

IX.—NAVAL FORCE AT AND ABOVE MONTREAL.

77. As regards the Naval force that would be required to co-operate in the defence of Canada, at and above Montreal, it has already been pointed out that gun-boats might assist in the defence of Montreal, in connexion with the entrenched camp opposite that city, and on Lake St. Louis and the Lake of the Two Mountains in connexion with the approach by Vaudreuil. So far as Lake St. Louis there is difficulty in passing first-class wooden gun-boats, the Lachine Canal admitting of their transit from Montreal to that Lake; but to take such vessels into the Lake of the Two Mountains it would be necessary to enlarge the channel and the lock at St. Ann's, by which access is obtained thereto, which present will only admit of the passage of third-class gun-boats.

78. It would further be an advantage to place gun-boats on Lake St. Francis, to aid in the protection of that portion of the St. Lawrence. Unfortunately, however, the Beauharnois Canal, by which first-class gun-boats could be passed from Lake St. Louis to that lake, is on the south side of the river, and unless some arrangements were made for placing such vessels on it previously to the commencement of hostilities—it is probable that that communication might be cut off.

79. This circumstance, as well as the probability that the canals on the left bank of the St. Lawrence would not be available after the enemy had established himself on the opposite shore, would, moreover, render it unlikely that gun-boats could be passed by these canals into Lake Ontario. The Rideau Canal, as also the Carillon and Grenville Canals, on the Ottawa River, would be available for the transport of troops and stores, but they are only capable of passing third class wooden gun-boats at, in any case, wooden gun-boats could not now suffice to maintain a naval command on Lake Ontario. To obtain such command, it would be necessary to adopt some arrangement by which a few armour-plated gun-boats could readily be made available on the Lake. To this point, therefore, it is submitted that the Canadian Government should especially direct their attention. Probably about six such vessels might suffice at the commencement of a war. It must be observed that a great deal depends upon Canada taking the initiative in this matter. If armour-plated gun-boats could be brought into action on the Lake before the enemy had been able to launch any, his power of placing a naval force upon the Lake might be greatly diminished, if not destroyed.

80. In addition to any other vessel of war, it would be advisable to have some swift armed steamers upon the lake, and probably the steamers which ply on Lake Ontario might be made to answer as part of the flotilla.

X.—NATURE OF PROPOSED WORKS, &c.

81. It remains to be considered; 1st, the nature of the proposed works; 2nd, their armament; 3rd their probable cost.

82. As regards the land works, it is recommended that, considering the necessity of their being executed with rapidity, the shortness of the working season in Canada, and the advisability of rendering them as inexpensive as possible, they should be of a less permanent character than it would be desirable to adopt under other circumstances; with this view it is proposed that at Montreal the main part of the works should be of earth, with detached walls in the ditches, which should be flanked by caponieres of masonry. Bomb-proofs of wood and earth may be added behind the ramparts at a time of expected attack. The forts might further be strengthened by masonry keeps, from which a fire could be brought to bear over the whole of the interior of the work; these keeps would be well covered by the earthen ramparts of the main work, and they should be of an economical construction, with their roofs of timber and earth. At Kingston and Quebec, where the excavations would be chiefly in rock, a somewhat different construction would be adopted. The parapets would be of earth, but instead of detached walls in the ditches, there would be escarps cut out in the rock and faced with masonry where necessary. In these instances, perhaps it may be found more economical to have deeper ditches, in which case the keeps might be dispensed with and the permanent bomb-proofs placed behind the front rampart.

Nature of proposed works.

83. A good military road of communication, covered by a parapet, with openings at convenient points for sorties, should be established a short distance in rear of each of the lines of defensive works, and temporary batteries might be thrown up between the several forts.

84. As regards the sea defences; those at Kingston would consist partly of earthen batteries with masonry keeps affording accommodation for the garrison, ammunition, and stores, and partly of casemated works. The latter would be constructed of the stone obtained from the locality, strengthened with iron embrasures built into the masonry. Iron might also be applied in time of war to the embrasures in the earthen batteries. At Toronto and Hamilton the works on the island at the former place, and that on the spit at the latter, would be of the casemated description. The shore battery at Toronto would be of earth in connexion with a defensive enclosure of masonry.

85. With respect to the armament,—1st of the land works; it is proposed that a portion should consist of 40-pounder rifle guns, or other ordnance of about that size, mounted on travelling carriages, so that they might be easily withdrawn if necessary; and that, if desired, a great number of guns might be concentrated on any point. There should also be some heavier pieces of ordnance, both rifled and smooth bore, to bear on the enemy's trenches in the event of siege. The Keeps would be armed with barronades, small howitzers, or other light guns, to sweep the interior of the work. Much of the armament for the land works might, perhaps, consist of guns, which, since the introduction of armour-plated ships, are no longer applicable for coast fortifications. For the sea defences on Lake Ontario, considering the nature of vessels to which they would be opposed, 68-pounders and 8-inch shell guns might, at all events in the first instance, form the main portion of the armament. There should, however, be some 70-pounder rifled guns for long range, as also a few powerful pieces of ordnance, which would do effective damage to the armoured portion of iron-plated gun-boats.

Armament.

The probable number of pieces of ordnance for all the proposed works both land and sea would be 700.