

that it should only be armed at present with two 7-inch and one 64-pounder rifled guns. Two field pieces should be added to protect the rear of the work, and to fire upon the adjacent beaches, which cannot be well protected from the battery without a considerable increase in its armament. The chances of a landing on these beaches are so small that the field guns will suffice.

This battery, with three guns, and the three torpedo boats, will suffice for present requirements. In the future two more guns and submarine mines can be added. A ship, steaming at ten knots, would be exposed to fifty shots from the three guns, during the time she took to come within, and pass beyond, their maximum range; thirty shots would be at ranges varying from 400 to 2,000 yards.

Bombardment  
of Dunedin  
from the sea.

With regard to the bombardment of Dunedin from the open sea, this is a danger the extent of which should be well considered before the expenditure, required for the defence of Port Chalmers, is incurred. Some doubt has, I understand, been expressed as to the likelihood of a bombardment being resorted to by an enemy, in order to enforce a compliance with his demands for a contribution of money. I think the wisest course will be to make provision for meeting all reasonable contingencies, for—so long as the shipping in Port Chalmers was secured from capture—I believe the enemy would be justified in shelling Dunedin from the open sea.

The range into the heart of the town, from the position that could be taken up by the ship, would be 4,000 yards, and the place the enemy would be firing into would cover a large area; every shell, therefore, thrown into the city would, doubtless, do some damage; but, beyond creating considerable consternation, I do not think there need be any serious apprehension of the result of a bombardment. At the same time the erection of two batteries—one for three guns on Lawyer's Head to the east, and the other for two guns on the west of the beach—would be the most effectual way of keeping the enemy's ships at such a distance from the shore as to render a bombardment impracticable. It would, of course, be preferable to place powerful ordnance at these points, because the ranges are practically limited only by the power of the guns; but as there are already three rifled guns available—one 7-inch and two 64-pounders—they might be mounted on Lawyer's Head; the provision of a second battery and more powerful armament being deferred until the future. If, however, economy must be exercised in the matter, reliance could, for the present, be placed upon the light guns of the field force which it is proposed to maintain at Dunedin, the sand hills along the beach affording admirable positions for them. It may be observed that, in favorable weather, the plan, already suggested, of driving off hostile vessels—by means of torpedo launches, conveyed to the spot by a steamer—might be adopted.

Bluff harbor  
and Invercar-  
gill.  
Population,  
3,761.

Bluff harbor, situated at the south-east corner of the South Island, is the port of Invercargill, a city which is rising in importance. It is also the first port of call, and the last of departure, for the steamers