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REPORT

FROM

THE PARLIAMENTARY STANDING COMMITTEE  
ON RAILWAYS

ON THE

MURCHISON AND RUSHWORTH RAILWAY  
DEVIATION;

TOGETHER WITH

MINUTES OF EVIDENCE AND PLAN.

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*Ordered by the Legislative Assembly to be printed, 15th July, 1919.*

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RAILWAYS STANDING COMMITTEE REPORT No. 1.—[6d.]—9615.

MEMBERS OF THE PARLIAMENTARY STANDING COMMITTEE ON RAILWAYS.

*(Twelfth Committee.)*

R. F. TOUTCHER, Esq., M.L.A., Chairman\* ;

The Hon. J. W. Billson, M.L.A.,  
The Hon. A. Hicks, M.L.C.  
(Vice-Chairman),†

J. Menzies, Esq., M.L.A.,  
The Hon. H. F. Richardson, M.L.C.,‡  
R. H. Solly, Esq., M.L.A.

\* Appointed Chairman on the 2nd April, 1919.

† Appointed Vice-Chairman on the 2nd April, 1919.

‡ Appointed on the 8th July, 1919.

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# REPORT.

THE PARLIAMENTARY STANDING COMMITTEE ON RAILWAYS, which was authorized under the provisions of the *Murchison and Rushworth Railway Deviation Act 1918* to inquire into the schemes for the deviation of the railway between Waranga and Rushworth stations, in consequence of the enlargement of the Waranga Reservoir, and to recommend the adoption of one of the proposed deviations, has the honour to report as follows :—

## FORMER REPORT.

1. On the 29th October, 1918, the Legislative Assembly referred to the Committee for inquiry and report the question of deviating the railway between Waranga and Rushworth stations so as to raise the rails above the high-water level of the enlarged Waranga Water Storage Basin, and on the 13th December, 1918, the Committee presented its Report on this matter to the Legislative Assembly. In that Report the Committee gave the reasons for deviating the existing line and the length and estimated cost of the new route suggested by the Railways Commissioners and the State Rivers and Water Supply Commission. During the inquiry, however, it was elicited from Mr. J. S. Dethridge, State Rivers and Water Supply Commissioner, that there was a possibility of the new full-supply level of Waranga Reservoir (398 feet above low tide, Hobson's Bay) being still further increased later on by 5 feet by shortening the length of the main western or inlet channel from the Goulburn Weir and adding to the height of the embankment forming the northern end of the storage basin. If this were done it would then necessitate raising the railway deviation several feet for the greater part of its length, so as to keep the rails well above the additional supply level (403 feet), thus incurring further expenditure. An inspection of the locality and an examination of the map showing the surface levels of the adjacent lands led the Committee to the opinion that, if there were a likelihood of the Waranga Reservoir being further enlarged in the next generation or so, the question of deviating the railway more to the south, so as to place the line on higher ground and outside the submerged area, should be looked into. The Committee concurred with the Railways Commissioners and the State Rivers and Water Supply Commission as to the necessity for altering the route of the existing railway. As this work was considered to be urgent, so as to allow the additional water for irrigation to be stored in the enlarged basin as soon as possible, the Committee recommended—

- (1) That the existing railway between Waranga and Rushworth stations be deviated.
- (2) That the Way and Works Branch of the Railway Department be requested to make a survey and detailed estimate of the cost of carrying the deviated railway to the south of the enlarged Waranga Reservoir, keeping the line outside of the submerged area.
- (3) That a Bill be passed by Parliament this Session authorizing a deviation of the Waranga—Rushworth railway, the limit of deviation allowed in such measure to be sufficient to include the route referred to in the preceding recommendation (2), and providing that when the detailed estimate of cost stated in recommendation (2) is submitted to the Parliamentary Standing Committee on Railways and inquired into and considered by it, the deviation then recommended by the Committee, either the one keeping outside the submerged area or passing through the southern end of the enlarged reservoir, should be carried out without any further authority being obtained from Parliament.

2. The necessary Bill was passed by Parliament in December, 1918, and shortly afterwards the required survey of the undulating country at the south end of Waranga Reservoir was made. On the 25th March, 1919, the Committee received from the Railways Commissioners a plan based on the survey showing the route of the suggested second deviation placing the new line on the higher ground outside the submerged area, and also an estimate of the cost of this work prepared by Mr. E. Ballard, Chief Engineer of Way and Works. A month later a supplementary statement on this matter was received from that officer in response to the Committee's application for further information and estimates of cost.

## ESTIMATED COST OF DEVIATIONS.

3. These estimates provided for three schemes, namely:—No. 1: 3 miles 23 chains in length, which was the one proposed at the outset by the Railways Commissioners and the State Rivers and Water Supply Commission, and which at its furthest point of deviation would be about half-a-mile south of the existing line, and would for 4,000 feet be carried on embankments and bridges through the southern portion of the enlarged storage basin, thus having water for that distance on both sides of the railway when the reservoir was at its new full-supply level of 398 feet; No. 2: 3 miles 63 chains in length, which was investigated at the instance of the Committee, and which at its furthest point of deviation would be about three-quarters of a mile south of the existing railway, and would be located for one or two short lengths just above the 398-ft. level, but for the greater part of the distance would be along the margin of the 403-ft. contour, so that if later on this reservoir were still further enlarged by raising the maximum surface level of the stored water from 398 feet to 403 feet, the rail level of this deviation could without much trouble be elevated by additional earthworks to 408 feet to keep the road bed well above the wave action; and No. 3: 3 miles 79 chains in length, which was placed a little outside the route of No. 2 deviation, so as to be practically on or above the 408-ft. contour for its full length, thus requiring no alteration or raising in the event of the reservoir being subsequently still further enlarged.

4. Mr. Ballard informed the Committee that if scheme No. 1 were adopted to meet the present requirements of a maximum water level of 398 feet—the works now in progress at Waranga Reservoir providing for the surface level of the stored water being raised 10 feet, or from 388 feet to 398 feet—the cost of this railway deviation would be £19,280. If, however, the full-supply level were subsequently increased a further 5 feet, reaching a maximum of 403 feet, the estimated cost of raising this deviation to keep the rails well above wave action, or to a level of 408 feet, would be £28,144, making a total outlay of £47,424. He added that the cost of scheme No. 2 to meet the present requirements of a maximum water level of 398 feet would be £22,840, and if later on this deviation had to be raised 5 feet, or also to a rail level of 408 feet, a further expenditure of £18,474 would be necessary, bringing the total outlay on this scheme to £41,314, compared with £47,424 for scheme No. 1. The estimated cost of scheme No. 3 providing from the outset for a maximum water level of 403 feet and a rail level of not less than 408 feet, thus requiring no alteration to be made to the railway in the event of this storage basin being still further enlarged, was £30,691. Each of these estimates provided for a sum (£1,882 in the case of deviation No. 1, £4,367 for No. 2, and £4,272 for No. 3) to be paid to the Railway Department as a capitalized amount to cover the extra running and maintenance expenses due to the new routes being longer than the present line, varying from 26 chains for No. 1 to about 60 chains for Nos. 2 or 3. It was considered that, as Waranga Reservoir is being enlarged for the benefit of the irrigationists in the northern areas, the users of the Murchison—Rushworth railway should not be penalized by being required to pay additional fares and rates, the former varying from 2d. to 6d. per passenger extra, and the latter from 2d. to 6d. per ton, over the railway mileage between those stations which will be increased by the deviation.

## ESTIMATED COST OF ADDITIONAL STORAGE.

5. In the meantime, while these surveys and estimates were being made, the State Rivers and Water Supply Commission had been looking into the question of further enlarging Waranga Reservoir and whether it would be less costly to provide additional storage elsewhere than at Waranga. Mr. Dethridge, when giving further evidence before the Committee in May last, said the original Waranga Reservoir was constructed for £260,000, and had a storage capacity of 196,000 acre feet, so that the average cost was approximately 26s. per acre foot of stored water. The enlarged reservoir would hold 133,000 acre feet additional, and the estimated cost of this work, including land purchase and railway and road deviations, was £270,000, or about £2 per acre foot. The Sugarloaf storage on the Upper Goulburn River above Alexandra Township would when completed also cost about £2 per acre foot. If, however, Waranga Reservoir were to be still further enlarged by raising the full-supply level by 5 feet the increased storage capacity would be 75,000 acre feet only, and as the estimated cost of this work was, roughly, £300,000, the cost of this additional storage would be no less than £4 per acre foot. The principal cause of this comparatively large expenditure was that the inlet channel from the Goulburn Weir to Waranga Reservoir, which had a fall of 6 inches to the mile and was about 23 miles in length, would have to be curtailed by 10 or 11 miles to give the required 5 feet of additional storage. This shortening of the inlet channel would necessitate the making of an extensive tunnel, causing the estimated cost of the new inlet channel to reach £100,000, to which would have to be added £150,000, being the anticipated cost of still further increasing the height of the large embankment forming the northern side of Waranga Reservoir. Surveys, supervision, and allowances for unforeseen contingencies accounted for the remaining £50,000. It was considered that cheaper storages than £4 per acre foot could be provided elsewhere, such as at Camp Hill on the Goulburn River above Seymour, or at Sugarloaf, by raising the height of the dam at that storage basin. Under

ordinary conditions water liberated at Sugarloaf Reservoir would reach Waranga Reservoir in three days. Therefore, while it would be possible to still further enlarge Waranga Reservoir, the extra cost of that work, as compared with other storages, made such an undertaking a somewhat remote probability.

#### RECOMMENDATION OF COMMITTEE.

6. After an inspection by the Committee of the sites of the deviations, and on taking the foregoing estimates of cost and evidence of witnesses into consideration, and also the lesser capital expenditure required at the outset for either scheme No. 1 or No. 2, as compared with the cost of scheme No. 3, and computing that the interest on the difference between the immediate outlays on either scheme No. 1 or No. 2 and No. 3 would, at 5 per cent. compound interest, earn in less than twenty years a sum which would be sufficient to provide for the additions to scheme No. 1 or No. 2, so as to bring their rail level up to the height attained in scheme No. 3, namely, 408 feet, in the event of Waranga Reservoir having to be further enlarged at the end of that period, the Committee came to the conclusion that scheme No. 3 should be set aside because of the largeness of its cost, £30,691, as against £19,280 and £22,840 respectively. The Committee had then to choose between schemes No. 1 and No. 2, and here again the capital expenditure required largely determined the matter. Scheme No. 1 being the less costly and also the shorter deviation, thus involving less maintenance and running expenses and probably a less costly road deviation, was selected in preference to scheme No. 2.

7. The Committee therefore recommended that scheme No. 1, at an estimated cost of £19,280, be adopted, and early in May last it informed the Railways Commissioners and also the State Rivers and Water Supply Commission of this decision, so that there should be no unnecessary delay in proceeding with the required railway deviation and filling the enlarged Waranga Reservoir. This deviation will be about  $3\frac{1}{4}$  miles in length. The expenditure authorized by the *Murchison and Rushworth Railway Deviation Act 1918* was £23,000.

R. F. TOUTCHER,  
Chairman.

Railways Standing Committee Room,  
State Parliament House,  
Melbourne, 9th July, 1919.

[*Minutes of Evidence are not printed.*]