

the light-keepers the means of supplying themselves with provisions and stores. There is frequently much trouble in carrying out this duty, owing to the difficulty of reaching several of the lighthouses, particularly those recently erected, as they are all at a considerable distance from any settlement or harbor, and, from their position, a landing can only be effected from seaward in fine weather, and during certain winds. The light at Farewell Spit occupies the most isolated position, and considerable trouble and expense will be caused in providing for its maintenance. The ground on which the lighthouse and keeper's dwellings are built is composed of sand, not fit for cultivation, and almost destitute of vegetation. Owing to the barren and uninviting character of the station, it will be difficult to get keepers to stay at it for any length of time together, and they will therefore have to be frequently changed. Up to the present time, an arrangement on reasonable terms has been made with the owners of the "Lady Barkly" (a small steamer plying between Nelson and Collingwood) to visit the Spit with stores once in every three months. So long as this service can be continued, it is the cheapest and most satisfactory one that can be adopted; but as there is always a risk of the steamer being removed, other plans for supplying this station will shortly be arranged, so as to be ready for adoption in case of this contingency arising.

4. On the occasion of my visit to Dog Island lighthouse, at the end of February last, my attention was directed to a crack in the masonry at the base of the tower. I should here state that soon after the tower was erected it was found that the mortar used in its construction was bad, and this had to be raked out from between the joints of the stones on the outside, and replaced by Portland cement. Since this was done, the defect above referred to appeared. I thought that sooner or later it might endanger the safety of the tower, which is 100 feet high, and is built of rubble stone work, and accordingly I applied to the Government to instruct Mr Blackett to inspect the structure, and report whether, in his opinion, anything was required to be done immediately to strengthen and repair it. Mr. Blackett soon after visited Dog Island and reported that it was necessary, for the safety of the tower, that it should be strengthened without delay. He was authorised at once to prepare the requisite drawings and specifications, and to have the repairs proceeded with as quickly as possible. All the other lighthouses are in good order; they are all amply supplied with stores, and the light-keepers are performing their duties zealously and satisfactorily. Several changes of stations have been made in the staff, in order to place experienced men at the new lighthouses. Two keepers have been dismissed during the last two years; one for intemperance, and the other because it was found that he was constantly quarrelling with his assistants, and that he had such an ungovernable temper as quite prevented anyone from being able to remain with him. The new dwellings for the keepers at Pencarrow (the necessity for which was pointed out in Mr. Balfour's report for 1868-69) have been recently completed, at a cost of £804. The contract for the erection of these buildings was taken by Messrs. Scouler and Archibald, and the work was carried out most satisfactorily.

5. The amount of light dues collected for the year ended 30th June, 1870, was £6,013, and for the year ended in June last, £5,575. The falling off in the last year's dues, of £439, as compared with the dues of the previous year, arose from the tonnage of vessels arriving from beyond seas, and the number of steamers plying on the coast, being less than in previous years, and from the steamers now carrying the English mail being exempted from payment of light dues. An Order-in-Council fixing light dues at certain ports, at which dues had not hitherto been charged, and for slightly increasing some of the existing rates was issued on the 23rd June last; the additional revenue that will be yielded under this order will only be trifling. The changes in the rates were made, not so much with a view to increasing the revenue, as to remove the anomaly of rates being charged at some ports and not at others, and to fix charges on vessels visiting ports benefitted by the new lights.

6. In obedience to a resolution of the House of Representatives of the 29th June, 1870, the apparatus for the temporary light at the Manukau Heads was forwarded to Manukau, and instructions were given to Mr. James Stewart, C.E., (prior to the appointment of Mr. Blackett, to be Marine Engineer) to prepare plans for a small tower for this light, or for fixing it in one of the beacons on the South Head of the Manukau Harbour, as was at first intended by the late Marine Engineer. Mr. Stewart has not yet forwarded these plans, in consequence, I believe, of his time being fully occupied in superintending the erection for the Provincial Government of Auckland of the Bean Rock light in the Auckland Harbour, and the Sandspit passage light between Auckland and the Thames. These lights are now nearly completed; the plans for fixing the Manukau light will therefore, no doubt, be immediately prepared, and as soon as approved of, the work may at once be proceeded with.

7. The necessity for a light at the entrance of Tory Channel has been urged in previous reports of the Marine Department, and Parliament in its last session voted a sum for erecting this light, and also for placing one on Portland Island; but no progress has yet been made towards erecting these lighthouses, as the Government gave directions that they were not to be proceeded with for the present. I trust, however, that the Government will at an early date authorize the Marine Engineer to take steps for erecting the Tory Channel light, as it has been admitted by competent authorities on all sides that this light is greatly needed for the safe navigation of Cook Strait, and for guiding steamers entering Tory Channel at night. Mr. Balfour estimated that the cost of this light would be from £3,000 to £4,000; the annual cost of maintaining it after completion would be about £500. The cost of placing a light on Portland Island is estimated at from £5,000 to £6,000, and the annual outlay afterwards at about £600.

8. *Buoys and Beacons.*—The following buoys and beacons are outside the limits of Provincial jurisdiction, and the maintenance of them therefore devolves upon the Marine Department:—

- Beacon on Flat Rock, near Kawau Island.
- Beacon on Richmond Rock, entrance to Pelorus Sound.
- Beacon on Reef at French Pass.
- Beacon on Hapuku Reef, Astrolabe Roads.