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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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Fatal man overboard from the lone-operated creel fishing vessel *Harriet J* (AH180) west of Fast Castle Head, south-east Scotland on 28 August 2021

SUMMARY

At about 0736¹ on the morning of 28 August 2021, the skipper of the lone-operated creel² fishing vessel *Harriet J* accidentally entered the water while shooting³ the fishing gear. The unmanned vessel motored away and shortly afterwards it passed close to another fishing vessel, which managed to manoeuvre alongside *Harriet J* so that a crewman was able to board it and take control. He confirmed that *Harriet J*'s skipper was missing. At the same time, Aberdeen Coastguard was notified and a “Mayday Relay”⁴ was broadcast. A search was carried out by local fishing vessels and emergency services. Just before 0900, the skipper was recovered unconscious from the water and airlifted to a hospital where, at 0955, he was declared deceased.

The MAIB investigation found that the skipper of *Harriet J*, who was working alone although operating the vessel in the same area as other family-owned vessels, probably became entangled while the fishing gear was being deployed. He was neither wearing a personal flotation device (PFD) nor a personal locator beacon (PLB)⁵ and there were no effective barriers to separate him from the fishing gear on the vessel's working deck.



Harriet J

A recommendation has been made to the Fishing Industry Safety Group (FISG) to expedite the delivery of the outcomes of its working group focusing on the safety of lone-operated fishing vessels.

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

² A trap used to catch shellfish, also known as a pot.

³ A term used to describe the act of deploying a fleet of linked creels from the stern of a vessel while under way.

⁴ A distress signal transmitted on behalf of a stricken vessel that cannot send its own “Mayday” message.

⁵ A PLB is a device which, when activated, alerts the search and rescue services as to its position to satellites on 406MHz and locally on the 121.5Mhz distress frequency.

FACTUAL INFORMATION

Narrative

At about 0400 on 28 August 2021, the skipper of *Harriet J* left his home in St Abbs, Berwickshire, Scotland and drove the short distance to his vessel, which was berthed in St Abbs harbour, to prepare for a day's fishing. As was their normal practice, he was joined at the harbour by two of his relatives, the skippers of the small fishing vessels *Danny Boy* and *Skua*, who were planning to fish in the same area during the day; *Danny Boy* was lone-operated, while *Skua* was manned by a skipper and one crew member.

At 0435, the vessels left St Abbs in the dark and proceeded west around St Abbs Head and along the coast towards Siccar Point (**Figure 1**). While *Skua* started hauling creels in the bay near Fast Castle Head, *Danny Boy* and *Harriet J* headed further west with *Danny Boy* working further offshore. The skippers of the three vessels talked over very high frequency radio (VHF) throughout the morning.

Between about 0600 and 0700, the skipper of *Harriet J* worked three fleets⁶ of creels in the bay near to Siccar Point, hauling each fleet while heading broadly west at approximately 1 knot (kt)⁷, before reversing direction at roughly 5 knots (kts) over the ground⁸ to shoot the fleet in the same position (**Figure 1**). At about 0700, having brought *Harriet J* closer inshore to a position 0.5 nautical miles (nm) north of Meikle Poo Craig, the skipper started to slowly motor the boat on a westerly course along the coast while hauling the fourth fleet of creels. At about 0730, *Harriet J* circled round to the south, picking up speed, and settled on a heading of 095° at 5.4kts. At 0736, the track of *Harriet J* showed a notable dip in speed while shooting the fourth fleet (**Figure 2**), after which the vessel resumed its easterly course and speed.

The skipper of *Skua* was working his boat to the west of Fast Castle Head. He noticed that *Harriet J* was approaching and attempted to contact the skipper by VHF but received no response. He was concerned by both the unusual behaviour of the vessel and its heading. At 0745, *Harriet J* passed *Skua* at a distance of less than 5m. The skipper and crew member on board *Skua* dropped the fishing gear they were working and set off in pursuit, raising the alarm by calling the skipper of *Danny Boy* by VHF as they did so.

On receiving the call, the skipper of *Danny Boy* contacted the coastguard by VHF. He then used his mobile phone to call a friend who was the coxswain of the St Abbs independent lifeboat.

At 0754, *Skua* manoeuvred alongside the starboard side of *Harriet J* and pushed the vessel to the north to prevent it running aground. The crew member from *Skua* was then able to board *Harriet J* and take control. He confirmed that the skipper was not on board. He found a woollen hat at the forward end of the working deck (**Figure 3**).

At 0806, the coastguard broadcast a "Mayday Relay" and began to activate the local search and rescue assets, including lifeboats from Eyemouth to the south and a rescue helicopter from Aberdeen. The St Abbs independent lifeboat mobilised on receipt of the call from the skipper of *Danny Boy* and local vessels also converged on the bay to assist in the search as they became aware of the situation.

The skipper of *Danny Boy* proceeded to the position where he knew *Harriet J* had been working. On his approach he spotted a broken marker float from the end of a fleet lying in the water and, fearing that his family member might be tangled in the gear, he started hauling in the backline. He found a boot trapped in the loop of chain as he recovered the weight and reported both this and his position to the coastguard. He continued to haul up more of the fleet but, with no sign of *Harriet J*'s skipper, he dropped the gear back into the water and recommenced searching.

At 0851, the helicopter arrived on the scene. At 0857, the skipper of the fishing vessel *Fiddlers Green* spotted the skipper of *Harriet J* in the water approximately 1nm to the west of Fast Castle Head and called the coastguard for assistance. The skipper was not wearing a PFD and, although air had become trapped in his clothing and was keeping him afloat, his head was not supported above the surface.

⁶ A line of creels connected to a backline, strung together to fish for shellfish.

⁷ A knot is 1 nautical mile (1852m) per hour.

⁸ Derived from the Global Positioning System (GPS) positions recorded in the plotter that the MAIB retrieved from *Harriet J* during its investigation.

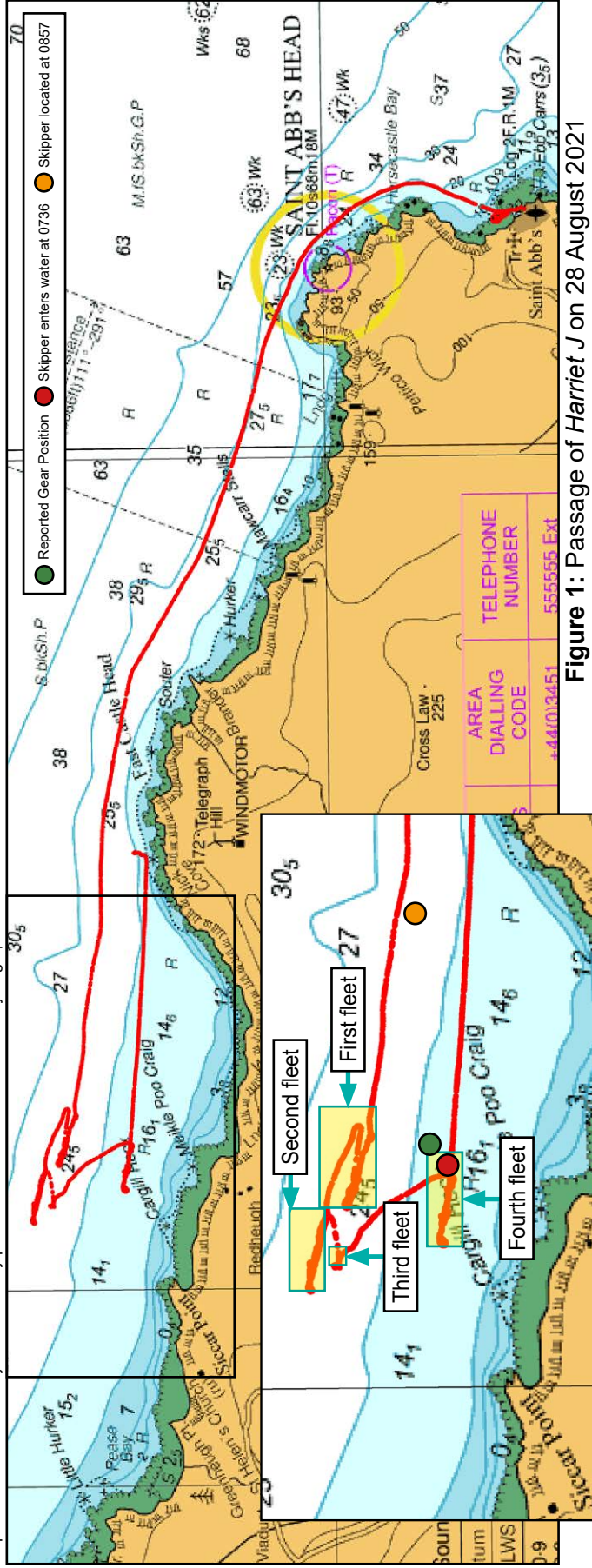


Figure 1: Passage of Harriet J on 28 August 2021

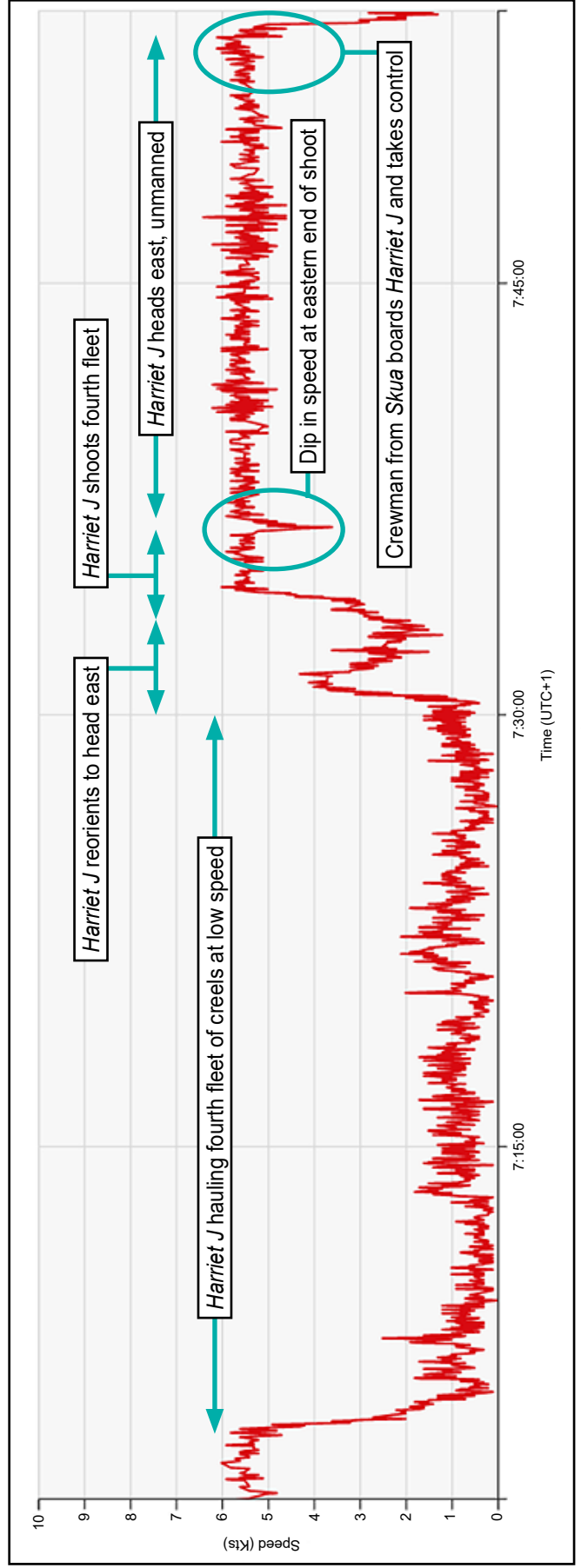


Figure 2: Harriet J's speed profile on 28 August 2021

For illustrative purposes only: not to scale

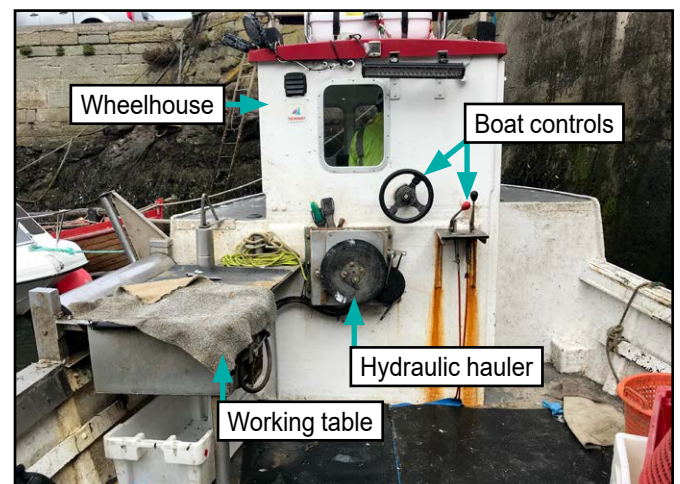
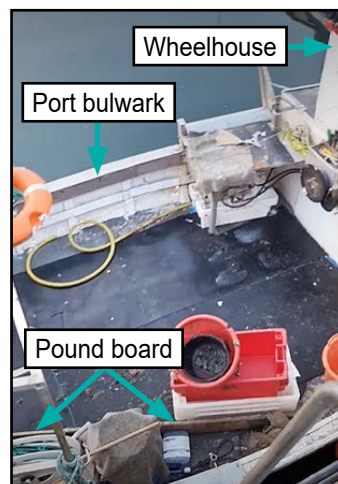
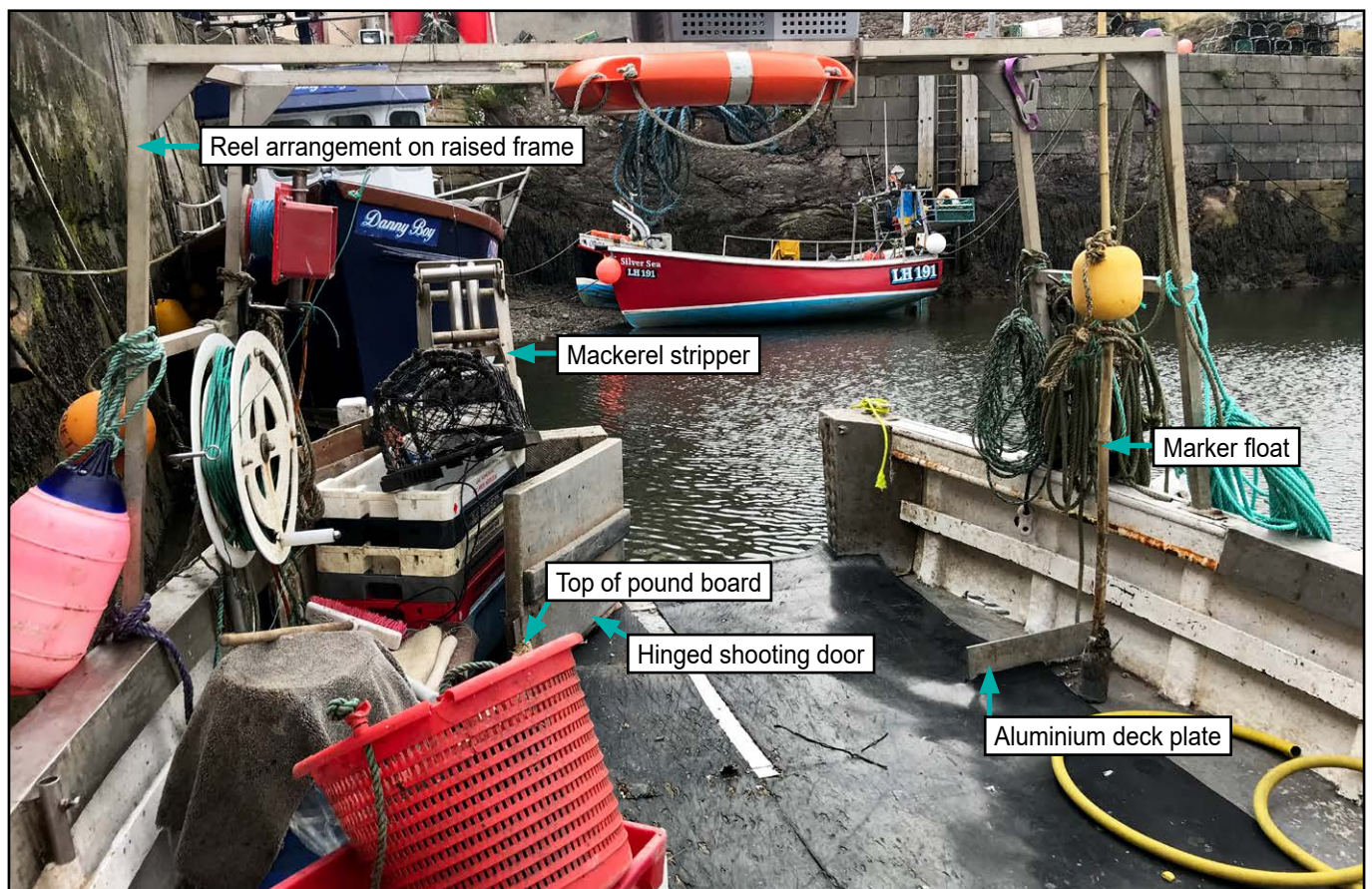
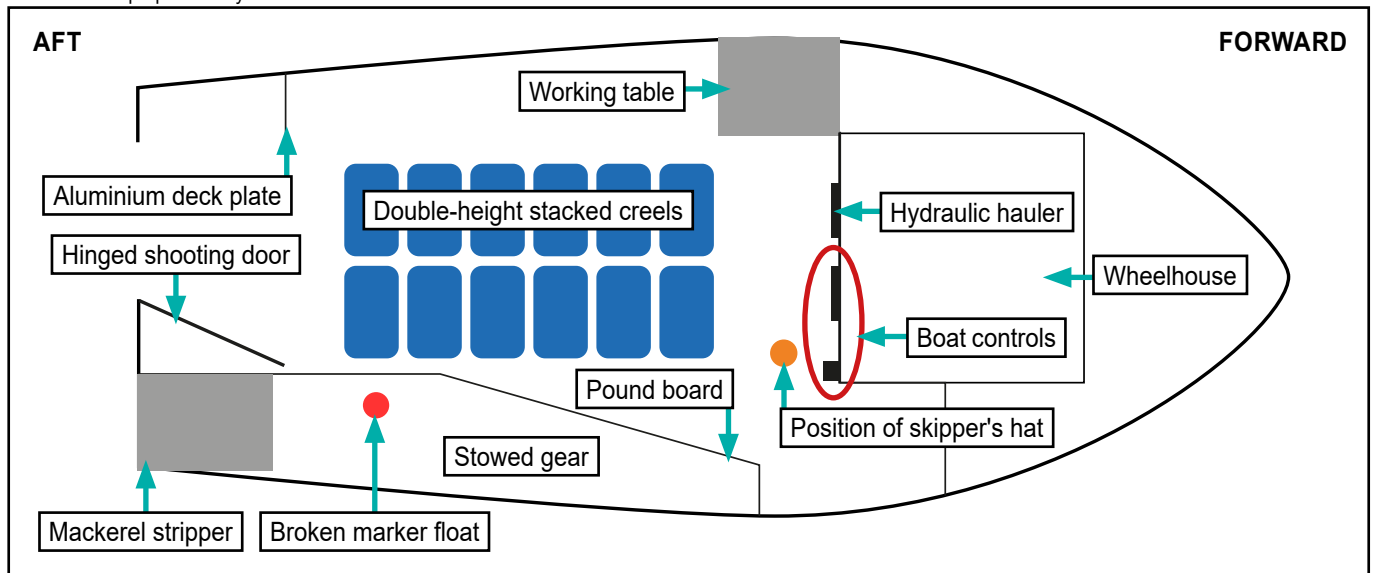


Figure 3: Harriet J's deck arrangement

The St Abbs lifeboat closed on the position and its crew retrieved *Harriet J's* skipper from the water and started immediate first aid. By 0906, the skipper of *Harriet J* had been transferred onto the helicopter and was airlifted to Edinburgh Royal Infirmary where, at 0955, he was declared deceased.

Environmental conditions

In the early morning of 28 August 2021, the conditions to the west of Fast Castle Head comprised a south-westerly force 3 wind, slight seas and a long northerly swell of approximately 1.2m. The air temperature was 12°C and the sea temperature was around 15°C. Sunrise was at 0607, high tide at Eyemouth was at 0656 and the tidal flow north-east of Siccar Point was 0.6kts, running east.

Cold water immersion

Sudden immersion in water temperatures of less than 15°C can result in cold water shock and/or cold incapacitation⁹.

Cold water shock is an immediate reaction to entering the water and is associated with a gasp reflex, hyperventilation and a rapid increase in heart rate and blood pressure as the body encounters the cold water, increasing the risk of drowning or heart failure.

Cold incapacitation usually occurs within 2 to 15 minutes of entering the water. The blood vessels become constricted as the body tries to preserve heat and protect vital organs. This results in the blood flow to the extremities being restricted, causing cooling and consequent deterioration in the functioning of muscles and nerve ends, which leads to progressive incapacitation that impedes the ability to swim.

Harriet J's skipper

Harriet J's skipper, John Wilson, was 64 years old. He was a lifelong fisherman, and an accident at work in his youth had resulted in his right arm being amputated below the elbow. He used a modified prosthetic arm while fishing and was able to swim. He was wearing a T-shirt and hooded jacket over waterproof trousers and size 8 boots on the day of the accident.

In 2015, the skipper had suffered a heart attack that necessitated the fitting of a coronary artery stent and he was on medication to manage several conditions. At the time of the accident there was no requirement for him to be medically assessed or hold a medical fitness certificate¹⁰.

The skipper had owned and operated *Harriet J* since April 2012 and he held a Seafish Under 16.5m Skipper's Certificate (Unrestricted) issued in 2009¹¹ and had completed all the mandatory training for commercial fishermen. He was not a member of the local Anglo-Scottish Fishermen's Association; however, there was no requirement for him to be.

The skipper's postmortem report stated that the immediate cause of his death was drowning, but also referred to ischaemic heart disease as a contributory factor, noting that the further strain on an already diseased heart may have potentially played a role in his death. He had also suffered a blow to the right side of his head, which caused a laceration and bruising. Low levels of alcohol were identified in the toxicology report, which the postmortem report stated may have been produced following his death.

Harriet J

Harriet J was a 7.19m creel fishing vessel built in 1997 and registered in Arbroath. It was constructed of glass reinforced plastic, with some portions clad in aluminium. It was propelled by a single 32 kilowatt diesel engine sited in a compartment below the open rear working deck. The engine and rudder could be controlled either from inside the wheelhouse, by wheel or a heading control system, or by a set of controls located next to the hydraulic hauler and working table at the forward end of the deck (**Figure 3**).

There was no means available to assist a person in the water to board the vessel.

⁹ Refer to Section 3.3 of Marine Guidance Note MGN 570(F) – Fishing vessels: Emergency Drills.

¹⁰ The requirement for John Wilson, when operating *Harriet J*, to hold an ML5 medical certificate would enter force on 30 November 2023. The medical assessment for this certificate included sections on cardiac conditions, including treatment for coronary heart disease, and musculoskeletal limitations, including the use of prostheses. A referral to an MCA medical assessor would have been necessary.

¹¹ A voluntary certificate comprising a number of short courses relevant to skippers of fishing vessels less than 16.5m operating beyond 20 nautical miles from a safe haven.

The hydraulic hauler on the port side was used to haul the creels onto the working table, where they could be emptied of the catch and rebaited before being stacked along the working deck in readiness for shooting. The catch was placed in plastic boxes, which were lined up along the port bulwark¹² and prevented from being pulled overboard by an aluminium plate set into the working deck.

A shooting door that opened inwards was set into the transom, flush with the deck and hinged on the starboard side.

A short pound board of approximately 200mm height was positioned on the starboard side of the deck and provided the only division of the working area. The area behind the board was stowed with equipment and did not afford easy access to the rear of the vessel when the working area was filled with creels and lines at the start of shooting.

A mackerel stripper¹³ leading up to a reel arrangement on a raised frame over the stern was installed on the starboard side of the vessel for catching bait.

Harriet J was equipped in accordance with the regulatory requirements for a vessel of its size and operation. A PFD in the form of a waistcoat with 50N of buoyancy and a PLB were both in the wheelhouse. The PLB was registered with the Maritime and Coastguard Agency (MCA) UK Beacon Registry¹⁴. A fixed VHF Digital Selective Calling (DSC)¹⁵ radio was installed in the wheelhouse for ship-to-ship and ship-to-shore communication.

The vessel's creel fleets were made up of several components attached to a backline (**Figure 4**). A marker float in a dan buoy arrangement was located at each end of the fleet and comprised a weight, made from a plastic bottle filled with cement, into which a 4m bamboo pole was set. The pole was fitted with a float halfway along its length and topped with an orange flag, which stood about 2m clear of the sea surface.

Approximately 20m further down the backline from each marker float was a weight¹⁶ composed of two 16-link loops of chain attached to a shackle, which was 100mm in length and weighed about 14kg in total. The fleet comprised 24 creels, which weighed 14kg each and were spaced about 10m apart along the length of the backline.

The process of hauling the gear started with the manual recovery of the marker float. The backline was then placed on the hauler and the creels recovered in turn onto the working table for the catch to be removed and the creel rebaited. The fleet was then stacked from the forward end of the deck until the second marker float at the opposite end of the fleet was finally lifted on board.

While shooting creels the skipper manually jettisoned the first marker float and chain weight then, setting *Harriet J's* throttle ahead, the creels would each be pulled through the shooting door one after the other by the forward motion of the vessel. After the second chain weight had been pulled from the deck, the skipper slowed the vessel down and manually jettisoned the second marker float into the water from the now empty deck.

The skipper's normal practice was to remain in the wheelhouse or at the controls at the forward end of the working deck as the weights and creels were being shot. Snags in the gear while on deck when shooting were not uncommon, and it was reportedly routine practice for the skipper to enter the working deck and kick the gear while under load to free a snag.

Certification and regulation

Harriet J held a small fishing vessel certificate, issued by the MCA following an inspection on 11 April 2017, which was valid until 26 July 2022. At the time the certificate was issued the vessel was required to have a lifejacket¹⁷ for each person on board but there was no requirement for a PLB to be carried.

¹² A solid extension of the side shell of the vessel that extends up above the deck to provide protection for the crew.

¹³ A series of rollers that automatically remove fish from the fishing line and allow them to drop into a container.

¹⁴ The MCA maintain a record of 406MHz beacon registrations to support their search and rescue activities. The registry includes both EPIRB (Emergency Position Indicating Radio Beacons) and PLB.

¹⁵ Digital Selective Calling is a digital alerting system that, on the press of a single button, can send a vessel's identity, position and the nature of its distress to all DSC-equipped vessels and shore stations within range.

¹⁶ Also referred to as a *stone*.

¹⁷ A statutory lifejacket shall be of the solid-filled type, or if inflatable shall comply with EN ISO 12402, with gas inflation and at least 150 Newtons buoyancy (MSN 1871 (F), Amendment 1, Annex 2).

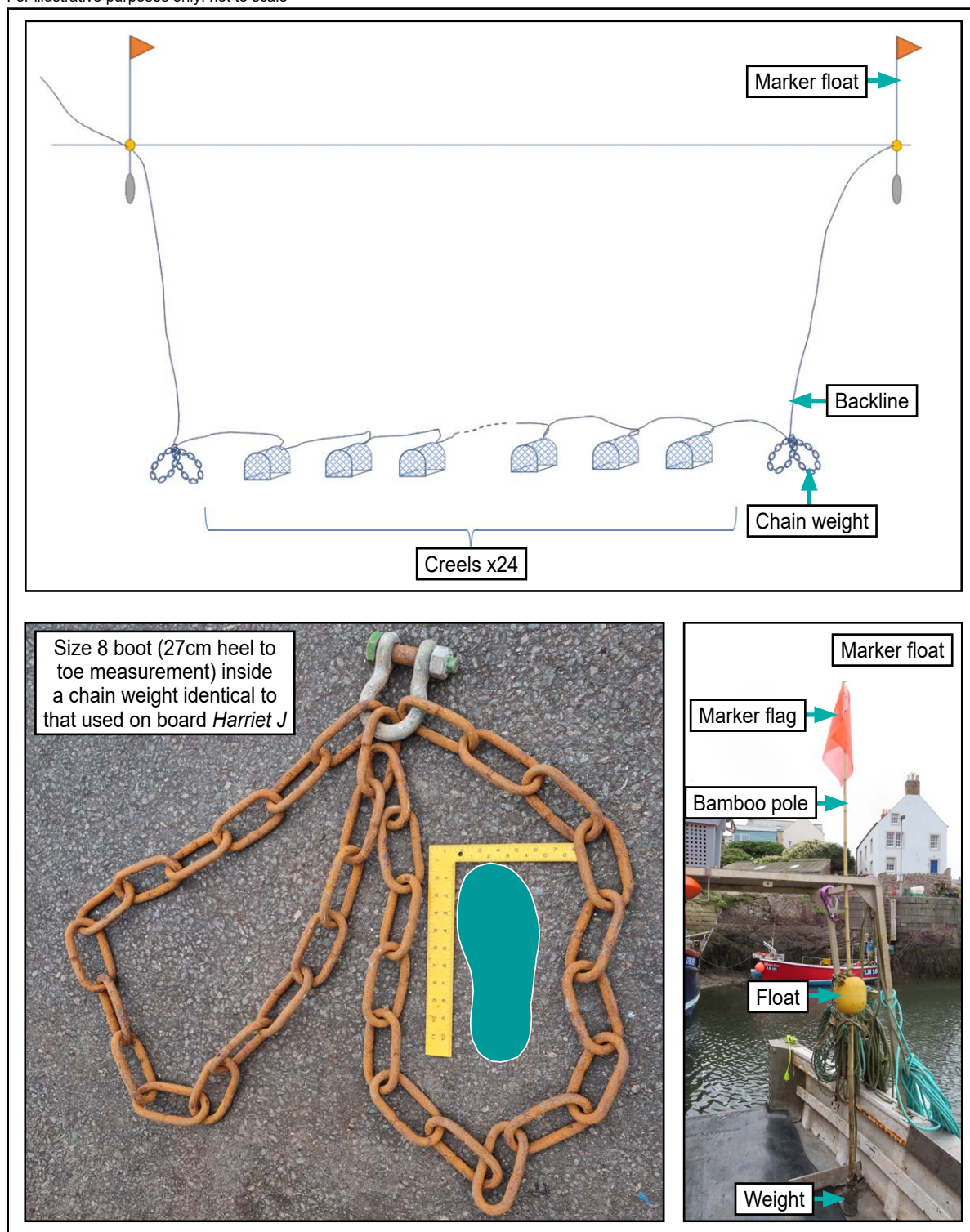


Figure 4: *Harriet J's* fishing arrangement

During the inspection, the MCA surveyor carried out an additional check related to the assessment and management of risks; this was termed a concentrated inspection campaign (CIC). The records of the CIC, though limited, stated that a PLB and PFD were used to mitigate the risk of a person falling overboard from *Harriet J*.

In December 2018, the MCA amended MSN 1871 (F) – The Code of Practice for the Safety of Small Fishing Vessels of less than 15m Length Overall. The changes made the wearing of PFDs¹⁸ mandatory *unless measures were in place to eliminate the risk of falling overboard. The code amendment also required Harriet J to carry an EPIRB, or a PLB for each crew member, from 1 October 2019.*

¹⁸ A PFD means a lifejacket or a buoyancy aid of at least 150N or a wearable buoyancy device of at least 50N that provides buoyancy in the water and is intended to be constantly worn in the case of falling overboard, rather than for intentionally entering the water or survival craft during an abandon ship scenario.

Industry guidance

Comprehensive guides were available that set out appropriate safe working and emergency response practices and identified many of the hazards associated with the operation of fishing vessels, both generic and specific to creel fishing vessels.

The MCA's Fishermen's Safety Guide¹⁹ stated that lone operations *are not recommended due to the high level of risk involved*. The guide went on to identify the hazards associated with lone fishing as:

No help available if injured

If you fall overboard, there is no one to raise the alarm or stop the vessel, or help recover you to the vessel

The suggested hazard mitigations were to wear a PFD, use safety lines, rig an overboard ladder, equip the vessel with an EPIRB and carry a PLB.

The guide indicated that potting²⁰ vessels were at risk of:

Crewman becoming entangled in the rope and dragged overboard

The recommended mitigations for this risk included to:

Ensure that the layout of the vessel allows safe and efficient working of pots/creels. Look for possible snag points that the rope or pots may snag on when shooting

To lessen the danger of crew members becoming entangled with the rope, consider if it is possible to install a barrier to contain the rope clear of the area where the crew are handling the pots

The MCA's *Single handed fishing* publication provided similar advice.

Guidance on how to prepare risk assessments was provided on the Seafish²¹ website and information about the use of PFDs, risk assessments and creel fishing vessel safety was included in the *FISG Home and Dry* online safety campaign²².

The free online resource SafetyFolder was also available to support fishers in managing their health and safety activities. The skipper of *Harriet J* had not registered with this service.

No evidence other than the brief notes of the 2017 MCA inspection was available to indicate that the skipper of *Harriet J* had accessed the broad range of safety guidance material available to him.

Similar accidents

In the 5 years before this accident there were eight fatal accidents involving UK fishing vessels under 15m in length where a person went overboard. Of these, four were lone-operated boats and four were the result of entanglement in the gear. All were creel (or potting) fishing vessels, only one of the fishers who died was wearing a PFD and none carried a PLB. The accidents included:

The MAIB investigation into an accident on the lone-operated creel fishing vessel *Sea Mist* in March 2019 (MAIB report 14/2019²³) concluded that the skipper caught his boot in the backline while shooting creels, was pulled overboard and drowned;

The MAIB investigation into the fatal man overboard of the skipper of the lone-operated creel fishing vessel *Saint Peter* in May 2021 (MAIB report 6/2022²⁴) concluded that he was probably caught in the backline of his gear while shooting. He was kept afloat by a PFD; however, there was no easy means for him to reboard the vessel and he had no equipment with which to send a distress signal from the water.

¹⁹ <https://www.gov.uk/government/publications/fishermens-safety-guide>

²⁰ Potting is synonymous with creel fishing.

²¹ Seafish, a member of FISG, is a non-departmental public body (NDPB) that supports the seafood industry in the UK.

²² Home and Dry is a safety campaign and website run by FISG to share vital information and guidance on fishing safety with fishers.

²³ <https://www.gov.uk/maib-reports/man-overboard-from-single-handed-creel-boat-sea-mist-with-loss-of-1-life>

²⁴ <https://www.gov.uk/maib-reports/person-overboard-from-single-handed-creel-fishing-vessel-saint-peter-with-loss-of-1-life>

Action taken on previous accidents

The MAIB made two recommendations to FISG in its *Sea Mist* report: to evaluate and revise the safety guidance for lone-operated fishing vessels; and, to improve the promulgation of such information to industry. In January 2020, the MCA updated its *Fishermen's Safety Guide* and *Single handed fishing*²⁵ publications as a result of these recommendations.

Seafish also commissioned a review²⁶ of the safety guidance that existed for potting, the findings of which included recommendations that:

Seafish and the wider fishing industry should continue with a proactive stance and targeted potting safety campaign to encourage uptake of guidance across the UK industry via industry press, social media, gear suppliers and boat yards. [sic]

On 7 October 2021, the FISG executive board established a working group focused on the safety of lone-operated fishing vessels. The group was provided with a copy of the Seafish review to support the discussions. In November 2021, an extraordinary meeting of FISG members identified several proposals, including: suggestions for improved engagement and promulgation of information with industry; the updating of guidance material; and the consideration of vessel design.

ANALYSIS

Overview

Harriet J's skipper probably entered the water when he became entangled in the chain weight used at the end of the fourth fleet of creels worked that morning. He was likely pulled from the vessel through the shooting door at the aft end of the working deck, striking his head in the process. Once in the water he was neither able to reboard the vessel nor call for assistance. He succumbed to drowning while still in the water, a possible contributory factor of which was his pre-existing heart condition.

Entry into the water

Once the vessel was in the area of the accident each slow passage to the west corresponded with the hauling of a fleet of creels. On completion of the haul, a reciprocal passage at a higher speed indicated that the vessel was shooting the rebaited fleet back into position.

At 0736, the track of *Harriet J* showed a notable dip in speed from 5.4kts while shooting the fourth fleet of creels (**Figure 2**). This speed dip occurred close to the position of the broken flag found by the skipper of *Danny Boy*.

The force needed to slow *Harriet J* was significant and is most likely to have arisen from the passage of the gear from the vessel during shooting being halted, then released. The force required to break the marker float's bamboo pole was discounted as being sufficient to cause such a reduction in vessel speed. It is therefore likely that either a creel or the second chain weight became snagged on the deck of *Harriet J*.

The layout of the working deck on *Harriet J*, and the equipment stowed behind the pound board, meant that it was impossible for the skipper to access the deck to free a snag without placing himself near to the fishing gear.

The practice of kicking snagged gear to release it was reportedly common and it is likely that, when the skipper moved into the working area to release a snag, his booted right foot became entrapped in the chain loop, as found by the skipper of *Danny Boy* (**Figure 4**).

The chain weights used on the gear formed a natural bight; this created a snagging and entrapment hazard, but had not been identified as a risk.

Given the nature of the skipper's head injury, it is likely that he struck part of the vessel as he was pulled from his feet and through the shooting door. The position of the woollen hat found by *Skua's* crew member suggested that he might have been towards the forward end of the deck when he fell. The skipper was able to free himself from his boot at some point, meaning it was likely that he was still conscious when he went overboard.

²⁵ <https://www.gov.uk/government/publications/single-handed-fishing>

²⁶ Tegen Mor Fisheries Consultants Ltd – *Review of existing safety guidance on potting*. (Ref TMSF01/2020 dated 31 March 2020).

Inability to reboard *Harriet J*

The throttle of *Harriet J*'s engine was set at the start of the shooting run immediately before the accident and remained so until *Skua*'s crew member boarded the vessel. The speed over the ground of the unmanned *Harriet J* remained at 5.4kts after the accident. The distance between the position where the skipper likely entered the water and where he was found 81 minutes later was 0.9nm, giving a speed of drift of approximately 0.7kts, which was consistent with the tidal current at the time.

The direction of the current was roughly eastward and contributed to the speed over the ground of *Harriet J*; the vessel's speed through the water was therefore 4.7kts, approximately 2.4m per second.

It would have been impossible for the skipper to recover himself back on board *Harriet J* due to the speed at which the vessel was moving away from him and because he had no means of remotely stopping the engine.

Personal flotation device and survivability

The skipper was not wearing a PFD when he was recovered from the water but he had been supported at the surface by air trapped in his clothing. Survival time in the water depends on many factors²⁷ and it was not possible to accurately predict the probable survival time for the skipper in the situation he found himself.

Without a PFD to provide additional buoyancy the skipper would have had to actively swim to maintain a clear airway above the water given the swell. It is likely that cold incapacitation, and the clothing he was wearing, further reduced his ability to maintain his head clear of the water in the swell experienced. A PFD with a spray hood reduces the energy needed to maintain someone's head clear of the water and helps improve their chance of survival.

Means to raise the alarm

The PLB carried on board *Harriet J* was stowed in the wheelhouse and, along with the fixed DSC VHF radio, was unavailable to the skipper once he had entered the water. The PLB was of a manual type and relied on a casualty being both conscious and physically able to activate it. While it was possible to operate the PLB with one hand, the need to actively swim in the absence of a PFD could have made its operation more difficult.

Medical considerations

The most significant factor in the skipper's death was drowning. Cold incapacitation due to the prolonged period in cold water would likely have affected his ability to survive in the water and the immediate effects of immersion in cold water would have placed additional strain on his already diseased heart. The skipper's disability would have likely increased the exertion required to remain afloat and, given his existing heart condition, may also have contributed to the outcome of this accident.

The postmortem toxicology report recorded that the presence of a low concentration of alcohol may have been due to postmortem bacterial production. There was no evidence of alcohol consumption before the accident. Alcohol was therefore not considered to be a contributory factor.

Awareness of operational risks

The skipper of *Harriet J* had purchased a PLB in 2017 and also carried a PFD on board, neither of which was required by the regulations at that time.

These actions suggested that he had considered some of the risks associated with lone fishing. The lack of any effective means of separating the skipper from the gear on the deck of *Harriet J* demonstrated that the significant hazard it posed had not been identified or mitigated.

The skipper's awareness of the relevant MCA instructions and industry safety guidance would have been enhanced if he had been a member of the local fishermen's association or had registered with the SafetyFolder service. However, it is unlikely that he would have been aware of the updated advice available without proactively seeking it. Despite the potting safety review conducted by Seafish and the establishment of a specialist FISG working group, it is apparent that there is still further work to be done to enhance the promulgation of relevant industry guidance on the safety of lone-operated fishing vessels.

²⁷ Health and Safety Executive Offshore Technology Report – OTO 95 038 – *Review of probable survival times for immersion in the North Sea*, Robertson and Simpson (1996).

CONCLUSIONS

- The skipper of *Harriet J* probably died because he became entangled in a chain weight in his fishing gear and was pulled through the open shooting door into the sea, where he likely succumbed due to the effects of cold incapacitation.
- The skipper probably accessed the working deck to free a snag in the fourth fleet of creels as it was being deployed from the vessel.
- There was no effective way to segregate the skipper from the working area on board *Harriet J* due to the deck layout and the equipment stowed behind the pound board; the risks of becoming entangled in the gear and dragged overboard had not been effectively assessed and mitigated.
- It is likely that the skipper was initially conscious in the water, despite suffering a blow to his head, given that he had become free from the entrapment.
- With no means to remotely stop the vessel's engine, the skipper was unable to recover himself back on board given its speed of advance.
- The skipper's chances of survival would have improved had he been wearing his PFD.
- The skipper was not carrying his PLB, the activation of which would have enabled the search and rescue teams to localise the search effort.
- The skipper's disability was not a contributory factor in the accident but may have affected the effort required for him to remain afloat with his head clear of the water.
- There is still further work to be done to enhance the promulgation of relevant industry guidance on the safety of lone-operated fishing vessels.

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

The **Maritime and Coastguard Agency** has commissioned studies with the Health and Safety Executive and the Behavioural Insights Team²⁸ to examine behaviours and strategies to increase the wearing of PFDs within the UK fishing industry.

The **Fishing Industry Safety Group** has made significant investment to develop its Home and Dry safety campaign, with the latest material specifically targeting under 10m vessels, and provide man overboard awareness training events.

RECOMMENDATIONS

The **Fishing Industry Safety Group** is recommended to:

- 2023/101** Expedite the delivery of the outcomes of its working group on lone-operated fishing vessels, taking into account the work commissioned by the MCA and Seafish.

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

²⁸ The Behavioural Insights Team is a consultancy group specialising in individual and organisational behaviours.

VESSEL PARTICULARS

Vessel's name	<i>Harriet J</i>
Flag	UK
IMO number/fishing numbers	AH180
Type	Creel fishing vessel
Registered owner	Privately owned
Year of build	1997
Construction	Glass reinforced plastic
Length overall	7.19m
Registered length	7.19m
Gross tonnage	2.80

VOYAGE PARTICULARS

Port of departure	St Abbs
Port of arrival	St Abbs (intended)
Type of voyage	Fishing
Cargo information	None
Manning	1

MARINE CASUALTY INFORMATION

Date and time	28 August 2021 at about 0736
Type of marine casualty or incident	Very Serious Marine Casualty
Location of incident	2nm west of Fast Castle Head, south-east Scotland
Place on board	Working deck
Injuries/fatalities	1 fatality
Damage/environmental impact	None
Ship operation	Fishing
Voyage segment	Mid-water
External & internal environment	Long 1.2m northerly swell; air temperature 12°C; wind south-westerly force 3; sea temperature approximately 15°C
Persons on board	1