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PROVISION OF WHARFAGE
SEYMOUR COAL MINE

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Provision of Wharfage Facilities, Seymour
Coal Mine

by
A. J. Debenham

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23rd November, 1944.

CONFIDENTIAL.

Dear Sir,

PROPOSALS FOR THE PROVISION OF WHARFAGE
FACILITIES IN CONNECTION WITH SCHEME FOR
RE-OPENING OF THE SEYMOUR COAL MINE,
TASMANIA.

The Commonwealth Coal Commissioner in a letter to the Director of Shipping, dated 14th October, 1944, asked that this Committee should investigate and report on a proposal to re-open the Seymour Coal Mine on the East coast of Tasmania, in so far as it concerns the provision of a suitable wharf or jetty in the vicinity for the shipment of the coal for export.

2. Following this request, the Chairman of the Committee, the Executive Member and the Engineer recently visited Tasmania and, in company with Mr. W. H. Williams, the Director of Mines, Tasmania, spent three and a half days in the neighbourhood of Seymour investigating the possibilities of providing a suitable jetty that could be regularly employed for the shipment of coal to other States.

OBJECT OF PROPOSAL :

3. It was learnt from Mr. Williams that the proposal was to export the Seymour coal to Victoria and South Australia, provided, inter alia, that a suitable shipping centre could be recommended. The immediate purpose of the proposal is to relieve the serious shortage in coal supplies in those two States at the present time, but, in view of the considerable expenditure that would be involved in re-opening the mine, the continuance of this export as a post-war activity must receive full consideration, and, therefore, while it was no part of the function of the Committee to investigate the working of the mine and the financial aspects of the proposed development, consideration had to be given on broad lines to the economics of the proposal.

DESCRIPTION OF MINE :

4. The Seymour mine is situated close to the foreshores and, from information furnished by Mr. Williams, consists of a top and bottom seam, both of which have been worked, and possibly a third seam lower down, about which little information is available. The mine has been worked on three separate occasions, on the first occasion about 90 years ago, on the second, a little over 50 years ago and on the third, about 15 years ago.

5. The present proposal is to develop the second or larger seam, which has a thickness of about 3'6" to 5' with a wandering band of shale 6" in thickness. This seam apparently has been worked over an area of some four or five acres and is situated about 160 ft. below the ground surface. In the first instance the mine was worked from a circular vertical shaft, but on the last occasion a dip tunnel some 800 ft. in length was driven on an inclination of 1 in 5.

6. The mine at present is flooded to the surface level, but the information made available by Mr. Williams shows that the coal has a volatile hydro carbon content of between 20% and 30%, fixed carbon between 50% and 60%, moisture 3% and ash from 15% to 18%. The Calorific value of the coal ranges from 11,380 to 12,480 British Thermal Units per pound, with an average of 11,750. The coal, from evidence that was submitted, is of a good hard quality, the mine has a sound roof and floor and, from the mining point of view, little difficulty can be anticipated in producing the coal at the pit mouth at a reasonable cost. However, although the coal has a reasonable calorific value, it has a high percentage of ash content and cannot be regarded as first class, and, in competition with Newcastle coal, it would obviously command a lower price per ton.

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PRESENT OBJECTIVE :

7. Records of the mine and the coal produced are not very complete, but it was ascertained from Mr. Williams that a sum of £5,000 had been made available for the purpose of unwatering the mine and despatching a suitable parcel of coal to Melbourne for bulk tests, provided an assurance is given by this Committee that no undue difficulty would be met with in developing a suitable wharf at which the coal could be shipped.

PORTS AVAILABLE FOR SHIPMENT OF SEYMOUR COAL :

8. The East coast of Tasmania, North of the Port of Hobart, is poorly provided with adequate ports for the larger type of cargo vessels.

9. Sketch plans are attached to this report, a general plan (A) showing the position of four possible shipping points, namely Picanini Point, Long Point, Bicheno and Cole's Bay, and detailed plans of Long Point (B), Bicheno (C), and Cole's Bay (D).

10. In the vicinity of the Seymour mine there have been attempted shipments of coal from the Dalmayne colliery from a jetty at Picanini Point (plan A), some three miles to the North of Seymour, which, on account of its exposed situation, was soon destroyed by seas and the venture proved to be a failure.

11. At Long Point (plan B), in the immediate vicinity of the Seymour mine, shipments of coal and produce were carried out over a period of 14 years or more, in small vessels of about 150 tons capacity, chiefly from a jetty on the South side of Long Point, but also for a short period from a jetty on the North side. According to the statement of a resident who was concerned in building one of the jetties, a jetty on the South side of Long Point, 200 ft. out from the high water mark with a 300 ft. "L" head would provide a suitable berth with a depth of 21 ft. L.W.O.S.T.

12. Another port some 13 miles to the South of the Seymour mine is Waubs Bay at Bicheno (plan C), which is far more satisfactorily situated in regard to protection from heavy seas that are likely to occur from the South and South-east, particularly during the Winter months. The remains of an old jetty exist at the head of the Bay in a position well protected from all weather except that from the North-east and, from information given by local residents, it would appear that a jetty about 700 ft. long would provide a 300 ft. berth with over 21 ft. of water L.W.O.S.T. This is indicated on the plan, but would require confirmation by hydrographic survey.

13. Still further to the South is Cole's Bay (plan D), distant 36 road miles from Seymour, the last 15 of which are over a second class road. Here there is already a wharf in a dilapidated condition, but the wharf, although well sheltered from South and South-easterly weather, is exposed to Westerly and South-westerly weather, and, in any case, the distance from Seymour and the consequent heavy transport costs make this site undesirable.

EFFECT OF TRANSPORT COSTS TO COLE'S BAY AND BICHENO :

14. In view of the relatively low value of the coal, and of the proposals for the post-war continuance of the trade, transport costs from the mine to the shipping point must be reduced to the minimum if it is successfully to compete on a peace-time basis with the Newcastle coal. The establishment of a jetty at either Cole's Bay or Bicheno for the export of coal from Seymour may be open to objection from the economic point of view, particularly as it would appear that transport would, at least for some considerable time, have to be confined to road haulage. The cost of road transport from Seymour to Cole's Bay would probably amount to from 12/- to 15/- per ton/from Seymour to Bicheno to approximately 5/- per ton.
and

LONG POINT JETTIES :

15. At Long Point, as stated, jetties have been built at different times, both on the North side and on the South. The North side, although offering better protection from heavy seas from the South-east, is open to the objection that a reef occurs some 1,500 ft. away from the northern end of Long Point, situated roughly in a North-westerly direction, and the evidence from local fishermen was that at least one other submerged reef occurs, and there may also be other foul ground.

16. As far as could be ascertained, the first wharf established at Long Point some 50 years ago was on the North side, but in consequence of the danger to sailing vessels attached to the position from the presence of reefs, it was abandoned in favour of a jetty on the South side of Long Point, where, although there was less protection from the South-east seas, there was no foul ground. At that time a depth of water of some 14 ft. was ample to serve sailing vessels calling at the Port and carrying about 150 tons of produce or coal.

17. The first jetty on the South side was a short one extending only some 40 ft. beyond the low water mark, and appears to have been dangerously close to the southern limit of Long Point. The original jetty apparently was re-built about 1890 and, on that occasion, an alternative position was proposed some 140 ft. further to the North of the original jetty in order to obtain greater protection from the southerly tip of Long Point. The proposal, however, was not adopted.

18. The latest venture in the Seymour mine was in 1929/31 when the old site under the shelter of the southern part of Long Point was abandoned and a jetty 1,100 ft. in length built immediately opposite the mine in position indicated in the sketch (B) attached. This jetty, however, did not give sufficient depth even for the small vessels then calling for the coal and it was subsequently extended by 200 ft. Apparently the jetty, particularly the last extension, was not of suitable design and construction, and it was destroyed by seas very shortly after completion, with the result that the mine closed down in a little over three years, after shipping only about 6,000 tons, for an expenditure of about £68,000.

CONDITIONS AT LIKELY POINTS OF SHIPMENT :

19. Evidence available indicates that the weather most likely to interfere with shipment is that from the East, South-east and South and, provided adequate shelter be available from rough seas from these directions, it appears that a minimum of interruption should be experienced, as heavy seas from the North-east do not frequently occur.

20. Little official data is available as to the depths of water that exist at likely points of shipment, but certain information has been collected from local fishermen, retired mine managers, masters of vessels who are well acquainted with this coast and other local residents. From information so received (although at times it was contradictory in character), and subject to confirmation by hydrographic survey, there would appear to be sufficient depth of water for the provision of wharfage facilities at Bicheno and there is, moreover, sufficient shelter from all seas, except those from the North-east. With regard to Long Point, the North side would offer better protection from the East, South-east and South than the South side, although the presence of submerged reefs, if confirmed by hydrographic survey, may preclude any serious consideration being given to the erection of a jetty on the North side. On the South side of Long Point it would be possible to construct a jetty capable of berthing vessels of 2,000 tons carrying capacity and about 16 ft. loaded draft for a large part of the year, but there would be periods when heavy South or South-easterly weather would compel temporary cessation of the shipment of coal from such a jetty. The extent of this interruption may, in the extreme, amount

to 20% of the total time, although it is hoped that with modern vessels, and having regard to experience on the N.S.W. coast, this percentage may be considerably less. A jetty on the South side would, moreover, have to be very strongly constructed in order to withstand the very heavy seas that occasionally would find their way around the protecting headland.

OUTPUT OF MINE AND SIZE OF VESSELS TO BE USED :

21. Mr. Williams informed the Members of the Committee that he planned for a weekly output of up to 4,000 tons, but commencing probably at 2,000 to 2,500 tons per week. While this, no doubt, could be most economically handled ultimately by a 4,000 ton d.w.t. capacity vessel calling once a week, a shorter berth with less depth would suffice for a smaller vessel of say 2,000 tons d.w.t. capacity, drawing say 15 to 16 ft. of water, and it could consequently be kept closer inshore and would, therefore, be more protected. In addition there would be less stress on the wharf. Further, if it is ultimately found necessary to adopt the South side of Long Point, there are likely to be periods when South-easterly weather might prevent any berthing or loading of vessels for three days or more and this suggests the advisability of making a greater number of shipments, in smaller vessels, to minimise the effect of delays.

HYDROGRAPHIC SURVEYS :

22. It is recommended, in the first instance, that action be taken to have hydrographic surveys made of the North and South sides of Long Point and also of Waubs Bay, Bicheno.

23. The surveys should be in sufficient detail to enable Shipmasters to navigate in the vicinity and particular care should be taken to accurately establish the location of, and minimum depths on, all reefs and foul ground, particularly on the North side of Long Point and close inshore. If practicable, prickings, to determine the nature of the sea bed, should be taken at the proposed jetty sites at Bicheno and on the North and South sides of Long Point. The suggested locations of the prickings are indicated approximately on plans (B) and (C).

24. The hydrographic survey should be connected to a land traverse, having one or more permanent marks to facilitate location of proposed jetties and permit the establishment of beacons or other aids to navigation. Sufficient levels should be taken ashore to enable contours, at say 5 ft. vertical intervals, to be plotted over the area between the mine workings and the southern tip of Long Point; in the vicinity of the old jetty site on the North side of Long Point and at the head of Waubs Bay, Bicheno.

RECOMMENDATIONS :

25. With all the information available to the Committee, including that obtained on the site, the experience and the use of similar jetties in N.S.W., meteorological reports of weather on the East coast of Tasmania, opinions expressed by shipmasters with local knowledge, and, subject to hydrographic survey at Bicheno and North and South of Long Point confirming information now available, the Committee recommends :-

- (a) That, from the point of view of protection from seas and continuity of loading operations, the best position for a shipping jetty within reasonable distance of Seymour is in Waubs Bay, Bicheno.

- (b) That if shipment from Bicheno is considered to be an uneconomical proposition, a shipping point can be constructed on the North side of Long Point, unless hydrographic survey shows that reefs and shoals in the Bay are such as to preclude the use of this site with safety by present day shipping; and
- (c) That if the hydrographic survey indicates the unsuitability of the North side of Long Point, and Bicheno is discarded for economic reasons, the only alternative left would be the construction of a jetty on the South side of Long Point. It is anticipated that at this site interruptions to loading operations would be greater than at either of the other two sites and may amount to as much as 20%. At the same time the Committee is of the opinion that loading operations could be performed at a jetty suitably sited at this Bay.

26. The recommendations in regard to a site for a jetty are in the order given above.

27. If desired, the Committee will report further on receipt of hydrographic survey information and will examine designs of jetty, which it may be decided to construct at any one of the points mentioned.

Yours faithfully,

(Sgd.) A. J. Debenham.

Executive Member.

The Director of Shipping,
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