

1889.  
NEW ZEALAND.

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# PUBLIC WORKS STATEMENT,

BY THE MINISTER FOR PUBLIC WORKS, THE HON. EDWIN MITCHELSON,  
7TH AUGUST, 1889.

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MR. SPEAKER,—

The proposals of the Government in relation to public works, which I have to explain this evening, are essentially moderate, merely defining the manner in which the Government proposes that the expenditure of the balance of the loan funds (amounting at the end of March last to £1,445,670) should be spread over a period of about three years.

## RAILWAYS IN COURSE OF CONSTRUCTION AND PROPOSED, INCLUDING ADDITIONS TO OPENED LINES.

To commence with the railways.

### HELENSVILLE NORTHWARDS.

The Helensville Northwards Railway is, as honourable members are no doubt aware, already completed and opened for traffic to a point in the Kaukapakapa Valley, about 8 miles from Helensville and 44 miles from Auckland, and it is now proposed to undertake its extension for a farther distance of 10 miles to Burns's farm (Ahuroa), between Komokoriki and the Kaipara Flats, that being the nearest point to which it can be profitably taken.

By this extension there will be opened up a large area of land at present unutilised, a considerable portion of which is owned by the Crown, and, as the land which will be passed through, by the railway, is covered to a great extent with valuable kauri and other timber, there will be a profitable timber-traffic on the new extension, and, consequently, a further development of the traffic on the existing line, in the immediate present, to be followed hereafter, as the land is cleared, by the more permanent traffic of a settled district.

To complete the work now proposed, however, including provision for existing liabilities and engagements, will cost close upon £80,000, and, as the balance of loan allocation for this railway, at the end of March last, was only £56,929, the Government has decided to recommend that the £23,000 originally allocated for the double line to Penrose should be diverted to the Helensville line, thus making up the funds available to £79,929. In coming to this conclusion, the Government has been largely influenced by the fact that the £23,000 provided for the Penrose line is only a small fraction of the amount required to complete that work, the total estimated cost of which is £100,000; and, as there seems to be no prospect of obtaining the balance required for many years to come, it would appear to be useless to continue it as an allocation to the Penrose line.

The authority proposed to be asked for this year, in order to admit of contracts being let for the works which I have indicated, will be the £79,929, already mentioned; but of this amount only £15,000 will require to be voted for actual expenditure within the year.

Beyond the point to which this railway is now proposed to be carried, namely, to Burns's farm, no further extension would appear to be justifiable until the colony is in a position to continue it to Wellsford or Maungatoroto, that is to say, to a distance beyond Burns's of about 15 or 32 miles respectively; and, in order to provide for this, and for the further extension of this very important railway in the future, the Government propose to introduce a Bill this session setting apart the proceeds of certain kauri forests, the property of the Crown, to the North of Auckland, as an endowment for that purpose.

#### GRAHAMSTOWN—TE AROHA.

On the Grahamstown—Te Aroha Railway the rails are laid from Grahams-town to Kauaeranga, about 5 miles, and the formation, without bridges, is completed from thence to about the 19th mile, near Ohinemuri. From that point to Te Aroha, a distance of 13 miles, no work has as yet been done. The loan allocation is short by some £65,000 of the amount required to complete the work, and as there are no funds out of which this amount can be supplemented, and, furthermore, as any further expenditure on the railway would be wasted until it can be completed throughout, it has been decided by the Government that nothing more should be done at present, beyond the completion of some necessary drainage works, including the culverts required at the Thames. The line passes through some very good land, suitable for settlement; but a large portion of this land is still in the hands of the Natives, and it is intended that steps should be taken to acquire for the Crown as much of it as is possible.

The authority now proposed to be asked for to cover the drainage works which I have referred to is £4,500, and of this amount £3,500 will require to be voted for actual expenditure this year.

#### PUTARURU—ROTORUA.

No work has been done on this railway since the date of my last Statement, and it therefore remains in the same position as there described, that is to say, it is completed with permanent-way for 8 miles (to Ngatira), at the Putaruru end, and the formation without bridges for about 6 miles at the Rotorua end is also done, the intervening gap of 18 miles being at present untouched.

As the line at present stands, therefore, the work done upon it, which has cost about £70,000, cannot be utilised, as there is no road, and no justification for making one, from Ngatira to Ohinemutu. It is therefore proposed that it should be carried on for a further distance of 10 miles, to the Okohiriki Saddle, from which point to the present road from Oxford to Rotorua a road 6 miles in length can easily be made. This would reduce the coach journey to 12 miles, and it would thus be possible to get from Auckland to Ohinemutu, or *vice versa*, in one day, whereas it now takes two days. It is manifest that this would make an immense difference in the tourist and other traffic, and thus attain a better return for the expenditure already made, not alone on the Putaruru—Rotorua Railway, but also on the railway from Auckland to Putaruru.

The extension to the Okohiriki Saddle will also open up one of the best blocks of agricultural land in the district, the property of the Crown, containing about 43,000 acres, on which there is a large quantity of valuable timber. If this land is opened up by a railway to Auckland, and by a road to Rotorua, as I have suggested, it would, without doubt, carry a large and thriving population, whose first efforts in settlement might also be very considerably assisted by the employment which could be afforded to them during the construction of the road and railway. It is, in fact, the only block of good agricultural land in the immediate vicinity of Rotorua, and, until it is opened up in the manner suggested, there is very little chance of its being settled upon. The opening-up of this land would also conduce very largely to the development of the Rotorua Sanatorium.

In order that the railway-works which I have above indicated may be undertaken, it is proposed to ask for authority this year for the balance of the

loan allocation, £40,350, but the vote required for actual expenditure within the year will be only £10,000.

#### NORTH ISLAND TRUNK RAILWAY.

I now come to the most difficult case which we have to deal with, namely, the North Island Trunk Railway.

*North End.*—At the north end the railway is finished to the Upper Mokau Valley, a distance of 34 miles from Te Awamutu, and the Poro-o-tarao section, between the 45th to the 47th mile, including tunnel, is approaching completion. Between the Upper Mokau Valley and Poro-o-tarao section, 11 miles, the contract survey is completed, but no work has as yet been done.

*South End.*—At the south end no works or surveys have been done since the date of my last Statement, so that the line remains as there described, namely, from Marton to Rangitira, 19 miles completed and opened for traffic; working surveys finished from thence to the end of the Paengaroa Section, 32 miles; and line located from thence for 10 miles to the head of the Hautapu Valley, which is the end of the rough country; total, 61 miles.

*Connection with New Plymouth.*—During the recess surveys have been undertaken (under the vote for “Surveys of New Lines of Railway”) for the purpose of ascertaining the probable cost of connecting the New Plymouth District with the Central Line, and, as the result of this, detailed preliminary surveys have been made of two alternative routes. A special report on this subject, together with a map showing the several routes, will be laid before you.

The two routes surveyed are the Ngaire and the Waitara routes.

The Ngaire line leaves the Foxton-New Plymouth Railway near Eltham Station, and, traversing successively the Makuri, Mangaotuku, Wanganomona, Tangarakau, Heao, and Ohura valleys, merges into the central route in the Ongaruhe Valley, at a point 25 miles from Upper Mokau, and 160 from Auckland. The Waitara line follows up the coast from Waitara to the Mimi River, and then strikes inland up the Mimi Valley and across the intervening ranges into the Tangarakau watershed, where it joins the Ngaire route.

The Waitara line would be exceedingly costly: about 15 miles in the Mimi and Waitara watersheds are by far the heaviest yet surveyed in the North Island, and after leaving the coast no settlement-country is opened up. For these and other reasons it is unnecessary to give further consideration to this route.

The Ngaire line on the other hand is quite feasible: 15 miles in the Tangarakau Valley are very heavy, but the whole of the remainder is moderate or easy. The average cost per mile for the 103 miles between Eltham and Ongaruhe is £8,800. There is no exceptionally heavy work in the shape of tunnels or viaducts. The general direction of the line is straight, the altitudes are low, and the gradients and curves are easy. Comparing it with the central route, the distances to Auckland from the principal centres in the south would be as follow:—

To Auckland.	By Central Route.	By Taranaki Route.
From Napier <i>via</i> Palmerston ... ..	453 miles	500 miles
From Wellington ... ..	433 "	480 "
From Wanganui ... ..	350 "	335 "
From New Plymouth ... ..	451 "	298 "

The expenditure on the North Island Trunk Railway to date, exclusive of the purchase of Native lands, and charges and expenses of raising loans, has been in round numbers—

At the north end	....	....	....	£245,000
At the south end	....	....	....	167,000
Total	....	....	....	<u>£412,000</u>

The estimated cost of connecting Wellington with Auckland by the several

routes mentioned, exclusive, as before, of the purchase of Native lands, and the costs and charges of raising loans, is, in addition to the amount already expended, as follows:—

For the North Island Trunk Railway	....	....	£1,673,000
For the Ngaire or Stratford route	....	....	£1,166,000
And for the Waitara route	....	....	£1,341,000

In any case, however, the total sum at present available is only, in round numbers, £434,000.

Independently, however, of any question as to whether either of the lines to connect Taranaki with the Main Trunk Railway should be constructed or not, the Government is of opinion that the works along the central route should be carried at the south end into the Awarua Block—namely, for a distance of 12 miles beyond Hunterville; and that at the north end the 11 miles to connect the Upper Mokau with the Poro-o-tarao section, together with the platelaying over the tunnel section, and the construction of a station beyond, should also be undertaken. The estimated cost of these works, exclusive of permanent-way, sleepers, and rolling-stock already provided for, would be respectively £120,000 and £110,000. Total, £230,000. But, after giving the subject very full and careful consideration, the Government is clearly of opinion that, before these works are undertaken, a large area of Native land, suitable for settlement, should be acquired at both ends of the line, and within easy reach of it.

The proposal of the Government, therefore, is that £100,000 should be set aside out of the present North Island Trunk Loan for the purchase of these lands, the proceeds of the sale of the said lands, as well as the proceeds of the sale of the one hundred thousand pounds' worth of land already purchased, to be credited to the fund as they accrue; and, if this proposal is assented to by the House, steps will at once be taken to give effect to it. Preliminary negotiations have, in fact, already been instituted with the view of attaining this end, and it is believed that very satisfactory prices can be arranged, and that by next session such progress can be made in the acquisition of the land at both ends as would warrant the Government in then asking the House to carry on the railway to the extent which I have indicated.

If sufficient land is thus acquired between this and next session, the Government is of opinion that these lands should then be opened up by roads, say, from Powhakarua, (the end of the proposed extension of the railway from the south,) to Kerioi, and from a point 9 miles from Eltham, near Stratford, to Poro-o-tarao; and also, that in order to give access to the large extent of Crown land in the interior of the country, the Wanganui River should be made navigable as far as Taumaranui.

*Existing Roads.*—The road-works already constructed in connection with the North Island Trunk Railway are in much the same position as they were last year. A dray-road has been partly made in the inland Patea District—from the Upper Rangitikei Crossing to Moawhanga (16 miles), and thence to Turangarere (11 miles). The weekly mail-coach from Napier now runs as far as Moawhanga. There is a good riding-road along the railway-line all the way from Hunterville to the Upper Mokau, a distance of about 170 miles, with a branch (25 miles) from Ohakune to the Wanganui River at Pipiriki. The tracks have been kept passable during the year, and improvements have been effected on the Inland Patea Road.

*Purchase of Native Lands.*—The particulars as regards the purchase of Native lands out of the loan for the North Island Trunk Railway will be stated in connection with the purchases of Native lands in the North Island generally, which I shall come to presently.

*Vote proposed for this Year.*—Out of the North Island Trunk Railway loan as a whole, the vote which is now asked for, in order to meet existing engagements during the current year is £34,201.

#### WOODVILLE—PALMERSTON.

On the Woodville—Palmerston Railway considerable difficulty has been experienced in the Manawatu Gorge, in getting a solid foundation; the rock which at first sight appeared solid enough, having proved, when opened out, to

be friable and very subject to slips. This has caused not only delay in the completion of the railway, but also considerable expenditure on retaining-walls and other works beyond what was originally anticipated; but the whole of the works required for the completion of the line from Woodville to Palmerston are now in active progress, and the principal contracts expire in April next, the other minor works being timed to be finished about the same date.

Allowing, therefore, for unavoidable delays, we may confidently hope to see this important link in the railway-system of the colony completed and open for traffic about this time next year.

The amount which will now be required to be authorised for this railway, in order to cover its total cost, will be the full balance of the loan allocation, namely, £90,328; and of this amount £75,000 will be required to be voted for actual expenditure within the current year.

#### WELLINGTON-WOODVILLE.

The Wellington-Woodville Railway is now completed and open for traffic from Wellington to Eketahuna, 88 miles, thus leaving a gap of only 27 miles unfinished in the whole distance from Wellington to Napier. If funds were available, it would be desirable that this length should be completed; and the Government is of opinion that it should be undertaken when further funds can be provided.

The present loan allocation is now practically exhausted, its amount being £15,358, as against liabilities at the end of March last amounting to £11,696, and the difference being required for contingencies in connection with the works completed and in hand, including the river-bank protection-works at the Awapuru Bridge. For expenditure within the current year, the amount required is £12,500, and for that amount a vote will be proposed.

#### BLenheim-AWATERE.

On the Blenheim-Awatore Railway, the formation, without bridges, is done to the end of the Dashwood Section, 8 miles from Blenheim. It is now proposed to complete this distance with bridges and permanent-way; and also to form and complete a further length of  $2\frac{1}{2}$  miles, which will bring the line to a convenient stopping-place at the south side of the Dashwood Pass, and from that point it is proposed to construct a dray-road to the Awatore River. This is all that the balance of the present loan allocation admits of being done, but it is anticipated that when this is done, the railway from Blenheim to Dashwood, which has so long been lying idle, will be utilised, and also that by this means the returns on the existing Picton to Blenheim section will be considerably increased.

The present road over Taylor's Pass, between the Awatore and Blenheim, is so very steep that it almost prohibits the possibility of carting at any reasonable cost, and the Government has been informed that the wool-wagons go round the bluffs along the sea-shore, without any road at all, rather than attempt to go over Taylor's Pass Road.

This being so, there seems to be very little doubt that the railway through the Dashwood Pass would be utilised, as it can be approached from the Awatore by a road of short length and with easy grades; and on that basis the Government has decided to ask the House to now authorise the undertakings which I have described, to the extent of the balance of the existing loan allocation (£27,363) of which £10,000 is proposed to be voted for expenditure within the year.

The section of railway from Blenheim to Dashwood could, it is anticipated, be worked very cheaply in connection with the existing railway from Picton to Blenheim, on which the staff and rolling-stock are not fully employed.

#### GREYMOOUTH-HOKITIKA.

On the Greymouth-Hokitika Railway during the last financial year the embankment and protective works at the Arahura River have been completed, and the Teremakau Bridge has made good progress, and is now nearly finished.

The condition of the line at present is, that at the Hokitika end, the railway is completed, with permanent-way from the Hokitika Wharf to about the 4th mile, near the Arahura River; and between that point and the Kapitea Creek, near the 10th mile, the formation is nearly all done, and the Arahura River is bridged.

At the Greymouth end the rails are laid for  $1\frac{1}{2}$  miles, and the formation, without bridges, is partly done to the Teremakau River,  $7\frac{1}{2}$  miles farther, and the bridge over the Teremakau is, as before stated, nearly completed.

The Government regrets that, as so large a sum of money (close upon £100,000) has already been expended on this line, it cannot be at once completed; but, in view of the fact that it would cost quite £80,000 more to complete and equip it, whereas there is only £26,178 available under loan allocation, it is evidently impossible for the Government to complete the work.

This being so, the question arose as to what could best be done, and, after giving the matter full consideration, the Government decided to ask the Midland Railway Company if they would be willing to take over this railway, and complete and equip and work it as a part of their undertakings in the colony. It is not probable, however, that the company would enter into this undertaking without a subsidy of some kind, and the Government have determined upon not granting any further endowments of land to railway companies. If a subsidy is given, therefore, it would have to be in the shape of the works already done, or some of them, and it is understood that the company is willing to entertain the project on these terms. No final arrangement can, however, be come to until the arrival in the colony of the company's engineer-in-chief, who is shortly expected from London.

The House will be asked to authorise the balance of loan-allocation, viz., the £26,178 already alluded to, to be utilised (in the event of the negotiations with the Midland Railway Company falling through), firstly, for completing and equipping the railway from Greymouth to the Teremakau (or to the Kumara Road); secondly, for adapting the Arahura Bridge for combined road and railway traffic; and, thirdly, for such other works as may be found, after full inquiry, to be the most advisable to construct. By this means it is hoped that some return may be obtained for the expenditure already incurred.

The Greymouth end of the line, at any rate, can be worked very economically in conjunction with the Greymouth to Brunner Railway.

On the basis of these proposals the amount required for expenditure during the current year will be £15,000.

#### MOUNT SOMERS.

On the Mount Somers Branch Railway, the extension to Springburn, 4 miles, which has been for some time in hand by the "unemployed," and otherwise, is now approaching completion, and, as the balance of existing allocation in Part III. of Loan Fund is insufficient to finish it, a further amount in aid to the extent of £1,971 has been provided from Part I. The total amount now required to be authorised is therefore the balance of allocation in Part III., £4,415, and £1,971 from Part I.: total, £6,386; practically the whole of which will be required for expenditure within the current year.

#### LIVINGSTONE BRANCH.

On the Livingstone Branch Railway there is a balance unexpended of loan allocation amounting to £1,063; but, as no further extension of the line is contemplated, it is not proposed to ask for any vote on account of this work during the current year.

#### OTAGO CENTRAL.

On the Otago Central Railway the rails are laid from Chain Hills Junction to Barewood Creek,  $21\frac{1}{2}$  miles. The formation, tunnels, and masonry of bridges are completed to a point 3 miles beyond the Sutton, or 36 from the Chain Hills. The bridge-superstructures are finished as far as the rails are laid, and under contract to the Sutton at 33 miles. It has not been considered necessary to

open the line for regular traffic, but excursion-trains are occasionally run to the Deep Stream, at the 20th mile, and settlers' produce and mining-plant are carried by the ballast-trains.

The contract for the superstructure of the Barewood bridges expires in July, 1890, and the platelaying to the Sutton must necessarily be finished at the same time. There will be no difficulty in having the formation and bridges on the Middlemarch Section also finished by the same date. The only work therefore that will remain unfinished after the Barewood bridges is the Middlemarch platelaying, and this can easily be done in three months. We may consequently look forward with confidence to having this long-delayed railway completed to Middlemarch before Christmas, 1890.

For the works already in hand, or still to be undertaken, for the completion of the railway to Middlemarch, the sum of £61,473, being the balance of the existing loan allocation, will now require to be authorised; and, of this amount, £40,000 will be required to be voted for actual expenditure within the current year.

It will thus be seen that it is anticipated that the present loan allocation will complete the railway to Middlemarch, but with nothing to spare; and, as the Government has come to the conclusion that a further extension of this railway is absolutely necessary, if any return whatever is to be obtained for the money already expended, a Bill has been prepared and laid before Parliament setting forth a proposal by which the construction of a further distance of 38 miles can be attained. This will bring the railway to Eweburn, which is, in fact, the first point on the line of this railway from which any considerable amount of traffic can be anticipated. If this extension is not provided for, the working of the portion already in hand from Chain Hills to Middlemarch would involve a continuous loss of revenue, in addition to the loss already incurred by interest on upwards of £500,000, which it will have cost when completed.

#### CATLIN'S RIVER.

On the Catlin's River branch, the first 7 miles from Balclutha to Romahapa has been opened for traffic for some considerable time, and the formation-works are now practically finished for 5 miles further, up to the Ahuriri Flat.

The proposal of the Government now is, to complete this 5 miles of formation with permanent-way, and to also construct and complete with permanent-way a further distance of 1 mile up to McDonald's Saddle, thus attaining in all a length of 13 miles of railway, over which it is anticipated that considerable traffic will ensue.

To admit of these works being undertaken, an authority for the balance of the loan allocation, £26,549, will now be asked for; but of this amount the vote required for actual expenditure within the current year will be only £8,000.

#### RIVERSDALE-SWITZER'S.

On the Riversdale-Switzer's Railway no work has been done since the date of my last Public Works Statement. It therefore remains in the same position as there described; that is to say, completed for a distance of 2 miles, and formed without bridges for a further length of 6 miles; out of a total length of 14 miles from Riversdale to Switzer's.

The balance of the existing loan allocation for this work is £18,615; but the amount required to complete it will be £15,000 more than that; and, as the Government cannot see its way to provide this extra amount, it is considered that no further work should be done at present.

#### EDENDALE-FORTROSE.

On the Edendale-Fortrose Railway a length of 4 miles from Edendale to Wyndham has been opened for traffic for several years, and a further distance of  $5\frac{1}{2}$  miles from Wyndham to Glenham is now formed, and a contract has just been entered into for platelaying and stations. When that is done there will be a total length of  $9\frac{1}{2}$  miles, terminating at the Glenham Road-crossing, which is a convenient point for traffic.

The balance of loan allocation on 31st March last was £15,393, and of that amount £9,000 will be required to complete the works which I have indicated, leaving a balance of £6,393, which is not at present required.

The vote required for actual expenditure within the current year is £8,000.

#### SEAWARD BUSH.

On the Seaward Bush branch railway, which has been finished and opened for traffic for some considerable time from Appleby to Oteramika, a distance of 11½ miles, there is a balance of loan allocation amounting to £3,961; but, as no extension which would be of any use can be made with this, it is not proposed to ask for any appropriation on account of it during the current year.

#### EXPENDITURE ON RAILWAYS LAST YEAR, AND VOTES PROPOSED FOR CURRENT YEAR.

On account of railways in course of construction as a whole, with liabilities at the end of March, 1888, amounting to £261,577, the amount voted for expenditure during the year ending March last was £406,900, and of this amount £272,077 was expended within the year.

As against this, with liabilities at the end of March last amounting to £207,483, we propose to ask for votes for the current year amounting to £316,745, leaving £669,557 available for expenditure in succeeding years. Of these amounts £31,000 is for expenditure on the North Island Trunk Railway, leaving £352,810 still available for same, and £285,745 is for expenditure on all the other railways, provided for under Parts I. and III. of the fund, leaving £316,747 still available for same.

#### TOTAL LENGTH OF RAILWAYS CONSTRUCTED AND IN PROGRESS.

The total length of railways open for traffic on the 31st March last was: In the North Island, 662 miles; and in the South Island, 1,108 miles: total, 1,770 miles. There were also at that date 164 miles of railway in course of construction, of which 72 were in the North Island and 92 in the South Island. The total expenditure on railways, including cost of provincial lines, and purchase of district railways, up to the 31st March last, was £14,738,782; and the liabilities on the 31st March were £207,484, making in all £14,946,266.

#### ADDITIONS TO OPEN LINES.

For additions to opened railways the amount voted for expenditure during last year was £65,000, and of this amount £48,440 was expended. Of these sums, however, £25,000 in each case was for purchase of a stock of permanent-way for working-railway requirements, so that the vote for actual works in the shape of additions to open lines was only £40,000, and of this sum £23,440 was expended. The diminution of this class of expenditure alluded to in former Public Works Statements, and which cannot be otherwise than satisfactory to the House and the country, is therefore still going on, the several expenditures for the last five years having been in round numbers £140,000, £91,000, £80,000, £38,000, and £24,000. For the present year, with liabilities at end of March last amounting to £26,027, we ask for a vote of £30,000.

#### THE WORKING RAILWAYS.

On the subject of the working railways it is not necessary that I should make any remarks, as a full report on the year's workings, with the usual statistical returns, has already been laid on the table of the House by the Railway Commissioners, in accordance with section 61 of "The Government Railways Act, 1887."

#### PUHIPUHI TRAMWAY.

Before finally leaving the subject of the railways, I wish to take this opportunity of bringing before the House a matter which is of great importance to the Auckland district especially, but also more or less to the whole of New Zealand, namely, the saving and utilising of so much as can now be saved of the Puhipuhi Kauri Forest.



Honourable members are aware, that most unfortunately, a large part of this valuable forest has already been partially burnt, and that this destruction is still going on. The Government has therefore come to the conclusion that steps should be taken to provide access to the forest by tramway, in order that it may be utilised, and a Bill for that purpose will be laid before Parliament for its consideration during the current session.

### ROADS.

I now come to the subject of roads, and should mention, in the first instance, that all classes of roads, except roads on goldfields, are now in the charge of the Minister of Lands. The roads on goldfields are in the charge of the Minister of Mines.

The length of roads and bridges constructed or improved out of Public Works Funds last year was :—

Dray-roads, North Island	....	....	....	192 miles.
" Middle Island	....	....	....	74 "
Total dray-roads	....	....	....	<u>266 miles.</u>
Horse-roads, North Island	....	....	....	96 miles.
" Middle Island	....	....	....	23 "
Total horse-roads	....	....	....	<u>119 miles.</u>
Grand total of roads of all classes	....	....	....	<u>385 miles.</u>

Bridges, North Island	....	....	9 bridges, 343 feet.
" Middle Island	....	....	4 " 369 "
Total bridge-work in both Islands	....	....	<u>13 bridges, 712 feet.</u>

The total length of roads constructed and improved in the colony generally from the commencement of the public-works policy up to the 31st March last, approximately, was as follows :—

Dray-roads, North Island	....	....	....	3,573 miles.
" Middle Island	....	....	....	1,287 "
Total dray-roads	....	....	....	<u>4,860 miles.</u>
Horse-roads, North Island	....	....	....	2,783 miles.
" Middle Island	....	....	....	1,220 miles.
Total horse-roads	....	....	....	<u>4,003 miles.</u>
Grand total of roads of all classes	....	....	....	<u>8,863 miles.</u>

Bridges, North Island	....	....	639 bridges, 49,919 feet.
" Middle Island	....	....	165 " 33,898 "
Total bridge-work in both Islands	....	....	<u>804 bridges, 83,817 feet.</u>

## ROADS NORTH OF AUCKLAND, MAIN ROADS, MISCELLANEOUS ROADS AND BRIDGES, AND GRANTS-IN-AID.

### ROADS NORTH OF AUCKLAND.

For roads north of Auckland the loan allocation has for some time been practically exhausted. The total balance left on 31st March, 1888, was only £732. Of this amount £264 was expended during last financial year, and a vote is now asked for the remainder, £468.

### MAIN ROADS.

For main roads the amount voted last year was £15,100, of which £10,968 was expended. For the present year, with liabilities at end of March last amounting to £7,380, we ask for a vote for £14,000. This will leave a balance on loan allocation for this class of works of only £4,676. It is obvious, therefore, that, if the colony is to continue to maintain these main roads, the necessary funds for the future must be obtained from the Consolidated Fund, or some other source.

The roads which have been maintained under this heading are main roads running through counties where the Counties Act is not in force, or otherwise in sparsely inhabited districts.

### MISCELLANEOUS ROADS AND BRIDGES.

For miscellaneous roads and bridges the amount voted last year was £34,604, of which £26,748 was expended. For the current year, with liabilities amounting to £21,232, we ask for a vote for £27,112. This will leave a balance on loan allocation of only £4,651. The principal items on which expenditure will take place during the year are: Roads in the Bay of Plenty District; the Napier–Murimotu Road, a very important link in the arterial lines of the country; the Kaikoura–Clarence Road; subsidy for bridge over the Clutha at Cromwell; and the opening-up of tracks in Milford and other Sounds, to afford visitors an opportunity of seeing something more of this wonderful country.

### GRANTS-IN-AID,

*Including Roads under the Roads and Bridges Construction Act, Subsidies to Local Bodies under the Finance and Powers Act, and provision for Work for Unemployed.*

*Under the Roads and Bridges Construction Act.*—The progress-payments claimed and paid last year, in pursuance of grants of old standing, amounted to £972, and for this year about £400 will be required for similar payments.

*Under the Local Bodies' Finance and Powers Act.*—The amount advanced last year out of the Public Works Fund was £11,310. For the present year only £147 is required to meet a small outstanding liability, as it is not intended to charge to the Public Works Fund any further advances under this Act.

*Work for Unemployed.*—Under the heading of work for unemployed the amount expended last year was £14,631, mainly on road construction. For the current year, with liabilities amounting to £2,525, we ask for a vote for £8,000, to be devoted as far as possible to forming county roads, the work to be done by small contracts. The balance of loan allocation for expenditure in future years is £2,000.

### ROADS TO OPEN UP CROWN LANDS BEFORE SALE.

For roads to open up Crown lands before sale the amount expended last year was £21,954. For the present year, with liabilities amounting to £25,434, we ask for a vote for £45,827. This is to cover the existing liabilities, and to undertake some new works in various parts of the colony. The balance of loan allocation which will thus be left for expenditure in future years is £15,731. The general results of last year's operations, together with the proposals for the ensuing year, will appear in the annual report on the surveys of the colony.

### VILLAGE SETTLEMENTS.

For village settlements the amount voted for expenditure last year was £26,000, and of this amount £10,770 was expended. For the current year we ask for a vote for £19,173. A detailed report on this subject will shortly be laid before the House.

### ROADS ON GOLDFIELDS.

For roads on the goldfields, including subsidies to local bodies, and also direct grants for the construction of roads and tracks for the development of the mineral resources of the colony, the expenditure last year was £7,015.

For the present year, with liabilities amounting to £25,168, we ask for a vote of £30,000. The amount asked for this year in excess of the existing liabilities is for the purpose of completing roads on which large sums have been from time to time expended, but which cannot be utilised until the whole distance is constructed.

### EXPENDITURE ON ROADS OF ALL CLASSES.

On account of roads of all classes, with liabilities at the end of March, 1888, amounting to £119,121, the amount voted for expenditure during the year ending March last was £186,504, and of this amount £104,632 was expended within the year. For the current year, with liabilities at the end of March last amounting to £120,858, we ask for a vote of £145,127.

### WATERWORKS ON GOLDFIELDS.

Under the heading of waterworks on the goldfields the balance remaining on loan allocation is only £929, and the works have consequently come to an end. It may, therefore, be interesting to state the total expenditure on this class of works up to 31st March last, which has been £509,996. For the current year authority is asked for the balance of the allocation (£929) to cover the cost of some small additions to existing water-races, which it is anticipated will increase the sale of water.

### PURCHASE OF NATIVE LANDS, NORTH ISLAND.

*In the North Island generally.*—Under the heading of purchase of Native lands in the North Island generally, as distinct from purchases out of the loan for the North Island Trunk Railway, the expenditure during the year ending the 31st March last was £5,089, and the area finally acquired during the same period was 37,000 acres.

Negotiations for further blocks of land have been pushed forward during the year, and within a few months an additional area of considerable extent will be in the hands of the Government.

The efforts of the department during the past year have been principally in the direction of completing old negotiations, and acquiring land for old advances. There is still much important and difficult work to be done in this direction.

The balance of loan allocation in Part I. of the Public Works Fund available for these purchases is only £9,396, but a sum of £20,285 is still due to the General Land Purchase Fund from the fund for the purchase of land along the North Island Trunk Railway, on account of purchases made out of the general fund within the railway area; and, assuming that arrangements will be made for further sums to be available for land purchase along the North Island Trunk Railway, and that this amount of £20,285 will consequently come in for credit, there will be available for general land purchases the sum of £29,681.

*Along North Island Main Trunk Railway.*—Coming now to the land purchases out of the allocation of £100,000 under the North Island Trunk Railway Loan, the amount expended last year was £3,983, and the area finally acquired during the same period was 29,900 acres. The total expenditure to the 31st March last was £98,491, thus leaving a balance available for further purchases of

only £1,509; but, as already stated (under the heading of the North Island Trunk Railway), the Government now proposes to ask the House to authorise a further allocation of £100,000 out of Part II. of the Public Works Fund for these land purchases, and if this is granted the amount available will thus be £101,509.

Out of this amount there would then be recouped to the General Land Purchase Fund the sum of £20,285 expended out of that fund on lands along the line of the railway, acquired before the passing of "The North Island Main Trunk Railway Loan Application Act, 1886," but which are still in the hands of the Government, and available to be dealt with under the provisions of that Act. If these proposals are assented to, vigorous efforts will be made to acquire land along the line of the railway at both ends; but, to avoid unprofitable expenditure, no payment will be made upon land until the title is ascertained in accordance with section 4 of "The Native Land Court Act, 1886."

The total expenditure on land along the North Island Trunk Railway, to the 31st March last, has therefore been £118,776. Of this amount £87,499 has been paid for 630,283 acres of which the purchases are complete, and £31,277 has been paid on account of further areas of which the purchases are as yet incomplete.

### IMMIGRATION.

Immigration is now discontinued, except to a very limited extent in favour of separated families. It is in fact restricted to cases where the father of a family has his wife and children in the United Kingdom.

Owing to intimation through the Agent-General in May last year that all nominations would lapse unless taken advantage of within three months, a large number of applications for refunds of deposits were received. This has greatly reduced the liability of the department in respect to outstanding nominations.

The liabilities and commitments, both in London and in the colony at this date amount to £2,830. This includes the cost of passages for 58½ adults, whose nominations still hold good, and for the passages of whom the Government is liable should application be made under the nominations.

It is proposed to take a further vote of £1,000 for the passages of separated families.

Nominations in favour of ten separated families have been accepted, on which the sum of £340 was deposited in the colony.

Since the date of my last Statement (18th August, 1888) 250 persons have arrived under the ordinary regulations, and 14 persons under the regulations for the introduction of small farmers, which are not now in force. This makes a total of 264 persons who have arrived in the colony during the year. There is one family of four persons now afloat.

Details of nationalities, and classes of immigrants introduced up to the 30th April last, will be found as usual in Parliamentary Paper D.—3, 1889.

### TELEGRAPH EXTENSION.

In the extension of the telegraph system of the colony a sum of £12,047 was expended during the last financial year, and it is estimated that a sum of £12,700 will be required to carry out the proposals for the present year. The expenditure of last year included a sum of £6,293 on account of the telephone exchanges of the colony, bringing the total capital cost of these exchanges, including the stock of material in hand for them, to £59,581 on the 31st March, 1889.

The work of last year, like that of the year preceding it, consisted principally of the extension of telegraph communication to several small villages by means of telephones. Of the lines erected for this purpose, the most important were to Middlemarch, Pigeon Bay, Marsden Point, Norsewood, Wairau Valley, Inangahua Junction, and to Hakaru and Pukekaruro, and the completion of the line to Kaipara Heads.

The only line erected for connection by means of the ordinary telegraph instruments was to Mahakipawa, for the convenience of the population on the goldfields there.

The Estimates for the present year provide for the extension of communication from Tologa Bay to Awanui, from Mongonui to Kaitaia, from Mangamahoe to Eketahuna, from Pembroke to Cardrona, from Riversdale to Balfour, from Te Awamutu to Otorohanga, and from Morrinsville to Oxford.

### PUBLIC BUILDINGS.

In connection with public buildings the following are the principal works which have been done during the year—

*Out of Loan Fund.*—The new prison at Mount Eden, and the new departmental buildings, Auckland, have been well advanced, and the Whau Lunatic Asylum additions have been completed. The new prison-works at Mount Cook have made good progress, and a new post office is in course of erection at Palmerston North. The restoration and extension of Sunnyside Asylum, partly destroyed by fire, is being vigorously proceeded with. Minor buildings, votes for which were taken last year, have been erected or are in progress in various parts of the colony.

There was voted last year out of loan £52,244 for public buildings, of which £34,592 was expended. The liabilities at the 31st March, 1889, amounted to £23,454, and to cover these, and to provide for further works during the present year, a vote of £48,051 will be proposed. This will leave a balance on loan allocation of £37,170, for expenditure in succeeding years. While that balance will continue to be devoted to the erection and extension of the more important and necessary public buildings until it is exhausted, it is intended thereafter to pursue the policy indicated by my Statement of last year, that the whole cost of public buildings, inclusive of school buildings, shall be borne on the Consolidated Fund.

*Out of Consolidated Fund.*—The restoration of the General Post Office (injured by fire) has been completed, and the Admiralty House, Auckland (also injured by fire), has been restored. The Departmental Buildings, Parliament Buildings, and Government Houses at Wellington and Auckland have been painted, and the maintenance of all public buildings upheld throughout the colony.

There was voted last year, out of the Consolidated Fund, £45,050 for Public Buildings and Domains, and £30,000 for school buildings, or a total of £75,050. On these votes the expenditure was respectively £29,340 and £23,816; total, £53,156. The liabilities at the 31st March, 1889, were on Public Buildings and Domains £10,452, and on school buildings £100, amounting to a total of £10,552; and, to cover these, and provide for the usual maintenance, and also to provide £25,000 for further school buildings, a vote of £56,275 has been taken on the Consolidated Fund.

### LIGHTHOUSES.

I now come to the subject of lighthouses, and it is to be regretted that the funds at the disposal of the Government for this class of work are so limited, as there are several points on the coast of the colony where, if funds were available, it would be very desirable to erect lighthouses. Amongst these I may mention Stephens Island, Cape Palliser, Cape Kidnappers, and the East Cape.

At Stephens Island a light would be very useful to all vessels navigating Cook Strait, and especially so to vessels from over-sea, when not able to make the land, or to see Farewell Spit light.

Cape Palliser is a turning point, and a light there would also be of great value to vessels bound from the South Island ports to the East Coast of the North Island.

On Cape Kidnappers a light would be of great use to ocean-going vessels bound to Napier, either from north or south, and would also be of some service to the ordinary coasting-ships. It has been suggested that the light now on Napier Bluff might possibly with advantage be removed to this point.

The East Cape is one of those prominent points where vessels have to materially alter their course, and a light there would consequently be of considerable benefit.

Early in August last year a working-party was sent to Cuvier Island, and the erection of the lighthouse and other buildings is so far advanced that it is anticipated that the light will shortly be ready for exhibition. The lighthouse is a cast-iron structure, which was manufactured at Auckland.

On lighthouses last year the amount expended was £2,504, and for the current year the amount asked for is £2,930. This exhausts the loan allocation.

### HARBOUR WORKS.

On account of harbour works, no provision was made under loan funds last year, nor is it intended to make any this year, the allocation for that class of works being exhausted. Since April, 1888, however, the Public Works Department has had charge of the construction of the harbour works at Westport and Greymouth, which have been carried on rapidly, in accordance with Sir John Coode's designs, by funds created under the special Acts of 1884.

### HARBOUR DEFENCES.

During the past year the defence-works have been carried on by convict labour, the barracks originally erected at the principal forts having been converted into secure temporary prisons. The prisoners are thus, with advantage both to themselves and to their work, kept confined on the fortifications on which they are employed.

Considerable progress has been made on the established lines of the scheme of defence.

The amount voted last year was £56,541, and of this amount £50,090 was expended, chiefly on matériel of war from England (fulfilling contracts entered into by the previous Government). This leaves an unexpended balance on loan allocation of £6,452. The total expenditure on the works themselves was £15,010, of which, again, £2,240 represents payments on account of unsettled claims for land taken for batteries in 1885. The expenditure on matériel was therefore £35,080; upon works, £12,770; and upon land, £2,240: making in all a total of £50,090, as above. The large contracts for matériel have now been fulfilled, and the remaining orders are not for large amounts.

The liabilities at the 31st March last were £3,715 on English matériel, and £2,400 on works (£600 of the latter item representing a still unsettled land-claim), or a total of £6,116. These liabilities, with contingencies, will absorb the unspent balance of £6,452 above arrived at.

The Government have again to express their sense of the valuable advice which has continued to be readily and freely given by General Schaw on questions connected with these works and the scheme of defence generally.

The total expenditure on harbour defences up to the 31st March, 1889, has been in round numbers £442,000, of which £233,000 represents cost of matériel of war obtained from England, and £209,000 the cost of works in the colony. Of this latter sum about £32,000 has been paid for land, and the balance, £177,000, represents the cost of the forts, batteries, submarine defences, steam-lauiches, special reports, supervision, and all other general charges.

### RATES ON NATIVE LANDS.

For rates on Native lands there is a balance due to the extent of about £1,000 in respect of the year ending the 31st March, 1888; and the estimated amount required for rates during the year ending the 31st March, 1889, but not yet paid, is £10,000, and, for the year ending the 31st March, 1890, a further £10,000: making in all £21,000.

As the rates, however, do not usually become payable until the year following that on which they are assessed, it is only proposed to ask this year for a vote for £8,595, being the £11,000 for the years ending the 31st March, 1888 and 1889, less recoveries up to the 31st March, 1889, amounting to £2,405. The £10,000 in respect of the year ending the 31st March, 1890, less such recoveries as may fall due in the meantime, will be asked for next year.

The total amount paid out of the Public Works Fund in respect of these rates up to the 31st March, 1889, was £43,609, out of which, as I have just stated, £2,405 has already been recovered, leaving £41,204 still to be recovered; and, assuming that the estimate of amount still to be paid (namely, £18,595) is correct, the amount to be ultimately recovered will be £59,799.

After the payment of rates in respect of the year ending the 31st March last no further sums will be payable on this account, the Act having been repealed.

### THERMAL SPRINGS.

Coming now to the subject of Thermal Springs, I find that the only one of these with which it is necessary for me to deal, as it is the only one on which any public-works expenditure has recently been going on, is that at Rotorua; but full information as regards the other thermal springs with which the Government is more or less connected will be found in the report of the Crown Lands Department already laid on the table of the House.

At Rotorua the extensive alterations and improvements undertaken in connection with the bathing accommodation are now completed, and it is satisfactory to find that invalids from all parts of our own and other colonies, and even from Europe, are attracted by the marvellous efficacy of these baths. The hospital which was burned down last year is to be rebuilt on a more suitable and less costly plan. It is clearly recognised by the Government that it ought not to compete with the local hotels, which can accommodate those who can afford to pay. It is only intended for persons from a distance who must come to Rotorua, and can only do so if cheap hospital accommodation is provided.

On thermal springs generally, the amount expended last year was £936; and, for this year, we ask for a vote for £2,350 for the Rotorua Hospital, that being the estimated cost to complete it.

### EXPENDITURE ON PUBLIC WORKS OF ALL CLASSES.

On account of public works of all classes, with liabilities at end of March, 1888, amounting to £471,695, the amount voted for expenditure during the year ending March last was £895,807, and of this amount £633,365 has been expended. Of the amount thus expended, £104,911 was for costs, charges, and discounts contingent on raising loans, leaving £528,454 as representing the expenditure on other works and services.

Apportioning this total to the several parts of the Public Works Fund it shows,—

Part I.—Liabilities at beginning of year, £205,323; voted for expenditure, £404,555; actually expended, £269,016.

Part II.—Liabilities at beginning of year, £75,904; voted for expenditure, £135,711; actually expended, £86,183.

Part III.—Liabilities at beginning of year, £190,468; voted for expenditure, £355,541; actually expended, £278,166.

As compared with the total expenditure last year, it may be interesting to mention the totals for a few years previously, which are in round numbers (exclusive of the purchase of District Railways).—For 1883–84, £1,409,000; 1884–85, £1,336,000; 1885–86, £1,287,000; 1886–87, £1,167,000; 1887–88, £966,000; 1888–89, £633,000.

### PUBLIC WORKS FUND.

The funds available for Public Works are as follows:—

#### PART I.

Comprising Immigration; some small items of Railways; Roads of all classes, except roads along North Island Trunk Railway; Waterworks on Goldfields; Purchase of Native Lands, North Island, except lands along North Island Trunk Railway; Telegraph Extension; Public Buildings; Lighthouses, Harbour Works, and Harbour Defences; Rates on Native Lands; and Thermal Springs.

In Part I. of the Fund we had at the 31st March last the sum of £303,801, and to this there is to be added £87,974, to which this fund is entitled under section 31 of the Government Loans to Local Bodies Act, making in all £391,775.

As against this, the amount proposed to be expended during the present year, including £165,273 liabilities at end of March last, is £252,545, which will leave £139,230 available for appropriation in succeeding years. A further sum, amounting to about £59,800, will, however, probably come to the credit of this fund in the shape of recoveries under the Native Land Rating Act.

#### PART II.

For the North Island Trunk Railway, including Road Works, and Native Land Purchase in connection therewith.

In Part II. of the Fund we had at 31st March the sum of £435,817; and, as against this, with liabilities at end of March amounting to £28,972, we shall have to expend during the present year, in order to meet existing engagements, the sum of about £34,201, leaving £401,616 for appropriation in succeeding years.

#### PART III.

For Railway Works generally, with the exception of the North Island Trunk Railway, and the small items of Railways included under Part I.

In Part III. of the Fund we had at 31st March the sum of £618,078; and, as against this, with liabilities at end of March amounting to £174,394, we propose to expend during the present year the sum of £287,415, leaving £330,663 for appropriation in succeeding years.

#### THE PUBLIC WORKS FUND AS A WHOLE.

Taking the Public Works Fund as a whole, therefore, we had available at 31st March last the sum of £1,445,670; and, as against this, with liabilities at the end of March amounting in all to £368,639, we propose to expend during the present year the sum of £574,161, leaving £871,509 available for appropriation in succeeding years.

As explained in my last Public Works Statement, however, it is scarcely probable that the various amounts which I have just alluded to as proposed to be expended will all come to charge within the current financial year, so that the actual expenditure which will be brought to book will not probably exceed £445,000, thus leaving about £1,000,000 for expenditure in succeeding years.

#### TABLES A, B, C, AND D.

The condition of the various funds, in relation to the several works and services provided for, will be found in detail on Tables A, B, and C, which will be attached to this Statement.

From Table A of these it will be seen that some readjustments are proposed in the allocations recommended last session for the various classes of works under Part I. of the fund; but none of them call for any special notice, as they consist merely in carrying a small portion of the amount previously unallotted to the credit of some of the items where funds were insufficient to fulfil engagements.

Table D shows the total expenditure on all classes of works for several years back.

#### CONCLUSION.

In conclusion, Sir, I would wish to take this opportunity of congratulating the House and the country on the improved prospects of the colony since the date of my Public Works Statement of last year, and to express the hope and belief that, if the proposals which I have now made are given effect to, it will further develop our resources, and enable us to take further advantage of the rise in prices which our produce has recently commanded.

The usual reports by the several permanent officers of the department will be attached to this statement, and also the usual tables showing condition of loan allocations, &c.



PUBLIC WORKS STATEMENT, 1889.

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LIST OF TABLES ATTACHED TO STATEMENT.

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**Table A—Public Works Fund, Part I.**—Condition on 31st March, 1889.

**Table B—Public Works Fund, Part II.**—Condition on 31st March, 1889.

**Table C—Public Works Fund, Part III.**—Condition on 31st March, 1889.

**Table D—General Summary.**—Showing total expenditure under Public Works Fund on all classes of works for the years 1880-81 to 1888-89, and the proposed expenditure on same for the year 1889-90. Also the balances of existing loan allocations which will then remain available for appropriations in succeeding years.



Table A.  
[To accompany Public Works Statement of 7th August, 1890.]  
PUBLIC WORKS FUND.—PART I.

NOTES.

The amounts in plus column have been obtained as follows:—

	£		£
(Class I.) Immigration .. ..	2,499	From unallotted .. ..	2,499
(Class III.) Railways .. ..	2,000	From unallotted .. ..	2,000
(Class IV.) Grants-in-aid .. ..	3,908	From unallotted .. ..	3,908
(Class VIII.) Customs Buildings ..	400	From Parliamentary Buildings ..	76
		From hospitals and charitable institutions .. ..	103
		From school buildings .. ..	221
			400
(Class X.) Rates on Native Lands ..	17,399	From unallotted .. ..	17,399
(Class XI.) Thermal Springs.. ..	2,285	From unallotted .. ..	2,285
(Class XII.) Charges and Expenses of raising Loan .. ..	1,842	From unallotted .. ..	1,842
Unallotted .. ..	10,734	From hospitals and charitable institutions .. ..	2,068
		From recoveries, Ohinemuri County .. ..	90
		From recoveries, Oamaru Harbour Board .. ..	5,000
		From receipts in aid under District Railways Purchasing Act .. ..	3,000
		From receipts in aid under "Government Loans to Local Bodies Act, 1866" .. ..	576
			10,734
Advance to Westport Harbour Board ..	14,336	From recoveries, Westport Harbour Board .. ..	14,336
			£55,403
Total .. ..	£55,403	Total .. ..	£55,403

Amounts in minus column distributed as follows:—

	£
(1) 76 to Customs. (Class VIII.)	76
(2) 103 to Customs. (Class VIII.)	103
(4) 221 to Customs. (Class VIII.)	221
	£400
(3) 2,499 to Immigration. (Class I.)	2,499
2,000 to Railways. (Class III.)	2,000
3,908 to Grants-in-aid. (Class IV.)	3,908
17,399 to Rates on Native Lands. (Class X.)	17,399
2,285 to Thermal Springs. (Class XI.)	2,285
1,842 to Charges and Expenses of raising Loans. (Class XII.)	1,842
	£29,933
(6) 14,336 to advance to Westport Harbour Board.	14,336
	£14,336
(8) 2,068 to unallotted.	2,068
(7) 90 to unallotted.	90
(9) 5,000 to unallotted.	5,000
(10) 3,000 to unallotted.	3,000
(10) 576 to unallotted.	576
	£10,734
	£55,403 Total.

Classes	Description of Work.	(1) Allocations as determined in July, 1888.	(2) Expenditure during Year ending 31st March, 1889.	(3) Balances of Allocations unexpended on 31st March, 1889.	(4) Readjustment of Allocations now proposed (August, 1889).		(5) Unexpended Balances of Allocations as thus readjusted August, 1889.	(6) Liabilities on 31st March, 1889.	(7) Year ending 31st March, 1890.		(8) Balances which will thus remain available for further Under-takings in succeeding Years.
					Plus.	Minus.			Amounts proposed to be voted for actual Expenditure.	Total Amount proposed to be authorised.	
I.	Immigration .. ..	£ 10,122	£ 8,791	£ 1,331	£ 2,499	..	£ 3,880	£ 1,200	£ 3,880	£ 3,880	£ ..
II.	Public Works, Departmental .. ..	6,911	6,458	453	..	..	453	..	..	..	453
III.	Railways .. ..	12,092	4,762	7,330	2,000	..	9,330	5,793	9,330	9,330	..
IV.	Roads:—										
	Roads, Bridges, and Wharves North of Auckland	732	264	468	..	..	468	340	468	468	..
	Main Roads .. ..	34,644	10,968	23,676	..	..	23,676	7,380	14,000	19,000	4,676
	Miscellaneous Roads and Bridges .. ..	58,511	26,748	31,763	..	..	31,763	21,232	27,112	30,000	1,763
	Grants-in-aid .. ..	33,552	26,913	6,639	3,908	..	10,547	2,875	8,547	10,547	..
	Roads to open up Lands before Sale .. ..	83,512	21,954	61,558	..	..	61,558	25,434	45,827	56,200	5,358
	Village Settlements .. ..	60,147	10,770	49,377	..	..	49,377	38,429	19,173	48,177	1,200
	Roads on Goldfields .. ..	46,707	7,015	39,692	..	..	39,692	25,168	30,000	35,000	4,692
	Total Roads .. ..	317,805	104,632	213,173	3,908	..	217,081	120,858	145,127	199,392	17,689
V.	Waterworks on Goldfields .. ..	984	55	929	..	..	929	..	700	929	..
VI.	Purchase of Native Lands, North Island ..	14,485	5,089	9,396	..	..	9,396	3,911	9,396	9,396	..
VII.	Telegraph Extension .. ..	28,370	12,047	16,323	..	..	16,323	3,591	12,700	16,323	..
VIII.	Public Buildings:—										
	Parliamentary Buildings .. ..	76	..	76	..	(1)76	..	..	..	..	..
	Departmental Offices .. ..	27,258	14,568	12,670	..	..	12,670	5,595	8,300	8,800	3,870
	Judicial .. ..	34,277	8,228	26,049	..	..	26,049	2,433	17,300	26,049	..
	Post and Telegraph .. ..	2,413	82	2,331	..	..	2,331	837	2,331	2,331	..
	Customs .. ..	..	..	..	400	..	400	..	400	400	..
	Lunatic Asylums .. ..	53,893	10,242	43,651	..	..	43,651	13,446	19,600	26,000	17,651
	Hospitals and Charitable Institutions ..	2,964	673	2,291	..	(2)103 } (3)2,068 }	130	1,143	120	120	..
	Quarantine Stations .. ..	..	..	..	..	..	..	..	..	..	..
	School-buildings .. ..	1,000	779	221	..	(4)221	..	..	..	..	..
	Total Public Buildings .. ..	121,881	34,592	87,289	400	2,468	85,221	23,454	48,051	63,700	21,521
IX.	Lighthouses, Harbour Works, and Defences:—										
	Lighthouses .. ..	5,434	2,504	2,930	..	..	2,930	350	2,930	2,930	..
	Harbour Defences .. ..	56,541	50,089	6,452	..	..	6,452	6,116	6,452	6,452	..
	Total Lighthouses, &c. .. ..	61,975	52,593	9,382	..	..	9,382	6,466	9,382	9,382	..
X.	Rates on Native Lands .. ..	11,500	10,304	1,196	17,399	..	18,595	..	8,595	18,595	..
XI.	Thermal Springs .. ..	1,000	935	65	2,285	..	2,350	..	2,350	2,350	..
XII.	Charges and Expenses of raising Loans ..	30,000	28,758	1,242	1,842	..	3,084	..	3,084	3,084	..
	Unallotted .. ..	35,000	..	35,000	10,734	(5)29,933	15,801	..	..	..	15,801
	Advance to Westport Harbour Board ..	Dr.14,336	..	Dr.14,336	14,336	..	..	..	..	..	..
	Totals .. ..	637,789	269,016	368,773	55,403	32,401	391,775	165,273	252,545	336,311	55,464
	Recoveries on account of services of previous years:										
	From Westport Harbour Board .. ..	..	Cr. 14,336	14,336	..	(6)14,336	..	..	..	..	..
	From Ohinemuri County .. ..	..	Cr. 90	90	..	(7)90	..	..	..	..	..
	From Oamaru Harbour Board .. ..	..	Cr. 5,000	5,000	..	(8)5,000	..	..	..	..	..
			19,426								
		637,789	249,590	388,199	55,403	51,827	391,775	165,273	252,545	336,311	55,464
	Receipts in aid:—										
	Under District Railways Purchasing Acts ..	..	..	3,000	..	(9)3,000	..	..	..	..	..
	Under "Government Loans to Local Bodies Act, 1866" ..	..	..	576	..	(10)576	..	..	..	..	..
	Grand totals .. ..	..	..	391,775	55,403	55,403	391,775	165,273	252,545	336,311	55,464

Table B.  
[To accompany Public Works Statement of 7th August, 1889.  
PUBLIC WORKS FUND.—PART II.

Classes.	—	(1.) Balances of Allocations as determined in July, 1888.	(2.) Expendi- ture during Year ending 31st March 1889.	(3.) Balances of Allocations unexpended on 31st March, 1889.	(4.) Readjustment of Allocations now proposed (August, 1889).		(5.) Unexpended Balances of Allocations as thus readjusted (August, 1889).	(6.) Liabilities, 31st March, 1889.	(7.) Year ending 31st March, 1890.		(8.) Balances which will thus remain available for further Undertakings in succeeding Years.	Length completed up to 31st March, 1889.			(9.) Condition into which it is estimated the Railway will be brought by Expenditure of Amounts stated in Column 6.						Additional Amount which will be required to complete the whole Line, with Permanent-way, Stations, &c., from Marton to Te Awamutu, over and above the £1,000,000 already provided.				
					Plus.	Minus.			Amount proposed to be voted for actual Expenditure.	Total Amount proposed to be authorised.					Complete with Permanent-way.			Formation only.							
												Miles.	From	To	Miles.	From	To	Miles.	From	To	Miles.	From	To	Amount.	
I.	Departmental .. .. .	£ 10,000	£ 3,000	£ 7,000	£	£	£ 7,000	£ ..	£ 1,000	£ 1,000	£ 6,000														£
II.	Railway Construction—																								
	Construction, north end .. ..	234,359	29,022	205,337			205,337	26,316	30,000	30,000	175,337	26	Te Awamutu ..	Te Kuiti ..	55	Te Awamutu ..	Maramata ..	..	..	..	216	Marton ..	Te Awamutu ..	1,285,000	
	“ south end .. ..	122,756	6,237	116,519			116,519	780	800	800	115,719	19	Marton ..	Rangatira ..	32	Marton ..	Powhakaroa ..	..	..	..					
	Surveys .. .. .	6,141	Cr. 549	6,690			6,690	200	200	200	6,490														
	Permanent-way, sleepers and rolling- stock—																								
	North end .. .. .	46,068	Cr. 9,196	34,135			34,135	..	..	..	34,135														
	South end .. .. .			21,129			21,129	..	..	..	21,129														
	Total Railways .. ..	409,324	25,514	383,810			383,810	27,296	31,000	31,000	352,810														
III.	Roads to give access to Railway—																								
	North end .. .. .	440	310	130			130	..	130	130	..														
	South end .. .. .	2,150	1,588	562			562	88	562	562	..														
	Total Roads .. ..	2,590	1,898	692			692	88	692	692	..														
IV.	Purchase of Native lands .. ..	5,492	3,983	1,509			1,509	1,588	1,509	1,509	..														
V.	Charges and expenses raising loans ..	50,000	51,788	Dr. 1,788	(1)1,788		..	..	..	..	..														
	Unallocated .. .. .	44,594	..	44,594		(2)1,788	42,806	..	..	..	42,806														
	Total .. .. .	522,000	86,183	435,817	1,788	1,788	435,817	28,972	34,201	34,201	401,616														

(1) £1,788 from unallocated. (2) 1,788 to charges and expenses raising loans.

Table C.  
(To accompany Public Works Statement of 7th August, 1889.)  
PUBLIC WORKS FUND.—PART III.

Name of Railway, &c.	(1.)	(2.)	(3.)	(4.)		(5.)	(6.)	(7.)		(8.)	Length completed up to 31st March, 1889.				Condition into which it is estimated that the various Railways will be brought by Expenditure of Amounts stated in Column 5.						Additional Amount which would be required to complete, with Permanent-way and Stations, &c., to extent hereunder.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
	Allocations determined in July, 1888.	Expenditure during Year ending 31st March, 1889.	Balances of Allocations unexpended on 31st March, 1889.	Readjustment of Allocations now proposed (August, 1889).		Unexpended Balances of Allocations as thus readjusted (August, 1889).	Liabilities on 31st March, 1889.	Year ending 31st March, 1890.		Balances which will thus remain available for further Undertakings in succeeding Years.									Complete with Permanent-way.						Formation.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
				Plus.	Minus.			Amount proposed to be voted for actual Expenditure.	Total Amount proposed to be authorised.		Miles.	From	To	Whether open for Traffic or not.					Miles.	From	To	Miles.	From	To	Miles.	From	To	Amount.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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\* This estimate will apply approximately to either route the probable cost of works being greatest for route along present line, but this being about equalized by the probable additional cost of land on the Beach route.  
(1) Transferred to Helensville northwards.  
(2) Deficit provided for under Part I. of loan.  
(3) Ditto ditto.

Table D  
[To accompany Public Works Statement of 7th August, 1889.]

GENERAL SUMMARY.

Showing EXPENDITURE under PUBLIC WORKS FUND, 1880-81 to 1888-89, and PROPOSED EXPENDITURE, 1889-90, &c.

Class.	Description of Services.	Expenditure.									Amounts proposed to be voted for Expenditure during the Year ending 31st March, 1890.	Balances of existing Loan Allocations which will then remain available for Appropriations in succeeding Years.
		1880-81.	1881-82	1882-83.	1883-84.	1884-85.	1885-86.	1886-87.	887-88.	1888-89.		
	SERVICES AT PRESENT CHARGED TO PART I. OF THE PUBLIC WORKS FUND.	£	£	£	£	£	£	£	£	£	£	£
I.	Immigration .. .. .	29,701	4,334	3,999	107,041	57,148	11,675	12,454	15,598	8,791	3,830	..
II.	Public Works Departmental* .. .. .	..	..	..	..	..	..	12,896	6,089	6,458	..	453
III.	Railways† .. .. .	..	..	..	..	..	..	16,729	1,408	4,762	9,330	..
IV.	Roads:—											
	Roads North of Auckland .. .. .	43,773	17,022	7,929	17,566	34,571	33,163	30,738	3,138	264	468	..
	Main Roads .. .. .	83,501	92,519	111,603	31,809	30,380	26,833	22,294	13,756	10,968	14,000	9,676
	Miscellaneous Roads and Bridges .. .. .				61,635	37,165	37,615	39,748	25,989	26,748	27,112	4,651
	Grants-in-Aid .. .. .	..	..	..	106,399	149,982	138,045	81,264	57,632	26,913	8,547	2,000
	Roads to open up Lands.. .. .	52,152	35,936	81,634	84,631	49,314	61,794	57,157	61,488	21,954	45,827	15,731
	Village Settlements .. .. .	..	..	9,439	..	..	1,891	12,053	..	10,770	19,173	30,204
	Roads on Goldfields .. .. .	..	..	..	26,602	15,631	31,622	32,625	25,053	7,015	30,000	9,692
	Miscellaneous .. .. .	51,117	129	..	..	..	..	..	..	..	..	..
	Total, Roads .. .. .	230,543	145,606	210,605	328,642	317,043	329,072	265,717	199,109	104,542	145,127	71,954
V.	Waterworks on Goldfields .. .. .	16,577	13,272	6,824	16,596	8,029	9,032	7,665	1,016	55	700	229
VI.	Purchase of Native Lands, North Island .. .. .	56,887	37,912	29,844	24,480	70,572	34,545	18,457	1,515	5,089	9,396	..
VII.	Telegraph Extension .. .. .	43,783	7,485	18,654	19,532	25,799	36,010	18,952	22,984	12,047	12,700	3,623
VIII.	Public Buildings:—											
	Parliamentary .. .. .	..	..	5,331	8,416	183	..	8	24	..	..	..
	General Departmental Offices .. .. .	..	..	..	..	..	..	947	12,742	14,588	8,300	4,370
	Judicial .. .. .	55,402	16,259	16,743	22,652	12,227	11,106	15,875	8,273	8,228	17,300	8,740
	Post and Telegraph .. .. .	9,336	1,752	9,989	22,616	8,955	4,880	2,772	2,227	82	2,331	..
	Customs .. .. .	..	..	193	1,659	830	99	..	..	..	400	..
	Survey .. .. .	..	..	20	34	..	461	..	..	..	..	..
	Quarantine Station .. .. .	..	971	996	848	313	123	274	..	..	..	..
	Lunatic Asylums .. .. .	39,604	26,695	31,652	58,047	24,992	4,007	13,694	23,107	10,242	19,600	24,051
	Miscellaneous .. .. .	..	..	..	34	..	..	..	..	..	..	..
	Hospitals and Charitable Institutions .. .. .	2,219	140	64	256	3,792	3,299	4,421	4,156	673	120	..
	School-buildings .. .. .	99,173	82,535	88,134	49,814	66,069	62,884	51,607	40,000	779	..	..
	Total, Public Buildings .. .. .	205,734	128,352	153,072	164,376	117,361	86,859	89,598	90,529	34,592	48,051	37,170
IX.	Lighthouses, Harbour Works, and Harbour Defences:—											
	Lighthouses .. .. .	..	2,397	4,724	6,730	7,382	300	3,272	2,866	2,504	2,930	..
	Harbour Works .. .. .	24,512	18,810	19,374	29,591	17,050	6,508	6,004	500	Cr. 15,000	..	..
	Harbour Defences .. .. .	904	..	..	7,213	9,601	127,167	139,429	73,459	50,089	6,452	..
	Total, Lighthouses, &c. .. .. .	25,416	21,207	24,598	43,534	34,033	133,975	148,705	76,825	47,593	9,382	..
	Contingent Defence .. .. .	154,000	133,219	..	..	..	25,000	12,500	..	..	..	..
X.	Rates on Native Lands .. .. .	..	..	..	..	..	..	25,139	8,446	10,304	8,595	10,000
XI.	Thermal-Springs .. .. .	..	..	..	..	..	..	7,814	2,999	935	2,350	..
XII.	Charges and Expenses raising Loans .. .. .	..	..	..	..	..	..	..	..	28,758	3,084	..
	Advance to Westport Harbour, repayable .. .. .	..	..	..	..	..	..	14,336	Cr. 14,336	..	..	..
	Unallotted .. .. .	..	..	..	..	..	..	..	..	..	..	15,801
	Totals for the Services at present charged to Part I. of Public Works Fund .. .. .	762,641	491,387	447,596	704,201	629,985	666,168	636,626	440,854	249,590	252,545	139,230
	OTHER SERVICES.											
	Railways:—											
	Construction Works, including Rails, Sleepers, and Rolling-stock, and Additions to Open Lines .. .. .	950,395	432,524	436,054	662,046	663,063	537,196	432,349	402,318	267,315	307,415	669,557
	Roads to give access to North Island Trunk Railway .. .. .	..	..	..	..	..	6,832	12,900	20,410	1,898	692	..
	Purchase of District Railways .. .. .	..	..	..	..	..	188,300	166,187	..	..	..	..
	Purchase of Native Lands, North Island .. .. .	..	..	..	..	..	..	70,379	24,129	3,983	1,509	..
	Unallotted .. .. .	..	..	..	..	..	..	..	..	..	..	51,806
	Total charge to Railways (except the small items in Part I.) .. .. .	950,395	432,524	436,054	662,046	663,063	732,328	681,815	446,857	273,196	309,616	721,363
	Miscellaneous, including Charges and Expenses raising Loans, Interest and Sinking Fund, Public Works Departmental .. .. .	206,605	26,808	13,387	43,341	43,679	76,890	15,043	78,448	91,153	12,000	10,916
	Total, Other Services .. .. .	1,157,000	459,332	449,441	705,387	706,742	809,218	696,858	525,305	364,349	321,616	732,279
	Grand Total .. .. .	1,919,641	950,719	897,037	1,409,588	1,336,727	1,475,386	1,333,484	966,159	1,613,939	574,161	871,509

\* Up to 1886-87 this item was not subdivided, and is included under item "Miscellaneous," at foot of table.  
† These are isolated items of railways not covered by loan of 1886. Up to 31st March, 1886, all expenditure on railways was included under one heading.  
‡ This is the net expenditure for the year after deducting credits, as indicated, amounting to £19,426. The total expenditure, omitting credits, as shown in Tables A, B, and C, is £633,365.

# PUBLIC WORKS STATEMENT, 1889.

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3. Diagram showing Miles of Government Railway opened in the North and Middle Islands combined, year by year since 1872.
4. Map of North Island, showing Railways opened, in progress, and proposed.
5. Map of Middle Island, showing Railways opened, in progress, and proposed.

#### *Enclosures with Appendix K.*

- A.—Table of Altitudes.
- B.—Table of Distances.
- C.—Sketch-map of Central and Taranaki Routes.





1889.  
NEW ZEALAND.

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# PUBLIC WORKS TABLES

AND

ANNUAL REPORTS

OF THE

ENGINEER-IN-CHIEF.

MARCH, 1889.



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TABLE NO. 1.

SUMMARY showing the TOTAL EXPENDITURE ON PUBLIC WORKS AND OTHER SERVICES out of *Immigration and Public Works Fund* to 31st March, 1889, and the LIABILITIES on that Date.

Number of Table containing Details.	Works.	Total Net Expenditure to 31st March, 1889.	Expenditure during 12 Months ended 31st March, 1889.	Total Expenditure to 31st March, 1889.	Liabilities on Authorities, Contracts, &c., 31st March, 1889.	Total Expenditure and Liabilities.	Works.
2	Railways ...	£ s. d. *13,362,423 15 3	£ s. d. 272,077 3 1	£ s. d. 13,634,500 18 4	£ s. d. 207,483 11 2	£ s. d. 13,841,984 9 6	Railways.
3, 4, 5	Roads ...	3,363,551 6 7	106,438 10 2	3,469,989 16 9	120,945 4 3	3,590,935 1 0	Roads.
7	Water-supply on goldfields ...	509,941 10 11	54 10 6	509,996 1 5	...	509,996 1 5	Water-supply on goldfields.
8	Telegraphs ...	561,963 1 9	12,047 4 5	574,010 6 2	3,591 0 0	577,601 6 2	Telegraphs.
6	Public buildings ...	1,687,900 13 9	34,592 6 7	1,722,493 0 4	23,453 18 10	1,745,946 19 2	Public buildings
9	Lighthouses, harbour works, and harbour defences	822,124 16 5	47,593 5 4	869,718 1 9	6,466 2 3	876,184 4 0	Lighthouses, harbour works, and harbour defences.
...	Departmental ...	308,153 1 6	21,458 0 8	329,611 2 2	...	329,611 2 2	Departmental.
18 of 1878	Coal-exploration and mine-development	10,835 8 0	...	10,835 8 0	...	10,835 8 0	Coal-exploration and mine-development.
11 of 1877	Aiding works on Thames Goldfields	50,000 0 0	...	50,000 0 0	...	50,000 0 0	Aiding works on Thames Goldfields.
...	Immigration ...	2,133,668 17 0	8,791 4 4	2,142,460 1 4	1,200 0 0	2,143,660 1 4	Immigration.
...	Purchase of Native land ...	1,141,287 18 7	9,071 16 4	1,150,359 14 11	5,499 3 8	1,155,858 18 7	Purchase of Native land.
...	Defence ...	429,718 19 3	...	429,718 19 3	...	429,718 19 3	Defence.
...	Charges and expenses of raising loans ...	916,561 5 11	104,911 0 10	1,021,472 6 9	...	1,021,472 6 9	Charges and expenses of raising loans.
...	Interest and sinking fund ...	218,500 0 0	...	218,500 0 0	...	218,500 0 0	Interest and sinking fund.
...	Rates on Native lands ...	33,585 6 2	10,304 0 0	43,889 6 2	...	43,889 6 2	Rates on Native lands.
...	Thermal Springs ...	10,812 17 11	935 8 0	11,748 5 11	...	11,748 5 11	Thermal Springs.
...	Advances to Westport Harbour Board	14,335 13 4	Cr.14,335 13 4	...	...	...	
	TOTALS	25,575,364 12 4	613,938 16 11	26,189,303 9 3	368,639 0 2	26,557,942 9 5	TOTALS.

\* Exclusive of value of provincial railways taken over by Government.

Public Works Department, 12th June, 1889.

W. A. THOMAS,  
Accountant.

**TABLE No. 2.**  
**TOTAL EXPENDITURE on RAILWAYS to 31st March, 1889, and LIABILITIES on that Date.**

LINES OF RAILWAY.	Total Expenditure by General Government to 31st March, 1888.	EXPENDITURE DURING YEAR 1888-89, AND VALUE OF STOCK (£29,755 13s. 10d.) ISSUED TO LINES.										Total Expenditure by General Government, 31st March, 1889.	LIABILITIES.				Total Expenditure by General Government, and Liabilities, 31st March, 1889.	Valuation of Works constructed by Provinces.	Total Expenditure and Liabilities, 31st March, 1889.	LINES OF RAILWAY.
		New Works.			Works on Open Lines.			Surveys.	Rolling-stock.		New Works.		Works on Open Lines.	Surveys.	Total Liabilities.					
		Construction.	Permanent- way.	Total New Works.	Additional Works.	Permanent- way.	Total Works on Open Lines.		Additions to.	Reductions from.										
Kawakawa .. ..	£ 90,068 17 8	£ ..	£ ..	£ ..	£ ..	£ ..	£ ..	£ ..	£ ..	£ 24 7 7	£ 90,044 10 1	£ ..	£ ..	£ ..	£ ..	£ 90,044 10 1	£ ..	£ 90,044 10 1	Kawakawa.	
Whangarei to Kamo .. ..	69,721 9 9	11,909 12 6	8,237 8 0	20,147 0 6	..	..	..	..	68 1 2	..	69,789 10 11	..	60 0 0	..	..	69,849 10 11	..	69,849 10 11	Whangarei to Kamo.	
Helensville Northwards .. ..	6,160 10 6	..	..	..	..	..	..	..	..	..	26,307 11 0	3,815 13 5	..	..	30,123 4 5	..	30,123 4 5	Helensville Northwards.		
Kaipara to Waikato .. ..	1,317,515 7 7	..	..	..	1,862 14 10	..	1,862 14 10	..	3,707 3 7	..	1,323,085 6 0	..	845 19 4	..	1,323,931 5 4	..	1,323,931 5 4	Kaipara to Waikato.		
Cambridge Branch .. ..	56,347 4 4	..	..	..	3 9 3	..	3 9 3	..	..	..	56,350 13 7	..	..	..	56,350 13 7	..	56,350 13 7	Cambridge Branch.		
Waikato to Thames— Hamilton to Te Aroha .. ..	143,990 2 3	..	..	..	388 2 1	..	388 2 1	..	..	..	144,378 4 4	..	472 19 3	..	144,851 3 7	..	144,851 3 7	Waikato to Thames— Hamilton to Te Aroha.		
Te Aroha to Thames .. ..	57,492 0 9	2,603 1 9	..	2,603 1 9	..	..	..	..	..	..	60,095 2 6	350 3 8	..	..	60,445 6 2	..	60,445 6 2	Te Aroha to Thames.		
Morrinsville to Rotorua— Morrinsville to Lichfield .. ..	165,173 8 5	..	..	..	1,099 6 0	..	1,099 6 0	..	..	..	166,272 14 5	..	287 8 9	..	166,560 3 2	..	166,560 3 2	Morrinsville to Rotorua— Morrinsville to Lichfield.		
Putaruru to Rotorua .. ..	46,241 16 2	15,753 5 11	6,435 2 0	22,188 7 11	..	..	..	..	..	..	68,430 4 1	4,684 7 2	..	..	73,114 11 3	..	73,114 11 3	Putaruru to Rotorua.		
Marton to Te Awamutu— North End .. ..	168,247 6 3	29,022 1 1	7,867 7 0	36,889 8 1	..	..	..	..	..	..	205,136 14 4	26,315 18 0	..	..	231,452 12 4	..	231,452 12 4	Marton to Te Awamutu— North End.		
South End .. ..	97,664 6 2	5,687 15 0	..	5,687 15 0	..	..	..	..	..	..	103,352 1 2	980 6 1	..	..	104,332 7 3	..	104,332 7 3	South End.		
Gisborne to Ormond .. ..	4,975 1 7	..	..	..	..	..	..	..	..	..	4,975 1 7	..	..	..	4,975 1 7	..	4,975 1 7	Gisborne to Ormond.		
Wellington to Napier— Napier to Woodville and Palmers- ton North .. ..	688,050 14 4	36,872 14 8	..	36,872 14 8	1,534 12 5	..	1,534 12 5	..	1,466 14 10	..	727,924 16 3	61,031 15 11	1,536 15 5	..	790,493 7 7	..	790,493 7 7	Wellington to Napier— Napier to Woodville and Palmers- ton North.		
Wellington to Woodville .. ..	1,015,730 2 11	17,486 0 0	5,349 5 0	22,835 5 0	5,717 2 5	..	5,717 2 5	..	4,915 11 10	..	1,049,198 2 2	11,695 19 0	548 12 4	..	1,061,442 13 6	..	1,061,442 13 6	Wellington to Woodville.		
Wellington to Foxton .. ..	41,797 11 7	96 19 11	..	96 19 11	..	..	..	..	..	..	41,894 11 6	304 10 6	..	..	42,199 2 0	..	42,199 2 0	Wellington to Foxton.		
Foxton to Waitara .. ..	1,403,041 5 5	..	..	..	108 11 1	1,244 6 0	1,352 17 1	..	..	3,531 4 11	1,400,862 17 7	..	5,332 12 6	..	1,406,195 10 1	..	1,406,195 10 1	Foxton to Waitara.		
Nelson to Roundell .. ..	177,678 7 1	..	..	..	..	..	..	..	..	15 3 4	177,663 3 9	..	..	..	177,663 3 9	..	177,663 3 9	Nelson to Roundell.		
Greymouth to Nelson Creek .. ..	211,073 7 5	..	..	..	..	..	..	..	4,231 12 5	..	215,304 19 10	..	..	..	215,304 19 10	..	215,304 19 10	Greymouth to Nelson Creek.		
Greymouth to Hokitika .. ..	69,388 13 6	22,885 10 3	..	22,885 10 3	..	..	..	..	..	..	92,274 3 9	6,923 0 6	..	..	99,197 4 3	..	99,197 4 3	Greymouth to Hokitika.		
Westport to Ngakawau .. ..	222,894 0 11	..	..	..	..	398 7 0	398 7 0	..	2,444 9 0	..	225,736 16 11	..	..	..	225,736 16 11	..	225,736 16 11	Westport to Ngakawau.		
Pictou to Hurunui— Pictou to Awatere .. ..	228,958 15 11	1,977 2 11	..	1,977 2 11	85 15 2	..	85 15 2	..	23 18 0	..	231,045 12 0	529 3 3	..	..	231,574 15 3	..	231,574 15 3	Pictou to Hurunui— Pictou to Awatere.		
Hurunui to Red Post .. ..	39,033 14 4	..	..	..	..	..	..	..	..	..	39,033 14 4	..	..	..	39,033 14 4	..	39,033 14 4	Hurunui to Red Post.		
Hurunui to Waitaki— Main Line .. ..	1,737,123 4 4	..	..	..	3,572 5 4	..	3,572 5 4	..	..	785 18 7	1,739,909 11 1	..	1,905 6 4	..	1,741,814 17 5	316,135 0 0	2,057,949 17 5	Hurunui to Waitaki— Main Line.		
Oxford Branch .. ..	55,203 2 11	..	..	..	3 19 6	..	3 19 6	..	..	..	55,207 2 5	..	..	..	55,207 2 5	..	55,207 2 5	Oxford Branch.		
Eyreton Branch .. ..	47,636 14 6	..	..	..	3 3 0	..	3 3 0	..	..	..	47,639 17 6	..	1 0 0	..	47,640 17 6	..	47,640 17 6	Eyreton Branch.		
Lytelton Branch .. ..	91,014 12 9	..	..	..	..	..	..	..	..	..	91,014 12 9	..	..	..	91,014 12 9	340,500 0 0	431,514 12 9	Lytelton Branch.		
Southbridge Branch .. ..	99,626 3 1	..	..	..	..	..	..	..	..	..	99,626 3 1	..	..	..	99,626 3 1	..	99,626 3 1	Southbridge Branch.		
Springfield & Whitecliffs Branches .. ..	107,187 9 9	773 19 3	..	773 19 3	73 6 2	..	73 6 2	..	..	..	108,034 15 2	1 13 4	5 14 1	..	108,042 2 7	75,124 0 0	108,042 2 7	Springfield & Whitecliffs Branches.		
Fairlie Creek Branch .. ..	73,941 13 4	..	..	..	..	..	..	..	..	..	73,941 13 4	..	..	..	73,941 13 4	..	73,941 13 4	Fairlie Creek Branch.		
Waimate Branch .. ..	49,327 18 5*	..	..	..	122 12 4	..	122 12 4	..	..	..	49,450 10 9	..	..	..	49,450 10 9	..	49,450 10 9	Waimate Branch.		
Ashburton Forks Branch .. ..	73,304 10 0	..	..	..	149 15 10	..	149 15 10	..	..	..	73,454 5 10	..	..	..	73,454 5 10	..	73,454 5 10	Ashburton Forks Branch.		
Upper Ashburton Branch .. ..	53,541 0 3	876 17 10	2,037 0 0	2,913 17 10	..	..	..	..	..	..	56,454 18 1	4,817 11 7	..	..	61,272 9 8	..	61,272 9 8	Upper Ashburton Branch.		
Little River Branch .. ..	100,036 17 3	563 5 10	..	563 5 10	..	..	..	..	..	..	100,600 3 1	4,800 16 8	..	..	105,400 19 9	..	105,400 19 9	Little River Branch.		
Canterbury Interior Main Line— Oxford to Malvern .. ..	53,559 1 6	..	..	..	..	..	..	..	..	..	53,559 1 6	..	..	..	53,559 1 6	..	53,559 1 6	Canterbury Interior Main Line— Oxford to Malvern.		
Whitecliffs to Rakaia .. ..	499 6 10	..	..	..	..	..	..	..	..	..	499 6 10	..	..	..	499 6 10	..	499 6 10	Whitecliffs to Rakaia.		
Temuka to Rangitata .. ..	5,152 2 8	..	..	..	..	..	..													

STATEMENT showing Agreement of Public Works Table No. 2 of Expenditure on Railways with  
Return No. 6 attached to Report of New Zealand Railways Commissioners.

Expenditure to 31st March, 1889, on Railways constructed by General Government	£
out of Public Works Fund (as per Table No. 2) ... ..	13,634,501
Expenditure on account of Rakaia-Ashburton Forks Railway out of Consolidated Fund ... ..	35
Expenditure on Greymouth and Westport Harbour Works forming part of Railway System (as per Table No. 10) ... ..	141,345
Valuation of Railways constructed by Provinces (as per Table No. 2) ... ..	1,104,281
	<hr/>
	14,880,162
Less Expenditure on Permanent-way for Gisborne to Ormond Tramway ...	4,975
	<hr/>
Leaves Amount shown by General Manager ... ..	<u>£14,875,187</u>

N.B.—The £25,000 shown in Table No. 2, under the heading of “Permanent-way for Railway Department,” has, in the Railway Table No. 6, been distributed and included in the cost of the various sections of the Railways.

TABLE No. 3.

STATEMENT showing the EXPENDITURE on ROADS out of Immigration and Public Works Loan to 31st March, 1889, and the LIABILITIES on that date.

	Expenditure to 31st March, 1888.			Expenditure during 12 Months ended 31st March, 1889.			Total Expenditure to 31st March, 1889.			Liabilities on Authorities, Contracts, &c., 31st March, 1889.			Total Expenditure and Liabilities.		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
ROADS, BRIDGES, and WHARVES, NORTH of AUCKLAND ... ..	229,140	15	9	264	0	0	229,404	15	9	340	0	0	229,744	15	9
MAIN ROADS:—															
Paeroa to Owaharoa ... ..	500	0	0	...	...	...	500	0	0	...	...	...	500	0	0
Cambridge to Taupo ... ..	1,341	10	7	...	...	...	1,341	10	7	...	...	...	1,341	10	7
Oxford to Rotorua ... ..	15,148	3	4	409	6	11	15,557	10	3	99	1	4	15,656	11	7
Tauranga, East Cape, Whakatane, Te Te-ko, and sundry roads, Bay of Plenty	7,474	3	2	...	...	...	7,474	3	2	...	...	...	7,474	3	2
Tauranga to Napier, <i>via</i> Taupo ...	18,901	5	1	2,575	18	8	21,477	3	9	1,208	11	0	22,685	14	9
Kurupapanga to inland Patea ...	5,000	0	0	...	...	...	5,000	0	0	...	...	...	5,000	0	0
Maintenance of roads, North Island	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Trunk Railway ... ..	...	...	...	103	15	3	103	15	3	296	4	9	400	0	0
Seventy-Mile Bush ... ..	61,326	5	7	...	...	...	61,326	5	7	...	...	...	61,326	5	7
Manawatu Gorge ... ..	117,236	6	4	...	...	...	117,236	6	4	...	...	...	117,236	6	4
Nelson, Tophouse, and Tairādale ...	4,204	8	2	339	16	9	4,544	4	11	453	14	11	4,997	19	10
Nelson, Westport, and Greymouth ...	48,359	11	3	2,377	6	1	50,736	17	4	3,472	3	11	54,209	1	3
Inangahua Bridge, maintenance ...	141	17	6	...	...	...	141	17	6	...	...	...	141	17	6
Pelorus District and Rai Valley ...	28,660	14	3	...	...	...	28,660	14	3	...	...	...	28,660	14	3
Haast Pass Track ... ..	3,414	7	2	155	13	6	3,570	0	8	640	8	10	4,210	9	6
Hokitika to Christchurch ... ..	100,143	17	10	5,006	4	9	105,150	2	7	1,209	13	1	106,359	15	8
Otira Toll ... ..	500	0	0	...	...	...	500	0	0	...	...	...	500	0	0
Native districts ... ..	11,486	8	3	...	...	...	11,486	8	3	...	...	...	11,486	8	3
Totals ... ..	423,838	18	6	10,968	1	11	434,807	0	5	7,379	17	10	442,186	18	3
MISCELLANEOUS ROADS AND BRIDGES:—															
Maungaturoto to Tokatoka ... ..	...	...	...	...	...	...	...	...	...	250	0	0	250	0	0
Warkworth to Kawakawa ... ..	...	...	...	1,716	0	0	1,716	0	0	2,284	0	0	4,000	0	0
Mercury Bay to Mahikarau ... ..	...	...	...	...	...	...	...	...	...	400	0	0	400	0	0
Hunua to Railway-station ... ..	...	...	...	50	0	0	50	0	0	50	0	0	100	0	0
Putamahoe to Steinson's Corner ...	...	...	...	50	0	0	50	0	0	50	0	0	100	0	0
Waioro to Port Waikato ... ..	...	...	...	50	0	0	50	0	0	50	0	0	100	0	0
Tamaki Bridge ... ..	...	...	...	160	0	0	160	0	0	...	...	...	160	0	0
Great South ... ..	764	5	8	...	...	...	764	5	8	...	...	...	764	5	8
Waikomiti Bridge ... ..	150	0	0	...	...	...	150	0	0	...	...	...	150	0	0
Payment to Ferryman, Port Waikato	7	10	0	...	...	...	7	10	0	...	...	...	7	10	0
Pukekohe to Waiuku ... ..	5,274	2	1	150	0	0	5,424	2	1	50	0	0	5,474	2	1
Punt at Tuakau ... ..	270	9	6	...	...	...	270	9	6	...	...	...	270	9	6
Tuhikaramea to Hamilton ... ..	500	0	0	...	...	...	500	0	0	...	...	...	500	0	0
Raglan to Waipa ... ..	1,769	1	0	139	1	6	1,908	2	6	310	15	0	2,218	17	6
Bridge over Waikato at Hamilton ...	284	12	3	...	...	...	284	12	3	...	...	...	284	12	3
Cambridge to Tauranga ... ..	4,000	0	0	...	...	...	4,000	0	0	...	...	...	4,000	0	0
Katikati to Te Aroha (horse-track) ...	359	9	5	...	...	...	359	9	5	...	...	...	359	9	5
Katikati to Te Aroha (Thompson's track) ... ..	946	16	11	491	10	0	1,438	6	11	708	10	0	2,146	16	11
Rotorua-Rotomahana ... ..	...	...	...	92	10	0	92	10	0	157	10	0	250	0	0
Thames to Tauranga ... ..	5,323	8	0	...	...	...	5,323	8	0	...	...	...	5,323	8	0
Opotiki to Whakatane ... ..	886	19	9	212	15	11	1,099	15	8	436	4	1	1,535	19	9
Repairing flood damages, Cook County	1,490	12	0	...	...	...	1,490	12	0	...	...	...	1,490	12	0
Sundry roads and bridges, Auckland...	10,466	19	7	357	7	0	10,824	6	7	93	12	11	10,917	19	6
Bay of Islands District ... ..	34,903	16	5	...	...	...	34,903	16	5	...	...	...	34,903	16	5
Mangere Bridge ... ..	15,486	7	8	1,824	13	1	17,311	0	9	...	...	...	17,311	0	9
Thames ... ..	75	2	9	...	...	...	75	2	9	...	...	...	75	2	9
Waikato ... ..	27,582	11	7	...	...	...	27,582	11	7	...	...	...	27,582	11	7
Bay of Plenty ... ..	90,048	19	11	1,171	6	5	91,220	6	4	643	19	10	91,864	6	2
Poverty Bay ... ..	21,499	5	4	...	...	...	21,499	5	4	...	...	...	21,499	5	4
Taupo ... ..	9,336	17	1	...	...	...	9,336	17	1	...	...	...	9,336	17	1
Tools, &c. ... ..	714	13	6	...	...	...	714	13	6	...	...	...	714	13	6
Mahurangi to Whangarei ... ..	129	15	3	...	...	...	129	15	3	...	...	...	129	15	3
Pukekohe Railway-station, through East Pukekohe, to Bombay ... ..	15	2	2	...	...	...	15	2	2	...	...	...	15	2	2
Buckland Station ... ..	300	0	0	...	...	...	300	0	0	...	...	...	300	0	0
Bridge over Waipa, on Raglan Main Road	1,006	4	8	...	...	...	1,006	4	8	...	...	...	1,006	4	8
Te Awamutu Station to Township ...	315	16	3	...	...	...	315	16	3	...	...	...	315	16	3
To free Hamilton Bridge from tolls ...	6,700	0	0	...	...	...	6,700	0	0	...	...	...	6,700	0	0
Waimapu Bridge ... ..	5,655	3	0	...	...	...	5,655	3	0	...	...	...	5,655	3	0
Repairing flood damages at the Thames:	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Thames County ... ..	4,928	10	0	...	...	...	4,928	10	0	...	...	...	4,928	10	0
Thames Borough ... ..	2,452	10	0	...	...	...	2,452	10	0	...	...	...	2,452	10	0
Taranu Tramway ... ..	1,000	0	0	...	...	...	1,000	0	0	...	...	...	1,000	0	0
Tauranga to Opotiki ... ..	100	0	0	...	...	...	100	0	0	...	...	...	100	0	0
Ormond to Opotiki ... ..	912	18	8	...	...	...	912	18	8	...	...	...	912	18	8
Carried forward ... ..	255,658	0	5	6,465	3	11	262,123	4	4	5,484	11	10	267,607	16	2

TABLE No. 3—*continued.*  
STATEMENT showing the EXPENDITURE on ROADS—*continued.*

	Expenditure to 31st March, 1888.		Expenditure during 12 Months ended 31st March, 1889.		Total Expenditure to 31st March, 1889.		Liabilities on Authorities, Contracts, &c., 31st March, 1889.		Total Expenditure and Liabilities.	
	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.
MISCELLANEOUS ROADS AND BRIDGES — <i>continued.</i>										
Brought forward ...	255,658	0 5	6,465	3 11	262,123	4 4	5,484	11 10	267,607	16 2
Hamilton to Cambridge ...	100	0 0	...	...	100	0 0	...	...	100	0 0
Coromandel to Thames ...	200	0 0	...	...	200	0 0	...	...	200	0 0
Coromandel to Port Charles ...	100	0 0	...	...	100	0 0	...	...	100	0 0
Coromandel to Tairua ...	200	0 0	...	...	200	0 0	...	...	200	0 0
Maungatawhiri Valley ...	102	0 0	...	...	102	0 0	...	...	102	0 0
Maketu to Ararimu ...	100	0 0	...	...	100	0 0	...	...	100	0 0
To Ohaupo Station ...	250	0 0	...	...	250	0 0	...	...	250	0 0
Whau to Henderson's Creek ...	400	0 0	...	...	400	0 0	...	...	400	0 0
Rukuhia Swamp ...	693	1 8	...	...	693	1 8	...	...	693	1 8
South Bombay to Paparata ...	100	0 0	...	...	100	0 0	...	...	100	0 0
Tuakau to Waikato ...	50	0 0	...	...	50	0 0	...	...	50	0 0
Sundry roads, Waitoa District ...	400	0 0	...	...	400	0 0	...	...	400	0 0
Wade to Wainui ...	100	0 0	...	...	100	0 0	...	...	100	0 0
Helensville to Kaukapakapa ...	658	19 1	...	...	658	19 1	...	...	658	19 1
Komorau Bridge ...	250	0 0	...	...	250	0 0	...	...	250	0 0
Waihi Bridge ...	...	...	...	...	...	...	250	0 0	250	0 0
Whangaroa to Kao. ...	250	0 0	...	...	250	0 0	...	...	250	0 0
Clark's Road ...	50	0 0	...	...	50	0 0	...	...	50	0 0
Road to Omaha Wharf ...	80	0 0	...	...	80	0 0	...	...	80	0 0
Stokes Point to Lucas Creek ...	100	0 0	...	...	100	0 0	...	...	100	0 0
Stokes Point to Lake District ...	200	0 0	...	...	200	0 0	...	...	200	0 0
Removal of snags, Thames River ...	636	18 11	...	...	636	18 11	...	...	636	18 11
Whatawhata Bridge ...	34	17 0	...	...	34	17 0	...	...	34	17 0
Coromandel Wharf ...	3	9 0	...	...	3	9 0	...	...	3	9 0
Coromandel to Mercury Bay ...	14	4 8	...	...	14	4 8	...	...	14	4 8
Aroha Township to Gold-mines ...	500	0 0	...	...	500	0 0	...	...	500	0 0
Removal of punt, Te Rori to Churchill ...	40	14 9	...	...	40	14 9	...	...	40	14 9
Removal of Churchill punt... ..	42	2 0	...	...	42	2 0	...	...	42	2 0
Manawatu and Makotuku Rivers, Ormondville ...	450	0 0	...	...	450	0 0	...	...	450	0 0
Sundry roads and bridges, Hawke's Bay ...	419	10 5	...	...	419	10 5	...	...	419	10 5
Roads, Napier District ...	32,189	19 2	...	...	32,189	19 2	...	...	32,189	19 2
Napier to Murimotu Road ...	...	...	467	0 6	467	0 6	532	19 6	1,000	0 0
Roads, Wairoa ...	1,212	7 8	...	...	1,212	7 8	...	...	1,212	7 8
Tools, &c. ...	248	15 0	...	...	248	15 0	...	...	248	15 0
Bridge over Ahuriri Harbour ...	625	16 1	...	...	625	16 1	...	...	625	16 1
Bridge over Wangaehu ...	1,000	0 0	...	...	1,000	0 0	...	...	1,000	0 0
Bridge approach, Orepuhi ...	150	0 0	...	...	150	0 0	...	...	150	0 0
Foxton to Otaki, inland ...	599	10 9	...	...	599	10 9	...	...	599	10 9
Grant-in-aid for bridge over Manawatu River ...	2,002	16 0	...	...	2,002	16 0	...	...	2,002	16 0
Roads in Fitzherbert Block ...	1,050	5 3	...	...	1,050	5 3	...	...	1,050	5 3
Sundry roads, Wellington ...	347	1 11	...	...	347	1 11	...	...	347	1 11
Patea to Wanganui ...	36,275	18 9	...	...	36,275	18 9	...	...	36,275	18 9
Wanganui to Taupo ...	5,376	18 1	...	...	5,376	18 1	...	...	5,376	18 1
Hutt to Lowry Bay ...	290	0 0	...	...	290	0 0	...	...	290	0 0
Tools, &c. ...	504	9 8	...	...	504	9 8	...	...	504	9 8
Bridge over Waiohine ...	13	15 6	...	...	13	15 6	...	...	13	15 6
Parakaretu Block ...	149	0 0	...	...	149	0 0	...	...	149	0 0
To relieve Wanganui Bridge from tolls ...	17,000	0 0	...	...	17,000	0 0	...	...	17,000	0 0
Karori Road ...	153	1 8	...	...	153	1 8	...	...	153	1 8
Waverley to Patea Road ...	130	0 0	...	...	130	0 0	...	...	130	0 0
Manawatu Bridge at Foxton ...	0	18 0	...	...	0	18 0	...	...	0	18 0
Roads and bridges in unsettled districts, Patea and Taranaki ...	48,296	16 3	...	...	48,296	16 3	...	...	48,296	16 3
Great South Road between Opunake and Manaia ...	2,946	0 0	...	...	2,946	0 0	...	...	2,946	0 0
Bridge over Stony River, and approaches ...	1,151	6 2	...	...	1,151	6 2	...	...	1,151	6 2
Inglewood to Whitecliffs ...	5,000	0 0	...	...	5,000	0 0	...	...	5,000	0 0
Inglewood to Ngatimaru ...	...	...	2	1 8	2	1 8	497	18 4	500	0 0
Henwood and Upland ...	993	12 10	...	...	993	12 10	...	...	993	12 10
Sundry roads, Taranaki ...	251	11 3	...	...	251	11 3	...	...	251	11 3
New Plymouth, inland ...	3,760	17 3	...	...	3,760	17 3	...	...	3,760	17 3
Hawera to Waitara ...	14,469	19 2	...	...	14,469	19 2	...	...	14,469	19 2
Wai-iti to Patea ...	58,566	6 9	...	...	58,566	6 9	...	...	58,566	6 9
Tools, &c. ...	254	4 2	...	...	254	4 2	...	...	254	4 2
Waverley to Patea ...	70	0 0	...	...	70	0 0	...	...	70	0 0
General salaries, &c. ...	402	18 8	...	...	402	18 8	...	...	402	18 8
Refund expenses, T. Kelly, Mountain Road Commission ...	19	8 0	...	...	19	8 0	...	...	19	8 0
Roads, Lower Moutere, flood damages ...	1,661	18 10	...	...	1,661	18 10	...	...	1,661	18 10
Bridge over Granity Creek... ..	762	19 11	...	...	762	19 11	...	...	762	19 11
Bridge over Owen Creek ...	1,797	10 1	...	...	1,797	10 1	...	...	1,797	10 1
Horse-bridge over Matakitaiki ...	889	13 2	523	11 2	1,413	4 4	26	8 10	1,439	13 2
Carried forward ...	502,799	13 11	7,457	17 3	510,257	11 2	6,791	18 6	517,049	9 8



TABLE No. 3—*continued*.  
STATEMENT showing the EXPENDITURE on ROADS—*continued*.

	Expenditure to 31st March, 1888.	Expenditure during 12 Months ended 31st March, 1889.	Total Expenditure to 31st March, 1889.	Liabilities on Authorities, Contracts, &c., 31st March, 1889.	Total Expenditure and Liabilities.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
MISCELLANEOUS ROADS AND BRIDGES — <i>continued</i> .					
Brought forward ...	502,799 13 11	7,457 17 3	510,257 11 2	6,791 18 6	517,049 9 8
Bridge over Matiri River ...	2,841 16 0	...	2,841 16 0	...	2,841 16 0
Bridge over Inangahua, at Buller Junction ...	8,804 2 7	...	8,804 2 7	...	8,804 2 7
Bridges on road, Nelson to Reefton ...	9,795 10 2	...	9,795 10 2	...	9,795 10 2
Bridge over Little Grey, at Devery's ...	3,870 18 1	...	3,870 18 1	...	3,870 18 1
Bridge over Grey, at Cobden ...	4,971 8 5	...	4,971 8 5	...	4,971 8 5
Bridge over Waiau, in Amuri County ...	11,240 14 11	...	11,240 14 11	...	11,240 14 11
Bridge over Waiau, at Hanmer Plain ...	14,937 18 4	...	14,937 18 4	...	14,937 18 4
Robin Hood's Bay to White's Bay ...	...	...	...	50 0 0	50 0 0
Sandy Bay ...	...	...	...	300 0 0	300 0 0
Riwaka Valley ...	...	...	...	200 0 0	200 0 0
Riwaka (Brooklin Extension) ...	...	...	...	50 0 0	50 0 0
Nelson to Reefton, and Greymouth Bridges ...	...	7,944 0 4	7,944 0 4	4,739 17 6	12,683 17 10
Sundry roads and bridges, Nelson ...	794 0 1	...	794 0 1	...	794 0 1
Buller to Arnould ...	73,197 4 8	...	73,197 4 8	...	73,197 4 8
Boatman's ...	844 10 0	...	844 10 0	...	844 10 0
Westport to Lyell ...	12,405 6 6	...	12,405 6 6	...	12,405 6 6
Upper Buller Road ...	246 0 1	...	246 0 1	...	246 0 1
Ahaura to Amuri ...	6,210 13 10	...	6,210 13 10	...	6,210 13 10
Nile Bridge ...	1,115 16 4	...	1,115 16 4	...	1,115 16 4
Takaka Valley ...	2,000 0 0	...	2,000 0 0	...	2,000 0 0
Collingwood to Quartz Range ...	507 1 1	...	507 1 1	...	507 1 1
Takaka Road ...	21 6 0	...	21 6 0	...	21 6 0
Takaka Tramway ...	3,000 0 0	...	3,000 0 0	...	3,000 0 0
Bridge over Wairoa, in Waimea District ...	3 18 0	...	3 18 0	...	3 18 0
Bridge over Inangahua, at Reefton ...	2,099 6 7	...	2,099 6 7	...	2,099 6 7
Bridge over Ahaura ...	125 14 0	...	125 14 0	...	125 14 0
Tracks, Pelorus and Queen Charlotte Sounds ...	348 6 1	404 15 1	753 1 2	365 4 11	1,118 6 1
Pelorus District and Rai Valley ...	...	116 19 1	116 19 1	2,367 18 11	2,484 18 0
Bridge over Wairau, near Blenheim ...	4,362 8 3	...	4,362 8 3	...	4,362 8 3
Bridge over Clarence River ...	18,486 17 11	128 6 0	18,615 3 11	171 14 0	18,786 17 11
Kaikoura to Clarence ...	5,128 15 3	7,299 9 0	12,428 4 3	588 16 6	13,017 0 9
Kaikoura to Waiau ...	31,182 8 11	100 0 0	31,282 8 11	...	31,282 8 11
Wharf at Havelock ...	441 6 10	...	441 6 10	...	441 6 10
Sundry Roads & Bridges, Marlborough ...	508 0 11	...	508 0 11	...	508 0 11
Greymouth to Okarito ...	103,447 12 11	...	103,447 12 11	...	103,447 12 11
Bridge over Teremakau, Kumara ...	1,079 18 0	...	1,079 18 0	...	1,079 18 0
Bridge over Donnelly's Creek ...	2,010 13 7	...	2,010 13 7	...	2,010 13 7
Extension south of Okarito ...	1,033 10 0	...	1,033 10 0	...	1,033 10 0
Sundry roads, &c., Westland ...	47 15 11	...	47 15 11	...	47 15 11
Dray-road through Cheviot Hill Country ...	100 8 0	...	100 8 0	...	100 8 0
Bridge over Grey, at Cobden ...	13 10 0	...	13 10 0	...	13 10 0
Greymouth to Arnould ...	5,058 1 5	...	5,058 1 5	...	5,058 1 5
Lyell to Westport ...	...	1,322 3 7	1,322 3 7	1,178 16 5	2,501 0 0
South Creek to Main Line ...	281 17 6	...	281 17 6	...	281 17 6
Junction Line ...	3,923 9 5	...	3,923 9 5	...	3,923 9 5
Greenstone to Lake Brunner ...	2,756 5 6	...	2,756 5 6	...	2,756 5 6
Marsden to Maori Creek ...	2,538 3 0	...	2,538 3 0	...	2,538 3 0
Marsden to Paroa ...	798 8 0	...	798 8 0	...	798 8 0
Stillwater to Maori Gully ...	1,869 2 0	...	1,869 2 0	...	1,869 2 0
Kanieri Forks, Kanieri Lakes ...	1,578 1 0	...	1,578 1 0	...	1,578 1 0
Hokitika to Bluespur ...	2,520 3 5	...	2,520 3 5	...	2,520 3 5
Kanieri Bridge ...	489 15 0	...	489 15 0	...	489 15 0
Waimea Bridge ...	207 12 6	...	207 12 6	...	207 12 6
Westland, general ...	2,613 13 3	...	2,613 13 3	...	2,613 13 3
Bridge over Upper Waitaki ...	510 18 3	...	510 18 3	...	510 18 3
Bridge, Ashburton, subsidy ...	7,000 0 0	...	7,000 0 0	...	7,000 0 0
Christchurch to Hokitika (Bealey Valley) ...	...	1,114 7 1	1,114 7 1	713 1 8	1,827 8 9
Sundry roads, Canterbury ...	818 11 9	...	818 11 9	...	818 11 9
Waikari to Waitati ...	3,257 6 4	...	3,257 6 4	...	3,257 6 4
Maori Kaika to Taiaroa Head Light- house ...	881 8 6	...	881 8 6	...	881 8 6
Anderson's Bay ...	100 0 0	...	100 0 0	...	100 0 0
Green Island to Brighton ...	990 13 0	...	990 13 0	...	990 13 0
Bridge over Taieri, Main South Road ...	11,916 4 8	...	11,916 4 8	...	11,916 4 8
Bridges over Clutha at Beaumont and Roxburgh, grant-in-aid ...	16,403 13 2	...	16,403 13 2	...	16,403 13 2
Kaitangata to Wangaloa ...	500 0 0	...	500 0 0	...	500 0 0
Bridge over Matakura, Otama District ...	1,998 17 2	...	1,998 17 2	...	1,998 17 2
Martin's Bay Settlement ...	75 0 0	125 0 0	200 0 0	...	200 0 0
Sundry roads and bridges, Otago ...	1,001 5 1	...	1,001 5 1	...	1,001 5 1
Queenstown Jetty ...	453 2 3	...	453 2 3	...	453 2 3
Carried forward ...	900,566 4 4	26,012 17 5	926,579 1 9	17,517 8 5	944,096 10 2

TABLE No. 3—continued.  
STATEMENT showing the EXPENDITURE on ROADS—continued.

	Expenditure to 31st March, 1888.			Expenditure during 12 Months ended 31st March, 1889.			Total Expenditure to 31st March, 1889.			Liabilities on Authorities, Contracts, &c., 31st March, 1889.			Total Expenditure and Liabilities.		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
MISCELLANEOUS ROADS AND BRIDGES—continued.															
Brought forward ...	900,566	4	4	26,012	17	5	926,579	1	9	17,517	8	5	944,096	10	2
Bridge over Kaikorai Stream ...	400	0	0	...			400	0	0	...			400	0	0
Grant in aid of bridge at Kaikorai, on Main South Road ...	456	0	0	...			456	0	0	...			456	0	0
Subsidy, Clutha Bridge ...	2,500	0	0	...			2,500	0	0	...			2,500	0	0
Bridge over Oreti at Elbow ...	9	0	0	...			9	0	0	...			9	0	0
Warrington ...	200	0	0	...			200	0	0	...			200	0	0
Bridge over Clutha at Alexandra, grant-in-aid ...	5,000	0	0	...			5,000	0	0	...			5,000	0	0
Bridge over Clutha at Cromwell ...	...			...			...			3,500	0	0	3,500	0	0
Waitahuna Bridge ...	750	0	0	...			750	0	0	...			750	0	0
Native Districts ...	...			735	5	11	735	5	11	214	3	8	949	9	7
Expenditure under Miscellaneous Public Works Votes (see Table No. 7 of 1884) ...	318,948	10	3	...			318,948	10	3	...			318,948	10	3
Totals ...	1,228,829	14	7	26,748	3	4	1,255,577	17	11	21,231	12	1	1,276,809	10	0
ROADS TO GIVE ACCESS TO RAILWAY, MARTON-TE AWAMUTU :—															
North end ...	3,566	5	5	310	0	0	3,876	5	5	...			3,876	5	5
South end ...	36,576	10	5	1,587	13	1	38,164	3	6	87	14	0	38,251	17	6
Totals ...	40,142	15	10	1,897	13	1	42,040	8	11	87	14	0	42,128	2	11
GRANTS-IN-AID :—															
Grants-in-aid under "The Roads and Bridges Construction Act, 1882" ...	374,015	1	4	971	13	6	374,986	14	10	203	0	0	375,189	14	10
Expenses taking poll re Buller Bridge ...	79	4	4	...			79	4	4	...			79	4	4
Portion of subsidies to local bodies ...	132,170	16	5	11,309	1	6	143,479	17	11	147	0	0	143,626	17	11
Contingencies and subsidies to local bodies for providing work for unemployed ...	26,055	19	7	14,631	10	7	40,687	10	2	2,525	1	3	43,212	11	5
Grant to Ohinemuri County ...	1,000	0	0	...			1,000	0	0	...			1,000	0	0
Totals ...	533,321	1	8	26,912	5	7	560,233	7	3	2,875	1	3	563,108	8	6
SUMMARY.															
ROADS, BRIDGES, &c., North of Auckland	229,140	15	9	264	0	0	229,404	15	9	340	0	0	229,744	15	9
MAIN ROADS ...	423,838	18	6	10,968	1	11	434,807	0	5	7,379	17	10	442,186	18	3
MISCELLANEOUS ROADS AND BRIDGES	1,228,829	14	7	26,748	3	4	1,255,577	17	11	21,231	12	1	1,276,809	10	0
ROADS TO GIVE ACCESS TO RAILWAY, MARTON-TE AWAMUTU ...	40,142	15	10	1,897	13	1	42,040	8	11	87	14	0	42,128	2	11
GRANTS-IN-AID ...	533,321	1	8	26,912	5	7	560,233	7	3	2,875	1	3	563,108	8	6
ROADS TO OPEN UP LANDS (see Table No. 4) ...	506,834	17	3	21,954	2	8	528,788	19	11	25,433	11	2	554,222	11	1
IMPROVEMENT OF VILLAGE SETTLEMENTS ...	13,944	2	0	10,770	0	11	24,714	2	11	38,429	7	6	63,143	10	5
THROUGH LANDS RECENTLY PURCHASED (see Table No. 5, 1883) ...	21,527	14	5	...			21,527	14	5	...			21,527	14	5
GOLDFIELDS ROADS (see Table No. 5) ...	140,971	6	7	7,015	0	10	147,986	7	5	25,168	0	5	173,154	7	10
PAYMENTS TO ROAD BOARDS (see Table No. 11, 1877) ...	225,000	0	0	...			225,000	0	0	...			225,000	0	0
Totals ...	3,363,551	6	7	106,529	8	4	3,470,080	14	11	120,945	4	3	3,591,025	19	2
Less recovery on account of services of previous years ...	...			90	18	2	90	18	2	...			90	18	2
GRAND TOTALS ...	3,363,551	6	7	106,438	10	2	3,469,989	16	9	120,945	4	3	3,590,935	1	0

TABLE No. 4.

STATEMENT showing the EXPENDITURE on ROADS under the Control of the Minister of Lands, to 31st March, 1889, and the LIABILITIES on that Date.

	Expenditure to 31st March, 1888.	Expenditure during 12 Months ended 31st March, 1889.	Total Expenditure to 31st March, 1889.	Liabilities on Authorities, Contracts, &c., 31st March, 1889.	Total Expenditure and Liabilities.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
ROADS TO OPEN UP LANDS BEFORE SALE.					
<i>North Island.</i>					
Auckland—					
Kaihu to Kaikohe .. ..	385 1 0	..	385 1 0	..	385 1 0
Homestead blocks, Manganui ..	454 15 6	..	454 15 6	..	454 15 6
Pakiri Block .. ..	282 7 6	..	282 7 6	..	282 7 6
Wairua to Sandy Bay .. ..	1,540 3 6	..	1,540 3 6	..	1,540 3 6
Wairua to Helena Bay .. ..	1,557 12 1	3 2 6	1,560 14 7	230 0 0	1,790 14 7
Whangarei through Taheke ..	1,092 11 4	20 14 0	1,113 5 4	172 12 6	1,285 17 10
Purua and Mangakahia .. ..	1,411 5 3	..	1,411 5 3	..	1,411 5 3
Tangihua No. 3 .. ..	827 8 2	..	827 8 2	..	827 8 2
Manganui Bluff to Kaihu ..	4,018 15 0	..	4,018 15 0	..	4,018 15 0
Takahue to Mangonuiowae ..	2,931 7 7	..	2,931 7 7	..	2,931 7 7
Okaihu to Victoria Valley ..	6,736 1 4	150 0 0	6,886 1 4	420 9 11	7,306 11 3
Helensville to Kaipatiki ..	2,236 5 7	..	2,236 5 7	..	2,236 5 7
Waikato to Block XVI., Awaroa ..	3,806 19 11	..	3,806 19 11	..	3,806 19 11
Lake Whangape to Blk. VII., Awaroa ..	3,035 10 4	..	3,035 10 4	..	3,035 10 4
Hikutaiia to Ohinemuri ..	4,022 7 7	..	4,022 7 7	..	4,022 7 7
Tauranga to Te Puke and Matata ..	12,962 1 2	..	12,962 1 2	..	12,962 1 2
Opotiki to Waiotahi .. ..	562 10 0	..	562 10 0	..	562 10 0
Opotiki to Ormond .. ..	14,958 14 1	..	14,958 14 1	..	14,958 14 1
Te Aroha Block .. ..	5,300 2 6	..	5,300 2 6	..	5,300 2 6
Takahue to Herd's Point ..	2,712 18 5	..	2,712 18 5	1,000 0 0	3,712 18 5
Block II., Tangihua .. ..	635 6 0	..	635 6 0	..	635 6 0
Wairoa and Waikaremoana bridle-track through the Waiau District, Poverty Bay ..	544 18 6	..	544 18 6	..	544 18 6
Huihuitaha to Patetere .. ..	705 8 2	..	705 8 2	..	705 8 2
Ruakituri Block .. ..	2,149 14 4	..	2,149 14 4	..	2,149 14 4
Ormond to Waiapu .. ..	12,476 0 1	..	12,476 0 1	..	12,476 0 1
Gisborne to Waimata .. ..	4,250 9 6	..	4,250 9 6	..	4,250 9 6
Gisborne to Wairoa .. ..	11,963 7 8	..	11,963 7 8	..	11,963 7 8
Taupo, via Rotoaira and Murimotu, to West Coast ..	12,122 7 8	479 10 1	12,601 17 9	..	12,601 17 9
Katikati to Te Aroha .. ..	785 11 1	..	785 11 1	..	785 11 1
Tolago Bay to Arakihi .. ..	2,172 6 9	..	2,172 6 9	..	2,172 6 9
Kohukohu to Rahutapu .. ..	484 13 6	..	484 13 6	..	484 13 6
Ohuka to Waikaremoana ..	100 0 0	..	100 0 0	..	100 0 0
Whangaroa to Kahuru .. ..	2,065 15 0	..	2,065 15 0	..	2,065 15 0
Hamilton-Whatawhata Drain ..	137 18 0	..	137 18 0	..	137 18 0
Warerenga Road .. ..	552 2 9	..	552 2 9	300 0 0	852 2 9
Waimamaku Bridge .. ..	606 8 9	..	606 8 9	..	606 8 9
Awaroa Swamp, drains and roads ..	460 2 6	..	460 2 6	200 0 0	660 2 6
Paparoa to Waikiekie .. ..	497 11 10	193 10 5	691 2 3	82 0 0	773 2 3
Oamarakau Bridge .. ..	378 19 0	..	378 19 0	..	378 19 0
Churchill Punt .. ..	150 5 2	..	150 5 2	..	150 5 2
Otonga Bridge .. ..	225 4 3	..	225 4 3	..	225 4 3
Kawhia to Waipa .. ..	3,050 9 11	74 4 3	3,124 14 2	40 0 0	3,164 14 2
Alexandria to Kawhia .. ..	3,807 0 4	18 5 6	3,825 5 10	..	3,825 5 10
Rotorua to Galatea via Rotomahana ..	1,848 3 9	..	1,848 3 9	..	1,848 3 9
Galatea to Te Kapu via Waikaremoana ..	1,341 15 3	..	1,341 15 3	..	1,341 15 3
Alexandra to Hikurangi .. ..	523 0 10	3 6 0	526 6 10	130 0 0	656 6 10
Wangaro to Akatea .. ..	636 5 2	..	636 5 2	250 0 0	886 5 2
Akaaka Swamp .. ..	80 13 0	..	80 13 0	..	80 13 0
Waihou Ferry through Komata ..	250 0 0	..	250 0 0	..	250 0 0
Draining Tatarariki .. ..	533 13 7	53 6 10	587 0 5	270 4 0	857 4 5
Drain, Te Aroha .. ..	350 0 0	..	350 0 0	..	350 0 0
Cabbage Bay to Cape Colville ..	284 11 0	..	284 11 0	..	284 11 0
Lower Waihou Road .. ..	375 0 0	..	375 0 0	..	375 0 0
Otama to Deeds .. ..	502 0 6	..	502 0 6	..	502 0 6
Mangapai to Mareretu .. ..	706 2 3	131 1 6	837 3 9	72 0 0	909 3 9
Puriri to Tairua .. ..	1,441 9 6	19 19 11	1,461 9 5	231 0 0	1,692 9 5
Whaingaroa to Waitetuna ..	511 8 0	..	511 8 0	..	511 8 0
Matawhero to Whangape ..	41 0 0	..	41 0 0	..	41 0 0
Mauku Bridge (subsidy) .. ..	1,413 17 1	62 14 9	1,476 11 10	250 0 0	1,726 11 10
Huka Falls .. ..	2,051 11 6	..	2,051 11 6	..	2,051 11 6
Ahipara to Herekino .. ..	299 18 11	..	299 18 11	..	299 18 11
Wairoa Ferry, Dargaville ..	100 0 0	..	100 0 0	200 0 0	300 0 0
Tairua to Whenuakito .. ..	..	..	..	220 0 0	220 0 0
Puhoi to Makarau .. ..	..	..	..	200 0 0	200 0 0
Omaha .. ..	..	3 2 6	3 2 6	396 17 6	400 0 0
Waimamaku to Pakanae .. ..	..	..	..	500 0 0	500 0 0
Rotorua to Waiotapu .. ..	..	..	..	200 0 0	200 0 0
Mata to Rauaroa .. ..	..	..	..	100 0 0	100 0 0
Approach to Miranda Wharf, £1 for £1 ..	6,600 18 10	533 11 4	7,134 10 2	1,220 2 0	8,354 12 2
Miscellaneous .. ..	..	..	..	..	..
Carried forward .. ..	151,048 7 9	1,746 9 7	152,794 17 4	6,685 5 11	159,480 3 3

TABLE No. 4—continued.  
STATEMENT showing the EXPENDITURE on ROADS, &c.—continued.

	Expenditure to 31st March, 1888.			Expenditure during 12 Months ended 31st March, 1889.			Total Expenditure to 31st March, 1889.			Liabilities on Authorities, Contracts, &c., 31st March, 1889.			Total Expenditure and Liabilities.		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
ROADS TO OPEN UP LANDS BEFORE SALE —continued.															
Brought forward ..	151,048	7	9	1,746	9	7	152,794	17	4	6,685	5	11	159,480	3	3
North Island—continued.															
Taranaki—															
Road through bush, Waimate Plains	15,714	8	9	..			15,714	8	9	..			15,714	8	9
Roads east of Stratford ..	1,442	5	11	55	2	5	1,497	8	4	114	16	7	1,612	4	11
Bush land inland of Patea ..	1,926	0	11	..			1,926	0	11	..			1,926	0	11
Continuous Reserve (to be refunded)	5,045	10	4	..			5,045	10	4	..			5,045	10	4
Mountain Road to blocks under survey	890	14	0	..			890	14	0	..			890	14	0
Waitara Bridge ..	5	15	0	963	3	2	968	18	2	..			968	18	2
Opening up Huiroa Block ..	906	0	9	..			906	0	9	100	0	0	1,006	0	9
Huiroa Block, bridge over Manganui River	781	1	3	..			781	1	3	..			781	1	3
To complete bush-felling, Stratford ..	34	0	0	..			34	0	0	..			34	0	0
Through parts of Blocks I., II., V., VI., X., Ngaire District	2,041	0	10	..			2,041	0	10	..			2,041	0	10
Through parts of Blocks III., V., X., Ngaire District	1,146	3	6	..			1,146	3	6	..			1,146	3	6
Block X., Huiroa ..	745	17	0	..			745	17	0	..			745	17	0
Egmont District ..	356	12	11	..			356	12	11	..			356	12	11
Kahouri Bridge ..	600	0	0	..			600	0	0	..			600	0	0
Eltham and Branch Roads	5,895	8	5	399	1	7	6,294	10	0	550	10	0	6,845	0	0
Native Trust Blocks ..	1,727	11	11	107	1	10	1,834	13	9	..			1,834	13	9
Ironsand Blocks ..	514	0	2	..			514	0	2	..			514	0	2
Tariki Road ..	1,149	7	0	..			1,149	7	0	..			1,149	7	0
Road through bush, Waimate Plains	1,614	9	8	..			1,614	9	8	..			1,614	9	8
Pukearuhe to Mokau ..	562	8	1	146	14	2	709	2	3	153	5	10	862	8	1
Bridge on Stratford to Opunake Road	376	19	8	..			376	19	8	..			376	19	8
Inglewood to Waitara ..	2,702	1	0	47	0	5	2,749	1	5	..			2,749	1	5
Roads east of Midhurst ..	253	10	3	..			253	10	3	..			253	10	3
Egmont Road ..	185	15	6	..			185	15	6	..			185	15	6
Roads East of Waitara ..	657	12	11	955	19	0	1,613	11	11	132	10	0	1,746	1	11
Roads inland of Mokoia ..	..			321	9	7	321	9	7	185	10	5	507	0	0
Alfred Road ..	..			..			..			112	10	0	112	10	0
Miscellaneous ..	35	11	9	85	13	11	121	5	8	390	0	0	511	5	8
Hawke's Bay—															
Tologa to Mangatokerau ..	..			29	19	7	29	19	7	120	0	5	150	0	0
Tologa to Arakihi ..	..			131	16	9	131	16	9	410	0	0	541	16	9
Ormond to Waipau ..	..			2	0	0	2	0	0	300	0	0	302	0	0
Ormond to Opotiki ..	..			604	9	11	604	9	11	120	0	0	724	9	11
Waipoua Road to Oilsprings ..	..			300	0	0	300	0	0	350	0	0	650	0	0
Puketitiri Block ..	520	0	0	..			520	0	0	..			520	0	0
Norsewood District, Ngamoko, and Maharahara	2,709	16	6	..			2,709	16	6	..			2,709	16	6
Ahuturanga Block ..	1,883	7	11	..			1,883	7	11	..			1,883	7	11
Tautane and Tahoraite ..	15,689	18	11	1,077	19	1	16,767	18	0	500	0	0	17,267	18	0
Tukituki to Waipawa ..	985	1	5	..			985	1	5	..			985	1	5
Mohaka and Waitara ..	151	6	4	..			151	6	4	..			151	6	4
Waitara Block ..	781	0	6	..			781	0	6	..			781	0	6
Umutaeroa Block ..	2,088	15	4	..			2,088	15	4	..			2,088	15	4
Maharahara Block ..	1,938	12	8	..			1,938	12	8	..			1,938	12	8
Victoria and Bush-mills Settlements	800	0	0	100	0	0	900	0	0	..			900	0	0
Wairoa to Rotokakaranga ..	1,569	7	10	..			1,569	7	10	200	0	0	1,769	7	10
Makaretu ..	1,512	7	7	281	4	11	1,793	12	6	140	0	0	1,933	12	6
Te Ohu ..	434	8	10	..			434	8	10	..			434	8	10
Miscellaneous ..	698	8	1	50	0	0	748	8	1	195	0	0	943	8	1
Wellington—															
Pahiatua, Mangaone, &c. ..	18,509	7	9	408	7	8	18,917	15	5	156	11	3	19,074	6	8
Repairs, Fitzherbert Bridge ..	500	0	0	..			500	0	0	..			500	0	0
Roads, Fitzherbert Block ..	400	0	0	..			400	0	0	..			400	0	0
Otamakapua and Waitapu ..	4,224	8	8	239	19	6	4,464	8	2	150	0	0	4,614	8	2
East side of Pohangina River ..	920	17	6	..			920	17	6	..			920	17	6
Momahaki to Waitotara ..	3,142	0	5	460	12	8	3,602	13	1	122	4	5	3,724	17	6
Tokomaru Block ..	1,904	14	4	..			1,904	14	4	100	0	0	2,004	14	4
Wanganui to Murimotu ..	2,274	17	7	827	17	11	3,102	15	6	47	15	7	3,150	11	1
Marton to Murimotu ..	2,670	6	6	..			2,670	6	6	..			2,670	6	6
Rangitumau Block ..	2,574	8	8	1,043	4	10	3,617	13	6	175	7	1	3,793	0	7
Sandon Township ..	1,430	7	9	..			1,430	7	9	..			1,430	7	9
Wairarapa East ..	1,500	0	0	..			1,500	0	0	..			1,500	0	0
Mungaroa to Waikanae ..	4,373	2	11	..			4,373	2	11	..			4,373	2	11
Blocks V., VI., IX., and XIII., Kai-ranga Survey Dist., Palmerston N.	3,738	8	0	..			3,738	8	0	..			3,738	8	0
Carried forward ..	278,284	7	3	10,385	8	6	288,669	15	9	11,511	7	6	300,181	3	3

TABLE No. 4—continued.

STATEMENT showing the EXPENDITURE ON ROADS, &amp;c.—continued.

	Expenditure to 31st March, 1888.			Expenditure during 12 Months ended 31st March, 1889.			Total Expenditure to 31st March, 1889.			Liabilities on Authorities, Contracts, &c., 31st March, 1889.			Total Expenditure and Liabilities.		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
ROADS TO OPEN UP LANDS BEFORE SALE —continued.															
Brought forward .. ..	278,284	7	3	10,385	8	6	288,669	15	9	11,511	7	6	300,181	3	3
North Island—continued.															
Wellington—continued.															
Blocks V., VI., IX., X., and XIII., Kairanga Survey District, Palmers- ton N., 24 miles, to open 8,582 acres	1,524	7	2	..			1,524	7	2	..			1,524	7	2
Karewarewa Block .. ..	319	1	9	..			319	1	9	..			319	1	9
Paratieke .. ..	588	2	7	..			588	2	7	..			588	2	7
Kaiwhata and Pahaoa .. ..	500	0	0	..			500	0	0	..			500	0	0
Otairi Block .. ..	117	17	6	..			117	17	6	..			117	17	6
Makakahi Road .. ..	530	3	4	139	4	6	669	7	10	..			669	7	10
Wairoa Survey District .. ..	..			14	5	7	14	5	7	..			14	5	7
Kairanga Drain .. ..	350	0	0	..			350	0	0	..			350	0	0
Kimbolton Road Extension .. ..	1,008	4	11	..			1,008	4	11	..			1,008	4	11
Kimbolton Road to Orua .. ..	496	2	0	..			496	2	0	..			496	2	0
Waitapu Block .. ..	162	19	3	918	19	3	1,081	18	6	300	0	0	1,381	18	6
Mangatainoko Roads .. ..	4,796	15	8	120	8	4	4,917	4	0	..			4,917	4	0
Tiraumea Bridge .. ..	418	5	5	1,101	2	1	1,519	7	6	666	13	10	2,186	1	4
Tutaekara Road .. ..	1	10	0	1	11	6	3	1	6	300	0	0	303	1	6
South Pahiatua Road .. ..	1,130	17	9	346	13	8	1,477	11	5	133	0	0	1,610	11	5
Mangaone to Tiraumea .. ..	..			611	1	3	611	1	3	212	6	10	823	8	1
Tiraumea to Makuri .. ..	..			581	2	6	581	2	6	969	0	0	1,550	2	6
Puketoi .. ..	..			4	16	0	4	16	0	408	10	6	413	6	6
Makakahi Bridge to Mangahao .. ..	..			9	14	6	9	14	6	250	0	0	259	14	6
Mauriceville West .. ..	..			197	11	4	197	11	4	154	9	0	352	0	4
Otaki to Foxton .. ..	..			12	10	0	12	10	0	313	10	0	326	0	0
South Mangaone Road .. ..	214	7	4	..			214	7	4	..			214	7	4
Maungakaretu .. ..	993	9	0	454	15	0	1,448	4	0	125	0	0	1,573	4	0
Mikimiki .. ..	..			135	12	6	135	12	6	..			135	12	6
Miscellaneous .. ..	809	19	4	322	7	7	1,132	6	11	93	0	0	1,225	6	11
Middle Island.															
Nelson—															
Cobden to Seventeen-mile Diggings ..	1,678	11	0	..			1,678	11	0	..			1,678	11	0
Hampden to Maruia .. ..	10,507	5	9	..			10,507	5	9	..			10,507	5	9
Grey Valley to Teremakau .. ..	2,688	2	1	..			2,688	2	1	..			2,688	2	1
Wakefield to Stanley Brook .. ..	200	0	0	..			200	0	0	..			200	0	0
Aorere Valley to Karamea .. ..	4,699	7	5	..			4,699	7	5	..			4,699	7	5
Tadmor and Sherry to Buller .. ..	5,482	16	11	..			5,482	16	11	..			5,482	16	11
Baton to Karamea .. ..	200	0	0	..			200	0	0	..			200	0	0
Maruia to Amuri .. ..	1,653	4	1	..			1,653	4	1	..			1,653	4	1
Takaka to Anatoki and Collingwood ..	4,733	6	5	..			4,733	6	5	..			4,733	6	5
Takaka to Karamea .. ..	289	3	4	..			289	3	4	..			289	3	4
Ahaura to Kopara and Amuri .. ..	2,065	1	8	..			2,065	1	8	..			2,065	1	8
Oronoko to Rosedale .. ..	963	14	0	..			963	14	0	..			963	14	0
Brooklands Valley Road .. ..	178	6	6	..			178	6	6	..			178	6	6
Karamea to Mokihinui .. ..	913	12	2	..			913	12	2	..			913	12	2
Ahaura (Mason's) to Haupiri .. ..	1,938	8	5	145	1	1	2,083	9	6	..			2,083	9	6
Takaka to Stockyard .. ..	14	17	7	242	16	6	257	14	1	..			257	14	1
Pigeon Valley to Motueka .. ..	500	0	0	..			500	0	0	250	0	0	750	0	0
Pretty Bridge Valley .. ..	200	0	0	..			200	0	0	..			200	0	0
Grey Valley, via Clarke, to Maruia ..	191	10	2	20	0	0	211	10	2	..			211	10	2
Dovedale .. ..	200	0	0	..			200	0	0	160	0	0	360	0	0
Little Sidney Road, Riwaka .. ..	..			..			..			150	0	0	150	0	0
Trass Valley .. ..	..			60	0	0	60	0	0	100	0	0	160	0	0
Wakefield District .. ..	..			60	0	0	60	0	0	100	0	0	160	0	0
Wairoa Bridge .. ..	..			..			..			150	0	0	150	0	0
Miscellaneous .. ..	1,297	8	4	45	5	10	1,342	14	2	61	0	0	1,403	14	2
Marlborough—															
Awatere Valley Road .. ..	8,484	11	1	..			8,484	11	1	..			8,484	11	1
Westland—															
Mapourika to Gillespie's .. ..	8,077	5	0	..			8,077	5	0	..			8,077	5	0
Mahitahi to Haast .. ..	16,234	16	9	..			16,234	16	9	..			16,234	16	9
Mathias Pass Road .. ..	336	18	0	..			336	18	0	..			336	18	0
In the County of Westland .. ..	1,980	0	0	..			1,980	0	0	..			1,980	0	0
Kumara to Beach .. ..	2,000	0	0	..			2,000	0	0	..			2,000	0	0
Kokatahi River to Hokitika River ..	970	0	0	..			970	0	0	..			970	0	0
Moeraki Crossing to Otumotu .. ..	1,510	18	5	..			1,510	18	5	..			1,510	18	5
Mount Bonar to Poerua River .. ..	900	0	0	..			900	0	0	..			900	0	0
Wataroa and Waitangi-taone .. ..	1,500	0	0	..			1,500	0	0	..			1,500	0	0
Teremakau to Bell Hill Road .. ..	1,786	16	0	200	0	0	1,986	16	0	..			1,986	16	0
Waikukupa to Cook's River Flat .. ..	1,000	0	0	..			1,000	0	0	..			1,000	0	0
Carried forward .. ..	377,622	11	4	16,130	7	6	393,752	18	10	16,407	17	8	410,160	16	6

TABLE No. 4—continued.

STATEMENT showing the EXPENDITURE on ROADS, &amp;c.—continued.

	Expenditure to 31st March, 1888.		Expenditure during 12 Months ended 31st March, 1889.		Total Expenditure to 31st March, 1889.		Liabilities on Authorities, Contracts, &c., 31st March, 1889.		Total Expenditure and Liabilities.	
	£	s. d.	£	s. d.	£	s. d.	£	s. d.	£	s. d.
ROADS TO OPEN UP LANDS BEFORE SALE —continued.										
Brought forward ..	377,622	11 4	16,130	7 6	393,752	18 10	16,407	17 8	410,160	16 6
<i>Middle Island—continued.</i>										
Westland—continued.										
Gillespie's to Cook's River Flat ..	1,061	16 0	..	..	1,061	16 0	906	18 0	1,968	14 0
Cascade Valley Road ..	1,809	9 2	..	..	1,809	9 2	..	..	1,809	9 2
Pounamou to Teramakau ..	500	0 0	..	..	500	0 0	200	0 0	700	0 0
Mahitahi to Paringa ..	..	..	1,400	0 0	1,400	0 0	..	..	1,400	0 0
Miscellaneous ..	279	15 6	..	..	279	15 6	50	10 10	330	6 4
Canterbury—										
Mathias Pass Road ..	2,046	15 10	..	..	2,046	15 10	..	..	2,046	15 10
To Upper Ashley over Kuku Pass ..	8,490	13 1	24	11 7	8,455	4 8	237	18 9	8,693	3 5
Irrigation works, Eyre & Waimakariri ..	3,400	0 0	..	..	3,400	0 0	..	..	3,400	0 0
Oxford Bush to Upper Ashley ..	3,996	2 3	..	..	3,996	2 3	..	..	3,996	2 3
Burke's Pass, Mackenzie County ..	249	18 10	..	..	249	18 10	..	..	249	18 10
To deferred-payment lands, Teviotdale ..	1,764	4 11	..	..	1,764	4 11	..	..	1,764	4 11
To deferred-payment lands, Waikari ..	784	19 1	..	..	784	19 1	..	..	784	19 1
To village & deferred-payment blocks ..	1,399	15 10	..	..	1,399	15 10	..	..	1,399	15 10
Blackford to Redcliffe ..	600	0 0	..	..	600	0 0	..	..	600	0 0
Blackhill's Road ..	970	0 0	..	..	970	0 0	..	..	970	0 0
Road to Mount Cook and Glaciers ..	1,200	0 0	..	..	1,200	0 0	430	0 0	1,630	0 0
Waihao to Hakateramea ..	823	19 1	39	9 4	863	8 5	..	..	863	8 5
Mount Grey Downs ..	350	0 0	118	0 0	468	0 0	..	..	468	0 0
Glentui Road ..	579	19 10	103	5 6	683	5 4	..	..	683	5 4
Ohau Bridge, £1 for £1 ..	..	..	..	..	..	..	800	0 0	800	0 0
Miscellaneous ..	1,235	4 11	82	13 4	1,317	18 3	347	16 6	1,665	14 9
Otago—										
Beaumont to Miller's Flat ..	6,000	0 0	..	..	6,000	0 0	..	..	6,000	0 0
Through Blocks VIII. and X., Bengier Run 106 ..	1,000	0 0	..	..	1,000	0 0	..	..	1,000	0 0
Kelso to Greenvale ..	1,148	7 3	..	..	1,148	7 3	..	..	1,148	7 3
Tapanui Railway to Run 140 ..	500	0 0	..	..	500	0 0	..	..	500	0 0
To open up Otago and Southland runs ..	1,145	2 3	..	..	1,145	2 3	..	..	1,145	2 3
Through Runs 171 and 171A ..	12,941	15 7	..	..	12,941	15 7	..	..	12,941	15 7
Otago to Waikawa, and bridge over Tokanui Creek ..	1,500	0 0	..	..	1,500	0 0	..	..	1,500	0 0
Arrowtown to Crown Terrace ..	1,000	0 0	..	..	1,000	0 0	..	..	1,000	0 0
Waitahuna to Run 52c ..	1,200	0 0	..	..	1,200	0 0	..	..	1,200	0 0
Run No. 75 (Boyd's) ..	3,000	0 0	..	..	3,000	0 0	..	..	3,000	0 0
Education reserves ..	1,821	3 9	..	..	1,821	3 9	..	..	1,821	3 9
Through Runs 177 and 257 ..	5,002	0 0	..	..	5,002	0 0	..	..	5,002	0 0
Glenorchy up Rees and Dart ..	1,805	3 7	..	..	1,805	3 7	..	..	1,805	3 7
Lauder Block ..	1,004	0 0	145	0 0	1,149	0 0	..	..	1,149	0 0
Upper Clutha Blocks ..	454	15 0	150	0 0	604	15 0	..	..	604	15 0
Waikaia Bush to Clutha Valley ..	3,500	0 0	..	..	3,500	0 0	..	..	3,500	0 0
Pembroke to Matukituki ..	1,729	11 4	..	..	1,729	11 4	..	..	1,729	11 4
Block II., Blackstone ..	200	0 0	..	..	200	0 0	..	..	200	0 0
Taieri Lake, Block XV., Maniototo ..	200	0 0	..	..	200	0 0	..	..	200	0 0
Taieri Bridge to Nenthorn Bridge ..	175	0 0	..	..	175	0 0	..	..	175	0 0
Ida Valley ..	500	0 0	..	..	500	0 0	..	..	500	0 0
Kurov Run ..	1,261	0 0	..	..	1,261	0 0	..	..	1,261	0 0
Pyramid Bridge to Waikaia ..	500	0 0	..	..	500	0 0	..	..	500	0 0
Taieri River Road ..	200	0 0	..	..	200	0 0	..	..	200	0 0
Hummockside District ..	260	0 0	..	..	260	0 0	..	..	260	0 0
Athol to Nokomai Saddle ..	..	..	200	0 0	200	0 0	..	..	200	0 0
Moeraki District ..	167	10 8	..	..	167	10 8	..	..	167	10 8
Blocks XVI., XIV., IX., Maniototo ..	540	0 0	..	..	540	0 0	200	0 0	740	0 0
Gimberburn District ..	400	0 0	..	..	400	0 0	100	0 0	500	0 0
Swinburn and Rock and Pillar ..	100	0 0	100	0 0	200	0 0	300	0 0	500	0 0
Run 210 ..	293	0 0	..	..	293	0 0	307	0 0	600	0 0
Silverpeak, &c. ..	250	0 0	70	0 0	320	0 0	..	..	320	0 0
Switzer's Track to Spylaw and Clutha ..	690	5 8	..	..	690	5 8	..	..	690	5 8
Rankleburn, &c. ..	..	..	..	..	..	..	120	0 0	120	0 0
Kelso to Waikaka ..	..	..	..	..	..	..	1,000	0 0	1,000	0 0
Catlin's District ..	..	..	..	..	..	..	1,000	0 0	1,000	0 0
Mossburn to Manapouri ..	..	..	200	0 0	200	0 0	300	0 0	500	0 0
Blocks II. and III. Campbelltown ..	..	..	..	..	..	..	100	0 0	100	0 0
Appleby to Tisbury ..	..	..	196	11 0	196	11 0	53	9 0	250	0 0
Woodend to Bushy Point ..	..	..	..	..	..	..	100	0 0	100	0 0
Bridge Tokomairiro River, N. Branch ..	250	0 0	..	..	250	0 0	..	..	250	0 0
Hindon ..	1,005	0 0	..	..	1,005	0 0	..	..	1,005	0 0
Glenomaru and Owake ..	300	0 0	443	11 2	743	11 2	450	0 0	1,193	11 2
Waikaka to Wendon and Greenvale ..	500	0 0	..	..	500	0 0	..	..	500	0 0
Carried forward ..	463,149	0 9	19,403	9 5	482,552	10 2	23,411	10 9	505,964	0 11

TABLE No. 4—continued.

STATEMENT showing the EXPENDITURE on ROADS, &amp;c.—continued.

	Expenditure to 31st March, 1888.			Expenditure during 12 Months ended 31st March, 1889.			Total Expenditure to 31st March, 1889.			Liabilities on Authorities, Contracts, &c., 31st March, 1889.			Total Expenditure and Liabilities.		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
ROADS TO OPEN UP LANDS BEFORE SALE —continued.															
Brought forward .. ..	463,149	0	9	19,408	9	5	482,552	10	2	23,411	10	9	505,964	0	11
<i>Middle Island—continued.</i>															
Otago—continued.															
Wendon District .. ..	500	0	0	..			500	0	0	..			500	0	0
Seaward Forest to coast .. ..	6,064	15	11	..			6,064	15	11	..			6,064	15	11
Forest Hill Tramway .. ..	12,766	7	10	250	0	0	13,016	7	10	..			13,016	7	10
Waikawa to Catlin's .. ..	2	14	0	..			2	14	0	..			2	14	0
Orepuki to Waiau .. ..	900	0	0	..			900	0	0	..			900	0	0
Branch Road to Forest Hill .. ..	1,494	19	5	..			1,494	19	5	..			1,494	19	5
Tomogalak Creek to D. P. Land .. ..	499	5	6	..			499	5	6	..			499	5	6
Waikaka Siding to Waikaka Town .. ..	..			1,200	0	0	1,200	0	0	600	0	0	1,800	0	0
Bay Road to Otara Bush .. ..	1,179	18	3	..			1,179	18	3	..			1,179	18	3
Bush land east of Makarewa .. ..	520	0	0	..			520	0	0	..			520	0	0
Port William to Halfmoon Bay .. ..	250	0	0	..			250	0	0	..			250	0	0
Wyndham, <i>via</i> Mimihau, to Otaraia .. ..	999	18	2	200	0	0	1,199	18	2	..			1,199	18	2
Waikaka to Pyramid .. ..	200	0	0	..			200	0	0	..			200	0	0
Wendonside .. ..	100	0	0	..			100	0	0	..			100	0	0
Pyramid Bridge .. ..	850	0	0	..			850	0	0	..			850	0	0
Otatara Bush .. ..	500	0	0	..			500	0	0	..			500	0	0
West's to Mokohua .. ..	100	0	0	..			100	0	0	..			100	0	0
Waimatuku Bush .. ..	500	0	0	..			500	0	0	100	0	0	600	0	0
Blackmount to deferred-payment land .. ..	350	0	0	75	0	0	425	0	0	..			425	0	0
Bush land, Makarewa .. ..	150	0	0	..			150	0	0	..			150	0	0
Seaward Moss to Awarua Bay .. ..	500	0	0	..			500	0	0	..			500	0	0
Hedgehope Road .. ..	200	0	0	..			200	0	0	..			200	0	0
Waikiwi Suburban .. ..	40	0	0	110	0	0	150	0	0	..			150	0	0
Wallacetown to Tomoporakau .. ..	150	0	0	..			150	0	0	..			150	0	0
Winton Tramway to Winton Forest .. ..	200	0	0	..			200	0	0	..			200	0	0
Seaward Forest to D. P. Block .. ..	153	16	0	146	4	0	300	0	0	250	0	0	550	0	0
Stewart Island .. ..	256	5	0	..			256	5	0	250	0	0	506	5	0
Sundry roads .. ..	9,394	2	11	..			9,394	2	11	..			9,394	2	11
Sundry roads, Native labour .. ..	9	9	0	..			9	9	0	..			9	9	0
Miscellaneous .. ..	4,854	4	6	569	9	3	5,423	13	9	822	0	5	6,245	14	2
Totals .. ..	506,834	17	3	21,954	2	8	528,788	19	11	25,433	11	2	554,222	11	1
VILLAGE SETTLEMENTS:—															
Village settlements .. ..	13,944	2	0	10,770	0	11	24,714	2	11	38,429	7	6	63,143	10	5

TABLE No. 5.

STATEMENT showing the EXPENDITURE on GOLDFIELDS ROADS (Class IV.) out of Immigration and Public Works Loan to 31st March, 1889, and LIABILITIES on that Date.

	Expenditure to 31st March, 1888.	Expenditure during Twelve Months ending 31st March, 1889.	Total Expenditure to 31st March, 1889.	Liabilities on Authorities, Contracts, &c., 31st March, 1889.	Total Expenditure and Liabilities.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
ROADS ON GOLDFIELDS—					
Subsidies towards the construction of roads and tracks in mining districts, and minor works for the development of minerals, upon a subscription of one-half being contributed ..	58,663 15 9	921 13 8	59,585 9 5	7,363 18 0	66,949 7 5
AUCKLAND—					
Assistance to Piako County Council towards constructing tramway from Te Aroha Mountain to batteries ..	6,000 0 0	..	6,000 0 0	..	6,000 0 0
Opening Mokau River for development of coal-mine ..	552 8 0	..	552 8 0	..	552 8 0
Waikawau to Manaia ..	..	1 18 0	1 18 0	998 2 0	1,000 0 0
Ohinemuri Valley to Waitekauri ..	..	..	..	500 0 0	500 0 0
Whangamata Harbour to Reefs ..	..	141 10 6	141 10 6	..	141 10 6
Hikutaia to Marototo ..	..	..	..	1,000 0 0	1,000 0 0
NELSON—					
Lyell to Mokihinui <i>via</i> Eight-Mile ..	5,098 8 6	..	5,098 8 6	..	5,098 8 6
Mokihinui Quartz-reefs to Specimen Creek ..	1,238 7 5	..	1,238 7 5	..	1,238 7 5
Brighton to Seventeen-Mile Beach <i>via</i> Terraces ..	1,789 7 2	..	1,789 7 2	..	1,789 7 2
Cobden to Seventeen-Mile Beach ..	2,652 1 4	..	2,652 1 4	234 0 0	2,886 1 4
Wangapeka to Karamea ..	2,000 0 0	..	2,000 0 0	..	2,000 0 0
Aorere Valley to Karamea and Mokihinui ..	17,375 12 8	1,077 8 0	18,453 0 8	7,807 9 0	26,260 9 8
Owen Valley Road ..	2,045 3 8	163 5 6	2,208 9 2	..	2,208 9 2
Hatter's Terrace to Bell Hill ..	500 0 0	..	500 0 0	..	500 0 0
Larry's Creek to Lyell Road, near Dee River (subsidy of £1 for £1) ..	..	423 10 0	423 10 0	..	423 10 0
Bridle-track to Upper Anatoki ..	705 16 0	..	705 16 0	16 12 0	722 8 0
Hatter's Terrace Road (£1 for £1 subsidy) ..	..	400 0 0	400 0 0	..	400 0 0
Deep Creek to Bell Hill (£1 for £1 subsidy) ..	176 10 0	189 0 0	365 10 0	..	365 10 0
Irishman's to Lake Brunner (£1 for £1 subsidy) ..	600 0 0	300 0 0	900 0 0	..	900 0 0
Improving roads and tracks, Collingwood to Takaka, Motueka, and Karamea ..	10,095 7 9	584 2 1	10,679 9 10	615 11 0	11,295 0 10
Ahaura to Amuri ..	2,504 19 7	..	2,504 19 7	..	2,504 19 7
MARLBOROUGH—					
Wakamarina Valley ..	11 0 0	..	11 0 0	..	11 0 0
Anikiwa Jetty ..	..	96 6 0	96 6 0	193 13 5	289 19 5
CANTERBURY—					
Road to open up Wilberforce Quartz-reefs ..	1,830 17 7	..	1,830 17 7	..	1,830 17 7
WESTLAND—					
Cedar Creek Road ..	3,000 0 0	..	3,000 0 0	1,500 0 0	4,500 0 0
Browning's Pass to Reefs (subsidy of £2 for £1) ..	2,207 10 8	..	2,207 10 8	..	2,207 10 8
Jackson's Bay to Cascade and Gorge River Districts ..	2,845 16 9	1,724 10 0	4,570 6 9	775 10 0	5,345 16 9
Grey Valley to Teremakau ..	..	..	..	900 0 0	900 0 0
OTAGO—					
Arthur's Point to Skipper's ..	7,547 14 1	786 15 0	8,284 9 1	3,263 5 0	11,547 14 1
Waikaia Bush Road ..	1,000 0 0	..	1,000 0 0	..	1,000 0 0
Arrowtown to Macetown Quartz-reefs and Motutapu Bush ..	9,270 6 8	..	9,270 6 8	..	9,270 6 8
Waitahuna Bridge, on account of reconstruction ..	750 0 0	..	750 0 0	..	750 0 0
SOUTHLAND—					
Tracks, Merivale District ..	500 0 0	..	500 0 0	..	500 0 0
Contingencies ..	10 3 0	255 2 1	265 5 1	..	265 5 1
Totals ..	140,971 6 7	7,015 0 10	147,986 7 5	25,168 0 5	173,154 7 10



TABLE NO. 6.

STATEMENT showing the EXPENDITURE for WATER-RACES on GOLDFIELDS out of Immigration and Public Works Loan to 31st March, 1889, and the LIABILITIES on that Date.

LOCALITY AND NAME OF RACE.	EXPENDITURE.				LIABILITIES.				Total Expenditure and Liabilities.
	Survey and Construction, 1870-89.	Subsidies, 1870-89.	Survey and Construction, 1887-89.	Subsidies, 1887-89.	Totals.	Authorities on Construction.	Authorities on Subsidies.	Contracts.	Totals.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
NORTH ISLAND.									
AUCKLAND PROVINCIAL DISTRICT—									
Thames .. .. .	80,708 19 3	..	..	..	80,708 19 3	..	..	..	80,708 19 3
MIDDLE ISLAND.									
WESTLAND PROVINCIAL DISTRICT—									
Subsidies—									
Hohouu .. .. .	3 7 0	1,958 12 1	..	..	1,958 19 1	..	..	..	1,958 19 1
Hibernian .. .. .	12 5 8	1,992 14 8	..	..	2,005 0 4	..	..	..	2,005 0 4
New River .. .. .	21 5 0	3,496 0 3	..	..	3,517 5 3	..	..	..	3,517 5 3
Kanieri .. .. .	1 5 6	10,310 18 4	..	..	10,312 3 10	..	..	..	10,312 3 10
Ross Sludge-channel ..	..	1,500 0 0	..	..	1,554 10 6	..	..	..	1,554 10 6
Kumara Sludge-channel No. 2	..	2,762 17 2	..	..	2,762 17 2	..	..	..	2,762 17 2
Government Works—									
Waimaea .. .. .	173,363 7 1	..	..	..	173,363 7 1	..	..	..	173,363 7 1
Mikouui .. .. .	25,644 9 6	..	..	..	25,644 9 6	..	..	..	25,644 9 6
NELSON PROVINCIAL DISTRICT—									
Government Works—									
Nelson Creek .. .. .	90,722 10 8	..	..	..	90,722 10 8	..	..	..	90,722 10 8
Napoleon Hill .. .. .	257 16 7	..	..	..	257 16 7	..	..	..	257 16 7
Argyle (Charleston) ..	14,701 15 3	..	..	..	14,701 15 3	..	..	..	14,701 15 3
Black's Point .. .. .	244 9 0	..	..	..	244 9 0	..	..	..	244 9 0
OTAGO PROVINCIAL DISTRICT—									
Subsidies—									
Arrow .. .. .	..	612 10 0	..	..	612 10 0	..	..	..	612 10 0
Beaumont and Tuapeka	4 6 2	640 0 0	..	..	644 6 2	..	..	..	644 6 2
Carrick Range .. .. .	..	9,249 13 1	..	..	9,249 13 1	..	..	..	9,249 13 1
Mount Pisgah .. .. .	..	200 0 0	..	..	200 0 0	..	..	..	200 0 0
Lawrence Drainage-channel	..	2,956 14 0	..	..	2,956 14 0	..	..	..	2,956 14 0
Ophir Tail-race .. .. .	..	1,150 0 0	..	..	1,150 0 0	..	..	..	1,150 0 0
Muddy Creek Channel ..	..	850 0 0	..	..	850 0 0	..	..	..	850 0 0
St. Bathans .. .. .	..	1,000 0 0	..	..	1,000 0 0	..	..	..	1,000 0 0
Maerewhenua .. .. .	1,065 0 0	..	..	..	1,065 0 0	..	..	..	1,065 0 0
Government Works—									
Mount Ida .. .. .	65,766 3 8	..	..	..	65,766 3 8	..	..	..	65,766 3 8
Waipori .. .. .	11,263 1 0	..	..	..	11,263 1 0	..	..	..	11,263 1 0
SOUTHLAND PROVINCIAL DISTRICT—									
Subsidy—									
Round Hill .. .. .	..	133 19 4	..	..	133 19 4	..	..	..	133 19 4
GENERAL—									
Increased water-supply ..	530 4 0	100 0 0	..	..	630 4 0	..	..	..	630 4 0
DEPARTMENTAL—									
Salaries, travelling, advertising, &c.	6,720 6 8	..	..	..	6,720 6 8	..	..	..	6,720 6 8
TOTALS .. .. .	390,321 12 9	938,910 18 11	..	..	6,429,287 2 2	..	..	..	429,287 2 2
SUMMARY.									
NORTH ISLAND .. .. .	80,708 19 3	..	..	..	80,708 19 3	..	..	..	80,708 19 3
MIDDLE ISLAND .. .. .	390,321 12 9	938,910 18 11	..	..	6,429,287 2 2	..	..	..	429,287 2 2
TOTALS .. .. .	471,030 12 0	938,910 18 11	..	..	6,509,976 1 5	..	..	..	509,996 1 5

TABLE No. 7.

STATEMENT showing EXPENDITURE on TELEGRAPHS out of Immigration and Public Works Loan to 31st March, 1889, and the LIABILITIES on that Date.

Line.	Miles of		Expenditure during Twelve Months ended 31st March, 1889.	Total Expenditure and Liabilities.	
	Poles.	Wire.			
Expenditure to the 31st March, 1888	..	..	£ s. d.	£ s. d.	
Telephone exchanges	..	..	6,293 8 5	561,963 1 9	
Hikutaia	..	4	3 11 0		
Te Kopuru-Kaipara Heads	31	35	1,304 2 11		
Marsden Point-Whangarei Heads	18	18	681 12 9		
Whirinata	$\frac{1}{4}$	$\frac{1}{2}$	8 5 3		
Hakaru and Pukekararo	9	9	397 8 9		
Wellsford	..	..	16 13 5		
Matata	$\frac{1}{4}$	$\frac{1}{2}$	36 19 6		
Otahuhu Bureau	$\frac{1}{2}$	9	81 17 9		
Pungarehu and Opunake	..	..	0 8 3		
Cape Egmont	..	..	0 5 6		
Okato	..	..	9 5 0		
Rohotu	..	..	1 12 0		
Oakara	..	..	16 9 3		
Norsewood	4	4	200 9 8		
Mokatoka	..	..	14 13 8		
Greatford and Halcombe	..	..	34 7 7		
Waitotara	..	..	187 18 11		
Kaiwara	..	$1\frac{1}{2}$	9 8 6		
Awatere	..	15	156 16 7		
Mahakipawa	$1\frac{1}{2}$	3	269 0 8		
Wairau Valley	..	15	213 8 5		
Owen River	..	13	95 1 2		
Inangahua Junction	..	11	184 4 10		
Cronadon	..	4	60 3 2		
Wakapuaka	..	$6\frac{1}{2}$	76 13 1		
Spring Grove	$\frac{1}{2}$	2	41 4 10		
Riwaka	..	$2\frac{1}{2}$	55 9 8		
Christchurch-New Brighton	3	5	129 10 4		
Oxford and Hororata	5	5	166 6 6		
Akaroa-Duvauchelle	..	6	109 3 1		
Pigeon Bay	$6\frac{1}{2}$	$6\frac{1}{2}$	273 16 2		
Kakanui	..	9	134 17 0		
Matakanui	7	8	17 8 10		
Abbotsford-Middlemarch	43	43	1,055 19 10		
Georgetown and Papakaia	$1\frac{1}{4}$	$2\frac{1}{2}$	73 13 1		
Nuggets Lighthouse	..	..	0 16 0		
			12,362 11 4		
Deduct value of stock previously purchased	..	..	315 6 11		
				12,047 4 5	
				574,010 6 2	
Liabilities on 31st March, 1889	..	..	..	3,591 0 0	
Total Expenditure and Liabilities	..	..	..	£577,601 6 2	

TABLE No. 8.

STATEMENT showing the EXPENDITURE on PUBLIC BUILDINGS out of Immigration and Public Works Loan to 31st March, 1889, and the LIABILITIES on that Date.

	Total Expenditure to 31st March, 1888.	Expenditure for Year ended 31st March, 1889.	Total Expenditure to 31st March, 1889.	Liabilities on Authorities, Contracts, &c., 31st March, 1889.	Total Expenditure and Liabilities.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Judicial	237,036 11 1	8,228 3 2	245,264 14 3	2,432 19 1	247,697 13 4
Postal and Telegraphic	141,420 10 3	81 17 5	141,502 7 8	837 1 2	142,339 8 10
Customs	4,749 2 2	..	4,749 2 2	..	4,749 2 2
Offices for Public Departments	158,616 19 6	14,588 4 0	173,205 3 6	5,595 0 9	178,800 4 3
Lunatic Asylums	266,851 4 6	10,242 2 6	277,093 7 0	13,445 12 10	290,538 19 10
School-buildings	818,734 6 9	778 14 6	819,513 1 3	..	819,513 1 3
Hospitals	32,651 4 2	673 5 0	33,324 9 2	1,143 5 0	34,467 14 2
Miscellaneous	9,838 14 10	..	9,838 14 10	..	9,838 14 10
Quarantine Stations	3,525 0 3	..	3,525 0 3	..	3,525 0 3
Survey	514 13 2	..	514 13 2	..	514 13 2
Parliament Buildings	13,962 7 1	..	13,962 7 1	..	13,962 7 1
Totals..	1,687,900 13 9	34,592 6 7	1,722,493 0 4	23,453 18 10	1,745,946 19 2

TABLE No. 9.

STATEMENT showing the EXPENDITURE on LIGHTHOUSES, HARBOUR WORKS, and HARBOUR DEFENCES out of Immigration and Public Works Loan to 31st March, 1889, and the LIABILITIES on that Date.

	Total Net Expenditure to 31st March, 1888.	Net Expenditure during 12 Months ended 31st March, 1889.	Total Expenditure to 31st March, 1889.	Liabilities on Authorities, Contracts, &c., to 31st March, 1889.	Total Expenditure and Liabilities.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
<b>LIGHTHOUSES.</b>					
Akaroa .. .. .	7,148 16 5	..	7,148 16 5	..	7,148 16 5
Brothers .. .. .	6,241 0 0	..	6,241 0 0	..	6,241 0 0
Cape Egmont .. .. .	3,354 6 4	..	3,354 6 4	..	3,354 6 4
Cape Foulwind .. .. .	6,955 9 1	..	6,955 9 1	..	6,955 9 1
Cape Maria van Diemen .. .. .	7,028 14 8	..	7,028 14 8	..	7,028 14 8
Cape Saunders .. .. .	6,066 6 3	..	6,066 6 3	..	6,066 6 3
Centre Island .. .. .	5,785 19 0	..	5,785 19 0	..	5,785 19 0
Cuvier Island .. .. .	3,349 16 6	2,504 2 1	5,853 18 7	350 0 0	6,203 18 7
French Pass Beacon .. .. .	668 15 8	..	668 15 8	..	668 15 8
French Pass .. .. .	1,427 17 5	..	1,427 17 5	..	1,427 17 5
Hokitika .. .. .	801 9 7	..	801 9 7	..	801 9 7
Jackson's Reef Beacon .. .. .	3,180 0 5	..	3,180 0 5	..	3,180 0 5
Kaipara .. .. .	5,571 8 0	..	5,571 8 0	..	5,571 8 0
Manukau Heads .. .. .	600 13 11	..	600 13 11	..	600 13 11
Marine Store .. .. .	499 11 3	..	499 11 3	..	499 11 3
Moeraki .. .. .	2,943 1 11	..	2,943 1 11	..	2,943 1 11
Mokohinau .. .. .	8,185 11 0	..	8,185 11 0	..	8,185 11 0
Portland Island .. .. .	6,554 14 5	..	6,554 14 5	..	6,554 14 5
Puysegur Point .. .. .	9,958 19 5	..	9,958 19 5	..	9,958 19 5
Stephen's Island .. .. .	70 18 1	..	70 18 1	..	70 18 1
Timaru .. .. .	1,116 17 3	..	1,116 17 3	..	1,116 17 3
Tiritiri Cable .. .. .	1,085 19 6	..	1,085 19 6	..	1,085 19 6
Tory Channel .. .. .	353 7 7	..	353 7 7	..	353 7 7
Waipapapa Point .. .. .	5,969 18 11	..	5,969 18 11	..	5,969 18 11
Miscellaneous, including expenditure on s.s. "Hinemoa" and "Stella" ..	20,590 5 9	..	20,590 5 9	..	20,590 5 9
<b>HARBOUR WORKS.</b>					
Pollock Wharf, Manukau .. .. .	150 0 0	..	150 0 0	..	150 0 0
Whangarei Heads Wharf .. .. .	600 0 0	..	600 0 0	..	600 0 0
Matakana Wharf .. .. .	556 10 3	..	556 10 3	..	556 10 3
Waiuku Channel .. .. .	357 11 6	..	357 11 6	..	357 11 6
Coromandel Wharf .. .. .	Cr. 0 10 0	..	Cr. 0 10 0	..	Cr. 0 10 0
Waitara Harbour .. .. .	2,000 0 0	..	2,000 0 0	..	2,000 0 0
Removing eel-weirs, Patea River ..	50 0 0	..	50 0 0	..	50 0 0
Napier Harbour .. .. .	328 0 0	..	328 0 0	..	328 0 0
Castlepoint Jetty .. .. .	51 14 1	..	51 14 1	..	51 14 1
Kaikoura Jetty and Harbour .. .. .	2,912 16 10	..	2,912 16 10	..	2,912 16 10
Pictou, removal of old wharf .. ..	94 0 0	..	94 0 0	..	94 0 0
Collingwood Harbour .. .. .	745 18 8	..	745 18 8	..	745 18 8
Karamea Wharf .. .. .	75 0 0	..	75 0 0	..	75 0 0
Westport Harbour .. .. .	14,110 18 7	..	14,110 18 7	..	14,110 18 7
Greymouth Harbour .. .. .	127,233 19 6	..	127,233 19 6	..	127,233 19 6
Hokitika Harbour .. .. .	56,500 0 0	..	56,500 0 0	..	56,500 0 0
Timaru Harbour .. .. .	100,000 0 0	..	100,000 0 0	..	100,000 0 0
Oamaru Harbour .. .. .	5,000 0 0	Cr. 5,000 0 0	..	..	..
Martin's Bay, removal of rock .. ..	5 0 0	..	5 0 0	..	5 0 0
Port Levy Jetty .. .. .	250 0 0	..	250 0 0	..	250 0 0
Toitois Jetty .. .. .	1,000 0 0	..	1,000 0 0	..	1,000 0 0
Balclutha Jetty .. .. .	250 0 0	..	250 0 0	..	250 0 0
Catlin's River, removal of rocks ..	277 19 0	..	277 19 0	..	277 19 0
Catlin's River Jetty .. .. .	1,015 7 7	..	1,015 7 7	..	1,015 7 7
Queenstown Beacon .. .. .	35 0 0	..	35 0 0	..	35 0 0
Queenstown Jetty .. .. .	297 8 0	..	297 8 0	..	297 8 0
Jackson's Bay Jetty .. .. .	32 6 4	..	32 6 4	..	32 6 4
Miscellaneous .. .. .	400 0 0	..	400 0 0	..	400 0 0
<b>HARBOUR DEFENCES.</b>					
Guns .. .. .	123,970 12 3	23,798 6 7	147,768 18 10	3,715 3 5	236,792 14 1
Ammunition .. .. .	19,556 5 3	4,975 1 4	24,531 6 7		
War Office stores .. .. .	9,291 13 5	120 10 0	9,412 3 5		
Torpedo boats and torpedoes .. ..	19,824 17 8	374 7 7	20,199 5 3		
Submarine mining stores .. .. .	12,928 0 0	2,096 4 5	15,024 4 5		
Miscellaneous .. .. .	12,426 18 5	3,714 13 9	16,141 12 2	1,800 18 10	178,586 18 4
Works in colony .. .. .	164,016 5 11	12,769 13 7	176,785 19 6		
Land for depôts and batteries .. ..	30,271 4 10	2,240 6 0	32,511 10 10	600 0 0	33,111 10 10
<b>Totals .. .. .</b>	<b>822,124 16 5</b>	<b>47,593 5 4</b>	<b>869,718 1 9</b>	<b>6,466 2 3</b>	<b>876,184 4 0</b>



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## APPENDICES TO THE PUBLIC WORKS STATEMENT, 1889.

## APPENDIX A.

AUDITED STATEMENT OF EXPENDITURE ON PUBLIC WORKS  
OUT OF THE IMMIGRATION AND PUBLIC WORKS LOANS  
FOR THE YEAR 1888-89.*Prepared in compliance with Section 8 of "The Public Works Act, 1882."*

SIR,—

Public Works Department, Wellington, 10th June, 1889.

In compliance with the 8th section of "The Public Works Act, 1882," I enclose a statement of the expenditure during the preceding financial year upon all Government works authorised by Parliament under "The Public Works Appropriation Act, 1888."

I have, &amp;c.,

EDWIN MITCHELSON,

Minister for Public Works.

The Controller and Auditor-General, Wellington.

## STATEMENT of NET EXPENDITURE on GOVERNMENT WORKS for the Year 1888-89 out of IMMIGRATION and PUBLIC WORKS LOANS.

Class.	Votes.	Summary.	Appropriation.	Expenditure.	Credits.	Net Expenditure.
		PUBLIC WORKS FUND.	£	£ s. d.	£ s. d.	£ s. d.
		PART I.				
III.	73-76	Railways .. .. .	8,400	4,761 14 11	..	4,761 14 11
IV.	77-83	Roads .. .. .	186,504	107,385 14 9	2,753 19 6	104,631 15 3
V.	84	Water-races .. .. .	755	54 10 6	..	54 10 6
VII.	86	Telegraph Extension .. .. .	20,000	13,266 18 8	1,219 14 3	12,047 4 5
VIII.	87-93	Public Buildings .. .. .	52,244	34,632 15 7	40 9 0	34,592 6 7
IX.	94, 95	Lighthouses and Harbour Defences .. .. .	60,291	54,499 3 3	1,905 17 11	52,593 5 4
XI.	97	Thermal Springs .. .. .	1,001	936 3 0	0 15 0	935 8 0
			329,195	215,537 0 8	5,920 15 8	209,616 5 0
		PART II.				
II.	100,101A	Railways .. .. .	75,240	45,876 13 6	20,362 17 5	25,513 16 1
III.	102	Roads .. .. .	1,900	1,919 4 1	21 11 0	1,897 13 1
			77,140	47,795 17 7	20,384 8 5	27,411 9 2
		PART III.				
II.	106-122	Railways .. .. .	323,260	285,613 5 10	43,811 13 9	241,801 12 1

W. A. THOMAS,  
Accountant.

Public Works Department, 31st May, 1889.

Examined and found correct.

JAMES EDWARD FITZGERALD,

Controller and Auditor-General.

11th June, 1889.

Vote No.	Name of Vote.	Appropriation.	Expenditure.	Credits.	Net Expenditure.	Expended in Excess of Appropriation.
		£	£ s. d.	£ s. d.	£ s. d.	£ s. d.
<b>PUBLIC WORKS FUND.</b>						
<b>PART I.</b>						
<b>Railways—</b>						
73	Wellington-Foxton .. ..	500	96 19 11	..	96 19 11	..
74	Springfield Branch .. ..	900	773 19 3	..	773 19 3	..
75	Lincoln-Little River .. ..	3,000	563 5 10	..	563 5 10	..
76	Surveys, New Lines of Railway ..	4,000	3,327 9 11	..	3,327 9 11	..
		8,400	4,761 14 11	..	4,761 14 11	..
<b>Roads—</b>						
77	Roads, Bridges, and Wharves North of Auckland	300	294 0 0	30 0 0	264 0 0	..
78	Main Roads .. ..	15,100	11,590 16 11	622 15 0	10,968 1 11	..
79	Miscellaneous Roads and Bridges ..	34,604	26,785 15 0	37 11 8	26,748 3 4	..
80	Grants-in-aid .. ..	25,500	28,481 1 7	1,568 16 0	26,912 5 7	1,412 5 7
81	Roads to open up Lands before Sale ..	50,000	22,383 5 0	429 2 4	21,954 2 8	..
82	Village Special Settlements .. ..	26,000	10,835 15 5	65 14 6	10,770 0 11	..
83	Roads on Goldfields .. ..	35,000	7,015 0 10	..	7,015 0 10	..
		186,504	107,385 14 9	2,753 19 6	104,631 15 3	1,412 5 7
<b>Water-races—</b>						
84	Water-races, Middle Island .. ..	755	54 10 6	..	54 10 6	..
<b>Telegraph Extension—</b>						
86	Telegraph Extension .. ..	20,000	13,266 18 8	1,219 14 3	12,047 4 5	..
<b>Public Buildings—</b>						
87	Parliamentary Buildings .. ..	76	..	..	..	..
88	General Departmental Offices .. ..	20,500	14,588 4 0	..	14,588 4 0	..
89	Judicial .. ..	12,930	8,251 2 0	22 18 10	8,228 3 2	..
90	Postal and Telegraph .. ..	2,000	94 8 11	12 11 6	81 17 5	..
91	Lunatic Asylums .. ..	13,900	10,242 6 2	0 3 8	10,242 2 6	..
92	Hospitals and Charitable Institutions ..	2,044	678 0 0	4 15 0	673 5 0	..
93	School-buildings .. ..	794	778 14 6	..	778 14 6	..
		52,244	34,632 15 7	40 9 0	34,592 6 7	..
<b>Lighthouses and Harbour Defences—</b>						
94	Lighthouses .. ..	3,750	2,504 2 1	..	2,504 2 1	..
95	Harbour Defences .. ..	56,541	51,995 1 2	1,905 17 11	50,089 3 3	..
		60,291	54,499 3 3	1,905 17 11	52,593 5 4	..
97	Thermal Springs .. ..	1,001	936 3 0	0 15 0	935 8 0	..
<b>PART II.</b>						
<b>Railways—</b>						
100	Marton-Te Awamutu .. ..	65,000	35,493 15 0	235 4 6	35,258 10 6	..
101	Permanent-way, Sleepers, and Rolling-stock	10,240	10,240 0 0	19,436 0 0	Cr. 9196 0 0	..
101A	Surveys .. ..	..	142 18 6	691 12 11	Cr. 548 14 5	..
		75,240	45,876 13 6	20,362 17 5	25,513 16 1	..
<b>Roads—</b>						
102	Roads .. ..	1,900	1,919 4 1	21 11 0	1,897 13 1	..
<b>PART III.</b>						
106	Helensville Northwards .. ..	15,000	12,165 18 9	256 6 3	11,909 12 6	..
107	Grahamstown-Te Aroha .. ..	5,000	2,653 1 9	50 0 0	2,603 1 9	..
108	Putaruru-Rotorua .. ..	20,000	15,753 5 11	..	15,753 5 11	..
109	Woodville-Palmerston .. ..	53,000	36,934 11 7	61 16 11	36,872 14 8	..
110	Mangamahoe-Woodville .. ..	24,000	17,635 6 5	149 6 5	17,486 0 0	..
111	Blenheim-Awatere .. ..	6,000	2,902 10 5	925 7 6	1,977 2 11	..
112	Greymouth-Hokitika .. ..	23,000	22,892 7 0	6 16 9	22,885 10 3	..
113	Mount Somers Branch .. ..	4,000	876 17 10	..	876 17 10	..
114	Livingstone Branch .. ..	46	11 6 0	..	11 6 0	..
115	Otago Central .. ..	40,000	41,354 15 4	6 0 6	41,348 14 10	1,348 14 10
116	Catlin's River Branch .. ..	2,000	2,933 13 5	0 8 6	2,933 4 11	933 4 11
117	Riversdale-Switzers .. ..	250	44 0 2	..	44 0 2	..
118	Wyndham-Fortrose .. ..	9,000	4,691 2 0	..	4,691 2 0	..
119	Seaward Bush .. ..	1,000	647 19 10	..	647 19 10	..
120	Additions to Open Lines .. ..	65,000	49,201 12 4	761 10 3	48,440 2 1	..
121	Permanent-way, Sleepers, and Rolling-stock	50,000	68,959 12 8	41,581 18 5	27,377 14 3	..
122	Surveys .. ..	5,964	5,955 4 5	12 2 3	5,943 2 2	..
		323,260	285,613 5 10	43,811 13 9	241,801 12 1	2,281 19 9



## APPENDIX B.

STATEMENT of all LIABILITIES in respect of the Services of the Public Works Department outstanding at the Close of the Financial Period ended 31st March, 1889, prepared in terms of Section 9, Subsection (2), of "The Public Revenues Act, 1882," and forwarded, as therein provided, to the Audit Office.

Class.	Votes.	Summary.								Total.	
PUBLIC WORKS FUND.											
PART I.											
III.	73-76	Railways .. .. .	5,793	4	3						
IV.	77-80	Roads .. .. .	31,826	11	2						
VIII.	87-92	Public Buildings .. .. .	23,453	18	10						
						61,073 14 3					
PART II.											
II.	100-101A	Railways .. .. .	27,296	4	1						
III.	102	Roads .. .. .	87	14	0						
						27,383 18 1					
PART III.											
II.	106-122	Railways .. .. .				174,394 2 10					
						262,851 15 2					
CONSOLIDATED FUND.											
XII.	56-57	Public Buildings and Government Gardens .. .. .				10,452 8 6					

Vote No.	Name of Vote.	Works under Contract.	Material, Wages, Salaries, &c.	Material from England.	Total.
PUBLIC WORKS FUND.					
Chargeable to the Unexpended Balance of Loans raised prior to the 31st March, 1886.		£ s. d.	£ s. d.	£ s. d.	£ s. d.
Railways—					
73	Wellington-Foxton .. .. .	..	304 10 6	..	304 10 6
74	Springfield Branch .. .. .	..	1 13 4	..	1 13 4
75	Lincoln-Little River .. .. .	4,397 3 0	403 13 8	..	4,800 16 8
76	Surveys, new Lines of Railway .. .. .	..	686 3 9	..	686 3 9
		4,397 3 0	1,396 1 3	..	5,793 4 3
Roads—					
77	Roads, Bridges, and Wharves, North of Auckland .. .. .	..	340 0 0	..	340 0 0
78	Main Roads .. .. .	..	7,379 17 10	..	7,379 17 10
79	Miscellaneous Roads and Bridges.. .. .	3,005 9 1	18,226 3 0	..	21,231 12 1
80	Grants-in-aid .. .. .	..	2,875 1 3	..	2,875 1 3
		3,005 9 1	28,821 2 1	..	31,826 11 2
Public Buildings—					
87	Parliamentary Buildings .. .. .	..	..	..	..
88	General Departmental Offices .. .. .	4,719 15 0	875 5 9	..	5,595 0 9
89	Judicial .. .. .	667 12 8	1,765 6 5	..	2,432 19 1
90	Postal and Telegraph .. .. .	832 18 8	4 2 6	..	837 1 2
91	Lunatic Asylums .. .. .	11,703 5 0	1,742 7 10	..	13,445 12 10
92	Hospitals and other Charitable Institutions .. .. .	..	1,143 5 0	..	1,143 5 0
		17,923 11 4	5,530 7 6	..	23,453 18 10
Services chargeable to the £1,000,000 raised under "The North Island Main Trunk Loan Act, 1882."					
Railways—					
100	Main Trunk Line, Marton-Te Awamutu .. .. .	25,034 19 10	2,061 4 3	..	27,096 4 1
101	Permanent-way, Sleepers, and Rolling-stock .. .. .	..	..	..	..
101A	Surveys .. .. .	..	200 0 0	..	200 0 0
		25,034 19 10	2,261 4 3	..	27,296 4 1
102	Roads to give access to Marton-Te Awamutu Railway .. .. .	..	87 14 0	..	87 14 0

STATEMENT of all LIABILITIES—continued.

Vote No.	Name of Vote.	Works under Contract.	Material, Wages, Salaries, &c.	Material from England.	Total.
	<i>Services chargeable to the £1,325,000 raised under "The New Zealand Loan Act, 1886."</i>	£ s. d.	£ s. d.	£ s. d.	£ s. d.
106	Helensville Northwards .. ..	2,729 6 5	1,086 7 0	..	3,815 13 5
107	Grahamstown—Te Aroha .. ..	..	350 3 8	..	350 3 8
108	Putaruru—Rotorua .. ..	..	4,684 7 2	..	4,684 7 2
109	Woodville—Palmerston .. ..	49,928 11 7	11,103 4 4	..	61,031 15 11
110	Mangamahoe—Woodville .. ..	9,296 3 8	2,399 15 4	..	11,695 19 0
111	Blenheim—Awatere .. ..	..	529 3 3	..	529 3 3
112	Greymouth—Hokitika .. ..	6,241 12 8	681 7 10	..	6,923 0 6
113	Mount Somers Branch .. ..	..	4,817 11 7	..	4,817 11 7
114	Livingstone Branch .. ..	..	13 0 0	..	13 0 0
115	Otago Central .. ..	15,765 9 0	7,013 4 4	..	22,778 13 4
116	Catlin's River Branch .. ..	..	83 14 8	..	83 14 8
117	Riversdale—Switzers .. ..	..	18 9 4	..	18 9 4
118	Wyndham—Fortrose .. ..	2,571 19 6	649 3 2	..	3,221 2 8
119	Seaward Bush .. ..	..	1 12 9	..	1 12 9
120	Additions to Open Lines.. ..	..	26,027 2 9	..	26,027 2 9
121	Permanent-way, Sleepers, and Rolling-stock	3,273 13 4	5,218 10 3	19,910 9 3	28,402 12 10
122	Surveys New Lines—				
	Miscellaneous expenses .. ..	..	..	..	..
		89,806 16 2	64,676 17 5	19,910 9 3	174,394 2 10
	CONSOLIDATED FUND.				
56	Public Buildings .. ..	4,940 4 7	5,418 5 8	..	10,358 10 3
57	Government Gardens .. ..	..	93 18 3	..	93 18 3
		4,940 4 7	5,512 3 11	..	10,452 8 6

Public Works Department, 30th April, 1889.

W. A. THOMAS,  
Accountant.

## APPENDIX C.

SCHEDULE of RAILWAY CONTRACTS CURRENT on the 1st April, 1888, and CONTRACTS ENTERED INTO by the Public Works Department during the Year ended 31st March, 1889.

Date of Contract.	Lines of Railway and Branches.	Name of Contract.	Particulars.	Length of Contract.	Length of Sidings in Contract.	Name of Contractor.	Contract to be completed.	Date Contract was completed.	Amount of Contract.	Remarks.
Jan. 18, 1889	Lincoln-Little River	Lake Ellesmere Drainage and Reclamation	..	M. ch. lk.	M. ch. lk.	J. Brightling ..	May 16, 1889	..	£ 4,917 3 0	Contract assigned to E. Porter and Co., 11th May, 1887.
Aug. 14, 1885	Marton-Te Awarunutu	Pororo-taroa Tunnel	Formation	1 34 0	..	J. J. O'Brien ..	Aug. 11, 1887	..	46,849 0 0	
Aug. 21, 1886	"	Hunterville	F. & p.l.	5 57 0	0 62 0	Jesse Coates ..	June 19, "	May 22, 1888	14,242 14 8	Contract assigned to Peter Dey.
March 10, 1887	"	Waiteti ..	F. & p.l.	8 53 0	0 25 0	J. and A. Anderson	Dec. 10, 1888	Mar. 30, 1889	57,858 17 0	Contract relet to Frank Dye.
March 26, "	Helensville Northwards	Kaipara ..	Formation	4 12 0	..	Hugh Fulton ..	Oct. 22, 1887	June 13, 1888	6,875 4 8	
March 9, 1888	"	Kaukapakapa	F. & p.l.	7 58 0	1 40 0	Wilkie and Wilson	March 5, 1889	Mar. 25, 1889	11,903 12 2	
Jan. 31, 1889	"	Kaukapakapa Station-buildings	..	..	..	Larkin and Elliot	March 25, "	..	177 0 0	
Nov. 15, 1887	Grahamstown-Te Aroha	Completion of Ohinemuri ..	Formation	6 15 0	..	T. Muirhill ..	July 11, 1888	Aug. 28, 1888	3,465 13 8	
March 10,	Putaruru-Rotorua ..	Ngatira ..	F., p.l., & buildings	8 0 0	0 50 0	Daniel Fallon	June 11, "	June 30, "	34,785 14 2	
Nov. 6, 1886	Woodville-Palmerston	Manawatu Gorge ..	Formation	4 32 0	..	Jones and Peters	Oct. 23, "	..	45,156 3 1	
Sept. 26, 1888	"	Pohangina Bridge ..	..	..	..	W. G. Bassett	April 24, 1890	..	12,447 0 0	
Feb. 8, 1889	"	Ashurst ..	F. & p.l.	7 52 15	0 50 0	P. Honeybone	March 22, "	..	14,484 1 6	
Aug. 23, 1886	Mangamahoe-Woodville	Wi Waka ..	F. & p.l.	6 15 0	0 50 0	M. Danaher ..	Aug. 23, 1888	Mar. 1, 1889	60,500 0 0	
June 1, 1888	Ditto ..	Awapurua Bridge ..	Formation & prot. w.	1 58 0	..	A. Peebles ..	May 29, 1889	..	3,936 12 0	
Jan. 21, 1889	"	Eketahuna Station-buildings	..	..	..	J. W. Cross ..	March 21, "	..	786 0 0	
Jan. 10, "	"	Painting Awapurua Bridge ..	..	..	..	W. Crutenden	March 15, "	..	311 4 0	
July 9, 1884	Blenheim-Avatore ..	Dashwood ..	Formation	3 4 0	..	Parker and Maddock	July 9, 1886	May 7, 1888	17,746 6 8	
May 25, 1887	Grey mouth-Hokitika	Teremakau Bridge	..	..	..	Scott Brothers	March 18, 1889	..	19,800 13 8	
Feb. 19, "	Otago Central	Taieri Gorge Bridges	..	..	..	J. and A. Anderson	Dec. 14, 1888	Dec. 11, 1888	12,879 10 6	
July 1, "	"	Barewood Bridges	Masonry	..	..	John Whittaker	June 24, "	Dec. 8, "	13,935 17 0	
Sept. 13, 1888	"	"	Super-structure	..	..	J. and A. Anderson	July 9, 1890	..	15,765 9 0	
May 10, 1887	Wyndham-Fortrose ..	Glenham	Tunnel & formation	1 66 0	..	A. Menzies ..	Feb. 3, 1888	..	13,840 19 6	

APPENDIX D.

SCHEDULE of SLEEPER CONTRACTS and DELIVERIES on 1st April, 1888, and CONTRACTS ENTERED INTO by the Public Works Department during the Year ended 31st March, 1889.

Date of Contract or Agreement.	Contractor's Name.	Address.	No. of Sleepers contracted for, and Class of Timber.	Rate per Sleeper.	Place of Delivery.	Rate per Month.	Date of Completion.	Total delivered to Date.	Remarks.
NORTH ISLAND.									
PALMERSTON-WOODVILLE DISTRICT.									
25 January, 1889	Nornan Campbell	Woodville ..	.. 10,000 totara*	s. d. 2 5	Woodville Railway-station ..	2,000 ..	25 June, 1889 ..	..	Portion of these delivered but not passed.
"	Henry Carlson	Danevirke ..	.. 5,000 totara*	2 3	Mangatua Railway-station ..	1,000 ..	" ..	..	
"	Alexander Bell	Halcombe ..	.. 12,000 totara*	2 0	3,000 at Halcombe 9,000 at Rata Siding on the Hunterville line	2,400 ..	" ..	..	
"	Managh and Co.	Halcombe ..	.. 1,000 totara*	1 11	Halcombe Station..	200 ..	" ..	..	
"	Henry Holland	Bunynthorpe ..	.. 2,000 totara*	2 1½	Bunynthorpe Station ..	400 ..	" ..	..	
MIDDLE ISLAND.									
WESTLAND DISTRICT.									
24 January, 1889	W. and J. Marris	Westport ..	.. 908 silver pine	2 3	Westport-Ngakawan Railway-line, between pegs 18m and 19m.	One-fifth each week	28 Feb., 1889 ..	..	In progress.

\* Sawn.

SCHEDULE of CONTRACTS for ROADS and MISCELLANEOUS WORKS CURRENT on the 1st April, 1888, and CONTRACTS ENTERED INTO by the Public Works Department during the Year ended 31st March, 1889.

APPENDIX E.

Date of Contract.	Line of Road or Work.	Name of Contract.	Name of Contractor.	Contract to be completed.	Date Contract was completed.	Amount of Contract.	Remarks.
Jan. 9, 1885	Miscellaneous Roads— Tauranga—East Cape	..	..	May 9, 1885	..	£ 450 0 0	Completed.
Feb. 17, 1888	..	Bridle-road, Hawai River to Maraenui ..	Te Tataua Ngatatori and another	Feb. 17, 1889	..	150 0 0	Completed.
Sept. 12, 1888	Opotiki—Whakatane ..	Repairs, &c., Opape-Torere Section	Wiremu Kingi ..	Jan. 7, 1889	..	440 0 0	Completed.
Sept. 12, 1888	..	Section 1, Waiohaki—Ohiva Road	J. R. Rushton ..	Jan. 7, 1889	..	130 0 0	Completed.
May 22, 1888	Mangare Bridge ..	Section 2, ..	J. and W. Parkinson ..	Nov. 19, 1888	Nov. 21, 1888	1,655 5 0	Completed.
July 8, 1887	Bridges on road, Nelson to Reefton	Repairs No. 2 ..	Larkin and Elliot ..	March 17, 1889	..	8,957 0 0	Completed.

## APPENDIX F.

SCHEDULE of CONTRACTS for ROADS and MISCELLANEOUS WORKS current on the 1st April, 1888, and CONTRACTS entered into by the MINISTER of LANDS during the Year ended 31st March, 1889.

Date of Contract.	Name of Contract.	Name of Contractor.	Contract to be completed.	Date when Contract was completed.	Amount of Contract.
AUCKLAND.					
17 Oct., 1887	Okaihū to Victoria, Nos. 1-5 ...	K. Otene ...	31 Jan., 1888	5 Aug., 1888	£ s. d. 150 0 0
17 Oct., "	" No. 6 ...	T. Pou ...	31 Jan., "	1 June, "	150 0 0
24 Oct., 1888	Avondale Bridges ...	G. Knight ...	31 Jan., 1889	"	112 0 0
1 March, "	Ahipara to Herekino, No. 150 ...	T. Richards ...	1 May, 1888	20 May, 1888	235 7 8
5 March, 1889	Mata to Kauroa ...	Gilmour and Co. ...	30 June, 1889	"	161 5 0
HAWKE'S BAY.					
11 Jan., 1887	Tautane Roads, No. 20 ...	W. Hood ...	31 May, 1887	1 May, 1888	694 10 0
20 Feb., 1888	" ...	J. McCarthy and Co. ...	31 May, 1888	1 June, "	550 4 0
1 Aug., "	Tologa Bay, Arakihi ...	G. Kilburne ...	15 Oct., "	15 Oct., "	90 15 0
3 Oct., "	Makaretu ...	G. Russell and Co. ...	6 Jan., 1889	31 Jan., 1889	188 0 0
TARANAKI.					
18 Nov., 1887	Roads east of Waitara, Nos. 129, 130 ...	R. Stanley ...	1 Mar., 1888	15 April, 1888	226 0 0
6 March, 1888	Waitara Bridge ...	Clare and Rundle ...	1 Sept., "	1 Feb., 1889	939 15 0
14 March, "	Eltham and Bush Roads, Nos. 140-144 ...	A. Weisaderstei ...	30 June, "	Jan., "	152 13 4
29 June, "	Ouri Bridge ...	F. Standing ...	1 Jan., 1889	15 Jan., "	149 15 0
19 Sept., "	East of Waitara, Nos. 150-152 ...	Scrivener and Co. ...	31 Dec., 1888	18 Jan., "	130 0 0
19 Feb., 1889	Kaupokonui Bridge ...	F. H. Cane ...	30 June, 1889	"	339 10 0
WELLINGTON.					
1 Sept., 1887	Mangatainoka ...	A. Reese ...	31 Mar., 1889	1 May, 1888	432 12 0
1 Sept., "	Tiraumea Bridge ...	C. B. Vine ...	30 June, "	"	1,956 13 10
Aug., 1888	Waitotara, Momahaki, No. 54 ...	G. Prince ...	Dec., 1888	10 Jan., 1889	94 0 0
Aug., "	" " No. 55 ...	J. Wilkie ...	Dec., "	10 Jan., "	120 11 6
Aug., "	" " No. 56 ...	J. Connell ...	Dec., "	10 Jan., "	66 0 0
Aug., "	Mangaone, No. 42 ...	T. P. Girdwood ...	Dec., "	1 Mar., "	263 17 8
20 July, "	Rangitumanu, No. 51 ...	Mortensen and Co. ...	Dec., "	"	188 18 0
6 June, "	Wanganui-Murimotu ...	J. Tyler ...	1 Oct., "	15 Oct., 1888	180 0 0
6 June, "	" ...	T. Bell ...	1 Oct., "	15 Oct., "	88 0 0
25 Aug., "	Mauriveville West, Nos. 50, 51 ...	Rasmussen and Co. ...	"	1 Feb., 1889	182 6 10
1 Oct., "	Makakahi, No. 157 ...	M. Guerin ...	30 Jan., 1889	"	107 17 7
1 Oct., "	Puketoi, Nos. 58, 59 ...	J. Vile and Co. ...	1 Mar., "	15 Mar., 1889	220 9 9
1 Oct., "	" Nos. 60, 61 ...	Rioux and McMahon ...	1 Mar., "	15 Mar., "	272 2 0
1 March, 1889	Mangaone-Tiraumea, No. 45 ...	Shadbolt and Co. ...	31 May, "	"	150 14 10
WESTLAND.					
28 Feb., 1889	Cook's River Flat ...	Peedy and Co. ...	31 Dec., 1889	"	906 18 0

## APPENDIX G.

SCHEDULE of CONTRACTS for ROADS on GOLDFIELDS current on the 1st April, 1888, and CONTRACTS entered into by the MINISTER of MINES during the Year ended 31st March, 1889.

Date of Contract.	Name of Road.	Name of Contract.	Name of Contractor.	Contract to be completed.	Date Contract was completed.	Amount of Contract.	Additions authorised.
Aug. 16, 1887	Motueka to Takaka ..	Completion of Nikaui	Gottherd Cederman	Feb. 9, 1888	April 20, 1888	£ s. d. 942 0 0	£ s. d. ..
June 1, "	Cascade River to Pyke Valley	Sections 5, 6, 7, and 8	Murdoch McPherson	Mar. 1, "	June 2, "	965 15 0	21 11 0
Sept. 1, "	Ditto ..	Sections 9, 10, 11, 12, and 13	Harris and Cuttance	July 1, "	Aug. 10, "	1,061 9 0	12 5 0
April 28, 1888	Collingwood to Karamea	Sections 1 and 2 ..	Williams and Harvey	April 28, "	Aug. 28, "	268 2 0	16 15 0
April 16, "	Mokihinui to Karamea	Part Section 26 ..	Stewart, Burke, and Blackburn	July 2, "	Oct. 3, "	225 17 0	3 5 0
June 5, "	Little Wanganui River	Ford to Ocean-beach	H. Dolphin and others	June 19, "	Oct. 2, "	72 2 3	..
Nov. 5, "	"	"	M. L. Jones ..	Feb. 24, 1889	..	107 12 0	..
Nov. 20, "	Arthur's Point to Skipper's	Completion ..	J. Maher and Sons	July 20, "	..	3,733 6 7	..

## APPENDIX H.

ANNUAL REPORT ON PUBLIC WORKS BY THE ASSISTANT  
ENGINEER-IN-CHIEF.

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

SIR,—

Public Works Office, 31st March, 1889.

I have the honour to submit the following report on the various works completed and in progress throughout the colony during the financial year ending the 31st March, 1889 :—

## RAILWAYS.

## ABSTRACT.

The following table shows the expenditure and liabilities on Government railways in New Zealand up to the 31st March, 1889 :—

Name of Railway.	Total Length of Railway or Section.	Open for Traffic.	Expenditure to 31st March, 1889.	Liabilities on 31st March, 1889.
	M. ch.	M. ch.	£ s. d.	£ s. d.
Kawakawa .. .. .	7 41	7 41	90,044 10 1	..
Whangarei-Kamo .. .. .	9 20	6 52	69,789 10 11	60 0 0
Helensville Northwards .. .. .	110 0	..	26,307 11 0	3,815 13 5
Kaipara-Waikato, with Branches .. .. .	172 36	151 1	1,379,435 19 7	845 19 4
Waikato-Thames .. .. .	62 55	30 55	204,473 6 10	823 2 11
Morrinsville-Rotorua .. .. .	73 36	41 60	234,702 18 6	4,971 15 11
Wellington-Napier and Palmerston North .. .. .	230 15	181 67	1,777,122 18 5	74,813 2 8
Wellington-Foxton .. .. .	..	..	41,894 11 6	304 10 6
Foxton-Waitara .. .. .	202 63	197 60	1,400,862 17 7	5,332 12 6
North Island Main Trunk .. .. .	216 0	44 34	308,488 15 6	27,296 4 1
Nelson-Roundell .. .. .	52 0	22 73	177,663 3 9	..
Greymouth-Nelson Creek .. .. .	7 69	7 69	215,304 19 10	..
Greymouth-Hokitika .. .. .	24 0	..	92,274 3 9	6,923 0 6
Westport-Ngakawau .. .. .	19 61	19 19	225,736 16 11	..
Picton-Hurunui—Picton-Awatere Section .. .. .	34 40	17 73	231,045 12 0	529 3 3
Picton-Hurunui—Red Post Section .. .. .	9 50	9 50	33,033 14 4	..
Hurunui-Waitaki, with Branches .. .. .	474 41	429 30	2,495,333 13 1	11,532 2 0
Oxford-Malvern .. .. .	11 44	11 44	59,210 11 0	..
Waitaki-Bluff, with Branches .. .. .	560 60	434 8	3,391,274 3 2	18,160 14 2
Otago Central—Chain Hills—Middlemarch .. .. .	39 57	..	452,703 4 1	22,778 13 4
Invercargill-Kingston, with Mararoa Branch .. .. .	117 4	97 44	318,630 11 11	208 0 0
Western Railways .. .. .	57 56	57 56	223,803 19 2	..
Preliminary surveys .. .. .	..	..	63,735 3 11	686 3 9
Miscellaneous .. .. .	..	..	10,336 19 11	..
Stock of permanent-way and rolling-stock on hand .. .. .	..	..	75,316 0 0	28,402 12 10
Value of permanent-way in hands of Railway Department .. .. .	..	..	25,000 0 0	..
Total .. .. .	2,493 28	1,769 36	13,629,525 16 9	207,483 11 2
PROVINCIAL GOVERNMENT LINES.				
Canterbury (lengths included above) .. .. .	..	..	731,759 0 0	..
Otago .. .. .	..	..	372,522 2 5	..
Grand total .. .. .	2,493 28	1,769 36	14,733,806 19 2	207,483 11 2

The only length of railway opened during the year is the section of the North Island Trunk line between Marton and Rangatira, 18 miles 16 chains in length, on which traffic was regularly commenced on the 2nd June, 1888. The Ngatira section, 8 miles, of the Thames Valley-Rotorua Railway, although completed, has not been opened for traffic. The following sections of railway are, however, nearly finished, and will be ready for opening shortly :—

Railway.	Section.	Length.
		M. ch.
Helensville Northwards .. .. .	Helensville to Kaukapakapa...	7 42
North Island Main Trunk .. .. .	Te Kuiti to Upper Mokau ..	8 53
Wellington-Woodville .. .. .	Mangamahoe to Eketahuna ..	6 15
Otago Central .. .. .	Chain Hills to Hindon ..	16 50

Attached to this report is a coloured diagram, showing the length of railway opened each year from the commencement of the public works.

## RAILWAY, HELENSVILLE NORTHWARDS.

*Kaipara Section.*—The contract for the formation of this portion of the line—4 miles 12 chains—was completed in June by one of the sureties, the original contractor having abandoned the work.

*Kaukapakapa Section.*—This contract includes the formation of the Helensville Station-yard, and a length of 3 miles 30 chains beyond the Kaipara section; also the platelaying on both sections. The work has just been satisfactorily finished.

*Station-buildings.*—The station-buildings at Kaukapakapa will be completed in a few days, and the line can then be opened for traffic to 43 miles 30 chains from Auckland.

*Surveys.*—The contract-survey has been made to 46 miles 36 chains, a little beyond the Makarau River. The works on this section are somewhat heavy, including a tunnel 638 yards long. A preliminary survey has been made to 67 miles 75 chains, about three miles from Welsford, and it is proposed to continue both the preliminary and detailed survey of the line, so as to get full and accurate information. The land-plans have been finished for the Kaukapakapa section and the ballast reserve at Kaukapakapa. A survey has been made and a design prepared for a wharf at Mount Rix at the junction of the Kaipara and Kaukapakapa Rivers. The construction of the wharf will save the navigation of the shallower waters of the Kaipara River, and admit of the whole traffic of the estuary being carried on at all states of the tide.

## KAIPARA-WAIKATO RAILWAY.

*Auckland-Penrose.*—The survey for a second line from Auckland to Penrose has been completed.

## WAIKATO-THAMES RAILWAY.

*Ohinemuri Section.*—The contract for the formation of this section was finished in August.

*Bridges.*—A contract has been got ready for the bridges and culverts on the Hikutaia and Ohinemuri sections,  $4\frac{1}{2}$  to 19 miles.

*Surveys.*—A survey has been made and land-plans prepared for a road to the Hikutaia Station, and a survey is in progress for a road to the Omaha ballast-quarry.

## THAMES VALLEY-ROTORUA RAILWAY.

*Ngatira Section.*—The contract for the formation, platelaying, and station-buildings on the Ngatira section of eight miles was finished in October.

*Surveys.*—The land-plans have been completed, also the survey of a branch road from Okoheriki Station, at 18 miles, to the Rotorua main road at a point about six miles from Ohinemutu.

## NORTH ISLAND MAIN TRUNK RAILWAY.

*Waiteti Section.*—Although very much hindered by slips, the works on this section have been completed well up to contract time. This brings the railway to the Upper Mokau, 34 miles 34 chains from Te Awamutu. The contract included the construction of an iron viaduct over the Waiteti Ravine. It has four spans of 106ft., and stands 118ft. above the creek-bed. The abutments and bases for piers are of concrete, and the piers and girders of malleable iron. All the ironwork was manufactured in the colony, and carried out in a very creditable manner.

*Pororo-tarao Tunnel.*—Steady progress was made during the year with the tunnel, but the works are considerably behindhand. The headings met on the 10th November exactly true to line and level, and  $16\frac{1}{2}$  chains of the tunnel has been lined.

*Hunterville Section.*—This section was finished in May and opened for traffic on the 2nd June. It extends to 18 miles 40 chains from Marton Junction Station. Cattle and sheep-pens have since been erected at Hunterville, a flag-station at Rata, and sheep-loading pens at Porewa.

*Roads.*—The various roads connected with the North Island Trunk Railway have been kept open during the year. The bush-felling on the sections between Kerioi and Ohakune has been widened, and considerable improvements made on the Inland Patea Road. The weekly mail from Napier now runs as far as Moawhanga.

*Surveys.*—All the surveys of the North Island Trunk Railway will be dealt with in a special report giving the result of the survey of the Taranaki route. The land-plans of the Pororo-tarao section are completed.

## WOODVILLE-PALMERSTON RAILWAY.

*Woodville-Gorge Section.*—This section was opened out in August to provide work for the unemployed of Napier and the Woodville district. Work has been carried on steadily, mostly by piece-work and petty contracts. A contract is now being prepared for the small tunnels, and will be advertised shortly.

*Manawatu Gorge Section.*—The works on this section, which are unusually heavy, have been proceeded with steadily during the year, and all the more difficult portions are finished. With the exception of trimming-up, the earthworks are complete. Of 45 chains of tunnelling, 30 chains are pierced. Of twenty-two bridges the masonry is practically finished on seventeen, and twenty-one out of twenty-five retaining-walls are in a similar condition. The bridge superstructures and other works are also well advanced. The steep mountain-slopes in the Gorge are standing as well as could be expected; but there has been considerable difficulty in getting firm foundations for bridges and retaining-walls. Clay-slate rock which on the surface looks hard and solid is frequently soft and friable when dug into. This has necessitated considerable additions to the concrete foundations.

*Pohangina Bridge.*—This bridge consists of eight iron-girder spans of 80ft. on cylindrical piers, with three 13ft. timber spans at each end. A contract was entered into for its construction in September, and good progress is being made with the work.



*Ashurst Section.*—The formation and platelaying from Terrace-end Junction, Foxton-New Plymouth Railway, to the Pohangina Bridge, and the small piece of formation between the bridge and the Gorge section, is now under contract, and work has been commenced. The Terrace-end station has been rearranged, and a second line of rails laid to Palmerston North.

#### WELLINGTON-WOODVILLE RAILWAY.

*Awapurua Bridge.*—A difficulty in settling with the Maoris for some land required has delayed the completion of the contract for protective works and stream-diversion at this bridge. It is expected, however, that a settlement will be come to immediately, when the works will be pushed on. The contract for painting the bridge is nearly finished.

*Wiwaka Section.*—This section is now practically completed, and traffic to Eketahuna, 88 miles from Wellington, will be commenced early next month. Notwithstanding bad weather and many other difficulties, the contractor pushed the work on vigorously, and has carried out the contract in a satisfactory manner. At Eketahuna the station-buildings are nearly finished, the contract including sheep- and cattle-yards. A water-supply also is being provided.

*Extension to Island Bay.*—A reconnaissance-survey of the proposed extension to Te Aro and Island Bay has been made, several routes having been examined.

#### PICTON-AWATERE RAILWAY.

*Dashwood Section.*—The formation of this section was completed by the contractors in May last. There are now 8 miles of formation finished from Blenheim southwards.

#### WESTPORT-NGAKAWAU RAILWAY.

*Westport Coal-staiths.*—To prevent large stones rolling into the river, and to facilitate deepening the channel, a row of piles is being driven in front of the coal-staiths. The contract should be finished at an early date.

*Westport-Ngakawau Railway Extension.*—The formation of an extension of 37 chains is nearly completed. The work has been carried out under petty contracts, and will enable a junction to be effected with the Ngakawau Coal Company's railway.

*Survey.*—A survey has been made and plans prepared for the further extension of the line to the Mokihinui River, where another company has a coal-railway. The extension will be 7 miles 11 chains in length. The line is comparatively easy, the only work of importance being the bridge over the Ngakawau River.

#### GREYMOUTH-BRUNNERTON RAILWAY.

New sidings to the extent of 103 chains have been provided at Greymouth, and the water-supply for the hydraulic cranes completed. This enables the cranes and new wharf to be used by the Railway Department. The quay-wall along the river has been raised to protect the railway and Town of Greymouth in high floods.

#### GREYMOUTH-HOKITIKA RAILWAY.

*New River Section.*—Tenders for the completion of the line and platelaying between Greymouth and the Teremakau River were received in April, but consideration of them was deferred.

*Teremakau Bridge.*—Three cylinder-piers, one concrete abutment, and three spans of iron superstructure are erected. The contractors have the rest of the material on the ground, and expect to finish the bridge in July or August next.

*Arahura Protective Works.*—These works were completed in September, at a cost of £8,000, and have proved a success. They are also an effectual protection to a large area of property besides the railway lands.

*Minor Works.*—The filling-in of the tidal creek at Greymouth, fencing near the Teremakau River, and some small additions to the Hokitika Wharf, were duly carried out.

*Surveys.*—The land-plan survey of the railway has been finished.

#### HURUNUI-WAITAKI RAILWAY AND BRANCHES.

*Springfield Branch.*—The contract for the Hawkins Bridge was satisfactorily completed in June, and handed over to the East Malvern Road Board.

*Mount Somers Branch.*—The bridges and platelaying on the extension of this branch to Springfield are now in hand by the Working Railways Department for this department.

#### WAITAKI-BLUFF RAILWAY AND BRANCHES.

*Dunedin Station Overbridge.*—The south-eastern approach is not quite finished, the prisoners who were excavating material for the filling having been withdrawn to more urgent work.

*Catlin's River Branch.*—During the winter about sixty of the "unemployed" were engaged on the formation as far as 12½ miles, and some of the men who had settled on land in the neighbourhood were kept on for a few months longer. Since then the works have been closed.

*Riversdale-Switzers Branch.*—The tenders for the Mataura Bridge received in April were postponed pending a decision as to further works to be undertaken on this branch.

*Edendale-Toitois Branch.*—Notwithstanding that he was frequently urged on, the contractor for the Glenham section is very much behind with his contract. It is expected, however, that he will finish in a few weeks, and tenders will then be invited for laying the permanent-way.

*Surveys.*—The land-plans for all the railways have now been finished, with the following exceptions, which will be undertaken as opportunity occurs: viz., Waiareka Junction to Ngapara, 15 miles; Dunedin to Port Chalmers, 9 miles; Athol to Kingston, 19 miles; and Winton to Lumsden, 30 miles. The latter is now under survey by contract, and the plans for 17 miles are ready. Surveys for a considerable number of Proclamations taking additional land were made during the year, also the survey of a short extension of the Catlin's River Branch.

## OTAGO CENTRAL RAILWAY.

*General.*—The rails are now laid on this line to Barewood Creek Bridge, 21½ miles from Wingatui Junction; and so soon as the superstructure of each bridge is completed the rails are laid to the next one. The superstructure of all the bridges to and including the Sutton, at 33 miles, is under contract, the time for finishing them being July, 1890. The platelaying must necessarily be finished as soon as the bridges, and the formation of the Middlemarch section should also be done by that time, so the platelaying can go right on. We may therefore calculate on having this long-delayed work finished and the line opened to Middlemarch about November, 1890. In the meantime excursion-trains are occasionally run to the Deep Stream, twenty miles up, and mining-plant and wool are frequently carried by the ballast-trains for the convenience of miners and settlers.

*Wingatui to Sutton: Formation and Platelaying.*—Work has been given to the “unemployed” of Dunedin on this section in flattening slopes, making a road to Hindon, preparing the formation for the permanent-way, and breaking stone for ballast. Most of the works in the completion of the formation and ballasting have been done by this class of labour.

*Silver Peaks Bridges Masonry Contract.*—This work, reported as nearly finished at the end of last year, was duly completed in a satisfactory manner by the end of May.

*Barewood Bridges Masonry Contract.*—This contract included the masonry of nine bridges, ending with that over the Sutton Stream, thirty-three miles from the commencement of the line. The works were satisfactorily completed in December. All the masonry on this railway is of particularly good quality. It is built of rough schist rock, found in large blocks on the ground.

*Taieri Gorge Bridges Superstructure.*—This contract included the manufacture and erection of the iron superstructure of the eight bridges in the Mount Hyde and Silver Peaks masonry contracts. The work was finished in December, a little before contract time, and otherwise in a satisfactory manner.

*Barewood Bridges Iron Piers and Superstructure Contract.*—This contract was entered into in September last. The first shipment of materials has arrived, and is being rapidly worked up. A commencement is expected to be made with the first bridge—that over Barewood Creek—in two or three weeks.

*Middlemarch Section.*—The formation of this section has been in progress by the “unemployed” since September last, an average of sixty-six men having been engaged. The works are light, so good progress has been made. The formation and culverts on 2½ miles are completed. A few small bridges and the station-buildings on this section will be let by contract, but the formation will probably require to be kept for the “unemployed.”

*Middlemarch to Ida Valley.*—As it is intended to deal this session with the question of extending the Otago Central Railway beyond Middlemarch, detailed drawings, specifications, and estimates are in preparation for the length between Middlemarch and Ida Valley, 58½ miles. The drawings and specifications will be in a form to enable tenders to be called for at once. They will be ready in time for the session.

## SLEEPERS.

Two contracts, for the supply of 9,000 sleepers for the Mangamahoe-Eketahuna section, have been completed; and 30,000 sleepers for the Woodville-Palmerston section are now being supplied, under five contracts.

## HARBOURS.

## WESTPORT.

*General.*—The Government resumed control of the harbour and harbour-works of Westport at the beginning of the year. The works are carried out under the supervision of this department, and a local Board of Government officials fulfil the legal requirements of the Westport Harbour Board Act.

*Breakwaters.*—The west breakwater, which was in progress under the late Board, has been extended 707ft. during the year. 149,190 tons of stone have been deposited from a tip-head without staging, the average cost being 3s. 1d. This gives £32 per lineal foot as the cost of the breakwater.

The east breakwater was commenced in June last. As the shore end is of a small section, and composed of light material, it has progressed rapidly, 2,425ft. having been done already. 81,016 tons of stone have been deposited from a tip-head, at an average cost of 3s. The wall thus costs £5 per lineal foot.

Up to the 14th ultimo the work was done by day-labour, and since then by contract. The rate of progress by the contractors has been slower than before, owing to disputes between them and their workmen; but this will be rectified before long.

*Subsidiary Works.*—A considerable number of subsidiary works have been carried out in connection with the harbour-works proper, some of which have been finished since the Government resumed control—for instance, the railway to the east breakwater, the bridge over the Buller, protective works at the Buller overflow, and additions to plant and rolling-stock. The Buller Bridge is for both road and railway traffic. It consists of 80ft. spans of iron lattice-girders on piers of ironbark piles. A survey has also been made of the river with the view of determining what inside works are required so as to accommodate the larger class of vessels that can now come over the bar.

*Effect of Works.*—The breakwaters are already having a beneficial effect on the bar, and I have no doubt Westport will become a safe and commodious shipping-port when the works are finished.

The following table shows the depths on the Buller bar for each month of the year :—

Month.						Mean Depths on Bar at High-water, taking Averages of Three Days at each Spring- and Neap-tide.	
						Spring-tides.	Neap-tides.
1888.						Ft.	Ft.
April	...	...	...	...	...	19 $\frac{1}{4}$	16 $\frac{3}{4}$
May	...	...	...	...	...	18	17 $\frac{3}{4}$
June	...	...	...	...	...	18 $\frac{1}{2}$	16 $\frac{3}{4}$
July	...	...	...	...	...	19 $\frac{1}{4}$	17 $\frac{3}{4}$
August	...	...	...	...	...	19	16 $\frac{1}{2}$
September	...	...	...	...	...	18 $\frac{1}{2}$	15 $\frac{1}{2}$
October	...	...	...	...	...	20 $\frac{1}{2}$	18 $\frac{1}{2}$
November	...	...	...	...	...	20 $\frac{1}{2}$	18
December	...	...	...	...	...	19 $\frac{3}{4}$	18 $\frac{1}{2}$
1889.							
January	...	...	...	...	...	20 $\frac{1}{2}$	19 $\frac{1}{4}$
February	...	...	...	...	...	21 $\frac{1}{2}$	19 $\frac{3}{4}$
March	...	...	...	...	...	21	18 $\frac{3}{4}$
Means for the year						19 $\frac{2}{3}$	17 $\frac{3}{4}$

The difference about corresponds to the difference of rise of tide at springs and neaps.

#### GREYMOUTH.

*General.*—The control of this port and the works connected with it was resumed by Government at the beginning of the year, and the business is carried on in the same way as at Westport.

*Breakwaters.*—The work of extending the breakwaters is being done by contract. The following statement shows the result of the year's operations :—

	North Breakwater.	South Breakwater.
Advance made, lineal feet	140	150
Stone deposited from staging, tons	21,500	40,084
Cost of stone per ton	4s. 8d.	3s. 1d.
Cost of breakwater per foot, including staging	£42	£49

The progress of the north breakwater was retarded for several months by the wreck of the s.s. "Gerda." The steamer was driven ashore on the wall, and broke down 275ft. of the staging. Although now exposed to the full force of the ocean, the breakwaters are standing quite firmly, and the slope taken by the stone is no flatter than was expected.

As at present fixed the south breakwater will extend 480ft. further to sea than the north one. It is difficult to determine what this overlap should remain at. It can only be done by experiment. The greater the overlap the easier the navigation of the port, but if the overlap is increased beyond a certain limit the depth and direction of the channel will be prejudicially affected. The overlap as now fixed is the result of careful inquiries and consideration, but it is subject to modification with further experience. If, after a time, it is found that the channel remains good, the south breakwater can be extended a little to facilitate the navigation; but if, on the other hand, the channel shows symptoms of changing, the north breakwater must be brought up till the equilibrium is re-established.

*River Training-wall.*—The upper Coal-Creek section of this wall has been extended 528ft. : 23,748 tons of stone were used, costing 2s. 10d. per ton, which makes the average cost of the wall £6 8s. per lineal foot. A commencement has been made with the middle section of the training-wall. 1,054 tons of stone have been deposited in 90ft. of wall at a cost of 2s. 7d. a ton, or £1 10s. per lineal foot of training-wall. In September the lower training-bank was finished, 400ft. having been made during the year with 18,000 tons of stone, costing 2s. 11d. per ton, or £6 7s. per lineal foot.

After the present contracts for the breakwaters are completed the only important work required for the present in the whole harbour is the extension of the training-wall. It is necessary to continue it piecemeal, otherwise the berthage at the wharves will be subject to encroachment by shingle-banks.

*Minor Works.*—Several small items of works in connection with the harbour, such as landing-steps and moorings, have been executed during the year.

*Effect of Works.*—The beneficial effects of the harbour-works on the Grey River entrance are so well known that it is unnecessary to comment on them. They are unanimously admitted to be a complete success.

The following table shows the depths on the Grey bar for each month of the year :—

Month.						Mean Depths on Bar at High-water, taking Averages of Three Days at each Spring- and Neap-tide.	
						Spring-tides.	Neap-tides.
1888.						Ft.	Ft.
April	...	...	...	...	...	19 $\frac{3}{4}$	18 $\frac{3}{4}$
May	...	...	...	...	...	17 $\frac{1}{4}$	16
June	...	...	...	...	...	18 $\frac{3}{4}$	18 $\frac{1}{4}$
July	...	...	...	...	...	20	19 $\frac{1}{2}$
August	...	...	...	...	...	19	18 $\frac{1}{2}$
September	...	...	...	...	...	18 $\frac{1}{4}$	17 $\frac{1}{4}$
October	...	...	...	...	...	23	18 $\frac{1}{4}$
November	...	...	...	...	...	22 $\frac{1}{4}$	18 $\frac{1}{4}$
December	...	...	...	...	...	20 $\frac{1}{4}$	19 $\frac{1}{4}$
1889.							
January	...	...	...	...	...	19 $\frac{1}{2}$	20
February	...	...	...	...	...	20 $\frac{1}{4}$	19
March	...	...	...	...	...	22	21 $\frac{3}{4}$
Means for the year						20	18 $\frac{3}{4}$

The difference of level of high-water at springs and neaps is 2 $\frac{1}{2}$ ft.

#### MOKIHINUI.

A contract was entered into in February for deepening the inner bar of the Mokihinui River. This will facilitate the passage of vessels to the wharves, which are situated about a mile up the river. The work is well in hand, and should be finished in June.

#### ROADS AND BRIDGES.

The general administration of roads and bridges passed into the control of the Survey Department in January; but, as the Public Works Department had charge of them till then, and as it has still charge of certain works, it is considered desirable to include them in this year's report.

#### AUCKLAND DISTRICT.

*Mangare Bridge.*—Work was commenced under the Repairs Contract No. 2 in May, and finished in November.

*Panmure Swing-bridge.*—Some small repairs have been executed during the year.

*Road on West Side of Waipa.*—The survey having been finished early in the year, the Karamu Contract, 3 miles 16 chains, was let and the works completed in January.

*Road from Kawa Railway-station to Waotu.*—A bridge has been built over the Waikato, and a survey made with a view of improving the approaches.

*Otorohanga-Te Kuiti Tracks.*—These small tracks were finished in June.

*Katikati-Te Aroha Track.*—This has been kept in fair order for horse-traffic, a few slight repairs only being necessary.

*Oxford-Rotorua Road.*—Nothing more than the usual maintenance was done.

*Stone-breaking.*—Work for the unemployed of Auckland has been found in stone-breaking, and up till the end of December eighty men were on an average engaged at this work.

*General.*—Reports were made on the Waipa-Kawhia Road, and the Mangakowhai and Mangapu Bridges.

#### BAY OF PLENTY AND NAPIER.

*Tauranga-East Cape.*—Improvements have been continued on the various sections of this road and its branches, and all were maintained in a good state for traffic.

*Opotiki-Ormond Road.*—The maintenance of the 44 miles from Opotiki to Motu has been attended to, and the road kept in a fair condition for horse-traffic.

*Tauranga-Napier Road.*—This road has been well maintained, and more than the usual amount of improvements undertaken. Contracts are in progress for the renewal of the Mangarewa and Ohaupora Bridges, with substantial timber superstructures on masonry abutments, while contracts for the new Parsons's and Catten's bridges were completed. In the Mangarewa Gorge some two miles of the road has been cleared of rock, which was used in improving other portions. On the southern section a large number of culverts have been put in or renewed, and embankments protected.

*Branch Road to Rotomahana.*—The contractor has made very little progress with the work on the 4 miles between Pariheru and Rotomahana.

#### WANGANUI DISTRICT.

*Tiraumea Bridge.*—This bridge, after considerable delay, is now approaching completion.

*Manawatu Gorge Road.*—Beyond the removal of slips and gravelling repairs there has been but little to do on the road. It was maintained in good order for the heavy traffic caused by the railway-construction.

## MARLBOROUGH AND NELSON DISTRICT.

*Clarence Bridge.*—The bridge was screwed up and repaired in September.

*Wairau Bridge.*—This bridge has also been screwed up and made good.

*Pelorus and Queen Charlotte Sounds.*—The unfinished portions of the tracks from Torea to Kenepuru, and from Kenepuru to Manaroa, are in progress for the Lands Department, the cost being met from accrued "deferred-payment thirds." The Anakiwa Jetty has been built for the Mines Department, to accommodate the traffic to the Mahakipawa Goldfield; and a track 4ft. wide is being constructed between Mahakipawa and the main road, near Havelock, so that stock may be driven from the Grove and Mahakipawa to Havelock.

*Maungatapu Track.*—The track over the Maungatapu Range has been maintained for the Telegraph Department, the Tinline Bridge receiving general repairs.

*Cable Bay Road.*—To avoid crossing the river and mud-flat, the road, 2 miles 72 chains long, between the Wakapuaka Road and the Cable Bay telegraph-station was made last winter, the surplus labour of Nelson being utilised for the work.

*Nelson, Tophouse, and Tarndale Road.*—Between Belgrove and Tophouse the road has been maintained, and in the Wairau Gorge sufficient repairs were executed to enable horse-traffic to pass through.

*Nelson-Lyell Road.*—Some repairs have been done on the section of the old main road between Tophouse and the Hope Junction. The present road was maintained from the Motupiko to the Hope Junction, and protective works were executed at the eastern approach of the Owen Bridge.

*Owen Valley Road.*—So little money was available for the maintenance of this road that it was not possible to do more than keep it open for traffic.

*Matakitaki Horse-bridge.*—The eastern approach connecting the bridge with the road has been finished; an additional span of 60ft. at the western end, rendered necessary by the threatened encroachment of the river, was satisfactorily completed, and the bridge painted.

*Motupiko Bridge.*—To prevent the river from overflowing, the western approach was raised, the settlers in the neighbourhood contributing to the work. This bridge also has been painted.

*Takaka Bridge.*—The Takaka Bridge has been screwed up and otherwise made good.

*Surveys.*—A survey has been made of a road from Kaituna to Tuamarina, 5 miles 3 chains; also of a track, 5 miles 56 chains in length, between Watamonga and Port Underwood, to establish communication between the latter place and Queen Charlotte Sound.

## WESTLAND DISTRICT.

*Buller Road.*—The slips which came down early in the year were cleared away, and the road opened for light traffic in July. The bridge at Hawk's Crag has been repaired, and a contract entered into for replacing the Ohika-iti bridge.

*Lyell Bridge.*—Difficulties with the foundations of one of the piers, and a flood in November, have delayed the completion of the bridge. The ironwork for the superstructure has been prepared in the contractors' shops in Christchurch and is now being sent to the site, the last pier is well forward, and the approaches practically finished; so a better rate of progress may now be expected.

*Inangahua Bridge.*—This bridge at the Buller junction has been maintained.

## HOKITIKA—CHRISTCHURCH ROAD.

*Maintenance.*—There were a considerable number of slips on the Westland section, but nothing of any consequence on the Canterbury side. The road has been maintained in a fair state of repair.

*Taipo Bridge.*—Some additional protective works have been put in at the Taipo Bridge.

*Bealey Deviation.*—At present the road is in the bed of the Bealey River, and this diversion is on the solid ground out of the reach of floods. About thirty of the "unemployed" have been on the work, and fair progress is being made.

*Harley's Creek Deviation.*—A survey of this proposed deviation was executed.

## CANTERBURY DISTRICT.

*Kaikoura-Clarence Road.*—The formation has been continued during the year, and in a few weeks travellers will be able to drive right through from Picton to Kaikoura.

*Waiau-Hammer Springs Road.*—A road has been formed and metalled to the hot springs on the Hammer Plains, a distance of  $4\frac{1}{2}$  miles.

*High Peaks Road.*—This road starts about  $\frac{1}{3}$  miles beyond the Whitecliffs Railway terminus, and extends towards the Rakaia Gorge. Manganese deposits exist some 3 miles from the starting-point, and the road was made passable so far; the formation is in hand for  $1\frac{1}{2}$  miles further.

*Relief-works.*—Besides the above road-works the only work provided for the "unemployed" of Christchurch has been the quarrying of stone at Kaituna for railway protective works.

## OTAGO DISTRICT.

*Haast Pass Track.*—A small party was engaged during part of the year in maintaining the 56 miles from the Pass to the mouth of the Haast River.

*Hindon Road.*—A survey and plan have been executed of the road,  $2\frac{3}{4}$  miles long, connecting the Otago Central Railway with the main road to the Hindon settlement and quartz reefs. The work done was confined to formation and drainage, but it would be desirable to put the metalling in hand shortly, as the settlers are using the road a good deal, and there is a heavy traffic in machinery for the reefs.

*Tomahawk Road.*—The road from the Queen's Drive, Musselburgh, to the main road near the Tomahawk Lagoon is being formed and metalled. It is  $1\frac{1}{2}$  miles in length.

*Portobello Beach Road.*—The widening of this road to 30ft. for about  $1\frac{1}{4}$  miles is in progress.

*General.*—As in the case of Canterbury, the three last-mentioned road-works in Otago were done by "unemployed" labour.

#### PUBLIC BUILDINGS.

For convenience, the works done during the whole year are included in this report, although from the 1st January, 1889, the public buildings have been under the control of the Defence Department.

##### AUCKLAND DISTRICT.

*Mount Eden Gaol.*—The ground floor was completed ready for occupation in November. Since then the second concrete floor has been finished, and the walls are well in hand up to the level of the roof.

*Whau Lunatic Asylum.*—After the contract for the additions to the Asylum was finished, the fittings were undertaken, and the patients are now occupying the new wing.

*Government House.*—The ceilings have been renewed and the house painted and repaired. The repairs to the Admiralty House, rendered necessary by the fire in December, were also carried out.

*Departmental Buildings, Auckland.*—The contract is still in progress under the charge of Mr. Mahoney. It is expected that the building will practically be finished on the expiry of the contract-time, in July next.

*Courthouses.*—A contract has been let for a new Courthouse at Onehunga, and the present Courthouse fenced in. Repairs have been executed to the Courthouses at Hamilton, Coromandel, and the Thames; also to the District Court at Auckland.

*Police-stations.*—A new station was erected at Mercer, and repairs and improvements carried out at Auckland and Hamilton.

##### WANGANUI DISTRICT.

*Post-office, Palmerston North.*—The new post-office will probably be finished by the end of May.

*Lock-up, Waipiro.*—This building is now in course of erection.

*General.*—Various minor repairs to the buildings throughout the district were done, and the maintenance attended to.

##### WELLINGTON DISTRICT.

*Mount Cook Gaol.*—Considering the small number of prisoners available, fair progress has been made. All labour was concentrated on the southern wing, and, with the exception of the temporary end-wall, all the brickwork is finished. With a view of reducing the cost, the designs for the tower were reconsidered, a modified plan being decided upon and carried out.

*Government Printing Office.*—The necessary fittings were supplied under three contracts, and the building is now occupied. The boundary-fence, a fire-prevention service, and additional stairs have also been provided, and the circular stairs cased in.

*General Post Office.*—The contractor has made such good progress with the restoration of this building that in all likelihood it will be completed early in May. Two of the rooms are already finished and occupied by the Superintendent of Telegraphs.

*Post-office, Masterton.*—The staff of the post and telegraph offices having been amalgamated, the office-accommodation was rearranged, the interior at the same time being renovated and papered.

*Parliamentary Buildings.*—The exterior and roofs are now being painted and the fences repaired. To accommodate the additional dynamo required to run the electric light in the Legislative Council, the roof of the engine-shed has been raised, and extra shafting provided.

*Departmental Buildings, Wellington.*—After a thorough overhaul and repair, the outside and roof are being painted: the work is nearly finished. For the better protection of the building in the event of fire, folding-doors have been put at the north and south ends of the corridors to lessen the draught, and partitions erected in the roof; also trap-doors and ladders outside.

*Government House.*—A contract was entered into for painting the outside and roof, and another prepared for renovating the interior in readiness for the arrival of His Excellency the Governor.

*Police-stations.*—At Martinborough a contract for a new station is in progress. Two additional rooms were built at Eketahuna; the watch-house at Masterton, the station at the Upper Hutti, and the office and lock-up at Featherston re-roofed with galvanised iron, the latter being painted inside and out at the same time.

*Hospital, Wellington.*—The distempering, postponed when the additions contract was in progress on account of the dampness of the walls, has since been done.

*Mount View Asylum.*—The hot-water service being in a very unsatisfactory state, it was taken out, and a new service laid.

*Supreme Court.*—Alterations and improvements in the drainage have been effected.

*General.*—The lithographic machinery for the Survey Department was fitted up in the old Government Printing Office; some minor alterations and repairs to the quarantine-station, Soames's Island, carried out; four water-meters imported and fixed at the Departmental Buildings, Printing Office, Railway Station, and Government Insurance Office; and the Government Buildings generally repaired and maintained.

## NELSON DISTRICT.

*General.*—Small repairs have been executed to the Government Buildings, Lunatic Asylum, and Police-station at Nelson; and to the Government Buildings and Police-station at Blenheim.

## WESTLAND DISTRICT.

*Courthouses.*—A contract was prepared and tenders are now advertised for additions and alterations to the Courthouse at Westport. The Courthouses at Greymouth and Kumara have been repaired.

*Police-station, Brunnerton.*—Additions were made to this station.

*Post-office, Hokitika.*—This office has been repaired and painted.

## CANTERBURY DISTRICT.

*Sunnyside Asylum.*—The fittings and furniture for the central block were supplied and the water-service completed. In October the whole female division was gutted by fire; plans were at once prepared, and a contract has just been entered into, for its restoration. To accommodate the patients in the meantime the Immigration-barracks at Addington were repaired, and an attic in the male division of the Asylum made into a dormitory. A residence for the doctor has also been built.

*Police-stations.*—The station and residence at Christchurch were repaired, and a petty contract carried out for a new roof and repairs to the Kaikoura station.

*Post and Telegraph Offices.*—At Christchurch the entrance to the private letter-boxes has been covered in, the mail-room distempered, and various repairs executed; and the office at Geraldine re-roofed.

*Quarantine-station.*—The jetty at Quail Island was repaired, a 20ft. span being added at the landward end, and the approach-road made good.

*General.*—Additional accommodation for the Official Assignee has been provided, and alterations made for the Crown Lands Department, in the old Government Buildings.

## OTAGO DISTRICT.

*Seacliff Asylum.*—The drainage of the site was continued, and various minor works carried out.

*Police-stations.*—Stations and outhouses have been erected at the Bluff, Riverton, Otautau, and Wyndham, stables and lock-ups being also provided at the two latter places. A contract is now in progress for a lock-up at Pembroke.

*Post-offices.*—Large repairs are being made to the Oamaru office, and the contract for a new office at Clyde is almost completed.

*General.*—The repairs to the dynamite magazine at Port Chalmers are finished, and the municipal buildings at Port Chalmers, in which provision is made for a Courthouse, is making good progress. A large amount of repairs and maintenance has been undertaken throughout this district.

## NUMBER OF MEN ON WORKS.

The table below shows the average number of men employed under this department on works and surveys for the year, not including contractors' men engaged away from the works:—

							Number of Employés
Auckland ... ..	...	...	...	...	...	...	426
Wanganui ... ..	...	...	...	...	...	...	273
Hawke's Bay ... ..	...	...	...	...	...	...	
Wellington ... ..	...	...	...	...	...	...	201
Nelson and Marlborough	...	...	...	...	...	...	44
Westland ... ..	...	...	...	...	...	...	484
Canterbury ... ..	...	...	...	...	...	...	227
Otago ... ..	...	...	...	...	...	...	420
Miscellaneous ... ..	...	...	...	...	...	...	91
Total ... ..	...	...	...	...	...	...	2,166

## ENCLOSURES.

Accompanying this report are the following, viz.:—

1. Statement showing lengths of railway authorised, constructed, and surveyed.
2. Diagram of railways, showing mileage open each year, in the North and Middle Islands, separately.
3. Diagram of railways, showing mileage open each year, in the North and Middle Islands, combined.
4. Map of the North Island, showing railways opened and in progress.
5. Map of the Middle Island, showing railways opened and in progress.

I have, &c.

W. N. BLAIR,

The Hon. the Minister for Public Works.

Assistant Engineer-in-Chief.





## APPENDIX I.

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### ANNUAL REPORT ON LIGHTHOUSE WORKS, ETC., BY THE ASSISTANT ENGINEER-IN-CHIEF.

The ASSISTANT ENGINEER-IN-CHIEF to the SECRETARY, MARINE DEPARTMENT.

SIR,—

Marine Department, 31st March, 1889.

I have the honour to report that the only works undertaken by this department during the past year have been in connection with the erection of Cuvier Island Lighthouse.

The cast-iron tower referred to in last year's report was satisfactorily manufactured by Mr. A. Beaney, of Archhill, Auckland, at a cost of £704.

Early in August a party of men were landed under the charge of Mr. Scott, the foreman of works attached to the department, and the work of constructing the necessary roads, tramways, and buildings was commenced. The iron tower and lantern were landed successfully in February, and it is hoped that the light will be ready for exhibition early in September next.

Plans for a new beacon at Manukau Heads have been prepared, with the view of having it constructed during next summer.

I have, &c.,

W. N. BLAIR,  
Assistant Engineer-in-Chief.

The Secretary, Marine Department.

## APPENDIX K.

## NORTH ISLAND MAIN TRUNK RAILWAY.

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

SIR,—

Public Works Office, 27th June, 1889.

I have the honour to inform you that the survey of the Taranaki-Auckland line has been completed, and I beg to submit the following report thereon. As this line comes into competition with the Central Route it is necessary to refer to both. I attach a map showing the two routes, with an alternative to the Taranaki route *via* Waitara. The lengths of railway to be constructed, and distances between important places on all the routes, are given on the map, and the Native lands recently purchased and under negotiation are shown in distinctive colours.

## STATE OF SURVEYS.

As showing the extent of our information on the various lines, it is desirable to describe the state of the surveys:—

*Central Route.*—The distance between the Upper Mokau and Rangatira, the present termini of the North Island Main Trunk Railway, is  $163\frac{1}{2}$  miles. Of this length,  $26\frac{1}{2}$  miles at the north and 43 miles at the south are definitely located and surveyed. This leaves 94 miles of which there are only trial-surveys of more or less exactness. There is one trial-section right through, and several trial-lines over the rough ground between Murimutu and Waimarino, and again between Waimarino and the Upper Wanganui Valley. The information as regards these places is not, however, complete: further investigation of an extensive character must take place before an exact estimate can be made.

*Taranaki Routes.*—The Taranaki routes—from Eltham Junction to Ongarue Junction,  $103\frac{1}{2}$  miles, with the alternative from Waitara to Tangarakau, 47 miles—have been carefully surveyed throughout. Although only preliminary surveys, they are more in detail than usual. The lines have been pegged out at short intervals, gradients have been run and cross-sections taken where necessary, and a traverse has been made of each line for its entire length. The information is therefore very complete, and the estimates based thereon may be accepted with considerable confidence.

## GENERAL DESCRIPTION OF COUNTRY.

The character and capabilities of the country traversed by the various routes were fully investigated by a Parliamentary Committee in 1884. It is therefore unnecessary to go minutely into the subject here, but in order that the report may be complete in itself I shall give the leading facts.

*Central Route.*—Commencing at Rangatira, the railway soon enters into a very broken country, which continues well into the Hautapu valley, a distance of thirty-nine miles from Marton Junction. Then it gradually opens out into flatter and more rounded ranges, till at Turangarehe the hills become downs. The country on both sides of the Rangitikei is generally too rough for cultivation, but in ascending the Hautapu—more particularly on the eastern side—it opens out into valleys and easy slopes where farms could be planted. The block bounded by the Hautapu and Rangitikei, and extending northwards fifteen or twenty miles, is probably the best settlement-country on the whole line between Rangatira and Upper Mokau. The country from Turangarehe to the Wangaehu watershed is open and undulating, and the land generally good. Some of it rises to an altitude of 2,600ft., but I do not know that this will be a bar to settlement. The country is covered with tussock, and otherwise resembles in appearance some of the upland districts in the Middle Island.

From Rangatira to the head of the Hautapu all the country is limestone of various kinds—soft argillaceous limestone or papa at the lower end, and hard crystalline varieties in the Upper Hautapu.

From Rangatira to Paengaroa—a distance of thirty-two miles—the country is nearly all covered with forest. The timber is chiefly rimu and kahikatea, with a large sprinkling of totara and maire: there is a considerable quantity of totara in clumps in the Rangitikei valley, and very large isolated trees all up the Hautapu.

After leaving the Hautapu valley the railway enters the Murimutu Plain, which extends to Waione, a point about two miles beyond Kerioi, or eighty miles from Marton. This plain is open, and covered with scant tussocky grass; the soil being mostly pumice-sand.

The bush is again entered at Waione, and, with the exception of about six miles on the Waimarino Plain and at other places, it continues all the way to the upper Wanganui valley, a distance of sixty miles. Although presenting considerable difficulties to railway-construction, the configuration of this country is no barrier to settlement. There is a considerable quantity of flat land, and the slopes are generally easy. The bed-rock is papa, overlying which there are large deposits of volcanic matter of various kinds, from basalt to clay and sand. The surface is vegetable matter and soil of varying thickness up to 18in., which seems quite capable of growing ordinary crops. Generally the soil is deeper and the land much better on the western side of Ruapehu than on the east. The more recent ejecta from the mountain have apparently been carried eastward, as in the case of the Tarawera eruption. The country rises from an altitude of 2,000ft. near Ohakune, to 2,680ft. at Waimarino, then falls to 565ft. at Taumaranui, in the upper Wanganui valley.

The bush between Murimutu and the upper Wanganui is of mixed varieties, rimu predominating. There is a fine belt of silver beech between Waione and Ohakune, and the rimu trees near the

latter place are exceptionally large. On the higher levels matai and kawaka are common, with a sprinkling of maire all through. Totara is very scarce till within three miles of the Wanganui, where there is a belt of splendid timber: the trees are very close together, and they run up to 80ft. or 90ft. long in the trunk, and 5ft. or 6ft. in diameter. Mr. Kirk says that he has "seen no finer trees in any part of the colony." The totara-belt is about three miles broad, and seems to extend a great distance along the slopes of the Wanganui; I crossed it in two places, about eight miles apart.

Between Taumaranui and Upper Mokau, a distance of forty miles, the railway runs generally through open country, with occasional patches of bush on the slopes of the ranges. The Ongarue valley opens out into a plain near the top, and there are other flats and slopes over which the plough could pass; but the land does not seem to possess the essentials of fertility. The bed-rock is papa, but overlying it are thick deposits of pumice-rock and pumice-sand, with very little soil on the surface.

The bush on the slopes of the ranges between Taumaranui and Upper Mokau is of the ordinary mixed description, but greatly inferior to that between Murimutu and Taumaranui.

There are no useful minerals that I know of along the central route, but a large number of mineral waters of various kinds.

*Ngaire Route.*—For 84½ miles out of the total of 103 miles 58 chains, this line is practically the same as the Stratford route of 1884. Instead, however, of leaving the Foxton-New Plymouth Railway at Stratford, it leaves near Eltham, in the Ngaire district, and instead of continuing northwards from Nihoniho through the Mokau country to Hangatiki, it follows up the Ohura, and, crossing the intervening ridge, merges into the Central line in the Ongarue valley.

The Ngaire route is nearly all in the two main watersheds of the Patea and Wanganui Rivers. It does not cross the main ridge which divides the western rivers from those that fall into the sea to the southward of Mount Egmont. This ridge is crossed at Poro-o-tarao, on the portion of line common to the Taranaki and Central Routes.

Commencing at Eltham Junction, the first subsidiary watershed is that between the Makur and Mangaotuku, at 16 miles. For fourteen miles of this distance the line runs through a wide first-class settlement-country, with good soil, capable of supporting a large population. After this the valley gets narrow and swampy, and of comparatively little value for settlement. With the exception of a small portion of the Ngaire Swamp, and some clearings, all the country up to the 16th mile is covered with bush, chiefly rimu, kahikatea, and tawa. The bed-rock is papa, with volcanic and alluvial clay, and soil on the top.

The next ridge is at the 31st mile. It divides the watershed of the Mangaotuku from that of the Makahu and its tributary, the Pohokura. The first two miles leading into the Mangaotuku valley are very rough, and unfit for settlement. Then for six miles the valley is wider and the slopes easy: a width of about half a mile of good land could be brought under cultivation. Part of this section of the Mangaotuku valley is open, or covered only with scrub, a strip nearly three miles long being old Maori clearings. In the next six miles the valley gradually closes in and gets swampy, and for a mile or two at the saddle the country is very rough—the whole being covered with bush.

The next natural division comes at the 37th mile, where a broad ridge separates the Pohokura and Mangare Streams. It is also the watershed of the Patea and Wanganui Rivers. The valleys of the Makahu and Pohokura are very narrow: including the slopes of the hills, there is only a width of 20 chains fit for settlement. There are ridges at the 48th and 49th miles, but the next important point is at the 53rd mile, where the railway enters the valley of the Waingarara. The first two miles in this section are rough, but the remainder is good settlement-country—flat valleys and low ridges, with easy slopes; and the width is considerable. The bed-rock is papa and the bush mixed.

The railway next traverses sixteen miles of very rough country in the Waingarara, Tangarakau, and Heao valleys, the roughest section on the line. The country is so broken up and uneven as to be unfit for settlement of any kind. The valleys are covered with mixed bush, and the ridges with beech (*Fagus fusca* and *F. Solandri*). The rocks are papa conglomerates and fossiliferous lime- and sand-stones.

From the 69th to the 95th mile the railway follows a succession of flat valleys, intersecting low rolling country. The land is all good and fit for settlement, but there is not much of it. The bush ends finally at the 80th mile.

From the 95th mile to the terminus of the line in the Ongarue valley, 103 miles 58 chains from Eltham Junction, the country is pumice, as described in connection with the Central Route.

The quantity of agricultural land between Eltham Junction and Nihoniho not served by the New Plymouth-Foxton railway, but within five miles of the proposed line, is roughly estimated at 60,000 acres, and the Survey Department maps show two blocks of agricultural land in the Ohura watershed of 40,000—making a total of 100,000 acres within easy access of the proposed railway. It is possible that there may be more outside the five miles, particularly on the eastern side, but we have no definite information on the subject. There cannot, however, be much on the western side, for the line is close to the main watershed and the West Coast ranges.

Most of the good land opened up by the original Stratford route lies in the Mokau watershed to the northward of Nihoniho, and on that part of the line which would be left out under the present proposals. The survey maps show 90,000 acres classed as agricultural land, the most of which is limestone, like the Te Kuiti and Otorohanga country.

Two seams of coal, 5ft. in thickness, have been discovered on the Ngaire line—one at 61 miles and the other at 64 miles—and there are indications of coal at various places in the locality. The seams occur among the conglomerates and limestones of the Tangarakau valley. The coal is apparently of the same quality as that found at Mokau: probably this is the southern boundary of the Mokau coalfield. The deposits that have been tested on the Mokau River are about sixteen miles from Tangarakau.

*Waitara Route.*—With reference to the country on this route, the Assistant Engineer who made the survey reports: "The country is all settled and open as far as 17 miles, at which point the line enters the bush, and from this to the junction with the Stratford (Ngaire) line in the Tangarakau there is no land of any value for settlement with the exception of three or four hundred acres, at 24 miles, in Uruti valley, about the same quantity in Makarakia valley, at 35 miles, and five or six hundred acres in Waitara valley, at 42 miles. The bush contains no timber of any value except rimu and kahikatea, and these only as scattered trees, with no quantity in any one place.

#### DESCRIPTION OF LINES.

*General.*—Attached to this report are tables of altitudes (A) at various important points on the routes under discussion, and on the portion of the open line between Marton and New Plymouth. The best idea of the levels of the lines is got by examining these tables.

*Central Route.*—As will be seen from the tables, there are great undulations on the Central Route. It rises to an altitude of 2,642ft. in getting on to the Murimutu Plain, then drops 637ft. to the lower end of the plain, rises again to an altitude of 2,680ft. on the Waimarino Plateau, and falls 2,115ft. to Taumaranui, which is only 565ft. above sea-level. The Poro-o-tarao tunnel, on the portion of the line common to all routes, stands at an altitude of 1,117ft., after which there is a gradual fall northwards.

It may be possible to reduce some of the undulations on the Central Route in making the working survey—for instance, the height at the upper end of the Murimutu Plain and the dip at the lower end: both of these may possibly be reduced in finally locating the line. The descent from Waimarino to Taumaranui cannot, however, be avoided; and this is one of the most important features on the Central Route. It was expected that a ruling gradient of 1 in 70, with minimum curves of  $7\frac{1}{2}$  chains radius, could be got all the way from Marton to Te Awamutu; but it is impossible to get such an easy gradient on this incline; even 1 in 50 cannot be got without very heavy works. Occurring as it does in one locality, and that near the centre of the Island, where the traffic must always be lightest, the carrying-capacity of the railway will be little impaired by this gradient. It is a question, however, as to whether the gradients on other parts of the line should not be reduced to the same standard: by doing so a large saving would be made in the cost of construction. 1 in 50 is the ruling gradient on the Middle Island Main Trunk Railway, and the same or steeper gradients occur between Wellington and Marton and Te Awamutu and Auckland. I think, therefore, that under the circumstances 1 in 50 may well be adopted for the whole of the North Island Main Trunk line.

In general direction the Central Route is tolerably straight, and the minor bends are comparatively few. The minimum curves on the surveyed portion are  $7\frac{1}{2}$  chains radius, and this standard can be maintained throughout.

There are three sections on the Central Route where very heavy works are required—about nine miles of the twenty-two miles between Rangatira and Lower Hautapu, seven miles on the incline between Murimutu and Waimarino, and ten on the incline between Waimarino and Taumaranui. The Rangatira-Hautapu section will have about 1,500,000 cubic yards of earthwork, 95 chains of tunnelling, and three viaducts. The viaduct over the Makohine ravine will be 700ft. long and 230ft. high: it is the largest work of the kind hitherto proposed in New Zealand. There will be five viaducts on the incline between Murimutu and Waimarino, and nine between Waimarino and Taumaranui; but in the present state of the surveys the amount of the other works at these places cannot be determined.

*Ngaire Route.*—As shown by the table of altitudes, the undulations on this route are comparatively small. The line commences at Eltham Junction at a level of 757ft.: the greatest rise from this level is 212ft. and the greatest fall 322ft. Generally the line is flat in the valleys and rising towards the saddles, with short gradients of 1 in 50. There are thirteen lengths of 1-in-50 grade, the longest being  $4\frac{1}{2}$  miles.

In general direction the Ngaire line is very straight, but it has a great number of minor bends. The radius of the sharpest curve is  $7\frac{1}{2}$  chains.

The heaviest works on the Ngaire route occur at intervals all along the line, at the crossings of the various watersheds. There are generally heavy earthworks on the inclines leading to the ridges, and a tunnel at the summit. The earthworks average 39,000 cubic yards per mile for the whole distance between Eltham Junction and Ongarue, but on eight miles in the Tangarakau-Heao inclines the average is 71,700 cubic yards. There are thirty-one tunnels, amounting in the aggregate to 188 chains, and ranging from 2 to 26 chains: the longest is that through the Patea-Wanganui watershed, 26 chains.

The bridging on the Ngaire line is comparatively light. There are only two viaducts, both over the Tangarakau River. The largest is considerably smaller than the one recently erected over the Waiteti gully, and the other still less. The remainder of the bridging generally is ordinary low-level river and creek bridges, of short span.

*Waitara Route.*—Commencing near sea-level, at Waitara, this line rises to an altitude of 144ft. at the Waiau, and falls nearly as much to the Mimi valley. There is a rise again to 847ft. at the head of the Waitara, and a fall to 435ft. at the junction with the Ngaire line in the Tangarakau valley.

From the commencement to the Uruti, at the 24th mile, the works on the Waitara route are comparatively light, and the same may be said of twelve miles at other places; but the remaining eleven miles are far above the average. And of this again three and a half miles are the heaviest piece of railway hitherto surveyed in the North Island: the country is a regular succession of saw-tooth ridges and ravines, over which a railway cannot possibly be taken except at an enormous cost. The earthwork on the whole line averages 45,000 cubic yards a mile; but the three and a half miles on the Uruti incline average 104,000 cubic yards per mile, in addition to which there are 106 chains of tunnelling and four viaducts on the same short section.

There are seventeen tunnels on the Waitara route, amounting in the aggregate to 216 chains, and ranging from 2 to 74 chains. The longest is that at the Mimi-Waitara watershed, and there are two in the Waitara Valley—one of  $48\frac{1}{2}$  and the other of 29 chains. Although the country is so rough, the bridging on the Waitara route is not excessive. This is due to the fact that there are few large streams in the deep gullies. The only viaducts are the four on the Uruti incline, and the only low-level bridge of consequence is the one over the Waitara River at the commencement of the line.

*Comparison, Ngaire and Waitara Routes.*—The following is a comparison of the salient features of the Ngaire and Waitara routes from their respective starting-points to the point of meeting in the Tangarakau valley:—

	Ngaire Line.	Waitara Line.
Length of railway to make ... .. miles	54 $\frac{1}{4}$	47
Greatest altitude attained ... .. feet	732	847
Length of tunnelling ... .. chains	85	216
Quantity of earthwork ... .. cubic yards	1,805,000	2,121,000
Total cost of line ... .. £	422,600	597,600
Average cost per mile ... .. £	7,790	12,730

As will be seen from the table, all the more important points are in favour of the Ngaire route, and so also is the question of opening up new country. I think, therefore, that the Waitara route does not merit further consideration.

*Open Line.*—In connection with this, it is necessary to consider the gradients and curves on the New Plymouth and Foxton Railway, between Marton and Waitara.

From Turakina to Waitotara, a distance of forty-two miles, there is a succession of steep gradients up to 1 in 35, with curves 5 chains radius. It would be impossible to keep up a high rate of speed on this length, and to improve the line to the ordinary standard of 1 in 50 with  $7\frac{1}{2}$ -chain curves would entail a very large expenditure.

#### LENGTHS AND DISTANCES.

The principal lengths and distances connected with the various routes are shown on the accompanying map, and given in further detail in the tables of distances, B, hereto attached.

#### ESTIMATES.

Although not very plentiful, the necessary materials for construction are generally obtainable at short intervals along all the railway-lines under discussion. Good ballast is somewhat scarce in the pumice-country on the Central Route, and timber on the Taranaki lines; but in all other cases there is a fair supply of the various materials required.

As already stated, the estimate for the central line is not based on actual quantities throughout, there being no detailed survey for the ninety-four miles in the middle. It is therefore less exact than those for the Taranaki lines. I believe, however, that it can be accepted as a very close approximation.

The following are abstracts of the estimates for the various lines:—

#### *Central Route.*

	£
Estimate to complete line from Rangatira to Upper Mokau ...	1,673,200
Amount expended to 31st March, 1889, and liabilities on that date ...	411,800
Total for whole line, Marton to Te Awamutu, 216 miles, averaging, say, £9,650 per mile ...	<u>£2,085,000</u>

#### *Ngaire Route.*

Estimate for line from Eltham Junction to Upper Mokau, 129 miles, averaging, say, £9,040 per mile ...	1,165,926
Amount expended to 31st March, 1889, on northern end of central route, and liabilities on that date ...	244,662
Total for whole line, Eltham Junction to Te Awamutu, 163 miles, averaging, say, £8,650 per mile ...	<u>£1,410,588</u>

#### *Waitara Route.*

Estimate for line from Waitara to Upper Mokau, $121\frac{1}{2}$ miles, at £11,036 ...	1,340,853
Amount expended to 31st March, 1889, on northern end of central route, and liabilities on that date ...	244,662
Total for whole line, Waitara to Te Awamutu, 156 miles, averaging, say, £10,160 ...	<u>£1,585,515</u>

#### *Enclosures.*

The following enclosures accompany this report:—

- A.—Table of altitudes.
- B.—Table of distances.
- C.—Sketch-map of the Central and Taranaki Routes.

I have, &c.,

W. N. BLAIR,

Assistant Engineer-in-Chief.

A.

NORTH ISLAND MAIN TRUNK RAILWAY.  
TABLES OF ALTITUDES.

CENTRAL ROUTE.

Place.	Mileage.	Height above	Intermediate	Intermediate
		Sea-level.	Distance.	Height.
	M. c.	Ft.	M. c.	Ft.
Marton Junction ... ..	0 0	455	...	...
Hunterville ... ..	15 35	870	15 35	415
Summit near Rangatira ... ..	19 20	990	3 65	120
Makohine ... ..	24 21	842	5 1	148
Powhakaroa Tunnel ... ..	30 61	1,054	6 40	212
Paengaroa ... ..	50 26	1,734	19 45	680
Turangare ... ..	61 21	2,395	10 75	661
Summit, Murimutu Plains ... ..	70 0	2,642	8 59	247
Mangawhero River, near Ohakune ... ..	87 40	2,005	17 40	637
Summit, Waimarino ... ..	107 45	2,680	20 5	675
Taumararui ... ..	141 50	565	24 40	2,115
Ongaruhe Junction ... ..	156 50	616	15 0	51
Por-o-tarao Tunnel ... ..	169 77	1,117	13 27	501
Upper Mokau ... ..	181 79	671	12 2	446
Te Kuiti ... ..	190 49	173	8 50	498
Te Awamutu ... ..	216 29	161	25 60	12

NGAIRE ROUTE.

Eltham Junction ... ..	0 0	757	...	...
Makuri Valley ... ..	9 61	528	9 61	229
Makuri-Mangaotuku Summit ... ..	16 20	594	6 39	66
Mangaotuku Valley ... ..	17 51	475	1 31	119
Mangaotuku-Makahu Summit ... ..	30 65	727	13 14	252
Makahu Valley ... ..	34 34	634	3 49	93
Makahu-Wangamomona Summit ... ..	37 20	688	2 66	54
Wangamomona Valley ... ..	41 8	504	3 68	184
Wangamomona-Mauku Summit ... ..	48 28	732	7 20	228
Raekohua Valley ... ..	51 29	573	3 1	159
Raekohua-Waingarara Summit ... ..	52 53	696	1 24	123
Tangarakau Gorge ... ..	55 39	435	2 66	261
Tangarakau-Heao Summit ... ..	65 8	969	9 49	534
Heao Valley ... ..	68 73	592	3 65	377
Heao-Mangaroa Summit ... ..	72 12	750	3 19	158
Mangaroa Valley ... ..	75 63	499	3 51	251
Niho-niho, Ohura Valley ... ..	84 46	522	8 63	23
Ohura-Ongaruhe Summit ... ..	101 6	894	16 40	372
Ongaruhe Junction ... ..	103 58	616	2 52	278

WAITARA ROUTE.

Waitara ... ..	0 40	10	...	...
Waiau Summit ... ..	6 40	144	6 0	134
Onairo Valley ... ..	9 0	16	2 40	128
Onairo-Urenui Summit ... ..	10 40	118	1 40	102
Urenui Valley ... ..	11 40	25	1 0	93
Urenui-Mimi Summit ... ..	14 20	146	2 60	121
Mimi Valley ... ..	16 0	21	1 60	125
Mimi-Waitara Summit ... ..	27 50	505	11 50	484
Waitara Valley ... ..	28 60	480	1 10	25
" ... ..	38 20	847	9 40	367
" ... ..	42 40	695	4 20	152
Waitara-Tangarakau Summit ... ..	43 20	720	0 60	25
Tangarakau Gorge ... ..	47 60	435	4 40	285

## OPEN LINE.—MARTON JUNCTION TO NEW PLYMOUTH.

Place.	Mileage.	Height above Sea-level.	Intermediate Distance.	Intermediate Height.
	M. c.	Ft.	M. c.	Ft.
Marton Junction ... ..	0 0	455	...	...
Marton ... ..	1 40	486	1 40	31
Turakina ... ..	11 0	61	9 40	425
Wangaeahu ... ..	16 40	48	5 40	13
Fordell ... ..	21 40	480	5 0	432
Aramoho Junction ... ..	31 40	26	10 0	454
Brunswick ... ..	35 0	468	3 40	442
Kai-iwi ... ..	40 20	117	5 20	351
Kai-iwi Summit ... ..	41 40	251	1 20	134
Okehu Valley ... ..	43 0	88	1 40	163
Nukumarū Summit ... ..	50 20	284	7 20	196
Waitotara ... ..	53 0	23	2 60	261
Summit near Waverley ... ..	59 0	275	6 0	252
Patea ... ..	68 40	8	9 40	267
Manutahi ... ..	76 40	356	8 0	348
Tongahoe Bridge ... ..	81 40	90	5 0	266
Hawera ... ..	86 40	339	5 0	249
Eltham Junction ... ..	99 40	757	13 0	418
Stratford ... ..	104 40	990	5 0	233
Summit near Midhirst ... ..	109 40	1,128	5 0	138
New Plymouth ... ..	134 20	9	24 60	1,119

## B.

## NORTH ISLAND MAIN TRUNK RAILWAY.

## TABLE OF DISTANCES.

## LENGTHS OF RAILWAY TO BE CONSTRUCTED.

<i>Central Route.</i> —Rangatira to Upper Mokau ... ..	M. c.
<i>Ngaire Route.</i> —Eltham to Ongarū Junction and Upper Mokau ... ..	163 35
<i>Waitara Route.</i> —Waitara to Tangarākau and Ongarū Junctions and Upper Mokau ... ..	129 2
	121 36

[NOTE.—The Poro-o-tarao Tunnel Contract, of 1m. 34c., already in progress, is included in each of the above.]

## DISTANCES TO TRAVEL FROM AUCKLAND.

Place.	By Central Route.	By Ngaire Route.	By Waitara Route.
	Miles.	Miles.	Miles.
Ongarū Junction ... ..	160	160	160
Tangarākau Junction ... ..	...	209	209
Waitara ... ..	448	295	256
New Plymouth ... ..	451	298	267
Eltham Junction ... ..	416	263	288
Patea ... ..	385	294	319
Wanganui ... ..	350	335	360
Marton Junction ... ..	316	363	388
Palmerston North ... ..	344	391	416
Napier ... ..	453	500	525
Wellington ... ..	433	480	505



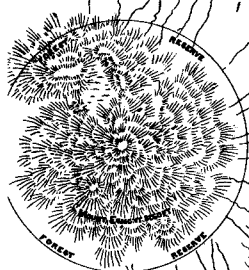
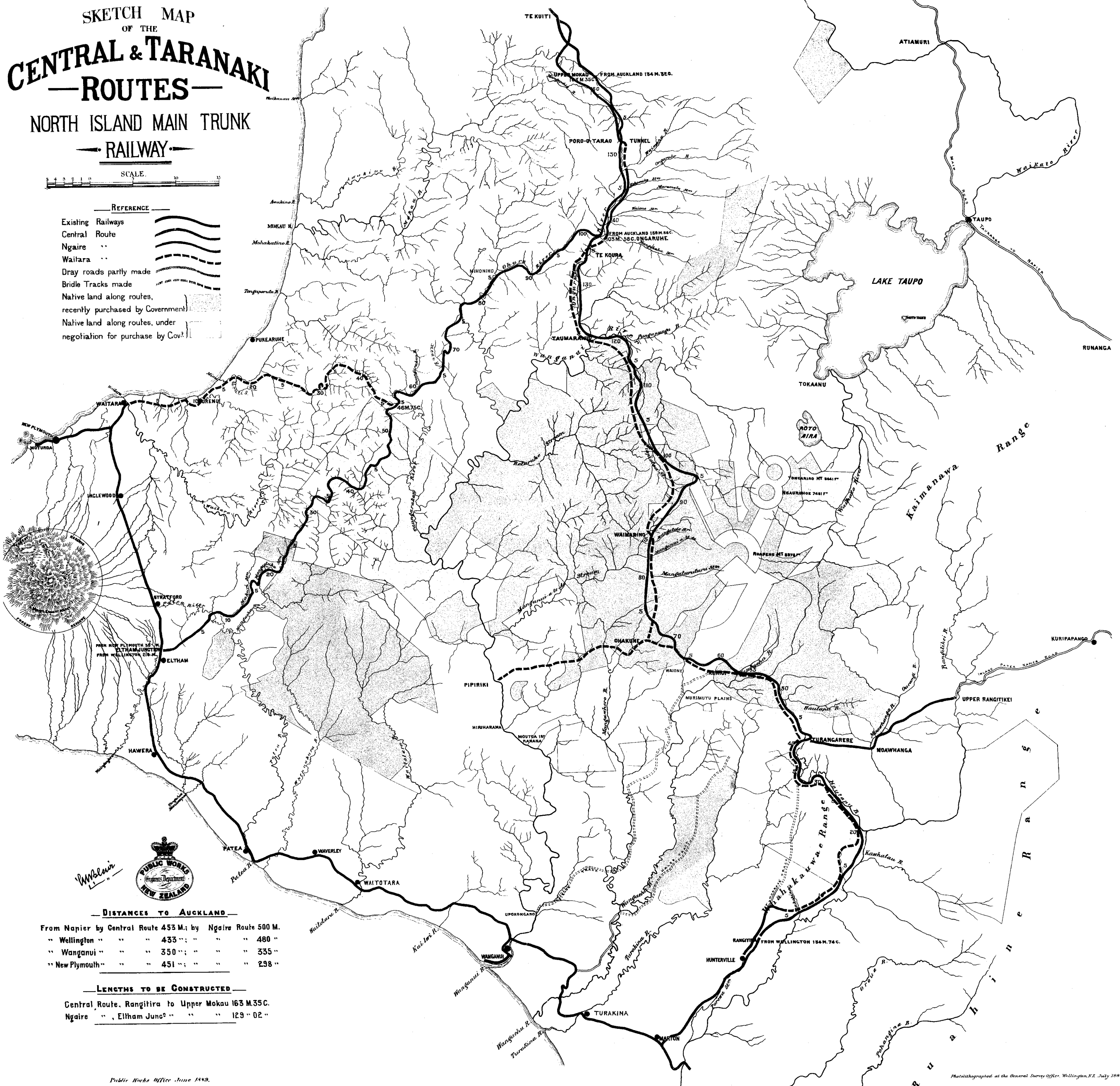


# SKETCH MAP OF THE CENTRAL & TARANAKI — ROUTES — NORTH ISLAND MAIN TRUNK RAILWAY



## REFERENCE

- Existing Railways
- Central Route
- Ngairi
- Waitara
- Dray roads partly made
- Bridle Tracks made
- Native land along routes, recently purchased by Government
- Native land along routes, under negotiation for purchase by Govt.



## DISTANCES TO AUCKLAND

From Napier by Central Route	453 M.	by Ngairi Route	500 M.
Wellington	433		480
Wanganui	350		335
New Plymouth	451		298

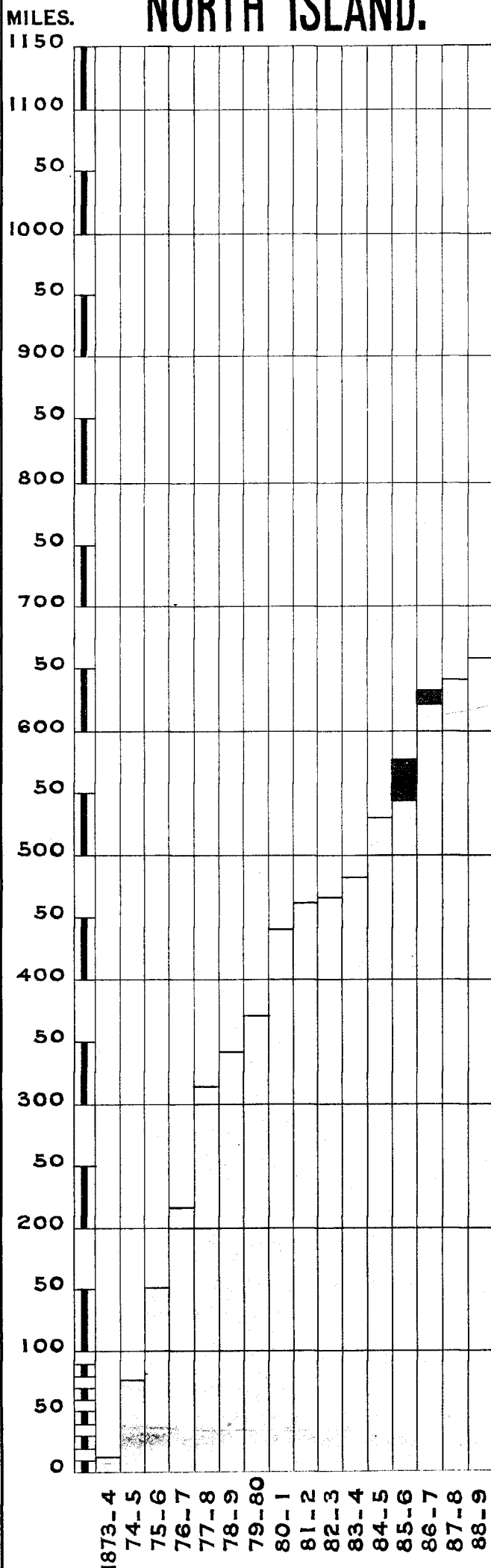
## LENGTHS TO BE CONSTRUCTED

Central Route, Rangitira to Upper Mokau	163 M. 35 C.
Ngairi " , Eltham Junction "	129 " 02 "

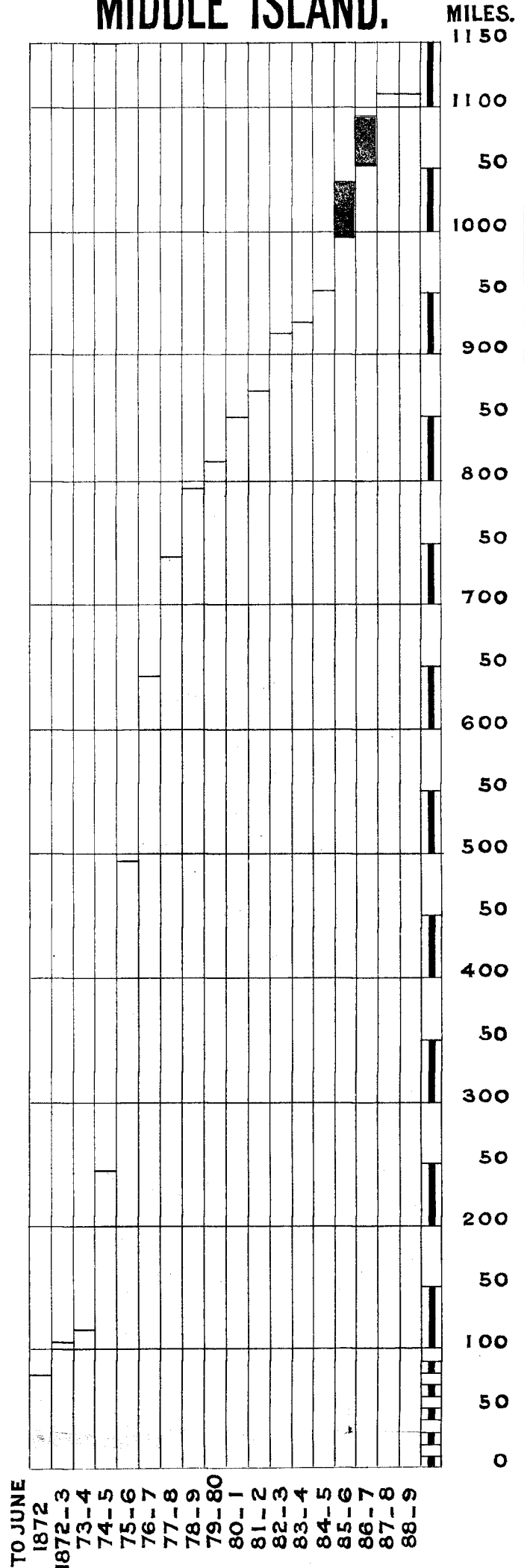


# Number of Miles open of Government Lines.

## NORTH ISLAND.



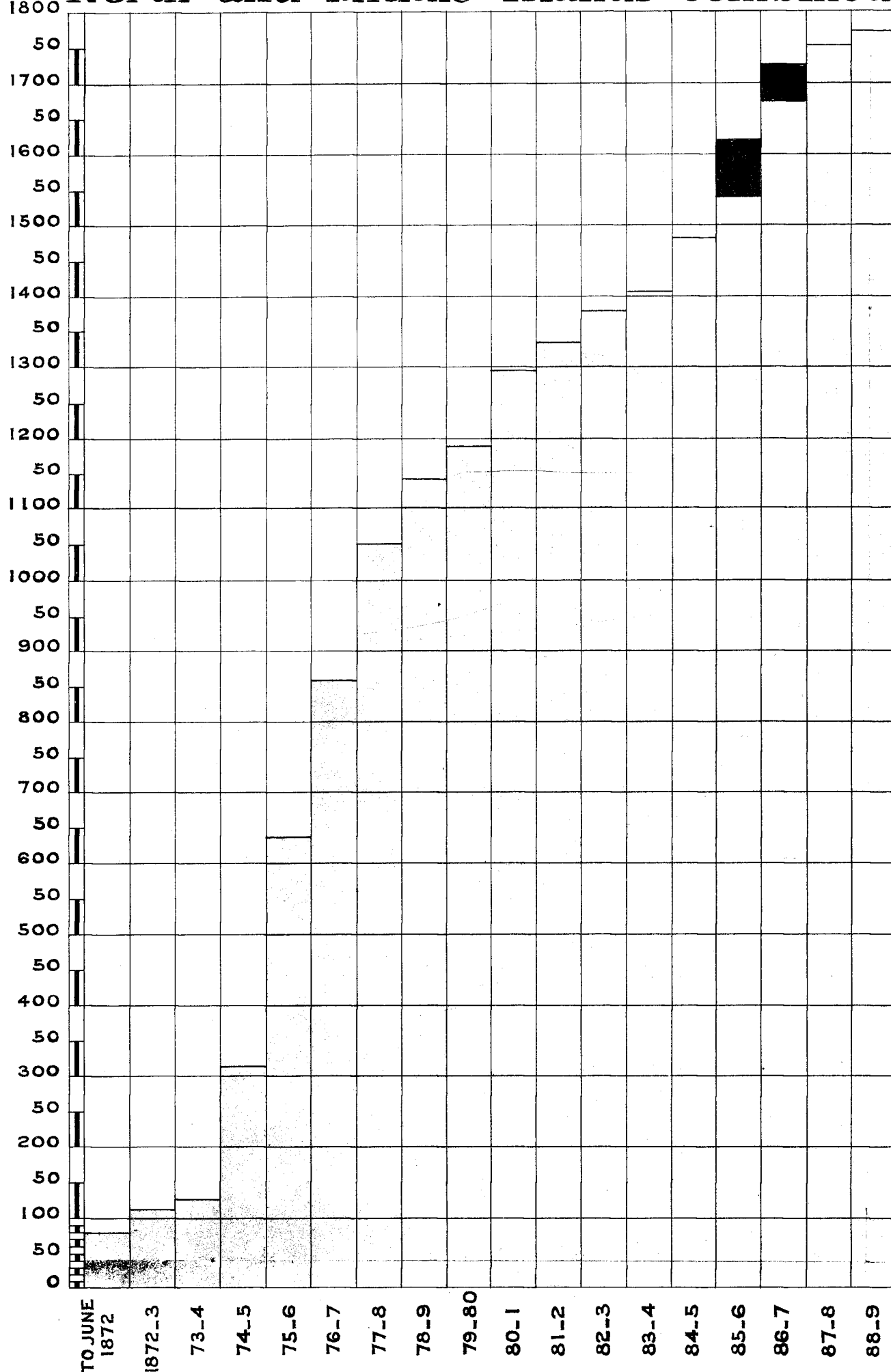
## MIDDLE ISLAND.



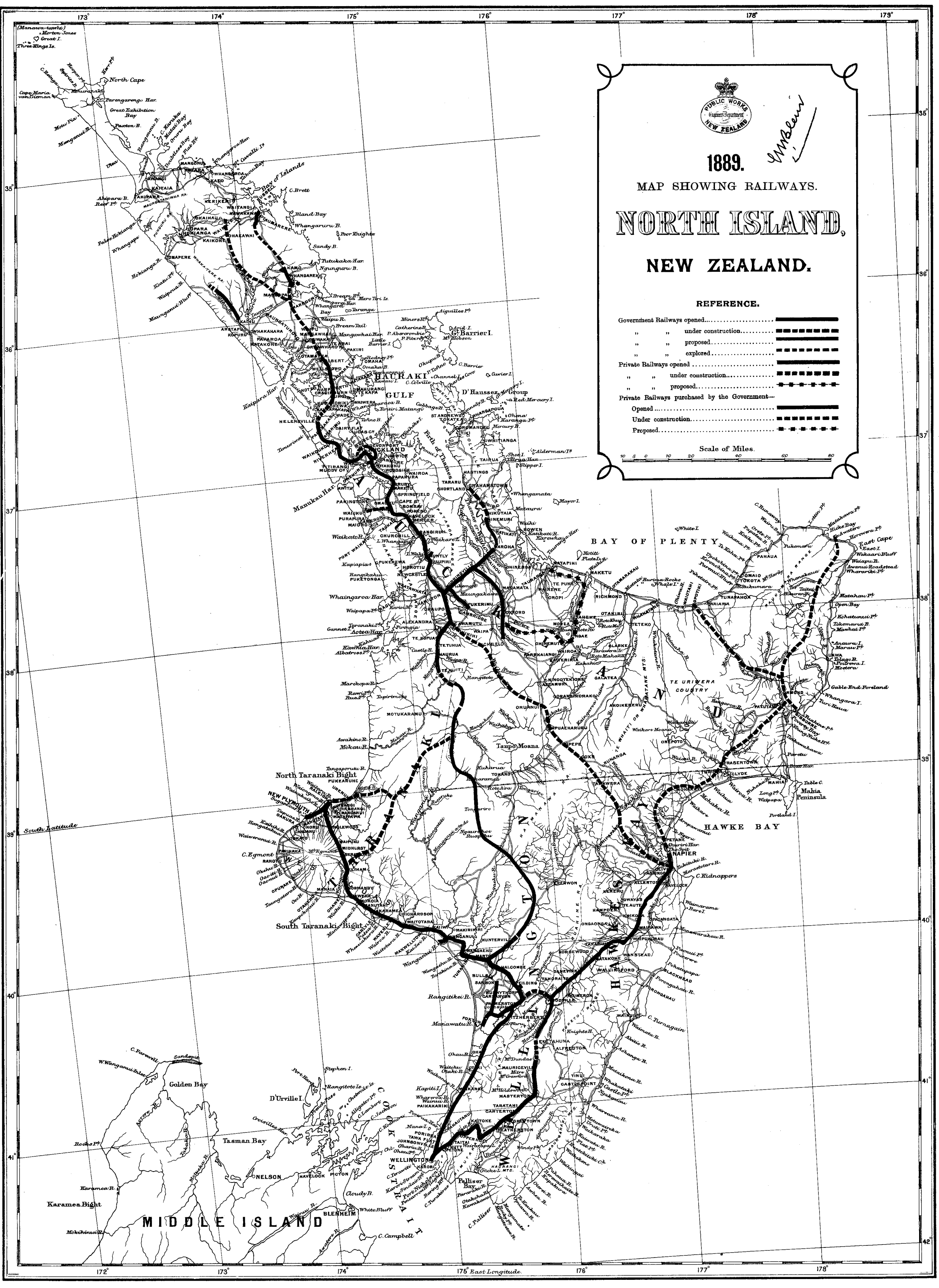


# Number of Miles open of Government Lines.

MILES. **North and Middle Islands combined.**







*Wm. Blair*

1889.

MAP SHOWING RAILWAYS.

# NORTH ISLAND, NEW ZEALAND.

## REFERENCE.


Government Railways opened.....	—————
"    "    under construction.....	—————
"    "    proposed.....	—————
"    "    explored.....	—————
Private Railways opened.....	—————
"    "    under construction.....	—————
"    "    proposed.....	—————
Private Railways purchased by the Government—	
Opened.....	—————
Under construction.....	—————
Proposed.....	—————

Scale of Miles.



[illegible]





1889.

MAP SHOWING RAILWAYS.

MIDDLE ISLAND,

NEW ZEALAND.

REFERENCE.

Government Railways opened.....

"    "    under construction.....

"    "    proposed.....

"    "    explored.....

Private Railways opened.....

"    "    under construction.....

"    "    proposed.....

Private Railways purchased by the Government—

Opened.....

Under construction.....

Proposed.....

Scale of Miles.

10

20

30

40

50

General Survey Office, Wellington, N.Z.



TABLE of LENGTHS of GOVERNMENT LINES AUTHORIZED, CONSTRUCTED, and SURVEYED, up to 31st March, 1889—continued.

## MIDDLE ISLAND.

[illegible]

\* In these cases the dates given are the dates on which the railways became the property of the Government.

† This comprises 45m. 59ch. of railways constructed by the Government and 45m. 79ch. of lines constructed by private companies under the District Railways Act, and afterwards purchased by the Government.

This comprises 11m. 83ch. of railways constructed by the Government and 36m. 39ch. of lines constructed by private companies under the District Railways Act, and afterwards purchased by the Government.

NORTH ISLAND.

\* This comprises 12m. 70ch. of railway constructed by Government and 30m. 60ch. of line constructed by private company under the District Railways Act, and afterwards purchased by the Government.

† This comprises 48m. of railway constructed by Government and 11m. of line constructed by private company under the District Railways Act, and afterwards purchased by the Government.