1,533	6	8		
									17,551	16 11
NELSON:—										
Nelson—Foxhill: Construction						£17,064	17	4		
Sleepers						10,900	0	0		
									27,964	17 4
MARLBOROUGH:—										
Picton—Blenheim: Construction						...			1,028	0 0
CANTERBURY:—										
Addington—Kowai: Construction ...	£38,160	1	8							
Rangiora—Oxford: Construction	17,028	0	10							
Rolleston—Malvern: Construction ...	7,848	0	0							
Kaiapoi—Eyreton: Construction	10,237	0	0							
Racecourse—Southbridge: Construction ...	19,553	17	6							
Selwyn—Rakaia: Construction	3,014	11	0							
Rakaia—Ashburton: Construction ...	4,011	13	0							
Ashburton—Temuka: Construction ...	51,604	8	6							
Temuka—Timaru: Construction	33,451	4	1							
Timaru—Waitaki: Construction	590	0	0							
						185,498	16	7		
Sleepers						53,627	10	0		
									239,126	6 7
CANTERBURY AND OTAGO:—										
Waitaki Bridge						...			33,558	0 6
OTAGO:—										
Waitaki—Moeraki: Construction	£8,805	11	3							
Dunedin—Moeraki: Construction... ...	35,227	7	2							
Dunedin—Port Chalmers: Construction ...	16,408	6	3							
Dunedin—Clutha: Construction	45,026	18	8							
Invercargill—Mataura	660	0	0							
						106,128	3	4		
Sleepers						15,754	3	4		
									121,882	6 8
Total: Construction, &c. ...	£615,758	18	3							
Sleepers	92,754	11	8							
	£708,513	9	11						£708,513	9 11

APPENDIX H.

CONTRACTS FOR CONSTRUCTION OF ROADS.

RETURN MADE IN COMPLIANCE WITH CLAUSE 96, "IMMIGRATION AND PUBLIC WORKS ACT, 1870."

SCHEDULE of CONTRACTS for the CONSTRUCTION of ROADS under "The Immigration and Public Works Act, 1870," from 1st July, 1873, to 30th June, 1874.

NORTH ISLAND.

PROVINCE OF AUCKLAND.

Roads, Bay of Islands.

	£ s. d.	£ s. d.
WAIMA—HERDS POINT,—		
Pataru Ngamanu, cutting and clearing road from Manuwhataroa Junction of Waima Road to Herds Point, Hokianga (13th May, 1873)	200 0 0	
		200 0 0
WAIMATE—WAIHAU,—		
T. Hapimana, clearing 86 chains forest, 2 bridges, and cuttings ...	137 0 0	
Rihari Te Tata, culvert bridge and approaches, 12½ chains forest clearing	34 0 0	
Komene Paora, 23 chains ditching at Ruhi Kino Swamp ...	12 0 0	
		183 0 0
KERI KERI—MONGONUI,—		
Heremaia Te Ara, clearing forest on road and extras	150 6 0	
Hakiaha Te Wha, 15 chains side cutting, 2 culverts, drains across swamp, with large culverts, &c.	79 18 0	
Tutere and Otai, contract for 40 chains side cutting	49 5 6	
G. Aickin, contract No. 1., construction of road from Whangaroa to Mongonui	1,350 0 0	
Hori Otai and Tutere, contract for 1 bridge, 20 ft., and 10 chains of side cutting in forest	30 15 6	
		1,660 5 0
WAIMATE—PAHIA,—		
R. Ferrel, extras on contract	28 0 0	
		28 0 0
OKAIHAU—UTUKURA,—		
P. Taonui and another, contract on line of road	350 0 0	
Te Ana Otene, clearing 12 chains forest, and earth cuttings ...	41 5 0	
		391 5 0
WAIROA—KAIKOHE,—		
Te Rata Pou and another, contract for clearing 203 chains of forest and scrub	134 8 0	
Hara Poti, amount of contract	82 0 0	
Eramiha, extra on contract	91 0 0	
Natamahira, contract for 2 bridges and 20 chains of side cuttings	61 0 0	
Eramiha, extra on contract, £91	7 0 0	
Hapeta, constructing 1 culvert bridge and 1 culvert	17 0 0	
Alex. McLeod and Co., clearing bush on road from Wairoa to Mangakahia, at 17s. 9d. per chain, 4 miles 3,475 links ...	314 16 9	
Alex. McLeod and Co., scrub, at 8s. per chain, 6,660 links ...	26 8 0	
Eramiha, contract for clearing 4 chains of forest, and putting in side cutting	9 0 0	
Hari Poti, cutting and clearing 8,229 links of forest, at £1 ...	75 0 0	
Arepata, clearing 30 chains 65 links bush, at £1	30 13 0	

Roads, Bay of Islands—continued.	£ s. d.	£ s. d.
Paura Kiwi, cutting and clearing 35 chains forest, at £1 ... ... £32 0 0		
43 chains tea-tree, at 10s 20 10 0		
	52 10 0	
Puke Atua, cutting and clearing 36 chains of forest, at £1 ...	31 0 0	
Wirimu Te Kuo, cutting and clearing 64 chains of forest, at £1	64 0 0	
Ki To Ki, cutting and clearing 28 chains forest and tea-tree ...	30 6 0	
Matieu Te Aremu, cutting and clearing 60 chains of forest, at £1	60 0 0	
Matieu Te Aremu, 9½ miles of road, at 1s. per chain ...	38 0 0	
Puke Atua, cutting and clearing 5,545 links forest, at £1 ...	55 0 0	
Wiremu Tamati, cutting and clearing 5,135 links forest, at £1	51 6 0	
Hari Poti, cutting and clearing 6,180 links of forest, at £1 ...	61 16 0	
Te Rata, contract for erecting 3 bridges, 1 culvert, and 10 chains cutting	112 4 0	
Paora Kiwi, extras on contract cutting and clearing, &c. ...	18 6 0	
Renata Manihera, 101 chains ditching	60 8 8	
Renata Manihera, 18½ chains clearing	3 14 0	
Wharepapa and Kitohe, 20 chains side cutting, £56 3s. 1d.; 3 culverts, £6; 5¼ chains clearing, £2 12s.	64 15 1	
Matieu Te Aranui, extra on contract, £60	24 13 6	
Matieu Te Aranui, grading on the above road, 200 yards, at 1s. 6d.	15 0 0	
Hare Mokena, contract for 55 chains ditching	33 19 7	
R. Manihera, extra on contract, 5 chains ditching	2 16 7	
Arona, contract for 5 chains side cutting, 2 culverts, clearing land-slip, and 4 chains fillings	30 8 0	
Natanahira, contract for erecting 2 bridges, 54 ft. and 22 ft. span, ditching and clearing swamp	97 16 6	
K. Pewa and Arona, contract for ditching and filling 4 chains and 3 chains of side cutting, widening cutting at Paraheia Cliff	28 1 0	
W. H. Te Ripi, contract for 30 chains side cutting, 6 culverts, and 9 chains clearing	73 0 0	
P. Kuao, contract for raising and forming road across Kareanui Swamp, 20 chains, and 10 chains draining	79 18 0	
M. Te Aranui, extra on contract for earthworks, 400 yards, at 1s. 6d.	30 0 0	
Heke, contract for side cutting and earthworks, 295 yards, at 1s. 6d.	22 2 6	
Paura Kiwi, contract for earthworks at Waikopani Creek, 178 yards, at 1s. 6d.	13 7 0	
		2,002 14 2
WAITANGI—HOKIANGA,—		
Rawiri Te Tahua, contract on line of road, Taheke, Hokianga Heads	270 0 0	
Penete Pana, contract, Hokianga Heads	50 0 0	
Pere Teara, contract, Hokianga Heads	160 0 0	
Honi Mohi Tawhai, contract, Hokianga Heads	200 0 0	
George Leaf, contract on road from Whiririaki to Koutu ...	90 0 0	
J. A. Bedggood, repairing abutment to Black Bridge on right bank	38 10 0	
Komene Paora, contract for culvert, outfall and drain, and forming road across Ngatakimona Swamp	21 10 0	
George Aickin, works on road between Haruru and Puketutu ...	650 0 0	
Mokaraka, contract for clearing 104 chains of fern, scrub, &c. ...	58 0 0	
Kereama, coutract for putting up 2 bridges and approaches ...	40 0 0	
R. Whareraru, contract for cuttings and 5 culverts	50 0 0	
Vare and Jones, work on road between Black Bridge and Puketutu	655 0 0	
Dixon and Sackville, work on road between Black Bridge and Waimate	570 0 0	
T. and W. Bedggood, contract for building bridge across Mangatoa	124 0 0	
Hori Ngamanu, contract, road from Manawhataroa to Kapeke ...	200 0 0	
T. and W. Bedggood, extra for raising bridge 12 inches, and facing approaches with stone	7 15 0	
Hori Ngamanu, contract for cutting culverts, &c., Taheke, Hokianga	60 0 0	
Akaripa, contract for building culvert bridge	14 0 0	
Te Awatapu, contract £40 0 0		
Extra for removing fence 14 0 0		
	54 0 0	
Vare and Jones, extras on contract £655, enlarging bridge at Waipuakakho £20 0 0		
Ditto, peg 65 ... ... 5 0 0		

Roads, Bay of Islands—continued.	£ s. d.	£ s. d.
Culvert pegs 75 and 78 ... ... 12 0 0		
Widening fillings and breast cuttings ... 71 4 0		
	108 4 0	
Dixon and Sackville, extras on contract, 5 extra culverts and outfall drains £19 0 0		
Widening breast cutting 28 17 6		
Widening approaches and culverts 44 0 0		
Enlarging culvert 5 0 0		
Ditto 4 0 0		
Enlarging bridge culvert 20 0 0		
Making swamp embankments 13 0 0		
Ditto 12 0 0		
Keeping road free for traffic 20 0 0		
60 chains catch-water drains, 5s. 15 0 0		
Extra drain to swamp 1 0 0		
Forming 3 chains road extra, at 20s. ... 3 0 0		
	184 17 6	
Komene Paora, 1 large culvert and approaches	10 0 0	
H. Te Haara, contract for culvert, bridges, and approaches ...	40 0 0	
Hauraki, contract for 26¾ chains ditching and forming approaches to swamp	21 17 6	
H. Himi and Euru, contract for 1 bridge, culvert, and heavy filling	48 0 0	
H. Keno, contract for culvert, bridge, and heavy fillings, at Ohaewae	45 0 0	
Thomas Jones, contract for construction of about 427 chains of road between junction of Waimate Road and Ohaewae ...	1,425 0 0	
		5,195 14 0
AWANUI—KAITAIA,—		
R. C. Jordan, extras on contracts 1 and 2	197 0 10	
		197 0 10
AWANUI—CALIFORNIA,—		
Ahipara Road Board—Grant for completion of road	384 14 6	
		384 14 6
MAHURANGI—PORT ALBERT,—		
Holder and Burke, extras on contract	148 1 0	
A. Sutherland, extras on contract	21 5 0	
E. Mills, contract for Mahurangi Bridge approaches ...	95 0 0	
E. Mills, contract No. 2, clearing, forming, bridging, &c., 429 chains	2,279 0 0	
E. Brown, contract for about 329 chains breast cutting, Sec. No. 3	978 15 6	
A. Wilson, contract (section No. 4) for (about) 293 chains of road formation	1,149 0 0	
		4,671 1 6
SHOAL BAY—NORTH SHORE,—		
Pitts and Goldie, extras on contract £1,175, 90 ft. of piles driven to secure apron of water-way, 2s. 6d.	11 5 0	
Pitts and Goldie, 600 feet planking, spikes, bolts, &c. ...	6 0 0	
Pitts and Goldie, 108 cubic yards rough stone pitching, 5s. ...	27 0 0	
Pitts and Goldie, clearing tea-tree and forming 11 chains road ...	13 15 0	
		58 0 0
WAIMATE—WAIHARE,—		
Rihari Te Tata, amount of contract for culvert, bridge, and approaches	34 0 0	34 0 0
OHAEWAE—OKAIHAU,—		
T. and W. Bedggood, culvert, bridge, approaches, and outfall drain	30 10 0	
W. Clarke, moving, putting up, replacing with new timbers, 57 chains fence	75 0 0	
T. Hapimana, 1 culvert and 4½ chains forming	7 0 0	
		112 10 0
KAWA KAWA—WHANGAREI,—		
Eru Nehua, contract for cutting and clearing on road, 8,741 links forest, at £1 ... £87 8 0		
1,940 links scrub, at 2s. 6d. 2 6 3		
	89 14 3	
Henare Peia, contract for cutting and clearing on road, 5,845 links forest, at £1 ... ... £58 8 6		
1,000 links forest, at 10s. 5 0 0		
650 links scrub, at 5s. 1 12 6		
2,500 links scrub, at 2s. 6d. 3 2 6		
	68 3 6	
Timeu, contract for cutting and clearing on road, 1,024 links forest, at £1	10 4 0	

Roads, Bay of Islands—continued.	£ s. d.	£ s. d.
Himiona, contract for cutting and clearing on road, 1,135 links forest, at £1 ... ... £11 6 0		
304 links fern, at 2s. 6d. 0 7 6		
	11 13 6	
Iwi Te Mauru, contract for cutting and clearing 588 links, at £1	5 17 6	
Kio Wirepa, contract for cutting and clearing on road, 1,050 links forest, at £1 ... ... £10 10 0		
4,930 links scrub, at 2s. 6d. 6 2 6		
	16 12 6	
John Chisholm, contract for cutting and clearing 4,600 links forest, at £1	46 0 0	
Pera, contract for cutting and clearing on road, 8,568 links, at £1 ... ... £85 13 0		
840 links, at 10s. 4 4 0		
600 links, at 2s. 6d. 0 15 0		
	90 12 0	
Hohaia Pataone, contract for cutting and clearing on road, 37 chains forest, at £1 ... £37 0 0		
11·25 chains forest, at 10s. 5 12 6		
	42 12 6	
Mauira, contract for cutting and clearing on road, 930 links, at 10s.	4 13 0	
Toke, contract for cutting and clearing on road, 400 links forest, at £1	4 0 0	
Patu Hohaia, contract for cutting and clearing on road 2,150 links forest, at £1 ... ... £21 10 0		
350 links scrub forest, at 2s. 6d. 0 8 3		
	21 18 3	
Patuhihi, contract for cutting and clearing on road, 2,635 links forest, at £1 ... ... £26 6 0		
1,750 links forest, at 15s. 13 2 6		
	39 8 6	
Eru Pumaka, cutting and clearing 1,337 links of forest, at £1 ...	13 6 6	
Te Whaereamu, cutting and clearing 1,860 links forest, at £1; cutting and clearing 700 links light bush, at 10s.; cutting and clearing 300 links fern bush, at 2s.	22 9 6	
Te Kahuti, cutting and clearing 520 links light bush, at 10s. ...	2 12 0	
Te Iwi Tamauru, „ „ 1,240 links forest, at £1 ...	12 8 0	
Henare Peia, „ „ 2,012 links forest, at £1 } ...	22 11 0	
„ „ „ 2,000 links fern, at 2s. 6d. }		
Manira, „ „ 570 links forest, at £1 ...	5 14 0	
Toki, „ „ 570 links forest, at £1 ...	5 14 0	
Whatarau, „ „ 1,013 links light bush, at 10s. ...	5 1 3	
Tanatui, „ „ 1,432 links forest, at £1 ...	14 6 0	
Hare Puhi Kura, „ „ 710 links forest, at £1 ...	7 2 0	
Komene Te Ruhi, „ „ 1,020 links forest, at £1 ...	10 4 0	
Rewi Tai Kawa, „ „ 3,024 links forest, at £1 ...	30 4 0	
Kio, „ „ 2,200 links forest, at £1; and 200 links light bush, at 5s.	20 10 0	
Eru Nehua, contract for bridge over the Oemoka Creek ...	13 10 0	
Henare Peia, contract for earthworks at Ruapekapeka, 137 yards, at 1s. 6d.	10 5 6	
Eru Era Maki, contract for earthworks, Tanuiata Kaiposson, 30 yards	1 10 0	
Eru Nehua, contract for 11 chains of drain, at 2s. 6d.	4 2 6	
Pera, contract for earthworks, 133 yards, at 1s. 6d.	9 19 6	
Rewi Taikawa, contract for earthworks, 151 yards, at 2s. ...	15 2 0	
Eru Nehua, extras on contract for bridge over Oemoka Creek ...	1 10 0	
Nemo te Waha, contract for earthworks, 33 yards, at 1s. 6d. ...	2 9 6	
Perini Kake, contract for earthworks at Pukeahuahu, 45 yards, at 1s. 6d.	3 7 6	
Nemo te Waha, extra on contract for earthworks	2 0 0	
		687 8 3

Roads North of Auckland.

Smith, Rintoul, and Lambert, causeway and bridge over Pararau, Kaipara	549 0 0	
Smith, Rintoul, and Lambert, ford, Matakohe Creek	116 0 0	
Vile and Hill, cutting and clearing bush road, &c., between Maungaturoto and Mangapai	49 10 0	
A. Huett, side cutting between Whangarei Head and Whangarei	8 0 0	
McLeod and Matheson, bridge over Mangawhere Creek, Hikuranga District	117 0 0	

Roads North of Auckland—continued.	£ s. d.	£ s. d.
Wainui District Board, cutting, clearing, ditching, fascining, 16 chains, Old North Road	24 0 0	
Ramsay and Garrett, extra timber for lengthening of bridge, spikes, &c.	12 0 0	
W. R. Harvey, extra on contract section 1, 8 cubic yards earthwork, at 1s. 3d.	5 0 0	
Hoe and Dram, extra timber and labour for wing to bridge, section 3	3 10 0	
J. W. Glenny, contract, section 1, clearing bush, earth cuttings, &c., on main road to Kaukapakapa, 97 chains	158 0 0	
Duncan Stuart, contract, section 13, clearing bush, earthworks, &c., on Whangarei and Wharekohe Road, 123 chains, bush clearing 85 chains, side cutting and ditching, and 10 culverts	343 0 0	
John McLeod, culvert, ditching, and earthworks on road, Hikurangi	19 0 0	
Alex. McKenzie, contract £294, extra additional length about 46 chains	15 8 0	
Jas. Inglis, section 2, contract for constructing 9 culverts, forming, ditching, &c.	190 0 0	
Jas. Trounson, extra on contract £129, 2 extra sills, 20 ft., 12 x 12	2 0 0	
Jas. Trounson, extra on contract £196, ditching, 10 chains ...	5 0 0	
C. Davis, extras on contracts 1 and 2	13 11 6	
W. Ormiston, extras on contract section No. 8, £685 ...	188 3 0	
D. Stuart, section 13, extras on contract, 27 chains bush, £20 5s.; culvert, &c., £7	27 5 0	
Lambert and Rintoul, extra on contract £549, timber for bridge	5 0 0	
M. Guison, contract, section No. 1, cutting, forming, draining culverts, and fascining at Cobbler's Hill, near Riverhead ...	99 0 0	
M. Phillips, contract, section No. 2, cutting and forming road at Lucas Creek Hill; works let at schedule of prices, estimate	320 0 0	
John Smyth, contract, section No. 2, erecting bridge over Orewa Creek	178 0 0	
Henry Pitts, contract for carting and delivering scoria ash in Shoal Bay, 1,650¾ cubic yards, at 2s. 8d....	220 2 0	
Henry Pitts, constructing small stone culvert	3 0 0	
		2,670 9 6

Waikato.

MERCER—CAMBRIDGE,—

R. Martin, extras on contract No. 2		46 13 4	
Cavanagh and Lovett, contract for raising road through Hopu Hopu Reserve		41 2 0	
Cavanagh and Lovett, sidelong cutting at Taupiri Gorge, 1,696 yards, at 8d.		56 10 8	
R. Martin, extra on contract No. 1, refascining and keeping in repair road, Mercer to Whangamarino		50 0 0	
T. W. Waller, to deliver about 61,000 feet sawn timber, as per lists, marked A.B., and supplementary, at Waikato Heads, at 19s. per 100 ft.			
R. B. Ferguson, contract for work, Taupiri Gorge—			
1,390 yards excavation, at 8d.	£45 19 2		
239 yards scraping for sides, at 1s. ...	11 19 0		
89 yards culvert, replacing bridge, at 8d. ...	2 18 6		
5,000 ft. forming, at 15s. per 100 ft. ...	37 10 0		
Work, taking out and putting in culverts ...	6 13 4		
		105 0 0	
Cavanah and Lovett, extras on contract earthwork, 500 cubic yards, at 8d	£3 10 0		
Culvert	1 10 0		
Culverts, 40s.; spikes, 10s.	2 10 0		
		7 10 0	
R. Martin, extras on contract No. 1		13 12 0	
G. Codlin, extra on contract No 3, for plant taken over ...		14 10 9	
R. B. Ferguson, extras on contract—			
Fascining	£1 10 0		
Taking up fascines	5 10 0		
Widening flat	4 10 0		
Cutting 70 yards, at 1s.	3 10 0		
Shifting fascines	2 2 0		
Culvert	1 3 6		
		18 5 6	
D. F. Scott, contract for carting timber from Waikato River to Tamahere Bridge		22 0 0	
			375 4 3

Bay of Plenty.

			£ s. d.	£ s. d.
Opotiki—Tableland,—				
Angus Smith, section No. 1, contract No. 2			129 15 0	
Loftus Richards, extras on contract, section No. 2—				
20⅓ chains formation	£10 5 0			
Ditch to swamp	0 14 3			
Drain to river	1 1 0			
Carting earth swamp	24 4 0			
Gravelling 17 chains	37 8 0			
Pile bridge, lieu plain	10 0 0			
	£83 12 3			
Less bridge not required	15 0 0			
			68 12 3	
				198 7 3
Ohiwa—Waimana,—				
Tomai Koha, contract No. 2, constructing 4¼ miles road, at £20			90 0 0	
Extra small bridge in swamp			5 10 0	
Raku Raku, forming 2 miles of road, at £20; and extras, £20 ...			60 0 0	
				155 10 0
Whakatane—Te Teko,—				
Pohipoto, Ngatiawa Hapu, contract for constructing 2 miles of road, at £40			80 0 0	
Ngatiwa Hapu, contract for constructing 1 mile of road ...			40 0 0	
Ngatepakeko, contract for forming 2 miles of road, at £40 ...			80 0 0	
				200 0 0
Richmond—Galatea,—				
Rawiri, contract No. 3, for widening 5¼ miles of road, at £20 per mile			105 0 0	
Arama Karaka, contract No. 4, for widening road 5¼ miles, at £20 per mile			105 0 0	
13 chains alteration of line, at 5s. per chain			3 5 0	
8 chains alteration of line, at 2s. 6d.			1 0 0	
				214 5 0
Tauranga—Ohinemuru,—				
W. Watson, contract No. 5, £305, extended to £1,140, difference			835 0 0	
Mitchell and Stewart, contract No. 6, for tarring and painting 4 bridges			48 0 0	
Alex. Sutherland and Co., contract No. 7, for construction of truss bridge, Wairoa River			1,487 0 0	
Wm. Watson, extras on contract No 5, £1,140			95 10 4	
J. Donally, contract for 1 year's maintenance of 19 miles of road			63 10 0	
				2,529 0 4
Ohinemutu—Branch,—				
Henry Bumpus, contract for erection of plain bridge, 40 feet ...			87 10 0	
				87 10 0
Tauranga—Ta Papa,—				
W. H. Bennett, contract No. 3, Omanawa Bridge			599 0 0	
S. Earl, improving Tauranga Ta Papa road at Judea			73 0 0	
W. H. Bennett, earthwork in forming West Bridge approach, extras			6 0 0	
W. H. Bennett, pohutukawa angle blocks, extras			6 0 0	
W. H. Bennett, anchor braces and blocks to east retaining wings, extras			1 10 0	
W. H. Bennett, 2 long joists and hand-rail braces, extras ...			2 10 0	
				688 0 0
Tauranga—Marenui,—				
Joseph Thompson, tarring and painting 3 bridges (No. 2) ...			64 0 0	
Joseph Thompson, erection of 2 truss bridges (construction of embankment at Waioeka River, at Opotiki, contract No. 3)			1,864 0 0	
Hamiora Rewete, contract for 2¾ miles road construction, at £50	£137 10 0			
„ Large bridge over creek ...	10 0 0			
„ Extra for rock excavation ...	5 0 0			
			152 10 0	
Wiremu Kingi, maintenance of road from Opotiki to Torere ...			10 0 0	
				2,090 10 0
Tauranga—Tapaueharuru,—				
R. C. Jordan, extras on contract No. 19			29 14 0	
R. C. Jordan, contract No. 6, extra height Awahou Bridge ...			12 0 0	
Rikiana, repairs and maintenance of road between Teraringa and Waikato, at per annum			50 0 0	
Geo. McAuly, erection of 3 bridges, Ateamuri, Taupo, contract 4			255 0 0	

	£ s. d.	£ s. d.
Bay of Plenty—continued.		
James Carthy, maintenance of road from Oropi to Teraringa, 9 miles, contract No. 31	73 0 0	
R. C. Jordan, extras on contract No. 6	198 0 0	
J. Murphy, extra work on contract	7 4 0	
Geo. Green, contract No. 27, tarring and painting 23 bridges ...	281 0 0	
Mita Makai, repairs and maintenance of road from Waititi to Hemo	20 0 0	
G. McAuly, extras on contract	165 0 0	
Wi Katene, extras on contract No. 3, £1,712 10s.	212 7 3	
Jno. Fielding, contract for maintenance of road from the Green Hill paddock, Tauranga, to Oropi, for 12 months, from 21st January, 1874	60 0 0	
Iheia Teio and another, contract No. 6, block and side cutting, embankments, and formation	160 0 0	
Poihipi Tukanangi and party, improving road from Taupo Bridge to Otupaeahaki	500 0 0	
Kennedy, contract for forming portion of approach to Tauranga and Thames Road	207 0 0	
Paurini, contract for repairs and maintenance of road between Waikaukau and Anahohi Hapi, from 1st November, 1873 ...	22 10 0	
Perererika, contract No. 28, repairs and maintenance of road, Waititi to Hemo, from November 6th, 1873, per annum ...	20 0 0	
		2,272 15 3
ROTORUA—TARAWERA,—		
Aporo Wharetine, contract No. 1	260 0 0	
Watene and people, contract No. 3, for delivering stone and building abutments to the Wairoa Bridge	25 0 0	
Ngatiwhakane Hapu, contract No. 2, for constructing 180 chains road	110 0 0	
		395 0 0
MAKETU—ROTORUA,—		
Bumpus and Co., contract for tarring and painting two bridges...	35 0 0	
Te Harete, repairs and maintenance of Takeke Bridge and approaches	20 0 0	
Henry Bumpus, erecting the Paeringa Bridge, Government finding all timber and bolts, and Contractor nails, spikes, and labour, contract No. 38	55 0 0	
		110 0 0
OPOTIKI—GISBORNE,—		
James Smith, contract for maintenance of road from junction Waioeka Road and Otara River, for twelve months, from 26th January	47 17 6	
		47 17 6
Poverty Bay and East Coast.		
TE KAPU—GISBORNE,—		
Ihakara Haeata, side cutting, block cutting, fern clearing, fascining, &c., contract No. 1	146 0 0	
Tekohari and others, contract No. 2, side cutting, bush clearing, fern clearing, &c.	149 0 0	
Tamihana Huata and another, contract, side cutting, fern and scrub clearing, culverts, &c., contract No. 3	107 0 0	
Tamihana Huata and another, contract No. 4, side cutting, scrub and fern clearing	88 0 0	
Kerei Teata, contract No. 16, for draining and road formation, and erection of culvert	120 0 0	
Ralph Gardiner, contract No. 15A, for maintenance of road from Wairoa to Opoiti, for 12 months, from 9th May, 1874 ...	50 0 0	
Paora Kate and others, contract No. 6, for road formation, erection of bridges and culverts, and bush and scrub clearing ...	325 0 0	
Watikena and others, road formation, side and block cutting, embankments and fascining, erection of culverts and bridges, and bush and scrub clearing, contract No. 5	650 0 0	
Hami Mahuke, contract No. 7, road formation, bush and scrub clearing, and erection of bridges and culverts	325 0 0	
		1,960 0 0
GISBORNE—HICKS BAY,—		
Aperahama and party, contract No. 31, 4 miles bridle-track formation	118 9 6	
Te Rei and party, contract No. 32, 3 miles bridle-road formation	292 11 0	
Hunia Hoki and others, extras on contract No. 15	14 10 0	
Hone Mokena, maintenance of ferry at Orutua for 1 year ...	10 0 0	

Poverty Bay and East Coast—continued.	£ s. d.	£ s. d.
Wiremu Tutaepa Eruera, Rangiwha, and party, contract No. 1, dray road from Te Awanui to Maratutahi, 3 miles, road 12 feet wide, with culverts	216 17 0	
Herewini, Horomona, and Co., contract No. 16, bridle road, side cutting—		
1,275 yards light soil, at 4d. £21 5 0		
3,357 „ clay soil, at 5d. 69 18 9		
264 „ soft tufa, at 8d. 8 16 0		
1,245 „ hard tufa, at 1s. 62 5 0		
Culverts, 7 x 3, 6 x 1, 6 ft. 12 0 0		
	174 4 9	
Robert Waddy, contract No. 5A, for maintenance of ferry at Uawao River, from 16th August, 1873, to 15th August, 1876, three years, at £20 per annum	60 0 0	
Hone Meihana, maintenance of ferry at Pakarae River, from 6th March, 1874, to 5th March, 1876, two years, at £10 per annum	20 0 0	
Hepeta Maitai, contract No. 6, for removing slips, deepening drains, repairing culverts, road formation, &c.	52 13 0	
Hutana Pinewaipapa, contract No. 17, 2¾ miles bridle path formation	184 0 6	
Wi Patene, contract No. 4, for maintenance of road for 12 months, ending 10th June, 1875, from Pohatukina to Waitotara ...	5 0 0	
Eru Rito, contract No. 12, for maintenance of road for 12 months, ending 10th June, 1875, Waitahahoata—Kaihuihui ...	5 0 0	
Ereatara Tapore, contract No. 13, for maintenance of road for 12 months, ending 10th June, 1875, Kaihuihui—Makarangi ...	3 0 0	
Te Manu, contract No. 13A, for maintenance of road for 12 months, ending 10th June, 1875, Te Papara—Waihirere ...	2 10 0	
Tamati Whakakahu, contract No. 13B, for maintenance of road for 12 months, ending 10th June, 1875, Waihirere—Taumokomoko	5 0 0	
Kerehona, contract No. 14, for maintenance of road for 12 months, ending 10th June, 1875, Tongoiro—Ueraukohau ...	4 0 0	
Komene Tuau and another, contract No. 17, for maintenance of road for 12 months, ending 10th June, 1875, Tawhite—Waikawa	8 0 0	
Hoani Kaikapo, contract No. 19, for maintenance of road for 12 months, ending 10th June, 1875, Whareponga—Kotoengahue	2 0 0	
Mokena, contract Nos. 21 and 22, for maintenance of road for 12 months, ending 10th June, 1875, Waitekaha—Mangatawa ...	5 0 0	
Hone Heihi, contract No. 23, for maintenance of road for 12 months, ending 10th June, 1875, Mangatawa—Repoura ...	2 10 0	
Makaea Te Hakiro, contract No. 25, for maintenance of road for 12 months, ending 10th June, 1875, Tamata—Wharepara ...	2 0 0	
Wiremu Keiha, contract No. 26, for maintenance of Waiapu Ferry for 2 years, ending 9th June, 1876	20 0 0	
		1,207 5 9
TE KAPU—WAIKARE MOANA,—		
Makarini Te Wharehina, maintenance of bridle track from Maungapapa to Onepoto, for the annual sum of (contract No. 12)	20 0 0	
Ihakara Paemako, maintenance of bridle road from Tekapu to Maungapapa for one year, for the sum of (contract No. 11)	30 0 0	
Makarini and Hori, contract No. 9...	70 0 0	
Makarini, contract No. 10	70 0 0	
Makarini and Winiata, contract No. 8	70 0 0	
Day and Bristow, contract No. 12, erection of Scamperdown Bridge, 90 ft., at £6 6s.	567 0 0	
Day and Bristow, extras on contract No. 12, Scamperdown Bridge	147 0 0	
Ralph Gardiner, contract No. 14, for 20 chains formation and 20 ditches	94 5 6	
Day and Bristow, extras on contract No. 12	30 0 0	
Day and Bristow, extras on contract No. 12, for securing bridge	35 0 0	
Ralph Gardiner, contract No. 13, for road maintenance for 12 months, from 9th May	50 0 0	
		1,183 5 6
MAHIA—GISBORNE,—		
Wi Kaipuke, contract No. 7, for maintenance of road for 12 months, ending 25th May, 1875	25 0 0	
		25 0 0
Taupo.		
TARAWERA—TAPAUEHARURU,—		
C. L. Hart, extras on contract No. 22	25 0 0	
		25 0 0

PROVINCE OF HAWKE'S BAY.

Napier.

	£ s. d.	£ s. d.
NAPIER—TARAWERA,—		
John Tracey, extras on contract No. 20	32 0 0	
C. L. Hart, maintenance and upholding self-acting ferry at the Mohaka River, for the period of 12 months, from 1st September, 1873, to 31st August, 1874	12 0 0	
Joseph Hogan, maintenance of section 112, from the Kawaka to Stony Creek, for 12 months, from 19th January, 1874, contract No. 26	675 0 0	
J. V. Teague, contract No. 27, maintenance of section 3, from Stony Creek to Waipunga Upper Bridge, near Runanga, for 12 months, from 19th January, 1874	250 0 0	
Pat. Loughlan, contract No. 28, for 1,000 yards road metal, at 3s. 3d.	162 10 0	
McAuley, Mohauka Bridge	2,455 0 0	
		3,586 10 0

Seventy-Mile Bush.

	£ s. d.	£ s. d.
TAKAPAU—GORGE,—		
Mackay and Monteith, construction of 16 bridges, total length 483 feet, at £3 2s. 6d.	1,509 7 6	
R. C. Jordan, metalling 10 miles road, at £4 per chain ...	3,200 0 0	
Mackay and Monteith, contract for Tamaki and Oruakeretaki Bridges	620 0 0	
Anthony Nathan, contract No. 2, metalling 5 miles 65 chains, at £3 18s. 6d., from eighth-mile peg towards Tahoeaite ...	1,825 2 6	
John McMenamin, contract No. 1, metalling 8 miles, at £5 18s. 6d.	3,792 0 0	
Robertson and Peebles, contract for metalling 114 chains, at £3 15s., in the Dannewirk Settlement	427 0 0	
Robertson and Peebles, extras on contract, 43 chains metalling, at £2 17s. 6d.	123 12 6	
Jas. Omara, contract for metalling 90 chains of road, at £2 13s.	238 10 0	
		11,735 12 6

PROVINCE OF WELLINGTON.

Wanganui.

	£ s. d.	£ s. d.
WANGANUI—PATEA,—		
R. S. Low, Waitotara Bridge	2,826 5 0	
James Donovan, extra three chains, at 25s., on contract £100 ...	3 15 0	
Job Sanders, extra two chains, at 30s., on contract £183 ...	3 0 0	
John Wilkie, contract No. 1, for metalling 124 chains road between Whenuakura and Patea, £5 5s.	651 0 0	
James Laing, contract No. 2, for metalling 125 chains road between Whenuakura and Patea, £3 12s....	450 0 0	
E. T. Baynton, subsidy for working and maintaining the ferry at the Whenuakura River, at per annum	50 0 0	
R. S. Low, contract for bridge over Whenuakura River ...	2,866 8 0	
J. O'Sullivan, contract for constructing and metalling approaches to Waitotara Bridge...	54 10 0	
		6,904 18 0
WANGANUI—TAUPO,—		
John McMenamin, contract No. 6, 396 chains road formation ...	374 0 0	
Joseph Lees, contract No. 7, for about five miles of road, 17s. per chain	340 0 0	
Emery and Kennedy, contract No. 8, for construction of 400 chains of Wanganui-Taupo horse road	299 0 0	
		1013 0 0

Manawatu.

	£ s. d.	£ s. d.
FOXTON—GORGE,—		
Henry McNeil, Manawatu Bridge	10,777 8 10	
A. and T. Stace, contract for gravelling 30 chains (more or less) at Otangorki Flat, at 28s. 10d. per chain; amount authorized, £52 10s.	39 11 6	
G. Hansen and others, contract for sections 3, 4, 5, 6, widening road alongside tramway	559 18 5	
Nils, Nillson, and another, contract, sections 1 and 2, for widening road alongside tramway, 96¼ chains, £3 9s. 6d.	334 9 6	
		11,711 8 3
FOXTON—PALMERSTON (TRAMWAY),—		
Walter Ockenden, building store shed at Foxton Tramway Station	196 0 0	
Manson and Bartholemew, extra on contract for supplying timber	508 18 3	

Manawatu—continued.	£	s.	d.	£	s.	d.
C. A. Bergersen and Co., eight openings for flood waters across line of tramway between Oroua Bridge and Palmerston ...	365	0	0			
P. Stewart, authorized additions on contract £2,620, £210 8s. 7d., less £96 6s. 6d.	114	2	1			
Meyrick, Perrin, and Co., contract for erection of goods shed at Palmerston; goods shed 43 ft. by 16 ft., open shed over line 79 ft. 6 in. by 12 ft. 6 in.	164	16	0			
Peter Stewart, repairs to gravelling over 6½ miles of line between rails, 641 cubic yards, at 4s. 1½d. ... £132 4 1						
9 cubic yards, at 7s., taken further along line 3 3 0						
29 cubic yards, at 12s., taken to Foxton Station 17 8 0	152	15	1			
Manson and Bartholemew, 28,113 ft. 9-in. wooden rails for tramway	168	13	7			
W. Ockenden, extras	23	6	0			
Painting station sheds, Foxton terminus	35	0	0			
H. Balme, tramway bus, as per contract	145	0	0			
C. A. Bergersen and three others, extras on contract £365 ...	13	1	6			
Geo. Hughes, contract for stables and shed at Palmerston ...	242	18	0			
Thos. Cameron, contract for stables and shed, Foxton ...	248	0	0			
Meyrick and Perrin, extra on store shed contract, for gates and closing ends	19	0	0			
Meyrick and Perrin, contract for painting store and station shed at Palmerston	40	0	0			
				2,436	10	6

Opaki, Manawatu.

OPAKI—GORGE,—						
Jas. Gorrie, extras on contract 17, 4 chains, £2 5s	11	0	0			
Robt. Campbell, delivering 20,000 ft. timber for bridges and culverts, at 4s. 6d.	45	0	0			
N. Christiansen, amount of contract for clearing 24 chains, at £2, and 5 chains, at £1 15s.	56	15	0			
Kakawaero, amount of contract for clearing 30 chains, at £2 5s., 1st September	60	0	0			
John Swanson, felling and clearing 3 chains on road, at £2 ...	6	0	0			
R. Campbell, delivering 11,100 ft. timber along line of road for bridges and culverts	24	19	6			
Ole Jensen, contract No. 1, for road, 30½ chains, at £1 16s., and 2½ chains, at £2 10s.	60	10	6			
J. Hefty, contract No. 2, for road, 2½ chains, at £2 ...	5	0	0			
Jens Neilsen, contract No. 3, for road, 11 chains, at £4 ...	44	0	0			
Jens Hansen, contract No. 4, for road, 13 chains, at £2 15s. ...	35	15	0			
Ole Mortensen, contract No. 5, for road, 6 chains, 800 yards, at 1s.; 15 chains, at £3 15s.; 4 chains, 377 yards, at 1s. ...	115	2	0			
Jno. Swansen, contract No. 6, for road, 16¼ chains, at £4 10s. ...	73	2	6			
Neils C. Christiansen, contract No. 7, for 4 chains, 400 cubic yards, at 1s.; 10¼ chains, at £3 15s.; 3 chains, 312 cubic yards, at 1s. 3d.	77	18	9			
Jens Jorgenson, contract No. 8, for 15 chains, at £3; 12 chains, 1,533 cubic yards, at 1s	121	13	0			
Mackay and Monteith, contract for forming 3 miles 70 chains road, being section between Manawatu River and junction of Wairarapa Road with the West Coast Road	1,876	0	0			
Henry Aulin, contract No. 9, for road, 29 chains, 2,642 cubic yards, at 1s.	132	2	0			
J. C. Dobelstein, contract No. 10, for 8¼ chains, 580 yards, at 1s. 2d.; 16 chains, 1,000 yards, at 1s., of road ...	83	16	8			
John Swanson, contract No. 11, for road, 16¼ chains, 1,200 yards, at 1s.	60	0	0			
T. Larsen, contract No. 12, for road, 21 chains, at £4; 2½ chains, 278 yards, at 1s.	97	18	0			
R. Beyers, contract No. 13, for road, 7 chains, at £4 3s. ...	29	1	0			
Jens Jorgensen, contract No. 14, for road, 16 chains, at £4 ...	64	0	0			
Neils Andersen, contract No. 15, for road, 16 chains, at £4; 6 chains, at £4 10s.	91	0	0			
R. Brodersen, contract No. 16, for road, 15 chains at £3; 6 chains, 600 yards, at 1s.	122	0	0			
Jens Petersen, contract No. 17, for road, 13 chains, at £3 10s.; 13 chains, at £2 17s.; 16 chains, at £5; 2¼ chains, at ...						
A. Jacobsen, contract No. 18, for road, 47 chains, at £3 10s.; 38 chains, 6,674 yards, at 1s.	498	4	0			
A. Dreyer, contract No. 19, for road, 1½ chains formation, at £3 10s.; 8 chains side cutting, at per yard, 4s. 6d.; 2½ chains side cutting, at per yard, 2s. 3d.						
N. C. Christiansen, contract No. 20, for road, 20 chains, at £4 10s.	90	0	0			
O. C. Mortensen, contract No. 21, for road, 37½ chains, at £5 ...	187	10	0			

Opaki, Manawatu—continued.	£ s. d.	£ s. d.
Jargen Neilsen, contract No. 22, for road, 36½ chains, at £4 15s.	173 7 6	
J. C. Dobbelstein, contract No. 23, for road, 10 chains, at £4 15s.	47 10 0	
G. Harvey, contract No. 24, for road, 10½ chains, at £6 8s., including two culverts and retaining walls	67 4 0	
Neils Andersen, contract No. 25, for road, 14 chains, at £4 15s.	66 10 0	
P. C. Christiansen, contract No. 27, for road, 42 chains, at £4 10s.	189 0 0	
A. McKay, contract No. 28, for road, 63½ chains, at £5 5s. ...	333 7 6	
H. M. Petersen, contract No. 29, for road, 16 chains, at £4 10s.	72 0 0	
L. Heyer, contract No. 30, for road, 61½ chains, at £4 12s. ...	282 18 0	
A. Lawsen, contract No. 31, for road, 16 chains, at £4 10s. ...	72 0 0	
Hans Larsen, contract No. 32, for road, 31½ chains, at £4 15s.	149 12 6	
G. Christiansen, contract No. 33, for road, 25 chains, at £4 10s.	112 10 0	
Alex. McLeod, contract No. 34, for road, 27 chains, at £5 5s. ...	141 15 0	
Anders Olsen, contract No. 35, for road, 23 chains, at £4 15s. ...	109 5 0	
George Herron, contract No. 36, for constructing 89 chains of road in heavy side cuttings; and also 3 block cuttings and heavy fillings	489 10 0	
Thorsten Larsen and others, contract No. 37, for constructing 6 chains of road along the side of steep hill, 12 feet in the solid and 3 feet in formation, batter ½ to 1	34 10 0	
H. M. Petersen, contract No. 38, for constructing 17 chains of road alongside of steep hill, heavy side cutting	89 5 0	
Alex. Jacobson, contract No. 39, for forming 24 chains of road, with double ditch on flat ground; and also block cuttings and heavy fillings	114 0 0	
Jens Petersen, contract for constructing 2 box culverts, 22 feet, x 2′ x 6′, at £2 15s.	5 10 0	
C. P. Schaumann, contract for constructing 803 chains of road ...	4,215 10 0	
C. McLeod, contract No. 1, for 26 box culverts and bridge culverts, 2 feet 10 inches by 5 feet square, and 18 feet to 32 feet long	147 4 0	
		10,980 16 5

PROVINCE OF TARANAKI.

PATEA—WAI-ITI,—

Laird and Davidson, extras on contract No. 65		12 18 9	
R. Rundle, erecting a bridge over the Werikino Stream, contract No. 96		398 0 0	
W. Elkin, extra on contract No. 83, for lowering cross roads, &c., 213 yards, at 10s. per yard		8 17 6	
Stevenson and Tait, contract No. 95, gravelling 102½ chains road, from sixth mile from Waingongora		602 3 9	
H. Thompson, contract No. 94, forming 93 chains road between Okati and Stony River		196 0 0	
J. Mulree, extras on contract No. 85, lengthening 2 culverts, 17 feet, at 5s.		4 5 0	
J. Mulree, extras on contract No. 86—			
Lengthening 2 culverts, 20 feet, at 5s. ...	£5 0 0		
1 new culvert, 31 feet, at 5s.	7 15 0		
		12 15 0	
J. Mulree, extras on contract No. 87—			
52 yards earthwork, at 8d.	£1 14 8		
Lengthening old culvert, 7 feet, at 8s. ...	1 15 0		
		3 9 8	
J. T. Davis, contract No. 97, gravelling 154½ chains main road, Wanganui and Taranaki		861 6 9	
T. Delamore, gravelling 160 chains road from Manawapou towards Patea, contract No. 98		840 0 0	
J. Paterson, contract No. 99, forming 94 chains road near Carlyle		244 8 0	
W. Bartlett, extra authorized on contract No. 45, Waiteiku Bridge		100 0 0	
Kahiu, gravelling 16½ chains road near Opunake, 12 feet wide, 12 inches deep in centre, 9 inches at side, at £2 10s. per chain		41 5 0	
R. Rundle and Co., contract for constructing bridge over Patea River		3,632 17 0	
H. McCarthy, contract No. 105, gravelling 156 chains, more or less, of main road near Manutahi		1,231 13 0	
J. Stevenson, contract No. 106, for gravelling 173 chains road, £3 15s., and other 60 chains at same rate		648 15 0 225 0 0	

Province of Taranaki—continued.	£ s. d.	£ s. d.
S. Julian, contract No. 109, for gravelling 100 chains road near Oeo, at £3 17s. 6d.	387 10 0	
Tuhaka, contract No. 112, for 49½ chains road formation, consisting of cutting, embankment, ditching, clearing, &c. ...	146 10 0	
		9,597 14 5
HAWERA—WAITARA,—		
H. Mayne, felling 40 chains of bush on mountain road, and clearing up track through the same, at 7s. 6d. per chain ...	15 0 0	
W. F. Oakes and another, gravelling 7 chains road near Hawera, at £6	42 0 0	
Thos. Jenkins, contract No. 2, 2 miles of road, at 34s. per chain	272 0 0	
Thos. Twigg, contract No. 3, 85 chains 60 links road, at 30s. per chain	128 8 0	
Wm. Aikman, contract No. 1, 2 miles of road, at per chain, 38s.	304 0 0	
Wm. Aikman, 1 chain extra	1 18 0	
Wm. Thompson, contract No. 4, 60 chains of road, at 34s. ...	102 0 0	
Wm. Thompson, extra on contract No. 4, 3 chains, at 34s. ...	5 2 0	
		870 8 0
NEW PLYMOUTH—NEAR MOUNT EGMONT,—		
J. Mulree, contract No. 100, for forming 50 chains, more or less, of road, Mangorei Road and Bridge	195 16 10	
G. Morley, contracts 101–104, erection of 4 bridges, viz., Mangaoraka, contract 101; near Upland Road, contract 102; Manganai, contract 103; Waiongona, contract 104 ...	840 0 0	
J. Mulree, contract No. 108, for forming 24 chains of road ...	36 10 0	
J. Mulree, extra on contract, £195 16s. 10d., taking down and erecting 3 chains fencing	1 16 0	
W. Campbell, erection of Waiwakaiho Bridge	350 0 0	
G. Morley, extra on contract No. 101, £212	18 8 0	
		1,442 10 10

APPENDIX I.

CONTRACTS FOR CONSTRUCTION OF WATER-RACES.

RETURN MADE IN COMPLIANCE WITH SECTION 96, "IMMIGRATION AND PUBLIC WORKS ACT, 1870."

SCHEDULE of CONTRACTS for the CONSTRUCTION of WATER-RACES under "The Immigration and Public Works Act, 1870," from 1st July, 1873, to 30th June, 1874.

PROVINCE OF AUCKLAND.

THAMES,—	Miles.	Chains.	Links.	£ s. d.	£ s. d.
James Heron, contract for construction of Thames Water-Race head works ...	...	27	5	2,596 4 0	
R. N. Smith and Co., contract for section No. 2, Thames Water-Race	7	34	85	16,630 0 0	
	7	61	90		19,226 4 0

PROVINCE OF WESTLAND.

WAIMEA,—	Miles.	Chains.	Links.	£ s. d.	£ s. d.
Denfield and Co., construction of sections, 1, 2, 3, 4, and 5	3	53	...	8,373 0 0	
W. F. Wilkinson, contract for construction of Waimea Water-Race, sections 8 and 9	3 3	0 33	93 22	14,233 14 6	
Cullen and Dee, contract for construction of section No. 7	3	11	0	8,533 1 6	
	13	18	15		31,139 16 0

PROVINCE OF NELSON.

NELSON—NELSON CREEK,—	Miles.	Chains.	Links.	£ s. d.	£ s. d.
Roche and Co., contract, section No. 1 ...	3	12	51	5,399 5 0	
Roche and Co., contract, section No. 2 ...	4	24	33	10,848 5 0	
Roche and Co., contract, section No. 3 ...	4	...	...	5,828 1 1	
Roche and Co, contract, section No. 4 ...	4	64	62	9,991 3 6	
	16	21	46		32,066 14 7

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Price 9s.]

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