ACCIDENT REPORT

Report on the investigation of

the grounding of

Karin Schepers

at Pendeen, Cornwall, UK on

3 August 2011

MAIB
MARINE ACCIDENT INVESTIGATION BRANCH

LESS SERIOUS MARINE CASUALTY REPORT NO 10/2012 May 2012

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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GLOSSARY OF ABBREVIATIONS AND ACRONYMS

ADO	Area District Officer (MCA)
AIS	Automatic Identification System
BNWAS	Bridge Navigational Watch Alarm System
DCPSO	Duty Counter Pollution and Salvage Officer (MCA)
DMA	Danish Maritime Authority
ETV	Emergency Towing Vessel
IMO	International Maritime Organization
knots	A measure of speed in nautical miles per hour
m	metres
MCA	Maritime and Coastguard Agency
MGN	Marine Guidance Note
MRCC	Maritime Rescue Co-ordination Centre
MSN	Merchant Shipping Notice
OOW	Officer of the Watch
RNLI	Royal National Lifeboat Institution
SAR	Search and Rescue
SMS	Safety Management System
SOSREP	Secretary of State's Representative for Maritime Salvage and Intervention
STCW	International Convention on Standards of Training, Certification and Watchkeeping for Seafarers
TSS	Traffic Separation Scheme
VDR	Voyage Data Recorder
VHF	Very High Frequency (radio)

TIMES: All times used in this report are UTC + 2 (ship's time) unless otherwise stated

Karin Schepers

SYNOPSIS

At 0536 on 3 August 2011, the container vessel *Karin Schepers* grounded on the Cornish coast while on passage from Cork, Ireland to Rotterdam, Netherlands. At 0323 the master relieved the second officer as the officer of the watch, and he fell asleep a short time later. No lookout was posted, and with no-one awake on the bridge the vessel continued on for over 2 hours, crossing the Land's End Traffic Separation Scheme before grounding close to Pendeen Lighthouse, West Cornwall, England. The vessel was undamaged, and the crew were able to refloat her on the rising tide.

The master had been the 8-12 watchkeeper, and at midnight had handed over the watch to the second officer. However, the master returned to the bridge at regular intervals after midnight, sounding increasingly intoxicated until eventually he ordered the second officer from the bridge. Shortly after this the master, alone on the bridge, fell asleep.

When *Karin Schepers* was 2 miles from land, the coastguard at Falmouth Maritime Rescue Co-ordination Centre was alerted to its location and attempted, unsuccessfully, to contact the vessel. Lifeboats, a SAR helicopter and a cliff rescue team were all mobilised before the vessel grounded. The master eventually responded to the coastguard after the vessel was aground and advised them that the crew were all safe and that the vessel would be refloated by de-ballasting. After 50 minutes aground *Karin Schepers* refloated and resumed passage under her own power.

The Maritime and Coastguard Agency considered directing the vessel into a port for survey following the grounding, but believed they did not have the legal powers to facilitate this. However, such powers do exist and it would have been prudent to have undertaken a survey of the vessel, particularly given the unusual circumstances of the grounding, before she was permitted to resume passage through UK waters.

Additional safety barriers, which could have helped to mitigate the risk posed by the master falling asleep, were not in place; there was no lookout on the bridge throughout the night, and the bridge navigational watch alarm system was not switched on. The audits of the vessel's safety management system, by the owner, had failed to detect that these important safety requirements were being ignored on board or that measures designed to prevent the consumption of alcohol on their vessels were ineffective.

Recommendations have been made to the Maritime and Coastguard Agency relating to:

- The provision of operational guidance to its officers on the use of powers of direction that may be invoked for vessels which have been involved in an accident.

- The use of Automatic Identification System data for monitoring marine traffic movements.

SECTION 1 - FACTUAL INFORMATION

1.1 PARTICULARS OF *KARIN SCHEPERS* AND ACCIDENT

SHIP PARTICULARS

Vessel's name	*Karin Schepers*
Flag	Antigua and Barbuda
Classification society	Germanischer Lloyd
IMO number/fishing numbers	9404077
Type	Container ship
Registered owner	Karin Schepers, HS Bereederungs GmbH & Co KG
Company	HS Schiffahrts GmbH & Co KG
Manager (Manning)	Marlow Navigation Co Ltd, Cyprus
Construction	Steel
Length overall	140.64m
Registered length	130.6m
Gross tonnage	7852gt
Minimum safe manning	10
Authorised cargo	Containers

VOYAGE PARTICULARS

Port of departure	Cork, Republic of Ireland
Port of arrival	Rotterdam, Netherlands
Type of voyage	Liner container feeder service
Cargo information	Containers
Manning	13

MARINE CASUALTY INFORMATION

Date and time	3 August 2011, 0536
Type of marine casualty or incident	Less Serious Marine Casualty
Location of incident	50 10.3'N 005 37.7'W, near Pendeen Lighthouse, Cornwall
Injuries/fatalities	None
Damage/environmental impact	Minor damage
Ship operation	On passage
Voyage segment	Cork to Rotterdam
External & internal environment	Morning twilight, good visibility, sea state: calm. The wind was light airs. Tidal stream was northerly at 2kts.
Persons on board	13

1.2 NARRATIVE

Information from the vessel's Voyage Data Recorder (VDR) has been used as a source for much of the content of this narrative.

Karin Schepers arrived in Cork from Rotterdam at 0720 on 1 August 2011. The vessel was operating on a regular feeder container liner service between Irish ports and Rotterdam.

The vessel shifted berth twice during the day and ceased cargo operations at 1645. She remained alongside overnight, during which time the master, who did not keep a watch in port, had an unbroken night's sleep.

Cargo operations resumed at 0900 on 2 August and completed at 1800. A pilot boarded at 1950 and the vessel sailed at 2000 bound for Rotterdam. The master and chief officer were on the bridge with the pilot, who steered the vessel out of harbour using the autopilot. The pilot disembarked at 2115.

1.2.1 The passage

At 2120 *Karin Schepers* began her sea passage; the course was set to 135º on autopilot towards the Land's End Traffic Separation Scheme (TSS) **(Figure 1)**. The master was the 8-12 officer of the watch (OOW).

The chief officer, who was the 4-8 OOW, had remained on the bridge following his watch in order to compile a list of the dangerous cargo the vessel had loaded. This information was required when reporting to the coastguard on entry to the various TSSs the vessel would encounter during the passage.

Just before midnight the second officer came to the bridge to take over as the 12-4 OOW. The chief officer completed the dangerous cargo list and left the bridge.

The master handed over the watch to the second officer and left the bridge. No lookout was posted and the bridge navigational watch alarm system was not switched on.

At 0022 the master returned to the bridge and turned on a music compact disc player. He sat on one of the bridge chairs in front of the radars **(Figure 2)** and the second officer occupied the other chair. The two men had a general discussion, in English.

Over the course of the next 2 hours the master left the bridge at intervals but returned each time after about 10 minutes. On one occasion, as he left, he invited the second officer to follow him for a drink; this offer was declined.

During this period, the master's speech became increasingly slurred, and on occasions he spoke in Russian, which the second officer could not understand. At 0249 the master started to fall asleep and the second officer suggested several times that he should go and rest. However, the master gave no coherent response.

At 0312 the second officer began to cry, following which he told the master to take some rest and never to punch him again.

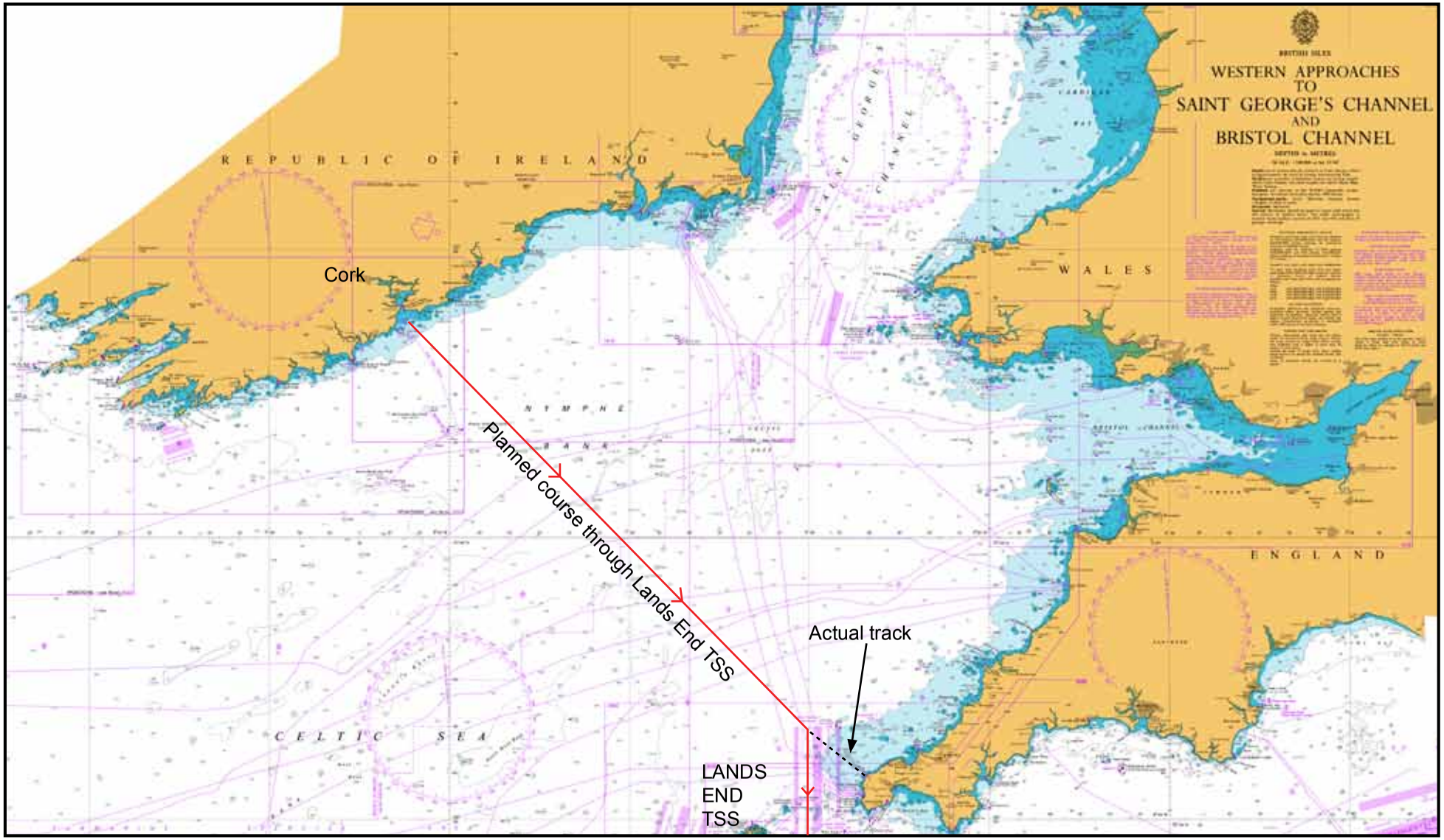

Figure 1: Chartlet showing *Karin Schepers*' planned course from Cork to the Land's End TSS and actual track

Figure 2: *Karin Schepers*' wheelhouse showing bridge chairs

At 0323 the master ordered the second officer to leave the bridge. The second officer said he considered the master to be drunk, and again asked him to go and rest. The master did not reply, and the second officer left the bridge.

The bridge then became relatively quiet and, apart from music which had been playing throughout, the only other sound was of occasional snoring.

At 0422, the OOW of a vessel 4 miles astern of *Karin Schepers,* called the coastguard at Falmouth Maritime Rescue Co-ordination Centre (MRCC) on Very High Frequency (VHF) radio to report that she was 7 miles from the Land's End TSS. The report included details of her cargo, operational status, number of persons on board, and previous and next ports.

At 0426 *Karin Schepers* reached her planned alteration of course position at the entrance to the south-bound lane of the TSS. However, the vessel did not alter course and continued on a heading of 135º, at 16.6 knots, as she crossed the north-bound lane of the TSS, passing within 2 miles of a vessel in that lane at 0456 **(Figure 3)**.

Reproduced from Admiralty Charts **777,**1148 and 1149 by permission of the Controller of HMSO and the UK Hydrographic Office

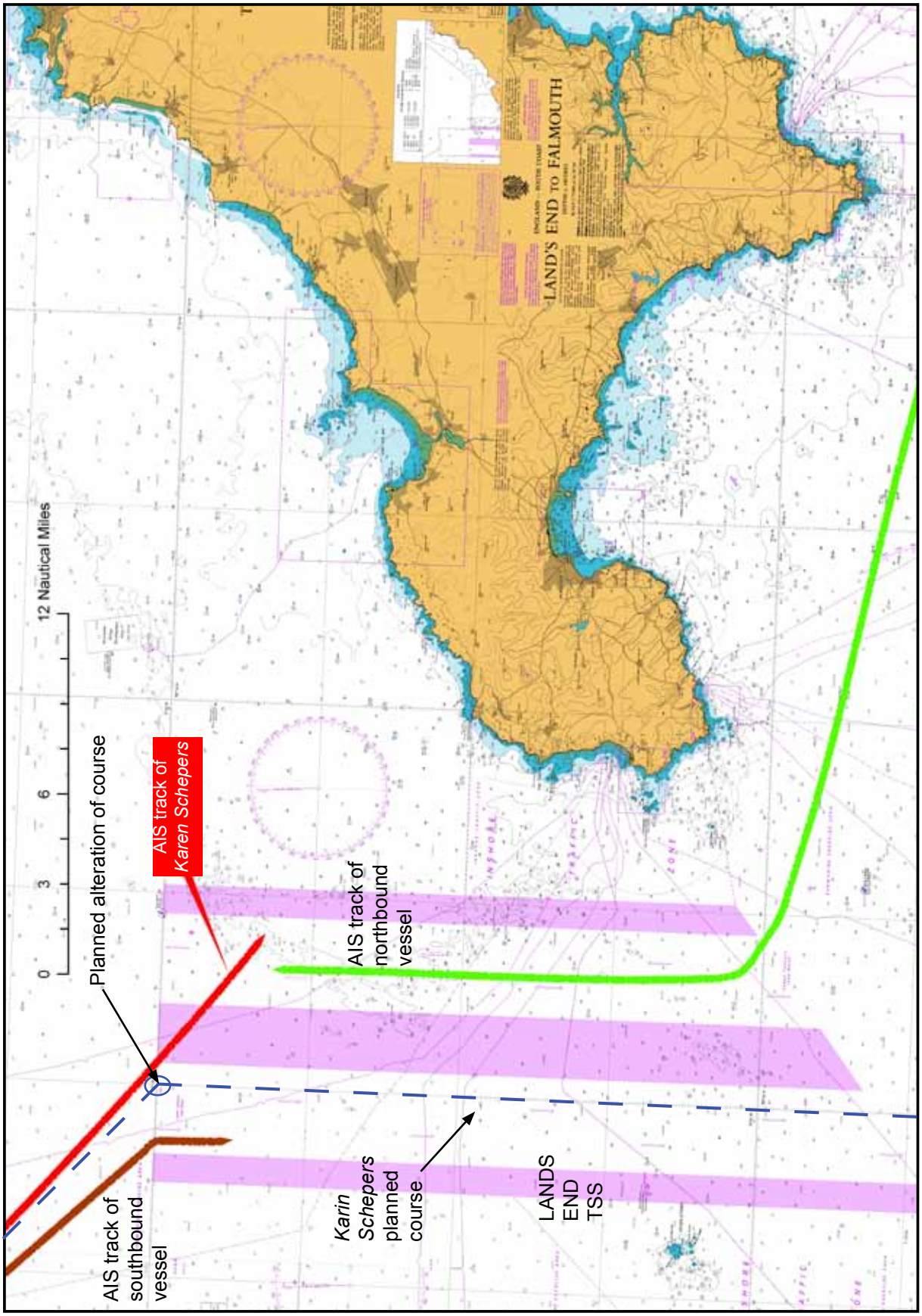

Figure 3: *AIS track of Karin Schepers* and other vessels in the vicinity at 0456

1.2.2 The grounding

At 0525 *Karin Schepers* was 2 miles from land when an unidentified vessel called her on VHF radio to advise her to check her position. No response was made to this call. Alerted by this call, the coastguard at Falmouth MRCC made a number of attempts to contact *Karin Schepers* on VHF radio, Medium Frequency radio and satellite telephone. These calls were audible on the bridge of the vessel, but the master did not respond.

At 0534 Falmouth MRCC called out Sennen Cove Royal National Lifeboat Institution (RNLI) lifeboat and began to contact the Search and Rescue (SAR) helicopter, the St Ives cliff rescue team, and on-call senior Maritime and Coastguard Agency (MCA) managers.

Karin Schepers began to vibrate heavily as she entered shallow water, the satellite telephone continued to ring, and numerous bridge alarms sounded as the vessel grounded at 0536.

At 0538 the master woke up and the propeller pitch was set to zero. The chief officer arrived on the bridge, asked the master what had happened, and was told *"nothing*".

1.2.3 Events after the grounding

At 0542 the propeller pitch was set to 50% astern for a short period before being returned to zero. The satellite telephone continued to ring throughout this period and was finally answered by the master, at 0546, when he spoke to the coastguard and asked them to call him back in 4 minutes.

At 0547 the coastguard watch manager at Falmouth MRCC called out the Area District Officer (ADO) and briefed the Duty Counter Pollution and Salvage Officer (DCPSO) on the accident. The DCPSO was informed that communications with the vessel had been difficult and that, based on conversations held, the master appeared to be drunk.

Over the course of the next few minutes on board *Karin Schepers* the propeller pitch was again set astern, initially to 30% and then to 60%, when heavy sounds of vibration were audible on the bridge. At 0551, the pitch was returned to zero.

The coastguard then contacted the master, on the satellite telephone, to request details of *Karin Schepers*' condition, the number of persons on board and the quantity of oil she was carrying. The master advised them that there was a problem but that the hull condition had not yet been checked. He gave the fuel quantities, crew numbers and asked the coastguard to call back later.

The DCPSO briefed the deputy to the Secretary of State's Representative (SOSREP) and informed the MCA duty operations director of the accident.

1.2.4 Mobilisation of search and rescue assets

At 0605 the Sennen Cove lifeboat arrived on scene **(Figure 4)** and the St Ives lifeboat was called out. A few minutes later a coastguard cliff rescue team arrived on the cliffs above the vessel, from where they had a good view of *Karin Schepers* **(Figure 5)**, and they updated Falmouth MRCC on the situation.

Image courtesy of the Royal National Lifeboat Institution

Figure 4: Sennen Cove Lifeboat alongside *Karin Schepers*

Image courtesy of the Maritime and Coastguard Agency

Figure 5: *Karin Schepers* aground - viewed from cliff top (with helicopter and lifeboat on scene)

At 0610 the rescue helicopter crew confirmed to the coastguard at Falmouth MRCC that they were airborne and en route to the scene of the grounding. The coastguard requested an update from *Karin Schepers*; the master advised that the hull was being checked and that he would update them later.

The ADO arrived at Falmouth MRCC soon after being called out, and he assumed duties that included keeping MCA duty managers informed of the accident and dealing with the press. He also obtained approval from the DCPSO for the mobilisation of the Emergency Towing Vessel (ETV).

1.2.5 Refloating the vessel

At 0610 the master instructed the chief engineer to pump out the forward water ballast tanks. Shortly after this, the crew of the Sennen Cove lifeboat reported a faint smell of diesel oil in the vicinity of the vessel.

At 0621 *Karin Schepers* informed Falmouth MRCC that the vessel had not been damaged, the crew were well, and that their intention was to remove water ballast from forward tanks in an attempt to refloat her. This plan was acknowledged by the coastguard at Falmouth MRCC, who requested to be kept advised on the operation.

At this time the crew of the SAR helicopter confirmed that they were on scene and that their winchman would be lowered onto *Karin Schepers* to confirm that the crew were unharmed.

At 0626 the propeller pitch was placed to 60% astern and *Karin Schepers* moved off the bottom and refloated. As the vessel began to move astern the helicopter's winchman arrived on the bridge. The master confirmed that the vessel was undamaged and that there were no injuries to the crew, most of whom had remained asleep. The winchman then left the bridge to return to the helicopter.

As the vessel proceeded into deeper water she turned away from the shore to resume her passage. Falmouth MRCC advised *Karin Schepers* that the Sennen Cove lifeboat would remain in attendance to ensure the vessel had not been damaged when she came off the rocks.

1.2.6 Resumption of passage

Over the next 20 minutes a number of telephone discussions took place between the coastguard at Falmouth MRCC, DCPSO, and other senior MCA on-call personnel. The discussions focused on the expectation that *Karin Schepers* should be directed to proceed to either Mounts Bay or Falmouth for survey. The MCA duty surveyor was contacted, and he suggested that the vessel should be sent to Falmouth, where a surveyor would be available to board her on arrival.

At 0640 the crew of the SAR helicopter reported that there were no signs of pollution from the vessel. The crew also reported that *Karin Schepers* appeared to have grounded on the only patch of sand in the area.

At 0650 the DCPSO informed the coastguard at Falmouth MRCC that the deputy to the SOSREP had advised him that there were no legal powers available to direct the vessel into port. Accordingly, *Karin Schepers* should be permitted to continue on her passage. The DCPSO also confirmed that the ETV could be stood down at this time.

Falmouth MRCC then began to stand down the SAR assets. The Sennen Cove lifeboat was instructed to remain in attendance until *Karin Schepers* was clear of the TSS, and once the winchman had been lifted off the vessel the SAR helicopter returned to its base.

On the bridge, *Karin Schepers*' master and chief officer discussed how the incident should be recorded in the official log. It was agreed that the report would refer to the vessel manoeuvring close to the shore but would not mention the grounding.

Falmouth MRCC continued to monitor the vessel's progress as she transited through the Land's End TSS, and maintained regular contact with her to check that she remained seaworthy.

At 0750 Falmouth MRCC requested *Karin Schepers* to save her Voyage Data Recorder (VDR) information; this was acknowledged by the master.

The vessel cleared the TSS at 0840 and, following further confirmation that all was well on board, the Sennen Cove lifeboat was stood down by the coastguard at Falmouth MRCC and returned to its base.

Later that morning *Karin Schepers*' master reported the incident to the owner. He advised that she had been manoeuvring close to the shore as a result of strong tidal streams, but stated that the vessel had not gone aground. The owner instructed the master to save her VDR information.

Marine Accident Investigation Branch (MAIB) inspectors and technical staff boarded the vessel on her arrival in Rotterdam the following day, and found that the VDR information had not been saved. However, this did not prevent MAIB's technicians from recovering a full VDR dataset covering the period of the accident.

1.3 BRIDGE TEAM

Karin Schepers' crew were employed by a manning agency, Marlow Navigation Co Ltd and consisted of a mix of Ukrainian, Russian and Filipino nationals. The vessel's official language was English.

Bridge watchkeeping duties on *Karin Schepers* were undertaken by the master, chief officer, and second officer.

1.3.1 Master

The master, aged 39, was a Ukrainian national. He held a Ukrainian certificate of competency (STCW[1] II/2) permitting him to sail as master on ships, other than tankers and passenger ships, of 500 gross tonnes or more, worldwide.

He had sailed as master for 8 years and had been employed by Marlow Navigation Co Ltd in 2009. He had joined *Karin Schepers* in April 2011.

He was the 8-12 OOW at sea and did not maintain a watch when the vessel was in port.

[1] International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, known by the short title 'STCW'

1.3.2 Chief officer

The chief officer, aged 43, was a Ukrainian national. He held a Ukrainian STCW II/2 certificate of competency permitting him to sail as master on ships of 500 gross tonnes or more worldwide.

He had sailed as chief officer for 3 years and had joined *Karin Schepers* in June 2011 for his second period of duty on the vessel. He had worked for Marlow Navigation Co Ltd for several years.

He was the 4-8 OOW at sea, kept the 6-12 watch in port, and was responsible for the vessel's cargo operations.

1.3.3 Second officer

The second officer, aged 25, was a Filipino national. He held an STCW II/1 certificate of competency permitting him to sail as officer of the watch, which was issued in 2009.

He had joined *Karin Schepers* in May 2011 and this was his first trip as a second officer. He had joined Marlow Navigation Co Ltd as a cadet in 2007.

The second officer was the 12-4 OOW at sea and kept the 12-6 watch when the vessel was in port.

1.4 LOOKOUT

1.4.1 Owner's requirements

The owner required that the master issue appropriate orders for lookout, in accordance with his responsibility '*for the safe and professional operation of his ship*' **(Annex A)**.

1.4.2 Flag state requirements

The Antigua and Barbuda Department of Marine Services and Merchant Shipping circular 01-002-98 regarding the use of a lookout during periods of darkness states:

> *Any vessel in UK territorial waters with the officer of the navigational watch acting as sole look-out during periods of darkness will be deemed to be in contravention of Regulation 11 of the Merchant Shipping (Safe Manning, Hours of Working and Watchkeeping) Regulations 1997.*
>
> *As Antigua and Barbuda is a signatory to the International Convention on Standards for Training, Certification and Watchkeeping for Seafarers (STCW) 1978, as amended in 1995, the Department of Marine Services and Merchant Shipping wish to draw company's, masters' and officers' attention to Section A-VIII/2.15 of the STCW-Code following to which "ships are prohibited from operating with the officer of the navigational watch as the sole look-out during periods of darkness.*

1.4.3 Maritime and Coastguard Agency requirements

The following guidance and advice has been issued by the MCA:

MSN 1767(M) section 3, paragraph 21.2:

> *'the UK does not consider it safe for the officer of a navigational watch to act as the sole lookout during periods of darkness or restricted visibility'*
>
> *MGN 137 (M&F) contains the following:*
>
> *Masters of UK ships and other ships when in UK waters (other than fishing vessels and pleasure craft) are also reminded of the requirements in the Merchant Shipping (Safe Manning, Hours of Work and Watchkeeping) Regulations 1997.*
>
> *These requirements are to ensure that the watchkeeping arrangements for the ship are at all times adequate for maintaining safe navigational watches, having regard to the STCW Code section A-VIII, and to give directions to deck watchkeeping officers in accordance with Part 3 of that section. Having regard to STCW 95, masters ought not to operate with the officer of the navigational watch acting as sole lookout during periods of darkness and restricted visibility.*

MGN 315(M) gives guidance on the application of the STCW and contains specific advice on the keeping of a lookout **(Annex B)**.

Karin Schepers' master routinely did not require a lookout to be used during the hours of darkness.

1.5 BRIDGE NAVIGATIONAL WATCH ALARM SYSTEM (BNWAS)

The BNWAS is a system that is designed to ensure that the OOW remains alert by activating an alarm sequence at set intervals. This sequence will usually consist of a flashing light, followed by an audible alarm that requires acknowledgement on the bridge in order to reset the system. In the event that this went unacknowledged, an audible alarm would sound in selected cabins and, if this also went unacknowledged, the general alarm would be activated, alerting the entire crew.

A BNWAS was fitted on *Karin Schepers* **(Figure 6)**, but it was not turned on at the time of the accident, and evidence indicates that it had not been used for several months.

Figure 6: Bridge Navigational Watch Alarm System

The requirement to carry a BNWAS was confirmed by the International Maritime Organization (IMO) in amendments to SOLAS Chapter V, Regulation 19, effective 1 January 2011. The amendment gives dates by which various vessels must have fitted a BNWAS, and states that it shall be in operation whenever the ship is underway at sea.

1.6 DRUG AND ALCOHOL – POLICY AND LEGISLATION

1.6.1 Owner's requirements

Following a previous grounding incident in March 2009 (see section 1.11), HS Schiffahrts GmbH & Co KG had adopted a 'zero tolerance' policy to alcohol consumption whereby any member of the crew found to have consumed alcohol would immediately be dismissed. This policy was implemented on the owner's behalf by Marlow Navigation Co Ltd. Prior to joining *Karin Schepers*, crew were required to sign to acknowledge that they understood and would comply with this alcohol policy.

The owner had contracted Marlow Navigation Co Ltd. to carry out a random programme of testing for alcohol consumption, which the crew were required to consent to as a condition of their employment (Annex C). The owner had also instructed the ship's chandlers, who supplied consumable provisions to the vessel, that alcohol was not permitted on board and should not be supplied to the vessel.

1.6.2 Flag state requirements

The Antigua and Barbuda Department of Marine Services and Merchant

Shipping issued circular 01-001-98, which states the companies must ensure:

> *All seafarers must be informed of the direct effect of drugs and alcohol to perform watchkeeping duties. Any effort is to be made to prevent drugs and alcohol from impairing the ability of watch keeping personnel.* [sic]

The flag state also required that a poster be displayed on the bridge of all its vessels stating that alcohol use was not permitted. Such a poster was displayed on the bridge of *Karin Schepers.*

1.6.3 United Kingdom legislation

The Railways and Transport Safety Act 2003, sections 78, 79 & 81 introduced limits of alcohol for professional seafarers. Section 84 of the act enables a marine official to detain a vessel if it is suspected that an offence under the relevant sections has been committed.

1.6.4 International Limitations

In June 2010, the IMO agreed to amend the STCW Convention to establish alcohol limits for seafarers. The amendments entered in to force on 1 January 2012, and require administrations to establish limits of not greater than 0.05% blood alcohol level or 0.25 mg/l alcohol in the breath for masters, officers and other seafarers while performing designated safety, security and marine environmental duties.

1.7 ENVIRONMENTAL CONDITIONS

At the time of the accident the wind was light airs with a calm sea.

Morning twilight began at 0520 and sunrise occurred at 0654 (UTC+2).

The tidal stream off Land's End at the time of the grounding was northerly at 2kts.

1.7.1 Tidal conditions (grounding site)

Low water: 0255, 0.9m

High water: 0850, 6.4m

The tidal range was 85% of the spring range, and the tidal rise was 1.2m over the 50 minutes *Karin Schepers* was aground.

1.8 ROLE OF HER MAJESTY'S COASTGUARD

The role of HM Coastguard was defined in the HM Coastguard operational procedures for SAR:

> *The modern role of HM Coastguard was clearly defined by the Secretary of State for Transport in the House of Commons in March 1992 when he announced that under the authority given to him by the Coastguard Act 1925 it had been agreed that Her Majesty's Coastguard is responsible for the initiation and co-ordination of civil maritime search and rescue within the United Kingdom Search and Rescue Region. This includes the mobilisation, organisation and tasking of adequate resources to respond to persons either in distress at sea, or to persons at risk of injury or death on the cliffs and shoreline of the United Kingdom.*

1.9 LAND'S END TRAFFIC SEPARATION SCHEME

On 28 March 2008 the MCA made an application to the IMO to amend the TSS "Off Land's End, between Longships and Seven Stones" **(Annex D)**.

Section 7.4 *"Monitoring of Compliance*" stated that the:

> *TSS remains a recommendatory routeing scheme. However, vessels equipped with an Automatic Identification System (AIS) that use the scheme, are remotely monitored for compliance with Rule 10 of the 1972 Collision Regulations[2] by Falmouth MRCC.*

A routeing scheme is defined by the IMO as "Any system of one or more routes or routeing measures aimed at reducing the risk of casualties; it includes traffic separation schemes, two-way routes, recommended tracks, areas to be avoided, inshore traffic zones, roundabouts, precautionary areas and deep-water routes[3]."

[2] The Merchant Shipping (Distress Signals and Prevention of Collisions) Regulations 1996

[3] IMO Publication, Ships Routeing - 7th Edition, 1999, as amended

1.10 SAFETY DIRECTIONS

Schedule 1 of the Marine Safety Act 2003 amended the Merchant Shipping Act 1995. Schedule 3A was introduced to detail the safety directions which the Secretary of State for Transport may give following an accident **(Annex E)**.

Schedule 3A, part 3 states that the Secretary of State may give a direction to secure the safety of a ship, which requires a ship to be moved, or not moved, from or to a specified place or area in United Kingdom waters following an accident.

In practice, such a direction will be given by the Secretary of State's representative for Maritime Salvage and Intervention (SOSREP).

The role of the SOSREP was created in 1999 following Lord Donaldson's review of salvage and intervention and their command and control in UK waters. The SOSREP task is to oversee, control and, if necessary intervene and exercise "ultimate command and control", acting in the overriding interest of the United Kingdom in salvage operations within UK waters.

1.11 PREVIOUS ACCIDENTS

On 22 March 2009, *Karin Schepers* grounded in Danish waters while on passage from Finland to the UK. The Danish Maritime Authority (DMA) investigated the accident and published a report[4] which concluded that:

The grounding of KARIN SCHEPERS was caused by the following:

- *The chief officer was incapacitated due to intoxication.*
- *The chief officer fell asleep during his watch.*
- *There was no look out on the bridge.*
- *The Bridge Navigational Watch Alarm System was off.*
- *No crewmembers reacted on the various attempts to draw attention to the dangerous path the ship was taking.*

The report made the following recommendations:

- *The shipping company is recommended to find ways to ensure that the Drug & Alcohol Policy (Marlow Navigation Co. Ltd Drug and Alcohol policy) is complied with.*
- *The shipping company is recommended to introduce procedures ensuring that watch keeping on the bridge always is optimal in the prevailing circumstances and conditions including the use of lookout and Bridge Navigational Watch Alarm System.*
- *The shipping company is recommended to promote safety management on board their ships by enhancing communication in order to make crewmembers think pro-actively and react in unusual situations.*

[4] http://www.dma.dk/SiteCollectionDocuments/OKE/Quarterly-information/kvartalsvis-orientering-2-2009.pdf

The DMA reported that the owners had taken the following actions as a result of these recommendations:

- Introduced a zero alcohol policy on all its vessels
- Introduced briefings for crews joining vessels regarding the zero alcohol policy
- Ensured that crews were following watchkeeping orders
- Instructed masters to report immediately any deficiencies with the bridge navigational watch alarm system.

In February 2011, *K-Wave, a* feeder container vessel, grounded when her bridge was left unmanned after several of her crew – including the OOW – had consumed alcohol on the bridge. The MAIB report[5] into the accident found that no lookout had been posted and the bridge navigational watch alarm system was turned off.

Since 2004 MAIB has been informed of a further nine groundings of merchant vessels of 100 gross tons or more in which the abuse of alcohol was a contributory factor to the accident.

[5] http://www.maib.gov.uk/cms_resources.cfm?file=/K%20Wave_Web_Report.pdf

SECTION 2 - ANALYSIS

2.1 AIM

The purpose of the analysis is to determine the contributory causes and circumstances of the accident as a basis for making recommendations to prevent similar accidents occurring in the future.

2.2 FATIGUE

Karin Schepers' master fell asleep after he had ordered the second officer to leave the bridge. It is probable that he had been drinking alcohol, which would have contributed to his fatigue.

Analysis of the master's rest periods shows that there was a high risk of a fatigue problem despite him having slept well for the entire previous night, when the vessel was alongside in Cork. He was aware that *Karin Schepers* would sail that evening, but did not take the opportunity to rest during the day. He remained on the bridge at midnight, at the end of his watch, even though *Karin Schepers* was in open water and the second officer was a qualified OOW who was familiar with the vessel.

The effects of fatigue include slow reactions and slips and lapses in decision-making. Alcohol exacerbates these effects and explains, but does not excuse, the master's poor decision-making when he chose to remain on the bridge at the end of his watch. VDR records indicate that he became progressively more tired and displayed more signs of intoxication, ultimately becoming physically abusive to the second officer before falling asleep, alone, on the bridge.

After he had been ordered from the bridge by the master, who he considered to be tired and drunk, the second officer did not seek advice from another senior officer on board before going to bed. The fact that the second officer did not do this suggests a lack of an effective crew resource management structure on board the vessel.

2.3 ALCOHOL

The effects of alcohol consumption are well documented, and are recognised by the international marine community who, through the IMO, have taken steps to reduce alcohol consumption at sea (see 1.6.4). In this accident, the master's alcohol consumption, possibly exacerbated by fatigue, resulted in him behaving in a manner that any junior watchkeeper would have found difficult, and which placed the safety of the vessel and crew, and the environment at risk.

When interviewed by MAIB inspectors, the second officer had bruises and marks on his face and body that appeared to have been recently sustained. Subsequent analysis of the audio recordings from the VDR indicated an assault could have taken place on the bridge in the period before the grounding. In subsequent interviews, the second officer was unwilling to account for his injuries, and consequently this aspect of the events of the midnight to 0400 watch on 3 August remains unresolved.

Alcohol was consumed on board *Karin Schepers* despite the measures the vessel's owner had implemented following the previous grounding accident. These included the introduction of a zero alcohol policy and the instruction to chandlers that alcohol

should not be supplied to the vessel. It is possible that more extensive random testing might have identified the use of alcohol on board, but the owner would appear to have taken practical steps to minimise the risk.

One of the means owners can employ to control the consumption of alcohol on board their vessels is through the supply of breathalyser test kits and their mandatory use following any marine accidents. However, the use of these kits would logically be the responsibility of the master. Where the master is complicit or, as in this case, involved in the use of alcohol on board vessels, it is difficult to see what further steps owners can take.

It is therefore imperative that coastal states ensure that tests for alcohol consumption are conducted following all accidents that have the potential to lead to injury, loss of life, or damage to the environment.

2.4 LOOKOUT

No lookout was posted when *Karin Schepers* entered and departed port, or during the hours of darkness. This appeared to be the master's normal operating practice.

The requirement to have a lookout posted during the hours of darkness, in addition to the OOW, is widely promulgated and was included as an owner's instruction to the master in the vessel's Safety Management System (SMS). By failing to require a lookout to be posted the safety of the vessel, her crew, and the environment was placed at risk.

The fact that the owner was unaware that a lookout was, routinely, not used on board indicates weakness in the owner's ability to monitor the onboard application of the vessel's SMS. The effectiveness of a SMS relies on a robust audit procedure in which the owner actively engages to ensure company procedures are being followed.

Where the presence of a company representative is likely to alter the normal operating methods employed on board, consideration should be given to the routine examination of onboard records, including VDR recordings, to audit compliance with the SMS.

2.5 BRIDGE NAVIGATIONAL WATCH ALARM SYSTEM

Karin Schepers was fitted with a BNWAS which, had it been switched on, would have alerted off duty staff to the fact that the lone watchkeeper had fallen asleep.

Use of the BNWAS was routinely not required by the master. By electing not to use this important safety device the vessel, crew and environment were placed at an increased level of risk in the event that the OOW became incapacitated. The importance of the BNWAS as a safety barrier has been recognised by the IMO, which introduced mandatory carriage requirements for the equipment, on a rolling programme, from 1 January 2011.

The failure to use the BNWAS is another indication that the vessel's SMS was ineffective. It is important that audits are robust and of sufficient scope to provide evidence that companies' SMS procedures are being complied with at all times.

2.6 MONITORING OF TRAFFIC USING THE LAND'S END TSS

As *Karin Schepers* approached the Land's End TSS another vessel, a few miles astern, reported to Falmouth MRCC the details of its cargo and operational status prior to entering the TSS. No report was made by *Karin Schepers* because the only person on the bridge was asleep.

The Land's End TSS is an IMO designated recommendatory routeing scheme, which means that vessels using it are recommended to report to Falmouth MRCC but are not compelled to do so. It is reasonable to assume that *Karin Schepers*' bridge officers had intended to report when using the TSS; they had done so on previous voyages and the chief officer had prepared a list of the dangerous cargo on board for such a purpose.

The fact that the vessel did not report on approaching the TSS was not noticed at Falmouth MRCC as the coastguard is not required to proactively monitor vessels using the area.

Had Falmouth Coastguard watchkeepers been monitoring the AIS tracks of vessels approaching the Land's End TSS, the report made by the vessel travelling astern of *Karin Schepers* might have prompted them to question the intentions of *Karin Schepers* at a much earlier stage.

In 2008 the MCA submitted an application to IMO to amend the Land's End TSS. The application stated that "vessels fitted with AIS are remotely monitored for compliance with Rule 10 of the 1972 Collision Regulations by Falmouth MRCC". This statement does not reflect the existing role of the coastguard or the instructions issued to them in their operational procedures.

The role of the coastguard in relation to the monitoring of the AIS transmission of vessels transiting the Land's End TSS requires clarification, as differences exist between MCA operational orders and submissions made by the UK to the IMO.

2.7 MONITORING OF *KARIN SCHEPERS* BY OTHER VESSELS

Karin Schepers failed to alter course to enter the south-bound lane of the TSS, and crossed the north-bound traffic lane in a manner contrary to Rule 10[6] of the Collision Regulations.

[6] Rule 10

Traffic separation schemes

(a) This Rule applies to traffic separation schemes adopted by the Organization and does not relieve any vessel of her obligation under any other Rule.

(b) A vessel using a traffic separation scheme shall:

(i) proceed in the appropriate traffic lane in the general direction of traffic flow for that lane;

(ii) so far as practicable keep clear of a traffic separation line or separation zone;

(iii) normally join or leave a traffic lane at the termination of the lane, but when joining or

leaving from either side shall do so at as small an angle to the general direction of traffic flow as practicable.

(c) A vessel shall, so far as practicable, avoid crossing traffic lanes but if obliged to do so shall cross on a heading as nearly as practicable at right angles to the general direction of traffic flow.

(d) (i) A vessel shall not use an inshore traffic zone when she can safely use the appropriate traffic lane within the adjacent traffic separation scheme. However, vessels of less than 20 metres in length, sailing vessels and vessels engaged in fishing may use the inshore traffic zone.

(ii) Notwithstanding sub-paragraph (d) (i), a vessel may use an inshore traffic zone when en route to or from a port, offshore installation or structure, pilot station or any other place situated within the inshore traffic zone, or to avoid immediate danger.

(e) A vessel other than a crossing vessel or a vessel joining or leaving a lane shall not normally enter a separation zone or cross a separation line except:

(i) in cases of emergency to avoid immediate danger;

(ii) to engage in fishing within a separation zone.

An unidentified vessel made a VHF radio call to *Karin Schepers* when she was 2 miles from land, and told her to check her position; this was the call which alerted Falmouth MRCC to the vessel's situation. Although some attempt was made by a vessel to warn her of her predicament, there were several vessels in the area which could have attempted to alert *Karin Schepers*' OOW to the impending danger at least 40 minutes before she grounded.

Mariners should not hesitate to attempt to contact the watchkeepers of any vessel which appears to be standing into danger. In view of the professional manner in which Falmouth MRCC reacted once it was made aware of *Karin Schepers*' position, an earlier attempt to contact the vessel might have enabled action to be taken in sufficient time to have prevented the accident.

2.8 ACTIONS TAKEN BY VESSEL WHILE AGROUND

2.8.1 Initial attempts to refloat the vessel

Karin Schepers ran aground at a speed of 16.6kts, onto a sand bottom, in an area renowned for its rocky coastline. Shortly after the grounding the propeller pitch was reduced from full ahead to zero, and was then set astern, in an unsuccessful attempt to refloat the vessel.

Once contact with the coastguard had been established, the master made a further attempt to refloat *Karin Schepers* by placing the propeller pitch astern. No assessment of her condition was made before these manoeuvres, and the coastguard was not informed before the attempt to refloat the vessel was made.

It was extremely fortunate that *Karin Schepers* grounded on an isolated area of sand, and suffered no damage **(Figure 7)**. However, the attempt to refloat the vessel before an assessment had been made of her condition was ill-considered. The master should have consulted the emergency checklist provided for grounding situations **(Annex F)** which would have guided him to obtain soundings inside and outside the vessel in order to gain a thorough assessment of the vessel's condition before any further action was taken.

It is important that crews understand the requirement to use checklists in an emergency situation. When placed under severe stress it is easy for ships' staff to overlook essential tasks. Checklists covering foreseeable accident scenarios should therefore be prepared in advance and routinely used during drills to ensure the use of such aids becomes instinctive during emergency situations.

2.8.2 Use of general alarm

Following the grounding, some of *Karin Schepers*' crew went to the bridge, but the majority stayed in their cabins and some remained asleep.

Once it was confirmed that the vessel was aground, all the crew should have been alerted by the sounding of the general alarm. The condition of the vessel's hull was not checked for some time after the grounding; in different circumstances, the failure to undertake an early muster of the crew could have placed them in danger.

However, the grounding checklist did not contain any reference to mustering the crew. During an emergency, a full muster of the crew, and passengers if carried, must be completed as early as possible; their safety is paramount. This requirement should be included in every emergency checklist.

Image courtesy of the Maritime and Coastguard Agency

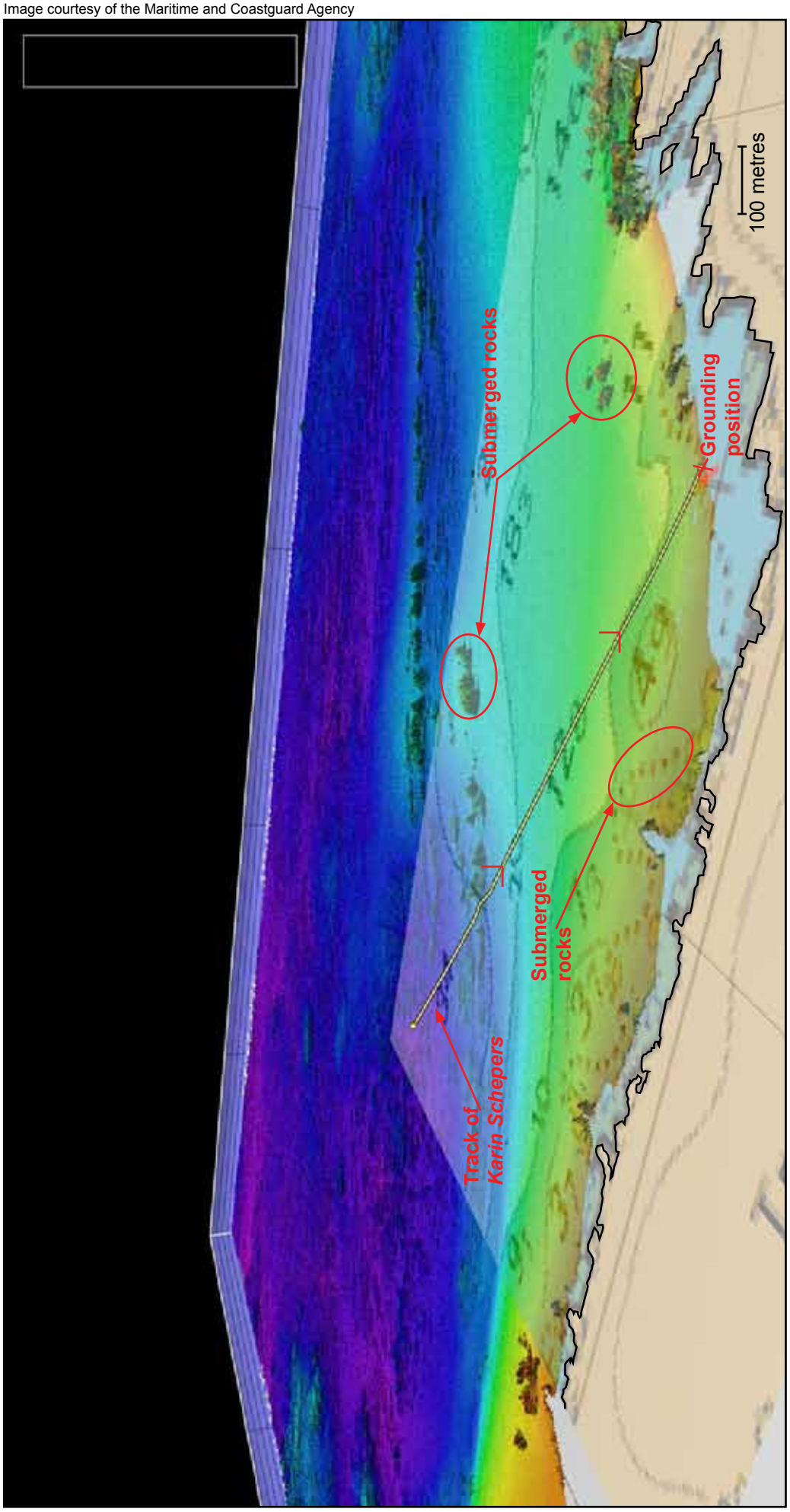

Figure 7: Track of *Karin Schepers* towards grounding position (overlayed on latest MCA hydrographic survey of area)

2.9 ACTIONS TAKEN BY FALMOUTH MRCC

Falmouth MRCC began trying to contact *Karin Schepers* 10 minutes before she grounded. In that time, as well as continuing to attempt to contact the vessel, the coastguard deployed the Sennen Cove lifeboat, the SAR helicopter and the St Ives cliff rescue team.

A short time later the ETV and the St Ives lifeboat were also mobilised. Falmouth MRCC received administrative support from other MRCCs during the emergency, which ensured they were free to deal exclusively with the casualty. Vessels calling with non-emergency traffic reports were also efficiently advised that coastguard personnel were working exclusively with a casualty to ensure the distress situation remained their priority.

Once alerted, Falmouth MRCC reacted commendably to the situation. The professional and efficient handling of the initial stages of the incident ensured that the rescue services arrived on scene within 30 minutes of the grounding.

2.9.1 Initial communications with the vessel

Once contact had been established with *Karin Schepers*, Falmouth MRCC staff quickly realised that they were not receiving coherent replies to their questions. This prompted an early report to the DCPSO from the MRCC that the master “sounds drunk”.

The fact that Falmouth MRCC raised concerns about the sobriety of the master at an early stage of the incident should have alerted senior MCA staff to the possibility that the decisions made on board might not be reliable. The need for intervention should have been assessed before allowing the vessel to continue her voyage.

In any emergency situation clear communications are essential to ensure effective decision-making. When reporting key information, it is important to ensure that the recipient understands the significance of the message.

2.10 DECISION TO ALLOW THE VESSEL TO REFLOAT AND CONTINUE ON PASSAGE

2.10.1 Refloating

The senior MCA duty staff notified of the accident included the DCPSO and, through him, the deputy to the Secretary of State’s Representative (SOSREP) and the duty surveyor. While Falmouth MRCC was controlling the SAR effort, the senior MCA staff considered the possibility of pollution and the potential requirement for salvage.

The vessel was fortunate as she had grounded on a sand bottom, on a rising tide, and in flat calm conditions. However, the initial report that she was undamaged should not have been relied upon.

When *Karin Schepers* indicated its intention to pump out her forward ballast tanks and refloat, objective evidence should have been sought to ensure that this was a safe and prudent action to permit.

The decision to allow a vessel that is aground to refloat, before a reliable assessment of her condition has been made, should be carefully and systematically considered. By permitting a vessel to refloat without a survey having been carried out, there is a possibility of an escalation of the emergency.

2.10.2 Resumption of passage

Once *Karin Sche*pers had refloated, a discussion took place between Falmouth MRCC and MCA duty staff regarding the possibility of undertaking a survey of the vessel in either Mount's Bay or Falmouth.

However, the DCPSO informed Falmouth MRCC, following advice from the deputy to the SOSREP, that there were no statutory powers available to direct the vessel to make for a safe port for survey.

This was not correct, as the powers contained in Schedule 3A, s.3 of the Merchant Shipping Act 1995 enabled SOSREP to direct the vessel to any specified place or area in UK waters for survey following the accident. Such a direction should have been issued so that checks could be made to verify that *Karin Schepers* was in all respects safe to continue her voyage.

The decision by senior MCA staff to allow *Karin Schepers* to resume her passage without a survey having been conducted, stemmed from a general lack of awareness of the powers of intervention that were available to them.

Steps should be taken to ensure that decision makers within HM Coastguard are provided with appropriate guidance on this issue.

2.11 SAVING OF VOYAGE DATA RECORDER INFORMATION

Following the accident, both Falmouth MRCC and the owner instructed the master to save the VDR information. However, when MAIB inspectors boarded the vessel on her arrival in Rotterdam, the button to save VDR information had not been activated.

Fortunately MAIB technical staff were able to recover the VDR information; this provided the only complete and accurate record of the accident.

Crews need to be cognisant of the importance of saving VDR information following an accident. Such data provides investigators with vital information to help determine the causes and circumstances of accidents so that lessons may be learned for future safety. A clear instruction to save VDR information following an accident should be included in companies' SMSs and, ideally, be included on ships' emergency response checklists.

SECTION 3 - CONCLUSIONS

3.1 SAFETY ISSUES DIRECTLY CONTRIBUTING TO THE ACCIDENT WHICH HAVE RESULTED IN RECOMMENDATIONS

None

3.2 OTHER SAFETY ISSUES IDENTIFIED DURING THE INVESTIGATION ALSO LEADING TO RECOMMENDATIONS

1. The role of the coastguard in relation to the monitoring of the AIS transmissions of vessels transiting the Land's End TSS requires clarification, as differences exist between MCA operational orders and submissions made by the UK to the IMO. [2.6]

2. The decision to allow a vessel that is aground, to refloat before a reliable assessment of her condition has been made, should be carefully and systematically considered. By permitting a vessel to refloat without a survey having been carried out, there is a possibility of an escalation of the emergency. [2.10.1]

3. The decision by senior MCA staff to allow *Karin Schepers* to resume her passage without a survey having been conducted, stemmed from a general lack of awareness of the powers of intervention that were available to them. [2.10.2]

3.3 SAFETY ISSUES IDENTIFIED DURING THE INVESTIGATION WHICH HAVE BEEN ADDRESSED OR HAVE NOT RESULTED IN RECOMMENDATIONS

1. After he had been ordered from the bridge by the master, who he considered to be tired and drunk, the second officer did not seek advice from another senior officer on board before going to bed. This suggests a lack of an effective crew resource management structure on board the vessel. [2.2]

2. The fact that the owner was unaware that a lookout was, routinely, not used on board indicates a weakness in the owner's ability to monitor the onboard application of the vessel's SMS. The effectiveness of any SMS relies on a robust audit procedure in which the owner actively engages to ensure company procedures are being followed. [2.4]

3. Where the presence of a company representative is likely to alter the normal operating methods employed on board, consideration should be given to the routine examination of onboard records, including VDR recordings to audit compliance with the SMS. [2.4]

4. The failure to use the BNWAS is another indication that the vessel's SMS was ineffective. It is important that audits are robust and of sufficient scope to provide evidence that companies' SMS procedures are being complied with at all times. [2.5]

5. Mariners should not hesitate to attempt to contact the watchkeepers of any vessel which appears to be standing into danger. In view of the professional manner in which Falmouth MRCC reacted once it was made aware of *Karin Schepers*' position, an earlier attempt to contact the vessel might have enabled action to be taken in sufficient time to have prevented the accident. [2.7]

6. It is important that crews understand the requirement to use checklists in an emergency situation. When placed under severe stress it is easy for ships' staff to overlook essential tasks. Checklists for all foreseeable accident scenarios should therefore be prepared in advance and routinely used during drills to ensure the use of such aids becomes instinctive during emergency situations. [2.8.1]

7. During an emergency, a full muster of the crew must be completed as early as possible; their safety is paramount. This requirement should be included in every emergency checklist. [2.8.2]

8. In any emergency situation, clear communications are essential to ensure effective decision-making. When reporting key information, it is important to ensure that the recipient understands the significance of the message. [2.9.1]

9. Crews need to be cognisant of the importance of saving VDR information following an accident. Such data provides investigators with vital information to help determine the causes and circumstances of accidents so that lessons may be learned for future safety. A clear instruction to save VDR information following an accident should be incorporated into companies' SMSs and, ideally, be included on ships' emergency response checklists. [2.11]

SECTION 4 - ACTIONS TAKEN

4.1 THE OWNER, HS BEREEDERUNGS GMBH & CO KG

HS Bereederungs GMBH & Co KG has:

- Issued a revised standing order to its vessels regarding the use of the BNWAS and lookouts **(Annex G)**.

- Undertaken a fundamental review of the vessel's safety management system and revised its audit process.

4.2 MARLOW NAVIGATION COMPANY LIMITED

Marlow Navigation Company Limited has:

- Reviewed the circumstances of the accident and its procedures for recruitment and retention of officers.

- Ensured that, to prevent a recurrence, the second officer understands the importance of taking appropriate action by calling other senior officers in the event the master is incapacitated.

- Included the accident scenario in its in-house marine resource management training programme to ensure appropriate lessons are learnt from the safety issues identified in this report.

SECTION 5 - RECOMMENDATIONS

The **Maritime and Coastguard Agency** is recommended to:

2012/114 Provide operational guidance to coastguard officers on the use of powers of direction to prevent a vessel from leaving UK waters in circumstances where the powers delegated to the SOSREP have not been invoked.

2012/115 Assess the desirability of, and, where appropriate, develop operational guidelines for using Automatic Identification Systems (AIS) data to monitor marine traffic movements. Special consideration should be given to using AIS data to monitor marine traffic movement in areas of high traffic concentrations, including traffic separation schemes, where there is limited or no radar coverage.

Marine Accident Investigation Branch
May 2012

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

Annex A

Owner’s instructions to masters regarding lookouts

M-02 Motivating the Crew

Purpose

The Master has to motivate the crew to join him in achieving of the Companies policy.

Procedure

He shall be present on board in all departments and motivate the crew during their daily routines and promote a safe working environment among the crew.

M-03 Issuing Appropriate Orders

Purpose

Clear and simple orders support a safe working environment for every person on board.

Procedure

The Master is responsible for the safe and professional operation of his ship. He shall give clear and simple orders and instructions, assuring himself that they are understood and followed.

Standing orders to be issued and posted at the Masters discretion for:

- Designated Safety Officer,
- Identify additional training needs,
- Lookout,
- Calling the Master
- Reporting of accidents/HazOcc,
- Shore leave,
- other, like laundry schedule, slop chest,
- etc.

After a handover, the new Master may endorse the present Standing Orders or issue new Standing Orders.

Annex B

Extract from MGN 315(M)

Extracts from MGN 315 (M)

Section 2.6 Masters, owners and operators are reminded that the MCA considers it dangerous and irresponsible for the OOW to act as sole look-out during periods of darkness or restricted visibility.

Section 2.7 The factors to be considered before the dedicated bridge look-out can be dispensed with are detailed in paragraph 8.3. It is implicit in STCW 95 that at all times when a ship is underway a separate dedicated look-out must be kept in addition to the OOW.

Section 8.1 The ColRegs require that 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 risk of collision.

Section 8.3 In certain circumstances of clear daylight conditions the Master may consider that the OOW may be the sole look-out. On each occasion the Master should ensure that:

- *The prevailing situation has been carefully assessed and it has been established without a doubt that it is safe to do so;*
- *Full account has been taken of all the relevant factors including not limited to:*
  - *state of the weather*
  - *visibility*
  - *traffic density*
  - *proximity of dangers to navigation*
  - *the attention necessary when navigating in or near traffic separation schemes*
  - *design and layout of the bridge*
  - *arcs of visibility*
  - *radar equipment fitted and their limitations with respect to navigation*
  - *other duties that the officer may have to engage in and which could be a distraction from the keeping of a proper look-out such as:*
    - *operation of GMDSS and other communications equipment such as cell phones and email systems*
    - *navigational maintenance such as completion of logs and other record keeping and correction of charts and publications*
    - *routine testing and maintenance of bridge equipment*

In any event, an OOW acting as sole look-out should always be able to fully perform both the duties of a look-out and those of keeping a safe navigational watch. Assistance must be immediately available to be summoned to the bridge when any change in the situation so requires.

Section 9.1 The OOW should consider the look-out as an integral part of the Bridge Team and utilise the look-out to the fullest extent.

Annex C

Drug and Alcohol policy and consent forms

Objective	prevention of drug and alcohol abuse at sea
Scope	seagoing personnel
References	- MN 11-000, MN 32-630 - OCIMF Guidelines for the Control of Drugs and Alcohol onboard Ship, June 1995
Distribution	original with Quality Manager, one controlled electronic copy on the intranet
Records	MN 11-022-F1

Marlow Navigation is committed to promote a safe working environment for shipboard personnel. Drug and alcohol abuse would have grave consequences for the safety of ship, the personnel and the environment.

1. Prohibitions

1. No Master, officer or rating shall be intoxicated at any time.
2. No Master, officer or rating shall navigate or assist in the navigation of the ship or operate its equipment or perform any scheduled duties while impaired by the use of drugs or alcohol.
3. The misuse of legitimate drugs or the use, possession, distribution or sale of illicit or unprescribed drugs by Marlow seafarers is strictly prohibited.
4. Any Marlow seafarer using prescription drugs, must declare details of said drugs to the Master upon joining the vessel.
5. Any crewmember using medicines which can cause or can contribute to unacceptable job performance or unusual job behaviour, shall report the fact to the Master who will take appropriate action.
6. The use of other substances which alone or in combination can cause or contribute to unacceptable job performance or unusual job behaviour is prohibited.

2. Responsibilities

It is the personal responsibility of all Masters, officers and ratings to comply with above prohibitions. Every seafarer must be able to carry out both routine and emergency duties in a competent and capable manner, unimpaired by the effects of alcohol or drugs.
Seafarers must always bear in mind that their actions not only ensure their own safety, but also the safety of others and the vessel and the protection of the environment.
The Master has the overall responsibility for the implementation of this policy on board.

3. Control

Marlow ensures that manning agents abide to this Drug and Alcohol Policy and have seafarers tested for drugs and alcohol abuse as and when requested by the company.

On board ships the Master is responsible for the control of the consumption of alcohol and the use of prescribed drugs and must take measures necessary to safeguard such control following the guidelines of the flag state, port state (if applicable) and ship's owner or manager.

OCIMF recommends that officers and ratings observe a period of abstinence from alcohol prior to scheduled watchkeeping duty or work periods. This may be either a fixed period, such as the 4 hours required by the USCG, or a minimum period of 1 hour of abstinence for each unit of alcohol consumed (refer to the table below for examples of approximate alcohol unit conversions).

Whichever method is used to determine the abstinence period, the objective should always be to ensure that, prior to going on scheduled duty, the blood alcohol content of the seafarer is theoretically zero. Officers and ratings should be aware that local regulations may be in place and where this is the case, it is recommended that these be strictly adhered to where they exceed these guidelines.

OCIMF Guidance for	Alc. by Vol.	Volume	Units
Beers, Ciders and Lagers			
Beers, Ciders and Lagers - Extra Strength	4 - 6 %	10 oz. / 30 cl.	2.5
Beers, Ciders and Lagers - Ordinary Strength	1 - 4 %	10 oz. / 30 cl.	1.0
Beers, Ciders and Lagers - Low Alcohol	0.05 - 1 %	10 oz. / 30 cl.	0.5
Table Wines, Others	6 - 12 %	10 cl 1 litre bottle	1.0 10.0
Sherry, Fortified Wines, Others	12 - 16 %	6 cl 1 litre bottle	1.0 16.0
Spirits, Liquor, Liqueurs, Others	16 - 40 %	1 oz. / 3 cl	1.0
Any Other Low Alcohol Beverage	0.05 - 1 %	10 oz. / 30 cl	0.5

4. Measures

Notwithstanding possible stricter regulations by owners, managers or authorities Marlow Navigation implements following measures:

1. Any crewmember or master employed by Marlow and found misusing legitimate drugs or found in possession of or using, trafficking, distribution or smuggling illicit or unprescribed drugs, will be dismissed from the vessel and may face prosecution.
2. Any crewmember or master employed by Marlow and found impaired by alcohol while on duty shall be immediately relieved of his duties and be replaced. In case of a crewmember being the abuser, the master will report such abuse to the Company in writing, witnessed by a relevant crewmember, as soon as possible. In case of a Master being the abuser, or in case the Master fails to report alcohol abuse incidents to the company, crewmembers must report such incidents to the company.
3. When the effect of the intoxicants on a person's manner, disposition, speech, general appearance or behavior is apparent, the master shall arrange for an alcohol test with a breath analyser if provided on board. ***A person shall be considered impaired, when having an alcohol content of 40mg per 100 ml of blood level or greater. The master will keep records of all alcohol tests carried out.***
4. Masters, officers and ratings will undergo random tests for drug and alcohol abuse, at times designated by the company. The place, time and sample taking will be decided by the company.
5. In order to control the abuse of alcohol onboard, the master will:
    - control the sales of alcoholic beverages to crewmembers;
    - seal all alcoholic beverage stores before arriving at any port;
    - prohibit serving alcoholic beverages to third parties boarding the vessel to perform any type of work in any capacity (i.e. pilots, authorities, surveyors, visitors, etc.)
    - prohibit individuals to carry onboard any uncontrolled alcohol;
    - stop the sale of alcoholic beverages onboard, if and when he considers necessary;
    - effect immediate dismissal to any crewmember that violates any of the requirements of this policy

This policy shall be brought to the attention of all seafarers employed by Marlow Navigation.

Form Usage	To be completed by Crewmember at the Manning Agency
Distribution	Original to the Seafarer, Scanned Copy to be sent to Marlow

Name of Seafarer (print) : _____

Rank : _____

Place & Date : _____

1. Declaration of Consent

DECLARATION OF CONSENT

I, _____herewith confirm that I am fully aware of the contents of the "Marlow Navigation Co. Ltd Drug and Alcohol Policy" MN 11-022, and especially of paragraph 4.2 which requires that I report any alcohol abuse incidents to the company, and declare my agreement hereto, with my own free will.

Date: _____ **Signature:_____**

2. Authorisation to obtain blood, breath or urine samples

AUTHORISATION TO OBTAIN BLOOD, BREATH OR URINE SAMPLES

I, _____do hereby authorise any doctor, nurse, qualified medical technician, clinic, laboratory or medical facility appointed by Marlow Navigation Co. Ltd, to collect blood and/ or urine samples from me for alcohol and drug screening as required during pre-employment and annual physical examinations, when reasonable suspicion arises and in the conduct of the screening program. This authorisation is contingent on the release of the test results to the employee, if requested.

In addition, I am aware & consent that during my employment, unannounced alcohol tests can be conducted by personnel appointed by Marlow Navigation Co. Ltd

Date: _____ **Signature:_____**

3. Authorisation to release medical information

AUTHORISATION TO RELEASE MEDICAL INFORMATION

I, _____ do hereby authorise the release of the below-described medical information of mine to the management of "Marlow Navigation Co. Ltd". This authorisation is limited only to information regarding results and evaluation of all alcohol and drug screening tests performed in connection with such tests. The use of this Authorisation is limited to assisting Management in making an employment or administrative decision. This authorisation shall remain valid for one year from the date of Authorisation. I reserve the right to receive a true copy of this Authorisation.

Date: _____ **Signature:_____**

Note: The above consent is valid only for the period of the relevant contract. As soon as the contract expires, then the validity of the consent expires as well.

Form Usage	To be completed by Crewmember at the Manning Agency
Distribution	Original to the Seafarer, Scanned Copy to be sent to Marlow

Name of Seafarer (print) : _____

Rank : _____

Place & Date : _____

DECLARATION OF ACKNOWLEDGMENT

I, _____ herewith confirm that I have been informed and have agreed to abide to the "DRY VESSEL/ ZERO ALCOHOL POLICY" which applies onboard the vessel_____.

I am aware that any violation of the above policy would automatically result to my immediate dismissal.

Date: _____ **Signature:**_____

Note: The above consent is valid only for the period of the relevant contract. As soon as the contract expires, then the validity of the consent expires as well.

Annex D

Land’s End TSS - MCA application to IMO to extend routing

INTERNATIONAL MARITIME ORGANIZATION

IMO

E

SUB-COMMITTEE ON SAFETY OF NAVIGATION
54th session
Agenda item 3

NAV 54/3/5
28 March 2008
Original: ENGLISH

ROUTEING OF SHIPS, SHIP REPORTING AND RELATED MATTERS

Amendments to the Traffic Separation Scheme "Off Land's End, Between Longships and Seven Stones"

Submitted by the United Kingdom

SUMMARY

Executive summary:	This document proposes amendments to the established Traffic Separation Scheme (TSS) Off Land's End, between the United Kingdom mainland and the Isles of Scilly in SW England, for the purposes of better managing the flow of traffic in the general area potentially affected by proposals for new offshore renewable energy developments and thus the preservation of navigational safety and the protection of the marine environment
Strategic direction:	5.2
High-level action:	5.2.4
Planned output:	5.2.4.2
Action to be taken:	Paragraph 9
Related documents:	IMO Ships' Routeing 2003; MSC/Circ.1060. Circular letter No.2831; resolutions A.989(25) and A.990(25)

1 Description of the Area

The area of the "Off Land's End, Between Longships and Seven Stones" TSS lies off the south-west extremity of the English coast, between the mainland and the Isles of Scilly, from 21 to 31 miles WSW off Land's End.

The Land's End TSS forms one of a family of three schemes centred upon the Isles of Scilly. The other two schemes, lying to the south and west of the island group, are unaffected by this proposal to amend the Land's End scheme.

This part of the United Kingdom is an historic landfall for international shipping from the south and west and thence proceeding up the English Channel or northwards towards the Bristol Channel, Irish Sea and beyond.

Numerous navigational dangers exist within the general area. The Seven Stones reefs on the western side of the TSS is where the crude oil tanker "Torrey Canyon" foundered in 1967, resulting in widespread pollution and environmental damage.

An IMO-adopted TSS has been in place since 1971.

The Government of the United Kingdom has now given consent for the establishment of an experimental site ("South-West Wave Hub") to assess the viability of a variety of wave and possibly tidal current power generation systems some nine nautical miles off the north Cornish coastline, north-east of the northern boundaries of the existing scheme.

By amending the scheme in the manner in this proposal, it is intended to displace, by some 2-3 nautical miles to the north, vessels using the TSS and bound, primarily, to/from ports in the Bristol Channel away from the experimental site. The amendments to the TSS will therefore be one of a series of risk control measures to ensure safety of navigation and protection of the marine environment whilst enabling the United Kingdom to exploit offshore renewable energy initiatives.

2 Co-operation between States

Not applicable – the scheme lies exclusively within United Kingdom territorial waters.

3 Traffic considerations

3.1 Existing and proposed aids to navigation

The proposed amendments to the TSS will not affect mariners' ability to determine their position with sufficient accuracy to navigate in accordance with Rule 10 of the 1972 Collision Regulations.

3.2 Traffic patterns

The sea area between Land's End and the Isles of Scilly is an important and busy shipping route for vessels sailing around the south-west corner of the United Kingdom heading to and from ports in the Bay of Biscay and beyond, English Channel, Bristol Channel, Irish Sea, North Channel and ports on the south and west coasts of the Irish Republic,

The existence of a long-established TSS has resulted in an orderly flow of traffic along a north-south axis for many years. A traffic survey undertaken by the United Kingdom's Maritime and Coastguard Agency in August 2006, on vessels fitted with AIS, indicated that on average 29 ships per day used the existing TSS, with 64% heading in a northerly direction and 36% in a southerly direction. However, the same survey also revealed significant daily fluctuations in that the highest and lowest numbers of vessels recorded in a single day were 45 and 14 respectively.

A full range of ship types carrying a diverse array of cargoes (including hazardous and polluting cargoes) have been identified using data from the Maritime and Coastguard Agency's AIS network. "Cargo" vessels predominate followed by tanker traffic.

3.3 Adequacy of hydrographic surveys and charting

The area is covered by the United Kingdom Civil Hydrography Programme and has been systematically surveyed over many years. The latest applicable surveys were carried out between 1987 and 1991 to International Hydrographic Organization (IHO) Order 1 standard at a scale of 1:25000. Other surveys were undertaken between 1960 and 1977 at scales between 1:50000 and 1:100000.

The area is adequately covered by Admiralty charts 1148, scale 1:75000 (published 06/2001) and 2565, scale 1:150000 (published 06/2001), both charts are World Geodetic System 1984 Datum (WGS 84).

3.4 Alternative routeing measures

There is an IMO-adopted Recommendation on Navigation which advises laden tankers using the TSS to keep at least three miles to seaward of Wolf Rock and, in addition, to avoid using the scheme in restricted visibility or adverse weather.

3.5 Offshore exploration and production

No drilling rigs, platforms or other offshore structures relating to hydrocarbon exploration and/or production exists within or in the vicinity of the TSS.

4 Marine environmental considerations

4.1 Environmental factors

Full details of wind, swell, tides and currents liable to be encountered in the area of the proposed amendments are contained in Admiralty Sailing Directions NP27 (Channel Pilot) and NP37 (West Coasts of England and Wales Pilot).

4.2 Impact by the proposed amendment for protecting the marine environment

The primary purpose for this proposed amendment is to enhance safety of life at sea and protection of the marine environment by improving the management of vessel traffic in the general area.

5 Recommendatory routeing system

The proposed amendments do not alter the status of the “Off Lands Ends, Between Longships and Seven Stones” TSS as a recommendatory routeing system.

6. Position-fixing in relation to the routeing system

The general area is well covered by a system of fixed and floating aids to navigation (IALA “A” system) which are maintained by the Trinity House Lighthouse Service in its capacity as the General Lighthouse Authority (GLA) for England, Wales, Channel Islands and Gibraltar. The area is also covered by the GLA’s public Differential Global Positioning System (DGPS) service which provides mariners with real time integrity monitoring of GPS derived positions and the capability of fixing positions to better than five metres (95% probability) in moving applications. The nature of the surrounding landmass and islands is

such that visual positioning, combined with radar ranges, can readily provide a reliable back up in the event of problems with satellite-based navigation.

7 Miscellaneous information

7.1 Fishing, development of offshore exploration and exploitation of the seabed, etc.

A significant amount of fishing activity takes place in the general area but has never created a problem with compliance with the original TSS and it is not anticipated that it will impact unduly with the proposed amendments. Currently no hydrocarbon offshore exploration or production takes place in the area but interest is being shown in offshore renewable energy development and a facility for evaluating wave and tidal current devices has already been consented but not yet constructed (as of April 2008) off the north Cornish coast. This facility, when constructed, will be located about eight nautical miles ENE of the northern extremity of the amended TSS.

7.2 Summary of other measures

The Off Land's End TSS is covered by an IMO-adopted voluntary reporting system for laden tankers which are recommended to report to Falmouth Coastguard when at least one hour from the estimated time of arrival (ETA) of entering the TSS, and on final departure. There is also an IMO-adopted Recommendation on Navigation which advises laden tankers using the TSS to keep at least three miles to seaward of Wolf Rock and, in addition, to avoid using the scheme in restricted visibility or adverse weather.

7.3 Consultation

The proposed amendments have been scrutinized and accepted by the United Kingdom Safety of Navigation (UKSON) Committee, which is the principal forum by which the Maritime and Coastguard Agency engages a wide range of stakeholders on matters relating to navigational safety in United Kingdom waters. The proposal has also been endorsed by the Trinity House Examiners' Committee and has undergone and passed detailed assessment by various branches of the United Kingdom Hydrographic Office (UKHO).

7.4 Monitoring of compliance

The Off Land's End TSS remains a recommendatory routeing scheme. However, vessels equipped with an Automatic Identification System (AIS) that use the scheme, are remotely monitored for compliance with Rule 10 of the 1972 Collision Regulations by Falmouth Maritime Rescue Coordination Centre (MRCC).

Proposal

8 It is now proposed to:

.1 amend the existing "Off Land's End, Between Seven Stones and Longships" TSS by extending the northern part of the scheme (three traffic separation zones and the corresponding traffic lanes for northbound and southbound traffic created by the separation zones) a distance of 12.0 nautical miles to the north of the current boundaries; and

.2 amend the Inshore Traffic Zone which lies between the eastern boundary of the TSS and Land's End by extending the northern boundary 2.0 nautical miles.

Details of the proposed amendments to the scheme are given at annex.

Action requested of the Sub-Committee

9 The Sub-Committee is invited to approve the amendments referred to in paragraph 8 and to forward the proposal to the Maritime Safety Committee for their adoption. The United Kingdom requests that the effective date of implementation be 1 July 2009.

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ANNEX

PROPOSED AMENDMENTS TO THE "OFF LAND'S END, BETWEEN SEVEN STONES AND LONGSHIPS" TSS

Reference Charts: British Admiralty 1148 (published 06/2001), 2565 (published 06/2001)
Note: These charts are based on World Geodetic System 1984 Datum (WGS84)

1 Description

1.1 The proposed amendment to the "Off Land's End, Between Seven Stones and Longships" TSS comprises:

Amendments to the three traffic separation zones and the corresponding traffic lanes for northbound and southbound traffic created by the separation zones;

An amendment to the inshore traffic zone which lies between the eastern boundary of the TSS and Land's End.

2 Details of proposed amendments

Note: Original scheme positions were on the Ordnance Survey of Great Britain 1936 datum (OSGB36), whereas the revised positions are on WGS84 datum

(a) A separation zone, two miles wide, is bounded by lines connecting the following geographical positions:

(1)	49º 58′.02 N	005º 55′.76 W
(2)	50º 20′.03 N	005º 55′.76 W
(3)	50º 20′.03 N	005º 58′.88 W
(4)	49º 56′.52 N	005º 58′.88 W

(b) A separation zone, one mile wide, is bounded by lines connecting the following geographical positions:

(5)	50º 00′.99 N	005º 49′.58 W
(6)	50º 20′.03 N	005º 49′.58 W
(7)	50º 20′.03 N	005º 51′.11 W
(8)	50º 00′.22 N	005º 51′.11 W

(c) A separation zone, one mile wide, is bounded by lines connecting the following geographical positions:

(9)	49º 54′.29 N	006º 03′.56 W
(10)	50º 20′.03 N	006º 03′.56 W
(11)	50º 00′.03 N	006º 05′.06 W
(12)	49º 53′.54 N	006º 05′.06 W

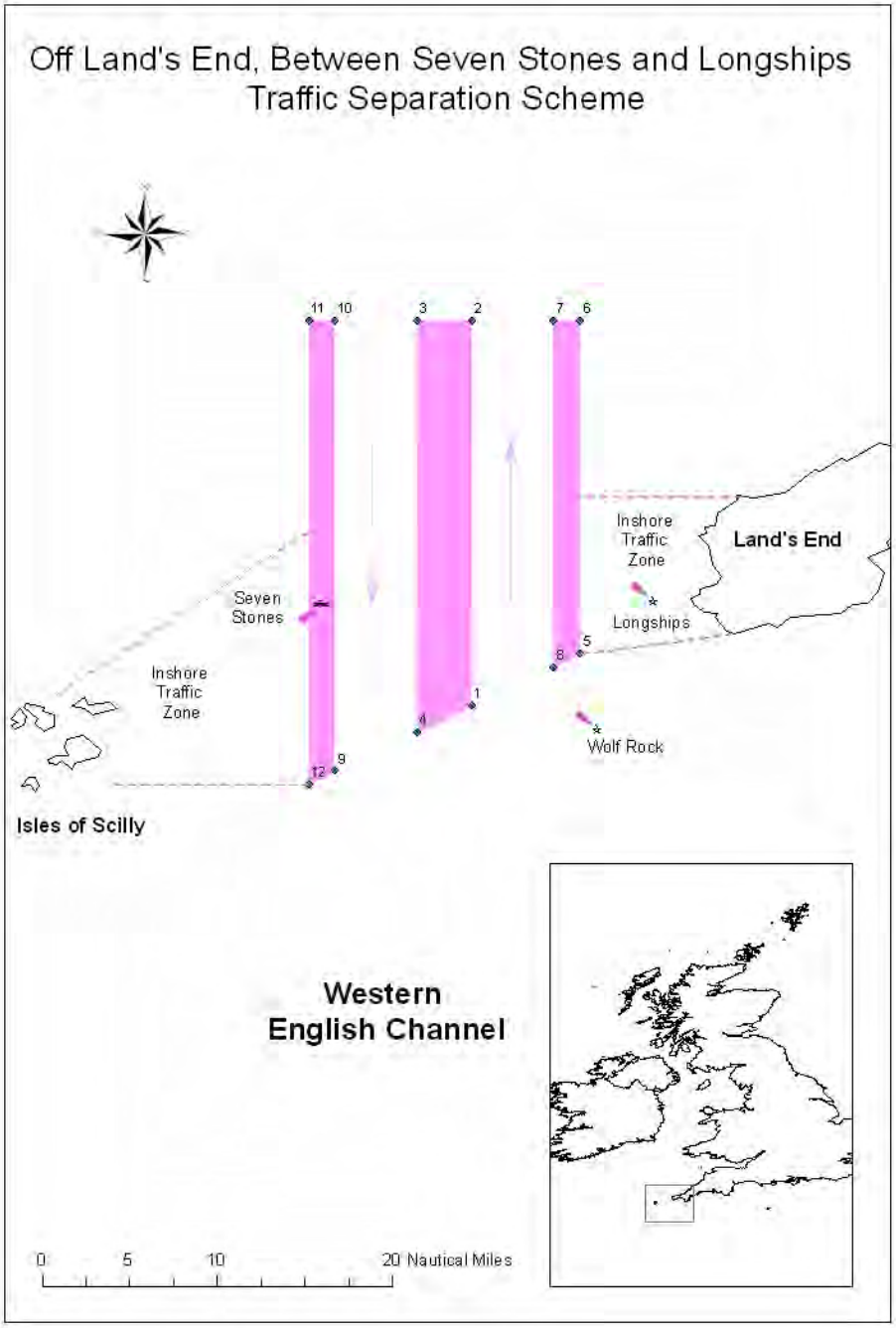
(d) A traffic lane for northbound traffic, three miles wide, is established between the separation zones described in paragraphs (a) and (b) above.

(e) A traffic lane for southbound traffic, three miles wide, is established between the separation zones described in paragraphs (a) and (c) above.

Inshore Traffic Zones

The area between the eastern boundary of the TSS and Land's End, and which lies between a line drawn from position (5) above in a direction of 078° to the coast and a line drawn from position 53º 10′.00 N, 005º 49′.58 W in a direction of 090° to the coast at Pendeen Point, is designated an inshore traffic zone.

The area between the western boundary of the TSS and the Isles of Scilly, and which lies between a line drawn from position (12) above in a direction of 270° to the islands and a line drawn from position 50º 08′.00 N, 006º 05′.06 W in a direction of 225° to Round Island Lighthouse, is designated an inshore traffic zone.


Off Land's End, Between Seven Stones and Longships
Traffic Separation Scheme
11
10
3
2
7
6
Inshore
Traffic
Zone
Land's End
Seven
Stones
Longships
8
5
Inshore
Traffic
Zone
1
4
Wolf Rock
12
9
Isles of Scilly
Western
English Channel
0
5
10
20 Nautical Miles

Annex E

Marine Safety Act 2003 - Schedule 1

The United Kingdoms Response to Salvage and Marine Pollution

Powers of Intervention
Schedule 3A para 1, MSA 1995 as amended

Power to Intervene and Issue Directions

For purposes of preventing / reducing risk to safety or of pollution by a hazardous substance

- Directions to take any action of any kind whatsoever - includes destruction of a vessel.
- Safety applies in UK Waters (12nm).
- Pollution - applies up to 200 miles from UK coast or international median line.

Powers of Intervention
Schedule 3A para 22 (2), MSA 1995 as amended

Hazardous Substances

- Means oil.
- Includes pollution by any other substance which is prescribed by the Secretary of State by Order.
- Includes any other substance which creates a hazard to health, harms living resources or marine life, damages amenities or interferes with lawful use of the sea.

Powers of Intervention
Schedule 3A para 3, MSA 1995 as amended

Power to Require Ships to be Moved

For purpose of securing safety of a ship, other ships, any persons or property, or reducing such risk.

- Directions that ship is / is not to be moved from a specific place, or over a specific route.
- Can direct a ship to be removed from UK Waters.
- Directions to owners / master /person in possession of ship.
- Applies in UK waters only (12 nm).

Powers of Intervention
Schedule 3A para 2, MSA 1995 as amended

Direction to Persons in Control of Coastal Land or Premises

For purpose of removing, or reducing a risk to safety or of pollution following an accident.

- Direction to grant access or facilities in relation to any ship, anything which is or was on the ship including any person.

Includes:

- Permitting persons to land.
- Making facilities available for undertaking repairs or other works.
- Making facilities available for the landing, storage and disposal of cargo or of other things.

Powers of Intervention
The Offshore Installations (Emergency Pollution Control) Regulations 2002

Offshore Installations: Power to Intervene and Issue Directions

For purpose of preventing or reducing the risk of pollution.

- Applies all of S.137 MSA 1995 to offshore installations.
- Directions can be given to operators, managers, servants or agents of operators of ANY offshore installation.
- Applies UK Continental Shelf.

Powers of Intervention
Schedule 3A para 4, MSA 1995 as amended

Action in Lieu of a Direction

Where SoS is entitled to give a direction, or has given one, which has not achieved, or is not likely to achieve, a sufficient result.

Can take such action as appears necessary or expedient for the purpose of which a Direction was, or could have been, given:

- Persons can enter land or make use of facilities.
- Can do anything which could be authorised by a Direction.
- Includes taking control over a ship or offshore installation.
- Includes making arrangements for destruction.

Powers of Intervention
S.100A MSA 1995 as amended

Power to Establish a Temporary Exclusion Zone

For the purpose of preventing significant damage to persons or property, or pollution or reducing such risk.

- Applies to any ship, structure or other thing.
- Must be wrecked, damaged or in distress.
- Zone may be defined geographically or in relation to a casualty.
- Cannot include areas outside of UK Pollution Zone (200 miles).
- Must be reviewed.

Annex F

Karin Schepers - Emergency checklist - Grounding

12. Grounding

If the vessel is aground and therefore cannot manoeuvre, all possible sources of ignition must be eliminated and action take to prevent flammable vapours from entering the engineroom spaces or the accommodation.

The master's next priority should be to ensure that he as soon as possible receives detailed information that the vessel has sustained, in order to find out what remedial action needs to be taken to ensure the safety of the vessel and its crew.

Tasklist

- take soundings around the vessel
- try to get sea bottom samples
- make a drawing where soundings have been taken
- take soundings of all tanks in the area of damage
- check cargo hold spaces in the area of damage
- check engine room spaces within area of damage
- check all other spaces within area of damage
- sound and check bilges
- check cargo (shifted, open containers, IMO container)
- check cargo lashings, hatches, hatch covers
- check on dangerous reaction of cargo with water
- check danger of shifting cargo
- check on structural damage
- check on fire / explosion risks
- check possibilities to change ballast condition
- check possibilities transferring fuel from damaged tanks
- check on possibilities to stop possible leaks

- close all watertight doors
- close all hatches
- close all portholes
- on order by command unit close ventilation air intakes
- prepare first aid and stretches

Furthermore the master should consider:

- Danger to vessel's complement if the vessel should slide off grounding side.
- Danger of vessel broken down by heavy seas or swells.
- Health hazards to the vessel's complement and surrounding population due to release of hazardous substances in dangerous concentration.
- That fires may start due to released flammable substances due to uncontrolled ignition sources.
- to sound immediately all tanks and to record the time of soundings

Furthermore, the vessel's master must take into account the following considerations:

- Is the vessel constantly being struck in the seaway?
- Is the vessel exposed to torsion?
- Sounding to be taken around the vessel to establish the vessel's situation or to position the bottom.
- Is there a large difference in the tidal ranges at the grounding site?
- Are there strong tidal currents in the grounding area?
- May the vessel drift further up on the shore, due to high tides, wind and waves?

Vessel Aground

Incident reported: Hour ..... Date .....

Reported by: Name .....

Name of vessel: .....

Home port: .....

Owner: .....

Position of vessel at time of incident: N/S .....

E/W .....

In port/river/estuary: Place .....

Type of incident: .....

Cause of incident: .....

Extent of incident: .....

Consequences of incident: .....

.....

Contact with vessel established: Hour .....

Date .....

Name of person contacted: .....

Information received from vessel: .....

.....

Was assistance from PandI Club requested ?..... **YES/NO**

If so, type of assistance: .....

Provided by - who: Name .....

* What was the cause of the running aground ?

- Loss of property ..... **YES/NO**
- Loss of steering power ..... **YES/NO**

- Navigational error ..... **YES/NO**
- Human error ..... **YES/NO**
- Adverse weather ..... **YES/NO**
- Avoiding immediate danger ..... **YES/NO**

* Bottom formation at site of running aground ?

- Soft mud/sand ..... **YES/NO**
- Hard packed mud/sand ..... **YES/NO**
- Coral reef ..... **YES/NO**
- Sharp rocks ..... **YES/NO**
- Cliffs ..... **YES/NO**

* Situation at site of running aground ?

- Is vessel seriously damaged ? ..... **YES/NO**
- Is vessel taking in water ? ..... **YES/NO**
- Will vessel stay afloat if refloated ? ..... **YES/NO**

* Soundings taken around vessel

Result:

- Forward: Stb. ..... Port .....
- Midships: Stb ..... Port .....
- Aft: Stb. ..... Port .....

* Soundings of tanks

Result:

- Forward: Stb. ..... Port .....
- Midships: Stb. ..... Port .....
- Aft: Stb. ..... Port .....

* Assistance required:

- Divers for bottom inspection .....**YES/NO**

Reason: .....

.....

- Salvage vessel/tugboats ..... **YES/NO**

Reason: .....

.....

.....

Main Rescue Centre contacted: Hour ..... Date .....

Name of person contacted: .....

Information received from MRC: .....

.....

Personnel on board at time of incident:

* Deck/engine crew: .....

* Catering personnel .....

Status of persons on board:

* Number of evacuees, if any: .....

* Number of injured, if any: .....

* Number of hospitalised, if any: .....

* Number of deceased, if any: .....

Landing point of evacuee: .....

Contact with police at landing point established. .....**YES/NO**

Name of police contact: .....

Contact with other Governmental offices established. .....**YES/NO**

If so, what authorities ? .....

Name of official contacted: .....

Persons called in to assist:

.....

Competence: .....**YES/NO**

* Experts on dangerous cargo: .....**YES/NO**

Name of person(s) contacted: .....

Company Correspondent deployed to landing point of evacuees:

.....**YES/NO**

Name: .....

Does the correspondent have clear instructions on how to handle the situation ?

..... **YES/NO**

Instructions given: .....

.....

Situation under control: Hour ..... Date .....

Vessel en route to: Port of refuge ..... **YES/NO**

Repair port ..... **YES/NO**

Original destination ..... **YES/NO**

Vessel proceeding under own propulsion: ..... **YES/NO**

Vessel being towed: ..... **YES/NO**

Name of tug(s): .....

Name of towing/salvage company: .....

Name of port: .....

Condition of vessel: .....

Vessel arrived at designated port: Hour ..... Date .....

Has Company's Emergency Response Team received information on the type(s) of

chemical(s) on board the stricken vessel ? ..... **YES/NO**

Are there several types of cargo loaded on board ? ..... **YES/NO**

What types of cargo ? .....

Do they constitute a danger to the complement or surrounding areas if the vessel is in port ?

..... **YES/NO**

Company's Emergency Response Team (technical personnel) deployed to designated port: ..... **YES/NO**

Reason for deployment: .....
Response from Company's Emergency Response Team:

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Reports from local Correspondent:

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Reports from PandI Club :

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Annex G

Owner’s revised standing orders regarding lookout and BNWAS

COMPANY STANDING ORDER

1. Whilst underway and at anchor (berth to berth), the Bridge Watch Alarm System is to be switched on;
2. Additional Lookout to be engaged as required by STCW'95 (during hours of darkness, restricted visibility, high dense traffic, etc.). The additional lookout is also required under pilotage;
3. The name of lookout must be recorded in the deck log book;
4. Voyage planning must cover the entire voyage from berth to berth as required by STCW'95;
5. The watch plan must be up-to-date and posted on the bridge and in the mess room(s). The plan must indicate lookout availability for 24hrs whilst underway and at anchor.

This standing order must be displayed on the bridge.

[redacted] (Ems), 2011-10-18

[redacted] (DP/CSO)

Marine Accident Report