

successful in procuring the construction of the Inner Harbour as far as the provision of two berths for overseas vessels, the district would then be committed to the Inner Harbour scheme; but nevertheless it amply justifies our statement that the Harbour Board entered on this inquiry with no definite scheme reduced to plans and specifications, but with requirements measured by a shifting standard dictated by the fortunes of their scheme during the course of the inquiry.

At pages 234 and 235 the same tendency is shown in the evidence of Mr. R. W. Holmes:—

Questioned by the Chairman: Would not a statement of the Board's policy as to the amount of berthage required for the port's trade usually be the basis of an engineer's estimate of cost?

Answer: Certainly.

Question: The absence of such a statement leaves the estimates elastic and indefinite?

Answer: The Board would then leave the matter to the discretion of the engineers.

Question: In your son's evidence he said at page 100, "to bring the two schemes on to a basis in which it would be fair to compare their costs, we include the raising of the height of the breakwater by 10 ft. throughout its length." Were your instructions sufficiently elastic to enable you to include that figure of £223,000 without a statement of the Board's intentions in the matter of the height of the breakwater?

Answer: Yes.

Question: Have you ever since your appointment here been acquainted with the Board's policy as to the number of ocean-going berths required?

Answer: No.

Then again there was evidence and admissions of hurry and unpreparedness in the matter of these figures and estimates. It is only fair to the Board's consulting engineers that we point this out. Mr. J. D. Holmes said on page 90, "We have been pushed for time in respect to giving evidence before this Commission." At page 100 he says, "The statement which we are making, which was completed last night, has been prepared under instructions from the Harbour Board for this Commission and not for the Board." On page 149 he said, "I did not take into account labour costs, and work up from them; I took average cost per yard. If I had done so we would have been on the work for about two months instead of two weeks." In answer to an obvious question at this point he continued, "I would have more faith in my estimates if I had had the two months. The work of making up a whole case had been done in a fortnight."

Another feature of the estimates submitted by the engineers is that, having arrived at an engineering basis of the cost of one of the harbour schemes, they then purported to place a valuation of the land which was reclaimed as an incidental work, and *to deduct that value and call the net result the net cost of harbour-construction*. Thus, in connection with the Inner Harbour schemes, they arrive at a gross cost of £461,000; to that they add the estimated cost of roading reclaimed areas, £83,000, and subtract an estimated value of the reclaimed land, £276,000, and call the result, £268,000, *the net cost of the harbour*.

It may incidentally be pointed out that Mr. J. D. Holmes stated that the basis of this valuation was that a member of his staff *got it from somebody at the Harbour Board's offices, and that it was the selling value of the land*. This method of presentation did not trouble us to anything like the same extent as the other unsatisfactory features we called attention to, because we simply ignored the question of the land and the relative deduction from cost; but we would call attention to the probable effect on the public mind of this fallacious method of putting forward an estimate of engineering costs of a harbour. When this Board seeks to build a harbour it must borrow the full amount required to construct the harbour, and it must pay interest on the amount so borrowed. The value of the land reclaimed has no bearing whatever upon these two elements in the Harbour Board's problems. Where the reclaimed land will help will be when the rents it produces amount to more than interest upon the cost of reclaiming it. If and when that happens, the reclamations will be rendering some assistance to the Harbour Board in its finances. The extent to which assistance may be expected will be dealt with fully by us in that part of our report which deals with the question of reclamation.

We tender the foregoing explanation of the method adopted by the Board and some of its witnesses in supplying us with figures and estimates because two results flow naturally from the cause. One is that, even if we could reduce the Harbour Board's ill-defined and elastic proposals to a definite scheme, we cannot attach to it a reliable estimate of the cost of that scheme. The other is that this unsatisfactory feature of the evidence contributed largely to the length of the proceedings and the quantity of the work that we have had to perform. We have all, particularly the engineering member of the Commission, spent weary days trying from unsatisfactory materials to produce some stable and intelligible result in the form of estimates of cost. Most of that time would have been saved and the result would have been more satisfactory if the Harbour Board had come prepared with costs of a definite scheme, put forward on its merits as a scheme, and not as arithmetical arguments in a party dispute.

ECONOMIC CONDITIONS AS AFFECTING INNER AND OUTER HARBOUR DEVELOPMENT.

From an economic point of view the first consideration is naturally the capital cost of developing either harbour, and the subsequent annual cost of maintenance. Exact estimates for either scheme are (for reasons already given) not available, but the approximate figures as submitted by various engineers show that the capital cost of developing the Outer Harbour at the breakwater would be considerably less than the cost of developing the Inner Harbour. This statement is justified by figures put forward elsewhere, prepared by Mr. A. C. Mackenzie (Commissioner). The annual cost of maintenance in the case of the Inner Harbour would also exceed that of the Outer Harbour by the cost of the dredging necessary to maintain the outer channel from the entrance at the moles to deep water. This item for maintenance dredging is estimated to amount approximately to £10,368 per