

## FV KAREN

### Grounding at the Entrance to Ardglass Harbour, County Down, Northern Ireland 3 January 2011

#### SUMMARY

At 1755 (UTC) on 3 January 2011, the stern prawn trawler *Karen* (**Figure 1**) grounded at the entrance to Ardglass Harbour. Resulting damage to the vessel's forefoot caused her to take water forward. However, the collision bulkhead held and the skipper left the engine running ahead to reduce the risk of the vessel foundering. The crew donned their lifejackets and successfully launched the liferaft, but before they were forced to evacuate the vessel they were rescued by the Portaferry inshore lifeboat (ILB). One crewman suffered minor bruising to his ribs. *Karen* was refloated and manoeuvred alongside later that evening.

The investigation has determined that the skipper was not monitoring the vessel's passage towards Ardglass harbour when the crew were engaged in processing the catch. It is likely that the skipper was absent from the wheelhouse for some of that time. There was no watchkeeping alarm fitted in the wheelhouse and the crew were unqualified. Written risk assessments were inaccurate and incomplete.

The owner has instructed the skippers of his vessels to employ only suitably qualified crew. However, recommendations have been made to the owner designed to improve safety standards within his fleet.

#### Extract from The United Kingdom Merchant Shipping (Accident Reporting and Investigation) Regulations 2005 – Regulation 5:

"The sole objective of the investigation of an accident under the Merchant Shipping (Accident Reporting and Investigation) Regulations 2005 shall be the prevention of future accidents through the ascertainment of its causes and circumstances. It shall not be the purpose of an 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 13(9) of the Merchant Shipping (Accident Reporting and Investigation) Regulations 2005, 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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Figure 1



FV Karen

## FACTUAL INFORMATION

### Narrative

*Karen* sailed at 0600 on 3 January 2011 for fishing grounds east of Ardglass. Early hauls were moderate but, at 1430, about 25 stones (159 kg) of prawns were caught. The final haul was made at 1630 and netted a further 8-10 stones (50–63 kg) of prawns.

At 1700, *Karen* was 8 miles east-south-east of Ardglass. The light was fading and the skipper decided to return to harbour. Using the bright lights behind the golf course, to the south of the harbour entrance as a point of reference, he set a reported course of 292°(T) on the autopilot and a speed of about 7.5 - 8.0 knots for the passage back to port. The autopilot did not have a watch alarm incorporated. A track plotter and a global positioning system (GPS) unit were switched on, and an unstabilised radar display was set at 1.5 miles with 0.25 mile range rings.

During the latter stages of the passage, the skipper reportedly opened and leaned out of the wheelhouse starboard window, which was positioned directly above the autopilot (**Figure 2**), to speak with a crewman on deck. At about 1755, the vessel grounded on the northern side of Ardglass Harbour. The impact caused the crewman to fall onto a rail, resulting in bruising to his ribs. There were no other injuries. The skipper's estimated grounding position and other key navigational marks are shown in **Figure 3**.

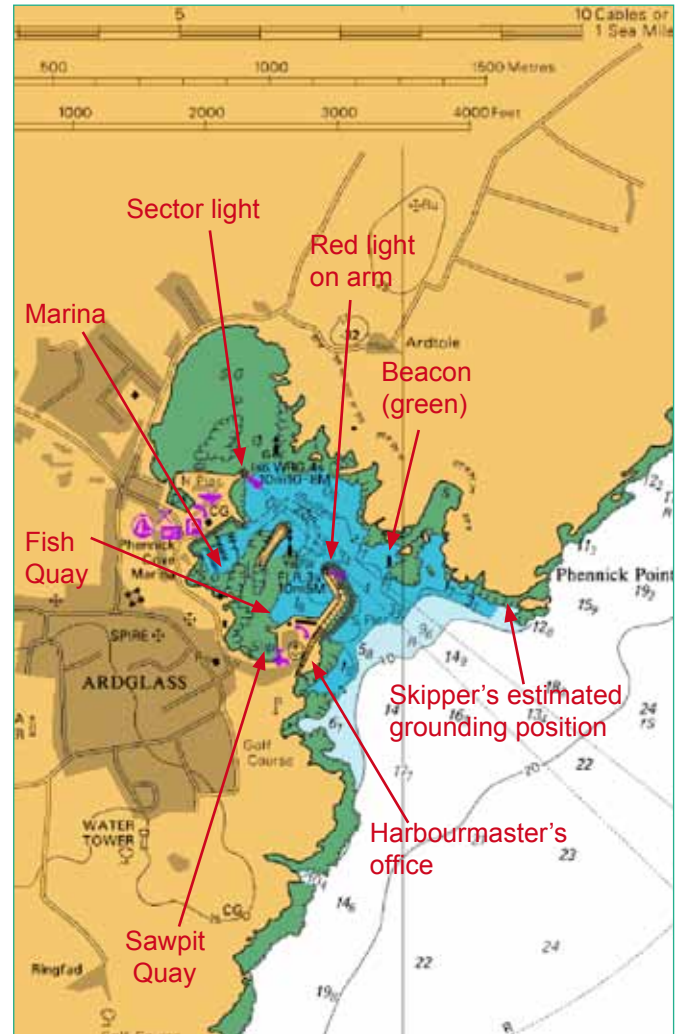
Figure 2



Position of autopilot in relation to the wheelhouse starboard window

Reproduced from Admiralty Chart BA 633 by permission of the Controller of HMSO and the UK Hydrographic Office

Figure 3



Skipper's estimated grounding position and key navigational marks

Deciding that it was safer to keep the vessel on the rocks than to attempt to refloat, the skipper reduced the engine speed and left the gearbox engaged ahead. He switched on the deck lights and pressed the Digital Selective Calling (DSC) button on the VHF radio, but not for the 5 seconds required for it to send a transmission. He immediately followed this with a "Mayday" transmission, which was received by Dublin Coastguard (CG) and relayed to Belfast CG, who activated the Portaferry ILB. Irish CG rescue helicopter R116 was scrambled from Dublin but was stood down before it arrived on scene.

The skipper established that the engine room bilge was free of water and then configured the auxiliary engine bilge pump onto the forward suction. The crew reported to the skipper that the vessel was rapidly flooding in the fore peak and



accommodation areas, but the fish room collision bulkhead was intact with only minor leakage occurring at its extremities.

At about 1800, the skipper instructed the crew to don their lifejackets and to launch the liferaft. The liferaft initially inverted, but it was quickly righted and secured alongside.

By 1815, the Ardglass-based fishing vessels *Glendeveron* and *Silver Dee* were on scene. Belfast CG advised *Karen's* skipper that no attempt should be made to remove the vessel from the rocks, and that the crew should not go below as there was a risk of the vessel foundering.

At 1825, the ILB arrived on scene. *Karen's* crew were quickly recovered and landed at Ardglass Marina, where they were met by the CG coastal rescue team and paramedics. The injured crewman was transferred to hospital.

At 1915, the ILB transferred *Silver Dee's* skipper and one of his crew to *Karen*, and they confirmed that the flooding was being contained by the collision bulkhead. Following this information, Belfast CG and the Ardglass harbourmaster agreed that an attempt could be made to refloat *Karen*. Once the vessel was clear of the rocks, and on advice from Belfast CG, the skipper initially tried to manoeuvre her stern-first to lessen the hydrostatic pressure on the damaged hull and so reduce the risk of further flooding. However, steerage proved too difficult and he opted to drive her slowly ahead. With the ILB in attendance, the vessel arrived alongside Fish Quay at 1930.

Damage to the vessel was limited to the foot of the stem post (**figure 4**), where some planking had also sprung causing the caulking to become displaced. There was also abrasion damage to the hull on both sides at the turn of bilge.

### Skipper's normal navigation procedure

*Karen's* skipper's usual method of navigating into Ardglass Harbour was by sight, using the golf course lights as an initial point of reference, and by monitoring the track plotter. He did not use a formal passage plan and it was not his practice to use the radar for navigation. When approaching Ardglass from the east, the skipper normally monitored the harbour approach sector light, and used the vessel's entry into the sector light's white arc as a guide for altering course towards the harbour entrance. He usually changed to hand-steering a short distance from the green beacon opposite the breakwater.

### Crew and qualifications

Statutory Instrument 1989 No 0126 (The Fishing Vessels (Safety Training) Regulations) and Marine Guidance Note (MGN) 411<sup>1</sup> stipulates the safety training requirements for UK fishing vessel skippers and crews. *Karen's* skipper, who was a UK national, had been employed in the fishing industry for 22 years and had gained a Class 2, Limited (Fishing Vessel) Certificate of Competency on 23 November 1994. He also held sea survival, fire-fighting and prevention and first-aid certificates, but had not attended the mandatory safety awareness training course<sup>2</sup>.



Stem post damage

Figure 4

<sup>1</sup> Training and Certification Requirements for the Crew of Fishing Vessels and their Applicability to Small Commercial Vessels and Large Yachts

<sup>2</sup> The skipper had attended a 2½ hour "Health and Safety Awareness" course run by the Northern Ireland Fishery Harbour Authority on 24 March 2006. The course was tailored for port users and covered on-shore harbour work activities.

Three crewmen were on board. Two of the crew had 17 and 1½ years fishing experience respectively, but had not completed any of the mandatory safety training courses. The third crewman had been involved in fishing for 17 years, and had completed the STCW<sup>3</sup> safety courses but not the required safety awareness training course

### Previous similar accident

On 19 January 2006, the Ardglass-based FV *Greenhill* grounded between Ardglass and Ringfad Point. The skipper, who was alone on watch, had left the wheelhouse to help his crew process the catch for landing on arrival; a practice identified during the investigation to be common in the industry. The damaged vessel was subsequently driven off the rocks, but floodwater quickly transferred through the transverse bulkheads, which had numerous unsealed penetrations. As the vessel foundered the crew were unable to access their lifejackets, which were stowed below deck. Although the vessel's liferaft was deployed, two of the crew were lost.

Reproduced from Admiralty Chart BA 633 by permission of the Controller of HMSO and the UK Hydrographic Office

## ANALYSIS

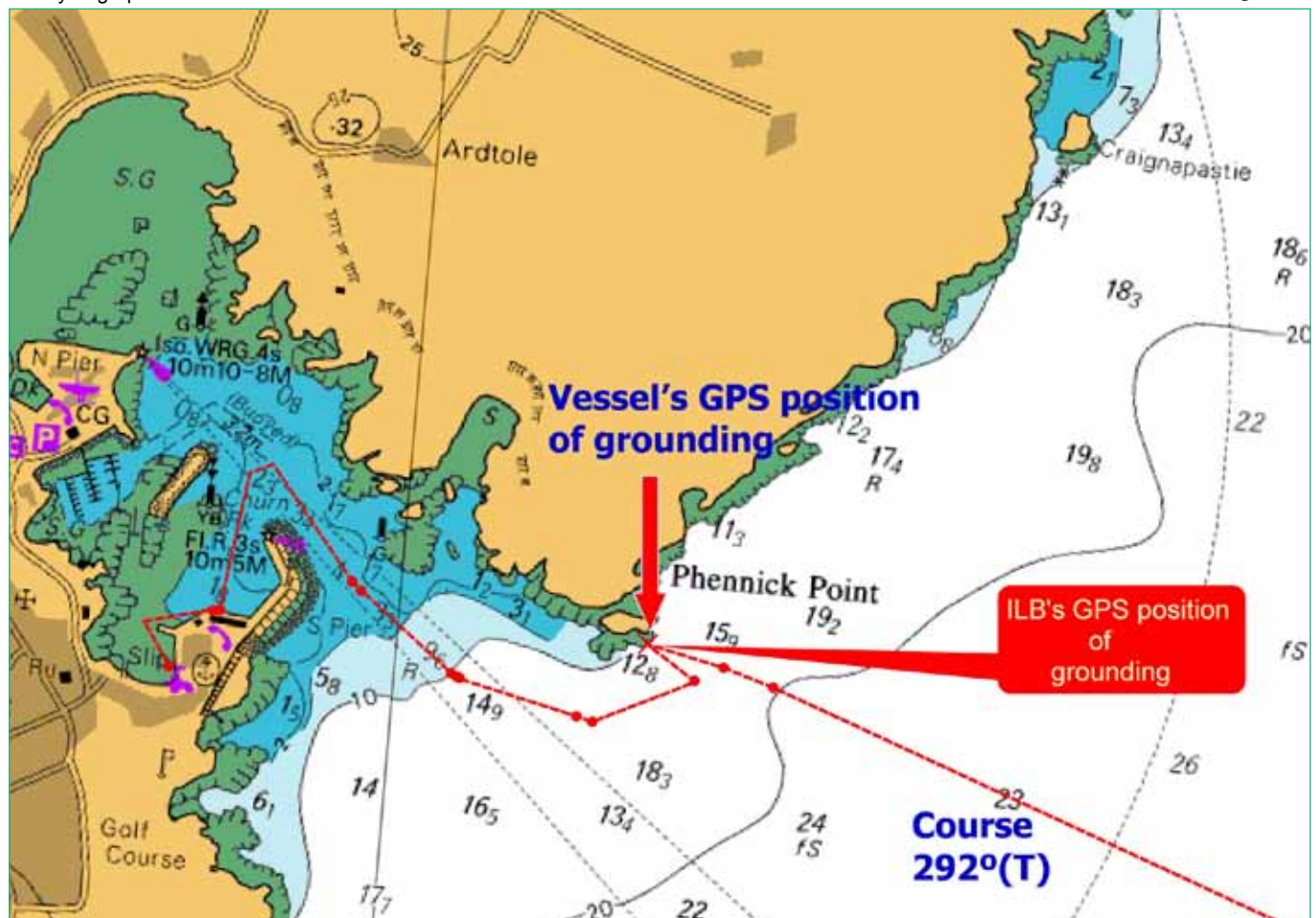
### The grounding

*Karen's* skipper was well rested before setting out that morning and was not involved in the physical aspect of shooting or hauling the gear. Fatigue is therefore not considered to be a factor in this accident. The weather conditions were excellent, visibility from the wheelhouse was good, and all of the Ardglass Harbour navigational aids were operational.

Post-accident tests of the autopilot and steering gear confirmed that both functioned correctly and equipment malfunction did not contribute to the accident.

Data downloaded from *Karen's* GPS unit confirmed that she was making a generally steady course of 292°(T) until grounding at Phennick Point in position 54°15.613'N, 005°35.693'W (Figure 5). The grounding position was confirmed from the ILB's GPS, though the skipper estimated

Figure 5



GPS track and grounding position

<sup>3</sup> International Convention on Standards of Training, Certification and Watchkeeping for Seafarers 1978, as amended

the vessel had grounded closer to the harbour. There was no evidence to support a suggestion that the autopilot might have been inadvertently adjusted to starboard just prior to the grounding when the skipper reportedly leaned out of the wheelhouse starboard window to speak with a crewman on deck.

### Watchkeeping

The skipper was unable to recall any detail of the vessel's passage back to harbour from the time of his setting a reported course of 292°(T) until the time of grounding. The witness evidence was insufficient to provide a coherent account of the events leading up to the accident. Had the skipper been keeping a proper navigational watch, he would have been aware that the golf course lights were further to port than normal when approaching Ardglass from the east, and that *Karen* was still in the green arc of the sector light, indicating the vessel was too far to starboard of his intended track. A more structured approach to navigation, for example using a waypoint on the GPS, would have provided a clearer warning that the vessel was not on track.

*Karen's* skipper might have been temporarily distracted before the grounding when he spoke to a crewman on deck. However, his inability to recall any navigational detail from the passage towards Ardglass harbour suggests that it is likely the skipper was absent from the wheelhouse for some of that time. At the time of the grounding the crew were processing the catch and anecdotal evidence suggests that the skipper had been helping them in this task.

Rule 5 of the Convention on the International Regulations for Preventing Collisions at Sea, 1972, as amended (COLREGS), states:

*“Every vessel shall at all times maintain a proper look-out by sight and hearing as well as by all available means appropriate in the prevailing circumstances and conditions so as to make a full appraisal of the situation and of the risk of collision.”*

MGN 313 (F) (Keeping a Safe Navigational Watch on Fishing Vessels) reinforces Rule 5 of the COLREGS. It states that the wheelhouse should never be left unattended and that the person in

charge of the watch should not undertake any duties that would interfere with the safe navigation of the vessel.

*Karen's* skipper was aware of the findings of the MAIB's investigation into the grounding of FV *Greenhill*. However, he took insufficient account of the navigational safety lessons to be learnt from that accident, and did not follow the guidance provided in MGN 313 (F).

It is concluded that no equipment defects or external factors contributed to the accident. The grounding occurred because of a lack of an effective lookout and inadequate passage monitoring, probably through the wheelhouse being left unattended for some of that time.

### Crew certification and risk assessments

Written risk assessments were kept on board *Karen* as recommended by Section 5.2 of Annex 1 to MGN 20(M+F)<sup>4</sup>. However, they were superficial and poorly completed. The risk factor, derived by multiplying the “Likelihood (L)” and “Harm (H)” scores of possible hazards should have been used to determine whether control measures were necessary to reduce risks to an acceptable level. However, there were numerous errors in calculating the risk factors and so appropriate control measures were not identified. The risk factors calculated for hazards associated with “Wheelhouse Operations”, including the wheelhouse being left unattended, required that actions be identified to reduce risks. However, none were recorded.

The assessments were required to be re-evaluated annually and confirmed as appropriate by the owner in accordance with the Annual Self-Certification section of the vessel's United Kingdom Fishing Vessel Certificate<sup>5</sup>. The number of inaccuracies identified during this investigation strongly suggests that the annual risk assessment validation was not being completed.

SI 1989 No 0126 stipulates that the owner and skipper are responsible for ensuring their crews are properly qualified. *Karen's* owner, who operated 11

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<sup>4</sup> Implementation of EC Directive 89/391, Merchant Shipping and Fishing Vessels (Health and Safety at work) Regulations 1997.

<sup>5</sup> A 5-year renewal survey was carried out on 18 October 2010 with the current certificate remaining valid until 31 October 2015.



other fishing vessels from Ardglass, ensured his vessels were adequately crewed such that they were commercially effective. However, he was unwilling to invest in crew training, especially of novice fishermen, as his experience was that many did not remain with his vessels. He had delegated the responsibility for finding appropriate crew to the skippers of his vessels, and he had made no checks to ascertain the training status of *Karen's* crew.

Neither the skipper nor any of the crew of *Karen* held the full set of required safety qualifications. In particular, none had attended the mandatory safety awareness training course. In this case, the skipper's poor perception of risk resulted in the vessel's passage being inadequately monitored. Had the skipper completed this course, he might have appreciated better the risks associated with his navigational practices.

If the owner had adopted a more proactive approach to risk assessment and crew training, the potential for such accidents to occur would have been reduced.

### Watch alarm

Although the fitting of a watch alarm is not a mandatory requirement for UK registered fishing vessels, section 5 of MGN 313 (F) states:

*"It is strongly recommended that any automatic pilot fitted should incorporate a watch alarm. It is a good practice to extend the installation of a watch alarm to vessels not fitted with automatic pilot. A watch alarm should be fitted on board ALL vessels where there may be one person on navigational watch". [Sic]*

Had *Karen* been fitted with a watch alarm, it might well have alerted and reminded the skipper of the need to make regular checks of the vessel's position during the passage into harbour, and so reduce the risk of a grounding or other navigation-related accident occurring.

### Post-grounding actions

Once *Karen* had grounded, the skipper took appropriate action to ensure the safety of his crew and, as best he could, that of his vessel. Although he did not press the DSC button for the required 5 seconds, he promptly transmitted a "Mayday". He was conscious of the post-grounding lessons

identified from the FV *Greenhill* accident, in particular of the need to keep the vessel's engine in-gear while still aground, if major flooding is confirmed. The flooding boundary was closely monitored, and the lifejackets were donned and liferaft deployed in readiness for evacuation. Had they needed to abandon the vessel before assistance arrived, the crew would have been well prepared.

Given the high probability of *Karen* breaking up, with the consequent risk of pollution, Belfast CG's and the Ardglass harbourmaster's decision to refloat her under controlled conditions was well considered.

## CONCLUSIONS

1. *Karen's* skipper failed to keep a safe navigational watch in that he did not effectively monitor the vessel's passage into Ardglass Harbour. It is likely that the wheelhouse was left unattended for some of that time.
2. The skipper took insufficient account of the navigational safety lessons to be learnt from the grounding of FV *Greenhill* and did not follow the guidance provided in MGN 313 (F).
3. Had the skipper and his crew attended the mandatory safety awareness training course, the likelihood of this accident would have been reduced.
4. The risk assessment produced for "Wheelhouse Operations" required actions to reduce the risks. However, none were recorded.
5. Had the owner adopted a more proactive approach to risk assessment and crew training, the potential for such accidents to occur would have been reduced.
6. Had a watch alarm been fitted it might well have alerted and reminded the skipper of the need to make regular checks of the vessel's position during the passage into harbour.
7. Post-grounding actions taken by the skipper, Belfast CG and the Ardglass harbourmaster were well considered.

## **ACTION TAKEN**

The owner of *FV Karen* has:

- Promulgated instructions to the skippers of his vessels to employ only suitably qualified crew.

## **RECOMMENDATIONS**

The owner of *FV Karen* is recommended to:

**2011/115** Take the following actions to improve safety on board his vessels:

- Ensure skippers and crew are familiar with the guidance contained in MGN 313 (F) - Keeping a Safe Navigational Watch on Fishing Vessels.
- Ensure skippers and crew are qualified in accordance with MGN 411(M+F) – Training and Certification Requirements for the Crew of Fishing Vessels and their Applicability to Small Commercial Vessels and Large Yachts.
- Review the onboard written risk assessments for accuracy and relevance, and ensure that control measures are identified and implemented where appropriate.
- Consider fitting watch alarms as recommended by MGN 313 (F).

**Marine Accident Investigation Branch  
June 2011**

## SHIP PARTICULARS

Vessel's name	<i>Karen</i>
Flag	United Kingdom
Classification society	Not applicable – subject to MCA survey
IMO number/Fishing number	GY 317
Type	Fishing vessel
Registered owner	Privately owned
Manager(s)	Privately managed
Construction	Wooden
Length overall	19.23 metres
Registered length	17.71 metres
Gross tonnage	50
Minimum safe manning	Not applicable
Authorised cargo	Not applicable

## VOYAGE PARTICULARS

Port of departure	Ardglass, Northern Ireland
Port of arrival	Ardglass, Northern Ireland
Type of voyage	Coastal
Cargo information	Prawns
Manning	4

## MARINE CASUALTY INFORMATION

Date and time	3 January 2011 at 1755 (UTC)
Type of marine casualty or incident	Serious Marine Casualty
Location of incident	Entrance to Ardglass Harbour, Northern Ireland
Place on board	Not applicable
Injuries/fatalities	Bruising to one crewmember
Damage/environmental impact	Hull penetration causing flooding/no pollution
Ship operation	On passage
Voyage segment	Arrival
External & internal environment	Visibility good. Wind north-westerly force 3. Sea state slight with 0.5m swell. Spring tide with LW at 1652 and HW at 2303. Tidal direction 203°(T) at 0.8 knot.
Persons on board	4