

Grounding and loss of the motor vessel *Channel Queen* near the Needles, Isle of Wight, England on 20 July 2023

Extract from The United Kingdom Merchant Shipping (Accident Reporting and Investigation) Regulations 2012 – Regulation 5:

“The sole objective of the investigation of an accident under the Merchant Shipping (Accident Reporting and Investigation) Regulations 2012 shall be the prevention of future accidents through the ascertainment of its causes and circumstances. It shall not be the purpose of an such investigation to determine liability nor, except so far as is necessary to achieve its objective, to apportion blame.”

NOTE

This report is not written with litigation in mind and, pursuant to Regulation 14(14) of the Merchant Shipping (Accident Reporting and Investigation) Regulations 2012, shall be inadmissible in any judicial proceedings whose purpose, or one of whose purposes is to attribute or apportion liability or blame.

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SUMMARY

At 0559¹ on 20 July 2023, the UK registered motor vessel *Channel Queen* grounded while passing over the wreck of the steam ship *Varvassi* near the Needles lighthouse, Isle of Wight, England, while escorting a relay swim event around the island. *Channel Queen* was then deliberately beached in nearby Scratchell's Bay.

The passengers and crew abandoned *Channel Queen* to its rigid inflatable boat and a liferaft and were then transferred to a Royal National Lifeboat Institution lifeboat. *Channel Queen* was subsequently declared a total loss.

The investigation found that there was no chartered navigational passage plan; effective use was not being made of the available navigation equipment to execute a safe passage; the qualified skipper had left the vessel to a kayak before *Channel Queen* grounded; and the vessel was being driven by *Channel Queen*'s owner, who was insufficiently qualified to be in command.

Swimon Proprietary Limited has been recommended to implement a process to ensure that any vessel it operates or engages from a third party to support its events is crewed by sufficient numbers of personnel who are suitably qualified for the intended area of operation and that these personnel remain on board at all times when underway.

The company has also been recommended to review the method of navigation passage planning used on board any vessel it operates to ensure that recommended good practice is followed, including making appropriate use of charts and charting systems.

Image courtesy of *Channel Queen*'s owner



Channel Queen

¹ All times are British Summer Time – universal time coordinated + 1 hour (UTC+1).

FACTUAL INFORMATION

Narrative

During the evening of 19 July 2023, while moored in Lymington Harbour, the skipper, owner, and a volunteer deckhand prepared *Channel Queen* for the following day's charter and, at about 2230, went to their quarters to rest. A fourth crew member, who was a second volunteer deckhand, arrived on board at around midnight and proceeded to their quarters, disturbing the resting crew as they did so. At 0315, the owner's alarm clock awoke the crew, and the owner, skipper and a deckhand prepared for the arrival of their passengers. The second deckhand remained in their cabin, resting.

Channel Queen had been chartered to support a relay swim event around the Isle of Wight in aid of a charity. At around 0415, a group of 10 relay swimmers arrived at the marina and were met by *Channel Queen's* owner, who escorted them to the vessel and then conducted a safety briefing.

Channel Queen was equipped with two navigation and helming stations, the lower one inside the cabin of the boat, the upper one outside on the upper deck flybridge. At 0450, *Channel Queen* departed Lymington for the swim start point in Alum Bay, near the Needles, Isle of Wight (**Figure 1**). The skipper and owner shared the helming of the vessel on the flybridge during the 40-minute passage.

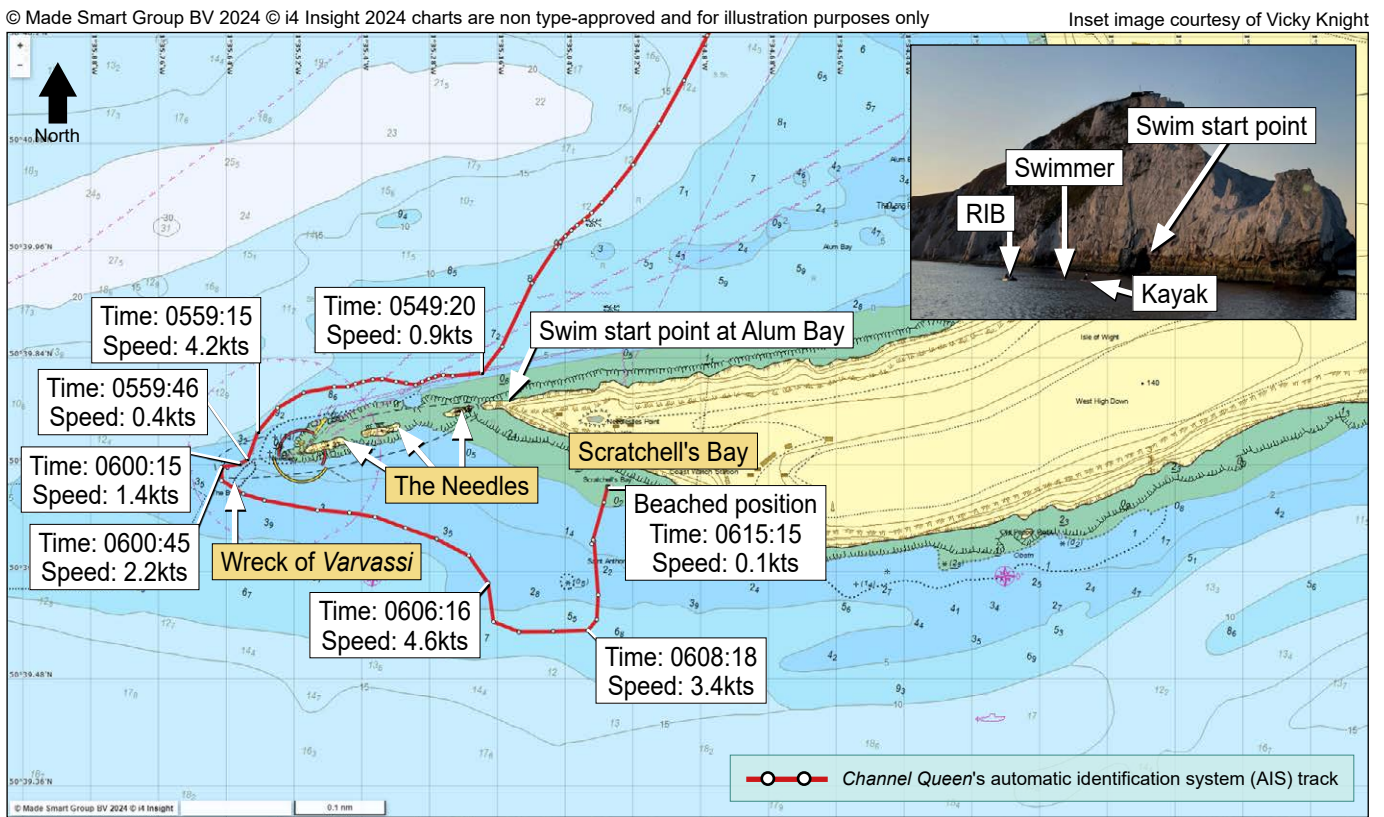


Figure 1: *Channel Queen's* AIS track and (inset) the swim start point

The accident

At 0530, *Channel Queen* arrived in Alum Bay and the skipper passed control of the helm to the vessel's owner shortly afterwards, saying, "Your helm". The owner acknowledged this by saying, "My helm". A formal handover briefing was not conducted. At 0537, the first swimmer entered the water as the skipper disembarked from *Channel Queen* and boarded a kayak. A deckhand boarded the vessel's outboard motor-powered rigid inflatable boat (RIB). The kayak and RIB were to provide close support to the swimmer on the first leg of the relay, passing through the shallow waters between the rocks of the Needles, known locally as 'Threading the Needles'. The planned start time of the swim coincided with the anticipated change of tidal direction from ebb to flood to assist the swimmer on the first stage through the Needles and eastwards across Scratchell's Bay.

On the flybridge, the owner drove *Channel Queen* in a south-westerly direction at a speed of 4 knots (kts) out of Alum Bay, intending to navigate west around the Needles to rendezvous with the swim team in Scratchell's Bay. Two members of the swim team were also on the flybridge, and the RIB shadowed *Channel Queen* as it commenced its passage to the west. At about 0557, the owner engaged in a three-way very high frequency (VHF) radio conversation with the swim support team in the RIB and kayak. The swimmer had requested earplugs due to an earache, and a plan was made for the RIB to collect a set from *Channel Queen* and take it to the swimmer. The group on the flybridge chatted as they looked eastwards towards the swim team; they were in good spirits, admiring the sunrise over the Isle of Wight, and took advantage of the near-perfect conditions to photograph the moment.

At 0559, *Channel Queen* shuddered noticeably as it passed over the charted wreck of *Varvassi* at a speed of less than 5kts and the port engine stopped (**Figure 2**). The owner immediately contacted the skipper by VHF radio to report that the vessel had struck an object. The deckhand who had been resting in the forward cabin alerted the owner that the hull had been breached and the vessel was flooding. Aware of the loss of power in the port engine, the owner immediately requested the skipper to return to *Channel Queen* for assistance. The skipper promptly reboarded the vessel, assessed the damage and decided to beach *Channel Queen* in Scratchell's Bay to prevent it from foundering.

© Made Smart Group BV 2024 © i4 Insight 2024 charts are non type-approved and for illustration purposes only

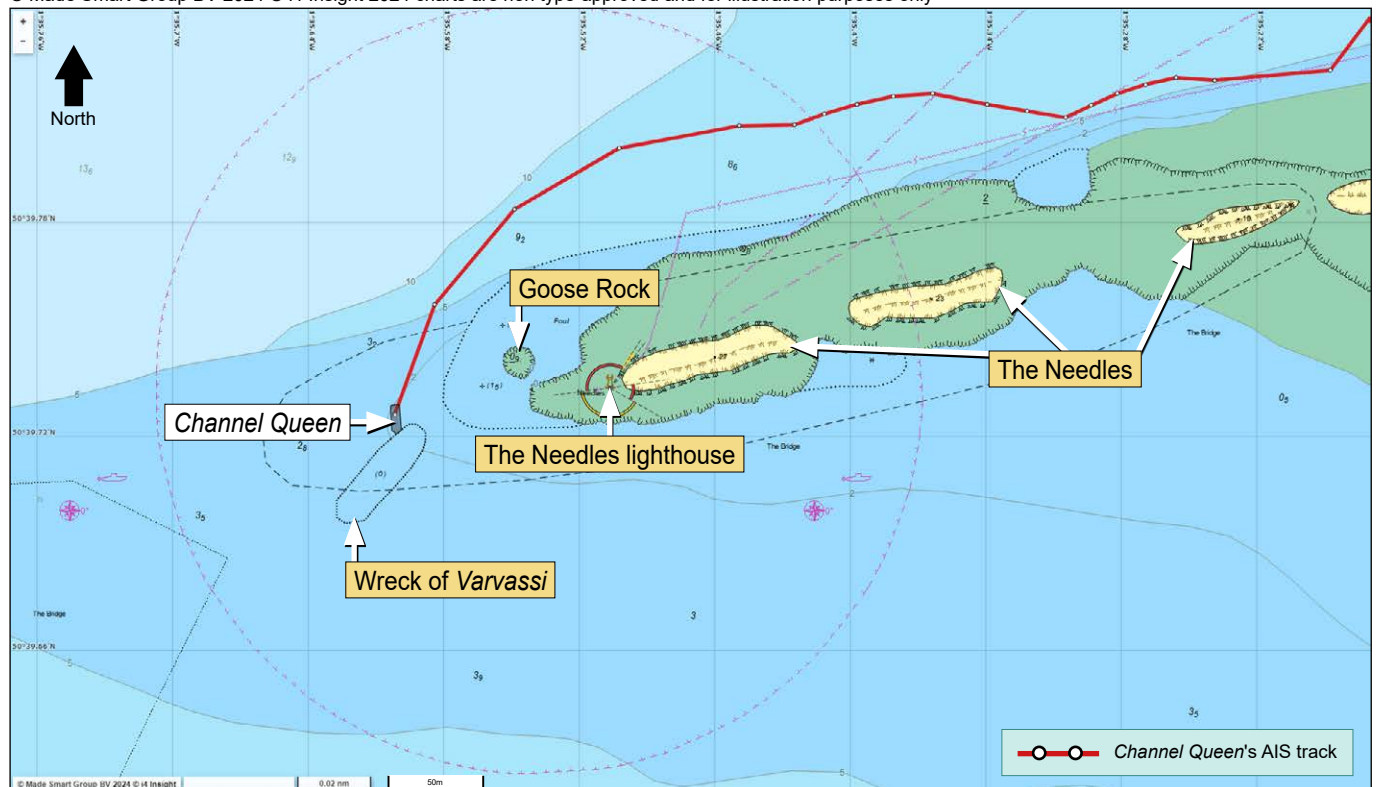


Figure 2: *Channel Queen's* AIS position as it approached the wreck of *Varvassi*

Emergency response

At 0606, *Channel Queen's* owner broadcast a "Mayday" call on VHF Channel 16. The call was received by Solent Coastguard and search and rescue assets were mobilised, including a helicopter and Royal National Lifeboat Institution (RNLI) lifeboats. At 0609, *Channel Queen* was beached in Scratchell's Bay, striking a submerged rock as it did so (**Figure 3**). Two nearby leisure vessels had heard the distress call and arrived to assist a short while later.

By 0646, all of *Channel Queen's* passengers and crew had safely abandoned the vessel to its RIB and one of its two liferafts. They were transferred to an RNLI lifeboat a short distance away that subsequently landed them ashore in Lymington Harbour. Some passengers had suffered minor injuries, which were tended to locally.

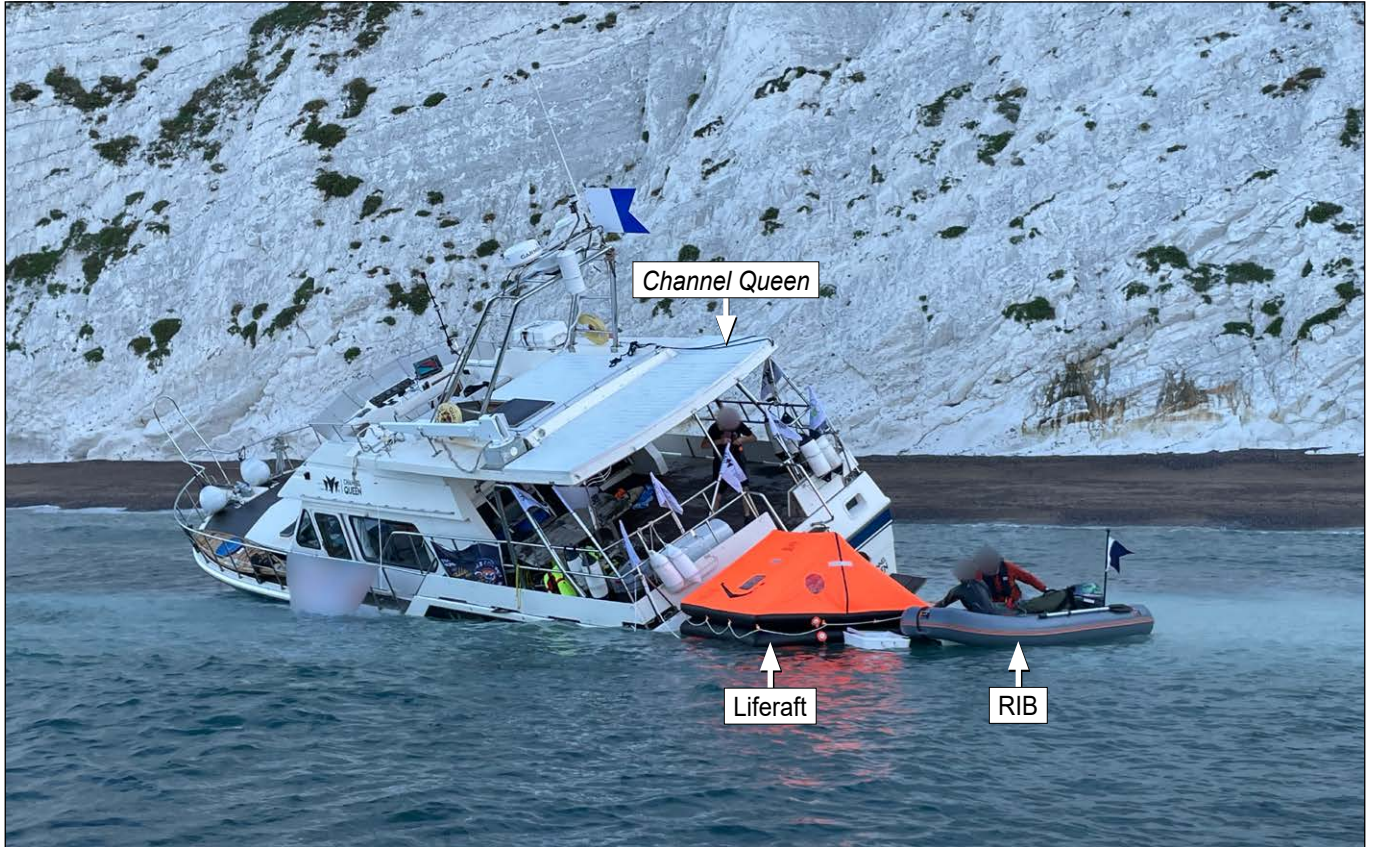


Figure 3: *Channel Queen* beached in Scratchell's Bay

Environmental conditions

The wind was light north-westerly with smooth seas and good visibility. Sunrise occurred at 0514. Low water was at 0523 with a height of 0.7m above chart datum² and the sea temperature was 18°C.

Channel Queen

Channel Queen was a 16.25m length Trader Tarquin 54 Sunliner built in 1986. It had a draft of 1.6m and was powered by twin Caterpillar 210-horsepower diesel engines. It had been purchased by the owner in May 2022 and used by the owner and skipper for several long-distance leisure voyages. A significant refit of the vessel was carried out during May 2022 and *Channel Queen* was subsequently inspected and certified so that it could be operated commercially.

Channel Queen had two navigation and helm stations. For navigation, the main station inside the cabin was equipped with a large chart table for its paper charts and two electronic navigation systems; one manufactured by Garmin and the other by Raymarine. Both electronic systems displayed a combination of electronic charts, radar and depth sounder information. The Garmin was supplemented by a portable slave Garmin tablet computer. The helm position on the flybridge was equipped with a Raymarine chart plotter that also displayed echo sounder depth information. Electronic navigation charts were installed on all three plotter units, each of which could be programmed with waypoints, routes for navigation planning, and shallow water contour alarms to alert the person at the helm to any approaching hazards identified on the route. The Raymarine plotter could simultaneously display the same chart at two different scales using a dual-screen function. No waypoints, routes or alarms had been entered into any of the plotters to warn of any potential navigational risks, and the Garmin tablet computer, available on the flybridge, was switched off.

Channel Queen's skipper and owner preferred to helm the vessel from the flybridge as this offered an unobstructed 360° view around the vessel, unlike the lower helm in the cabin where visibility was more restricted.

² Water level at the lowest astronomical tide.

There were two paper charts at the chart table that covered the area of the swim event. Neither chart was marked with waypoints or routes, nor were hazards or points of interest likely to be encountered during the event highlighted.

When *Channel Queen* grounded, the Raymarine flybridge plotter was zoomed in to show the largest possible scale chart covering a small geographical area, set up with a single screen display and principally being used to provide depth information.

The crew

Channel Queen's crew consisted of four members: the skipper, the owner, and two volunteer deckhands. The skipper and owner met in June 2022, and had worked closely together ever since.

There were no formal schedules of duties, watchkeeping arrangements, or rest periods for the crew manning *Channel Queen* or the swim support RIB and kayak. Periods of work and rest were not planned, recorded or monitored.

The owner

The owner, a highly motivated and accomplished marathon swimmer with extensive experience organising swim events and coaching the swimmers over many years, had limited experience of navigating vessels as a commercial boat operator during these events. In addition to owning *Channel Queen*, the owner was the sole proprietor of the company that managed the swim event, Swimon Proprietary Limited (Swimon).

The skipper

Channel Queen's skipper was an experienced boater and kayaker who had completed a high standard of kayak training. Over a period of 12 to 15 years, the skipper had accumulated many hours of sea time in a sea kayak, including several solo long-distance journeys.

Training and qualifications

The skipper and owner had undertaken training at three separate Royal Yachting Association (RYA) training centres over a 10-month period, beginning in August 2022.

The skipper had successfully completed the RYA Yachtmaster Coastal certificate of Competency in May 2023, which had been commercially endorsed.

The owner held a course completion certificate for the RYA Powerboat Advanced course. However, they did not hold the commercially endorsed RYA Yachtmaster Coastal certificate of competency required to command *Channel Queen* when operating commercially.

The RYA Yachtmaster Coastal syllabus included, among other subjects: safety at sea; boat handling; responsibilities of the skipper; navigation; chartwork; passage planning; and meteorology.

The swim relay

The swim relay event aimed to complete an anticlockwise circumnavigation of the Isle of Wight in about 25 to 36 hours, starting and finishing at Alum Bay. The skipper had compiled a detailed spreadsheet, which accounted for the tides and swimmers' abilities, to determine the relay exchange positions along the route. Swimmers would each undertake 1-hour segments, entering and exiting the water from *Channel Queen's* swim platform. The event pre-planning undertaken by the owner and skipper included agreement that additional support would be provided by *Channel Queen's* RIB and the skipper's kayak during the shallower stages of the swim. The agreed plan for the start of the event was for the skipper, as the most experienced and competent kayaker, to disembark from *Channel Queen* to the kayak and escort the first swimmer to the start location, accompany them through the Needles rocks, and then reboard *Channel Queen* in Scratchell's Bay once it had rounded the Needles.

Wreck of Varvassi

The 114m *Varvassi*, a steel-hulled cargo ship, grounded on 5 January 1947 and sank. The wreck was unmarked but clearly identified on paper and electronic charts and the hazard was referred to in numerous publications and online. Four sections of the wreck remained: two boilers, the engine, and the propeller shaft. The boilers were upright on the seabed, approximately 4m in diameter with a vertical height of 2.5m, and were awash at chart datum. The innermost boiler was approximately 100m from the base of the Needles lighthouse.

The *Varvassi* wreck lay outside and clear of the Needles marked main navigation channel, west of the Needles lighthouse. The Bridge buoy, a west cardinal navigation mark³ 0.8 nautical miles west of the Needles lighthouse, indicated the shallower depth of water from that point eastwards and included the wreck.

A high volume of inshore traffic frequently passed the *Varvassi* wreck (**Figure 4**).

Image courtesy of SW (Sail-World)

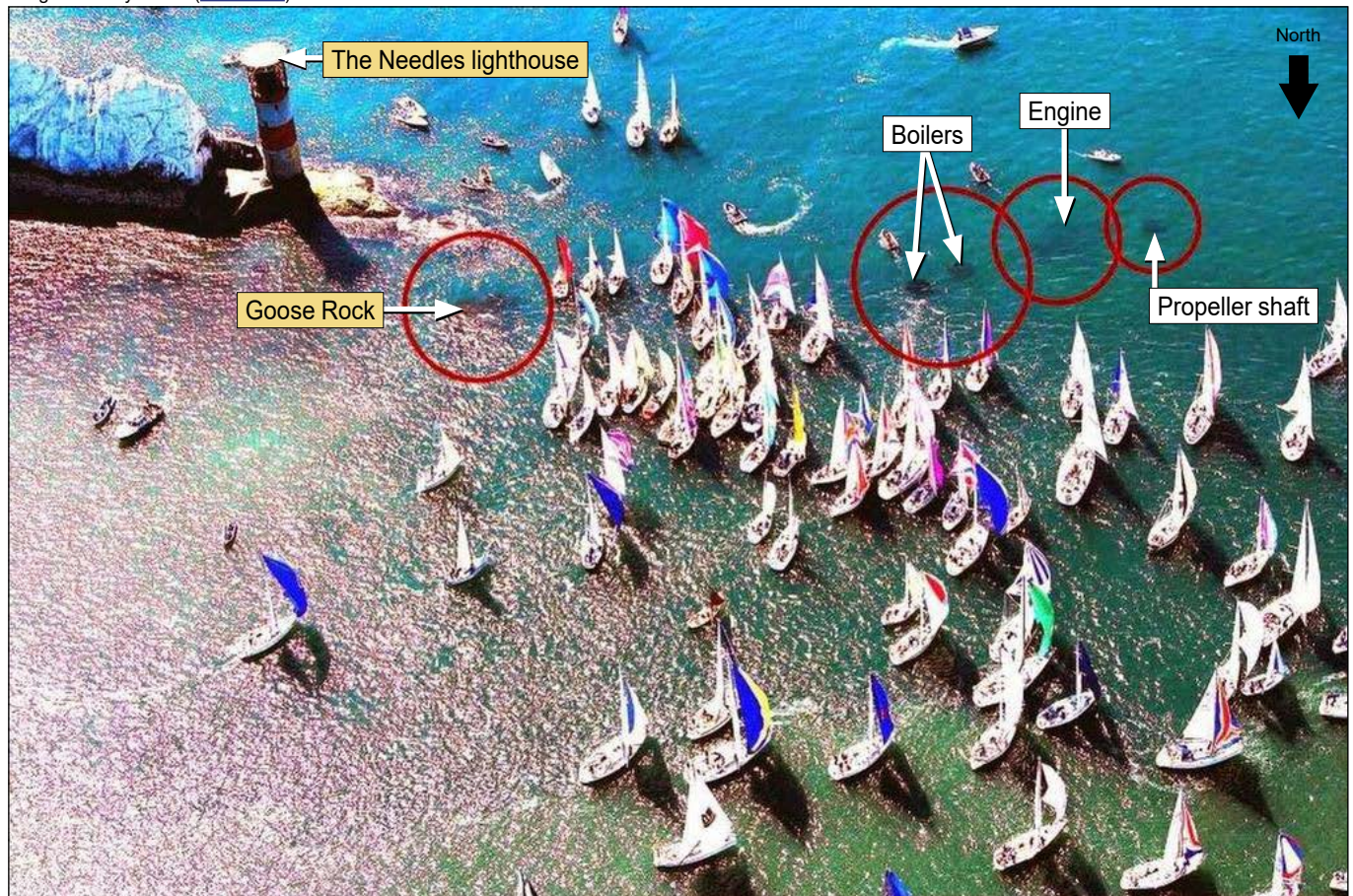


Figure 4: Round the Island Race competitors passing the remains of *Varvassi*

Passage planning

Channel Queen's skipper's chosen method of passage planning was to refer to the paper charts and a nautical almanac and make handwritten notes that included identified hazards on the route, buoyage and their lights, and lighthouses and their light sequences as well as mandatory VHF reporting points. Any items to port of *Channel Queen* that would be encountered on passage were written on the left-hand side of the page, and those to starboard were written on the right. The plan did not include creation of waypoints, or courses and distances to follow between them. The method of planning included

³ A pillar or spar marked with black and yellow horizontal stripes. The colour pattern and the triangles (marks) on the top indicate whether the deepest or safest water is to the north, south, east, or west.

identification of shallow water hazards and aimed to keep *Channel Queen* in areas with a minimum water depth of 4.0m at all states of the tide. The plan was written on the pad of paper and was kept at the lower helm position in the main cabin.

The passage plan was neither marked on the paper charts nor input into the electronic navigation systems.

Risk assessment

Before the swim event the owner had completed a voyage and event risk assessment for the King's Harbour Master (KHM) Portsmouth, using the KHM's comprehensive risk assessment template.

Section 5 of the completed risk assessment made a general reference to manning and stated that:

At any one time, there will be at least 1 x Safety Kayaker or RIB operator wearing high vis clothing no more than 30 metres from the swimmers, aiming to maintain a distance of 3 - 10m where possible. Channel Queen will be in the vicinity of the swimmer/s in the water and will have onboard qualified safety personnel, a qualified Lifeguard and Lifesaver, and a dedicated VHF/Comms person plus Skipper. The RIB will have a safety person at all times. [sic]

The specific hazard of grounding had been acknowledged at point 7.9 in the completed risk assessment. The numerous primary control measures that had been noted to reduce the risk of occurrence from a *High Risk* to a *Minimal Risk* included:

1.1 The use of tidal prediction information

1.24 Safety Training - Two crew will have all safety and first aid courses needed for commercial skipper work in the UK

There was no mention of passage planning, execution, or navigation monitoring as control measures.

Previous swim events

In 2022, Swimon had conducted two circumnavigation swim relays of the Isle of Wight from *Channel Queen*. At that time, the owner and skipper were not qualified to command the vessel commercially so the owner had contracted qualified individuals to be in command of *Channel Queen* for each event. The skipper then undertook the role of assistant navigator. Swim support using the kayak was shared between the skipper and the owner.

The two previous events had started at Ryde bay and Bembridge Point on the eastern side of the Isle of Wight. However, on each occasion the swimmers had faced unfavourable tidal conditions on arrival at the Needles. Threading the Needles was described as *the trickiest part of the swim* and it was decided to start future events in Alum Bay and in low water, which offered the optimal tidal conditions to begin this passage.

REGULATION AND GUIDANCE

The International Convention for the Safety of Life at Sea (SOLAS), 1974 Chapter V Regulation 34 – Safe navigation and avoidance of dangerous situations – required that:

Prior to proceeding to sea, the master shall ensure that the intended voyage has been planned using the appropriate nautical charts and nautical publications for the area concerned, taking into account the guidelines and recommendations developed by the Organization.⁴

Merchant Shipping Notice (MSN) 1868 (M) Amendment 1 – Standards of Training, Certification & Watchkeeping Convention: UK Requirements for Safe Manning and Watchkeeping required that:

All vessels must be adequately manned for their safe operation, with due regard for the nature of their operation and their location.

Small Commercial Vessel Code

Small commercial vessels operating under the UK flag and in UK waters had to comply with the merchant shipping regulations or an MCA Code of Practice. *Channel Queen* was certified to the *Code Of Practice for the Construction, Machinery, Equipment, Stability, Operation and Examination of Motor Vessels, of up to 24 Metres Load Line Length, in Commercial Use and Which Do Not Carry Cargo or More Than 12 Passengers* (the Code).

The Code related to the construction of a vessel, its machinery, equipment, stability, and the correct operation of a vessel so that safety standards were maintained. The Code also dealt with manning levels and the qualifications needed for the senior members of the crew for the intended area of operation. *Channel Queen* was certificated to Area Category 2, allowing operations up to 60 miles from a safe haven with appropriately qualified crew on board. The swim event started in categorised waters and was planned to stay within Area Category 3, up to 20 miles from a safe haven. The skipper's commercially endorsed RYA Yachtmaster Coastal certificate of competency was the minimum level of certification required to be in command of *Channel Queen* for the event.

Annex 7 of the Code detailed the required number of qualified personnel to be carried on board and provided information on:

Minimum Qualifications of the Person In Charge of the Vessel (Skipper) and of the Additional Persons Required to be Carried On Board [sic]

The Code stated as part of a declaration at 27.4.3 that:

The vessel will be manned at all times in accordance with the Code...for the intended area and type of operation...

Guidance

The RYA Passage Planning handbook⁵ provided guidance on how to prepare for sea voyages, which included:

- **Tides:** *check the tidal predictions for your trip and ensure they are fit for what you are planning to do.*
- **Crew:** *take into account the physical ability of your crew. Crews suffering from cold, tiredness and seasickness won't be able to do their job properly and could even result in an overburdened skipper.*
- **Navigational dangers:** *make sure you are familiar with any navigational dangers you may encounter during your boating trip. This generally means checking an up-to-date chart and a current pilot book or almanac.*

⁴ Resolution A.893(21) – Guidelines for Voyage Planning.

⁵ Chennell, P (2011), reprinted 2022, page 8.

Similar accidents

There have been numerous groundings on the wreck of *Varvassi*. These have frequently occurred during the Round the Island Race⁶, when competitors have attempted to make the passage between the wreck and the Needles lighthouse (**Figure 4**).

ANALYSIS

Overview

The investigation concluded that *Channel Queen* grounded when passing over the wreck of *Varvassi* while the qualified skipper had disembarked to a kayak in order to supervise a swimmer. The rudimentary passage plan did not support the insufficiently qualified owner, who was navigating the vessel by eye while also dealing with a number of distractions. The passengers and crew abandoned to a small RIB and a liferaft and were soon rescued. This section of the report will discuss the contributory factors to why *Channel Queen* struck the wreck, including shortcomings in passage planning and the vessel's operation.

Passage planning

Channel Queen's passage plan did not conform to accepted good practice taught during RYA Yachtmaster Coastal training. The skipper believed that a well-constructed passage plan identifying courses to steer, alteration of course waypoints and clearing distances from hazards on route would not be appropriate for the swim event and that any plan needed to be more dynamic in nature. The emphasis was placed on swimmer capabilities, changeover points and tidal conditions; there were no waypoints, courses or cross-track distances plotted on paper charts or input into the electronic navigation aids and no limiting depths or areas of danger highlighted. The *Varvassi* wreck was well documented and was clearly marked on the vessel's navigation charts as a significant hazard, but that *Channel Queen* would be passing it near the time of low water when the highest parts of the wreck were nearly awash had not been identified. As such, the passage plan did not provide a sound basis for a safe circumnavigation of the Isle of Wight while providing swim support close inshore.

Handover of the helm

The process for handing over responsibility for the safe navigation of *Channel Queen* lacked formality. The skipper was primarily focused on the swim event and preparing to board the kayak and was confident in the owner's ability to navigate and helm *Channel Queen*. Consequently, there was no exchange of information beyond confirming helm responsibility between the departing skipper and the relieving owner.

The skipper's decision to leave the vessel, with the owner's agreement, was contrary to the requirement contained within the Code and MSN 1868 for a person with the appropriate qualifications to be carried on board. The skipper disembarking to the kayak had become normalised practice during the previous events when an additional qualified person was engaged to be in command of *Channel Queen*. The requirement for the qualified skipper to always remain on board when *Channel Queen* was underway had been overlooked by both the skipper and the owner.

Safety of navigation

The owner navigated *Channel Queen* by eye while also monitoring the swimmer's progress. The owner also communicated with the support kayak and RIB by VHF radio to resolve the swimmer's need for earplugs while interacting with the two swim team members present on the flybridge. These tasks demanded the simultaneous monitoring of multiple individual pieces of information, which divided the owner's attention. *Channel Queen's* risk assessment identified the need for a dedicated VHF operator in addition to the skipper on board. The owner, when preparing the risk assessment, had identified

⁶ An annual one-day yacht race around the Isle of Wight organised by the Island Sailing Club. The race regularly attracted over 1,200 boats and around 10,000 sailors.

the need to allow the skipper to focus on the safe navigation of the vessel. However, when the skipper and one crew member departed *Channel Queen*, the mitigating measures in the risk assessment were not followed.

There were two electronic navigation aids at the flybridge helm position. However, the Garmin tablet was switched off and the Raymarine unit was not being optimally used to provide early warning of navigational errors or the presence of hazards. The Raymarine plotter display was zoomed in to show a small geographical area and was not being used for route navigation so would not have provided the operator with a view of *Channel Queen's* passage and position. Its use to display depth information under the keel would have provided very limited early warning of *Channel Queen's* approach to the wreck.

The skipper and the helm were focused on the swim event rather than the safe navigation of the vessel. When *Channel Queen* grounded, the navigation equipment was not being used to execute a passage plan and the skipper had left the vessel to the kayak after a very brief handover to the insufficiently qualified owner, who was attempting to deal with multiple tasks single-handedly.

Safety management and hours of rest

The late arrival on board of the fourth crew member, and the early arrival of the passengers, meant that the three on-duty crew would have had a maximum of 4 hours of interrupted sleep before the start of the swim event and were likely to have been suffering from tiredness. Even though the swim event had only just started it is possible that this impacted the crew's individual operational abilities and affected their decision-making.

When determining the safe operation of the vessel, it is the responsibility of the skipper to ensure that a person with adequate experience is in charge of the navigational watch at all times. This requirement, along with crewing the kayak and the RIB, monitoring the VHF and supporting the 10-person swim team, imposed a substantial workload on the four-person crew over the planned 25 to 36-hour voyage. A thorough analysis of the tasks the crew had to conduct, combined with the need for a watchkeeping roster to cover the day and a half that *Channel Queen* could be underway, would have identified that there were insufficient qualified crew on board to safely conduct the planned activity.

CONCLUSIONS

- The skipper's passage plan did not provide a sound basis for the safe circumnavigation of the Isle of Wight while providing swim support close inshore.
- The skipper disembarking to the kayak had become a normalised procedure during previous swim support events when an additional qualified person was engaged to be in command of *Channel Queen*. The requirement for the qualified skipper to always remain on board had been overlooked by both the owner and the skipper.
- *Channel Queen's* skipper and owner prioritised the swim event over the safe navigation of the vessel. When *Channel Queen* grounded, the navigation equipment was not being used to execute a passage plan and the skipper had left the vessel after a very brief handover to the insufficiently qualified owner, who was not qualified to command and was attempting to deal with multiple distractions single-handedly.
- A thorough analysis of the tasks the crew needed to conduct, combined with the need for a watchkeeping roster to cover the day and a half that *Channel Queen* could be underway, would have identified that there were insufficient qualified crew on board to safely conduct the planned activity.

RECOMMENDATIONS

Swimon Proprietary Limited is recommended to:

- 2024/123** Implement a process to ensure that any vessel operated by Swimon, or engaged from a third party to support its events, is crewed by sufficient numbers of personnel suitably qualified for the intended area of operation and that they remain on board at all times when underway.
- 2024/124** Review the method of navigation passage planning used on board any vessel it operates to ensure that recommended practice is followed, including making appropriate use of charts and charting systems.

Safety recommendations shall in no case create a presumption of blame or liability

VESSEL PARTICULARS

Vessel's name	<i>Channel Queen</i>
Flag	UK
Coding authority	Yacht Designers & Surveyors Association
Type	Swim support vessel
Registered owner	Privately owned
Manager(s)	Swimon Proprietary Limited
Year of build	1986
Construction	Glass reinforced plastic
Length overall	16.25m
Gross tonnage	Not applicable
Minimum safe manning	Not applicable
Authorised cargo	Not applicable

VOYAGE PARTICULARS

Port of departure	Lymington, England
Port of arrival	Lymington, England (Intended)
Type of voyage	Near coastal
Cargo information	None
Manning	4

MARINE CASUALTY INFORMATION

Date and time	20 July 2023 at 0559 BST
Type of marine casualty or incident	Very Serious Marine Casualty
Location of incident	Scratchell's Bay, Isle of Wight, England
Injuries/fatalities	None
Damage/environmental impact	Constructive total loss
Ship operation	Commercial voyage
Voyage segment	On passage
External & internal environment	Wind north-westerly 8kts, smooth sea. Daylight; Clear, visibility good
Persons on board	14