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**1891.**  
**QUEENSLAND.**

**REPORT ON THE DEPARTMENT OF PORTS AND HARBOURS**  
**FOR THE YEAR 1890-91.**

**Presented to both Houses of Parliament by Command.**

TO THE HONOURABLE THE COLONIAL TREASURER.

Department of Ports and Harbours,  
Brisbane, 26th August, 1891.

SIR,—I have the honour to submit, for your information, the following Report concerning this Department for the past year:—

I assumed charge on the 1st July, 1890, and found that the heavy gales and floods experienced in January of the same year had most seriously affected several of the dredged cuttings of the Brisbane, Mary, Burnett, and Fitzroy Rivers. In some places the Brisbane River had silted up to such an extent that there were fully 18 inches less water than before the flood. This, however, only proved a temporary inconvenience, as the dredges soon restored the cuttings to their original depths. I also found that considerable changes had taken place in the formation of the banks at the northern entrance to Moreton Bay, necessitating the removal—to make the lead effective—of Tangaluma Light (which had only been established in 1885), also the removal (for the fourth time) of the Yellow Patch Light, and the building of two new cottages for the lightkeepers. Owing to the encroachment of the sea, it had also been found necessary to remove Comboyuro Point Lighthouse and the keeper's cottage some 200 feet further inland. This work was accomplished by the Inspector, Mr. H. L. Pethebridge. The floating beacon which marked the northern entrance to the port had been ashore on Bribie Island for some time, but, during the first interval of settled westerly weather, she was floated and brought to Brisbane to be repaired and supplied with new moorings, after which she was on the 8th August replaced in her former position, and by the end of October the works of the Department generally, which had suffered in the early portion of the year, were restored.

In January and February of the present year another series of heavy gales was experienced along the whole coast of the Colony, and on the 6th, 7th, and 8th of June a gale of unusual severity, accompanied by torrents of rain, swept along the coast from Bowen southwards, causing heavy seas and abnormally high tides. Such unfavourable weather, of course, occasioned considerable loss to the Department, a great number of buoys being driven from their moorings (some lost altogether), and beacons and other plant receiving a large amount of damage.

## MORETON BAY AND BRISBANE RIVER.

The banks at the northern entrance to Moreton Bay are constantly shifting, and the maintenance of the necessary lights and buoys to enable vessels to enter and clear the port in safety is a source of continual anxiety. The floating beacon, which had broken adrift during the month of February, disappeared altogether on the 10th March; and although diligently searched for, no trace of her has been discovered. Two valuable buoys disappeared from the outer banks about the same time. The floating beacon has been replaced by a new second-class (Trinity pattern) steel conical buoy, surmounted with a staff and cage, the top of which is 12 feet above the water, forming a most conspicuous object. New buoys have been moored in the positions of those lost.

No. 1 cutting, Hamilton Reach, has now a depth of 17 feet at low water, spring tides; and the entrance to the bar cutting is being dredged to a similar depth. The increased depth of water in these cuttings is of considerable importance to vessels of heavy draught. A depth of 15 feet at low water, spring tides, is fully maintained in the other cuttings, but there are several shallow places in the town reaches of the river which require attention.

The more recent gales and floods do not appear to have injuriously affected the dredged cuttings of the Brisbane River. Several new beacons have been erected to replace those blown down or found defective; and, to render them more conspicuous, heads have been placed on some of the beacons marking the bar cutting. Beyond some slight repairs, now being effected, all the sea and river marks for the navigation of this port are in good order, and the various buildings are not likely to require any extensive repairs for some time.

The apparatus at the various lighthouses in Moreton Bay are in good order, with the exception of the reflectors at Cape Moreton, which will shortly require re-silvering. This work can be done locally.

The sea-pilot steamer "Advance" continues to do her work satisfactorily, and is most usefully employed at her present station. She is only used for towing in cases of emergency, so that her earnings in that respect are very limited.

The "Laura" is a most useful vessel, and is kept fully employed performing the various duties of the Department. She is, however, seventeen years old, and her hull shows signs of weakness, although her engines and boiler are in good order.

The "Pippo" requires a new boiler and certain repairs to her hull. To efficiently carry out the work of the Department at this port, I find a third steamer indispensable, as the "Advance" must be kept at her station, and it is impossible for the "Laura" to successfully perform all the other work of the Department; and should either break down, a third steamer would be necessary as a relieving vessel.

The Nautical Surveyor (Mr. E. A. Cullen) has just finished a survey of the northern half of Moreton Bay, a work which was rendered necessary by the fact that the only chart available for use was one

originally published by the Admiralty in 1865, with corrections inserted at various intervals up to within the last two years, since which great changes have taken place in the formation of the banks. Mr. Cullen accomplished the work in the "Pippo" in a most satisfactory manner, in the short space of five months, and a tracing of the new chart has been transmitted to the Admiralty for publication. The survey discloses changes of a prejudicial character at the entrance to the North or Howe Channel, which has been contracted by the extension of the east bank in a northerly direction about four cables, and the south-east extreme of the north bank to the eastward, about three and a half cables, while to the north-north-east of the north bank a small patch has formed, having only three fathoms upon it at low water. This patch is only one cable to the westward of the line of lights, and a continuance of similar growths will render the entrance at night exceedingly difficult, and probably destroy the utility of the present leading lights. The channel, however, at present maintains a depth in its shallowest part of 21 feet at low water, spring tides. The attached plan shows the position of the line of lights in relation to the three fathom patch and north-west extreme of the east bank. The three and five fathom contours as existing in 1886 are shown in red, while their present positions are indicated in black. Numerous other changes are shown on the new chart, but the banks to the westward, in the vicinity of the north-west channel, have changed so very little during the last twenty-five years that the channel may be regarded as practically a permanent one. It is the widest, deepest, and only permanent approach to Moreton Bay, and vessels of heavy draught, whose visits are rapidly increasing—including some of H.M. ships—have now to wait for daylight to enter the port by this channel. It is buoyed for use in the daytime, and can—when considered necessary—be easily and cheaply lighted for use at night.

The approach to Moreton Bay by the South Passage should be discouraged, as the banks move about in a remarkable manner; and variation in the depth of water and direction of the channels being of frequent occurrence, it should be attempted only by men possessing good local knowledge, in vessels of light draught.

#### WIDE BAY AND MARYBOROUGH.

The new channel across Wide Bay Bar, which was buoyed and lighted in July of last year, maintains its depth and direction. Some changes have taken place in Sandy Strait, notably at Stewart's Island Flats, where the cutting has silted up; and a new channel to the eastward of the cutting, carrying a depth of 18 inches more water, has been beaconed and lighted. The gales and floods experienced during January and February did very great damage; and the outlay in replacing lost buoys, and repairing and replacing beacons, has been considerable. A perch buoy has been moored at the northern entrance to Great Sandy Strait, in place of the floating beacon which was sunk on the night of the 10th May last. The work of raising this vessel was commenced, but had to be abandoned in consequence of heavy weather coming on and ultimately breaking her up. The buoys and beacons are in good order throughout this district. When the cutting at Horse-shoe Bend is completed, there will be a depth of 10 feet at low water, spring tides, through all the cuttings in the Mary River, and vessels drawing 19 feet will be enabled to reach the wharves at Maryborough.

The lightkeeper's cottages at Woody Island and one of the cottages at Inskip Point require some repairs, but with those exceptions the domiciles are in good order.

The steamer "Llewellyn" has been recently surveyed, and, beyond the ordinary outlay, no expenditure is anticipated during the current year. In June last this vessel was instrumental in saving the brigantine "Hector," with eighty lives on board, from being wrecked on Breaksea Spit. In Great Sandy Strait and the Mary River there are no less than 50 lights, most of which are leading lights burning day and night. These lights keep two steam launches with their crews constantly at work attending to them; the system is elaborate, but very costly.

### BURNETT RIVER.

The gales and floods in the early part of this year, and again in June last, caused considerable damage in the river and outside the Heads, nearly every buoy being swept from its moorings, by the velocity of the freshes (two being lost altogether). Several of the beacons were blown down, and the course of the channel in the Inner Bar lead altered so much, that the leading beacons had to be removed twice. The banks at the entrance to the river have increased in extent, and changed the course of the channel outside the Bar, rendering the approach to the port more intricate. The buoys have been shifted to mark the new channel.

The lighthouse at the Burnett Heads and the leading beacons in the river are all in good order. The pilot vessel has given much satisfaction since receiving extensive alterations and repairs in Brisbane last year.

The new explosives magazine is found to be a great convenience, and offers ample accommodation for all requirements.

The beacons in the Kolan River, which were blown down in the June gale have been restored.

### PORT CURTIS.

The recent heavy weather has had the effect of altering very much the north channel into Port Curtis, the depth having shallowed from 18 to 11 feet at low water, spring tides. The inner end of the channel has been contracted by the extension of the north-west end of the east bank west-north-westerly direction, and the spit off Oyster Rock to the southward. These changes have necessitated the removal of the two buoys—formerly marking the entrance—to the inner edge of the east bank and the southern point of the spit off Gatcombe Head.

Heavy deposits of mud have taken place in Auckland Creek and the Calliope River, and it has been found necessary to shift the leading lights to enable vessels to enter the creek in safety. Considerable expense has been incurred through the renewals of buoys and beacons occasioned by the floods in February last, almost every buoy being displaced. All the marks are now, however, in position again. The light on Gatcombe Head and the apparent light on Oyster Rock are working satisfactorily, and the dwelling-houses of the lightkeeper and pilot crew are in very fair order, only

one of them requiring repairs of any consequence. Ordinary wear and tear is the only expense likely to be required for the pilot schooner "Enid" during the current year.

Very little progress of any utility has been made in connection with the work of deepening the Narrows.

At Bustard Head I found the lighthouse, the two auxiliary lights, and the domiciles of the superintendent and keepers in excellent order.

### ROCKHAMPTON.

The floods of this year have caused no changes of importance in the Fitzroy River. The new channel at Central Island—which opened out and was beacons and lighted this time last year—maintains its depth unassisted by dredging operations, and appears to be improving. No. 5 cutting is consequently no longer used. A new vessel has replaced the old lightship at the Upper Flats. She is considered an efficient and necessary beacon at one of the most rocky curves of the Fitzroy River, and serves as a domicile for the lightkeepers, who maintain the lights ashore and afloat for a distance of five miles. Tidal signals are also shown from the vessel both day and night.

During the year the dwelling-houses of the pilot's staff at Keppel Bay and the lightkeepers at Sea Hill, Balaklava, and Brown's Crossing have been painted throughout; at the latter station some repairs were also executed. Any further expense during the current year is, therefore, not likely to be necessary.

At Balaklava the sea is encroaching on the northern foreshore of the island, but arrangements have been made to deposit some 500 tons of ballast, of which a rough dyke will be constructed by the Harbour Master's staff. This, it is anticipated, will prevent further inroads by the sea.

The buildings at Sea Hill and at the pilot station are in good order. The Timandra Bank lightship requires some repairs, and the decks want caulking, which I anticipate may be done without removing the vessel from her station. All the buoys and beacons in Keppel Bay and the Fitzroy River have had careful attention, and are in good order.

### CAPE CAPRICORN.

The lightkeeper in charge of this station (Edwin Biss) died in Rockhampton during the year, and was succeeded by the first assistant (James Aitken). The lighthouse tower is in good order, but the iron roofing of two of the cottages requires renewal, being oxidised and full of perforations.

### NORTH REEF.

At this exposed and isolated station I found the central structure in sound condition, but the corrugated iron forming the walls and roof of the circular superstructure round the base of the tower, and which forms the domicile for the superintendent and lightkeepers, is very much

corroded by the action of the salt water, necessitating some considerable repairs. During the gale and high tides of March last, the sandbank was entirely submerged, the sea smashing in the doors and windows, and flooding the keeper's quarters. The sand, some 14 feet in depth, which originally surrounded the building, has been washed away, allowing the sea free access to the foundation caisson, which is down 14 feet into the solid madrepora. I do not, however, consider the stability of the structure is depreciated to any extent in consequence. This station, like Cape Capricorn, is visited by the Harbour Master at Rockhampton once a month.

#### PINE ISLET.

Everything here is in good order, and a gangway ladder has been constructed to facilitate landing at this almost inaccessible rock, which the Harbour Master at Rockhampton visits every two months.

#### YEPPOON.

One small steamer and two or three small craft trade to this place, the Department maintaining the necessary marks for navigation.

#### HARRISVILLE (EMU PARK).

No vessels except fishing and pleasure boats have been here for some time. A black buoy is, however, kept moored off the end of the outer reef.

#### PORT BOWEN.

Is now only visited by vessels seeking shelter. The wharf is in good order, but no cattle have been shipped since 1887.

#### BROADSOUND.

Since October last the staff at this port, which previously consisted of a pilot and three hands, has been considerably reduced—the coxswain only (who is also a boatman pilot) being retained. The trade to the port is merely one small steamer, making about four trips a year.

#### PORT MACKAY.

So far but little improvement in the Pioneer River appears to have resulted from the construction of the stone training walls. Raising the wall from Fisherman's Bank down stream to its present termination will have a beneficial effect, and remove the possibility of small vessels—when not under command—resting upon it at high water. Its additional height will also prevent the sand (as in February last, when the sea made a breach through East Point) from being carried over into the main channel and leaving a deposit of some 18 inches on the top of the wall. The upper stone wall commencing at Magazine Island has proved beneficial, by creating a scour resulting in the removal

of the upper flats. At East Point the bar beacons have been removed again (for the third time in ten years), in consequence of the continual growth in a south-westerly direction of the extreme end of the sand spit.

The older portion of the wooden retaining wall on the south bank of the Pioneer River is in a most unsightly and dilapidated condition, owing to the combined ravages of white ants and cobra; the newer portion is also being quickly destroyed from the same cause. The stone retention wall which extends along part of River Street is, however, well constructed, and likely to prove of permanent utility.

The buoys and beacons within Port Mackay are in an efficient condition, and the lighthouse at Flat Top and dwelling-houses of all the Department's employees require but few repairs. The steam launch is a useful handy vessel, and is in good order.

#### HABANA CREEK.

To the northward of Mackay, is the outlet for all the sugar manufactured on the Habana Estate, which last year amounted to 2,666 tons. The requisite beacons are maintained by the pilot's staff at Mackay.

#### CABBAGE-TREE CREEK.

To the southward of Mackay, is available for small vessels drawing 8 or 9 feet of water, and may possibly require beaconing, as it is likely to be availed of, in consequence of its close proximity to Grass-Tree Mountain, where gold reefing promises shortly to be in operation.

#### DENT ISLAND.

As this station I found the lighting apparatus working well, and the tower and cottages in a satisfactory condition. Mr. F. Walker, the late lightkeeper in charge, has been compelled to retire through ill-health, after a faithful service of twenty-one years.

#### BOWEN.

I regret to say that Mr. Robert Findlater, who has satisfactorily filled the position of pilot at Bowen for the last twenty-eight years, died last month. The boatman pilot will in future carry out the duties hitherto performed by Mr. Findlater. The platform of the lighting apparatus at North Head lighthouse requires some repairs, but the other buildings appear in good order. The wreck of the s.s. "Wentworth" still remains on the rocks to the southward of North Head, and forms a most efficient beacon. The pilot ketch "Dudley" has been recently repaired at Townsville in a very satisfactory manner. She is a very useful vessel, making monthly trips to Dent Island in addition to her other duties.

## CAPE BOWLING GREEN.

During the last six months the sea has gradually encroached upon the lighthouse and cottages at this station, quite 150 feet of the bank in front of the lighthouse having disappeared. The sea, on three occasions, washed some of the piles from under the superintendent's house. With high spring tides the water touches the base of the lighthouse on the north-west side; and as the spit to the south-east is now moving away, it would appear more than probable that if any further encroachment takes place the buildings will be surrounded with water, when their position will be most critical. There was nothing abnormal in the state of the tide when the greatest encroachment took place, and the disappearance of the bank which formerly protected the buildings can only be accounted for by the soft and yielding nature of the sand which underlies an apparently hard and compact surface. I visited Cape Bowling Green twice within a month, and the changes wrought during the interval of my visits were remarkable. On the first occasion a bank of sand 6 feet high, with a row of cocoanut trees about eight years old, extended some 150 feet in front of the buildings. On my last visit the whole of this bank, together with the cocoanut trees, had disappeared, and the sea at high water was washing under the superintendent's house and within a few feet of the lighthouse. I consulted on the spot with the Harbour Master (Mr. Hughes), the Inspector (Mr. Pethebridge), and the Superintendent (Mr. Cole), all of whom have been acquainted with the place for the last seventeen or eighteen years, with the object of selecting a new and more eligible site. Such, however, does not appear to exist. The lighthouse and apparatus are in good order, and the cottages, with the exception of that occupied by the superintendent, are in fair condition.

## CAPE CLEVELAND.

The clockwork requires some slight alterations, owing to the irregular intervals of revolution; but, with that exception, everything is in satisfactory order.

## TOWNSVILLE.

No alteration appears to have taken place in the depth of water in Cleveland Bay. The damage to the eastern breakwater caused by the cyclone of last year has been repaired, and the structure has been greatly strengthened. At its outer extremity a massive concrete foundation has been embedded in the masonry, upon which the lighthouse has been strongly secured. The light is of the 4th order dioptric, showing a red arc of 270° to seaward, and a white arc of 90°, visible inside the breakwater and to the southward towards Alligator Creek. The extension of the western breakwater is also completed, and from its outer extremity a small green light will be exhibited. The channel into Ross Creek, dredged in 1889 to a depth of 10 feet at low water, has silted up in places below the Harbours and Rivers' Wharf to 5-1/2 feet; above that it retains its depth.

Inside the breakwater, and at the entrance between the piers, dredging is being proceeded with, and it will be a great advantage to the shipping visiting the port when the dredging along the inside of the eastern breakwater is completed.

It is proposed to erect semaphores for exchanging communications between the signal station and Bay Rock lighthouse, flag signals being frequently indistinguishable. The lighthouse at Bay Rock is well maintained.

The steam launch is very useful, but rather small for the work she has to perform.

The buoys and beacons in Cleveland Bay are now in good repair, several renewals having been necessary during the past year. All the property of the Department appears to be well looked after, and in an efficient state. The new relieving lightship built at Townsville was finished last April. After being fitted with two new 5th order dioptric lights—which, being exhibited from the same lantern, show a powerful fixed light—she was towed up in July to relieve the Channel Rock lightship, which had been thirteen years at her moorings. The latter vessel has been brought to Townsville for repairs.

#### BARRATTA AND ALLIGATOR CREEKS.

Have required rebeaconing throughout. The trade to the latter creek is increasing, as the Meat-preserving Works have recommenced operations.

#### PLANTATION CREEK.

The necessary beacons and leading lights are maintained.

#### DUNGENESE.

At this port much damage was done by the gales in the early part of the year. The beach which formerly protected the pilot station buildings has been greatly encroached upon by the sea, and at one time fears were entertained for the safety of the dwelling-houses. Happily, however, the only damage done was the destruction of the boatshed and the loss of a few stores. The Custom-house and telegraph station, which adjoin the pilot station, are being removed to a new site; and I think it advisable that the pilot station should also be removed, as, with a renewal of last year's weather, the buildings may be lost altogether. The destruction to buoys and beacons was very great, and the approaches to the Herbert River have altered very much. All damage to buoys and beacons has been made good, and the channels, which retain their former depths, re-marked.

### SNAGGING PUNT.

Snagging has been carried on during the year in the Johnstone, Seymour, Herbert, and Nind Rivers. The results, however, were not satisfactory, it being difficult to control the operations of the men. A local trust has been appointed to carry out the work, and better results may be anticipated.

### MOURILYAN HARBOUR.

The trade to this port is now confined to the visit of a small steamer twice a week. The necessary beacons and lights are maintained by the Department.

### JOHNSTONE RIVER.

Has, like mostly all the other ports, suffered from the effects of gales and floods. The amount of damage was, however, comparatively trifling, and confined to the blowing down of a few inexpensive beacons. The approach to the river has altered its direction, and the leading lights and beacons on Flying Fish Point have been moved to indicate the course in, which is now N. W. by W.  $\frac{3}{4}$  W., while formerly it was W.  $\frac{3}{4}$  N. The houses at the pilot station and the pilot cutter are in good order.

### CAIRNS.

The new cutting into Cairns harbour was completed last year, giving a depth of 13 feet at low water, spring tides, and leading lights and beacons have been established to render the cutting easily navigable by night as well as by day. The dredged channel has stood remarkably well; only a slight silting up has been recently reported near the third pile. This spot, however—upon inquiry—appears never to have been dredged. A new staff for the outer leading light has been erected, and the buoys and beacons are fully maintained. The largest coasting steamers now enter and leave the port in safety. The beacons in the Barron and Mulgrave Rivers are attended to by the staff at Cairns, and are at present in their proper positions.

My predecessor suggested that a lightship should be placed near the Fairway Buoy to mark the entrance to the dredged cutting, and as a guide for vessels visiting the port, as well as to exhibit the necessary tidal signals. A light-vessel or—what would be cheaper—a small fixed pile-light on the Trotter-Lindberg principle—would certainly be a great advantage. The pilot boat, dwelling-houses, boatshed, and all property of the Department is well looked after.

### LOW ISLAND LIGHTHOUSE.

The lighthouse and buildings on this island are kept in a very orderly way, and apparently no outlay will be necessary for some time. The Harbour Master at Port Douglas visits the station once a month.

## PORT DOUGLAS.

The buoys and beacons are in good order, but the lighthouse requires a new balcony and door. The buoys and beacons at the Daintree and Mossman Rivers are maintained by the staff at Port Douglas, but the trade at the present time is very limited.

## COOKTOWN.

During the past year the swinging basin has been dredged, which considerably increases the anchorage accommodation at this port. The pilot vessel "Governor Cairns" has been recently repaired and remetalled, and consequently will require no further outlay for some time. She is principally employed in attending to the beacons in the Inner Route to Torres Straits, and conveying stores to the lighthouses at Archer Point and Rocky Islet. The harbour plant, buildings, buoys, beacons, and the lighthouse and signal station on Grassy Hill are well cared for, and in good order. Two new buoys were supplied last year.

## LIGHTSHIPS.

The new relieving light-vessel is now stationed at Channel Rock, and, as she was provided with a new and complete equipment, no outlay will be necessary for her maintenance for some time.

The Claremont Island lightship had a thorough overhaul two years ago. She is kept in excellent order, and requires no outlay. The Piper Island lightship will be the next vessel to be relieved. The metal on her bottom is becoming thin, and the caulking in her topsides defective. After a careful examination I consider she may remain another year or eighteen months at her station. The repairs necessary in the meantime are unimportant.

## BEACONS, INNER ROUTE.

These are now in an efficient state, the heavy weather of the past year having occasioned considerable damage, two expensive beacons having to be renewed altogether.

## THURSDAY ISLAND.

The timber portion of the jetty was finished last year, and the T end is now being slowly proceeded with, the velocity of the tide rendering the performance of the work very difficult. When complete it will be a great convenience to large steamers, not exceeding 22 feet draught of water, which will be able to lie alongside. The buoys and beacons are well maintained, but there are at present no leading lights for guiding vessels into the port at night-time. This want is often a source of great detention and loss to vessels visiting the port, and many complaints have been made in consequence. Arrangements can easily be made to provide leading lights; and as their maintenance would not require any addition to the present staff, the outlay would be very moderate. The lighthouse and signal station at Goode Island are in a very efficient state, but the tramway for

getting oil and stores from the beach (some 1,100 feet in length) is quite past repair, and requires renewal. It is proposed to put iron instead of wooden rails, as being more economical in the end.

At the pilot station everything is in order, no outlay for repairs being necessary. The pilot cutter "Lizzie Jardine" has been relieved by the cutter "Eileen," recently repaired at Cooktown.

#### PROUDFOOT SHOAL LIGHTSHIP.

When I visited this vessel I found that the heavy weather experienced during the last north-west monsoon had caused her to ride heavily, and that her decks forward had, as a consequence, strained a little. The necessary repairs are being effected by one of the crew, who is a practical shipwright. I propose in future to keep a carpenter in lieu of a seaman on each light-vessel.

#### NORMANTON.

The dredged cuttings at the mouth of the Norman were completed on 20<sup>th</sup> September, 1890, when the necessary beacons and leading lights were erected, and all the works of the Department were in good order until the 24<sup>th</sup> February last, when the Gulf of Carpentaria was visited by a gale of great violence, accompanied by unusually high seas. Vessels anchored at the Norman Bar dragged considerably, although riding with both anchors down. The damage to the harbour works was very great. All the beacons at the mouths of the Norman and Albert Rivers were displaced, some being destroyed altogether. The lightship parted her cable, and was carried about 900 feet above ordinary high-water mark on the Bynoe beach, and two of the Department's boats were smashed. The dredged cuttings into the Norman River have stood very well, considering the gales and floods experienced during the year, for, except at one place near the second black buoy in the outer cutting, hardly any change is perceptible. At the place indicated, however, the channel for about 400 feet has silted up some 18 inches. Since the weather has become settled no further alteration has taken place. The buoys and beacons have been restored to a state of efficiency, but the lightship is still on shore. As she does not appear to have received much damage, a contract has been let for floating and taking her to Karumba.

After the "Vigilant" returned to Normanton from Thursday Island, where she had been relieving the "Albatross," she required a number of repairs which were executed, and she is now in fair condition.

#### GENERAL.

The trade to several of the ports having considerably diminished, I have as vacancies occurred, been able to recommend reductions in the staff by 13 officers and men, which will effect an annual saving of £1,932, without in any way impairing the efficiency of the Department.

Having visited all the lighthouses on the Queensland coast, I find the sites upon which the structures are erected have been selected with great care and judgment, and the illuminating

apparatus of the most modern description (excepting Cape Moreton, which, however, shows an excellent light), and supplied principally by the eminent lighthouse engineers, Messrs. Chance Bros., of Birmingham.

Additional 1st or 2nd order lights are not necessary at present, but in the Inner Route and Torres Strait much time is lost by the mail and other large steamers through having to anchor at night. Steam vessels are fast superseding sailing vessels, and their number passing along this coast increases every month, which will soon render additional lights necessary.

Pintsch's gas for beacons, buoys, and light-vessels is being adopted to a great extent in Europe, Asia, America, and the Suez Canal. In the colony of Victoria Pintsch's gas buoys are also in use. It possesses great advantages, owing to the cheapness of first cost and to the fact that no outlay is necessary for lightkeepers, as the light burns from six weeks to two months without attention. This system of lighting is admirably adapted for use in the Inner Route and for the shifting channels at the entrance to Moreton Bay. Several lightships with their crews have been recently dispensed with in France, and gas buoys substituted.

Another cheap and very effective light, the "Trotter Lindberg," is being introduced into the lighting system of Europe. This light is produced by burning paraffin or lythene oil in a specially designed apparatus. With the latter the light burns 14 days, and with the former 7 days without attention. A special feature of the apparatus is that an intermittent light is produced by the automatic action of a screen, which is made to revolve by the ascent of the heated air produced by the light. To mark the outer end of a cutting or narrow channel, the Trotter-Lindberg light might be utilised instead of a lightship. A lantern, with optical apparatus complete, costs about £100 to £125 in London.

### SUNKEN WRECKS.

Disfigure several of our rivers, and are not only a source of danger to navigation, but are liable to cause deposits which may hereafter render dredging necessary. I have endeavoured—without success—to find owners for the vessels referred to. Ownership has evidently been transferred from one to another with the intention of evading the responsibility of raising or removing the wrecks. Some legislation is needed on this subject. The steamer "Settler" was removed from the river bank at Bulimba in February last, the lowest tender for the work being £100.

### WRECKS AND CASUALTIES.

A tabulated statement is attached hereto, giving particulars of the wrecks and casualties to shipping on our coast for the year ending 30<sup>th</sup> June last. Happily no loss of life has been the result. Nor have the crews suffered much hardship, being in most cases rescued by means of their own boats.

## WATER POLICE.

Good work has been done by the Town Water Police, all their vigilance being required to prevent breaches of the Port Regulations.

## UNIVERSAL SYSTEM, BUOYS AND BEACONS.

The system as recommended by the International Maritime Conference at Washington, the Life-saving Appliances Act, the new Load Line Act, and the Report of the Bulkhead Committee are having the special attention of the Marine Board, and will be dealt with as soon as possible.

## TREE-PLANTING ON ISLANDS AND REEFS.

The pilot vessels at Broadsound, Mackay, Townsville, and Cooktown have been frequently utilised during the last twelve months in conveying cocoanut and other trees, to the various islands and reefs adjacent to our coast, where they have been planted, and the lightkeepers in the neighbourhood have been instructed to protect the young plants as far as possible. Tree culture, especially the cocoanut—for which the coral islands form congenial homes—is important, not only commercially, but as contributing to the safety of navigation, the existence of trees rendering the outlying islands and reefs more conspicuous, and are more serviceable than beacons. As an article of food, the cocoanuts would prove invaluable to shipwrecked crews. Those planted on some of the islands are thriving well, especially some 200 young plants on the Lizard Islands. The trees that have been planted recently require protection in some way, or they will disappear, as did the fully-matured trees which existed some years ago on the Frankland Islands.

## FISHERIES.

The revenue derived from the Oyster Fisheries has increased in a substantial manner during the past year. This is owing to the large number of banks which have been licensed in Rodd's Harbour, and also the successful sale of dredge sections in Moreton Bay. Banks at the Flinders Group, Princess Charlotte Bay, have also been licensed, the oysters being sent to Normanton and Burketown. On my recent Northern trip I visited Flinders Group, and saw indications of what may develop into a large industry, not only in connection with edible oysters, but with pearl oysters, several samples of which were shown to me. The quantity and value of oysters exported from Brisbane and Maryborough up to 30<sup>th</sup> June last were as per following table, viz.:—

## BRISBANE.

Year	No. of Bags.	Value. (£)
1870	4,523	1,644
1871	5,127	1,625
1872	4,060	1,427
1873	3,036	0,768
1874	3,912	1,704
1875	5,349	2,622
1876	6,648	2,792
1877	2,736	1,639
1878	1,790	1,227
1879	3,793	2,729
1880	5,293	3,475
1881	7,559	6,153
1882	9,953	9,074
1883	8,878	7,342
1884	8,256	8,475
1885	8,076	8,094
1886	7,512	8,533
1887	7,167	8,240
1888	6,191	7,616
1899	6,791	13,368
1890	12,906	15,981
1891[A]	8,719	11,381

## MARYBOROUGH.

Year	No. of Bags.	Value. (£)
1887	1,692	1,967
1888	1,990	3,326
1889	1,914	3,677
1890	3,257	6,580
1891[A]	1,869	3,542

[Footnote A: six months]

The revenue received on account of Oyster Fisheries for the year ending 30<sup>th</sup> June, 1981, was as follows:—

Brisbane	£4,360	17	9
Maryborough	875	10	0
Gladstone	400	0	0
Rockhampton	2	0	0
Thursday Island (Flinders Group)	7	0	0
<b>Total</b>	<b>£5,645</b>	<b>7</b>	<b>9</b>

The number of men and boats employed in connection with the oyster industry in Moreton Bay are—men 82, boats 36; and the number of banks worked are 241.

Licenses for catching fish at this port have been issued as follows for the current year:—Europeans, 99 men and 46 boats; Chinese, 32 men and 16 boats.

Attached hereto is the Inspector's Report on the Oyster and other Fisheries in the Maryborough district.

I have, &c,  
T. M. ALMOND,  
Portmaster and Chairman Marine Board.

CASUALTIES TO VESSELS on the QUEENSLAND COAST for the year ended 30th June, 1891.

Name of Vessel.	Tonnage.	Date.	Nature and Locality of Casualty.	Total or Partial Loss.	No. of Lives Lost.	Result of Inquiry.
Taldora, s.s.	232	14 July 1890	Stranding, Eagle Rock, Fitzroy River	Partial	None	Master cautioned.
Archer, s.s.	694	20 July 1890	Stranding, M Reef, Inner Route	Partial	None	Pilot's license suspended 3 months.
Changsha, s.s.	1463	22 July 1890	Stranding, Rattray Island, Inner Route	Partial	None	Master severely censured.
Volga, barque	1620	06 August 1890	Stranding, Beresford Shoal	Total	None	No default.
Grace Lynn, schr.	93	12 August 1890	Stranding, reef off Low Island	Partial	None	Master Guilty; gross negligence.
Joseph, barque	687	22 August 1890	Stranding, Heroine Reef, Endeavour Strait	Total	None	Foreign vessel. No inquiry.
Royal Duke, schr.	105	22 August 1890	Foundering, Cooktown Harbour	Partial	None	No default.
Jennie Scott, ketch	38	21 September 1890	Stranding, Flora Reef	Total	None	No default.
Taiyuan, s.s.	2269	14 October 1890	Collision, Brisbane River	Partial	None	Pilot's license suspended for 3 months.
Corea, s.s.	382	09 November 1890	Fire, Brisbane River	Partial	None	No default.
Kate, s.s.	147	11 November 1890	Collision, Brisbane Bar	Total	None	Insufficient lookout on Burwah.
Burwah, s.s.	568	11 November 1890	Collision, Brisbane Bar	Partial	None	Insufficient lookout on Burwah.
Maori King, s.s.	2476	08 December 1890	Stranding, Brisbane River	Partial	None	No default.
Orange Grove, barque	385	15 December 1890	Stranding, Dungeness	Partial	None	No default.
Fiado, s.s.	985	18 December 1890	Stranding, Brisbane River	Partial	None	No default.
Sybil, schr.	150	07 January 1891	Dismasting off Double Island Point	Partial	None	No default.
Perseverance, schr.	163	08 January 1891	Foundering 18 miles from High Peak Point	Total	None	Master's certificates cancelled.
Wawoon, s.s.	50	08 January 1891	Damage to boiler, Fitzroy River	Partial	None	Engineer's certificate suspended 3 months.
Kingswear, s.s.	201	05 February 1891	Stranding, Cordelia Rock	Partial	None	Master cautioned.
Recorder, s.s.	677	06 February 1891	Stranding, Madge Reef, Normanby Sound	Partial	None	No default.
Moltke, barque	827	21 May 1891	Stranding, Flinders Opening	Partial	None	Foreign vessel. No inquiry.
Wastwater, s.s.	2810	10 June 1891	Collision, Brisbane River	No Loss	None	Master Ranelagh cautioned.
Ranelagh, s.s.	836	10 June 1891	Collision, Brisbane River	No Loss	None	Master Ranelagh cautioned.
Anahuac, ship	1220	15 June 1891	Stranding, reef near Bramble Cay	Total	None	Foreign vessel. No inquiry.

Harbour Master's Office,  
Maryborough, 31st July, 1891.

SIR,—In accordance with your instructions, I have the honour to submit the following Report on the Oyster Fisheries of this port, the extreme limits of which extend from Tin Can Inlet on the south, taking in Wide Bay, Great Sandy Strait, and Hervey Bay, to the Burrum River on the north, covering a distance of nearly 100 miles, exclusive of many large creeks, all containing oyster ground between those limits.

I commenced marking off these oyster banks in July, 1886. We then had licenses issued for 72 banks, 18 boats, and 42 men, at a revenue of £398 for the year ending 30th June, 1886. We now have for the year ending 30th June, 1891, licenses issued for 175 oyster banks, 30 boats, and 53 men, at a revenue of £942 2s. 6d. [*Vide* Schedule appended.]

I hope to have the survey of the different sections in Hervey Bay completed by the end of the present year, when tracings of plans of same will be forwarded to you. This would have been finished before, but that I can only spare a few days in each month from my other duties for the work. I shall then require to run over the whole district again, as a considerable quantity of new ground has been taken up in the different sections since first survey, owing to the heavy falls of spat which have since taken place, portions of which ground previously never carried an oyster. During the past year large quantities of spat have fallen on the oyster banks in Hervey Bay and Great Sandy Strait, some of the banks being literally covered, thus preventing the shipment of good marketable oysters, which, if removed in their present state, would cause the destruction of all the young oysters attached to them.

Great attention has been paid by the different licensees to the cultivation of their banks by removing the poor oysters from the high ridges, after being carefully culled and separated into clumps containing from three to four oysters, are deposited on the grass flat and lower ground lying near. Upwards of 4,000 bags have been treated in this manner with excellent results.

Over 9,000 bags of marketable oysters, at a rough value of 30s. per bag (£13,500), have been shipped during the past year by the different licensees to the various markets of the colonies. Messrs. Leftwich and Sons alone have sent over 3,500 bags; the Moreton Bay Oyster Company and Messrs. Perry and Griffin have also shipped large quantities of oysters for the purpose of cultivating the Moreton Bay banks.

In conclusion, I am pleased to state that the whole business throughout is in a flourishing condition and steadily increasing in magnitude, and I feel confident that the revenue received from this industry for the following year will reach four figures.

## FISHERIES.

There have been large quantities of mullet in this district during the season which commences when the westerly winds set in, generally about the end of May and ending about August, when they come close in to the shore to spawn. Crabs are also plentiful.

I do not think that a close season is at all necessary at this port, as there are so few persons engaged in the traffic.

Licenses have been issued at this port for the year ending 30th June, 1891, to 6 Europeans and 4 Chinese; also 6 boats.

I have, &c.,  
EDWD. J. BOULT,  
Inspector of Fisheries.

The Chairman, Marine Board, Brisbane.

### SCHEDULE RESPECTING OYSTER FISHERIES, MARYBOROUGH.

Period.	Banks.	Boats.	Men.	Revenue.
Year ending June, 1886	72	18	40	398 0 0
Year ending June, 1887	140	30	70	765 0 0
Year ending June, 1888	150	40	73	836 0 0
Year ending June, 1889	167	37	77	923 0 0
Year ending June, 1890	163	33	51	903 0 0
Year ending June, 1891	175	31	53	949 2 6

Transfers and Fishing Licenses. £12.

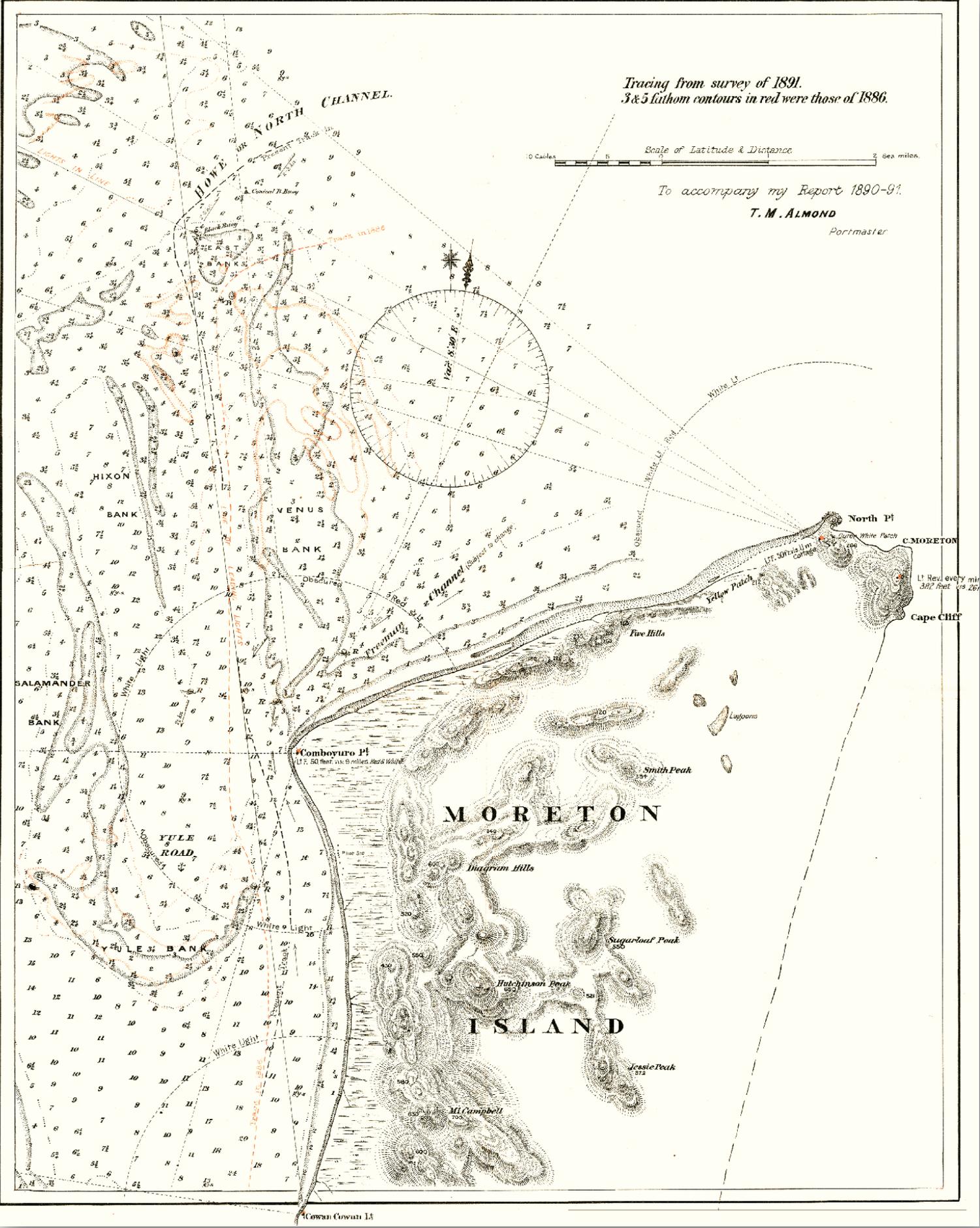
*Price 1s.6d.*

By Authority: James C. Beal, Government Printer, William street, Brisbane.

Tracing from survey of 1891.  
 3 & 5 fathom contours in red were those of 1886.

Scale of Latitude & Distance  
 10 Cables 5 0 5 Sea miles.

To accompany my Report 1890-91.  
**T. M. ALMOND**  
 Portmaster



Cowan Cowan Lt

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