MAIB report - Philomena

Contents

GLOSSARY OF ABBREVIATIONS AND ACRONYMS

cm - Centimetres

CoC - Certificate of Competency

kg - Kilogramme

kW - Kilowatt

m - Metre

MCA - Maritime and Coastguard Agency

MSN - Merchant Shipping Notice

MGN - Marine Guidance Note

RAF - Royal Air Force

RNLI - Royal National Lifeboat Institution

SFPA - Scottish Fishery Protection Agency

UK - United Kingdom

UTC - Universal Co-ordinated Time

VHF - Very High Frequency

SYNOPSIS

On 6 March 2001, the coastguard informed the MAIB that a fatal accident had occurred on board Philomena. An investigation began the following day.

Philomena, a scallop dredger fishing in the Moray Firth in moderate to rough seas, was shooting her fishing gear when she rolled to starboard and her port towing bar swung inboard and struck a deckhand on the head. He was seriously injured and, despite efforts by the crew and rescue services to save him, he subsequently died.

The accident occurred after the casualty had moved from a position of safety to a position where he was exposed to the movement of the towing bar. Contributory factors include:

The victims lack of familiarity with the vessels equipment and procedures.

The lack of a risk assessment for the shooting and hauling procedures.

The skippers inability to monitor, from his control position, the actions of all deckhands.

A safety helmet would have afforded protection to the casualtys head and might have reduced the severity of his injuries.

Recommendations to the owner are aimed at improving the safety of personnel

SECTION 1 FACTUAL INFORMATION

1.1 Particulars of Philomena and Accident

Vessel details

Registered owner : Mr T I Nicholson

Port of registry : Troon

Flag : UK

Type : Fishing Vessel

Built : 1970 at Visser, Netherlands

Construction : Steel

Registered length : 27.3m

Gross tonnage : 165

Engine power : 543kW

Service speed : 9.5 knots

Accident details

Time and date : 1530(UTC), 6 March 2001

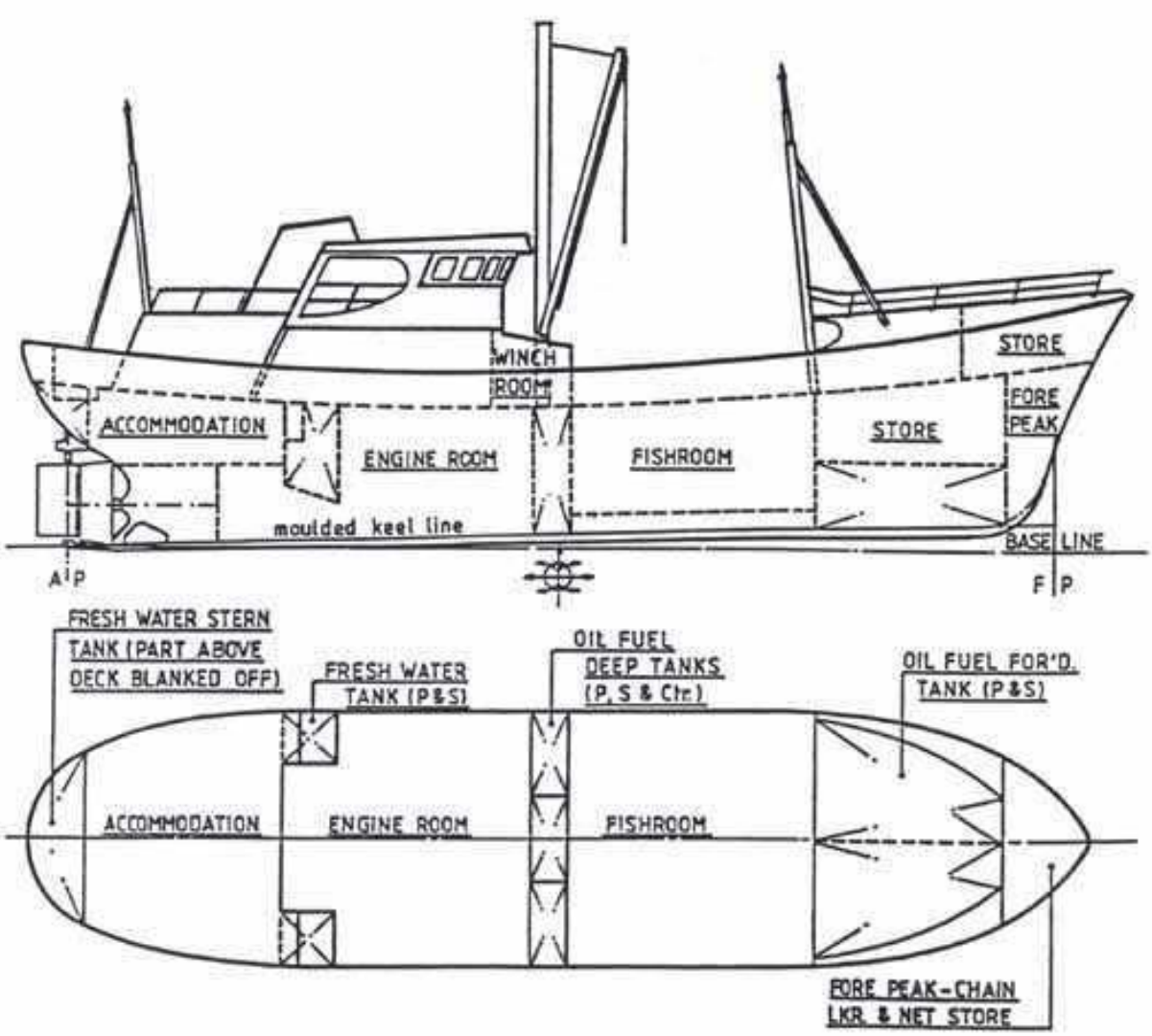
Location of incident : 58° 13.03N, 002° 29.62 W, 23 miles south-east of Wick

Persons on board : 5

Injuries/fatalities : One fatality

Damage : None

'Philomena'



General arrangement - plan and profile

1.2 Narrative

All times are UTC

Following a weeks break from fishing, Philomena sailed from Peterhead at about 0200 on 6 March 2001 to proceed to fishing grounds in the Moray Firth. Her skipper kept the wheelhouse watch for the passage, and was accompanied for the first hour by Mr Scott Davies who had only joined the vessel shortly before sailing. During this time, the skipper briefed Mr Davies regarding the vessels operation and procedures. At about 0300, Mr Davies left the wheelhouse and went to bed.

Between 0500 and 0700, the crew prepared to shoot the fishing gear and, over the following 12 hours, the scallop dredges were shot and hauled three times, with the intervening tows lasting between 2 and 2.5 hours. For the third haul the vessel was on a north-westerly down-sea course at a speed of about 4 knots. After emptying the dredges, preparations were made to shoot the gear for the fourth time; two deckhands moved forward to operate the hydraulic doors and two, including Mr Davies, moved aft to secure the turning chains. The skipper, who remained in the wheelhouse, took the engine out of gear and, as Philomena slowed, she began to swing to the west putting the sea on the port quarter and then the port beam. After the deckhands forward had confirmed to the

skipper that the securing chains had been released and the turning chains secured, the skipper lifted the towing bars from their cradles and the deckhands forward lowered the hydraulic doors.

Philomena then rolled heavily to starboard. This helped to move the starboard towing bar outboard, but caused the port towing bar to swing inboard and strike the heel of the port derrick and the side of wheelhouse. The deckhand forward on the port side looked aft and saw Mr Davies standing aft of the conveyor and towing bar. The vessel then started to return upright, causing the port towing bar to swing away from the wheelhouse. The heel to port, however, was short-lived and the vessel quickly rolled back to starboard. This caused the port towing bar to strike the wheelhouse side for a second time, although not as hard as on the previous occasion. The time interval between the port towing bar consecutively striking the wheelhouse was between 5 and 10 seconds. After the second strike the port towing bar was lowered into the water and the skipper increased speed.

As expected, the forward motion of the vessel, and the influence of the turning chains, caused the towing bars to move perpendicular to the vessel. Before lowering the dredges, the skipper checked that both turning chains had been released. He saw the starboard turning chain had been released but that the port turning chain was still attached. Realising there might have been a problem, he moved to the walkway aft of the wheelhouse and saw Mr Davies lying on his back with his head pointing aft several metres forward of the port turning chain; he was not moving.

The skipper realised immediately that Mr Davies had serious injuries, and, at 1530, summoned the other crew for assistance while sending a Mayday message on VHF radio channel 16. He reported that there was a man on board with severe head injuries and requested a helicopter. RAF rescue helicopter, call sign Rescue 137 from RAF Lossiemouth with a paramedic embarked, was scrambled and proceeded to Philomenas position.

When Philomenas crew attended Mr Davies, he was unconscious; he was not breathing and a pulse could not be found. Despite conducting mouth to mouth and chest compressions, he remained unresponsive. Pillows and blankets were also used to try to keep Mr Davies warm and comfortable until the helicopter arrived. At 1543, the coastguard established a VHF radio link between Philomena and the duty accident doctor at Aberdeen Royal Infirmary. Medical advice was passed to the crew via the skipper, but the crews efforts to revive Mr Davies remained unsuccessful. By 1555, based on information relayed by the skipper, the duty accident doctor had formed the opinion that Mr Davies was probably dead.

Rescue 137 arrived on scene at about 1615 and a crewman was lowered on to Philomena. Mr Davies was then moved aft and placed in a stretcher before being transferred to the helicopter by winch at 1623. At 1635, Rescue 137 landed Mr Davies at Wick airport from where he was taken by ambulance to Caithness Hospital. Although attempts to resuscitate the casualty continued in the helicopter and ambulance, and on arrival at the hospital at 1645, Mr Davies was pronounced dead at about 1700.

1.3 Mr Scott Davies

Mr Davies was 32 years old, and had worked on prawn trawlers between 1987 and 1999. He joined the SFPA in May 1999 as a fishery officer but this employment, which was non-seagoing, ended in January 2001. He sailed in Vertrouwen from 13 until 21 February as a deckhand, with the anticipation of taking over as a relief skipper. After being examined by the MCA in Aberdeen on 2 March, he was granted a 3-month dispensation for a Class 2 (Fishing) CoC for use in Vertrouwen, but was later informed that he would not be required. Mr Davies contacted the owner of Philomena on 5 March and joined the vessel in the early hours of 6 March, immediately before the vessel sailed. Again he was taken on as a deckhand, with a view to becoming relief skipper. This was his

first trip in Philomena; he had never previously worked on a beam scalloper fitted with hydraulic doors.

He had been a member of the RNLI since 1987, serving on the Dunbar and Peterhead lifeboats, and had been a 2nd coxswain since 1998. He had studied for NVQ2 in order to obtain a Class 2 (Fishing) Certificate of Competency but had not completed the final assessment. He had no known medical condition which might have contributed to the accident.

The periods of rest taken by the casualty on the days previous to joining Philomena on 6 March are not known. After joining, he slept for brief periods before starting the days fishing, and during the three tows. Immediately before the incident, Mr Davies was observed to be bright and alert.

1.4 The skipper and remaining crew

The skipper, and one of the deckhands, had been on board Philomena for about 2 years. One deckhand had been on board for about 1 year, and the remaining deckhand for about 3 weeks. One of the crew had not completed the mandatory first-aid course.

1.5 Shooting and hauling procedure

1.5.1 General

Philomena has 16m towing bars weighing several tonnes fitted on both sides. Eighteen scallop dredges are attached to each bar. When not in use, the bars lie fore and aft in a cradle over a conveyor belt, inboard of the side rail. They are attached to large derricks by chain bridle and wire. The wire and derricks are used to raise and lower the towing bars and dredges, and are controlled by the skipper in the wheelhouse. Hydraulic doors, again fitted on both sides, are used to lift the bottoms of the dredges and empty their contents on to the conveyor belt; they are operated by deckhands forward. These doors are not a common fitting on beam scallopers.

Securing chains are fitted to the deck, one forward and one aft on each side. The chains are hooked to the underside of the towing bar through strong eyes, and ensure the towing bars are lifted to the height at which the hydraulic doors should be raised.

A turning chain is fitted to the after end of the towing bar and is secured to a strong point aft on the vessel before shooting. As soon as the towing bar is lowered into the water, the chain acts as a pivot and turns the towing bar perpendicular to the vessels side as she moves forward. The towing bar cannot be lowered to the required depth until the turning chain has been removed.

1.5.2 Hauling

The towing bars are brought to the vessels side. They are then raised until about 15 to 30cm above the side rails, and the securing chains are attached. The bars are then raised further until the securing chains are taut. At this point the hydraulic doors, are lifted until they catch the bottom of the dredges. The deckhands operating the hydraulic doors, and the skipper controlling the height of the bar, then co-ordinate their actions to raise the hydraulic doors at the same rate as the bars are lowered into their cradles. This inverts the dredges, causing their contents to empty on to the conveyor belt. The securing hooks are designed to disengage as the towing bar nears the cradle; occasionally they fail to do so and have to be released manually. When hauling, speed is maintained on a down-sea course at a speed of between 3.5 and 4 knots.

1.5.3 Shooting

After emptying the scallop dredges, the turning chain is attached and the securing chains are checked to make sure they have released. The bars are then raised and the hydraulic doors lowered to release the bottoms of the dredges. When the dredges are disengaged from the hydraulic doors, the towing bars are manoeuvred outboard and lowered into the water. As soon as the towing bars are perpendicular to the vessels side, the turning chains are removed and the bars can be lowered to the desired depth. When shooting, the vessel is taken out of gear.

1.5.4 Manning

Philomena used a skipper and four deckhands to conduct the shooting and hauling operations. The skipper operated the winches, which controlled the derricks and the height of the towing bars from the wheelhouse. Two deckhands were positioned forward, one on either side, to hook/unhook the securing chains and to operate the hydraulic doors. The remaining deckhands were positioned on each side aft, to secure the securing chain when hauling, and to secure and release the turning chain prior to and during shooting.

Mr Davies worked on the port side aft for all three hauling, and four shooting operations conducted on 6 March, and did not appear to have any difficulty in understanding or conducting the tasks he was required to do.

On completion of shooting the fishing gear, Mr Davies next job was to sort out the catch at the forward end of the conveyor.

1.5.5 Co-ordination and control

From the winch-control position in the wheelhouse, the skipper could see the forward deckhands at the control positions for the hydraulic doors and, also, about the forward 11 of the 18 dredges fitted to the towing bar. He could not see the deckhands aft nor the after seven dredges on the towing bar.

After the hauling and emptying of the dredges, the skipper relied on the forward deckhands to indicate, either by shouting or giving a thumbs-up signal, that they were ready to start shooting. The forward deckhands could see along the length of the towing bars and could see the after deckhands on their respective sides. They checked that the securing chains were unhooked, and that the turning chains had been secured, before signalling to the skipper that they were ready.

On receipt of the appropriate signals from the forward deckhands, the skipper raised the towing bars. The forward deckhands then synchronised the lowering of the hydraulic doors with the raising of the towing bars. They were unable to see the aft deckhands while conducting this task.

1.5.6 Maintenance

During the hauling procedure immediately before the fatal accident, the fishing gear was checked as follows:

With the securing chains secured, but before the hydraulic doors were raised, the swords and springs on the dredges were checked.

With the hydraulic door raised and the bar lowered, the bellies of the dredges were checked.

No problems with the gear were noted.

1.5.7 Vertrouwen

The procedures for shooting and hauling the gear on Vertrouwen were similar but, as hydraulic doors were not fitted, the dredges had to be hauled on board and emptied manually. Also, turning chains were not used. During his time on board, Mr Davies was employed primarily on the starboard side forward, and appeared to conduct his tasks satisfactorily

1.6 The working environment of Mr Davies

In conducting his tasks, the only occasions Mr Davies had to stand between the towing bar and the main housing, when the bar was neither over the side nor in its cradle, were when hooking the securing chain on to the towing bar, and when checking the dredges during hauling. On these occasions, the dredges prevented the towing bar from swinging inboard. His other tasks, including the resecuring of the turning chain, could be achieved from a position aft of the towing bar.

Figure 1

During the times the towing bar was free to swing inboard, the inner side of the cradle prevented the bar from swinging into the main housing up to a height of about 170cm, the height of the deck overhang above. The distance from the inner side of the cradle, which is coincident with the inner edge of the conveyor, to the main housing bulkhead is approximately 55cm. The cradle was 2m forward of the aft end of the towing bar and about 50cm above the conveyor. The conveyor was 110cm wide. The casualty was found between the conveyor and the main housing bulkhead just forward of the cradle. **Figure 1** shows the layout of this area of the vessel and indicates key features. There were several major trip hazards in this area.

1.7 Height of the towing bar

It is estimated that when the towing bar first struck the wheelhouse, its height above the conveyor belt was about 168cm (198cm above the deck). When it struck the second time, it is estimated it had been raised about a further 40cm.

Practical demonstrations of the hauling and shooting procedure were conducted alongside at Buckie on 8 March 2001. With the towing bar positioned at the height above the deck observed at the time of the second strike, it was found that the bar could only strike the head of a person of similar height to Mr Davies, if they were standing on a platform higher than the conveyor **(see Figure 2)**. This would have been possible if the deceased was standing on either the raised edges of the conveyor, the cradle, or on top of the catch.

Estimated height of the towing bar and position of Mr Davies at the time of the accident
Figure2

1.8 Environmental conditions

The wind was south-easterly force 5 to 6. The sea was moderate to rough with a 3m swell.

1.9 Postmortem

A postmortem was carried out on Mr Davies on 8 March, during which it was noted he weighed 130kg and was 1.73m tall. Samples of blood and urine were taken and later analysis excluded the presence of alcohol. The postmortem report concluded:

From the circumstances of the case and the autopsy findings, I am of the opinion that this man died from a head injury consistent with being crushed by a tow bar on a scallop boat.

1.10 Safety management

The Merchant Shipping and Fishing Vessels (Health and Safety) Regulations 1997 came into force on 31 March 1998 and are applicable to all United Kingdom ships, including fishing vessels. Guidance on the application of these regulations is provided by the MCA in *MGN 20 (M+F)* which states:

..it is the duty of employers to protect the health and safety of workers and others affected by their activities so far as is reasonably practicable.

Among the principles for ensuring health and safety highlighted in the MGN are:

a. *The avoidance of risks, which among other things includes the combating of risks at source and the replacement of dangerous practices, substances or equipment by non-dangerous or less dangerous practices, substances or equipment;*

b. The evaluation of unavoidable risks and the taking of action to reduce them;

c. Giving collective protective measures priority over individual protective measures; and

d. The provision of appropriate and relevant information and instruction for workers.

There is no requirement for risk assessments to be written. At the time of the accident, the owner had not conducted a risk assessment and, although the skipper had produced written instructions for the vessels procedures, these had not been made available to Mr Davies. Neither *MGN 20*, nor any other *MSN* relevant to fishing vessels were held on board.

Following the accident, the owner, in consultation with the skipper and crew, conducted a risk assessment of the vessels operations and activities. Additionally, investigations have commenced to: improve the visibility from the wheelhouse to enable the skipper to see the deckhands aft when operating the winch controls; provide a method for the deckhands aft to alert the skipper; and reduce the periods deckhands must work in the vicinity of the towing bar when its movement is unchecked.

1.11 Protective clothing

Lifejackets and industrial safety helmets were available on board. The crew were encouraged to use them, but were not required to do so. At the time of the accident, Mr Davies was wearing new rigging boots and oilskins; he was not wearing a safety helmet or lifejacket.

SECTION 2 - ANALYSIS

2.1 The accident

Mr Davies was last seen conscious after the vessel had rolled to starboard and the port towing bar first struck wheelhouse side; he was standing in an area of safety. He was later found lying prone on the deck between the conveyor and the main housing, soon after the bar had swung inboard for a second time. It is, therefore, probable Mr Davies injuries were caused by the towing bar crushing his head against the wheelhouse side on the second occasion it swung inboard. This is supported by the findings of the postmortem.

In view of the position in which the deceased was found, it is likely that he was in the vicinity of the cradle when hit. Mr Davies could have easily reached this position during the 5 to 10 second interval between the successive strikes of the towing bar. Furthermore, given the estimated height of the towing bar at the time of the second strike, he must have been standing either on the cradle itself, on the raised sides of the conveyor, or on the catch for his head to be forced against the wheelhouse side **(see Figure 2).**

2.2 Mr Davies actions

To be struck by the towing bar, Mr Davies must have moved forward from his position of safety immediately after the first strike. As he was required to remain aft to release the turning chain, his reason for taking such action is not known. The dredges had been checked while hauling and no problems had been seen, and the forward deckhand on the port side had confirmed that the securing chains were unhooked. Having not used turning chains during his time in Vertrouwen, it is possible Mr Davies might have forgotten that the turning chain needed to be released, and was moving forward to start his next task. This, however, cannot be confirmed. It is also possible that Mr Davies was tired, but this is not supported by the observations of the skipper and crew. Although the vessel was rolling, and there were significant tripping hazards in his vicinity, neither a trip nor a slip is likely to have resulted in Mr Davies reaching the height required to be hit by the towing bar.

Regardless of Mr Davies reasons for moving from a safe area, passage forward could have been achieved safely had the deck area between the main house and the conveyor been used. As can be seen in **Figure 1**, this area is protected by the inboard side of the bar cradle and wheelhouse overhang, even with the towing bar raised from its cradle and free to swing unchecked. Although the deceased was found lying in this area, he could not have been standing in it when struck.

The deck space available, and the movement of the vessel and towing bar, might have influenced the route chosen by Mr Davies. First, the area between the cradle and the main housing, although adequate, is not spacious, whereas the conveyor is wider and easier to walk along. For a person of his size, the conveyor would inevitably have been the easier of the two routes, and probably his preferred option. Second, the continued raising of the towing bar with the vessels movement to port and the resulting swing of the towing bar away from the wheelhouse side, might have given the impression the towing bar was clearing over the port side. Having already seen the towing bar strike the wheelhouse side with some force, Mr Davies is unlikely to have moved along the conveyor if he did not think that this was the case.

2.3 Familiarisation and induction training

Mr Davies had only worked on board Philomena for about 14 hours when the accident occurred. His induction training and vessel familiarisation was limited to 1 hour in the wheelhouse with the

skipper. He had not understudied another deckhand in the tasks he was expected to perform, nor was he supervised when performing these tasks for the first time. He was, however, an experienced fisherman who had recently been to sea in a vessel of a similar type, and he might have given the skipper the impression that he was familiar with the tasks he was expected to do and the risks involved.

Vessels of similar type, and performing similar tasks, inevitably differ in some way; varying equipment and layout, and differences in procedure and manning are examples. The discussion with the skipper after leaving Peterhead acquainted Mr Davies with the vessels procedures and, as an experienced fisherman, he probably understood the tasks he was required to undertake. The fact that he successfully completed them during the days previous hauling and shooting operations is evidence of this. However, although Mr Davies might have been aware of what he was required to do, it cannot be certain that he was fully aware of the risks involved, or of the precautions to take or actions to avoid, to minimise these risks. To be fully beneficial, induction training or familiarisation of procedures must highlight the risks involved and control measures to be taken.

2.4 Working practices

Although not complicated, the shooting and hauling operations on board Philomena, and the tasks of the individuals concerned can be hazardous, particularly in bad weather. However, because of the limited visibility from his position in the wheelhouse, the skipper is unable to supervise and control all aspects of the procedures. As a result, the success and, therefore, safety of these operations, is reliant on individuals understanding and conducting their tasks without instruction, and upon the completion of key stages being relayed by the forward deckhands to the skipper by either voice or hand signals. Other than Mr Davies, the crew had been on board for sufficient time to be familiar with the vessels equipment and procedures; Mr Davies had only conducted the shooting procedure on three occasions before the accident.

When shooting, the most dangerous period for the deckhands is when the towing bar is lifted out of its cradle until it is over the side and below the side rail. However, during that period, there is no requirement for any deckhand to stand inboard of the towing bar in a place of risk. For the deckhands aft, there is sufficient space aft of the towing bar and, should the need arise to move forward, there is a restricted, but adequate, walkway protected by the inner side of the towing bar cradle. Nonetheless, neither the skipper nor the deckhand forward operating the hydraulic doors, can monitor or control the actions of the personnel aft. The events of 6 March show that under the vessels current shooting procedures, if one of the deckhands aft moves into a position of danger, for whatever reason, this will not be seen nor will corrective action be taken. In some vessels of a similar type to Philomena, the practice of moving all deckhands forward so that they are visible from the wheelhouse when shooting the towing bar, has enabled the skipper to monitor the movement of personnel during this potentially hazardous period.

Mr Davies was not wearing a safety helmet or a lifejacket, despite operating with heavy equipment on the deck in rough seas. A safety helmet would have afforded protection to his head and may have reduced the severity of his injuries.

2.5 Risk assessment and control measures

The owner of Philomena had not undertaken a risk assessment of any of the vessels activities. Notwithstanding this, hydraulic doors are a prudent collective measure that negates the need for personnel to stand in exposed positions when emptying the dredges. Also, the provision of lifejackets and safety helmets are prudent individual protective measures. Unfortunately, because at

the time of the accident Mr Davies chose not to use a safety helmet, it had no chance of being effective.

2.6 First-aid

Although one of the crew had not completed the mandatory first-aid course, three first aid trained members of the crew were able to render assistance to Mr Davies. Consequently, the lack of training in this instance is not considered to have affected the level of first aid administered. However, the need for fishermen to be trained in first aid was once again highlighted.

SECTION 3 - CONCLUSIONS

3.1 Findings

1. Philomena was returning to the fishing grounds following a weeks break. [1.2]

2. Mr Davies joined Philomena shortly before sailing.[1.2,1.3]

3. This was his first trip in Philomena. [1.3]

4. Mr Davies had no previous experience of a vessel fitted with hydraulic doors. [1.3]

5. Induction training was limited to a one-hour conversation with the skipper. [1.2]

6. Mr Davies was an experienced fisherman and mariner. [1.3]

7. Mr Davies did not appear tired. [1.3]

8. Mr Davies was not under the influence of alcohol. [1.9]

9. Mr Davies was a relatively large man. [1.9]

10. Although one of the crew had not completed a mandatory first aid course, the level of first aid administered on board was not affected. [1.4, 2.6]

11. The crew and rescue services were unable to revive Mr Davies. [1.2]

12. Mr Davies died from head injuries. [1.9]

13. The head injuries were sustained while shooting the fishing gear for the fourth time that day. [1.2]

14. Mr Davies was employed on the port side aft during shooting and hauling operations. [1.2]

15. Vessel movement caused the port towing bar to swing inboard on two occasions and the port towing bar hit Mr Davies as it swung inboard on the second occasion. [1.2,2.1]

16. Mr Davies was moving forward along the conveyor when hit. [2.1, 2.2]

17. It is not known why Mr Davies moved forward. [2.2]

18. It is unlikely Mr Davies tripped or fell. [2.2]

19. Mr Davies could have moved forward safely via an alternative route but this route was less accessible than the route along the conveyor. [2.2]

20. It is likely Mr Davies believed the towing bar was clearing the vessels side before he started to move forward along the conveyor. [2.2]

21. The owner had not undertaken a risk assessment of the vessels activities. [1.10]

22. The skipper had produced written instructions for the vessels procedures but these had not been made available to Mr Davies. [1.10]

23. It is not certain if Mr Davies was aware of the risks involved and the precautions to be taken when shooting and hauling the fishing gear. [2.3]

24. Safety helmets were available for the crew but they were not required to use them. [1.11, 2.4,2.5]

25. Mr Davies was not wearing a safety helmet when hit by the towing bar. Had he done so the severity of his injuries might have been reduced. [1.11, 2.4]

3.2 Cause

The fatal injuries sustained by Mr Davies were caused the by the port towing bar swinging inboard, hitting Mr Davies on the head and crushing it against the wheelhouse side. [1.2,1.9, 2.1]

Underlying Factors

1. The skipper was unable to monitor the safety of all personnel when shooting or hauling the fishing gear. [2.3]

2. Although experienced, Mr Davies was new to the vessel and her procedures for shooting and hauling using hydraulic doors and turning chains. [1.3, 1.5.7, 2.3]

3. The induction training and vessel familiarisation given to Mr Davies was minimal. [2.3]

4. A formal risk assessment of the vessels activities including the shooting and hauling operations had not been conducted. [1.10, 2.5]

SECTION 4 - RECOMMENDATIONS

Mr T I Nicholson, the owner of Philomena, is recommended to:

1. Continue to investigate and then implement improvements in the hauling and shooting procedures to allow better monitoring and control of personnel by the skipper.

2. Ensure all new crew are fully conversant with his vessels layout, equipment, procedures, risks and control measures via comprehensive induction training and vessel familiarisation.

3. Ensure personal protective clothing and aids provided are used in accordance with the risk assessment and operating procedures.