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T A S M A N I A.

HOUSE OF ASSEMBLY.

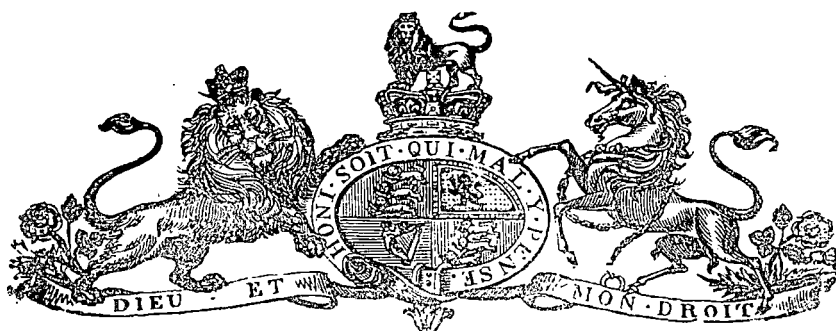
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**MERSEY HARBOUR AT PORT FREDERICK:**

**COMMANDER STANLEY'S REPORT.**

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Laid upon the Table by the Minister of Lands, and ordered by the House to be printed, July 19, 1881.



## REPORT ON THE MERSEY HARBOUR AT PORT FREDERICK.

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*Hill Side, Sandy Bay, 9th April, 1881.*

SIR,

ADVERTING to our conversation *re* the Survey of the Mersey River, to show the Channel between Torquay and Formby and the Ballast Ground, Latrobe, and to your desire to be more fully acquainted with my proposal, I have to remark—first, my proposal will include a thorough Marine Survey of the River Channel, but will avoid all extraneous matter; it will also include the soundings off Torquay, Formby, and the Ballast Ground, and will be of such a character and on such a scale as to enable the Government to decide without difficulty upon the relative advantages of the above-mentioned places as to wharfage or anchorage ground for trading vessels when once across the outer bar.

I am ready to make the above survey, and pay every expense in connection therewith, for the sum of One hundred and forty-nine pounds ten shillings (£149 10s.)

I am, &c.

H. J. STANLEY.

*The Hon. C. O'REILLY, Minister of Lands and Works.*

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CAPT. Stanley's offer accepted.

C. O'REILLY.

11. 4. 81.

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*Lands and Works Office, Hobart, 11th April, 1881.*

SIR,

I HAVE the honor to acknowledge the receipt of your letter of the 9th instant, submitting, as requested at our recent interview, an offer to make a thorough Marine Survey, with soundings, of the River Mersey at Port Frederick; to show the Channel between Torquay and Formby, and the Ballast Ground at Latrobe, together with soundings off Torquay, Formby, Horsehead Creek, and the Ballast Ground at Latrobe, to enable the Government to decide upon the relative advantages of the above places as to wharfage or anchorage ground for trading vessels when once across the outer bar.

In reply I have to inform you that, having submitted the matter to the Cabinet, it has been decided to accept your offer to effect such a Marine Survey as aforesaid, for a sum of £149 10s., (which it is assumed will cover the cost of Plan and Report), provided that it is completed by the 18th of June next.

It is very desirable that the work be proceeded with at as early a date as possible, that the Survey may be in the hands of the Government within the stipulated time.

I have, &c.

C. O'REILLY, *Minister of Lands and Works.*

*Capt. STANLEY, R.N., Hill Side, Sandy Bay.*

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Hill Side, Sandy Bay, 15th June, 1881.

SIR,

I HAVE the honor to forward herewith a Plan and Report of the Channel of the Mersey River.

I have, &c.

H. J. STANLEY.

*The Hon. C. O'REILLY, Minister of Lands and Works.*

#### REPORT ON THE RIVER MERSEY.

THE River Mersey from the Bar to the Ballast Ground (near Latrobe) is about  $3\frac{1}{2}$  nautical miles in length. The present navigable portion ends near the ballast ground, where, alongside the jetty, there is 10 feet at low water, with 12 feet close to. Small craft, by availing themselves of the tide, get up the creek to the town, where they lie aground. The entrance of the river, inside the bar abreast of the leading beacons, is only 225 feet across from low water to low water; and it may be considered that not less than 16 feet of water will be found for 200 feet of that distance, or nearly from shore to shore: in mid-channel there is as much as 27 feet. At 900 feet inside the beacons the river begins to open out, and the effect is immediately observed in the banks, which are now constantly met with, until a contraction of the river again takes place at Whirlpool Reach. This reach extends from Stewart's mill to Horsehead Creek, a distance of  $\frac{3}{4}$  of a mile. Its average width is 450 feet; and where the shore is quite bold the depth from side to side is not less than 18 feet at low water spring tides. The only dangers in the reach are the Sisters Rocks, two pinnacles about 150 feet apart, covering at about half tide, or, to speak with greater exactness, the one when the tide has risen 5 feet 9 inches, the other 6 feet 6 inches. These rocks are near the centre of the reach, and one-third distance from the western shore. There is a small island near the southern termination of the reach, but it cannot be considered a danger. From here the river channel trends south-easterly, being bounded on its S.W. side by extensive muddy sand flats, those portions near the high line being covered with a coarse tussocky grass. On the opposite shore, between Patrick's Bay and the Ballast Ground, flats are also found, but they are of a less extensive character.

Reverting to the entrance, the north jetty on the Torquay side (see plan) has 4 feet alongside; there is 10 feet close to, and in the channel (which is here 400 feet in width) as much as 20 feet. In the consideration of any jetty extension in this place there should be a careful abstention from the prosecution of any works likely to interfere in the smallest degree with the ingress or egress of tidal waters. A second jetty more to the southward is at present only useful to very small craft, but is not in a position which can be objected to on the score of interference with tidal waters. The whole of the sand flats between the jetty and the point southward of it is favourable for reclamation and consequent channel improvement and wharfage accommodation.

At the Formby side, the present jetty is in a very good position. Any wharfage extension on this shore should be confined to the same locality, the preference being given to a northern extension.

Nearly abreast of the Formby jetty is the first bar in the channel leading to Latrobe. If the channel were beaconed it would be possible to obtain a depth of 6 feet at low water spring tides over this first bar: under present conditions only 5 feet can be assured. The bar having been crossed, no other difficulty in the navigation will be met with (unless the Sisters Rocks be excepted) until out of Whirlpool Reach and abreast of the point N.W. of Patrick's Bay. Here there are several sandy knolls, two of which, only 150 feet from the shore, have only 3 feet 3 inches upon them. It is likely that they are levelled by floods, but they must be reckoned upon in the navigation of the channel. The greatest depth at this place at low water spring tides is only 4 feet; and here may be considered the second bar. Proceeding south-eastwards there will be found about midway between Patrick's Bay and Picnic Point a flat of 700 feet in length, the greatest depth over which at low water spring tides is 3 feet 10 inches. Between this and the Ballast Ground the depth ranges between 4 and 8 feet until close to the Ballast Ground, where there is a hole of deep water about 400 feet long by 150 broad, having from 10 to 13 feet in it at low water spring tides.

At Horsehead Creek there is a small gutter of deep water (9 to 12 feet) extending to a distance of about 100 feet from the point on the left bank of the entrance, but this depth does not extend to the creek itself, which is almost dry at low water. The accompanying plan will show how very limited is the accommodation.

The present survey being only of the channel between Torquay and the Ballast Ground (Latrobe), does not include a survey of Port Frederick bar. From information obtained from the Harbour Master at Torquay, corroborated by other evidence, there appears to be 5 feet 6 inches on the bar at low water spring tides. If the channel to the Ballast Ground were beaconed 4 feet might be secured. As before observed, 3 feet 10 inches is the actual and least depth, but the bottom in the channel being mud, the depth is more than equal to 4 feet.

There is therefore a difference in the navigable depths of the upper and lower portions of the Mersey River of 1 foot 6 inches, a difference which will be lessened by the fact that vessels crossing the bar generally require a greater depth than their draught of water.

Respecting the outer bar, I am informed that many years since it was fordable. If this statement is correct a permanent improvement may be happening. As regards the upper portion of the river, it

appeared to me that a gradual growth of the sandy mud flats was taking place; in other words, that a reclamation of land by nature was being gradually effectuated. I obtained information on this point which leads me to think that my surmise is correct.

In the first part of my Report I have mentioned the fact that in Whirlpool Reach, where the channel is confined between bold shores, and only 450 feet wide, its depth may be considered not less than 18 feet at low water. This is indicative of the scouring power; and by narrowing the channel to 450 feet we might (supposing the bottom to be suitable, of which I have no doubt,) obtain that depth over the whole distance.

*The anchorage ground between Torquay and Formby.*—The widest part of the deep water channel in the vicinity of Formby and Torquay is 450 feet. A circle may be described with a radius of 220 feet which will embrace all the anchorage ground to a depth of 9 feet at low water. The number of vessels which can occupy this space must depend partly on their size and partly on the manner in which they are moored or anchored. There is a bank with only 5 feet upon it just south of the anchorage.

*Datum mark for soundings.*—I have been careful in fixing datum marks for the reduction of soundings, and for future observation and reference. A very low tide occurred during the time of observation, but I was not satisfied with this, and reduced all soundings 6 inches lower. The floor of the jetty at the Ballast Ground is considered to be 12 feet 11 inches above the ordinary level of low water spring tides. At Torquay the floor of the south jetty is considered to be 14 feet 6 inches above the ordinary level of low water spring tides.

The greatest care has been taken to make the accompanying plan as accurate as possible; but although I have exceeded my instructions, and represented more than the mere depth of water in the channel leading from Torquay to the Ballast Ground, &c., as per terms, yet the present survey is not as complete as I should have wished to make it. I trust, and have no doubt, however, that it will prove sufficient for the purposes of the Government.

H. J. STANLEY.

June 15th, 1881.

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*Lands and Works Office, Hobart, 16th June, 1881.*

SIR,

I HAVE the honor to acknowledge the receipt of your Reports on the capabilities of the Rivers Leven, Inglis, Penguin, and of Emu Bay; also your Report and Plan of the Mersey Harbour at Port Frederick.

I have to thank you for the promptitude with which you have carried out the instructions of the Government with respect to furnishing Harbour Reports of the North West Coast.

I have, &c.

C. O'REILLY, *Minister of Lands and Works.*

CAPT. STANLEY, *R.N., Staff Commander, Sandy Bay.*



Mersey Entrance and Bar (Unsurveyed)

TASMANIA  
**THE RIVER MERSEY**

Between  
Torquay and the Ballast ground Latrobe.

Surveyed by  
STAFF COMMANDER H.J. STANLEY R.N.  
1881.

Soundings in Feet and Inches.

Datum. The floor of the Jetty at the Ballast ground is 12' 6" above L.W. Sp.  
and that of the South Jetty Torquay is 6' 6" above L.W. Sp.

