1875.

NEW ZEALAND.

TENTH REPORT OF THE MARINE DEPARTMENT,

FOR THE YEAR ENDED 30TH JUNE, 1875.

Presented to both Houses of the General Assembly by Command of His Excellency.

Office of the Commissioner of Customs,
Wellington, 5th August, 1875.

MY LORD,—

I do myself the honor to transmit herewith, for your Lordship's information, the Report of the Marine Department of this colony, for the Financial Year ended on the 30th June last.

To His Excellency the Most Honorable
the Marquis of Normanby, K.C.M.G., &c., &c., &c.,
Governor of New Zealand.

I have, &c.,
W. H. REYNOLDS.

REPORT.

Customs Department (Marine Branch),
Wellington, 24th July, 1875.

SIR,—

In the absence, on leave, of the Secretary, Mr. Seed, I do myself the honor to furnish the following report of this department for the year ended on the 30th June last.

Lighthouses.—During the past year all the coastal lights have been maintained on an efficient footing, and no complaints have been received of their not having been regularly exhibited to mariners. On the 1st September last, the new light at Manukau Heads was lighted; it is a fixed white light of the third order, with a dioptric glass mirror. The oil consumed is paraffin oil, manufactured by Young's Paraffin Light and Mineral Oil Company (Limited). This illuminant is considerably cheaper than colza or rape oil, which is at present burnt in all the other lighthouses under the control of this department; it costs in England 1s. 7d. per gallon, and colza costs 2s. 5½d.; whilst, when burnt in a third-order lamp, with Captain Doty's patent burners, the photogenic power is, according to experiments made by Dr. Stevenson Macadam, equal to 80·13 candles as compared with a power equal to 53·16 candles produced by a lamp of the same order burning colza oil. The freight on this oil to New Zealand is, however, considerably higher than that on colza, but the Agent-General has been communicated with, and requested to endeavour to have the rate reduced. I append a return showing the total cost of the erection of this lighthouse.

New Lighthouses.—Appended hereto are the reports made by the Marine Engineer (Mr. Blackett) and Captain Johnson of this department, who were specially instructed by you to visit The Brothers, in Cook Strait, and the several sites proposed for new lighthouses in the Middle Island and at the Snares. The apparatus, lanterns, and stores for Tory Channel, and the lantern for Cape Foulwind, have arrived in the colony. As it has been decided to erect a lighthouse on The Brothers, the first will not be required for Tory Channel, but will be available for some other site. With reference to Cape Foulwind light, the following preliminary steps have been taken:—A road about 82 chains long has been made, at a cost of £575, from the Charleston Road to the lighthouse site, and a clearing has been made at the spot where it is intended to erect the tower and dwellings. The plans and specifications for these are being prepared by Mr. Blackett, and will in a short time be ready for calling for tenders.

In accordance with your instructions an order was sent home in February last for apparatus, &c., for the following lighthouses, viz.:—The Brothers, Puysegur Point, Centre Island, Moko Hinau Island, Cape Maria Van Diemen, and Portland Island. At Puysegur Point it has been found necessary to make a road about two miles long to connect the lighthouse site with the nearest port, viz., Otago Retreat, at one of the entrances to Preservation Inlet. The road is now being made by a party of

workmen under an overseer, and will shortly be completed. A small house, to be used as a barrack for the workmen at The Brothers, has also been prepared, and is ready for erection there. Plans and specifications for the necessary buildings in connection with these lights are now being prepared by Mr. Blackett, and it is hoped that most of the buildings will be erected during the course of the ensuing summer.

Steam Tender for Lighthouse Service.—In the last year's report, Mr. Seed drew attention to the necessity for a steamer to be specially provided for the service of this department. The Marine Engineer, in his report of 23rd September, 1874 (herewith), having also urged this necessity, an order for a suitable vessel was, in accordance with your instructions, sent to England in the early part of this year. I may add that the need for this vessel has been forced on my attention during the past few months.

Tory Channel Leading Lights.—As leading lights have been considered to be necessary to guide masters of vessels entering Tory Channel at night, Captain Johnson, of this department, visited that place, and selected sites for them. On these sites he fixed temporary beacons, and, in accordance with his suggestion, a circular has been sent to masters of vessels frequenting that channel, requesting them to report whether they consider that the course indicated by these beacons is the most suitable one.

Lighthouse Dues.—The light dues collected during the past year amounted to £10,241 19s 6d., exceeding the collections of the previous year by £1,400 8s. 2d., whilst the cost of maintaining the existing lights amounted to £5,767 4s. 9d., thus showing a credit balance of £4,474 14s. 9d. A statement is appended of the revenue and expense of maintenance of lighthouses from 1st July, 1866, to 30th June, 1875, which shows a net profit of £18,847 13s. 5d. for the nine years. The returns of cost do not, however, include the cost of supervision, nor any allowance for the services of the "Luna."

Kaipara Signal Station.—In consequence of representations made to the Provincial Government of Auckland, they have decided to erect a signal station, flagstaff, and beacons on the North Head of the Kaipara Harbour. This will prove of great service to the large and increasing number of vessels trading to that port.

Examination of Masters, Mates, and Engineers.—Certificates have been issued to 85 successful candidates, 79 being masters and mates, and 6 engineers. The largest number of examinations still continues to be held at Auckland. Regulations for the examination of masters and engineers of river steamers have been prepared and issued.

Naval Training School.—A commencement under "The Naval Training Schools Act, 1874," has been made at Kohimarama, near Auckland, where a most suitable site has been rented from the Melanesian trustees, together with the buildings thereon, and the schooner "Southern Cross," which is well adapted for the purposes of a training ship. The school was commenced in December last, under the superintendence of Lieut. Tilly, R.N., whose services were most valuable. At his suggestion Lieut. Breton, R.N., was confirmed as manager of the school in April, and under his management the school is well conducted, and the boys are making satisfactory progress. His report on the school is appended hereto. Since my special report to you of the 11th March last, of which I append a copy, the number of boys committed or transferred to the school has been slowly but steadily increasing. The present staff, with but slight increase, will suffice for double the number of boys now in the school; and the proportionate cost per head will be reduced by every addition. It is very desirable that as much publicity as possible may be given to the advantages of this institution.

Steam Navigation.—The number of steamers to which certificates have been granted is 91, of an aggregate tonnage of 7,302, and horse-power of 3,009, being 17 of 1,784 tons and 402 horse-power in excess of those to which certificates were given last year. An interesting feature in connection with this increase is that, of these additional steamers, 14 were built in this colony.

Wrecks and Casualties.—During the past financial year, 68 casualties were reported to this office. Of these, 63 occurred on or near the coasts of the colony, and 5 at sea. Of the 63 on these coasts, 19, of an aggregate tonnage of 2,039 tons, were cases of total loss; 43, of an aggregate tonnage of 7,567, were cases of partial loss; and 4 were cases of loss of life only, the vessels not suffering any damage. The casualties are 5 in number, of 1,903 tons, more than those that occurred during the previous financial year; but the total losses are 8 in number, of 3,035 tons, less. A large proportion of the partial losses reported during the past year were not of a serious nature.

The lives lost on the coasts of the colony amounted to 33. Of these, 19 were lost in the missing schooners "Cambria," "Euphrosyne," "Ivanhoe," and "Kaituna;" 2 each were lost overboard from the "Alma" and "Mary Melville," and 1 each from the "Orpheus" and "Star of the Sea;" 4 were lost in the "Success," on the Ninety-mile Beach, near the mouth of the Ashburton River; and 4 in the "William and Mary," which vessel capsized in Cook Strait. In connection with this vessel a curious circumstance took place; when the vessel capsized, the master and mate were in the cabin; they managed to get in the lazaret, and remained there for about three days, when they attempted to dive out through the cabin, the master, the sole survivor, alone being successful.

Weather Reporting.— The weather-reporting service has been progressing favourably under Captain Edwin's directions. His report on that branch of this department is appended hereto. To obviate the serious inconvenience that would result from the absence of Captain Edwin from any cause after the system of storm signals and weather forecasting had become established, it has been arranged that Captain Johnson, in addition to his other duties in this department, shall be associated with Captain Edwin in this branch, affording him such assistance therein as might be desirable, without interfering with the general plan as worked out by Captain Edwin. This arrangement has apparently been working satisfactorily for some time past.

Returns, &c.—The usual financial and other returns, and the wreck chart, will be found attached hereto.

I have, &c.,
H. S. McKellar,
(for Secretary of Customs).

The Hon. the Commissioner of Customs, Wellington.

NEW ZEALAND

WRECK CHART

1st July 1874 to 30th June 1875.

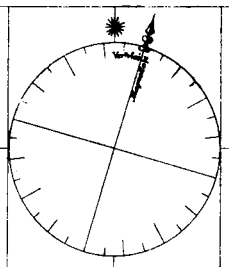
COMPILED FROM

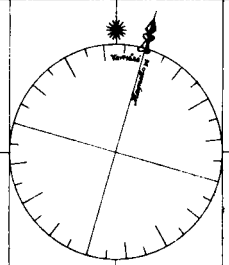
Official Records

in the

MARINE DEPARTMENT

H Parkinson del.





SYMBOLS

CASUALTIES BY STRANDING

X ___ *Signifies a Total Loss.*

X ___ *" " Partial Loss.*

CASUALTIES BY COLLISION

OO *Collision between two Sailing-vessels with partial loss.*

O+ *" " a Steam-vessel & a Sailing-vessel with partial loss.*

CASUALTIES OTHER THAN BY COLLISION OR STRANDING

● ___ *a Total loss of a Sailing vessel.*

○ ___ *a Partial " " " "*

\+ ___ *" " " " Steam vessel.*

Three Kings

North Cape

Aurenui

Bay of Islands

Hokianga. River

Broom Bay

Great Barrier

Kaipara Hr

Tiritiri

AUCKLAND

Manukau Hr

Waikato R.

Tauranga

East Cape

Kawhia

Poverty Bay

Waitara R.

NEW PLYMOUTH

Hawkes Bay

NAPIER

Patea

WANGANUI

Cape Farewell

Manawatu

Porangahau

Cape Turnagain

NELSON

WELLINGTON

Cape Foulwind

WESTPORT

Cape Palliser

Light Rev. Fix 49 M.

Cape Campbell

Charleston

Kaikoura

GREYMOUTH

HOKITIKA

OKARITO

Light fixed Fix 27 M.

LYTTELTON

Banks Peninsula

Jacksons Bay

Martins Bay

Milford Sd

TIMARU

OAMARU

Allday Bay

DUNEDIN

Light fixed Fix 20 M.

Nugget Pt

Light Rev Fix 25 M.

INVERCARGILL

Dog I.

Light revolving Fix 18 M.

Solander I.

Stewart I.

Snares

Bounty Is.

"THE NAVAL TRAINING SCHOOLS ACT, 1874."

(No. 247/11.) 11th March, 1875.

THE first school under the Act was established at Kohimarama, Auckland, early in December, 1874, where provision is made for about sixty boys (60). Up to the end of February—3 months—only nineteen (19) boys have been admitted. Of these eleven (11) have been transferred from Industrial Schools at Auckland (5) and Dunedin (6), while only eight (8) were committed by Magistrates, all at Auckland.

This appears to me so unsatisfactory a result of the three months' operation of the Act, so altogether inadequate to the requirements of the colony, and to the expensive machinery that is in operation, that I deem it my duty to call your attention to it.

It is well known that in most if not all of the large towns of the colony there are numbers of boys of the classes mentioned in sections 8 to 10, uncared for, and only too likely to grow up as criminals, if not rescued by the means of institutions of this kind; and from the absence of committals at any place other than Auckland, it appears evident that the existence and value of the school, and the object of the Government in passing the Act, are not sufficiently known to the Magistrates and police authorities throughout the colony; and I would suggest that the attention of the Hon. Minister for Justice be called thereto, with a view to such action as he may deem desirable, to make the subject more generally known.

Possibly the name may have been misunderstood, and deterred some parents and guardians from availing themselves of the 10th section. The term "Naval Training School" has, I know, by some been thought to mean a place for training boys for Her Majesty's navy; it would be well to explain that the intention is to train boys for, and to apprentice them, when fit, to the mercantile marine of the colony. See section 23. Magistrates should bear this in mind when making committals under the 8th to the 10th sections, and should make careful inquiry in each case as to the fitness of the boy for training for sea-life (one instance has already occurred in which a boy was committed at the parents' request, whose expressed object was to be relieved of temporary care of the boy, and to have him educated at Government expense without the least intention of having him sent to sea). When Magistrates are committing under the 10th section, it would be well that they should examine into the parents' or guardians' ability See section 41. to pay a contribution towards the expense of the boy's maintenance and training, and make order See section 42. accordingly, without waiting for formal complaint from manager of the school.

The training of a boy for a seafaring life cannot well be done under two (2) years. A knowledge of See section 13. this may be useful to Magistrates when exercising the discretion given to them to determine the time for which a boy shall be committed (in the case above referred to the boy was committed for one year only).

To prevent the introduction into the school of infectious or contagious diseases, I think that Magistrates might be requested to have each boy examined by a medical man, before commitment, and be authorized to pay a fee for the same.

H. S. McKELLAR,
(for Secretary).

The Hon. the Commissioner of Customs, Wellington.

RETURN of the Total Ordinary Expenditure of the Marine Department for the Financial Year 1874–75.

Vote 27.	Nature of Expenditure.	Details of Expenditure.	Total Amount Expended.	Total Amount Voted.
Item.		£ s. d.	£ s. d.	£ s. d.
1	Officer in Charge	...	100 0 0	100 0 0
2	Marine Engineer	...	300 0 0	300 0 0
3	Inspector of Steamers and Nautical Assessor	...	400 0 0	400 0 0
4	Inspector of Steamers and Engineer Surveyor	...	400 0 0	400 0 0
5	Examiner of Masters and Mates in Navigation	...	300 0 0	300 0 0
6	Clerk	...	270 0 0	270 0 0
7	Local Inspectors	...	75 0 0	75 0 0
8	Expenses under "Enquiry into Wrecks Act, 1869" ...	...	100 17 4	250 0 0
9 to 19	Lightkeepers' Salaries	...	3,659 15 8	3,790 0 0
20	Repairs to Lighthouses, Tools, and other Permanent Lighthouse Stores, &c.	246 3 2	...	...
	Lighthouse Contingencies, Payment of Temporary Keepers, &c.	349 17 5	...	...
	General Lighthouse Expenses, including Oil, &c. ...	1,511 8 6	...	...
	Lightkeepers' Travelling Expenses	180 13 6	...	...
	Departmental Travelling Expenses	385 19 11	...	...
	Departmental Contingencies	36 17 10	...	...
	Charts	105 7 11	...	...
	Buoys and Beacons	28 13 11	...	...
	Cadet	40 0 0	...	...
	Salaries of Local Examiners of Masters and Mates ...	178 6 8	3,063 8 10	3,000 0 0
21	Naval Training School at Kohimarama	...	1,827 7 11	2,000 0 0
22	Weather Reporting Service	...	305 13 5	500 0 0
	Totals	...	10,802 3 2	11,385 0 0

RETURN showing Cost of Maintenance of the New Zealand Lighthouses during the Financial Year 1874–75.

Name of Lighthouse.	Repairs and Stores of a Permanent Nature.	Oil and other Annual Supplies and Contingencies.	Keepers' Salaries.	Total Expenses for the Year.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Tiri Tiri	48 1 1	143 18 3	348 6 2	540 5 6
Manukau	82 16 0	173 13 2	310 0 0	566 9 2
Farewell Spit	28 11 11	206 0 3	447 10 6	682 2 8
Nelson	...	48 6 4	180 0 0	228 6 4
Mana Island	18 3 0	209 4 8	330 0 0	557 7 8
Pencarrow Head ...	1 5 0	180 18 0	340 0 0	522 3 0
Cape Campbell	9 14 0	175 11 1	320 0 0	505 5 1
Godley Head	43 2 2	212 0 1	340 0 0	595 2 3
Tairoa Head	3 10 0	123 6 2	320 16 8	447 12 10
Nugget Point	11 0 0	205 12 5	311 13 4	528 5 9
Dog Island	...	182 15 6	411 9 0	594 4 6
Totals ...	246 3 2	1,861 5 11	3,659 15 8	5,767 4 9

RETURN showing the Cost of the Naval Training School established at Kohimarama.

Nature of Expenditure.	Amount expended.
	£ s. d.
Repairs and Fittings to Buildings	704 11 7
Salaries and Wages of Officers of Institution	447 17 2
Provisions, Fuel, and Lighting	181 1 4
Clothing	147 9 0
Beds and Bedding	84 9 0
Utensils, Crockery, School Books, and Sundries	107 0 3
Moorings, Boats, and Fittings for "Southern Cross" ...	108 9 3
Passages and Expenses of Boys to School	46 10 4
	£1,827 7 11

RETURN showing the Total Cost of the Manukau Lighthouse.

Cost of Lantern Apparatus, and Oil, Glasses, Wicks, Tools, and other Stores, from England.	Cost of Tower and Dwellings, and of Approaches to the Lighthouse Station.	Wages &c. of Fitters fitting up Lantern and Apparatus.	Hire of Steamer and Freight of Stores in the Colony.	Salaries of Inspectors of Works.	Survey of Reserve.	Stores and Sundries.	Total Cost.
£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1,860 15 3	2,562 14 1	65 0 0	297 11 9	93 15 0	55 15 10	39 10 5	4,975 2 4

RETURN showing the Amount Expended on New Lighthouses up to 30th June, 1875.

Name of Lighthouse.	Amount expended.
	£ s. d.
Cape Foulwind	1,452 8 7
Puysegur Point	501 16 1
The Brothers	206 10 1
Moko Hinau	1 4 0
Portland Island	4 10 0
Tory Channel	1,213 8 0
	£3,379 16 9

RETURN of the Amount collected during the Financial Year 1874–75, as Fees under the Steam Navigation Act and the Merchant Ships Officers Examination Act, and for Sale of Charts, &c.

Nature of Receipt.	Amount collected.
	£ s. d.
Fees under Steam Navigation Act and Merchant Ships Officers Examination Act	756 15 0
Sale of Charts	56 5 10
Sale of Oil Casks, &c.	74 18 6
Total	£887 19 4

RETURN showing the Amount of Light Dues collected during the Financial Year 1874–75.

Port at which collected.	Amount.
	£ s. d.
Auckland	1,604 16 5
Onehunga	5 0 2
Kaipara	19 15 5
Tauranga	11 17 11
Russell	29 10 9
Mongonui	1 2 4
Hokianga	7 12 8
Wangarei	6 19 8
New Plymouth	49 13 8
Wanganui	45 16 1
Wellington	1,683 17 0
Napier	193 4 6
Picton	112 16 1
Havelock	20 4 1
Kaikoura	2 10 11
Nelson	718 15 3
Westport	48 11 8
Greymouth	82 15 8
Hokitika	28 16 4
Lyttelton	2,145 2 6
Timaru	84 11 3
Oamaru	112 1 1
Dunedin	2,685 9 1
Invercargill	18 10 5
Bluff	512 15 4
Riverton	9 13 3
Total for 1874–75	£10,241 19 6
Total for 1873–74	£8,841 14 4

RETURN showing the Amount collected for Lighthouse Dues, and the Expenditure on Account of Lighthouses (Maintenance only), for the Financial Years 1866–67 to 1874–75.

Financial Year ending	Light Dues received.	Lighthouse Expenditure.	Balance.	
			Profit.	Loss.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
30th June, 1867	7,136 5 11	3,926 15 0	3,209 10 11	...
„ 1868	6,117 0 4	4,456 14 6	1,660 5 10	...
„ 1869	6,340 1 1	3,480 12 7	2,859 8 6	...
„ 1870	6,012 19 5	4,326 1 9	1,686 17 8	...
„ 1871	5,575 6 4	6,320 11 11	...	745 5 7
„ 1872	5,904 0 0	5,759 6 7	144 13 5	...
„ 1873	6,845 9 5	5,277 3 3	1,568 6 2	...
„ 1874	8,841 11 4	4,852 9 7	3,989 1 9	...
„ 1875	10,241 19 6	5,767 4 9	4,474 14 9	...
Totals	63,014 13 4	44,166 19 11	19,592 19 0	745 5 7

NOTE.—The expenses do not include the cost of supervision, nor any allowance for the services of the "Luna."

RETURN of the Amount received for Pilotage, Port Charges, &c. (being Provincial Revenue), at the various Ports of New Zealand, during the Financial Year 1874–75.

Name of Province and Port.	Amount received for Pilotage.	Amount received for Port Dues, &c.	Totals.
	£ s. d.	£ s. d.	£ s. d.
AUCKLAND—			
Auckland	1,658 3 3	300 3 5	*1,958 6 8
Onehunga	67 12 0	111 14 6	179 6 6
Kaipara	285 13 5	113 5 8	398 19 1
Tauranga	22 11 10	...	22 11 10
Thames	40 1 6	69 5 6	109 7 0
Russell	46 12 4	3 1 10	49 14 2
Mongonui	21 4 8	14 6 0	35 10 8
Hokianga	107 9 5	...	107 9 5
Totals	2,249 8 5	611 16 11	2,861 5 4
TARANAKI—			
New Plymouth	93 2 3	63 17 6	156 19 9
WELLINGTON—			
Wanganui	252 15 3	...	252 15 3
Wellington	2,465 11 6	1,200 0 3	3,665 11 9
Totals	2,718 6 9	1,200 0 3	3,918 7 0
HAWKE'S BAY—			
Napier	1,177 3 2	355 4 5	1,532 7 7
MARLBOROUGH—			
Picton	14 10 4	...	14 10 4
NELSON—			
Nelson	1,015 16 10	7 7 10	1,023 4 8
WESTLAND—			
Hokitika	42 15 6	...	42 15 6
CANTERBURY—			
Lyttelton	3,592 12 11	1,697 3 1	5,289 16 0
Timaru	...	1 16 10	1 16 10
Totals	3,592 12 11	1,698 19 11	5,291 12 10
OTAGO—			
Oamaru	...	343 14 1	343 14 1
Dunedin	2,925 8 6	1,401 13 0	†4,327 1 6
Invercargill	...	40 1 10	40 1 10
Bluff	671 7 10	106 6 0	777 13 10
Riverton	70 6 0	5 5 0	75 11 0
Totals	3,667 2 4	1,896 19 11	5,564 2 3
TOTALS 1874–75	14,570 18 6	5,834 6 9	20,405 5 3
TOTALS 1873–74	11,586 19 7	4,808 8 0	16,395 7 7

* Revenue of Auckland Harbour Board. † £1,925 15s. 5d., revenue of Otago Harbour Board.

RETURN showing the Quantity of Oil consumed at the New Zealand Lighthouses during the Financial Year 1874–75.

Name of Lighthouse.	Quantity of Oil consumed.
	Gallons.
Tiri Tiri	456
Manukau	*350
Farewell Spit	394
Nelson	122
Mana Island	545
Pencarrow Head	563
Cape Campbell	411
Godley Head	518
Tairoa Head	353
Nugget Point	557
Dog Island	591
Total for 1874–75	4,860
Total for 1873–74	4,610

* Paraffine.

RETURN showing the Number of Masters and Mates Examined during the Financial Year 1874–75, distinguishing the Number of Successful and Unsuccessful Candidates.

Class Examined for.	Auckland.			Wellington.			Dunedin.			TOTALS.		
	Passed.	Failed.	Total.	Passed.	Failed.	Total.	Passed.	Failed.	Total.	Passed.	Failed.	Total.
Foreign-going Certificates	26	20	46	5	3	8	18	...	18	49	23	72
Home-trade Certificates	11	1	12	20	16	36	4	...	4	35	17	52
Totals	37	21	58	25	19	44	22	...	22	84	40	124

RETURN of Masters, Mates, and Engineers, to whom Certificates of Service have been granted under "The Merchant Ships Officers Examination Act Amendment Act, 1871," during the Financial Year 1874–75.

Name.	Rank for which Certificate has been granted.	Class of Certificate.	Date of Issue of Certificate.	Number of Certificate.
John Rodgers	Master	Home Trade ...	8 July 1874	2,366
Charles Edward Morgan	„	„ „ ...	11 „ „	2,367
John McAlister	Mate	„ „ ...	15 „ „	2,368
Frederick Holloway	Master	Foreign „ ...	24 September „	2,370
Charles Irvine	„	Home „ ...	24 „ „	2,371
John Huttly	„	„ „ ...	24 „ „	2,372
John McDonald	Mate	„ „ ...	24 „ „	2,373
Mello Schenkel	Master	„ „ ...	24 „ „	2,374
Edward Thomas Wing	„	„ „ ...	24 „ „	2,375
David Anderson	„	„ „ ...	14 October „	2,376
Peter Doull	Mate	Foreign „ ...	24 November „	2,377
William Ennis Baxter	Master	Home „ ...	24 „ „	2,378
John Dempsie	„	„ „ ...	24 „ „	2,379
Francis Pearse Gillard	„	„ „ ...	24 „ „	2,380
William Adolphus Waterman ...	„	Foreign „ ...	27 „ „	2,381
George Prouse Chapman	„	„ „ ...	26 January 1875	2,382
William McDonald	„	„ „ ...	26 „ „	2,383
George Charles Williams	„	Home „ ...	26 „ „	2,384
George Holland	Mate	Foreign „ ...	26 „ „	2,385
John Trimmer	Master	Home „ ...	26 „ „	2,386
John Terry	„	„ „ ...	26 „ „	2,387
John Symons	„	„ „ ...	26 „ „	2,388
John Turner	„	„ „ ...	2 February „	2,389
William Hunt	„	„ „ ...	8 „ „	2,390
Charles Ebenezer Browne	„	„ „ ...	10 „ „	2,391
Julius Henry Jacobsen	„	„ „ ...	12 March „	2,392
Edward Moore	„	„ „ ...	12 „ „	2,393
George Siddels	„	„ „ ...	12 „ „	2,394
Peter Peterson	„	„ „ ...	12 „ „	2,395
Henry Dalton	„	„ „ ...	12 „ „	2,396
Thomas Thwaites	„	„ „ ...	12 „ „	2,397
William George Cellem	„	Foreign „ ...	16 „ „	2,398
William Urquhart	„	„ „ ...	1 April „	2,399
James Bulliff	„	Home „ ...	1 „ „	2,400
Samuel Neill	„	„ „ ...	8 „ „	2,401
Claude Hamilton Smith	„	„ „ ...	22 „ „	2,402
William Lombard...	„	Foreign „ ...	27 „ „	2,403
William Liddell	„	Home „ ...	12 May „	2,404
George McLeod	„	„ „ ...	27 „ „	2,405
Alfred Ransley	„	„ „ ...	15 June „	2,406
Tope Taranui	„	„ „ ...	18 „ „	2,407
Alfred Bruce	Mate	„ „ ...	29 „ „	2,408
Henry Johnson	Engineer... ...	Second Class ...	27 November 1874	1,027

RETURN of Steam Vessels to which Certificates have been issued in New Zealand during the Financial Year 1874–75.

Name of Vessel.	Tons Register.	Horse-power of Engines.	Nature of Propeller.	Class of Certificate.	Nature of Engines.	Remarks.
Blue Nose	42	30	Paddle	River	Non-condensing	Steam Launch.
Eclipse	8	8	Screw	„	„	
Rangiriri	30	30	Stern Wheel	„	„	
Waikato	61	14	Paddle	„	„	
Enterprise No. 1 ...	22	14	„	„	„	

RETURN of Steam Vessels to which Certificates have been issued, &c.—*continued.*

Name of Vessel.	Tons Register.	Horse-power of Engines.	Nature of Propeller.	Class of Certificate.	Nature of Engines.	Remarks.
Enterprise No. 2 ...	40	32	,,	Extended River	,,	
Gemini	11	7	Twin Screw	River	,,	
Lady Bowen	29	34	Paddle	Extended River	Condensing	
Lalla Rookh	23	14	,,	,,	Non-condensing	
Devonport	23	12	,,	River	,,	
Golden Crown	207	140	,,	Extended River	Condensing	
Tam O'Shanter ...	10	7	,,	River	Non-condensing	
Lily	20	10	Twin Screw	Extended River	,,	
Takapuna	58	20	Paddle	River	,,	
La Buona Ventura ...	4	4	Screw	,,	,,	Steam Launch.
Hauraki	73	45	Paddle	Extended River	Condensing	New Vessel.
Manaia	62	30	,,	,,	Non-condensing	Ditto.
Scotchman	20	10	Screw	River	,,	Ditto.
Star of the South ...	175	45	,,	Sea-going	Compound	
Pretty Jane	101	35	,,	,,	Condensing	
Southern Cross ...	65	40	,,	,,	Compound	
Southern Cross ...	139	50	,,	,,	,,	New Vessel.
Emu	123	25	,,	,,	,,	Ditto.
Iona	159	65	,,	,,	,,	Ditto.
Rowena	74	30	,,	,,	Condensing	
Go-ahead	82	30	Twin Screw	,,	,,	
Alert	12	8	Screw	River	Non-condensing	Ditto.
Pearl	14	5	,,	,,	,,	Ditto.
Fairy	4	4	,,	,,	,,	Steam Launch.
Effort	13	12	Paddle	Extended River	,,	
Waitara	11	15	Screw	,,	,,	New Vessel.
Lily	5	8	,,	River	,,	
Una	14	8	,,	,,	,,	Wrecked.
Bella	12	12	,,	Extended River	,,	
Fairy	33	15	,,	,,	,,	
Victoria	22	10	,,	River	,,	New Vessel.
Sir Donald	29	12	,,	Extended River	Condensing	Ditto.
Result	18	23	,,	,,	Non-condensing	Ditto.
Phœbe	416	120	,,	Sea-going	Condensing	
Taranaki	298	90	,,	,,	,,	
Lady Bird	286	70	,,	,,	,,	
Wellington	261	80	,,	,,	,,	
Rangatira	186	50	,,	,,	,,	
Manawatu	103	45	Paddle	,,	,,	
Storm Bird	67	30	Screw	,,	,,	
Napier	44	24	,,	,,	Non-condensing	
St. Kilda	174	45	,,	,,	Condensing	
Wallabi	101	25	,,	,,	,,	
Egmont	52	18	,,	,,	Compound	New Vessel.
Tongariro	39	10	Paddle	Extended River	Non-condensing	
Pioneer	18	10	Screw	River	,,	
Osprey	28	10	Paddle	,,	,,	
Halcyon	24	25	Twin Screw	Extended River	,,	
Clyde	27	32	Paddle	,,	,,	
Mullogh	46	15	Screw	River	,,	
Gazelle	47	30	,,	Extended River	,,	
Moa	50	25	,,	,,	Condensing	
Pioneer	10	6	,,	River	Non-condensing	Steam Launch.
Beautiful Star	126	30	,,	Sea-going	Condensing	
Maori	118	60	,,	,,	,,	
Lady of the Lake ...	60	30	Paddle	,,	Non-condensing	
Samson	111	70	,,	,,	Condensing	
Wanganui	165	50	Screw	,,	,,	
Comerang	152	60	Paddle	,,	,,	
Shag	31	27	Screw	,,	Non-condensing	New Vessel.
Express	136	32	,,	,,	Condensing	
Bruce	204	90	,,	,,	Compound	Ditto.
Easby	969	140	,,	,,	,,	
Geelong	108	70	Paddle	Extended River	Condensing	
Golden Age	79	60	,,	River	Non-condensing	
Result	8	3	Twin Screw	,,	,,	
Jane	25	8	Screw	,,	,,	
Jane Williams	33	15	,,	,,	,,	
Antrim	35	30	Paddle	,,	,,	
Venús	10	10	Screw	,,	,,	
Balclutha	84	50	Paddle	,,	,,	New Vessel.
Portobello	11	10	,,	,,	,,	
Tuapeka	24	60	Stern Wheel	,,	,,	Wrecked.
Peninsula	32	20	Paddle	,,	,,	
Waipara	70	30	Twin Screw	Sea-going	,,	
Lioness	26	60	Paddle	,,	Condensing	
Dispatch	38	40	,,	,,	,,	
Result	13	10	,,	Extended River	Non-condensing	
Ino	24	12	Twin Screw	,,	,,	
Titan	21	55	Paddle	Sea-going	Condensing	
Lady Barkly	30	25	,,	Extended River	,,	
Wallace	56	40	,,	Sea-going	,,	
Charles Edward ...	89	60	,,	,,	,,	
Lyttelton	86	25	,,	,,	,,	
Murray	78	18	Screw	,,	,,	
Kennedy	125	36	Twin Screw	,,	,,	

RETURN of Masters, Mates, and Engineers, to whom Certificates of Competency have been granted under "The Merchant Ships Officers Examination Act, 1870," during the Financial Year 1874–75.

Name.	Rank for which Certificate has been granted.	Class of Certificate.	Date of Issue of Certificate.	Number of Certificate.
Thomas Fernandez*	Master	Foreign Trade	1 July 1874	36
James Lee	Second Mate	" "	11 " "	37
Murdock David Sutherland*	Master	" "	11 September "	38
Andrew Kean*	First Mate	" "	11 " "	39
James Lewis*	Master	" "	14 " "	40
Michael Carey*	"	" "	6 October "	41
James Matthew*	"	" "	11 November "	42
Thomas Cook Bayldon*	First Mate	" "	11 " "	43
James Sinclair*	Only Mate	" "	16 " "	44
Thomas Mellen	Master	" "	23 " "	45
William Earle	"	" "	23 " "	46
Julius Berthold Apstein	"	" "	23 " "	47
Alexander George Armstrong*	"	" "	18 February 1875	48
James Dunn*	"	" "	18 " "	49
Robert Edis Protheroe*	First Mate	" "	18 " "	50
William Solloway Lane*	Master	" "	18 " "	18
Martin John O'Connell*	"	" "	18 " "	51
William Esson	"	" "	18 " "	52
Daniel Robert Cooper*	"	" "	18 " "	53
Peter Webb Pullman*	"	" "	18 " "	54
Charles Frederick Helander*	"	" "	23 " "	33
Andrew Sloane*	"	" "	2 April "	55
George Gay*	"	" "	2 " "	56
Joachim Heinrich Petersen	"	" "	2 " "	57
David McKenzie*	"	" "	2 " "	58
Frederick Henry Barns	Only Mate	" "	2 " "	59
John Bone	Second Mate	" "	2 " "	60
Alexander Turberville	"	" "	2 " "	61
John McPherson	First Mate	" "	2 " "	62
Peter Pender	"	" "	2 " "	63
Anders John Petterson	"	" "	2 " "	64
Benjamin Pillinger*	"	" "	2 " "	65
Charles Abbott	Second Mate	" "	2 " "	66
John McKenzie*	Only Mate	" "	6 " "	67
William Henry Palmer*	Master	" "	6 " "	68
James Carey*	"	" "	22 " "	29
Samuel Vincent	"	" "	3 May "	69
Frederick Kemball	First Mate	" "	3 " "	70
James Horne	"	" "	3 " "	71
Charles Thomas Paterson	Second Mate	" "	3 " "	72
William Hudson O'Meagher	First Mate	" "	3 " "	73
William John Grey*	Master	" "	12 " "	74
Arthur Henry Austen*	"	" "	11 June "	75
George Brown Harris*	"	" "	11 " "	76
James Horsburgh	Only Mate	" "	11 " "	77
Alfred Moss	Master	" "	30 " "	78
Joseph Goodman	"	Home "	1 July 1874	5,026
William Lindsay	"	" "	11 September "	5,029
Christen Eriksen Greager	"	" "	12 November "	5,031
Edward Stephenson	"	" "	30 January 1875	5,025
John Berneck	Mate	" "	30 " "	5,032
Alexander Campbell	Master	" "	30 " "	5,033
George Bell	"	" "	30 " "	5,034
Henry Wyvil Dale	"	" "	30 " "	5,035
William Thomas Mincham	"	" "	30 " "	5,036
James Bissett	"	" "	30 " "	5,037
John Anderson	Mate	" "	30 " "	5,038
David Buike	Master	" "	18 February "	5,039
William Cormack	Mate	" "	18 " "	5,040
James Henry Smith	Master	" "	18 " "	5,041
Findlay McArthur	"	" "	18 " "	5,042
Nicolas Sciascia	Mate	" "	18 " "	5,043
Thomas Ayres	Master	" "	18 " "	5,044
Charles Matthew Wing	"	" "	23 " "	5,045
George William White	"	" "	23 " "	5,046
Charles Frederick Sundstrom	"	" "	2 April "	5,047
William Oram Morris	"	" "	2 " "	5,048
Peter Brown	"	" "	2 " "	5,049
Alexander Edmund Edwards	"	" "	2 " "	5,050
John Flood	"	" "	2 " "	5,051
James Lee	Mate	" "	2 " "	5,052
William Thompson	Master	" "	3 " "	5,053
Thomas McGee	"	" "	5 " "	5,027
Andrew Lillyblad	Mate	" "	22 " "	5,054
Olof Johnson	Master	" "	26 May "	5,055
Robert Jamieson	Mate	" "	12 June "	5,056
Frank Amodeo	Master	" "	15 " "	5,057
James Reardon	"	" "	23 " "	5,030
John Leys*	Engineer	First Class	31 July 1874	22
John Fawcus*	"	" "	11 November "	23
Samuel Austin	"	Second "	10 February 1875	24
John David Stuart*	"	" "	18 " "	25
Armand Caudan*	"	First "	11 June "	6
John Coppell*	"	" "	15 " "	26

* Issued under the provisions of Her Majesty's Order in Council of 9th August, 1872, and have the same force as similar Certificates granted by the Board of Trade in the United Kingdom.

RETURN of Wrecks on which Inquiries have been held under the Inquiry into Wrecks Act, or for which Casualty Returns have been received, between 1st July, 1874, and 30th June, 1875.

Date of Casualty.	Name of Vessel, also Age and Class.	Rig.	Register Tonnage.	Number of Crew.	Number of Passengers.	Nature of Cargo.	Nature of Casualty.	Number of Lives Lost.	Place where Casualty occurred.	Wind.		Finding of Court of Inquiry, or Opinion of Officer holding Investigation.	Name of Master.
										Direction.	Force.		
1874.													
July 3	"Edwin Bassett," 8 years	Barque	414	12	2	Coal and general cargo, 670 tons	Stranded; partial loss	...	Jerningham Point, Port Nicholson	S.S.W. to E.	Gentle breeze	Master miscalculated distance in foggy weather; insufficient allowance for tide	Joseph Salmon.
„ 13	"Paterson," p.s., 19 years	Schooner	260	21	6	Railway material	Stranded; total loss	...	North Spit at the entrance of the Waitara River	...	Light	Vessel too large for river. Master and crew did all that lay in their power	George Mundle.
„ 14	"Eliza Mary," 6 months	Brigantine	161	7	...	Coal	Stranded; partial loss	...	South Spit at the entrance of the Waitara River	N.N. W.	Fresh breeze	Vessel drew too much water; fresh took vessel on Spit. Officers relieved from blame	John James.
„ 14	"Onward," 2 months	Schooner	32	3	4	Coal	„	...	Off Beacon Rock, Tairua Head, Auckland	E.S.E.	„	No blame attached to master. Wind failed whilst vessel on bar	Martin John O'Connell.
„ 20	"Manawatu," p.s., 1 year	„	103	14	7	General	Collision; partial loss	...	About half-way across Evans Bay, within harbour of Port Nicholson	S.	Strong breeze	Neglect of master of "Kate Brain" in not keeping a look-out, and breach of regulations for preventing collisions at sea	John Griffiths.
„ 20	"Kate Brain," under 1 year	Brigantine	118	7	...	Grain			...	...	...	... ...	David Henry.
„ 22	"Frowning Beauty," 28 years	Barque	365	11	...	Ballast	Loss of cable; masts cut away; partial loss	...	About half a mile to northward of Kaiwarawara, a village on western side of Port Nicholson	S.E.	Whole gale	Cables being much worn, and not in condition to bear strain of vessel	Charles J. Campbell.
„ 23	"Miltiades," 3 years, A1 20 years	Ship	1,452	47	368½	General	Stranded; partial loss	...	Off Gull Point, Hauraki Gulf, Auckland	S.S.E.	...	Error of judgment on part of master in not tacking sooner	Robert A. Perrett.
„ 30	"Carl," 18 years	Brig	167	8	...	Ballast, 10 kegs butter	Stranded; total loss	...	On the Triangle Rocks inside Bluff Harbour	N.W.	...	Wind failed when vessel in stays. No blame attached to master	Charles John Macey.
Aug. 1	"Albion," 59 years	Barque	313	20	...	Nil	Stranded; partial loss	...	Lat. 20° 22′ S., Long. 174° 44′ W., and 3 miles N.W. of Romanga.	S.W.	Light	Master and pilot erred in judgment in considering themselves clear of the reef.	Jones Kelly.
„ 3	"Fairy," 11 years	Schooner	34	4	...	General merchandise	Stranded; total loss	...	South side of Reef Point, Hokianga River	W.N. W.	Fresh gale	Vessel went ashore through missing stays ...	Thomas Jones.
„ 8	Comerang, p.s., 9 years	„	152	12	7	...	Collision; partial loss	...	Middle Cross Channel, Port Chalmers Harbour, between Otago Heads and the town of Port Chalmers.	...	Moderate breeze	Collision caused by steamer coming up wrong side of the channel	Joseph Hughes.
„ 8	"Hope," 10 years	Ketch	Not registered; 24 tons	3	...	Grain and Potatoes	„	...	...	...	...	... ...	William Juber.

	"Comerang," p.s., 9 years	Schooner	152	12	35	General	Stranded; partial loss	...	Waipapapa Point, between Nuggett Point and the Bluff	Calm	...	...	...	Joseph Hughes.
„ 24	"Collingwood," 6½ years	Ketch	15	2	...	Firewood and hop poles	Stranded; total loss	...	Waimea Sands, Nelson	N.E.	Light	...	...	Francis Gillard.
„ 24	"Helena," 3 months	Brigantine	126	7	...	N.Z. Produce	Stranded; partial loss	...	Off black buoy under Mount Mongonui, entrance of Tauranga Harbour.	N.E.	Strong gale	No blame attached to master	...	Alexander Campbell.
Sept. 5	"Cynthia," 11 years	Schooner	63	4	...	Ballast	Stranded; partial loss	...	Eastern Shore, within entrance of Wellington Harbour, abreast of north end of Barrett's Reef.	N.W.	Fresh breeze	Error in judgment of master in not letting go anchor when vessel misstayed. He did all in his power to save vessel after accident		Thomas Swede.
„ 12	"Star of the Sea," 1 year	Fore-and-aft schooner	38	5	...	General	Loss of life	1	Off Stephen's Island	W.	Strong breeze	Man knocked overboard through breaking of staysail hawse		Robert Bowden.
„ 16	"Easby," s.s., 1 year	Schooner	969	28	7	Coal	Stranded; partial loss	...	Between 2 and 3 miles off Waipapapa Point.	E.	Moderate breeze	Court held that it had no jurisdiction, as the vessel was not materially damaged		Robert Shand.
„ 21	"Condoreen," 10 years (Swedish)	Ship	American; 1,067	...	1	„	Loss of masts and rigging; partial loss	...	About 300 miles W.S.W. from the Three Kings, off New Zealand.	N.W.	Hurricane	Casualty caused by bad weather	...	Axel Rembold Meiglick.
„ 22	"Glimpse," 10 years	Ketch	35	4	...	Railway Iron	Stranded; partial loss		Moeraki	N.E.	Strong breeze	Vessel parted cable, and went ashore	...	George Scoones.
„ 24	"Dauntless," 2½ years	Schooner	72	6	1	Timber and Rope	„	...	Kawau. Reef jutting out from mainland; Flat Rock Beacon, bearing S.E. by E. ¾ E., and Matakana Point, S.W. by W. ½ W.	W.S.W.	„	Error of judgment; master censured	...	William Millar.
„ 24	"Waipara," 8 years	„	70	8	24	General	„	...	Greymouth Bar ...	N.W.	Fresh breeze	R.M. found that master had shown culpable negligence in attempting to cross the bar on the ebb tide, and with a strong fresh running, and in direct opposition to the regulations for entering bar harbours. Suspended master's certificate for three months. As Nautical Assessor did not concur, no action was taken		Chas. Stephen Bascand.
„ 28	"Richard and Mary," 3 months	„	44	4	...	Coal and Palings	„	...	Oamaru	E.N.E.	„	Vessel missed stays, and went on shore	...	Wm. Buchan.
Oct. 3	"United Brothers," 23 years	„	50	4	...	Iron Bridge Material	Stranded; total loss	...	On beach, about 5 miles north of Oamaru.	S.	Moderate gale	Vessel made so much water whilst labouring in a heavy sea that master was compelled to beach her		Stephen Tall.
„ 7	"Rose," 14 years	Cutter	25	3	...	Ballast	Foundered; partial loss	...	Inside of Wangapoa River, Auckland	S.W.	Squally	Sudden squall capsized the vessel	...	Christian Jensen.
„ 12	"William Cundell," 11 years, A1 5 years	Brig	267	11	...	Coal	Collision; partial loss	...	1¼ mile distant from Otago Heads	„	Strong breeze	Brig, when bringing up, parted cable; this was not discovered in time to take effectual steps to prevent her drifting on to the "Sea Gull"		Daniel Macfarlane.
„ 12	"Sea Gull," 15 years	Brigantine	121	7	...	Slate and ballast		...						Benjamin Bern.

RETURN of Wrecks on which Inquiries have been held, &c.—*continued.*

Date of Casualty.	Name of Vessel, also Age and Class.	Rig.	Register Tonnage.	Number of Crew.	Number of Passengers.	Nature of Cargo.	Nature of Casualty.	Number of Lives Lost.	Place where Casualty occurred.	Wind. Direction.	Wind. Force.	Finding of Court of Inquiry, or Opinion of Officer holding Investigation.	Name of Master.
1874.													
Oct. 12	"Emu," s.s. 1 year	Three-masted Schooner	123	...	...	Grain	Dismasted; partial loss	...	About 30 miles off Cape Turnagain	W.N.W.	Strong gale	... ...	George Baker.
„ 13	"Alma," 20 years	„	163	9	1	General	Loss of three topmasts, bulwarks, &c., partial loss	2	Ocean 60 miles W. ½ N. from Cape Foulwind	S.W.	Whole gale	Accidental; vessel had been properly hove to...	James Watters.
„ 17	"Edith," 12 years	Schooner	63	7	...	Fruit and oil	Stranded; partial loss	...	Between the North Head of Auckland and Takapuna Point	S.E.	Light	Error of judgment on part of master ...	George Henry Trayte.
„ 17	"Prosperity," 6 years	Brigantine	134	7	...	General	„	...	200 yards north of end of North Spit, Hokitika	S.W.	Gentle breeze	Vessel struck on a shallow ridge that had been missed by leadsman on board tug	John Payne.
„ 30	"Anne Melhuish," 25 years	Barque	344	11	2	Coal	„	...	1½ cable length east of the Steeple Rocks in Harbour of Port Nicholson	...	Calm	Master committed error in judgment in keeping too close to western shore	William Davidson.
Nov. 10	"Wild Duck," 7 years	Ketch	42	...	1	Timber	Collision; partial loss	...	Just inside bar of Waikato River	N.E.	Fresh breeze	Collision caused by misconduct of master of "Merlin," who was made liable to pay costs of inquiry	William Waite.
„ 10	"Merlin," 4½ years	Schooner	41	4	...	„	„	...					Eugene McCarthy.
„ 20	"Sarah and Mary," 9 years	Brigantine	154	8	...	Water pipes and general	Stranded; partial loss	...	On a bank at the entrance to the Hokitika River, about 600 yards north of end of the North Spit	N.W.	Moderate breeze	Fresh affected steering of "Sarah and Mary"...	Hugh Simpson.
Dec. 2	"Wanganui," 9 months	Schooner	82	6	...	General	Stranded; partial loss	...	Bar of the Hokitika River	E.	Gentle breeze	Bar head shifted unknown to signalman, who had not altered beacons	John Blaney.
„ 2	"Wallace," p.s. 8 years	„	64	15	2	„	Stranded; partial loss	...	South Spit of Hokitika River	„	„	... ...	John Heffer.
„ 4	"Anazi," 10 years, A1 at Lloyd's	Barque	468	16	11	„	Collision; partial loss	...	Lat. 4° South, Long. 33° West	S.E. by E.	Light	Collision caused by "City of Madras" (which had overtaken the "Anazi") trying to luff across her bows	James Hill.
„ 4	"City of Madras"	Ship											
„ 14	"Kennedy," s.s., 10 years	Schooner	125	...	...	„	Stranded; partial loss	...	North Beach, near entrance to Grey River	...	Moderate	Vessel had insufficient power to stem current, there being a fresh in the river	William Conway.
1875.													
Jan. 1	"Tiri Tiri," 5 years	Ketch	20	...	...	Ballast	„	...	Breakwater off Point Britomart, Auckland Harbour	N.E.	Gale	No one left on board vessel; anchor broke ...	George Broadfoot.

Jan. 11	"Express," s.s., 21 years	Schooner	136	16	...	General	Stranded; partial loss	...	Reef of Rocks near Tewaewae Point, Bluff Harbour	S.W.	Fresh breeze	Master steered too much to port after leaving wharf; mate mistook colour of buoy	John Christian.
Feb. 4	"Pretty Jane," s.s., 5 years	Three-masted Schooner	101	17	8	Wool, grass seed, and general	„	...	On the bar of the Koputetea River, Poverty Bay	E.	Light	Court found that vessel was stranded by the want of knowledge and great imprudence of the pilot, Joseph Kennedy, and that the chief officer, James Carey, was extremely culpable in allowing pilot to take vessel to sea during temporary absence of master, and not having remonstrated with pilot for attempting to take the bar. Master considered reprehensible for absenting himself when the ship was going to sea without any cause whatever, and for not giving positive instructions that the vessel should not proceed to sea. Master's certificate suspended for three months	Thomas Fernandez
„ 15	"Una," s.s., 2 years	Ketch	20	4	...	Shingle ballast	Foundered; total loss	...	Napier Roadstead, about 1½ mile from shore	...	None	Vessel foundered through covering plates giving way. Cargo too heavy for vessel of her construction	Andrew Christoffersen.
„ 23	"Waikato," 1½ year	Nil	61	7	...	Grass seed	Burning; partial loss	...	At the Wharf, Newcastle, Waikato River	...	...	No evidence to show how fire originated ...	William George Cellem.
„ 24	"Janet Grey," 11 years	Cutter	27	3	...	Ballast	Stranded; total loss	...	Point to Westward of Kourangi Rocks, Province of Auckland	...	Calm	No blame attached to master	George Tupp.
„ 24	"Thames," 15 years	Ketch	23	3	...	Timber	Stranded; partial loss	...	South Spit at entrance of Wanganui River, West Coast, Cook Strait	N.N. W.	Moderate	Master censured for carelessness and want of judgment in attempting bar without finding position of vessel, and not paying attention to rules for sailing vessels entering port	Eric Henry Oscar Suisted.
...	"Cambria," 4 years	Schooner	43	3	...	Cement, wire, and wooden doors	Supposed foundered	Supposed 3 (all hands)	Not known ...	...	Not known	Vessel left Dunedin, and not since heard of ...	Thos. Saunders.
...	"Kaituna," 2 months	Ketch	47	4	...	Timber	„	Supposed 4 (all hands)	Supposed off Banks Peninsula	...	Not known	Vessel last seen off Banks Peninsula; not since heard of	John A. Scott.
Mar. 8	"Tawera," 13 years	„	55	...	...	...	Burning; partial loss	...	Mechanics' Bay, Auckland	...	...	Cause of casualty not discovered	Robert Church.
„ 16	"Mary Melville," 15 months	Schooner	62	6	2	Live stock and grass seed	Loss of life	1	Between Oharu Point and East Cape	W.	Fresh breeze	No blame attached to those on board vessel ...	John Urquhart.
April 17	"Samson," p.s., 21 years	„	124	14	12	Grain	Paddle wheel carried away	...	Off Shag Point ...	S.W.	Light	... ...	James Edie.
...	"Euphrosyne"	„	75	6	...	Coal in sacks and corn sacks in bales	Supposed foundered	Supposed 6 (all hands)	...	...	Not known	Vessel left Dunedin for Oamaru and not since been heard of	R. Spence.
„ 28	"Mary Bannatyne," 4 years	Brigantine	116	17	...	General	Loss of life	1	Lat. 43° 36′ S., Long. 163° 15′ E.	N.	Strong gale	Casualty unavoidable	William Chalmers Munn.
May 8	"Elderslie," 7 years, 1st class	Three-masted Schooner	203	11	1	Coal	Stranded; total loss	...	South side of Oamaru Bay	E.N. E.	Strong breeze	Master did all in his power to save ship ...	Magnus Sutherland Meredith.
...	"Ivanhoe," 10 years	Schooner	72	6	...	Timber	Supposed foundered	Supposed 6	...	...	...	Vessel left Auckland for Levuka and has not since been heard of	Donald Stuart.

RETURN of Wrecks on which Inquiries have been held, &c.—*continued.*

Date of Casualty.	Name of Vessel, also Age and Class.	Rig.	Register Tonnage.	Number of Crew.	Number of Passengers.	Nature of Cargo.	Nature of Casualty.	Number of Lives Lost.	Place where Casualty occurred.	Wind. Direction.	Wind. Force.	Finding of Court of Inquiry, or Opinion of Officer holding Investigation.	Name of Master.
1875.													
May 8	"Young Dick," 6 years, A1 9 years	Schooner	162	7	...	General	Collision; partial loss	...	South side of Oamaru Bay	...	Strong breeze	"Elderslie" fouled "Young Dick" whilst that vessel was at anchor	George Henwood Symons.
„ 8	"Elderslie," 7 years, 1st class	3-masted Schooner	203	11	1	Coal	...		...	...	...	...	Magnus Sutherland Meredith.
„ 9	"Cyrene," 9 years	Barque	527	12	1	Railway sleepers	Stranded; total loss	...	On the beach, half a cable's length south of Strathallan Street, Timaru	N.N.E.	Strong gale	...	Robson Clayburn.
„ 9	"Princess Alice," 13 years	Brig	268	10	1	Coal	„	...	On the beach opposite Strathallan Street, Timaru	E.N.E.	„	...	James Story Brownell.
June 4	"Julia," 11 years	Cutter	16	1	...	Wood	„	...	Takatu Reef, near Kawau, Province of Auckland	S.E.	Strong breeze	No blame attached to master	William Davis.
„ 5	"Elibank Castle," 1 year	Schooner	70	5	...	Coal and general cargo	„	...	Near mouth of Ashburton River, Ninety Mile Beach	S.E.	Gale	Stranding unavoidable. No blame to master or crew	John Linklater.
„ 5	"William Gifford," 17 years	Barque	232	10	...	Coal	Bulwarks carried away; £120 damage	...	At sea, between Oamaru and Banks' Peninsula	S.S.E.	Fearful gale	...	John Bishop.
„ 5	"Speedwell," 19 years	„	350	10	...	„	Loss of bulwarks, &c.; £300 damage	...	West of Lyttelton,	S.E.	Heavy gale	...	Francis Abdil Athow.
„ 5	"William and Mary," 10 years	Schooner	47	5	...	Timber	Capsized; total loss	4	About 30 miles N.W. of Kapiti Island, Cook Strait	S.E.	Gale	Master believed that before going below he had done all he could to secure safety of vessel	James Stevens.
„ 5	"Wild Wave," 14 years	„	39	4	...	Ballast and a little timber	Stranded; total loss	...	North of mouth of Ashburton River, Ninety Mile Beach	S.E.	„	...	Jacob Karalus.
„ 5	"Success," 12 years	„	59	4	...	Ballast	„	4; all hands	South of mouth of Ashburton River, Ninety Mile Beach	S.E.	„	...	Edward Lake.
„ 5	"Mary Melville," 15 months	„	62	6	...	...	Loss of life	1	On voyage between Lyttelton and Napier	S.W.	„	...	John Urquhart.
„ 5	"Orpheus," 12 years	„	21	...	...	Timber	„	1	Off Table Cape ...	S.W.	„	...	James Dunn.
„ 6	"Fleur de Maurice," 11 years	Barque	333	9	...	Coal	Main yard and sails carried away	...	Cook Strait ...	S.	„	...	John Dobson.
„ 6	"Mary Campbell," 6 years	Brigantine	144	8	5	General	Stranded; partial loss	...	North Spit of the Hokitika River, about 200 yds from entrance	N.W.	Gentle breeze	No blame attached to master, who followed the directions of master of tug	William Williams.
„ 8	"Wallace," p.s., 8 years	Schooner	64	15	15	„	„	...	Extreme end of North Spit, Hokitika River, Province of Westland	E.	„	Line stretched across the channel caught projection on bottom of "Wallace." No blame to master	William Conway.
„ 15	"Isabel," 1 year	Cutter	12	2	...	„	„	...	Maketu Bar, Bay of Plenty	W.	Unsteady	No carelessness attributed to master	William Underwood.

RETURN of Pilotage Exemption Certificates issued during the Financial Year 1874-75.

No. of Certificate.	Names of Masters to whom Certificates have been issued.	Names of Vessels for which Certificates have been issued.	Ports included on Certificate.
233	George Davies	Malay	Wellington, Auckland, Kaipara, Manukau, and Mongonui.
234	John Bennett	Prince Alfred ...	Auckland.
235	William Smith Stuart ...	Craig Ellachie ...	Lyttelton.
236	John Moreton	Moneynick	Auckland.
237	Alexander Campbell ...	Robin Hood	Wellington.
238	Alexander Campbell ...	Helena	Auckland.
239	Joseph Jenkins	Record	Wellington.
240	George Baker	Emu	Auckland.
241	Hugh Simpson	Sarah and Mary ...	Lyttelton.
242	Robert Shand	Easby	Dunedin.
243	William Darling Dawson ...	Hannah Broomfield ...	Wellington.
244	John Scoullar	Joliba	Lyttelton.
245	James Hoyten Davis ...	John Knox	Lyttelton.
246	Andrew Moir	Cezarewitch	Dunedin and Wellington.
247	John Wood	Pakeha	Dunedin.
248	James McFarlane	Bruce	Dunedin.
249	Winthorp Ellis	Lady Franklin ...	Auckland.
250	Robert Reid Brown ...	William Ackers ...	Wellington.
251	Joseph Pallant	Mera	Auckland.
252	George Gay	Kate Brain	Dunedin.
253	Edward Curphy	Maid of Erin ...	Lyttelton.
254	Jonathan T. Durrell ...	Victoria	Auckland.
255	William Luly	Hopeful	Lyttelton.
256	Henry Edward Hill ...	Malay	Wellington and Dunedin.
257	James Thompson	Anne and Jane ...	Wellington.
258	James Gray	Queensland	Lyttelton.
259	Duncan Cameron McIntyre ...	Chanticleer	Auckland.
260	David Rees	Syren	Lyttelton.
261	Cardinal Sainty	Syren	Auckland.
262	John Byron Sherlock ...	Union	Auckland.
263	Alexander Joss	Craig Ellachie ...	Bluff Harbour.
264	Robert Nicoll	Hadda	Lyttelton.
265	Joseph Ellis	Go-ahead	Manukau.
266	Robert Croll	Neptune	Wellington.
267	Henry Wyvil Dale ...	Go-ahead	Wellington and Manukau.
268	Thomas Henry Forster ...	Edwin Bassett ...	Wellington.
269	James Cooper	Comet	Dunedin.
270	Frederick Jones	Bruce	Dunedin.
271	Martin John O'Connell ...	Emu	Auckland and Manukau.
272	Charles Evans	Manawatu	Wellington.
273	Benjamin Bern	Sea Gull	Dunedin.
274	Peter Davies	William Ackers ...	Wellington.
275	Peter Webb Pullman ...	Augusta	Auckland.
276	George Rennie McArthur ...	Sea Shell	Lyttelton.
277	William Whitburn ...	Otago	Lyttelton and Wellington.
278	William Meiklejohn ...	Omaha	Auckland.
279	John Walter Garth ...	Clematis	Lyttelton.
280	William H. Wilson ...	Wave	Auckland.
281	Murdoch McKenzie ...	Martha	Auckland.
282	Alexander D. McGillivray ...	Go-ahead	Auckland, Manukau, Wellington, Nelson, Westport, Hokitika, Greymouth, and Okarito.
283	William Edward Oliver ...	Australind	Wellington.
284	Malcolm Ross Brown ...	Island City	Lyttelton.
285	Thomas Dawson	Jane Anderson ...	Dunedin.
286	Henry D. Bower	Derwent	Auckland and Kaipara.
287	Frederic Condy	Woodville	Dunedin.
288	John Moore Lamont ...	Corrido	Lyttelton.
289	William George Cellem ...	Waikato	Russell, Auckland, Manukau, Tauranga, Napier, Wellington, Picton, Lyttelton, Dunedin, and New Plymouth.
290	John Veal	Sea Gull	Wellington.
291	Robert Sopwith	Wave	Auckland.
292	William Stavers	Glimpse	Auckland.
293	George Harless	Iris	Lyttelton.
294	George Edward Grosley Jackson	Kenilworth	Auckland.
295	Charles Frederick Helander ...	Star of the South ...	Wellington.
296	Joachim Heinrich Petersen ...	Jessie Niccol ...	Dunedin.
297	Charles William Bartlett ...	Sea Bird	Lyttelton.
298	Kenneth McKenzie ...	Cabarfeidh	Auckland, Russell, and Tauranga.

APPENDICES TO MARINE REPORT.

APPENDIX A.

CORRESPONDENCE RELATIVE TO SELECTION OF SITES FOR NEW COASTAL LIGHTHOUSES.

No. 1.

Mr. BLACKETT to the SECRETARY of CUSTOMS.

SIR,— Marine Office, Wellington, 23rd September, 1874.

I have the honor to forward, for the information of the Hon. the Commissioner of Customs, a memorandum on The Brothers Rock, in Cook Strait, as a sight for a lighthouse.

The examination of the island was made on the 22nd instant, during a trip of the "Luna" steamer, under particularly favourable circumstances.

I have, &c.,
JOHN BLACKETT,
Marine Engineer.

The Secretary of Customs, Wellington.

MEMORANDUM for the Hon. the COMMISSIONER OF CUSTOMS.

The Brothers Islands, in Cook Strait, as a Site for a Lighthouse.

AFTER examining the islands from the deck of the "Luna," it was decided that the northern island besides being the better situated for lighting for the purposes of navigation, also offered a better site for a lighthouse and the necessary dwellings, &c., as well as better facilities for landing. The only place where a landing could be effected was at the southern extremity of the island, on the eastern side, in a little bay or recess which is sheltered from the prevailing N.W. winds. A very light N.W. wind was blowing at the time we landed, and the water seemed, on leaving the vessel, comparatively still; but, on nearing the island, a perceptible lift or heave of the sea was apparent, causing the boat to rise and fall at times at least five or six feet when close to the rocks. This demanded a certain amount of expertness in getting out of the boat, and also in getting in again on the return, there being no beach of any kind, and the rocks being steep-to.

The island is composed entirely of rock of a similar formation as those around Wellington, tolerably soft and easily worked, but of no use for building purposes, except of the roughest kind. The shape of the surface of the island, both on its northern and southern faces, is steep, and it will be necessary to cut roads from one end to the other to get materials and goods conveyed to the top. Most of the road-making will be in rock, and, the southern face being steeper than the rest, will require that the lower portion of the road shall be made with steps.

The northern face is not so steep, and the upper portion of it is covered with a thin layer of light vegetable earth, in which grows a scanty scrubby vegetation.

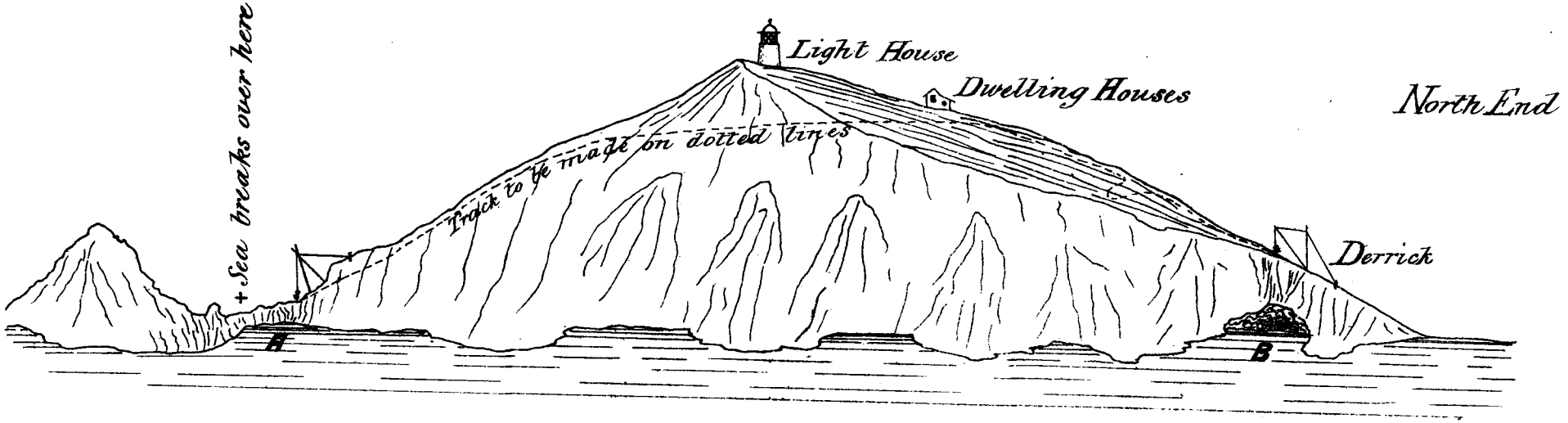
There is no fresh water on the island. The height to the summit from sea level is about 230 feet, so that a very low tower will be needed for the light, for which there is sufficient level space on the top for a good foundation. The dwelling-houses, &c., may be built a little way down the northern slope, where there is width enough for the purpose.

Should it be decided to erect a lighthouse on this island, for which purpose it is eminently well fitted, it will be advisable to make certain preliminary arrangements for the reception of the materials and their landing, in readiness for the arrival of the apparatus from England. These will consist of, viz.,—

(1.) The improvement of the landing-place at the southern end, and the erection of a derrick with lifting gear at the same place.
(2.) The cutting of a track from here to the site of the dwelling-houses, and from thence to the northern end of the island, where there exist facilities for constructing an alternative landing-place for goods and material, &c.
(3.) The erection of a derrick and lifting gear, &c., at this landing-place.
(5.) The necessary levelling and other preparation of the foundations of the light tower, dwellings, and stores.

This work would in my opinion be best performed by a party of picked men under an efficient overseer, who would be sent to the island specially equipped with tents, tools, gear, provisions, fuel, and *water*, and who should after their landing not be left until they had properly housed themselves under canvas, and properly stored their provisions, &c. They should also be frequently visited during their stay to see that their progress was satisfactory, and that they were in no need of help on account of accidents of any kind, shortness of food or water, &c.

It will be observed that this will necessitate the almost constant use of a small steamer, and unless this can be obtained I should not recommend the above work to be proceeded with; a sailing craft is of no use for such service. I may offer the opinion that, in view of the Government proceeding to build



View of the "Brothers" (North Island) looking Westward; shewing position of lighthouse, dwelling houses, and landing place as proposed. A is the place where the landing was effected; B shews a favourable place for erecting a Derrick for landing goods &c.

To accompany memo:
J. B.
27·3·74.

all the lighthouses which have been recommended as necessary for the proper lighting of the coast, it will be real economy to purchase a steamer for this department, not only for the purpose of official inspections after they are built, but for the purpose of carrying the material and plant for the erection of each to its selected site, and so save a large item in all tenders for the erection of the lighthouses, it being evident that either the Government or any contractor must pay for such special services at a high rate, seeing that the work is always of an exceptional and frequently of a dangerous character.

The latter fact points strongly to the necessity for a special steamer for such purposes, as the captain and his officers become expert by practice at the peculiar work required of them, which demands both skill and experience to avoid accidents and loss of life, which might otherwise happen under less experienced hands.

Attached to this memorandum is a sketch of The Brothers, which will illustrate the remarks herein, and render the description clear and intelligible. The sketch is drawn very nearly to scale, and with the slopes and altitudes as measured.

JOHN BLACKETT,
Marine Engineer.

No. 2.

MEMORANDUM for the Hon. the COMMISSIONER of CUSTOMS.

The Brothers Lighthouse Site Landing-Place.

THE most suitable of the two Brothers for a lighthouse site is the northern one; and on examining this island yesterday, a landing-place was found on the eastern side, near the northern end, which is capable of being improved so much, that a boat in ordinary N.W. weather will find no difficulty in landing the usual lighthouse and keeper's stores. Owing, however, to the first 60 or 70 feet of the track being so steep, it will be difficult to carry heavy material to the site. On the northern end of the island the ground slopes more gradually towards the sea, and here an overhanging cliff, of about 50 feet above sea level, was found, under which, in fine weather, a boat could safely lay, and, with help of a derrick and a winch on the top of the rock, the heavy material for building the tower, dwelling, with the apparatus and lantern, could easily be landed and conveyed to the site.

21st September, 1874. R. JOHNSON.

No. 3.

Mr. BLACKETT to the SECRETARY of CUSTOMS.

SIR,— Marine Office, Wellington, 25th January, 1875.

I have the honor to forward, for the information of the Hon. the Commissioner of Customs, the following memorandum on lighthouses, containing information collected during the last trip of the p.s. "Luna" round the Middle Island, which extended from 15th December, 1874, to 8th January, 1875.

The various sites which have been proposed are described in the order in which they were inspected, and attached to this memorandum is a series of rough sketches, Nos. 1 to 10, illustrative of the positions and peculiar features of each.

An approximate estimate of the cost of erecting lighthouses on these sites is also appended hereto. This has been prepared with the assistance of Captain Robert Johnson, with whose report (supplementary to that of last year) the present memorandum is now forwarded.

I have, &c.,
JOHN BLACKETT,
Marine Engineer.

Wm. Seed, Esq., Secretary and Inspector of Customs, Wellington.

Light for Akaroa and the Adjacent Coast.

Three sites were examined, the first of which, marked A on Sketch 1, is situated on Akaroa Head. Its height above sea level is 247 feet; the nearest, or in fact the only, landing for boats is situated in a deep bay to the east of the head; the landing is on a ledge of rocks, and is distant about 15 chains from the site A. It will be necessary to cut a road for the whole of this distance, mostly in deep sideling ground, and in many places, if not for the whole length, more or less in rock of variable degrees of hardness.

The second site, marked B on Sketch 1 is situated within the entrance to Akaroa Harbour, and is called Point Trueni; its elevation is about 90 feet. It is composed entirely of rock, very rough and broken, and access can only be gained to it by means of a road cut from the same landing-place as described for site A, which road would have this disadvantage, viz. that it would cross the summit of the range, which is 607 feet high, and would be necessarily very steep and impracticable.

The ground embracing the above sites and the landing is all open.

The third site, marked C on Sketch 2 is on Flat Point, a few miles to the north of Akaroa Head; its elevation is 170 feet. The nearest good landing-place is situated in a small bay to the southward, where there is a shingly beach, from which to the site C would be required a road at least 1¾ miles long, part of which would be in rough sideling ground, rocky in places, and part on undulating table land. The country is open, with the exception of a small portion in the bay near the landing, where there is bush.

Of these three sites there can be no doubt that the one on Akaroa Head is the best, whether considered in reference to the requirements of navigation, or in cheapness of first construction, and the

maintenance of the light hereafter. A very low tower would suffice here, in the erection of which either wood or stone might be used, as the latter could be obtained by excavation at the site. A wooden tower would, however, be most cheaply constructed.

Cape Saunders.

In connection with this light two sites were examined, the first of which is on the cape itself, and which is marked D on Sketch 3. This site is seaward of the site originally selected, and at a much lower elevation, viz. 292 feet as compared with 472 feet; it is on the advanced edge of the cliff, on a rocky shelf about a chain wide and three or four chains long, and it can be reached by a road from Porto Bello, about seven or eight miles distant. A portion of this road nearest Porto Bello is already made, but from the end of the made portion to the site is some very rough country and very steep hills, and the completion of the road would involve a heavy expenditure. An easier method of access would be by forming a road from a landing-place situated in a small bay immediately to the south of Cape Saunders. This would be nearly two miles long, and would involve a considerable amount of work. The portion of the road near the landing would be rather steep, and for a certain distance in bush and scrub; the rest in open land, and tolerably steep in places.

The second site here examined is marked E on Sketch 3, situated a short distance to the south of Cape Saunders, and at an elevation of 180 feet above sea level. This could be reached from the same landing-place as described for the last site, and only about 60 chains of road would be required, 40 chains of which would be common to the two sites D and E, as shown by the dotted lines on sketch.

It can, I think, be shown that, taken in connection with existing lights, this site is equally eligible for navigation purposes with site D; while, as regards first cost of construction and future maintenance of light, it will be infinitely cheaper. Its lower level also gives it a very great advantage over the other, as it lies below the line of fog which so frequently obscures the higher levels, as we had abundant opportunities of verifying during the trip.

Ruapuke Island.

One eligible site for a lighthouse was examined on this island; it is marked P on Sketch 4, and is situated on the northern extremity of the island, near the North Head. The elevation is about 220 feet above sea level. A very fair landing-place was found on a rocky beach to the westward, and the ground from thence to the summit offers good facilities for making a road, which will probably be about a mile or a mile and a quarter long. The part of the island visited is partly in grass and partly in scrub and flax, with rocks protruding in places through the soil, the rocks being granitic.

Centre Island.

This island offers great facilities for the establishment of a lighthouse—a good landing on a sandy beach; easy rising ground over which to form a road; a prominent site (marked F on Sketch 5); of a convenient elevation, viz. 247 feet; abundance of stone (granite) for building, if required; and a commanding position in the Straits. The road to the site would probably be about half a mile long from the landing.

Rugged Island.

This island, though admirably suited as regards position, offers no facilities for the economical establishment and maintenance of a lighthouse. Its general appearance is shown in Sketch 6, from which it will be apparent that the name of "Rugged" is well bestowed. The site, and the only one adapted for the purpose (marked G in the sketch), is a rocky tongue, covered with scrub, projecting from the body of the island, at an elevation of 247 feet above sea level. This is not accessible from its own proper side of the island, and can only at present be reached by landing on the opposite side on a rocky ledge, clambering to the summit (535 feet) up the south-east sloping side of the island, and descending by a difficult path under the bluff rocky face to the site described.

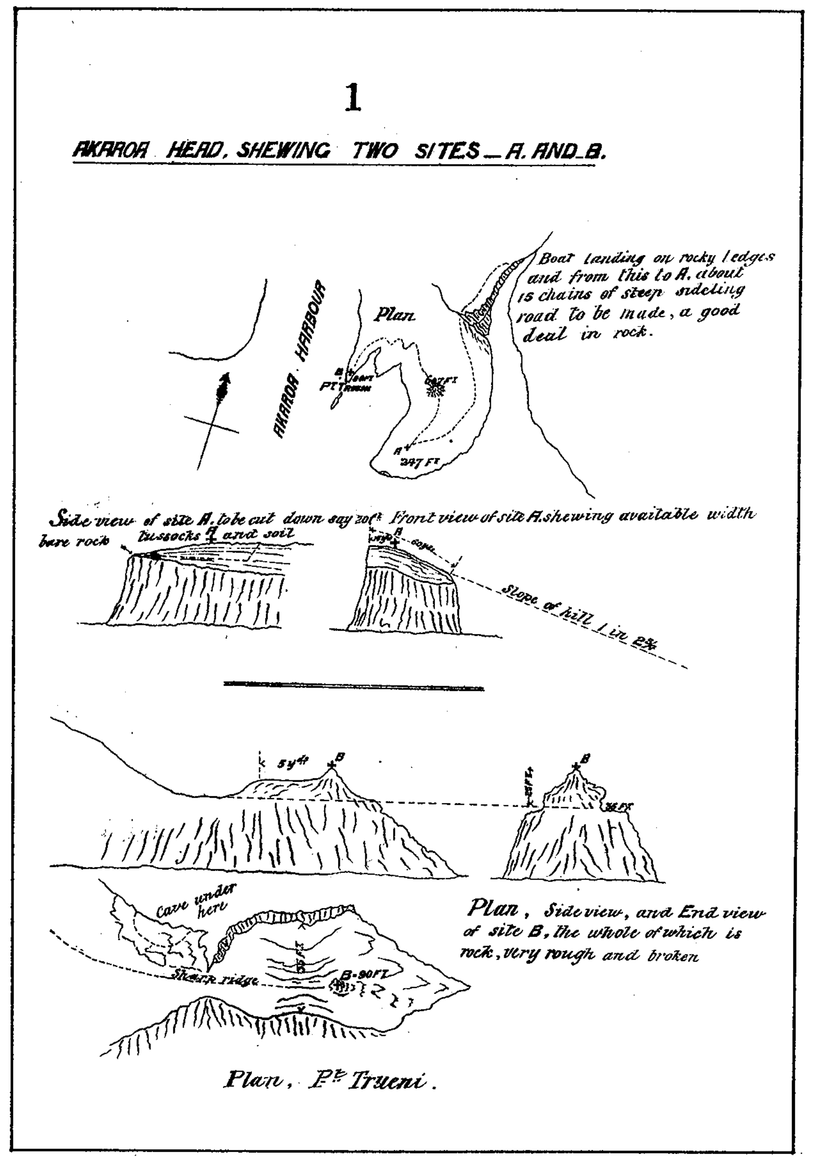
It will be evident that even with the best road that could be constructed, the work of building a lighthouse here would be one of immense labour and difficulty, and the task of maintaining it and keeping it supplied with the necessary stores one of incessant toil and hard work. It has been suggested that a tunnel might be made through the island on the level of the site to obtain a level road, and thus avoid the labour of climbing over the summit; but, in my opinion, the character of the rock will forbid such an attempt. It is of the hardest description, granitic in parts, but generally of pure rusty coloured quartz of the closest and densest texture.

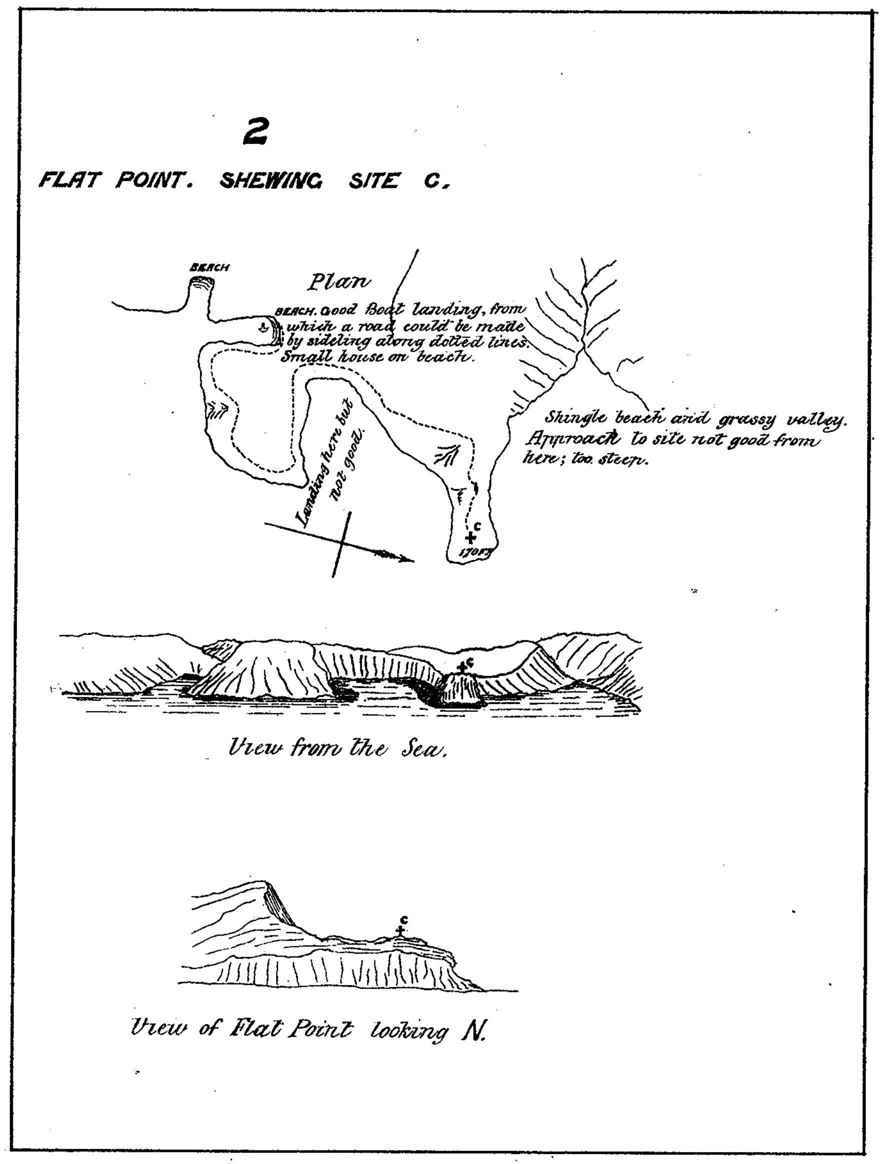
On the grounds, therefore, above stated, and the certainty that any attempt to tunnel would be attended with very heavy expense, I would not recommend the establishment of a lighthouse on Rugged Island.

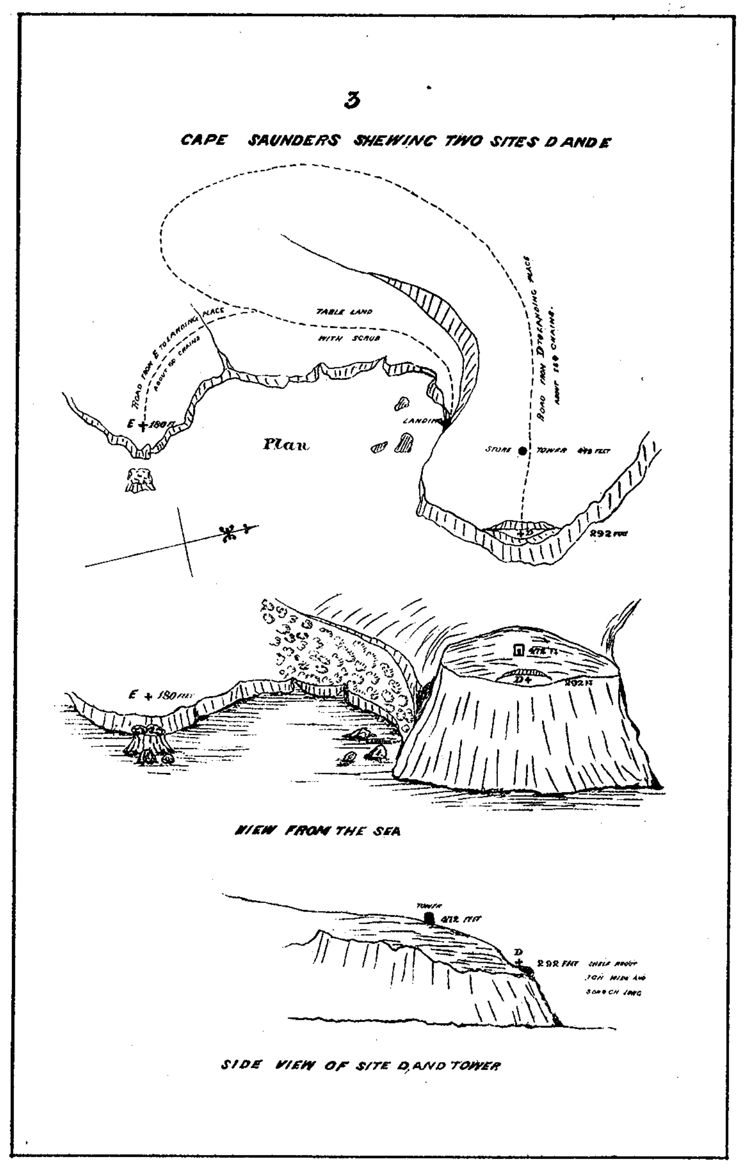
The Snares.

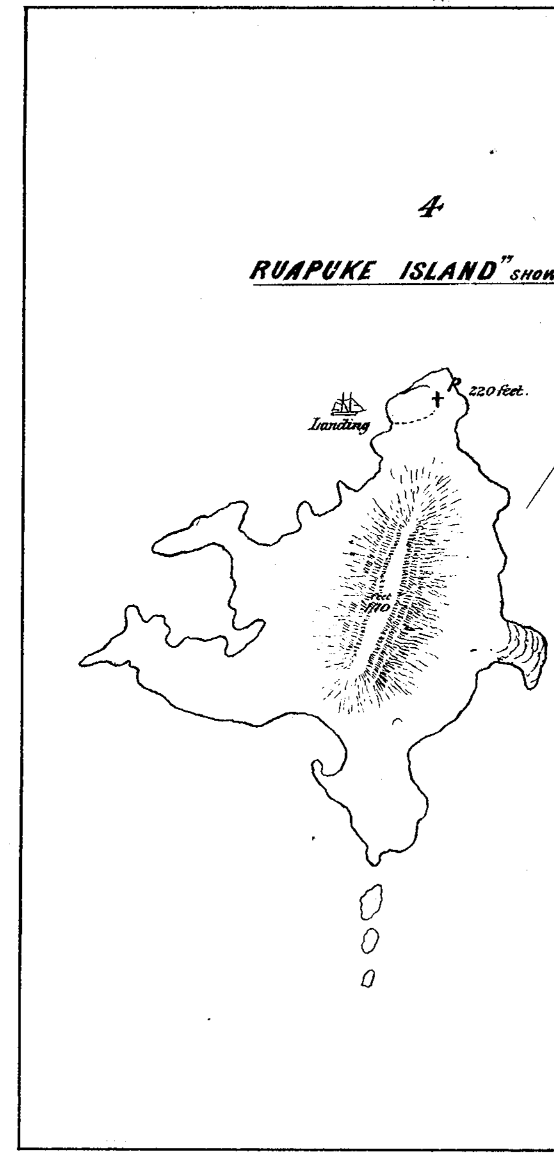
After more than two days' delay, caused by heavy contrary winds, we succeeded in reaching The Snares, and in effecting a landing on the north-eastern side, where there is a very good boat harbour, having a rocky entrance and sides, situated at about the centre of the length of the largest island. This island is tolerably well covered with vegetation, consisting of—1. A heavy scrub, varying in height from 10 to 15 feet, with a rough stone-coloured cork-like bark, and a thick woolly-like foliage in tufts at the ends of the branches. The wood of this tree is tough and strong. 2. Koromiko, of one or two kinds, up to 6 feet high. 3. A large shrub with bright green leaves and large yellow flowers, arranged in cone-like clusters. 4. A strong, coarse, tall, broad-bladed grass, growing in tufts. 5. A less coarse kind, growing closer. 6. A fine wiry kind of grass, growing like "Maori-heads" on stems, 2 feet to 3 feet high, or sometimes in lines or ridges between which one can walk.

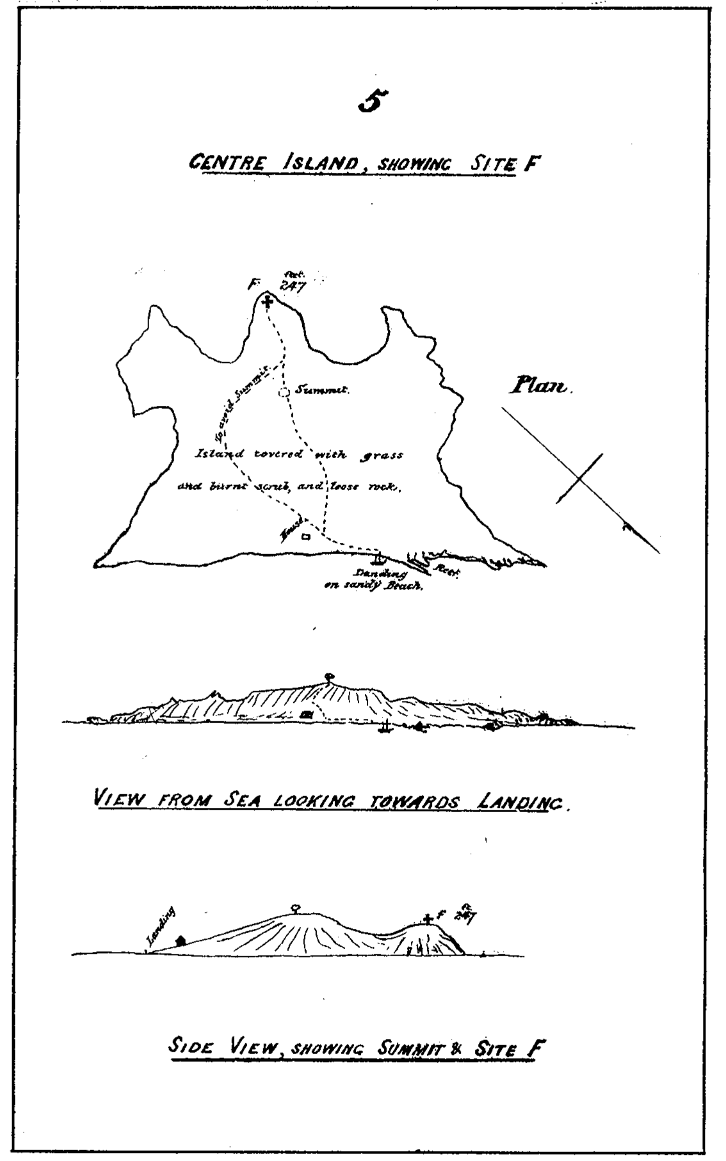
The island is composed of rough coarse granite, covered with a thickness of chocolate-coloured vegetable mould of variable thickness, in which are hundreds of thousands of bird burrows; these are situated not only in the open amongst the grasses, but in the bush also, every available piece of soil being made use of.

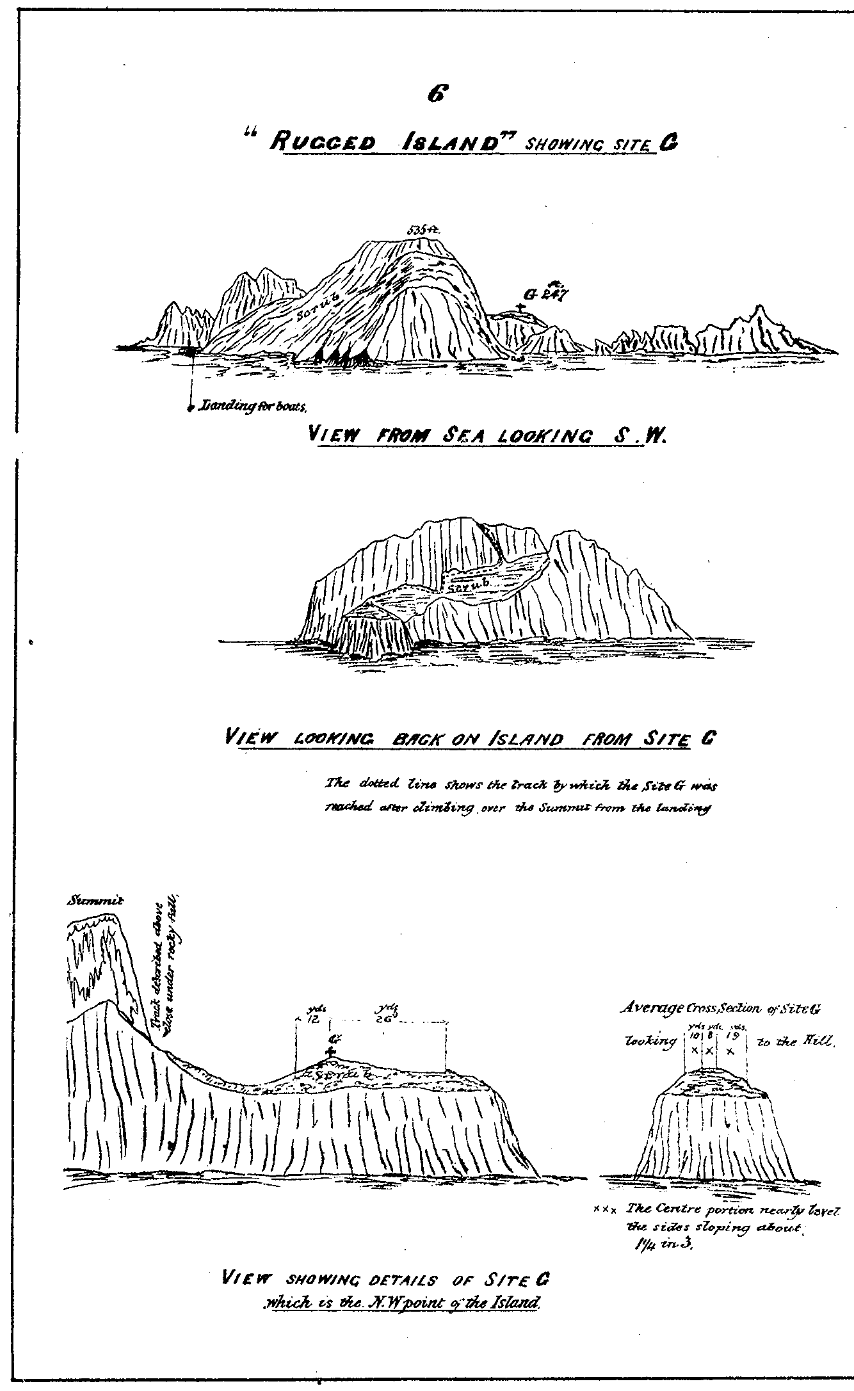

1
AKAROA HEAD, SHEWING TWO SITES _ A. AND B.
Plan
AKAROA HARBOUR
Boat landing on rocky ledges and from this to A. about 15 chains of steep sideling road to be made, a good deal in rock.
A 247 FT
Side view of site A. to be cut down say 20ft
bare rock
Tussocks & and soil
Front view of site A. shewing available width
Slope of hill 1 in 2½
Plan, Side view, and End view of site B, the whole of which is rock, very rough and broken
Cave under here
Sharp ridge
B-90FT
Plan, Pt Trueni.

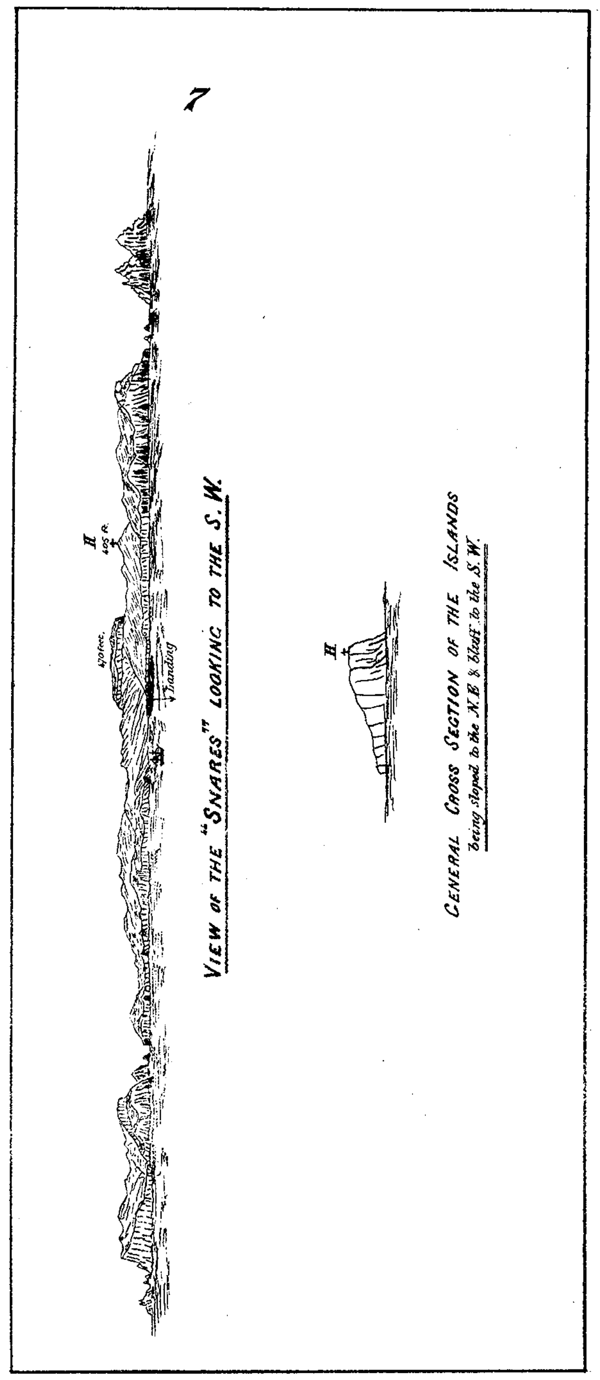

2
FLAT POINT. SHEWING SITE C.
Plan
BEACH
BEACH. Good Boat landing, from which a road could be made by sideling along dotted lines. Small house on beach.
Shingle beach and grassy valley. Approach to site not good from here; too steep.
Landing here but not good.
C 170FT
View from the Sea.
View of Flat Point looking N.

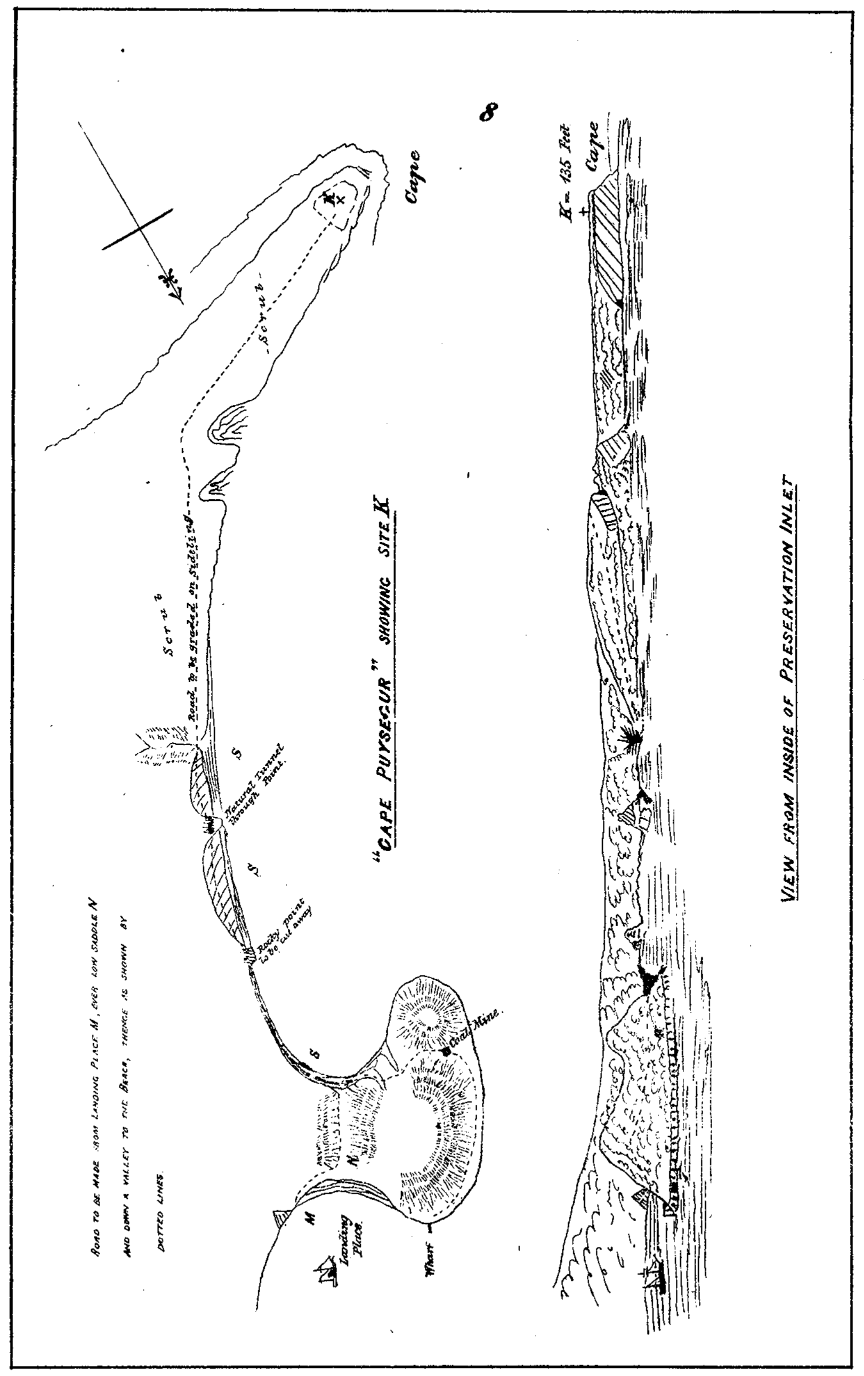

3
CAPE SAUNDERS SHEWING TWO SITES D AND E
TABLE LAND WITH SCRUB
ROAD FROM E TO LANDING PLACE ABOUT 50 CHAINS
ROAD FROM D TO LANDING PLACE ABOUT 150 CHAINS
E + 180 FT
Plan
LANDING
STORE
TOWER
292 FEET
E + 180 FEET
VIEW FROM THE SEA
TOWER 412 FEET
D 292 FEET
SIDE VIEW OF SITE D, AND TOWER

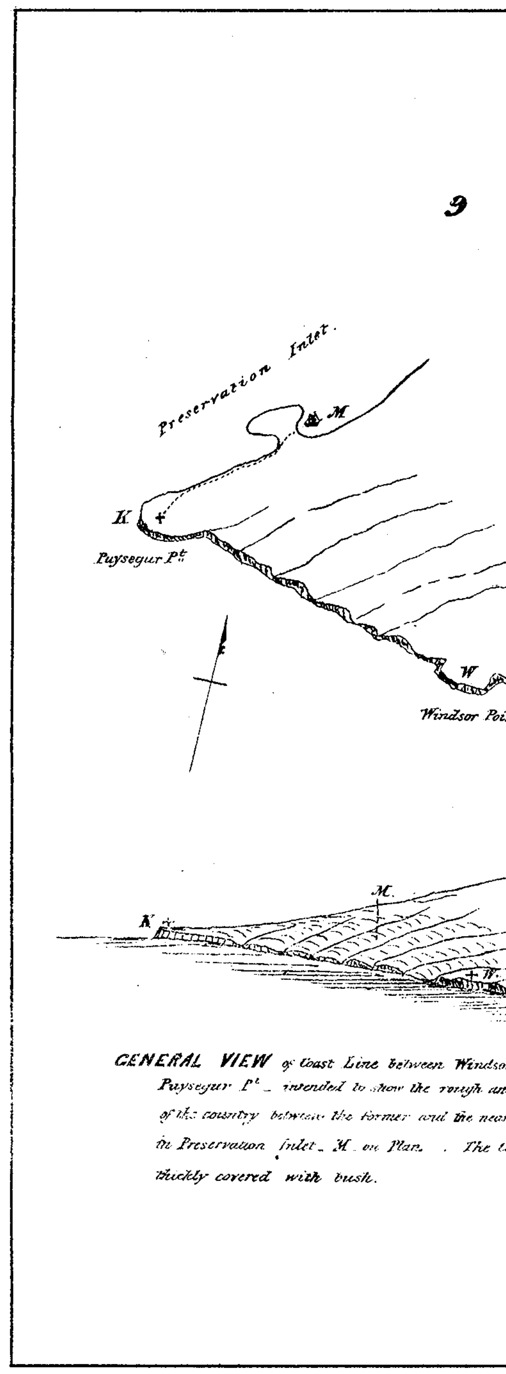

4
RUAPUKE ISLAND" SHOWING SITE P
P 220 feet.
Landing
Feet 710

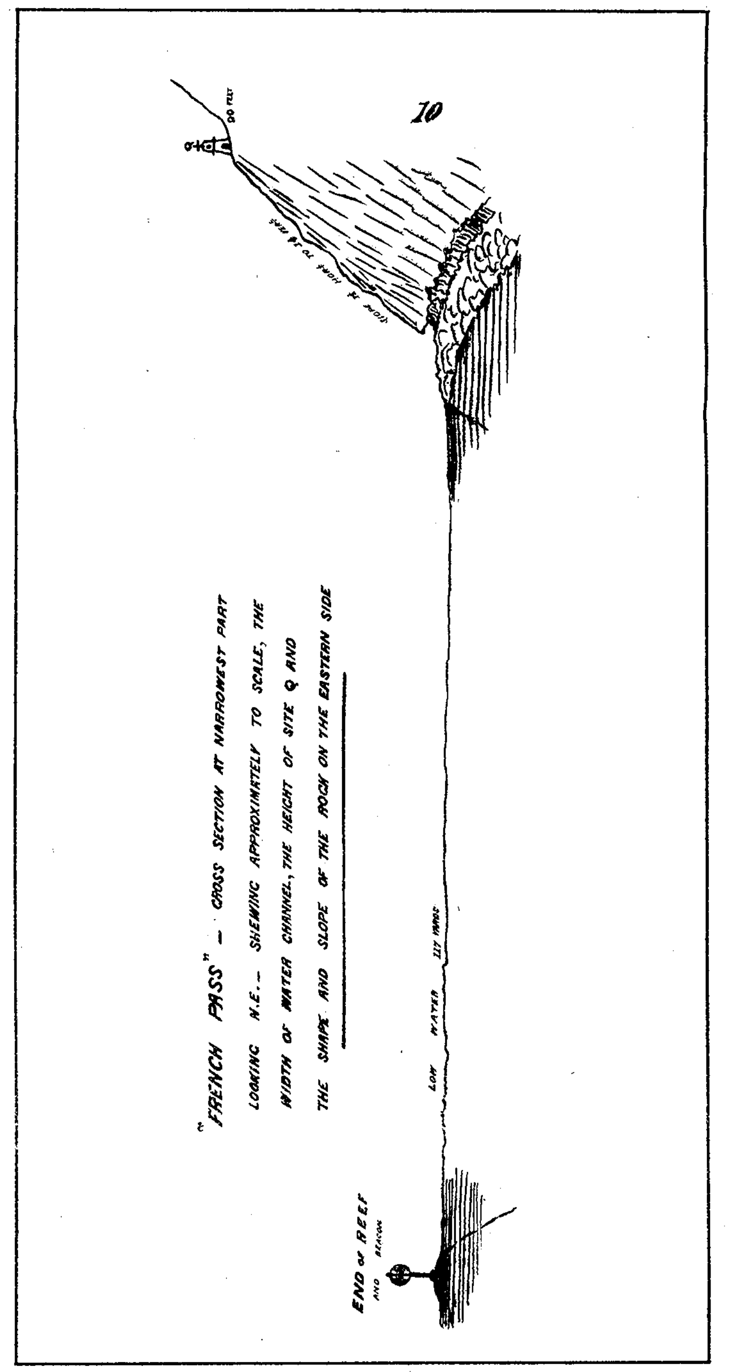

5
CENTRE ISLAND, SHOWING SITE F
F feet 247
Summit.
Plan.
Island covered with grass and burnt scrub, and loose rock.
Landing on sandy Beach.
Reef
VIEW FROM SEA LOOKING TOWARDS LANDING.
Landing
F ft. 247
SIDE VIEW, SHOWING SUMMIT & SITE F


6
" RUGGED ISLAND" SHOWING SITE G
535 ft.
Scrub
G ft. 247
Landing for boats.
VIEW FROM SEA LOOKING S. W.
Scrub
VIEW LOOKING BACK ON ISLAND FROM SITE G
The dotted line shows the track by which the Site G was reached after climbing over the Summit from the landing
Summit
Track described above close under rocky hill.
yds 12
yds 26
G
Scrub
Average Cross Section of Site G
looking to the Hill.
yds 10
yds 8
yds 19
xxx The Centre portion nearly level the sides sloping about 1¼ in 3.
VIEW SHOWING DETAILS OF SITE G
which is the N.W point of the Island


7
H
Landing
VIEW OF THE "SNARES" LOOKING TO THE S.W.
H
GENERAL CROSS SECTION OF THE ISLANDS
being sloped to the N.E & bluff to the S.W.


8
Cape
K
Scrub
Road to be graded on sideling
Natural Tunnel through Point.
Rocky point to be cut away
Coal Mine.
M
Landing Place.
Wharf
"CAPE PUYSEGUR" SHOWING SITE K
ROAD TO BE MADE FROM LANDING PLACE M, OVER LOW SADDLE N AND DOWN A VALLEY TO THE BEACH, THENCE AS SHOWN BY DOTTED LINES.
K = 135 Feet
Cape
VIEW FROM INSIDE OF PRESERVATION INLET


9
Preservation Inlet.
M
K
Puysegur Pt.
Plan
W
Windsor Point.
K
M.
W
GENERAL VIEW of Coast Line between Windsor Pt. and Puysegur Pt. _ intended to show the rough and broken nature of the country between the former and the nearest landing place in Preservation Inlet _ M on Plan. The Country is thickly covered with bush.


10
"FRENCH PASS" _ CROSS SECTION AT NARROWEST PART LOOKING N.E. _ SHEWING APPROXIMATELY TO SCALE, THE WIDTH OF WATER CHANNEL, THE HEIGHT OF SITE Q AND THE SHAPE AND SLOPE OF THE ROCK ON THE EASTERN SIDE
LOW WATER 117 YARDS
END of REEF AND BEACON

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. 1.	Akaroa Head	2nd order ...	6,200	
	" "	3rd " ...		4,600
2.	Flat Point	2nd " ...		7,100
3.	Cape Saunders, site E	2nd " ...	6,500	
	" " site D	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.

Note on No. 7.—Preference would be given to the 2nd order chiefly on account of its much greater cheapness, not only in first construction, but in maintenance hereafter, in which the difference would be very considerable.

Note on No. 8.—This cost is supposed to include the fixing of reflectors on the beacon which stands on the end of the reef.

JOHN BLACKETT.

No. 4.

Mr. BLACKETT and Captain JOHNSON to the SECRETARY of CUSTOMS.

SIR,— Marine Office, 12th March, 1875.

We have the honor to forward, for the information of the Hon. the Commissioner of Customs, the enclosed memorandum on The Snares, in reference to their suitability as a site for a lighthouse.

We have, &c.,
R. JOHNSON,
Inspector of Steamers.
JOHN BLACKETT,
Marine Engineer.

The Secretary of Customs, Wellington, New Zealand.

Memorandum on The Snares.

Compiled from Information obtained during a Visit made there in New Zealand Government p.s. "Luna," on 31st December, 1874, and from Captain Stokes' Survey in 1851.

THESE are a group of islands situated between latitude 41° 4′ S. and 48° 7′ S., and longitude 166° 28′ to 166° 35′, being about sixty miles S.W. of the southern end of Stewart Island. The largest of the group is about a mile long by half a mile broad; the land is undulating, and rises in the highest part to 470 feet above sea level. It is covered with soil, and stunted timber grows in the valleys, and scrub and grass of different kinds on the hills. Water is found in abundance, strongly impregnated with peat and guano; and the whole island swarms with penguins and other sea fowl, which have so much undermined the light soil with innumerable burrows, that it is difficult to walk from one part of the island to the other.

Good granitic stone fit for building, and peat and wood fuel, are found in abundance.

The coast line generally is formed of precipitous cliffs, rising nearly perpendicular, except on the N.E. side, where the land slopes to the sea, presenting a much lower coast line, in the middle of which is a capital boat harbour, safe in all weathers for boats and small cutters. A plan of this, made from a rough survey, is attached to this memorandum.

Eastward of the main island, with only a boat passage between, lies another smaller island of much the same character as the larger; and about three miles to the S.W. of the nearest part of the main island lie four separate rocks or islets, with only a narrow passage between them. The largest of these is about one-quarter of a mile long, and the smallest about half that size.

These rocks bear from each other about north and south, and extend over a mile in length, the four forming a rugged ridge of almost inaccessible rocks, the highest peaks of which rise to 290 feet. No vegetation or water appears on any of them, and landing can only be effected in the finest weather.

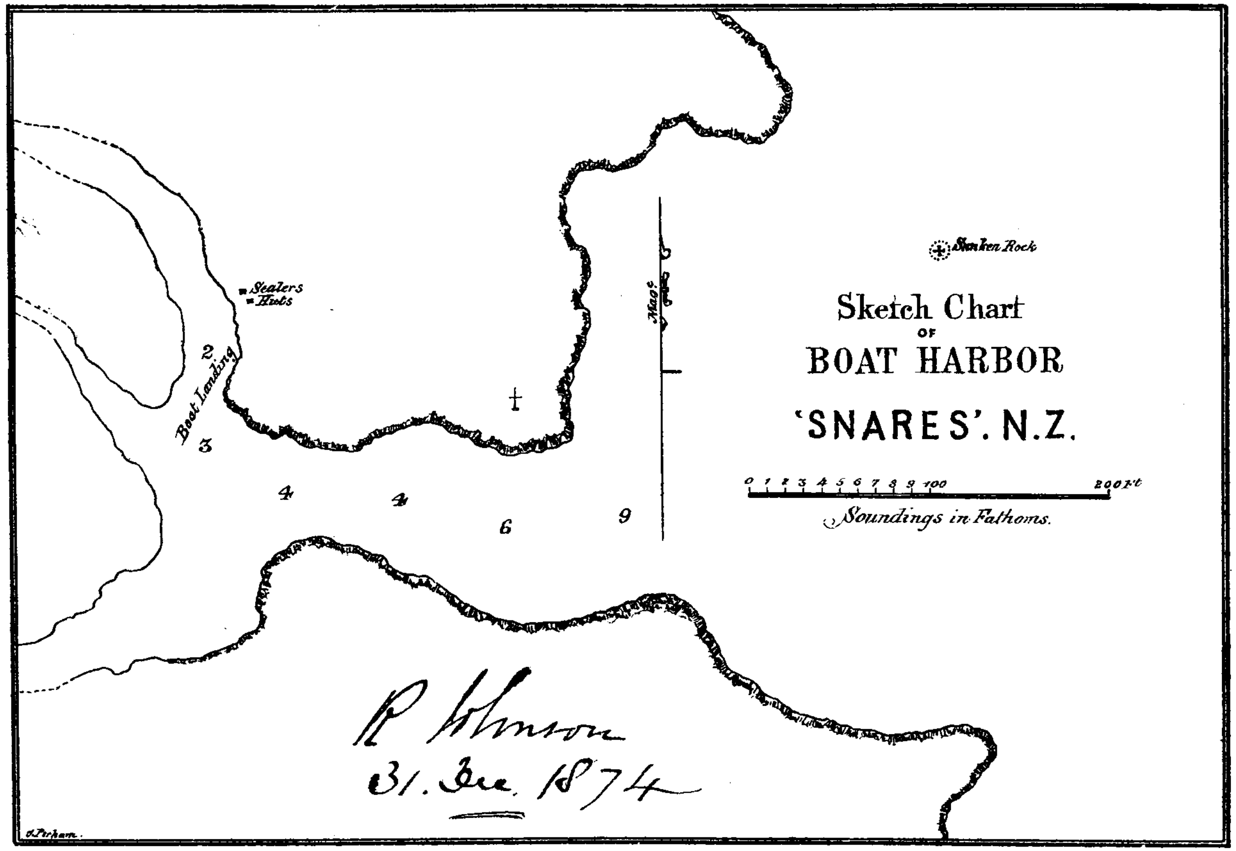
To the westward of these rocks there are no dangers whatever, and a vessel may approach them with perfect safety; but between the islets and the main island there is a rock showing just above water, which is always breaking over it; this is shown on the chart. The group is surrounded with deep water, and there is no anchorage except close under and to leeward of the main island, where a steamer may anchor with a stream anchor in forty fathoms during moderate weather.

The want of a light on this group has long been felt by masters of vessels passing, and at an Intercolonial Conference of delegates from various colonies held at Sydney, N.S.W., in February, 1873, a resolution was passed to the effect, "that the risk to life and property occasioned by the existence of the dangerous group of islands known as The Snares, and the Auckland Islands, south of New Zealand, rendered the erection of a lighthouse in that vicinity eminently desirable, and that it be a recommendation to the Imperial Government and to the several Colonial Governments to contribute to the expenses of such light in proportion to the tonnage of the shipping inwards or outwards in Great Britain of each colony deriving benefits from the same."

The "New Zealand Pilot" also has this passage: "The group (Snares) form an excellent landmark from the westward, and are recommended to be made as a point of departure in passing south of Stewart Island." The vessels referred to in the above passage would be those arriving from the westward, and bound to the southern ports of New Zealand, and to vessels passing when bound from Tasmania, South Australia, Victoria, and New South Wales, to Europe or America.

Taking into consideration that all vessels making the group arrive from the westward, it will be obvious that the rocky islets to the westward of the main island would be the proper place for a light, but, from their isolated situation, the difficulty of landing, bad weather, want of water and vegetation, &c., the cost of construction and maintenance would be great and attended with considerable trouble, while a light on the main island would be comparatively easy of construction and maintenance.

The objections however to erecting a light on the main island are, that a lower altitude than 400 feet cannot be obtained, and if obtained the islets to the westward would obscure 18° of an arc of the horizon whence ships arrive; whilst if erected on the highest point, say 470 feet, it would be very liable to be obscured in thick weather, and over the islets the light would not be seen at a nearer distance than nine miles, except over the lowest part of the islets and through the gaps between them; therefore, under such circumstances, a vessel not being certain of seeing the light on account of the islets could not run with confidence towards the group. This defect might be met, to a certain extent, by a contrivance, adopted we believe in America, that is, the use of a powerful steam whistle which


Sunken Rock
Sketch Chart
OF
BOAT HARBOR
'SNARES'. N.Z.
0 1 2 3 4 5 6 7 8 9 100 200 Ft
Soundings in Fathoms.
Mag.
Sealers
Huts
Boat Landing
2
3
4
4
6
9
R Johnson
31. Dec. 1874

may be heard, it is stated, from three to ten miles, according to the weather. The use of this in fogs would doubtless lessen the dangers of approaching the group, but would not, it is assumed, give such perfect confidence to the seaman as the erection of a light on a lower elevation on one of the outlying islets.

From such observations as we were able to make during our short visit, we estimate that the approximate cost of erecting a light of the first order, together with the necessary buildings and appliances, on one of the outlying rocks, would be about £18,000 to £20,000, and on the main island from £12,000 to £15,000; also, that the cost of maintenance in the former case would be about £2,200, and in the latter about £1,200 per annum.

These amounts would not include oils and stores, but they do include the cost of the necessary attendance of a steamer a certain number of times per year.

R. JOHNSON,
Inspector of Steamers.
JOHN BLACKETT,
Colonial Marine Engineer.

Marine Office, Wellington, New Zealand,
12th March, 1875.

No. 5.

Captain JOHNSON to the SECRETARY of CUSTOMS.

SIR,— Marine Office, Wellington, 25th January, 1875.

In continuation of my last year's report on lighthouse sites, I have the honor to report, for the information of the Hon. the Commissioner of Customs, that, in company with Mr. Blackett, I proceeded in the "Luna" on her recent trip round the Middle Island, and visited the following localities in addition to those already reported on.

Banks Peninsula.

In this locality the two most suitable sites are—the first on Flat Point, and the second on Akaroa Head. A light on the former would have a greater arc of illumination to the northward than if placed on the latter, and is a better situation for vessels passing the peninsula bound South; while Akaroa Head lies more in the track of vessels coasting from the southward as well as those trading within Timaru Bight. To English ships coming South-about the two sites are about equal. The landing-place for Flat Point is distant and inconvenient, while the landing-place at Akaroa Head is close to, in the adjoining cove. Taking everything into consideration, I am of opinion that Akaroa Head possesses the greater advantages of the two, and should be preferred.

Entrance to Akaroa Harbour.

The entrance to Akaroa Harbour is well marked. The western entrance—Point Iron Head—is a high perpendicular cliff of about 800 feet high; the eastern side is also high, with the land sloping towards Akaroa Head and Trueni Point, that lies a short distance within the harbour. On this point a capital site for a harbour light may be had at an elevation of 90 feet. Landing in its immediate neighbourhood is, however, difficult, and can only be effected in very fine weather. The permanent landing-place would have to be in the cove eastward of Akaroa Head, from whence to site a road over a 600-feet high hill would have to be formed. Should a coastal light be erected on Akaroa Head, there will be no necessity for a distinct harbour light on Trueni Point, as the one light would answer both purposes. I would suggest that some arrangement might be made with the Provincial Government of Canterbury by which the light might be put up at joint expense of both Governments.

Cape Saunders.

On visiting the cape on this occasion the weather was fine and clear, and no difficulty was experienced in making the necessary examination. Two good sites were found; the first at an elevation of 292 feet, with an illuminating arc of 205°, and the second at a short distance to the westward at an elevation of 180 feet, with an illuminating arc of 175°. It will therefore be seen that the first has a greater arc by 30° than the second; but to this excess, however, I attach no importance, as it is only over an arc already guarded by Tairoa Head Light, which is on a lower elevation, and would be seen in thick weather, when a light is most required, and when a light on a higher elevation would be obscured. Between the first and second sites there is a small bay in which there is an excellent boat-landing suitable for both sites; safe in all weather, except during southerly winds, which blow direct in. The second site, in my opinion, is more preferable of the two. A light here would show from N. 50° E. to S. 45° W., or over an arc of 175° right in the direction from whence ships make the peninsula bound to Otago from the southward. Its altitude is also more suitable for localities like Cape Saunders subject to fogs; and, as the sea arc is less on this site than the first, a greater amount of back rays can be spared to strengthen that to seaward.

Ruapuke.

In last year's report I stated that the proper place for Dog Island light is on Ruapuke. Having this year examined that island, a capital site was found on the North Head, at an elevation of 220 feet. Had a light with a red sector, showing over Toby Rock, been erected here, instead of on Dog Island, greater assistance than is now given would have been rendered to vessels navigating Fouveaux Strait. However, as shifting of this light would necessitate the erecting of a good harbour light at the entrance to Bluff Harbour, which, with the shifting of Dog Island Light, would cost a large sum, I think the best plan now would be to erect a small coasting light somewhere in the vicinity of Slope Point, as when this light and the lights the sites for which I examined and reported on last year are erected, the whole coast from the S.W. Cape to Otago will be thoroughly and efficiently lighted up.

The Snares.

The largest of the Snare group is about one mile long by half a mile broad, moderately high, and rises on the south side perpendicular to a height of 470 feet. The N.E. side is less precipitous, and about its centre the land is comparatively low. Here, an excellent boat harbour was found safe in all weather, and only open to the N.E. Plan of this harbour from a rough survey I herewith attach. The soil on this island is everywhere good; stunted timber growing in the valleys, with dense scrub, and grass on hills. The whole group is covered with innumerable penguins and other sea-fowl. From the boat harbour, a road could be made to any part of the island; therefore, when it is determined to erect a light, no difficulty will be found in getting to the best site, which, I fear, cannot be found below an altitude of 400 feet. The necessity of a light on this group may be judged from the fact that most of the English ships bound to the southern ports make these islands, as well as those from Tasmania, South Australia, Victoria, and New South Wales, bound to America and Europe. The "New Zealand Pilot" also says, "That, for vessels bound to the westward, the group form an excellent land mark, as well as a point of departure."

French Pass.

The difficulty vessels experience in going through the French Pass at night is to know the exact position of end of reef before getting too close to it. There is no difficulty in getting to the pass, as vessels, both from the north as well as the south, coast along a high and well-marked land; therefore, it would appear that the proper place for the light is on end of reef, but, I presume, the cost of construction and maintenance is so great, that the idea of erecting it there is out of the question. The alternative plan would be to erect it on the main, at an elevation of, say, 90 feet, showing colour north and south, and reflected white from end of reef, on which glass mirrors would be fixed. A suitable site for this was found, and a one at a lower altitude would not do, as it would reflect its rays too strong in the eyes of an approaching vessel when near the mirrors.

R. JOHNSON,
Inspector of Steamers.

W. Seed, Esq., Secretary and Inspector of Customs, Wellington.

APPENDIX B.

REPORT ON NAVAL TRAINING SCHOOL, KOHIMARAMA.

Captain BRETON to the SECRETARY of CUSTOMS (Marine Branch).

SIR,— Naval Training School, Kohimarama, 30th June, 1875.

I have the honor to transmit, for the information of the Hon. the Commissioner of Customs, a report of this institution for the seven months it has been established.

The health of the boys has been all that could be desired until within the last three weeks, during which time a number of them have been suffering from scobies, but I am glad to be able to report that the vigorous treatment adopted, under the direction of Dr. Goldsbro, has been the means of materially reducing the number affected by it. I had been treating some of the boys for a rash which I considered to be merely from the blood being slightly out of order, until I took one who was getting worse up to Dr. Goldsbro, who at once stated it was the before-mentioned disease. This would seem to point to the nccessity for periodical medical inspection. I also think it advisable that all boys should be subject to a medical inspection before the order for their being sent here is made, and the medical certificate attached to the order, one case having occurred of a boy subject to epilepsy and of weak intellect having been sent here. The disease above alluded to must also have been introduced through the absence of this precaution.

Divine service, according to the ritual of the Church of England, has been performed by myself, or in my absence by the schoolmaster, every Sunday, and on two occasions by the Rev. G. Maunsell; on one occasion I took a boat's crew to church in Auckland.

Prayers are held morning and evening by myself, or in my absence by the schoolmaster; these consist of a chapter in the Bible and the Lord's Prayer, at which all are required to attend.

The Rev. Dr. Kinder has attended every week, for some months, to give religious instruction to the Protestant boys. The Rev. Father Fynes, and Mr. George Cutts, a layman and near neighbour, have also attended to instruct the Roman Catholic boys. Table B contains a record of these visits.

Table A shows the progress made by the boys in their schooling, which I think reflects great credit on the schoolmaster, Mr. Speight.

In seamanship the progress is satisfactory, and in pulling in boats very good. In tailoring, for the short time the boys have been under instruction, the progess is very good. Table C shows a list of the clothing made and other work done within the school, with the estimated cost of labour.

The admissions have been 40, and discharges 2; absconded and not returned, 3; leaving 35 now in the school. See table D.

The conduct of the boys has, on the whole, been very satisfactory. Looking to their previous mode of life there has been less trouble than I anticipated; seven have at different times absconded, two were brought back within four hours, one within two days, and one returned of his own accord after sleeping out one night, and three still absent have been at large for eight days, but the police are on their track. One has been expelled for repeatedly absconding and general bad behaviour; one sent here from the Howe Street School was returned to that institution, he not being considered eligible for admission.

Our garden has been most successfully managed by Mr. Speight. Notwithstanding the very late season at which it was commenced, for the last sixteen weeks we have supplied ourselves with vegetables, with the exception of potatoes and onions. I am now having ground prepared for potatoes, and hope to be able to produce a considerable quantity in the coming season. I have no doubt that if the area of ground attached to the school were larger, it might before very long be made, to a great extent, self-supporting. Cows and pigs would be a great help in this respect. I have made arrangements for having one of the latter at once.

One great difficulty I have had to contend with has been the want of a proper seaman instructor, and I am afraid this will not be got over, unless men are procured from Her Majesty's Navy for the purpose, as although good seamen are to be got, they are wanting in many other essential points which can scarcely be looked for from men who have not been themselves subject to proper training and strict discipline.

The schooner "Southern Cross," attached to the school, was got under weigh for the first time on the 3rd of March, since which I have taken her out on seven occasions, and I am satisfied with the way the boys work her; weather permitting, one watch goes off in the forenoon and the other in the afternoon for sail drill and general nautical instruction.

No regular ration has been established, but I have endeavoured to combine good feeding with economy. The cost of ration, which includes fuel, lights, and soap, is shown in table E.

I cannot as yet state with certainty the cost of clothing the boys, but I do not think the amount shown in Table E will be very far wrong.

Table H contains the list of articles supplied to each boy. Donations to the school have been numerous, showing the interest taken in it by a large section of the public. Particulars of these are shown in Table M.

A wharf is much required here to save the boats from the constant wear and tear on the beach, and also to facilitate landing and embarking when there is a surf on the beach, which is always more

or less the case with the wind from the northward or eastward, and also when the tide is out, as there is then a long rocky flat to be got over.

Hospital, gaol, and office accommodation is much required, the present arrangements being quite inadequate; the hospital is the only place for the cook to sleep in. I would also call your attention to the great want of accommodation for myself, having only three small rooms in which to accommodate my family and do all my office work. I am unable to keep a servant, and have no means of cooking in my own quarters, but have to get my food cooked in the school kitchen, which necessitates its being brought through the cold or rain from one building to another. The situation is also bad, there being no privacy for my family, gaol and hospital being on one side, school, dormitory, and lavatory on the other, and the boys constantly about the building.

It will be seen in the list of donations that a harmonium has been presented to the school. Mrs. Breton has undertaken the training of a choir, and we now have singing as a part of the church service.

Bathing is carried out when the weather permits, and the boys rapidly acquire the art of swimming; the majority are now proficient in this exercise.

The school was started under the superintendence of Captain T. C. Tilly, and I cannot close this without referring to the very valuable advice and assistance I received from him. Although his official connection ceased some time since, he still continues to take the most lively interest in its success.

I have, &c.,

G. R. Breton,

The Secretary of Customs, Marine Branch, Wellington. Manager.

A.—Table showing the Educational State of Boys.

Particulars.	Read.				Write.				Cipher.			
	Well.	Indifferently.	Not.	Total.	Well.	Indifferently.	Not.	Total.	Well.	Indifferently.	Not.	Total.
On admission	5	9	26	40	...	11	29	40	2	6	32	40
On 30th June, 1875	13	8	14	35	7	12	16	35	10	11	14	35
Discharged and absent without leave	1	3	1	5	...	3	2	5	...	4	1	5
Totals	14	11	15	40	7	15	18	40	10	15	15	40

B.—Table showing the Visits of Clergymen for Divine Service and Religious Instruction, from 1st December, 1874, to 30th June, 1875.

Church of England.	Roman Catholic.	Presbyterian.	Wesleyan and Baptist.
23	2 A layman 10	Nil.	Nil.

C.—List of Articles Manufactured from 1st December, 1874, to 30th June, 1875, and the estimated Cost of Labour employed.

Articles Manufactured.	Quantity.	Rate.	£ s. d.	Estimated Cost of Labour for	Quantity.	Rate.	£ s. d.
		s. d.				s. d.	
Trowsers, brown drill ...	5	1 0	0 5 0	Putting hoop-iron on paling fence...	480 feet	8 0	0 8 0
,, waterproof ...	14	1 0	0 14 0	Fitting crutches in whaleboat ...	8	5 0	0 5 0
Jumpers, brown drill ...	4	1 0	0 4 0	,, oars	12	0 6	0 6 0
,, waterproof ...	14	1 0	0 14 0	Repairing boats	3	15 0	0 15 0
Pillow cases	30	0 3	0 7 6	Putting hinges on doors	3	2 6	0 2 6
Flannels	13	0 7½	0 8 1½	Altering whaleboat's sail ...	1	3 0	0 3 0
				Fitting of temporary gaol ...	1	5 0	0 5 0
				Building pigsty	1	5 0	0 5 0
				Putting up close fence	1 chain	8 0	0 8 0
				Fencing round tree	1	5 0	0 5 0
Total	...	...	2 12 7½	Total	...	...	3 2 6

D.—Return showing Admissions and Discharges from 1st December, 1874, to 30th June, 1875.

Admissions.	Numbers.	Discharged.	Numbers.
Committals	21	Returned to Industrial School	1
Transferred from Industrial Schools... ...	19	Discharged for misconduct	1
		Absconded and not returned	3

Remaining on 30th June, 1875—35.

E.—Cost of Rations, Clothing and Bedding.

	£	s.	d.
Rations, including fuel, lights, and soap per head per diem ...	0	0	7¾
Clothing for the year (estimated) each boy	3	0	0
Bedding, each boy	1	12	9½

F. — Table showing Particulars of Parentage of Boys received from 1st December, 1874, to 30th June, 1875.

Number of Boys Received.	Both Parents Living.	One Parent Living.	Both Parents Dead.	Unknown.
40	13	21	4	2

G.—Committing Benches and Transfers.

Auckland	15	Industrial School, Auckland	6
Opotiki	1	„ „ Dunedin	11
Blenheim	1	„ „ Canterbury	2
Reefton	1		
Rangiora	1		
Invercargill	1		
Wellington	1		

H.—List of Articles supplied to each Boy.

Description.	Number.	Cost.	Description.	Number.	Cost.
		£ s. d.			£ s. d.
Serge Frocks	2	1 12 6	Quilts	1	0 4 0½
„ Trowsers ...	2		Mattress	1	0 12 0
„ Cap	1		Pillow	1	0 2 0
Brown Drill Jumpers ...	2	0 10 8	Black Bag	1	0 5 6
„ Trowsers ...	2		Rack Comb	1	0 0 5
Silk Neckerchief ...	1	0 1 7	Small Tooth Comb ...	1	0 0 1¾
Towels	1	0 0 9	Knife	1	0 1 0
Pillow Case	1	0 0 8	Boots	1 pair	0 5 6
White Drill Caps ...	2	0 2 8	Socks	2 pairs	0 1 8½
Flannels	2	0 6 0	Comforter	1	0 1 0
Blankets	2	0 14 9	Knife Lanyard	1	0 0 1

K.—Return showing the Ages of Boys received from 1st December, 1874, to 30th June, 1875.

Number of Boys received.	Aged 10.	Aged 11.	Aged 12.	Aged 13.	Aged 14.
40	9	6	12	11	2

L.—TABLE showing the Religion of Boys received from 1st December, 1874, to 30th June, 1875.

Church of England.	Roman Catholic.	Presbyterian.	Wesleyan.	Baptist.	Total.
17	15	5	2	1	40

M.—DONATIONS to the School from 1st December, 1874, to 30th June, 1875.

Name of Donor.	Donation.	Name of Donor.	Donation.
The Rev. J. Kinder	Fruit	The Hon. W. H. Reynolds and party, per T. Hill, Esq. ...	Foot and Tennis Balls
Wm. Atkin, Esq.	Fruit	Mrs. Breton	Books
Captain T. C. Tilly	Cricketing Tools	George Cutts, Esq. ...	Tins of Jam
Mrs. Speight	A number of Books		2 Loads of Manure
Rev. Dr. Maunsell	Descriptive Plates	Miss Yonge (funds provided by)	Harmonium, 7-stop
Dr. Goldsbro'	Books		Descriptive Plates
Mrs. T. C. Tilly	Toys and Games		Books
The Hon. W. H. Reynolds ...	Buns and Apples		Illuminated Texts
		F. D. Yonge, Esq.	Illustrated Papers

APPENDIX C.

REPORT ON RESULTS OF EXPERIMENTAL STORM WARNINGS, 1874-75.

No. 1.

Commander EDWIN to the Hon. the COMMISSIONER of CUSTOMS.

SIR,— Wellington, 28th June, 1875.

In compliance with your instructions, I undertook in April, 1874, to endeavour to form some weather forecasts, with a view of ascertaining whether a system of storm signals could be initiated in this country with a fair prospect of success. In order that I might be afforded as many facilities as possible in this research, the Government made arrangements by which I have been placed in direct communication with the Harbour Masters at various parts of the colony, so that I can have the benefit of their professional experience without the loss of time which would have been the case had their communications been forwarded in the usual way.

On commencing my duties I found that the daily weather report was furnished from observations made with aneroid barometers; this rendered it necessary to order a supply of mercurial barometers from England, as the former class of instrument is liable to alter both the nature and amount of their errors, and any conclusion as to the point in question based upon reports derived from such information would be undoubtedly condemned as faulty. However, as it appeared very doubtful whether the proposed investigations would turn out satisfactorily, it was decided only to order instruments of an inexpensive kind.

These barometers arrived in Wellington in November last, and have been since distributed as in the annexed Table A. The whole number were packed by myself with every care, and I am fortunately able to state that they have suffered no injury in transit, notwithstanding the rough travelling they have had *en route* to such places as Taupo, Roxburgh, Naseby, &c. I must here remark that all these articles were found in good order on their arrival from England.

In my memorandum of 13th January, 1874, I stated my opinion that about a year after the time when the mercurial barometers were in position, I should be able to form an opinion as to the possibility of establishing a system of storm warnings, and it was decided that in the meantime I should endeavour to collect information, receive telegrams as to the state of the weather, and try to familiarize the observers with the use of a concise cypher code, which had been specially devised for use in this service by Mr. Lemon, General Manager of the Telegraph Department; and with reference to this code, it appears to me that the present is a fitting opportunity to acknowledge that it has proved very useful and easily understood.

At seaports where there were no Harbour Masters, and at inland places, you directed me to obtain the services of officers of the Telegraph Department. I have found these gentlemen most willing to render me every assistance, and very prompt in forwarding replies to my queries as to the state of the barometer, &c. Most of these stations were supplied already with aneroids, and having obtained an additional supply of these from Mr. Lemon, I was soon able to add some important places to the list of reports.

It now became necessary to find out whether the Harbour Masters had barometers, and I therefore wrote to them upon this matter, and at the same time let them know that it was proposed to send experimental storm warnings. In every instance I received expressions of readiness to commence duty and of willingness to give me the benefit of their experience; it therefore became evident that the subject had aroused the interest of professional seamen, and thus one of the principal elements of success became at once assured.

A code of instructions to weather reporting officers had been drawn up and distributed previously to commencing work, and in this the officers were directed to state what weather they expected when any considerable change became apparent, but I soon found that it was generally the opinion that the weather report was furnished too early in the day to enable them to make any good estimate of what was about to take place, and it was in some instances recommended that the reporting hour should be altered, but this I had to point out was impossible, as it would interfere with the public convenience; and as the main object was to obtain a comprehensive view of the weather at a certain time, the present arrangement was well suited for the purpose. Nevertheless, it soon became evident that from this very cause comparatively little additional matter would be received from Harbour Masters, and I was thus induced to turn my attention more particularly to the information given in the daily report, and, after a considerable period of careful investigation, I was enabled to detect and make allowance for many instrumental errors. During this time I had already been able to give some intimation of approaching bad weather, but I was now tempted to do so more frequently, and principally for this reason: that as the Harbour Masters were not able to give me much information, it became necessary for me to try and obtain it by experience, and I was emboldened to do this as the warnings were experimental and not made public by signal.

The warnings issued relative to some of the heavy gales of last winter were of such good result, that in September last I decided to try and anticipate the arrival of the mercurial barometers, and, by giving more frequent warnings of the possible approach of bad weather, endeavour to ascertain at an earlier period than at first seemed possible whether it would be advisable to establish the proposed storm-warning system. The result of this has been so fortunate, that I have been already able to

recommend that standard barometers and other accurate instruments should be, as soon as possible, placed at the stations, so as to insure that all the material for forecasting shall be unimpeachable; and I have no hesitation in stating my belief that when such is the case, public intimation of approaching gales may be made by signal with nearly as much success (viz. about 80 per cent.) as is now the case in older and more populous countries. I say *nearly*, because the following are apparently the principal causes why, in my opinion, an equal proportion of success cannot be expected, at all events for some time to come:—

1st. The distance of New Zealand from any extended land area.
2nd. Its peculiar shape, being of great extent in length, but of only about one-third of that amount in breadth between the extreme points of Cape Egmont and the East Cape.
3rd. The remarkable rapidity with which the barometer moves.
4th. The want of accumulated and reliable data for studying the routes and preliminary symptoms of coming changes in the weather.
5th. The want of a well-organized system of observations made at sea. These should all be made at New Zealand mean time, so as to insure all observations being synchronous.
6th. The hour at which the daily report of the weather is generally received for discussion, and the insufficiency of the material it contains.

The first of these causes will to a great extent detract from the value of the information we may be able to obtain by telegraphic communication; for the distance to Australia is such as to permit storms which pass over that country expending their violence before reaching this colony, and it will also admit of the possibility of storms being generated at sea and then travelling in upon our coasts. The great extent of the American continent affords their Storm Signal Department immense facilities in the way of anticipating the approach of bad weather, and in tracing out both the shape and routes of these disturbances; and the short distance between England and the Continent is found to be of great use to the English system, as the reports received from France more especially frequently give timely warning of the changes preceding some of their most violent gales. The value of telegraphic communication with Australia will be found when a united series of synchronous observations are made in that country.

The second prevents the lateral extension of our weather-reporting system, and necessitates the stations being closer together than would otherwise be required, and when any rapidly moving storm comes in, renders it a matter of great difficulty to issue warnings in time to be of real value, as the gale may have already visited several places before telegrams can be received from the central office.

The third will always be one of the greatest difficulties with which any storm-signal service in this colony will have to contend, and can only partially be met by vigilant observation and attention to all kinds of signs of a change of weather. It is, however, probable that when information relative to humidity can be added to that given by the barometer, and a greater amount of matter can be included in the daily report, a good deal of this difficulty may be overcome; but this will never lessen the necessity for vigilant observation, and it is now only by making notes at all hours from near sunrise to late in the evening, and at times before daylight, that any fairly reliable warnings can be issued. In this frequent note-making, I am very ably assisted by several of the observers, who telegraph such matter as may be useful as soon as they can, whether early or late in the day.

The fourth, will, no doubt, be lessend as the records of the office accumulate, and it is hoped that the note books kept by the weather reporting officers will prove very useful in this respect, for there are many matters in connection with storms, in all stages of their existence, which are most requisite in this branch of the subject, and without which mere mechanical registration of instruments is of very little value.

The fifth would, in a great measure, overcome the difficulties caused by the peculiar shape of the country, so far as the compilation of data and study is concerned; and would, above all, tend to show in what shape, or more properly what form, the gales move, an essential point with reference to the rules which may possibly be laid down for enabling vessels to avoid the most dangerous winds. There are now three steam services connecting New Zealand with Australia, viz.,—One from Sydney to Auckland, one from Sydney to Wellington, and the third from Melbourne to the Bluff and Hokitika, each of which could, by careful observation made at stated hours of New Zealand time, afford a mass of information which cannot be obtained by any other means, and would therefore be proportionately valuable, as the vessels are commanded by tried seamen who are all well known to us, and who I believe would willingly make the necessary observations, even though the remuneration were more honorary than substantial. Observations of a similar nature, made by vessels trading to Fiji, would, I am sure, soon give very valuable results.

The sixth cause arises from the report being published in so many places; but there are also several other delays, amongst which must be mentioned the absence of Harbour Masters on duties connected with tidal work, which at times prevents them from attending at the telegraph office at 9 a.m., the hour appointed for supplying the report. In a previous memorandum, I have already dealt fully with this subject, and have proposed a plan which, while it will insure each place obtaining all necessary information, will yet enable the Telegraph Department to place the report in the hands of the officers in charge of the storm-signal service at a much earlier hour than is at present possible.

In all other countries where weather telegraphy is in use, no information on this subject is *made public* until it has been revised at the principal office; but under the present system this is impossible; and I am therefore of opinion that the weather report, as now published, should be done away with, and the whole of the necessary informatiom telegraphed direct to the central office by means of the elaborate cypher code now in use in the Signal Department of the United States. This will become a matter of necessity; but if it be decided to keep the report as it is now published, the information for the central office should have precedence of it, so that there may be nothing in the way of making the weather forecast as early in the day as possible. This information should be received by the officer in charge of the work not later than 9 a.m., which is the hour at which the telegraphing of the reports is now commenced. The present publication might still be carried out, but if efficiency in the storm-signal work is to be considered, its information must be supplied direct, and without reference to any other matter of

similar nature. That real efficiency in storm-signal systems is only to be attained by giving every facility for the receipt and distribution of weather telegrams, is shown by the following extract from the report of the sub-committee appointed to consider this special matter at the International Meteorological Congress, held at Vienna in September, 1873.

In reply to a question submitted to them as to their opinions "in respect of the action of the storm signals hitherto in use, &c.," the sub-committee reply that "It is sufficiently evident from the various answers of scientific men who have been asked for their opinions, as well as from the other official and non-official reports of the individual directors of Meteorological Institutes, that there is a general conviction of the importance of weather telegraphy for the purposes of practical life, and that the existence of such a system is considered a necessity: this is shown from the results obtained hitherto from the system already in existence.

"The sub-committee therefore expresses its opinion in the following words:—It seems desirable that the system of weather telegraphy should be developed as generally as possible, and on as uniform a plan as possible. In all countries in which, up to the present time, such systems have not been organized, steps leading to such an organization should be taken as soon as possible."

After stating their opinion that systems should be in close relation to each other, and that all observers should be well instructed for purposes of weather telegraphy, the sub-committee state that "In order to make the system of warnings as perfect as possible, according to the present state of the science, the sub-committee must indicate that it is desirable that the observations and reports based thereon should be made as complete and continuous (as regards the former) as is possible, *i.e.* neither Sundays nor holidays should make a difference to them, and there should not be a complete interruption during the night;" and that "representations should be made to the respective Governments to facilitate weather telegraphy as much as possible. This is of importance, not only with reference to the expense, but also with reference to time in respect of the telegrams within each system, and from one central office to another. If telegraphic weather reports are delayed from a consideration of other despatches, the operation of the system will, in the opinion of the sub-committee, be seriously interfered with."

If such direct system of working has been found very desirable in countries of large area and more extended communication, and where reports on these matters are not published until after they have been revised by the central office, how much more necessary must they be in New Zealand, whose peculiar disadvantages in these respects have been already alluded to.

I now propose to bring under your notice certain disadvantages which are felt in working this system, but which are not in my power to ameliorate. Of course you are aware that the Harbour Masters' Departments are virtually under the Provincial Government, and there are one or two cases in connection with this circumstance that interfere with the work considerably.

I wish especially to bring under your notice one instance in which the officer who supplies my report is entirely without office accommodation, and is so straitened for room that I have instructed him to return me all papers connected with the storm-signal service, so that I may have them in safe custody until he has more room at his disposal. Besides this disadvantage, the want of an office will prevent my being able to supply him with a standard barometer, &c., as valuable instruments should only be kept where there is little possibility of accident, and this cannot be said to be the case where an ordinary dwelling-house is already so filled that the necessity for relief has become urgent. The want of reliable instruments at this place will be much felt in my duties, especially as the position is one of considerable interest.

There is also another instance in which the weather reporter has to perform the duties of signalman and pilot, and other very responsible matters have also to be carried out by him without either assistance or office accommodation, and, unless these are given, it is useless for me to supply him with instruments to which he could not give the necessary attention. I have been informed that this officer's residence is a considerable distance from the telegraph station, and being without office accommodation he has to go to his own house to make observation of the instrument whenever I telegraph for information, and it thus happens that I sometimes cannot get a reply to even an *urgent* telegram for some hours.

A third case of a somewhat similar nature is that of the officer in charge of the telegraph station at Castle Point, who is lineman as well as telegraphist, and, of course, when repairs to the line are required, the office is closed. From the peculiar situation of the station it is very useful in supplying additional information, and, being so near Wellington, replies can be received from thence very quickly—a fact of which I frequently avail myself if there are appearances of easterly winds. When this office is closed I am, of course, unable to obtain this advantage. Castle Point is a place where a great deal of wool is shipped in coasters, and should the Government decide at some future time to establish storm signals, it will be advisable to have the telegraph office at Castle Point more frequently available.

A fourth case of this kind exists at a very important station for purposes of weather forecast, and I find on inquiry that there is neither harbour office nor Harbour Master's residence; so I have not yet been able to obtain reports from thence, though I have at various times given intimation to the Harbour Master of the probable approach of bad weather.

There are several other places amongst the reporting stations where the observer has to do work similar to that at Castle Point; and when this absence from the station is taken into consideration in connection with the third primary cause already pointed out, it becomes evident that we have to contend with another disadvantage, though in this latter case the evil is remediable.

I must now bring under your notice that, when the instruments ordered from England are all in position and supplying daily information, the increased amount of material forwarded to the central office will necessitate there being some additional assistance given to me, not only in the ordinary official work of recording letters, &c., but also in tabulating and reducing the observations previously to attempting any forecast of the weather. This, I submit, should be the duties of myself and an officer fully competent to share the responsibilities and undertake the duties of the office in case of my being in any way unable to carry out the work. Such assistance is especially necessary, as it should be my province to visit each station once a year and to personally superintend

the erection of the instruments in the first instance. For these reasons, it will be evident that such assistance should be supplied as soon as possible, in order that the officer upon whom this work will devolve should have time in which to become conversant with the manner of carrying on the work, and that there should be no doubt that such officer take a great interest in this special duty of weather forecast, I would suggest that I should be authorized to select some person from the staff employed upon the experimental storm-signal service since its commencement, as it appears to me that to place any person in charge of the office who has not taken an active part in this work would be an act of injustice to those who have so fully placed all their knowledge at my disposal, and to whose zeal I am mainly indebted for the satisfactory results shown in the letters accompanying this report. With the aid of such assistance as already proposed, I should have time to investigate the material already collected, while many of the minor events were as yet within my own recollection. The information thus found would be of great assistance; and it has always been a matter of considerable regret to me that I have never been able to take up any such study since I commenced these duties.

In the estimates I have already made for the storm-signal service, I have not made any mention of the necessity for this assistance, as I was not then aware that the warnings were considered of such a reliable nature as they have now been shown to be; but as the duties I have to carry out are evidently becoming a matter of serious responsibility, I have considered it necessary to bring this matter before you.

The accompanying replies to your circular letter requesting information as to the results of the warnings issued during the past nine months will show that very favourable opinions are expressed as to their value at most places.

I have, &c.,
R. A. Edwin,
Commander, R.N.

The Hon. the Commissioner of Customs.

No. 2.

[A Circular Letter relative to Progress made in Storm-Signal Service.]

Sir,— Office of Commissioner of Customs, Wellington, 9th June, 1875.

Some months ago you were informed of the desire of the Government to establish a system of storm warnings, and as you have since taken part in making the necessary observations and have been in receipt of storm warnings, I have no doubt that you have had opportunity of remarking what has been the result of the warnings received at your station.

You are aware that the duties that are now carried on are experimental, and before taking any further steps in the matter, I am desirous of collecting the opinions of some of the observers, so as to ascertain whether there is any probability of the storm warnings being of real value.

I have therefore to request that you will be good enough to forward me by return mail your opinion as to whether these warnings have been borne out by the weather subsequently experienced at your station, and what you consider is as nearly as possible the proportion of the whole number that have been found useful; also any suggestions you may be able to make for the more fully carrying out the object in view.

I am aware that you have most likely not kept any register of the results of the storm warnings you have received, but have no doubt that you will be able to give such information as will enable me to form a reliable opinion upon this subject.

I have, &c.,
William H. Reynolds.

No. 3.

Mr. J. M. Munce to the Hon. W. H. Reynolds.

Sir,— Telegraph Department, Bealey Station, 25th June, 1875.

I have the honor to acknowledge the receipt of your letter of the 9th instant. The storm warnings received have in most instances been borne out by the weather subsequently experienced at this station, but as I have kept no record of the storm warnings, or their results, I am unable to state the proportion of the whole that have been found useful.

As far as my experience goes, I have no doubt as to the value of the storm warnings in places where there is a large population.

I have, &c.,
J. M. Munce,
Officer in Charge.

The Hon. the Commissioner of Customs, Wellington.

No. 4.

Mr. Sheath to the Hon. W. H. Reynolds.

Sir,— New Zealand Telegraphs, Tauranga, 22nd June, 1875.

I have the honor to acknowledge the receipt of your letter of the 9th instant, requesting me to forward you my opinion by return mail as to whether I considered the storm warnings would be of real value, and whether the warnings have been borne out.

I regret not having kept any register of the weather indicated by Captain Edwin, but on the whole

I think his warnings have been pretty well borne out. About 75 per cent. of the telegrams received have proved correct.

It has been remarked the bad weather indicated does not always come here, and it often happens that there is strong wind outside when we have it moderately calm, so that it would appear to be somewhat difficult to predict gales at Tauranga. Captain Fairchild's knowledge of weather in the Bay of Plenty would, I believe, bear me out in this opinion.

I am of opinion that if a system of storm warnings were established it would be of real service.

I may have estimated the proportion of telegrams that have been borne out by the weather subsequently experienced at this station low, but not having kept any reliable accounts was afraid of misleading you.

If a system of storm signals is established, I would suggest that the flagstaff as described in my telegram to Captain Edwin some months ago be erected.

I have, &c.,
J. H. Sheath,
Officer in Charge.

The Hon. the Commissioner of Customs, Wellington.

No. 5.

Captain Best to the Hon. W. H. Reynolds.

Sir,— Grahamstown Harbour Office, 23rd June, 1875.

I have the honor to acknowledge the receipt of your letter of the 9th instant, in which you do me the honor to request suggestions from me on various matters in connection with the working of the system of storm warnings at present adopted throughout the colony, and as to whether those warnings are likely to prove of practical benefit. In reply, I beg to state that the warnings have been to a certain extent a success, in enabling me to inform masters of coasting vessels and others of the expected bad weather, thus giving them time to take precautionary measures to meet the same, whether in leaving the port for sea or at their moorings, and which have in many instances proved most advantageous. With regard to that portion of your letter as to whether the warnings have been borne out by the weather subsequently experienced, I may state that it has not in all cases proved correct, but in nearly every instance it has been borne out by the barometer and general appearance of the sky in direction indicated in the warnings. I constantly inquire of the masters of coasting vessels which arrive here as to the weather experienced by them, with a view of contrasting with the storm warnings sent to this station, and have invariably found the warnings correct, although perhaps quite different weather here, which I attribute in a great measure to the chain of hills which divide us from the East Coast. I may state that for several years past, and before the inauguration of the present system, I have made the atmospheric changes and indications of approaching bad weather a special study, and I can say that the warnings sent to this port have been in the proportion of one to four. Even in this proportion, there can be no doubt that the system, if continued, and with a better class of instruments, will ere long prove of immense benefit to those whose avocations and business are in connection with the shipping of the colony; and, with a view of creating more interest and closer attention on the part of weather officers in the performance of this very interesting and important duty, I would respectfully suggest that a better class of instruments be supplied, as I need not say want of confidence in any instrument upon the accuracy of which so much depends independent of practical experience from observation of atmospheric changes, will cause a person to doubt his judgment, and detract from the zeal and attention that otherwise would follow when there is a pleasure in the duty and a confidence in the instrument assisting in the performance of it.

I have, &c.,
George C. Best,
Harbour Master, Thames.

The Hon. the Commissioner of Customs, Wellington.

No. 6.

The Chairman of the Auckland Harbour Board to the Hon. W. H. Reynolds.

Sir,— Auckland Harbour Board, Auckland, 23rd June, 1875.

I have the honor to acknowledge the receipt of your letter of the 9th current, in reference to the system of experimental storm warnings, and requesting an opinion as to the result of the work. I am directed to inform you, in reply, that your letter was referred to the weather returning officer for his opinion thereon. Copy of his minute I herewith enclose, to which I beg to refer.

I have, &c.,
James M. Brigham,
Secretary.

The Hon. the Commissioner of Customs, Wellington.

Regarding the storm warnings forwarded by Commander Edwin to the Chairman of the Auckland Harbour Board, and from that gentleman to me, I beg most respectfully to state that not one in twenty has been correct, and the very few that have I have been invariably prepared for.

I do not attribute any blame or want of management on the part of Commander Edwin, as I believe that gentleman has done all that man could do; but my long experience on the East and West Coasts of New Zealand tells me that many gales blow along the coast that never reach half-way to Auckland, and that most of the gales that visit this harbour are purely local; and further, I believe it to be almost impossible to foresee the weather in Auckland at Wellington.

Wm. Ellis.

No. 7.

Mr. FABIAN to the Hon. W. H. REYNOLDS.

SIR,— Telegraph Station, Castle Point, 21st June, 1875.

I have the honor to acknowledge receipt of your letter of the 9th instant, in respect to storm reports generally, and, in reply, beg to state that in almost every case, after being warned of the approach of bad weather by Captain Edwin, bad weather has followed. I keep diagrams, also a rough diary of weather, and have taken an interest in it, and, having had some years experience at sea, believe storm warnings to be beneficial. Considering that the Government has made weather information available on so easy a tariff, believe it will prove a blessing to seamen and others availing themselves of it.

Since the 1st of April last up to present date, not less than thirteen gales have visited this coast, and in most every case warnings have been received preparatory to their taking place.

I beg to suggest that if a flagstaff was erected at Castle Point it would be the means of showing warnings to passing vessels, and such as may be lying at anchor in the bay.

I have, &c.,
F. P. FABIAN,
In charge Telegraph Station, Castle Point.

The Hon. the Commissioner of Customs, Wellington.

No. 8.

Captain SEWELL to the Hon. W. H. REYNOLDS.

SIR,— Oamaru, 18th June, 1875.

I have the honor to acknowledge receipt of your communication of date 9th June, 1875, relative to storm warnings. In reply, I beg to state I am of opinion that about two-thirds of the storm warnings received at this station have been correct; the warnings failing were chiefly for bad weather from the westward, which failings may be accounted for by the position of the Horse Range and Kakanui Mountains, they, being to the south-west and west, shelter Oamaru and district from some of the westerly weather experienced farther south, the mountains deflecting the winds down the Waitaki and Shag Valleys.

One result of the storm warnings is, that it keeps the weather officers always on the alert, looking out for changes in the weather.

I have, &c.,
WM. SEWELL,
Deputy Harbour Master, Oamaru.

The Hon. the Commissioner of Customs, Wellington.

No. 9.

Captain THOMSON to the Hon. W. H. REYNOLDS.

SIR,— Habour Office, Bluff, 19th June, 1875.

I have the honor to acknowledge the receipt of your letter of the 9th instant, in reference to the system of storm warnings; and, in reply, have to state that about 50 per cent. of the warnings that "Bad weather was approaching" have been correct, but the wind not always from the direction indicated. This, I consider, is as much as could be expected during the first year, and seeing the small area in an east and west direction over which data can be obtained. When the cable is laid between this and Australia I have no doubt it will greatly assist in foretelling the weather. I have frequently found the warnings of service, especially when fine weather appeared to be set in. I have no doubt that, in a few years, when all the local indications are known, a much larger percentage of the warnings will be correct, and found useful both on land and sea.

I have, &c.,
THOS. THOMSON,
The Hon. the Commissioner of Customs, Wellington. Harbour Master.

No. 10.

Captain LEECH to the Hon. W. H. REYNOLDS.

SIR,— Harbour Office, Westport, 17th June, 1875.

I have the honor to acknowledge the receipt of your letter of the 9th instant, and, in reply, have much pleasure in bearing testimony to the beneficial results which have already accrued from the storm warnings sent from time to time by Commander Edwin, R.N., since he assumed office.

At first, as might be expected, the warnings were not so correct, but during the last six months they have improved wonderfully. The telegram sent at 7.40. p.m. on the 4th instant, although short, "Expect severe gale," was fully, and unfortunately to many, fearfully and quickly verified, as shown by the terrific gales of the 5th and 6th respectively, which, although we escaped them nearly altogether here, were so severe on the East Coast.

I have not the slightest doubt that if proper instruments are supplied to the observers, and they get acquainted with their use, that Commander Edwin will be enabled to render most valuable information to the seafaring and indeed all sections of the community, for it concerns all more or less.

Owing to want of office accommodation, I have, as you observe, kept no register of the results; but still I think that 50 per cent. of the warnings sent have been useful.

I am not aware that I can offer any suggestions for more fully carrying out the object in view. As from information already obtained, since taking observations, I only see one thing wanting—good instruments. I am aware those cannot be obtained hurriedly; but when once in position, there is no doubt that in time a perfect system of meteorological observations will be established throughout the colony.

I have, &c.,
S. A. LEECH,
Harbour Master.

The Hon. the Commissioner of Customs, Wellington.

No. 11.

Captain TURNBULL to the Hon. W. H. REYNOLDS.

SIR,— Harbour Department, Westland, Hokitika, 17th June, 1875.

I have the honor to acknowledge the receipt of your letter of the 9th June, 1875, in which I am requested to forward to you my opinion as to whether the storm warnings have been borne out by the weather which has subsequently been experienced at this station, and what number has been found useful at this station; and also what suggestion, if any, I may be able to make for the more fully carrying out the object in view.

In the first place, I may state that the weather experienced at this station subsequent to the warning being sent has borne out such warnings in a large proportion, more especially those gales which visit us from the north and north-west round to the south-west.

In the second place, the forecast has been good, considering the material which Commander Edwin, R.N., had to commence with, such as common aneroids, for which no proper rate of error can be fixed, and situated as we are with an immense chain of mountains dividing the East from the West Coast, which chain of mountains must affect the course of the winds from the oceans on each side of the ranges, each of which oceans being also of a different temperature. The proportion of good forecasts is as 7 to 10, which, I think, will recommend itself to your notice.

In the third place, the only suggestion which I could place before you is, that the principal stations should have first-class instruments, a large Letts' Diary to record all remarks at full length in; and I think that, from my knowledge of the officers in charge on many of the stations, especially stations in the Middle Island, the results would be highly satisfactory to you.

I have, &c.,
THOS. TURNBULL,
Chief Harbour Master for Westland.

The Hon. the Commissioner of Customs, Wellington.

No. 12.

Mr. WILKIE to the Hon. W. H. REYNOLDS.

SIR,— Telegraph Office, Spit, Port Ahuriri, 14th June, 1875.

I have the honor to acknowledge receipt of yours of the 9th instant relative to storm warnings.

During the last three months I have paid particular attention to the warnings telegraphed by Captain Edwin, and have found them correct in nearly every instance.

The most correct predictions as regards the winds here have been those predicted from south-west round northerly to north-east, the winds from south-west to east not blowing home here into the bight of the bay.

Regarding the predictions for southerly and easterly weather, I have ascertained by inquiries from captains of vessels that they were very often correct on the main coast line outside of the bay, although not felt so far in as this. I have also noticed, after many of the predictions for south-easterly weather, that a heavy south-east sea would come into the bay, although we had very little wind here.

As nearly as I can judge I should think the warnings were correct in about six instances in every seven.

I may also state that the captains and owners of vessels here highly appreciate Captain Edwin's endeavours, and they are now placing great dependence on his predictions, as some of them have experienced considerable benefits from attending to his warnings. It is now a common occurrence here, when there is appearance of dirty weather, for them to ask me what opinion Captain Edwin gives of it. I have no doubt that, after the system is fairly established, it will be a great benefit to vessels trading in and and about Hawke's Bay.

I have, &c.,
W. WILKIE,
Telegraphist.

The Hon. the Commissioner of Customs, Wellington.

No. 13.

Captain THOMSON to the Hon. the COMMISSIONER of CUSTOMS.

SIR,— Harbour Office, Port Chalmers, 14th June, 1875.

Agreeably to your request in communication of 9th inst., *re* storm warnings, I have the honor to report as follows:—

1st. Since the commencement of the experiment till now, the warnings flashed from the central office to this station have been on the whole borne out very nearly.

2nd. About three-fourths of the warnings have been received in good time to give the ship master notice of same, and about one-fourth not till after the gale has set in; the delay, I presume, being crowd of business on the telegraph.

3rd. The afore-mentioned timely warnings have been of much service to the sailing coasters and small-power steamers. The anxious master calls for the information, and it is conveyed to the heedless by the Deputy Harbour Master and myself. Also such warnings reduce the risk of casualties in the harbour, as vessels are then removed, and if necessary extra moorings put out for the gale.

4th. It appears to me that the time has now arrived when publicity of the storm warnings should be given (by day) at the signal stations in harbours with Fitzroy's signals for that purpose; besides the seafaring men, the yachting and boating men would profit by the information, amongst whom many lives have been lost in the harbour of Dunedin owing to an ignorance of approaching bad weather.

Hopeful that the Government may be pleased to order the use of the signals referred to—signal masters have much time on their hands, and the attention to the one duty would not cause the other to suffer.

I have, &c.,
WM. THOMSON,
Harbour Master.

The Hon. the Commissioner of Customs, Wellington.

No. 14.

Captain MILLS to the Hon. the COMMISSIONER of CUSTOMS.

SIR,— Harbour Office, Timaru, 14th June, 1875.

I have the honor to acknowledge the receipt of your letter of 9th inst. respecting the storm warnings which I have received at this station. I may state out of the warnings that I have received and have found correct is about eight in number. As for their being useful, my opinion is that they are of great benefit, especially in open roadsteads. Although they are not always correct, it puts one on his guard for heavy weather. I may further mention that Timaru lays in a deep bight, which I have no doubt you are aware of, and I may safely state that the wind very seldom blows home here, for it is often blowing a gale of wind out in the offing, with high sea, when it is quite calm, with smooth sea, in here.

I have, &c.,
W. MILLS.

The Hon. the Commissioner of Customs, Wellington.

No. 15.

Captain MCLELLAN to the Hon. W. H. REYNOLDS.

SIR,— Harbour Office, Lyttelton, June 14th, 1875.

I have the honor to acknowledge the receipt of your letter of 9th June, in reference to the system of storm warnings.

I beg most respectfully to state that the warnings received by me from Wellington during the last twelve months were of great importance to the safety of the shipping in this harbour; the warnings being in most cases correct, and only out in N.W. winds, from which direction shipping in this harbour receive very little damage.

I may state that in nine out of twelve of the warnings received, they were perfectly correct. I may also state that the last severe S.W. gale, as warned from Wellington at 2.45 p.m. on the 4th inst., was the means of my securing all vessels at the wharves; by which warning the shipping in this port received no damage, and was the means of my not allowing a ship called the "Cicero" to be removed in to the wharf, as she could not be secured before the gale came on.

As far as my experience goes, I would suggest that weather telegrams be sent at noon instead of as at present at 9 a.m. Local winds and calms are now reported, instead of the winds received during the day.

I have, &c.,
H. MCLELLAN,
Deputy Harbour Master.

The Hon. the Commissioner of Customs, Wellington.

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