

Innumerable penguins inhabit this island; they are to be found all over it, but mostly congregate in hundreds on any bare exposed surface of the granite rock. Besides these are to be found one or two kinds of gull, and one or two land birds.

We climbed with considerable difficulty through scrub and grass and swamp to one of the principal summits, marked H, in Sketch 7, which is 405 feet high, and from this one could see at no very great distance the highest summit, marked 470 feet on the chart. This we did not visit, as the travelling was very tedious, and no object would have been gained by doing so.

If necessary roads could be opened to almost any part of the island, and a lighthouse built; but its great elevation above the sea would very much lessen, if not entirely do away with its usefulness, as in foggy weather, when the light would be most wanted, it would certainly be obscured by fog and clouds. Of this we had full demonstration during our visit, as, after inspecting the island as described, we steamed round the islands and saw the clouds gather and arrange themselves in horizontal layers, entirely obscuring the summits.

#### *Puysegur Point.*

The general features and position of this site for a lighthouse are shown in Sketch 8, the exact site selected being at K, on the most advanced point, at an elevation of 135 feet. This is most favourably situated for the purpose intended, as it forms the eastern headland of Preservation Inlet, in which there is at no great distance good sheltered anchorage, and an excellent boat landing on a sandy beach, shown at M in the sketch. Besides this, in fine weather a landing may be effected at other places nearer the cape at S.S.S.

From M to the site K it will be necessary to form a road, altogether about one and three-quarter miles in length, partly through bush and scrub, and partly along the beach, on which at one point some rock will have to be removed; some cuttings in sideling will also be required, in which rock will probably be met with, but this will not be difficult to deal with, being a softish sandstone lying in inclined strata, as shown in sketch.

In clearing a site for the lighthouse and other buildings, it would be advisable for purposes of shelter to leave untouched about one chain width of scrub between the face of the cliff and the clearing: and the work of clearing, both for the buildings and for the road, as well as the road formation, might be at once proceeded with, to be in readiness for future operations.

#### *Windsor Point.*

Besides Puysegur Point, Windsor Point had been suggested as a probable site for the most westerly lighthouse of the southern coast of the Middle Island, and had it been easy of access might possibly have been selected in preference to Puysegur Point. This, however, is not the case, the only landing-place near is that already described for the latter, and to reach Windsor Point from the landing-place it would be necessary to construct a road, six or eight miles long, over a difficult and broken bush country, the course of such road lying *across* the ridge and gullies, as will be seen by inspecting Sketch 9, where W shows Windsor Point and M the landing-place in Preservation Inlet, behind the wooded ranges. The cost of making and maintaining this road would in my opinion tell heavily against establishing a lighthouse at Windsor Point, and I should therefore recommend the first-described site, Puysegur Point, as being the one to be chosen and unmistakeably preferable. As a site it is really much better than it would appear to be by an inspection of the ordinary charts, as it projects very much farther into the sea than there shown, and as seen from a vessel presents a well-defined and bold outline, which strikes the eye at once.

#### *French Pass.*

This place is well known and will not need much description. The site for a light was examined and found to be about 90 feet above water level, although this can be varied, if necessary, by cutting into the hill at any height desired. The approaches to it on both sides are on very steep sideling ground, rocky, with a thin covering of clay or soil; and considerable expense will be incurred in road-making, and preparing sites for the tower and for the dwellings.

Sketch 10 shows nearly to scale a cross section of the Pass at the narrowest place, and the relative positions of the site Q and the present beacon on the end of the reef.

Landing-places are to be found on either side of the Pass.

#### *Lighthouses—Middle Island.*

Memorandum showing approximate cost of each, complete, calculated for revolving holophotal lights, with alternate flashes and eclipses.

No.	Site	Order	£	£
1.	Akaroa Head ... ..	2nd order ...	6,200	
	" " " " " " " " " "	3rd " " " "		4,600
2.	Flat Point ... ..	2nd " " " "		7,100
3.	Cape Saunders, site E ... ..	2nd " " " "	6,500	
	" " " " " " " " " "	2nd " " " "		7,500
4.	Ruapuke ... ..	2nd " " " "		6,000
5.	Centre Island ... ..	2nd " " " "	6,500	
6.	Rugged Island ... ..	2nd " " " "		10,000
7.	Puysegur Point ... ..	2nd " " " "	8,500	
	" " " " " " " " " "	1st " " " "		9,500
8.	French Pass " " " " " " " " " "	4th " " " "		2,500

*Note on No. 6.*—Beyond the cost here set down should be added that of the almost continual attendance of a steamer during the work, the difficulty of which would render this necessary.