

The position of the work is well suited for prison labour, being isolated, and at a considerable distance from town, or any other dwellings. If, however the town site is adopted, a large proportion of free labour must be employed, or the prisoners, as many as may be required, brought into town every day. This would be inconvenient and unsafe, and would tell against the town site as compared with the others.

Time of Completion.—Assuming that the harbour-work is to be done by prison labour, and that an average number of a hundred and fifty men will be available, it will take about six to seven years after the completion of the tramways and prison-buildings to run out the western mole of the large harbour to a depth of $4\frac{1}{2}$ fathoms, and for the small harbour about the same time. At the town site it will take about six years with the same amount of labour to reach the same depth. In each case this would give sufficient shelter for local steamers, and large vessels could also be unloaded during ordinarily favourable weather. The remainder of the works, assuming an average of two hundred men, would occupy a further period of ten to twelve years for the large harbour at the whaling-station, and six to seven years for the small harbour for that opposite the town.

Having now laid before you all the information we have collected, and having given the subject in all its aspects the most careful consideration, we have no hesitation in recommending the adoption of the large harbour at the whaling-station, and next to that, should the Government consider it too large a work to undertake, the lesser harbour at the same site.

Waitara River

During our stay in New Plymouth we examined the Waitara River, with a view of determining whether the river was capable of improvement. It is one of the numerous class of rivers having a shifting bar at its mouth, composed of shingle and sand, the depth varying from 8ft. to 14ft. at high water according to the tides and the occurrences of freshes in the river. In order to improve the entrance, it would be necessary to build two parallel guiding-piers, reaching from the shore almost out to the bar. This would probably secure a depth of 12ft. at high water, but, should it be required to increase the permanent depth beyond this, further protection would be necessary, in the shape of a breakwater or mole on the western side, the cost of which would exceed that estimated for the harbour-works at New Plymouth above described.

Owing to the absence of any abundance of suitable material the cost of the guiding-piers would be very great, but, as we have not sufficient information as to soundings and distances, &c., we cannot give an estimate.

Conclusion.—In conclusion we beg to express our thanks to his Honour the Superintendent and other provincial authorities for the courtesy with which information and plans, &c., were furnished for our assistance.

We have, &c.,

JOHN CARRUTHERS.

JOHN BLACKETT.

Hon. the Minister for Public Works.

Enclosure.

REPORT ON THE PROPOSED HARBOUR AT TARANAKI, NEW ZEALAND.

SIR,—

Wellington, 26th December, 1866.

In considering the question on which you have requested us to report to you—namely, the practicability and probable cost of providing harbour-accommodation at New Plymouth, in the Province of Taranaki—the following desiderata have been kept prominently in view. First, the selection of a site upon which a perfectly safe harbour, possessing the qualities of a harbour of refuge, and those necessary for the ordinary provincial trade, can be constructed. Second, the site so selected to afford such natural advantages as will enable the works to be constructed for a sum not exceeding about £300,000 or £350,000. Third, the works to be so designed that they can be carried out in parts, without materially increasing the cost, while each part shall constitute a useful and integral portion of one great plan, to be carried on as the resources of the province may permit. Fourth, the first section to give a good landing-jetty at which the ordinary shipping business of the province (including the discharge and loading of ocean-going vessels) can be carried on at high water during fine weather, for a sum not exceeding £100,000.

As requested by your Honour Mr Balfour visited New Plymouth in May last for the purpose of collecting data by soundings, and superintending the making of a general survey of the roadstead by the surveyors in the employment of the Government, the results of which survey are shown in the accompanying plan, sheet No. 1 (though to prevent confusion the actual soundings are not given, and only contour-lines for every fathom are shown) and, on the information then and previously obtained, the conclusions put forward in the following report are based.

1 Selection of Site.

In selecting a site our attention was first directed to that under the lee of the Island of Moturoa, a preliminary examination of the locality having induced us to believe that the facilities offered by the island for procuring material, and the great natural protection afforded by it in breaking the worst sea, might be turned to profitable account in the design of the works, and, indeed, this would have been the case had not the soundings proved that the area, already partially sheltered by Moturoa, is much shallower than we had believed it to be, so that nothing short of works so extensive as would more than counterbalance the apparent advantages of this site would shelter a reasonable area of water of sufficient depth.

Bearing in mind, therefore, the comparatively limited expenditure to which we are restricted by the circumstances of the case, we have been compelled, after careful consideration, to abandon this site for one where a better result can be obtained for the sum proposed to be expended.

The reasons which have led us to reject the Moturoa site are as follows. We are of opinion that no expenditure there which should fall short of closing the entrance between Mikotahi and