MAIB
MARINE ACCIDENT INVESTIGATION BRANCH

ACCIDENT REPORT

VERY SERIOUS MARINE CASUALTY | REPORT NO 4/2016 | MARCH 2016

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

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

NOTE

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

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Collision between the fishing vessels *Silver Dee (B310)* and *Good Intent (SY79)* resulting in the foundering of *Silver Dee*

Irish Sea

29 July 2015

SUMMARY

On 29 July 2015, the fishing vessels *Silver Dee* and *Good Intent* collided in the Irish Sea. *Silver Dee* was badly damaged and the vessel started to flood. *Silver Dee*'s crew were able to transfer across to *Good Intent* before their vessel sank about 8 minutes later. *Good Intent* was also damaged but was able to return to Ardglass, Northern Ireland under its own power. There were no injuries.

The investigation identified a number of factors that contributed to the collision and to *Silver Dee's* loss. These included:

- A proper and effective lookout was not maintained on board either vessel.
- *Good Intent*'s wheelhouse was left unattended for long periods of time and *Silver Dee*'s skipper was not monitoring nearby vessels.
- The wheelhouse watchkeepers on both vessels were probably affected by fatigue.
- *Silver Dee* flooded rapidly because the vessel was not fitted with watertight bulkheads.

Image courtesy of Darren Purves and Marinetraffic.com

FV *Good Intent*

FV *Silver Dee*

If *Silver Dee* had been built today, the current construction standards applicable to wooden fishing vessels would have significantly increased the vessel's survivability.

Despite industry initiatives, the failure to keep a safe navigational watch persists among a number of fishermen, with economic and social factors continuing to take preference over safety considerations. Recommendations have been made to the skippers of both vessels to improve watchkeeping practices on fishing vessels they may be in charge of in the future.

FACTUAL INFORMATION

Narrative

At 0330 (UTC+1)[1] on 29 July 2015, the stern trawler *Silver Dee* sailed from Ardglass, Northern Ireland, bound for prawn fishing grounds to the south **(Figure 1)**. On board were the vessel's skipper and four deckhands. The wind was north-north-westerly between 7 and 10 knots, the sea was slight and the visibility was good. It was dark, and *Silver Dee*'s deck and navigation lights were on.

When *Silver Dee* was clear of the harbour, the four deckhands went to their bunks in the forward cabin space. The skipper remained on watch and was seated in the wheelhouse chair. The vessel was in autopilot controlled steering and its engine was set to 'full ahead'. *Silver Dee* was making good a course of 173º at a speed of 8kts[2].

A number of other fishing vessels, also from Ardglass, were close by and heading in a similar direction. *Silver Dee*'s skipper was aware of the lights and radar targets of the other fishing vessels but he did not monitor their movement. During the passage to the fishing grounds, the skipper planned the day's tows with the aid of a plotter and a computer. It is reported that the skipper remained in the wheelhouse and that he was not distracted from his watchkeeping responsibilities.

Meanwhile, the stern trawler *Good Intent* was drifting 17nm south of Ardglass **(Figure 1)**. The vessel's navigation and deck lights were on and its engine was running in 'idle' but it was not in gear. The bosun (senior deckhand) was on watch. He spent much of his time on the deck or inside the accommodation but periodically visited the wheelhouse to check for other vessels in the vicinity. The skipper and the vessel's other four deckhands were asleep in their bunks.

At 0430, *Good Intent*'s bosun went to the wheelhouse and checked visually and by radar that no other vessels were close by. He then put the engine to 'full ahead' and selected autopilot controlled steering. *Good Intent* was soon making good a course of approximately 040° at 7.3kts **(Figures 1 and 2)**. The vessel was heading towards a position about 5.6nm to the north-east that was marked by a cursor on a chart plotter. The bosun had been instructed by the vessel's skipper to be in that position at 0515 to start the day's fishing. The bosun then left the wheelhouse to prepare the fishing gear. He kept a lookout from the deck but occasionally visited the wheelhouse to check the vessel's progress.

By 0510, it was starting to get light[3]. *Good Intent*'s bosun returned to the wheelhouse and saw that the vessel was nearing the position shown on the chart plotter. He did not see that *Silver Dee* was about 0.6nm off *Good Intent*'s port side. The bosun put the engine to 'idle' and then returned to the accommodation.

[1] All times are UTC +1

[2] All courses and speeds in this report are 'over the ground' unless stated otherwise.

[3] Civil twilight was at 0444 and sunrise at 0530.

Reproduced from Admiralty Chart BA 0044 by permission of the Controller of HMSO and the UK Hydrographic Office.

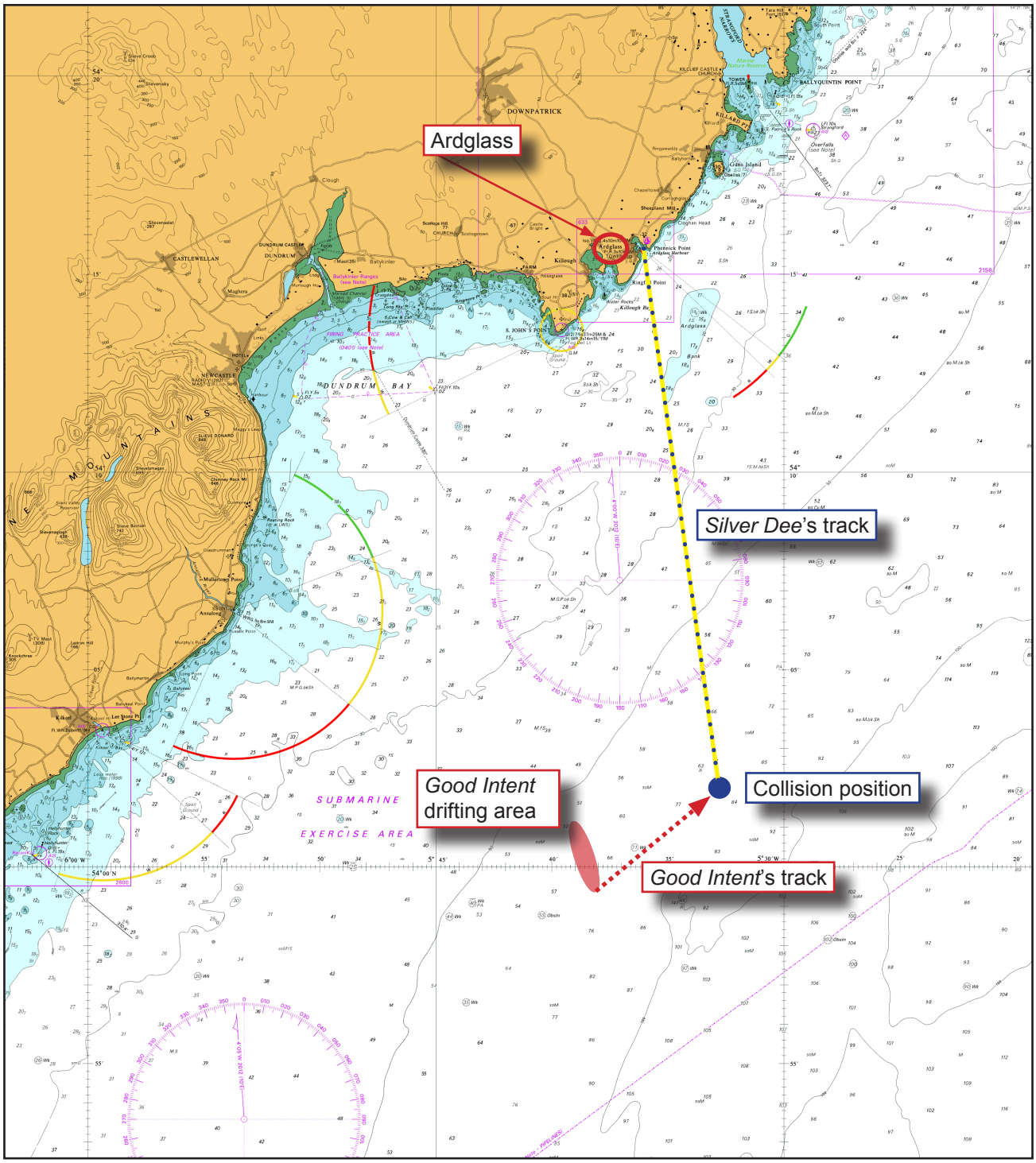

Figure 1: Extract from Chart 0044 showing tracks of *Silver Dee* and *Good Intent*

At about 0515, *Good Intent*'s bosun informed the skipper and the crew that the vessel was 'in position' and switched on the kettle. He then returned to the wheelhouse. As soon as the bosun arrived in the wheelhouse he saw *Silver Dee* extremely close on the port beam. The bosun immediately put the engine to 'full astern'.

At about the same time, *Silver Dee*'s skipper saw *Good Intent* immediately ahead. The vessels collided before he had time to react; *Silver Dee*'s bow struck *Good Intent*'s port shoulder.

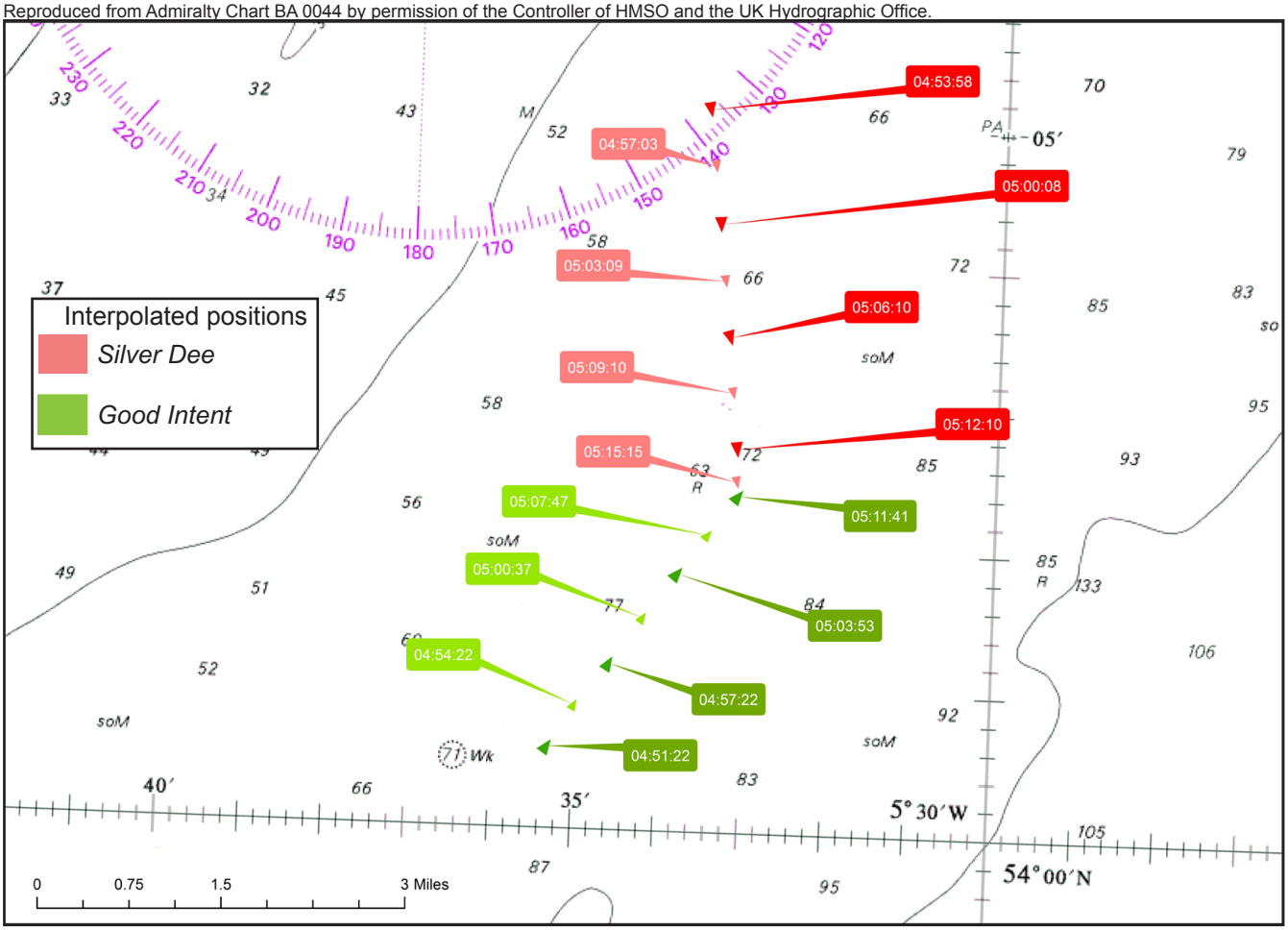

Figure 2: AIS tracks of *Silver Dee* and *Good Intent*

Post-collision actions

On impact, *Silver Dee*'s skipper was thrown forward onto the wheelhouse console. The vessel's crew were jolted awake and immediately saw water rushing into the cabin. They quickly went to the wheelhouse where the skipper told them to don lifejackets and to check the damage. One of the deckhands soon identified that the fish hold was flooding. The force of the collision had sprung planks either side of the vessel's stem.

Good Intent's skipper and the four crew inside the accommodation had also felt the impact. They left the accommodation and donned lifejackets. The crew also started to check for damage. The bilge pumps were started as a precaution but no water ingress was found.

The skippers soon established contact with each other on very high frequency (VHF) radio channel 13, a local working channel. *Silver Dee*'s skipper advised that he was taking on a lot of water and his vessel would probably sink. The skippers agreed to manoeuvre the vessels alongside each other to enable *Silver Dee*'s crew to transfer to *Good Intent*. *Silver Dee*'s steering, engine and auxiliary power were unaffected by the collision.

At 0525 *Good Intent*'s skipper sent a DSC alert[4]. He also called Belfast Coastguard via VHF channel 16 to notify them of the collision and that *Silver Dee* was taking on water rapidly. Belfast Coastguard immediately tasked the Newcastle all weather lifeboat to assist.

By 0530, *Silver Dee* was alongside *Good Intent* and its skipper and crew stepped across onto *Good Intent*'s deck. *Good Intent* was then manoeuvred clear of *Silver Dee.* At 0537 *Good Intent*'s skipper

[4] DSC - digital selective calling. DSC-enabled VHF radios are able to send pre-defined distressed messages. The message may be defined or undefined. *Good Intent*'s skipper sent a message with "sinking" as its definition.

informed Belfast Coastguard on VHF radio that both vessels' crews were safe and uninjured. He also advised the coastguard that *Good Intent* did not appear to be in immediate danger. Over the next few minutes, *Silver Dee* slowly submerged **(Figure 3)** and eventually sank at about 0545 **(Figure 4)**. Shortly afterwards, the vessel's Emergency Position Indicating Radio Beacon floated to the sea surface and started transmitting. Its liferaft also released and inflated.

Figure 3: *Silver Dee* after abandonment

Figure 4: *Silver Dee* stern seconds before sinking

Good Intent proceeded to Ardglass where *Silver Dee*'s crew disembarked. Inspection in port established that *Good Intent* had suffered damage to steelwork and planking on its port side **(Figure 5)**.

Fishing routine

Prawn trawlers operating out of Ardglass and other nearby Northern Irish ports usually sailed early in the morning and returned late at night. Generally the trawlers worked Monday to Friday weather permitting. On 27 and 28 July 2015, *Silver Dee* had sailed from Ardglass at 0330 and returned at 2230.

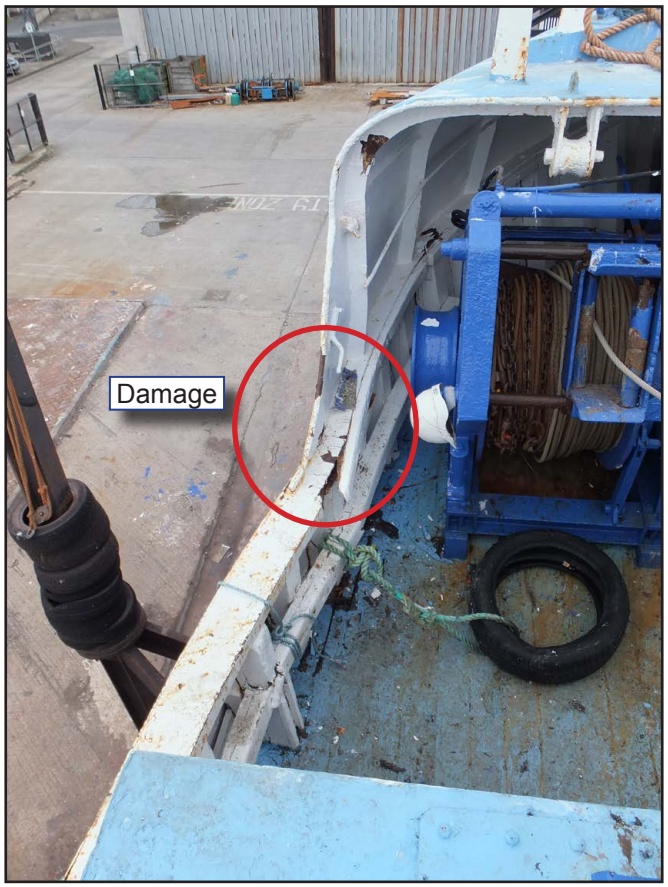

Figure 5: Damage to port shoulder of *Good Intent*

Good Intent had not been following the local practice. The skipper preferred to drift at sea overnight in order to maximise the opportunity to rest and to save fuel. The vessel was able to do this because it was equipped with an ice-maker that enabled the catch to be kept in the fish hold for up to 4 days without deteriorating. *Good Intent* had been at sea since sailing from Portavogie, Northern Ireland at 0310 on 27 July 2015.

Crews and watchkeeping routines

Silver Dee

Silver Dee's skipper was 41 years of age and was a UK national from Northern Ireland. He had been a fisherman for all of his working life and owned the

vessel. The skipper held a Deck Officer (Fishing Vessel) Class I Certificate of Competency (CoC). The crew comprised two Filipinos, a Lithuanian and a Romanian. The skipper and the crew had completed the mandatory training required for UK fishermen[5].

At sea, the skipper kept the wheelhouse watch except when resting for between 2 and 3 hours in the afternoon while the vessel was towing. When the skipper was resting, one of the other crewmen would keep the wheelhouse watch but would wake the skipper if he had any concerns.

On 28 July, *Silver Dee*'s skipper had rested on board for 2 hours during the afternoon and for 3½ hours at home overnight. On the morning of 29 July, the skipper arrived on board the vessel at about 0315.

Good Intent

Good Intent's skipper was 34 years of age and he was also a UK national from Northern Ireland. He had been a fisherman for 17 years and held a Deck Officer (Fishing Vessel) Class II CoC. The skipper had worked on board *Good Intent* since April 2014.

The bosun was 29 years of age and a Sri Lankan national. He had been a fisherman since the age of 12 and had worked on board *Good Intent* for 25 months. The bosun had not slept during the 19½ hours before the collision. The MAIB investigation identified that the bosun's knowledge of radar and navigation was rudimentary and that he had no understanding of the COLREGS[6].

At sea, the skipper kept the wheelhouse watch except during the afternoon when he rested while the vessel was towing, and for between 4 and 5 hours overnight when the vessel was drifting. When the skipper was resting, the wheelhouse watch was kept by the bosun, who was instructed to inform the skipper if *Good Intent* was called by radio or if there was a cause for concern.

During the 14 months the skipper and the bosun had worked on board together, the skipper had trained the bosun to operate the vessel's steering and engine controls and how to keep a lookout. The skipper did not require the bosun to remain in the wheelhouse when the vessel was drifting overnight.

The deckhands were Filipino nationals. They were experienced fishermen and had completed the mandatory training in sea survival, first-aid and fire-fighting. However, three of the Filipinos had not completed the basic health and safety course.

Construction

Silver Dee and *Good Intent* were wooden, twin-rigged stern trawlers. *Silver Dee* was 18.54m in length and was built in 1971. *Good Intent* was 18.21m in length and was built in 1981. Both vessels complied with the requirements of The Fishing Vessels (Safety Provisions) Rules 1975. *Silver Dee* had three main compartments below the waterline; the cabin space, the fish hold and the engine room **(Figure 6)**. The vessel was not fitted with a collision bulkhead or any other watertight bulkheads.

[5] New entry fishermen in the UK must complete basic safety courses in sea survival, elementary first-aid; fire-fighting and health and safety. Fishermen with 2 years' experience must also complete a 1-day mandatory safety awareness course run by the Sea Fish Industry Authority (Seafish).

[6] COLREGS – The International Regulations for Preventing of Collisions at Sea 1972, as amended.

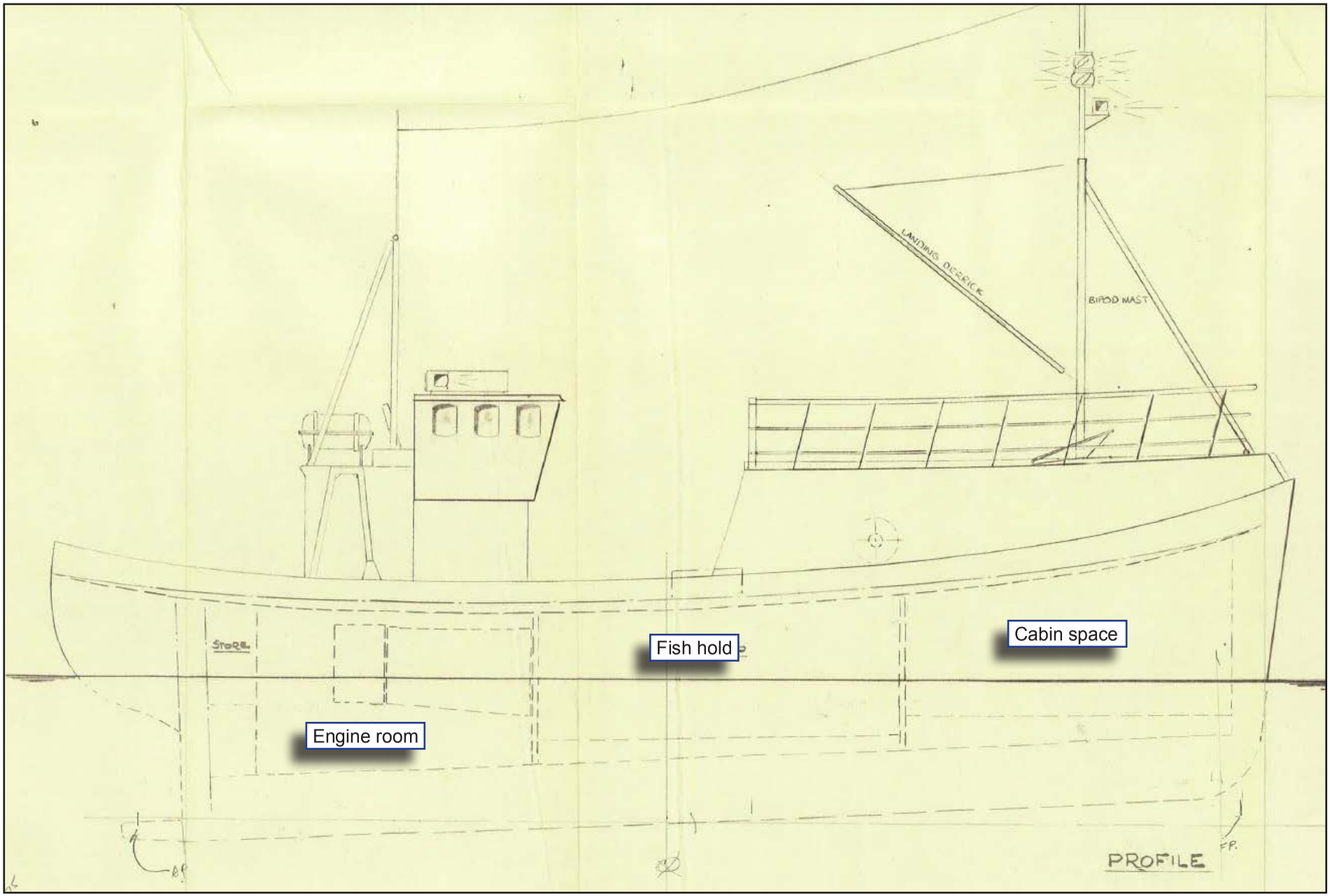

Figure 6: *Silver Dee* side profile

Wheelhouse equipment

The wheelhouses of *Silver Dee* and *Good Intent* were similarly equipped with two plotters, a radar display, an echo sounder, two VHF radios, two GPS[7] receivers, an AIS[8] and an autopilot. The vessels' AISs were not integrated with the radar displays or the plotters. Before the collision, *Silver Dee*'s skipper had switched the radar display between the 3nm and 6nm range scales; *Good Intent*'s radar display was set on the 3nm range scale. No watch alarm was fitted on board either vessel. *Silver Dee*'s wheelhouse had a chair located on the centreline. Two chairs were fitted in *Good Intent*'s wheelhouse, one either side of the centreline **(Figure 7)**.

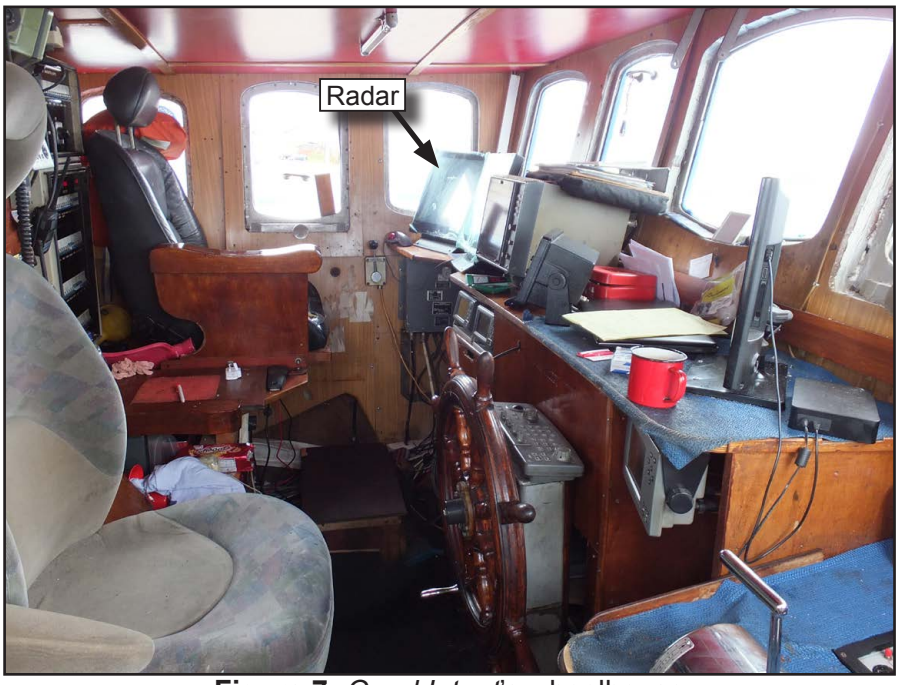

Figure 7: *Good Intent*'s wheelhouse

ANALYSIS

The collision

At 0430, the distance between *Silver Dee* and *Good Intent* was 9.25nm and closing **(Figure 1)**. The visibility was good and the vessels were displaying navigation and deck lights. Therefore, by the time the vessels had closed to 3nm at about 0500, they would have been in sight of each other and showing on the radar displays**.** At that point, if both vessels had maintained their courses and speeds *Good Intent* would have passed between 0.6nm and 0.8nm ahead of *Silver Dee*.

However, neither *Silver Dee*'s skipper nor *Good Intent*'s bosun was aware of the proximity of the two vessels. Consequently, *Good Intent*'s bosun stopped his vessel directly in the path of *Silver Dee* and *Silver Dee*'s skipper was oblivious to the danger ahead. Both *Silver Dee*'s skipper and *Good Intent*'s watchkeeper remained unaware of the perilous situation until seconds before the vessels collided. By then, it was too late for any effective avoiding action to be taken.

Lookout

It is a fundamental requirement of the COLREGS that a proper lookout is maintained at all times. If there is no lookout, many of the regulations intended to prevent collisions in varying circumstances cannot be applied.

Silver Dee

Silver Dee's skipper was a career fisherman who held a Deck Officer (Fishing Vessel) Class I CoC. Therefore, he should have had the experience and the knowledge to keep a safe wheelhouse watch, particularly as the passage to the fishing grounds was straightforward and the sea and weather conditions were favourable. It is not known why the skipper did not see *Good Intent* until seconds before the collision. During the 2 hours on passage, he had planned the day's fishing tows, but this task would have taken only a short period of time to complete. The skipper reportedly remained in the wheelhouse and did nothing else to distract him from his watchkeeping responsibilities.

[7] Global positioning system.

[8] Automatic identification system.

Throughout the passage, the skipper was seated in the wheelhouse chair and appears to have been relatively inactive. He was 'relaxed' about other nearby fishing vessels heading in a similar direction, which was a routine occurrence, and he did not monitor their movement. At 0500, *Good Intent* was one of four fishing vessels within 3nm that were ahead of *Silver Dee* **(Figure 8)** but the skipper did not notice that *Good Intent* was moving to the north-east. Such movement would have been readily apparent by radar and by sight, as *Silver Dee*'s port navigation light would have been visible.

Silver Dee's skipper was probably fatigued to some degree, having had only short periods of rest over the previous 2 days' fishing. Alone in the warmth of the wheelhouse and with little stimulation, the possibility of him falling asleep, particularly from about 0500, cannot be discounted.

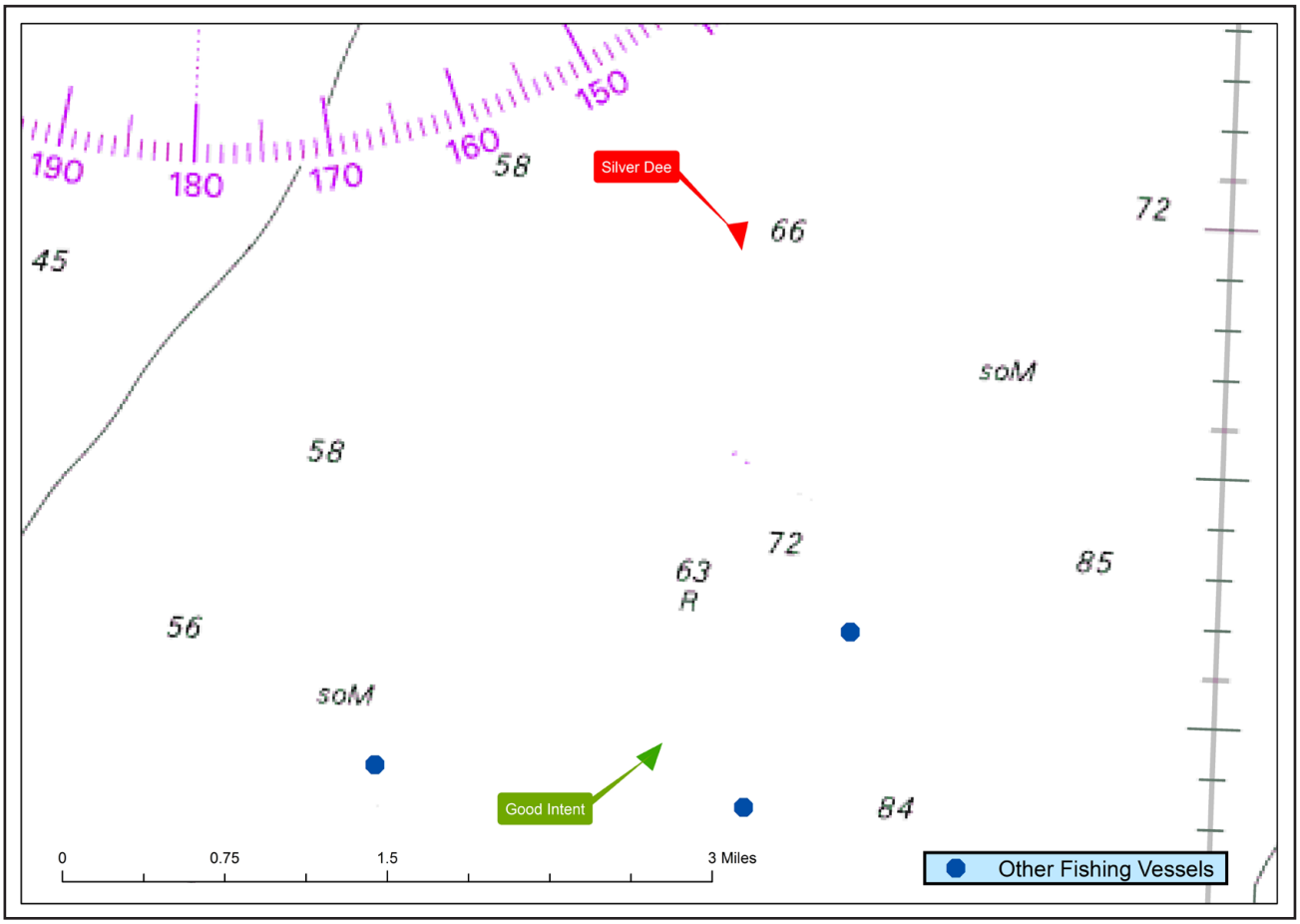

Figure 8: Disposition of vessels at 0500

Good Intent

Good Intent's bosun was also an experienced fisherman. When he returned to the wheelhouse at about 0510 and put the engine to 'idle', he did not see *Silver Dee* approaching about 0.6nm off the port side. The bosun's objective was to ensure that the vessel was stopped in the position briefed to him by the skipper. Consequently, his focus was probably on the plotter, stopping the vessel and then waking the skipper and the crew.

However, it would have been almost impossible for the bosun to enter the wheelhouse, look at the plotter and adjust the engine control lever without looking out of the windows with peripheral vision. Therefore, it is likely that the bosun did not notice *Good Intent* because the vessel was obscured from his view by either the port side wheelhouse chair, the radar display or a window frame **(Figure 7)**.

The bosun's activities on deck and inside the accommodation prevented him from maintaining a continuous lookout. As a result, his situational awareness was reduced to the extent that he was unaware of *Good Intent*'s proximity. While Rule 5 of the COLREGS does not stipulate from where a lookout needs to be maintained, it is common sense that it should be kept in a position from which an all-round view can be achieved. For most fishing vessels, this is usually the wheelhouse. In this case, had the bosun remained in the wheelhouse throughout his watch, the probability of him detecting *Good Intent* at an early stage and not stopping directly ahead of it, would have increased considerably.

Notwithstanding that the bosun's knowledge of navigation and radar were rudimentary and that he did not understand the COLREGs, both of which raise concerns about his competency as a watchkeeper, it is likely that the bosun's performance and behaviour were also affected by fatigue. Working very long days on board *Good Intent* for over 2 years without a break, and not having any sleep during the 19½ hours before the collision, would undoubtedly have taken its toll.

Keeping a safe navigational watch

The MCA's Marine Guidance Note 313 (F) "Keeping a Safe Navigational Watch on Fishing Vessels" includes:

- *Watches must be kept by competent people;*
- *A Proper lookout should be kept at all times;*
- *The activities of all other vessels in the area should be monitored;*
- *Sufficient rest should be taken before a watch* [sic]

It is evident from the circumstances of this case, that this guidance was not followed. Despite the MCA and industry initiatives, the failure to maintain a safe navigational watch persists among a number of fishermen, with economic and social factors continuing to take precedence over safety considerations. Competent watchkeeping requires safety-oriented attitudes and behaviours as much as it requires experience, knowledge and skill.

Post-accident actions and survivability

Silver Dee's damage and resulting flooding was quickly assessed by the vessel's skipper. As *Silver Dee* sank only 8 minutes after its crew had transferred to *Good Intent*, his prompt decision to abandon the vessel was sensible and justified. *Good Intent*'s skipper's broadcast of a DSC alert and his VHF call to Belfast Coastguard were also timely and appropriate. In addition, the activation of the EPIRB and the surfacing of the liferaft highlighted the benefits of vessels carrying such equipment.

Silver Dee's rapid flooding was due to its lack of a collision bulkhead and other watertight subdivisions. Floodwater was able to rush through the damaged planking at the stem and then spread quickly through the vessel.

Since the Fishing Vessels (Safety Provisions) Rules 1975 were introduced, there have been numerous changes to the construction requirements applicable to new vessels; *Silver Dee* did not have to meet these revised requirements due to "grandfather rights"[9]. Had *Silver Dee* been constructed today, it would be required to be fitted with a collision bulkhead and watertight bulkheads either side of the engine room. Specifically MSN 1770 (F)[10] states:

[9] Grandfather rights or clauses – the practice of permitting vessels to operate to the standards applicable at the time they were built, or as otherwise stated

[10] Merchant Shipping Notice 1770 (F) The Fishing Code of Safe Working Practice for the Construction and Use of 15 metre registered length (L) Fishing Vessels

In vessels constructed of wood, a collision bulkhead and bulkheads at the fore and aft ends of the machinery space, should be provided. The after bulkhead of the machinery space may terminate on a horizontal, flat that extends aft to the stern, above the line of shafting. The bulkheads and flat referred to in this section should be of adequate strength and gasketed and/or caulked to prevent significant leaks or flooding.

CONCLUSIONS

- A proper and effective lookout was not maintained on either vessel.
- *Good Intent*'s wheelhouse was left unattended for long periods of time and *Silver Dee*'s skipper was not monitoring any nearby vessels.
- The wheelhouse watchkeepers on both vessels were probably affected by fatigue.
- The failure to maintain a safe navigational watch persists among a number of fishermen.
- *Silver Dee* flooded rapidly because the vessel was not fitted with watertight bulkheads. Changes in construction standards should help to prevent similar losses in the future.

ACTION TAKEN

MAIB actions

The MAIB has:

Issued a safety flyer to the fishing industry highlighting the safety issues raised in this report.

RECOMMENDATIONS

The skippers of *Silver Dee* and *Good Intent* are recommended to:

106/2016 Take steps to improve the standard of watchkeeping on board vessels they are in charge of in the future, taking particular account of the guidance contained in MGN 313 (F) - Keeping a Safe Navigational Watch on Fishing Vessels.

SHIP'S PARTICULARS		
Vessel's name	*Silver Dee*	*Good Intent*
Flag	British	British
Classification society	Not applicable	Not applicable
IMO number/fishing numbers	B310	SY79
Type	Stern trawler	Stern trawler
Registered owner	Privately owned	Mackinnon Fishing Ltd.
Manager(s)	Privately managed	Mackinnon/Skipper
Year of build	1971	1981
Construction	Wood	Wood
Length overall (m)	18.54	18.21
Registered length (m)	17.23	16.39
Gross tonnage	63	86
Minimum safe manning	Not applicable	Not applicable
Authorised cargo	Not applicable	Not applicable
VOYAGE PARTICULARS		
Port of departure	Ardglass	Ardglass
Port of arrival	Not applicable	Ardglass
Type of voyage	Coastal	Coastal
Cargo information	Not applicable	Not applicable
Manning	5	6
MARINE CASUALTY INFORMATION		
Date and time	29 July 2015: 0515 UTC+1	
Type of marine casualty or incident	Very serious marine casualty	
Location of incident	54°02'N 005°33'W	
Place on board	Ship	Ship
Injuries/fatalities	None	None
Damage/environmental impact	Vessel lost	Moderate hull damage
Ship operation	In passage	In passage
Voyage segment	Mid-water	Mid-water
External & internal environment	North-north-westerly wind force 3, slight sea state, good visibility. Sunrise 0530, no moonlight.	
Persons on board	5	6