

harbour; for while all vessels go up the northern arm, the station is on the southern side; and the distance is so great that a vessel outside the bar cannot possibly see a signal made. Also, on looking from the station seaward, the view is across instead of along the channel. This drawback, combined with that interposed by the spray arising from the continued breakers, renders it impossible to observe the course a ship is making. The signal station is therefore, in my opinion, perfectly useless. From my own observation and the information received from Captain Laurie, the Harbour Master, I consider there can be no difficulty in removing the station, which ought to be done as soon as possible. Whether this be done or not, I would strongly recommend that leading beacons be placed on the South Head for the Galatea Channel, and a buoy on the shoal patch extending off, or rather seaward of, Pouto Point. 2. At Hokianga, there is a sunken rock just within the entrance. Vessels in avoiding this danger, from want of knowing its exact position, often keep away too much, and run into other danger. I recommend that a buoy be placed near this rock to mark its position; also that the present two leading beacons for crossing the bar be removed further apart, or an additional one erected—the latter would be the preferable course.

The Hon. the Commissioner of Customs.

I have, &c.,
R. JOHNSON.

No. 4.

Captain JOHNSON to the Hon. the COMMISSIONER of CUSTOMS.

REPORT ON MANA LIGHT.

SIR,—

Wellington, 23rd June, 1874.

In accordance with your instructions in reference to Mana Island light, I have the honor to report that this light was erected by the Chief Marine Board in 1864. The site was chosen after a great deal of consideration, and the reasons which induced the Board in selecting Mana as a site, with other information, is given in a report of Captain Sharp, Master Warden, and myself, copy of which I hereby attach. In addition to those reasons, I would also state that the Board considered, with a light on Mana, vessels passing northward of Stephen's Island would be enabled to steer with confidence in thick weather direct for the light, as no danger lies in their track, and the irregular tides in the vicinity of Cook's Rock, as well as that danger, would be avoided. Since its erection, however, I find that many of these vessels, particularly when proceeding westward, instead of keeping well over to the Mana shore, make a short cut by steering in a more direct course for the Brothers, and thus shortening a little the distance at the expense of an increased risk.

The altitude of the site on Mana has also proved too high, and the power of the light too small for the altitude; and the result is that while the rays can be seen by an observer whose eye is 15 feet above the sea at a distance of twenty-nine miles in clear weather, the power is only sufficient to enable the light to be seen eighteen miles in a mean state of the atmosphere; and at much less distance than this (owing to a large amount of the rays being overhead), the light is subject to be obscured at a time or in such weather when it ought to be seen. This light, also, from its similarity of character, has been mistaken for that at the entrance to Wellington Harbour, and *vice versa*. To obviate this mistake, as well as to lighten the entrance to Tory Channel, the Board had intended to erect, as soon as it had funds, a red light in the vicinity of Wellington Heads, with sufficient power to throw its rays right across the Strait to Terawiti, forming, as it were, a red arc between two fixed white lights; this light, as you are aware, is now ordered, and, when erected, will lessen the possibility of vessels making that mistake again, except to those who will not keep a look-out and pay that attention to navigation which this part of the Strait requires.

Since 1863 the number of steamers trading through the French Pass have greatly increased, and a light on Mana, to those vessels, is of little good, while one on the Brothers would be of great service. By reference to the report it will be seen that the principal reason the Board had for not erecting the light on the Brothers in the first instance was want of sufficient funds. The superior position of the Brothers was always understood; and had the Brothers the same facility of erecting and maintenance of a light as Mana, no doubt the light would have been erected there.

Having considered the whole question, I am of opinion that one of two things should be done, viz.,—1. Either a new flash white light, with a red arc over Cook's Rock, be erected on the northern Brother, and, if possible, 25 feet blasted off top of Cook's Rock; or, 2. A new flash white light be substituted for the one on Mana, with lower altitude, and the present light removed to the North Cape, where the altitude of site is less and more suitable, and where it cannot be mistaken for a neighbouring light.

Should Government entertain the first proposition, I would suggest that Mr. Blackett and myself should survey the Brothers, as well as Cook's Rock, before any further action is taken.

The Hon. the Commissioner of Customs.

I have, &c.,
R. JOHNSON.

No. 5.

REPORT of a Visit to the islet Brothers, in Cook Strait, for the purpose of ascertaining its suitability as the Site for a Lighthouse, by Captain SHARP, Master Warden, and Captain JOHNSON, Warden, Chief Marine Board.

On the 25th August, 1863, having obtained the services of the Wellington Steam Navigation Company's vessel "Lady Bird" to convey us to the Brothers, we left the port of Wellington shortly after 1 p.m. The weather was very fine, a light southerly wind prevailing. On the northern shore there was a slight swell, which decreased as the vessel neared the opposite side of the Strait; indeed a more suitable day could seldom have been chosen, and such might not happen again for