

1909.

VICTORIA.

REPORT

FROM

THE PARLIAMENTARY STANDING COMMITTEE ON RAILWAYS

ON THE QUESTION OF

RAILWAY COMMUNICATION WITH EAST GIPPSLAND;

TOGETHER WITH

APPENDIX, MINUTES OF EVIDENCE, AND PLAN.

Ordered by the Legislative Assembly to be printed, 30th June, 1909.

By Authority:

J. KEMP, GOVERNMENT PRINTER, MELBOURNE.

EXTRACTED FROM THE VOTES AND PROCEEDINGS OF THE LEGISLATIVE ASSEMBLY.

WEDNESDAY, 10TH FEBRUARY, 1909.

18. LINES OF RAILWAY REFERRED TO STANDING COMMITTEE.—Mr. A. A. Billson moved, pursuant to *amended* notice, That the following questions be referred to the Parliamentary Standing Committee on Railways for consideration and report :—

* * * * *

(5) The question of developing the East Gippsland country by means of a railway to eventually connect with the New South Wales railway system, and in the meantime open up the Crown lands between Bairnsdale and the New South Wales border to promote settlement and tap the timber and mineral resources of the district, and also the provision of a deficiency rate.

* * * * *

Question—put and resolved in the affirmative.

MEMBERS OF THE PARLIAMENTARY STANDING COMMITTEE ON RAILWAYS.

(*Ninth Committee.*)

The Hon. E. H. CAMERON, M.L.A., Chairman ;

J. W. Billson, Esq., M.L.A.,
J. Cullen, Esq., M.L.A.,
The Hon. Dr. W. H. Embling, M.L.C.,

The Hon. D. Melville, M.L.C.
(Vice-Chairman),
E. C. Warde, Esq., M.L.A.

APPROXIMATE COST OF REPORT.

	£	s.	d.
Compilation,*	..	..	..
Printing (900 copies)	..	..	..
	..	18	0 0

* The compilation was a portion of the work of the Secretary of the Railways Standing Committee, who is paid by annual salary.

REPORT.

(Summary of this Report on Page 16.)

THE PARLIAMENTARY STANDING COMMITTEE ON RAILWAYS, to which the Legislative Assembly referred the question of developing the East Gippsland country by means of a railway to eventually connect with the New South Wales railway system, and in the meantime open up the Crown lands between Bairnsdale and the New South Wales border to promote settlement and tap the timber and mineral resources of the district, and also the provision of a deficiency rate, has the honour to report as follows:—

1. This question was inquired into in 1908 by the Eighth Parliamentary Standing Committee on Railways, which visited Bairnsdale, Bruthen, Buchan, Orbost, Bonang, Bendoc, Delegete, and Bombala, and took evidence regarding the route of the proposed railway; the area of Crown lands available for settlement; the quality of the land; the varieties of the timber growing in East Gippsland, and quantities available; the mineral resources of that country; the likelihood of the proposed railway having to compete with water carriage; and the existing settlement and production around Bruthen and Orbost. Since then the present (Ninth) Committee has inspected the country between Orbost and Mallacoota, including the settlements at Murrungowar, in the valley of the Cann River, and around Genoa. Some months ago the Eighth Committee wrote to the Railways Commissioners asking them to supply it with an estimate of the annual revenue, interest charges, and working expenses of both a broad and narrow gauge railway from Bairnsdale, *via* Johnsonville, Bruthen, and Nowa Nowa, to Orbost, and also with an estimate of the annual average saving the Department would make by having sleepers, beams, and piles, required for railway work, delivered on the line at Bruthen, Nowa Nowa, or Orbost, instead of at Bairnsdale. This information, however, had not come to hand when the Committee ceased to exist, owing to the dissolution of Parliament. The evidence, &c., obtained by the former Committee was placed before the present (Ninth) Committee, and that information was of much assistance to it in arriving at a decision concerning the proposed railway.

PRESENT DIFFICULTIES OF COMMUNICATION.

2. The eastern part of Victoria, which includes the whole of the counties of Tambo and Croajingolong, comprising 3,400,000 acres, is without railway facilities. Of the numerous streams in that country only two or three are navigable by small craft for a few miles from their mouths during certain periods of the year. Frequently it is dangerous, for weeks at a time, for small steamers or sailing vessels to approach the coast because of the absence of harbor works and defined channels across the ever-shifting sand bars which are formed at the exits of all the rivers and inlets along the East Gippsland coast. Access by road to the large territory mentioned is also difficult and costly, owing to the roughness and steepness of the bush tracks. An effort has been made in recent years by the Government to improve the principal tracks by grading them in the worst places and bridging streams. But while this expenditure has been a benefit to the district by opening portions of the country to light vehicular traffic, where formerly saddle and pack horses had to be used, it has not been much of an inducement to the settlers to increase their production, because of the long distances they still have to cart to reach either the Bairnsdale railway station, or Lakes Entrance, which is the only port open all the year round. Consequently, East Gippsland is in a very backward condition both as regards settlement and production, and must remain so unless the railway is extended from Bairnsdale into that country or very costly ports are made at intervals along the coast line from Cunninghame to Mallacoota and roads constructed from the hill lands leading down to those harbors.

DESCRIPTION OF COUNTRY.

3. From Lakes Entrance to Cape Howe the land near the coast is mostly sandy and low-lying, with occasional grass-tree plains and small swamps; but on going inland the country becomes undulating, with a gradual ascent until, at a distance of from 10 to 20 miles from the sea, the chain of ranges which crosses East Gippsland from west to east is met with. These ranges, in places, have a sloping face, but here and there the rise is sharp and somewhat abrupt. They are broken and irregular in their outline, attaining an altitude of from 2,000 feet to upwards of 4,000 feet above sea level. Speaking generally, this rangy country, which is covered with timber of different varieties, extends northwards towards the border for 25 or 30 miles, and then gradually dips into New South Wales. Owing to the formation of the ranges, most of the rain falling in East Gippsland is shed into numerous streams flowing southward into the ocean, but that falling on the northern slopes of the ranges is carried by tributaries of the Snowy River into New South Wales. After flowing westward for 60 or 70 miles in that State the Snowy River enters Victoria, and passing through a gap in the East Gippsland ranges runs southward to the coast, entering the ocean about 30 miles east of Lakes Entrance and 90 miles west of Cape Howe. The Snowy River is the boundary between the counties of Tambo and Croajingolong. It is the principal stream in East Gippsland. Orbost, which is the leading town and largest agricultural centre in East Gippsland, is situated on the lower banks of the Snowy River, and Marlo—a favourite seaside resort—is at its mouth, about 11 miles from Orbost.

PROSPECTS OF SETTLEMENT.

4. In consequence of the remoteness of East Gippsland and difficulty of access very few have made a close inspection of that country. From the evidence and reports, however, obtained from officers of the Lands, Forests, and Railways Departments, who had been several times through various portions of the country, and also from the statements of local settlers and others, as well as from its inspection of different parts of this extensive area, the Committee is forced to the conclusion that the Crown lands in East Gippsland, totalling about 2,250,000 acres—after allowing for timber and other reserves—would not, even if railway facilities were provided, offer a field for immediate settlement on an extensive scale. This is due to the comparative poorness of the bulk of the lands in the hands of the Crown; to the steepness of the country in many places; to the high cost of preparing the land for cultivation either by clearing it where it is on the hill slopes or by draining where it is on the low-lying areas adjacent to the coast; and also to the fact that in most cases the settler would require a fairly large block to make a living off, thus restricting the number of families who could be settled in that portion of Gippsland. Fully two-thirds of the Crown lands are more adapted for grazing than cultivation, and in order that grass may grow it will be necessary to ring-bark the timber, which is very abundant and of good quality, but, except for special purposes, is not of any commercial value at present, because of the long distance it would have to be carried by rail to market compared with supplies obtainable nearer Melbourne. In any case, it is certain that railway extension into East Gippsland will not result, for the reasons stated above, in any immediate large increase in the area under cultivation, such as usually follows railway construction in the Mallee.

RICH LANDS ALIENATED.

5. Nearly the whole of the best lands in East Gippsland, including the rich alluvial flats along the principal rivers, are already occupied, the holders either having obtained the Crown grant of these fertile lands or having the right under their leases to do so. The Tambo flats adjacent to Bruthen contain about 3,000 acres, worth from £40 to £60 an acre, and the Snowy and Brodribb flats near Orbost comprise approximately 30,000 acres of exceptionally rich land yielding from 80 to 120 bushels of maize to the acre. Settlement on a limited scale has also taken place in the box country in the valley of the Cann River, and along the Genoa River which flows

into Mallacoota Inlet, as well as in the valleys of the Bendoc, Bonang, and Deddick rivers near the New South Wales border. On the limestone country and the small detached basaltic patches around Buchan there is some settlement but little cultivation, and there are also a few settlers on the volcanic land at Gelantipy, about 20 miles north of Buchan, which is almost wholly devoted to grazing. These are the principal settlements in East Gippsland. They are scattered in comparatively small groups over that country, and represent a total of about 600,000 or 700,000 acres out of the 3,400,000 acres in Tambo and Croajingolong. Some years ago the Lands Department made the Murrungowar country, about 20 miles east of Orbost, available for occupation. Most of the land was taken up and afterwards abandoned because of the then difficulties of access. Mr. E. J. Dunn, officer in charge of the Geological Branch of the Victorian Mines Department, informed the Committee that the ordovician rock covered considerably more than half the area of Croajingolong. It consisted of slates, mudstones, sandstones, and grits, and the soil derived from it was of poor quality, especially lacking in phosphoric acid and lime. Fruit trees and vines could be grown on such soil, but the grass at present on it was of poor quality. The flats in this ordovician country could be used if fertilizers were supplied, but the ranges carried so little grass that the land would not, he considered, be worth fencing in. Granite covered at least one-fourth of Croajingolong. The soils derived from this rock consisted on the surface for the most part of coarse grains of quartz, some mica, and felspar occasionally. Such soils were poor, in consequence of their physical character and their chemical contents. Underneath the surface soil of the granite there was frequently a subsoil of a clayey character, which contained a fair proportion of lime and potash, but locked up in such a manner as not to be available for plants. Grass growing on grauitic country was generally very light. It was not a fattening grass, and had a tendency to deteriorate. The dacite rock, he remarked, was found on the eastern and western sides of the Upper Snowy River, and also along the tributaries of that stream. It contained felspars and quartz, and a fair proportion of lime. But it was also deficient in phosphoric acid. These beds did not furnish a rich soil, though in other parts of Victoria, such as on the top of the Dandenong Ranges, the dacite beds produced good soils. The basaltic land in Croajingolong was restricted to two or three small areas, namely, near Bonang, and a little patch 28 miles north of Orbost, besides a very narrow belt 20 or 30 chains wide and half-a-mile or so long about 3 miles north of Club Terrace. Along the undulating lightly-timbered country bordering on the coast line, and running inland for a distance ranging from 3 to 15 miles, were the tertiary deposits consisting of calcareous beds underneath the clayey beds. In some places between Bairnsdale and Orbost the tertiary beds were of a clayey nature. Further eastward the top soil of these beds was sandy and poor. He explained that in the jungle country in the parishes of Murrungowar, Kuark, and Errinundra, the red volcanic colour was given to the soil by the iron derived from the decomposition of the mica in some cases, and of the hornblende in others. Neither the fact of land being covered with heavy timber, nor the colour of the land could, he said, be regarded as a true indication of the value of the soil. Trees only required potash and silicia and a good rainfall, the amount of phosphorus needed being very minute. Cereal crops, on the other hand, required different food to that absorbed by our native trees. In answer to a question, Mr. Dunn stated that all the country from Bairnsdale to Orbost might be worked up into reasonable farms that would maintain the holders, but his view was that the railway should not be extended into Croajingolong upon the agricultural prospects alone, as the expense of maintaining the fertility of the land would be heavy.

OPINIONS OF GOVERNMENT OFFICERS.

6. Mr. Dunn's opinion as to the poor quality of the remaining Crown lands in East Gippsland was endorsed by Mr. G. S. Pinniger, Lands officer and district surveyor at Bairnsdale, who has charge of the Croajingolong country, and also by Mr. M. Murphy, land examiner, Construction Branch of the Victorian Railways, who spent seven months travelling over the East Gippsland country. The former when questioned said he could not point out any compact block of 150,000 to 200,000 acres in the whole of that extensive country where settlers could be put on allotments of from 200 to 300 acres each, with the prospect of maintaining themselves and their

families. He considered that there was no extent of the lands in Croajingolong remaining in the hands of the Crown suitable for cultivation. Without a railway it would be a very long time before people could be induced to settle on those lands, and with a railway through that country people would gradually settle on the land, but settlement, he thought, would not immediately follow the opening of the line. Mr. Murphy also informed the Committee that in no part of East Gippsland was he able to find 100,000 acres of good land in one compact area suitable for settlement, and, he added, as a practical farmer with 25 years' experience, that he had a very poor opinion of the Crown lands in East Gippsland as a field for close settlement. He stated that a man would have all he could do to make a living off 600 or 700 acres of such country, and in most instances he would require a thousand acres. Mr. Murphy further said that of the 2,000,000 acres of Crown lands in East Gippsland he would put it all down as third and fourth class land, except about 10,000 acres in Murrungowar, and 7,000 or 8,000 in Kuark—these parishes are commonly known as the lower jungle country—15,000 acres in Errinundra, a few thousand acres in the Bemm Valley and at Tongli, and 4,000 or 5,000 acres of good flat land at the Thurra River, and small patches of alluvial land scattered along the various streams. He thought the best place to try further settlement was at Murrungowar and Kuark, about 20 or 30 miles north-east of Orbost. Mr. Pinniger was also of the same opinion, but he estimated the area of land there suitable for cultivation at 25,000 acres as against 17,000 or 18,000 acres computed by Mr. Murphy. The Committee while at Mallacoota also examined Mr. E. H. Lees, authorized surveyor for Croajingolong, who for years has been constantly travelling over the district, as to the value of the remaining Crown lands in that county for settlement purposes. He said that out of 1,900,000 acres in Croajingolong about 200,000 or 300,000 acres would be taken up at once if railway and road facilities were provided, and that out of that 300,000 acres there would be a total area of from 40,000 to 50,000 acres of rich land, including the jungle country to the north of Murrungowar, and along the upper branches of the Delegete River, and the good land in the parishes of Errinundra and Combienbar, and in the upper valleys of the Bemm and Thurra rivers, and also in the parish of Karlo. He thought that railway and road facilities would induce those who held the blocks of rich maize land to subdivide them, and so promote closer settlement. Of the second class land, he added, a man would require not less than 640 acres to keep himself and his family.

THE JUNGLE (MURRUNGOWAR) COUNTRY.

7. At the instance of the Committee the Ministry, in 1908, obtained a report from the Lands Purchase and Management Board as to the suitability for close settlement of the jungle country, extending from Murrungowar northward through Kuark towards Mount Ellery, and also in the parishes of Goonegerah, Dellicknora, and Errinundra, beyond Mount Ellery, in the direction of Bendoc. The Board reported that of the 21,400 acres of jungle country in Murrungowar and Kuark, 7,300 acres are held under licence or lease from the Crown, but of this area not more than one-fifth has been improved to any satisfactory degree by the holders. Of the remaining 14,000 acres in possession of the Crown most of the land is a red or chocolate loam of silurian formation, the balance being a grey soil of granitic formation. Both soils appear to be capable of producing good grain and root crops, and seem to suit English grasses fairly well, the annual rainfall averaging 40 inches. The country, which, generally speaking, is hilly, is heavily timbered with messmate, stringybark, silver-top, and a species of bluegum, while the jungle consists of silver wattle, blanket-wood, hazel, fuschia, dogwood, sassafras, lilly-pilly, creepers, and tree ferns and bracken. The Board was of opinion that in order to successfully establish settlement in this country on areas not exceeding 150 acres each and get the land into profitable use, it will be necessary to give all possible encouragement to the selectors. It therefore suggested that the timber should be ringbarked as a first step towards settlement, and roads made to give access to the land. Two years later, when the trees are dead, the settlers can be put on the blocks to cut down and burn off the scrub and jungle and to sow English grasses in the ashes. By postponing the payments of the rents for the first six years and granting the selectors some financial assistance the Board thought settlement in that part of the jungle country might be successfully accom-

plished. It was stated by the Board, however, that as this pioneering work would, to some extent, be experimental it could not agree to any of its loan moneys being used for the purpose, but if the Government would place funds at the disposal of the Board it would see that they were spent to the best advantage, and would endeavour to have the sums so expended repaid by the selectors. Dealing with the remaining jungle lands, comprising 50,000 acres, to the north-east of Mount Ellery, in the parishes of Goonegerah, Dellicknora, and Errinundra, the Board reported that about half that area is a gently undulating tableland at an elevation of from 3,000 feet to 4,000 feet above sea level. It is covered with a fine forest of various kinds of eucalypti, and the jungle consists of similar growths to those in the Murrungowar country. The soil is generally of a light-reddish colour of silurian formation with occasional outcrops of granite, and for the most part it is shallow, though here and there a deeper surface is met with. The inspectors of the Board stated that they were not favorably impressed with the prospects of turning this area into use for settlement in small blocks, the soil being too shallow and the high elevation rendering the country subject to frosts and extreme cold in winter. As nothing had been done to prove the suitability of such country for cultivation and the growth of grasses, they suggested that one or two small areas should be cleared and experiments made with crops and grasses to determine whether land subject to snow and severe frosts could be profitably used for dairy farming. As to the remainder of the jungle country, comprising about 26,000 acres on the southern slopes from the tableland, its winter climate is less severe, but the steepness of the hill sides makes it impossible to cultivate the land, and, indeed, over much of this area, they added, the slopes are too steep for grazing purposes.

MINERAL RESOURCES.

8. Mr. E. J. Dunn, officer in charge of the Geological Branch of the Victorian Mines Department, gave evidence concerning the mineral resources of East Gippsland. He said that "the granite area, lying between the Snowy River and Mount Drummer (near the Thurra River), is all of the hornblendic description, and this rock is one of the most productive in the State for copper, lead, tin, silver, and wolfram ores. It is also auriferous. Many lodes are known and are being slowly developed in this rock. At Mount Deddick very promising argentiferous galena lodes are known. Near the Snowy River and around Orbost several copper lodes have been found, and at Accommodation Creek (a tributary of the Deddick River near the New South Wales border) there is some exceedingly good copper ore of considerable thickness. . . . This is a rich district and one that I would like to see opened out, but it will never be worked until there is better communication. . . . I think very highly of the whole of these granitic areas to the west of Mount Drummer for all the minerals mentioned. . . . I have been over the whole of the country from Bendoc to Clarkville, and it is all good mining country, in which a considerable number of reefs have been proved, but the remoteness of the locality, the expense of mining, and the difficulties in the way of prospectors, are such as to greatly impede operations in that district. . . . Altogether, I think the prospects of this country as a mining area are excellent. But I do not think it possible, under present conditions, to develop mining around Bendoc, Mount Deddick, Bonang, and that country. It is only by good roads and railways that mining operations there can be advanced. . . . Railway communication would enable prospectors for gold, copper, lead, silver, and so on to operate in this country with some chance of success. It is futile for them to go there now, because if they found a promising reef they could not in the first place test it, and in the second they could not work it on account of the expense; so the country is closed to prospectors." Mr. Dunn added that a railway from Bairnsdale to Orbost would help mining at such places as Club Terrace, but it would not be of much assistance to the more distant mining fields in the Omeo, Deddick, and Bonang districts. The Honorable James Cameron, M.P., informed the Committee that there was a deposit of manganese within 12 miles of Nowa Nowa, and it was estimated there were over one million tons in that one deposit. Shafts 20 feet, 30 feet, and down as deep as 70 feet had been sunk to determine the extent and value of that deposit. To have the manganese tested in the London market he had sent 50 tons to Melbourne. As a product it brought £3 a ton in London. But the heavy cost of carting the manganese to the seaboard, added to the

expense of shipping it to London, prevented a profit being made, and, consequently, no further steps had been taken to work the deposit. In addition to that, he stated, there was a very valuable deposit of iron starting within 3 miles of Nowa Nowa and running in big beds north-east towards the Snowy River. It had been tested in Sydney and went over 70 per cent. Within a few miles of the deposit was an extensive deposit of lime. The lime was not only of value as a flux in connexion with iron smelting, but it was required for agricultural purposes in East Gippsland, the greater part of the soil from Bairnsdale to the New South Wales border being deficient in lime. Liming land had greatly assisted agriculture in New Zealand, and would similarly improve the soils of Croajingolong, where the annual rainfall is from 30 to 47 inches. In referring to the deposit of iron ore at Nowa Nowa, Mr. E. J. Dunn said it would be necessary to carry on further operations before one could say there was any very large quantity to be dealt with, though there was undoubtedly excellent iron ore there distributed over a considerable area. He added that in addition to the deposit of lime mentioned by Mr. Cameron, there was a tract of limestone north of Club Terrace and another about 20 miles north of Orbost. They would be very valuable for supplying the deficiency of lime in the soil in the neighbourhoods in which they occur. The Orbost deposit was also valuable for marble, which was excellent in quality and colour.

TIMBER SUPPLIES.

9. As previously stated, there is an abundance of hardwood timber of different varieties in East Gippsland. But only a small proportion of it would be utilized under present conditions even if the railway were extended into that country. The proposed line to Orbost crosses the Lower Tambo River about 18 miles from Bairnsdale and enters the Tambo State Forest. The country here is undulating and the prevailing timber is white stringybark, with red ironbark in limited quantities. Further on Lake Tyers is reached; formerly on both sides of the lake there were belts of grey box of very high value, but since 1886 these areas, with the lower valley of the Tambo, have been the main sources of supply for timbers of special strength and durability required by the Railway Department. The Crown has at present about 7,000 acres of grey box country on the eastern shores of Lake Tyers. This area has, according to the evidence of Mr. H. R. Mackay, Conservator of Forests, been heavily cut over for beams, piles, and sleepers, but it still bears a large quantity of young pole and spar timber of good quality and a fair quantity of bridge and pile and a large quantity of sleeper timber. In addition to this source of supply, there are on the western side of Lake Tyers nearly 5,000 acres of timbered country, about half of which bears grey box and is under the control of the Board for the Protection of the Aborigines. After leaving Nowa Nowa, at the head of Lake Tyers, the proposed railway, on its way to Orbost, passes through a forest reserve of about 150,000 acres, the principal timber growing on that reserve being white stringybark. This reserve has been but lightly touched, so far, for ordinary building timber for saw-mills, but it has been greatly injured by the bush fires lit by graziers to whom it is licensed annually and who fire it to get a better growth of autumn grass among the rough timber. The fires not only destroy the mature timber but they also ruin the young pole and spar timber and prevent any solid growth. Northward of this reserve, as the country ascends towards Buchan, red ironbark with silver-top is found at intervals. Mr. Mackay stated that at present the mileage is too great, and, consequently, the cost of conveyance too high, to enable sleepers to be drawn from these areas either by water carriage from Nowa Nowa to the south end of Lake Tyers, and thence by bullock team to Cunninghame wharf, or wholly by bullock waggon to the Swanreach wharf. But if the suggested railway to Orbost were constructed the scattered belts of ironbark on these ridges could undoubtedly be utilized to advantage for railway material. After crossing the Snowy River, red ironbark of good quality is found on the line of ranges running north-west from Mount Buck, in the shale and slate on the eastern and western fall, but it is scattered everywhere through the larger belts of stringybark. On going 3 or 4 miles east of Orbost, valuable belts of white and yellow stringybark are met with. There is also a fair belt of mahogany in the Mount Raymond reserve, 7 miles east of Orbost. Continuing eastward towards the Bemm River there are stretches of

stringybark, white gum, and grey box, with silvertop on the ridges. Near that stream there are patches of these timbers with a limited quantity of red and grey box and mountain ash. The most valuable belt of timber in Southern Croajingolong is the grey box in the valley of the Cann River, about 60 miles east of Orbost. It comprises, with outlying spurs, about 15,000 acres, but a considerable proportion of it on the older selections north and south of the main road to Upper Genoa has been ring-barked. This timber is a true grey box of a very fine quality, many of the trees running from 40 feet to 60 feet to the first limb, and containing from 3,000 to over 5,000 superficial feet of timber. On ascending the Upper Cann northward, with the small timber reserves on either side of that river, the gorge narrows and the grey box is found in the valley only or on the lower spurs. The mountain ash or silvertop and stringybark take its place on the high ridges on either side. On the northern side of the coast range sloping towards the New South Wales border within the watersheds of the Delegete, Queenborough, and Bonang rivers, and also near the head of the Errinundra River, the timber consists chiefly of cut-tail—the local name for a variety of white topped messmate—interspersed with the ordinary smooth-bark messmate, white stringybark, white mountain gum, grey gum, and silvertop. In the jungle country, on both sides of the coast range—from Murrungowar northwards towards Bonang and Bendoc—there is a variety of brush timber consisting of blackwood, of fair to good quality, beechwood, acacias, sassafras, white cedar, waratah, and lilly-pilly or myrtle. In the valley of the Upper Genoa River, to the north-west of Mallacoota Inlet, there is a very valuable belt of grey box following the line of the river in the parishes of Maramingo and Wangarabell. About six years ago this was excised from the Cann River forest reserve, and is now occupied in grazing blocks of about 1,000 acres each. Further eastward on Crown lands, on both sides of the Wallagaraugh River, in the parishes of Maramingo and Wau Wauka West, there are about 3,000 acres of grey box interspersed with some red ironbark. A belt of bloodwood, which is a very durable timber in contact with the ground, is met with on the west side of Mallacoota Inlet, in the parishes of Mallacoota and Betka, running southward from Genoa Hill towards the Wingau River.

TIMBER FOR SPECIAL PURPOSES.

10. When Mr. Mackay was asked by the Committee if the timber in East Gippsland could successfully compete in the Melbourne market with timber from nearer forests, such as Warburton, he replied—"I think that the timber required for ordinary building construction could not bear the railway freight, 16s. 10d. per ton, from the neighbourhood of Orbost, or 18s. 9d. from the Cann River, as against 4s. 3d. from Warburton. But timber required for special purposes by the State for the under-framing of railway trucks, and for girders, and bridge or jetty work will undoubtedly have to come from East Gippsland in time, probably within the next five to ten years. And as there is such a considerable area of grey box of first-class quality which has as great a breaking strain for beams, and crushing strain for piles as any Australian hardwood, the State Departments must resort to Croajingolong for such material. . . . The East Gippsland grey box is undoubtedly a timber of very fine quality, and it has occurred to me that, if this line were put in, the timber might be exported to Great Britain and Western Europe, both by private holders and the State, for special purposes and generally for use by the larger railway companies in the construction of rolling-stock. At present, Western Australia has the largest share of this trade, and now that the supply of accessible karri has failed the exporting companies in that State have fallen back on the timber locally called blackbutt, a very clean, long-barrelled timber, which is useful for the purpose, but which is not of so high a value as karri. The price obtained for that timber runs from about 19s. 6d. to 23s. 6d. per hundred superficial feet in Great Britain, cut to special lengths. That timber is not the same as the Victorian blackbutt. But our grey box and ironbark are superior to it. . . . If the export trade could be developed by sending abroad the grey box for rolling-stock material it might shortly grow to an annual value of say £25,000 or £30,000. That would represent about 3,000,000 feet, or 8,300 tons, as a beginning. . . . We have already had an application from one of the largest exporting firms in Sydney to open the Upper Genoa areas on the New South Wales border in the neighbourhood of Wurrin and

Wangarabell. They wanted to cart the sleepers and any timber they cut down some 45 miles to Twofold Bay. I take it they were satisfied as to the financial soundness of the undertaking before they approached us. We refused to allow any hewing on the south side of the border, as our supplies will be required for Victorian use. . . . A railway to Orbost would not tap the grey box timber in the Cann Valley. If it is a question of timber supplies and utilization of the most valuable timber in Croajingolong, I think the line should go, at least, to the Cann Valley, because it would not only tap the valuable belts of grey box on the Cann and smaller belts on the streams westward of that, but it would render accessible the good building timber, such as the mountain ash, white and yellow stringybark and grey gum on the mountain ranges forming the watersheds of the streams between Orbost and the Cann."

SUPPLIES OF SLEEPERS AVAILABLE.

11. The evidence given by Mr. F. W. H. Lade, who was specially employed by the Construction Branch of the Victorian Railways to examine the timbers in East Gippsland, agreed generally with that given by Mr. Mackay. In Mr. Lade's opinion the grey box in the Cann and Genoa valleys, and the bloodwood, which he found on both sides of Mallacoota Inlet, were the principal timbers of commercial value in that country, the other varieties being at the best but second-class hardwood. He estimated that there were 60 million superficial feet of box, which had not been rung, on Crown and private lands in the Cann Valley, and 100 million superficial feet at Wangarabell and Genoa. In the country to the north and north-west of Bruthen, embracing an area of 100,000 acres, he estimated that there were 20 million superficial feet of ironbark (which included 400,000 sleepers) within 15 miles of the route of the proposed line from Bairnsdale to Orbost, and 538,000 ironbark, and 20,000 box sleepers in the forest between Bruthen and Orbost, or a total of 958,000 sleepers. He also estimated that in the two areas referred to there were 980 box and 3,270 ironbark piles. In these areas there were many millions of superficial feet of second-class building timber, but it could not compete, he said, in the Melbourne market with the supplies from nearer districts, such as Warburton and Healesville.

WATER CARRIAGE COMPETITION.

12. Inquiry was made by the Committee as to the likelihood of the proposed railway extension from Bairnsdale eastward having to compete with cheap water carriage, such as exists all along the Victorian coast, from Portland in the west to Bairnsdale in the east. It was ascertained that a railway as far as Bruthen would have to contend practically all the year round against the competition of small steamers and of sailing craft fitted with auxillary oil engines to enable them, at any time, to enter Lakes Entrance, and ascend the Tambo River, which is navigable up to Mossiface, or within 4 miles of Bruthen. A large quantity of vegetables (principally beans) and fruit are grown on the rich alluvial flats below Bruthen. Being of a perishable nature, these are taken by boat to Bairnsdale or carted to there, and then sent by rail to Melbourne. The bulk of the maize grown on these fertile lands is, however, carried by water to Melbourne. Evidence was given that if the railway was extended to Bruthen most of the maize would be despatched by train to Melbourne so as to take advantage of any sudden rise in the market, it being too risky to send the grain by water under such circumstances. Nevertheless, the Committee is of opinion that even if the railway were extended to Bruthen the bulk of the maize would still be forwarded by boats to Melbourne, because the latter would carry it at a lower rate. The officers of the Railway Department who visited the district to estimate the revenue of the proposed railway were of the same opinion. In their forecast of the probable receipts of the line they allowed for water carriage competition, as far as maize from Bruthen is concerned, expressing the belief that out of the 3,500 tons grown on the Bruthen and Nicholson flats 700 tons only would be despatched by rail to Melbourne to catch a temporary high market.

13. But it is different with respect to the maize grown around Orbost because of the delays and difficulties connected with the transport of goods by water from and to that town. As previously stated, there is an ever-shifting sand bar at the entrance to the Snowy River, and frequently it is impossible, for weeks at a time, for

the small craft trading to Orbost to cross the bar. When the channel is open it is never known how long it will remain so. The Committee, when visiting Marlo, saw three small boats there which had been locked in the mouth of the river for several weeks owing to the entrance having suddenly become closed. This uncertainty of transport not only occasions loss to the shippers of maize through their missing good markets, but the delays and risks in getting over the bar require the owners of the boats to ask a comparatively high rate for the carriage of grain and goods to and from Melbourne, or Lakes Entrance, so as to enable them to pay the wages and food of the crews, the cost of insurance against wreckage, and to earn interest on the capital spent in building and equipping the boats. Evidence was given that the residents of Orbost a few years ago became dissatisfied with the charges made for the carriage of goods by boat, and they formed a local shipping company which started carrying maize from Orbost to Melbourne at 22s. a ton. It was, however, forced to increase the rate to 25s. a ton to make the freight a paying one, and ultimately the company was wound up. In 1905 the rate fell from 25s. to 22s., but in 1908 it was up again to 27s. per ton, including wharfage, but not insurance. Witnesses at Orbost stated that the cost of carting maize from there to Cunninghame (Lakes Entrance) was 20s. a ton, and the boat freight to Melbourne 10s. additional. When the Snowy River was closed, maize was sometimes carted to Cunninghame, and stores brought back from that port. The Committee was informed by the Railways Commissioners that the rate for the conveyance of maize by rail from Orbost to Melbourne would be but 16s. a ton, so that the railway, with its quicker despatch and delivery, and less wear and tear on the bags, was certain to secure the grain freight as against the boats, even if the latter could come down to that rate, which was unlikely with the risk of frequent delays at the entrance to the Snowy River.

HARBOR AT MOUTH OF SNOWY RIVER.

14. In view, however, of the Government having first made safe ports at considerable public expense at various places along the Victorian coast, and then, through the exercise of local pressure, built railways to those seaside towns, or *vice versa*, resulting in the railways being subjected to the keen competition of water carriage, the Committee obtained a report from Mr. W. Davidson, Inspector-General of Public Works, on the probable cost of making a safe harbor for vessels of light draught at Marlo, at the entrance to the Snowy River. He wrote, "Apart from the matter of the construction of an entrance at Marlo, on the Cunninghame plan, the river bed itself presents difficulties that do not obtain in the lakes and their rivers. The Snowy River bed, on reaching the low-lying flat country in the Orbost district, becomes a succession of ever-moving sand bars of great width, with, under normal river conditions, but a trifling depth of low-velocity water on them. The river scour could not be expected to keep open a navigation channel, and it would only be by continuous dredging that a waterway for the shallowest draught description of seagoing craft could be maintained, while even if the Brodribb River, as has been suggested, were adopted for navigation purposes the characteristics described would prevail from Marlo up to the junction of the two rivers. From a chart of soundings taken in 1891, I find that training works at Marlo from their roots in the hummocks to reach to a low water depth of $8\frac{1}{2}$ feet would be 1,600 feet long, and would then apparently terminate in the surf of the bar—an objectionable feature which could not be accepted in any design. I have no data on which to form an opinion as to the further length that would be necessary to carry the works into 12 feet of water at the outer ends: this latter depth would, in my opinion, be the minimum objective. I have made no estimate of the cost of an entrance to the Snowy River. Perhaps in this connexion it may be of interest to know that the Lakes Entrance works have cost to date £150,000, while I am strongly of opinion that from a cause (the marine worm, *terrida navilis*) not known of or taken into consideration prior to their construction, as much more will have to be spent on them within the next ten or twelve years if they are to be maintained in existence. And these walls are but 1,200 feet long as against the indeterminate but not less than 1,600 feet at the Snowy mouth. . . . Already has a wharf at Marlo been destroyed by the "terrida," and it may now be accepted as a fact that its existence on the eastern section of our southern coast precludes the use of timber for submarine works of any

magnitude, the alternative being in the adoption of "ferro" or "reinforced" concrete in piles and submerged beams as now so extensively used in marine works all over the coasts of the world. In my opinion, the idea of constructing an entrance for vessels to the Snowy River in the present or prospective—within reasonable limits—development of Croajingolong is altogether Utopian."

COST OF RAILWAYS TO THE BORDER.

15. Mr. Kernot, Chief Engineer for Railway Construction, submitted to the Committee various proposals for the extension of the Bairnsdale railway to different points on the New South Wales border. He explained that all the routes were common as far as Orbost, and that a broad-gauge railway from Bairnsdale to Orbost township would be 60 miles 76 chains in length, with a ruling gradient of 1 in 50 feet, and would cost £423,210, or £6,976 per mile. The proposed extension from Orbost, known as the No. 1 route, would, on leaving that township, proceed in a northerly direction, and ascend the western bank of the Brodribb River, and thence up the valley of Goonegerah Creek to near Mount Little Bill, where a descent would be made into the valley of the Bonang River, and thence along the valley of the Delegete River to the New South Wales border. This route, which would pass through very broken country, would be approximately $65\frac{1}{2}$ miles in length from Orbost to the border. It was estimated to cost £799,500. The No. 2 route, on leaving Orbost, would proceed eastward for about 8 miles towards Mount Raymond, and thence along the main road to Murrungowar, turning northwards through the parish of Kuark to the east side of Mount Ellery, where an altitude of over 3,000 feet would be attained, and thence down the valley of the Delegete River to Bendoc, terminating at the border about 4 miles east of Delegete Hill, close to the road from Bendoc to Delegete township. This proposal would be $66\frac{1}{2}$ miles in length, and the cost was set down at £582,000. It would also traverse rough country, and the railway would have steep gradients and sharp curves. The No. 3 route would branch off the No. 2 route near Mount Raymond, and proceed eastwards to Cabbage Tree Creek, and thence north-eastward to Club Terrace, and from there eastward to the Cann River, thence up the valley of that stream, terminating at the border a few miles south of Bondi. This line has been permanently surveyed, and its length would be 82 miles, and estimated cost £600,000. The No. 4 route would branch off the No. 3 survey where the latter first entered the valley of the Cann River, and would then proceed in a north-eastward direction to the Genoa River, terminating at the border near Timbillica. The length of this route from Orbost would be 90 miles, and the estimated cost £630,000. It was urged that if either No. 1 or No. 2 route were constructed, the railway could at some future time be extended from the New South Wales border to the site of the proposed Federal Capital at Dalgety; and, moreover, that a railway from Bairnsdale to near Delegete would result in the land around that border township being cultivated, and the produce sent to the Melbourne market; and also in a large traffic in live stock from the Bombala and Monaro districts to the Victorian markets. It was, however, ascertained by the Committee that the New South Wales Parliament had recently authorized the construction of a railway from Cooma to Bombala—a distance of 53 miles—and that this extension would take the live stock and other traffic to Sydney, although the Committee was informed by witnesses at Bombala that frequently the Melbourne market was the better one for lambs and sheep. The proposed No. 3 route from Orbost, by way of Cann River valley to the border near Bondi, would likewise meet the requirements of the Bombala district, though it would not serve Delegete and the surrounding country. Evidence was given that this survey would tap the roads, which would have to be made when settlement took place, down the valleys of the various streams flowing southward from the hill country into the ocean between Marlo and Cape Everard. It was also stated that this line would serve a much larger area of better land than either the No. 1 or No. 2 route, and that it would take the railway within reasonable distance of the good land bordering on the upper reaches of the Genoa River. In view, however, of the early construction of the railway from Cooma to Bombala, and the somewhat inferior quality of much of the country between Orbost and the New South Wales border, the Committee considered there was no justification at present for recommending either a broad or narrow gauge railway beyond Orbost.

BAIRNSDALE TO ORBOST LINE.

16. Being of opinion that the proposed railway should not go further east than Orbost, the Committee asked Mr. Kernot if a site for a terminal station could be obtained on the west side of the Snowy River, close to the existing road bridge. He reported that the terminus could be placed on the flats on the Bairnsdale side of that stream, on a site about 75 chains by road from the Orbost post-office, and that this alteration would make a reduction of about £26,000 in the cost of the line, as the expense of building a bridge over the Snowy River would be avoided. The length of the line from Bairnsdale to the terminal station on the west side of the Snowy River would be 60 miles 7 chains, and the estimated cost £399,210, or £6,643 per mile. Mr. Kernot further stated that the line could be terminated at the edge of the tableland, close to the top of the hill on the west side of the Snowy River. This site would be about 4 miles by road from the Orbost post-office, and the length of the railway would be 57 miles 2 chains from Bairnsdale, and the estimated cost £369,210, or £6,474 per mile. He explained that owing to the rapid descent from the tableland to the Orbost flats, there could be no intermediate station, and that the Committee would have to choose between the site on the top of the hill overlooking the flats or the one on the western bank of the Snowy River, close to the road bridge spanning that stream. The Committee favoured the latter site, as it would be nearer to Orbost township and would avoid teams carting up a steep hill to the tableland. On crossing the Mitchell River at Bairnsdale the line, as permanently surveyed, would proceed in an easterly direction, passing over the Nicholson River, about 3 miles from its mouth, and continuing eastward to Johnsonville. It would then turn northward, and keep close to the western bank of the Tambo River till reaching Bruthen. After entering that township the line would turn south-eastward into the parish of Colquhoun North and then run eastward to Nowa Nowa, at the head of Lake Tyers, and continue eastward, passing over Tildesley River, or Hospital Creek, and the Hartland River to Orbost. Mr. Kernot stated that a direct route could have been taken from Bairnsdale to Bruthen by way of Sarsfield, which would have lessened the length of the line by about 3 miles. But the objection to this shorter route was that it would traverse more difficult country; would have a steeper ruling gradient; and would have sharper curves, which would necessitate the use of special rolling-stock. Moreover, the cost of this direct line would, owing to the heavy earthworks, be as large as carrying the railway by way of Johnsonville, notwithstanding the longer length of the latter route. Mr. Kernot was questioned by the Committee as to the necessity for turning the line northward from Johnsonville to Bruthen, and thence south-eastward from that town to Colquhoun North, instead of crossing the Tambo River near Johnsonville, and going direct eastward to Colquhoun North. His reply was that there would be great difficulty in getting foundations for a railway bridge in the lower reaches of the Tambo River, and that if the line went eastward from Johnsonville there would have to be a very expensive viaduct across the Tambo flats, as it would practically have to be as high as the one on the Bacchus Marsh railway. It would cost very little more, he added, to take the railway northward to Bruthen than to build the viaduct over the Lower Tambo, and, moreover, by carrying the line into that township it would tap the Omeo trade. The Traffic officers of the Railway Department also urged that the railway should be carried into Bruthen for the sake of the Omeo traffic. They stated that if passengers and teamsters had to come 5 or 6 miles southward from Bruthen to reach the railway at Johnsonville, there would be a danger of their going by the Sarsfield-road into Bairnsdale, and thus the proposed extension would lose the Omeo traffic.

REDUCTION IN COST OF LINE.

17. Mr. Kernot suggested that if it were desired to reduce the capital cost of the proposed broad-gauge railway from Bairnsdale to the west bank of the Snowy River, opposite Orbost, it could be done by either using serviceable secondhand 60lb. steel rails, should they become available through the relaying of main lines with heavier rails, or by steepening the ruling gradient of the railway from 1 in 50 feet to 1 in 40, and, later on, when the traffic warranted it, the line could be regraded to 1

in 50 by increasing the depth of the cuttings and raising the embankments in places. The saving in cost by using secondhand serviceable rails would be about £250 a mile, or £15,000 for the 60 miles between Bairnsdale and Orbost, and the reduction in the capital outlay, by putting in the steeper grade, would total £16,000.

COST OF NARROW-GAUGE RAILWAY.

18. It was stated by Mr. Kernot that a 2ft. 6in. railway from Bairnsdale to the west side of the Orbost bridge would cost £326,000. This narrow-gauge line would keep to the route surveyed for the 5ft. 3in. railway, and the cost included provision for wide bridges over the Mitchell, Nicholson, and Tambo rivers, so that the line could, at some future time, be converted to a broad-gauge railway at a minimum outlay should the traffic justify that course.

SETTLEMENT.

19. On crossing the Mitchell River at Bairnsdale the proposed railway would pass through a number of farms in the neighbourhood of Johnsonville, and from there to Bruthen would skirt the rich Tambo flats. After leaving that township the line would traverse a State forest for a distance of about 20 miles, and would then pass through a large area of unoccupied Crown lands on its way to Orbost. The country between the Tambo and Snowy rivers is undulating, with a light, sandy, tertiary soil, and a good yellow clay subsoil. It is timbered with stringybark, silvertop, &c., and with some grass-tree. Occasional river and creek flats, which are very restricted in area, are met with, and there is also a long, narrow morass, known as Éwing's, extending from Lake Tyers along the coast to Marlo, at the mouth of the Snowy River. This morass contains about 3,500 acres of fine, peaty, alluvial land. A report obtained from the Public Works Department stated that this morass could be reclaimed at an expenditure of £20,000 by diverting the waters of the Tildesley and Hartland rivers and Dinner and Simpson creeks into Lake Corringale, near the mouth of the Snowy River. It was represented to the Committee that much of the sandy, loamy country between Nowa Nowa and the Snowy River could produce fair crops of oats, rye, barley, and, in occasional patches, maize, if phosphatic manures were used. Dr. Cherry, Director of Agriculture, stated that if this country were cultivated on the rotation principle and fertilizers used it could be successfully settled in blocks of 150 acres, provided the holders relied chiefly on dairy farming and produced hay, millet, maize, and root crops for the herds, and conserved the animal manure so as to periodically enrich the soil.

PRODUCTION AND POPULATION.

20. It was reported by the Railway officers who visited the district to estimate the traffic over the proposed railway from Bairnsdale to Orbost that the line would directly serve about 450,000 acres, whilst practically the whole of Eastern Gippsland and the Omeo district would also be tapped by the projected railway. Within the area directly served by the line there were approximately 300,000 acres of Crown lands, including large areas of State forests. They added that cultivation in the district was almost entirely confined to the Tambo and Orbost flats, where maize, beans, pease, and fruit were the principal productions. It was reported by them that the average yield of maize on the Tambo flats was 60 bushels per acre, and on the Orbost flats 75 bushels. The Tambo flats cover an area of about 3,000 acres, while the Orbost flats, including those adjacent to the Brodribb River, consisted of approximately 30,000 acres. Last year 3,500 tons of maize were produced on the Bruthen and Nicholson flats near the mouth of the Tambo River, and 4,618 tons on the Orbost flats. The Railway officers anticipated that the construction of a railway would result in the present production of maize at Orbost being doubled, and they estimated that there would be 8,700 tons of that grain available for transport from that station as soon as the railway was opened. They also considered that there would be a total increase of 500 tons in other agricultural produce, such as potatoes, oats, lucerne hay, &c., and that 300 tons of butter and cheese, and also 100 tons of wattle bark, would be despatched from Orbost, in addition to a large number of live stock, hides, and skins. They also estimated that 4,000 tons of sawn timber, for sale to the public, would be put on the rails at Bruthen, Colquhoun, and Nowa Nowa, and that

NARROW-GAUGE (2FT. 6IN.) RAILWAY.

EXPENDITURE.				£	s.	d.	£	s.	d.
Interest at 4 per cent. per annum on £340,950, being cost (£326,000) of constructing 60 miles of railway from Bairnsdale, <i>viâ</i> Swanreuch, Bruthen, and Nowa Nowa, to Orbost, and £14,950 for rolling-stock... ..									
				13,638	0	0			
Traffic charges									
				1,445	0	11			
Maintenance expenses									
				4,140	0	0			
Locomotive charges and cleaning and repairing rolling-stock									
				2,625	19	0			
General expenses									
				205	5	6			
Total annual charges							22,054	5	5

REVENUE.

(Based on Local Rates for carriage over new line.)

	On the New Line.			On other Lines from New Traffic from the New Line.			Total.		
	£	s.	d.	£	s.	d.	£	s.	d.
Passengers	5,310	0	0	842	18	7	6,152	18	7
Parcels	710	0	0	50	0	0	760	0	0
Mails	525	0	0	...	...	...	525	0	0
Class goods	3,349	2	6	180	0	0	3,529	2	6
Wool	88	15	0	50	0	0	138	15	0
Live stock	1,367	5	0	292	0	0	1,659	5	0
Timber	654	3	4	200	0	0	854	3	4
Agricultural produce	2,506	0	0	1,976	0	0	4,482	0	0
Dairy produce	431	5	0	282	10	0	713	15	0
All other traffic	345	0	0	104	18	0	449	18	0
Total... ..	15,286	10	10	3,978	6	7	19,264	17	5
Estimated annual loss							£2,789	8	0

The Committee does not agree with the statement of the Railways Commissioners that the revenue from the passenger traffic would be less on the narrow-gauge line than on the broad-gauge one.

SUMMARY OF THIS REPORT.

22. The question referred to the Committee was developing East Gippsland by means of a railway to open up the Crown lands between Bairnsdale and the New South Wales border and promote settlement, and to tap the timber and mineral resources of the district ; and also the provision of a deficiency rate.

The eastern part of Victoria, which includes the counties of Tambo and Croajingolong, comprising, 3,400,000 acres, is without railway facilities.

Access by road to this large territory is difficult and costly owing to the roughness and steepness of the bush tracks.

In recent years the Government has improved the main track running through East Gippsland by grading the road in the worst places and bridging the streams.

While this work has been a benefit by opening portions of the country to light vehicular traffic, where formerly saddle and pack horses had to be used, it has not been much of an inducement to increase production, because of the long distances produce would have to be carted to reach Bairnsdale railway station or Lakes Entrance, which is the only port open all the year round.

Two or three of the rivers in East Gippsland are navigable by small craft for a few miles only from their mouths, but frequently the entrances to those streams are blocked for months at a time by ever-shifting sand bars.

Owing to these difficulties East Gippsland is in a very backward condition, both as regards settlement and production.

And it must remain so unless the railway is extended from Bairnsdale into that country or very costly ports made at intervals along the coast line.

The land near the coast is sandy and low lying, with occasional grass-tree plains and small swamps.

But on going inland the country becomes undulating, and at a distance of from 10 to 20 miles from the sea the chain of ranges which crosses East Gippsland from west to east is met with.

These ranges are broken and irregular in their outline, attaining an altitude of from 2,000 feet to 4,000 feet above sea level.

This rangy country is covered with timbers of different varieties.

But, owing to the long distance which timber from East Gippsland would have to be carried to Melbourne, that suitable for building purposes will not be able to compete in that market with the timber growing at Warburton and other forests nearer the metropolis.

Sleepers and bridge and other timbers for special purposes will, however, be obtained by the Railway Department from the forests between Bairnsdale and Orbost, and it is estimated that the Department will save about £1,500 annually by having such timber delivered on the proposed line to Orbost instead of being carted to Bairnsdale as at present.

From evidence obtained from local settlers and officers of the Lands, Forests, and Railway Departments, as well as from its inspection of different parts of East Gippsland, the Committee came to the conclusion that the remaining Crown lands in that part of the State—after allowing for timber and other reserves—would not, even if railway facilities were provided, offer a field for immediate settlement on an extensive scale.

This is due to the comparative poorness of the bulk of the Crown lands ; to the steepness of the country in many places ; to the high cost of preparing the land for cultivation, either by clearing it where it is on the hill slopes or by draining where it is on the low-lying areas adjacent to the coast ; and also to the fact that most of the settlers would require fairly large blocks to make a living off, thus restricting the number of families who could be settled there.

Nearly the whole of the best lands in East Gippsland, including the rich, alluvial flats along the lower reaches of the Snowy and Bemm rivers and the upper portions of the Cann and Genoa rivers, are already occupied, the holders having obtained the Crown grant of these fertile lands or having the right to do so.

These settlements are scattered in comparatively small groups over East Gippsland, and represent a total of about 700,000 acres out of the 3,400,000 acres in Tambo and Croajingolong.

According to Mr. E. J. Dunn, officer in charge of the Geological Branch of the Mines Department, the prospects of East Gippsland as a mining area are excellent, but the remoteness of the locality, the expense of mining, and the difficulties in the way of prospectors are such as to greatly impede operations.

He said that railway communication would enable prospectors for gold, copper, lead, silver, and so on to operate in this country with some chance of success.

Mr. W. Davidson, Inspector-General of Public Works, informed the Committee that the works at Lakes Entrance had cost the Government £150,000 to date.

He stated that the construction of a harbor at Marlo, at the mouth of the Snowy River, would prove a much more costly work, and in his opinion the idea of constructing an entrance for vessels to the Snowy River in the present or prospective development of Croajingolong "was altogether Utopian."

The cost of a broad-gauge railway from Bairnsdale, *via* Johnsonville, Bruthen, Nowa Nowa, to Orbost, terminating on the west bank of the Snowy River, would be £399,210, the line being 60 miles 7 chains in length and having a ruling gradient of 1 in 50.

Mr. Kernot, Chief Engineer for Railway Construction, reported that the cost of a 2ft. 6in. railway along that route would be £326,000.

He favoured the building of the broad-gauge line, and stated that its cost could be reduced by £16,000 by steepening the grade to 1 in 40, and some years hence, when the traffic warranted it, the line could be regraded to 1 in 50.

He also stated that if serviceable secondhand rails became available, by the relaying of the main lines of the State with heavier rails, the cost of the railway to Orbost would be reduced by about £250 per mile, or a total reduction of £15,000 for the 60 miles from Bairnsdale.

Four routes had been surveyed for the extension of the railway from Orbost to the New South Wales border, terminating respectively near Bonang, Bendoc, Bondi, and Timbillica.

The estimated cost of these extensions was as follows :—Bonang route, 65½ miles, £799,500 ; Bendoc, 66½ miles, £682,000 ; Bondi, 82 miles, £600,000 ; Timbillica, 90 miles, £630,000.

In view, however, of the somewhat inferior quality of the large area of country between Orbost and the New South Wales border, the Committee considered there was no justification at present for recommending either a broad or narrow gauge railway beyond Orbost.

The Railways Commissioners estimated that the working expenses and interest charges of a broad-gauge line from Bairnsdale to Orbost would total £24,580 18s. 6d. per annum, while the revenue was put down at £20,841 3s. 1d., leaving a yearly deficit of £3,739 15s. 5d.

RECOMMENDATION.

23. The Committee is of opinion that the annual loss on the proposed broad-gauge railway from Bairnsdale to Orbost will exceed the £3,739 estimated by the Railways Commissioners. It considers that even if the output of maize at Orbost is doubled, as anticipated by the Traffic officers of the Railway Department as the result of railway communication, it is likely that a market for that additional yield will have to be found in New South Wales or Queensland, and, consequently, there is a danger of the maize being unloaded from the train at Bairnsdale and shipped by steamer direct from there to Sydney or Brisbane. In that case the line will not receive the net revenue which it is credited with for the carriage of maize over the existing railway from Bairnsdale to Melbourne. Furthermore, there is a probability of the greater portion of the Orbost flats being used for dairying and much of the maize grown cut for fodder. The Committee is also of opinion that the demand for building timber in the Bairnsdale, Sale, and Rosedale districts will not be as large as expected by the Traffic officers unless the large estates near Sale are subdivided and settled. Therefore, the Committee considers that there will not be 4,000 tons of sawn timber carried annually over the proposed Orbost extension, in addition to the sleepers and bridge timber required by the Railway Department. For these reasons the Committee believes that the yearly loss in connexion with the railway to Orbost will reach £5,000. Against that, however, should be set the annual saving of £1,500 which the Railway Department expects to make by having sleepers and bridge timber delivered at stations on the proposed line instead of being carted into Bairnsdale as at present. In view of the evidence of Mr. Kernot, Chief Engineer for Railway Construction, the Committee considers that a reduction of at least £12,500 can be made in the capital cost of the line, bringing it down to £386,710, either by using serviceable second-hand rails or adopting, for the present, a ruling gradient of 1 in 40 feet instead of 1 in 50 feet, or by not expending the full sum allowed for unforeseen contingencies and general expenses, and observing other economies in construction. This will lead to a yearly reduction of £500 in the interest charges, bringing the estimated annual deficiency down to £3,000.

24. In the expectation that no public expenditure will hereafter be incurred in making improvements to the entrance to the Snowy River at Marlo, and that railway extension to Orbost will result in increased settlement in East Gippsland, and lead to greater activity on the part of prospectors in that country with the chance of important mining developments, the Committee recommends the construction of a broad-gauge railway from Bairnsdale through Johnsonville, Bruthen, and Nowa Nowa, terminating on the west bank of the Snowy River close to the Orbost bridge, at an estimated cost of £386,710, with £4,650 added for rolling-stock. This recommendation is made conditionally on the estimated annual loss of £3,000 being made good by the Tambo Shire Council and by the Orbost Shire Council, the latter contributing four-fifths, at least, of that sum ; and also conditionally on the municipalities named

lodging £3,000, in the proportions mentioned, with the Honorable the Treasurer to meet the first year's deficiency before the construction of the railway is entered upon. Evidence was given before the Committee at Orbost that the owners of the rich flats there, totalling 30,000 acres, would be prepared to pay a deficiency rate up to 5s. per acre per annum for 20 years, or a lesser period if the railway should in the meantime become a paying one. The holders of the hill lands around Orbost consented to pay a deficiency rate up to 6d. per acre per annum, and the owners of the Tambo flats near Bruthen, totalling 3,000 acres, expressed their willingness to have their land rated up to 2s. per acre per annum rather than go without the benefit of railway facilities. It will, therefore, be seen that both Shire Councils will be well able to meet the deficiency rate suggested by the Committee, as the railway will increase the value of the Tambo flats by several pounds, will benefit the lands near Buchan, and will materially enhance the value of the Orbost flats.

25. The following extracts from the Minutes of the Proceedings of the Committee show the divisions which took place during the consideration of the question referred to it :—

TUESDAY, 15TH JUNE, 1909.

The Committee proceeded to further consider the evidence received regarding the proposed East Gippsland railway.

Mr. Warde moved, That the Committee, in its Report, express the opinion that the annual loss in connexion with the proposed broad-gauge railway from Bairnsdale to Orbost will be £5,000 instead of £3,739 estimated by the Railway Department, as the Committee believes that the revenue from the carriage of maize and sawn timber will not come up to the expectations of the Department during the first few years following the opening of the line.

And, after discussion—

Motion put.

The Committee divided.

Ayes, 4.
The Chairman,
Dr. Embling,
Mr. Melville,
Mr. Warde.

Noes, 2.
Mr. J. W. Billson,
Mr. Cullen.

And so it was resolved in the affirmative.

WEDNESDAY, 23RD JUNE, 1909.

The Chairman submitted the Draft Report on the question of railway communication with East Gippsland.

The Report was read.

Mr. Melville moved, That owing to the difficulty experienced in getting the Construction Branch of the Railway Department to adopt the newer and cheaper means of transport, the Committee recommends the Government, before Parliament is asked to authorize the construction of the proposed railway from Bairnsdale to Orbost at a cost of £386,000, to invite proposals from railway and electrical engineers and others to convey effectively, at a capital outlay considerably below the £386,000, the passengers and tonnage stated in this Report as likely to be the annual traffic between Bairnsdale and Orbost and *vice versa* during the next seven years, and that a substantial premium be offered for any plan or proposal which is accepted by the Government. Those submitting proposals to be asked to keep in view the possibility of using, *inter alia*, suction gas plants at several sub-stations along the route of the railway for the purpose of generating electricity as the motive power for the line and using the charcoal of the adjacent forests in lieu of coal.

And, after discussion—

Motion put.

The Committee divided.

Ayes, 1.
Mr. Melville.

Noes, 5.
The Chairman,
Mr. J. W. Billson,
Mr. Cullen,
Dr. Embling,
Mr. Warde.

And so it passed in the negative.

E. H. CAMERON,
Chairman.

Railways Standing Committee Room,
State Parliament House,
Melbourne, 23rd June, 1909.

[Minutes of Evidence are not printed.]

APPENDIX.

APPROXIMATE ESTIMATE OF COST OF PROPOSED BAIRNSDALE TO ORBOST TOWNSHIP RAILWAY; LENGTH, 60 MILES 76 CHAINS; 5FT. 3IN. GAUGE; RULING GRADIENT, 1 IN 50; SHARPEST CURVE, 12 CHAINS RADIUS. PERMANENT SURVEY.

BASED ON 7s. RATE OF WAGE.

Description of Work.	Quantity.	Rate.			Cost.	Total cost.
		£	s.	d.	£	£
Preliminary expenses and surveys (not including past expenditure) sum of ... ..	...	...	...	...	...	1,500
Land transfer expenses, sum of ... ..	...	...	...	...	...	1,000
Clearing and grubbing	61 miles ...	100	0	0	...	6,100
Fencing	128 " ...	35	0	0	4,480	
Cattle-pits and gates, sum of ... ..	...	...	...	...	1,250	
						5,730
Earthwork in cuttings 15-ft. formation width; main line	1,012,000 c. yards	0	2	0	101,200	
Earthwork in side cuttings, back cuttings, ditches, and creek diversions; main line ...	564,000 "	0	1	0	28,200	
Earthwork; road diversions	19,000 "	0	1	0	950	
Earthwork; table and mitre drains	5,400 l. chains	0	3	0	810	
Earthwork in foundations to bridges, culverts, &c., exclusive of special bridges	5,400 c. yards	0	1	6	405	
Earthwork; widening-out for stations and in road approaches	69,000 "	0	1	6	5,175	
						136,740
Special bridges—Mitchell, Nicholson, Tambo, and Snowy, sum of ... ..	...	...	...	...	73,300	
Bridges (timber)	8,400 l. feet	3	10	0	29,400	
Timber culverts, including ironwork ...	15,300 c. feet	0	2	6	1,912	
Brick, stone, and concrete culverts, sum of ...	...	...	...	...	4,000	
						108,612
Metalling and gravelling roads, station grounds, and platforms	9,500 c. yards	0	3	6	1,662	
Ballast 8½ in. thick	96,000 "	0	3	6	16,800	
						18,462
Sleepers, 9ft. by 9in. by 4½in.	139,500 No.	0	2	9	...	19,181
Permanent-way materials, main line and sidings, new 60-lb. steel rails	63·20 miles ...	850	0	0	53,720	
Check railing, including materials	60 l. chains ...	4	0	0	240	
Points and crossings, sum of ... ..	...	...	...	...	805	
Laying permanent-way, sum of ... ..	...	...	...	...	4,650	
Railway freight on permanent-way material, sum of ... ..	...	...	...	...	3,100	
						62,515
Terminal station; buildings, platforms, cranes, &c., sum of ... ..	...	...	...	...	600	
Roadside stations; buildings, platforms, &c., sum of	7 No. ...	...	...	...	1,390	
Residences for employés, sum of	6 " ...	...	...	...	1,200	
						3,190
Additions to junction station, sum of ... ..	...	...	...	...	...	—
Turntable, engine shed, &c., sum of ... ..	...	...	...	...	...	1,270
Water supplies, sum of	3 No. ...	...	...	...	...	1,500
Stock trucking yards, sum of ... ..	...	...	...	...	...	1,000
Signals, sum of ... ..	...	...	...	...	...	400
Telegraph	61 miles ...	20	0	0	...	1,220
						368,420
Provision 7 per cent. for miscellaneous items and unforeseen contingencies ...	...	...	...	...	...	25,790
Engineering, supervision, and general expenses, sum of ... ..	...	...	...	...	...	31,000
Total ... ..	...	...	...	...	...	425,210

Or £6,976 per mile, exclusive of land and rolling-stock. If serviceable secondhand rails become available the cost will be reduced by about £250 per mile.

MAURICE E. KERNOT,
Chief Engineer for Railway Construction.
17.2.09.