

1931.
NEW ZEALAND.

GOVERNMENT RAILWAYS BOARD

(REPORT BY THE).

Laid before Parliament pursuant to Subsection (2) of Section 18 of the Government Railways Amendment Act, 1931.

Wellington, 9th September 1931.

To the Hon. the Minister of Railways.

SIR,—

The Board has the honour to report in terms following:—

INTRODUCTORY.

The Board since its appointment under the Government Railways Amendment Act, 1931, has given initial attention to numerous questions concerning the railway system. The purpose of the Board at the outset has been chiefly to familiarize itself with the work entrusted to it. First, attention was given to the highly important financial obligations of the Department, the object being to gain a knowledge of what is involved from the standpoint of the national, commercial, and domestic interests which the system serves and which it is necessary to protect and develop. The Board, from the outset, has had the fullest assistance from the General Manager of Railways and from the chief executive officers of the Department.

The Government Railways Amendment Act, 1931, clearly defines the position and functions of the Board, and incidental to vesting power in the Board “to carry on, control, manage, and maintain the Government railways to the end that the railways, while being maintained as a public service in the interests of the people of New Zealand and as an essential factor in the development of trade and industry, shall be so carried on, controlled, managed, and maintained on the most economical basis, having regard to the economic and financial conditions from time to time affecting the public revenues and trade and industry in New Zealand, with a view to obtaining a maximum of efficiency and maintaining a proper standard of safety and a reasonable standard of comfort and convenience for persons using the railways and any other services carried on in connection therewith,” the Legislature gave the Board authority to report upon—

- (a) Proposed new railway-lines,
- (b) Railway-lines on which construction work has been suspended,
- (c) Railway-lines in course of construction,

in the manner following:—

Section 18:—

“(1) Where after the commencement of this Act any special Act authorizing the construction of any Government railway is passed without a report by the Board on the proposed railway being first laid before Parliament no work in connection with such construction shall, save as such special Act expressly otherwise directs, be undertaken until a report by the Board respecting the railway so authorized is laid before both Houses of Parliament and a resolution approving such work is passed by both such Houses.

“(2) Where before the commencement of this Act work in connection with the construction of any Government railway or part thereof has been suspended and has not been resumed at the commencement of this Act, such work shall not thereafter be resumed until a report respecting such railway or part of a railway has been laid before both Houses of Parliament and a resolution authorizing the completion of such work has been passed by both such Houses.

“(3) At any time within one year after the commencement of this Act the Board may submit to the Minister a report on any railway or part of a railway then under construction (being a railway or part of a railway the construction of which was begun before the commencement of this Act) recommending that the work of construction be not further proceeded with or that it be carried out to such extent only as is recommended by the Board. The Minister shall as soon as practicable after receiving such report cause the same to be laid before both Houses of Parliament, and if both such Houses pass a resolution approving the recommendation of the Board no further work in connection with the construction of such railway or part of a railway shall thereafter be carried out save in accordance with the recommendation of the Board.”

The terms of section 20 of the Act, quoted hereunder, must ultimately be considered also in relation to lines at present coming within the scope of section 18. Section 20 is as follows:—

“The Board on being satisfied that any railway or part of a railway can continue to be operated only under conditions that will result in the net revenue therefrom being insufficient to cover the working-expenses thereof, or on being satisfied that the continued operation of any railway or part of a railway is otherwise not in the public interest, may cease to operate the same, and with the approval of the Governor-General in Council dispose of the land and all other property of the Crown in respect of such railway or part of a railway.”

At the outset the Board gave consideration to—

- (1) The Wharanui—Parnassus line (76 miles), on which work is proceeding.
- (2) The East Coast line (Napier—Gisborne), of which it may be said that there are four sections, namely:—
 - Napier—Putorino (38 miles 61 chains). (Open line—at present unworkable owing to earthquake damage.)
 - Putorino—Wairoa (33 miles 32 chains). (Under construction.)
 - Wairoa—Waikokopu (24 miles 35 chains). (Practically completed, but still under the control of the Public Works Department.)
 - Waikokopu—Gisborne (35 miles 40 chains). (Construction stopped last year.)
- (3) Kawatiri—Inangahua (47 miles 32 chains). (Construction stopped.)
- (4) Inangahua—Te Kuha (20 miles 6 chains). (Under construction.)
- (5) Waiotira—Dargaville line (31½ miles). (Open from Waiotira to Kirikopuni—14 miles. Construction completed between Kirikopuni and Tangowahine—10¼ miles—but being worked by the Public Works Department. Construction stopped between Tangowahine and Dargaville—7¼ miles).
- (6) Okaihau—Rangiahua line (14 miles). (Construction stopped.)

The Board deemed it essential to make an early inspection of the above-mentioned lines, and for this purpose paid visits to the respective districts to apprise itself fully as to—

- (1) The physical features of the routes:
- (2) The prospective value of the new sections of line to the open railway system:
- (3) Finally and fundamentally, in relation to all the works, whether they could be justified upon the grounds of sound and stable finance, having due regard to (a) the development of the country in so far as such development would be dependent upon a railway service, and (b) the cost of construction and the financial results of operating.

PART I.—WHARANUI-PARNASSUS.

Estimated capital cost—		£	£
Public Works Department ..	2,581,000		
Railways Department—Additional terminal facilities, bridge-strengthening, and signalling and communication systems	176,000*		
		—————	2,757,000
Average cost per mile			36,276
Expenditure to 31st March, 1931			415,239
			Miles.
Mileage—Wharanui to Parnassus			76
Work in hand—			Miles. Miles.
North end			28
South end			15
			— 43
Surveyed and located but not commenced			6
Trial surveys only; not finally located			27
			—
			76
Expenditure since 31st March, 1931—			£
April–May			49,500
June–July			50,000
Expenditure to complete—		£	
Public Works Department	2,066,261		
Railways Department*	176,000		
		—————	2,242,261

The members of the Board left Wellington for Picton on the 24th June, being accompanied by the General Manager of Railways, Mr. H. H. Sterling, and the Engineer-in-Chief of the Public Works Department, Mr. F. W. Furkert.

The Board was met at Blenheim by Mr. E. F. Healy, M.P. for Wairau, and by the Commissioner of Crown Lands for the Marlborough District.

The Board left Blenheim on the morning of the 25th June, and during that day and the following day was fully occupied in an inspection of the line and of the contiguous country.

The route may be classified into three sections, as follows:—

- (1) Picton to Wharanui (56 miles). (Open line.)
 - (2) Wharanui to Parnassus via Clarence River, Kaikoura, and Conway River (76 miles). (Under construction.)
 - (3) Parnassus to Christchurch (85 miles). (Open line.)
- Total distance, 217 miles, Picton–Christchurch.

At several points suggested by persons well informed as to local conditions the Board made detours alternatively to the coast and inland from the route of the railway-line. By so doing the Board saw typical portions of the country and had the advantage of meeting local residents. In addition, the Board received many written statements, and later received oral statements at Wellington.

CONSTRUCTION COSTS.

Approaching the question from the standpoint of construction costs, the Board finds that the following is the actual position:—

The total expenditure to the 31st March, 1931, was £415,239.

The estimated expenditure from the 31st March, 1931, to complete the line was £2,165,761, to which must be added the cost of additional terminal facilities, bridge-strengthening, and signalling and communication systems, amounting to £176,000, making a total of £2,341,761.

* Capital expenditure by Railways Department does not include £54,000 required to bring the existing lines to main trunk line standard.

Actual expenditure from the 1st April, 1931, to the 30th May, 1931, was £49,500.

Estimated expenditure from the 1st June, 1931, to the 31st July, 1931, is £50,000.

The total expenditure actually incurred and estimated to the 31st July, 1931, is £514,739.

The additional expenditure required to complete the line between Wharanui and Parnassus from the 31st July, 1931, is £2,066,261, to which must be added additional capital expenditure by the Railways Department amounting to £176,000.

The estimated additional cost of completing the line from Wharanui to the Clarence River (20 miles) at 31st July, 1931, was £127,753.

The expenditure from Parnassus northwards at the 31st July, 1931, was £221,635. The work at present is spread over 15 miles, on which the formation on the first 12 miles to the Conway Station-yard is well advanced. The estimated additional cost of completing to the Conway River from Parnassus at the 31st July, 1931, was £298,273.

The question on which the Board is required to report is whether an expenditure of a further £2,242,261 is justified upon this railway undertaking.

The financial aspect may first be considered in relation to actual experience on the present South Island lines. A commencement may be made with the average revenue for the whole of the South Island main lines—that is, the lines excluding the branch lines which were considered as non-paying lines within the meaning of the arrangements that were up to recently in force for crediting the Railways Department with the loss on these lines. The main lines as so determined include the best-paying portion of the South Island railway system. The gross revenue per mile on these lines has during the past six years averaged £2,671 per annum. During the same period the ratio of operating expenditure to revenue has averaged 89 per cent. The Railways Department is charged $4\frac{1}{4}$ per cent. on earlier loan-moneys invested in the railways. The average interest charge for rolling-stock on the South Island main line is £195 per mile per annum. Utilizing the foregoing figures with other data, the following comparative statement is arrived at:—

(a) *Annual Loss on Operation of Existing Lines, Picton-Wharanui and Parnassus-Christchurch.*

	£
Working-expenses	141,412
Less revenue	127,167
Operating loss	14,245
Add interest charges (including interest on rolling-stock) ..	58,933
Total present annual loss	<u>£73,178</u>

(b) *Estimated Annual Loss on Operation of Line Picton to Christchurch (if completed), assuming that the Revenue and Expenditure per Mile of Line will be equal to the Revenue and Expenditure of existing South Island Lines, exclusive of Non-paying Branches.*

	£
Revenue—217 miles at £2,671	579,607
Expenditure—89 per cent. of revenue	515,850
Net revenue	63,757
Interest charges—	
$5\frac{1}{4}$ per cent. on new capital required to construct new line, £2,581,000	135,502
Interest on existing lines at $4\frac{1}{4}$ per cent.	49,631
Interest on estimated cost of additional terminal facilities, bridge-strengthening, and signalling and communication systems— $5\frac{1}{4}$ per cent. on £176,000	9,240
Rolling-stock at £195 per mile	42,315
	<u>236,688</u>
Annual loss if proposed line constructed	172,931
Less present annual loss as per (a)	73,178
Increase in annual loss if proposed line is constructed and worked	<u>£99,753</u>

The foregoing calculation is based on the best view that could be taken of the working of the line. It assumes—

- (1) That, as to through traffic, the line will be a main trunk line :
- (2) That the competition in that area will not be greater than the average competition experienced over the South Island main lines :
- (3) That the country served by the line is up to the stage of development of the average of the country served by the South Island main lines.

With regard to (1), it does not appear that the route of the through goods traffic between the North and South Islands would be much altered. The time factor in regard to transport of goods would hardly be to the advantage of the railway, for the reason that, generally speaking, goods from, say, Christchurch to Wellington, could be taken as fast by sea via Lyttelton as by rail from Christchurch to Picton and thence by sea from Picton to Wellington.

A decisive factor that would influence the routeing of the goods traffic is the question of cost. The hauling of goods from Christchurch to Picton and their transport by sea from Picton to Wellington could not possibly compete on a cost basis with direct shipment between Lyttelton and Wellington. The conclusion reached is that as regards the principal goods traffic between the North and South Islands the proposed railway would not secure the business. It has been urged that the diversion of the through goods traffic to the proposed railway would be assured by the establishment of a train-ferry for goods between the two Islands. The Board cannot agree with this contention. A train-ferry service could be established only at great capital cost for vessels and terminal facilities. Even with a train-ferry it does not appear to the Board that costs would be in favour of the rail route.

One other aspect of the goods business seems to call for further comment in view of the fact that much point was given thereto in the representations that were made to the Board. It was contended that there would be a substantial development in live-stock traffic by reason of the access that the line will give to the Addington market. The Board's conclusion is that possibilities from this point of view as embodied in estimates furnished by those in favour of the line require to be somewhat discounted. The reason advanced for the assumption that there would be a heavy live-stock traffic over the line was that the Marlborough sheep-farmers desired to avail themselves of the Canterbury markets. The principal traffic that might be anticipated was stated to be fat lambs for freezing and export, to be passed through the freezing-works; sheep for local butchers that would be passed through the Addington Saleyards; and breeding-ewes. The demand for stock for local butchers would not be increased by the opening-up of another source of supply, as would be afforded by the completion of the line; it would merely mean that a greater number of Marlborough sheep might be sent to Addington, but it is not at all likely that the traffic would be heavy. As regards breeding-ewes, it is possible there might be a certain increase in this class of business, though the Marlborough farmers would have to compete with the present sources of supply, and there is no ground for assuming that the construction of the railway would alter the position to such a substantial extent as would lead to any great development of this trade. The next type of traffic is the fat-lamb business, which was much emphasized. If it could be established that the completion of the railway would cause a substantial increase in this type of traffic, the Board would consider it a very relevant factor not only on account of the benefits that would accrue directly to the railway business, but also from the point of view of the development of the district. The Board is of opinion that the likelihood of substantial increase of the fat-lamb business from that portion of Marlborough now served by rail, as a result of completing the line between Wharanui and Parnassus, is not so great as has been suggested. In this connection a relevant factor is that freezing-works already exist at Picton, and this must always tend to limit the quantity of fat lambs that would be sent over the line to freezing-works in Canterbury. As to that portion of the country that lies between the two present terminals, the Board considers that by reason of the lack of road access to the railway, and the nature of the country, the fat-lamb traffic that would be developed in that area by the construction of the railway would be relatively small.

As regards the passenger business, the three following factors are material in a comparison of the route by rail and sea via Picton with the route by sea via Lyttelton—namely, (a) comfort ; (b) speed ; (c) cost.

Under the first two of these headings—namely, comfort and speed—it does not appear to the Board that there would be any substantial balance of advantage in favour of the route via the proposed railway ; while as to the third—namely, cost—the advantage would certainly lie with the present sea route.

The Board therefore is of opinion that the proposed new route via Picton would not supersede the present Wellington–Lyttelton route.

With regard to (2)—namely as to whether competition in the area to be served by the railway will be any greater than the average competition experienced over the remainder of the South Island main lines—the Railway Department's experience up to the present has been that keen competition must be expected in the area through which the line would pass. Competitive services are already well established in the district. The community of interest governing the local traffic in the Marlborough district is principally with Wellington, particularly in goods traffic. As regards local passenger traffic, there is a certain amount between Christchurch and Marlborough, but this is already highly competitive. The Railway Department has, by arrangement with a motor-service proprietor, a through-booking system in operation by rail and motor between Christchurch and Blenheim. In addition to this service, there are four other services running direct between Christchurch and Blenheim in competition with one another and with the combined rail and motor service. There is no reason to anticipate that the position of these services will be any different from the position of similar services in other parts of the country where the distances are similar, such as between Wellington and Napier, Wellington and New Plymouth, Christchurch and Dunedin, Auckland and Thames, and Auckland and Rotorua. In all these cases the motors are running in competition with the Railway Department's express services, and it is reasonable to anticipate that the same conditions would arise in connection with the traffic between Christchurch and Blenheim.

So far as Blenheim is concerned, construction of the new line is not likely to have any material influence on the routing of the goods traffic. The railways already have to contend with very serious competition from the boats that ply between Wellington and Blenheim direct. There are already road services for goods established to serve the district, and the Board is convinced that the competition for goods traffic would continue.

With regard to (3)—namely the stage of development of the country that would be served by the new line—this development is not at present up to the average stage of development of the country that is served by the present main lines in the South Island. Indeed, it is the factor of possible development that has generally been advanced as one of the arguments in favour of the construction of the line. It seems to the Board, however, that the possibilities in this connection are relatively limited.

The country along the route of the new line is, except for one or two comparatively small areas, unsuitable for very close settlement, being almost wholly pastoral land, so that the increased production that would come from that area would not be great. This area is not at all well roaded and before any substantial development can take place, even if the railway were constructed, heavy expenditure would be needed for roading. The facts before the Board indicate that the quality of much of the land would not justify the roading costs, much less the cost of a railway in addition.

The position may now be summarized thus : On the most optimistic view possible, as a main trunk line, the net result would be an increase of £99,753 per annum in the annual loss on the railways. (See statement at page 4.) The facts indicate, however, that even this position—unsatisfactory in itself—does not represent the full loss likely to be experienced.

The question of the financial return from the line may be viewed from another standpoint. To secure an average revenue per mile equal to the average for the South Island main lines requires a revenue from the line between Christchurch

and Picton of £579,600. Even assuming that the whole of the Wellington-Lyttelton passenger traffic now travelling by the ferry service were diverted to the new route, the total passenger revenue accruing therefrom would be approximately £250,000. Adding local passenger traffic at £200 a mile, which is an extremely liberal figure (especially as local passenger traffic by rail is one aspect of the railway business that has been severely affected by competition), the total passenger revenue per annum for the line would be £293,400. This leaves the sum of £286,200 to be obtained from goods revenue, which represents £1,319 per mile per annum. As there is little or no prospect of through goods traffic, the business in goods must be measured by the requirements of the district by way of inward traffic and the products of the district by way of outward traffic. A comparison with lines serving what might be regarded as somewhat similar country shows that the annual goods revenue from the Otago Central line is approximately £500 per mile, and the Southbridge line is approximately £650 per mile. The latter line passes through good agricultural land. The Taneatua line (in the North Island) has a goods revenue of approximately £400 per mile per annum. That line has some similar features to the line now under consideration, in that the business of the Taneatua line is faced with competition by sea through the ports on the Bay of Plenty, while the traffic on the proposed line is liable to competition by sea through the ports at Blenheim and Kaikoura. On the other hand, it may be pointed out that the Taneatua line serves an extensive tract of good country beyond the terminus of the line. This has no parallel in the case of the Christchurch-Picton line; while as regards the land along the route of the line the Taneatua line compares more than favourably with the proposed line. When it is realized that, even conceding for the purpose of present consideration that the proposed line might become the through passenger route between the North and South Islands, there requires to be obtained an annual goods revenue of £1,319 per mile, as compared with £400 per mile received from the Taneatua line and £500 per mile from Otago Central and £650 per mile from the Southbridge line, the possibility of the line proving a financial success is obviously remote.

To avoid misunderstanding, the Board desires to emphasize that in the tabulation included in the foregoing portion of this report dealing with the South Island main line averages there is no suggestion that the figures shown represent a result that would be achieved by the new line. The principal fact demonstrated by the statement is that even with the quantity of traffic passing over the better portions of the South Island lines it is not possible to pay present-day operating expenses and interest on present-day costs of construction.

In view of the amount of work already done, particularly at the northern end, the Board considered whether construction might not be justifiably completed to some appropriate point. An examination of this phase of the question has led the Board to the following conclusions:—

- (1) That, having regard to the stage now reached in construction and taking into account the cost of completing construction, the section from Wharanui southward to the Clarence River offered a *prima facie* case for examination. Up to the 31st July, 1931, the expenditure on that section was £127,753; hence the completion of this section would load the Working Railways capital with a total sum of £380,530 for construction only.
- (2) That careful consideration of the prospective operating results of the section to Clarence River, if completed, failed to disclose any reasonable prospect of decreasing the operating loss at present being experienced on the open line from Picton to Wharanui. On the contrary, there are strong indications that in actual fact the operating loss would be increased if construction were completed on this section.
- (3) That accordingly the net result of completing this section would be to continue, if not to increase, the existing operating loss, added to which would be the substantial item of interest on the capital cost of £380,530.

The Board also considered whether completion of the line might not be justified from the present terminus at Parnassus northward as far as the Conway River, but came to a decision similar to that above mentioned regarding construction southward to the Clarence River.

The terminus heretofore regarded as fixed for this line is Picton. The open portion of the northern section of the line extends south from Picton 56 miles to Wharanui. Picton is the deep-sea port for the Town of Blenheim and for the Provincial District of Marlborough. It is on a naturally sheltered waterway well adapted for deep-sea vessels. There is a railway wharf at Picton with facilities sufficient for all present and reasonably anticipated traffic. There is a freezing-works at Picton, for which the port, with its facilities, provides a means of direct shipment to overseas markets. There is an excellent passenger-steamer service from Picton to Wellington, a distance of 52 sea miles. The voyage normally occupies three and a half hours. The Board has already expressed its view that the bulk of the present inter-Island passenger traffic would not be diverted from the Lyttelton-Wellington ferry service. Without question, in the judgment of the Board, Picton is the most practicable terminal port. The proposals that have recently been made regarding the development of a port at Clifford Bay, which was visited by the Board, have been considered from both the working and the economic standpoint. On the map attached hereto is shown—

- (1) Inter-Island connections between Wellington in the North Island, and Picton, Clifford Bay, and Lyttelton in the South Island.
- (2) The entire route of the railway from Picton to Christchurch, with the respective sections shown, as follow :—
 - (a) Picton to Wharanui (open line) :
 - (b) Wharanui to Clarence River (under construction) :
 - (c) Clarence River to Conway River (under construction) :
 - (d) Conway River to Parnassus (under construction) :
 - (e) Parnassus to Christchurch (open line).

Clifford Bay is situated 4 miles from the station of Hauwai on the open section of railway-line, 42 miles from Picton. The country surrounding and for some distance inland formerly comprised large sheep-stations, a considerable area of which is now more closely settled. Within reasonable distance there are the settlements of Ward and Seddon. These two settlements have been successful, and the land there for the most part is good. More distant still are the fine areas of the rich grazing and cropping land of Marlborough. The further development of Marlborough is not, in the judgment of the Board, primarily dependent upon the railway or its extension ; neither is it dependent to any degree upon a further port facility in competition with Picton, such as Clifford Bay would be if developed. Further, additional trade interests would not to any extent be developed either in the Marlborough Province, the South Island, or the Dominion generally by the construction of another port at Clifford Bay. This Bay is part of a large sweep of open coast with a north-east aspect. Port-construction works could be carried out only at great cost and with extremely doubtful results. The Board has had the benefit of information obtained from the Engineer-in-Chief of the Public Works Department, in which he states:—

“ If the Clifford Bay Harbour scheme should be adopted it would not be safe to allow less than an additional £1,000,000. The surveys of this work have not yet been completed, and consequently the cost cannot yet be definitely stated, but sufficient information is available to enable me to give the above figure as a reasonable approximation.”

The wastage on duplication of port works has in the past been considerable, and a further duplication of the shipping and port facilities on the New Zealand coast at an enormous cost in conjunction with or apart from the railway system is, in the opinion of the Board, economically unsound. With New Zealand's relatively small population and necessarily restricted volume of trade, a duplication of facilities such as Clifford Bay would further add to the already heavy indebtedness of the taxpayer without commensurate result.

The Board has carefully considered all features of the Clifford Bay proposal, and is of the opinion that the proposal for the establishment of an additional port at that place is not warranted and would afford no justification for the completion of the railway between Wharanui and Parnassus.

The Board had many representations made to it by persons and representative bodies, and many estimates were submitted which sought to justify the completion of the line on financial grounds. As was frankly admitted by one of the principal witnesses that appeared before the Board, estimates of this kind are necessarily more or less speculative. The Board, appreciating this fact, has endeavoured to avoid the liability of error that this procedure involves, and has preferred to base its judgment on facts of actual experience. The Board has therefore worked in this report on the basis of the actual results already achieved in the working of the railways in the South Island. It has not been considered necessary to refer in detail in this report to all the estimates submitted to the Board. Such procedure would unduly encumber the report, while serving no useful purpose. It has been found that when the estimates submitted have been brought to the test of comparison with actual results their unsoundness has become obvious. One estimate, for instance, shows a ratio of expenditure to revenue as low as 41 per cent., a figure that has not been attained in New Zealand and which could only be attained with an intensity and regularity of traffic that is not likely to be, even approximately, reached on the line in question.

The aspect of regularity is one that has a very direct bearing on working-costs, particularly in relation to this line, which, as its advocates indicate, would have to rely largely on business in live-stock. This class of business is seasonal and a one-way traffic; and while the needs of ordinary business could scarcely be met with a reasonable degree of service with less than one goods train per day, this minimum time-table would in the live-stock season require to be augmented by additional trains to meet the peak of the live-stock traffic.

The conclusion of the Board is that the completion of the railway-line between Wharanui and Parnassus is not justified, and that work thereon should be stopped. The Board has reached this conclusion with a careful regard to its obligations in its administration of the New Zealand railway system, and has not overlooked the question of service to the public and the industrial development of the country. If the Board could have found in the course of its examination of the problem of this railway that an immediate deficiency in operating results might within a time not too remote have been converted into a more favourable result through the development of trade and industry, it would have been well disposed to recommend completion of the line. The Board has, however, been compelled to conclude that neither the immediate nor the remoter prospect is sufficiently encouraging to justify the expenditure that would be involved in completing the Wharanui-Parnassus railway.

PART II.—NAPIER-GISBORNE RAILWAY.

This line may be divided into four sections, viz.—

Section.	Miles	Ch.	
(1) Napier to Putorino ..	38	61	Open line.
(2) Putorino to Wairoa ..	33	32	Under construction.
(3) Wairoa to Waikokopu ..	24	35	Practically completed; being worked by Public Works Department.
(4) Waikokopu to Gisborne ..	35	40	Construction stopped.
	132	8	

The estimated capital costs are as follow :—

	Expended to 31st March, 1931.	Additional Cost to complete.	Total Cost.	Cost per Mile.
	£	£	£	£
Napier—Putorino	1,039,000	45,000	1,084,000	27,795
Putorino—Wairoa	1,173,845	258,313	1,432,158	42,122
Wairoa—Waikokopu	616,559	37,170	653,729	26,149
Waikokopu—Gisborne	571,438	1,186,180	1,757,618	48,823
	£3,400,842	£1,526,663	£4,927,505	£37,049

The members of the Railways Board left Wellington for Gisborne on Tuesday, the 7th July, accompanied by the General Manager. At Palmerston North they were joined by Mr. W. D. Lysnar, M.P., who accompanied them throughout the visit. They were joined at Napier by officers of the Public Works and Lands Departments.

The party left Napier for Gisborne the following morning, being met at Wairoa by the Chairman of the Wairoa County Council and by the Mayor of Wairoa, who made representations on behalf of the Wairoa district.

The Board visited Waikokopu, where the Public Works Department controls a wharf in conjunction with the railway from Wairoa to Waikokopu, which that Department also operates.

From Waikokopu the Board travelled approximately 14 miles up the coastal road which follows the proposed route of the railway, and, returning to Waikokopu, resumed the journey via Nuhaka and Morere to Gisborne, where it was met by Mr. K. S. Williams, M.P., the Mayor of Gisborne, the Commissioner of Crown Lands, Gisborne, and representatives of local interests.

On Thursday, the 9th July, the local representatives conducted the Board on a tour of inspection of the district in the Gisborne locality, travelling in the morning to Tolaga Bay, where the Board was met by representatives of the local authorities, and spending the afternoon inspecting portions of the district round Gisborne.

The Gisborne Section at present comprises the line from Gisborne to Motuhora, 48 miles 38 chains, the branch line from Makaraka (3 miles 12 chains from Gisborne) to Ngatapa, a distance of 11 miles 33 chains, having been closed as from the 31st March last. The total capital cost of the Gisborne Section, including the Ngatapa line, was £848,284. The capital cost of the closed line was £167,430. The line from Gisborne to Motuhora was originally intended to be carried on through to Opotiki, ultimately joining up with the open line at Taneatua. The line to Ngatapa was to be continued to Wairoa as the connecting-link in the East Coast line to Napier. The line was opened from Gisborne to Kaitaratahi (13 miles) in 1902, and to Motuhora in 1917, and from Makaraka to Ngatapa in 1924. The line has not been proceeded with beyond Motuhora. A considerable amount of construction was done south of Ngatapa, involving an expenditure of £118,406 on the Ngatapa Section southwards and £20,685 on the Wairoa Section northwards.

The nature of the country caused the route to be abandoned in favour of the Gisborne—Waikokopu route. With this decision the necessity for maintaining the Ngatapa Section disappeared, and this section of line was accordingly closed as mentioned above.

Much information was furnished to the Board orally and in written reports and statements bearing on the question of the railway between Napier and Gisborne. Dealing with the various sections of the line, the position is as follows :—

- (1) *Napier—Putorino.* (Open line, damaged by earthquake. 38 miles 61 chains.)
- | | |
|-----------------------------------|------------|
| Capital cost | £1,039,000 |
| Estimated cost of repairs | £45,000 |

Putorino is the present terminus of the Napier—Wairoa line, the first section of which, Napier to Eskdale, 11 miles 67 chains, was opened for traffic in 1923, and on

6th October, 1930, the line Eskdale-Putorino, 26 miles 74 chains, was added. This line was badly damaged by the earthquake, in some parts being completely obliterated so that it will have to be practically re-located and reconstructed.

As the section between Napier and Putorino is open line it does not call for further comment in this report, except to state that last year the line showed an operating loss of £4,646 and a total loss including interest of £26,981.

(2) *Putorino-Wairoa.* (Under construction. 33 miles 32 chains.)

Estimated capital cost	£	1,432,158
Expenditure to 31st March, 1931		1,173,845
		£258,313
Estimated expenditure to complete		£258,313

Expenditure since 1st April, 1931, has been at the rate of about £20,000 per month.

Work is proceeding and is well advanced on this section, rails having been laid for 4 miles northward of Putorino, and for 18 miles southward of Wairoa. The principal works to be finished on this length are about 7 chains of the Kotemaori Tunnel (41 chains); the Mohaka Viaduct, a steel bridge over 300 ft. high, which is estimated to cost £120,000; and the Mangaturanga Viaduct, which is now nearing completion, and is estimated to cost £80,000. The foundations of the Mohaka Bridge have been constructed, and the steel for the towers and the superstructure is now in the Public Works shops at Tauranga for fabrication.

At the present rate of progress this line would be completed in about twelve months' time. It was represented to the Board that its completion would be of great benefit to Wairoa and the surrounding district, which includes some of the best land between Napier and Gisborne. Careful attention has been given to the potentialities of traffic from the country between Napier and Wairoa, which, however, are not good. The land traversed by the line carries a small population and is mainly sheep-country.

Ratepayers within this area are subject to harbour rates and will naturally seek to divert their business to the steamers in order to minimize their burden of rates. Keen competition is to be anticipated also from road services. The Department has already experienced this in the district in connection with a through-booking arrangement which it instituted for goods by rail to Putorino and thence by lorry to various points as far as Gisborne. Rates were reduced to meet competition, but it was found that opposition road services were able to concentrate on the better-paying classes of traffic, leaving the less remunerative classes to the Railway Department and its road contractor.

The frozen-meat and by-products from Wairoa are all shipped through Waikokopu. There will be constant and keen competition for the wool traffic between boat, motor-vehicle, and rail, and experience has shown that the boat and the motor-vehicle operators will generally underbid the railway for the higher classes of traffic.

After careful investigation of the possibilities of the goods traffic, the Board is of opinion that it could not be relied upon to furnish any substantial revenue to the railway.

As regards passenger traffic, the settlement on the route of the railway is very sparse; the Town of Wairoa is the only centre of population of any magnitude. Road services are already well established in this district, and competition will, in the opinion of the Board, continue to be keen. The Board is of opinion that the possibilities of passenger traffic are limited.

The total capital cost of the whole section between Napier and Wairoa would be approximately £2,516,158. The Board is of opinion that the line, if completed, would not earn sufficient revenue to pay operating-expenses, much less return any contribution towards interest on this large sum.

(3) *Wairoa-Waikokopu.* (24 miles 35 chains.)

	£
Capital cost	653,729
Expended to 31st March, 1931	616,559
	<hr/>
Estimated cost of completion	£37,170

The cost of the Waikokopu Wharf and Breakwater (£59,531) is included in the foregoing figures.

The line was built principally for the transport of frozen meat and products from the freezing-works at Wairoa to the port of Waikokopu, and is operated by the Public Works Department, as is also the port of Waikokopu.

Waikokopu provides fairly good berthage for ships, except in southerly weather. Coastal vessels are berthed at the wharf, whilst ocean liners lie off, meat and other produce being taken out by lighters, which are sent from Napier as occasion requires.

The line was originally regarded as a branch line, but with the decision to abandon the inland railway route between Wairoa and Gisborne in favour of the coastal route it became an integral portion of the proposed railway route between Napier and Gisborne.

The meat-works at Wairoa were badly damaged by fire in February last. If they are not restored, the main source of revenue from the line will be lost and the necessity for keeping it open will disappear. Even should the meat-works resume operations, the line as a separate entity would not be justified.

Motor-lorries are now run between Wairoa and Waikokopu for most lines of traffic, and the only commodity that would of necessity have to be conveyed by rail is frozen meat. The revenue from that traffic would not justify operating the line as part of the railway system. As an alternative to the abandonment of the line, an arrangement might be come to with the meat company to lease it for use as a tramway for the carriage of the company's output.

(4) *Waikokopu-Gisborne.*

	£
Estimated capital cost	1,757,618
(or £48,823 per mile of line)	
Expenditure to 31st March, 1931	571,438
Estimate to complete	1,186,180

The suggested line is a continuation of the line from Napier to Wairoa, and is designed to give rail access to Gisborne. The length to be constructed is 35 miles 40 chains. Work was commenced in April, 1929, and stopped on the 14th January, 1931.

The route selected is along the sea-coast, and consequently serves the country on one side only, which for the greater part of the distance is steep and rugged. Only a few miles near Waikokopu and the area near Gisborne are suitable for close settlement. The coastal route represents a connecting-link between Gisborne and the North Island railway system rather than the means of opening up country along the route of the line for settlement.

The Board is of opinion that, notwithstanding the productivity of the Poverty Bay district, the volume of business that would be secured by the railway, having due regard to all relative factors, including competition by sea and road, would not give a financial return commensurate with the cost of the line.

Having considered the four sections separately, it is now necessary to deal with the Napier-Gisborne line as a whole.

A useful basis from which to commence consideration of the financial position would be the actual experience on the North Island lines. The gross revenue per mile on the North Island main lines, *excluding the non-paying branch lines*, was last year £3,533 per mile. The average operating ratio of working-expenses to revenue for the last three years was 83·8 per cent. The average annual interest charge for rolling-stock on North Island main lines was £186 per mile. The total capital cost of the completed line from Napier to Gisborne would be £4,927,505.

Utilizing these figures, and assuming for the moment that the Napier-Gisborne Railway could produce a result equal to that produced by the main North Island lines as above described, the following statement shows what the position would be:—

	£
Revenue—133 miles at £3,533	469,889
Expenditure—133 miles at £2,961	393,813
	<hr/>
Net revenue	76,076
Interest charges—	
5 per cent. on £4,927,505	246,375
Rolling-stock, at £186 per mile	24,738
	<hr/>
Estimated annual loss if the proposed line is completed	£195,037
	<hr/> <hr/>

In view of the fact that the construction of this line has been spread over a considerable number of years, the interest charges have been averaged at 5 per cent.

The Board is convinced that the average results of the North Island lines (excluding the non-paying branches) are not possible of even approximate attainment by the Napier-Gisborne line. The statement serves, however, to bring out clearly that even if that result could be achieved the line would be unprofitable. As bearing on the result that might be achieved by the line, the following facts are relevant:—

It is claimed that the railway would secure the bulk of the passenger traffic passing between Gisborne and the south, and which is at present being catered for by service cars. This claim is based mainly on the hilly and tortuous nature of the road. On this ground also it was strongly represented to the Board that private-car owners would prefer to patronize the railway. In the light of general experience the Board considers that this claim is highly speculative, and concludes that the passenger traffic could not be relied upon to afford any very substantial return on the money that would be required to construct the line.

Goods traffic may be considered under two headings—namely, the produce of the district outwards, and the requirements of the district inwards. The first heading would embrace principally wool, maize, frozen meat, live-stock, and a limited quantity of dairy-produce. Inwards, the principal commodities would be general merchandise, coal, petrol, and fertilizers. Wool is at present to a large extent shipped through the ports that serve the district, and it is not likely that the provision of a railway would secure the total transport of this product. After a careful analysis of the possibilities of goods traffic, both outwards and inwards, the Board is of opinion that there is no prospect of obtaining a revenue sufficient to show a reasonable financial return on the cost of the line.

The shipping facilities which exist at Wairoa, Waikokopu, Gisborne, Tolaga Bay, and Tokomaru Bay have an important bearing on the question of constructing this railway. The following figures, taken from the "Local Authorities Handbook," showing the amounts collected by way of harbour rates, are relevant in this connection:—

	1925.	1926.	1927.	1928.	1929.
	£	£	£	£	£
Tolaga Bay	816	2,842	4,691	3,694	4,794
Gisborne .. .. .	..	16,797	23,670	35,628	36,176
Wairoa	8,647	6,483	7,483	5,605	7,587
Napier	13,919	10,113	14,103	14,128	376

A natural desire to minimize this liability to rating must always predispose ratepayers and residents in these districts towards the sea route, and they could hardly be expected to patronize the railway with any traffic that could be shipped by sea.

After carefully reviewing all the circumstances, the Board is of opinion that a fair indication of the financial prospects of the line may be obtained by reference to the results of the working of the Taneatua line. The Board is aware that it

has been contended that the fact that the proposed line will have Gisborne as its terminus, whereas there is no parallel circumstance associated with the Taneatua line, makes the comparison not a fair one as regards the proposed line. Against this, however, it is clear to the Board that the land along the route of the Taneatua line is greatly superior to that along the route of the Gisborne line. Except for the areas in the immediate vicinity of Gisborne and Wairoa, the country along the route of the Napier–Gisborne line is not first class, and much of it may be classed as inferior. On the other hand, the Taneatua line serves many rich areas in the vicinity of Opotiki, Opouriau Valley, Whakatane, and the Rangitaiki district, Tauranga, and Te Puke. The conclusion of the Board is that a comparison between the two lines would be a reasonably fair one. On the basis of the operating results of the Taneatua line for last year, the following statement shows what the results would be for the Napier–Gisborne line:—

	£
Working-expenses—133 miles at £956	127,148
Less revenue—133 miles at £568	75,544
	<hr/>
Operating loss—133 miles at £388	51,604
Less credit allowed for feeder value—133 miles at £88.. .. .	11,704
	<hr/>
	39,900
Add interest charges—5 per cent. on £4,927,505	246,375
Rolling-stock—£35 per mile	4,655
	<hr/>
Total loss per annum	<u>£290,930</u>

The Board is definitely of opinion that the construction of the Napier–Gisborne line is not justified, and that work where now proceeding should be stopped.

PART III.—KAWATIRI–INANGAHUA.

The proposed line from Kawatiri to Inangahua would be approximately 47 miles 32 chains long, and would connect the Nelson Section with the main South Island railway system. The following is the position in regard to expenditure in connection with the construction of this line:—

	£
Estimated capital cost	1,853,000
Average cost per mile of line	38,604
Expenditure already incurred	256,000
Estimated cost to complete	1,597,000

The foregoing figures of the cost of the line must be taken as approximate only, as the location of the line between Murchison and Inangahua has not been finally surveyed, except for the first 3½ miles from Murchison. This section of the line would run through the upper Buller Gorge, where construction work would be very difficult and costs proportionately heavy. From Kawatiri to Gowan, a distance of 3 miles 22 chains, the line has been completed, but is still in the hands of the Public Works Department. From Gowan to Murchison (17 miles 50 chains) the formation has been partly carried out, and it is estimated that the line could be completed to Murchison by an expenditure of approximately £284,000.

The Board proceeded to Nelson on Wednesday, 12th August, accompanied by the General Manager, and was met at Nelson by the Mayor of Nelson and representatives of various bodies in the district. The Board left Nelson the next morning by train for Glenhope, accompanied by Mr. G. C. C. Black, M.P. for Motueka, and other residents of the district, who were given the opportunity of conveying to the Board all the information they desired to give in connection with the matter under consideration. On arrival at Glenhope the Board proceeded by road over the route of the proposed line via Murchison, through the upper Buller Gorge, to Inangahua.

Consideration of the passenger business in regard to the proposed line does not afford much prospect of a volume of business that would justify the construction of the line. The route from Nelson to Westport and Greymouth is covered by a standard of road that is quite satisfactory for the traffic passing over it, and the business is at present being catered for by service cars. The

transport provided by the cars is, in the opinion of the Board, quite adequate to the needs of the district, and from the point of view of the requirements of this branch of the business there is no justification for the construction of the line. The Board considers that the service cars would continue to run on this route even if the railway were constructed, and that the cars would continue to secure a proportion of the traffic. The passenger traffic is not extensive, and would not be sufficient to warrant the provision of passenger services by rail sufficiently attractive to divert the business from the service cars.

With regard to goods traffic, it has been suggested that the line would provide an outlet from the Nelson District for fruit and stock to the South Island markets. Fruit from Nelson would come into competition with other sources of supply of fruit in the South Island. It would require to be transported long distances to reach the markets that would be served by the rail connection. Live-stock traffic from Nelson District to the South Island markets would not show any appreciable return on the expenditure that would be involved in providing the connection. In this case, again, the distances would be long and the traffic relatively expensive to work by reason of its being a one-way business.

As regards traffic towards Nelson, it has been claimed that a business in the transport of coal would develop. The coal traffic for Nelson City itself does not call for the construction of the railway. The likelihood of such deposits as may exist along the route of the railway being developed in competition with coal deposits already opened up in the Westport and Greymouth Districts and served by adequate means of transport is, in the opinion of the Board, extremely remote. The principal distributing centre from which Nelson draws its general merchandise is Wellington. The alternative centre that would be provided by connection of the Nelson Section with the South Island main section of railway would be Christchurch, and land transport via the railway route from Christchurch could not compete successfully with sea transport from Wellington.

With regard to the possibilities of the line as a factor in the development of the district, the Board's conclusion is that the scope in this direction is limited, and that those portions which do offer any reasonable possibility of development can be served by road transport. It may be mentioned in connection with this line that in January, 1928, a scheme was inaugurated between Glenhope and Murchison whereby goods and live-stock were conveyed by lorry at railway rates, so that the settlers were, from the point of view of their transport costs, placed in practically the same position as if the railway had been constructed. The business that has been done by this service may therefore be taken as some indication as to what the railway, if constructed, would return. On examining the matter from this point of view it is found that the revenue derived from this service was only £62 per mile per annum. This is, of course, a very low figure, and quite insufficient to justify the provision of a railway.

The position in the case of this railway, as with others dealt with in this report, is complicated by the fact that transport by sea, which would largely affect the railway from a competitive point of view, is subsidized by harbour rating. The Nelson Harbour Board has collected the following amounts in rates for the respective years shown hereunder :—

		£			£
1925	..	..	3,179	1928	.. .. 2,337
1926	..	..	2,601	1929	.. .. 2,475
1927	..	..	2,077	1930	.. .. 3,696

This rating provides an incentive to the use of the port when it affords means of transport alternative to the railway, and this factor must be taken into account as an influence limiting the financial return that would be obtained from the proposed line.

After reviewing the costs of construction and operation and the prospective revenue, the Board is of opinion that the construction of the Kawatiri-Inangahua line is not justified.

PART IV.—WESTPORT—INANGAHUA.

	£
Total estimated cost	977,000
Expenditure to 30th June, 1931	527,000
Estimated expenditure to complete	450,000
Total cost equals £37,577 per mile.	

The Westport–Inangahua line was originally projected about 1907. In April, 1912, the section from Westport to Te Kuha (5 miles 61 chains) was opened for traffic and has since been worked as a goods line, with an occasional excursion passenger-train. In July, 1927, the line from Te Kuha to Cascade, a further distance of 2 miles 65 chains, was brought into use by the Public Works Department for the conveyance of coal from the Cascade Mine, and this section of the line is still being worked by that Department. The distance from Cascade to Inangahua is 17 miles, making a total distance from Westport to Inangahua of 26 miles.

Other distances that are relevant to a consideration of this line are the following :—

	By Rail if constructed.	By Road as at present.	
	Miles.	Miles.	
Westport–Greymouth	92	69	Coast road.
	..	96	Road to Reefton and rail Reefton–Greymouth.
Westport–Christchurch via Greymouth .. .. .	..	214	Coast road to Greymouth and rail Greymouth to Christchurch.
Westport–Christchurch via Stillwater	220	..	..
Westport–Nelson	139	150	..

The Board, after going over the route of the Kawatiri–Inangahua Railway, arrived at Inangahua on the afternoon of Thursday, the 13th August, and were there met by representatives from Westport, including the Deputy Mayor of Westport. The Board proceeded over the route of the railway, arriving at Westport the same evening. Next morning, after inspecting part of the district in the vicinity of Westport, the Board returned to Inangahua, where it joined the train for Greymouth.

The position in regard to passenger traffic is problematical. Practically the only possibility of a reasonable assurance that the railways would secure the bulk of the passenger traffic to and from the direction of Nelson would be if the line were completed between Kawatiri and Inangahua. Assuming that this is not done the passenger traffic between the West Coast and Nelson would still require to be catered for by service cars, at any rate between Nelson and Inangahua Junction, and it cannot be foreseen whether the service cars, having once secured the passengers, would not cover the whole distance to Westport. The volume of the passenger traffic that would come to the railway is uncertain. The traffic for Greymouth and Christchurch is at present catered for by service cars, which run between Westport and Greymouth via the coastal road which has been recently opened. As will be seen from the figures set out above, the distance by rail over the new line from Westport to Greymouth would be 92 miles, while the distance by the coastal road would be only 69 miles. The road has also some scenic attractions, and the Board is of opinion that the great bulk of the passenger traffic between Westport and Greymouth would continue to go by the road route.

With regard to passenger traffic between Westport and places beyond Greymouth, particularly Canterbury, the present position is that passengers travel by service cars over the coastal road to Greymouth, where they join the train. The probability is that passengers would continue to use this route. The service permits them to leave Westport in the morning in time to join the express train for Christchurch at Greymouth, and, similarly, on the return journey the cars wait at Greymouth until the arrival of the train from Christchurch, proceeding thence to Westport, which

is reached at about 8.30 in the evening. This arrangement is convenient, and a railway service via the proposed new line would present no advantages over it from a service point of view. It is true that at present rates the through fare from Westport, say, to Christchurch by rail would be less than the fare by road from Westport to Greymouth, thence by rail from Greymouth to Christchurch. Experience has shown, however, that in such cases the service cars can adjust their fares to approximate very closely to the through rail fare, and that the advantage of service and established practice is a very material factor. The Board is therefore of opinion that passenger traffic would not afford a substantial contribution to the revenue from the line.

The principal classes of goods traffic that may be expected to pass over the line are coal, live-stock, and general merchandise. The indications are that the coal traffic would be largely confined to screened coal for stations in Canterbury. Other classes of coal from the present mines are not likely to be diverted to the railway to any substantial extent. In regard to the possibilities of new coal-measures being opened up on the route of the line, the Board is not sanguine that any considerable development in this direction would take place within a reasonable time. The mines that are already opened in New Zealand would be in keen competition with any new ventures; and, as the coal-market has shown a marked shrinkage since the development of electrical power, the successful opening-up of new coal-measures is likely to be slow. Moreover, the fact requires to be taken into consideration that there are very extensive coal deposits already served by railway-lines that are quite sufficient to meet the present and prospective demand for coal for many years to come. Viewing the coal position from a national standpoint, there is no necessity for the construction of the proposed line.

There has been a suggestion that the linking-up of the Westport district with the main South Island railway system would enable Westport coal to be railed to Lyttelton for the purpose of bunkering ships. The best information that can be obtained is that there is no likelihood of the development of any substantial business in this direction. Other possible traffic would be live-stock, but this would be practically confined to butchers' requirements in the Westport district. These requirements are at present met principally by sea from the North Island, but it is probable that if the line were constructed supplies would be drawn by rail from Canterbury. This traffic is, however, limited. Figures which were recently taken out indicate that it would amount to approximately three trucks of live-stock per week.

The traffic in general merchandise would be towards Westport, and the indications are that a fair proportion of it would pass over the new line. The great bulk of this traffic at present comes into Westport by sea, but with the institution of road services operating from Inangahua in conjunction with the railway there has been a development of general merchandise traffic from Canterbury into the Westport district by rail and road. In view of this development, it appears probable that some portion of the traffic now entering Westport by sea would be diverted to the proposed line. It is difficult, however, to forecast to what extent this would take place. It was urged that if the line between Inangahua and Westport were completed the same increase in traffic as was experienced on the Otira line might be expected. The differences in the distances from the points on the Greymouth line and on the Westport line, respectively, to Christchurch make the position of the Westport line much less favourable than that of the Greymouth line in relation to competition between Westport and Christchurch, and the Board concludes that there would not be an increase in traffic by rail from Westport to Canterbury such as was experienced in the case of the Greymouth line. So far as transport costs are concerned, the sea route would have the advantage, while, on the other hand, from a service point of view the advantage would rest with the railway. It may be quite safely concluded that competition by sea would continue, and that this would operate as a factor limiting the traffic in general merchandise that would pass over the railway-line.

There are some fairly extensive blocks of timber in the district that would be served by the line, but having regard to the shorter haul from stations on the Ross-Otira Section, it is not likely that there would be any rapid development of the timber trade from the district that would be served by the proposed line to Canterbury, which is the principal market for timber produced on the West Coast.

With reference to the prospective development of the district and its relation to the railway, the Board cannot see any great possibilities. The position in regard to coal and timber has been already dealt with, and, so far as farming is concerned, the district that would be tapped by the line has very limited scope for development.

It appears to the Board that there is no justification for the line. The cost of construction is high, being over £37,000 per mile. The Board is of opinion that, if the line returned any net revenue at all on operating, the amount would fall far short of the interest charges, and that the net result would be a further burden on the taxpayers of the Dominion, without any commensurate advantage to the Dominion as a whole.

The Board's conclusion, therefore, is that the completion of the Westport-Inangahua line is not justified.

PART V.—WAIOTIRA—DARGAVILLE.

The line dealt with in this part of the report—namely, from Waiotira to Dargaville—may for the purposes of the report be conveniently divided into the following sections:—

Waiotira-Kirikopuni (14 miles of open line).—The construction of this section was commenced prior to the Great War, but was suspended in 1915. The work was recommenced in 1921, and on the 15th May, 1928, the line was handed over to the Railways Department and has since been operated as an open line.

Kirikopuni-Tangowahine (10 $\frac{1}{4}$ miles).—The construction of this section is completed, but the line has not yet been handed over to the Railways Department, and is being operated by the Public Works Department.

Tangowahine-Dargaville (7 $\frac{1}{4}$ miles).—This section is still incomplete and construction has been stopped.

The capital cost of the Waiotira-Dargaville line is shown in the following summary:—

	Distance.	Total Cost.	Cost per Mile.
	Miles.	£	£
Waiotira-Kirikopuni (open line)—			
Actual cost of construction	14	1,059,350	75,668
Kirikopuni-Tangowahine (completed but still under control of the Public Works Department)	10 $\frac{1}{4}$	}	}
Tangowahine-Dargaville (construction stopped)	7 $\frac{1}{4}$		
Actual expenditure to 31st July, 1931, on this 17 $\frac{1}{2}$ miles ..	..	448,439	} 28,254
Estimated cost of completing from Tangowahine to Dargaville	..	46,000	
Totals	31 $\frac{1}{2}$	1,553,789	
Average cost per mile of line .. .. .	..	..	49,327

	£
Total amount expended to 31st July, 1931 ..	1,507,789
Total amount estimated as required for completion ..	46,000
	<u>£1,553,789</u>

The Kaihu Valley line, which extends from Dargaville northward to Donnelly's Crossing, will also be referred to in the course of the report. The following are relevant data regarding that section of line :—

	Distance.	Total Cost.	Cost per Mile.
Dargaville-Kaihu (open line completed 1893)—	Miles.	£	£
Actual cost	16½	54,948	3,330
Kaihu - Donnelly's Crossing (open line, completed 1923)—			
Actual cost	7½	122,189	16,292
Totals	24	177,137	
Average cost per mile of line			7,381

This isolated section would be connected with the main North Island railway system by the completion of the Tangowahine-Dargaville line.

The Board left Auckland on the morning of the 22nd July for an inspection of these lines, being accompanied by the General Manager, the Hon. C. J. Carrington, M.L.C. (representing the Right Hon. J. G. Coates, member for Kaipara), and by officers of the Railways, Public Works, and Lands Departments.

The Board was met at Waiotira by the Mayor of Dargaville, the Mayor of Whangarei, the Chairman of the Whangarei Harbour Board, and other representatives of local interests. At Dargaville, and later at Donnelly's Crossing, the Board met local settlers and business men and received many oral and written statements in reference to the completion of the line. The Board has given careful consideration to these statements, as well as to the information obtained and the observations made during the inspection, supplemented by a close analysis of the Departmental records and data.

The problem is whether the completion of the Tangowahine-Dargaville Section is justified, having due regard to the transport requirements of the district and to the financial results that will follow from the operation of the Waiotira-Donnelly's Crossing line if the work is completed and the whole line taken over by the Railways Department.

With regard to the transport requirements of the district, the position is materially affected by geographical conditions peculiar to the locality. These conditions arise from the natural facilities for transport by water made available by the extensive waterways of the Kaipara Harbour and of the Wairoa River, covering the whole area from Helensville in the south to Dargaville in the north. No point in the whole area served by the proposed railway is far distant from these waterways on the one side or from the shipping facilities of Whangarei Harbour on the east coast. It is a well-established fact that transportation by water can be provided at a lower cost than transportation by land. It is not surprising, therefore, to find that the transport requirements of this area are being met to a large extent by vessels of various kinds operating on these waterways, and that they secure a large proportion of both the goods and the passenger traffic. Further, the roads throughout the area have been greatly improved, with the result that road transport has become an important factor and provides an easy means of short-haul transport to and from the waterways already mentioned. In addition, the motor services secure a considerable volume of passenger and parcels traffic to and from Auckland.

The Board finds that under present conditions the transport requirements of the district are being met to a substantial extent by the combination of water and road transport, and that, generally speaking, these requirements are by no means dependent on the completion of the railway.

The Board feels that the prospective financial results of the proposed railway must be considered in the light of the conditions referred to above, having regard also to the volume of business now offering in the district and to the possibilities of further development. The district is not densely populated, and passenger traffic will always be proportionate to population. The volume of passenger business that would be secured by the railway would fall far short of what would be required from that source to show a return commensurate with the high cost of constructing the proposed line and the cost of working the traffic thereon.

The position as regards goods traffic is much the same. The natural products of the district are mainly timber and kauri-gum, both of which are rapidly diminishing sources of traffic. The Board was impressed with the development that is taking place in farming, with a consequent increase of traffic in dairy-produce and livestock. In the representations made to the Board strong emphasis was laid on the prospects of much further development in this respect, and the Board has taken this into account in considering the prospective earning-capacity of the proposed line. The inwards goods traffic of the district consists of coal, cement, fertilizers, and various lines of general merchandise. In the carriage of both the outwards and the inwards goods traffic full advantage is being taken of the inducements offered by cheap water transport. A comparison of freight-rates for general merchandise between Auckland and Dargaville by the through-railway route and by the combined sea and rail route via Helensville shows charges ranging from 44s. 3d. per ton for Class D goods to 83s. 5d. per ton for Class A goods by the former service and 39s. to 46s. 6d. per ton by the latter service. At present the bulk of the dairy-produce from Dargaville to Auckland is conveyed by the sea and rail route despite a substantial reduction offered in the rail route via Waiotira.

The Board's examination of the whole position shows that the volume of goods traffic that would be secured by the railway would be limited, and, as in the case of passenger traffic, would not be commensurate with the high cost of constructing the line and operating it. The Board is faced with the fact that if the Tangowahine-Dargaville line were completed the Railways Department would incur interest charges on £494,439. These charges would amount to £26,000 per annum. The total capital cost of the line from Waiotira to Dargaville would be no less than £1,553,789, on which the annual interest charges would be £71,000, or £2,254 per mile of line. This annual charge would rank amongst the highest of any of the lines throughout the Dominion, and would obviously call for a very substantial surplus on operating results if the line is to make any reasonable contribution towards this high interest charge.

Having due regard to all relevant factors, both present and prospective, the Board is convinced that there would be no such surplus from the operation of the line, but, on the contrary, the result would be an annual operating loss.

The following are the actual operating results on the section of line already open between Waiotira and Kirikopuni and on the Kaihu Valley Section:—

Waiotira-Kirikopuni.

				Year ended 31st March,	
				1930.	1931.
				£	£
Working-expenses per mile of line	..	..	..	565	614
Less revenue per mile of line	..	..	..	193	195
Operating loss per mile of line	..	..	..	372	419
Less credit allowed for feeder value per mile of line	..		..	170	118
				202	301
Add interest charges per mile of line	..	..	..	3,230	3,231
Total loss, including interest, per mile of line	..		..	£3,432	£3,532

Kaihu Valley (Dargaville-Donnelly's Crossing).

				Year ended 31st March,	
				1930.	1931.
				£	£
Working-expenses per mile or line	..	..	..	400	372
Less revenue per mile of line	..	..	..	271	238
Operating loss per mile of line	..	..	..	129	134
Add interest charges per mile of line	..	..	..	340	342
Total loss per mile of line, including interest	..		..	£469	£476

The significance of these figures lies in the fact that, although there is a great difference between the two sections as regards the interest charge per mile of line, both sections show an actual loss on operation and neither contributes anything towards the annual interest charge. It has been submitted to the Board that the adverse experience in operating these two sections is largely attributable to the lack of through communication by rail, and that this establishes a good argument

for the completion of the Tangowahine–Dargaville Section. The Board appreciates this aspect of the case, but must point out that the contention is sound only if the completion of the line and the consequent operation of the through line would transform the present operating losses into operating profits. The Board's examination of the position leaves it with the conviction that completion of construction to Dargaville would not materially improve the results, and a heavy annual deficiency would still be shown.

The traffic possibilities of the district from a railway standpoint, even allowing for future development, cannot be considered as comparing at all favourably with the main North Island lines. Nevertheless, the Board finds that even if it is assumed that the Waiotira–Dargaville and the Dargaville–Donnelly's Crossing lines were capable of earning the same revenue as the main North Island lines, excluding non-paying branches, the net result would make a totally inadequate contribution towards the high interest charges with which the Department would be faced. This arises from the fact that the high cost of construction of the line is out of all proportion to the traffic possibilities of the district.

The conclusion of the Board is that the completion of the Waiotira–Dargaville line is not justified.

PART VI.—OKAIHAU – RANGIAHUA.

The open railway-lines north of Whangarei extend to Opuia on the Bay of Islands. From Otiria a branch line runs northwards for 25 miles to Okaihau. An extension of the line has been under construction from Okaihau for a distance of 14 miles to Rangiahua, on the headwaters of the Hokianga Harbour. The construction of this extension has been stopped. The following are the figures relating to the construction costs of the proposed line from Okaihau to Rangiahua :—

				£
Amount already expended ..	..	..	..	655,392
Estimated cost of completion ..	..	..	..	60,000
				<hr/>
Total estimated cost of line ..	..	..	..	715,392
				<hr/> <hr/>
Cost per mile of line ..	..	..	..	£51,099

The country from Okaihau to Rangiahua is unstable and the cost of construction is accordingly high.

A highway runs practically up the centre of the valley from Okaihau to Rangiahua, and the sum of £20,000 has been expended on this road in connection with the construction of the railway. It is estimated that a further £5,000 will be required for the completion of the work on the road. The total expenditure of £25,000 on this road will be charged to the Railway Construction Account. The road is more advantageously situated than the railway in catering for goods and passenger traffic offering between Okaihau and Rangiahua. The distance by road is 10 miles, as against 14 miles by the railway; and whereas the road taps the floor of the valley, the railway is well above the floor of the valley at Okaihau and for a considerable part of the distance to Rangiahua.

The Board visited Rangiahua on the evening of the 24th July, and had an opportunity of hearing the views of residents of the district. The Chairman of the County Council, the County Manager, and others placed before the Board full information regarding the local situation. The Board was accompanied by officers of the Railways, Lands, and Public Works Departments, from whom also valuable information was obtained.

The proposed line will establish rail connection with Hokianga Harbour, as the railway would actually meet tidal water at Rangiahua. The geographical position is therefore very similar to that already referred to in Part V of this report dealing with the Waiotira–Dargaville line.

Accordingly the Board, in considering the question of whether the Okaihau–Rangiahua line should be completed, has, as in the case of the Waiotira–Dargaville line, examined the position from the point of view of the transport requirements of the district, the present and potential possibilities of traffic, and the financial results that would follow from the completion of the line. With regard to the

transport requirements of the district, the Board finds these are substantially supplied by the natural facilities for sea-borne traffic provided by the extensive waterways of Hokianga Harbour on the west coast and by the ports of the east coast, supplemented by road transport from the various seaports to points inland.

A comparison of freight rates by sea for general merchandise shows that such goods can be landed from Onehunga at Horeke, on Hokianga Harbour, at charges ranging from 15s. to £1 per ton. Such goods are charged by weight or measurement, as is the custom with sea-borne traffic; and even if it be assumed that the effect of this practice may be to make the charges on a dead-weight basis as much as twice the charges specified above, it will be seen that the maximum range on the freight rates would be £2 per ton dead-weight. The railway rates for general merchandise from Auckland to Rangiahua would range from £2 12s. 3d. for class "D" goods to £4 19s. 5d. for class "A" goods per ton dead-weight. The traffic to Rangiahua itself would be decidedly limited, and that place, as terminus of the railway, would have to be considered more from the point of view of a distributing centre. From this point of view the distance of 6 miles between Horeke and Rangiahua does not materially affect the question of the comparison of rates. It is to be noted also that for traffic northward from Hokianga Harbour there are other ports as conveniently situated from the point of view of road access as Rangiahua, and to which the shipping rates from Onehunga would not materially differ from those quoted above for Horeke. The margin of difference between the railway rates and the shipping rates is so striking as to render the conclusion inevitable that the proportion of general-merchandise traffic that would be secured to the railway would be negligible, and would probably be limited to goods where there would be special circumstances, such as urgency.

Even as to fertilizers the railway would have no advantage in cost over the sea route. The railway rates from Westfield to Rangiahua would be as follow: 12s. 4d. per ton for lots of not less than 6 tons; 15s. 5d. for lots of not less than 1 ton. Having regard to the rates charged by the ships for general merchandise, it is clear that the shipping interests would find it quite possible to carry fertilizer at a rate that would be competitive with the railways.

The district is well provided also with passenger service cars. The road routes are more direct than the proposed railway route, and the Board sees no prospect of any substantial volume of passenger traffic being diverted to the railway north of Otiria even if the extension to Rangiahua is completed.

Examination of the goods-traffic possibilities of the district shows that the volume of business that would be available for the railways is limited. The Board is impressed with the amount of development that has taken place in these North Auckland districts in recent years, and with the possibilities for future development. It does not follow, however, that this development would be proportionately reflected in the railway revenue. The output of the dairy factories in the district is at present being transported by sea, and it does not appear that the extension of the line to Rangiahua would be likely to divert this business to rail. Indeed, practically the only traffic that might be assured to the rail would be live-stock. Such traffic, however, is seasonal, and a one-way traffic, and accordingly has a limited value as regards railway net revenue. Even a substantial live-stock traffic would fall far short of providing an adequate return on the high capital cost of the proposed line.

The best guide to the financial possibilities of this line is to be found in the results that have been obtained from the working of the branch line between Otiria and Okaihau, of which the section to Rangiahua is an extension. The financial results of the working of this line for the last two years were as follow:—

		1930.	1931.
		£	£
Working expenses	.. .. .	14,875	14,583
Less revenue	.. .. .	7,750	6,906
Operating loss	.. .. .	7,125	7,677
Less credit allowed for feeder value	.. .. .	4,542	3,231
		2,583	4,446
Add interest charges	.. .. .	15,363	15,354
Total loss, including interest	.. .. .	£17,946	£19,800

It will be seen that the financial position of this branch is extremely unsatisfactory, and the Board sees no reason for concluding that the extension of the line to Rangiahua would decrease the operating loss, while, on the other hand, the burden of interest charges would be very substantially increased.

The Board concludes that the completion of the line from Okaihau to Rangiahua is not justified.

CONCLUSION.

In concluding this report, the Board feels constrained to make some observations of a general character which are suggested by the investigations that it has made into the various railways that have been dealt with herein.

A point that was frequently stressed before the Board in the course of its investigations was that, as a considerable portion of the total expenditure involved in constructing various lines had already been incurred, the spending of the balance in order to complete the line would be justified. Such a contention has to be considered with reference to section 20 of the Government Railways Amendment Act, 1931, which reads as follows:—

“The Board on being satisfied that any railway or part of a railway can continue to be operated only under conditions that will result in the net revenue therefrom being insufficient to cover the working-expenses thereof, or on being satisfied that the continued operation of any railway or part of a railway is otherwise not in the public interest, may cease to operate the same, and with the approval of the Governor-General in Council dispose of the land and all other property of the Crown in respect of such railway or part of a railway.”

Unless, therefore, the line shows a definite prospect of returning at least a reasonable amount of net revenue as a contribution towards interest charges, it appears to the Board that, notwithstanding what may have been already spent, the expenditure of any further moneys for the completion of any such line would not be justified. From a financial point of view the completion of a line which will not return sufficient to meet operating-expenses is simply creating a recurring liability.

References have been made during the Board's investigations to the adverse effect on employment that would result if no further construction on these railways were undertaken. While the Board fully appreciates the seriousness of the unemployment position, it feels strongly that the question before it is one of railways policy, and that the vital issues involved therein should not be confused by reference to the unemployment problem, which has been the subject of special legislation and which is under the care of the Unemployment Board. Since the Board has concluded that completion of the lines cannot be justified on the basis of sound railways finance and policy, it is impossible to justify such completion merely on the grounds that it would create employment or ease the present unemployment problem. To do so would be to confuse the real issue and place the national unemployment problem in a wrong perspective. Public opinion is turning towards the desirability of utilizing the Unemployment Fund in more productive works, and this has no doubt prompted the suggestion made in some quarters that further railway-construction on the lines under consideration offers a suitable means of utilizing relief labour in productive channels. The Board is unable to concur with this view, since it has reached the conclusion that further expenditure on these railways would not create a productive asset, but would in fact involve the Dominion in further financial obligations and recurring annual losses.

An important phase of the problem of construction of further railways that the Board fears is apt to be overlooked is the very radical change that has taken place in recent years in the transport industry. The development of the motor-vehicle in conjunction with the development of the roading system of the Dominion has introduced a factor which has a very material bearing on the necessity for further railway-construction. The North Auckland Peninsula affords a very striking example of the change in the position from the point of view of the necessity of railways as the means of meeting the transport needs of the district. Up till comparatively recently the roading system in that district was not well

developed. In such circumstances, the necessity for the provision of railway facilities was much greater than it is to-day. The area is well served by navigable waterways from its main distributing centre—Auckland City. The utility of these waterways was in the past, however, almost wholly nullified by the lack of good roads and suitable vehicles to transport the goods to and from the various landing-points. To-day, however, the position is entirely different. The road system of the district has been developed to a very great extent, with the result that the utility value of the waterways as a part of the transport system of the district has been altogether altered, and, unquestionably, the waterways, in conjunction with good roads and suitable road-vehicles, are able to provide a means of transport reasonably adequate for the needs of the district and at a cost, both capital and operating, much lower than would be possible in the case of a railway. It must be remembered that, notwithstanding the provision of the railway, the development of the roading system has progressed, and is likely to continue to do so. The additional capital required to be expended to provide the necessary road-vehicles to operate in conjunction with shipping facilities is infinitesimal as compared with the capital required to provide a railway. It cannot be doubted that the natural and most economical form of transport for that area is not a railway, but a good system of roads converging on the waterways. Similarly, though possibly not so strikingly, the same influences are operating in other places to an extent that makes the necessity for the provision of a railway much less pressing than may have been the case before alternative means of transport were developed to the present stage.

The position is much accentuated by the fact that construction costs of the railways have now reached a very high figure. In order that the full significance of this statement may be appreciated, the following tabulation is afforded of the cost of constructing the various sections of line mentioned therein:—

Construction Costs and Annual Loss of various Lines in New Zealand (exclusive of Rolling-stock).

—	Year completed.	Construction Cost per Mile.	Annual Loss, including Interest, 1931.
		£	£
Oxford and Eyreton Branches ..	1878	2,300	16,870
Rakaia—Methven	1885	3,300	3,515
Southbridge	1875	3,600	4,688
Morrinsville—Rotorua	1894	5,600	..
Frankton—Thames	1898	6,000	..
Nelson—Glenhope	1913	6,600	42,263
Foxton—New Plymouth	1885	8,000	..
Palmerston North—Napier	1891	8,300	..
Otago Central	1922	9,786	90,802
Catlins River	1915	10,800	24,961
Marton—Te Awamutu	1909	13,700	..

In each case where the accounts for the line have been segregated so as to show the financial results of the section mentioned the amount of annual loss has also been stated.

Construction Costs of the various Lines dealt with in this Report (exclusive of Rolling-stock).

	Construction Cost per Mile.
	£
Wharanui—Parnassus	36,276
Napier—Gisborne	37,049
Kawatiri—Inangahua	38,604
Westport—Inangahua	37,577
Waiotira—Dargaville	49,327
Okaihau—Rangiahua	51,099

The highest figure for construction costs shown in the first tabulation is the section Marton—Te Awamutu. The country through which this section passes is difficult from a railway-construction point of view, and the cost per mile when the line was constructed was considered to be heavy. It will be noticed, however, that the average cost of that section may be regarded as very low as compared with the costs of the lines that are now under consideration. The cause of the present high costs is to be found in the physical nature of the country through which the lines pass and the high unit cost of construction work. Construction costs in recent years have been found by the Board to range from an average of round about £30,000 per mile up to £76,000 per mile and even higher. Even taking the lower figure, at present-day cost of money, which involves a charge of not less than 5 per cent., the net revenue per mile per annum that would require to be returned in order to make the financial position secure would be £1,500. When it is realized that on the North Island lines *after excluding the non-paying branch lines*, as shown in the annual Railway Statement the net revenue per mile is only £572 per annum, while in the case of the South Island main lines—that is, the main South Island system *after excluding the non-paying branch lines*—the net revenue is £294 per mile per annum, the impossibility of the situation from the point of view of the national finances becomes at once apparent. In raising this point the Board is not unmindful of the fact that in times past it has been the practice to construct railways in New Zealand which it was known would not return sufficient net revenue to meet interest charges, but which were considered to be justified owing to the indirect return to the State through the development of the country as a result of the construction of the lines. This position, however, requires some further examination in the light of present-day conditions. In the first place, the margin of difference between possible net revenue and interest charges has become so great as to impose a very serious burden on the national finances, and this raises the question as to whether, even if the developmental aspect is conceded, the country is in a position to afford to expend the moneys that are involved in providing new railway-lines. It must be remembered that, even after the construction of a railway, development is a more or less tardy process, so that the indirect return to the State arising therefrom is correspondingly remote. The burden in the meantime has to be carried, and, although this may be possible when the burden is of reasonable dimensions and the country's finances are in a state of buoyancy, the position becomes quite otherwise when the burden becomes so great and the finances are in so difficult a position as is the case at the present time. Moreover, on the developmental question the radical changes which have taken place in the transport industry in recent times certainly raise a doubt as to whether railways are as necessary for development as was previously the case, or, indeed, are the best method of providing the transport facilities that are considered to be requisite for such development. Generally, the traffic in the areas remaining to be served by new railways is relatively sparse, and such traffic can be better catered for by a small-scale production unit such as the road-motor than by a mass-production unit such as the railways.

Another aspect of this question is that the magnitude of the capital required is very much smaller and the process of investment can be made much more gradual in the case of road transport—so as to suit the requirements as they arise—than is possible in the case of railways. In almost every case where railways are proposed to be constructed in New Zealand roads have already been provided, and it would cost much less money to improve the roads to a satisfactory standard and to provide motor transport that would be reasonably adequate to the needs of the district than to construct and work a railway. Practically all the timber and coal requirements of the Dominion can be met from sources of supply that are already well provided with transport facilities, and, generally speaking, the products of the country are provided with reasonable access to suitable markets.

The foregoing facts will serve to indicate the difference in the position as it has existed in the past and as it exists to-day as regards railway-construction, and the decision of the Board in connection with the present proposals does not therefore imply any judgment at all adverse to the position of the railways as now existing. The Board believes that most of the existing railways will continue to be an essential part of the transport system of the Dominion for many years to come, notwithstanding that their financial results have been adversely affected

by the competition of other means of transport. Reference has been made in more than one place in this report to the adverse effect on the railway business, present and prospective, of competition by sea through harbours, the charges of which are partly met by local taxation. So also in the case of competition by road, the advantage afforded the road-vehicle by the provision of a way over which to operate, while the railways have to provide their own way and are debited with the full cost thereof, entirely obscures the economic position of the present railway system. The principal significance, however, in relation to the question of further railway-construction, of the development of other forms of transport than railways is that such development has made the construction of further railways less necessary for the purpose of meeting the transport needs of the various districts affected than was the case before such development took place. This fact, operating in conjunction with high construction-costs for railways, the narrowing of the margin of potential development, and the increasing pressure of competition has led the Board to the conclusions set out herein.

The construction of most of the railways that have been considered by the Board would, no doubt, result in some advantage to local interests. This, of course, will have its inevitable influence in moulding local opinion; but, inasmuch as the financial burden falls upon the Dominion as a whole, unless a sufficient proportion of the benefit accruing from the provision of the railways can be secured for the State, then the construction of the railways will simply be for the advantage of the relatively few at the expense of the many. Consideration of this aspect of the problem prompts the Board to refer to the question as to whether something might not, or should not, be done to secure to the State a due share of the financial benefit which would come to individual interests through railway-construction. In the course of its investigations the Board repeatedly raised the question with persons who came before it in advocacy of the construction of the particular line for the time being under review as to whether the owners of the land would submit to a rate to cover any financial deficiency that might result from the construction and operation of the line. The answer in practically every case was such as to lead the Board to the conclusion that such a proposal would not be favourably received by the landowners affected. The argument generally advanced was that unprofitable railways had been constructed in other parts of the Dominion, and that it was not just to ask the landowners of the particular district to make up a deficiency on the proposed railway when others whose land had been benefited by a railway had not been placed in that position. This places the burden of any unprofitable line that may be constructed on the taxpayer, and the Board certainly does not think that the taxpayer should have his burden of taxation further increased simply because of the policy of the past. It could scarcely be denied that the position of New Zealand in regard to its railway finance is a serious one. How, then, could an increase in the burden be justified? That burden is now making itself palpably felt, and the Board feels strongly that it would not be justified in making any recommendation that would still further increase it. The magnitude of the issue involved in this consideration will be realized from the following tabulation of the cost of completing the lines dealt with in this report:—

				£
Wharanui—Parnassus	..	..	..	2,242,261
Napier—Gisborne	..	..	..	1,526,663
Kawatiri—Inangahua	..	..	..	1,597,000
Westport—Inangahua	..	..	..	450,000
Waiotira—Dargaville	..	..	..	46,000
Okaihau—Rangiahua	..	..	..	60,000
				<hr/>
Total..	..	..	..	£5,921,924
				<hr/> <hr/>

The foregoing figures do not include provision for rolling-stock, signalling-appliances, or telegraph and telephone facilities, the cost of which would bring the total amount to substantially more than £6,000,000.

Inasmuch as none of the lines investigated could be constructed and operated without substantially increasing the burden on the national finances, the Board concludes that its duty is clear ; hence the recommendations embodied in the foregoing parts of this report.

There is appended hereto a map on which is shown all the lines that are referred to in this report.

In witness whereof the official seal of the Government Railways Board was hereto affixed by resolution of the Board in the presence of—

[L.S.]

J. J. ESSON, Chairman.

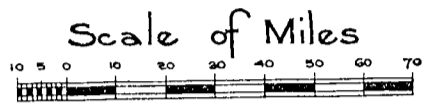
JAMES H. GUNSON,	}	Members, Government Railways Board.
GEO. W. REID,		
DANIEL REESE,		
EDWARD NEWMAN,		

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**MAP
OF
NEW ZEALAND
SHEWING
RAILWAY SYSTEM**



LEGEND.

- Lines open - - - shown thus
- Lines closed - - - " "
- Lines under construction - - - " "
- Lines proposed - - - " "
- Steamer route - - - " "
- " " " " " "
- Proposed steamer route - - - " "

