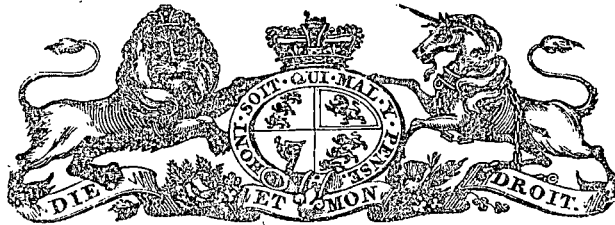


(No. 16.)



1862.

TASMANIA.

**REPORT OF THE ADMIRALTY SURVEYOR ON
GEORGE'S BAY AND BARS.**

Presented by the Colonial Treasurer, and ordered by the House to be printed,
22 July, 1862.



East Coast, 20th May, 1862.

SIR,

THE Executive Government having requested that I would examine the Bar and Bay of George's, I beg to report to Your Excellency that, having completed the survey, I am enabled to make the following observations, and to request Your Excellency will be pleased to lay the same before the Executive. The chart which accompanies these remarks will serve to elucidate more clearly the observations.

From Cape St. Helen's to the Rocky Islets (called Elephant) off Grant's Point, the shore has a considerable indentation on the Eastern Coast, rugged and rocky. The sand bank from the north shore to that on the south forms the Bar to the entrance of the Bays, having near the centre of the outer Bay two Channels,—the northern one only practicable for small craft. The south Channel, fit only for boats, is at times practicable when the north is not, owing to the partial protection from breakers by the middle shoal during N.N.W. winds.

The south shoal, which spreads considerably into the outer Bay, has extended itself to the southward, and choked the northern edge of a passage formerly known as Glover's Channel, and, taking a horse-shoe shape, narrows the present passage to a width of about 40 yards on the northern shore, where rocks with only 5 and 6 feet water on them exist in detached patches.

The Surveyor-General has been good enough to forward to me a tracing of a plan made in 1836. Comparing it with ours, I find the present Channel is in a different direction, and not so wide at the Bar, and also not so wide as in 1853, when Major Cotton reports,—“The least depth on the Bar is $7\frac{1}{2}$ feet, and the greatest $13\frac{1}{2}$ feet; the width of the Channel on the Bar is not less than 200 yards, and there is deep water both within and without.” I agree with Major Cotton that it is probable the Bar is permanent in its position.

The entrance to the Bay is by the Channel between the north and middle shoals, and only offers in fair weather a navigation to small coast craft; it is, therefore, in its present condition, a dangerous Channel to the mariner. The depth in the north Channel is very uneven—30, 20, 15, and 12 feet will be obtained by the lead in the space of 50 square yards,—but a course can be shaped preserving a depth over 8 feet at low water, spring tide, over the Bar.

The Bar is about W.S.W. from Cape St. Helen's nearly 1 mile; and being well in the outer Bay, serious inconvenience will be experienced by sailing craft with fair winds making for the Bar, and finding that the breakers and time of tide prevent an entrance, and therefore, so far in, unable to work out to clear St. Helen's Point, or the Elephant Rocks off Grant's Point, and having the shoals to leeward of them. This danger to vessels could be obviated by the establishment of a Telegraph similar to those in England, where Tidal Harbors have a code of Signals indicating the state of the Bar: precautions absolutely necessary for preventing too bold an approach to a lee shore till fully certain of safety.

In consequence of the detached rocks of 5 and 6 feet off Dora Point, the direction of the Channel from the Bar becomes circuitous when between Granite Rock and Dora Point; the northern end of the Horse-shoe Bank requiring to be rounded quite close in order to avoid another patch of 5 feet about 70 yards S.S.W. off Dora Point.

The end of the shoal between Dora and Clark Points has 4 feet on its extreme edge, and confines the Channel between it and the western side of Horse-shoe Bank to a width of 50 or 60 yards, with depths varying from 15 to 7 feet.

It is probable that the increasing growth of the Horse-shoe Bank will join the western shore, and form a greater barrier to the entrance of the Bays of George's and Moulting than the present outer Bar; unless it is contemplated to make the harbors available for commercial purposes, when the Engineer's skill would doubtless preserve whatever depth the Dredging Machine effected by confining the main strength of the ebbing tide to one Channel by artificial means.

The deepest part of the Bar has from 8 to 10 feet at low water springs; but, as the highest rise of spring tide is only $3\frac{1}{2}$ feet, the depth is never more than 10 to $12\frac{1}{2}$ feet—shallow enough to break in almost all weather and winds from seaward. As the width of the Bar is only a little more than 100 yards, the banks of sand on either hand having 3 to 5 feet water over them, any ocean swell in any direction causes rollers to break across the entrance, as well as on the shallow shoals—which would give a lift of some feet, rendering it extremely dangerous for vessels of even lightest draught taking the Bar. In fact, the practicable navigation for vessels of any draught not over 7 feet is only safe and judicious when the Bar is perfectly still,—a circumstance very rare with any winds from N.N.W. round N. & E. to south. If at any time of the year there is a prevalence of off-shore winds—that is, from N.W. round W. to south,—the Bar will be navigable to all vessels whose draught does not exceed $7\frac{1}{2}$ and 8 feet. In the present condition of the inlet, the depths from the outer Bar to Pelican Point—a distance of about $1\frac{1}{2}$ miles,—varying so much will only admit of a vessel drawing under 9 feet.

From Pelican's Point past Atkin's Point, the Barracks, and to off the entrances of Moulting and George's Bays, a course by systematic buoying can be marked, which will present a depth of never less than 15 feet, and up to 70 feet; but the course in many places will not admit of any deviation without getting into shallow depths of 13 and 10 feet.

The mud flats do not seem to alter their direction or limits.

Moulting Bay is deep at its entrance, and, with George's Bay, offers a safe anchorage to any number of vessels of any draught; the deep water in George's Bay approaches near to the south shore, but the mud flats off South Arm extend over to the Pebbly Point, near Newman's Farm, having 15 feet on its edge, and narrows the passage to Jason Gates.

Jason Gates are steep, too,—having depths of 15 to 20 feet between them, and about 70 yards wide.

Boat Channels of (various depths) wind tortuously through the mud flats in Medea's Cove and the Golden Fleece.

The River George has extensive mud flats off its entrance, which uncover at half tide, when the River is hardly navigable for boats. The deposit from the River is apparently small, and is distributed on the flats or lost in the depths of the Bays, and therefore no possibility of any deposit from this River affects the Bar,—the silting up of which can only come from the sea.

The tides are regular, high water at full and change, VIII to 45 m., rise at spring tides $3\frac{1}{2}$ feet, at Neaps $2\frac{1}{2}$ feet.

With the very commodious anchorages which the Bays of George's and Moulting afford, and the easily navigable Channels from the Horse-shoe Bank to them, it is to be regretted the only harbor on the N.E. Coast should be shut up by the Bar at its entrance, preventing an outlet for the produce of the surrounding country, and, possibly still more important, for the coals of Fingal and Mount Nicholas. But consideration well matured is due to the difficulties which always attend projects that grapple with nature; and I fear, unless the operations are very extensive, the attainment by skill of overcoming them cannot be so complete; but what many will remain which will often be the cause of detentions and delays prejudicial to all commercial speculations where certainty of ingress and egress at all times is necessary,—more particularly on a Coast having numerous dangers at considerable distances off shore, rendering the approach to it a serious consideration till a detailed examination of it has been made. And here I will remark,—the very dangerous nature of the N.E. Coast of Tasmania makes it highly injudicious for steamers or vessels, presuming on their hitherto fortunate proceedings, approaching too close to a shore which is fringed with outlying dangers, not marked on any chart, and but partially known to a few, and which would doubtless be fatal to many vessels were their number greater and the voyages more frequent. Vessels should always give the Coast an offing of 3 to 4 miles.

Should it be contemplated to improve the entrance, a competent opinion will, of course, be obtained,—a question for the Engineer, and not in the province of the Nautical Surveyor, whose especial duty is to construct the chart, and which will, I think, exhibit the difficulties sufficiently clear to answer the purpose of the Engineer.

As the season for boatwork is drawing to a close, I have dispatched my men to their homes, retaining two in the Bay to take charge of the boats, &c., till an opportunity offers for their returning to Hobart Town.

A further suggestion was made in the letter to me from the Executive Government, relative to the best position for a Light-house, which question I am unable to answer till a detailed examination of the Coast between Falmouth and Cape Portland has been made,—work which requires a safe vessel to undertake it. Foreseeing the absolute want of such a craft, my application to the

Hydrographer of the Navy has met with an approval, on condition that the Colony of Tasmania shares with the Admiralty the cost of such a craft, which the Admiralty will build and despatch from England.

I am now constrained to inform Your Excellency that I shall not undertake any further operations till the Government takes actual participation in the expenses; but I entertain hopes, from the cordial wishes for the progress of the work expressed by your Government, the ready assistance offered by the Surveyor-General, and Departments, that, at the forthcoming Session of Parliament, the Representatives of Colonial interests will ensure the Coast Survey of Tasmania,—being a consideration of sufficient importance to leave all party or political caprices out of the question, in the fact of its general and lasting benefit; and that provision will be made for its continuation,—which must necessarily extend over some years, in consequence of the limited funds and few workers.

I have the honor to be,
Sir,

Your obedient Servant,

EDW. H. BROOKER, *Lieut. R.N.*,
Admiralty Surveyor.

To His Excellency Colonel GORE BROWNE, C.B.