1877.

NEW ZEALAND.

PUBLIC WORKS STATEMENT,

BY THE MINISTER FOR PUBLIC WORKS, THE HON. JOHN DAVIES ORMOND, FRIDAY, 10TH AUGUST, 1877.

Mr. SPEAKER,—

In the Statement I am about to make, I shall endeavour to inform the House as to the general conduct of works under the Public Works Department during the past year, and as to the proposals of the Government in respect to works to be undertaken in the year we have just entered upon. In doing so, I would remind honorable members that my term of office commenced in January last; and I desire to take this opportunity of thanking my honorable friend and predecessor (Hon. Mr. Richardson) for the kind and cordial assistance he has rendered me on the many occasions I have had to refer to him for information and advice on matters connected with the department.

The customary yearly reports from the Engineer-in-Chief, and other officers of the Public Works Department, will be appended to this Statement when circulated, together with Tables, as in previous years.

Except were otherwise specially mentioned the word "year" is intended to mean financial year.

RAILWAYS.

I will first speak of Railways. My predecessor, in making his Statement last year, commenced his remarks under this head by stating that the railway works throughout the colony had not been pushed on so rapidly during the year then ended as during the two years preceding; and, Sir, I have to state that during the past year, although considerable progress has been made, the votes for the year have not been fully expended.

It will be recollected that, when last year's Statement was made, it was announced that the new works authorized would not be undertaken until the Government was assured that the necessary means were available; and it was not until February, in the present year, that the monetary arrangements were concluded which enabled the Government to proceed vigorously with the different works authorized. I refer to this because in some parts of the colony complaint has been made that the Government has not pushed on the works as rapidly as was desired; but I think it will be admitted that the course pursued by the Government was the only prudent one open to them.

I will now pursue the same course that has been adopted in past years, and give some account of the works in progress on the different lines of railway throughout the colony.

The Kawakawa Railway is now completed to the shipping place, and has been provided with rolling stock. It is not intended to undertake any further work on this line at present, beyond a small extent of open bridging, which is necessary to secure against damage by floods; and this work is in course of construction.

The Auckland to Kaipara Railway is being extended from Helensville to a new and more convenient station on the Kaipara River, and a section of 10 miles from Auckland towards Riverhead is now in progress under

contract. The course of the further extension to Riverhead is not yet determined, but plans and estimates of the alternative lines are being prepared, and will be considered before the route to be followed is determined.

The Auckland–Waikato line is expected to be open to Newcastle (76 miles) by the end of August; from thence to Ohaupo (20 miles) the formation is finished; and it is proposed during this year to complete the line to Ohaupo, and to push on the work towards Te Awamutu. It is also intended, during the present year, to improve the station and workshops at Auckland, and connect the present station with the Queen Street Wharf. The railway wharf at Onehunga is also in course of construction.

The Napier–Manawatu Railway is now running to Takapau (59 miles), and will be completed to Kopua, between 5 and 6 miles farther, by October. It is proposed to extend this line a few miles during the present year, which will bring the settlements in the Seventy-Mile Bush into more direct communication with Napier, and add considerably to the traffic.

The works on the Wellington–Masterton Railway have been delayed by causes partly unforeseen, and partly arising from the difficult character of the country the line passes through. It is now ascertained that all the tunnels will require lining. The bricks and other materials have to be carried by rail from Wellington or the Hutt, and the progress is necessarily slow, as each tunnel must be completed before the line can be laid, and material carried on for the next. It is, however, believed that the line will be open to Kaitoki, 27 miles from Wellington, by December, and every exertion will be used to get the line open to Featherston within the present year. It is proposed to go on with the formation from Featherston to Masterton, so that the line may be ready for plate-laying by the time the rails can be taken up. It is also proposed to proceed with the works required to connect the railway station with the wharf at Wellington.

On the Waitara–Patea Railway the line will shortly be completed to Inglewood. A section southwards of Inglewood is in progress, and it is proposed to continue the works a few miles farther during the present year.

The southern section of the Patea–Manawatu Railway has progressed satisfactorily during the past year. The line is now open from Turakina to the Wanganui River. A short section to carry the line into the Town of Wanganui is under contract, and it is expected that the whole line from Wanganui to Foxton will be open for traffic within the present year.

To the north of Wanganui the formation to Kai Iwi is finished, and it is proposed to complete that piece of line, and extend the works northwards.

Delay has occurred in connecting the Nelson–Foxhill Railway with the Port, but it is proposed to do so during the present year, and to erect a workshop, so that repairs may be effected locally.

Ten miles of the Westport–Ngakawau Railway are completed, and the remainder will be shortly, as also the necessary works for loading the coal. This line was constructed to open up the valuable coal district between Westport and the Ngakawau River, and it is to be regretted that only one company—the Wellington Coal Company—is in a position to take advantage of the railway.

On the Picton–Blenheim line it is intended to carry out at once the extension of the line into Blenheim, and, as soon as the survey is completed, to extend the line southwards.

The Greymouth–Brunnerton line is working satisfactorily. The Brunner Coal Mining Company, the Coal Pit Heath Company, and the Greymouth Company are now making use of the line, and the traffic is so much increased as to render additional rolling stock necessary. It is proposed to proceed steadily with the river protection works during the present year, and to improve the station accommodation, as well as provide a workshop, as in the case of Nelson.

The line from Amberley to Waitaki was completed some months ago. The works proposed to be carried out during the present year are an extension of the Main Trunk northwards from Amberley about 15 miles; the completion of the Eyreton Railway, now under contract; the improvement of the line at the Waimakiriri River; the completion of the Opawa Railway; the conversion of the broad gauge from Amberley to Lyttelton to narrow gauge; the re-arrangement and

improvement of the railway stations at Christchurch and Lyttelton; general additions to station accommodation; and a large increase of rolling stock.

From Moeraki to Dunedin the whole line is under contract, except the Waikouaiti Section, the formation of which has been done by piece-work. The time for completion of the latest contracts is January next, and every exertion will be used to get the works finished within the specified time.

The completion of the line between Dunedin and Invercargill is in a forward state, with the exception of the section from Balclutha to Clinton, for which tenders are invited; the work to be completed in June, 1878.

The Invercargill to Kingston line is open for traffic to Lowther, and will be completed to Kingston within the present year; by which time the Government hopes the main trunk line from Amberley to Kingston, a length of 527 miles, will be open for traffic.

Several railways in the Provincial District of Otago were in course of construction under the Provincial Government, and have been taken over by the Public Works Department.

The Marewhenua, Waiareka, and Green Island Railways, although open for traffic, require a considerable expenditure for stations and rolling stock, and this is provided for.

The Outram Railway is near completion, but requires rolling stock.

The formation on the Western Lines, in the Otago district, was partly undertaken when the works were taken over, but much remains to be done to complete them. The section from Wallacetown to the junction with the Otautau line is now contracted for, and the completion of the formation of that section to Riverton, and of the Otautau line, will be proceeded with, so as to be ready for plate-laying as soon as the Wallacetown line is available for conveying the rails. There is no rolling stock for these lines, but what is requisite for their working has been ordered.

In conformity with the provisions of "The Financial Arrangements Act, 1876," a valuation has been made of the Provincial Railways in Canterbury and Otago.

The valuation of the Canterbury Railways amounts to £731,759, and of the Otago Railways to £372,522 2s. 5d.

Copies of the award of the valuation in each case will be laid upon the Table.

The total lengths of the railways authorized, open for traffic, and to be opened during and subsequently to the present year, inclusive of the lines undertaken by the provinces, are respectively, as follows:—

	Authorized.		Open for Traffic.		To be opened during 1877–78.		To be completed subsequent to 30 June, 1878.	
	Mls.	Chs.	Mls.	Chs.	Mls.	Chs.	Mls.	Chs.
In the North Island ...	412	13	212	47	131	75	67	51
In the South Island ...	815	32	647	55	142	31	25	26
	1,227	45	860	22	274	26	92	77

The amount appropriated by the Immigration and Public Works Appropriation Act of last year for Railways was £1,300,600; the expenditure against which has been £967,425 13s. 2d., including the distribution to the several railways concerned of £29,881 15s. 6d., being the balance of the advances made in previous years to the General Railways Account.

The total expenditure up to 30th June, 1877, was £6,129,920 11s. 5d., and the outstanding liabilities £530,333 4s. 4d. This amount includes the liabilities for all existing contracts, some of which extend into the year 1878, and for plant and materials ordered from Home.

SURVEYS.

The work performed during the past year on exploration surveys for the Main Trunk lines has not been considerable, and what has been done has not yet been plotted, so that the Engineer-in-Chief is unable at present to report definitely. It is our intention to push on the exploration surveys during the present year, and

to lay before Parliament next Session full information as to the direction of the Main Trunk lines in both islands, together with definite proposals for their completion.

A report has been recently received from Mr. Blair, District Engineer, of the result of reconnaissance surveys made by him of the different lines that have been advocated for opening the Central Otago District. His report will be appended to this statement.

ROADS.

The report of the Assistant Engineer-in-Chief contains detailed information as to the road works carried out under the Public Works Department. The sums appropriated last year for road works have been, where practicable, expended through the County Councils or Road Boards of the different districts, and where this could not be arranged, the works have been carried out by the Public Works Department. The votes have not in all cases been expended within the year, but engagements have been entered into which will necessitate re-voting the unexpended balances in each case.

The House will remember that special provision was made last session for roads in certain districts in the North Island, and for similar purposes in Westland and the Nelson South-West Gold Fields, on the grounds that these districts had urgent wants which could not be provided for by the local bodies, and that they had special claims to consideration from being so situated as not to derive the same immediate and direct advantages from the Public Works policy as other parts of the colony.

The Government intend to ask the House to make provision this session for similar works in the same districts, and I shall submit the following votes for these purposes:—

	£	£
Roads North of Auckland	10,000	
Balance of last year's vote, being liabilities	15,206	
		25,206
Roads in Native Districts		12,000
Roads, Westland	10,000	
Balance last year's vote	9,164	
		19,164
Roads, Nelson South-West Gold Fields	10,000	
Balance last year's vote	7,802	
		17,802
Hokitika-Christchurch Road		5,000

—being a total of £79,172 for road works.

There is another class of works to which I have to refer—viz., the provincial roads and undertakings which were under construction or authorized when the Abolition of the Provinces Act came into force. The reports of both the Engineer-in-Chief and Assistant Engineer-in-Chief contain information respecting many important works of this character which were taken over and have been carried on by the Public Works Department. Some works of the same class have been carried out by the local authorities at the request of the Government.

The expenditure under this head has been considerable, and I regret I am unable at present to furnish an accurate statement of the condition of these works. The requisite information has been called for from the different provincial districts, and when this is obtained we shall ask the House to make provision for the liabilities incurred. We shall also determine the particular works we shall ask the House to provide means to complete. The Government recognize that the distribution of the expenditure on these provincial works has been unequal in the different parts of the colony. We are also aware that there are some works in sparsely settled out-districts, such as bridges over difficult rivers, which are urgently required to connect important divisions of the country, and that in some cases these works are beyond the present means of the County Councils. We do not wish it to be inferred that we think the colony can provide for all the works of this kind that are desirable, but we propose, at the same time that we submit votes to cover the liabilities on the provincial works in progress, to ask provision for the more important and pressing of the works I have just described, and in so doing we shall take into consideration the claims of those districts which have not shared equally in the Public Works expenditure already incurred.

OPENING LANDS FOR SETTLEMENT.

The question of providing for opening lands for sale and settlement has pressed itself upon the consideration of the Government. We see plainly that the work of settlement cannot go on as it ought in many out-districts without assistance, and this is especially so in the case of bush lands. A Bill will be introduced to enable the Government to make advances for opening new blocks for sale, such expenditure to be recouped from the proceeds of sales of land within the districts so opened. A large sum might be expended with great advantage on this object, but we have to look to the means at our command, and only see our way to propose a vote for expenditure during the present year of £50,000.

WATER-RACES.

The expenditure on these works during the past year has been almost entirely confined to a few races, upon which large sums had been previously spent. In the North Island the only work of the kind in hand has been the Thames Race, and it has been completed, except the distribution to the batteries, for which provision will be asked.

In the South Island,—

The Mount Ida Race has been completed.

On the Nelson Creek Race large works have been carried out, necessitating the employment throughout the year of two hundred men. It is anticipated this race will be completed during the present month.

On the Waimea Race very considerable works have also been undertaken, including an extension to the Kumara. It is estimated that all the works in connection with this race will be completed in a few months.

The Mikonui Race has not been proceeded with, the tenders for the first section of the work having been considerably in excess of the vote.

It was stated last year, by my predecessor, that the Government proposed to hand over the different water-races to the Councils of the counties in which they were situated, and the Government has endeavoured to give effect to that proposal. The County Councils that have been communicated with have not, however, been willing to undertake the charge, and considering the very large cost of the works, the Government has not felt justified in handing them over until assured that proper provision was secured for their care and maintenance.

Appended to the Report of the Engineer-in-Chief is the Report of Mr. O'Connor, the Engineer under whose supervision the large water-races on the West Coast have been constructed. I regret to say that the results he reports in the case of such races as are completed are not satisfactory.

The Government propose to ask the House to provide the sums required to complete the most important water races in course of construction, which are estimated, including liabilities, as follows :—

	£
For the Thames Race	6,505
„ Waimea Race	25,828
„ Nelson Creek	24,384
„ Four-Mile Race	14,000
„ Mikonui Race	15,650
	£86,367

In the case of the Mikonui Race the amount asked for is the unexpended balance of last year's vote, but as the estimated cost of that race is £81,000, the Government will not propose to commence the work unless satisfied that the whole scheme will be completed by a private company.

PUBLIC BUILDINGS.

The Report of the Colonial Architect cannot be appended to this Statement, as he is laid up by illness in Dunedin. It will, however, be printed and published as soon as he is well enough to furnish it.

I hope to be able at the same time to give the House the valuation of the Provincial Buildings throughout the colony. The work of valuing is far advanced, and the valuation will be furnished as early as possible.

The expenditure on Public Buildings during the year ended June last amounted to £43,309, particulars of which will be appended.

The expenditure that will be required during the present year for Buildings is very much increased by the charge and maintenance of all public buildings in the colony having to be provided for, many of which were formerly provincial charges. It is found that many of these Buildings are in a bad state of repair, and afford insufficient accommodation. For Schools alone it is estimated that £50,000 is requisite. The provision needed for Lunatic Asylums, Lighthouses, Gaols, Police, and Courthouses, is very considerable. In all, the expenditure for Public Buildings is estimated at £215,000.

COAL EXPLORATION.

During the past year, the survey of the Buller Coal Field, commenced in 1874, has been brought to a close. The existence of over 100,000,000 tons of coal has been proved of good quality, in positions which can be worked to advantage. Several leases are understood to have been issued, but up to the present time the only mine in work is that belonging to the Wellington Coal Company, who have been most energetic in opening up their mine.

At Greymouth, the Brunner Coal Mining Company have during the past three years extended their workings from 22 acres to 38 acres, with a total output during that time of 49,833 tons. The Coal Pit Heath Company have coal now in the market, and the Greymouth Company have reached the coal in their new shaft, and expect to be at work shortly.

The Green Island Collieries in Otago, which have undergone great development since the opening of the Southern Railway, have been again inspected, and it is found that, although generally speaking these are in good order, they have been hitherto carried on without any working plans, and in such a manner that not more than one-third of the coal will be mined.

In the North Island the coal of the Waikato Basin has been further examined, and from surface indications it appears probable that even a greater extent of coal exists there than has ever been calculated in the most sanguine estimates. The extent, however, can only be settled by boring. Two fresh mines in this district are now bringing coal to market—viz., Rahuipokeka (Ralph's) Mine, at Taupiri, and the Bridgewater Colliery (Foote's), near the Miranda Redoubt. In the latter case, the seam of coal is 55 feet thick, only 18 feet being at present worked.

The Wangarei and Bay of Islands coal has also been examined, and plans of the workings of these and other collieries will be published with the Geological reports this year.

INSPECTION OF MACHINERY.

There is nothing special to remark under this head. The Report of the Chief Inspector is attached, and shows that a great deal of necessary work has been done, and that the department is rather more than supported by the fees charged.

RAILWAYS OPEN FOR TRAFFIC.

This part of the subject has assumed largely increased importance during the past year. Honorable members are aware that on the Abolition of the Provinces Act taking effect, the working of the Canterbury and Otago Railways devolved upon the Government. There have also been considerable additions to the lines open for traffic during the year, as well as new lines opened, and the additional work and responsibility thrown upon the Public Works Department by these changes has been very considerable.

As the Canterbury and Otago Railways came under the charge of the Government at the busiest season of the year, it was determined not to make any immediate change in the system of working. The railways in those districts were accordingly carried on under the same system and staff as before Abolition, and this was continued up to the 30th of June last.

The House is no doubt aware that the systems of management and the tariffs were different in Otago and Canterbury, and both were also different to the system and tariff in operation on the General Government lines. We had thus three separate railway systems and scales of charges in operation on the New Zealand Railways, and the impossibility of continuing this state of things became apparent when the line from Waitaki to Moeraki was opened. Then passengers or goods travelling by the rail were subject to different tariffs on passing over the Waitaki River. The local difficulty was at once met by assimilating the charges on the Waitaki to Moeraki section to those in operation on the Canterbury lines. But with the New Zealand Railways the property of the colony, it became manifest that the rates must be equalized as nearly as possible. My predecessor had anticipated the necessity of adopting a system of uniformity for the New Zealand Railways, and appointed, during his term of office, a Commission to inquire into and report generally on their working.

The report of that Commission has been laid on the table, and the recommendations made by it have been, in the main, given effect to by the Government. Before doing so, the Government carefully considered the whole question. We recognised that the subject was large, and involved, particularly in regard to the traffic, considerations requiring technical knowledge. Upon the Commission were gentlemen who were experts in railway management, and we concluded to adopt generally the recommendations, see how they worked, and alter and amend as experience showed the necessity. We also took into consideration that these changes would be brought into operation during the least busy season of the year, when the public interests would be least affected should the new system prove unsuitable in any particular.

The subjects in which radical changes were made were in adopting a system of central audit, the rendering weekly accounts, and a uniform tariff. Several other important questions in connection with railway management were reported on by the Commissioners, and advantageously. In respect to the central audit, the system recommended has only been adopted as a tentative measure, we desire to test fairly its operation; if it is found to work disadvantageously, it is easy to revert to a more local system. Very great difference of opinion exists as to the relative advantages of weekly or monthly accounts. The weekly system is now in force. It is reported to have worked well on the Northern lines, and there has not been sufficient time as yet to test fairly its operation on the Southern Railways. With respect to the tariff, I say at once that, on the new tariff coming into force, many mistakes were represented and remedied. There are other points now under consideration, in which I believe alterations are necessary. The question of passengers' fares is also being carefully looked into. The Government believe that the tariff should be as nearly uniform as possible; but experience has already shown that there are cases in which either uniformity must be abandoned, or the traffic of the railways suffer, and the Government will not hesitate in such cases to depart from the general principle of a uniform rate. In the meantime, I have instructed the Managers of the different railways to report on the working of the tariff, and generally as to the operation of the new regulations, with the hope that, aided by the information they can afford, and assisted by the representations that are freely made by the settlers, such alterations can be effected as will meet the public requirements.

I have already laid upon the Table the Report of the Commission which sat during the recess, and inquired into the working of the Auckland Railways. The principal recommendations made by the Commission were to reduce the charges, and place more power in the hands of the local Manager. The Government concurs that it is desirable to intrust the Managers of the different railways with larger discretion than has hitherto been allowed them, and this decision is being given effect to.

The recommendation of the Auckland Commission as to the reduction of charges involves consideration of the whole question of the tariff, to which I have already referred. It must however be remembered that the Auckland Railways, in their present unfinished state, cannot be expected to show such satisfactory results as it is believed they will when further completed.

The Government has given careful consideration to the subject, and we purpose taking power during the present session to lease the Auckland–Waikato Railway, with the view of practically testing the advantages of that mode of management.

In the case of the Canterbury Railways, there was a very great increase to the traffic during the past grain season; and I regret to say that considerable inconvenience was occasioned to the settlers. The increased work thrown on the railway may be gathered from the returns of traffic during the months of March and April of the present year, and comparing them with the returns of the same months in the preceding year.

	1877. Tons.	1876. Tons.
March ...	51,017	37,465
April ...	49,068	33,839

It will be seen, therefore, that the increase of traffic was very great, and could scarcely have been foreseen by the provincial authorities, or provision to meet it would, no doubt, have been made. The General Government only assumed charge of these railways shortly before the pressure commenced, and it was then impossible to procure the increased rolling stock required to meet the traffic. Another element which added largely to the difficulties of working the lines under such pressure was the delay caused through the difference of gauge on a portion of the railway.

To provide against the recurrence of such difficulties in the future, the Government is providing a large increase of narrow gauge rolling stock, and is changing the gauge of the section from Amberley to Lyttelton to the New Zealand standard gauge. I am confidently assured that the steps being taken will enable the railway to satisfactorily perform the work that will be thrown upon it during the next grain season.

The following table gives the results of the working of the different railways that have been under the conduct of the Public Works Department during the past year; and of the Canterbury and Otago Railways for the six months since they were taken over by the Government:—

Railways	Receipts. £ s. d.	Expenditure. £ s. d.	Profit. £ s. d.	Loss. £ s. d.
Kaipara	3,778 4 5	4,296 11 6	...	518 7 1
Auckland	21,868 3 9	17,663 8 10	4,204 14 11	...
Napier	21,374 13 10	13,239 19 2	8,134 14 8	...
Wellington	11,518 18 3	9,893 19 2	1,624 19 1	...
Foxton	8,364 12 2	7,378 13 2	985 19 0	...
Wanganui	175 9 6	412 14 4	...	237 4 10
New Plymouth ...	2,641 19 1	3,271 2 2	...	629 3 1
Picton	5,731 4 5	5,165 12 1	565 12 4	...
Nelson	6,209 13 3	5,490 9 5	719 3 10	...
Westport	858 12 6	833 6 6	25 6 0	...
Brunner	7,920 11 7	4,346 19 6	3,573 12 1	...
*Christchurch }	150,316 6 11	105,677 16 2	44,638 10 9	...
Dunedin } 6 months	48,785 7 3	32,566 15 10	16,218 11 5	...
Invercargill }	21,643 11 0	14,563 9 11	7,080 1 1	...
Making a total of receipts ...	...	...	£311,187 7 11	
Expenditure	...	...	224,800 17 9	
Leaving a balance ...	...	...	...	†£86,386 10 2

The traffic returns for the present year will, without doubt, be largely in excess of last year's. Not only have we to expect an increase on the lines now open, but it must be remembered that during the present year it is proposed to complete the works now in progress in Otago, which will connect the northern and southern districts with Dunedin, and make one continuous line from Amberley to Kingston of 527 miles, exclusive of 222 miles of branch lines in the same districts. Then the railways from Auckland to Waikato, Wellington to Wairarapa, and Wanganui to Foxton are also to be completed within the same

* Oamaru accounts are included with Christchurch, the connection of the lines having necessitated their amalgamation.
† These figures will not be found to agree exactly with those given in the Financial Statement, owing to the departmental accounts for the Southern lines not having been finally adjusted at the time it was made.

period, each line opening large and important districts; and although all these lines will not be completed in time to get returns from them within the present year, yet the additional mileage that will be opened at an early date will materially add to the traffic receipts.

The returns from some of the shorter lines are not so good as could be desired, but it cannot be expected these lines will be reproductive until they are continued, so as to tap the districts they were designed to develop. Of the Northern lines, the Napier Railway is giving the most satisfactory returns, but this line is sufficiently extended to secure the traffic of a rich settled district.

With the view of giving honorable members an opportunity of comparing the rates at present charged for the carriage of goods on the New Zealand Railways with the rates formerly in operation in Canterbury and Otago, and also as compared with the rates charged on the Victorian Railways, I have had a table prepared, and it will be appended to this report. There will also be attached to the statement a table of the passenger fares charged on some English lines, on the lines of the several Australian Colonies, on the Otago and Canterbury lines under provincial management, on the New Zealand lines prior to 1st July, and of the rates at present in force. An examination of this table will show that on the whole the charges on the New Zealand Railways are reasonable.

SUMMARY OF EXPENDITURE.

The expenditure in each island on the three principal classes of works up to 30th June last was as follows:—

	£ s. d.	£ s. d.	£ s. d.
North Island.			
Railways to 30th June, 1876	1,781,017 13 8		
„ during year 1876–77	418,447 15 5		
		2,199,465 9 1	
Roads to 30th June, 1876	459,612 3 11		
„ during year 1876–77	11,547 17 7		
		471,160 1 6	
Water-races to 30th June, 1876 ...	58,612 18 3		
„ during year 1876–77 ...	7,709 1 0		
		66,321 19 3	
Total, North Island			2,736,947 9 10
South Island.			
Railways to 30th June, 1876	3,381,477 4 7		
„ during year 1876–77	548,977 17 9		
		3,930,455 2 4	
Roads to 30th June, 1876	193,955 10 10		
„ during year 1876–77	4,455 12 3		
		198,411 3 1	
Water-races to 30th June, 1876 ...	220,871 0 0		
„ during year 1876–77 ...	67,870 9 7		
		288,741 9 7	
Total, South Island			4,417,607 15 0
Total			£7,154,555 4 10

PROPOSED EXPENDITURE ON RAILWAYS.

The expenditure we propose for the current year is as follows, and the sum named for each railway includes liabilities, which amounted in the aggregate, on the 30th June, to £530,333 4s. 4d.:—

Kawakawa	£6,113
Kaipara—Puniu	142,830
Waitara—Patea	50,000
Patea—Manawatu	141,956
Napier—Manawatu	75,633
Wellington—Masterton	162,677
Nelson—Foxhill	11,083
Picton—Blenheim	29,235
Greymouth—Brunnerton	35,006
Westport—Ngakawau	38,234
Amberley—Waitaki and Northwards	182,754
Waitaki—Bluff and Branches	365,488
Winton—Kingston	39,296
Western Railways	37,587
Surveys	10,000
Land	42,208

—making a total of £1,370,100 for railways during the current year. The Government would have preferred to propose a smaller expenditure for the year, but taking into consideration that in the case of some of the most important railways the works are far advanced, and represent in their unfinished state a large unproductive expenditure, we consider it necessary to provide for their completion at as early a date as possible. We also think it requisite to push on the completion of the main line from Dunedin to Invercargill, and through to Kingston, and to advance the works on the different sections of the main trunk lines in both islands, and to provide the rolling stock and station accommodation which is necessary to secure the efficient working of the railways throughout the colony. With the exception that we undertake the completion of those branch railways in the South Island which were in course of construction by the Provincial Governments, our proposals are confined to works on the main trunk lines: we consider the colony is not in a position at present to undertake the responsibility of constructing branch lines, but must confine itself to steadily proceeding with the main trunks. We fully recognize, however, that many important districts in the colony may be immensely assisted in the development of their resources by the construction of branch or district railways, and to provide for this a District Railway Bill has been prepared, which, we believe, will enable any district that is in a position to support a railway to secure it. I purpose submitting this Bill to the House very shortly. If Parliament sanctions the works I have proposed, a very considerable increase will be added during the year to the mileage of working railways; and looking at the results of the past year, we may confidently expect a largely increased traffic, and such returns as will amply justify us in providing for the further extension of our railway system.

No. 1.—RAILWAYS, BRIDGES, PLANT, AND ROLLING STOCK.

Net Classified Expenditure to 30th June, 1877.

Lines of Railway.	Land. Cost.	Land. Expenses.	Surveys: Preliminary and Working.	Construction. Grading.	Construction. Bridges and Culverts.	Construction. Fencing.	Construction. Permanent Way New Zealand.	Construction. Permanent Way, England.	Rolling Stock. New Zealand.	Rolling Stock. England.	Workshops, Stations, and Wharves.	Engineering and Office.	Incidental.	Total Net Expenditure to 30 June, 1876.	Total Net Expenditure during Year 1876–77.	Total Net Expenditure to 30 June, 1877.	Lines of Railway.
North Island.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	North Island.
Kawakawa	...	...	553 9 1	3,022 12 0	2,281 10 11	...	3,184 18 0	10,674 3 9	679 0 1	4,042 14 10	573 12 10	1,413 12 6	34 11 7	7,901 4 10	18,559 0 9	26,460 5 7	Kawakawa.
Kaipara—Puniu	27,326 6 2	2,497 6 10	11,410 0 4	199,158 14 0	83,848 13 2	8,770 12 6	114,301 1 2	146,086 8 9	19,672 16 9	74,819 7 0	81,559 13 1	30,989 12 9	5,189 9 5	725,571 12 7	80,058 9 4	805,630 1 11	Kaipara—Puniu.
Napier—Manawatu ...	2,868 5 0	127 4 7	8,545 19 3	55,267 3 7	54,319 19 8	8,512 8 10	56,678 12 10	74,258 12 9	5,761 12 1	27,273 16 2	21,759 15 0	11,080 9 2	687 14 7	288,497 7 2	38,644 6 4	327,141 13 6	Napier—Manawatu.
Wellington—Masterton ...	16,168 17 2	992 17 1	10,651 5 10	164,256 6 7	62,228 17 1	10,313 16 4	25,934 14 9	66,655 19 11	5,356 9 9	47,516 12 4	38,337 0 7	15,717 14 4	462 4 2	328,008 19 4	136,583 16 7	464,592 15 11	Wellington—Masterton.
Waitara—Patea	7,555 16 10	744 10 8	3,251 3 4	25,957 7 5	14,720 7 10	3,098 16 2	19,164 19 8	17,768 15 3	1,502 4 0	5,431 11 2	8,864 19 1	3,625 3 11	274 6 9	82,176 18 3	29,783 3 10	111,960 2 1	Waitara—Patea.
Patea—Manawatu (with Foxton Branch)	12,068 5 8	927 15 9	14,214 0 10	107,143 18 5	82,095 2 10	16,815 10 2	42,706 15 5	117,206 19 7	6,640 13 9	24,934 5 9	15,164 7 2	16,894 18 11	1,329 1 0	344,513 9 8	113,628 5 7	458,141 15 3	Patea—Manawatu (with Foxton Branch).
Preliminary Surveys:—																	Preliminary Surveys:—
Thames—Waikato ...	...	...	509 1 1	...	...	...	...	...	...	...	...	...	...	357 5 11	151 15 2	509 1 1	Thames—Waikato.
Mercer—Cambridge ...	...	...	528 17 3	...	...	...	...	...	...	...	...	...	...	528 17 3	...	528 17 3	Mercer—Cambridge.
Cambridge—Taupo ...	...	...	346 4 1	...	...	...	...	...	...	...	...	...	...	346 4 1	...	346 4 1	Cambridge—Taupo.
Masterton—Woodville ...	...	...	205 14 3	...	...	...	...	...	...	...	...	...	...	205 14 3	...	205 14 3	Masterton—Woodville.
Tokano—Napier... ...	...	...	20 16 0	...	...	...	...	...	...	...	...	...	...	20 16 0	...	20 16 0	Tokano—Napier.
Waipukurau—Gorge ...	...	...	3,179 11 0	...	...	...	...	...	...	...	...	...	...	2,889 4 4	290 6 8	3,179 11 0	Waipukurau—Gorge.
Total Surveys, North Island, £4,790 3s. 8d.																	Total Surveys, North Island, £4,790 3s. 8d.
Total, North Island ...	65,987 10 10	5,289 14 11	53,416 2 4	554,806 2 0	299,494 11 6	47,511 4 0	261,971 1 10	432,651 0 0	39,612 16 5	184,018 7 3	166,259 7 9	79,721 11 7	7,977 7 6	1,781,017 13 8	417,699 4 3	2,198,716 17 11	Total North Island.
South Island.																	South Island.
Nelson—Foxhill	14,846 10 4	1,123 1 8	1,950 10 4	18,146 2 0	14,112 4 8	6,911 13 0	16,328 7 5	22,468 16 6	1,567 3 10	7,589 2 3	8,998 15 9	3,393 1 3	164 1 1	111,808 17 10	5,790 12 3	117,599 10 1	Nelson—Foxhill.
Picton—Blenheim ...	8,103 8 7	1,157 5 10	1,892 3 3	52,249 14 10	28,449 15 8	923 2 2	17,024 0 9	22,614 8 9	2,330 9 7	8,562 5 11	10,157 17 7	4,295 6 9	192 3 8	152,987 7 3	4,964 16 1	157,952 3 4	Picton—Blenheim.
Greymouth—Brunner ...	5,839 19 0	1,075 18 8	1,534 1 4	35,706 15 7	28,778 5 10	597 8 0	9,357 15 5	10,905 7 10	2,850 10 11	14,460 15 11	22,228 7 10	5,687 5 8	468 9 7	114,384 4 9	25,106 16 10	139,491 1 7	Greymouth—Brunner.
Westport—Ngakawau ...	1,775 0 0	2,644 3 1	4,662 13 4	49,062 17 2	12,794 19 10	117 0 0	21,185 9 7	27,832 1 9	1,104 4 11	18,397 17 5	12,687 9 9	5,056 12 1	470 3 5	103,615 5 6	54,174 6 10	157,789 12 4	Westport—Ngakawau.
Amberley—Waitaki (with Branch Lines)	37,624 9 0	5,984 1 9	11,032 19 3	100,776 5 2	244,511 13 3	40,832 11 11	216,860 2 4	288,956 14 2	12,018 14 4	105,682 14 0	90,125 12 7	33,045 10 8	3,317 16 7	1,111,974 4 7	78,795 0 5	1,190,769 5 0	Amberley—Waitaki (with Branch Lines).
Waitaki Bridge	...	...	...	...	76,099 18 4	...	...	...	...	...	...	...	...	75,820 4 5	279 13 11	76,099 18 4	Waitaki Bridge.
Waitaki—Invercargill (with Tokomairiro—Lawrence Branch).	49,258 0 10	8,151 1 7	21,690 16 6	602,014 4 6	187,823 6 1	47,520 17 5	208,571 2 11	283,576 7 4	22,450 3 5	144,853 11 5	191,160 17 3	57,259 15 8	6,237 2 4	1,534,834 10 10	295,732 16 5	1,830,567 7 3	Waitaki—Invercargill (with Tokomairiro—Lawrence Branch).
Winton—Kingston ...	440 0 0	187 9 2	2,810 4 6	36,241 16 4	6,350 1 9	2,108 17 7	41,946 2 1	73,436 13 2	2,724 18 9	25,391 7 8	5,120 17 2	5,792 5 6	693 7 8	165,010 3 7	38,233 17 9	203,244 1 4	Winton—Kingston.
Preliminary Surveys:—																	Preliminary Surveys:—
Foxhill—Brunner ...	...	...	2,872 19 1	...	...	...	...	...	...	...	...	...	...	2,872 19 1	...	2,872 19 1	Foxhill—Brunner.
Foxhill—Southwards ...	...	...	454 11 8	...	...	...	...	...	...	...	...	...	...	448 6 8	6 5 0	454 11 8	Foxhill—Southwards.
Greymouth—Christchurch...	...	...	798 0 9	...	...	...	...	...	...	...	...	...	...	798 0 9	...	798 0 9	Greymouth—Christchurch.
Hokitika—Christchurch ...	...	...	34 16 8	...	...	...	...	...	...	...	...	...	...	34 16 8	...	34 16 8	Hokitika—Christchurch.
Greymouth—Hokitika ...	...	...	2,727 19 4	...	...	...	...	...	...	...	...	...	...	2,631 5 11	96 13 5	2,727 19 4	Greymouth—Hokitika.
Greymouth—Amberley ...	...	...	4,032 18 1	...	...	...	...	...	...	...	...	...	...	...	4,032 18 1	4,032 18 1	Greymouth—Amberley.
Hokitika—Malvern ...	...	...	468 0 3	...	...	...	...	...	...	...	...	...	...	468 0 3	...	468 0 3	Hokitika—Malvern.
Hokitika Survey Office ...	...	...	1,200 0 0	...	...	...	...	...	...	...	...	...	...	550 0 0	650 0 0	1,200 0 0	Hokitika Survey Office.
Blenheim—Hurunui ...	...	...	522 2 5	...	...	...	...	...	...	...	...	...	...	347 6 5	174 16 0	522 2 5	Blenheim—Hurunui.
Oamaru—Waareka ...	...	...	493 6 9	...	...	...	...	...	...	...	...	...	...	493 6 9	...	493 6 9	Oamaru—Waareka.
Dunedin—Moeraki ...	...	...	2,175 2 4	...	...	...	...	...	...	...	...	...	...	2,175 2 4	...	2,175 2 4	Dunedin—Moeraki.
Clutha—Mataura... ...	...	...	115 9 6	...	...	...	...	...	...	...	...	...	...	115 9 6	...	115 9 6	Clutha—Mataura.
Waipahi—Cromwell ...	...	...	100 0 0	...	...	...	...	...	...	...	...	...	...	100 0 0	...	100 0 0	Waipahi—Cromwell.
Miscellaneous	...	...	7 11 6	...	...	...	...	...	...	...	...	...	...	7 11 6	...	7 11 6	Miscellaneous.
Total Surveys, South Island, £16,002 18s. 4d.																	Total Surveys, South Island, £16,002 18s. 4d.
Total South Island ...	117,887 7 9	20,323 1 9	61,576 6 10	894,197 15 7	598,920 5 5	99,011 10 1	531,273 0 6	729,790 9 6	45,046 5 9	324,937 14 7	340,479 17 11	114,528 17 7	11,543 4 4	3,381,477 4 7	508,038 13 0	3,889,515 17 7	Total, South Island.
SUMMARY.																	SUMMARY.*
Railways, North Island ...	65,987 10 10	5,289 14 11	53,416 2 4	554,806 2 0	299,494 11 6	47,511 4 0	261,971 1 10	432,651 0 0	39,612 16 5	184,018 7 3	166,259 7 9	79,721 11 7	7,977 7 6	1,781,017 13 8	417,699 4 3	2,198,716 17 11	Railways, North Island.
Railways, South Islaad ...	117,887 7 9	20,323 1 9	61,576 6 10	894,197 15 7	598,920 5 5	99,011 10 1	531,273 0 6	729,790 9 6	45,046 5 9	324,937 14 7	340,479 17 11	114,528 17 7	11,543 4 4	3,381,477 4 7	508,038 13 0	3,889,515 17 7	Railways, South Island.
Additional Land, Rolling Stock, and Stations	5,620 8 9	...	...	...	...	...	...	...	2,077 10 6	20,194 17 2	13,794 19 6	...	...	...	41,687 15 11	41,687 15 11	Additional Land, Rolling Stock, and Stations.
Totals.... ...	189,495 7 4	25,612 16 8	114,992 9 2	1,449,003 17 7	898,414 16 11	146,522 14 1	793,244 2 4	1,162,441 9 6	86,736 12 8	529,150 19 0	520,534 5 2	194,250 9 2	19,520 11 10	5,162,494 18 3	967,425 13 2	6,129,920 11 5	Totals.

* The expenditure of £41,687 15s. 11d. on Additional Land, Rolling Stock, and Stations is divided between the two Islands as follows, viz.:—North Island, £748 11s. 2d., and for South Island, £40,939 4s. 9d.; making the total expenditure on Railways for North Island, £2,199,465 9s. 1d., and for South Island, £3,930,455 2s. 4d.

No. 2.—RAILWAYS, BRIDGES, PLANT, AND ROLLING STOCK.

RETURN of Expenditure and Liabilities for Survey and Construction, to 30th June, 1877.

Lines of Railway.	Expenditure to 30th June, 1876.	Expenditure during Year 1876-77.	Total Expenditure to 30th June, 1877.	Liabilities on 30th June, 1877.	Total Expenditure and Liabilities.	Lines of Railway.
NORTH ISLAND.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	**NORTH ISLAND.**
Kawakawa	7,901 4 10	18,559 0 9	26,460 5 7	2,771 9 9	29,231 15 4	Kawakawa.
Kaipara—Puniu	725,571 12 7	80,058 9 4	805,630 1 11	74,719 1 8	880,349 3 7	Kaipara—Punui.
Napier—Manawatu	288,497 7 2	38,644 6 4	327,141 13 6	20,801 1 6	347,942 15 0	Napier—Manawatu.
Wellington—Masterton	328,008 19 4	136,583 16 7	464,592 15 11	75,039 19 7	539,632 15 6	Wellington—Masterton.
Waitara—Patea	82,176 18 3	29,783 3 10	111,960 2 1	19,576 9 5	131,536 11 6	Waitara—Patea.
Patea—Manawatu, with Foxton Branch	344,513 9 8	113,628 5 7	458,141 15 3	46,869 13 5	505,011 8 8	Patea—Manawatu, with Foxton Branch.
Preliminary Surveys.						Preliminary Surveys.
Thames—Waikato	357 5 11	151 15 2	509 1 1	114 18 2	623 19 3	Thames—Waikato.
Mercer—Cambridge	528 17 3	...	528 17 3	...	528 17 3	Mercer—Cambridge.
Cambridge Taupo	346 4 1	...	346 4 1	...	346 4 1	Cambridge—Taupo.
Masterton—Woodville	205 14 3	...	205 14 3	...	205 14 3	Masterton—Woodville.
Tokano—Napier	20 16 0	...	20 16 0	...	20 16 0	Tokano—Napier.
Waipukurau Gorge	2,889 4 4	290 6 8	3,179 11 0	...	3,179 11 0	Waipukurau Gorge.
Totals, North Island	1,781,017 13 8	417,699 4 3	2,198,716 17 11	239,892 13 6	2,438,609 11 5	Totals, North Island.
SOUTH ISLAND.						**SOUTH ISLAND.**
Nelson—Foxhill	111,808 17 10	5,790 12 3	117,599 10 1	1,586 9 5	119,185 19 6	Nelson—Foxhill.
Picton—Blenheim	152,987 7 3	4,964 16 1	157,952 3 4	1,533 7 6	159,485 10 10	Picton—Blenheim.
Greymouth—Brunner	114,384 4 9	25,106 16 10	139,491 1 7	13,386 10 5	152,877 12 0	Greymouth—Brunner.
Westport—Ngakawau	103,615 5 6	54,174 6 10	157,789 12 4	29,158 15 0	186,948 7 4	Westport—Ngakawau.
Amberley—Waitaki, with Branch Lines	1,111,974 4 7	78,795 0 5	1,190,769 5 0	21,850 14 7	1,212,619 19 7	Amberley—Waitaki, with Branch Lines.
Waitaki Bridge	75,820 4 5	279 13 11	76,099 18 4	143 5 3	76,243 3 7	Waitaki Bridge.
Waitaki—Invercargill, with Tokomaiririro—Lawrence	1,534,834 10 10	295,732 16 5	1,830,567 7 3	168,192 0 0	1,998,759 7 3	Waitaki—Invercargill with Tokomaiririro—Lawrence.
Winton—Kingston	165,010 3 7	38,233 17 9	203,244 1 4	15,978 11 0	219,222 12 4	Winton—Kingston.
Preliminary Surveys.						Preliminary Surveys.
Foxhill—Brunner	2,872 19 1	...	2,872 19 1	...	2,872 19 1	Foxhill—Brunner.
Foxhill—Southwards	448 6 8	6 5 0	454 11 8	...	454 11 8	Foxhill—Southwards.
Greymouth—Christchurch	798 0 9	...	798 0 9	...	798 0 9	Greymouth—Christchurch.
Hokitika—Christchurch	34 16 8	...	34 16 8	...	34 16 8	Hokitika—Christchurch.
Greymouth—Hokitika	2,631 5 11	96 13 5	2,727 19 4	43 14 0	2,771 13 4	Greymouth—Hokitika.
Greymouth—Amberley	...	4,032 18 1	4,032 18 1	3,420 9 6	7,453 7 7	Greymouth—Amberley.
Hokitika—Malvern	468 0 3	...	468 0 3	...	468 0 3	Hokitika—Malvern.
Hokitika Survey Office	550 0 0	650 0 0	1,200 0 0	...	1,200 0 0	Hokitika Survey Office.
Blenheim—Hurunui	347 6 5	174 16 0	522 2 5	...	522 2 5	Blenheim—Hurunui.
Oamaru—Waareka	493 6 9	...	493 6 9	...	493 6 9	Oamaru—Waareka.
Dunedin—Moeraki	2,175 2 4	...	2,175 2 4	...	2,175 2 4	Dunedin—Moeraki.
Clutha—Mataura	115 9 6	...	115 9 6	...	115 9 6	Clutha—Mataura.
Waipahi—Cromwell	100 0 0	...	100 0 0	...	100 0 0	Waipahi—Cromwell.
Miscellaneous	7 11 6	...	7 11 6	...	7 11 6	Miscellaneous.
Totals, South Island	3,381,477 4 7	508,038 13 0	3,889,515 17 7	255,293 16 8	4,144,809 14 3	Totals, South Island.
SUMMARY.						**SUMMARY.**
North Island	1,781,017 13 8	417,699 4 3	2,198,716 17 11	239,892 13 6	2,438,609 11 5	North Island.
South Island	3,381,477 4 7	508,038 13 0	3,889,515 17 7	255,293 16 8	4,144,809 14 3	South Island.
Totals	*5,162,494 18 3	925,737 17 3	6,088,232 15 6	495,186 10 2	6,583,419 5 8	Totals.
General.						**General.**
Additional Land	...	5,620 8 9	5,620 8 9	...	5,620 8 9	Additional Land.
„ Rolling Stock	...	22,272 7 8	22,272 7 8	31,252 15 5	53,525 3 1	„ Rolling Stock.
„ Stations	...	13,794 19 6	13,794 19 6	3,893 18 9	17,688 18 3	„ Stations.
	*5,162,494 18 3	967,425 13 2	6,129,920 11 5	530,333 4 4	6,660,253 15 9	

*This amount is less by £52,523 2s. 1d. than the total in Statement No. 9 of last year. The portion for material, &c., has been apportioned in this year's expenditure to the Railways to which it belonged, and the remainder has been credited in like manner.

No. 3.—ROADS—NORTH ISLAND.

RETURN of Expenditure and Liabilities for Survey and Construction to 30th June, 1877.

Locality.	No. of Miles Constructed or in Progress.	Expenditure. 1869–76.	Expenditure. 1876–77.	Expenditure. Total.	Liabilities on Contracts, 30th June, 1877.	Total Expenditure and Liabilities.	No. of Miles Constructed or in Progress.	Locality.
Auckland Provincial District.	Mls. chs.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	Mls. chs.	Auckland Provincial District.
Bay of Islands	166 40	33,088 16 9	25 0 0	33,113 16 9	...	33,113 16 9	166 40	Bay of Islands.
North of Auckland	362 20	14,293. 0 9	3,814 9 9	18,107 10 6	289 14 9	18,397 5 3	362 20	North of Auckland.
Mangere Bridge	...	15,486 7 8	...	15,486 7 8	...	15,486 7 8	...	Mangere Bridge.
Thames	20 0	75 2 9	...	75 2 9	...	75 2 9	20 0	Thames.
Waikato	34 40	16,515 18 7	68 0 0	16,583 18 7	...	16,583 18 7	34 40	Waikato.
Bay of Plenty	474 0	67,210 8 10	2,790 11 7	70,001 0 5	3,526 1 3	73,527 1 8	474 0	Bay of Plenty.
Poverty Bay	243 0	14,882 6 11	1,061 19 4	15,944 6 3	482 12 0	16,426 18 3	243 0	Poverty Bay.
Taupo	47 0	9,273 4 5	...	9,273 4 5	...	9,273 4 5	47 0	Taupo.
Total	1,347 20	170,825 6 8	7,760 0 8	178,585 7 4	4,298 8 0	182,883 15 4	1,347 20	Total.
Hawke's Bay Provincial District.								Hawke's Bay Provincial District.
Napier	30 0	23,826 0 3	...	23,826 0 3	11 16 3	23,837 16 6	30 0	Napier.
Seventy-Mile Bush	37 40	45,750 18 2	...	45,750 18 2	...	45,750 18 2	37 40	Seventy-Mile Bush.
Wairoa	43 0	1,138 8 2	73 19 6	1,212 7 8	41 9 6	1,253 17 2	43 0	Wairoa.
Total	110 40	70,715 6 7	73 19 6	70,789 6 1	53 5 9	70,842 11 10	110 40	Total.
Taranaki Provincial District.								Taranaki Provincial District.
New Plymouth—Inland	7 40	3,481 11 3	279 6 0	3,760 17 3	...	3,760 17 3	7 40	New Plymouth—Inland.
Hawera—Waitara	52 0	13,225 19 0	681 7 6	13,907 6 6	...	13,907 6 6	52 0	Hawera—Waitara.
Wai-iti—Patea	126 0	58,553 6 9	13 0 0	58,566 6 9	...	58,566 6 9	126 0	Wai-iti—Patea.
Total	185 40	75,260 17 0	973 13 6	76,234 10 6	...	76,234 10 6	185 40	Total.
Wellington Provincial District.								Wellington Provincial District.
Patea—Wanganui	38 0	36,246 5 4	...	36,246 5 4	...	36,246 5 4	38 0	Patea—Wanganui.
Wanganui—Taupo	34 40	5,156 2 2	...	5,156 2 2	...	5,156 2 2	34 40	Wanganui—Taupo.
Manawatu	46 0	44,296 0 11	96 18 1	44,392 19 0	130 0 0	44,522 19 0	46 0	Manawatu.
Opaki—Manawatu Gorge	46 0	55,074 13 10	2,643 5 10	57,717 19 8	913 0 0	58,630 19 8	46 0	Opaki—Manawatu Gorge.
Hutt—Lowry Bay	...	290 0 0	...	290 0 0	...	290 0 0	...	Hutt—Lowry Bay.
Total	164 40	141,063 2 3	2,740 3 11	143,803 6 2	1,043 0 0	144,846 6 2	164 40	Total.
SUMMARY.								SUMMARY.
Auckland Provincial District ...	1,347 20	170,825 6 8	7,760 0 8	178,585 7 4	4,298 8 0	182,883 15 4	1,347 20	Auckland Provincial District.
Hawke's Bay „ „ ...	110 40	70,715 6 7	73 19 6	70,789 6 1	53 5 9	70,842 11 10	110 40	Hawke's Bay „ „
Taranaki „ „ ...	185 40	75,260 17 0	973 13 6	76,234 10 6	...	76,234 10 6	185 40	Taranaki „ „
Wellington „ „ ...	164 40	141,063 2 3	2,740 3 11	143,803 6 2	1,043 0 0	144,846 6 2	164 40	Wellington „ „
Unapportionable, Tools, &c. ...	...	1,732 18 6	...	1,732 18 6	...	1,732 18 6	...	Unapportionable, Tools, &c.
Recoveries	...	14 12 11	...	14 12 11	...	14 12 11	...	Recoveries.
Total Net Expenditure...	1,807 60	459,612 3 11	11,547 17 7	471,160 1 6	5,394 13 9	476,554 15 3	1,807 60	Total Net Expenditure.

Note.—The total expenditure to 30th June, 1876, in this table is less than the total to the same date in Table No. 3, Public Works Statement, 1876. The difference is accounted for by the following items having been deducted—viz., the cost of the Manawatu Tramway, £30,880 9s. 8d., which has been transferred to the Railway; recoveries amounting to £1,045 11s. 9d.; and certain sums, amounting to £97 19s. 8d., otherwise charged.

No. 4.—ROADS IN NATIVE DISTRICTS.

NORTH ISLAND.

RETURN of EXPENDITURE and LIABILITIES for Repairs and Maintenance, 1st July, 1876, to 30th June, 1877.

	£ s. d.	£ s. d.	£ s. d.
Amount Allocated (Vote 51)	...	...	10,000 0 0
Expenditure—1st July, 1876, to 30th June, 1877:—			
Waikato District	...	93 16 3	
Bay of Plenty District	...	2,145 4 5	
Poverty Bay District	...	954 13 2	
Napier District	...	655 11 2	
Taupo Disrrict	...	36 17 2	
Manawatu District	...	839 12 3	
Opaki Gorge	...	704 2 11	
Patea-Wai-iti District	...	1,271 17 6	
Wanganui District	...	321 9 5	
		7,023 4 3	
Liabilities on 30th June, 1877:—			
Waikato District	35 0 0		
Bay of Plenty District	1,096 10 2		
Poverty Bay District	631 15 1		
Napier District	814 19 10		
Wairoa District	92 7 11		
Manawatu District	7 7 3		
Wanganui District	11 4 0		
Patea-Wai-iti District	555 16 4		
		3,245 0 7	
			10,268 4 10
Balance Dr.	...	...	268 4 10

No. 5.—ROADS—MIDDLE ISLAND.

RETURN of Expenditure and Liabilities for Survey and Construction to 30th June, 1877.

Lines of Road.	Miles Completed and in course of Completion.	Expenditure. 1870–76.	Expenditure. 1876–77.	Expenditure. Total.	Liabilities on Contracts, 30th June, 1877.	Total Expenditure and Liabilities.	Miles Completed and in course of Completion.	Lines of Road.
NELSON SOUTH-WEST GOLD FIELDS.	Mls. chs.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	Mls. chs.	NELSON SOUTH-WEST GOLD FIELDS.
Buller—Arnould	52 23	52,340 15 2	300 0 0	52,640 15 2	4,300 0 0	56,940 15 2	52 23	Buller—Arnould.
Main Road—Boatman's	4 13	844 10 0	...	844 10 0	...	844 10 0	4 13	Main Road—Boatman's.
Westport—Lyell	36 51	7,273 13 10	...	7,273 13 10	...	7,273 13 10	36 51	Westport—Lyell.
Ahaura—Amuri	49 53	5,269 16 3	938 13 6	6,208 9 9	11 6 6	6,219 16 3	49 53	Ahaura—Amuri.
Nile Bridge	...	1,092 1 4	23 15 0	1,115 16 4	...	1,115 16 4	...	Nile Bridge.
Takaka Valley	...	906 14 9	772 8 0	1,679 2 9	384 14 3	2,063 17 0	...	Takaka Valley.
Collingwood Quartz Range	...	0 12 6	435 14 4	436 6 10	64 5 8	500 12 6	...	Collingwood Quartz Range.
	142 60	67,728 3 10	2,470 10 10	70,198 14 8	4,760 6 5	74,959 1 1	142 60	
WESTLAND PROVINCIAL DISTRICT.								WESTLAND PROVINCIAL DIST'CT.
Greymouth—Arnould	7 19	4,749 14 4	308 7 1	5,058 1 5	91 19 8	5,150 1 1	7 19	Greymouth—Arnould.
Greymouth—Okarito	81 30	75,795 13 4	613 5 10	76,408 19 2	2,160 11 6	78,569 10 8	81 30	Greymouth—Okarito.
South Creek—Main Line	0 37	281 17 6	...	281 17 6	...	281 17 6	0 37	South Creek—Main Line.
Junction Line	4 65	3,923 9 5	...	3,923 9 5	...	3,923 9 5	4 65	Junction Line.
Greenstone—Lake Brunner	8 4	2,756 5 6	...	2,756 5 6	...	2,756 5 6	8 4	Greenstone—Lake Brunner.
Marsden—Maori Creek	5 50	2,538 3 0	...	2,538 3 0	...	2,538 3 0	5 50	Marsden—Maori Creek.
Marsden—Paroa	0 77	798 8 0	...	798 8 0	...	798 8 0	0 77	Marsden—Paroa.
Still Water—Maori Gully	6 15	1,869 2 0	...	1,869 2 0	...	1,869 2 0	6 15	Still Water—Maori Gully.
Kanieri Forks—Kanieri Lakes ...	4 54	1,578 1 0	...	1,578 1 0	...	1,578 1 0	4 54	Kanieri Forks—Kanieri Lakes.
Hokitika—Blue Spur	4 46	2,520 3 5	...	2,520 3 5	...	2,520 3 5	4 46	Hokitika—Blue Spur.
Kanieri Bridge	0 4	489 15 0	...	489 15 0	...	489 15 0	0 4	Kanieri Bridge.
Waimea Bridge	...	207 12 6	...	207 12 6	...	207 12 6	...	Waimea Bridge.
Westland, General	...	2,197 11 2	209 6 8	2,406 17 10	185 8 4	2,592 6 2	...	Westland, General.
	124 1	99,705 16 2	1,130 19 7	100,836 15 9	2,437 19 6	103,274 15 3	124 1	
Hokitika—Christchurch	11 14	26,521 10 10	854 1 10	27,375 12 8	114 3 4	27,489 16 0	11 14	Hokitika—Christchurch.
(Note.—Exclusive of £2,190 authorized under section 35 of "Financial Arrangements Act, 1876.")								
SUMMARY.								SUMMARY.
Nelson South-West Gold Fields ...	142 60	67,728 3 10	2,470 10 10	70,198 14 8	4,760 6 5	74,959 1 1	142 60	Nelson South-West Gold Fields.
Westland Provincial District ...	124 1	99,705 16 2	1,130 19 7	100,836 15 9	2,437 19 6	103,274 15 3	124 1	Westland Provincial District.
Hokitika—Christchurch	11 14	26,521 10 10	854 1 10	27,375 12 8	114 3 4	27,489 16 0	11 14	Hokitika—Christchurch.
	277 75	193,955 10 10	4,455 12 3	198,411 3 1	7,312 9 3	205,723 12 4	277 75	

Note.—The total to the 30th June, 1876, in this Table differs from the total to the same date in Table No. 7 of Public Works Statement, 1876. The difference is accounted for by the following items—viz. £577 8s. 4d. added having been previously charged by Treasury to Westland Roads, but by Public Works Department to Departmental, and two sums deducted—£1,020 9s. 5d. charged by Treasury to Railways, and £253 Recoveries.

No. 6.—ROLLING STOCK AND PLANT.

PARTICULARS of Rolling Stock Ordered to 30th June, 1877.

	Locomotives.																Carriages.									Brakes.			Trucks.						Wagons, etc.			
		Fairlies.				Bogies.											1st Class.			Composite.			2nd Class														
	Fell.	23 tons. 9-in. cyl. 8 wheels.	24 tons. 9-in. cyl. 8 wheels.	23 tons. 10-in. cyl. 4 whls. Dbl. Bogie.	25 tons. 10½-in. cyl. 8 wheels.	American 12-in. cyl. 4 wheels, coupled.	17 tons. 10½-in. cyl. 4 wheels, coupled.	12 tons. 9½-in. cyl. 4 wheels, coupled.	25 tons. 14-in. cyl. 6 wheels, coupled.	23 tons. 13-in. cyl. 6 wheels, coupled.	17 tons. 10½-in. cyl. 6 wheels, coupled.	12 tons. 8-in. cyl. 6 wheels, coupled.	12 tons. 9½-in. cyl. 4 wheels, coupled.	10 tons. 8½-in. cyl. 4 wheels, coupled.	10 tons. 8-in. cyl. 4 wheels, coupled.	8 tons. 8-in. cyl. 4 wheels, coupled.	6-in. cylinder. 4 wheels, coupled. Vert. boiler.	6 wheels.	4 wheels.	4 wheel Saloon.	6 wheels.	4 wheels.	4 wheel Cross-seated.	6 wheels.	4 wheels.	4 wheel Saloon.	Fell.	Passenger.	Goods.	Platform, Coal.	Carriage.	Timber.	Cattle.	Sheep.	Horse Boxes.	Covered Goods.	High Side.	Low Side.	Iron Hopper, Mineral.
Total	4	1	1	6	2	2	14	11	6	4	49	2	16	1	1	17	1	37	14	7	82	42	20	102	56	6	2	37	67	31	2	160	91	140	47	288	1035	676	382

PARTICULARS of Rolling Stock Received up to 30th June, 1877.

Kawakawa Section ...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	25	...	2	...	...	...	1	3	...	...
Kaipara „ ...	...	...	...	1	...	...	...	1	...	...	...	...	1	...	...	...	...	1	1	...	1	2	...	2	3	...	...	...	2	...	...	12	2	8	...	8	21	15	...
Auckland „ ...	...	1	...	...	...	...	...	...	...	...	9	...	...	...	...	...	...	5	3	...	7	10	...	8	8	...	...	5	9	...	...	28	10	4	10	28	88	48	50
Napier „ ...	...	...	...	...	...	...	...	1	...	...	2	...	3	...	...	...	...	1	1	...	5	2	...	5	5	...	...	2	4	...	...	...	2	4	2	3	64	38	...
Wellington „ ...	4	...	...	1	...	...	...	2	...	...	...	...	2	...	...	...	...	1	1	...	2	8	...	2	4	...	2	2	4	...	...	12	4	4	4	17	28	21	...
Foxton „ ...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	...	2	...	...	...	...	3	2	...	2	7	...	...	...	3	...	...	10	2	4	2	12	30	18	...
Wanganui „ ...	...	...	...	1	...	...	...	...	...	...	2	...	...	...	...	...	...	1	1	...	1	2	...	4	2	...	...	1	2	...	...	...	2	4	3	13	15	15	...
New Plymouth „ ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	2	...	...	5	...	...	2	...	...	...	...	...	...	...	...	4	4	6	...
Greymouth „ ...	...	...	...	...	...	...	...	...	...	...	2	...	...	1	1	...	...	...	...	...	...	2	...	...	2	...	...	...	2	...	...	...	...	...	...	...	7	8	62
Westport „ ...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	1	...	...	...	...	...	2	...	...	...	2	...	...	...	...	...	...	...	15	...	88
Nelson „ ...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	2	...	1	2	...	...	2	...	...	...	2	...	...	4	2	2	...	...	10	10	...
Picton „ ...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	1	...	2	...	...	1	1	...	...	2	...	...	...	6	1	2	...	3	6	20	...
Christchurch „ ...	...	...	...	...	...	...	4	...	6	...	9	2	1	1	...	12	1	13	1	...	28	10	...	40	10	...	...	8	20	...	2	20	29	50	12	106	402	40	50
Dunedin „ ...	...	...	1	3	2	...	...	...	...	...	11	...	1	...	...	...	...	8	...	6	18	...	20	17	...	6	...	6	6	...	...	20	15	32	6	24	163	110	112
Invercargill „ ...	...	...	...	...	...	...	...	1	...	4	10	...	1	...	...	...	...	7	2	...	14	...	...	21	4	...	...	9	2	...	...	40	15	20	2	49	36	123	20
Total	4	1	1	6	2	...	4	7	6	4	48	2	16	1	1	17	1	37	14	6	82	42	20	102	56	6	2	37	59	25	2	154	84	134	41	268	892	472	382

No. 6.—ROLLING STOCK AND PLANT—*continued.*

SCHEDULE of Various Classes of Permanent-way Material.

ORDERS.

Lines.	Order. Memo.	Order. Date.	Miles.	Weight per yard.	Rails.	Fang Bolts.	Spikes.	Sole Plates.	Steel Joints.	Fish Plates.	Bolts and Nuts.	Wood Keys.	Chairs.	Points and Crossings.
					Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	No.	Tons.	Sets.
Manawatu Tramway ...	27/71	Sept. 2/71	3	25 lb.	121	...	4	...	...	...	...	...	...	2
Canterbury Branch Lines	11/72	Jan. 20/72	20	30 lb.	944	...	29	...	34	...	...	...	...	10
Ditto	78/72	June 8/72	92	„	4,340	...	132	...	155	...	...	...	...	30
Ditto	63/75	Aug. 31/75	...	„	...	...	...	...	20	...	...	...	...	...
Picton–Blenheim ...	24/72	Jan. 23/72	12	„	566	...	17	...	20	...	...	...	...	...
			124	...	5,850	...	178	...	229	...	...	...	...	40
Addington–Rangiora ...	...	Mar. 2/71	6	70 lb.	767	...	28	...	...	39	...	28,581	274	...
Ditto ...	...	...	13	„	1,438	...	48	...	3	54	14	70,269	431	30
			19	...	2,205	...	76	...	3	93	14	98,850	705	30
Rangiora–Kowai ...	138/73	Jan. 18/73	14	56 lb.	1,252	26	18	...	...	48	13	...	...	10
Selwyn–Rakaia ...	9/71	Mar. 15/71	13	„	1,144	58	28	74	...	54	...	...	...	...
Auckland	...	...	6½	„	1,372	and fastenings		...	...	...	...	...	...	41
Kawakawa ...	...	...	3	„	268	„	„	...	...	...	...	...	...	...
			36½	...	...	...	...	...	...	...	...	...	...	51
To be Delivered at—														
Wellington ...	59/74	Sept. 26/74	89	52 lb.	7,500	92	128	...	...	244	69	...	...	...
Ditto ...	61/74	Sept. 30/74	...	„	...	...	...	...	...	...	...	...	...	80
Ditto ...	27/76	June 1/76	5	„	410	...	7	...	...	15	4	...	...	...
Ditto ...	32/76	June 29/76	...	„	...	...	...	...	...	...	...	...	...	80
* Ditto ...	44/76	Aug. 25/76	1	Steel.	82	...	...	...	...	...	...	...	...	...
* Ditto ...	64/76	Oct. 20/76	29½	52 lb.	2,419	29	40	...	...	90	24	...	...	...
Auckland	27/76	June 1/76	6	„	492	...	8	...	...	17	5	...	...	...
Ditto ...	32/76	June 29/76	...	„	...	...	...	...	...	...	...	...	...	20
Port Chalmers ...	59/74	Sept. 26/74	11	„	1,000	11	16	...	...	29¾	8½	...	...	...
Ditto ...	61/74	Sept. 30/74	...	„	...	...	...	...	...	...	...	...	...	50
Ditto ...	27/76	June 1/76	28½	„	2,337	...	39	...	...	86	23	...	...	...
Ditto ...	40/77	May 4/77	5	„	410	6	7	...	...	15	4	...	...	...
*The Bluff... ...	27/76	June 1/76	9	„	738	...	12	...	...	26	7	...	...	...
Wellington, colonial make	77/2121	May 14/77	...	...	...	...	...	...	...	...	...	...	...	10
			184	...	15,388	138	267	...	...	522¾	144½	...	...	240
Wellington–Masterton (Summit Incline)	30/74	May 2/74	3	Steel. 70 lb.	596	and fastenings		...	...	...	...	...	...	...

ORDERS UNEXECUTED.

Lines.	Port of Delivery.	Order. Memo.	Order. Date.	Miles.	Weight per Yard.	Rails.	Fang Bolts.	Spikes.	Fish Plates.	Fish Bolts.	Steel Joints.	Points and Crossings.
			1876.		lbs.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Sets.
Kaipara–Puniu	Auckland ...	27/76	June 1	24	40	1,509	...	38	...	...	56	...
„	„ ...	64/76	Oct. 20	5	40	315	5	7	...	...	12	...
Takapau Southward	„ ...	64/76	Oct. 20	7	40	441	7	10	...	...	18	...
Wellington–Masterton	Wellington ...	44/76	Aug. 22	1	52	†82	...	...	...	...	...	...
„	„ ...	44/76	Aug. 22	1	40	†63	...	...	...	...	...	...
„	„ ...	64/76	Oct. 20	29½	52	2,419	29	40	90	24	...	...
„	„ ...	64/76	Oct. 20	5	40	315	5	7	...	...	12	...
Waitara–Patea	„ ...	27/76	June 1	10	40	629	...	16	...	...	23	...
			1877.									
„	Colonial make	77/2121	May 14	...	52	...	...	...	...	...	...	10
			1876.									
Brunner–Greymouth	Wellington ...	64/76	Oct. 20	2	40	126	2	3	...	...	5	...
Nelson–Foxhill	„ ...	27/76	June 1	1	40	63	...	2	...	...	3	...
Picton–Blenheim	„ ...	27/76	June 1	¾	40	47	...	1¼	...	...	2¼	...
Waitaki–Invercargill	Dunedin ...	27/76	June 1	28½	52	2,337	...	39	86	23	...	...
„	„ ...	40/77	May 4/77	5	52	410	6	7	15	4	...	...
Waitaki–Invercargill	The Bluff ...	27/76	June 1/76	9	52	738	...	12	26	7	...	...
			1877.									
Western Railways, Otago	Colonial make	77/2121	May 14	...	40	...	...	...	...	...	...	40
„	Dunedin ...	58/77	June 30	...	...	...	...	25	...	...	...	...
Kaiapoi–Eyreton	Colonial make	77/2993	June 30	...	40	...	...	...	...	...	...	10
Total to arrive, 52-lb. material				...	...	5,986	35	98	217	58	...	10
„ „ 40-lb. „				...	...	3,508	19	109¼	...	...	131¼	50

* Orders not yet completed. † Steel.

No. 6.—ROLLING STOCK AND PLANT—*continued.*

SCHEDULE of 40lb. PERMANENT WAY MATERIAL.

ORDERS.

Lines.	Order. Memo.	Order. Date.	Miles.	Rails.	Fang Bolts.	Spikes.	Sole Plates.	Top Clips.	Steel Joints.	Points and Crossings.
				Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Sets.
*Auckland–Kaipara	27/76	June 1/76	24	1,509	...	38	...	...	56	...
Kaipara–Riverhead... ...	28/73	June 2/73	18	1,132	44	21	47	33	47	10
Auckland–Mercer	53/71	Nov. 25/71	10	629	25	12	26	19	26	...
Ditto	123/72	Oct. 25/72	25	1,572	61	30	65	46	65	...
Ditto	129/72	Nov. 23/72	...	...	...	...	...	...	...	25
Mercer–Newcastle	1/74	Jan. 10/74	25	1,572	61	30	65	46	65	20
*Auckland–Puniu	64/76	Oct. 20/76	5	315	5	7	...	...	12	...
Waitara–New Plymouth ...	24/72	Jan. 23/72	10	629	25	12	26	19	26	...
Ditto ...	28/73	June 2/73	2	126	5	3	5	4	5	...
*Waitara–Patea	27/76	June 1/76	10	629	...	16	...	...	23	...
Wellington–Masterton ...	53/71	Nov. 25/71	10	629	25	12	26	19	26	...
Ditto ...	24/72	Jan. 23/72	11	692	27	13	29	20	29	...
Ditto ...	129/72	Nov. 23/72	...	...	...	...	...	...	...	25
Napier–Waipukurau ...	24/72	Jan. 23/72	12	754	30	15	31	22	31	...
Ditto ...	28/73	June 2/73	35	2,200	85	42	91	65	91	20
*Takapau Southward ...	64/76	Oct. 20/76	7	441	7	10	...	...	18	...
Manawatu–Wanganui ...	28/73	June 2/73	15	943	37	18	39	28	39	10
Ditto ...	1/74	Jan. 10/74	15	943	37	18	39	28	39	10
Westport–Mount Rochfort ...	1/74	Jan. 10/72	40	1,257	50	24	51	38	51	10
Brunner–Greymouth ...	53/71	Nov. 25/71	8	503	20	10	21	15	21	...
* Ditto ...	64/76	Oct. 20/76	2	126	2	3	...	...	3	...
Nelson–Foxhill	138/73	Jan. 18/73	21	1,321	51	25	55	39	55	12
* Ditto	27/76	June 1/76	1	63	...	2	...	...	3	...
*Picton–Blenheim	27/76	June 1/76	0¾	47	...	1¼	...	...	2¼	...
Ditto	53/71	Nov. 25/71	12	754	30	15	31	22	31	...
Ditto	53/71	Nov. 25/71	3†	188	8	4	8	6	8	...
Ditto	28/73	June 2/73	8	503	20	9	22	15	22	10
Rakaia–Timaru	24/72	Jan. 23/72	15	943	37	18	39	28	39	...
Ditto	123/72	Oct. 25/72	30	1,886	74	36	78	56	78	...
Ditto	129/72	Nov. 23/72	...	...	...	...	...	...	...	25
Ditto	28/73	June 2/73	20	1,258	49	24	52	37	52	40
Waitaki–Moeraki	28/73	June 2/73	41	2,578	100	46	105	77	105	20
Moeraki–Dunedin	1/74	Jan. 10/74	25	1,572	62	30	65	46	65	20
Dunedin–Clutha	68/71	May 27/71	6	377	15	7	15	11	15	10
Ditto	26/71	Aug. 31/71	10	629	24	12	26	19	26	10
Ditto	53/71	Nov. 25/71	3†	188	8	4	8	6	8	...
Ditto	123/72	Oct. 25/72	25	1,572	62	30	65	46	65	...
Ditto	129/72	Nov. 23/72	...	...	...	...	...	...	...	25
Clutha–Mataura	1/74	Jan. 10/74	25	1,572	62	30	65	46	65	10
Tokomairiro–Lawrence	28/73	June 2/73	23	1,447	56	25	59	44	59	40
Invercargill–Mataura ...	53/71	Nov. 25/71	12	754	30	15	31	22	31	...
Ditto	28/73	June 2/73	28	1,741	68	33	73	52	72	...
Winton–Kingston	28/73	June 2/73	23	1,447	56	25	59	44	59	30
Ditto	1/74	Jan. 10/74	27	1,698	67	32	70	51	70	10
TO BE DELIVERED AT—										
Auckland	59/74	Feb. 26/74	60	3,975	63	87	...	...	138	...
The Bluff	59/74	Feb. 26/74	62	4,025	64	89	...	...	142	...
Lyttelton	60/74	Sept. 28/74	45½	3,000	48	67	...	...	105	...
Auckland	61/74	Sept. 30/74	...	...	...	...	...	...	...	30
Wellington	61/74	Sept. 30/74	...	...	...	...	...	...	...	30
Lyttelton	61/74	Sept. 30/74	...	...	...	...	...	...	...	60
Port Chalmers	61/74	Sept. 30/74	...	...	...	...	...	...	...	30
The Bluff	61/74	Sept. 30/74	...	...	...	...	...	...	...	50
Auckland	12/76	Mar. 10/76	...	...	...	27	...	...	...	...
Lyttelton	12/76	Mar. 10/76	...	...	...	9½	...	...	...	...
Port Chalmers	12/76	Mar. 10/76	...	...	...	7	...	...	...	...
The Bluff	12/76	Mar. 10/76	...	...	...	16½	...	...	...	...
Auckland	32/76	June 29/76	...	...	...	...	...	...	...	75
Wellington	32/76	June 29/76	...	...	...	...	...	...	...	35
* Ditto	44/76	Aug. 25/76	1†	63	...	...	...	...	...	...
* Ditto	64/76	Oct. 20/76	5	315	5	7	...	...	12	...
Colonial Made	...	...	...	...	...	...	...	...	...	343
Ditto	...	Aug. 1/76	...	...	...	...	...	...	...	51
* Ditto (Western Railways)	77/2121	May 14/77	...	...	...	...	...	...	...	40
* Ditto (Kaiapoi–Eyreton)	77/2993	June 30/77	...	...	...	...	...	...	...	10
*Dunedin (Western Railways)	58/77	June 30/77	...	...	...	25	...	...	...	...
	...	...	796¼	50,517	1,606	1,119¼	1,487	1,069	1,900¼	1,146

* Orders not yet completed. † Steel.

No. 7.—WATER-RACES.

RETURN showing Expenditure and Liabilities for Survey and Construction of, and Subsidies for, Water Races on Gold Fields, to 30th June, 1877.

Locality and Name of Company.	Distance.		Expenditure.					Liabilities.			Total Expenditure and Liabilities.	Locality and Name of Company.
			Survey and Construction, 1870–76.	Subsidies, 1870–76.	Survey and Construction, 1876–77.	Subsidies, 1876–77.	Totals.	Contracts.	Subsidies.	Totals.		
	Ml.	Ch.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	
NORTH ISLAND.												NORTH ISLAND.
Auckland Provincial District:—												Auckland Provincial District:—
Thames	11	70	58,612 18 3	...	7,709 1 0	...	66,321 19 3	365 5 4	...	365 5 4	*66,687 4 7	Thames.
SOUTH ISLAND.												SOUTH ISLAND.
Westland Provincial District:—												Westland Provincial District:—
Hohonu	4	65	3 7 0	1,955 12 1	...	...	1,958 19 1	...	...	...	1,958 19 1	Hohonu.
Hibernian	4	36	9 13 2	1,992 14 8	2 12 6	...	2,005 0 4	...	...	...	2,005 0 4	Hibernian.
New River	4	52	18 12 6	3,496 0 3	2 12 6	...	3,517 5 3	...	1,497 9 9	1,497 9 9	5,014 15 0	New River.
Waimea	15	75	97,721 4 1	...	20,239 7 2	...	117,960 11 3	19,827 11 1	...	19,827 11 1	137,788 2 4	Waimea.
Mikonui	15	0	1,376 18 5	...	349 7 0	...	1,726 5 5	285 4 0	...	285 4 0	2,011 9 5	Mikonui.
Kanieri	...	...	1 5 6	10,310 18 4	...	...	10,312 3 10	...	...	...	10,312 3 10	Kanieri.
Nelson Provincial District:												Nelson Provincial District:—
Nelson Creek	19	15	32,951 9 8	...	33,234 19 4	...	66,186 9 0	17,383 15 4	...	17,383 15 4	83,570 4 4	Nelson Creek.
Napoleon Hill	47	40	257 16 7	...	...	...	257 16 7	...	...	...	257 16 7	Napoleon Hill.
Charleston, Four-Mile ...	...	...	98 8 0	...	17 12 0	...	116 0 0	...	...	...	116 0 0	Charleston, Four-Mile.
Otago Provincial District:—												Otago Provincial District:—
Mount Ida	64	44	49,554 8 3	...	9,292 5 11	...	58,846 14 2	715 0 0	...	715 0 0	59,561 14 2	Mount Ida.
Arrow	3	30	...	612 10 0	...	...	612 10 0	...	...	...	612 10 0	Arrow.
Beaumont and Tuapeka ...	60	...	...	640 0 0	...	...	640 0 0	...	1,360 0 0	1,360 0 0	2,000 0 0	Beaumont and Tuapeka.
Carrick Range	17	20	...	3,540 9 1	...	4,102 8 3	7,642 17 4	...	1 5 0	1 5 0	7,644 2 4	Carrick Range.
Waipori	...	...	11,263 1 0	...	...	...	11,263 1 0	...	...	...	11,263 1 0	Waipori.
Mount Pisgah	...	...	...	200 0 0	...	...	200 0 0	...	800 0 0	800 0 0	1,000 0 0	Mount Pisgah.
Departmental:—												Departmental:—
Salaries, Travelling, Advertising, &c.	...	...	4,866 11 5	...	629 4 11	...	5,495 16 4	291 13 4	...	291 13 4	5,787 9 8	Salaries, Travelling, Advertising, &c.
Total	...	...	256,735 13 10	22,748 4 5	71,477 2 4	4,102 8 3	355,063 8 10	38,868 9 1	3,658 14 9	42,527 3 10	397,590 12 8	Total.

* Credit—Unused Ironwork, £4,800.

Note.—The total to the 30th June, 1876, on this Table, is less than the total to same date in Table No. 12, Public Works Statement, 1876, £1,435 7s. 10d., for recoveries, having been deducted.

RETURN showing the Amount of Subsidies, Payments of Interest on Sums Advanced, Refunds, &c.

—	Subsidy.	Payments on Subsidy.	Balance.	Payments of Interest.	Amount of Subsidy refunded.	—
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	
Hohonu	2,494 12 11	2,494 12 11	...	271 16 9	547 1 4	Hohonu.
Hibernian	2,000 0 0	2,000 0 0	...	443 11 5	...	Hibernian.
New River	5,000 0 0	3,502 10 3	1,497 9 9	639 14 8	...	New River.
Kanieri	10,560 18 4	10,560 18 4	...	560 18 4	...	Kanieri.
Arrow	612 10 0	612 10 0	...	139 8 6	...	Arrow.
Beaumont and Tuapeka ...	2,000 0 0	640 0 0	1,360 0 0	...	...	Beaumont and Tuapeka.
Carrick Range	7,618 0 7	7,616 15 8	1 5 0	338 19 2	...	Carrick Range.
Mount Pisgah	1,000 0 0	200 0 0	800 0 0	3 10 0	...	Mount Pisgah.
	31,286 1 10	27,627 7 2	3,658 14 9	2,397 18 10	547 1 4	

No. 8.—COAL MINES.

RETURN of EXPENDITURE and LIABILITIES for PROSPECTING and DEVELOPING, to 30th June, 1877.

PROVINCIAL DISTRICT.	EXPENDITURE.			LIABILITIES.	TOTALS.	PROVINCIAL DISTRICTS.
	Prospecting and Developing.		TOTALS.			
	1871–76.	1876–77.				
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	
AUCKLAND	1,252 8 11	316 3 11	1,568 12 10	48 6 1	1,616 18 11	AUCKLAND.
NELSON	6,472 10 4	968 10 4	7,441 0 8	...	7,441 0 8	NELSON.
WESTLAND	610 4 3	52 0 0	662 4 3	3 10 0	665 14 3	WESTLAND.
CANTERBURY	245 8 2	...	245 8 2	...	245 8 2	CANTERBURY.
OTAGO	320 19 9	...	320 19 9	...	320 19 9	OTAGO.
GENERAL EXPENSES	22 3 0	...	22 3 0	...	22 3 0	GENERAL EXPENSES.
TOTALS	8,923 14 5	1,336 14 3	10,260 8 8	51 16 1	10,312 4 9	TOTALS.

NOTE.—The total to the 30th June, 1876, in this table, is less than the total to the same date on Return No. 13, Public Works Statement, 1876, £16 16s. 1d. for recoveries having been deducted.

No. 9.—TELEGRAPH EXTENSION.

RETURN showing the AMOUNT EXPENDED for TELEGRAPH PURPOSES out of the IMMIGRATION and PUBLIC WORKS LOAN, from the 1st July, 1876, to the 30th June, 1877.

No. of Miles of Poles.	No. of Miles of Wire.	Locality.	Amount.
			£ s. d.
28	50	Reefton to Westport	2,931 3 5
48	98	Hawera to New Plymouth, *vid* Mount Egmont	3,837 4 4
12	12	Palmerston North to Feilding	440 8 9
16	16	Waiwera Line from Warkworth	1,720 10 2
		Second Cook Strait Cable, including freight from London, cost of laying, and demurrage of ship "Zealandia" (52½ miles)	13,248 6 8
		Five miles spare No. 1 Cook Strait Cable (including freight from London, &c.)	2,822 4 3
			24,999 17 7
		New Stations, also sundry material lying in stock, and expenditure on lines in course of construction, not yet brought to charge	8,224 17 5
105	176		33,224 15 0

SUMMARY of TELEGRAPHIC EXPENDITURE out of IMMIGRATION and PUBLIC WORKS LOAN, to 30th June, 1877.

Period.	Miles.		Amount.
	Poles.	Wire.	
			£ s. d.
Total to 30th June, 1876	1,813	4,528	233,245 2 8
From 1st July, 1876, to 30th June, 1877	105	176	33,224 15 0
Total	1,918	4,704	266,469 17 8

No. 10.—PUBLIC BUILDINGS.

RETURN of EXPENDITURE and LIABILITIES on the 30th June, 1877.

—	Expenditure to 30th June, 1876.	Expenditure for Year ending 30th June, 1877.	Total Expenditure, 30th June, 1877.	Liabilities.	Total Expenditure and Liabilities, 30th June, 1877.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Judicial	10,080 17 6	5,075 15 2	15,156 12 8	3,123 0 0	18,279 12 8
Postal and Telegraphic... ...	35,814 11 7	17,388 13 4	53,203 4 11	6,265 0 0	59,468 4 11
Customs	1,167 12 3	290 0 0	1,457 12 3	...	1,457 12 3
Offices for Public Departments ...	78,269 3 3	20,546 2 11	98,815 6 2	26,600 0 0	125,415 6 2
Miscellaneous	9,826 9 7	8 12 9	9,835 2 4	...	9,835 2 4
Totals	135,158 14 2	43,309 4 2	178,467 18 4	35,988 0 0	214,455 18 4

No. 11.—PUBLIC WORKS.

Total Expenditure and Liabilities, 30th June, 1877.

As per Return No.	—	Expenditure to 30th June, 1876.	Expenditure during Year ending 30th June, 1877.	Total Expenditure to 30th June, 1877.	Liabilities on 30th June, 1877, extending over a period of years.	Total Expenditure and Liabilities.	—
		£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	
5	Railways, Bridges, Plant, and Rolling Stock ...	5,162,494 18 3	967,425 13 2	6,129,920 11 5	530,333 4 4	6,660,253 15 9	Railways, Bridges, Plant, and Rolling Stock.
1	Roads—Norsh Island	459,612 3 11	11,547 17 7	471,160 1 6	5,394 13 9	476,554 15 3	Roads—North Island.
3	Roads—Middle Island	193,955 10 10	4,455 12 3	198,411 3 1	7,312 9 3	205,723 12 4	Roads—Middle Island.
	Payments to Provinces and Road Boards ...	225,000 0 0	...	225,000 0 0	...	225,000 0 0	Payments to Provinces and Road Board.
7	Water Supply on Gold Fields	279,483 18 3	75,579 10 7	355,063 8 10	42,527 3 10	397,590 12 8	Water Supply on Gold Fields.
	Aiding Works on Thames Gold Field	39,908 0 0	10,092 0 0	50,000 0 0	...	50,000 0 0	Aiding Works on Thames Gold Fields.
8	Coal Exploration and Mine Development ...	8,923 14 5	1,336 14 3	10,260 8 8	51 16 1	10,312 4 9	Coal Exploration and Mine Development.
9	Telegraph Extension	233,245 2 8	33,224 15 0	266,469 17 8	8,200 0 0	274,669 17 8	Telegraph Extension.
10	Public Buildings	135,158 14 2	43,309 4 2	178,467 18 4	35,988 0 0	214,455 18 4	Public Buildings.
	Lighthouses	26,982 8 11	26,379 18 5	53,362 7 4	12,905 0 0	66,267 7 4	Lighthouses.
	Departmental	82,052 4 10	17,049 13 6	99,101 18 4	...	99,101 18 4	Departmental.
	Totals	6,846,816 16 3	1,190,400 18 11	8,037,217 15 2	642,712 7 3	8,679,930 2 5	Totals.
2	Maintenance of Roads in Native districts under Vote 51, Defence Loan	...	7,023 4 3	7,023 4 3	3,245 0 7	10,268 4 10	Maintenance of Roads in Native districts under Vote 51, Defence Loan.
	Totals	6,846,816 16 3	1,197,424 3 2	8,044,240 19 5	645,957 7 10	8,690,198 7 3	Totals.

No. 12.—COMPARISON BETWEEN OLD AND NEW FREIGHTS ON GOODS.

COMPARATIVE STATEMENT of the Cost of Freight on Goods on the New Zealand Railways at the New Rates, on the Victorian Railways, and at the Old Rates on the Otago Railways, Canterbury Main Line, Canterbury (including Lyttelton Line), and Wellington Line.

—	New Zealand Railways (New).	Victorian.	Otago.	Christchurch Main Line.	Christchurch (including Lyttelton Line).	Wellington.	New Zealand Railways (New).	Victorian.	Otago.	Christchurch Main Line.	Christchurch (including Lyttelton Line).	Wellington.	New Zealand Railways (New).	Victorian.	Otago.	Christchurch Main Line.	Christchurch (including Lyttelton Line).	Wellington.	New Zealand Railways (New).	Victorian.	Otago.	Christchurch Main Line.	Christchurch (including Lyttelton Line).	Wellington.	New Zealand Railways New).	Victorian.	Otago.	Christchurch Main Line.	Christchurch (including Lyttelton Line).	Wellington.
	10 Miles.						20 Miles.						50 Miles.						100 Miles.						120 Miles.					
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Drapery ... per ton	7 6	5 10	5 10	5 10	9 4	5 6	12 6	11 8	11 8	8 4	11 10	8 0	27 6	29 2	29 2	15 10	19 4	15 6	48 4	58 4	58 4	24 2	26 8	28 0	55 0	70 0	70 0	27 6	30 0	33 0
Woollen Goods „	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Agricultural Implements „	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sugar ... „	6 8	5 0	...	...	...	...	10 10	10 0	...	...	...	...	23 4	25 0	...	...	...	...	40 0	50 0	...	...	...	...	45 0	60 0	...	...	...	...
Earthenware „	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Beer, in casks „	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Zinc, in casks „	5 10	4 2	...	...	...	...	9 2	8 4	...	...	...	...	19 2	20 10	...	...	...	...	31 8	41 8	...	...	...	...	35 0	50 0	...	...	...	...
Cement ... „	...	3 4	...	...	...	...	...	6 8	...	...	...	...	...	16 8	...	...	...	...	...	33 4	...	...	...	...	...	40 0	...	...	...	...
Tallow, in cases „	...	4 0	...	...	...	...	...	6 0	...	...	...	...	...	13 6	...	...	...	...	...	26 0	...	...	...	...	...	31 0	...	...	...	...
Grindstones „	5 0	3 4	...	...	...	...	7 6	6 8	...	...	...	...	15 2	16 8	...	...	...	...	23 4	33 4	...	...	...	...	25 10	40 0	...	...	...	...
Sulphur ... „	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Salt ... „	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Fire Bricks ... „	...	...	...	4 4	7 4	...	...	...	...	6 4	9 4	...	...	...	...	11 11	14 11	...	...	...	...	18 3	20 5	...	...	...	...	20 8	22 10	...
Grain ... „	4 7	3 0	3 4	...	...	4 8	6 8	3 0	6 8	...	...	6 4	12 11	6 6	16 8	...	...	11 4	19 2	12 3	33 4	...	...	19 8	21 8	15 2	40 0	...	...	23 0
Flour ... „	...	3 0	...	...	...	...	...	3 0	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Minerals ... per truck	8 4	15 0	16 8	21 8	36 8	23 4	16 8	15 0	31 3	31 8	46 8	31 8	41 8	32 3	60 5	59 7	74 7	56 8	72 11	63 6	102 1	91 3	102 1	98 4	85 5	76 0	118 11	103 4	114 2	115 0
Posts and Rails „	10 0	10 0	10 0	13 0	22 0	14 0	20 0	12 6	20 0	19 0	28 0	19 0	50 0	20 10	50 0	35 9	44 9	34 0	100 0	41 8	100 0	54 9	61 3	59 0	120 0	50 0	120 0	62 0	68 6	69 0
Firewood ... „	8 4	...	...	...	...	...	16 8	...	...	...	...	...	41 8	...	...	...	...	...	72 11	...	...	...	...	...	85 5	...	...	...	...	...
Sawn Timber per 100 ft	0 8	1 2	0 6	0 11	1 8	0 11	0 10	1 2	0 10	1 5	2 2	1 2	2 1	2 6	2 1	2 8	3 5	2 0	4 2	3 11	4 2	4 4	4 11	3 5	5 0	4 6	5 0	4 7	5 2	3 11
Wool ... per bale	0 10	0 8	{ 1 6 / 2 0 }	1 5	2 5	1 5	1 8	1 4	{ 1 6 / 2 0 }	2 2	3 2	2 3	4 2	3 4	{ 3 2 / 4 2 }	4 0	5 0	4 9	7 10	6 8	{ 6 3 / 8 4 }	6 1	6 10	3 11	9 1	8 0	{ 7 6 / 10 0 }	6 11	7 8	10 7
Sheep† ... per truck	10 0	*	15 0	10 0	10 0	10 2	12 6	*	25 0	10 8	10 8	14 4	27 6	*	55 0	20 0	20 0	26 10	52 6	*	105 0	36 8	36 8	43 8	62 6	*	125 0	43 4	43 4	56 0
Cattle ... per head	3 6	*	*	3 6	3 6	3 6	4 4	*	*	4 4	4 4	4 4	6 10	*	*	6 10	6 10	6 10	11 0	*	*	11 0	11 0	11 0	12 8	*	*	12 8	12 8	12 8

* Sheep and Cattle—Victorian rates not available; Dunedin rates not published.
† New Zealand New Rates compared on rate for two-floored truck; one-floor only taken.

Minerals.
New Zealand Railways (New Rates)—Consignor loads and unloads.
Victorian Railways—Railway Department loads and unloads.
Otago Railways—Consignor loads and unloads.
Canterbury Railways—Railway Department loads and unloads.
Wellington Railways—Railway Department loads and unloads.

Posts and Rails.
New Zealand Railways (New Rates)—Consignor loads and unloads.
Victorian Railways—Consignor loads and unloads.
Otago Railways—Consignor loads and unloads.
Canterbury Railways—Railway Department loads and unloads.
Wellington Railways—Railway Department loads and unloads.

Sawn Timber.
New Zealand Railways (New Rates)—Consignor loads and unloads.
Victorian Railways—Consignor unloads.
Otago Railways—Consignor loads and unloads.
Canterbury Railways—Railway Department loads and unloads.
Wellington Railways—Railway Department loads and unloads.

No. 13.—COMPARISON BETWEEN OLD AND NEW PASSENGER FARES.

STATEMENT showing COMPARISON between the various OLD and NEW PASSENGER FARES on the New Zealand Railways and some of the English Lines.

	1st Class.	2nd Class.
Peterborough to Manea (Great Eastern Railway) 20 miles	4/2	3/4
New Zealand Northern Railways, old fares (easy grades), corresponding distance ...	4/5	2/9
Otago Railways „ (uniform) „ „ ...	5/-	3/4
Canterbury Railways „ „ „ „ ...	4/-	2/8
New Zealand Railways, new fares „ „ „ ...	5/-	3/4
Grantham to Boston (G.N.R.), 32 miles	6/-	4/6
New Zealand Northern Railways, old fares (easy grades), corresponding distance ...	6/11	4/3
Otago Railways „ (uniform) „ „ ...	8/-	5/4
Canterbury Railways „ „ „ „ ...	7/-	4/6
New Zealand Railways, new fares „ „ „ ...	8/-	5/4
Caermarthen to Aberystwith, 53¾ miles...	12/5	8/3
New Zealand Railways, old fares (easy grades), corresponding distance	11/11	7/3
Otago Railways „ (uniform) „ „	14/-	9/4
Canterbury Railways „ „ „ „	12/9	8/4
New Zealand Railways, new fares „ „ „	14/-	9/4

COMPARISON of Passenger Fares on Colonial Railways, estimated for Fifty Miles.

	For Fifty Miles.			
	Single.		Return.	
	1st Class.	2nd Class.	1st Class.	2nd Class.
Queensland, level lines	12/6	8/4	18/9	12/6
South Australia	12/6	9/5	18/9	14/2
New South Wales, level lines	10/5	8/4	15/8	12/6
„ „ heavy grades	15/10	13/-	23/9	19/6
Tasmania, main line	12/6	8/4	18/9	12/6
*Victoria	8/4	5/7	16/8	11/2
New Zealand Northern Lines, old rates, level lines	10/8	6/6	16/-	9/9
„ „ „ „ heavy grades ...	12/9	8/7	19/2	12/11
Otago Lines „ uniform	12/6	8/4	18/9	12/6
Canterbury Lines „ „	11/5	7/7	16/1	11/5
New Zealand Railways, new rates „	12/6	8/4	18/9	12/6

* Single tickets only are issued.

APPENDICES TO THE PUBLIC WORKS STATEMENT, 1877.

APPENDIX A.

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

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

Sir,— Public Works Office, Wellington, 18th July, 1877.

I have the honor to submit the following annual report on work done in railway construction during the past financial year :—

The expenditure on railways up to the 30th June, 1871, was	...	...	...	£12,160
During the year ending 30th June, 1872, it was	...	...	...	205,057
„ „ 1873 „	...	...	...	604,323
„ „ 1874 „	...	...	...	1,049,465
„ „ 1875 „	...	...	...	1,691,356
„ „ 1876 „	...	...	...	1,600,133
„ „ 1877 „	...	...	...	967,426
Total expenditure to 30th June, 1877	...	...	...	£6,129,920

This sum is subdivided thus—

North Island	...	...	...	£2,199,465
South Island	...	...	...	3,930,455
Total	...	...	...	£6,129,920

Contracts have been entered into and other liabilities incurred to the extent of £530,333, apportioned as follows :—

North Island	...	...	...	£240,082
South Island	...	...	...	290,251
Total	...	...	...	£530,333

The whole of this liability will have to be met during the present year, and a further sum of £809,766 will be required to carry on the works, including the purchase of land, which you have indicated to me as those to be done during the same period. This gives a total to be expended during the year of £1,340,099.

The following table shows the lengths of railway opened for traffic and under construction, including the Provincial railways, which, by "The Abolition of Provinces Act," have come under the charge of the Colonial Government :—

Name of Railway.	Expended to 30th June, 1877.	To be spent, 1877-78.	Total Estimated Cost on 30th June, 1877.	Total Length authorized.	Open for Traffic.	To be opened during 1877-78.	Will not be finished by 30th June, 1878.
North Island.				Mls. chs.	Mls. chs.	Mls. chs.	Mls. chs.
Kawakawa	...	...	...	8 19	2 68	...	5 31
Kaipara—Puniu	...	...	...	142 40	61 15	51 65	29 40
Napier—Manawatu	...	...	...	64 1	58 36	5 45	...
Wellington—Masterton ...	...	...	...	68 39	19 44	24 75	24 0
Waitara—Patea, North ...	...	...	...	33 33	11 13	13 40	8 60
Patea—Manawatu, North ...	...	...	...	9 31	...	9 31	...
„ „ Central ...	...	...	...	86 10	{ 20 26	} 26 59	...
„ „ South ...	...	...	...	...	{ 39 5	} ...	...
Total, North Island ...	...	...	...	412 13	212 47	131 75	67 51
South Island.							
Nelson—Foxhill	...	...	...	20 11	19 10	1 1	...
Westport—Ngakawau ...	...	...	...	19 19	10 0	9 19	...
Picton—Blenheim	...	...	...	18 52	17 10	1 42	...
Greymouth—Brunnerton ...	...	...	...	7 50	7 50	...	...
Amberley—Waitaki and Branches—							
General Government Lines ...	...	...	...	249 21	249 21	...	...
Provincial Government Lines	...	...	...	54 37	54 37	...	...
Waitaki to Bluff and Branches—							
General Government Lines ...	...	...	...	323 63	214 7	109 56	...
Provincial Government Lines	...	...	...	122 19	76 0	20 73	25 26
Total, South Island ...	...	...	...	815 32	647 55	142 31	25 26
Summary of Length.							
North Island	...	...	...	412 13	212 47	131 75	67 51
South Island	...	...	...	815 32	647 55	142 31	25 26
Total	...	...	...	1,227 45	860 22	274 26	92 77

—	Expenditure to 30th June, 1877.	Debit Transfers.	Credit Transfers.	Net Expenditure to 30th June, 1877.	To be spent during 1877-78.	Estimated Cost to 30th June, 1878.
	£	£	£	£	£	£
Kawakawa	26,460	...	7,161	19,299	6,113	25,412
Kaipara—Puniu	805,774	6,925	9,246	803,453	142,830	946,283
Napier	327,149	...	1,302	325,847	75,633	401,480
Wellington—Masterton ...	464,778	...	12,194	452,584	162,677	615,261
Waitara—Patea	111,961	4,605	294	116,272	50,000	166,272
Patea—Manawatu	458,552	...	1,842	456,710	141,956	598,666
Surveys	4,790	...	...	4,790	...	4,790
Total North Island ...	2,199,464	11,530	32,039	2,178,955	579,209	2,758,164
Nelson—Foxhill	117,600	...	272	117,328	11,083	128,411
Picton—Blenheim	158,004	...	401	157,603	29,235	186,838
Greymouth—Brunner ...	139,519	...	739	138,780	35,006	173,786
Westport—Ngakawau ...	157,791	...	380	157,411	38,234	195,645
Amberley—Waitaki ...	1,199,862	...	58,248	1,141,614	121,680	1,263,294
Waitaki Bridge	76,100	...	...	76,100	144	76,244
Waitaki—Invercargill ...	1,861,682	...	53,382	1,808,300	343,813	2,152,113
Winton—Kingston	203,608	...	1,504	202,104	39,296	241,400
Sundries	286	...	...	286	...	286
Total General Government Lines	3,914,452	...	114,926	3,799,526	618,491	4,418,017
Lyttelton to Selwyn ...	656,635	47,965	...	704,600	54,430	*759,030
Albury Branch	75,124	3,448	...	78,572	6,500	85,072
Awamoko Branch	37,500	1,033	...	38,533	5,766	44,299
Waiareka Branch	58,009	4,914	...	62,923	10,449	73,372
Green Island Branch ...	12,829	6,678	...	19,507	1,785	21,292
Outram Branch	29,691	2,604	...	32,295	3,675	35,970
Bluff to Winton	174,196	10,794	...	184,990	...	184,990
Western Railways	60,297	18,501	...	78,798	37,587	116,385
Total Provincial Government Lines	†1,104,281	95,937	...	1,200,218	120,192	1,320,410
Main Lines	3,914,452	...	114,926	3,799,526	618,491	4,418,017
Provincial Lines	1,104,281	95,937	...	1,200,218	120,192	1,320,410
Total South Island ...	5,018,733	95,937	114,926	4,999,744	738,683	5,738,427
Surveys	16,003	...	...	16,003	10,000	26,003
Land (Suspense)	...	...	...	...	42,208	42,208
SUMMARY OF COST.						
North Island	2,199,464	11,530	32,039	2,178,955	579,209	2,758,164
South Island	5,018,733	95,937	114,926	4,999,744	738,683	5,738,427
Surveys	16,003	...	...	16,003	10,000	26,003
Land (Suspense)	...	...	...	...	42,208	42,208
Totals	7,234,200	107,467	146,965	7,194,702	1,370,100	8,564,802

As it may be interesting to note the rate at which the several lines have been completed, I attach a short table showing the lengths opened from year to year, including the provincial lines.

	Miles Opened during Financial Year.						Total.
	Up to 30th June, 1872.	1872-73.	1873-74.	1874-75.	1875-76.	1876-77.	
North Island...	...	...	10 62	60 67	76 65	64 13	212 47
South Island...	58 51	22 42	11 11	127 43	243 64	184 04	647 55
Total	58 51	22 42	21 73	188 30	320 49	248 17	860 22

* This sum will be reduced by the proceeds of the sale of broad-gauge rolling stock. The mount is, however, not easily estimated.

† The expenditure to 30th June, 1877, is based on the valuations of the several lines made in accordance with "The Financial Arrangements Act, 1876."

NORTH ISLAND.

Kawakawa Railway.

The railway purchased from the Coal Company has during the year been renewed, changed in gauge, and provided with proper rolling stock. It is unfortunately liable to heavy floods, which rose last year 10 feet above rail level. The cost of raising the rails above the reach of floods would be too great, and the inconvenience caused by stopping traffic for a few days is less than that of discharging coal from the great height to which the rails would have to be raised.

In order to reduce the expense of renewing the ballast after every flood, about 15 chains of open bridge work is required, at a cost of £2,500.

Kaipara-Puniu Railway.

Kaipara to Riverhead Section.—Contracts have been let for a new terminal station at the Kaipara River, which will reduce the cost of landing goods from the shipping to the trucks and *vice versâ*. The contract time for the completion of the work is February, 1878.

Riverhead to Auckland Section.—Ten miles from Auckland have just been commenced; the remaining 11 miles are to be let as soon as the surveys are completed. Great delay has taken place in beginning this work, principally owing to the wish of the residents to have the route of the railway altered from that originally proposed. Owing to this delay, and to the transfer to other lines of rolling stock and rails, the expenditure for the year on the whole line has fallen short of the appropriation by £110,500.

Auckland to Mercer Section.—It is proposed during the present year to generally enlarge and improve the station and workshops at Auckland.

Mercer to Newcastle Section.—The contract time for completion of the works of this section is the end of August, and the line will probably be opened by that date. The Contractor has carried on his work in a vigorous and workmanlike manner throughout.

The Waikato Bridge, consisting of 3 spans of 120 feet each, is completed. The deflection, when loaded, was less than half an inch.

Newcastle to Ohaupo Section.—The formation is finished, and, as soon as the line is completed to Newcastle, plate-laying will be commenced.

Ohaupo to Te Awamutu Section.—The surveys are completed, and it is intended to call for tenders without delay.

Napier-Manawatu Railway.

Thirty miles were opened during the year, bringing the line to Takapau. Thence to Kopua, a distance of 5 miles 65 chains, is under contract, and is expected to be opened by October.

South of Kopua the line crosses several very large ravines, the bridges of which will be expensive. It is proposed to go on with the erection of these, but no part of the line can be completed before next June. Immigrant labour is being employed on this section.

Wellington-Masterton Railway.

A contract for plate-laying 4½ miles from the Upper Hutt is in progress. When finished, bricks and other materials for lining the tunnel at 24 miles 30 chains may be carried up by rail, and the tunnel completed, when a further section of plate-laying may be begun.

The country is so rough and inaccessible that materials can be carried only by railway. Unfortunately all attempts at brick making have failed, and it is found that the whole of the tunnels will require lining. This has caused further delay. By using all possible expedition, the line to Featherston may be completed during the financial year, and it is proposed to go on with the formation towards Masterton, so that it may be ready by the time rails can be brought to Featherston over the line.

Waitara-Patea Railway.

The rails are being laid from Sentry Hill to Inglewood, and formation is in progress to Mangamawhete, a distance of 13½ miles southwards from the Sentry Hill Station of the Waitara and New Plymouth Section. It is proposed during the year to complete this section, and to continue the formation southwards for a few miles; immigrant labour being principally employed.

Patea-Manawatu Railway.

Kai Iwi-Wanganui River Section.—The formation of this section is finished, and it is proposed to lay the rails and open the line during the financial year. It is also proposed to go on steadily with the works northwards.

Wanganui Bridge, consisting of five spans of 120 feet each, is finished. The deflection when loaded was less than half an inch. As in the case of the Waikato Bridge, the workmanship of this bridge is all that could be desired.

Wanganui Town Branch.—It is proposed to construct a branch line from the bridge to the town of Wanganui, and eventually to reclaim sufficient land from the river for a permanent station ground. In the meantime a temporary station will be made in Churton Street. A contract for the branch has been entered into.

Wanganui River to Foxton.—The whole of the work on this section will be completed during the financial year, and uninterrupted railway communication between Wanganui and Foxton established.

SOUTH ISLAND.

The table of mileage above given shows that the whole of the lines in the South Island authorized to be built will be completed by next June, except 25 miles, comprising the Otautau and Orepuki Provincial Branch Lines.

Nelson-Foxhill Railway.

This line has been opened for traffic throughout the past year, except the extension to the port. The local authorities having demanded that the railway works shall be so designed as to increase the width of the existing road, the vote given last year would be insufficient to complete the works. I do not think the construction of the extension will much increase the traffic of the line.

It is proposed to erect a small workshop here so that wheels may be turned up, and other ordinary repairs effected.

Westport-Ngakawau Railway.

Ten miles are completed, and the remainder very nearly so, except the coal staiths at Westport, which are, however, so far advanced that coal traffic might be at once carried on.

This line has been constructed solely for the purpose of opening up the extensive coal mines lying between Westport and the Ngakawau River, but the lessees have not yet done much to open out their several mines. The Wellington Coal Company have made a beginning, and it is hoped that they will do a large trade; but none of the other companies have done anything beyond surveys and estimates.

I am afraid the railway will be nearly idle for a year or two, but it must eventually pay a good dividend on its cost.

A small workshop is required as at Nelson.

Picton-Blenheim Railway.

It is proposed to complete the line into the town of Blenheim, and, if means will allow, to extend it southwards.

Greymouth-Brunnerton Railway.

A small workshop, and some additions to station accommodation, are the only new works required.

Contracts have been entered into for part of the proposed river protection and harbour works, but the amount of work actually done is as yet small. It is proposed to continue these during the present year.

Amberley-Waitaki Railway and Branches.

The whole of this line is now open for traffic except the Eyreton extension, and the only new works proposed are—changing the gauge of the section from Lyttelton to Amberley to the New Zealand standard gauge of 3 feet 6 inches, painting the bridges, and giving further station accommodation.

As the change of gauge will throw the whole of the broad-gauge rolling stock out of use, an order has been sent to England for 300 wagons to be sent out at once. Eight locomotives will also be required to replace the nine broad-gauge engines now in use.

It is also proposed to improve the line near the Waimakariri River, so as to prevent the continual stoppages of traffic hitherto caused by floods, and to secure the Waimakariri Bridge, which is liable to scour.

Waitaki-Invercargill, and Branches.

Waitaki to Moeraki Section.—Further station accommodation, and completion of the timber work to prevent slips, are the only works required.

Moeraki to Palmerston Sections (Kartigi Contract).—The contract date for completion is January, 1878, but the contractors are falling somewhat behind time.

Waikouaiti Section (9 miles 47 chains).—This work has been carried on by day labour, and will be completed in time for the plate-laying to go on as soon as rails can be conveyed by railway from Port Chalmers.

Waikouaiti and Port Chalmers.—The whole of this work will be completed by January, 1878.

The station at Port Chalmers is so cramped and inconvenient that an enlargement is necessary, and I think a sum of £10,000 should be appropriated for immediate requirements.

Port Chalmers to Clutha.—More station accommodation, and the enlargement of the workshops at Dunedin, are the only works proposed for the year.

Clutha Bridge.—Consists of seven spans of 120 feet each, and will be completed in October or November.

Clutha Bridge to Balclutha.—A contract for this section, including the station at Balclutha, has been let, and will be ready about the same time as the bridge.

Balclutha to Clinton.—Four miles of this section will be kept for the "unemployed" of Dunedin. The rest will be let by tender, the plans and specifications being now nearly ready. The work is to be let, so as to be completed by the end of the financial year.

Clinton to Waipahi.—Plate-laying in progress. Other work is finished.

Waipahi to Invercargill.—Open for public traffic. Some further station accommodation will be required, which is included in the estimate of work for the year.

Winton-Kingston Railway.

From Winton to Lowther (36 miles 60 chains) is open for public traffic, and the whole line, including the station at Kingston, will be finished by the end of the financial year.

Provincial Railways.

Lyttelton to Christchurch.—The gauge of this section will be changed from 5 feet 3 inches to 3 feet 6 inches, and the station at the termini re-arranged and enlarged. This, with the alteration of the gauge of the Northern section from Christchurch to Amberley, will greatly facilitate the working of the railway. The break of gauge has shown itself in New Zealand, as elsewhere, to be an intolerable hindrance to rapid and economical working.

The following rolling stock will be rendered unserviceable by the change, but can probably be sold at fair prices:—9 locomotives, 287 wagons, 22 carriages, 2 break vans.

The stock to replace them will have to be provided, and an order for 300 narrow-gauge wagons, has been telegraphed to England.

The stations at Christchurch and Lyttelton will have to be rearranged and enlarged, as they are at present not suited for the traffic.

Complaints have been made of the insufficiency of the rolling stock to do the traffic in the grain season, but the real difficulty has been the inability of the consignees to take delivery of the grain when brought to Lyttelton. If the storage sheds at Lyttleton were large enough to hold the harvest of the year, the railway could easily bring the grain to the sheds. At present, however, the consignees cannot take delivery, and the railway wagons have been used as stores.

Albury Branch was constructed by the Timaru and Gladstone Board of Works, and open for traffic at the beginning of the year. A few weeks afterwards a severe flood occurred, which so seriously injured the line that traffic has not yet been resumed over 7 miles out of a total length of 16½.

Marewhenua Branch.—Constructed by the Province of Otago. The permanent way of this and other Otago branch lines is very light, the sleepers being only 3 inches thick, but as the gradients are good, and light engines can therefore be used, it will be perhaps sufficiently strong for some time. The only new works proposed are an engine shed and loading bank, with the necessary sidings.

Waiareka Branch.—The permament way of this line is of the same description as that above mentioned, the rails weighing 28 lbs. per yard. As the gradients are very severe, a heavier class of engine is required than on the Marewhenua branch, and the permanent way is too light. Mr. Conyers recommends the substitution of 40-lb. rails and the ordinary sleepers used in New Zealand. I fully concur in this recommendation, and suggest that as soon as possible it be carried out. The rails taken up may be used for renewals on other lines where 28 or 30 lb. rails are in use.

Some further station accommodation will also be required.

Western Railways.—Wallacetown, 11 miles 74 chains; Otautau, 17 miles, 22 chains. Tenders have been invited for the former of these lines, which will be completed in March next. The permanent-way materials for the latter cannot be brought on to the line until the former is completed. A number of sleepers of New Zealand timber only 3 inches thick have been supplied for these lines, but I do not consider it safe to run engines on such weak sleepers, and have therefore recommended the use of 5 inch sleepers, which has been approved. Rolling stock for these lines is required, but sufficient for present purposes has been ordered.

Rolling Stock for Provincial Railways.—The Provincial Government of Canterbury supplied sufficient rolling stock for the lines constructed by them, except passenger carriages and brake vans, of which the supply is short, but the Otago Government have made scarcely any provision for furnishing their lines. A sum of £133,000 will be required to stock the several provincial lines, and to replace the broad-gauge stock thrown out of use by the alteration of gauge. I estimate, however, that £73,100 only need be spent this year, as the balance may be supplied from the stock furnished by the General Government for their lines.

Water-races.

I append a very full and clear report from Mr. O'Connor, District Engineer, on the water-races on the West Coast of the South Island, which fully describes the present state of those works.

The only race in the North Island (that at the Thames) is completed, except the distribution to the batteries, which it is proposed to put in hand at once.

Provincial Works.

When the Abolition of Provinces Act came into force, there were several works under construction by the Provincial Government of Canterbury, which were transferred to the Public Works Department; but as the accounts have been paid through the late Provincial Auditor, I have not the same knowledge of the cost as I should have had if they had passed in the ordinary way through this office.

Waimakariri Gorge Bridge consists of three spans of 125, 110, and 95 feet respectively. It is formed of iron plate-girders, and is designed of sufficient strength to carry a railway, although at present it will be used only for road traffic.

Delay in the completion of this work was caused by the loss of one of the caissons last year in a heavy flood, and by unnecessary delay in England in sending out a duplicate.

The abutments and piers are finished, and the girders launched over two out of the three spans. The whole work, including the approaches, is expected to be completed in August.

Lyttelton Waterworks are completed now, and the supply of the Railway Station at Lyttelton provided for. It is intimated that there will be a surplus sufficient for the town and shipping.

Malvern Water-race.—The object of this race is to bring a supply of water from the Kowai to the waterless district between the Selwyn and the Waimakariri. The appropriation granted by the Provincial Legislature was, I believe, intended to finish the first and most expensive section, 2 miles in length, including the head-works.

Rakaia Gorge Bridge.—A sum was appropriated by the Provincial Government for a bridge to be built at the Gorge of the Rakaia. This, like the Waimakariri Gorge Bridge, is intended to eventually

carry a railway. No work has yet been done, but plans for an iron bridge are now in the draftsman's hands, and will be completed by the end of July.

Surveys.

A survey has been in progress all the summer of the lines connecting Amberley with Greymouth and with Picton, but the plans are not yet plotted, and nothing definite can yet be stated as to the feasibility at reasonable cost of the lines.

A party was despatched to survey a line from the Thames to the Waikato, but, owing to floods and rain, have not yet been able to send in any information.

I hope to be able to report fully on both these surveys within two or three months.

An examination of the Clutha River has been made, to ascertain whether it could be made navigable for steamers. I append a copy of Mr. Blair's report on the subject, from which it appears that the proposal to render the river navigable is not feasible.

I also enclose a copy of Mr. Blair's report on the several lines proposed for a railway into the interior of Otago.

Opened Lines.

As the length of lines opened for traffic is continually increasing, owing to the completion of new sections, it is very difficult to estimate the probable revenue for next year.

In 1875–76 the gross revenue was	...	...	...	£406,001
In 1876–77 „ „ „	...	...	...	£489,455
The increase of miles opened during the year being 248.				
In 1877–78 the gross revenue is estimated at		...	...	£600,450
The estimated increase of miles to be opened being 278.				

In 1875–76 the net revenue was	...	£110,641*		
In 1876–77 „ „ „	...	£141,428*	Increase ...	£30,787
In 1877–78 „ „ is estimated at £171,700.			Estimated increase,	£30,272

The cost of the railways opened for traffic, including the valuation of the provincial lines, and taking a proportionate part of the cost of lines opened during a part only of the year, is £4,350,000. The net revenue for last year is equal to 2·64 per cent on the cost, and if the estimates for next year are verified the profit will equal 2¾ per cent.; but it must be remembered that this does not include any provision for a renewal fund.

North Island.

Kaipara to Riverhead.—The clay and sand ballast in use on this line makes the maintenance very difficult, and will have to be replaced with scoria as soon as the line from Riverhead to Auckland is finished. Some material is found on the line which, although not forming good ballast, is better than the clay, and has been used over a mile or two of the permanent way with good results. The traffic is very small, and there is no prospect of the line paying its working expenses during the present year.

Auckland to Mercer.—The traffic on this line is very dull, being somewhat less than in 1875–76. The working expenses are, however, lower, and the net profit higher. The section from Mercer to Newcastle will be opened in September, when a much larger traffic may be looked for.

Napier to Manawatu.—This line continues to show a good business, the increase of revenue during last year being over 72 per cent., and the increase of net revenue being over 80 per cent. The extension to Kopua will give a large trade in timber.

Wellington to Masterton.—The traffic has increased 57 per cent. during the year, but this is due to the extension of the line to the Upper Hutt, as there is a slight falling off in the returns for the last six months as compared with the corresponding period of 1876. The extension to Kaitoki will have a good effect, as the traffic with the Wairarapa will then all be done by rail.

Foxton to Manawatu.—A small profit has been made on the year's traffic (about £1,000), which is as much as was expected. Through communication with Wanganui will be effected this year, when the receipts will increase.

Wanganui to Manawatu.—This line was only opened in May, and the traffic is very small. Until the line is extended to Foxton, it cannot pay working expenses.

Waitara to Patea.—The working expenses are higher than the receipts, and will probably continue to be so even when the line is extended to Inglewood.

South Island.

Picton to Blenheim.—A small profit has been earned, but the traffic is light, and shows no signs of improvement.

Nelson to Foxhill is in much the same state, as far as traffic is concerned, as the Picton line. It pays a small profit, but the traffic is not increasing very rapidly.

Westport to Ngakawau.—This line will depend almost entirely on the carriage of coal, and only one mine has yet begun work, so that there has been almost no traffic. Four trains a week only have been run, besides the construction trains necessary for bringing stone to Westport for the river protection works. Besides developing a useful industry, this line will eventually pay a good profit on its cost.

* The revenue of the several provincially worked railways is obtained from the printed reports published by the Provincial Governments. The provincial financial year ended on the 31st March, and the net revenue of the railways worked by the provinces is that for the year ending on that date, while the revenue of the lines worked by the Colonial Government is that earned in the year ending 30th June. This would not, however, materially affect the result.

Greymouth to Brunner.—This is also a coal railway, and is already doing a good business, although the trade is only in its infancy.

Canterbury Railways.—These lines have been worked at a great disadvantage, as there is a break of gauge at Christchurch; and although both gauges have been taken on to Lyttelton, the station yard there is so confined that a great deal of shifting from the wagons of one gauge to those of the other has been necessary, causing both loss of time and money. As it is now proposed to make the gauge uniform, the working expenses will be reduced, and the profit correspondingly increased.

The quantity of land placed under crop along the railway is increasing rapidly, and the traffic will next year be very great. Last year's receipts amounted to £260,198.

Otago Railways.—The receipts last year were £141,631, which will be increased this year by the opening of new sections. By the end of next year the system of main trunk lines will be completed, when a great improvement in the revenue may be expected.

GENERAL.

The railways in Otago and Canterbury were last year worked by the Provincial Governments, each Government having a separate system of accounts and book-keeping. The General Government had also a different system in use on the lines worked by them. In order to arrange a uniform system, a Commission was appointed by the Hon. the Minister for Public Works, who, on the 12th December last, reported generally on the subject of the management of New Zealand railways, and recommended a system of account and book-keeping which was approved by you, and was brought into operation on the 1st instant. A uniform system of charges was also recommended and approved, being somewhat higher than the rates formerly charged in Canterbury and the North Island, and lower than those charged in Otago.

These rates are lower than would be adopted if only the maximum returns were looked to, being lower than English rates where there is no competition. They are perhaps, on the whole, somewhat higher than those formerly in force, but the total increase is not very great.

I enclose the following tables for the railways which have always been worked by the General Government. Similar tables will in future be prepared for the Canterbury and Otago lines, but the change of management is too recent to allow it to be done this year.

Statement of Classified Expenditure.	Table A.
Statement of Passenger Traffic	„ B.
Proportion of Expenditure to Mileage and Receipts	„ C.
Summary of Goods and Cattle	„ D.
Summary of Goods and Cattle on Railway Wharves	„ E.
Statement of Rolling and Miscellaneous Stock	„ F.
Return of Accidents	„ G.
Statement of estimated and actual Earnings for Year 1876–77 ...	„ H.
The following tables are enclosed for all lines:—	
Statement of Account	„ I.
Balance Sheets, &c., Christchurch, Dunedin, Invercargill, and Oamaru Sections, for 6 months	„ J, K.

I have the honor to be,
Sir,
Your most obedient Servant,
JOHN CARRUTHERS,
Engineer-in-Chief.

Enclosure A.

STATEMENT of CLASSIFIED EXPENDITURE on RAILWAYS open for Traffic, for the Year ending 30th June, 1877.

	KAIPARA.			AUCKLAND AND MERCER.			NAPIER AND TAKAPAU.			WELLINGTON AND MASTERTON.		
	From 1 July, to 31 Dec., 1876.	From 1 Jan., to 30 June, 1877.	Total.	From 1 July, to 31 Dec., 1876.	From 1 Jan., to 30 June, 1877.	Total.	From 1 July, to 31 Dec., 1876.	From 1 Jan., to 30 June, 1877.	Total.	From 1 July, to 31 Dec., 1876.	From 1 Jan., to 30 June, 1877.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
A.—MAINTENANCE OF WAY:—												
Permanent Way,—												
1. Wages	1,033 18 2	961 8 9	1,995 6 11	2,406 12 8	2,530 19 6	4,937 12 2	1,914 2 9	2,991 11 4	4,905 14 1	1,392 7 4	1,503 1 9	2,895 9 1
2. Materials	33 10 10	37 17 2	71 8 0	49 11 8	119 8 2	168 19 10	30 11 9	73 4 2	103 15 11	22 13 8	77 16 3	100 9 11
Workshop Commission	0 2 5	...	0 2 5	15 12 8	13 19 1	29 11 9	...	...	...	...	7 2 1	7 2 1
3. Repairs of Roads, Bridges, Signals, and Works	...	...	...	44 6 5	31 2 10	75 9 3	14 11 7	72 8 0	86 19 7	...	24 14 3	24 14 3
Workshop Commission	...	...	...	8 8 3	6 4 5	14 12 8	...	...	...	...	...	...
4. Repairs of Stations and Buildings ...	1 14 5	12 5 4	13 19 9	60 9 8	145 10 6	206 0 2	...	...	...	3 0 0	8 1 9	11 1 9
Workshop Commission	0 3 5	2 4 6	2 7 11	11 13 2	24 3 10	35 17 0	...	...	...	0 2 0	0 5 8	0 7 8
Total	1,069 9 3	1,013 15 9	2,083 5 0	2,596 14 6	2,871 8 4	5,468 2 10	1,959 6 1	3,137 3 6	5,096 9 7	1,418 3 0	1,621 1 9	3,039 4 9
B.—LOCOMOTIVE POWER:—												
Running Expenses,—												
1. Wages	173 5 0	192 2 9	365 7 9	1,352 14 10	1,199 7 4	2,552 2 2	697 19 4	964 9 4	1,662 8 8	633 1 8	637 19 11	1,271 1 7
2. Fuel and Water Supply	100 2 7	63 6 11	163 9 6	614 6 11	423 2 5	1,037 9 4	650 1 1	784 3 6	1,434 4 7	524 7 4	540 4 5	1,064 11 9
3. Oil, Tallow, and other Stores	21 3 0	18 10 6	39 13 6	177 11 7	159 17 6	337 9 1	112 6 1	115 10 5	227 16 6	93 1 4	121 13 7	214 14 11
Renewals and Repairs,—												
4. Wages	6 15 10	60 9 9	67 5 7	397 9 5	316 0 3	713 9 8	1 19 0	10 11 8	12 10 8	136 5 2	177 16 4	314 1 6
5. Materials	5 9 9	32 19 3	38 9 0	130 4 0	134 18 7	265 2 7	34 10 5	120 9 5	154 19 10	228 2 5	198 7 8	426 10 1
Workshop Commission	2 8 2	18 3 4	20 11 6	123 12 8	82 3 11	205 16 7	0 12 4	2 4 1	2 16 5	3 6 9	0 4 6	3 11 3
Total	309 4 4	385 12 6	694 16 10	2,795 19 5	2,315 10 0	5,111 9 5	1,497 8 3	1,997 8 5	3,494 16 8	1,618 4 8	1,676 6 5	3,294 11 1
C.—REPAIRS AND RENEWALS OF CARRIAGES AND WAGONS:—												
Carriages,—												
1. Salaries and Wages	29 17 2	9 3 5	39 0 7	187 13 6	208 17 0	396 10 6	154 5 5	325 6 1	479 11 6	187 0 10	165 14 1	352 14 11
2. Materials	9 1 9	5 17 7	14 19 4	76 4 3	76 5 6	152 9 9	23 2 9	37 6 10	60 9 7	164 14 5	141 17 11	306 12 4
Workshop Commission	0 13 6	0 1 8	0 15 2	45 7 10	54 8 8	99 16 6	0 2 6	...	0 2 6	1 11 10	4 10 3	6 2 1
Wagons,—												
3. Salaries and Wages	20 9 1	15 13 10	36 2 11	177 1 0	172 2 11	349 3 11	...	...	...	18 2 9	64 19 6	83 2 3
4. Materials	21 13 9	7 5 0	28 18 9	67 8 2	50 19 8	118 7 10	7 13 5	110 6 2	117 19 7	1 10 10	104 17 9	106 8 7
Workshop Commission	4 1 9	2 17 4	6 19 1	42 14 9	40 5 4	83 0 1	...	...	...	1 0 11	2 3 7	3 4 6
Total	85 17 0	40 18 10	126 15 10	596 9 6	602 19 1	1,199 8 7	185 4 1	472 19 1	658 3 2	374 1 7	484 3 1	858 4 8

Enclosure A—*continued.*

STATEMENT of CLASSIFIED EXPENDITURE on RAILWAYS open for Traffic for the Year ending 30th June, 1877—*continued.*

	KAIPARA.			AUCKLAND AND MERCER.			NAPIER AND TAKAPAU.			WELLINGTON AND MASTERTON.		
	From 1 July, to 31 Dec., 1876.	From 1 Jan., to 30 June, 1877.	Total.	From 1 July, to 31 Dec., 1876.	From 1 Jan., to 30 June, 1877.	Total.	From 1 July, to 31 Dec., 1876.	From 1 Jan., to 30 June, 1877.	Total.	From 1 July, to 31 Dec., 1876.	From 1 Jan., to 30 June, 1877.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
D.—TRAFFIC:—												
1. Salaries and Wages	243 7 0	251 4 2	494 11 2	1,949 6 9	2,036 12 8	3,985 19 5	1,281 8 3	1,534 4 8	2,815 12 11	774 10 10	836 12 9	1,611 3 7
2. Fuel, Lighting, and General Stores ...	10 9 8	10 10 6	21 0 2	116 3 7	94 8 2	210 11 9	54 6 8	78 11 9	132 18 5	17 9 6	68 8 3	85 17 9
3. Printing, Stationery, and Tickets ...	4 12 1	0 11 10	5 3 11	49 7 11	80 0 6	129 8 5	47 10 10	53 4 4	100 15 2	17 9 0	29 2 9	46 11 9
4. Miscellaneous Expenses	9 7 4	19 19 0	29 6 4	42 11 0	75 3 7	117 14 7	...	99 2 10	99 2 10	4 5 0	46 0 9	50 5 9
Total	267 16 1	282 5 6	550 1 7	2,157 9 3	2,286 4 11	4,443 14 2	1,383 5 9	1,765 3 7	3,148 9 4	813 14 4	980 4 6	1,793 18 10
E.—GENERAL CHARGES:—												
1. General Government Expenses ...	126 2 0	149 7 10	275 9 10	304 4 0	367 12 2	671 16 2	159 2 0	213 8 4	372 10 4	161 4 0	192 0 8	353 4 8
2. Salaries of Manager, Accountant, &c. ...	135 11 0	116 6 9	251 17 9	305 12 11	301 16 8	607 9 7	175 14 2	174 10 6	350 4 8	176 15 5	214 14 8	391 10 1
3. Office and Incidental Expenses ...	0 14 0	10 10 8	11 4 8	6 3 9	16 12 2	22 15 11	...	116 5 5	116 5 5	38 3 4	27 2 7	65 5 11
4. Special Expenditure	0 6 0	12 0 8	12 6 8	17 17 6	29 14 4	47 11 10	...	3 0 0	3 0 0	1 3 9	64 0 3	65 4 0
Total	262 13 0	288 5 11	550 18 11	633 18 2	715 15 4	1,349 13 6	334 16 2	507 4 3	842 0 5	377 6 6	497 18 2	875 4 8
F.—SUNDRIES:—												
Law Costs	...	...	...	22 2 8	12 7 4	34 10 0	...	...	...	...	...	...
Compensation	...	...	...	...	...	...	...	...	...	...	32 15 2	32 15 2
Rates and Taxes	...	...	...	...	...	...	...	...	...	...	...	...
Total	...	...	...	22 2 8	12 7 4	34 10 0	...	...	...	...	32 15 2	32 15 2
Grand Total	1,994 19 8	2,010 18 6	4,005 18 2	8,802 13 6	8,804 5 0	17,606 18 6	5,360 0 4	7,879 18 10	13,239 19 2	4,601 10 1	5,292 9 1	9,893 19 2

Enclosure A—*continued.*

STATEMENT of Classified Expenditure on Railways open for Traffic, for the Year ending 30th June, 1877—*continued.*

—	Foxton and Manawatu.			Wanganui and Manawatu.			New Plymouth and Waitara.			Picton and Blenheim.		
	From 1 July, to 31 Dec., 1876.	From 1 Jan., to 30 June, 1877.	Total.	—	From 18 May, to 30 June, 1877.	Total.	From 1 July, to 31 Dec., 1876.	From 1 Jan., to 30 June, 1877.	Total.	From 1 July, to 31 Dec., 1876.	From 1 Jan., to 30 June, 1877.	Total.
A.—Maintenance of Way:—	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Permanent Way,—												
1. Wages	1,090 1 11	1,749 12 1	2,839 14 0	...	40 15 0	40 15 0	598 9 3	588 4 3	1,186 13 6	1,195 7 5	1,167 19 1	2,363 6 6
2. Materials	27 18 10	6 19 7	34 18 5	...	...	...	10 12 6	13 16 8	24 9 2	14 4 9	5 16 3	20 1 0
Workshop Commission	...	...	...	...	...	...	...	...	...	...	...	...
3. Repairs of Roads, Bridges, Signals, and Works	...	8 4 6	8 4 6	...	...	...	...	0 7 0	0 7 0	0 6 2	8 6 2	8 12 4
Workshop Commission	...	...	...	...	...	...	...	...	...	...	...	...
4. Repairs of Stations and Buildings ...	...	...	...	...	...	...	...	0 13 6	0 13 6	4 18 0	...	4 18 0
Workshop Commisson	...	...	...	...	...	...	...	...	...	...	...	...
Total	1,118 0 9	1,764 16 2	2,882 16 11	...	40 15 0	40 15 0	609 1 9	603 1 5	1,212 3 2	1,214 16 4	1,182 1 6	2,396 17 10
B.—Locomotive Power:—												
Running Expenses,—												
1. Wages	359 17 10	453 7 4	813 5 2	...	43 3 0	43 3 0	179 1 6	228 9 1	407 10 7	238 18 10	247 10 4	486 9 2
2. Fuel and Water Supply	351 1 4	436 14 10	787 16 2	...	48 18 8	48 18 8	136 18 1	138 3 4	275 1 5	200 9 5	182 12 11	383 2 4
3. Oil, Tallow, and other Stores	91 19 3	118 16 7	210 15 10	...	6 18 4	6 18 4	19 17 3	29 1 2	48 18 5	24 6 2	25 19 6	50 5 8
Renewals and Repairs	...	...	...	...	...	...	...	...	...	...	...	...
4. Wages	10 3 5	72 3 9	82 7 2	...	...	...	8 18 0	7 10 5	16 8 5	32 8 11	30 7 3	62 16 2
5. Materials	2 0 6	26 15 10	28 16 4	...	1 13 11	1 13 11	17 6 11	27 14 8	45 1 7	4 9 4	37 7 9	41 17 1
Workshop Commission	...	...	...	...	...	...	0 6 4	1 8 2	1 14 6	1 13 7	4 7 11	6 1 6
Total	815 2 4	1,107 18 4	1,923 0 8	...	100 13 11	100 13 11	362 8 1	432 6 10	794 14 11	502 6 3	528 5 8	1,030 11 11
C.—Repairs and Renewals of Carriages and Wagons:—												
Carriages,—												
1. Salaries and Wages	0 12 2	2 4 0	2 16 2	...	13 4 0	13 4 0	6 7 2	...	6 7 2	17 7 4	11 14 0	29 1 4
2. Materials	1 0 1	...	1 0 1	...	0 18 0	0 18 0	0 5 7	12 4 1	12 9 8	5 12 10	1 2 1	6 14 11
Workshop Commission	0 2 6	...	0 2 6	...	...	...	0 2 6	...	0 2 6	0 10 1	0 10 8	1 0 9
Wagons,—												
3. Salaries and Wages	...	19 15 4	19 15 4	...	...	...	...	6 18 0	6 18 0	24 3 6	18 14 0	42 17 6
4. Materials	...	...	...	...	...	...	...	3 6 9	3 6 9	55 3 2	0 15 3	55 18 5
Workshop Commission	...	...	...	...	...	...	...	...	...	...	...	...
Total	1 14 9	21 19 4	23 14 1	...	14 2 0	14 2 0	6 15 3	22 8 10	29 4 1	102 16 11	32 16 0	135 12 11

Enclosure A—*continued.*

STATEMENT of CLASSIFIED EXPENDITURE on RAILWAYS open for Traffic, for the Year ending 30th June, 1877—*continued.*

—	FOXTON AND MANAWATU.			WANGANUI AND MANAWATU.			NEW PLYMOUTH AND WAITARA.			PICTON AND BLENHEIM.		
	From 1 July, to 31 Dec., 1876.	From 1 Jan., to 30 June, 1877.	Total.	—	From 18 May, to 30 June, 1877.	Total.	From 1 July, to 31 Dec., 1876.	From 1 Jan., to 30 June, 1877.	Total.	From 1 July, to 31 Dec., 1876.	From 1 Jan,, to 30 June, 1877.	Total.
D.—TRAFFIC.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1. Salaries and Wages	542 6 5	624 2 10	1,166 9 3	...	53 18 3	53 18 3	241 6 7	257 1 3	498 7 10	317 1 2	338 4 6	655 5 8
2. Fuel, Lighting, and General Stores ...	11 2 2	63 3 2	74 5 4	...	8 9 4	8 9 4	10 15 7	6 2 6	16 18 1	1 10 9	4 0 9	5 11 6
3. Printing, Stationery, and Tickets ...	49 3 11	16 0 5	65 4 4	...	60 18 3	60 18 3	32 16 10	10 12 3	43 9 1	21 14 7	20 7 7	42 2 2
4. Miscellaneous Expenses	0 14 0	37 2 10	37 16 10	...	20 12 4	20 12 4	...	9 11 3	9 11 3	...	1 15 0	1 15 0
Total	603 6 6	740 9 3	1,343 15 9	...	143 18 2	143 18 2	284 19 0	283 7 3	568 6 3	340 6 6	364 7 10	704 14 4
E.—GENERAL CHARGES.												
1. General Government Expenses ...	91 0 0	161 5 10	252 5 10	...	49 0 9	49 0 9	70 4 0	85 5 4	155 9 4	161 4 0	192 0 8	353 4 8
2. Salaries of Manager and Accountant, &c. ...	150 8 7	154 7 10	304 16 5	...	52 15 0	52 15 0	175 14 2	152 7 9	328 1 11	175 14 2	174 10 6	350 4 8
3. Office and Incidental Expenses ...	1 13 7	24 1 6	25 15 1	...	0 10 0	0 10 0	...	0 10 0	0 10 0	...	...	...
4. Special Expenditure	...	33 1 11	33 1 11	...	10 19 6	10 19 6	...	4 17 0	4 17 0	...	8 9 10	8 9 10
Total	243 2 2	372 17 1	615 19 3	...	113 5 3	113 5 3	245 18 2	243 0 1	488 18 3	336 18 2	375 1 0	711 19 2
F.—SUNDRIES.												
Law Costs	...	11 10 0	11 10 0	...	...	...	...	...	...	...	...	...
Compensation	...	...	...	...	...	...	...	...	...	...	...	...
Rates and Taxes	...	...	...	...	...	...	...	...	...	...	...	...
Total	...	11 10 0	11 10 0	...	...	...	...	...	...	...	...	...
GRAND TOTAL	2,781 6 6	4,019 10 2	6,800 16 8	...	412 14 4	412 14 4	1,509 2 3	1,584 4 5	3,093 6 8	2,497 4 2	2,482 12 0	4,979 16 2

Enclosure A—*continued.*

STATEMENT of CLASSIFIED EXPENDITURE on RAILWAYS open for Traffic, for the Year ending 30th June, 1877—*continued.*

	NELSON AND FOXHILL.			WESTPORT AND MOUNT ROCHFORT.			BRUNNER.		
	From 1 July, to 31 Dec., 1876.	From 1 January, to 30 June, 1877.	Total.	From 5 August, to 31 Dec., 1876.	From 1 January, to 30 June, 1877.	Total.	From 1 July, to 31 Dec., 1876.	From 1 January, to 30 June, 1877.	Total.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
A.—MAINTENANCE OF WAY:—									
Permanent Way,—									
1. Wages	1,078 14 8	1,032 3 9	2,110 18 5	...	70 18 9	70 18 9	628 12 0	792 18 11	1,421 10 11
2. Materials	11 11 2	8 5 7	19 16 9	...	...	...	...	30 10 10	30 10 10
Workshop Commission	...	10 6 7	10 6 7	...	...	...	...	...	...
3. Repairs of Roads, Bridges, Signals, and Works...	6 12 8	10 18 1	17 10 9	...	...	...	5 5 2	34 15 11	40 1 1
Workshop Commission	...	...	...	...	...	...	...	...	...
4. Repairs of Stations and Buildings	6 2 10	34 13 0	40 15 10	...	...	...	2 16 6	3 7 1	6 3 7
Total	1,103 1 4	1,096 7 0	2,199 8 4	...	70 18 9	70 18 9	636 13 8	861 12 9	1,498 6 5
B.—LOCOMOTIVE POWER:—									
Running Expenses,—									
1. Wages	265 0 0	327 12 3	592 12 3	146 9 0	151 16 0	298 5 0	272 0 7	285 8 10	557 9 5
2. Fuel and Water Supply	251 1 1	303 11 8	554 12 9	34 15 0	92 8 3	127 3 3	76 5 6	62 0 0	138 5 6
3. Oil, Tallow, and other Stores	89 14 6	91 2 2	180 16 8	...	...	...	42 3 0	42 13 0	84 16 0
Renewals and Repairs,—									
4. Wages	44 13 9	95 3 0	139 16 9	18 13 2	0 0 2	18 13 4	8 3 7	42 19 0	51 2 7
5. Materials	13 9 7	59 16 2	73 5 9	8 2 11	4 11 8	12 14 7	12 1 10	5 6 6	17 8 4
Workshop Commission	1 16 7	...	1 16 7	...	...	...	...	...	...
Total	665 15 6	877 5 3	1,543 0 9	208 0 1	248 16 1	456 16 2	410 14 6	438 7 4	859 1 10
C.—REPAIRS AND RENEWALS OF CARRIAGES AND WAGONS:—									
Carriages,—									
1. Salaries and Wages	95 14 8	60 5 0	155 19 8	...	0 0 2	0 0 2	1 15 0	41 13 0	43 8 0
2. Materials	20 14 7	36 12 5	57 7 0	3 15 2	6 11 1	10 6 3	...	18 13 3	18 13 3
Workshop Commission	0 2 6	...	0 2 6	...	...	...	...	...	...
Wagons,—									
3. Salaries and Wages	1 14 0	7 8 6	9 2 6	...	...	...	28 0 7	48 11 8	76 12 3
4. Materials	10 10 10	2 15 10	13 6 8	...	1 16 0	1 16 0	39 5 0	24 8 11	63 13 11
Workshop Commission	...	...	...	...	...	...	1 17 0	...	1 17 0
Total	128 16 7	107 1 9	235 18 4	3 15 2	8 7 3	12 2 5	70 17 7	133 6 10	204 4 5

Enclosure A—*continued.*

STATEMENT of CLASSIFIED EXPENDITURE on RAILWAYS open for Traffic, for the Year ending 30th June, 1877—*continued.*

—	NELSON AND FOXHILL.			WESTPORT AND MOUNT ROCHFORT.			BRUNNER.		
	From 1 July, to 31 Dec., 1876.	From 1 January, to 30 June, 1877.	Total.	From 5 August, to 31 Dec., 1876.	From 1 January, to 30 June, 1877.	Total.	From 1 July, to 31 Dec., 1876.	From 1 January, to 30 June, 1877.	Total.
D.—TRAFFIC:—	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1. Salaries and Wages	345 12 4	401 15 8	747 8 0	55 16 2	67 2 10	122 19 0	288 0 3	340 17 8	628 17 11
2. Fuel, Lighting, and other Stores	9 4 4	9 10 3	18 14 7	4 10 8	0 6 4	4 17 0	14 5 11	13 8 5	27 14 4
3. Printing, Stationery, and Tickets	16 0 6	13 12 11	29 13 5	25 12 11	20 18 11	46 11 10	26 2 4	12 3 4	38 5 8
4. Miscellaneous Expenses	3 15 0	7 13 7	11 8 7	...	3 8 0	3 8 0	0 5 0	16 6 6	16 11 6
Total	374 12 2	432 12 5	807 4 7	85 19 9	91 16 1	177 15 10	328 13 6	382 15 11	711 9 5
E.—GENERAL CHARGES:—									
1. General Government Expenses	161 4 0	192 0 8	353 4 8	39 12 0	64 0 6	103 12 6	91 0 0	106 14 4	197 14 4
2. Salaries of Manager, Accountant, &c.	163 1 7	162 10 0	325 11 7	...	...	...	150 8 7	149 12 2	300 0 9
3. Office and Incidental Expenses	...	12 18 6	12 18 6	...	1 15 0	1 15 0	...	7 11 0	7 11 0
4. Special Expenditure	...	9 14 0	9 14 0	...	10 5 10	10 5 10	...	5 11 4	5 11 4
Total	324 5 7	377 3 2	701 8 9	39 12 0	76 1 4	115 13 4	241 8 7	269 8 10	510 17 5
F.—SUNDRIES:—									
1. Law Costs	...	3 8 8	3 8 8	...	...	...	...	...	...
2. Compensation	...	...	...	...	...	...	...	...	...
Rates and Taxes	...	...	...	...	...	...	...	...	...
Total	...	3 8 8	3 8 8	...	...	...	...	...	...
GRAND TOTAL	2,596 11 2	2,893 18 3	5,490 9 5	337 7 0	495 19 6	833 6 6	1,688 7 10	2,085 11 8	3,773 19 6

Enclosure B.

STATEMENT of Passenger Traffic for Year ending 30th June, 1877.

Name of Railway.	Date.	Number of Passengers. Single. First.	Single. Second.	Return. First.	Return. Second.	Amount. £ s. d.	Parcels, Dogs, etc. £ s. d.	Season Tickets. £ s. d.	Advertising. £ s. d.	Total. £ s. d.	Total last Year. £ s. d.
Kaipara	From 1st July to 31st December, 1876 ...	624	2,532	16	91	482 12 0	28 15 2	...	...	511 7 2	172 7 9
	From 1st January to 30th June, 1877 ...	1,113	3,041	37	79	680 3 0	29 13 1	...	...	709 16 1	574 1 6
	Total	1,737	5,573	53	170	1,162 15 0	58 8 3	...	...	1,221 3 3	746 9 3
Auckland and Mercer ...	From 1st July to 31st December, 1876 ...	4,407	21,233	3,490	18,075	5,483 2 9	188 11 9	145 8 6	39 16 3	3,856 19 3	6,353 2 6
	From 1st January to 30th June, 1877 ...	8,394	27,672	7,046	15,172	6,009 14 10	185 6 7	313 3 8	38 15 10	6,547 0 11	6,539 2 9
	Total	12,801	48,905	10,536	33,247	11,492 17 7	373 18 4	458 12 2	78 12 1	12,404 0 2	12,892 5 3
Napier and Takapau ...	From 1st July to 31st December, 1876 ...	4,804	12,797	2,587	7,413	4,511 13 1	112 5 10	34 16 0	50 0 0	4,708 14 11	2,763 16 9
	From 1st January to 30th June, 1877 ...	5,684	14,568	2,978	9,156	5,659 5 6	312 10 11	50 16 0	50 0 0	6,072 12 5	3,570 2 5
	Total	10,488	27,365	5,565	16,569	10,170 18 7	424 16 9	85 12 0	100 0 0	10,781 7 4	6,333 19 2
Wellington and Masterton	From 1st July to 31st December, 1876 ...	4,473	18,596	5,285	14,850	4,043 5 6	142 6 11	98 4 8	14 11 0	4,298 8 1	2,264 19 5
	From 1st January to 30th June, 1877 ...	5,219	18,751	5,558	15,941	4,221 17 2	164 1 9	131 0 2	...	4,516 19 1	4,127 19 4
	Total	9,692	37,347	10,843	30,791	8,265 2 8	306 8 8	229 4 10	14 11 0	8,815 7 2	6,392 18 9
Foxton and Manawatu ...	From 1st July to 31st December, 1876 ...	324	4,584	143	1,045	1,189 15 6	120 10 0	2 5 0	...	1,312 10 6	390 17 9
	From 1st January to 30th June, 1877 ...	1,331	4,454	348	2,204	1,592 12 9	122 8 10	32 15 0	...	1,747 16 7	650 17 11
	Total	1,655	9,038	591	3,249	2,782 8 3	242 18 10	35 0 0	...	3,060 7 1	1,041 15 8
Wanganui and Manawatu ...	From 18th May to 30th June, 1877 ...	135	280	53	135	77 11 4	1 19 9	...	...	79 11 1	...
New Plymouth and Waitara	From 1st July to 31st December, 1876 ...	370	3,360	387	2,683	771 12 3	13 19 4	12 5 0	...	797 16 7	335 2 2
	From 1st January to 30th June, 1877 ...	254	2,335	217	2,721	641 13 3	143 13 8	19 10 0	...	804 16 11	896 11 1
	Total	624	5,695	604	5,404	1,413 5 6	157 13 0	31 15 0	...	1,602 13 6	1,231 13 3
Picton and Blenheim ...	From 1st July to 31st December, 1876 ...	1,040	3,522	523	2,671	933 16 9	54 2 1	13 5 0	21 10 0	1,022 13 10	438 7 2
	From 1st January to 30th June, 1877 ...	1,006	3,179	585	2,481	847 10 3	60 5 3	19 15 0	9 9 0	936 19 6	1,149 14 1
	Total	2,046	6,701	1,108	5,152	1,781 7 0	114 7 4	33 0 0	30 19 0	1,959 13 4	1,588 1 3
Nelson and Foxhill ...	From 1st July to 31st December, 1876 ...	1,343	6,015	1,852	5,685	1,909 8 3	61 5 9	24 18 8	25 1 8	2,020 14 4	...
	From 1st January to 30th June, 1777 ...	1,339	6,658	2,674	7,010	2,222 2 7	80 12 7	82 9 6	12 10 10	2,397 15 6	1,919 1 2
	Total	2,682	12,673	4,526	12,695	4,131 10 10	141 18 4	107 8 2	37 12 6	4,418 9 10	1,919 1 2
Westport and Mount Rochfort	From 5th August to 31st December, 1876...	...	947	...	810	246 0 3	0 18 0	...	...	246 18 3	...
	From 1st January to 30th June, 1877 ...	...	774	...	580	194 6 9	32 11 0	...	...	226 17 9	...
	Total	...	1,721	...	1,390	440 7 0	33 9 0	...	...	473 16 0	...
Brunner	From 1st July to 31st December, 1876 ...	614	3,927	2,695	2,950	1,138 9 1	30 11 0	51 14 8	7 9 9	1,228 4 6	...
	From 1st January to 30th June, 1877 ...	442	3,665	2,993	3,601	1,116 5 5	28 14 0	66 2 0	10 7 7	1,221 9 0	497 6 3
	Total	1,056	7,592	5,688	6,551	2,254 14 6	59 5 0	117 16 8	17 17 4	2,449 13 6	497 6 3

Enclosure I.

CLASSIFIED STATEMENT showing RECEIPTS and EXPENDITURE, and PROPORTION of each CLASS of EXPENDITURE to MILEAGE and RECEIPTS, for Year ending 30th June, 1877.

NAME OF RAILWAY.	DATE.	Total Train Mileage.	RECEIPTS.			CLASSIFIED EXPENDITURE.							PROPORTION OF EACH CLASS OF EXPENDITURE TO MILEAGE AND CASH RECEIPTS.																	
													Maintenance of Way.			Locomotive Power.			Carriage and Wagon Repairs.			Traffic Expenses.			General Charges.			Sundries.			Total.		
			Total Receipts.	Receipts per Mile of Railway per Annum.	Receipts per Train Mile.	Maintenance of Way.	Locomotive Power.	Repairs of Carriages and Wagons.	Traffic Expenses.	General Charges.	Sundries.	Total.	Per Cent. of Receipts.	Per Mile of Railway.	Per Train Mile.	Per Cent. of Receipts.	Per Mile of Railway.	Per Train Mile.	Per Cent. of Receipts.	Per Mile of Railway.	Per Train Mile.	Per Cent. of Receipts.	Per Mile of Railway.	Per Train Mile.	Per Cent. of Receipts.	Per Mile of Railway.	Per Train Mile.	Per Cent. of Receipts.	Per Mile of Railway.	Per Train Mile.	Per Cent of Receipts.	Per Mile of Railway	Per Train Mile.
			£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.																				
Kaipara ...	From 1st July to 31st Dec., 1876 ..	5,828	1,516 4 5	178 7 7	0 5 2½	1,069 9 3	309 4 4	85 17 0	267 16 1	262 13 0	...	1,994 19 8	70·53	125·82	44·04	20·39	36·38	12·74	5·66	10·10	3·53	17·66	31·50	11·03	17·33	30·90	10·81	...	...	...	131·57	234·70	82·15
	From 1st Jan. to 30th June, 1877	5,938	1,626 11 4	191 7 3	0 5 5½	1,013 15 9	385 12 6	40 18 10	282 5 6	288 5 11	...	2,010 18 6	62·33	119·27	40·97	23·71	45·36	15·59	2·52	4·81	1·65	17·35	33·21	11·41	17·72	33·92	11·65	...	...	...	123·63	236·57	81·27
	Total ...	11,766	3,142 15 9	184 17 5	0 5 4	2,083 5 0	694 16 10	126 15 10	550 1 7	550 18 11	...	4,005 18 2	66·29	122·54	42·49	22·10	40·87	14·17	4·04	7·46	2·58	17·50	32·36	11·23	17·53	32·41	11·24	...	...	...	127·46	235·64	81·71
Auckland and Mercer	From 1st July to 31st Dec., 1876 ...	57,083	10,666 9 11	463 15 3	0 3 8½	2,596 14 6	2,795 19 5	596 9 6	2,157 9 3	633 18 2	22 2 8	8,802 13 6	24·34	112·90	10·93	26·22	121·56	11·76	5·60	25·93	2·50	20·22	93·80	9·07	5·94	27·56	2·66	0·19	0·97	0·09	82·52	382·72	37·01
	From 1st Jan. to 30th June, 1877	54,131	11,149 1 7	484 14 10	0 4 1½	2,871 8 4	2,315 10 0	602 19 1	2,286 4 11	715 15 4	12 7 4	8,804 5 0	25·75	124·84	12·73	20·77	100·67	10·25	5·41	26·22	2·67	20·50	99·40	10·14	6·43	31·12	3·17	0·11	0·54	0·05	78·97	382·79	39·03
	Total ...	111,214	21,815 11 6	474 5 0	0 3 11	5,468 2 10	5,111 9 5	1,199 8 7	4,443 14 2	1,349 13 6	34 10 0	17,606 18 6	25·07	118·87	11·80	23·43	111·12	11·03	5·49	26·07	2·59	20·37	96·60	9·59	6·18	29·34	2·91	0·16	0·75	0·07	80·70	382·75	37·99
Napier and Takapau	From 1st July to 31st Dec., 1876...	33,828	9,155 18 7	449 3 2	0 5 5	1,959 6 1	1,497 8 3	185 4 1	1,383 5 9	334 16 2	...	5,360 0 4	21·39	96·11	13·90	16·35	73·46	10·62	2·03	9·09	1·32	15·11	67·86	9·81	3·66	16·42	2·37	...	...	...	58·54	262·94	38·02
	From 1st Jan. to 30th June, 1877	36,130	12,115 12 1	448 14 6	0 6 8½	3,137 3 6	1,997 8 5	472 19 1	1,765 3 7	507 4 3	...	7,879 18 10	25·89	116·19	20·84	16·49	73·98	13·25	3·90	17·52	3·14	14·57	65·37	11·72	4·18	18·78	3·37	...	...	...	65·03	291·84	52·34
	Total ...	69,958	21,271 10 8	448 18 3	0 6 1	5,096 9 7	3,494 16 8	658 3 2	3,148 9 4	842 0 5	...	13,239 19 2	23·96	107·56	17·48	16·43	73·75	11·99	3·09	13·89	2·26	14·80	66·44	10·80	3·96	17·77	2·89	...	...	...	62·24	279·41	45·42
Wellington and Masterton	From 1st July to 31st Dec., 1876...	30,472	5,650 12 0	565 1 2	0 3 8½	1,418 3 0	1,618 4 8	374 1 7	813 14 4	377 6 6	...	4,601 10 1	25·09	141·82	11·18	28·64	161·83	12·74	6·62	37·40	2·95	14·40	81·37	6·40	6·68	37·73	2·97	...	...	...	81·43	460·15	36·24
	From 1st Jan. to 30th June, 1877	31,128	5,887 9 2	588 14 10	0 3 9½	1,621 1 9	1,676 6 5	484 3 1	980 4 6	497 18 2	32 15 2	5,292 9 1	27·53	162·11	12·50	28·47	167·63	12·92	8·22	48·41	3·73	16·65	98·02	7·56	8·46	49·79	3·84	0·56	3·28	0·25	89·89	529·24	40·80
	Total ...	61,600	11,538 1 2	576 18 0	0 3 8½	3,039 4 9	3,294 11 1	858 4 8	1,793 18 10	875 4 8	32 15 2	9,893 19 2	26·34	151·96	11·84	28·55	164·73	12·83	7·44	42·91	3·34	15·56	89·70	6·99	7·58	43·76	3·41	0·28	1·63	0·13	85·75	494·69	38·54
Foxton and Manawatu	From 1st July to 31st Dec., 1876...	17,555	3,874 6 8	274 9 7	0 4 5	1,118 0 9	815 2 4	1 14 9	603 6 6	243 2 2	...	2,781 6 6	28 86	79·20	15·28	21·04	57·76	11·04	0·03	0·11	0·01	15·57	42·75	8·26	6·28	17·22	3·33	...	...	...	71·78	197·04	38·02
	From 1st Jan. to 30th June, 1877	26,042	3,838 17 2	219 7 3	0 2 11½	1,764 16 2	1,107 18 4	21 19 4	740 9 3	372 17 1	11 10 0	4,019 10 2	45·97	100·84	16·26	28·86	63·31	10·21	0·57	1·25	0·20	19·29	42·31	6·82	9·71	21·31	3·44	0·30	0·66	0·11	104·70	229·68	37·04
	Recoveries ...	...	7,713 3 10 175 18 0																														
	Total ...	43,597	7,889 1 10	258 3 9	0 3 7½	2,882 16 11	1,923 0 8	23 14 1	1,343 15 9	615 19 3	11 10 0	6,800 16 8	36·54	94·34	15·87	24·37	62·93	10·58	0·30	0·77	0·13	17·03	43·97	7·40	7·81	20·16	3·39	0·15	0·38	0·06	86·20	222·55	37·43
Wanganui and Manawatu	From 18th May to 30th June, 1877	3,192	118 13 3	41 19 6	0 0 9	40 15 0	100 13 11	14 2 0	143 18 2	113 5 3	...	412 14 4	34·34	14·41	3·06	84·86	35·62	7·57	11·88	4·99	1·06	121·27	50·91	10·82	95·46	40·06	8·52	...	...	...	347·81	145·99	31·03
New Plymouth and Waitara	From 1st July to 31st Dec., 1876...	8,352	1,291 5 0	215 4 2	0 3 1	304 12 0	183 18 3	1 0 3	133 11 5	121 2 10	...	744 4 9	42·60	101·53	17·61	25·72	61·30	10·63	0·14	0·34	0·05	18·68	44·52	7·72	16·94	40·38	7·00	...	...	...	104·08	248·07	43·01
	From 1st Jan. to 30th June, 1877	10,896	1,182 14 2	197 2 4	0 2 2	603 1 5	432 6 10	22 8 10	283 7 3	243 0 1	...	1,584 4 5	50·99	100·51	13·28	36·58	72·11	9·53	1·89	3·74	0·50	23·96	47·23	6·24	20·55	40·50	5·35	...	...	...	133·97	264·09	34·90
	Total ...	19,248	2,473 19 2	206 3 3	0 2 6½	907 13 5	616 5 1	23 9 1	416 18 8	364 2 11	...	2,328 9 2	36·69	75·64	11·32	24·91	51·35	7·68	0·94	1·95	0·29	16 85	34·74	5·20	14·72	30·35	4·54	...	...	...	94·11	194·03	29·03
Picton and Blenheim	From 1st July to 31st Dec., 1876...	12,546	2,571 11 10	302 10 10	0 4 1½	1,214 16 4	502 6 3	102 16 11	340 6 6	336 18 2	...	2,497 4 2	47·25	142·93	23·22	19·53	59·09	9·59	3·99	12·09	1·94	13·23	40·04	6·59	13·10	39·64	6·43	...	...	...	97·10	293·79	47·77
	From 1st Jan. to 30th June, 1877	13,332	2,426 1 9	285 8 5	0 3 7½	1,182 1 6	528 5 8	32 16 0	364 7 10	375 1 0	...	2,482 12 0	48·72	139·07	21·28	21·77	62·15	9·51	1·35	3·86	0·59	15·02	42·87	6·56	15·46	44·12	6·75	...	...	...	102·32	292·07	44·69
	Total ...	25,878	4,998 1 7	294 0 0	0 3 10½	2,396 17 10	1,030 11 11	135 12 11	704 14 4	711 19 2	...	4,979 16 2	47·96	140·99	22·23	20·62	60·62	9·56	2·71	7·98	1·26	14·10	41·45	6·53	14·24	41·88	6·60	...	...	...	99·63	292·92	46·18
Nelson and Foxhill	From 1st July to 31st Dec., 1876...	16,126	2,857 11 6	285 15 2	0 3 6½	1,103 1 4	665 15 6	128 16 7	374 12 2	324 5 7	...	2,596 11 2	38·56	110·30	16·42	23·30	66·58	9·90	4·47	12·88	1·92	13·19	37·47	5·58	11·34	32·42	4·82	...	...	...	90·86	259·65	38·64
	From 1st Jan. to 30th June, 1877	17,292	3,351 11 8	335 3 2	0 3 10½	1,096 7 0	877 5 3	107 1 9	432 12 5	377 3 2	3 8 8	2,893 18 3	32·71	109·64	15·22	26·17	87·73	12·17	3·20	10·71	1·49	12·91	43·26	6·00	11·25	37·71	5·23	0·10	0·34	0·05	86·34	289·39	40·16
	Total ...	33,418	6,209 3 2	310 9 1	0 3 8½	2,199 8 4	1,543 0 9	235 18 4	807 4 7	701 8 9	3 8 8	5,490 9 5	35·42	109·97	15·80	24·85	77·15	11·08	3·80	11·80	1·70	13·00	40·36	5·80	11·30	35·07	5·13	0·05	0·17	0·02	88·42	274·52	39·43
Westport and Mount Rochfort	From 5th Aug. to 31st Dec., 1876...	2,020	368 0 6	86 19 7	0 3 8½	...	208 0 1	3 15 2	85 19 9	39 12 0	...	337 7 0	...	...	...	56·52	49·16	24·71	1·02	0·88	0·45	23·36	20·33	10·21	10·96	9·36	4·70	...	...	...	91·66	79·73	40·07
	From 1st Jan. to 30th June, 1877	2,140	483 12 0	96 14 5	0 4 6½	70 18 9	248 16 1	8 7 3	91 16 1	76 1 4	...	495 19 6	14·67	14·19	7·95	51·44	49·76	27·90	1·73	1·67	0·94	18·98	18·36	10·30	15·73	15·21	8·53	...	...	...	102·55	99·19	55·62
	Recoveries ...	...	851 12 6 7 0 0																														
	Total ...	4,160	858 12 6	85 17 2	0 4 1½	70 18 9	456 16 2	12 2 5	177 15 10	115 13 4	...	833 6 6	8·26	7·09	4·09	53·20	45·68	26·35	1·41	1·21	0·70	20·71	17·78	10·26	13·47	11·57	6·67	...	...	...	97·05	83·33	48·07
Brunner ...	From 1st July to 31st Dec., 1876...	7,896	2,285 10 4	571 7 5	0 5 9½	636 13 8	410 14 6	70 17 7	328 13 6	241 8 7	...	1,688 7 10	27·86	159·18	19·36	17·97	102·68	12·48	3·10	17·72	2·15	14·38	82·16	9·99	10·56	60·35	7·33	...	...	...	73·87	422·09	51·31
	From 1st Jan. to 30th June, 1877	8,108	3,055 10 6	763 17 8	0 7 6½	861 12 9	438 7 4	133 6 10	382 15 11	269 8 10	...	2,085 11 8	28·20	215·41	25·50	14·34	109·59	12·98	4·36	33·33	3·95	12·53	95·70	11·33	8·82	67·36	7·97	...	...	...	68·25	521·39	61·73
	Total ...	16,004	5,341 0 10	667 12 7	0 6 8	1,498 6 5	849 1 10	204 4 5	711 9 5	510 17 5	...	3,773 19 6	28·05	187·29	22·47	15·90	106·13	12·73	3·82	25·53	3·06	13·32	88·93	10·67	9·56	63·86	7·66	...	...	...	70·65	471·74	56·59

Enclosure D.

SUMMARY of Goods and Cattle carried, and Amount earned, for the Year ending 30th June, 1877.

Name of Railway.	Date.	Weight.	Horses.	Carriages.	Cattle.	Sheep.	Pigs.	Bales Wool.	Bushels Grain.	Wagons Coal.	Feet Timber.	Total.	Total Last Year.
		Tons cwt. qrs.										£ s. d.	£ s. d.
Kaipara	From 1st July to 31st December, 1876 ...	1,998 13 0	...	...	7	35	...	137	...	...	610,744	1,001 17 2	218 3 8
	From 1st January to 30th June, 1877 ...	2,049 10 0	...	5	7	120	18	40	...	...	381,219	929 10 8	1,172 19 5
	Total	4,048 3 0	...	5	14	155	18	177	...	...	991,963	1,931 7 10	1,391 3 1
Auckland and Mercer	From 1st July to 31st December, 1876 ...	10,790 6 0	31	13	33	2,280	582	580	27,300	268	1,313,280	4,956 12 0	4,751 10 2
	From 1st January to 30th June, 1877 ...	9,512 13 0	49	16	79	7,930	360	246	21,046	362	735,043	4,447 8 2	4,235 9 2
	Total	20,302 19 0	80	29	112	10,210	942	826	48,346	630	2,048,323	9,404 0 2	8,986 19 4
Napier and Takapau ...	From 1st July to 31st December, 1876 ...	8,092 19 0	24	21	6	781	21	6,135	...	...	1,006,077	4,615 11 1	2,603 14 0
	From 1st January to 30th June, 1877 ...	9,196 10 0	54	23	33	7,137	100	5,155	...	...	1,399,850	5,977 19 5	3,479 9 2
	Total	17,289 9 0	78	44	39	7,918	121	11,290	...	...	2,405,927	10,593 10 6	6,083 3 2
Wellington and Masterton ...	From 1st July to 31st December, 1876 ...	4,287 15 0	4	14	16	247	...	789	...	...	472,725	1,342 4 3	909 14 9
	From 1st January to 30th June, 1877 ...	3,776 18 0	13	12	22	505	...	370	...	...	602,820	1,361 6 10	2,122 3 9
	Total	8,064 13 0	17	26	38	752	...	1,159	...	...	1,075,545	2,703 11 1	3,031 18 6
Foxton and Manawatu ...	From 1st July to 31st December, 1876 ...	1,409 7 3	...	...	...	...	...	171	...	...	795,114	2,342 0 8	3,001 10 2
	From 1st January to 30th June, 1877 ...	1,585 9 2	3	1	2	2	8	407	...	...	957,911	2,040 2 3	3,663 7 2
	Total	2,994 17 1	3	1	2	2	8	578	...	...	1,753,025	4,382 2 11	6,664 17 4
Wanganui and Manawatu ...	From 18th May to 30th June, 1877 ...	484 2 0	...	...	...	...	...	...	...	...	...	95 18 5	...
New Plymouth and Waitara ...	From 1st July to 31st December, 1876 ...	1,488 10 0	...	1	...	40	38	7	17,457	...	155,090	484 11 3	126 3 4
	From 1st January to 30th June, 1877 ...	1,319 9 0	...	...	...	20	...	15	12,503	...	53,550	376 1 0	372 1 7
	Total	2,807 19 0	...	1	...	60	38	22	29,960	...	208,640	860 12 3	498 4 11
Picton and Blenheim ...	From 1st July to 31st December, 1876 ...	1,874 0 0	2	...	3	225	...	17	...	...	2,257,418	1,548 18 0	181 3 7
	From 1st January to 30th June, 1877 ...	2,154 13 0	3	...	7	240	82	10	...	...	1,828,525	1,489 2 3	1,358 14 4
	Total	4,028 13 0	5	...	10	465	82	27	...	...	4,085,943	3,038 0 3	1,539 17 11
Nelson and Foxhill	From 1st July to 31st December, 1876 ...	2,283 16 0	2	2	7	39	54	207	...	...	212,557	835 13 1	...
	From 1st January to 30th June, 1877 ...	2,389 12 0	3	5	13	13	...	372	...	...	304,912	955 10 4	612 2 11
	Total	4,673 8 0	5	7	20	52	54	579	...	...	517,469	1,791 3 5	612 2 11
Westport and Mount Rochfort ...	From 5th August to 31st December, 1876 ...	164 6 3	...	...	...	...	...	...	...	...	13,280	122 2 3	...
	From 1st January to 30th June, 1877 ...	336 2 2	...	...	1	...	...	...	...	...	29,673	255 14 3	...
	Total	500 9 1	...	...	1	...	...	...	...	...	42,953	377 16 6	...
Brunner	From 1st July to 31st December, 1876 ...	7,017 4 3	...	1	...	3	...	...	...	...	358,078	1,060 10 10	...
	From 1st January to 30th June, 1877 ...	*14,429 0 0	...	...	...	3	6	1	...	...	391,743	1,830 0 7	165 6 5
	Total	21,446 4 3	...	1	...	6	6	1	...	...	749,821	2,890 11 5	165 6 5

*13,496 Tons Coal and Coke.

Enclosure E.

SUMMARY of Goods and Cattle passed over, and Amount earned on, Railway Wharves, for Year ending 30th June, 1877.

Name of Wharf.	Date.	Goods.	Tonnage Dues.	Horses and Cattle.	Carriages.	Sheep, Pigs, and Goats.	Bales Wool and Tow.	Bricks.	Feet Timber.	Amount.	Amount last Year.
		Tons. cwt. qr.	Tons. cwt. qr.							£ s. d.	£ s. d.
Kaipara ...	From 1st July to 31st December, 1876 ...	1,693 19 0	...	3	...	35	...	...	361,491	323 3 7	66 10 0
	From 1st January to 30th June, 1877 ...	1,971 14 0	...	69	...	175	...	...	56,251	302 9 9	293 16 5
	Total	3,665 13 0	...	72	...	210	...	...	417,742	625 13 4	360 6 5
Onehunga	From 1st April to 30th June, 1877 ...	Tolls and	Landing Fees	...	...	...	...	...	...	236 6 4	...
Foxton ...	From 1st July to 31st December, 1876 ...	1,848 16 0	...	...	...	...	...	...	363,319	392 3 6	611 0 4
	From 1st January to 30th June, 1877 ...	1,751 3 0	...	...	...	...	703	...	365,514	366 5 6	667 5 2
	Total	3,599 19 0	...	...	...	...	703	...	728,833	758 9 0	1,278 5 6
Waitara ...	From 1st July to 31st December, 1876 ...	889 19 0	...	61	...	4	...	...	57,009	115 4 8	56 8 0
	From 1st January to 30th June, 1877 ...	881 12 0	...	6	...	...	...	...	6,300	63 8 8	47 6 1
	Total	1,771 11 0	...	67	...	4	...	...	63,309	178 13 4	103 14 1
Picton ...	From 1st July to 31st December, 1876 ...	764 5 0	...	23	2	5	230	...	1,800,422	396 12 7	...
	From 1st January to 30th June, 1877 ...	936 0 0	...	47	3	116	115	...	1,185,208	336 18 3	357 15 8
	Total	1,700 5 0	...	70	5	121	345	...	2,985,630	733 10 10	357 15 8
Brunner ...	From 1st July to 31st December, 1876 ...	6,187 13 0	13,000 0 0	295	19	1,888	...	...	304,710	1,395 12 5	...
	From 1st January to 30th June, 1877 ...	5,583 3 0	16,702 0 0	12	4	1,219	...	...	278,400	1,184 14 3	400 16 0
	Total	11,770 16 0	29,702 0 0	307	23	3,107	...	...	583,110	2,580 6 8	400 16 0

Enclosure F.

STATEMENT showing QUANTITY and STATE of ROLLING STOCK on the Railways open for Traffic on 30th June, 1877.

—	Locomotives.								Carriages.						Brakes.		Wagons.								
	8 tons, 8-in. cyl., 4 whls., cpld.	23 tons, 9-in. cyl., Fairlie.	12 tons, 9½-in. cyl., 4 whls., cpld.	12 tons, 9½-in. cyl., 6 whls., Bogie.	10-in. cyl., Fairlie.	17 tons, 10½-in. cyl., 6 whls., cpld.	17 tons, 10½-in. cyl., Bogie.	Central-rail System.	25 tons, 14-in. cyl., 8 wheels.	1st Class 6 wheels.	1st Class 4 wheels.	Composite. 6 wheels.	Composite. 4 wheels.	Cross-seated.	2nd Class 6 wheels.	2nd Class 4 wheels.	Passenger, 4 wheels.	Goods, 4 wheels.	Special for Centre Rail.	Horse Box.	Cattle Truck.	Sheep Truck.	Covered Goods.	High-sided.	Low-sided.	Timber Truck.	Iron Hopper.	Tarpaulins.
KAIPARA.																												
In good order	...	...	1	..	1	...	...	...	...	1	...	2	...	...	3	...	2	...	...	...	...	4	10	4	6	...	14
Undergoing heavy repairs	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Undergoing light repairs	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
In course of erection	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
In hands of contractor	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	...	...	1	1	1	...	...	...	...	1	...	2	...	...	3	...	2	...	...	...	...	4	10	4	6	...	14
AUCKLAND AND MERCER.																												
In good order	...	1	..	...	...	5	...	...	...	6	3	8	8	...	10	8	3	8	...	...	12	6	19	83	30	20	23	68
Undergoing heavy repairs	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Undergoing light repairs	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
In course of erection	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	...	10	...	6	14	...	6	10	18	...
In hands of contractor	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	15	23	4	9	...
Total	...	1	...	...	...	8	...	...	...	6	3	8	10	...	10	8	3	12	...	10	12	12	33	98	59	34	50	68
NAPIER AND TAKAPAU.																												
In good order	...	...	1	1	...	2	...	...	...	...	1	3	2	...	4	5	2	3	...	...	2	...	3	59	25	...	...	21
Undergoing heavy repairs	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Undergoing light repairs	...	...	2	...	...	...	...	...	...	1	...	2	...	...	1	...	..	1	...	...	...	...	...	5	1	...	...	6
In course of erection	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	4	...	...	12	...	...	...
In hands of contractors	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	27	...	...	...
Total	...	...	3	1	...	2	...	...	...	1	1	5	2	...	5	5	2	4	...	2	2	4	3	64	65	...	...	27
WELLINGTON AND MASTERTON.																												
In good order	...	...	1	2	...	...	...	4	...	1	1	1	8	...	1	3	2	4	2	4	4	4	15	28	3	12	2	32
Undergoing heavy repairs	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Undergoing light repairs	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...
In course of erection	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
In hands of contractors	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	18	...	...	...	...
Total	...	...	2	2	1	...	...	4	..	1	1	2	8	...	2	4	2	4	2	4	4	4	15	28	21	12	2	32
MANAWATU-FOXTON.																												
In good order	2	...	...	...	...	3	...	...	...	...	...	3	2	...	2	4	...	...	...	...	...	...	...	7	18	8	...	18
Undergoing heavy repairs	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Undergoing light repairs	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
In course of erection	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
In hands of contractors	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	2	...	...	...	...	3	...	...	...	...	...	3	2	...	2	4	...	...	...	...	...	...	...	7	18	8	...	18
WANGANUI-MANAWATU.																												
In good order	...	...	...	...	...	2	...	...	...	1	1	1	2	...	2	2	...	3	...	...	...	...	...	...	15	...	...	12
Undergoing heavy repairs	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Undergoing light repairs	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
In course of erection	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
In hands of contractors	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	...	...	...	...	...	2	...	...	...	1	1	1	2	...	2	2	...	3	...	...	...	...	...	...	15	...	...	12
NEW PLYMOUTH AND WAITARA.																												
In good order	2	...	...	...	...	...	...	...	...	...	...	...	2	...	...	1	2	...	...	...	...	...	...	4	2	...	...	4
Undergoing heavy repairs	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Undergoing light repairs	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
In course of erection	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
In hands of contractors	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	2	...	...	...	...	...	...	...	...	...	...	...	2	...	...	1	2	...	...	...	...	...	...	4	2	...	...	4
PICTON AND BLENHEIM.																												
In good order	...	...	2	...	...	...	...	...	...	1	2	...	...	...	1	1	2	...	...	...	...	...	3	6	20	4	...	11
Undergoing heavy repairs	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Undergoing light repairs	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
In course of erection	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	2	...	...	...	...	...	...
In hands of contractors	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	...	...	2	...	...	...	...	...	...	1	2	...	...	...	1	1	2	...	...	...	1	2	3	6	20	4	...	11

Enclosure F—*continued.*

STATEMENT showing QUANTITY and STATE of ROLLING STOCK.—*continued.*

—	Locomotives.									Carriages.						Brakes.			Wagons.								
	8 tons, 8-in. cyl., 4 whls. cpld.	23 tons, 9-in. cyl., Fairlie.	12 tons, 9-in. cyl., 4 whls., cpld.	12 tons, 9½-in cyl., 6 whls., Bogie.	10-in cylinder, Fairlie.	17 tons, 10½-in. cyl., 6 whls., cpld.	17 tons, 10½-in. cyl., Bogie.	Central-rail System.	25 tons, 14-in. cyl., 8 wheels.	1st Class 6 wheels.	1st Class 4 wheels.	Compo-sits. 6 wheels.	Compo-sits. 4 wheels.	Cross-seated.	2nd Class 6 wheels.	2nd Class 4 wheels.	Passengers, 4 wheels.	Good, 4 wheels.	Special for Centre Rail.	Horse Box.	Cattle Truck.	Sheep Truck.	Covered Goods.	High-sided.	Low-sided.	Timber Trucks.	Iron Hopper.	Tarpaulins.
Nelson and Foxhill.																											
In good order	...	...	...	1	...	...	...	...	...	2	1	2	...	...	1	...	2	...	...	1	1	...	10	9	4	...	12
Undergoing heavy repairs ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Undergoing light repairs ...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...
In course of erection ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
In hands of contractors ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	...	...	...	2	...	...	...	...	...	2	1	2	...	...	2	...	2	...	...	1	1	...	10	10	4	...	12
Mount Rochfort.																											
In good order	...	...	1	...	...	...	...	...	...	1	...	...	...	...	2	...	...	...	...	...	...	...	1	...	...	14	2
Undergoing heavy repairs ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Undergoing light repairs ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
In course of erection ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	14	...	...	22	...
In hands of contractors ...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	52	...
Total	...	...	3	...	...	...	...	...	...	1	...	...	...	...	2	...	...	...	...	...	...	...	15	...	...	88	2
Brunner.																											
In good order	...	...	2	...	...	...	...	...	...	...	...	...	2	...	...	2	...	2	...	...	...	...	2	8	...	50	6
Undergoing heavy repairs ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Undergoing light repairs ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
In course of erection ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
In hands of contractors ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	...	...	2	...	...	...	...	...	...	...	...	...	2	...	...	2	...	2	...	...	...	...	2	8	...	50	6
Grand Total...	4	1	13	6	2	15	...	4	...	9	11	22	32	...	22	34	11	29	2	16	20	23	58	244	222	68	190	206

Enclosure F—*continued.*

STATEMENT showing QUANTITY and STATE of MISCELLANEOUS STOCK on the Railways open for Traffic on 30th June, 1877.

—	Turntables.				Cranes.							Weigh-bridges.			Weighing Machines.							
	Wagon Traversers.	40 feet.	13 feet.	11 feet.	12-ton Steam Travelling.	10-ton Workshop, Overhead Travelling.	10-ton Hand Wharf.	2-ton Hand Wharf.	5-ton Breakdown.	2-ton, with Vertical Boiler on Trolly.	1½-ton Warehouse.	Railway—Wagon, 12-tons.	Cart—7 tons.	Cart—3 tons.	15 cwt.	10 cwt.	5 cwt.	3 cwt.	Platform Trucks.	Sleeper-Dressing Machines.	Rail Presses.	Wheel Presses.
Kaipara.																						
In good order	...	...	1	...	...	...	...	...	...	2	...	...	...	...	...	...	2	...	3	...	...	...
Undergoing heavy repairs ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Undergoing light repairs ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
In course of erection ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
In hands of contractors ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	...	...	1	...	...	...	...	...	...	2	...	...	...	...	...	...	2	...	3	...	...	...
Auckland and Mercer.																						
In good order	1	1*	2	...	...	1	...	...	1	1	1	1	...	...	1	1	5	6	20	...	2	1
Undergoing heavy repairs ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Undergoing light repairs ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
In course of erection ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
In hands of contractors ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	1	1	2	...	...	1	...	...	1	1	1	1	...	...	1	1	5	6	20	...	2	1
Napier and Takapau.																						
In good order	...	...	1	...	...	...	...	...	1	...	...	1	...	...	1	1	4	3	13	...	...	...
Undergoing heavy repairs ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Undergoing light repairs ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
In course of erection ...	...	...	4	...	...	...	...	1	1	...	2	1	...	...	...	...	...	...	...	...	...	...
In hands of contractors ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	...	...	5	...	...	...	...	1	2	...	2	2	...	...	1	1	4	3	13	...	...	...

* 15 feet.

Enclosure F—*continued.*

STATEMENT showing QUANTITY and STATE of MISCELLANEOUS STOCK on the Railways.—*continued.*

	Wagon Traversers.	Turntables.			Cranes.							Weigh-bridges.			Weighing Machines.				Platform Trucks.	Sleeper-Dressing Machines.	Rail Presses.	Wheel Presses.
		40 feet.	13 feet.	11 feet.	12-ton Steam Travelling.	10-ton Workshop, Overhead Travelling.	10-ton Hand Wharf.	2-ton Hand Wharf.	5-ton Breakdown.	2-ton, with Vertical Boiler on Trolly.	14-ton Warehouse.	Railway—Wagon, 12-tons.	Cart—7 tons.	Cart—3 tons.	15-cwt.	10-cwt.	5-cwt.	3-cwt.				
WELLINGTON AND MASTERTON.																						
In good order	...	...	...	...	...	...	...	1	1	1	2	...	...	1	...	2	2	1	10	...	1	1
Undergoing heavy repairs ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Undergoing light repairs	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
In course of erection	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
In hands of contractors	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	...	...	...	...	...	...	...	1	1	1	2	...	...	1	...	2	2	1	10	...	1	1
MANAWATU–FOXTON.																						
In good order	...	...	...	...	...	...	...	...	1	...	1	...	...	...	1	1	2	2	5	...	1	...
Undergoing heavy repairs ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Undergoing light repairs	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
In course of erection	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
In hands of contractors	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	...	...	...	...	...	...	...	...	1	...	1	...	...	...	1	1	2	2	5	...	1	...
WANGANUI–MANAWATU.																						
In good order	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	2	...	2	8	...	...	...
Undergoing heavy repairs ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...
Undergoing light repairs	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
In course of erection	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
In hands of contractors	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	2	...	4	8	...	...	...
NEW PLYMOUTH AND WAITARA.																						
In good order	...	...	1*	1	...	...	...	...	1	...	...	...	...	...	...	...	3	1	6	...	...	...
Undergoing heavy repairs ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Undergoing light repairs	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
In course of erection	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
In hands of contractors	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	...	...	1	1	...	...	...	...	1	...	...	...	...	...	...	...	3	1	6	...	...	...
PICTON AND BLENHEIM.																						
In good order	...	...	1	...	...	...	...	1	1	...	...	1	...	...	...	2	4	...	5	...	...	...
Undergoing heavy repairs ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Undergoing light repairs	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
In course of erection	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...
In hands of contractors	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	...	...	1	...	...	...	...	1	1	...	...	2	...	...	...	2	4	...	5	...	...	...
NELSON AND FOXHILL.																						
In good order	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	4	2	5	...	...	...
Undergoing heavy repairs ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Undergoing light repairs ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
In course of erection	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
In hands of contractors	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	4	2	5	...	...	...
MOUNT ROCHFORT.																						
In good order	1	...	...	...	...	...	...	1	1	1	...	...	...	...	...	...	...	1	1	...	...	...
Undergoing heavy repairs ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Undergoing light repairs	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
In course of erection	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
In hands of contractors	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	1	...	...	...	...	...	...	1	1	1	1	...	...	...	...	...	...	1	1	...	...	...
BRUNNER.																						
In good order	...	...	1	...	1	...	...	1	...	1	...	1	...	...	...	...	...	4	6	...	...	...
Undergoing heavy repairs ...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Undergoing light repairs	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
In course of erection	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
In hands of contractors	...	...	...	...	...	...	...	...	1	...	2	1	...	1	...	...	...	...	...	...	...	...
Total	...	...	1	...	2	...	...	1	1	1	2	2	...	1	...	...	...	4	6	...	...	...
Grand total	2	1	12	1	2	1	...	6	11	6	9	7	...	2	3	9	26	24	82	...	4	2

* 16 feet.

Enclosure G.

RETURN of the NUMBER and NATURE of the ACCIDENTS and INJURIES to LIFE and LIMB which have occurred on each of the several LINES of NEW ZEALAND RAILWAYS from 1st July, 1876, to 30th June, 1877.

Date of Accident.	Name of Railway.	Passengers killed or injured.				Servants of the Department, or of the Contractors, killed or injured.				Persons killed or injured while crossing at Level Crossings.		Trespassers.		Workshops.		Miscellaneous.		Nature and cause of Accidents.
		From causes beyond their own control.		From their own misconduct or want of caution.		From causes beyond their own control.		From their own misconduct or want of caution.										
		Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	
July 28	Wellington and Masterton	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	Engine left rails and turned over, throwing driver, Page, under foot-plate. Leg severely crushed.
September 14	Auckland and Mercer	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	Piece of timber fell off saw-bench, crushing P. Callie's great-toe.
October 16	Auckland and Mercer	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	In shifting wheel, J. Wither fell, and wheel passed over his feet.
January 16	Napier and Takapau	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	Woman named McMahon, in attempting to cross in front of train was run over.
April 17	Wellington and Masterton	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	Boy named Walley, in attempting to cross in front of the train was knocked down.
April 21	Kaipara ...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	Man named Niniss, lying drunk on line, was run over. Arm broken, &c.
May 18	Wellington and Masterton	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	Henry Rising, whilst cleaning crane, had his fingers badly crushed.
June 5	Auckland and Mercer	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	J. Barstow had his thumb severely bruised whilst using grindstone.
June 27	Auckland and Mercer	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	Wagon spring fell on to and crushed T. W. Crowley's great-toe.
June 27	Wellington and Masterton	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	Fireman McLauchlin fell off engine, and was very severely injured.

Railway.	Earnings.				Expenditure.			Profit.				Loss.	
	Estimated.	Actual.	More than Estimate.	Less than Estimate.	Estimated.	Actual.	Less than Estimate.	Estimated.	Actual.	More than Estimate.	Less than Estimate.	Estimated.	Actual.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Kaipara		3,152 11 1 *625 13 4				4,005 18 2 *290 13 4							
	8,060 0 0	3,778 4 5	...	4,281 15 7	7,918 12 0	4,296 11 6	3,622 0 6	141 8 0	...	...	659 15 1	...	518 7 1
Auckland and Mercer...		21,808 0 4 *236 6 4				17,606 18 6 *56 10 4							
	28,180 0 0	21,868 3 9	...	6,311 16 3	24,893 12 0	17,663 8 10	7,230 3 2	3,286 8 0	4,204 14 11	918 6 11	...	...	...
Napier and Takapau ...		21,374 17 10 †4 0											
	20,574 0 0	21,374 13 10	800 13 10	...	15,004 4 0	13,239 19 2	1,764 4 10	5,569 16 0	8,134 14 8	2,564 18 8	...	...	...
Wellington and Masterton ...	15,828 0 0	11,518 18 3	...	4,309 1 9	11,250 2 0	9,893 19 2	1,356 2 10	4,577 18 0	1,624 19 1	...	2,952 18 11	...	...
Foxton and Manawatu		7,442 10 0 *758 9 0											
		8,200 19 0 ‡175 18 0											
		8,376 17 0 †12 4 10				6,800 16 8 *577 16 6							
	15,341 0 0	8,364 12 2	...	6,976 7 10	14,495 10 0	7,378 13 2	7,116 16 10	845 10 0	985 19 0	140 9 0	...	...	...
Wanganui and Manawatu	11,310 0 0	(1½ months.) 175 9 6	...	11,134 10 6	8,889 8 0	412 14 4	8,476 13 8	2,420 12 0	...	...	2,657 16 10	...	237 4 10
New Plymouth and Waitara		2,463 5 9 *178 13 4				3,093 6 8 *177 15 6							
	6,096 0 0	2,641 19 1	...	3,454 0 11	7,104 18 0	3,271 2 2	3,833 15 10	...	...	379 14 11	...	1,008 18 0	629 3 1
Picton and Blenheim ...		4,997 13 7 *733 10 10				4,979 16 2 *185 15 11							
	8,580 0 0	5,731 4 5	...	2,848 15 7	8,118 8 0	5,165 12 1	2,952 15 11	461 12 0	565 12 4	104 0 4	...	...	...
Nelson and Foxhill	7,675 0 0	6,209 13 3	...	1,465 6 9	7,325 0 0	5,490 9 5	1,834 10 7	350 0 0	719 3 10	369 3 10	...	...	...
Westport		851 12 6 ‡7 0 0											
		858 12 6	858 12 6	...	2,728 4 0	833 6 6	1,894 17 6	...	25 6 0	2,753 10 0	...	2,728 4 0	...
Brunner		5,340 4 11 *2,580 6 8				3,773 19 6 *573 0 0							
	10,556 0 0	7,920 11 7	...	2,635 8 5	7,776 16 0	4,346 19 6	3,429 16 6	2,779 4 0	3,573 12 1	794 8 1	...	...	...
Total	132,200 0 0	90,442 2 9	1,659 6 4	43,417 3 7	115,504 14 0	71,992 15 10	43,511 18 2	20,432 8 0	19,834 1 11	8,024 11 9	6,270 10 10	3,737 2 0	1,384 15 0
								Less Loss ...	1,384 15 0				
									18,449 6 11				

* Receipts and Expenditure, Wharves. † Outstandings on Goods written off during year. ‡ Recoveries.

Enclosure I.

STATEMENT OF ACCOUNTS.

KAIPARA RAILWAY AND WHARVES.

Dr.	£	s.	d.	Cr.	£	s.	d.
To Gross Earnings,—				By Amount paid into Public Account, being amount outstanding on Goods, 1st July, 1876	5	13	6
Amount outstanding on Goods, 1st July, 1876, Railway	4	12	4	Amount paid into Public Account to 30th June, 1876, Railway	3,093	1	4
Ditto ditto, Wharves	1	1	2	Ditto ditto, Wharves	607	12	8
Passengers, Parcels, &c., to 30th June, 1877	1,221	3	3	Ditto of Cash in hands of Manager ditto, Railway	45	2	1
Goods and Cattle, ditto,	1,931	7	10	Ditto ditto, Wharves	12	14	11
Wharves, ditto,	625	13	4	Ditto outstanding on Goods, ditto, Railway	14	7	8
				Ditto ditto, Wharves	5	5	9
	£3,783	17	11		£3,783	17	11
To Amount paid into Public Account, to 30th June, 1877, Railway	3,093	1	4	By Expenditure to 30th June, 1877, Railway	4,005	18	2
Ditto ditto, Wharves	607	12	8	Ditto, ditto, Wharves	290	13	4
Ditto of Cash in hands of Manager, ditto Railway	45	2	1				
Ditto ditto, Wharves	12	14	11				
Ditto outstanding on Goods, ditto, Railway	14	7	8				
Ditto ditto, Wharves	5	5	9				
Loss	518	7	1				
	£4,296	11	6		£4,296	11	6

AUCKLAND RAILWAY AND WHARF.

Dr.	£	s.	d.	Cr.	£	s.	d.
To Gross Earnings,—				By amount paid into Public Account, being Cash in hand and outstanding on Goods on 1st July, 1876	256	4	8
Amount in hands of Manager, 1st July, 1876, Railway	13	0	3	Amount paid into Public Account to 30th June, 1877, Railway	21,329	3	10
Ditto outstanding on Goods, ditto ...	243	4	5	Ditto ditto, Wharf	191	18	8
Passengers, Parcels, &c., to 30th June, 1877	12,404	0	2	Ditto of Cash in hands of Manager ditto, Railway	243	3	3
Goods and Cattle, ditto ...	9,404	0	2	Ditto ditto, Wharf	36	19	10
Wharf, ditto ditto ...	236	6	4	Ditto outstanding on Goods ditto, Railway	59	10	4
				Ditto ditto, Wharf	7	7	10
				Ditto written off during year	176	2	11
	£22,300	11	4		£22,300	11	4
To Amount paid into Public Account to 30th June, 1877, Railway	21,329	3	10	By Expenditure to 30th June, 1877, Railway	17,606	18	6
Ditto ditto, Wharf	191	18	8	Ditto ditto, Wharf	56	10	4
Ditto of Cash in hands of Manager ditto, Railway	243	3	3	By Balance towards payment of Interest ...	4,204	14	11
Ditto ditto, Wharf	36	19	10				
Ditto outstanding on Goods ditto, Railway	59	10	4				
Ditto ditto, Wharf	7	7	10				
	£21,868	3	9		£21,868	3	9

NAPIER AND TAKAPAU RAILWAY.

Dr.	£	s.	d.	Cr.	£	s.	d.
To Gross Earnings,—				By Amount paid into Public Account, being Cash in hand and outstanding on Goods, 1st July, 1876	177	2	0
Amount in hands of Manager, 1st July, 1876	41	15	8	Amount paid into Public Account to 30th June, 1877	20,874	9	4
Ditto outstanding on Goods, ditto ...	135	6	4	Ditto Cash in hand of Manager ditto ...	261	15	0
Passengers, Parcels, &c., to 30th June, 1877	10,781	7	4	Ditto outstanding on Goods ditto ...	238	9	6
Goods and Cattle, ditto ...	10,593	10	6	Ditto written off during the year ...	0	4	0
	£21,551	19	10		£21,551	19	10
To Amount paid into Public Account to 30th June, 1877	20,874	9	4	By Expenditure to 30th June	13,239	19	2
Ditto of Cash in hands of Manager ditto	261	15	0	By Balance towards payment of Interest ...	8,134	14	8
Ditto outstanding on Goods ditto	238	9	6				
	£21,374	13	10		£21,374	13	10

Enclosure I—*continued.*

WELLINGTON AND MASTERTON RAILWAY.

Dr.	£	s.	d.	Cr.	£	s.	d.
To Gross Earnings,—				By Amount paid into Public Account, being Cash in hand and outstanding on Goods, 1st July, 1876	72	13	4
Amount in hands of Manager, 1st July, 1876	52	16	11	Amount paid into Public Account to 30th June, 1877	11,486	6	9
Ditto outstanding on Goods, ditto ...	19	16	5	Ditto of Cash in hands of Manager, ditto ...	31	18	0
Passengers, Parcels, &c., to 30th June, 1877	8,815	7	2	Ditto outstanding on Goods, ditto ...	0	13	6
Goods and Cattle, ditto ...	2,703	11	1				
	£11,591	11	7		£11,591	11	7
To Amount paid into Public Account to 30th June, 1877	11,486	6	9	By Expenditure to 30th June, 1877 ...	9,893	19	2
Ditto of Cash in hands of Manager, ditto ...	31	18	0	Balance towards payment of Interest ...	1,624	19	1
Ditto outstanding on Goods, ditto ditto ...	0	13	6				
	£11,518	18	3		£11,518	18	3

FOXTON AND MANAWATU RAILWAY.

Dr.	£	s.	d.	Cr.	£	s.	d.
To Gross Earnings,—				By Amount paid into Public Account, being Cash in hand and outstanding on Goods, 1st July, 1876	334	19	10
Amount of Cash in hands of Manager, 1st July, 1876, Railway	1	0	0	Amount paid into Public Account to 30th June, 1877, Railway	7,389	11	1
Ditto outstanding on Goods, ditto ...	304	4	9	Ditto ditto, Wharf	748	10	5
Ditto ditto, ... Wharf	29	15	1	Ditto of Cash in hands of Manager, ditto, Railway	19	8	0
Passengers, Parcels, &c., to 30th June, 1877	3,060	7	1	Ditto ditto, Wharf	5	1	10
Goods and Cattle, ditto ...	4,382	2	11	Ditto outstanding on Goods, ditto, Railway	21	15	0
Wharf	758	9	0	Ditto ditto, Wharf	4	7	10
				Ditto ditto, written off during year, Railway	11	15	11
				Ditto ditto, Wharf	0	8	11
	£8,535	18	10		£8,535	18	10
To Amount paid into Public Account to 30th June, 1877, Railway	7,389	11	1	By Expenditure to 30th June, 1877, Railway	6,800	16	8
Ditto ditto, Wharf	748	10	5	Ditto ditto, Wharf	577	16	6
Ditto Cash in hands of Manager, ditto, Railway	19	8	0	Balance towards payment of Interest ...	985	19	0
Ditto ditto, Wharf	5	1	10				
Ditto outstanding on Goods, ditto, Railway	21	15	0				
Ditto ditto, Wharf	4	7	10				
Recoveries	175	18	0				
	£8,364	12	2		£8,364	12	2

WANGANUI AND MANAWATU RAILWAY.

Dr.	£	s.	d.	Cr.	£	s.	d.
To Gross Earnings,—				By Amount paid into Public Account to 30th June, 1877	115	3	4
Passengers, parcels, &c., from 18th May to 30th June, 1877	79	11	1	Ditto of Cash in hands of Manager, ditto ...	3	9	11
Goods and Cattle, ditto ...	95	18	5	Ditto outstanding on Goods	56	16	3
	£175	9	6		£175	9	6
To Amount paid into Public Account to 30th June, 1877	115	3	4	By Expenditure to 30th June, 1877 ...	412	14	4
Ditto of Cash in hands of Manager, ditto...	3	9	11				
Ditto outstanding on Goods, ditto ...	56	16	3				
Loss	237	4	10				
	£412	14	4		£412	14	4

NEW PLYMOUTH AND WAITARA RAILWAY.

Dr.	£	s.	d.	Cr.	£	s.	d
To Gross Earnings,—				By Amount paid into Public Account, being Cash in hand and outstanding on Goods, 1st July, 1876	15	15	1
Amount Outstanding on Goods, 1st July, 1876, Railway	12	17	4	Amount paid into Public Account to 30th June, 1877, Railway	2,451	5	4
Ditto ditto, Wharf	2	17	9	Ditto ditto, Wharf	170	4	10
Passengers, Parcels, &c., to 30th June, 1877	1,082	13	6	Ditto of Cash in hands of Manager, ditto Railway	9	16	6
Goods and Cattle ditto ...	860	12	3	Ditto ditto, Wharf	0	7	0
Wharf ditto ...	178	13	4	Ditto outstanding on Goods, ditto, Railway	2	3	11
				Ditto ditto, Wharf	8	1	6
	£2,657	14	2		£2,657	14	2
To Amount paid into Public Account to 30th June, 1877, Railway	2,451	5	4	By Expenditure to 30th June, 1877, Railway	3,093	6	8
Ditto ditto, Wharf	170	4	10	Ditto ditto, Wharf	177	15	6
Ditto of Cash in hands of Manager, Railway	9	16	6				
Ditto ditto, Wharf	0	7	0				
Ditto outstanding on Goods, ditto Railway	2	3	11				
Ditto ditto, Wharf	8	1	6				
Loss	629	3	1				
	£3,271	2	2		£3,271	2	2

Enclosure I—*continued.*

PICTON AND BLENHEIM RAILWAY.

Dr.	£	s.	d.	Cr.	£	s.	d.
To Gross Earnings,—				By Amount paid into Public Account, being Cash in hand and outstanding on Goods, 1st July, 1876, Railway	18	2	0
Amount of Cash in hands of Manager, 1st July, 1876, Railway	15	12	10	Amount paid into Public Account to 30th June, 1877, Railway	4,967	2	8
Ditto ditto, Wharf	2	9	2	Ditto ditto, Wharf	730	4	9
Passengers, Parcels, &c., to 30th June, 1877	1,959	13	4	Ditto of Cash in hands of Manager, ditto Railway	30	10	11
Goods and Cattle ditto ...	3,038	0	3	Ditto ditto, Wharf	3	6	1
Wharf ditto ...	733	10	10				
	£5,749	6	5		£5,749	6	5
To Amount paid into Public Account to 30th June, 1877, Railway	4,967	2	8	By Expenditure to 30th June, 1877, Railway	4,979	16	2
Ditto ditto, Wharf	730	4	9	Ditto ditto, Wharf	185	15	11
Ditto of Cash in hands of Manager, ditto Railway	30	10	11	Balance towards payment of Interest ...	565	12	4
Ditto ditto, Wharf	3	6	1				
	£5,731	4	5		£5,731	4	5

NELSON AND FOXHILL RAILWAY.

Dr.	£	s.	d.	Cr.	£	s.	d.
To Gross Earnings,—				By Amount paid into Public Account, being Cash in hand and outstanding on Goods, 1st July, 1876	4	10	9
Amount of Cash in hands of Manager, 1st July, 1876	0	0	2	Amount paid into Public Account to 30th June, 1877	6,178	6	6
Ditto outstanding on Goods ditto ...	4	10	7	Ditto of Cash in hands of Manager ditto ...	26	6	1
Passengers, Parcels, &c., to 30th June, 1877	4,418	9	10	Ditto outstanding on Goods ditto ...	5	0	8
Goods and Cattle ditto ...	1,791	3	5				
	£6,214	4	0		£6,214	4	0
To Amount paid into Public Account to 30th June, 1877	6,178	6	6	By Expenditure to 30th June, 1877 ...	5,490	9	5
Ditto of Cash in hands of Manager ditto ...	26	6	1	By Balance towards payment of Interest ...	719	3	10
Ditto outstanding on Goods ditto ...	5	0	8				
	£6,209	13	3		£6,209	13	3

WESTPORT AND MOUNT ROCHFORT RAILWAY.

Dr.	£	s.	d.	Cr.	£	s.	d.
To Gross Earnings,—				By Amount paid into Public Account, to 30th June, 1877	826	6	6
Passengers, Parcels, &c., from 5th August, 1876, to 30th June, 1877	473	16	0	Ditto of Cash in hands of Manager ditto ...	25	6	0
Goods and Cattle ditto ...	377	16	6				
	£851	12	6		£851	12	6
To Amount paid into Public Account to 30th June, 1877	826	6	6	By Expenditure to 30th June, 1877 ...	833	6	6
Ditto of Cash in hands of Manager ditto ...	25	6	0	By Balance (Cash in hands of Manager) ...	25	6	0
Recoveries	7	0	0				
	£858	12	6		£858	12	6

BRUNNER RAILWAY AND WHARF.

Dr.	£	s.	d.	Cr.	£	s.	d.
To Gross Earnings,—				By amount paid into Public Account, being amount outstanding on Goods, 1st July, 1876	0	15	11
Amount outstanding on Goods, 1st July, 1876, Railway	0	15	11	Amount paid into Public Account to 30th June, 1877, Railway	5,312	9	8
Passengers, Parcels, &c., to 30th June, 1877	2,449	13	6	Ditto ditto, Wharf	2,580	6	8
Goods and Cattle, ditto	2,890	11	5	Ditto of Cash in hands of Manager ditto, Railway	27	15	3
Wharf, ditto	2,580	6	8				
	£7,921	7	6		£7,921	7	6
To Amount paid into Public Account to 30th June, 1877, Railway	5,312	9	8	By Expenditure to 30th June, 1877, Railway	3,773	19	6
Ditto ditto, Wharf	2,580	6	8	Ditto ditto, Wharf	573	0	0
Ditto of Cash in hands of Manager ditto, Railway	27	15	3	Balance towards payment of Interest ...	3,573	12	1
	£7,920	11	7		£7,920	11	7

Enclosure J.

*CHRISTCHURCH SECTION.

Balance Sheet for Six Months ending 30th June, 1877.

Dr.	£ s. d.	£ s. d.	Cr.	£ s. d.	£ s. d.
To Outstandings on 31st December 1876	6,216 0 0		By Cash paid to Public Account	145,458 11 11	
„ Cash Balances, „	820 0 0		„ Peacock's December Wharfage, paid in January	280 4 4	
„ Cash Balances from Oamaru „	951 3 9		„ Outstanding and Ledger Accounts	14,022 19 3	
„ Cash due Province of Canterbury „	2,287 17 5		„ Bad debts	8 18 6	
		10,275 1 2	„ Cash Balance	8,201 19 7	
„ Revenue	148,615 9 7				167,972 13 7
„ Wharfages collected at Cunningham and Co.'s	1,164 9 6				
„ Wharfages collected at Harbour Board	7,917 13 4				
		157,697 12 5			
Total		£167,972 13 7	Total		£167,972 13 7

Revenue and Expenditure for the Six Months ended 30th June, 1877.

	£ s. d.	£ s. d.		£ s. d.	£ s. d.
To Revenue,—			By Expenditure	103,040 1 0	
Merchandise	92,452 1 4		„ Wharf Refunds	9,082 2 10	
Passengers	49,602 4 6				
Parcels	3,005 14 2		„ Balance	45,575 8 7	
Carriages, Horses, and Dogs	1,347 14 1				157,697 12 5
Miscellaneous	2,207 15 6				
		148,615 9 7			
„ Wharfage collected on commission	...	9,082 2 10			
Total	...	£157,697 12 5	Total		£157,697 12 5

* Includes Oamaru Section from the date that the lines were connected.

Enclosure K.

DUNEDIN, INVERCARGILL, AND *OAMARU SECTIONS.

Revenue and Expenditure for Six Months ending 30th June, 1877.

Revenue.	£ s. d.	Expenditure.	£ s. d.
To Revenue	72,129 15 7	By Expenditure	49,768 0 11
		„ Excess of Receipts over Expenditure	22,361 14 8
	£72,129 15 7		£72,129 15 7

DUNEDIN SECTION.

Balance Sheet for Six Months ending 30th June, 1877.

1877.	Dr.	£ s. d.	£ s. d.	£ s. d.	Cr.	£ s. d.	£ s. d.
Jan. 1	To Balance	...	3,696 10 3		By Bank of New Zealand	...	48,267 13 1
	„ Passengers	19,839 18 5			„ Claims	...	32 2 6
	„ Parcels	764 17 7			„ Station Balances	3,782 5 11	
	„ Excess	224 1 0			„ Rent Account outstanding	399 16 0	
	„ Cloak-room	54 11 3					4,182 1 11
	„ Season Tickets	1,254 14 4					
	„ Goods	24,213 7 7					
	„ Haulage	147 18 1					
	„ Storage	190 5 4					
	„ Rents	827 10 10					
	„ Live Stock	45 18 11					
	„ Weigh Bridge	154 9 6					
	„ Express License Fees	9 0 0					
	„ Sundries	135 5 0					
	„ Dunedin, Portobello, and Ocean Beach Railway	774 9 7					
	„ Hillside Workshops	80 6 2					
	„ Port Chalmers Workshops	68 13 8					
			48,785 7 3	£52,481 17 6			£52,481 17 6
	Dr. to Balance		£4,182 1 11				

INVERCARGILL SECTION.

Balance Sheet for the Six Months ending 30th June, 1877.

1877.	Dr.	£ s. d.	£ s. d.	£ s. d.	Cr.	£ s. d.
Jan. 1	To Balance	...	1,748 17 10		1877.	
	„ Passengers	7,477 0 3			By Bank of New Zealand	22,699 2 7
	„ Parcels	112 1 4			„ Station Balances	693 6 3
	„ Season Tickets	176 0 3				
	„ Live Stock	80 6 9				
	„ Goods	12,973 1 0				
	„ Jetty Dues	51 10 0				
	„ Water Supply	2 2 0				
	„ Advertising Space	18 10 6				
	„ Storage	15 8 7				
	„ Sundries	737 10 4				
			21,643 11 0	£23,392 8 10		£23,392 8 10
	Dr. to Balance		£693 6 3			

Enclosure K—*continued.*

*OAMARU SECTION.

Balance Sheet for the Six Months ending 30th June, 1877.

1877.	Cr.	£ s. d.	£ s. d.	£ s. d.
Jan. 1	To Balance	...	492 1 11	
	„ Passengers	813 19 7		
	„ Season Tickets	2 0 0		
	„ Parcels	19 15 1		
	„ Cloak-room	1 9 1		
	„ Excess	1 0 9		
	„ Live Stock	1 1 0		
	„ Storage	5 2 0		
	„ Sundries	1 12 0		
	„ Goods	849 17 10		
	„ Express License Fees	5 0 0		
			1,700 17 4	
				£2,192 19 3
	Dr. to Balance, *nil.*			

1877.	Dr.	£ s. d.	£ s. d.	£ s. d.
	By Bank of New Zealand	1,228 10 6		
	„ Claims paid	13 15 0		
	„ Station Balances transferred to Christchurch	950 13 9		
				£2,192 19 3

DUNEDIN, INVERCARGILL, AND *OAMARU SECTIONS.

Balance Sheet for the Six Months ending 30th June, 1877.

1877.	Dr.	£ s. d.	£ s. d.	£ s. d.
Jan. 1	To Balances brought forward,—			
	Central Division		3,696 10 3	
	Southern „		1,748 17 10	
	Northern „		492 1 11	
				5,937 10 0
	„ Passengers	28,130 18 3		
	„ Season Tickets	1,432 14 7		
	„ Cloak-room	56 0 4		
	„ Excess	225 1 9		
	„ Parcels	896 14 0		
	„ Goods	38,036 6 5		
	„ Haulage	147 18 1		
	„ Storage	210 15 11		
	„ Rent	827 10 10		
	„ Live Stock	127 6 8		
	„ Weighbridge	154 9 6		
	„ Express License Fees	14 0 0		
	„ Advertising Space	18 10 5		
	„ Sundries	874 7 4		
	„ Dunedin, Peninsula, and Ocean Beach Railway	774 9 7		
	„ Hillside Workshops	80 6 2		
	„ Port Chalmers Workshops ...	68 13 8		
	„ Jetty Dues	51 10 0		
	„ Water Supply	2 2 0		
				72,129 15 7
				£78,067 5 7
	Dr. to Balance		£4,875 8 2	

1877.	Cr.	£ s. d.	£ s. d.	£ s. d.
	By Bank of New Zealand		72,195 6 2	
	„ Northern Division Balance transferred to Christchurch		950 13 9	
	„ Claims paid		45 17 6	
	„ Station Balances,—			
	Dunedin Central Division ...	3,782 5 11		
	Invercargill Division	693 6 3		
	Rent Account	399 16 0		
			4,875 8 2	
				£78,067 5 7

* During the period that this section was worked independently of Christchurch section.

Enclosure K—*continued*

DUNEDIN, INVERCARGILL, AND *OAMARU SECTIONS.

STATEMENT OF EXPENDITURE for Six Months ending 30th June, 1877.

WORKING EXPENSES.

	£ s. d.		£ s. d.	£ s. d.	£ s. d.
To Amount of Appropriation, 1876-77	52,950 0 0	By General Charges	2,083 14 7		
				2,083 14 7	
		Traffic Department—			
		„ Oamaru Section	430 3 5		
		„ Dunedin „	11,515 2 11		
		„ Invercargill „	3,610 14 2		
				15,556 0 6	
		Locomotive Department—			
		„ Oamaru Section	1,870 7 7		
		„ Dunedin „	11,465 3 1		
		„ Invercargill „	4,914 11 10		
				18,250 2 6	
		Maintenance Department—			
		„ Oamaru Section	277 4 2		
		„ Dunedin „	8,162 15 3		
		„ Invercargill „	5,438 3 11		
				13,878 3 4	
					49,768 0 11
		„ Amount transferred to Dr. of Christchurch Section		... ...	2,179 1 3
		„ Amount unexpended		... ...	1,002 17 10
	£52,950 0 0				£52,950 0 0

* During the period that this Section was worked independently of Christchurch Section.

Enclosure No. 1.

WESTLAND DISTRICT—ANNUAL REPORT ON WATER-RACES.

The District Engineer, Hokitika, to Engineer-in-Chief.

Sir,— District Engineer's Office, Hokitika, 31st May, 1877.

I have the honor to report that the water-races in this district, with which the General Government has been more or less connected during the year just ended, have been as per list below; which, with the one addition of the extension of the Waimea Race to Kumara, is the same as the list in last year's report.

Nelson South-West Gold Fields—
- Four-Mile Water-race—Charleston District.
- Nelson Creek Water-race—Grey Valley District.

Westland Gold Fields—
- New River Water-race—Marsden District.
- Hibernian Water-race—Marsden District.
- Hohonu Water-race—Greenstone District.
- Waimea Water-race—Waimea District.
- Waimea Extension to Kumara—Waimea and Kumara Districts.
- Kanieri Water-race—Kanieri District.
- Mikonui Water-race—Totara District.

Four Mile Water-race.—Length proposed, 14 miles. Estimate, for a race to carry 15 Government heads of water, of 40 superficial inches each, £10,800. An application having been received from a company at Charleston for a subsidy for this race, the country through which it would pass was carefully explored, and a full report upon it, with explanatory map attached, was furnished on 21st August, 1876.

In this report the original project of the company was shown not to be a good one, as the supply of water which it would afford would be small in comparison with the probable cost, and it was suggested that, in the event of a subsidy being granted, an alternative project should be adopted—namely, to construct the race for only 8 miles, to a point where it could be carried into Argyle Company's dam; to purchase this dam, with the distribution race appertaining to it, and to increase the capacity of said dam and race. This was estimated to cost in all £13,400—viz., about 1¼ times the probable cost of promoters' project, but it was calculated at same time to yield more than twice the quantity of water which that project would have yielded. The probability or otherwise of either project proving remunerative depended on the probable quantity of payable auriferous ground, about which no reliable data could be obtained by this department, but which the Warden was requested to give an opinion upon.

Nelson Creek Race.—To carry 60 heads of water. Length, as reduced by tunnels, 18 miles 50 chains; also head-works at Lake Hochstetter.

The construction of this race with head-works has been carried on with energy during the last twelve months, the average number of men employed daily during that period having been 203, and the net contract value of the work done £30,347.

The head-works are now completed, and the thoroughly trustworthy and workmanlike manner in which they have been carried out reflects great credit on the contractor, Mr. Price, who was some time since an Inspector in the Government service, and the very satisfactory manner in which he has completed this contract, the workmanlike and systematic way in which he went about it from the first, and the reasonable cost at which it has been carried out, without trouble, litigation, or arbitration, all go to show how advantageous it is to get well-trained experts as contractors in the case of any works of magnitude, rather than the in-experts who so frequently tender lowest and get the contracts, and then end by doing everything in a slow, bad, and slovenly manner, and becoming bankrupt themselves into the bargain. It is certainly a fact that the cases in which trouble has arisen in this district with contractors who were tradesmen, and understood their work, have been very few, if any at all; while the troubles and arbitrations in the cases of contracts made with storekeepers, publicans, and such like, have been numerous, and the work done by them seldom as satisfactory in the end as if it had been done by an expert.

Of the race line itself, the portion from the head-works down to the fifth mile, together with the branch race to "Owen's Look-out," is now practically completed, and it is expected that water will be sold from the branch race early in July.

From the fifth mile to the end of the race, the ditching and tunnelling is all practically completed, and only the boxing on flumes and bridges, and the waste-water channel at end of race, remain to be completed. Five of the bridges on this length were works of great magnitude and difficulty, having spans varying from 100 to 150 feet, standing from 70 to 170 feet above the bottoms of the gullies which they cross, and the original contractor, Mr. Roche (a storekeeper), made no progress with them whatever. The present contractors however, Messrs. Garven and Price, undertook the work systematically, and have succeeded in bringing it to a successful issue.

It is anticipated that the whole of the undertakings in connection with the Nelson Creek Race will be completed during the month of August next, and that from that date forward water can be delivered at any point required.

New River Water-race.—Estimated to cost £10,000, and undertaken under Government subsidy of £5,000. To carry 16 heads of water. Length contemplated, 8 miles 70 chains. Of this distance, 6 miles 53 chains is completed—namely, same length as noted in last annual report, no construction work having been done during the year ending 31st May, 1877.

The amount of subsidy paid to date is £3,502 10s. 3d., leaving £1,497 9s. 9d. still to be paid.

The interest on Government advances has not been paid since 20th March, 1876.

The amount spent by the company during the last twelve months on maintenance has been about £117, and the average number of miners engaged in claims worked by the race-water throughout the year has been twenty.

Hibernian Water-race.—Estimated at £5,185, and completed under a Government subsidy of £2,000. Capacity, 10 heads. Length, 5 miles 51 chains.

This work was reported completed in the annual report for year ending May, 1875.

During the last year it has been leased to a party of six men, who use the whole of the water in their claim.

The maintenance is done by the lessees, without cost to the company.

The interest on Government advances has not been paid since 19th June, 1876.

Hohonu Water-race.—Constructed to carry 50 heads. Length, 5 miles 41 chains, with a feeder from reservoir 1 mile 9 chains in length, constructed to carry 30 heads; a catchwater race 2 miles 8 chains in length from Musquito Creek, and a reservoir in extent about 5 acres.

The total cost of the undertaking has been about £12,500, of which about £2,500 was obtained from the Government as subsidy towards the construction of some of the later works undertaken.

The whole of the construction works were reported as completed the year before last.

During the last year there have been several heavy floods, which damaged the race and head-works considerably, and, though a large amount was expended in reconstruction, the works have not since been thoroughly restored.

The average number of men employed in claims worked by the race-water during the year has not exceeded twelve.

Waimea Water-race.—Main race. Length 15 miles 75 chains. Capacity, 40 heads.

This work was finally completed in July, 1876, and since that date water has been regularly sold.

Pending the construction of the head-works, the quantity of water available for sale does not exceed 15 heads running continuously, but, so far, this has been sufficient, as the demand has not at any time exceeded an average of 8 heads, running continuously.

The construction of headworks to such an extent as would afford permanent storage, so as to increase the total supply, has not, therefore, appeared to be necessary; but the demand for day-water being in excess of the quantity available in the day-time, it was recommended in January last to construct a weir in the Kawhaka, at the head of the race, of such a height as would store the night water during sixteen hours, and thus admit of the sale, during eight hours in the day-time, of the whole quantity running in the creek during each twenty-four hours. The sum of £9,000 was authorized for this on 12th March, 1877, and plans for the work are now in hand.

The only other portion of original project not yet undertaken is the branch to Tunnel Terrace, called Branch B, near Goldsborough. This was portion of the work originally recommended, and the project cannot be said to be complete without it, some of the best ground, and that most looked to to give a return, being at the end of the proposed branch. The cost of this work would be about £2,500.

The sales of water, from the time they first commenced in August, 1876, to the 31st May, 1877, have averaged £69 per month, and during the last five months they have averaged £86 per month. Were it not for the opening up of the Kumara Gold Field, and the migration of some of the miners from the Waimea to that place, the quantity of water sold at the Waimea would have been much greater than it has been; but even now it would be considerably increased by the construction of Branch B above alluded to.

Extension to Kumara.—Before this work was taken in hand extensive explorations and surveys were made of the entire surrounding country to ascertain the best line, and to discover, if possible, some good site for a reservoir along its course, as the Kawhaka Creek basin afforded no facilities for doing this, and the creek itself was evidently insufficient to supply the probable demand at Kumara without a reservoir to aid it.

The only really good sites for storage—namely, the flats in the valley of the Kapitea, having, however, already been taken up by the Kumara Water-race Company, it was found that no adequate storage room could be got at any moderate cost, so it was tried if the supply required could be got in another way—namely, by bringing in the Arahura River. This, however, though it promised at first sight to be feasible, proved, after careful examination, to be entirely too costly, and that idea also had therefore to be abandoned.

The only alternative left, therefore, was to purchase the property of the Kumara Water-race Company, consisting of a water-race having a length of 3 miles 3 chains, constructed to carry 30 heads, with dam across Kapitea Creek, which confined a very considerable reservoir of water, and registered rights extending over the Kapitea Valley from this dam to the source of the creek, all of which was purchased by the Government on the 24th March, 1877, for £8,000.

Since the date of this purchase, a length of 2 miles 23 chains of distribution race at Kumara some of which the Company had previously put in hand, has been completed, and a further length of 30 chains now in hand will complete all necessary branch races for delivery of water.

In the meantime, in order to bring in the necessary supply which it is designed to store in the Kapitea Valley, tenders were called on the 11th instant for a race called the Kawhaka Supply Race—length, 4 miles 75 chains, and proposed capacity 30 heads, extending from the Kawhaka Creek to the head of the Kapitea Valley.

The work was divided into thirty-four sections, averaging about 10 chains each, and of these twenty-six are already contracted for, and tenders have been accepted for the other eight.

The advantage of having let this race by task-work, which the Government authorized in this instance, is already apparent; as instead of only a few men being put on, as would probably have been the case had it been let in one contract, it is found that each section of 10 chains contracted for is now in full work, and there is very little doubt that they will all be finished within the contract time. A race of nearly 5 miles therefore, for which six or eight months would probably have been allowed for completion if let in one contract, will now most probably be completed in two months by task-work.

The cost, too, by the task-work method is much less, as is shown by the fact that the lowest tender for the whole of the sections was £4,673, while the sum of the task-work contracts will be under £3,600.

The plans for the second dam—namely, the dam at Loop-line Road, are in hand, and tenders will be called for by about end of June.

The sales of water at Kumara will necessarily be very limited until the Kawhaka Supply Race and the second dam above alluded to are completed; but even what is being sold at present, which is chiefly in dry weather derived from Waimea Race night water, is a great boon to the miners. The value of the water sold in April was £79 10s., and in May £122 10s.; total, £202; of which £167 10s. was realized up to end of May, leaving £34 10s. outstanding at that date.

Kanieri Water-race.—Length 12 miles 21 chains, constructed to carry 60 heads of water. Total cost about £23,800, of which the Government has contributed £10,000. This work was reported completed in the annual report for May, 1875. The maintenance during the past year was principally done by the miners using the race, in payment for the water which they received, and as several heavy slips occurred the actual receipts from sales were very slight. An average of about ten men are kept at work by the race-water.

Mikonui Water-race.—Tenders were again called for the long tunnel on this race on the 23rd November, 1876. The advertisements were inserted in one or more of the papers in all the chief towns of the colony. Several tenders were received accordingly on the date fixed—namely, 18th December, 1876, but the lowest was £19,700, including the £2,000 specified to be included for possible Government contingencies.

As this was considerably above the estimate it was declined.

Since that time the County Council have had the matter under their consideration on several occasions, the last one being in connection with the proposed handing over of the races to them, when it was mooted by some of the councillors that the Mikonui Race could possibly be carried out with the £16,000 voted, aided by some £12,000, which would probably be available from Waimea Race vote. On learning, however, that the total estimate for the Mikonui Race complete was £73,000, they seemed to come to the conclusion that the £45,000 which would still be required over and above the sum promised by the Government would be quite beyond the resources of the county to contribute.

I have, &c.,

C. Y. O'Connor,

The Engineer-in-Chief, Wellington. District Engineer.

Enclosure No. 2.

REPORT ON CLUTHA RIVER.

The District Engineer, Dunedin, to the Engineer-in-Chief.

Sir,— Public Works Office, Dunedin, 14th July, 1877.

In accordance with your instructions, number and date as per margin,* I have the honor to submit the following report on the Clutha River, and the possibility of improving its navigation:—

The idea of utilizing the river as a highway to the interior is by no means a new one. From the votes and proceedings of the Provincial Council of Otago, I find that a movement in this direction was made by the settlers in 1862, by memorializing the Government for a steamer.

Captain Thompson, the present Harbour Master, reported on the navigability of the river in 1861, Mr. Balfour in 1864 and 1865, and Mr. Adam Johnston in 1871. In his report of the 21st October, 1864, Mr. Balfour alluded to the idea of making the Clutha navigable to the Wanaka Lake, but he and the other gentlemen seem to have otherwise confined their investigation to that portion of the river below the Beaumont (Dunkeld). I have, however, examined it to the Bendigo Crossing, 10 miles above Cromwell.

Commencing at the sea the character of the Clutha River may be described in general terms as follows:—

Like most New Zealand rivers its entrance is guarded by a long sandy spit, running parallel with the stream for some distance, and terminating in a bar. The entrance does not, however, follow the general rule on the eastern side of this island, for instead of turning to the north as directed by the prevailing winds and ocean currents, the river turns southwards, to find an easier exit in the lee of the Nuggets.

The entrance is very much obstructed by a ledge of rocks in the channel, inside the bar proper. The depth at low-water on the bar is 7 feet, and on the reef 5. Mr. Balfour intended to remove a portion of the rock in 1864, and put in some experimental blasts, which were very successful, but from some cause or other the project was abandoned. From this and other evidence, I am of opinion that there would be no great difficulty in removing this obstruction.

Once inside the bar the river presents a sheltered reach three-quarters of a mile long, and wide and deep enough to accommodate a fleet. About the middle of this reach the river divides into two branches, that surround and form Inch Clutha. The Matau (northern) branch of the river is only navigable to the Kaitangata Township, a distance of 7 miles from the mouth, the main stream (Koau branch) being on the southern side of Inch Clutha. Both the branches and the main stream itself, to a point 2 miles above the Balclutha Township, flow through rich alluvial country, with low banks, over which the river flows in heavy floods. The banks are composed of light silt to a depth of 8 or 10 feet, which is constantly wearing away by the action of the water.

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* Telegrams 28/8/76.—Memo. No. 860, 6/3/77.

From the point just mentioned to the Tuapeka Junction (Dalhousie), a distance of 20 miles, the river flows generally in an unbroken stream through low undulating country; the banks, however, are firm, so the water has comparatively little effect upon them.

The character of the country changes at Tuapeka Mouth, the hills contract and confine the river in rocky banks, so that the current increases generally, and rapids are occasionally formed. This continues with little intermission to the lower end of Moa Flat, 55 miles from the sea.

From this point to Coal Creek, 3 miles above Roxburgh (Teviot), the river and the country on each side are much the same as between Balclutha and Tuapeka Mouth, with the exception of one or two spots where isolated rocks contract the river and increase its speed.

The country in the next section of 16 miles, between Coal Creek and Alexandra, the junction of the Manuherikia, is rough, and the river is confined between high rocky banks, that are occasionally quite precipitous, causing a proportionate increase in the speed of the current.

An entire change takes place at Alexandra, and continues to a point about 2 miles above Clyde. Although running between high banks the river is quite smooth, and the speed of the current comparatively low. The banks are generally composed of shingle, covered with vegetation, and are of a permanent character, except where disturbed by gold-washing.

From the last-mentioned point to Cromwell, a distance of about 13 miles, the river runs generally through a rocky gorge, which is frequently so narrow as to cause strong rapids.

The Clutha divides at Cromwell into two branches of nearly equal volume—the Kawarau, which comes in from Lake Wakatipu, and the Clutha proper, which has its source in Lake Wanaka.

Cromwell junction is about 110 miles from the sea by the river, and 95 miles in a straight line.

The fall in the river is approximately as follows, again commencing at the sea:—

Port Molyneux to Waiwera	20 miles	...	1½ feet per mile.
Waiwera to Blue Mountains	15 „	...	4 „ „
Blue Mountains to Ettrick (Mount Benger)	25 „	...	5 „ „
Ettrick to Clyde	35 „	...	7 „ „
Clyde to Cromwell	15 „	...	5 „ „

This gives the height at Cromwell 525 feet, and the average fall in the river 4¾ feet per mile, equal to a gradient of 1 in 1100.

At ordinary level the current, in the smooth reaches in the first 35 miles of the river, ranges from 2 miles per hour at Inch Clutha to 4 at Tuapeka Mouth. At Moa Flat and Clyde the smooth water flows at the rate of from 5 to 7 miles per hour. The speed of the current in the rapids can scarcely be ascertained with precision, but it cannot be less than from 8 to 10 miles, and it is in all probability somewhat more in several places.

I shall now consider the obstructions to navigation that occur in the river.

From the mouth to the Ecclefechan Rocks, near the Pomahaka Junction, a distance of 25 miles, there is no obstacle more serious than snags and sand-banks; and the available depth of water is generally about 5 or 6 feet.

The Ecclefechan Rocks, which are about 10 chains in length, contract the channel to a width of about 100 feet, and increase the current to a great extent; there seems, however, to be a considerable depth, consequently steamers have been able to ascend, although with a great effort. From this point to the Blue Mountains, 4 miles above the Black Cleugh—4 miles below Beaumont and 40 from the mouth—there is nothing but snags and sand-bars to contend with, and even these are of a trivial nature. The river gathers into a well-defined channel, and the snags disappear as the current increases.

From the Blue Mountains upwards the obstructions consist of isolated rocks and reefs, that contract and interrupt the flow of the water in various ways, and increase the velocity of the current to such an extent as to render navigation of any kind almost impossible. The following are notes of the general character of these obstructions, and the locality in which they occur:—

At a point 3 miles below the Beaumont (Dunkeld), 41 miles from the mouth, isolated rocks right across the river at intervals for a distance of about a mile.

At the Beaumont, 44 miles from mouth, flat reef and isolated rocks for about half a mile.

From about two miles above Beaumont to the Island Block, isolated rocks and rapids at intervals.

At the upper end of the Island Block, 4 miles below Ettrick and 56 from the mouth, flat ledge of rock right across the river. For upwards of half a mile the fall is very great, and the water is uniformly shallow throughout. This is in all probability the most formidable obstruction to navigation in the whole distance between Cromwell and the sea.

At Dumbarton Rock, 58 miles, reef and isolated rocks for a quarter of a mile.

At Roxburgh (Teviot), 70 miles, small reef and isolated rocks.

At Jordan Creek, 76 miles, reef and isolated rocks. River runs in a very precipitous gorge. Near Cairn Hill, 84 miles, reef and detached rocks, forming rapids or falls. The river bed drops suddenly 5 or 6 feet.

Near Lean Rock Creek, 100 miles, and from thence to Cromwell, 110 miles, isolated rocks at intervals. Channel contracted and current rapid.

Just above the confluence of the Kawarau the river becomes confined between high jagged rocks, that transform it into a foaming torrent; but there is a radical change in the next mile, the ranges open out into wide plains, and the Clutha, for 30 miles, assumes the character of the Canterbury rivers.

I shall now consider the question of the removal of the obstructions above described, as well as the other obstructions that are presented to the successful navigation of the river; and in doing so I shall endeavour to institute a comparison between the amount of work required and the results likely to be obtained therefrom.

Mr. Balfour estimates the cost of removing the rocks at the mouth at £3,000. I have no doubt this amount will be required to make anything like a good channel. The Koau branch is considerably obstructed by snags and sand-spits. It has been suggested that this channel might be permanently deepened by cutting off the Matau one altogether. I consider this a very good idea. The diversion could be done at little cost, and it would in all probability prove effectual. There is, however, a risk of the work being overdone. The river might scour its channel to an inordinate extent, and overflow lands previously beyond its reach. Another objection is that the lower end of the Matau branch, which is now useful in giving access to Kaitangata from the sea, might be detrimentally affected.

The snags and sand-banks between Inch Clutha and Tuapeka Junction could be removed, and otherwise the channel thereby improved. The snags are generally of light timber, and most of the sand-banks require nothing but marking out.

The Ecclefechan Rocks, which occur in this division, although of a somewhat formidable appearance, are not a serious barrier; they are irregular in height and seem to be considerably fissured, therefore could be easily blasted. £500 was spent usefully in Mr. Balfour's time in removing a portion of the rocks, and probably £1000 more would make a fair channel.

As above shown, there is no real difficulty in making the Clutha River navigable from the ocean to the Blue Mountains, a distance of 40 miles; the current is comparatively slow, and the few obstructions that exist could easily be removed. But the same cannot be said of the rest of the distance to Cromwell; the current is in many places too rapid to come down, much less to ascend, and the rocks that obstruct the channel at such short intervals are difficult to remove.

Without a detailed survey, it is difficult to give anything like an approximation to a correct estimate of the work, but the following may be taken as at least an indication. Assuming the price of removing the rock to be much the same as in a tunnel of equal hardness—viz., 20s. per cubic yard—

Tuapeka Junction to Beaumont would cost	£25,000
Beaumont to Roxburgh	45,000
Roxburgh to Clyde	15,000
Clyde to Cromwell	30,000
Total, Tuapeka to Cromwell	£135,000

For this expenditure we may remove the rock, and so give a free passage through the water; but we cannot remove the obstacle presented by the water itself—the current cannot on the average be reduced to less than 6 or 7 miles an hour, and it must necessarily in some places be much greater. The only way to reduce the current is by the construction of weirs and locks, but these expedients are too expensive to be dreamt of. Then, again, quick transit is now of such importance that water communication of this kind cannot successfully compete with a railway on all points.

In treating of this subject, Mr. Balfour, in his report of the 21st October, 1864, says: "Were the slope equalized the velocity of the surface-current would be about 7¼ miles per hour —a velocity so considerable as to discourage all hopes that the river could ever be rendered *economically* navigable from the mouth to the Wanaka Lake without the introduction of weirs and locks, and other engineering works of great magnitude and difficulty, and enormous expense."

Mr. Balfour took the height of the river at Cromwell at 720 feet, whereas it is only 525, so that there is a discrepancy between his gradients and mine. His average fall from Cromwell to the sea is 6½ feet per mile against 4¾ determined by me. His average speed calculated from the same data must also be too high, but, as already shown, this is unimportant, it being impossible to reduce the river to an even gradient.

By way of ready comparison, I insert the following table of the average fall of the Clutha and that of various rivers through the world, the latter being extracted from the latest edition of "Stevenson's Canal and River Engineering:"—

	Fall in Inches per Mile.
Clutha—Port Molyneux to Waiwera	18·00
Waiwera to Blue Mountains	48·00
Blue Mountains to Ettrick	60·00
Ettrick to Clyde	84·00
Clyde to Cromwell	60·00
Amazon	2·34
Clyde—from Glasgow to the sea	1·33
Danube—Ismail Chatal to the sea	5·00
Dee—Chester to Flint	11·00
Ganges	3·37
Irrawaddy—In summer	1·06
In flood	3·08
Mississippi—Ohio to the sea, ordinary level	2·08
Ohio to the sea, floods	3·25
Nile—Cairo to the sea, in flood	5·05
Cairo to the sea, when low	3·25
Rhine—Constance to Basle	63·00
Basle to Cologne	20·07
Cologne to the sea	7·07
Rhone	24·18
Tay—Fleak to Balinbrach	1·95
Balinbrach to Newburgh	9·35
Newburgh to Perth	5·06

Thames—Litchdale to Teddington	...	...	...	...	20·00
Teddington to Yaulet Creek	...	...	...	...	0·92
Tyne—Hexham to Stockfield	...	...	...	...	84·00
Stockfield to Ryton	...	...	...	...	45·60
Ryton Weir to the sea	...	...	...	..	10·33
Weir—Newbridge to the sea	...	...	...	...	16·00

From the above it will be seen that the minimum fall in the Clutha is much greater than the maximum one in the principal navigable rivers throughout the world.

Assuming that the obstructions to the navigation were removed, and that the current were reduced to 7 miles as above indicated, considerable power would be required to overcome the stream and develop a moderate degree of speed, say 6 miles per hour with a load of, say, 30 tons. It would require a stern or side wheel steamer of special construction, extra strong in hull to stand hard blows against the rocks, built in small compartments, so as to float though considerably damaged, and provided with 50-horse-power engine and boilers on the locomotive principle, so as to get up steam readily, without being too heavy. Such a craft would cost £3,500, and her working expenses would amount to £220 per month. Adding to this the interest on the cost of the work gives an annual charge of £10,000. We have, therefore, to decide whether the accommodation is commensurate with the outlay; but in considering this question we should bear in mind what the accommodation really is. The distance from Dunedin to Cromwell by the various routes would be as follows:—

					Miles.
By sea and river—					
Dunedin to Port Molyneaux, by sea	...	...	...	...	90
Port Molyneux to Beaumont, by river	...	...	...	..	44
Beaumont to Cromwell „	...	...	...	...	66
					200
Viâ Balclutha—					
Dunedin to Balclutha, by rail	...	...	...	...	52
Balclutha to Beaumont, by river	...	...	...	...	34
Beaumont to Cromwell „	...	...	...	...	66
					152
Viâ Lawrence—					
Dunedin to Lawrence, by rail	...	...	...	...	60
Lawrence to Beaumont, by road	...	...	...	...	12
Beaumont to Cromwell, by river	...	...	...	...	66
					138

These figures show that the removal of the obstructions in the river will not shorten the journey from Dunedin to Cromwell, as the stage to Beaumont can now be reached *viâ* Lawrence by rail and coach in 6½ hours, whereas it would take 10½ *viâ* Balclutha by rail and river, and the difference will increase with the length of the journey, for the coach can travel a mile or two per hour faster than the steamer. Even the construction of the railway from Lawrence to Beaumont, at a cost of about £90,000, would not put the balance on the other side, as the saving over the coach in such a short distance could not exceed an hour's time.

The advantage gained by the river navigation is confined to goods traffic and the down journey for passengers. I have no doubt goods could be carried cheaper by steamer between Beaumont or Balclutha and Cromwell than by wagons as at present, and passengers might be brought down as fast as if a railway were made the whole way. Still I fear that these benefits are too dearly purchased, particularly when they can only be of a temporary character. The question of a railway to Cromwell is a mere matter of time, and it will, when made, entirely supersede any water-carriage that can be provided on the Clutha. The river can easily be made navigable from the sea to the Blue Mountains, a distance of 40 miles, and the advantages derived therefrom would be commensurate with the outlay, but I am not prepared to say the same of the remaining portion. On the contrary, I am forced to indorse Mr. Balfour's opinion—founded on less, much less, information than I have—and say that I do not think it can "ever be rendered economically navigable."

Perhaps I should remind you that the improvement of the navigation of the river has been the subject of special legislation. "The Clutha River Conservators Board Act, 1875," provides an endowment for the purpose, and gives the Conservators jurisdiction over the "navigable waters of the Clutha River and part of Port Molyneux." Although constituted for some time, the Board has not yet done any work. I understand, however, that it is their intention to begin soon to remove the snags and mark out the sand-banks between Balclutha and Tuapeka Junction. The Land Company are also about to construct a steamer for running between these points.

I have, &c.,
W. N. Blair,
District Engineer.

Enclosure No. 3.

REPORT ON INTERIOR RAILWAY.

The DISTRICT ENGINEER, Dunedin, to the ENGINEER-IN-CHIEF.

SIR,— Public Works Office, Dunedin, 21st July, 1877.

In accordance with your instructions, number and date as per margin,* I have the honor to submit the following report on the various routes suggested for a railway into the interior of Otago, all of which are shown in distinctive colours on the accompanying map.

A knowledge of the configuration of the country, and an examination of the map, determines the proposition to be the connection of the Upper Clutha Valley to the main line of railway and the seaboard by the shortest and easiest route that will in its course open up the most good country for settlement.

No less than seven routes have at various times been proposed, with a common terminus at Cromwell. Commencing at the south and proceeding northwards, they comprise the following:— No. 1. Kingston to Cromwell, *viâ* the eastern side of Lake Wakatipu and the Kawarau Valley; coloured green on map. No. 2. Waipahi to Cromwell, *viâ* Tapanui, Ettrick (Mount Benger), and Clutha Valley, joining No. 3 at Ettrick; coloured yellow. No. 3. Lawrence to Cromwell, *viâ* Dunkeld (Beaumont) and Clutha Valley; coloured purple. No. 4. North Taieri to Cromwell, *viâ* Strath Taieri, Maniototo Plain, Ida Burn Valley, Manuherikia Valley, and Clyde; coloured red. No. 5. Palmerston to Cromwell, *via* Macrae's, Strath Taieri, Maniototo Plain, Ida Burn Valley, Manuherikia Valley, and Clyde, joining No. 4 at Strath Taieri; coloured neutral tint. No. 6. Palmerston to Cromwell, *viâ* Shag Valley, Maniototo Plain, Ida Burn Valley, Manuherikia Valley, and Clyde, joining No. 4 on the Maniototo Plain, opposite Naseby; coloured blue. No. 7. Duntroon to Cromwell, *viâ* the Kyeburn Pass, the ManiototoPlain, Ida Burn Valley, Manuherikia Valley, and Clyde, joining No. 4 on the Maniototo Plain, opposite Naseby; coloured brown. Some of these routes have alternative lines (shown dotted in the same colour on plan) for a portion of the distance: thus No. 4, instead of joining the main line at the Chain Hills Tunnel, may join the branch to Outram at a point 2½ miles from the Mosgiel Station. Instead of following the leading spurs from Macrae's to Palmerston, No. 5 may come down the north branch of the Waikouaiti River to the Waikouaiti Township. No. 7 has three alternative lines—one *viâ* the Otekaik Valley, joining at the Kyeburn Pass; another from the terminus of the Waiareka Railway, joining at Livingston; and a third from Teneraki, on the Waiareka line, also joining at Livingston.

The following table gives the distance by the different routes from several places on the seaboard to Cromwell and the Maniototo Plains, opposite Naseby, two leading points in the interior; it also shows the amount of present railway available in each instance.

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* Minute P.W. 77/2269 and telegram of 11th June, 1877.

PROPOSED INTERIOR RAILWAY OF OTAGO.

TABLE OF DISTANCES.

No.	Route.	Invercargill to Cromwell.			Invercargill to Naseby.			Dunedin to Cromwell.			Dunedin to Naseby.			Oamaru to Cromwell.			Oamaru to Naseby.		
		Already Constructed.	To be Constructed.	Total Distance.	Already Constructed.	To be Constructed.	Total Distance.	Already Constructed.	To be Constructed.	Total Distance.	Already Constructed.	To be Constructed.	Total Distance.	Already Constructed.	To be Constructed.	Total Distance.	Already Constructed.	To be Constructed.	Total Distance.
		Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
1	*Vid* Kingston and the Kawarau Valley	87	53	140	87	108	195	226	53	279	226	108	334	...	...	...	...	...	...
2	„ Waipahi, Tapanui, Ettrick, and Clutha Valley	56	84	140	56	139	195	83	84	167	83	139	222	...	...	...	...	...	...
3	„ Lawrence, Dunkeld, and Clutha Valley	124	77	201	124	132	256	59	77	136	59	132	191	...	...	...	...	...	...
4	„ North Taieri, Strath Taieri, and Maniototo Plain	132	122	254	132	67	199	7	122	129	7	67	74	...	...	...	...	...	...
	Same as last, but starting from Outram Branch	131	120	251	131	65	196	12	120	132	12	65	77	...	...	...	...	...	...
5	*Vid* Palmerston, Macrae's, and Strath Taieri	...	...	...	...	...	...	41	125	166	41	70	111	37	125	162	37	70	107
	Same as last, but starting from Waikouaiti	...	...	...	...	...	...	29	130	159	29	75	104	49	130	179	49	75	124
6	*Vid* Palmerston, Shag Valley, and Maniototo Plain	...	...	...	...	...	...	41	107	148	41	52	93	37	107	144	37	52	89
7	„ Duntroon, Maerewhenua Valley, Kyeburn Pass, and Maniototo Plain	...	...	...	...	...	...	105	96	201	105	41	146	27	96	123	27	41	68
	Same as last, but following Otekaik instead of Maerewhenua ...	...	...	...	...	...	...	105	93	198	105	38	143	27	93	120	27	38	65
	Same as No. 7, but starting from Terminus of Waiareka Branch, and joining at Livingston	...	...	...	...	...	...	95	98	193	95	43	138	17	98	115	17	43	60
	Same as No. 7, but starting from Teneraki on the Waiareka Branch, and joining at Livingston	...	...	...	...	...	...	85	106	191	85	51	136	7	106	113	7	51	58

Note.—Column "Already Constructed" contains, in addition to portions completed, those now under contract.

I shall now consider each route *seriatim*, in the order given in the table.

Route No. 1.—Kingston to Cromwell, *viâ* the eastern side of Lake Wakatipu and the Kawarau Valley:—

This is a continuation of the Winton and Kingston Railway. It follows up the eastern side of Lake Wakatipu to within seven miles of Queenstown, then strikes off through the low ground between Peninsula Hill and the Remarkables to the Kawarau Falls. From this point to the Nevis it keeps on the southern side of the river, the country being generally favourable to railway construction. Between the Nevis and Cromwell Flat there is little choice, and the ground on both sides is rather rough.

This line cannot be brought into Queenstown at all; and without a very objectionable detour and two expensive crossings of the river, or equally heavy work of another kind, it cannot be brought through the rich agricultural land of the Frankton and Arrow Flats. However, this is not a serious objection, as those places are all within 5 miles of the proposed line.

Although the country looks formidable, there are in reality few engineering difficulties on this route, and the gradients and curves would be easy. The only works worthy of special note are the cutting through of two or three rocky bluffs that project into the lake and river, and the bridging of the river itself.

A railway by Route No. 1 would bring the Lake District into direct communication with Invercargill on the one hand, and afford an outlet to its agricultural produce towards Cromwell and Clyde on the other. Besides its gold-fields traffic, and that resulting from tourists, this railway would open up, to a certain extent, 4,000 acres of the finest wheat-producing country in Otago, nearly all under cultivation. Although these objects are of considerable importance, I do not think they warrant the construction of a line at present. I have no doubt it will be made some day, were it only as a connection between the Southern and Midland Railway systems, but that day is still far distant.

Route No. 2.—Waipahi to Cromwell, *viâ* Tapanui, Ettrick, and the Clutha Valley:—

This is the line reported on in 1872 by the late Mr. Millar, F.S.A. It leaves the main trunk railway near Waipahi Station, 83 miles from Dunedin and 53 from Invercargill, follows down the Waipahi River to its junction with the Pomahaka, then up the Pomahaka to the Tapanui Township. From this point it strikes in a tolerably straight course across the intervening ridges to the Clutha Valley at Ettrick, where it joins Route No. 3. The remaining portion of the distance to Cromwell being common to Routes 3 and 4 will be considered under those heads. Two years ago the Provincial authorities got a detailed survey made of that portion of this route between Waipahi and Tapanui, 14¾ miles. The plans show it to be remarkably easy, the earthworks are light, and there are only two river bridges of the aggregate length of 6 chains. The gradients for the first 13 miles are 1 in 80 and downwards, but the last 1¼ mile has an incline of 1 in 38. I think, however, that this might be reduced to 1 in 50. The curves are all over 8 chains radius, except one of 5, which has been put in round a sharp point in the river. This may be increased to 7½ chains by increasing the cutting, or done away with altogether by the substitution of a tunnel 5 chains long. The ground between Tapanui and Ettrick is rather rough, being cut up into ridges and gullies, consequently the gradients would be somewhat steep and the earthworks heavy; still there are no formidable difficulties. I believe the line could be constructed at a much less cost than that portion of the Lawrence Railway between Manuka and Round Hill.

A branch railway from Waipahi to Tapanui would render available a large tract of the finest land in Otago, that is at present comparatively unproductive for want of proper communication, and I have no doubt that it will soon be made so far; but I am not prepared to recognize it as an instalment of a trunk line to the interior, chiefly for the reason that the country between Tapanui and the Dunstan District is not so good for settlement as that on other routes.

Route No. 3.—Lawrence to Cromwell, *viâ* Dunkeld (Beaumont) and Clutha Valley:—

This is a continuation of the Tokomairiro and Lawrence Railway. It follows generally the course of the main road between Lawrence and Dunkeld, then up the eastern bank of the Clutha River right on to Clyde; or possibly an easier line may be found by crossing the river at the Horse Shoe Bend, eight miles above Dunkeld, and following up the western side. The portion of this route between Clyde and Cromwell is common to it and No. 4, so will be described under the latter head.

The 13 miles on route No. 3, between Lawrence and Dunkeld, are much of the same character as on the made line between Waitahuna and Lawrence, with the addition of a tunnel, 10 or 15 chains long, through the Big Hill saddle. The strata at this point seem to be identical with those at the Round Hill. The curves on this portion will be sharp, 5 or 6 chains radius, but I think the ruling gradient can be reduced to 1 in 50.

The river runs in a narrow valley or gorge between Dunkeld and the Horse Shoe Bend, so that there would be a considerable amount of forming required, with occasional rocky bluffs to cut through, but nothing of a serious character. The valley widens out at the Horse Shoe Bend, and contiues open to Coal Creek, a distance of 25 miles. Both sides of the river are favourable to railway construction, the eastern one being so flat as to enable the line to be taken away from the bank altogether for 12 or 15 miles.

The ranges again close in at Coal Creek, and from that point to Alexandra the river runs between steep banks and gorges, that occasionally present somewhat serious obstacles to the construction of a railway. Without a detailed survey, I am not clear as to which bank is the easier. From Alexandra to Clyde there is absolutely no work, the ground being quite level. The section between Dunkeld and Clyde has a great extent, say twenty-five miles, of heavy formation works, with one or two large river bridges and a great number of smaller ones, but there are no other formidable engineering works, such as tunnels or viaducts. One great advantage is the flatness of the average gradient, about 1 in 500. With this to start from much of the heavy work can be saved.

The chief advantage claimed for this route is that it brings the Dunstan District into communication with Dunedin by the construction of a less length of railway than required by any other. The principal objection to it, and one which, in my opinion, is fatal, is that it does not, *en route*, open up country for settlement. According to the Chief Surveyor there is only 6,700 acres of good agricultural land in the whole Clutha Valley between Dunkeld and Alexandra, and most of what exists is already taken up.

Route No. 4.—North Taieri to Cromwell, *viâ* Strath Taieri, Maniototo Plain, Ida Burn Valley, Manuherikia Valley, and Clyde.

There are two alternative lines at the commencement of this route. The first leaves the Clutha Railway at the southern end of the Chain Hills tunnel, and strikes right across the Taieri Plain to the Mill Gully on the northern side of Arthur's Seat; then up that gully and through the ridge at the top into a small tributary of the Mullochy Gully. The second leaves the Outram Branch Railway about 2½ miles from Mosgiel, and runs straight on past the North Taieri church to the Totara Gully, on the southern side of Arthur's Seat; then up that gully and through a ridge into the tributary of Mullochy Gully just mentioned, where it joins the direct line from Chain Hills. From this point the route follows down the Mullochy Creek to the junction with the Taieri River, then up the Taieri River to the Nenthorn. Here again there are two alternative routes. One continues up the Taieri Valley as before, but the other runs straight from the Nenthorn to a crossing of the Taieri between Blair Taieri Township and Cottisbrook Station, where it also rejoins the line that followed up the course of the river. Blair Taieri, which is about 30 miles from North Taieri by the proposed line, is situated near the southern end of the Strath Taieri Plain. From this point to near Hyde, a distance of 15 miles, it would leave the river about 2 miles, and run straight through the plain; the country then gets ridgy, consequently the river must be followed somewhat closely to the Taieri Lake. The river is crossed for the second time near the lake, and the line then runs straight across the Maniototo Plain to the end of the Rough Ridge, passing within 4 miles of Naseby. After going round the Rough Ridge it turns down the Ida Burn Valley, and through the Pool Burn Gorge into the Manuherikia Valley, which is followed down to Clyde. Between Clyde and Cromwell, the line follows closely the eastern bank of the Clutha River.

Without a detailed survey it is impossible to decide as to the merits of the two alternative lines at the commencement of this route, there being so little difference between them. The direct line is 3 miles shorter on the whole distance, but it gives 2 miles extra to make. The saddle on the Totara Gully line is 110 feet lower, but it is somewhat broader, and will in all probability be schist rock, whereas the other is conglomerate or sandstone. Indeed, it is quite possible that a combination of both lines may be found most suitable; the direct one, instead of going up the Mill Gully, may require to go round to the Totara Gully, or the Outram branch line may require to come back to Mill Gully, just as the gradients work in. The height of the saddles at the Totara and Mill Gullies are respectively about 460 feet and 570 feet above the level of the Taieri Plain, or 540 and 650 feet above sea level. Assuming these saddles to be pierced at a height of 300 feet above sea level, which can easily be reached by 1 in 50 or 1 in 60 gradients, I estimate roughly the length of tunnel at Totara Gully as from 20 to 30 chains, and at Mill Gully as from 15 to 25. With the exception of this tunnel, there is no engineering difficulty worth mentioning between North Taieri and the Taieri River. The Taieri River runs between steep hills and rocky gorges, from the Mullochy to the Nenthorn, a distance of 17 miles, and in a less degree all the way to the Sutton, 5 miles further. It is here that all the really heavy works between Dunedin and Cromwell are met with, the ground for 8 miles being particularly rough and precipitous. There is, however, one thing greatly in its favour, the flatness of the average gradient, which is only about 1 in 200. With this to work from, almost any obstacle can be avoided; gullies can be dropped into and bluffs surmounted to the extent of 100 feet in a mile. This is an advantage that never occurred in any part of the rough country on the railways already made. We have always had to work to the ruling gradient, consequently every valley had to be filled up, and every spur cut through. From the information at my command, I am inclined to think the eastern side of the Taieri the easier all the way up; the slopes may not be much flatter, but there are fewer large streams to cross. It will be advisable to keep generally from 100 to 200 feet above the river bed. This avoids the steeper bluffs, and allows the adoption of somewhat flatter curves than could be used at the lower level.

The direct line from the Nenthorn to Blair Taieri entails a rise of 300 feet in 3 miles, with the same fall in 4; the one along the river is 1½ mile longer, but is practically level. Neither of them present serious engineering difficulties, so a detailed survey is required before determining between them. Once at the Nenthorn there are only two points on the whole distance to Cromwell, 97 miles that entail anything approaching heavy works; these are 7 miles along the Taieri River, near Hyde, and 2 miles in the Pool Burn Gorge, between the Ida Burn and Manuherikia Valleys; the remaining 88 miles may almost be taken as surface-forming. The ground at Hyde consists of ridges and spurs, that run into the river at various points; they entail a considerable number of short deep cuttings, some of them clay-slate rock, but there is nothing of a serious nature. I have not been through the Pool Burn Gorge, but Mr. Coyle, who reported on the subject to the Provincial Council in 1875, estimates the total rock cutting at from 20,000 to 30,000 cubic yards. There will be about 15 chains of bridging over large rivers, and 30 chains of stream bridges required on Route No. 4; and the minor watercourses, taken all through, are about the same in number and size as on similar country throughout the colony.

Although the average gradient on the first 30 miles of this line is so low, the roughness of the ground will necessitate the adoption of short inclines up to 1 in 60 or 1 in 50, and the curves will be sharp, perhaps 5 or 6 chains radius, but beyond Blair Taieri the ruling gradient need scarcely exceed 1 in 100, and the minimum curve is proportionately increased. The following shows approximately the altitude of the line at various leading points:—

	Distance from Dunedin.	Height above Sea Level.
	Miles.	Feet.
North Taieri	10	80
Mullochy Saddle	12	300
Junction of Mullochy with Taieri	15	150
Nenthorn	32	650
Mount Ross Saddle	35	920
Blair Taieri	38	675
Taieri Lake	65	1,000
Rough Ridge	84	1,900
Pool Burn Gorge	96	1,400
Clyde	115	540
Cromwell	129	700

Beyond accommodating the settlers at North Taieri, and the few miners that find employment at Mullochy and Hindon, there is little to call for a railway on the first 25 miles of this route, but from that point right to the terminus every mile opens up country fit for settlement, and calculated to support a large population. The Chief Surveyor has kindly given me the following as the areas of the various blocks of agricultural land still in the hands of the Crown:—

	Acres.
Strath Taieri, including Moonlight Flat	110,000
Maniototo Plain	180,000
Ida Burn Valley	70,000
Manuherikia Valley	120,000
Total	480,000

In addition to this the line terminates on the margin of the Upper Clutha Plains, that extend inland to the Wanaka and Hawea Lakes. I have no doubt a railway will some day be extended through those plains to the lakes, and perhaps ultimately to the West Coast, there being no serious obstacle in the way. There is also an easy route from Cromwell through the Lindis Pass to the Upper Waitaki Plains.

After fully considering the question in all its bearings, as laid down at the outset, I have no hesitation in saying that, in my opinion, Route No. 4 is infinitely superior to any other of the seven hitherto proposed; and further, that it is the best course for a railway that can be got between Cromwell and the seaboard.

Mr. Robert Hay, Engineer to the Taieri County Council, has made a reconnaisance survey of that portion of this route between North Taieri and the Blair Taieri Township. Although I do not agree with him in taking the line at a low level down the river bed, nor in the estimate he has made, his report gives some additional information on the subject, so I enclose a copy.

Route No. 5.—Palmerston to Cromwell, *viâ* Macrae's, joining No. 4 at Strath Taieri.

This route follows the leading spurs from Palmerston to the old Stoneburn Station, then the course of the north branch of the Waikouaiti River to Macrae's Township, from whence it curves westward, and runs right down the Moonlight Flat and the creek leading therefrom to the Taieri, where a junction is made with Route No. 4.

The map shows an alternative line at the commencement. It leaves the main line at the Waikouaiti Township, and follows up the north branch of the Waikouaiti River right to Macrae's.

Macrae's Township, which stands on a plateau some miles in extent, is 1,600 feet above Palmerston, and the distance is about 16 miles, consequently it can only be reached by a continuous incline, with an average rise of about 1 in 50. The ground along the proposed line continues tolerably level for about 9 miles, and then drops 1,000 feet in 12 miles. We have thus an exceptionally heavy incline to contend with in both directions.

About 8 miles of the distances between Palmerston along the river is very rough and precipitous, something like the Taieri Gorge, but with this important difference, that in the present case every obstacle must be gone through or over. The remaining 8 miles on the Palmerston side has somewhat heavy works, but nothing very serious. The alternative line right down the Waikouaiti River is rougher than the one from Palmerston, but it would shorten the distance to the interior by 7 miles, and a somewhat easier gradient could be obtained. The plateau at Macrae's and Moonlight Flat and the slope therefrom to the Taieri are favourable to railway construction.

The advantages claimed for this route are facility of construction and the opening up of good country for settlement.

I have no doubt it would be cheaper to construct a railway from Palmerston to Strath Taieri than from Dunedin to Strath Taieri, but there would be a large balance on the other side in the expense of working. The cost of raising every ton of goods 1,000 feet would pay for the construction of many miles of heavy line. But independently of this, there is the extra mileage to which the inland traffic would be subjected. The distance from Strath Taieri to Dunedin, *viâ* the Taieri Valley, is 41 miles, of which 7 are made, whereas the distance from Strath Taieri to Palmerston is 37 miles, and there are 41 more to reach Dunedin, which gives a clear balance of 37 in favour of the Taieri Valley route.

As to the land opened out by the Palmerston–Strath Taieri line, all the good country is on the western watershed, and within 8 miles of the Dunedin–Strath Taieri route, consequently it will not want for railway communication if the latter is constructed; and when the importance of the district calls for it, a branch can easily be made from Blair Taieri up the Moonlight Valley as far as required.

Route No. 6.—Palmerston to Cromwell, *viâ* Shag Valley, joining No. 4 on the Maniototo Plains.

A detailed survey was made by the Provincial Engineer in 1875 of about 15 miles of this route, and in the same year Mr. Coyle made a reconnaissance survey of the remainder for the Provincial Government, a report on which appears in the "Votes and Proceedings of the Provincial Council, Session 34." Mr. Coyle's survey embraces the most important part of the route, and his report fairly describes the line obtainable, so it is not necessary for me to enter into so much detail as I have done with some of the others.

The line follows generally the direction of the coach road from Palmerston up the Shag Valley and over the Pigroot Range to the Kyeburn, thence in a straight course to the centre of Maniototo Plain, where it joins Route No. 4.

For the first 10 miles, Route No. 6 is through level country presenting no engineering difficulties whatever, but between that point and the summit, which is 2,100 feet high and 20 miles distant, the ground is very rough indeed. It is necessary to have gradients of 1 in 40, and 5 chains curves on the eastern side, but the western one is much easier. There will be at least five tunnels, as well as other heavy works on this portion of the line.

There is a considerable quantity of good low country on this route, and even the tops of the ranges are better than usual. Still I do not consider the advantage to be gained in opening it up by a railway to be at all commensurate with the enormous outlay required in doing so. I believe, however, that a branch up to the head of the level part of Shag Valley will be found necessary and advantageous at no distant date.

Route No. 7.—Duntroon to Cromwell, *viâ* the Kyeburn Pass, joining No. 4 on the Maniototo Plain.

This line, which is intended to connect Oamaru with the interior, leaves the Awamoa Branch Railway at Duntroon and, following up the Maerewhenua River to within a mile of the saddle. Instead, however, of going through the saddle in the direction of the present bridle track, it turns sharply northward, and pierces the range at what is known as the Kyeburn Pass, at the head of the Otekaik River. It then returns to the direct course by a tributary of the Kyeburn, and follows the Kyeburn Valley to the Maniototo Plain. The plain is crossed in a westerly direction to a point opposite Naseby, where a junction is made with Route No. 4.

There are three other alternative lines between Oamaru and the Kyeburn Pass. One contemplates the extension of the Awamoko Railway to the Otekaik River, up which the line runs to the pass where it joins the Maerewhenua route; the second is an extension of the Waiareka Railway through the Tables to a junction with the Maerewhenua Valley line, 2 miles below Livingston; and the third leaves the Waiareka Railway at the Teneraki Station, 7 miles from Oamaru, then keeps about 4 miles more to the south than the last, but joins it before entering the Maerewhenua Valley.

Messrs. Thornton and Bull have, at the request of the residents of Oamaru and Naseby, made a reconnaissance survey of this route. I enclose a copy of their report, which gives a fair description of the line obtainable. I do not, however, agree with their estimates and some of the other conclusions they have arrived at.

The valley on the Maerewhenua line, which is the one recommended by Messrs. Thornton and Bull, is quite open up to Livingston, a distance of 10 miles; but between that point and the watershed, 12 miles further, the river runs in a very rough and precipitous gorge. Sometimes the cliffs rise quite perpendicular from the water's edge. The formation between the Waitaki and Livingston is all soft limestone, but after that right to the Maniototo Plain it is clay slate. Although there is a considerable distance to rise between Duntroon and the summit, it is not all available for easing the gradient or reducing the length of tunnelling at the top. The slopes of the valley below Livingston are too much cut up by lateral gullies to admit of the adoption of a high level line; consequently a gradient of 1 in 73 must be taken up to that point, and 1 in 45 afterwards, instead of 1 in 50 throughout. By the barometer I make the summit of the horse track 2,830 feet high, but the saddle through which the line is taken is upwards of 3,000 feet. It is proposed to pierce this at a level of 2,600 feet by a tunnel a mile in length. Although the earthwork will be generally heavy, there is no special work between the pass and the Maniototo Plain—the valley on the western side being tolerably open. A gradient of 1 in 55 and downwards can be got down this side. The Kyeburn tunnel would be through clay-slate of the newer formation. The beds are running parallel with the line, but tilted up westwards, at an angle of from 50 to 75 degrees. Where visible, the rock is so much shattered that heavy timbering and lining would be required to support it. There is a probability of meeting more solid material in the heart of the mountain; still it would not be wise to calculate on this. We are therefore committed to the construction of a mile tunnel through hard rock, that cannot stand without heavy timbering and lining, in a country where neither timber nor material for lining can be obtained. Such a work is, in extent, far beyond anything hitherto undertaken by this department.

The other works on this route are also of a heavy character, the formation on the 12 miles up the Maerewhenua Gorge would be heavier than any equal distance on the other routes; and, as already explained, every obstacle must be gone through or over, it being impossible to alter the gradient.

The first 8 miles of the line *viâ* Otekaik would be surface-forming, but the remainder of the distance to the pass is similar to the Maerewhenua Gorge, and the tunnel at the top is 1½ miles long. The proposed gradient is 1 in 38, but possibly this might be improved a little by commencing the assent sooner.

Both these lines must of necessity have very sharp curves.

The second alternative line, that from the terminus of the Waiareka Railway, at Ngapara, to Livingston, has a tunnel through the "Tables" 1¾ miles long, so it is unnecessary to consider it further.

The third line, that from Teneraki to Livingston, passes through an open undulating country favourable to railway construction.

Route No. 7 would bring Naseby and the Maniototo Plain into communication with Oamaru, but it would open up very little country for settlement on the way. There is some extent of good land between Ngapara or Duntroon and Livingston, but beyond that, right to the Lower Kyeburn Diggings, a distance of 25 miles, there is not, in my opinion, 100 acres fit for the plough; and as regards what is below Livingston, the construction of a railway would not open it up for settlement in the ordinary sense of the phrase. It has already been sold in large blocks, so little further settlement can take place.

Viewed in every aspect, I have no hesitation in pronouncing Route No. 7 as one of those least likely to advance the general interests of the country.

Having discussed in detail the various routes proposed, I shall now recapitulate and compare their leading characteristics.

Route No. 1, *viâ* Kingston and the Kawarau Valley, is easy to construct, and its curves and gradients will be easy, but it does not open up good country. It will, however, be useful as a junction when the railway system of Otago is more complete.

Route No. 2, *viâ* Waipahi, Tapanui, and Teviot, is tolerably easy to make and work, but beyond the first 16 or 18 miles, through which a branch is much needed, there is little good country for settlement.

Route No. 3, *viâ* Lawrence and Clutha Valley, is the shortest to construct, but it will be somewhat expensive to make, and there is little or no good land opened up by the way.

Route No. 4, *viâ* Strath Taieri, is the shortest from Dunedin to Cromwell; its gradients are easy, and it brings all the interior plains into direct communication with the capital and the best harbour.

Route No. 5, *viâ* Palmerston and Macrae's, lengthens the distance to the interior by 37 miles, and adds 1,000 feet to the height, without opening up much available land.

Route No. 6, *viâ* Palmerston and Shag Valley, misses the rich agricultural land of Strath Taieri altogether. In getting to the Maniototo Plain, it has to go through country 1,500 feet higher than on No. 4. It has severe gradients and curves, and exceptionally heavy works. There is, however, room for a branch to the head of Shag Valley.

Route No. 7, *viâ* Maerewhenua misses Strath Taieri and does not open up other good country in its place. A height of 1,200 feet is uselessly ascended in getting to the Maniototo Plain, and the works are heavier than on any of the other routes; it also lengthens the journey from the interior to Dunedin by 72 miles.

Although I have no hesitation in placing the Strath Taieri route first and the Maerewhenua one last or near the last, in order of usefulness, these are the two between which the greatest contrast exists. The residents of Oamaru and Naseby have publicly declared in favour of the Maerewhenua route, chiefly on the following grounds:—That it is much the shortest line; that it will take the shortest time to make; that it will come close to the Town of Naseby; that it will bring the interior of Otago into direct communication with South Canterbury; and lastly, that it will be the least expensive line. As will be seen by the foregoing table of distances, the first assertion is only correct to a limited extent, and on the assumption that it is of as much importance to the interior to be connected with Oamaru as with Dunedin. It is difficult to accept such a proposition, for an immense expenditure of time and money must still be incurred before an English ship can lie with safety in Oamaru Harbour. We must, therefore, continue to look upon Dunedin as the *entrepot* for the interior, in which case the Maerewhenua route is the most indirect and inconvenient that can be got. But independently of this it shows little or no advantage in distance.

There are 19 miles less line to construct between Lawrence and Cromwell than between Duntroon and Cromwell, without counting the 21 miles of the Awamoko Railway, which must be laid with heavier permanent way; and the total distance between Dunedin and the middle of the Maniototo Plains, *viâ* Strath Taieri, is only 6 miles longer than from Oamaru to the same point; but if we consider the gradient the balance is very much on the other side.

So far as time is concerned, I have not the slightest doubt that the Kyeburn tunnel would take longer to make than the whole Strath Taieri line.

The Strath Taieri line comes nearly as close to Naseby as the Maerewhenua one, and neither of them can be brought within 3 miles of the township at a reasonable cost, as the ground is broken up by long flat ridges and gullies running across the line; it can, however, be approached by a branch railway coming straight up one of the ridges or river beds.

I cannot see that any great advantage is to be derived from a connection between the interior of Otago and South Canterbury; both districts will ultimately have the same products, so no great interchange of commodities can take place.

The last argument advanced in favour of the Maerewhenua line—that of being the least expensive—is one on which, in absence of detailed surveys, I am not prepared to give a decided opinion. Messrs. Thornton and Bull estimate the cost of the Duntroon and Naseby line at £297,800, equal, in round numbers, to £7,500 a mile. No details are given, but I understand this to cover rolling-stock, engineering, and all other charges required in finishing and equipping the line. Mr. Hay estimates the cost of the 29 miles of the Strath Taieri line between North Taieri and the Township of Blair Taieri at £161,000, equal to £5,550 per mile, exclusive of rolling-stock; and in a subsequent report, published since the first part of this was written, he gives the cost of the 33 miles from Blair Taieri to the Maniototo Plains, opposite Naseby, at £136,050, or £4,120 per mile. This brings the total cost of the section between North Taieri and Naseby up to £297,050, or an average of £4,800 per mile.

The sum put down by Mr. Hay for the section between Blair Taieri and Naseby is not far wrong, but I think his other estimate, and those of Messrs. Thornton and Bull, are considerably below the mark

Taking the Maerewhenua line first, the works that cost much the same on all railways—fencing permanent-way, stations, rolling-stock, and engineering—will amount to about £2,700; and the Kyeburn Tunnel, at a moderate estimate, will cost what is equal to £2,000 per mile on the whole line; this only leaves £2,800 per mile for formation and bridging, a sum which, in my opinion, is altogether inadequate for the construction of a railway through such rough country, I feel confident that, instead of £2,800, much of the distance will cost £5,700, which is what was paid for the Round Hill section of the Lawrence line.

By a general comparison with lines already constructed, I should estimate roughly the cost of the Duntroon–Naseby line at £385,000. This includes relaying the Awamoko Branch with heavier rails, but it is exclusive of engineering and rolling stock.

On the same basis I would estimate the cost of the line from North Taieri to Naseby at about £370,000, or £15,000 less than the Maerewhenua route. But assuming the cost were the same, and that it was as important to the interior to be connected with Oamaru as with Dunedin, the difference in the gradients alone is sufficient to make a large balance in favour of the Strath Taieri route. This line rises with nearly a uniform incline from its lowest to its highest level, whereas the Maerewhenua one has an unnecessary rise of 1,200 feet in the middle.

In conclusion, if it is the intention of the Government to take steps towards constructing a railway into the interior of Otago, I have no hesitation in recommending the Strath Taieri line as emphatically the shortest and easiest route, that will in its course open up the most good country for settlement.

As already stated, I cannot without a more detailed survey give anything like a trustworthy estimate of the cost of a railway from Dunedin to Cromwell, *viâ* Strath Taieri; but the following, which does not include engineering nor rolling-stock, may be taken as at least an indication:—

	Miles.	£
North Taieri to Blair Taieri	34 ...	230,000
Blair Taieri to Maniototo Plain, opposite Naseby	33 ...	140,000
Maniototo Plain to Clyde	42 ...	170,000
Clyde to Cromwell	13 ...	60,000
Total Dunedin to Cromwell	122 ...	600,000

I may add that I believe there is every chance of a railway in this direction being directly remunerative in a very short time. A Select Committee of the Provincial Council of Otago, that was appointed to inquire into the subject in 1873 (see Votes and Proceedings, vol. 32), reported the estimated traffic beyond Lawrence, on a line *viâ* the Clutha Valley, to be £73,800 per annum. There is comparatively little intermediate traffic between Lawrence and Alexandra, and I understand the Committee did not calculate on supplying the districts east of Ida Burn Valley, consequently I have no doubt the above estimate is too low for the Strath Taieri line.

Whether it is intended to construct the line at present or not, I would recommend that a detailed survey of it be made before the lands through which it passes are sold.

I have, &c.,
W. N. Blair,
District Engineer.

Enclosure No. 4.

REPORT UPON RAILWAYS OPENED FOR TRAFFIC.

CHRISTCHURCH, DUNEDIN, AND INVERCARGILL SECTIONS.

The Superintending Engineer for Constructed Railways, Southern District, to the Engineer-in-Chief.

Sir,— Superintending Engineer's Office, Christchurch, 27th July, 1877.

I have the honor to submit to you the following Report upon the Railways opened for traffic within the Christchurch, Dunedin, and Invercargill Sections. As you are aware, my appointment to the charge of Christchurch Section dates only from the 21st February last, consequently I have not had the time at my disposal to effect a thorough inspection of the main and branch lines, but I hope shortly to be in a position to do so.

The appointments of Resident and Locomotive Engineers are also of recent date, so that I do not expect either of these officers to furnish a detailed report extending over the twelve months.

The reports furnished by the General Manager and Resident Engineer, Dunedin, and Assistant Engineer, Invercargill, enter fully into details. The traffic on the Dunedin Section was suspended owing to the exceptionally high floods in the month of February, Dunedin to Port Chalmers Line for two days, and on the Dunedin and Clutha Line for eight days; 14 miles of the main line being completely submerged, and the consequent necessary repairs greatly augmenting the working expenses on the Christchurch Section. The several stoppages of traffic also caused much public inconvenience through portions of the North and South Main Lines and Branches being flooded.

Sums have been placed on the Estimates for the raising of embankments, protective works to bridges, and for increasing water ways, which, when completed, will, I trust, prevent a recurrence of similar disasters.

Many complaints have been received from grain merchants and others during the recent busy season, and in many instances with good cause. The grain traffic is an exceptional one, and requires a

very large supply of wagons to meet it successfully. It has, as will be seen, from the General Manager's Report, increased with great rapidity within the past two years, and will no doubt continue to do so yearly. The inconvenience hitherto experienced has, in my opinion, arisen principally from the following causes—viz., insufficiency of rolling stock, break of gauge, and the bad arrangements of the Christchurch and Lyttelton Station yards. The work of assimilating the gauge and relaying the Christchurch yard will be commenced at once, and as a large number of wagons have been ordered from Home, I am sanguine that next year's arrangements will prove more satisfactory to the public. I cannot too strongly urge the advisability of enlarging the Hillside workshops, erecting a new station at Port Chalmers, and—that which is, in my opinion, most important of all—the completion of the fencing on the whole of the lines from Amberley to the Bluff.

The instructions and index to forms were received in the early part of the month of June last, and distributed by Managers to officers and others concerned, and are now in operation. Every precaution has been taken to ensure success to the system, but a certain amount of misunderstanding must be expected at first, as is invariably the case on the introduction of new and extensive changes.

I regret having to report that five fatal accidents have occurred during the year to servants of the department while in the execution of their duty—viz., on the Christchurch Section two, and three on the Dunedin and Clutha Section. No accident of any kind has occurred to passengers.

It affords me much pleasure to be in a position to bring under your notice the valuable and cordial assistance I have received in the discharge of my duties from General Managers, Resident and Locomotive Engineers, Assistant Engineers, and other officers, and the employés generally. The Reports of the General Managers, Resident and Locomotive Engineers, and Assistant Engineers are respectfully submitted for your consideration.

I have, &c.,
WM. CONYERS,
Superintending Engineer.

The Engineer-in-Chief, Wellington.

Enclosure 1.

DUNEDIN SECTION.

ABSTRACT A.—MAINTENANCE OF WAY AND WORKS.

Miles maintained, 83·36.

—	—	Per Mile Maintained.	Per Train Mile.
	£	£	d.
Proportion of Charge for Superintendence	240 0 0	2·879	·253
Wages to Inspectors, Repairs, &c.	11,501 16 4	137·973	12·122
Station Buildings and Fencing	1,103 14 5	13·241	1·163
Sawn Timber, Tools, &c....	704 11 9	8·452	·743
Tunnels, Bridges, and Culverts	401 19 7	4·822	·424
Re-laying and ballasting Line and new Sidings	2,460 9 10	29·515	2·593
	16,412 11 11	196·882	17·298

ABSTRACT B.—LOCOMOTIVE POWER—REPAIRS TO CARRIAGES AND WAGONS.

Train Miles, 227,717; Shunting, 61,090; Total Engine Mileage, 288,807.

—	—	Per Train Mile.	Per Engine Mile.
	£ s. d.	d.	d.
Proportion of Charge for Superintendence	240 0 0	·253	·199
Wages to Foremen, Fitters, Enginemen, Firemen, &c.	9,789 6 2	10·317	8·135
Coal	3,636 8 4	3·833	3·022
Oil, Tallow, Waste, and Material for Repairs	2,171 10 0	2·288	1·805
Painting, &c., Rolling Stock	1,064 4 5	1·122	·884
	16,901 8 11	17·813	14·045

ABSTRACT C.—TRAFFIC CHARGES.

—	—	Per Train Mile.
	£ s. d.	d.
Salaries and Wages	14,531 6 1	15·315
Extra Labour	2,831 4 3	2·984
Books, Tickets, Stationery, &c.	965 13 10	1·018
Incidental Expenses	2,028 15 7	2·138
Compensation	151 13 6	0·160
Goods Delivery Service	1,935 16 8	2·040
Clothing	232 6 9	0·245
	22,676 16 8	23·900

Enclosure 1—*continued.*

ABSTRACT D.—General Charges.

—	—	Per Train Mile.
	£ s. d.	d.
Superintending Engineer, Audit, and Travelling Expenses	1,670 6 10	1·760

SUMMARY of Expenses per Train Mile.

	d.
Abstract A.—Maintenance of Way and Works	17·298
„ B.—Locomotive Power, &c.	17·813
„ C.—Traffic Charges	23·900
„ D.—General Charges	1·760
	60·771 per train mile.

Total Miles run by Engines	288,807	miles.
„ Train Miles	227,717	„
„ Coal consumed	64,128¾	cwts.
„ „ per Train Mile	31·54	lbs.
„ Time of Engines running	16,470¾	hours.
„ „ under steam	39,823¼	„
„ Average Speed per hour, including stoppages	13·83	miles.

STATEMENT of Receipts and Expenditure for Year ending 30th June, 1877.

To	£ s. d.	By	£ s. d.
Maintenance of Way and Works, as per Abstract A ...	16,412 11 11	Receipts from—	
„ Loco.-power, Repairs to Carriages and Wagons, as per Abstract B ...	16,901 8 11	291,645 Passengers ...	36,682 7 7
„ Traffic Charges, as per Abstract C ...	22,676 16 8	2,125 Season Tickets ...	2,173 3 7
„ General Charges, as per Abstract D	1,670 6 10	Parcels, Excess Luggage, &c. ...	1,978 7 10
		Storage, Wharfage, &c. ...	850 19 9
		Haulage of Merchandise, &c. ...	45,155 19 1
		Rents	979 17 8
	57,661 4 4	„ Sundry Receipts	1,320 9 11
Profit on Working ...	31,480 1 1		
	£89,141 5 5		£89,141 5 5

Working Expenses = 64·68 per cent. of Receipts.

Enclosure 2.

INVERCARGILL SECTION.

ABSTRACT A.—Maintenance of Way and Works.

Miles maintained, 112·5.

—		Per Mile Maintained.	Per Train Mile.
	£ s. d.	d.	d.
Proportion of Charge for Superintendence	240 0 0	2·133	·362
Wages to Inspectors, Repairers, &c.	9,998 0 6	88·871	15·064
Station Buildings	276 8 5	2·457	·417
Sawn Timber, Tools, &c.	283 18 10	2·524	·428
Bridges and Culverts	781 13 0	6·948	1·178
	11,580 0 9	102·933	17·449

ABSTRACT B.—Locomotive Power: Repairs to Carriages and Wagons.

Train Miles, 159·292; Shunting, 44·769; Total Engine Miles, 204·062.

—		Per Train Mile.	Per Engine Mile.
	£ s. d.	d.	d.
Proportion of Charge for Superintendence	240 0 0	·362	·282
Wages to Foreman, Fitters, Drivers, &c.	5,339 17 2	8·046	6·28
Coal	3,100 9 6	4·671	3·647
Oil, Tallow, Waste, and Material for Repairs	841 0 0	1·267	·989
Painting Wagons, &c.	152 9 0	·229	·179
	9,673 15 8	14·575	11·377

Enclosure 2—*continued.*

ABSTRACT C.—TRAFFIC and EXPENDITURE for Twelve Months ending 30th June, 1877.

	£ s. d.	Per Train Mile.
Traffic Salaries and Wages	5,885 1 5	8·866
Books, Tickets, Stationery, &c.	203 4 11	0·306
Incidental Expenses	530 5 1	0·799
Goods Delivery	628 19 1	0·948
Extra Porterage	652 7 10	0·983
	£7,899 17 4	11·902

ABSTRACT D.—EXPENDITURE CHARGEABLE to GENERAL CHARGES.

	£ s. d.	Per Train Mile.
Superintending Engineer, Audit Office, and Travelling Expenses ...	1,002 4 2	1·510

SUMMARY of EXPENSES per TRAIN MILE.

	d.
Abstract A.—Maintenance of Way and Works	17·449
„ B.—Locomotive Power, &c.	14·575
„ C.—Traffic Charges	11·902
„ D.—General Charges	1·510
	45·436 per train mile.

Total Miles run by Engines	204,062
„ Train Miles	159,292
„ Coal consumed	32,330½ cwt.
„ „ per Train Mile	22·72 lbs.
„ Time of Engines running	10,514 hours.
„ „ under steam	24,046 „ 44 minutes.
„ Average speed per hour (including stoppages)	15·15 miles.

STATEMENT of RECEIPTS and EXPENDITURE for Year ending 30th June, 1877.

To	£ s. d.	By	£ s. d.
Maintenance of Way and Works, as per Abstract A ...	11,580 0 9	Receipts from— 82,806 Passengers ...	13,729 2 4
„ Loco.-power, Repairs to Carriages and Wagons, as per Abstract B ...	9,673 15 8	Season Tickets ...	235 3 6
„ Traffic Charges, as per Abstract C ...	7,899 17 4	Parcels, Excess Luggage, &c. ...	210 7 3
„ General Charges, as per Abstract D	1,002 4 2	Storage, Wharfage, &c. ...	115 12 11
		Rents ...	18 10 6
	£30,155 17 11	„ Sundry Receipts ...	770 8 10
Profit on Working ...	10,650 8 1	„ Merchandise, &c. ...	25,727 0 8
	£40,806 6 0		£40,806 6 0

Working Expenses=73·89 per cent. of Receipts.

Enclosure 3.

CHRISTCHURCH SECTION—OAMARU.

STATEMENT of RECEIPTS and EXPENDITURE for Seven Months ending 31st January, 1877.

To	£ s. d.	By	£ s. d.
Maintenance of Way and Works ...	2,150 1 5	receipts from 20,474 Passengers ...	3,436 1 3
„ Working of Engines, Repairs to Rolling Stock ...	5,039 18 2	„ Season Tickets ...	9 2 6
„ Traffic Charges ...	2,564 12 3	„ Storage, &c. ...	90 13 8
„ General Charges ...	668 2 9	„ Parcels, Excess Luggage, &c. ...	159 10 6
		„ Haulage of Merchandise ...	7,497 4 8
	£10,422 14 7	„ Sundry Receipts ...	490 7 7
Profit on working ...	1,260 5 7		
	£11,683 0 2		£11,683 0 2

Enclosure 4.

DUNEDIN, INVERCARGILL, and OAMARU SECTIONS, BALANCE SHEET for Twelve Months ending 30th June, 1877.

1877.		£ s. d.	£ s. d.			£ s. d.	£ s. d.
July 1	To Balances brot. forward,—			July 1, 1876, to June 30, 1877.	By Bank of New Zealand ...		139,791 14 7
	Dunedin Section	3,429 15 4			„ Claims Paid—		
	Invercargill ...	896 12 4			Dunedin Section ...	208 14 4	
	Oamaru ...	96 7 6			Invercargill Section	7 0 0	
			4,422 15 2		Oamaru Section ...	99 4 9	314 19 1
July 1, 1876, to June 30, 1877.	Passengers ...	53,847 11 2			„ Milton Pottery Company, written off by Provincial Government ...	120 11 0	
	Parcels ...	1,798 10 10			„ Oamaru Harbour Balance transferred to Christchurch ...	950 13 9	1,071 4 9
	Excess ...	447 4 1					
	Cloak-room ...	102 10 6					
	Season Tickets ...	2,417 9 7					
	Goods ...	78,165 15 6					
	Haulage ...	321 11 2					
	Storage ...	351 13 11					
	Rent ...	979 17 8					
	Live Stock ...	214 8 11					
	Weighbridge ...	330 12 5			„ Balance—		
	Express License Fees ...	25 0 0			Dunedin Section Stations ...	3,782 5 11	
	Advertisement Space ...	39 18 0			Dunedin Section Rents ...	399 16 0	
	Sundries ...	1,379 8 3			Invercargill Stations	693 6 3	4,875 8 2
	Dunedin, Portobella, and Ocean Beach Railway	964 7 10					
	Hill-side Workshops ...	93 17 11					
	Port Chalmers do.	68 13 8					
	Invercargill do.	0 12 6					
	Jetty Dues ...	71 9 6					
	Water Supply ...	9 18 0					
			141,630 11 5				
			146,053 6 7				146,053 6 7

Enclosure 5.

DUNEDIN SECTION.

TRAFFIC RETURN from all STATIONS for Year ending 30th June, 1877.

TABLE No. 1.		FORWARDED TONNAGES.		TABLE No. 2.	1877.		CORRESPONDING PERIOD.		INCREASE.		DECREASE.	
Description.		1877.	Corresponding Period, 1876.	Description.	No.	Value.	No.	Value.	No.	Value.	No.	Value.
						£ s. d.		£ s. d.		£ s. d.		£ s. d.
Merchandise ...	Tons	50,362	40,042	Passengers ...	...	36,682 7 7	287,043	36,636 2 5	4,602	46 5 2		
Flax	„	15	7	I. Single ...	43,577							
Iron, &c. ...	„	465	1,188	II. Single ...	144,530							
Coal	„	33,442	29,879	I. Return ...	21,778							
Other Mineral ...	„	30,826	13,526	II. Return ...	81,760							
Grain—Wheat ...	„	6,611	5,288	Season Tickets	2,125	2,173 3 7	695	951 19 9		1,221 3 10		
„ Oats ...	„	6,084	5,847	Parcels ...	...	1,448 11 9	...	1,147 7 5		301 4 4		
„ Barley ...	„	420	306	Cloak-room ...	...	97 13 1	...	79 11 11		18 1 2		
Flour	„	3,053	2,326	Excess Luggage	...	432 3 0	...	335 7 9		96 15 3		
Other Produce ...	„	3,691	2,148	Live Stock ...	...	86 9 5	...	97 18 2		...		11 8 9
Firewood ...	Trucks	48	146	Merchandise ...	...	45,069 9 8	...	35,384 1 6		9,685 8 2		
Heavy Timber ...	Tons	...	...	Storage ...	...	216 16 10	...	23 18 11		192 17 11		
Sawn Timber ...	100 ft.	101,046	81,830	Wharfage ...	...	...	...	129 6 6		...		129 6 6
Wool	Bales	32,608	39,806	Labour ...	...	321 11 2	...	...		321 11 2		
Live Stock ...	Trucks	68	54	Rent	...	979 17 8	...	72 15 0		907 2 8		
Carriages ...	„	...	8	Jetty Dues ...	...	...	...	...		...		
				Weighbridge ...	...	312 11 9	...	224 9 6		88 2 3		
				Sundries ...	...	154 3 0	...	38 9 10		115 13 2		
				Excess License Fees	...	18 0 0	...	21 0 0		...		3 0 0
				Advertising space	...	21 7 6	...	5 0 0		16 7 6		
				Dunedin, Peninsula, and Ocean Beach Railway	...	964 7 10	...	...		964 7 10		
				Hillside Workshops	...	93 17 11	...	...		93 17 11		
				Port Chalmers Workshops	...	68 13 8	...	...		68 13 8		
				Unclaimed Moneys	...	...	...	7 3 6		...		7 3 6
						89,141 5 5		75,154 12 2		14,137 12 0		150 18 9

Enclosure 6.

INVERCARGILL SECTION.

TRAFFIC RETURN from all STATIONS for Year ending 30th June, 1877.

TABLE No. 1. Description.		FORWARDED TONNAGES. 1877.	Corresponding Period, 1876.	TABLE No. 2. Description.	1877. No.	Value.	CORRESPONDING PERIOD, 1876. No.	Value.	INCREASE. No.	1877.	DECREASE. No.	1877.
						£ s. d.		£ s. d.		£ s. d.		£ s. d.
Merchandise ...	Tons	5,587	11,677	Passengers ...	...	13,729 2 4		13,502 7 6		226 14 10		...
Flax ...	„	136	37	I. Single ...	8,714	...		...		...		...
Iron, &c. ...	„	420	272	II. Single ...	50,250	...	74,113	...	8,693	...		...
Coal ...	„	691	243	I. Return ...	3,889	...		...		...		...
Other Mineral ...	„	4,184	3,327	II. Return ...	19,953	...		...		...		...
Grain—Wheat ...	„	1,381	965	Season Tickets ...		235 3 6		64 17 0		170 6 6		...
„ Oats ...	„	3,574	1,183	Parcels ...	...	210 7 3		99 1 2		111 6 1		...
„ Barley ...	„	193	322	Cloak-room ...	...	...		1 14 0		...		1 14 0
Flour ...	„	684	394	Excess Luggage ...	...	...		...		...		...
Other Produce ...	„	617	340	Live Stock ...	...	119 6 3		78 13 6		40 12 9		...
Firewood ...	Trucks	1,243	273	Merchandise ...	...	25,607 14 5		25,627 11 10		...		19 17 5
Heavy Timber ...	Tons	...	...	Storage ...	...	44 3 5		2 4 0		41 19 5		...
Sawn Timber ...	100 ft.	97,931	66,448	Wharfage ...	...	...		2 0 0		...		2 0 0
Wool ...	Bales	45,130	23,911	Labour ...	...	...		...		...		...
Live Stock ...	Trucks	89	90	Rent ...	...	...		...		...		...
Carriages ...	„	5	...	Jetty Dues ...	...	71 9 6		50 15 6		20 14 0		...
				Weighbridge ...	...	...		...		...		...
				Sundries ...	...	759 18 4		...		759 18 4		...
				Water Supply ...	...	9 18 0		1 11 6		8 6 6		...
				Advertising Space	...	18 10 6		8 0 0		10 10 6		...
				Workshops ...	...	0 12 6		24 12 7		...		24 1 0
						40,806 6 0		39,463 8 7		1,390 8 11		47 11 6

Enclosure 7.

OAMARU SECTION.

TRAFFIC RETURN from all STATIONS for Seven Months ending 31st January, 1877.

TABLE No. 1. Description.		FORWARDED TONNAGES. 1877.	Corresponding Period, 1876.	TABLE No. 2. Description.	No.	VALUE.	No.	VALUE CORRESPONDING PERIOD.
						£ s. d.		£ s. d.
Merchandise ...	Tons	7,842	1,186	Passengers,—				
Flax ...	„	...	...	I. Single ...	5,262			
Iron, &c. ...	„	407	2	II. Single ...	10,671	3,436 1 3	4218	
Coal ...	„	3,500	...	I. Return ...	1,085			
Other Mineral ...	„	1,513	...	II. Return ...	3,456			
Grain—Wheat ...	„	2,861	996	Season Tickets...	...	9 2 6		
„ Oats ...	„	2,427	378	Parcels ...	...	139 12 0		
„ Barley ...	„	1,248	8	Cloak-room ...	...	4 17 5		
Flour ...	„	3,133	409	Excess Luggage ...	...	15 1 1		
Other Produce ...	„	1,138	26	Live Stock ...	...	8 13 3		
Firewood ...	Trucks	117	91	Merchandise ...	...	7,488 11 5		
Heavy Timber ...	Tons	...	...	Storage ...	...	90 13 8		
Sawn Timber ...	100 ft.	27,038	1,060	Wharfage ...	...	...		
Wood ...	Bales	8,761	4,918	Labour ...	...	...		
Live Stock ...	Trucks	49	3	Rent ...	...	...		
Carriages ...	„	...	...	Jetty Dues ...	...	...		
				Weighbridge ...	...	18 0 8		
				Sundries ...	...	465 6 11		
				Express License Fees ...	...	7 0 0		
						£11,683 0 2		

Opened for Traffic October, 1875.

Enclosure 8.

NUMBER of MILES of RAILWAY open for Traffic.

—	Miles.	Chains.
Christchurch Section	376	8
Dunedin „	83	29
Invercargill „	128	12
Total	587	49

Enclosure 9.

COMPARATIVE STATEMENT of TONNAGE and Number of PASSSENGERS for Two Years ending 30th June, 1877.

Months.	Miles Open.	1876–77. Number of Passengers.	1876–77. Goods. Tons.	Months.	Miles Open.	1875–76. Number of Passengers.	1875–76. Goods. Tons.
July ...	255	53,857	20,777	July ...	170	45,290	16,599
August ...	...	52,382	22,711	August ...	...	42,711	17,681
September ...	259	58,925	20,037	September ...	...	43,053	20,383
October ...	...	59,398	18,166	October ...	...	50,648	19,995
November ...	263	82,548	23,013	November ...	200	72,264	16,484
December ...	...	75,439	17,781	December ...	209	65,239	19,683
January ...	279	88,570	24,341	January ...	224	76,178	17,923
February ...	362	67,818	23,582	February ...	245	64,519	21,554
March ...	366	90,125	52,017	March ...	...	70,018	34,047
April ...	380	87,948	49,068	April ...	...	79,665	30,110
May ...	...	76,003	48,014	May ...	...	52,038	39,703
June ...	...	65,572	38,421	June ...	...	53,084	25,511
Total ...	...	858,585	357,928	Total ...	...	714,706	279,673

ANALYSIS OF ABOVE STATEMENT.

MERCHANDISE. Description.	1877. Tons.	1876. Tons.	Increase. Tons.	PASSENGERS. Description.	1877. No.	1876. No.	Increase. No.
Wheat ...	66,682	38,044	28,638				
Oats ...	23,682	20,066	3,616				
Barley ...	10,696	9,498	1,198				
Flour ...	12,766	5,320	7,446				
Other Agricultural Produce	16,458	7,079	9,379	1st Class, Single	88,825	75,091	13,734
Coal ...	41,553	40,570	983	2nd „ „	295,947	244,975	50,972
Other Minerals ...	9,013	5,043	3,970	1st „ Return	127,837	103,920	23,917
Timber ...	63,946	61,090	2,856	2nd „ „	345,976	290,720	55,256
Wool ...	11,778	6,642	5,136				
General ...	101,354	86,321	15,033				
Totals ...	357,928	279,673	78,255	Totals ...	858,585	714,706	143,879

Enclosure 10.

COMPARATIVE STATEMENT of REVENUE and EXPENDITURE for Twelve Months ending 30th JUNE, 1877.

Months.	Miles Opened.	Revenue. Merchandise. £ s. d.	Passengers. £ s. d.	Miscellaneous. £ s. d.	Wharfage. £ s. d.	Total. £ s. d.	Expenditure. Traffic. £ s. d.	Engineers. £ s. d.	Total. £ s. d.
1876-77.									
July ...	255	8,647 11 5	5,703 13 7	181 19 5	1,246 18 0	15,780 2 5	5,213 10 7	7,346 10 4	12,560 0 11
August ...	...	9,466 0 1	5,687 2 3	177 6 0	1,211 2 1	16,541 10 5	5,337 12 2	7,332 8 7	12,670 0 9
September ...	259	8,434 5 3	6,483 14 9	364 14 4	1,096 2 2	16,378 16 6	4,946 9 11	6,279 12 5	11,226 2 4
October ...	...	7,690 3 3	6,965 11 10	178 11 7	827 0 9	15,661 7 5	4,743 16 0	7,121 7 7	11,865 3 7
November ...	263	9,565 17 2	7,990 11 6	445 2 9	1,344 11 3	19,346 2 8	5,638 13 4	7,041 7 4	12,680 0 8
December ...	...	9,175 12 0	7,574 13 9	189 10 0	826 9 7	17,766 5 4	5,216 9 3	8,377 10 5	13,593 19 8
January ...	279	11,514 13 6	8,497 14 0	298 8 8	1,376 17 7	21,687 13 9	5,565 14 9	10,567 1 4	16,132 16 1
February ...	362	9,072 6 9	8,367 6 11	189 4 1	820 5 8	18,449 3 5	5,536 16 3	7,590 18 11	13,127 15 2
March ...	366	19,502 12 6	10,456 5 10	449 4 1	1,398 13 7	31,806 16 0	6,701 18 6	10,359 1 2	17,060 19 8
April ...	380	19,455 2 3	9,821 12 5	249 12 1	1,542 16 8	31,069 3 5	7,306 5 9	10,907 0 3	18,213 6 0
May ...	...	18,812 3 4	9,021 13 3	226 3 10	1,733 2 6	29,792 2 11	7,956 15 10	10,299 6 7	18,256 2 5
June ...	...	14,095 3 0	7,791 0 4	423 7 10	1,514 7 11	23,823 19 1	7,370 2 10	12,878 18 10	20,249 1 8
Total ...	...	145,431 10 6	94,361 0 5	3,373 4 8	14,937 7 9	258,103 3 4	71,534 5 2	106,101 3 9	177,635 8 11
1875-76.									
July ...	170	6,038 14 6	4,041 11 2	171 17 11	417 14 9	10,669 18 4	4,754 13 3	5,750 6 2	10,504 19 5
August ...	...	7,105 16 2	4,006 1 8	69 4 8	1,020 19 8	12,202 2 2	4,271 14 8	5,204 18 0	9,476 12 8
September ...	...	9,067 8 4	4,162 1 3	578 13 5	1,350 17 8	15,159 0 8	4,370 16 9	5,562 3 6	9,933 0 3
October ...	...	8,732 1 1	4,621 11 7	194 17 11	1,415 19 6	14,964 10 1	4,503 19 6	5,780 14 8	10,284 14 2
November ...	200	7,334 11 11	5,991 9 4	176 3 3	1,226 17 4	14,729 1 10	4,544 14 8	5,659 7 8	10,204 2 4
December ...	209	9,560 3 9	6,013 8 8	241 17 5	1,477 12 5	17,293 2 3	4,984 12 9	6,646 9 3	11,631 2 0
January ...	224	9,132 16 10	6,708 4 4	242 18 3	1,387 9 11	17,471 9 4	4,633 17 6	5,713 0 2	10,346 17 8
February ...	245	9,614 6 3	6,578 14 3	229 5 7	1,668 6 1	18,090 12 2	4,592 8 6	6,063 9 10	10,655 18 4
March ...	...	16,139 9 2	7,366 0 3	244 15 7	1,763 19 5	25,514 4 5	4,795 15 4	6,539 4 11	11,335 0 3
April ...	...	12,311 4 0	7,757 13 8	205 19 10	1,611 10 9	21,886 8 3	5,511 11 1	7,353 12 5	12,865 3 6
May ...	...	16,608 1 1	6,682 12 5	204 18 7	1,902 1 10	25,397 13 11	5,984 7 7	6,653 7 8	12,637 15 3
June ...	...	11,617 9 11	5,808 2 1	293 1 6	1,376 15 10	19,095 9 4	7,676 18 8	7,564 4 8	15,241 3 4
Total ...	...	123,262 3 0	69,737 10 8	2,853 13 11	16,620 5 2	212,473 12 9	60,625 10 3	74,490 18 11	135,116 9 2

Summary.

1876-77.	— £ s. d.	— £ s. d.	Percentage of Working Expenses.
Gross Revenue ...	258,103 3 4		
Less Wharfage...	14,937 7 9		
	243,165 15 7		
Expenditure ...	177,635 8 11		
Excess of Revenue		65,530 6 8	73·05
1875-76.			
Gross Revenue ...	212,473 12 9		
Less Wharfage...	16,620 5 2		
	195,853 7 7		
Expenditure ...	135,116 9 2		
Gross Revenue ...		60,736 18 5	68·98

N.B.—The North Otago lines were not incorporated with this division until 1st February, 1877, and consequently the receipts, &c., are not included in these statements prior to that date.

APPENDIX B.

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

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

SIR,— Public Works Office, Wellington, 30th June, 1877.

I have the honor to forward my annual report on road work executed during the past year under "The Public Works Act, 1876," up to the 31st May.

The expenditure on new works has been very limited, and many roads formerly maintained by the General Government have at intervals during the year been handed over to the counties in which they are situated. Those roads which have not been so handed over have been maintained at as low a rate of expenditure as was compatible with keeping them open for traffic, and those in purely Native districts have been mostly kept in repair by parties of the Armed Constabulary.

I shall only describe those roads in each district on which new work has been executed, the information being supplied by the Engineers in charge of the respective districts.

ROADS NORTH OF AUCKLAND.

(T. HEALE in charge till 17th January; JAMES STEWART after that date.)

Bay of Islands.—The cart bridge described in last year's report as being in progress has been completed, as well as the approaches to it. Its total length is 121 feet, with a central span of 41 feet.

Mahurangi.—Section No. 5 of the Mahurangi and Port Albert Road has been completed, the work consisting of 164 chains clearing and forming.

Section No. 1A of the same road has also been completed in the same manner, 142 chains; also 15 chains of formation in extension of No. 1A, and five bridge culverts. State of the above for traffic good.

Provision has been made for road works in the seven Counties North of Auckland, by apportioning the sum of £15,200 in the following manner, and for the purposes described, viz.:—

			£	s.	d.	£	s.	d.
Waitemata County,	Main North Road	...	...		...	500	0	0
Rodney „	Waiwera „	...	£500	0	0			
„ „	Main „	...	4,000	0	0			
						4,500	0	0
Hokianga „	Taheke Bridge	... ...	...		...	1,000	0	0
Hobson „	Main Road	... ...	£500	0	0			
„ „	Wairoa „	... ...	500	0	0			
						1,000	0	0
Whangarei „	Wairua Bridge	... ...	£1,200	0	0			
„ „	Waipu Road	... ...	1,000	0	0			
„ „	Wairoa „	... ...	1,000	0	0			
„ „	Main „	... ...	2,000	0	0			
						5,200	0	0
Bay of Islands „	Main „	... ...	...		...	1,500	0	0
Mongonui „	Main „	... ...	...		...	1,500	0	0

A Surveyor, Mr. Fairburn, is now, and has been for some time, employed in laying off the main line of road, and in preparing plans and specifications for the works required. Copies of these are being furnished to each County for the works within its boundaries, and the Counties are proceeding with the works.

SURVEYS COMPLETED.

These are as follow, namely,—

Mahurangi.—Road line from section 5, Mahurangi and Port Albert Road, to Albertland Settlement, 64 chains; Port Albert and Waipu, 13¼ miles (ready for tender), a break of 7 miles unsurveyed and 8 miles completed; Warkworth to Puhoi, 16¼ miles (ready for tender); Puhoi to Waiwera, 4 miles 10 chains (ready for tender).

Whangarei to Kawakawa.—Section of Wairua Road for Whakapara Bridge, and section of Ngaruwahine-Waipunga Creek,—the latter awaiting design for bridge.

Bay of Islands.—Bridge crossing, Paheke, and 3 miles of road as approach, awaiting design for bridge. Re-staking the road line from Black Bridge (Waiaruhe) to Kawakawa (ready for tender).

Helensville.—Road line from Waimaukau Station to Kaukapakapa Road, 7½ miles (ready for tender).

BAY OF PLENTY AND WAIKATO.

(A. C. Turner in charge.)

Tauranga–Taupo Road.—One 6-foot bridge erected, and four cottages built alongside road for maintenance-men.

Tauranga–Katikati.—Second division, beyond Aongatete, 16 miles. The Armed Constabulary, up to near the end of January, at which time they were withdrawn, had formed about one mile of road over a very bad portion of the line. Excavation, 4,381 cubic yards. Eight large box culverts erected, and one chain of fascines laid down; also one plain bridge, 12 feet span, erected over Tuapo River.

Maketu–Rotorua.—One plain bridge, 16 feet span, built over the Ngae River.

Galatea–Opepe.—A little work has been done by Natives in extending this, amounting to 1,011 cubic yards.

Whakatane–Te Teko.—Upwards of 40 chains of new road have been formed by Natives, the work consisting principally of forming an embankment across a swamp. Earthwork, 18,675 cubic yards.

Rotorua–Tarawera.—Twenty-six culverts have been placed to drain side-cuttings.

Cambridge–Taupo.—Reported last year as surveyed, all but the levels. In December a party of Armed Constabulary, under Captain Morris, was placed on this line, and, up to the end of March, the latest report stated that 9½ miles of 10-foot road had been formed. Earthwork, 13,665 cubic yards; rock, 28 cubic yards. One plain bridge erected over Pokaiwhenua River, 25 feet long. Two other bridges of 20 feet span, two temporary bridges, and several culverts.

Opotiki–Ohiwa Road.—The Waiocka Bridge was partially destroyed by a flood in November, 1875; instructions have lately been issued to have the bridge repaired and restored, at an estimated cost of £460.

Opotiki–Torere Horse Road.—Three chains of side-cutting completed, on an old contract.

Whakatane Valley Road.—On this the Natives have formed 50 chains of road 18 feet wide, and 6 miles 23 chains 10 feet wide, making a total of 100 chains 18 feet wide, and 970 chains 10 feet wide, and completing the road with the exception of the bridging, the timber for which is cut.

Opotiki–Poverty Bay Horse Road.—This is now completed from Opotiki to the Motu River, and the Motu Bridge is finished under contract: it is a truss bridge, 66 feet span. South of this there yet remain about 7½ miles of deviation to be finished. The length now completed is 78 miles. During last year the Armed Constabulary have formed, north of the Motu, 7 miles 30 chains through bush, and maintained about 38 miles. Earthwork, 18,827 cubic yards. One small bridge erected, and twenty-five culverts. Rock excavations under contract: Hard, 3,530 cubic yards; soft, 1,041 cubic yards. South of the Motu the Armed Constabulary have formed 130 chains of road, and erected four large and three small stone culverts. Earthwork, 4,288 cubic yards; solid rock, 34 cubic yards; and loose rock, 111 cubic yards.

Thames–Katikati.—Through Ohinemuri Gold Field, from Te Puke Landing, on Thames River, to junction with Tauranga-Katikati Road, near Katikati, 20¼ miles. About 1¾ miles of this have been formed, during the year, by the Armed Constabulary; also one bridge 25 feet long, and one 18 feet long. Earthwork, 3,777 cubic yards. Total length of road completed, 10¾ miles.

Cemetery Breakwater, Tauranga.—This has been extended southwards 45 feet. Masonry, 495 cubic yards; earthwork, 175 cubic yards. Total length of wall, 465 feet. Work now complete.

Public Buildings, supervised during year.—Telegraph and Post Office additions, Maketu Native School, Omaio.

Waikato.

Hamilton–Cambridge.—Completion of embankment over Martyn's Creek culvert, and fascining 6 chains of road; also erection of 6 chains of post-and-rail fence.

Cambridge–Ohaupo.—A truss bridge of 120 feet span has been erected over the Waikato at Cambridge by the Provincial Government, the General Government contributing one-half the funds.

Alexandra Bridge, across Waipa River.—This has been repaired by the local Highway Board after damage by a flood, the General Government assisting by a contribution of £190—one-half estimated cost.

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

(E. H. Bold in charge.)

Kaiwhaka–Taupo.—Ordinary maintenance works have been carried out on this section, but attention is drawn to the fact that the bridges and culverts on this road in which rimu was used, 1872, (totara not being then obtainable), are rapidly decaying, and require immediate attention. The Rangitaiki and Upper and Lower Waipunga bridges should be repaired at once.

Wairoa–Gisborne (Inland Bridle Road).—On this line 5 miles of new track have been formed by Native labour, and heavy slips cleared off the old portion. Three plain bridges have been built, of a total length of 60 feet. The road is now open for traffic.

Waipaoa Cart Bridge.—The tenders received for this work being too high, a fresh site was selected about a mile further up the river, where the crossing was much narrower, and tenders were called for a bridge at this place. The lowest of these was accepted, the contract price being £2,987 15s. A new road to this site has also been laid off.

Kopua–Norsewood, viâ Te Whiti (3½ miles).—This road has been surveyed, and one-half the work let—viz., bush-clearing and formation. The other half will be let shortly. The road is intended to connect the southern end of the railway, Kopua, with the main road.

MANAWATU DISTRICT.

(J. T. Stewart in charge.)

Only maintenance works have been carried on in this district, the part of the main road lying within the Manawatu Gorge requiring special attention.

MASTERTON TOWARDS MANAWATU GORGE.

(Alex. Munro in charge till 31st August, 1876; J. D. Baird in charge since that date.)

Opaki–Manawatu.—In last year's report this road was described as having been formed throughout between Opaki and the Manawatu crossing, 40½ miles, of which 8½ miles had also been metalled, and other metalling contracts were then in progress.

Between Opaki and Masterton a new line of road has been laid off and formed—namely, from Opaki to a point on the old main road, 3 miles 61 chains in length. A contract has also been let for metalling a portion of this, 200 chains in length, but the work is yet uncompleted.

Woodville–Manawatu.—The metalling contract reported as being in progress last year has since been finished.

Works for which Provincial Appropriations had been made, taken over and carried out by General Government.

(J. D. Baird in charge.)

Opaki–Manawatu.—Contracts for metalling the remaining portions have been let—namely, sections 8 and 9, to Messrs. Nathan and Wilkie, 16 miles 40 chains; and sections 10 and 11 to Mr. Oakes, 11 miles 55 chains: total, 28 miles 15 chains.

Sections 10 and 11 are completed, and sections 8 and 9 very nearly so, the contractors being obliged to suspend work on account of wet weather.

One contract extending over 200 chains, and another for 60 chains, have also been let for re-metalling some of the older portions of the road, which had been cut up during the other metalling contracts.

A portion of last year's contracts for metalling not having been completed, the contractor stating his inability to carry out the work, it has been re-let—142 chains. Very little, however, has yet been done on it.

Mauriceville Road.—This branches from the Opaki–Manawatu Road, and the work of clearing and forming it has lately been let in eight contracts, a total length of 2 miles 73·83 chains.

The bridges on the same road have also been let by contract—namely, two of 25 feet each and one of 33 feet.

Punts.—Punts have been built to be placed at the crossings of the Mangatainoko and Manawatu Rivers, on the Opaki–Manawatu Road, and the wire ropes for working them have been provided, but owing to some difficulty with the Native residents some delay has taken place in erecting the posts for the wires and getting the punts to work. It is hoped, however, that this difficulty will soon be obviated.

Masterton–Alfredtown Road.—The contract for felling bush on this road has been completed, 100 chains.

Rangituma Road.—On this road contracts for felling bush have also been completed, 467 chains; and 370 chains are yet in hand.

Manyapakeha Road.—The contracts for felling bush on this road, 309 chains, are expected to be finished by the end of July. Three bridges have been built, 45 feet, 40 feet, and 70 feet respectively.

Lower Tauherenikau Bridge.—This work is expected to be completed next month: its length is 504 feet. The western approach is also yet unfinished, but the work of forming it is being prepared for tender.

Manawatu Bridge.—Near Palmerston North, 835 feet in length. It is expected that this contract will be completed about the end of July. The earthwork for the approaches is not included in the contract.

Rangitikei Bridges.—Respectively 375 feet and 690 feet in length, both on the same line of crossing. The contractor is proceeding with the delivery of the timber for the superstructure. The ironwork for the piers, &c., has been ordered from England, but has not yet arrived.

Waiohine Bridge.—On main line of road, Wairarapa, 120 feet long. This work is completed.

Tauherenikau Bridge.—On same main line of road. Repairs completed.

Reclamation Contract, Wellington Harbour.—This work is progressing in a satisfactory manner; at the last measurement there were about 32 acres completed out of 48 acres 2 roods 30 perches, and the timber breastwork is nearly finished.

Main Road, Wellington–Masterton–Manawatu.—The state of repair is on the whole satisfactory. Considerable slips have occurred on the Rimutaka and in the Forty-Mile Bush, but the cost of maintenance has nevertheless been kept within the limits allowed.

Bunnythorpe Road.—Bush-felling: 224 chains have been completed on this line; also 161 chains of formation.

Roads North of Feilding.—Bush-felling: 300 chains completed; and contracts for 260 chains and 490 chains yet in hand.

Moutoa Swamp.—Roads and Drains: Two contracts for making main drain have been completed, 74 chains; and two others for 160 chains are still in progress.

WEST COAST ROAD, PATEA TO PUKEARUHE; ALSO MOUNTAIN ROAD.

(O. Carrington in charge.)

Pukearuhe to New Plymouth.—A bridge over the Mimi on the main line of road has been built by a party of Armed Constabulary under Captain Messenger. The bridge is 110 feet long and 11½ feet wide, consisting of 4 spans of 20 feet each, and 2 of 15 feet each; the piers consist of five piles each, driven very deeply into the soft muddy bed of the river.

West of the Mimi a road has been laid off, levelled, and pegged, 165 chains, and a working plan and specifications handed to Captain Messenger, whose men are engaged on the work.

Urenui Bridge.—Some of the piers of this bridge after it had been opened for traffic began to sink in the mud of the river-bed, but this was arrested by depositing heavy stones around the piers, and the work now stands firm.

Mountain Road.—At the southern end a contract for gravelling 69 chains has been completed, and a further contract of 140 chains of gravelling has been let: of this, 89½ chains have been finished, but wet weather stopped further work this season.

PROVINCIAL GOVERNMENT WORKS TAKEN OVER AND WORKS COMPLETED DURING THE YEAR.

Waitara–Urenui.—Thirty chains of road formed north of Onaero, 9,000 cubic yards of earth and rock; twenty-two culverts erected between Onaero and Waitara; also, two cart bridges—one plain, over Waiau Stream; one trussed, over the Onaero.

Inland Road.—The contracts on this (8 miles 56 chains in all) have been completed, and the road is now open for traffic.

South Road, Oakura to Stony River.—Two formation contracts, two gravelling contracts, and one metalling contract, reported as having been let last year, have been completed.

Bridge Site, Upper Waitara.—Ground examined and site for bridge selected on line of road between Huirangi and Tikorangi; also, survey of road made, and subject specially reported on.

ROADS IN WESTLAND.

(C. Y. O'CONNOR in charge.)

Dray Road, Greymouth–Arnould.—Deviation at Wallsend, length 34 chains, formed 17 feet wide, metalled 12 feet wide and 12 inches thick. This deviation was made to avoid two crossings of the Brunner Railway, and lies along very steep, rough, and rocky ground. One-half of the cost, including maintenance to 30th April (viz., £231 6s. 3d.), was paid by the Greymouth Coal Company, which benefitted by its construction. It was handed over to the county at the above date.

Horse Road, Bowen–Okarito.—Section 6, south end, 2 miles 71 chains. To be formed 10 feet wide, and metalled 5 feet wide and 8 inches thick. This was let as a contract on 25th November, 1876, and on its completion the southern end of the Bowen–Okarito Road will be open from the Wataroa River to the Okarito Lagoon. The work consists of 231 chains clearing, forming, and metalling; 41 lineal feet of culvert covering; and maintenance for three months. The contract sum is £654. The clearing and 211 chains of forming are now completed.

Section 4, North End.—Three miles. This is now open for tender, the work being of same style as No. 6. It consists of 240 chains of clearing, forming, and metalling; 124 lineal feet of culvert covering; and one bridge, 41 feet span. The work lies principally along steep hill-sides.

The remainder of the Bowen–Okarito Road is now being surveyed and prepared for contract, in three-mile sections, one of which may be ready every fortnight; the distance yet to be surveyed is about 23 miles.

Coach Road, Hokitika–Christchurch.—The maintenance of this road from the Rangiriri to Arthur's Pass, about 32 miles, was taken over by the General Government on 21st April, 1877; and the charges for maintenance, which were all outstanding from and after 1st March, 1877, were paid by the General Government from that date.

A considerable amount of work has been required to keep this road open for traffic, owing to heavy floods and slips. These have been attended to promptly as occasion arose, and a large party is now at work repairing the damages caused by one of the late heavy rains.

The cost per month for maintaining this road has been estimated at £175, which sum has accordingly been authorized.

NELSON SOUTH-WEST GOLD FIELDS.

(A. D. DOBSON in charge.)

Inangahua to Boatman's, Dray Road.—Of this, one mile has been executed during the past year, thus completing the road, which is 4 miles 13 chains in length.

Stock Road, by way of Ada Saddle.—This is a new track which has been opened between the Grey Valley and the Upper Waiau, Amuri, by way of Cannibals' Gorge, Upper Maruia, and the saddle between this and the Waiau. Works executed: 11 miles of bush track, 8 feet wide, and 2 miles of side-cutting, 4 feet wide. All the timber has been cleared in Cannibals' Gorge, and a sheep-track cut over the spurs, to avoid the gorge and the river.

Amuri Stock Road, by way of Ahaura Saddle.—Works have been done on this road as follows, viz.:—On east of saddle, bush-cutting, 33 feet wide, 4 miles 17 chains; side-cutting, 6 feet wide, 47 chains.

On the west side of the saddle the road has been improved to avoid the river in many places, and the long cutting, from the top to the foot of the saddle, well cleared out.

Main Road, Greymouth–Reefton.—The unfinished portion of this, lying in the valley of the Little Grey, was estimated to cost about £4,000; this sum was placed at the disposal of the Inangahua County Council, who have had the necessary surveys made, and the work prepared for public tender.

WORKS COMMENCED UNDER PROVINCIAL ARRANGEMENTS, AND CARRIED ON BY GENERAL GOVERNMENT.

Improvement of Main Road, Buller Valley.—This work extends over a distance of about 20 miles 29 chains from the River Dee upwards. It has been let in contracts, and consists of general improvements of the dray road, clearing slips, water-tables, and drains, widening road where necessary, improving grades, occasional metalling, &c. The work has not yet been taken over, being still in hand.

Little Ohika Bridge.—Work still in hand.

Approaches to Punt Crossing below Lyell.—Work still in hand.

When these latter works are completed—as they will be shortly—the road from Westport to Reefton will be in a state to allow coach traffic.

WORKS IN CANTERBURY PROVINCIAL DISTRICT INITIATED BY THE LATE PROVINCE, AND SINCE CARRIED ON BY THE PUBLIC WORKS DEPARTMENT.

(G. P. Williams in charge.)

Rangitata Road Bridge Repairs Contract.—This work has been completed and the bridge reopened for traffic, but the maintenance of it is yet in the hands of the contractors. It includes the construction of protective groins, faced with concrete blocks, at each end of the bridge; the groins themselves being further protected by heavy concrete blocks placed at random, each from one to two cubic yards in bulk;—also about 30 chains of road embankment, formed and metalled 20 feet wide.

Ashley Gorge Bridge Approaches, Glentui.—This work is about two-thirds completed. It consists of the formation of an embanked approach to Glentui Bridge on the southern bank, about 4 chains long; and a deep cutting through the terrace on the northern bank, about 10 chains long, grade 1 in 12, and 12 feet wide.

Malvern Hills Road.—This work is on the point of completion. It includes 1 mile 74 chains of road, with culverts and small bridges; metalling not included.

Pig Saddle Road.—Formation of 2 miles 56 chains of road, without metalling. Work just about finished.

Cow Road, Little Akaloa.—Work completed at schedule rates by contract, 89 chains of side-cutting on grade 1 in 11.

West Coast Road Repairs.—About 50 miles of this road, up to the top of Arthur's Pass, has been maintained by day labour at a cost of about £120 per month, not including new metalling.

Hagley Park Roads Repairs.—These are being maintained by day labour, at a cost of about £20 per month, not including new metalling. Length, about 4 miles.

Sumner Road Improvements.—This contract includes the widening and metalling of about 14½ chains of road through rock-cutting, and is nearly completed.

In addition to the above road works, Mr. Williams has latterly supervised the following works:—

Okain's Bay Jetty, Banks Peninsula.—Completed.

Waimakariri Gorge Road Bridge, with Approaches.—Still in hand.

Malvern Waterworks Contract.—Still in progress.

Lyttelton Harbour Works, including *Officers' Point Breakwater.*—Completed, but still in contractor's hands for maintenance.

Gladstone Wharf Extension.—Nearly complete.

Intermediate Jetty Extension.—Completed, but still under maintenance by contractors.

Screw-Pile Jetty Extension.—Work not commenced.

GENERAL SUMMARY.

Works completed and in progress since commencement of public works under the Act of 1870 (not including provincial works taken over), viz.,—

North Island: Dray roads, 1,195 miles; horse roads, 554 miles: total, 1,749 miles.

Nelson South-West Gold Fields: Metalled dray roads completed and improved, 71 miles 20 chains; horse roads, 71 miles 40 chains, completed and improved.

Westland: Dray roads metalled complete, 72 miles 27 chains horse roads, 66 miles 75 chains, completed and in progress.

Totals for both Islands: About 1,338½ miles of dray road and 692½ miles of horse road, or about 2,031 in all.

I have, &c.,
John Blackett,
Assistant Engineer-in-Chief.

The Hon. the Minister for Public Works.

APPENDIX C.

ANNUAL REPORT OF THE CHIEF INSPECTOR OF MACHINERY.

The Chief Inspector to the Hon. the Minister for Public Works.

Office of the Chief Inspector of Machinery, Wellington,
18th July, 1877.

Sir,—

In presenting the Third Annual Report on the working of the Inspection of Machinery Department, for the year ended 30th June, 1877, I have the honor to state that the Act is working satisfactorily.

The boilers generally are in a much improved state since the Act has been in force.

The number of boilers inspected during the year has been 1,090. Of these, 40 have been under repairs, 14 have been found in a dangerous state, 7 have been condemned altogether.

The only explosion which occurred during the year took place at Kumara in November last, fortunately without injury to any one, or any very serious result. It was the boiler of a tramway locomotive, but having proved a failure for that purpose, was laying idle at Hokitika. The owner, on the Inspector's visit, refused to have a certificate, and the boiler was not inspected on that account. Shortly after the rush to Kumara set in, this boiler was used to work a saw-mill, when the explosion took place—a purpose for which it was quite unsuited, in not having sufficient power. It was a field boiler; half the crown gave way and shot towards the bush, taking the funnel with it. There is no direct proof as to the cause of the explosion, but there is every reason to believe that it was caused by excessive pressure.

The accidents to men employed about machinery that have occurred during the year were not preventable by fencing or by inspection.

The Inspectors are frequently applied to by boiler owners (especially when visiting isolated districts), and their superior knowledge and experience enables them to advise as to the laying down new boilers, and the best, safest, and most economical method of working them. The condition and the fencing in of machinery have also received the special attention of the Inspectors, with beneficial effect.

The Provincial District of Hawke's Bay has been brought under the Act during the year, and now all boilers and machinery in the colony are periodically inspected.

I forward herewith returns showing the number of boilers and the different kinds of machinery inspected in the various districts during the year; the amount of fees collected; and the cost of working the department.

I have, &c.,
J. Nancarrow,
Chief Inspector.

The Hon. the Minister for Public Works,
Wellington.

Enclosure No. 1.

Return showing the Amount of Fees collected in the Inspector of Machinery Department during the Financial Year ended 30th June, 1877.

Name of District.	Amount Collected.
Otago	£569 0 0
Canterbury	431 0 0
Auckland	449 0 0
Wellington	252 0 0
Marlborough	95 0 0
Taranaki	15 0 0
Nelson North	85 0 0
Nelson South	29 0 0
Westland	47 0 0
Hawke's Bay	50 0 0
Total	£2,024 0 0

Enclosure No. 2.

Return showing the Cost of Working the Inspection of Machinery Department during the Financial Year ended 30th June, 1877.

Nature of Expenditure.	Amount Expended.
Salaries	£1,230 0 0
Travelling expenses	456 13 5
Sundries	28 2 6
Total	£1,714 15 11

Enclosure No. 3.

RETURN showing the NUMBER of BOILERS INSPECTED during the Financial Year ended 30th June, 1877.

NAME OF DISTRICT.	No. of Portable Boilers.			No. of Stationary Boilers.			TOTALS.
	Under 5 H.P.	5 to 10 H.P.	Over 10 H.P.	Under 5 H.P.	5 to 10 H.P.	Over 10 H.P.	
Otago	24	115	18	67	34	56	314
Canterbury	7	131	7	79	13	26	263
Auckland	9	24	22	51	29	99	234
Wellington	22	26	41	10	21	8	128
Marlborough	2	12	3	2	5	19	43
Taranaki	...	4	1	2	1	1	9
Nelson North	3	13	7	7	8	4	42
Nelson South	...	2	2	1	...	6	11
Westland	1	1	3	5	5	7	22
Hawke's Bay	2	8	2	4	2	6	24
Totals	70	336	106	228	118	232	1,090

Enclosure No. 4.

RETURN showing MACHINERY INSPECTED during the Financial Year ended 30th June, 1877.

NAME OF DISTRICT.	DESCRIPTION OF MACHINERY.																				TOTALS.
	Steam Phormium Dressing.	Water Phormium Dressing.	Steam Printing.	Steam Flour-mills.	Steam and Water Flour-mills.	Water Flour-mills.	Steam and Wind Flour-mills.	Wind Flour-mills.	Steam Saw-mills.	Steam and Water Saw-mills.	Water Saw-mills.	Steam Bone-crushing Mills.	Wind Bone-crushing Mills.	Steam Woollen Mills.	Steam Foundries.	Steam Planing Machines.	Water Planing Machines.	Steam Quartz-crushing Machines.	Steam and Water Quartz-crushing Machines.	Water Quartz-crushing Machines.	Steam Threshing Machines.	
Otago ...	...	2	6	13	2	2	...	...	62	1	1	4	...	2	16	50	...	1	...	3	103	268
Canterbury ...	1	...	3	4	...	1	1	1	42	1	...	...	...	1	18	4	...	...	...	...	98	175
Auckland ...	4	7	2	5	2	1	...	...	52	...	...	4	...	...	13	35	...	14	2	2	9	152
Wellington ...	...	...	5	4	...	2	...	...	34	2	...	1	...	...	6	2	...	...	...	...	7	63
Marlborough	...	3	...	...	...	3	...	...	14	1	...	...	...	...	1	...	...	...	...	...	8	30
Taranaki ...	...	...	...	1	...	2	...	...	4	...	...	...	...	...	1	...	...	...	...	...	1	9
Nelson North	1	...	...	2	1	5	...	...	22	...	1	...	...	1	2	...	...	...	...	...	4	39
Nelson South	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	5	...	...	...	8
Westland ...	...	...	1	...	...	...	...	...	7	...	...	...	...	...	1	...	...	...	...	...	...	9
Hawke's Bay	1	...	...	...	...	...	...	...	7	...	...	...	...	...	2	1	...	...	...	...	6	17
Totals ...	7	12	17	29	5	16	1	1	247	5	2	9	...	4	60	92	...	20	2	5	236	770

APPENDIX D.

CONTRACTS FOR CONSTRUCTION OF RAILWAYS.

SCHEDULE of CONTRACTS for the CONSTRUCTION of RAILWAYS from 1st July, 1876. to 30th June, 1877.

PROVINCIAL DISTRICT OF AUCKLAND.

	£ s. d.	£ s. d.
KAWAKAWA :—		
H. P. Kavanagh, No. 2 station buildings	438 5 0	
		438 5 0
KAIPARA—PUNIU :—		
Daniel Fallon, Mercer–Newcastle permanent-way contract, 30 m. 35 ch., sidings 3 m.	£16,832 5 1	
Larkins and O'Brien, Auckland, formation and permanent-way contract, 9 m. 61 ch., sidings 60 ch.	16,933 0 0	
Alexander Smith, Helensville, formation and permanent-way contract, 43 ch., including buildings and wharf	9,067 14 2	
Sutherland and Smith, Onehunga Wharf contract, 20 ch., sidings 20 ch.	9,409 19 7	
John Foster, extension of Harkins Point Wharf	175 0 0	
John Taylor, additions, Waikato Bridge	1,184 8 6	
D. Glendinning, erection of station at Penrose	165 14 11	
D. Glendinning, additions to above contract	47 17 10	
E. J. Matthews, erection of additions to Auckland workshops ...	465 0 0	
E. J. Matthews, additions to above contract	64 17 6	
D. Glendinning, erection of No. 1 station buildings	898 17 2	
W. Cameron, erection of store at Newmarket	973 0 0	
E. Mills, erection of refreshment room at Mercer	245 0 0	
W. Goulton, additions, petty contract No. 14	134 5 2	
S. Gardiner, additions, petty contract No. 15	28 10 9	
Shallard and Wooley, erection of stone wall at Manurewa ...	99 10 0	
Jas. Preston, erection of two-rail ditch-and-bank fence at Pukekohe	26 6 6	
		56,751 7 2

PROVINCIAL DISTRICT OF HAWKE'S BAY.

	£ s. d.	£ s. d.
NAPIER—MANAWATU :—		
Millar, Murray, and Walker, additions, Waipawa–Takapau contract	£642 15 3	
J. McSweeney, erection of additions to Hastings Station ...	53 0 0	
J. McSweeney, additions to above contract	9 0 0	
McLeod and Reed, erection of platelayer's cottage at Waipukurau	125 0 0	
Joseph Sowry, removal and re-erection of goods shed at Pakipaki	147 0 0	
D. McLeod, erection of goods shed at Takapau	236 8 0	
J. McSweeney, erection of goods shed at Farndon	243 0 0	
A. Mackay, Kopua Bridges contract	1,139 0 0	
Corskie and Robb, erecting and finishing 4 sheep vans and 2 horse boxes	374 0 0	
G. Faulknor, erecting and finishing 12 low-side goods wagons ...	264 0 0	
James Pocock, painting bridges	155 0 0	
John Harris, fencing stop-bank at Roy's Hill	32 10 0	
John Anderson, repairs to stop-bank at Roy's Hill	187 10 0	
C. Lloyd, carting sleepers from Danevirk to Takapau ...	687 10 0	
Auckland Steam Packet Company, conveyance of 500 tons of railway material from Auckland to Napier	475 0 0	
		4,770 13 3

PROVINCIAL DISTRICT OF TARANAKI.

	£	s.	d.	£	s.	d.
WAITARA—PATEA :—						
Robert McGonagle, erection of goods shed and station at Inglewood	£298	0	0			
J. Bellringer, painting bridges	169	4	0			
D. McIntyre and Co., conveyance of 4 carriages, ex "Ocean Mail," from Wellington to Waitara	165	0	0			
D. McIntyre and Co., conveyance of 167 tons rails, 26 tons fastenings, 10 sets points and crossings, ex "Rakaia," from Wellington to Waitara	240	0	0			
D. McIntyre and Co., conveyance of 150 tons rails and fastenings, ex "Andrew Reid," from Wellington to Waitara	187	0	0			
				1,059	4	0

PROVINCIAL DISTRICT OF WELLINGTON.

PATEA—MANAWATU :—						
Henry Harris, additions to contract for completion of Wangaehu Bridges	£13	13	1			
J. Lockie and Co., additions, Rangitikei contract	62	6	5			
Rundle and Bassett, additions, Wanganui Bridge contract	2,297	6	0			
Wilkie and Denby, additions, Karere contract	2	5	3			
G. Hansen, Mangaone Creek diversion	145	0	0			
G. F. Baker, erection of 4th-class station at Marton	342	2	10			
W. W. Nicholson, erection of 5th-class station at Halcombe	157	5	0			
G. M. Chalmers, erection of No. 4 station buildings	700	0	0			
J. C. Richter, erection of additions to Foxton Station	108	0	0			
Fry and Marley, erection of additions to engine-shed at Foxton Station	143	10	0			
Fry and Marley, additions to above contract	2	0	0			
Alexander and Macfarlane, erection of station-master's house at Aramoho Junction	187	10	0			
G. M. Chalmers, construction of water supply at Aramoho Junction	443	10	0			
J. and J. Campbell, erecting and finishing 7 high-side and 10 low-side wagons, and 3 timber trucks	571	0	0			
J. and J. Campbell, additions to above contract	0	15	0			
Campbell Bros., erecting and finishing 12 covered goods wagons, 4 sheep vans, 2 cattle wagons, and 2 horse-boxes	1,130	0	0			
Campbell Bros., erecting and finishing 13 covered goods wagons, 4 sheep vans, and 3 horse-boxes	1,265	0	0			
Campbell Bros., erecting and finishing 15 low-side wagons	342	15	0			
J. Hamilton, erecting and finishing 7 low-side wagons	210	17	6			
Walton Pell, constructing approaches to Wanganui and Turakina Bridges	254	2	0			
Robertson and Co., straining-blocks for Rangitikei Bridge	294	1	9			
Robertson and Co., iron nuts, washers, &c., for Rangitikei Bridge	151	2	6			
E. W. Mills, straining-blocks for Turakina Bridge	91	16	7			
E. W. Mills, bolts, plates, &c., for Turakina Bridge	100	15	0			
A. W. F. Halcombe, carting sleepers	1,044	0	0			
Plimmer, Reeves, and Co., additions to freight contract ex "Hurunui"	1	17	4			
Plimmer, Reeves, and Co., additions to freight contract ex "Ocean Beauty"	5	13	4			
W. Bishop, additions to freight contract rails ex "Pym"	2	8	7			
W. Bishop, conveyance of 270 tons rails and 5 tons of wagon ironwork, ex "Camperdown," from Wellington to Foxton	229	8	3			
G. Thomas, conveyance of 436 tons rails, ex "Sarah Bell," from Wellington to Wanganui	354	9	11			
Plimmer, Reeves, and Co., conveyance of 630 tons rails, ex "Camperdown" and "Midlothian," from Wellington to Wanganui	540	1	4			
D. McIntyre and Co., conveyance of carriages and crane, ex "Waikato" and "Waimea," from Wellington to Wanganui	60	0	0			
D. McIntyre and Co., conveyance of carriages and brake-vans, ex "Waikato," from Wellington to Foxton	65	0	0			
D. McIntyre and Co., conveyance of 5 carriages and 2 locomotibes, ex "Ocean Mail," from Wellington to Foxton	385	0	0			
W. R. Williams, conveyance of ironwork from Wellington to Wanganui per schooner "Enterprise"	150	0	0			
				11,854	12	8
WELLINGTON—MASTERTON :—						
C. McKirdy, additions, Mungaroa contract	£2,001	6	7			
W. J. Ridler, erection of No. 2 store at Petoni	1,447	9	0			
W. J. Ridler, erection of platelayer's cottage at Petoni	107	0	0			

WELLINGTON—MASTERTON—*continued.*	£ s. d.	£ s. d.
W. J. Ridler, erection of special engine shed at Petoni ...	231 14 0	
W. J. Ridler, erection of carriage-repairing shed at Petoni ...	1,749 1 0	
A. R. Wallis, additions to Cross's Creek station-master's house...	5 0 0	
Campbell Bros., erecting and finishing 12 covered goods and 4 cattle wagons, 4 sheep vans, and 4 horse-boxes	1,352 0 0	
J. Robinson, Mungaroa No. 1 contract, permanent-way, 4 m. 45 ch.	2,663 15 0	
E. W. Mills, iron suspension-bolts for Hutt Bridge	128 10 0	
J. W. Thompson, painting Hutt Bridge with Carson's paint ...	230 0 0	
		9,915 15 7

PROVINCIAL DISTRICT OF NELSON.

NELSON—FOXHILL:—		
H. A. Freeman, erecting and finishing 2 cattle wagons and 2 sheep vans	£243 4 0	
T. C. Crooke, painting bridges	197 0 0	
		440 4 0
WESTPORT—NGAKAWAU RAILWAY:—		
Thos. Lawrie, erection of gate-keeper's house	£243 13 0	
J. Henderson, additions, Ngakawau contract...	261 16 3	
Plimmer, Reeves, and Co., conveyance of 244 tons rails and 21 tons fastenings, ex "Dunbritton," from Wellington to Westport	301 11 11	
E. Nelson, conveyance of 80 tons of permanent-way material and wagonwork from Wellington to Westport	60 0 0	
Greenfield and Stewart, conveyance of locomotive to Greymouth, and 4 ch. permanent-way material to Westport for £100 (one-half charged to Brunner–Greymouth Railway) ...	50 0 0	
		917 1 2

PROVINCIAL DISTRICT OF MARLBOROUGH.

PICTON—BLENHEIM:—		
Smith and Co., erecting and finishing 1 cattle wagon and 2 sheep vans	£181 4 0	
G. Thomas, conveyance of 2 carriages from Wellington to Picton	25 0 0	
		206 4 0

PROVINCIAL DISTRICT OF WESTLAND.

BRUNNER—GREYMOUTH:—		
Sparrow and Co,, construction of 20 pairs wheels	£120 0 0	
T. W. Hungerford, additions, Coal Gorge platelaying contract ...	214 12 7	
E. B. Garven, additions, Grey Gorge Bridge contract... ...	133 12 5	
McLean and Gunn, erection of 6th-class station at Wallsend ...	50 0 0	
Robertson and Co., construction of lifting gear for coal wagons	180 10 0	
E. W. Mills, construction of cast and wrought ironwork for wheels and axles	92 13 9	
E. W. Mills, construction of 4 anchor-plates	138 10 0	
E. W. Mills, construction of 25 sets of mineral wagon ironwork	296 5 0	
E. W. Mills, additions to above contract	12 10 1	
D. McIntyre and Co., conveyance of crane and carriages, ex "Waikato" and "Waimea," from Wellington to Greymouth	75 0 0	
D. McIntyre and Co., conveyance of about 90 tons rails, ex "Rakaia," from Wellington to Greymouth	168 17 9	
Greenfield and Stewart, conveyance of locomotive to Greymouth, and 4 ch. permanent way to Westport for £100 (one-half charged to Westport–Ngakawau Railway)	50 0 0	
McLeod and Gunn, construction of water service at Greymouth	200 0 0	
Sparrow and Co., making 25 sets points and crossings (being portion of contract for 51 sets)	360 0 0	
Butler and O'Connor, construction of training wall at Greymouth (at schedule rates)	...	
		2,092 11 7

PROVINCIAL DISTRICT OF CANTERBURY.

AMBERLEY—WAITAKI:—		
John Whittaker, Southern permanent-way contract, 15 m. 40 ch., sidings 40 ch.	£5,566 9 7	
John Whittaker, additions to above contract...	194 4 0	
G. Stumbles, strengthening viaducts	516 12 6	
Jones and Peters, construction of protective works at Orari Bridge	281 12 9	
D. Reese, erection of Rakaia Bridge keeper's house	279 18 0	

AMBERLEY—WAITAKI—*continued.*	£	s.	d.	£	s.	d
G. Filmer, erection of No. 2 station buildings, Timaru–Waitaki...	2,768	5	1			
T. H. Parsons, erection of No. 3 station buildings	3,559	13	0			
T. H. Parsons, additions to above contract	100	15	6			
E. Rowlands, erection of goods shed at North Waitaki Bridge Station	375	2	6			
E. Rowlands, additions to above contract	1	4	7			
Neal Murphy, erection of refreshment room	659	0	0			
Neal Murphy, additions to above contract	25	0	0			
James Lee, erection of station at Otaio	127	10	0			
T. H. Ker, No. 3 contract for erection of rolling stock ...	235	17	8			
T. H. Ker, additions to above contract	10	18	11			
J. Anderson, erecting and finishing 97 covered goods wagons ...	4,603	12	0			
Cuff and Graham, conveyance of rail joints and spikes, ex "Euterpe," from Lyttelton to Oamaru	255	6	10			
Sparrow and Co., 26 sets points and crossings (being portion of contract for 51 sets)	382	1	0			
				19,943	3	11

PROVINCIAL DISTRICTS OF CANTERBURY AND OTAGO.

WAITAKI BRIDGE:—	£	s.	d.	£	s.	d
Park and Curle, supply of pipes, cocks, &c., for water supply for bridge £485 16s., (one-half charged to Waitaki–Invercargill)	£242	18	0			
S. Wates, strengthening centre-planks of bridge	200	0	0			
				442	18	0

PROVINCIAL DISTRICT OF OTAGO.

WAITAKI—INVERCARGILL RAILWAY:—	£	s.	d.
Smyth and Morrison, Round Hill permanent-way contract, 3 m. 22 ch.	£1,218	0	0
Smyth and Morrison, additions to above contract	13	0	6
Job Wain, No. 2 permanent-way contract, Tokomairiro–Lawrence, 11 m. 68 ch., sidings 26 ch. 8 lks.	6,848	0	0
Job Wain, additions to above contract	527	11	10
John Whittaker, Waipahi permanent-way contract, 15 m. 64 ch., sidings 18 ch.	5,861	16	0
Proudfoot and McKay, Balclutha formation and permanent-way contract, 1 m. 22 ch., including erection of passenger station, engine and goods sheds, loading platform, and sundry station works	10,000	0	0
J. Brogden and Sons, additions, Oamaru–Moeraki contract ...	654	4	0
J. Brogen and Sons, additions, Moeraki deviation contract ...	117	2	9
J. Brogden and Sons, additions, Kakanui and Island Creek contract	3	7	10
Allen and Kingstreet, additions to completion of Port Chalmers contract	104	18	6
McKenzie, Paisley, and Co., additions, Kartigi contract ...	634	2	5
James McKay, additions to completion of Clutha Bridge Contract	63	1	0
J. and N. Campbell and Co., additions, Tokomairiro contract ...	69	3	2
Dey and Archibald, additions to contract for completion of Tokomairiro bridges	100	1	0
Irvine and Morrison, additions, Round Hill contract (lining tunnel)	3,720	18	7
Wain and Smyth, additions, laying permanent way from Clarksville siding to end of Glenore section	161	18	5
Job Wain, erection of additions to 5th-class station at Murchiston	69	12	0
Peter Dey, erection of two-stall engine-shed, class B, at Moeraki Junction	523	10	0
Peter Dey, erection of engine-shed at Lawrence	786	3	6
Peter Dey, additions to above contract	65	5	8
J. Hollick, erection of additions to Tokomairiro wayside station contract	248	10	0
J. Hollick, erection of station at Lawrence	578	1	2
J. Hollick, additions to above contract	10	13	9
J. Hollick, erection of cattle-pens and platform	625	12	10
William Mills, erection of Inspector's house at Waikouaiti ...	390	0	0
William Mills, erection of station at Waikouaiti	196	0	0
Robert Martin, contract for erection of additions to engine-shed	608	18	0
A. W. Wilson, erection of goods shed at Lawrence	555	8	0
A. W. Wilson, additions to above contract	21	15	0
E. Rowlands, erection of store at Oamaru, Class C	484	17	11
Meikle and Campbell, erection of store and workshop	1,118	7	8
Meikle and Campbell, erection of foot bridge at Dunedin Station	664	18	6
Meikle and Campbell, erection of passenger-shed and platform at Dunedin	669	3	0

	£ s. d.	£ s. d.
Waitaki—Invercargill Railway—*continued.*		
Cumming and Knowles, erection of carriage-painting shop ...	492 0 0	
Campbell Bros., erecting and finishing 20 covered goods and 15 cattle wagons, 20 sheep vans, and 2 horse-boxes	2,802 0 0	
P. Dey, erecting and finishing 46 covered goods and 15 cattle wagons, 20 sheep vans, and 2 horse-boxes	3,881 0 0	
P. Dey, erecting and finishing 6 covered goods wagons, 12 sheep vans, and 2 horse-boxes	993 0 0	
R. W. Hyslop, erecting and finishing timber trucks	188 10 0	
Findlay and Co., erecting and finishing 20 low-side wagons ...	279 0 0	
New Zealand Land Company, additions to fencing contract ...	108 15 0	
Watson and McIntosh, supplying and erecting gas fittings at Oamaru Station	114 8 8	
Reid and Grey, constructing castings for Clutha Bridge ...	894 18 9	
Park and Curle, supply of pipes, cocks, &c., for Waitaki Bridge water supply £485 16s. (one-half chargeable to Waitaki Bridge)	242 18 0	
Low and Hanchard, painting bridges	758 0 0	
		48,468 13 5
Winton—Kingston:—		
W. H. Topham, Lowther permanent-way contract	£2,014 3 4	
J. Whiteford, erecting and finishing No. 6 station buildings ...	520 7 0	
Brown and Francis, erecting and finishing rolling stock ...	190 0 0	
D. W. Lockhart, erecting and finishing rolling stock	342 0 0	
W. H. Topham, Athol permanent-way contract 13 m. 27 ch., sidings 20 chs.	3,845 15 4	
		6,912 5 8
ADDITIONAL ROLLING STOCK AND STATIONS.		
James Murray, erecting and finishing 20 hopper wagons ...	£463 0 0	
J. Anderson, erecting and finishing 25 cattle wagons, 50 sheep vans, and 6 horse-boxes	4,045 3 0	
W. Hogg, erecting and finishing 6 second-class carriages and 5 brake-vans	359 10 0	
G. Parkins, erection of No. 3 station buildings, Amberley–Waitaki Railway	874 0 0	
E. W. Mills, construction of 20 sets of outlet valves for water tanks	57 10 0	
		5,799 3 0
		£170,012 2 5

SLEEPERS.

PROVINCIAL DISTRICT OF TARANAKI.

Broadmore and Co., 20,000, at 2s. 6d. each	£2,500 0 0	
		2,500 0 0

PROVINCIAL DISTRICT OF WELLINGTON.

Richter Nannestad and Co., 309, at 3s. 11d. each	£60 10 3	
G. M. Snelson, 305, at 3s. 9d. each	57 3 9	
Richter Nannestad and Co., 37,000, at 1s. 4d. each	2,466 13 4	
Krull and Co., 2,387, at 4s. 2½d. each	502 5 3	
G. M. Snelson, 2,200, at 3s. 3d. each	357 10 0	
		3,444 2 7

PROVINCIAL DISTRICT OF OTAGO.

John Murdoch and Co., 6,000, at 2s. 11¾d.	£881 5 0	
John Murdoch and Co., 84 extra	12 10 0	
James Angus, 6,000, at 3s.	900 0 0	
		1,793 15 0
		£7,737 17 7

SUMMARY.

Auckland:—		
Kawakawa: Construction	£438 5 0	
Kaipara–Puniu: Construction	56,751 7 2	
		57,189 12 2
Hawke's Bay:—		
Napier–Manawatu: Construction	£4,770 13 3	
		4,770 13 3

	£	s.	d.	£	s.	d.
Taranaki:—						
Waitara–Patea: Construction	£1,059	4	0			
Sleepers	2,500	0	0			
				3,559	4	0
Wellington:—						
Patea–Manawatu: Construction	£11,854	12	8			
Wellington–Masterton: Construction	9,915	15	7			
Sleepers	3,444	2	7			
				25,214	10	10
Nelson:—						
Nelson–Foxhill: Construction	£440	4	0			
Westport–Ngakawau: Construction	917	1	2			
				1,357	5	2
Marlborough:—						
Picton–Blenheim: Construction	£206	4	0			
				206	4	0
Westland:—						
Brunner–Greymouth: Construction	£2,092	11	7			
				2,092	11	7
Canterbury:—						
Amberley–Waitaki: Construction	£19,943	3	11			
				19,943	3	11
Canterbury and Otago:—						
Waitaki Bridge	£442	18	0			
				442	18	0
Otago:—						
Waitaki–Invercargill: Construction	£48,468	13	5			
Winton–Kingston: Construction	6,912	5	8			
Sleepers	1,793	15	0			
				57,174	14	1
Additional Rolling Stock and Stations (General)	£5,799	3	0			
				5,799	3	0
				£177,750	0	0
Total: Construction, &c.	£170,012	2	5			
Sleepers	7,737	17	7			
	£177,750	0	0			

APPENDIX E.

CONTRACTS FOR CONSTRUCTION OF ROADS.

SCHEDULE of CONTRACTS for the CONSTRUCTION of ROADS from 1st JULY, 1876, to 30th JUNE, 1877.

NORTH ISLAND.

PROVINCIAL DISTRICT OF AUCKLAND.

	£ s. d.	£ s. d.
MAHURANGI—PORT ALBERT ROAD:—		
A. and P. Becroft, extras on contract section No. 5, for 8 extra culverts and lengthening culverts	32 10 0	
R. Farrall and Co., extras authorized on contract section 1A (£419 18s.)...	39 10 0	
		72 0 0
WAITANGI—HOKIANGA ROAD:—		
J. A. and W. H. Bedggood, extras authorized on Waiaruhe Bridge contract (£713 10s.)	£38 12 6	
J. A. and W. H. Bedggood, contract for approaches to Waiaruhe Bridge	69 0 0	
		107 12 6
TE KAPU—GISBORNE ROAD:—		
Chas. Stuart, contract No. 8, for the erection of 2 bridges at Mangarangiora Creek and Te Kopua Stream	£120 0 0	
Tuatini Tipoki, extra to contract for completion of contracts Nos. 6 and 7, authorized as a bonus	30 0 0	
		150 0 0
		£329 12 6

PROVINCIAL DISTRICT OF WELLINGTON.

OPAKI GORGE ROAD:—		
Harding and Campbell, contract No. 1, for formation, 53 ch. road and 2 bridges, &c.	£189 9 0	
		189 9 0

PROVINCIAL DISTRICT OF TARANAKI.

Charged as Unauthorized.

HAWERA—WAITARA ROAD:—		
J. Stevenson, contract No. 160, for gravelling 140 ch. of Mountain Road, from end of contract No. 138, near Hawera, towards Ketemarae	£1,470 0 0	
		1,470 0 0

SOUTH ISLAND.

PROVINCIAL DISTRICT OF WESTLAND.

GREYMOUTH—OKARITO ROAD:—		
Banka and Hallahan, contract section No. 6, Bowen and Okarito Road, south end, from peg 1032 to peg 1263	£693 5 0	
John Allen, contract for section 4, 3 miles, Bowen-Okarito Road, north end	949 15 0	
GREYMOUTH—ARNOULD ROAD:—		
R. B. Goff, contract for deviation of Arnould Road at Wallsend, length 33 ch. 60 l.	403 5 0	
		2,046 5 0

APPENDIX F.

REPORT ON COAL EXPLORATIONS CONDUCTED BY GEOLOGICAL SURVEY DEPARTMENT, 1876-1877.

As provided in Part VIII. of "The Immigration and Public Works Act Amendment Act, 1871."

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

Colonial Museum, Wellington, 20th July, 1877.

SINCE Mr. Cox's report on the survey of the Buller Coal Field, published as an appendix to the Public Works Statement of last year, the work in that locality has been completed, and the maps of the district are now ready for circulation.

The detailed reports and plans of the various coal areas appear in the Geological Reports for the current year, and a brief summary of the results is herewith given.

Since the completion of that survey, and during the current year, the same assistants have been employed on an examination of the Northern coal fields, including Waikato, Wangarei, and Bay of Islands, and have also completed surveys of the Green Island Collieries, which were previously being worked without any plans whatsoever of the mines.

A further report has also been obtained on the Kanieri Coal Field, and on the present condition of the Greymouth collieries; and the results of this survey appear in detail, with other work of a similar description, in the Geological Reports of this year.

The following brief summary gives the leading points of interest in connection with the various mines which have been examined and country explored during the time above specified:—

KAWAKAWA, BAY OF ISLANDS.

The coal at this mine is worked by an engine-dip, the extended workings being wrought upon a system of square work.

This excellent coal seam varies in thickness from 6 feet to 10 feet, and holds steadily until a fault is met with, having a down-throw to the south, estimated to be about 70 feet.

On this down-throw area the future permanent workings of the mine will depend, and the opening of this area will have to be undertaken shortly, as the engine-dip and lower level are now driven to about the water level of the present pumping shaft, and the surface water is breaking through a backing in the roof near this level, and all but overpowering the present pumping gear.

The future working of this mine will necessitate a shaft being sunk to the dip with heavy pumping gear, as pointed out some time ago.

WANGAREI.

Whauwhau Colliery (Walton's Mine).

This mine, which was formerly worked by Walton and others as a dip working, on an ordinary system of square work, the coal being raised by an engine plane, was abandoned by them, the water having overpowered their pumping appliances.

A party of working miners have since taken it up, and, after driving a tunnel for a distance of 19 chains through a slate bar, have cut the coal, and are now able to work it level free.

The coal seam worked by this Company is from 6 feet to 10 feet thick, and of fair quality.

Kamo Mine (Meldrum's).

This is a small very irregular tunnel working. The coal seam is from 8 feet to 10 feet thick, and it is probable that this seam is the same as that which has been found at Whareora, although the nature of the country between these two outcrops is such as to render the tracing of the coal by surface indications impossible.

Whareora.

Two outcrops of coal are known in this locality of 3 feet and 3 feet 6 inches thick respectively, but no explorations have been undertaken with regard to this coal beyond entering a drive for a few feet on one of the outcrops, and having some assays of the coal performed.

Some samples of coal from this locality are remarkably good, but the quality varies, as is also the case in the Whauwhau and Kamo Mines; and as the position is unfavourable, nothing would be gained by opening a mine here at present.

Hikurangi.

A considerable coal area may be looked for in this locality, the thickness of the seam varying from 2 feet to 6 feet. It may be traced from the summits of the slate ranges towards the swamp at the base of Mount Hikurangi, and may be looked for as occupying the low-lying ground there.

The coal from this locality has been used by the blacksmith in Wangarei with considerable satisfaction, and would appear to be of a somewhat better quality than the rest of the Wangarei coals.

Awaroa Creek.

Several bore-holes have been put down here with a view of discovering coal near the edge of the harbour, but up to the present time with no success; and the coal appears to be replaced here by a lower belt of limestone.

WAIKATO DISTRICT.

Bridgewater Colliery (Foote's).

The winning of this coal has only been recently commenced, but a seam of coal 55 feet thick has been struck in the main shaft, and a level, heading south from this shaft, has reached a point below the Maramarua Swamp, at the edge of which the shaft was sunk. In association with this coal seam three valuable bands of iron-stone have been discovered, yielding about 40 per cent. of metallic iron.

Rahuipokeka (Ralph's) Mine.

This mine is situated on the east bank of the Waikato River, at the base of the Taupiri Ranges, and is wrought by a tunnel, upon an irregular system of square work. The portion of the seam of coal worked at present is 18 feet thick, and is the same seam as that which occurs at Foote's mine. The workings were rising on the coal, and recently a further thickness of 13 feet has been proved by sinking on the then floor of the coal, which proved to be only a band of blaze 3 feet thick.

Kupakupa Mine.

This mine is situated on the western side of the Waikato River, opposite Ralph's mine, but at an elevation of 130 feet above the level of the river, and about 100 feet higher than Ralph's coal, indicating an up-throw fault to the westward.

The average thickness of the coal is 18 feet, and the mine, which is worked upon a true system of square work, is in very satisfactory order.

A careful examination of the coal formation in the Waikato District, and the relations which it bears to the overlying strata, renders it not improbable that the coal seam extends continuously throughout the greater part of this basin between Mercer and Taupiri, and flanked to the eastward by the slate ranges which run from the Firth of Thames to Taupiri, and thence to Ngaruawahia. The truth of this can easily be proved by a bore-hole, three sites which might be chosen being pointed out by Mr. Denniston in his report—viz., Churchill, Pungapunga, or Mercer, but Churchill would, for several reasons, be the best of these localities.

BULLER COAL FIELD.

A map of this district accompanies this report, showing all the known coaliferous areas between Westport and the Ngakawau River; and Mr. Denniston's report, which, as before mentioned, appears in the Geological Reports, gives 195 sections which have been observed throughout this coal field. The areas holding coal have been carefully laid down, and may be depended upon. No plans of the surveys for leases have been forwarded to the department, so that these do not appear on the map, and the following estimate of the quantity of the coal can only be given, in consequence, for the natural divisions which it would be most advisable to adopt in working the field, and which are indicated in the attached map.

	Approximate Extent.	Average Thickness.	Workable Coal, in Tons.
Area 1	500 acres	13 feet ...	4,875,000
Area 2	860 „	7 „ ...	4,515,000
Area 3	640 „	4 „ ...	1,920,000
Area 4	1,500 „	17 „ ...	19,125,000
Area 5	900 „	23 „ ...	15,550,000
Area 7	100 „	15 „ ...	1,687,500
High Level A	300 „	17 „ ...	3,825,000
High Level B	75 „	17 „ ...	956,000
High Level C	100 „	14 „ ...	1,050,000
Low Level C	122 „	12 „ ...	1,098,000
High Level D	300 „	15 „ ...	3,375,000
Mid Level D	1,105 „	15 „ ...	12,431,250
Low Level D	455 „	20 „ ...	6,825,000
Mid Level E	420 „	14 „ ...	4,410,000
Southern edge of Waimangaroa Gorge	90 „	6 „ ...	450,000
Mount William	180 „	15 „ ...	2,025,000
Todea Creek	225 „	25 „ ...	4,218,750
Coalbrookdale	600 „	12 „ ...	5,400,000
High Level of do.	770 „	9 „ ...	5,197,500
Mount Rochfort	200 „	4 „ ...	600,000
Lower Waimangaroa	1,200 „	9 „ ...	6,000,000
Total	...	...	105,034,000

Up to the present time the only mine which is in active operation is that of the Wellington Coal Mining Company, situated at the foot of Sims's Spur, on the northern side of the Waimangaroa River, from which mine the first shipload of coal has just been despatched for Wellington. The coal from this mine is soft, but otherwise its quality is all that can be desired for a good steam coal, and the coke which is made from it is inferior to none.

Several other companies are moving in the matter, but up to the present time no active operations have been undertaken, save that the Koranui Company have had a survey made for them, with a view of discovering the best route for a tramway; and Messrs. Fisher and Co. have had a tramway laid out to the face of their coal, to connect with the branch line of the Wellington Company.

Grey River Coal Field.

Brunner Mine.

During the last three years the workings of this mine have been increased from 22 acres to 38 acres in extent, with a total output for the four years of 49,823 tons. The coal is now conveyed to Greymouth by rail.

Six coke ovens have been constructed for this mine, and a very superior coke is produced, a half-burnt variety, known as black ends, being used locally for the locomotives on the Brunner Railway.

Coal Pit Heath.

This lease adjoins the Brunner Mine, and a shaft has been sunk, cutting coal of a good quality, and somewhat harder than that of the Brunner Mine, at a depth of 265 feet. This shaft was expected to be ready for working in a few weeks when this mine was visited in March last, and the Company are now bringing their coal to market.

Greymouth Coal Company.

A shaft has been sunk on this property, cutting a 16 foot seam of coal at a depth of 635 feet, but up to the present time no coal has been got out. The first shaft which was put down was too near a fault, and the coal struck also proved to be very inferior in character. No samples have been forwarded to the Department from the present seam, so that no report can be furnished as regards its quality.

Coal Creek Company

Two seams of coal of 6 feet and 10 feet thick respectively are known on this lease, being separated by about 170 feet of light-coloured sandstone. This coal will have to be worked by a special line, which the promoters propose to construct to connect this mine and the Point Elizabeth seams with Cobden.

Point Elizabeth Coal Mining Company.

Several outcrops of coal 4 feet to 16 feet thick are known in this lease of 3,840 acres, of first-rate quality. Up to the present time no attempt has been made to open up the mine. The extent of the coal is proved sufficiently to warrant the mine being opened, and with so large an area as is held by the Point Elizabeth Coal Mining Company the output should be very large.

Hokitika.

Kanieri Prospecting Association.

No fresh evidence has been gained of the existence of workable coal seams at the Kanieri, and the prospects in that district do not warrant any further expenditure being gone to by the Government for coal exploration.

Green Island, Otago.

The following collieries are at present at work at Green Island:—The Otago Colliery, the Freeman's Colliery, the Samson's Colliery, the Walton Park Colliery, and the Saddle Hill Colliery.

Somewhat extensive workings are being carried on in each of these mines, but up to the time when they were visited during this year not one of them was in possession of a plan of their workings.

Surveys have now been made of all the workings which are still accessible; but the inattention on the part of the proprietors of these collieries to the safety of the miners, and also to the proper working of the coal with the ultimate prosperity of the mines in view indicated by the want of plans, is most reprehensible, and requires some rules to be made, which shall compel proper attention to the interests of the colony in the winning of all coal available, and protection against accidents.

In the case of Samson's colliery, the railway passes over an area of partially-wrought ground the coal being at a depth of about 126 feet below the surface.

To this point it is necessary to draw the attention of the Government, in case of future mishap to the line, owing to the settling down of the formation when the coal is worked out.

The thickness of the seam throughout this district is about 18 feet, but, owing to the soft nature of the roof and floor, it has been the practice to work only 6 feet out of the centre of the seam. This is doubtless an extravagant system, as two-thirds of the coal has to be left; but it seems probable that it is the one which is best adapted for the district, as any other system would require extensive timbering —an item of no small cost in Otago.

Otago Colliery.

The workings in this mine are irregular, but forming a nearer approach to the "Room and Rance" system than any other. The workings are in a fair condition, with the exception of the return air course, which is reported as being in a dangerous state, in places being almost choked to the roof with the *débris*. The result of this is of course necessarily to render the ventilation of the mine very imperfect.

Freeman's Colliery.

This mine is worked on the "Room and Rance" system, rooms 14 feet to 18 feet wide being opened out on each side of a "dip" drive.

These workings are at present standing well, but as they are extended considerable waste may be looked for, as the nature of the roof and floor is such as not to warrant rooms of more than 12 feet in width, being taken out in the first instance.

Samson's Colliery.

The workings in this mine are extremely regular, due attention being paid in driving the levels, headings, and rooms to keep the work as straight as possible, and the roadways are in all cases in thoroughly good working order. The ventilation in this mine is also satisfactory, and, generally speaking, the mine is worked on an efficient system.

Walton Park Colliery.

The "Room and Rance" system is employed here as in other mines, and, although the workings are of considerable extent, and have been carried on without any working plans, they are very regular throughout, and are in good order. The roadways are in good repair, and the ventilation perfectly satisfactory, greatly to the credit of the underground manager, who has necessarily been working under disadvantages.

Saddle Hill Colliery.

This coal is wrought on the "Room and Rance" system, the rooms, which are 14 feet wide, being driven at an angle to the strike of the coal, and thus serving the place of headings. An easy gradie n for trucking the coal to the level is also obtained by this means. The present workings of the mine are in good order, and the ventilation is good.

In the Green Island District it seems probable that an area of about 8 square miles may be reckoned upon in which coal of a workable quality will be found, from which, on the present system of working 6 feet only from the centre of the seam would give a yield of about 28,000,000 tons of coal, about 46,500,000 tons being left unworked.

It will be seen by the appended table that the average amount of coal won per man per day in the Green Island District is the least of any of the working collieries of New Zealand, and that the cost of getting the same is higher here than at any other mine.

The slack is in all cases, excepting the Walton Park Colliery, thrown to waste, and at that mine it is only utilized to a small extent in burning bricks, being mixed with the clay.

This system assists in the burning of the bricks, and is a simple way of utilizing what would otherwise be thrown to waste.

The mines, however, may be considered as very expensively worked, and as the coal is of an inferior quality, they cannot be expected to compete with the more valuable deposits of that mineral in other localities.

Kaitangata Mine.

This is the third mine which has been opened in this important coal field, which extends over 40 square miles, and is estimated to contain 100,000,000 tons of coal.

The first mine opened was in an inconvenient position on the sea coast, and the second was only in a subordinate seam about half a mile from the present mine.

The new mine is opened in a seam 27 feet in thickness, dipping at 1 in 16 under the flat on which the Kaitangata Township stands, and rising into the hills which form the coast range. It is worked on an irregular system of "Post and Stall," the pillars being about 16 feet square.

The workings of this mine, which has not been long opened, are hardly an acre in extent, the length of the main drive being 180 yards, of which 110 yards is in coal.

In the lower part of the seam the coal is of superior quality, having a hard splintery fracture, laminated structure, and the joints being enfilmed with pyrites, or brass of the miners, which is rarely seen in brown coals.

The quantity of coal already mined is stated at 10,000 tons, seventeen miners being employed in April last.

The cost of mining and hauling is 3s. 9d., the freight to Dunedin 8s., and royalty 1s. per ton; but there is a heavy charge for interest on the capital sunk in a branch railway and other preliminary works, so that the coal is delivered in Dunedin at 22s. per ton.

General Remarks.

The present knowledge concerning the coal fields of New Zealand proves that good workable seams of coal occur at all the localities where mines have been opened up, and that a great extent of coal measures yet exist, which have never, up to the present time, had any work expended upon them. There is no doubt that in the future these deposits of coal will prove of great value to the colony, but the work which has already been undertaken shows how necessary it is that all mines which are opened up should be placed under the direct supervision of Government to insure proper attention being paid to the ultimate safety of the mines and the maximum yield of coal.

James Hector,
Director of the Geological Survey Department.

Enclosure 1—Is a report by Mr. Cox on the coal occurring on the southern side of the Waimangaroa Gorge. This was necessary in consequence of the correctness of plans having been called in question.

Enclosure 2—Gives all the exact statistical information which has been obtained concerning the various coal workings during the past year.

Enclosure 3—Is a Schedule of all the analyses of coals which have been performed by the department during the past year.

Enclosure No. 1.

REPORT ON THE WAIMANGAROA GORGE COAL.

Mr. J. B. Fisher to the Director of the Geological Department, Wellington.

Sir,— Westport, 22nd June, 1877.

Referring to the subject of my letter to you on 29th March, and telegrams of 26th March, 7th April, and 23rd May, and yours in reply of 26th March, 9th April, 10th April, 18th April, and 1st June:

The survey of the extension of the Wellington Company's branch incline tramways, &c., are now completed.

These works, with others, have cost myself and co-adventurers over £1,000, and we are consequently very anxious to push the thing to completion.

Messrs. Young and Chambers, by my instructions, made a sort of geological survey of the top of the plateau, and failed to find the slightest indications of slate at a distance of 90 chains from the face.

The present position of matters is most unsatisfactory. After spending a large amount of money in surveys, prospecting tunnels, &c., and obtaining the best locally-obtainable opinions that there is coal in the lease of a first-rate quality and extending back from the face 40 or 50 chains at least, and just as the whole thing is ready for the market, we are met by a Government plan showing the coal area as extending back no more than 7 or 8 chains, and the slate on the surface at 30 chains.

It will be apparent to you that we can do nothing with the property until the ban of the Geological Department is either removed or settled upon the area.

As this is far the most accessible of the hard coals, and the preliminaries of the Company in the most forward state of any, it is very desirable that the question whether the extent of coal in the area affords a fair promise of return to the necessary outlay for bringing it down or no, should be settled as speedily as possible.

If you have an officer at liberty upon whose judgment all parties can rely, and will send him down to inspect and report, I sincerely hope you will see your way to do so.

I have, &c.,
J. Bickerton Fisher,
Manager of the Westport Coal Company.

The Director of the Geological Department, Wellington.

Enclosure No. 2.

Memorandum of Instructions to Mr. Cox by Dr. Hector.

I wish you to proceed to Westport and inquire into the alleged incorrectness of the field maps of the Waimangaroa area. The lithograph plan published as an appendix to last year's Public Works Statement was clearly erroneous, but I sent a tracing of the large plan, and I presume that this is also objected to. Report as early as possible.

Wellington, 4th July, 1877. J. Hector.

Enclosure No. 3.

Report on Coal in Messrs. Fisher and Co.'s Lease, Waimangaroa Area, by S. Herbert Cox, F.C.S., F.G.S., Assistant Geologist.

Sir,— Nelson, 14th July, 1877.

I have the honor to inform you that, in accordance with your instructions, I have visited the locality where outcrops of coal occur along the southern side of the Waimangaroa Gorge and in the lease held at present by Messrs. Fisher and Co.

It will be seen on reference to my report on the Buller Coal Field, published as an appendix to the Public Works Statement, 1876, that this area was shown on the map as not holding coal at all.

This was an error, arising from the incorrectness of the tracing furnished me of the working plans, and in consequence of this error Mr. Fisher's first inquiry was made.

A tracing was forwarded to him on 10th April, 1877, from the original field maps of the district, in which the coal measures were shown occurring along the face of the break, and extending back into the plateau for a distance of about 10 chains.

Mr. Fisher did not appear satisfied with this plan, as will be seen from his letter of 22nd June, 1877; and accordingly, having been over the ground again in company with Mr. Fisher, I herewith submit the results of my observations.

The first outcrop of any note which is met with is a little to the eastward of peg 48 on Cooper's Spur traverse, and about 100 feet below the surface of the plateau. A drive has been entered here N.—S. along the strike of the coal, which is 3 feet 6 inches thick for a distance of 202 feet, showing a marked improvement in quality as far as hardness is concerned after the first 80 feet is passed.

A few chains to the eastward of this point the coal has thickened to 5 feet, and here another drive has been commenced and carried in for a distance of 60 feet, and the coal, which is soft at the outcrop, has slightly improved, but is not so hard as that at the end of tunnel No. 1, although in other respects it is superior, having a minimum quantity of water and ash in its composition.

Outcrops can be traced from here along the face of the break, with a thickness of about 5 feet, until reaching a point below V. 17, after which the coal gradually thickens until reaching into the area held by the Coalbrookdale Company, where an outcrop of good hard coal is met with, in a creek falling into the south branch of the Waimangaroa River, 12 feet in thickness and the bottom not showing.

From this it will be seen that coal may be traced along the northern boundary of the lease of an average thickness of not less than 5 feet, and which improves in character when driven on, but is somewhat inferior at the outcrop.

With regard to the width of the coal in this area no exact calculations can be made, but as the slate boundary shown on the maps, running from a point a few chains to the southward of V. 19 in an easterly direction, is perfectly correct, and the measures for some chains from there towards the face of the coal overlooking the Waimangaroa River are considerably contorted, I think the boundary of the coal shown on the maps from which the tracing sent to Mr. Fisher was taken includes the whole area which could be laid down with certainty as containing coal which could be worked; although it is probable that a slightly greater area might exist.

Calculating this coal area, then, as holding coal of an average thickness of 5 feet, and extending through the lease with an average width of 15 chains, which is as much as could be allowed with any prospect of correct results, from the first drive to the eastern boundary of the lease, a distance of 80 chains, a return of 450,000 tons of coal might be looked for, after allowing 25 per cent. for waste.

Whether this would warrant Messrs. Fisher and Co. in opening up their mine is a matter for their private consideration. They have an excellent approach to the mine, which would be readily worked; and careful estimates, which have been prepared for them by Mr. Young, of the cost of constructing a tramway to connect their face of coal with the branch line of the Wellington Company, exclusive of rolling stock, shows that a sum of £12,000 would complete this work.

Putting the mine into working order would be neither a long nor an expensive undertaking, as some returns would be coming in before much had been spent on the mine, the position of the coal being such as to allow of quick returns to any outlay on the mine, without endangering the subsequent workings.

One great object would be attained by opening up this area—namely, that it would be the key to much of the back country, to open which, at present, would involve a very considerable outlay; so that could Messrs. Fisher and Co. see a fair return for their money from the area which they at present hold, I think that subsequently the fact of that area being opened up would prove of considerable value.

I saw some of the coal from Messrs. Fisher and Co.'s lease tried in the blacksmith's forge while I was in Westport with most satisfactory results, a good welding heat being obtained from coal brought from the outcrop.

I have, &c.,
S. Herbert Cox.

Enclosure No. 4.

Table showing Expenses of Working, &c., in various New Zealand Collieries, from Actual Returns.

Name of Colliery.	Time Working.	Description of Coal.	Thickness.	Total Output.	System of Work.	Thickness Worked.	Quantity won per Man per Day.	No. of Men employed.	Costs. Large.	Costs. Small.	Costs. Slack.	Remarks.
	Years		Feet.	Tons.		Feet.	Tons.		s. d.	s. d.	s. d.	
Green Island District—												
Otago Colliery ...	3	Brown	16	...	Room and rance	6	2 to 2½	9	4 6	3 10	1 0	Declined to give output. Slack thrown to waste.
Freeman's Colliery ...	1½	,,	16	5,515	,, ,,	6	,,	13	4 6	3 6	...	Slack thrown to waste.
Samson's Colliery ...	3	,,	18	27,000	,, ,,	6	,,	18	4 6	3 10	1 0	,, ,,
Walton Park Colliery	7	,,	18	71,000	,, ,,	6 to 8	,,	41	4 6	3 6	1 9	,, ,,
Saddle Hill Colliery...	2	,,	18	14,000	,, ,,	6 to 7	,,	9	4 6	3 6	...	,, ,,
Kaitangata District—												
Kaitangata Colliery...	...	Pitch	27	10,000	,, ,,	8	3 to 4	41	3 9	3 0	0 8	Slack, part sold, remainder thrown to waste.
Westland District—												
Brunner Colliery ...	...	Bituminous	18	...	Stoop and room	...	4 to 5	...	2 9	...	...	Slack used for coke.
Coal Pit Heath Colliery	...	,,	18	...	...	...	...	...	...	...	...	
Greymouth Colliery...	...	,,	...	...	...	...	...	...	...	...	...	Not yet on coal.
Waikato District—												
Kupakupa Colliery ...	...	Brown	18	...	Post and stall	18	4 to 5	...	3 2	...	...	Slack thrown to waste.
Ralph's Colliery ...	...	,,	36	...	,, ,,	18	4 to 5	...	3 0	...	...	,, ,,
Bridgewater Colliery	...	,,	54	...	,, ,,	18	4 to 5	...	3 0	2 0	...	,, ,,
Wangarei District—												
Walton's Colliery ...	...	Pitch	10	...	Stoop and room	10	4 to 5	...	2 6	1 9	...	,, ,,
Kamo Colliery ...	...	,,	14	...	,, ,,	12	4 to 5	...	2 3	1 6	...	,, ,,
Bay of Islands District—												
Kawakawa Colliery ...	...	Glance	12	...	,, ,,	12	3 to 4	...	4 2	3 6	...	Greater part of slack sold.

Enclosure No. 5.

SCHEDULE of Coal Analysis made in the Colonial Laboratory between June, 1876, and July, 1877.

No.	Locality.	Variety of Coal.	Approximate Composition.				Evaporative Power.
			Fixed Carbon.	Hydro-Carbon.	Water.	Ash.	
1843	Waverley	Lignite	18·10	23·90	24·40	33·60	2·35
1898	Parapara	Carbonaceous shale ...	32·20	19·10	9·10	39·60	4·10
1901, 1	Collingwood	Bituminous coal ...	50·95	37·22	2·42	9·41	6·61
„ 2	„	„ ...	54·92	38·62	1·41	5·05	7·13
„ 3	„	„ ...	54·12	39·24	2·03	4·61	7·03
„ 4	„	„ ...	52·14	36·24	2·01	9·61	6·77
1905	Waikato	Brown coal	50·01	27·97	19·82	2·20	6·50
1908, *a*	Waimangaroa	Bituminous coal ...	64·31	33·33	·99	1·37	8·30
„ *b*	„	„ ...	52·35	27·86	1·76	18·03	6·80
1915, 1	Kamo Mine (Meldrum's) (Wangarei)	Semi-bituminous ...	52·63	34·30	8·91	4·16	6·80
„ 2	„ „ ...	„ ...	49·08	37·57	9·24	4·11	4·7
„ 3	„ „ ...	„ ...	50·01	37·69	9·61	2·69	6·5
„ 4	Whareora	„ ...	36·06	43·02	5·58	15·34	4·7
„ 5	„	„ ...	51·96	35·69	7·84	4·51	6·7
„ 6	„	„ ...	49·80	37·66	7·76	4·78	6·5
„ 7	Hikurangi	„ ...	42·70	44·46	5·93	6·91	5·5
„ 8	„	„ ...	44·12	46·89	6·39	2·60	5·7
„ 9	Whauwhau (Walton's Mine)	„ ...	47·09	42·19	6·99	3·73	6·1
„ 10	„ „	„ ...	47·91	40·70	8·19	3·20	6·2
1917	Kaitangata	Bituminous	57·72	33·68	4·08	4·57	7·5
1923	Grey River (Coal Pit Heath Company) ...	„	59·38	34·88	1·05	4·09	7·7
1924	Darling Downs, Queensland ...	Pitch coal	44·83	41·34	8·21	5·62	5·8

APPENDIX G.

REPORT BY MARINE ENGINEER ON LIGHTHOUSE WORK.

The MARINE ENGINEER to the Hon. the MINISTER for PUBLIC WORKS.

SIR,— Wellington, 30th July, 1877.

I have the honor to forward to you a copy of the Report on Lighthouses I addressed to the Secretary of Customs on the 30th of June.

I forward this report for the purpose of enabling you to comply with section 8 of "The Public Works Act, 1876."

I have, &c.,

The Hon. the Minister for Public Works. JOHN BLACKETT.

Enclosure.

Mr. BLACKETT to the SECRETARY of CUSTOMS.

SIR,— Marine Office, Wellington, 30th June, 1877.

For the information of the Hon. the Commissioner of Customs, I have the honor to forward the following report on works executed for new lighthouses during the past year :—

Cape Foulwind.—In the report for last year it was stated that the works at this lighthouse were nearly completed, and that the light would be established in a few weeks. This was accordingly done, and the light was first exhibited on Friday, 1st September, 1876.

The official description of the light is as follows :—Tower, 53 feet high from base to top of lantern, of timber, and painted white; the upper part close boarded, the lower part open framed work. The light is of the second order revolving white light, visible all round; greatest brilliance every thirty seconds. The light is 190 feet above the level of the sea, and allowing 15 feet for height of eye, the light will be seen 19½ nautical miles in clear weather.

The Brothers, in Cook Strait.—In last year's report it was explained that the working party was withdrawn on the 4th May, by reason that the department could not depend on the regular service of the "Luna," that vessel being required for other services. On the arrival, however, from England of the s.s. "Stella," an iron screw-steamer ordered expressly for lighthouse service, the work was again taken up, and a party despatched to The Brothers on the 18th November, 1876, since when the works have been carried on interruptedly and, I am glad to say, without any accident.

The tower, with a surrounding wall or fence of brick and stone, the keepers' dwelling, stores, iron tramway, landing-stages, and lifting gear are all completed, the works having been ably and substantially carried out under an Overseer. The lantern has been placed on the tower, and the light apparatus erected within it nearly complete; a few small items of work still remain to be finished, but the whole will be complete and ready for lighting up in a few weeks.

The light is of the description known as second order revolving, showing a bright flash every ten seconds; the lighthouse is also fitted with a special lens to throw a red light over the site of Cook's Rock.

Portland Island.—At date of last report the works for this lighthouse had been advertised, the tenders had been received, and were then under consideration. The tender of Mr. H. M. Shepherd was ultimately accepted, on the 16th October, 1876, for £1,946, the time of erection to occupy ten months. The Contractor in this case has shown a want of energy in carrying forward his contract, and a considerable amount of work yet remains to be done. He has been twice notified officially to proceed more quickly, but it is certain that he will be considerably over his contract time.

Puysegur Point, Preservation Inlet.—In last year's report it was stated that the preliminary work of road-making had been completed, and the heavy timbers for the tower landed; also that plans were ready for advertising. This was shortly afterwards done, and a tender was accepted on 6th January, 1877, from Mr. W. Birss, for £2,984 2s.; the work to be completed by 6th January, 1878. This includes the erection of tower, three dwellings, and three stores, the materials being conveyed to the landing-place by the Government steamer.

The progress made with these works has not been altogether satisfactory, but it is probable that they may yet be completed within contract time.

Centre Island, Foveaux Strait.—The works for this lighthouse were advertised and let at the same time as those of Puysegur Point—viz., 6th January, 1877—to Mr. William Boyd, for the sum of £2,087 1s. 9d. This includes, as in the case of Puysegur Point, the building of the tower, three dwellings, and three stores; the materials being conveyed to the landing-place by Government.

The works are well advanced at this place, and it is expected that all will be complete within contract time, which expires on the 6th of November, 1877.

In March last I visited, in the s.s. "Stella," Centre Island and Puysegur Point, having been informed by the Contractors that they were ready to begin work. A quantity of materials and stores were then conveyed to each place from the Bluff, and I marked off the exact sites and positions of the several buildings on the ground, leaving an Inspector at each place to supervise the work.

During the last month, July, the remainder of all the materials has been conveyed by the s.s. "Stella" to both of these places.

Moeraki.—On my return from Foveaux Strait I called at Moeraki, under instructions, examined the site selected there, and marked off the road line from the landing-place to the site; also fixed the positions of the tower, dwellings, and stores on the ground. I also made arrangements to have the road formed, to be in readiness for the conveyance of material. The road has since been finished, and plans and specifications prepared for the erection of the lighthouse, dwelling-houses, &c., the work being advertised for public tender.

Timaru: Harbour Light.—This lighthouse has been twice advertised for public tender, the first time it was withdrawn at the request of the Municipal authorities, for the purpose of altering the design and substituting stone instead of wood, and of adding a dwelling-house to the contract. Tenders were received for the works, as altered, accordingly; but the amount of the tenders being in excess of the funds available, all the tenders were declined at the instance of the Harbour Board, and it is now proposed to call for tenders for the erection of a wooden tower and dwelling-house, &c., plans for which are in course of preparation.

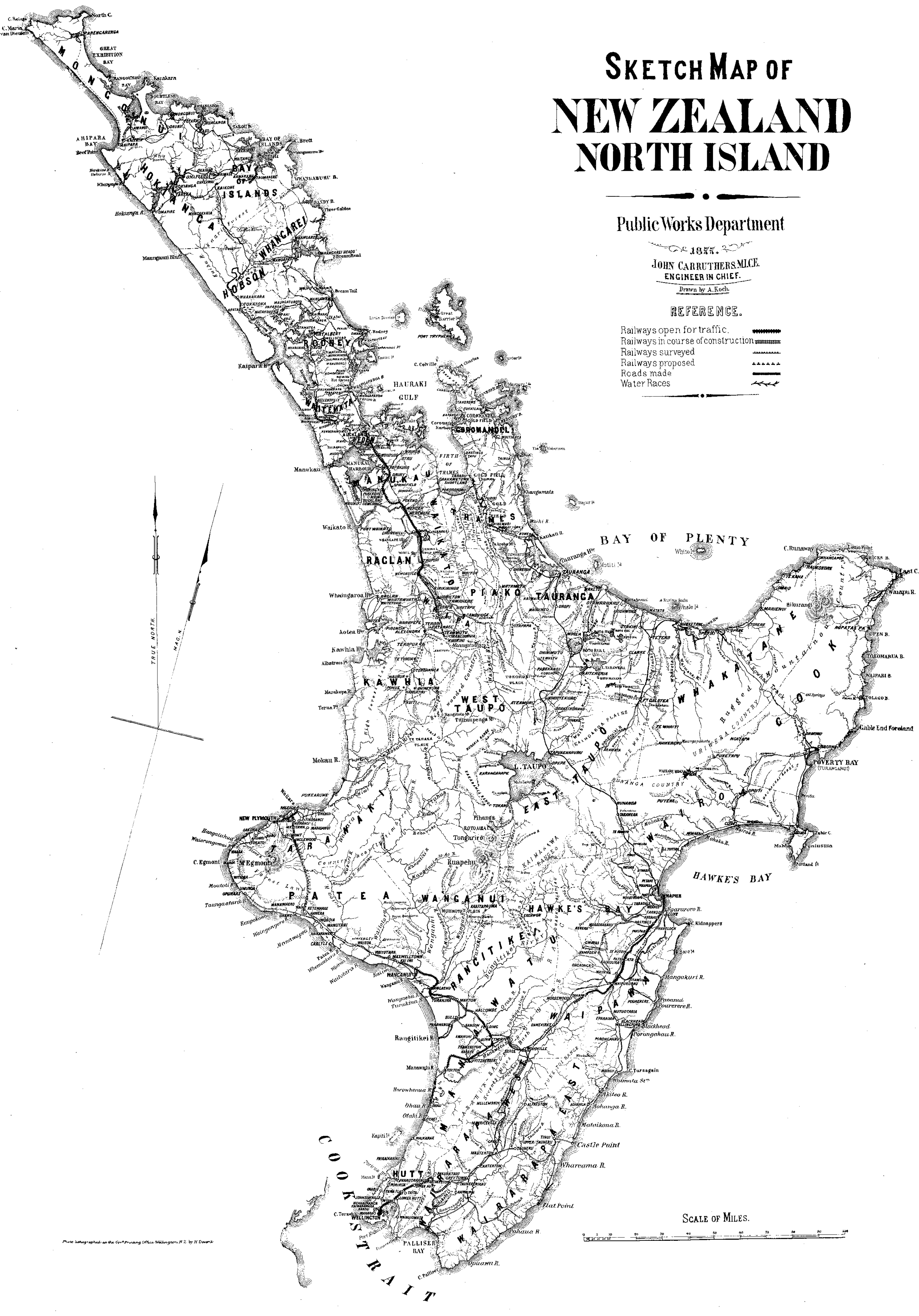
Hokitika: Harbour Light.—Nothing more has been done towards the erection of this lighthouse, beyond preparing to a certain extent the plans for the tower, the light originally intended for this place having been transferred to Moeraki, where the early establishment of a light is of much greater importance.

Cape Maria.—Arrangements are being made for the erection of this lighthouse in the same manner as that adopted at The Brothers, and it is expected that they will be so far completed as to allow of the working party being despatched about the end of July or the beginning of August. This plan of operations, which has answered so well at The Brothers in securing good work, has been adopted on that account, and on account of the distance of the site and the difficulty of keeping up communication regularly otherwise than by steamer.

Akaroa.—In the early part of March I visited the site of this lighthouse at Akaroa Head, and marked off the positions of tower, dwellings, &c.; also staked out the line of road and exact position of landing-place, after determining on the manner of landing material and stores. The work of forming the landing-place and the road will be undertaken in the spring; the lantern and apparatus have been ordered from England.

I have, &c.,
JOHN BLACKETT.

By Authority: GEORGE DIDSBURY, Government Printer, Wellington.—1877.


SKETCH MAP OF
NEW ZEALAND
NORTH ISLAND
Public Works Department
1877.
JOHN CARRUTHERS M.I.C.E.
ENGINEER IN CHIEF.
Drawn by A. Koch.
REFERENCE.
Railways open for traffic.
Railways in course of construction
Railways surveyed
Railways proposed
Roads made
Water Races
SCALE OF MILES.
TRUE NORTH
MAG. N.
BAY OF PLENTY
HAURAKI GULF
HAWKE'S BAY
COOK STRAIT
PALLISER BAY
POVERTY BAY
FIRTH OF THAMES
MONGONUI
BAY OF ISLANDS
HOKIANGA
WHANGAREI
HOBSON
RODNEY
WAITEMATA
EDEN
MANUKAU
COROMANDEL
THAMES
WAIKATO
RAGLAN
PIAKO
TAURANGA
KAWHIA
WEST TAUPO
EAST TAUPO
WHAKATANE
COOK
WAIROA
TARANAKI
PATEA
WANGANUI
HAWKE'S BAY
RANGITIKEI
WAIPAWA
MANAWATU
HUTT
WAIRARAPA
L. TAUPO
Ruapehu
Tongariro
M^t Egmont
NEW PLYMOUTH
NAPIER
WELLINGTON
AUCKLAND
WANGANUI
Photo lithographed at the Gov^t Printing Office Wellington N.Z. by H. Deveril

SKETCH MAP OF NEW ZEALAND SOUTH ISLAND

Public Works Department

1877.

JOHN CARRUTHERS, M.I.C.E.
ENGINEER IN CHIEF.

Drawn by A. Koch.

REFERENCE.

Railways open for traffic
Railways in course of construction
Railways surveyed
Railways proposed
Roads made
Water Races

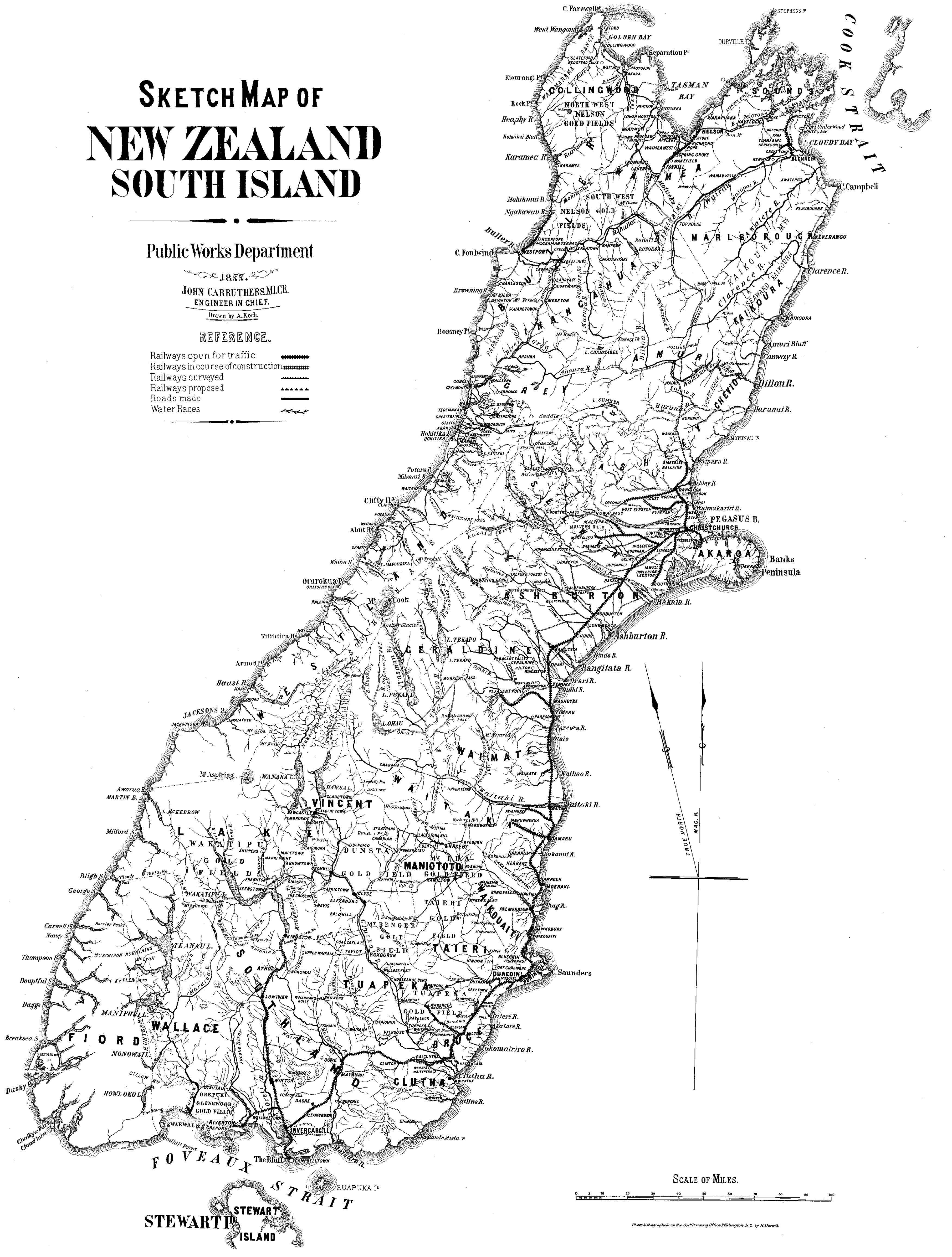


Photo-lithographed at the Govt Printing Office, Wellington, N.Z. by H. Deveril.

Plan to accompany Mr. W. N. Blair's Report on INTERIOR RAILWAY in the Provincial District of OTAGO

Scale of Miles

10 0 10 20 30 40

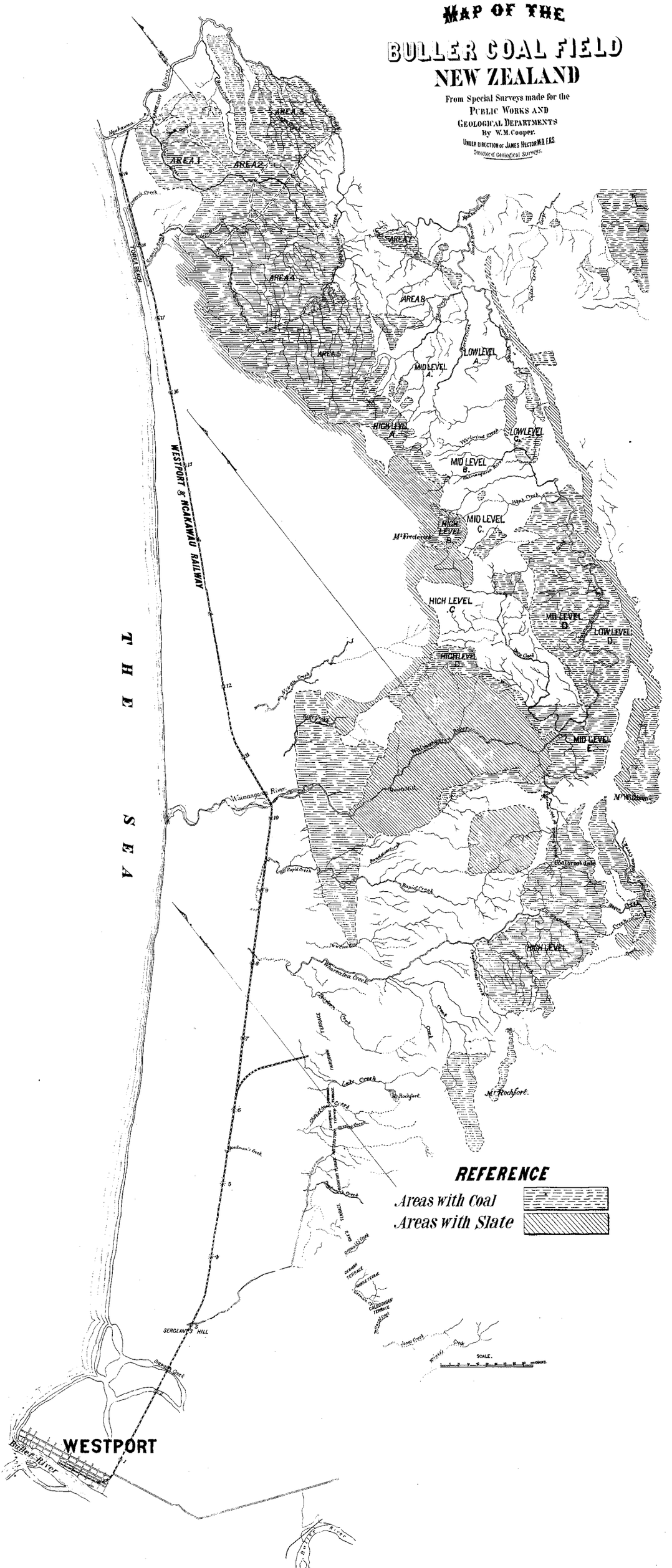
Reference

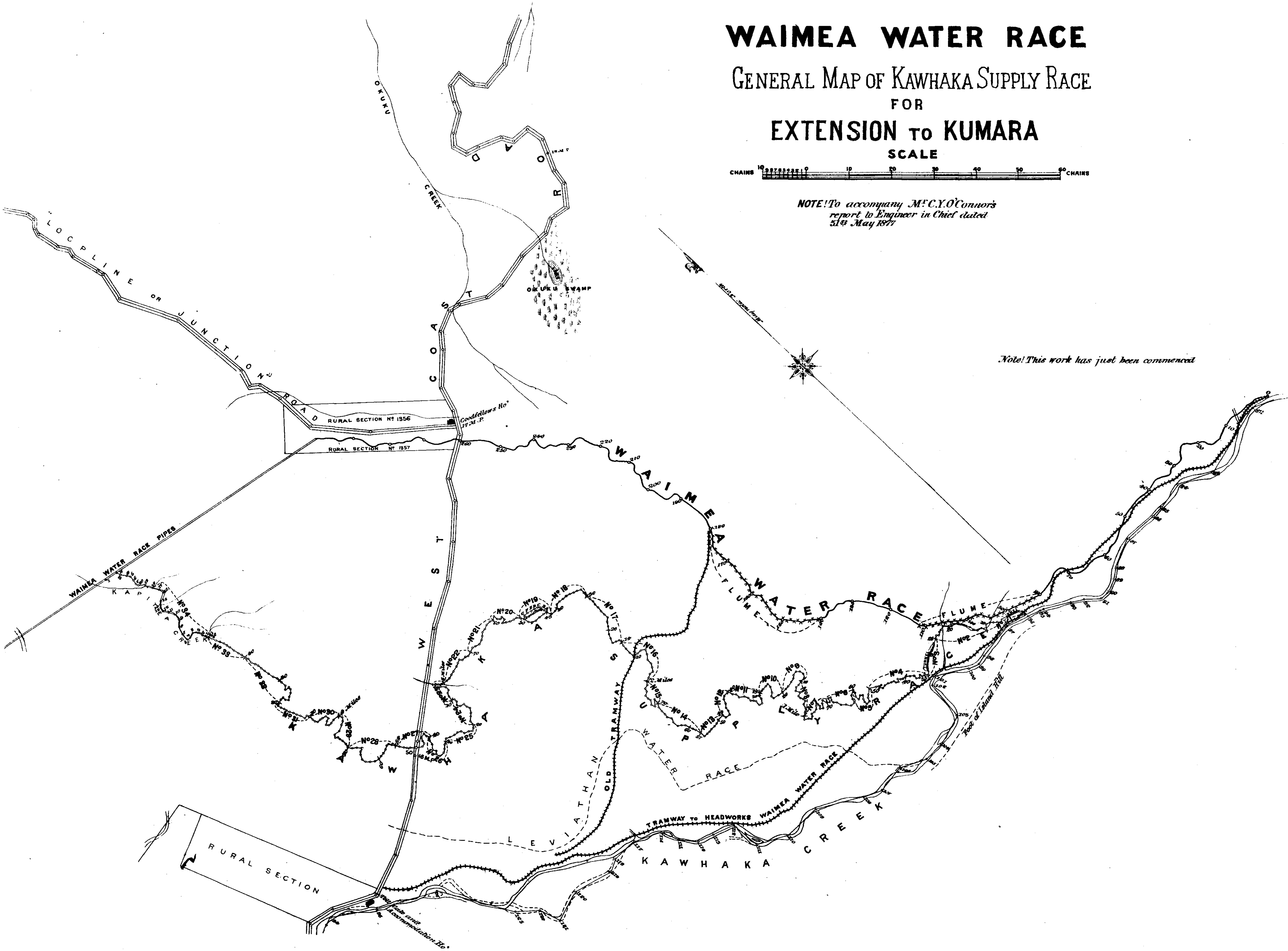
No. 1	Via Kingston & Kawarau Valley shewn thus	
No. 2	" " Waipahi, Tapanui, Ettrick & Clutha Valley	
No. 3	" " Lawrence, Dunkeld & Clutha Valley	
No. 4	" " North Taieri, Strath Taieri & Maniototo Plain	
	" " Same as last but starting Outram branch	
No. 5	Via Palmerston Macraes & Strath Taieri	
	Same as last but starting from Waikouaiti	
No. 6	Via Palmerston Shag Valley & Maniototo Plain	
No. 7	" " Duntroon, Marawhenua Valley, Kyeburn Pass & Maniototo Plain	
	Same as last, but following Otikaik instead of Marawhenua	
	Same as No. 7 but starting from Terminus of Waiareka branch & joining at Livingston	
	Same as No. 7 but starting from Teneraki on the Waiareka branch	
	Lines already completed and under Contract	

Dated 21st July 1877

MAP OF THE BULLER COAL FIELD NEW ZEALAND

From Special Surveys made for the
PUBLIC WORKS AND
GEOLOGICAL DEPARTMENTS
By W.M. Cooper.
UNDER DIRECTION OF JAMES HECTOR M.D. F.R.S.
Director of Geological Surveys.



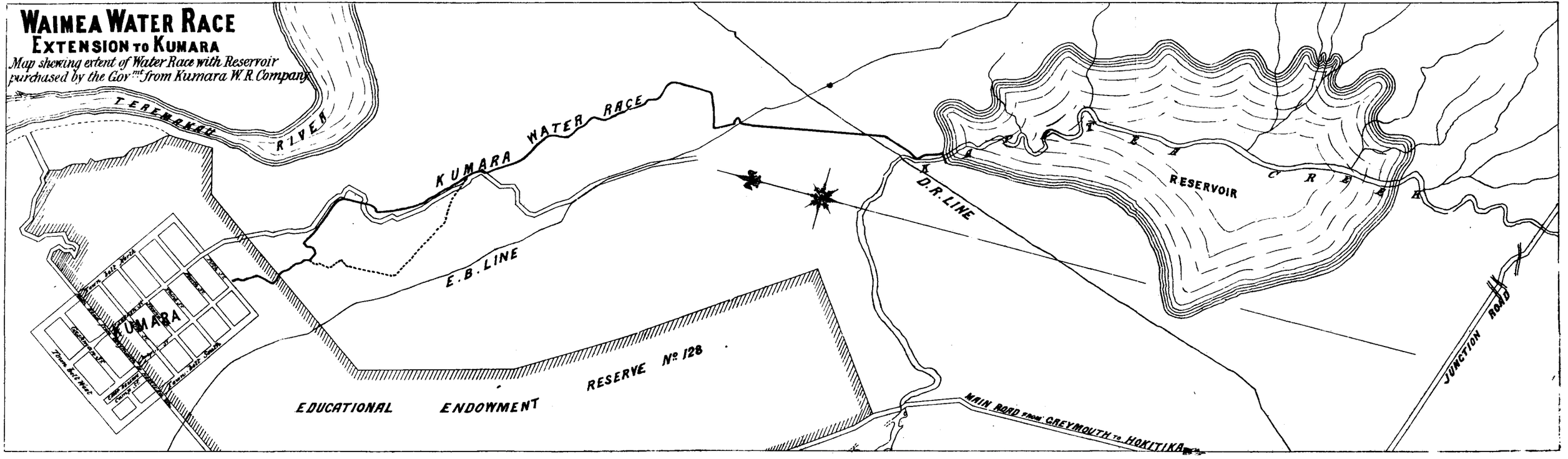


WAIMEA WATER RACE
GENERAL MAP OF KAWHAKA SUPPLY RACE
FOR
EXTENSION TO KUMARA
SCALE
CHAINS 10 0 10 20 30 40 50 60 CHAINS
NOTE! To accompany Mr C.Y. O'Connor's report to Engineer in Chief dated 31st May 1877
Note! This work has just been commenced
OKUKU CREEK
COAST ROAD
OKUKU SWAMP
LOCPLINE OR JUNCTION ROAD
RURAL SECTION No 1356
RURAL SECTION No 1357
Goodfellows Ho
WAIMEA WATER RACE
FLUME
WAIMEA WATER RACE PIPES
WEST COAST ROAD
KAWHAKA SUPPLY RACE
OLD TRAMWAY
LEVIATHAN WATER RACE
TRAMWAY TO HEADWORKS WAIMEA WATER RACE
KAWHAKA CREEK
Foot of Island Hill
RURAL SECTION
Accommodation Ho

To accompany Mr C.Y. O'Connor's report to Engineer in Chief. *Dated 31st May 1877.*

WAIMEA WATER RACE
EXTENSION TO KUMARA

Map shewing extent of Water Race with Reservoir purchased by the Govt from Kumara W.R. Company



SCALE

PLAN
OF
NELSON CREEK RACE.

SHEWING PROGRESS & CONSTRUCTION
TO MAY 31ST 1877

To accompany M.r C Y O'Connor's Report to Engineer-in-Chief dated 31st May 1877.