



Australian Government
Australian Transport Safety Bureau

Grounding of *Searoad Mersey*

Grassy Harbour, King Island, Tasmania | 30 October 2016



Investigation

ATSB Transport Safety Report
Marine Occurrence Investigation
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Cover photo: Owen Foley

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Addendum

Page	Change	Date

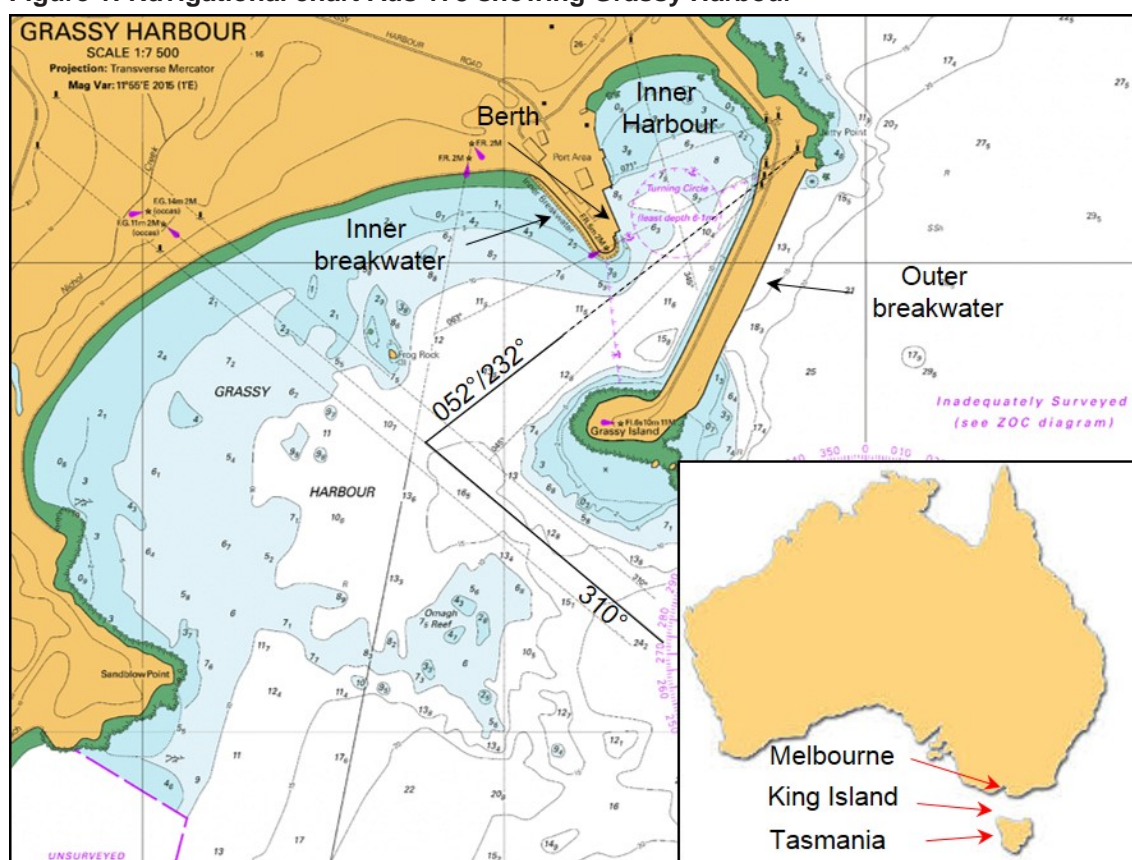
The occurrence

A limited-scope, fact-gathering investigation into this occurrence was conducted in order to produce this short summary report and allow for greater industry awareness of potential safety issues and possible safety actions.

What happened

On 30 October morning, the 119 m general cargo ship *Searoad Mersey* (Cover) arrived off Grassy Harbour, King Island (Figure 1) from Melbourne, Victoria. The ship was operating a 7-day schedule between Melbourne, King Island and Devonport, Tasmania. At about 0700,¹ the ship's master received a weather report for the harbour. The wind was from the north-west at 25 to 28 knots² as per the forecast.

Figure 1: Navigational chart Aus 178 showing Grassy Harbour



Source: Australian Hydrographic Office (annotated by ATSB)

At 0730, the ship approached Grassy Harbour's outer breakwater at 12 knots. Shortly after, the master manoeuvred the ship into the outer harbour and started a starboard turn to bring the ship onto the inner lead beacons for the inner harbour. Once inside the inner harbour, the ship's master swung the ship to port to berth the ship starboard side alongside the wharf.

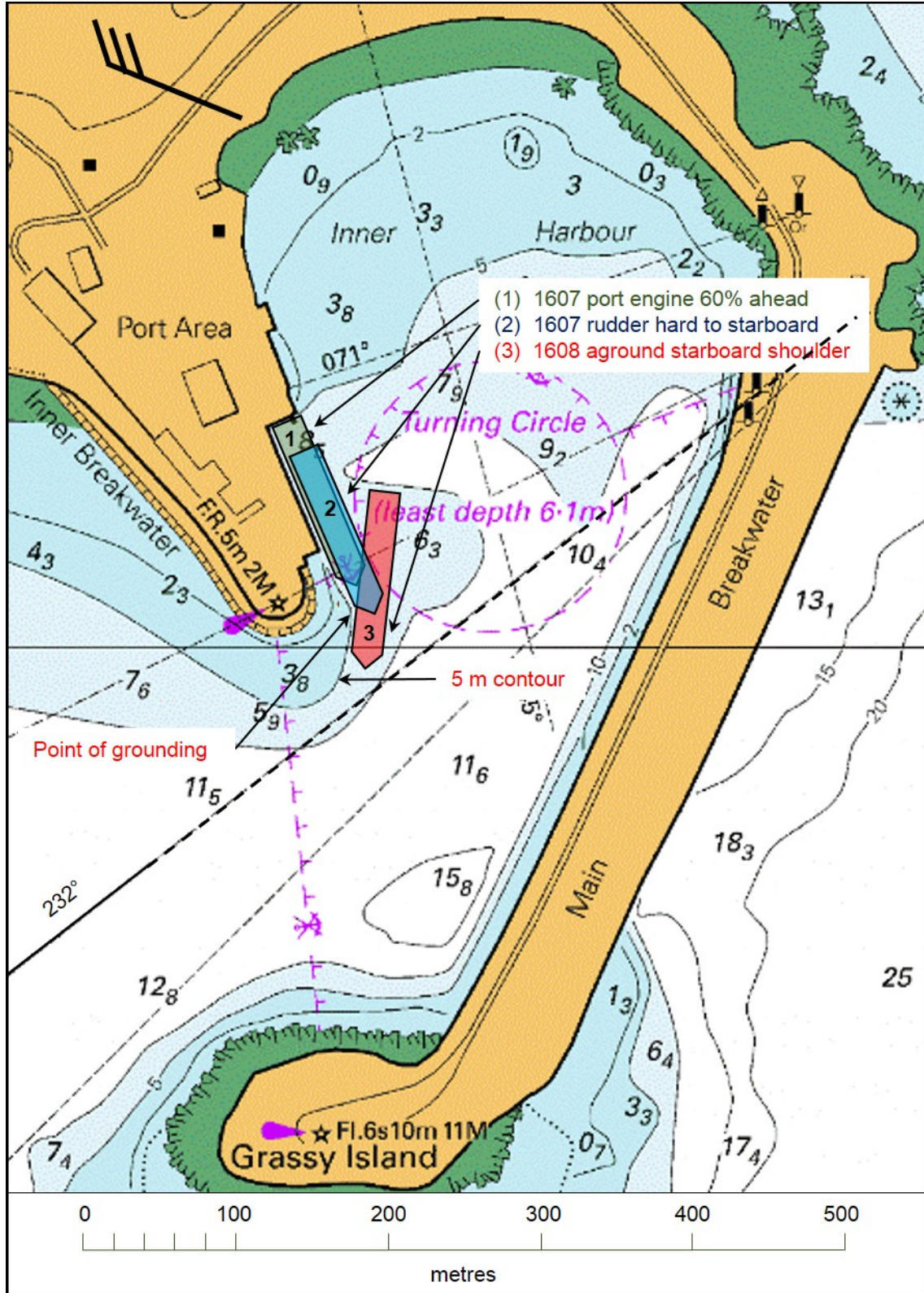
By 0800, *Searoad Mersey's* mooring lines were all fast. Shortly after, the ship's stern ramp was lowered and cargo unloading started. Cargo operations continued throughout the day with several delays. As a consequence, the ship's scheduled departure time of 1500 was delayed by an hour. The wind was from the west-northwest throughout the day at 27 to 33 knots.

¹ All times referred to in this report are local time, Coordinated Universal Time (UTC) + 11 hours.

² One knot, or one nautical mile per hour equals 1.852 kilometres per hour.

At 1604, the ship's main engines and bow thruster were on standby and ready for use. The master held a departure brief with the ship's bridge team detailing the departure plan. The ship's master and crew were very experienced and familiar with arrivals into and departures from Grassy Harbour. The standard brief detailed using the port engine ahead and full starboard rudder.

Figure 2: Searoad Mersey's grounding in the Inner Harbour



Source: Australian Hydrographic Office (annotated by ATSB)

The wind was still from the west-northwest at 27 to 33 knots and the tide was ebbing with low water expected at 1853. The ship's departure draughts were 5.1 m forward and 5.3 m aft. The master expected an under keel clearance of between 1 and 1.5 m for the departure.

At about 1605, the mooring lines were singled up forward and aft and by 1607, all mooring lines had been let go and recovered. The wind acting on *Searoad Mersey's* starboard quarter³ started to move the ship away the berth.

The ship's heading⁴ while alongside the berth was 155° and the next course was 232°, a 77° alteration to starboard. The master increased the port engine to 60 per cent ahead. The ship moved about 30 m ahead, parallel to the wharf, and the rudder was put hard over to starboard.

At 1608, the ship had moved ahead about 90 m and had started swinging to starboard. Shortly after, the ship grounded on the sandy bottom to the east of the inner breakwater (Figure 2).

The master stopped the port engine and put the bow thruster full to port. He then increased the starboard engine to 70 per cent ahead and the rudder hard to port. However, the ship's starboard shoulder⁵ remained grounded. Shortly after, the master unsuccessfully attempted to move the ship astern using both engines.

Searoad Mersey's crew sounded the ship's tanks to check for water ingress and started ballasting the ship's port tanks to list the ship. However, the port list had no effect and the ship remained grounded forward with the stern swinging freely in deep water. The second mate then started pumping ballast from the fore peak tank to the aft peak tank, to reduce the draught forward.

At 1648, the master reported the grounding to the ship's managers and the joint rescue coordination centre (JRCC) in Canberra. Shortly after, as the tide was still ebbing, he ordered the starboard anchor lowered to the sea bed.

At 1658, the main engines were stopped. Then, at 1700, the master felt *Searoad Mersey* roll slightly and immediately started the main engines. At 1705 with the main engines running astern, the ship started to move astern. The crew sounded the tanks again for any water ingress. The anchor was recovered and the rudder and engine tested. The master then manoeuvred the ship out of the inner harbour and continued the voyage to Devonport.

On 31 October, the ship's flag State authority, the Australian Maritime Safety Authority (AMSA), attended the ship in Devonport. The ballast tanks were inspected and no damage was found.

On 3 November, *Searoad Mersey* underwent an underwater hull inspection in Melbourne. Minor paint damage near the starboard shoulder was found but there was no structural damage.

ATSB comment

Since the last hydrographic survey in 2015, it is probable that silting had occurred near the inner breakwater. It is likely that the reduction in water depth to the charted depths were the result of the predominant westerly winds blowing sand from the nearby beach into the channel together with the movement of sand within the harbour.

Safety message

Masters, harbour masters and others responsible for ships calling safely at ports need to assure themselves of the reliability of charted depths, particularly in some small, remote ports. A possible reduction in charted depths due to local conditions, reference to the charted zone of confidence diagrams and the date of the last hydrographic survey are among the factors that should be taken into account.

³ The quarter is that part of the ship's side between the stern and abaft of midships.

⁴ All ship's headings in this report are in degrees by gyro compass with negligible error.

⁵ A shoulder is the area where a ship's hull form changes from the bow shape to the parallel mid body.

The ATSB SafetyWatch highlights the broad safety concerns that come out of our investigation findings and from the occurrence data reported by industry. Maritime pilotage is one of those safety concerns www.atsb.gov.au/safetywatch/maritime-pilotage.aspx.



General details

Occurrence details

Date and time:	30 October 2016 – 1608 (UTC +11)	
Occurrence category:	Serious incident	
Primary occurrence type:	Grounding	
Location:	Inner breakwater, Inner Harbour, Grassy Harbour, King Island, Tasmania	
	Latitude: 40° 03.98' S	Longitude: 144° 03.67' E

Ship details

Name:	Searoad Mersey	Year built:	1991
IMO number:	8914831	Gross tonnage:	7928
Flag State:	Australia	Length overall:	119.39 m
Classification society:	DNV GL	Moulded breadth:	18.52 m
Owner(s):	Australia Commonwealth Bank	Summer draught:	5 m
Manager:	Searoad Holdings, Australia	Main engine(s):	Wartsila 8R32E (2)

About the ATSB

The Australian Transport Safety Bureau (ATSB) is an independent Commonwealth Government statutory agency. The ATSB is governed by a Commission and is entirely separate from transport regulators, policy makers and service providers. The ATSB's function is to improve safety and public confidence in the aviation, marine and rail modes of transport through excellence in: independent investigation of transport accidents and other safety occurrences; safety data recording, analysis and research; and fostering safety awareness, knowledge and action.

The ATSB is responsible for investigating accidents and other transport safety matters involving civil aviation, marine and rail operations in Australia that fall within Commonwealth jurisdiction, as well as participating in overseas investigations involving Australian registered aircraft and ships. A primary concern is the safety of commercial transport, with particular regard to fare-paying passenger operations.

The ATSB performs its functions in accordance with the provisions of the *Transport Safety Investigation Act 2003* and Regulations and, where applicable, relevant international agreements.

The object of a safety investigation is to identify and reduce safety-related risk. ATSB investigations determine and communicate the safety factors related to the transport safety matter being investigated.

It is not a function of the ATSB to apportion blame or determine liability. At the same time, an investigation report must include factual material of sufficient weight to support the analysis and findings. At all times the ATSB endeavours to balance the use of material that could imply adverse comment with the need to properly explain what happened, and why, in a fair and unbiased manner.

Australian Transport Safety Bureau

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