

REPORT ON PEEL HARBOR - WARNBRO' SOUND AND ROCKINGHAM
BY J. S. ROE, SURVEYOR GENERAL.

Subsequent survey carried out in 1846.

To the Honorable the Colonial Secretary,
Survey Office,
Western Australia.
13th. July 1846.

Sir,

I have the honor to report to His Excellency the Governor my return from inspecting Peel Harbor and its vicinity, which His Excellency had instructed me to examine, with a view to ascertaining the extent of the natural changes which have taken place since my last survey of that locality in the year 1837 and also the fitness of the harbor and of its adjoining anchorage of Warnbro' Sound, as places of shipment for large naval timber.

With respect to the changes I found them considerable. The low narrow neck of sandy land covered with bushes and coarse grass, which divides the harbor from Warnbro' Sound has increased in length 160 yards, covering a space over which I had previously found a depth of 10 fathoms of water; and from the extremity of the new projection thus formed a sandy spit, which is mostly uncovered except at high tides, now projects 97 yards in a N.E. direction towards the main, covering a space where the depth of water had previously been 3 to 6 fathoms. A dry sand flat varying in breadth between 10 and 22 yards at low water has also been thrown up on the shore of the main opposite the abovementioned sand spit over a surface which in February last was covered by 9 feet of water. The width of the entrance at low water has thus been reduced to 110 feet in which space the greatest depth at such times is 7 feet and it appears never to exceed 10 feet except during the prevalence of gales, when the water on the coast rises several feet above its ordinary level.

Another conspicuous alteration and to which all the rest are mainly attributable, is observed in the narrow neck of land abreast of the head of the harbor. Eight and a half years ago the neck was the lowest and the narrowest in that part and bore indication of having occasionally being breached over by the sea during the N.W. gales, notwithstanding which, it was at that time, sprinkled over with vegetation. A range of bushy sand hills along the seaward shore 6 or 8 feet above the level of the water opposed a strong barrier against any considerable encroachment of the sea and the whole bore the appearance of increasing permanency both with regard to soil and its productions. It is now evident that the sea has very recently made a formidable breach there 200 yards wide, every sand hill has been washed down in that space to within 3 feet of the water's level - bushes and vegetation of every kind have been uprooted and borne away and the surface represents, at this time, the appearance of a bare dry sand bar.

It is at this part that I conceive the great change has been wrought in the formation of the harbor and that a resistless inroad of the sea whilst the water was high during the S.W. gale

has washed over the neck bearing with it the sand and wreck to the lee side of the harbor and increasing its body of water at the same time to twice its former depth by washing out its former sandy bed and laying bare the present bottom of tenacious clay. The sand thus moved has been arrested in its progress by the operation of the S.W. swell through Warnbro' Sound and has thus formed the accumulation at the mouth of the harbor already noticed.

This accession of sand, where depth of water is so essentially required, appears at the present time to be in active progress, but from partially different causes and to threaten the total closing up of the entrance, unless some remedial measures are adopted without delay. From the closest observation which a limited stay on the spot would admit, the constant ebbing and flowing of the tide or current seemed the active agent in increasing the bar at the harbor's mouth, by keeping the sand in continual motion and forming deposits where none existed a few minutes before. Although the ordinary rise and fall of the tide does not exceed 3 feet, it was observed on this occasion to rise one foot in a quarter of an hour and to fall again with equal rapidity immediately afterwards; the inward set of the tide running at the rate of between 2 and 3 miles an hour along one shore, whilst on the opposite shore there was an outset of equal velocity. The eddies and commotion thus formed keep the sand in constant motion and when it is remembered that this continual agitation of sand and water is strongest in the confined space of 110 feet at low tide, it will cease to be a matter of surprise that the entrance should be gradually filling up, for the bar is too shallow to admit over it the full force of the current which sweeps strongly at times from the Southward along the shore of Warnbro' Sound.

Having thus stated in detail the apparent causes of the great changes which have taken place in Peel Harbor since 1837 it remains only to notice the probable best means of preventing this splendid little basin closing up altogether, or of opening its entrance to its former width and depth. The former may doubtless be readily effected by the customary application of a dredging vessel and two attendant barges or punts; the sand, as raised from the bottom, to be conveyed one-third of a mile to the beach formed at the head of the harbor, which, when well raised and might be brought to resist any further encroachment of the sea. To widen and deepen the harbor's mouth it would be necessary to cut a small canal through the root of the present sand spit, commencing near the end of the vegetation on Point Shelter. The sea being thus re-admitted, would isolate the spit and convert it into a mere sand shoal and by aid of the dredging boat speedily remove it altogether, at an expense of less than one hundred pounds.

As a place of shipment for timber or of resort for shipping for any other purpose Peel Harbor is totally unfit at present and will continue so until some measures are adopted for deepening the waters at its entrance. Warnbro' Sound, although affording very secure anchorage for shipping at all seasons, is nonetheless unfitted for the shipment of timber with that perfect security which would be requisite for a ship lying at anchor with timber ports (transom doors) open. The Sound is 2 1/2 miles North and South and 2 1/4 miles East and West, formed by the main land on all sides except between West and South, in which quarter of the

Compass it is well sheltered from a dangerous sea by a chain of islands, rocks, reefs and covered shoals and has convenient depths all over it from 5 to 11 fathoms on excellent holding ground of clay and mud; but notwithstanding these advantages as a place of general resort, as a place for the shipment of timber it must be viewed as an open roadstead, and, therefore not adapted for the purpose.

Such is the report which, to the best of my judgment I have been enabled to make to His Excellency of Peel Harbor and Warnbro' Sound with reference to the objects in contemplation. I will now beg leave to submit for His Excellency's consideration a few additional observations which I conceive well calculated to carry out in an efficient manner the object in view - namely that of shipping the splendid naval timber of this country, from some place of perfect security for shipping and of easy access.

At a distance of 3 miles in a N. by E. direction from Peel Harbor is a part of Mangle's Bay, at the south extremity of Cockburn Sound, where the depth of water is 5 to 6 fathoms at 100 yards from the sandy beach and 10 to 11 fathoms at a cable's length further out, on a bottom of the best possible holding ground consisting of soft clay. The great value of this deep water frontage, in an extent of more than a mile, on so excellent an anchorage, well sheltered from any wind that may blow, suggested the propriety many years ago of including it in a reserve for a townsite and it was accordingly arranged to form one of the boundaries of a reserve of 1,000 acres for a townsite to be called "Rockingham", which there has not yet appeared any necessity for opening to the occupation of the public. The attention which has recently been directed to the exportation of timber from this country for the use of the naval and ordinance yards of Great Britain and the complete fitness of Rockingham in every respect as a place for its embarkation would appear to point out the time as having arrived for opening it to the public, under such regulations as may previously be established. The country around it being of a level character and presenting but slight impediments on the surface as far as the forest lands; railways would prove of comparative accomplishment and the heaviest timber could be shipped with facility, from a pile jetty a few yards in length, into the timber port of a ship, with her bow or stern warped close to the shore. Numerous other advantages are presented by the locality of Rockingham, but I have confined myself to those more immediately under consideration.

The charts and plan I herewith forward will assist in explaining this report, which I regret having been unable to curtail within shorter limits.

Signed: J. S. Roe.

... the appearance of increasing ... it is ... 200 yards wide, every part will have been carried ... 8 feet of the water's level - ... of every kind have been uprooted and borne away ... at this time, the appearance of a ... of this part that I perceive too great change has been ... the formation of the harbor and that a ... of the sea whilst the water was high during the S.W. gale

As to the latter point of this question, viz, as to the security of the anchorage in the bay and Inner Harbour, I have to inform you, it is my opinion that it is a perfectly safe anchorage for any class vessel throughout the year.

With regard to the Inner Harbour, it is perfectly landlocked, and sufficiently large to contain 100, moored head to the beach, on which a man might leap from the bow. The general depth of this Harbour is from 4 to 7 fathoms and soft bottom.

On the third point of your letter, viz, "Whether a 500 ton ship, or even a first rate vessel, could with safety, (being perfectly clear or to her position off the coast), if caught in a gale of wind from the north-west or the south-west, run into the harbour and anchor in perfect security", I do not feel any hesitation in giving my opinion, and therefore confidently state, that, inasmuch as the landmarks near Safety Bay are so easily known and bold near the entrance - that inasmuch as there are no dangers which I have observed nor visible from the ship's deck - that inasmuch as the entrance is so deep, and a rock about 15 feet high marking its northern side, that I should run for the harbour without hesitation, under such circumstances, in any class vessel, not apprehending the slightest danger and also that this harbour may be approached with confidence at all seasons of the year. There is one small reef bearing W. by N. from the rock and distant from it about 4 miles. This reef, however, I consider no danger as it is always to be seen.

Herewith I enclose a copy of soundings &c, taken this day which may serve as a guide to others.

In conclusion, permit me to offer you and this British Colony, my sincere congratulations on the discovery of a port so admirably adapted for the general purpose of trade.

I am, Sir,

Your obedient Servant,

(Signed)

DAVID S. ADAMS

Barque "Pioneer", New Bedford,
Massachusits.

To Thomas Peel, Esq.

Copy of a letter from Thomas Peel Esq. To the Editor of the
"PERTH GAZETTE".

On board the Barque "Pioneer", Inner Harbour,
Safety Bay. May 22, 1838.

Sir--It is with infinite satisfaction that I forward to you the correspondence between Captain Adams, of the barque Pioneer and myself. The value of a good port to the coast must be evident to all your readers and this, I feel persuaded, will prove to be one of the first, safest and most commodious in New Holland.

To Captain Adams must be conceded the honour of being the first to prove the value of this harbour by taking his ship through a passage I must confess I never understood but to be impracticable and, indeed, practically unknown until his entrance. To that Gentleman, therefore, I think this Colony is indebted and I will avail myself of this opportunity of stating how much I am gratified in thus publicly giving to him the honour which is justly due to his enterprise.

I have to add that Captain Adams has placed a beacon on the rock on the north side of the entrance.

I am, Sir,

Your obedient Servant,
THOMAS PEEL.

Comments by the Editor of the "Perth Gazette"

.....importance for the security of vessels using our coast, that no time should be lost in making the capabilities of this harbour generally known. The property surrounding the anchorage belongs to Thomas Peel Esq.

We are informed there is much good feed in the neighbourhood for stock of any kind. This is important to those who may be contemplating the importation of stock. The cattle could be landed at Safety Bay and, after recovering from a lengthened voyage, they may be driven with safety to the pastoral districts in the interior.

We feel it our duty to caution masters of vessels not to venture to run into this harbour until a more extensive survey of the channel and the approaches to it, has been made as many dangerous reefs are known to surround it. If these difficulties were accurately laid down by some responsible and competent person - a service which the local government ought and no doubt will see performed as early as possible - it must be admitted this practical illustration Captain Adams has given of the utility of this harbour, for trading purposes, will prove of great service and advantage to the colony.

PERTH. 1st. June 1838.