

4. If further funds allow, and if a proper garrison can be obtained, that a 7-inch gun and Moncrieff carriage be applied for, to be placed in a sunken redoubt, with brick revetments on the top of the North Head.

I consider that a very efficient defence would be provided against ships like the "Alabama," without No. 4, at an expense of about £300.

If however the gun on the North Head was considered necessary, the expense would probably be about £1,800.

F. W. HUTTON.

### No. 3.

The Hon. the DEFENCE MINISTER to Captain HUTTON.

SIR,—

General Government Offices, Auckland, 13th April, 1871.

I have the honor to acknowledge the receipt of your report on the defence of Auckland Harbour, dated 3rd April, 1871.

I have perused it with attention, and have to thank you for the valuable and suggestive information which it contains.

Captain Hutton, Auckland.

I have, &c.,  
DONALD McLEAN.

### No. 4.

Captain HUTTON to the Hon. the DEFENCE MINISTER, Wellington.

SIR,—

Wellington, 30th May, 1871.

In compliance with your instructions, I have the honor to enclose herewith reports on the defence of the harbours of Nelson and Wellington against the attack of small cruisers.

The Hon. the Defence Minister, Wellington.

I have, &c.,  
F. W. HUTTON.

### Enclosure 1 in No. 4.

REPORT on the DEFENCE of the HARBOUR of NELSON against CRUISERS.

THE town of Nelson lies at the head of a broad bay, and the harbour is formed by a boulder bank which stretches from one side of the bay almost to the other, leaving only a narrow channel between the end of the bank and the mainland.

To protect the town therefore from bombardment, at least two powerful rifled guns, of a range at least equal to those likely to be brought against the town by an enemy, would be required; mounted in Moncrieff batteries, and placed, one on the hills at the entrance of the harbour, and the other on the other side of the town.

To prevent the ships of the enemy from entering the harbour and getting under cover from the guns, I would recommend that a strong chain cable be securely fastened at the end of the bank, and the other end be brought over to the main land and made capable of being hauled up tight by means of a windlass across the entrance. I think that this chain would be cheaper, more efficacious, less liable to get out of order and more quickly got into place, than any system of torpedoes.

Hand power and not steam should be used for tightening the chain, for it must always be remembered that an attack would be made by surprise.

The entrance to the harbour is so narrow, and the hills close to it offer such favourable positions for riflemen, that any attempt to land or force the passage by boats ought not to succeed.

The windlass, &c., should be placed in a sunken pit, to screen it from the fire of the enemy.

F. W. HUTTON.

### Enclosure 2 in No. 4.

REPORT on the DEFENCE of the HARBOUR of WELLINGTON.

THE town of Wellington, although at the head of a large harbour, with a narrow entrance, is only three miles from the sea, from which it is divided by low land.

An attack upon it could be made in three ways—

1. By entering the harbour and taking up a position opposite to the town.
2. By effecting a landing in Lyall's Bay, and placing field guns on the hills between it and Wellington, so as to command the town.
3. By bombarding the town from the open sea.

In the absence of means of protection, the first is the one that would most certainly be selected, and it is therefore against this that precautions must be first taken.

A battery on Palmer's Head might certainly prevent ships from entering the harbour; but without a permanent garrison it might easily fall into the hands of the enemy, for I would again reiterate that any attack of the nature now contemplated will be made by surprise. Even Jerningham Point I consider to be too far off to be supported with sufficient rapidity from the town; and I should therefore recommend that two rifled guns, mounted in Moncrieff batteries, be placed, one on the point between Oriental Bay and the Baths, and the other between Mr. Rhodes' house and the town, at an elevation of about 100 feet above the sea.

To guard against the second mode of attack, I think that a Company of Volunteer Artillery with two 12-lb. Armstrong field guns, and the Rifle Volunteers, ought to be amply sufficient to give a good account of any force likely to be landed from cruisers or privateers.