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“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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## Grounding and subsequent loss of the fishing vessel *Ocean Maid* (BA 55) on Cairnbulg Point, Aberdeenshire, Scotland on 24 October 2022

### SUMMARY

At 0549<sup>1</sup> on the 24 October 2022, the UK registered fishing vessel *Ocean Maid* grounded on Cairnbulg Point to the east of Fraserburgh, Scotland. The four crew evacuated to a liferaft and were subsequently rescued by the Royal National Lifeboat Institution. Two of the crew sustained minor injuries and the vessel later broke up and sank. There was no significant pollution.

Image courtesy of Alex Young ([MarineTraffic.com](http://MarineTraffic.com))



*Ocean Maid*

The investigation found that:

- The vessel grounded because the lone watchkeeper was frequently absent from the wheelhouse in the period before the grounding, which meant the vessel's position was not being effectively monitored.
- The watchkeeper's ability to judge external visual indicators was compromised due to poor visibility, internal lighting from the television in the wheelhouse and visits to the galley as these affected his night vision.
- The reliance on past tracks as a form of navigation meant that the vessel's passage was reactive and unplanned, increasing the likelihood of grounding.
- The watchkeeper had been informally assessed by the skipper as able to keep a watch but there was no requirement for the watchkeeper to hold a navigation qualification.
- It was also established that the performance of the watchkeeper in monitoring the fishing vessel's passage was likely to have been affected by a lack of sleep.

In response to this accident the vessel's owner, Ocean Maid Limited, has supported a watchkeeper to attend recognised navigation courses and altered their onboard practices to ensure watchkeepers do not leave the wheelhouse. Recommendations have also been made to Ocean Maid Limited to improve the standards of watchkeeping and ensure lighting hazards with the potential to affect night vision are removed from the wheelhouse or reduced to a safe level on equipment fitted to any future vessels it owns.

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

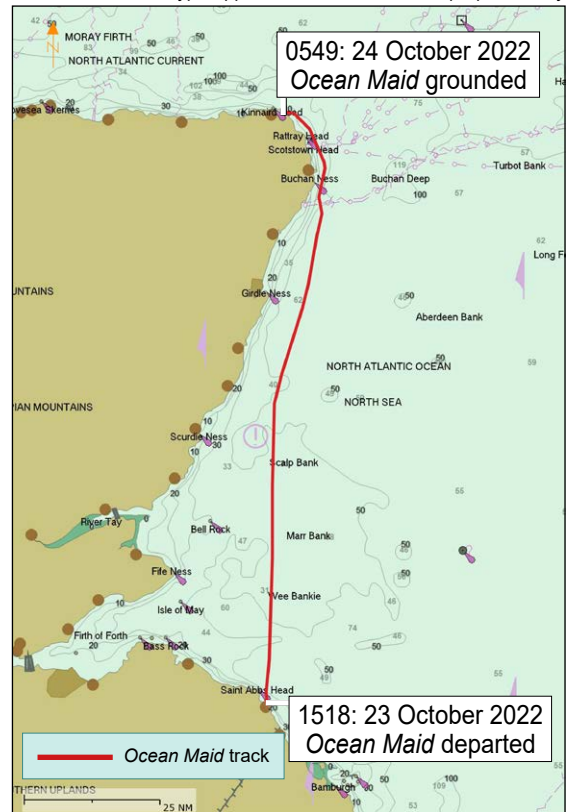
# FACTUAL INFORMATION

## Narrative

At 1518 on 23 October 2022, the fishing vessel *Ocean Maid* left Eyemouth, Berwickshire, Scotland to make the overnight passage to a shipyard in Fraserburgh, Aberdeenshire, Scotland for planned vessel maintenance and minor repairs (**Figure 1**). On board were the skipper/co-owner (the skipper), the skipper's father, who co-owned the vessel (the co-owner) and two crew members – a watchkeeper and deckhand. The visibility was poor and, as it was dark and foggy, the co-owner took the first navigational watch alone in the wheelhouse. Once clear of Eyemouth Harbour, the skipper and crew watched television in the accommodation area two decks below the wheelhouse until 2100, after which the watchkeeper and deckhand went to their bunks to rest.

At about 2200, the skipper took over the navigational watch from the co-owner who went to bed, leaving the skipper alone in the wheelhouse. During the watch, the skipper monitored the passage on the Olex plotter (**Figure 2**), checked the weather forecast using their mobile phone and listened to music that was playing from the television on the port side of the wheelhouse. At midnight, the skipper made tea and cooked a pizza in the galley one deck below before returning to the wheelhouse to eat it. By 0230, the visibility was improving, the sea state was moderate and the tidal stream was setting to the north-west at 1 knot (kt). It had started to drizzle and there was a fresh south-easterly breeze.

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**Figure 1:** *Ocean Maid*'s route before it grounded near Fraserburgh



**Figure 2:** Wheelhouse equipment

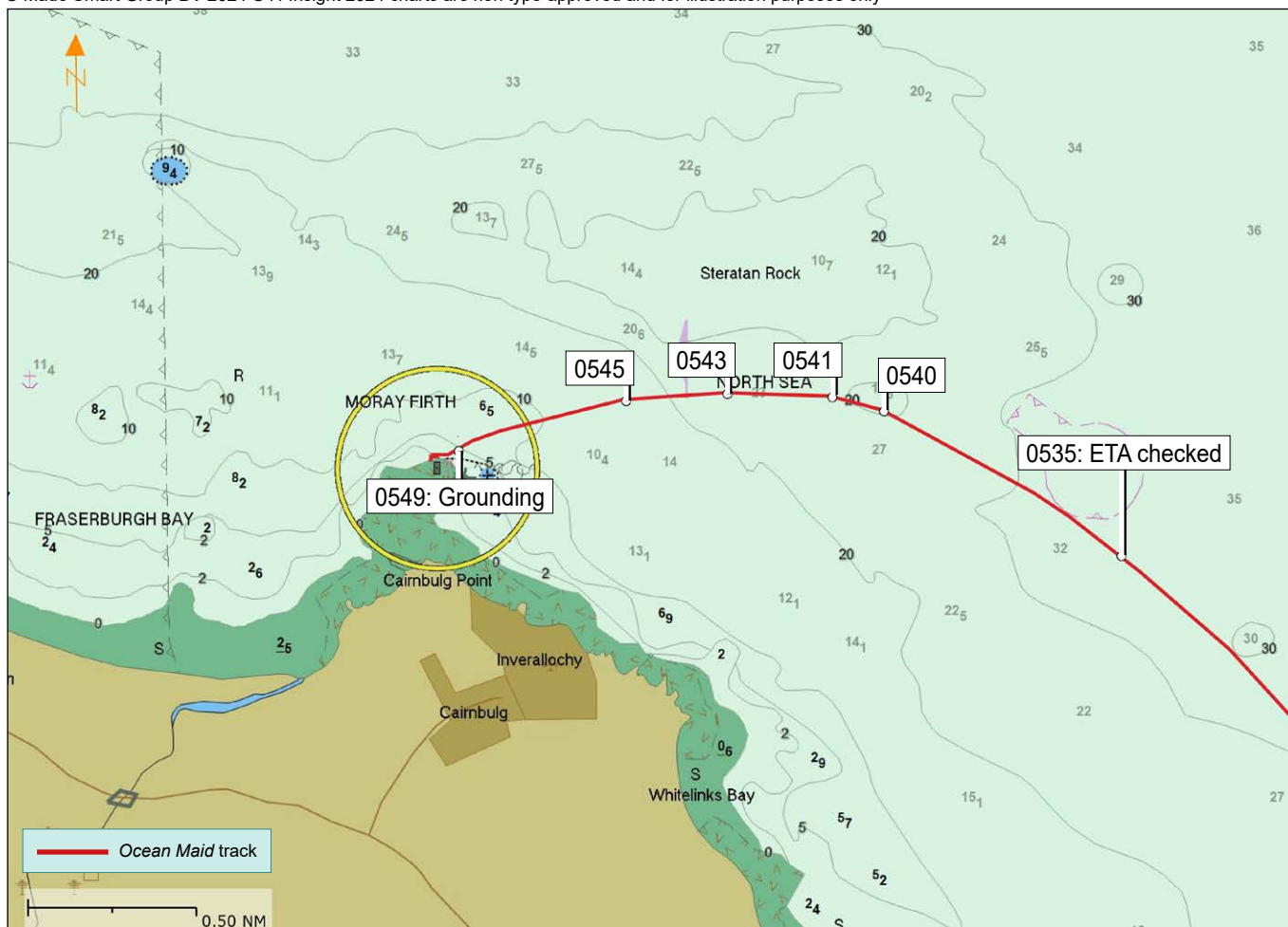
At 0230, the watchkeeper awoke and made a cup of coffee before going up to the wheelhouse to take over the watch from the skipper. The watchkeeper talked to the skipper for 20 minutes, which included receiving guidance on the intended passage, before the skipper left the wheelhouse to sleep. The watchkeeper sat in the chair on the starboard side of the wheelhouse, monitoring the passage visually through the windows and on the Olex electronic chart plotter. The television remained switched on but with the volume low. At around 0300, the drizzle had eased and the fog was clearing. At about 0500, the watchkeeper went down to the galley to make a cup of tea and some toast, before returning to the wheelhouse.

At approximately 0535, the watchkeeper checked the estimated time of arrival (ETA) at Fraserburgh by hovering the electronic chart plotter's cursor over the harbour. The watchkeeper recalled seeing an ETA of 0556 or thereabouts on the plotter display. Despite reduced visibility due to further drizzle, the watchkeeper could see lights through the wheelhouse windows and believed them to be Fraserburgh. The watchkeeper then left the wheelhouse and went down to the galley to make tea for the crew, which was part of the usual pre-arrival routine.

At about 0539, the watchkeeper returned to the wheelhouse and reset the watch alarm, which had just started to sound. At 0540, the watchkeeper made an alteration of course<sup>2</sup> to 285° to intercept a track indicated by a yellow line on the Sodena electronic chart plotter showing the route into Fraserburgh. The watchkeeper then made three more course alterations: to 271° at 0541; to 265° at 0543; and to 260° at 0545 (**Figure 3**). The watchkeeper did not recall making the four alterations or checking the vessel's position after 0540. At about 0545, the watchkeeper returned to the galley to finish making the tea and called down into the accommodation to wake the rest of the crew.

At 0549, as the watchkeeper returned to the wheelhouse, a loud bump was heard as the vessel started to go aground on Cairnbulg Point at a speed of 8kts.

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**Figure 3:** Chart showing the four course alterations leading up to the grounding

### Post-grounding actions

The crew of *Ocean Maid* was woken by the sound of the vessel grounding. The skipper quickly made their way to the wheelhouse to assess the situation, arriving a few seconds after the accident. The engine was taken out of gear and, as the vessel started rolling violently from side to side, the skipper realised that *Ocean Maid* was hard aground. At 0550, the skipper issued a verbal “Mayday” distress call to the coastguard via Channel 16 on very high frequency (VHF) radio.

<sup>2</sup> The courses indicated in this report are approximate, based on ground track information (i.e. courses made good over the ground) transmitted by the fishing vessel's automatic identification system (AIS).

The co-owner and the deckhand fetched lifejackets from the accommodation and donned them. They then made their way via the galley to the aft deck, where they were joined by the watchkeeper. The deckhand remained on the aft deck while the watchkeeper and co-owner climbed forward to release the starboard liferaft, which was stowed on the foredeck in front of the wheelhouse. *Ocean Maid* continued to roll violently as the following swell forced the vessel further onto the rocks.

At about this time the Fraserburgh Royal National Lifeboat Institution (RNLI) all-weather lifeboat (ALB) and its crew were preparing to depart for Macduff, Aberdeenshire for maintenance. A crew member was monitoring VHF Channel 16 before the launch approval was received and recognised the incident location referred to during the “Mayday” broadcast. The coxswain and crew decided to respond, inflating the ALB’s XP inflatable boat<sup>3</sup> ahead of expected tasking from the coastguard, which was officially requested at 0553.

In the meantime, *Ocean Maid*’s deckhand had embarked the fully inflated liferaft, followed by the watchkeeper and co-owner. The skipper, having finished the “Mayday” transmission to the coastguard, headed to the liferaft, taking a handheld VHF radio from the wheelhouse. The skipper fetched a lifejacket as they passed through the galley, and collected two Fladen flotation jackets<sup>4</sup>, an extra buoyancy aid and a knife from the shelter deck store.

At 0605, the RNLI ALB departed Fraserburgh. A few minutes later, *Ocean Maid*’s skipper embarked the liferaft and the crew pushed it away from the vessel’s side. *Ocean Maid* was still rolling violently and the crew were increasingly concerned that the vessel would strike them as the liferaft was still attached to the vessel but drifting on its painter towards the western side of Cairnbulg Point (**Figure 4**).

At 0612, the ALB arrived at Cairnbulg Point and located the liferaft. The proximity of the liferaft to the rocks prevented the ALB from reaching it and so the RNLI crew launched the XP boat. The ALB coxswain talked to *Ocean Maid*’s skipper via radio, instructing the skipper to cut the liferaft painter. The RNLI crew on board the XP boat threw the liferaft a heaving line, which the skipper attached to the liferaft, enabling the XP boat to tow it to the ALB and recover the crew of *Ocean Maid* safely onto the lifeboat.



Image courtesy of [RNLI](#)

**Figure 4:** RNLI video still, showing the position of the liferaft just before rescue

Image courtesy of [RNLI](#) / [Billy Watson](#) / [Deadline News](#)



**Figure 5:** *Ocean Maid* aground on Cairnbulg Point

At 0638, the ALB departed Cairnbulg Point and headed back to Fraserburgh. The crew of *Ocean Maid* were medically assessed and breathalysed by the Police at the lifeboat station, with all four crew returning negative results for alcohol consumption. The deckhand was taken to hospital and treated for bruising to their arm. The co-owner suffered breathing difficulties and was treated with oxygen at the lifeboat station but recovered after the event.

The vessel was aground on Cairnbulg Point for most of the 24 October (**Figure 5**) but had broken up by the following day.

<sup>3</sup> A small inflatable inshore rescue/tender boat based on an Avon Rover 280.

<sup>4</sup> A waterproof certified buoyancy jacket that protects against the first cold shock on entry into the water.

## ***Ocean Maid***

*Ocean Maid* was a wooden fishing trawler built in 1986. The skipper and co-owner had purchased *Ocean Maid* as a joint venture in 2018. The vessel had operated for approximately 14 of an available 24 months between 2020 and 2022, having undergone several lengthy periods of repair in a shipyard. In March 2022, the skipper secured guard vessel<sup>5</sup> work, which required *Ocean Maid* to meet the standards<sup>6</sup> of the Scottish Fishermen's Federation Services (SFFS) Limited<sup>7</sup> as the agent for these contracts. The certification process included reviewing the location and provision of lifesaving appliances (LSA) with SFF surveyors and conducting regular drills and toolbox talks with the crew. The vessel fished for prawns between guard vessel contracts, landing its catches in Eyemouth or Whitby, England.

*Ocean Maid's* general arrangement included a forepeak store, fish hold, engine room and crew cabin. The main deck was located one deck below the wheelhouse and accessed through the galley.

The navigation equipment in the wheelhouse included one Sodena chart plotter, two Olex chart plotters, two radars (one was broken at the time of the accident) and one Navitron watch alarm connected to the autopilot. The instruments in operation were set to night mode during the transit to Fraserburgh. It was reported that the watch alarm had a 3-minute dormant period, after which a pre-alarm buzzer warning would sound in the wheelhouse. If not reset within 30 seconds, an alarm would then sound in the galley and accommodation. The reset button could be reached from the wheelhouse chair. The wheelhouse was also equipped with a television. At the time of the accident this was tuned to a music channel. No issues were raised during certification with respect to wheelhouse visibility.

## ***Ocean Maid's crew***

*Ocean Maid's* skipper was a career fisherman and had held an STCW<sup>8</sup> Deck Officer Certificate of Competency (Fishing Vessel) Class 2 for 19 years, working on board fishing vessels operating around the UK.

The co-owner also held an STCW Deck Officer Certificate of Competency (Fishing Vessel) Class 2 and was an experienced fisherman, having worked at sea and owned vessels for over 50 years. The co-owner shared the navigational watches with the skipper and watchkeeper. It was usual for the co-owner to take the evening watch until approximately 2200, allowing the skipper and crew to take their meal breaks.

The watchkeeper had attended all required Seafish courses but held no formal navigation qualifications. The watchkeeper had worked on board fishing vessels for 20 years. They had been a member of *Ocean Maid's* crew for 7 years, during which they had been informally mentored by the skipper and co-owner to take an unsupervised night watch. The approach to Fraserburgh Harbour at night was a routine task that the watchkeeper had completed at least six times before the accident.

The deckhand was a Ghanaian national whose qualifications had recognised equivalency to UK requirements. These could not be verified due to the loss of documents in the accident. The deckhand had attended the Seafish safety awareness course in 2018.

## ***Navigational watchkeeping***

On keeping a lookout the Maritime and Coastguard Agency (MCA) expected fishing vessels to adhere to the instructions provided in Marine Guidance Note (MGN) 313 (F) *Keeping a Safe Navigational Watch on Fishing Vessels*, which stated:

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<sup>5</sup> Local fishing vessels engaged to deter other vessels in the vicinity from approaching vulnerable subsea assets and potentially hazardous areas (e.g. pipelines and cables, offshore sites, renewable energy installations, etc).

<sup>6</sup> Fishing vessel skippers and owners were required to complete pre-sailing checklists and an inspection to ensure the vessel's readiness for guard ship duty.

<sup>7</sup> Owned by the Scottish Fishermen's Federation, SFFS provided a route for companies wishing to hire the services of SFF member vessels and facilitated the associated contracts.

<sup>8</sup> International Convention on Standards of Training, Certification and Watchkeeping for Seafarers 1978, as amended (STCW Convention).

*Even where there is no statutory requirement for certificated officers, it is still essential that watch keepers are always experienced, capable, and have been instructed in their duties. This is especially vital if you are making a landfall, navigating close to the coast, in restricted visibility, severe weather conditions or in areas where there is dense traffic;*

*The person in charge of a navigational watch should not undertake any other duties that would interfere with the safe navigation of the vessel; and*

*Domestic radios, cassette players and television sets and other recreational items should never be used in the wheelhouse when they will distract a watchkeeper from their duties.*

Watchkeepers were not required to attend a watchkeeping course such as those provided by Seafish<sup>9</sup>.

The practice of the on-duty watchkeeper making tea for everyone and waking the off-duty crew just before entry into harbour was long-established on board *Ocean Maid*. The skipper had identified the hazard of leaving the wheelhouse unattended in a formal risk assessment (**Figure 6**).

Image courtesy of the [SafetyFolder](#) (Quinham)

	Hazard area/ Activity	Risk	Controls in place	Risk outcomes	Risk level
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**Figure 6:** *Ocean Maid* watchkeeping risk assessment

## Passage planning

The MCA expected commercial fishing vessels to comply with the International Maritime Organization (IMO) Resolution A.893(21) *Guidelines for Voyage Planning*, which required a detailed voyage or passage plan to include:

*The plotting of the intended route or track of the voyage or passage on appropriate scale charts: the true direction of the planned route or track should be indicated, as well as all areas of danger.*

## Passage making on board *Ocean Maid*

The navigation plan from Eyemouth to Fraserburgh was to follow past tracks recorded on the Olex electronic chart plotter: crossing the Firth of Forth, around Rattray Head, past Cairnbulg Point and across Fraserburgh Bay into Fraserburgh Harbour. The exact past track followed could not be reconstructed after the accident as the electronic chart plotters were not recovered before *Ocean Maid* broke up. It was reported that the Sodena chart plotter contained no past track for a passage directly into Fraserburgh Harbour. This plotter displayed a user-defined line extending from the harbour entrance into the bay, which the watchkeeper was expected to follow once *Ocean Maid* had reached that approximate area using the previous track on the Olex plotter.

The watchkeeper did not have a passage plan to follow apart from a past track on the Olex plotter (indicated as a white line on the Olex plotter) and then a line drawn on the Sodena plotter by a previous user (a yellow line on the Sodena plotter) out from Fraserburgh Harbour towards the past track. The watchkeeper habitually made small alterations of course to follow the track.

## Fishing and guard routines

The routine when prawn fishing was to fish between 0830 and 1830 daily, completing two 5-hour tows per day, with steaming to the fishing grounds taking 1 to 2 hours. During the tows, the crew would perform maintenance or rest. Each watchkeeper on guard routine undertook 5-hour to 6-hour watches (there were four crew on board during the period before the accident) and completed maintenance for the remaining time. The crew would sleep on board during both routines.

<sup>9</sup> Seafish is a non-departmental public body (NDPB) that supports the seafood industry in the UK: <https://www.seafish.org/about-us>. Seafish provide a non-mandatory watchkeeping course for the fishing industry.

## Sleep and low attentiveness

Merchant Shipping Notice (MSN) 1884 (F) *Amendment 1 ILO Work in Fishing Convention, Working Time*, stated that:

*Regulation 7(3) requires that every fisherman shall have minimum rest of 10 hours in any 24-hour period and of 77 hours in any 7-day period; and*

*Under Regulation 7(4), for workers daily hours of rest may be divided into no more than two periods, one of which shall be at least six hours in length, and the interval between consecutive such periods shall not exceed 14 hours.*

Annex 1 outlined that:

*All fishermen have responsibility for their own health and safety and to ensure that nothing that they do, or fail to do, puts at risk the health and safety of others working on the vessel. This includes ensuring that they are adequately rested when they arrive at the vessel to work, and when they go on duty.*

Annex B of MGN 505 (M) *Amendment 1 Human Element Guidance – Part 1 Fatigue and Fitness for Duty: Statutory Duties, Causes of Fatigue and Guidance on Good Practice*, highlighted a danger period between 0200 and 0600 when natural attentiveness was at risk of dipping, leading to crew members being more prone to falling asleep or making errors and misjudgements. MGN 505 also advised that:

*Adults need between 6 to 9 hours of sleep per night, preferably during one single, uninterrupted period and that Shift work can cause...sleep debt that leads to sleepiness during working days and days off.*

The watchkeeper had completed a 21-day guard duty and 4 days of prawn fishing on board *Ocean Maid* before the passage to Fraserburgh, had been awake from 0300 to 2130 (over 18 hours) the day before the accident, and had slept for approximately 5 hours in the period immediately before taking the watch. The watchkeeper felt very tired on waking at 0230 to take the watch alone but felt capable of doing so. There were no statutory requirements for fishing vessels to have an additional lookout during the hours of darkness, although MGN 313 (F) outlined the dangers of falling asleep on watch and ensuring that watchkeepers should be fit for duty.

## Cairnbulg Briggs light beacon

Cairnbulg Briggs light beacon was built in 1858 to mark the hazard posed by the reef at this point of the coast. In 2006, the beacon had been re-engineered with LED<sup>10</sup> technology following the 2005 grounding of the fishing vessel *Sovereign*<sup>11</sup>. This had increased the beacon's light output tenfold and had extended its range from 6 nautical miles (nm) to 10nm in poor visibility. The Northern Lighthouse Board assessed the Cairnbulg Briggs light beacon after the accident and found it to be functioning as designed.

## Previous accidents

The MAIB has conducted over 20 investigations into fishing vessel navigation accidents resulting from the watchkeeper's inability to effectively monitor the vessel's passage. Of these the most similar to the *Ocean Maid* accident was the 30m fishing vessel *Coelleira* (MAIB report 8/2020<sup>12</sup>), which grounded and sank on 4 August 2019 on the Ve Skerries, a low-lying reef off the west coast of the Shetland Islands, Scotland. The investigation found that the passage from the fishing grounds was not properly planned and the vessel's position was being ineffectively monitored. The bridge was unattended at the time of the grounding.

On 18 December 2005, the fishing vessel *Sovereign* grounded on Cairnbulg Point after the watchkeeper became distracted by their mobile phone and did not realise that the vessel had veered away from its intended course.

<sup>10</sup> Light-emitting diode, a semiconductor device that emits light.

<sup>11</sup> <https://www.gov.uk/maib-reports/grounding-of-fishing-vessel-sovereign-off-fraserburgh-scotland>

<sup>12</sup> <https://www.gov.uk/maib-reports/grounding-and-loss-of-fishing-vessel-coelleira>

# ANALYSIS

## Overview

*Ocean Maid* grounded because the vessel was not being navigated effectively while making passage to port as the lone watchkeeper left the wheelhouse before the grounding. The watchkeeper had repeatedly left the wheelhouse and became disorientated as to the vessel's position. The watchkeeper held no formal watchkeeping qualification and was unaware of the vessel's proximity to the shore. The crew were well trained and prepared; they evacuated safely having made an early "Mayday" call to the coastguard and were rescued quickly due to the prompt actions of the attending RNLI crew.

## The grounding

The watchkeeper made at least two visits to the galley to make tea, which had become an accepted practice on board. After each absence the watchkeeper needed to reorientate themselves using the visual environment observed out of the wheelhouse windows and with electronic navigational equipment in the wheelhouse. This frequent reorientation significantly increased the risk that the watchkeeper would unknowingly become disorientated as to the vessel's position relative to the coast. The watchkeeper had seen lights from the wheelhouse window but did not associate these with Cairnbulg Briggs light beacon. The watchkeeper's ability to see out of the wheelhouse windows was affected by the accumulated light emissions from the illuminated galley and the television in the wheelhouse.

The watchkeeper had received informal training on how to follow a past track and was not monitoring the passage on a planned plotted course. *Ocean Maid* grounded on Cairnbulg Point because the watchkeeper had become disorientated as to the vessel's position as there were insufficient active safeguards in place to mitigate risk and prevent the grounding.

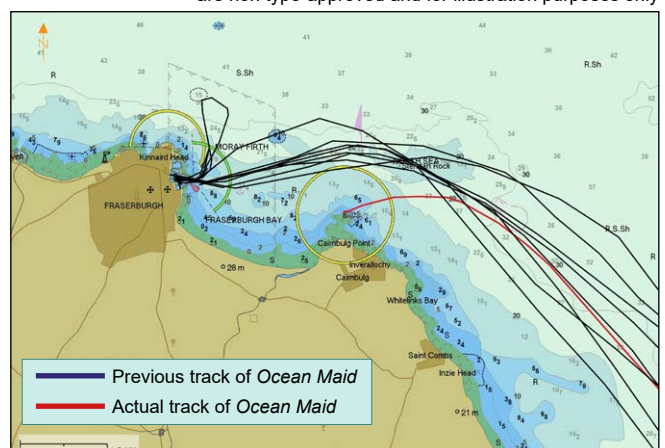
## Passage planning and monitoring

The Merchant Shipping (Safety of Navigation) Regulations and IMO Resolution A.893(21) made clear that a passage plan should include a plotted course on appropriate scaled charts, and that areas of danger should be highlighted. The MCA required that fishing vessels adhered to this regulation and guidance when on passage between ports and/or fishing grounds.

The watchkeeper had completed a night-time approach to Fraserburgh Harbour at least six times before the accident and had experience of using one of the two Olex chart plotters to navigate *Ocean Maid* by following a past track. The watchkeeper used the autopilot, following a previous track in conjunction with alterations as necessary to counter the effects of wind and tide. The watchkeeper was instructed to move navigation from the previous track shown on the Olex plotter to the user-defined yellow line placed on the Sodena chart plotter on reaching Fraserburgh Bay. This line did not join with the past track that *Ocean Maid* was following, which continued to follow the coast to the north, meaning the vessel had to be navigated without a passage plan from one track line to the other using two separate plotters. The use of two plotters would have increased the number of concurrent navigation tasks and increased the attention needed to complete the navigation of the passage successfully at a time when the watchkeeper's cognitive resources were probably low.

Analysis of *Ocean Maid*'s AIS track showed a series of small deliberate alterations to indicate when the watchkeeper was in the wheelhouse. The watchkeeper believed they were following the correct route into Fraserburgh Harbour and did not realise that their actions were beginning to turn *Ocean Maid* towards Cairnbulg Point when they started the series of small alterations from 0540 (see **Figure 2**). The reasons why the watchkeeper turned the vessel too early (see **Figure 7**), mimicking the previous tracks (see **Figure 7**) taken in previous passages to Fraserburgh, could not be

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**Figure 7:** Summary of *Ocean Maid*'s available AIS past tracks in the year leading up to the accident



determined during the investigation due to the watchkeeper's recall of events. It is likely the watchkeeper was relying on external visual indicators rather than the electronic chart plotter to determine the vessel's position.

With no formal passage plan, the hazards to navigation were not identified and led to the watchkeeper's navigation being reactive and unplanned, increasing the risk of disorientation and the likelihood of grounding.

### Watchkeeping practices

MGN 313 (F) required watchkeepers to stay in the wheelhouse to maintain a safe navigational watch. *Ocean Maid's* wheelhouse was left unattended twice on the vessel's approach to Fraserburgh Harbour, although it was not possible to identify the exact timing of these absences before the grounding. The skipper recognised that leaving the wheelhouse was a hazard to navigation and had identified the watchkeeper remaining in the wheelhouse as a control measure. Counter to this requirement was the accepted routine practice of the watchkeeper making tea in the galley a deck below the wheelhouse on the approach into port. It was likely that the established routine of leaving the wheelhouse when out at sea, where there was a lower perceived risk of grounding, had extended to coastal navigation where the hazard of grounding increased. The risk assessment had not made provisions to mitigate the specific risks presented by the established practice of leaving the wheelhouse to make tea on approach to port. The risk assessment also did not consider the difference between open sea and coastal navigation hazards or the risk of becoming disorientated as to the vessel's position while away from the wheelhouse.

The watch alarm was successful in keeping watchkeepers awake, but ineffective in maintaining their attendance in the wheelhouse as watchkeepers habitually afforded themselves 3.5 minutes to carry out a task elsewhere by pressing the reset button as they left the wheelhouse. It is essential that shipboard practices reflect the risks to safe navigation and crew adapt their routines to ensure watchkeepers are always present in the wheelhouse. This is particularly important during coastal navigation, as illustrated in the grounding and loss of the *Coelleira*, and on approach to a port. The practice of watchkeepers being absent from the wheelhouse had been identified as a hazard in the vessel's risk assessment but was not effectively controlled, contrary to the guidance outlined in MGN 313 (F).

### Night vision management

The watchkeeper's two trips to the illuminated galley immediately before the grounding would have impaired their diminished night vision, if not removed it altogether. *Ocean Maid's* wheelhouse television would have emitted light that affected the watchkeepers night vision as it did not have a night mode and was tuned to a music channel. The worsening visibility caused by the weather conditions combined with light exposure in the galley and the light levels due to the television would have impaired the watchkeeper's ability to identify anything but the nearest and most obvious lights and objects, and could explain why they did not clearly recognise the Cairnbulg Briggs beacon. MGN 313 (F) identified television sets and other domestic media devices as a source of distraction for watchkeepers and required these to be placed in the accommodation.

The watchkeeper's ability to maintain an effective visual lookout while in the wheelhouse was impaired by poor visibility, trips to the illuminated galley and the light emitted from the television in the wheelhouse.

### Fatigue

The watchkeeper had been working on board for over 3 weeks while *Ocean Maid* was on guard duty, which was unlikely to have affected their ability to achieve sufficient sleep. The watchkeeper had been awake for over 18 hours while prawn fishing the day before the accident, sleeping for just 5 hours immediately before the watch on the day of the accident and the day before, when the crew decided to watch television before going to bed. This was unusual compared with the vessel's usual fishing routine, which, although disrupted, probably allowed for sufficient unbroken sleep over a 10-hour to 12-hour rest period. It was only possible to obtain a detailed work/rest history for the 2 days before the grounding; however, it was clear that the 10 hours of rest required by MSN 1884 (F) was not achieved

by the watchkeeper in the 2 days before the accident due to the crewing levels on board and the nature of the fishing operation. The decision of the crew to watch television further reduced the time available for sleep.

It is important to provide fishing crew with the required opportunity to rest as outlined in MSN 1884 (F) and encourage them to sleep whenever possible to mitigate the effects of fatigue on their performance. However, as outlined in MSN 1884 (F) Annex 1, watchkeepers should rest when they can. The lack of sleep in the 2 days before the accident, increased by not taking opportunities to rest and the early morning low attentiveness danger period, was likely to have affected the watchkeeper's ability to monitor the vessel's progress and determine whether the vessel was heading into danger.

### **Watchkeeper qualification**

The MCA did not require fishing vessel watchkeepers to be qualified. However, MGN 313 (F) did require watchkeepers to be experienced, capable and instructed in their duties. The watchkeeper had been mentored by the skipper and co-owner and was deemed competent to stand a watch; however, although aware of plotted passage plans, the watchkeeper could not monitor one. Without the knowledge and tools a professional navigation qualification could provide, the ability of the watchkeeper to determine *Ocean Maid's* position was impaired, resulting in the vessel running aground. Until a qualification is required for all watchkeepers, the maritime regulator will rely solely on informal mentoring and supervision of watchkeepers provided by skippers to ensure the safe navigation of commercial fishing vessels. It is essential, therefore, that the skippers of fishing vessels recognise the hazard that ineffective navigational practices can have on the safety of their vessel and ensure that their mentoring and supervision is effective and that they actively support watchkeepers to gain relevant qualifications.

The watchkeeper was experienced and instructed in their duties but was not capable of monitoring a plotted passage plan as they lacked the knowledge and tools to do so.

### **Post-grounding actions**

The skipper's immediate "Mayday" transmission alerted the coastguard and RNLI crew in Fraserburgh to *Ocean Maid's* situation. This afforded valuable time in rescuing the crew, whose liferaft was being pushed onto Cairnbulg Point and was at risk of being damaged. The preparedness of the skipper and co-owner, having conducted regular drills, toolbox talks, and LSA assessments with SFF as a part of the certification as a guard vessel, meant that the liferaft and other emergency equipment were readily available, in good working order and deployed quickly. The co-owner successfully led the crew to launch and safely embark the liferaft before their vessel started breaking up.

The crew's survival was further assured by the early preparations of the RNLI Fraserburgh lifeboat coxswain and crew, principally the timely inflation of the XP boat to ensure its quick deployment on arrival at the scene. The survivability of the crew was markedly improved by the transmission of an early distress call and the prompt decision to abandon *Ocean Maid*.

## CONCLUSIONS

- *Ocean Maid* grounded on Cairnbulg Point because the watchkeeper had become disorientated as to the vessel's position as there were insufficient active safeguards in place to mitigate risk and prevent the grounding.
- With no formal passage plan, the hazards to navigation were not identified and led to the watchkeeper's navigation being reactive and unplanned, increasing the risk of disorientation and the likelihood of grounding.
- The practice of watchkeepers being absent from the wheelhouse had been identified as a hazard in the vessel's risk assessment but was not effectively controlled, contrary to the guidance outlined in MGN 313 (F).
- The watchkeeper's ability to maintain an effective visual lookout while in the wheelhouse was impaired by poor visibility, trips to the illuminated galley and the light emitted from the television in the wheelhouse.
- The lack of sleep in the 2 days before the accident, increased by the watchkeeper not taking opportunities to rest and the early morning low attentiveness danger period, was likely to have affected the watchkeeper's ability to monitor the vessel's progress and determine whether the vessel was heading into danger.
- The watchkeeper was experienced and instructed in their duties but was not capable of monitoring a plotted passage plan as they lacked the knowledge and tools to do so.
- The survivability of the crew was markedly improved by the transmission of an early distress call and the prompt decision to abandon *Ocean Maid*.

## ACTION TAKEN

### MAIB actions

The MAIB has issued a safety flyer to the fishing industry highlighting the lessons to be learned from this accident.

### Actions taken by other organisations

**Ocean Maid Limited** has:

- Supported one of its watchkeepers to complete the Seafish Bridge Watchkeeping course, with the intention that every watchkeeper holds this qualification to equip them with the knowledge and tools to follow a plotted passage plan.
- Stopped the procedure of the watchkeeper leaving the wheelhouse unattended.

## RECOMMENDATIONS

**Ocean Maid Limited** is recommended to:

- 2024/147** Enhance the safety of any vessel it may own in the future by applying the best practice guidance promoted in MGN 313 (F), in particular:
- the planning and checking of the intended passage before departure;
  - the effective monitoring of the vessel's position;
  - that watchkeepers maintain an effective visual lookout;
  - the removal of domestic media devices from the wheelhouse; and
  - ensuring that watchkeepers are sufficiently rested to take a watch, as required by MSN 1884 (F).

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

## VESSEL PARTICULARS

Vessel's name	<i>Ocean Maid</i>
Flag	UK
Classification society	Not applicable
IMO number/fishing numbers	BA 55
Type	Prawn trawler / guard vessel
Registered owner	Ocean Maid Limited
Manager(s)	Ocean Maid Limited
Year of build	1986
Construction	Wood
Length overall	21.33m
Registered length	19.72m
Gross tonnage	126
Minimum safe manning	4
Authorised cargo	Not applicable

## VOYAGE PARTICULARS

Port of departure	Eyemouth, Berwickshire, Scotland
Port of arrival	Fraserburgh, Aberdeenshire, Scotland
Type of voyage	Coastal
Cargo information	None
Manning	4

## MARINE CASUALTY INFORMATION

Date and time	24 October 2022 at 0549
Type of marine casualty or incident	Very Serious Marine Casualty
Location of incident	Cairnbulg Point, Aberdeenshire, Scotland
Place on board	Bow
Injuries/fatalities	None
Damage/environmental impact	Loss of vessel
Ship operation	In passage
Voyage segment	Transit
External & internal environment	Wind: east-south-easterly Beaufort force 3; sea state smooth with an easterly moderate swell; dark; poor visibility, with drizzle and fog.
Persons on board	4