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Australian Transport Safety Bureau

Foundering of *Venessa S*

Cabbage Tree Island, New South Wales, 20 June 2017

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Addendum

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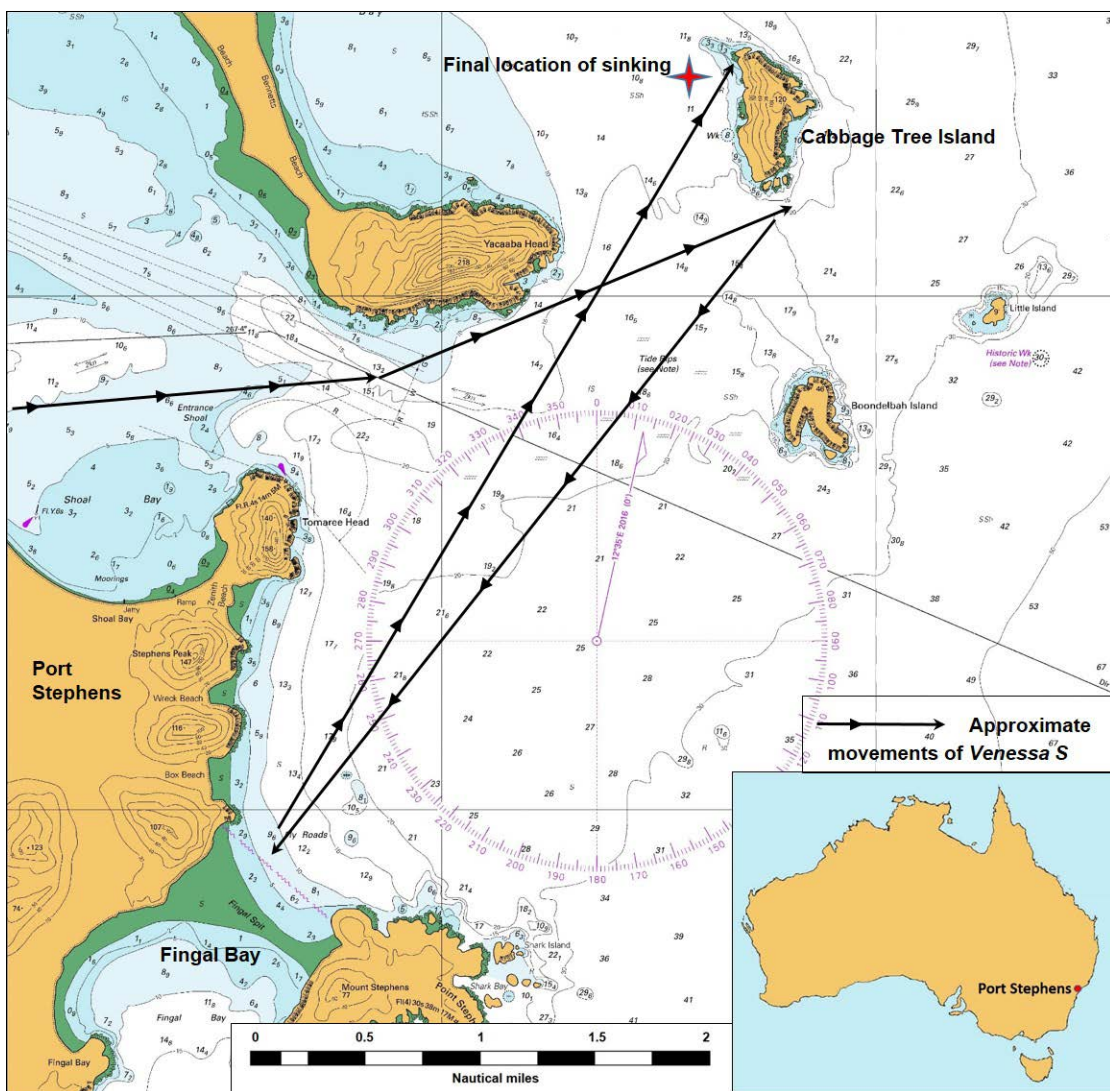
Foundering of *Venessa S*

What happened

On the afternoon of 20 June 2017, the 22 m fishing vessel¹ *Venessa S* (cover) was being prepared for sea at the Fisherman’s Co-op wharf, Port Stephens, New South Wales. The crew comprised the skipper and five deck crew, two of whom were new to the vessel.

Venessa S had an inboard marine diesel engine and was equipped with the required navigation equipment including radar, chart plotter,² echo sounder and global positioning system receiver unit. The intention was to proceed to Cabbage Tree Island (Figure 1), about 1 NM off the coast, to catch bait for the upcoming fishing trip.

Figure 1: Section of navigational chart Aus 209 showing waters off Port Stephens



Source: Australian Hydrographic Office, modified by the ATSB

¹ *Venessa S* was utilised for 'longline fishing', a commercial fishing technique that uses a longline with baited hooks attached at intervals by means of branch lines.

² Chart plotter: A device used in marine navigation that integrates global positioning system data with an electronic navigational chart. It displays the electronic chart along with the position, heading and speed of the ship.

At about 1530,³ the skipper had completed his pre-departure checks. These included checks on the engine, steering gear, fuel levels and navigation equipment. The skipper then moved the vessel to the refuelling wharf and took on approximately 3,100 L of diesel.

At about 1615, the skipper had finished refuelling and completed the vessel's safety induction for the two new crew members. Shortly after, *Venessa S* departed for Cabbage Tree Island, with a draught of about 2.3 m, forward and aft. The sky was partly cloudy with a southerly wind at 10 to 15 knots and a 2 to 2.5 m swell from the south to south-east.

Shortly after sunset, at about 1700, *Venessa S* arrived off Cabbage Tree Island. At 1703, the skipper decided that the swell made it impractical to catch bait there and to proceed to the Fingal Bay area, about 4 NM to the south of Cabbage Tree Island (Figure 1). At about 1730, *Venessa S* arrived at the baiting area near Fingal Bay and found insufficient bait. The skipper decided to go back to Cabbage Tree Island to anchor and wait for the swell to subside before trying to catch bait.

At about 1800, *Venessa S* approached the planned anchor position (Figure 2) on the north-west side of Cabbage Tree Island. The anchor was prepared and hydraulic power made available for the anchoring operation. As the skipper reduced power on the engine to slow down, it started to splutter and cough with no warnings or alarms. He immediately attempted to increase power to prevent it shutting down, but was unsuccessful. The engine stopped as *Venessa S* continued to approach the island at about 4.5 knots. The skipper attempted to restart the engine and succeeded after several attempts. The propulsion was immediately placed to full astern, but it was too late to avoid striking the bank. The skipper called out a warning to the crew and told them to brace for the impact.

Almost immediately after the skipper's warning, *Venessa S* struck the bank and then, as the astern propulsion took effect, slowly backed off towards deeper water. One of the crewmembers informed the skipper that the vessel was rapidly taking on water through a breach in the hull. The skipper instructed the crew to gather their life jackets and essential belongings and muster on deck in preparation to abandon the swiftly sinking vessel.

The skipper informed the vessel's owner of the situation using his mobile phone, and at 1807, broadcast a distress message over the radio. Meanwhile, the crew donned their life jackets and placed the vessel's tender⁴ into the water. In darkness, the skipper and crew then abandoned *Venessa S* for the tender, started the outboard motor and moved to a safe distance. *Venessa S* sank shortly after. The crew retrieved the vessel's life raft, which had inflated automatically as the vessel sank.

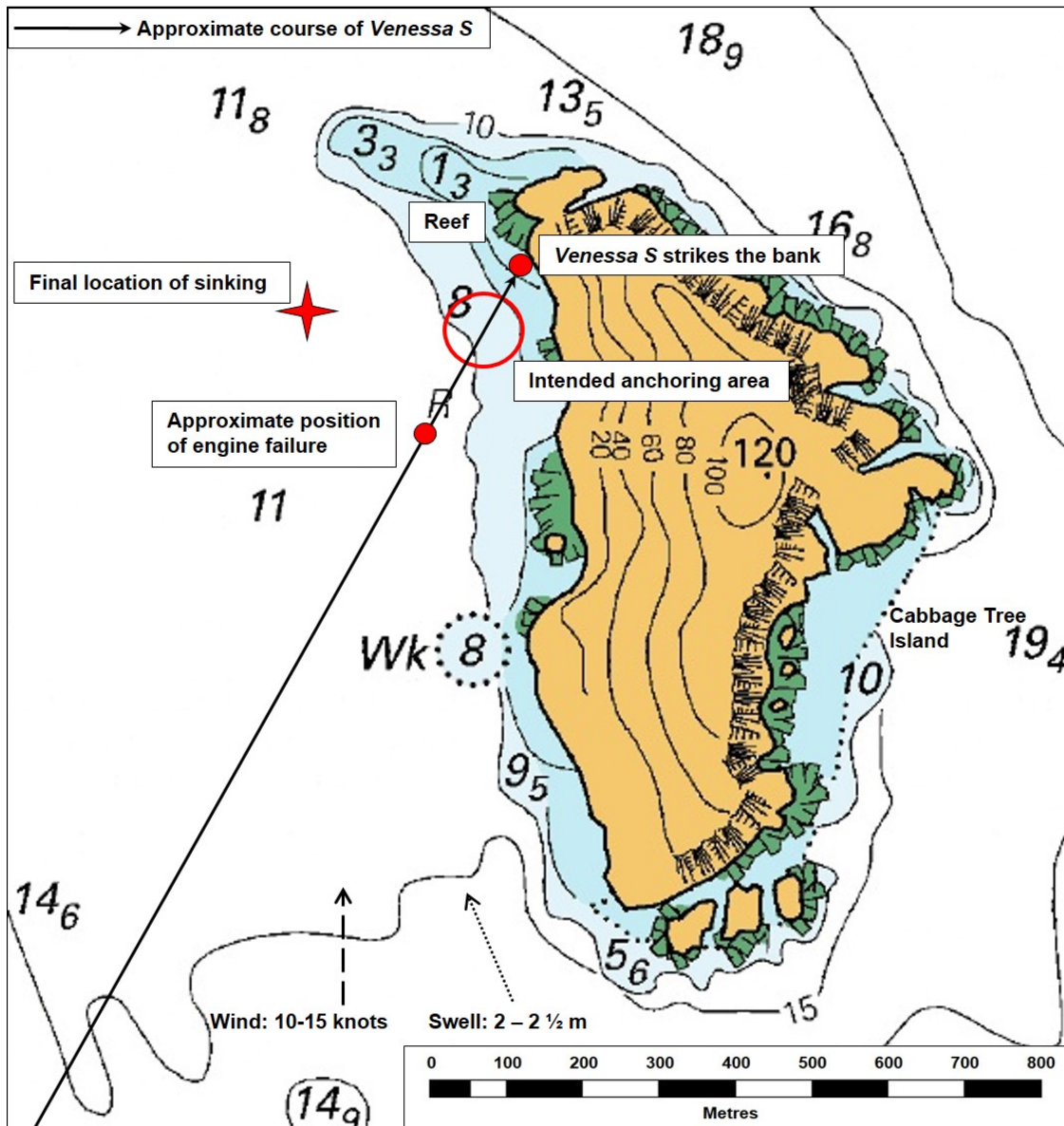
The skipper made phone contact with the local water police and remained in contact with them until they arrived on the scene at about 1920. The skipper and five crew were taken onboard the water police craft and the tender was taken in tow before proceeding back to the harbour. There were no reported injuries and the life raft was retrieved by the water police the next day.

In the days following the accident, the wreck of *Venessa S* began to break up and a notice for removal was issued by Roads and Maritime Services, New South Wales on 26 June 2017. The removal operation was completed on 14 July 2017 with the wreck removed from the seabed piece by piece and disposed of ashore.

³ All times referred to in this report are local time, Australian Eastern Standard Time, which is Coordinated Universal Time (UTC) + 10 hours.

⁴ Tender: A small boat usually carried by a larger vessel for service or support, in this case, used to shoot bait nets.

Figure 2: Detailed section of navigational chart Aus 209 showing Cabbage Tree Island



Source: Australian Hydrographic Office, modified by the ATSB

Grounding of Venessa S

On the return from Fingal Bay, the skipper intended to anchor at Cabbage Tree Island to shelter from the swell before resuming baiting operations. The intended anchor position was close inshore off the north-west side of the island with a reef to the north. It offered shelter from the swell, was a good location to catch bait and the skipper had anchored there often in the past. The approach to the anchor position put *Venessa S* on a heading directly towards the island. Consequently, when the engine stopped, the vessel's forward momentum, combined with the sea and swell, carried the vessel onto the bank.

Venessa S was required by the regulations⁵ to carry two anchors with the necessary cable and equipment. At the time of the engine stoppage, as *Venessa S* was approaching the anchor position, one of the anchors was prepared and ready to be dropped. However, it was not reported to have been used.

⁵ National Standards for Commercial Vessels (NSCV): Part-C – Design and construction, Subsection-7D – Anchoring systems, Chapter-3 – Deemed-to-satisfy solution for anchoring system, Paragraph 3.8 – Number of anchors.

The steering gear on *Venessa S* comprised a single, hydraulically operated rudder. When the engine stopped, there was no attempt made to turn the vessel away and *Venessa S* struck the bank head on. The skipper reported that he believed it was safer not to turn away as turning would have put the vessel into the reef instead of striking the bank.

Engine stoppage

Venessa S was equipped with a Yanmar 6AYM turbocharged, six cylinder marine diesel engine generating 485 kW of power. Both the skipper and owner indicated that the engine was robust, reliable and efficient. It had operated satisfactorily since it replaced the vessel's original engine about 8 years prior to this occurrence. Regular maintenance and checks were carried out by the vessel's owner assisted by the skipper. The vessel had five fuel tanks with about 5,000 to 6,000 L of fuel on board, which was sufficient for the intended trip. There was no evidence of any fuel quality issues and no reports of fuel issues from other vessels that used the refuelling wharf. There was also no evidence that the engine's emergency fuel shut-offs had been inadvertently activated. The skipper stated that he had never experienced a similar engine stoppage on *Venessa S* before.

Crew safety induction

Australian Maritime Safety Authority regulations⁶ require that each crew member be given a safety induction as soon as practicable after joining a vessel. The purpose of this induction is to adequately familiarise them with safety matters concerning their presence and duties on board the vessel.

The induction for the new crew who joined *Venessa S* was conducted before the vessel departed port. It included instruction in emergency procedures such as their emergency station, emergency duties and the use and location of the vessel's life-saving appliances. The skipper stated that having the crew properly inducted and prepared helped ensure a safe abandoning of the vessel in darkness.

Safety analysis

The engine stoppage and associated loss of propulsion occurred as the skipper began to slow down to anchor. The engine was successfully restarted after several attempts and placed at full astern, but there was insufficient time to stop before impacting the bank. The time lost due to the engine stoppage was vital to the successful outcome of the manoeuvre. This indicated that the loss of propulsion occurred at a critical point in the approach to the anchor position.

At the time of the engine stoppage, the anchor was prepared and ready for use. While it was not certain that the immediate use of the anchor would have prevented the grounding, it may have helped reduce the severity of the impact and the subsequent consequences. The skipper also elected not to attempt to turn the vessel away from the island in order to prevent a possible stranding on the reef.

While the cause of the engine stoppage could not be determined, the engine was successfully restarted soon after. This indicated that, whatever the cause, it was likely temporary rather than a catastrophic failure.

Once the decision had been made to abandon the vessel, the crew remained calm and professional. Life jackets were donned and the vessel abandoned for the tender, which had an outboard motor. Communications were established and maintained with rescue services until the crew were rescued. The vessel's life raft inflated automatically as the vessel sank and this was retrieved and secured to the tender by the crew. This ensured that they had additional survival resources at hand in the event of an extended wait for rescue.

⁶ National Standards for Commercial Vessels (NSCV): Part-E – Operations, Chapter-2 – Operational practices, Paragraph 2.8.1 – Initial safety training for crew.

Findings

These findings should not be read as apportioning blame or liability to any particular organisation or individual.

- A loss of propulsion occurred at a critical point in the approach to the anchor position, leading to the grounding and subsequent foundering of *Venessa S*.
- While unlikely to have prevented the grounding, the anchor was ready and available for use at the time of the engine stoppage.
- The cause of the engine stoppage, while undetermined, was likely temporary and not a catastrophic failure.
- The safety induction provided to the new crew members before departing almost certainly contributed to a safe and successful abandoning of the vessel in darkness.

Safety message

The effect of a loss of propulsion should be among the factors taken into account when planning approaches or manoeuvring close to navigational hazards. Mariners need to consider the possibility of machinery failure as an ever-present hazard and have appropriate contingency plans in place. The use of the anchor, especially if it is prepared and ready, should be among the options considered to slow or stop a vessel running into danger.

The safe abandoning of the vessel highlights the importance of a thorough safety induction for new crew. In emergency situations, valuable time may be lost trying to find or operate life-saving appliances under trying circumstances. A well familiarised crew, proficient in the use of the ship's life-saving appliances, increases the likelihood of a successful abandoning after an accident.

General details

Occurrence details

Date and time:	20 June 2017 – 1807 (UTC + 10)	
Occurrence category:	Accident	
Primary occurrence type:	Foundering	
Location:	West of Cabbage Tree Island, New South Wales	
	Latitude: 32° 41.14' S	Longitude: 152° 13.19' E

Ship details

Name:	<i>Venessa S</i>
Identifying number:	LFB12258
Call sign:	VJN2439
Flag State:	Australia
Builder:	Kali Boat Building and Repair, Port Adelaide
Year built:	1973
Owner(s) / Manager:	Klokan Fishing, Australia
Length overall:	21.8 m
Moulded breadth:	6.4 m
Moulded depth:	3.6 m
Main engine(s):	Yanmar 6AYM
Total power:	485 kW
Damage:	Destroyed

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 operations involving the travelling public.

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.

About this report

Decisions regarding whether to conduct an investigation, and the scope of an investigation, are based on many factors, including the level of safety benefit likely to be obtained from an investigation. For this occurrence, a limited-scope, fact-gathering investigation was conducted in order to produce a short summary report, and allow for greater industry awareness of potential safety issues and possible safety actions.