

# R E P O R T S

OF

OFFICERS

OF

# T H E M A R I N E B O A R D.

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PRESENTED TO BOTH HOUSES OF THE GENERAL ASSEMBLY, BY COMMAND OF  
HIS EXCELLENCY.

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AUCKLAND:

1864.



# R E P O R T S

## OF OFFICERS OF

# T H E M A R I N E B O A R D.

Marine Board Office,  
Wellington, 18th October, 1864.

SIR,—

(No. 64-129.)

I have the honor to report, for the information of His Excellency's Government, the proceedings of the Marine Board, during the current year, since the Act of 1863 was passed by the General Assembly. I may remark that the "Marine Board Act" of 1862 was, in many respects, found to be too cumbrous, and unsuited to the circumstances of the Colony; it being also of little avail until local Marine Boards were brought into operation, their concurrent action being required for the performance of the most important duties for which this new department had been considered necessary.

### PILOTS AND PILOTAGE.

This department has, in a great measure, been remodelled by the "Marine Board Act" of 1863. It has now only the nomination of Examiners, granting of Licenses, and the power of removing Pilots, in cases where the persons so employed have failed to perform the duties entrusted to them in a satisfactory manner. Under this authority the Marine Board have issued several Licenses to duly qualified persons, at the various Ports, and they have every reason to believe that the system thus adopted will secure the services of competent men, and a due protection to the mercantile interests. There is one point in connection with this subject, which I think it my duty to notice, from the numerous enquiries, by the local authorities, as to the meaning of Clause xxxvii. By that clause it is not compulsory on Masters to take Pilots: the result has been a very great reduction in the receipts of those departments, leaving their support a heavy tax on the Provincial revenue. Whether Pilots are employed or not, it is incumbent on Government to maintain such a complement as to ensure a reasonable supply. At Otago, where this establishment (from local causes) is very expensive, the result of this optional clause has been to reduce the receipts to so low a figure as to leave a heavy burthen on other sources of supply. At other Ports its operation has been of a similar nature, although felt in a minor degree. From these circumstances I would respectfully submit the propriety of restoring the former system of levying moderate Pilotage dues, which would enable those departments to collect something approaching the cost of maintaining them on an efficient footing.

### LIGHTHOUSES.

At the first meeting of the Board, in January, 1863, numerous applications were received by them from various parts of the Colony, showing the great want of Lighthouses in certain localities.

As it was a matter of great importance, both as to the preservation of life and property, it was deemed expedient by the Board to use their utmost endeavours to establish lights at the most critical points of navigation, so soon as they had the disposal of means for that purpose. Already the Governments of Otago and Southland had ordered three from home, to be placed respectively at Dog Island (Foveaux Straits), Cape Saunders, and Tairoa Head (at the entrance to Port Chalmers). The Provincial Government of Canterbury, shortly afterwards, voted a sum of Five thousand pounds, to enable the Board to place a light near the entrance to Port Lyttelton. This timely assistance relieved the Board from considerable difficulty. Two others only were of immediate necessity—one on Tiri Tiri Island, in the Gulf of Houraki, near Auckland, and a second in Cook's Straits. For the procuring of these, the General Government obtained a credit for the Board on the Bank of New Zealand for a sum of Ten thousand pounds.

£5,000.

£10,000.

Their next duties having reference to this subject, was to procure the best information as to the position of placing the lights, which was done either through the medium of personal inquiry or by circular letter, and, upon the result of such information, to visit the various places and to fix the precise sites, the particulars of which have already been furnished to Government.

The Lighthouses ordered by the Southern authorities partly reached the Colony towards the end of 1863 and beginning of 1864. They were sent out by Mr. Allan Stevenson, the well-known Lighthouse Engineer, and are believed to be the best kind of their respective descriptions. From circumstances entirely resting with the Provincial Governments, delay had arisen in the preparing towers and other requisites on the proposed sites. It was not in the power of the Board to proceed with these works until a vote of money was made by the General Assembly for that purpose, when estimates and specifications were at once prepared, and tenders to the extent of their means invited.

The Lighthouses ordered by the Board reached their destinations in June and July, 1864, they having been selected by the Hon. CROSBIE WARD, late Postmaster-General.

The Lighthouses now in course of erection are as follows :—

*Dog Island, Foveaux Straits.*—Tower one hundred feet high, of masonry. At the present rate of progress, it is expected to be finished by the end of the year. It will be illuminated about March, 1865. The Light will be one hundred and fifty-five feet above the sea level; is of first order—Holographal revolving; and should be visible from a vessel at a distance of from 16 to 20 miles, according to the height of the observer.

*Tairoa's Head, Entrance to Port Otago.*—Tower thirty feet high, of masonry, is nearly finished, and will be illuminated about the end of this year. The Light is about two hundred and fifty feet above the level of the sea, and is coloured red to distinguish it from that intended for Cape Saunders.

*Godley Head, Entrance to Port Lyttelton.*—Tower twenty feet high, of masonry; will be finished by the end of this year, and ready for illuminating in March next. The Light will be about four hundred and forty feet above the sea level, is of second order Dioptric, fixed, and should be visible from 20 to 25 miles in clear weather.

*Mana Island, Cook's Straits.*—Tower forty-eight feet high; iron. The material has all been conveyed to the Island, and works progressing rapidly. The Engineer reports he has reason to believe it will be completed in three months. The Light will be four hundred and fifty feet above the level of the sea, and is of second order Dioptric; fixed.

*Tiri Tiri Island, Gulph of Houraki.*—This tower and light is similar in every respect to that on Mana, and will be visible from 18 to 20 miles. Mr. Aylmer, Lighthouse Engineer, is at present superintending its erection.

*Cape Saunders.*—The works at this place have been delayed, owing to the means placed at the disposal of the Board being insufficient to defray the probable cost. Mr. Balfour, Marine Engineer at Otago, estimates the expense of building tower, dwellings, making roads, &c., at from £5,000 to £6,000.

Besides the foregoing, in course of construction, there are two in operation at Wellington and Nelson, Cook's Straits.

It is scarcely necessary to remark the great benefit that navigators will derive from these guides, when in full operation, or the saving of life and property that will probably ensue from having such good beacons, either for avoiding dangers, or directing into a port of safety.

A fair inference may be drawn of the usefulness of others by that at Wellington. Before a Lighthouse was placed on Pencarrow Head, losses of vessels and lives were of constant occurrence. Since it has been illuminated, not an accident of a serious character has happened, and navigators now approach the harbour at night and enter it in all weather with perfect confidence.

It was not the intention of the Board to have levied light dues until the Lighthouses, about being erected, were completed. As, however, the expense of maintaining the lights at Wellington and Nelson was being defrayed by the Provincial Governments, it was left optional with them to have dues imposed in case of their desiring such, the Marine Board undertaking to pay all current charges.

At Wellington, His Honor accepted the condition, and a rate has been levied since 1st September, 1863. The present dues, although within the limit prescribed by the Act, are high, and the Board contemplate reducing them considerably, when a general rate can be levied on all shipping trading to the Colony, at the several ports.

Some representations have been made by the Wellington Chamber of Commerce on this subject, complaining of the heavy tax upon shipping as compared with other countries. It must, however, be borne in mind that in young colonies, when trade is in its infancy, the rate charged must necessarily be higher than when the coast is largely frequented by vessels, if the cost of maintaining the lights is to be defrayed from the revenue so collected. As an offset against this charge, both insurance and freights are likely to be lower in proportion as the risks of casualties are reduced, and notwithstanding the objections that are made, by those immediately benefitted, there is no doubt that an increase of from fourpence to sixpence per gross ton on the freights would more than cover the demand for this very important boon to the shipping interest.

In fixing the future rate of dues, the Board have in view the raising a sufficient amount to defray the expense of maintaining and managing the Department, and also setting aside a Reserve Fund for the purpose of erecting other Lighthouses, at places where they are urgently required.

#### SURVEYS.

During the past year, the Board has been called upon to put this portion of their duty into practice, but owing to the absence of funds for that particular purpose, they have not been able to comply with the requisitions, and to ascertain the position of shoals said to exist on various parts of the coast of this Colony. Their first application for means was to the General Government, who instructed the Board to require the expense of Coast Surveys to be defrayed by the Provincial Governments on the Coast of whose Province such service might be necessary. The consequences are that funds have not been obtained from either source and the doubt still remains as to the position or extent of the dangers in question, causing great anxiety to Mariners navigating in the several localities.

The principal Shoals or Reefs that require to be surveyed, is that said to exist some miles from the shore off Waipapapa Point, near Foveaux Straits, on which the *Aldinga*, *Prince Alfred*, and recently the *Gothenburg* struck.

Reef near Long Look Out, Banks' Peninsula, on which a Hobart Town Barque knocked away her rudder, and the shoal near the anchorage at Napier, reported by the Steamship *Auckland*. All

these while, but imperfectly known, may lead Mariners, when endeavouring to avoid the one danger into others of still greater magnitude, especially in the neighbourhood of Foveaux Straits, which, from being subject to the prevalence of violent gales, and thick weather, requires more than ordinary care in navigating.

#### INSPECTORS OF STEAM VESSELS AND ENGINEER SURVEYORS.

The duties devolving upon these Officers is of an important character, to them is entrusted in a great measure the efficient condition of both Hull and Machinery of the numerous steam fleet now employed on the Coast of New Zealand. It is not stating more than truth to say that before periodical inspection of steam vessels was introduced, some of them were plying both on coast and rivers in a very unsafe condition, thereby endangering the lives of those on board. At present, under the authority of the "Steam Navigation Act," vessels are thoroughly examined at least twice a year, and are required to put the hull and machinery in a perfect state of repair, as also to complete their equipment strictly in accordance with the Law. These repairs sometimes occupy months, and are, during the operation, inspected from time to time by the Surveying Officers, to ensure their being well executed. Generally some steam vessels are under the hands of workmen, and therefore, with the other duties, causes almost constant employment to the officers of this branch of the department.

The number of Certificates issued during the year have been at

Otago	about	Seventy (70)
Wellington	„	Fourteen (14)
Other Ports	„	Thirteen (13)

#### EXAMINATION OF MASTERS AND ENGINEERS.

The Officers appointed to perform these duties are Inspectors of Steam Vessels and Engineer Surveyors; their examination extending merely to the navigation of the Coast of New Zealand, and the general management and knowledge of machinery. Previous to this ordeal being required, persons were in several instances employed in the capacity of Engineers who were quite unfit to be trusted with so important a charge. At Otago one vessel was in imminent danger, owing to the ignorance of the so-called Engineer, had it not been for the timely intervention of Mr. Hamilton, Engineer Surveyor, who fortunately was on the spot, and detained the boat until a more qualified man was appointed; it is probable a serious loss of life would have resulted. Several others have either been removed or had their Certificates withheld, from like causes. It may, therefore, be inferred that the system adopted is quite necessary, both for the protection of life and property.

Owing to the absence of resident Surveying Officers at Nelson, Canterbury, and Southland, some expense is necessarily incurred, visiting those Ports for the purpose of examining the local steam-boats and obliging them to conform to the law. Several Boats at those ports use high-pressure engines, and therefore require more strict supervision to prevent the possibility of accidents.

If the subsidized Boats were directed to carry officers of the Board (at a dietary rate) when travelling on duty, a considerable saving would be made. It is for the Government to consider whether such a condition could be embodied in their contract,

In the "Marine Board Act" of 1863 it is left for the Superintendents to define the limits of their several ports, for the purposes of the said Act. This Clause, xxix, has been differently construed, as applicable to the placing and maintaining of Buoys and Beacons in the immediate vicinity of Manakau, and used solely to direct vessels in or out of that harbour. At the request of Government the Board considered the question at issue, and reported their opinion to the effect that, local authorities having their officers and staff always employed on the spot, would be more likely to observe any alteration or removal of such Buoys or Beacons, and could replace them, not only more readily, but also, by the assistance of Harbour or Pilots' Crews, at a smaller expense. *Vide* "President's Letter," 28th April, 1864, No. 64, 56.

There are several Beacons required on parts of the Coast, or outlying rocks, which have been submitted by the Board to both General and Provincial Governments; neither, however, have provided the funds for such purpose: these accessories to safe navigation, therefore, for the present remain in abeyance. Among the places most requiring Beacons is the low sandy spit projecting from Cape Farewell which is a point exceedingly dangerous to vessels trading between Nelson and the West Coast of the Middle Island. In hazy weather it is scarcely visible until close to the shore. At the extreme of this spit a beacon of about forty feet in height, formed of rough timber, and painted a suitable colour, would be of great service in indicating a close approach to the land.

At Flat Rock, near Kawau Island, a Beacon is also much required; that danger being but a few feet above high-water mark, and lying much in the track of vessels approaching Auckland from the northward. The cost of placing such a Beacon would be comparatively trifling.

In concluding this report I beg to state that the Board is sanguine of being able to relieve the Government of all expenditure for its entire maintenance by the middle of next year, believing the receipts arising from dues and fees will be sufficient to meet every contingency, excepting of an extraordinary character, such as Coast Surveys, &c.

I have, &c.,

CHAS. SHARP,  
President Marine Board.

The Hon. the Postmaster-General,  
Auckland.

Marine Board Office,  
Auckland 15th Nov., 1864.

SIR,—

In compliance with your request in letter H. 64, 35, I have the honor herewith to furnish the following report upon the progress and condition of the Lighthouse now in course of construction on the Island of Tiri Tiri.

The iron tower, lantern, and the illuminating apparatus arrived in Auckland, per *Queen of the Deep*, on the 15th June, and, after some unavoidable delay, were transhipped into small crafts, conveyed and landed at once on the Island, with the exception of the illuminating apparatus, which was taken and stored in the Government Store on the North Shore, for greater security and until the time it would be required; it is now, however, on the site.

The carriage of material of every description from beach to site was expensive and difficult. A team of 12 bullocks, with fodder, had to be taken there, but from the nature of the ground—being in one place one in four steep, it was impossible to draw on the sledge over half a ton weight at one time.

After preparing necessary Plans for Foundation, tenders were advertised for early in August, but, in consequence of delay arising from the lowest Tenderer not being able to find approved sureties, it was not let until the 27th. This work was performed very satisfactorily within the specified time—two months.

The excavations for Foundation were sunk 10 feet down through layers of dry hard clay mixed with soft sand-stone, and layers of hard yellow clay sand-stone with traces of iron, but no water. The foundation is formed of three feet of concrete with seven feet of solid scoria masonry, of the best description of stone, quarried from Mount Eden. On this the first plate of the tower was laid, and firmly fixed and secured with holding-down bolts, on the 21st October, and is now 48 feet high, completed with its internal column, outside gallery, and floor-girders; leaving to be carried out the erection of lantern, lighting apparatus, fixing floor stairs, and other internal fittings of tower, together with caulking and painting.

By the end of the year I fully expect that the whole of the works will be completed, and the Light, which is of the 2nd order Dioptric, fixed, be ready for exhibition on the 1st January, 1865. The Light will be visible from a ship's deck at a distance of 24 nautical miles.

The Keepers' dwellings, in connexion with the Lighthouse, are completed, and are now occupied by the workmen employed on the tower. They consist of two cottages of four rooms each, are built of timber, and cost £775.

All the works are carried out under the immediate superintendency of R. Aylmer, Esq., C.E., who came from England with the Lighthouse for that purpose.

The exact amount of cost of all these works cannot correctly be stated until they are completed, but I do not anticipate it will exceed £6,600.

The cost of maintenance annually, including painting, insurance of dwellings, providing stores, salaries of two Keepers, and expenses incurred in visiting, &c., will be about £550.

With regard to any suggestions I may consider desirable to make, I beg to recommend that the whole of the island be kept as reserve for Lighthouse purposes and Pilot and Telegraph Stations. It seems to me when the trade of the Port increases, it will be desirable to remove the two latter. A Semaphore Telegraph may be erected there at once, with one repeating station half way. This alteration would involve two new stations, and the maintenance of one more than at present; or a single wire may be laid, crossing the harbour above the usual anchoring place for ships. Until a Telegraph is erected on the island it is desirable for the Board to have a boat to convey stores, oil, &c., there, and to enable the local member to visit the Lighthouse once a month to see that everything is going on right, as the rules are stringent in not permitting the Keepers to leave the island without permission, under any circumstances. The cost of a suitable boat probably would not exceed the sum of £150. Two bullocks or a horse will also be required to be kept on the island, to draw up stores, &c. I beg also to recommend that a beacon be placed on Flat Rock, off Kawau. This rock is only a few feet above water, and three miles from land, and is dangerous to vessels coming from or going to the North at night. A beacon is also much required on the end of Rangitoto Reef. This, I presume, comes within the Port limits, but as His Honor the Superintendent has not defined those limits it leaves the question open.

I have, &c.,

R. JOHNSON,  
Warden.

Secretary to Postmaster-General.