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H O U S E O F A S S E M B L Y .

ROADS IN CASTRA AND N. W. COAST :

REPORT OF ENGINEER-IN-CHIEF.

Laid upon the Table by the Minister of Lands and Works, and ordered by the House to be printed, July 19, 1882.



REPORT of Engineer-in-Chief on several suggested Lines of Road between Waratah and North West Coast

Lands and Works Office, Hobart, 5th October, 1881.

SIR,

In accordance with your verbal instructions I have examined the several suggested lines of road between Waratah and the North West Coast, and have now the honor to submit my Report upon the same.

The lines examined were marked roughly by the Surveyors, and are as follows:—

1. *Castra Route*—From Ulverstone through Castra to Waratah. (Mr. J. Scott, Surveyor.)
2. *Leven Route*—From Ulverstone over Dial Range to Waratah. (Mr. R. Hall, Surveyor.)
3. *Penguin Route*—From Penguin Creek along Pine Road to Waratah. (Mr. R. Hall, Surveyor.)
4. *Emu Bay Route*—From Burnie to Waratah, Rouse's Camp. (Mr. E. Counsel, Surveyor.)
5. *Table Cape Route*—From Wynyard to Waratah. (Mr. C. Sprent, Surveyor.)

No. 1, *Castra Route*, follows the Castra or Slab Road from Ulverstone, passes T. Fulton's lot, and along the old "Ten-feet Track," more or less.

I met Mr. Scott near New Year's Plains, and learning that he had not, up to the time of my visit (23rd August), obtained a satisfactory line round the Black Bluff; that he had suffered considerably from the hardships and exposure connected with exploring at a bad time of the year; and, moreover, that the summit level would probably be 1000 feet lower than the Black Bluff (*i.e.*, some 1200 or 1300 feet *higher than Waratah*), I decided to abandon this route. The distance was estimated by Mr. Scott at 50 miles from Waratah to Ulverstone, but my opinion is that it would be found to exceed that length considerably.

No. 2, *Leven Route*, follows the North Motton Road for nearly five miles from Ulverstone, crosses the Leven River at eight miles, and rises at about one in fifteen for some two and one-half miles to top of the Dial Range, crosses the Copper Creek mineral section, and joins the Penguin line ten miles back from Penguin Creek, from which point into Waratah it is common with the Penguin route.

The country passed through from Leven River to junction on Penguin route is heavily timbered, steep, and broken, and of little or no value for agricultural purposes. The line is very tortuous, and would be expensive to construct.

The distance from Waratah into Ulverstone by this line would be 50 miles.

No. 3, *Penguin Route*, follows the Pine Road from Penguin Creek, rising gradually for about 13 miles to the Hanging Rock at some 1400 feet above sea level (passing through heavily timbered but good private and Crown lands all the way); falls some 200 feet to Laurel Creek, and then rises to crossing of the Blythe River, close under Mount Husetop, at 19-mile point, and at about 1500 feet above sea level; this portion (13 miles to 19 miles) is through rather broken and undulating country, composed of granite sand and decomposing boulders, is more lightly timbered, and with belts of bauera scrub in the gullies; crosses or skirts about two miles of Button Grass

Marsh, at a height of 1800 to 1900 feet above sea level. From 24 miles to near 29 miles the country is broken, but not difficult for road construction; passes through myrtle forests, with some celery-top pine, gum, and small cutting-grass swamps; enters the V.D.L. Co.'s boundary at about 25½ miles, and after a steep rise comes out upon the Surrey Hill Plains under Valentine's Peak, at about 29 miles from Penguin Creek, and 2000 feet above sea level. The country is then open and gently undulating for the remainder of distance. The Wey River is crossed where the valley is some 80 feet deep, and the V.D.L. Co.'s tramway is intersected at 33 miles from Penguin Creek. From this point the line follows nearly side by side with the tramway to Waratah, crossing the Hellyer River in a favorable manner.

The distance from Waratah to Penguin Creek by this line is 44 miles. The combined distance to Ulverstone by this route and the Main Coast Road is 51 miles.

No 4. *Emu Bay Route*.—This route follows a line of road given by the V.D.L. Co. for use of public, between Rouse's Camp and Burnie, and for the whole distance passes through the private property of that company or land sold by them. Good road material is abundant all along this route. The gradients as a whole are favourable, the bad portions being at the Burnie end and in crossing the Hellyer Valley. Bridges over Wey and Hellyer Rivers are constructed. The land for seven or eight miles from Emu Bay is very good.

The distance from Waratah to Emu Bay is 41 miles.

No. 5. *Table Cape Route*.—This line, after leaving Wynyard, passes midway between Camp Creek and Blackfish Creek over heathy and poor land for about five miles, passes what is known as Connor's Farm at about six miles, and after traversing a myrtle forest comes out on to Moore's Plains at 11 miles from Wynyard and at about 800 feet above sea level; goes round the Calder Hill and crosses the Calder River (14 miles) at 850 feet elevation, then rises (at 16 miles) to the watershed between Calder and Inglis Rivers at 1100 feet elevation, passing through myrtle forest for some distance, and rising gradually to an elevation of about 1300 feet at 21 miles. From this point the road would fall to the crossing of the Hellyer River at 25 miles, which is here some 700 feet above sea, a long distance being on a grade of 1 in 20. Crossing the Hellyer the same grade round the spurs on south side of the Hellyer Valley brings road again up to an elevation of some 1300 feet, when it is eased off till the table land is reached at about 1700 feet above sea, then rising gradually to crossing of Wandle River at 31 miles, near corner of V.D.L. Co.'s Surrey Hills block, and at an elevation of 2000 feet. This table land is covered chiefly with a growth of myrtle, sassafras, and fern trees. From the Wandle River to Waratah there are two lines suggested: the one keeping altogether outside the property of the V.D.L. Co., over rough broken ground, and going direct to Waratah; the other keeping along and partly inside the property of that company to near Rouse's Camp, and then running parallel with Bischoff Company's tramway into Waratah. This latter is the preferable line, intersects open grassy undulating country, and has much more favourable gradients.

Distance from Waratah to Wynyard, 39 miles.

To summarise the above—

The Castra Route will have so high a summit elevation as to be fatal to its adoption from an engineering point of view, while it will undoubtedly be the longest.

The Leven Route has heavy gradients, a very rough and broken country, with costly works, including an expensive bridge over the Leven River, and passes through poor crown lands. On the section between Ulverstone and the Leven River an aggregate elevation of between 800 feet and 900 feet has to be overcome, and lost by the time the Leven River is reached, when the climb over the Dial Range immediately commences. Great credit is due to Mr. Surveyor Hall for the manner in which he has laid out this difficult section between the North Motton Road and the junction with the Pine Road; and, although it is a practicable line, I could not recommend its adoption.

The Penguin Route has on the whole fair gradients, the steeper portions being of no great length; passes through five or six miles of agricultural land belonging to the Crown before the barren country at Hanging Rock is reached; has no difficult crossings of valleys, and does not attain a summit level higher than Waratah. It is possible, however, that as the V.D.L. Co. have ceded one line of road through their property (viz., from Rouse's Camp to Emu Bay), compensation might have to be paid in some shape for 14 miles of road in another direction. Road material would be expensive for some miles, as the rotten granite and granite sand would never make a road, and get yearly worse under traffic.

The Emu Bay Route has fairly good gradients, excepting at Hellyer Valley and near Emu Bay; while the bridges at Wey and Hellyer Rivers are already constructed. This line compares favorably as to distance with the Penguin route; but, as it passes for the whole distance from Emu Bay to Rouse's Camp (2½ miles from Waratah) through the private property of the V.D.L. Co.

and lands sold by that company, and as this road, if constructed, would considerably enhance the value of the V.D.L. Co.'s property, I would not advise its construction except upon terms apportioning the cost fairly between the Government and the Company, otherwise the small saving that perhaps might be effected in the construction by the Government of this particular road would not outweigh the advantages of either the Penguin or Table Cape routes.

The Table Cape Route has an easier ascent for some miles from the coast than any other route, Castra excepted; is the shortest between Waratah and a port; passes in the neighbourhood of country well known to be auriferous; does not attain a summit level higher than Waratah; goes through a large extent of Crown land, which, although not of first-class quality, appears to me quite equal to that in the Table Cape Forest, intersected by the main road to Circular Head, and which is being purchased since road was made; crosses very few creeks as compared with Penguin route;—the one difficulty being the crossing of the Hellyer Valley and the necessity for a very long gradient on either side.

In conclusion, it seems to me that the choice lies between the Penguin and Table Cape routes, the former being 44 miles to Penguin, the latter 39 miles to Wynyard; and although Mr. Hall represents that by a more direct line between Valentine's Peak and Rouse's Camp he could save two or three miles, and Mr. Sprent that he could save one and a-half miles by taking the direct road *viâ* Camp Creek from Wynyard (and both are doubtless near the mark), yet, as there are many places where the gradients should be eased in both lines when actually set out for construction, it will be but fair to adopt the distances actually chained by them for purposes of present comparison. The Penguin route would bring into cultivation a large quantity of good land selected along the Pine Road, and now idle for want of means of communication, besides opening out a further quantity of good Crown land five or six miles back; while the Table Cape route would pass through a larger quantity of Crown land of rather inferior quality. The Penguin route would lead to a port that would be inferior to that at Wynyard until further expenditure is incurred in improving it.

The Penguin route has the advantage of having between three and four miles of good metalled road constructed, and about four miles in addition already cleared or being cleared; so that, although longer than the other route, and having more broken ground, the total cost of the two would not be greatly different, and may be taken approximately at £40,000 for either.

If access to a shipping-place from Waratah is the first consideration, I should recommend adoption of the Table Cape route. If, on the other hand, it is thought necessary to have in view the future construction of a main road connecting the North-West Coast with Corinna, Heemskirk, Macquarie Harbour, and, perhaps, eventually with the Huon, then I think the route *viâ* Penguin is preferable, because it is not so much to the westward at its commencement (the distance between the Penguin and Wynyard being 24 miles). The adoption of the Penguin route would, however, necessitate more costly works to give sufficient shipping accommodation than would be required at Wynyard.

I have the honor to be,
Sir,

Your obedient Servant,

JAMES FINCHAM, *Engineer-in-Chief.*

*The Hon. C. O'REILLY, M.H.A., Minister
of Lands and Works.*