

This breakwater should be run out to a length of about 700 feet in about 18 feet of water, curving gradually to the north-eastward and leaving a wide entrance between its extremity and the baths. Such a breakwater would entirely shelter the enclosure; and it could at the same time, I think, be entered or left by sailing boats in either north-west or south-east winds. I do not think that its cost would exceed £2,000.

If such accommodation would suit the smaller boats they could be entirely removed from proximity to the shipping, leaving the whole space to the south of the Queen's Wharf for the manipulation of the steamers and vessels approaching or leaving the southern T's. I have proposed this as a probable means of meeting the difficulty of providing shelter for small craft, and which, if considered suitable, might enable the City Council to reclaim to the full extent proposed. I would point out that the present plans make no provision whatever for the accommodation of watermen's boats. This is a necessity in every port, and is usually provided in a central and sheltered position. I have made no examination of the details of the proposed retaining walls, as I conclude that it is not required.

I have, &c.,

H. P. HIGGINSON,
Member Institute Civil Engineers.

The Hon. the Minister, Marine Department.

Enclosure 3 in No. 25.

Mr. W. N. BLAIR, C.E., to the Hon. the MINISTER, Marine Department.

SIR,—

Wellington, 27th March, 1882.

In accordance with your instructions (No. 183-82, of 20th March, 1882), I have the honor to submit the following report on the Te Aro reclamation proposed to be carried out by the Corporation of Wellington.

I have inspected the site of the proposed works, and examined the drawings and other documents referring to them.

Although already before you in detail, it is desirable that I should give an outline of the various proposals that have been made, otherwise my report will not be complete in itself.

The proposal of the Corporation of Wellington is to reclaim about eleven (11) chains of the Te Aro end of the harbour, and run the reclamation round in a gradually decreasing width to the Queen's Wharf, where it terminates in a frontage to the southern side of the wharf of about $3\frac{1}{2}$ chains. The outer edge of the reclamation is generally in from 10 to 13 feet at low water, running out to about 5 feet at the Queen's Wharf.

The first amendment on the Corporation's plans proposed by the Marine Department was to limit the width at Te Aro to about $8\frac{1}{2}$ chains, decreasing to 1 chain at the Queen's Wharf. The outer edge of the reclamation would be generally in from 9 to 10 feet of water, running out to about 4 feet at the wharf. An alternative proposal has since been made by the Marine Department with the view of meeting the wishes of the Corporation. It is to commence at the Queen's Wharf at the point fixed by the Corporation, but to run into the Marine Department's first line at cross-section M N on plans. A fourth proposal made by the Harbour Board is to strike a mean between the Corporation's line and the modified one laid down by the Marine Department.

Taking the block to be reclaimed at present only, and including the Harbour Board's endowment, the areas to be reclaimed under the various proposals are as follows:—City Corporation plan, $23\frac{1}{4}$ acres; Harbour Board's proposal, $22\frac{1}{2}$ acres; Marine Department's modified proposal, $20\frac{1}{4}$ acres; Marine Department's first line, 19 acres.

So far as I can ascertain, the only advantage claimed for the Corporation's plan is that it provides more building sites in the best position for business purposes, and admits of the ground being more economically laid out.

The objections to the Corporation's plan, and which are intended to be met by the amendments of the Marine Department, are that it curtails the area of the harbour in its best part, impedes the navigation, and prevents the extension of wharfage and other harbour improvements in the most convenient situation.

The revenue to be derived from the extra $4\frac{3}{4}$ acres of land in the Corporation's scheme would, I have no doubt, be considerable; but I do not think it can possibly be anything like an equivalent to the interests that are sacrificed in securing it. With reference to the question of more economically cutting up the reclaimed land into building allotments, this is a mere matter of rearranging the size of the blocks and the position of the streets; it will have comparatively little effect on the value of the land.

The objection to the Corporation's plan, that it curtails one of the most valuable parts of the harbour, is undoubtedly a valid one. Although Port Nicholson is such a magnificent harbour, the direction of the prevailing winds makes it difficult to get good shelter anywhere near the city. In fact, the Te Aro end of the harbour is the only place where shelter can be got in all weathers, and the proposed reclamation does away with the very best part of it.

With reference to the question of impeding the navigation, at present vessels of all kinds can, in ordinary weather, come in direct to their berths; but if the reclamation is carried out it will be very difficult for sailing vessels to come in at any time to the southern side of the wharf, and in stormy weather steamers will have far too little room.

The evils just referred to will be considerably aggravated when the traffic of the port demands the extension of the T's in the Queen's Wharf, and the construction of other wharves coming towards them from the Te Aro end. The sheltered area and the room for manœuvring vessels will be still further curtailed to a serious extent, or else the additional wharfage to be provided must be very limited. It is impossible to get the number and lengths of wharves likely to be required without prejudicially curtailing the area of water round them, the very point on which their usefulness depends.