

for this purpose; 6. A light on Puysegur Point would show more strongly over Bellamy Reef, and therefore would be more certainly discerned in foggy weather than one at Windsor Point (see sketches and tracings appended). The proper light for this position would be a holophotal revolving white light of the first order dioptric; and as the atmosphere is very humid, I recommend that the buildings be constructed either of iron or stone: the latter is abundant there.

General Remarks.—If a question arise whether a light on Puysegur Point or Rugged Island should be first erected (assuming that my recommendations of those sites are adopted), I should unhesitatingly advise the former, as the more urgently required, although I am aware that the Bluff Harbour Master is of a different opinion, as, indeed, I was myself until I had personally examined the locality. It is clear that a light should be placed at that point on the New Zealand coast where vessels bound for Otago or Canterbury first make the land, to guide them into Foveaux Strait. I would also venture to point out the great desirability of a light on the Snares, which lie right in the track of ships from Europe, India, and America, bound to all the middle and southern New Zealand ports, and also of the Australian homeward-bound vessels. It would prove a great saving of time to the former class, enabling them to proceed boldly, without the necessity of waiting for daylight, besides fixing their position before altering their course for the land; and to the latter it would be of great use, by allowing them to pass near and ascertain the rate of their chronometers; also, it would obviate the necessity of those vessels deviating from their course for fear of encountering those unlighted dangers well named the "Snares," and thus approaching too near the almost equally dangerous Auckland Islands. I would also remark that the very powerful light at present on Dog Island only partially fulfils its requirements in that position. The proper place for this light is on Ruapuke Island, when it would show right through the Strait, besides illuminating a much greater arc seaward than in its present position, where half the power is wasted inland. Moreover, on Ruapuke, it could be maintained at far smaller cost than on Dog Island, owing to the superiority of the soil and site. Again, the illuminating arc of Ruapuke light would extend to within ten miles of that of the Nugget Point light, and would include the dangerous Waipapa Point, where several vessels already have touched and only narrowly escaped shipwreck.

Having completed the survey of all the apparently available sites at the south-west point of the Middle Island, I next visited the site of the proposed Cape Foulwind Lighthouse, and found that the bush had been cleared sufficiently to enable me to select the best position for a light. This was done, and the exact position is marked by a large tree, marked with a crow's nest, and bears N. 40° E., distant about 6 chains from the original rata tree marked by Mr. Blackett and myself on a former visit. This site is on a small schist granite ridge about 15 feet high and 15 feet broad on the top, at an elevation of 190 feet above sea level. To clear the surrounding cliff both north and south, a tower, 36 feet in height will be needed, when an arc extending from S. round by W. to N. 68° E., will be illuminated (see sketch No. 11, and tracing marked C). Before the lighthouse is erected, a road will have to be made from the Charleston road, and the present track formed by the bush-clearers seems a capital direction for it to run. In the neighbourhood of the site, and in the direction of the highest land to the north and south, more bush will have to be cleared to avoid intercepting the light. The exact places where this will be required were pointed out to Mr. Rome, the foreman in charge of the clearing party.

Before concluding this report, I wish to call attention to the necessity of a better survey of the locality between the Steeple Rocks and the Buller River. When the Cape Foulwind light is erected, probably many vessels will run for shelter under the cape in south-west gales. The charts indicate neither soundings nor foul ground in this neighbourhood; and the "New Zealand Pilot" states that under Cape Foulwind vessels may find shelter in southerly winds. I however observed, from the "Luna's" deck, broken water far off the shore, and I therefore conclude that the shelter a vessel would find under Cape Foulwind is not altogether free from danger. I may also add that although I have recommended for Cape Saunders and Puysegur Point lights of the first order, as the best and most suitable to the requirements of those positions, should the cost be too great, second-order lights might be substituted without very great loss of power. The difference is indicated in the tracings.

I shall have the honor to give in a second report the results of my visit of inspection to the North Island stations and proposed new sites.

The Hon. the Commissioner of Customs, Wellington.

I have, &c.,
R. JOHNSTON.

No. 3.

Captain JOHNSON to the Hon. the COMMISSIONER of CUSTOMS.

SIR,—

Wellington, 10th June, 1874.

Following up my report on the Middle Island, I have now the honor to inform you that, for the examination of the various sites for the lighthouses proposed to be erected at once in the North Island, I left the Manukau in the "Luna," on the 24th March. Mr. Seed, Mr. Blackett, and Mr. Wilson were also on board. After calling at Kaipara, Hokianga, and Ahipara, we arrived off the Three Kings Islands on the 30th. The weather proving very fine, we were enabled to closely examine the coast of the islands from the ship, and although a tolerably good landing-place was found on the western shore of the main island, we considered it unnecessary to land, as the great height of the island—something like 1,000 feet—rendered it perfectly unsuited for a light. On its southern side, however, there appeared a point with an altitude of about 400 feet, but this is even very high; and if a light was erected thereon it would not show all round. From its position, it would be difficult to build the tower, and it would also be considerably out of the direct course of English ships bound to Auckland. Moreover, the Three Kings are steep and bold, and can be seen in thick or foggy weather, where a light in