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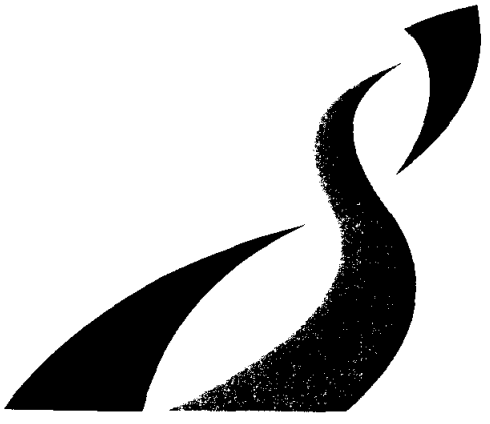
MARINE ACCIDENT INVESTIGATION BRANCH

Marine Accident Report 3/98

Report of the Inspector's Inquiry into the Grounding of the Feeder Container Ship

mv CITA

off Newfoundland Point, Isles of Scilly
on 26 March 1997



INVESTOR IN PEOPLE

October 1998

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October 1998

Marine Accident Investigation Branch
Department of the Environment, Transport and the Regions
Carlton House
Carlton Place
Southampton SO15 2DZ

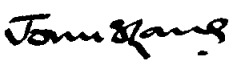
11 June 1998

The Right Honourable John Prescott MP
Deputy Prime Minister and Secretary of State
for the Environment, Transport and the Regions

Sir

I have the honour to submit the report on the loss of the feeder container vessel CITA, registered in Antigua and Barbuda, which ran aground on the Isles of Scilly on 26 March 1997.

I have the honour to be
Sir
Your obedient servant



J S Lang
Rear Admiral
Chief Inspector of Marine Accidents

Extract from
The Merchant Shipping
(Accident Reporting and Investigation)
Regulations 1994

The fundamental purpose of investigating an accident under these Regulations is to determine its circumstances and the causes with the aim of improving the safety of life at sea and the avoidance of accidents in the future. It is not the purpose to apportion liability, nor, except so far as is necessary to achieve the fundamental purpose, to apportion blame.

CONTENTS

Polyester sheeting on the Jetty at Hugh Town

Glossary of Terms, Acronyms and Abbreviations

CP Propeller:	Controllable Pitch Propeller
GPS:	Global Positioning System
IMO:	International Maritime Organization
LOF:	Lloyds Open Form
MPCU:	Marine Pollution Control Unit
P&I Club:	Protection and Indemnity Club
RNAS:	Royal Naval Air Station
RNLI:	Royal National Lifeboat Institution
STCW 78:	International Convention on Standards of Training, Certification and Watchkeeping prior to the 1995 Amendments
STCW 95:	International Convention on Standards of Training, Certification and Watchkeeping incorporating the 1995 Amendments
TEU:	Twenty (Foot) Equivalent Unit
UTC:	Universal Co-ordinated Time
Way Point:	Electronically generated alter-course position


CITA GROUNDS
SCOTLAND
NORTH SEA
SHETLAND ISLES
ORKNEY ISLANDS
HEBRIDES OR WESTERN ISLES
NORTHERN IRELAND
REPUBLIC OF IRELAND
ENGLAND
WALES
IRISH SEA
CELTIC SEA
ENGLISH CHANNEL
Faeroe Bank
Rosemary Bank
Anton Dohrn Seamount
Moray Firth
Dogger Bank
Great Sole Bank
Little Sole Bank
Isles of Scilly
Ile d Ouessant
Brest
Glasgow
Edinburgh
Londonderry
Belfast
DUBLIN
Liverpool
Bristol
LONDON
Southampton
Cork
Limerick
Waterford
Aberdeen
Kinnaird Head
Isle of May
Tynemouth
Flamborough Head
Great Yarmouth
Dover
Cap d'Antifer Le Havre
Cherbourg
PARIS
Fastnet Rk
Bishop Rock
Wolf Rock
Eddystone
Lundy
Tuskar Rk
Mine Hd
Fair Isle
Muckle Flugga
Foula
Sumburgh Hd
Duncansby Hd
Barra Head
Oban
Skerryvore
Inishtrahull
Slyne Hd
Mizen Head
Trevose Head
Pointe de Barfleur
Ile de Batz
Roscoff
Calais
Cap Gris-Nez
Goeree
Orfordness
Felixstowe
Inner Dowsing
Hutts
Middlesbrough
Newcastle
Isle of Man
Taunton
Milford Haven
Cardiff
Portland Bill
Start Point
Plymouth
Falmouth
St Catherine's Pt
Hurst Point
Dungeness
Sule Skerry
Sule Stack
Stroma
Duncansby Head
Butt of Lewis
Flannan Is
St Kilda
Barra Head
Tory I
Fair Isle
N. Ronaldsay
Sumburgh Head
Muckle Flugga
Viking Bank
Norwegian
ODAS K5 FI(S)Y.20s
ODAS RARH FI(S)Y.20s
ODAS K4 FI(S)Y.20s
ODAS 24 GB FI(S)Y.20s
ODAS 25 GB FI(S)Y.20s
ODAS 2151 BRITTANY FI(S)Y.20s
10°W(9°E)
6°W(7°E)
4°W(7°E)
OIL AND GAS FIELDS (see Note)
NORTH ATLANTIC 10·5-1kn
Reproduced from Admiralty Chart 4014 by permission of the Controller of HMSO and the UK Hydrographic Office

Synopsis

The accident was notified to the Marine Accident Investigation Branch (MAIB) Duty Co-ordinator by HM Coastguard, through the Department of Transport Duty Officer, at 0530 on 26 March 1997. An investigation began immediately and was carried out by Captain D J B Dunn, Principal Inspector.

CITA was being operated as a feeder container ship on a weekly schedule between Rotterdam, Southampton, Belfast and Dublin. She was manned with a Polish master and crew. She left Southampton during the morning of 25 March for Belfast. The planned route was to be via the northbound lane of the Land's End Traffic Separation Scheme and thence towards Belfast.

Shortly after midnight (ship's time) on 26 March, the Mate took over the bridge watch from the Master as CITA was approaching a course alteration position south of Lizard Point. On reaching it, course was altered to head for the southern end of the Land's End Traffic Separation Scheme. Some time later the Mate fixed the vessel's position and found he was about a mile to the north of the intended track. To regain it he adjusted the course to port by a few degrees and returned to his seat to resume his watch. Soon afterwards he fell asleep. Two and a half hours later, and without anyone on board being aware of what was happening, CITA ran aground on rocks at Northumberland Point, Isles of Scilly, while heading westwards at 13 knots.

The investigation identified the following causal factors:

(i) – that the officer of the watch onboard CITA selected a course to steer that would, unless subsequently changed, lead her to running aground on the Isles of Scilly;

(ii) – that the officer of the watch fell asleep after he had selected the course to steer.

The investigation also identified serious shortcomings with bridge manning at night, with the ship's management and with the failure to have a working watch alarm switched on.

Eight recommendations are made.

MV CITA [Photograph courtesy of FotoFlite]

Particulars of the vessel

Name:	CITA (ex LAGARFOSS 1996 ex JOHN WULFF 1983)
Lloyd's Number:	7605859
Flag:	Antigua & Barbuda
Call Sign:	V2QC
Registered Owners:	Martin Shipping Company Ltd
Manager:	Reederei Gerd A Gorke, Stade (Germany)
Time Charterers:	Bugsier-Reederei-und Bergungs-Gesellschaft mbH & Co, Hamburg
Protection and Indemnity Insurers:	Trampfahrt P & I Association (Hamburg)
Built:	1977 Germany
Type:	Gearless Single Hatch Single Hold Dry Cargo Converted to Feeder Container Ship
Length:	93.53 metres
Breadth:	14.53 metres
Gross Tonnage:	3083
Deadweight:	3806 tonne
Container Capacity:	234 TEU (94 in hold, 140 on deck)
Loaded Draught:	6.04 metres
Engine:	MaK Oil Engine. Power 2207 kW. CP Propeller
Service Speed:	14 knots
Classification:	Germanischer Lloyd
Persons on Board:	Eight
Injuries:	One
Damage:	Total Loss
Place of Incident:	Newfoundland Point, Saint Mary's, Isles of Scilly
Date and Time:	26 March 1997 0335 UTC

SECTION 1

Factual Information *(All times are UTC)*

1.1 BACKGROUND TO THE VOYAGE

The Antiguan and Barbudan registered motor vessel CITA, one of several similar vessels under the time charter of the Bugsier Company, was engaged on a weekly shuttle service carrying containers between the major container ports of Rotterdam and Southampton and the secondary ports of Belfast and Dublin. Additional calls were sometimes made at other ports and, prior to her final passage from Southampton, she had called at Thamesport.

The time charter with the owners of CITA was agreed on 21 October 1996. The vessel was delivered to commence service with Bugsier early in December 1996, to operate initially between English Channel ports. She was transferred to the Irish Sea Feeder Service a month later. The approximate schedule for her service was to be as follows:

Sunday	am	Arrive Rotterdam
	pm	Depart Rotterdam
Monday	midday	Arrive Southampton
	midnight	Depart Southampton
Tuesday		at sea
Wednesday	midday	Arrive Belfast
	afternoon	Depart Belfast
Thursday	am	Arrive Dublin
	pm	Depart Dublin
Friday		at sea
Saturday	am	Arrive Southampton
	pm	Depart Southampton for Rotterdam

The charter party allowed for the carrying of dangerous cargoes, provided they were packed, labelled, loaded, stowed and discharged in accordance with the International Maritime Organization (IMO) Dangerous Goods Code and appropriate national regulations. The charter party included the usual requirement that the Master "...prosecute all voyages with utmost despatch and ... render the customary assistance with the vessel's crew". It required the crew to provide the assistance customary on liner vessels operated by the charterers, which in particular included the opening and closing of hatches and the securing of the containers. The charter party also provided that the services included the supervision of loading.

CITA was managed by an operations superintendent who reported to the manager, Mr Gorke, at the Company's office near Hamburg.

1.2 EVENTS PRECEDING INCIDENT VOYAGE

The time kept on board CITA was one hour ahead of UTC but for the purposes of this report, all times have been adjusted to UTC. CITA arrived at St Helen's Road off the Isle of Wight from Thamesport at 0250 (0350 ship's time) on Monday, 24 March 1997 and anchored there to await berthing orders. The Pilot boarded at 1230 and the vessel arrived at Southampton Container Terminal at 1418. She was carrying 33 containers from previous ports, but none were to be discharged. The night shift shore labour boarded at about 2200 and commenced loading the hold with three tiers of containers at 2205. The crew had previously opened the hatch in preparation for loading.

As loading in the hold progressed, positioning cones were placed between each tier by the shore labour. During the night the shift foreman conversed briefly with the Mate and recalled him being concerned about the sailing time.

Once loading in the hold was complete the crew closed the hatch to enable a further three tiers of containers to be placed on top of it. The first tier was landed on deck pads in sockets on the hatch top. For the second and third tiers, twist locks (also called con locks) placed on deck by the crew, were set in the locking position and placed on the corner fitting of each container before the next one was landed over it. This was done by the shore labour with two 'pad men' being designated for each container crane. The night shift foreman left the vessel shortly after 0700.

The day shift foreman boarded CITA at 0730, had a brief conversation with the Mate and noticed that two of the crew were engaged in setting up the lashings on containers already loaded. Once the day shift had started work, the crew continued to secure containers in the usual way after each container was placed in stow.

Loading completed at 0945 on Tuesday, 25 March. 112 containers comprising 20ft and 40ft units had been loaded, with 33 in the hold and 79 on the hatch. Including those already on board, the total load was 145 containers. They contained a variety of goods including auto parts, toys, clothing, footwear, plywood sheets, bathroom accessories, furniture, tobacco, wine, flooring, yarn, golf bags, fork-lift trucks, bottles of mineral water, handicrafts, polythene bags, polyester sheets, toilet seats and garden gnomes. There were six containers with each containing 18.5 tonne of rechargeable batteries. When he went ashore, the day foreman recalled the vessel as being "virtually secured for sea" and the Mate "in a good state of health".

1.3 THE INCIDENT VOYAGE

CITA sailed from Southampton on Tuesday, 25 March 1997. With a Pilot embarked she left the container terminal at 0956. The departure draught was 5.10m forward and 5.87m aft.

The passage down Southampton Water was uneventful; conversation between Pilot and Master was brief. The Pilot did not speak to the Mate and recalled the interior of the wheelhouse as being "not particularly hot". The crew completed their securing of the containers during the pilotage passage which ended near the NE Gurnard Buoy. The Pilot

disembarked at 1100 leaving the Master to navigate CITA through the West Solent and the Needles Channel. Pilotage in these waters is not compulsory.

On leaving the bridge the Mate had a meal, checked that securing of the containers was complete and retired to his cabin. He went to bed at about 1230 and slept until the Master called him by telephone from the bridge at 1600. The Mate had something to eat before relieving the Master on the bridge at about 1620. The vessel was, at the time of the handover, following the course from Portland Bill to Start Point. When the Master handed over the watch to the Mate he stated his intention to sleep for a while and wished to be called at 1900. The Master recalled the Mate was "in quite a normal state" at this time. The weather and visibility were still good and the Master left the bridge.

During his watch the Mate checked the ship's position from the GPS at half hourly intervals and was in his words, "looking at the radar all the time". The radar display was positioned so that it could be seen from the watchkeeper's chair.

The Mate called the Master by telephone at 1900 and completed the entries in the deck log for the end of his watch. CITA was passing Start Point at this time, and course was altered to a position off Lizard Point. The Master arrived on the bridge at about 1920 and informed the Mate that as from midnight they would revert to normal watches, six-on six-off. This is a common watch system on coastal vessels, where the Master takes each 6 to 12 watch and the Mate takes each 12 to 6 watch. In CITA no look-outs were posted; the officers were the sole watchkeepers.

After leaving the bridge the Mate had his evening meal. His only liquid refreshment was orange juice. He went to bed at about 2000, had no problem with sleeping and was called at 2300 (midnight, ship's time) by the Master. He arrived on the bridge shortly afterwards.

On handing over the watch, the Master showed him the ship's position, asked for a call at 0600 (ship's time) and then left the bridge without leaving any navigational orders, either verbal or written. CITA was steering 261° (Gyro) to make 259° (True) and was approaching the planned alter course position five miles south-east of Lizard Point. Before leaving the bridge the Master had recorded the air temperature as 12°C, the wind as north-westerly force 4 and the gyro compass error as –2°. The visibility was moderate and the area weather forecast was for westerly winds force 4/5. The Master also recalled there was "nothing extraordinary" about the Mate.

After returning to his cabin one deck below the bridge, the Master studied the Southampton port charts for a while, in preparation for an examination for the issue of a Pilotage Exemption Certificate. Before turning in he went back to the bridge to replace the charts in their drawer, asked the Mate if "everything was OK" and was assured it was. The Mate was sitting in the watchkeeper's chair and looking at the radar screen in front of him. The Master formed the impression that the Mate was awake and alert. The Master left the bridge, returned to his cabin and went to bed. It was about 0000 on Wednesday, 26 March.

On reaching the alter course position south of Lizard Point, the Mate re-set the autopilot to bring the vessel to the new course of 282° (True) marked on the chart. Following his usual practice, he wrote the time, the position and the new course steered on a piece of scrap paper with the intention of transferring this information to the log book at the end of his watch.

The planned track was to the south-eastern limit of the entrance to the northbound lane of the Land's End Traffic Separation Scheme, four miles north-north-west of Wolf Rock

Lighthouse. Having made the course alteration the Mate returned to the watchkeeper's chair from which he maintained a visual lookout, watched the radar and monitored the GPS display to ensure the vessel remained on track.

About an hour later the Mate stood up to plot the vessel's position on the chart and found it put the ship about one mile to the north of the planned track. At the same time he noted from the GPS display the ship's speed was about 13 knots. He went to the autopilot and applied a course correction of (as recalled by him) about 7° to port to return the vessel to the charted course line. He did not write down this course correction, returned again to the watchkeeper's chair and resumed his lookout. The time was about 0100 and he was alone on the bridge.

Shortly after altering course to port the Mate, on his own admission, fell asleep in his chair. CITA continued westwards at 13 knots, on autopilot and without anyone being aware of what was happening. No-one else onboard was awake.

Sometime before 0330, the Master was "woken up by a shock" and climbed to the wheelhouse to find the Mate standing up and looking at the radar and around him. The Master asked the Mate what had happened and where they were. He saw the engine and propeller pitch settings were still at full ahead. The Master read the position on the GPS display, looked at the chart and realised that CITA had run ashore on the Isles of Scilly. He switched on the decklights and saw rocks nearby. The Mate had said nothing and was very evidently in a state of shock. The Mate left the wheelhouse and was subsequently found sitting in his cabin.

The position which the Master had read on the GPS, Latitude 49° 54.7'N Longitude 06° 16.7'W, indicating that the vessel was aground on an outcrop of rocks known as Newfoundland Point on the south-eastern side of the island of Saint Mary's, Isles of Scilly, and less than half a mile from the island's airport. The Master called the rest of the crew and telephoned the Company's Superintendent to tell him what had happened. He then contacted Falmouth Coastguard and informed them that his vessel was aground. Because he did not believe the crew to be in immediate danger he decided not to send a MAYDAY message straight away.

After grounding, CITA began to list to starboard almost immediately, indicating she was holed below the waterline and flooding at a substantial rate. The Master reassessed the situation and alerted Falmouth Coastguard. CITA's MAYDAY message was received at 0335 UTC (0435 ship's time), requesting assistance to evacuate the vessel. The weather at this time was moderate, with a south-south-westerly force 5 wind and visibility reduced to about two miles in drizzle.

The Saint Mary's RNLI Lifeboat, a rescue helicopter from RNAS Culdrose, the Saint Mary's Coast Rescue Team and the small local tug PENDRAGON were all mobilised to assist. The Lifeboat was the first unit to arrive by which time the starboard list had increased significantly. The Lifeboat came alongside and evacuated seven crewmembers, one of whom broke his ankle in the process. The Master, meanwhile, decided to stay on board for as long as possible and asked the Lifeboat to stand by. He telephoned the Superintendent again to update him on the successful evacuation of the crew. The list increased further and, as the main engine was still running, the Master set the propeller pitch control to full astern to see if the vessel would refloat. The vessel remained fast on the rocks.

The list continued to increase and by the time it reached about 50°, containers on the hatch were breaking loose and floating free. At 0500 the Master concluded it would be sensible to abandon ship. He was safely evacuated by the rescue helicopter, whose pilot judged the list to be about 60°.

1.4 POST GROUNDING ACTIVITIES

26 March

At 0600 the crew of PENDRAGON reported that the list had increased to about 70° and that CITA was awash over about two thirds of her length. Many more containers were seen to be floating away from the vessel at this time. At 1124 Falmouth Coastguard reported that CITA remained hard aground on Newfoundland Point on a falling tide. By now about 100 containers had been lost overboard of which 15 had been washed ashore. Two were on Bartholomew Ledge and some were drifting in St Mary's Sound having been carried there by the tide. Coastguards were already broadcasting regular navigational warnings to mariners to make them aware of the dangers posed by the floating containers.

In the hours following the accident the Council of the Isles of Scilly activated a prepared Emergency Procedures Plan. The Coastguard tug FAR TURBOT, based at Dover, had been ordered to the Isles of Scilly while the Police and shore Coastguard teams were keeping a watching brief.

Low water was at 1230. The Owners had signed an LOF salvage agreement with salvors Smit Tak International, who were arranging salvage vessels. The agreement covered the removal of CITA's fuel oil and the recovery of the containers. Weather conditions were moderate; the wind south-south-westerly force 5, with a slight sea and moderate swell and poor visibility due to low cloud and fog patches. At 1515 Falmouth Coastguard reported the list had reduced to about 50° on the rising tide, with the superstructure clear of the water. The vessel had been carrying 90 tonnes of light intermediate fuel oil and 35 tonne of diesel fuel. Although the visibility prevented a reliable assessment, some light pollution had been seen in the vicinity of the vessel. This was being monitored by Coastguard and reported to the Marine Pollution Control Unit (MPCU), who were already making preparations to deal with it. Beach cleaning equipment and members of the Smit Tak salvage team arrived on the Isles of Scilly late that evening.

27-29 March

Overnight, the position of CITA remained unchanged and by noon on 27 March, no further reports of leaking fuel oil from the vessel had been received. The Coastguard tug FAR TURBOT had arrived on scene and, together with various other vessels, was helping to recover floating containers from the sea. This was proving difficult owing to the offshore swell. The Coastguard continued to broadcast navigational warnings. Some containers were being towed into Newlyn and other ports by fishing vessels. Others which had drifted ashore were being looted, which necessitated drafting in additional police from the mainland to guard them.

A notice from the Receiver of Wreck, made available to the local public, outlined the legal requirement when a person finds "wreck" and warned of the penalties for not complying with it.

The main priority for the salvors was to remove the fuel oil from the vessel. They had chartered the vessel SALVAGE CHIEF for this purpose and, pending its arrival at noon on

29 March, PENDRAGON had been hired to put divers down to try to assess the salvage possibilities and plug any holes in way of the fuel tank spaces. Meanwhile visibility had improved to enable the MPCU surveillance aircraft to take off for a reconnaissance flight around the area. However, the weather forecast was for winds from the south-west and increasing possibly to gale force that evening before veering north-west and decreasing.

By 1730 the salvors had completed the diving inspection and reported that only a very small amount of fuel oil was leaking from the vessel which, although badly damaged below the waterline, remained stable. The forefoot had been set back and holed by the impact with the rocks and the hull was flooded from forward to aft, including the machinery space and lower levels of accommodation. There was also an open crack in the hull and it was clear that a deterioration in the weather, with the wind already at force 5 from the south-west, was likely to lead to the vessel breaking up. By Saturday evening it was assessed that some 10 containers remained on board, and about 33 had come ashore. Offshore, FAR TURBOT and the assisting vessels continued to recover those still floating.

30 March

Meanwhile SALVAGE CHIEF's arrival was delayed by adverse weather which meant the removal of the fuel oil did not start until the morning of Sunday 30 March when the conditions were fine, calm and clear. FAR TURBOT was released at 1800.

31 March

By 31 March (Easter Monday), 89 of the total cargo of 145 containers had been recovered or otherwise identified, 10 or 11 still remained submerged in CITA's hold, three of which contained batteries. The highest priority, however, remained the removal of fuel oil and, by 1600, about 65 tonne had been transferred to SALVAGE CHIEF. Some oil had inevitably been released to the sea, but this was assessed at no more than four to five tonnes with most of it dispersing rapidly.

Meanwhile many claiming salvage of containers or their contents, were reporting their findings to the Receiver of Wreck who, when possible, notified insurers.

1-12 April

The weather conditions remained suitable for diving operations and the forecast for the rest of the week was good. MPCU contractors helped to clean the beaches of debris from containers and assisted with its disposal.

During the next few days MPCU aircraft continued to make surveillance flights and reported light sheens of oil with very occasional heavier slicks. Removal of the fuel oil continued. In the same period 11 more containers, some known to contain batteries, were located and recovered. By the evening of 5 April all but one of the containers in CITA had been removed. The exception was a damaged one loaded with drums of cable whose state made it too dangerous to lift.

During the night of 6/7 April the weather deteriorated. SALVAGE CHIEF had to leave the site, but was able to continue working on the lee side of the Island recovering containers. By the evening of 7 April there was a three to four metres swell. Only a small quantity of the oil, about two to three tonnes, still remained on board. During the night CITA succumbed to the weather and sank into deeper water, close to the original grounding position. At low water the only part of the vessel visible above the surface was a short section of rail on the port side.

By noon on 9 April the weather had moderated sufficiently to allow an initial diving inspection of the wreck which showed that CITA had broken in two about ten metres forward of the machinery space. A further inspection revealed that the stern section was lying on its port side at a depth of 32 metres and on a sloping seabed, with the likelihood of it slipping further into the deeper water where the depths were up to 60 metres. Following discussions with the insurers and the owners, the salvors concluded it would be too dangerous to attempt to remove the remaining oil. They agreed, however, to remove containers from the shoreline and surrounding waters.

Aerial reconnaissance and beach inspections showed no further significant oil pollution, but beach cleaning work due to contaminated sand and the scattered contents of containers remained. A particularly awkward and unsightly cargo, a substantial quantity of polyester sheeting used in the production of video tapes, was very much in evidence. To stem the source, efforts were concentrated on tracing the container from which it came.

CITA was, in the meantime, declared a constructive total loss. Of her cargo of 145 containers, 55 (including the one which carried the polyester sheeting) remained unaccounted for and were judged to have sunk to the seabed. It was estimated that about 98% of the fuel and lubricating oils had been removed from the CITA prior to her final sinking and break up.

On 11 April, lawyers representing the CITA's insurers gave formal notice that because of the real difficulties trying to remove remaining fuel from the submerged wreck, the Salvage Agreement for fuel extraction would be terminated. The lawyers agreed, however, to retain the Agreement for cargo recovery until such time the Salvors had removed the containers on Porthmellon Beach and those lying submerged in Watermill Cove. Two of these had been damaged, and the batteries that they contained had spilled on to the sea bed. A crane using baskets was used to pick these up and took about three days to complete the task.

By 12 April, beach cleaning and debris collecting operations were being scaled down.

Meanwhile other damaged containers lying on the shores of the Isles of Scilly continued to present the local authority with unwelcome difficulties. Sunken containers were no less problematical. The Environmental Protection Division of the Ministry of Agriculture, Fisheries and Food (MAFF) advised the Isles of Scilly Council of the possible dangers to the marine environment and aquatic life from 18 tonnes of batteries in one of the sunken containers. MAFF explained that chemicals in the batteries would be diluted quickly by the seawater but solids would dissolve slowly. The dilution rate meant that the potential for contamination by hydrogen sulphide would be abated. On the other hand, fish and shellfish could only take up dissolved metals although these would be produced only very gradually and would be dispersed widely. The International Maritime Dangerous Goods Code lists several types of batteries, but none were listed as marine pollutants. It was therefore assessed that the danger of harm to the environment was minimal.

A large quantity of tobacco was considered to be a hazardous waste and was destroyed.

The many sheets of polyester sheeting washed ashore continued to be an unsightly nuisance and a problem. Both the Receiver of Wreck and the Environmental Trust made unsuccessful efforts to arrange for its removal, either by the owner of the goods or the insurers. Communication between UK authorities and the vessel's owners and insurers was never easy and this contributed to the difficulties in resolving problems arising from the presence of unwanted containers and their contents.

The finders of clothing from the cargo were allowed to keep it in lieu of salvage payment, but they were invited to make a small donation to the Royal National Lifeboat Institution.

On the afternoon of 26 April the pilot of an aircraft landing at St Mary's Airport reported that light oil appeared to be bubbling up from the wreck. The oil sheen was a long stream about one mile in length and 20 to 30 metres wide and leading away from the Islands in a north-easterly direction. As there was no threat to the coastline it was left to disperse naturally.

MV CITA aground off Newfoundland Point, Isles of Scilly

1.5 THE SHIP

MV CITA was built in Hamburg, Germany, in 1977 as a single hold dry cargo vessel with an ice strengthened bow. She was first named JOHN WULFF and, in 1983, became the LAGARFOSS. During her life she was converted to a feeder container vessel and, in October 1996, was renamed CITA and registered in the ownership of the Martin Shipping Company.

Conversions from small dry cargo vessels to feeder container ships are common but usually mean that cell guides are not fitted in the holds to hold containers in place. To prevent containers moving around once loaded, ring bolts are fitted to the floor of the hold to enable containers to be secured downwards in the hold. It is probable that CITA was so fitted.

CITA was well equipped for navigation. She was fitted with two radars, GPS and gyro compass. All were in working order. Steering was normally conducted by auto pilot when at sea; no defects were drawn to the attention of the Inquiry.

Like most merchant ships employed in the North European short sea trades CITA was fitted with a chair for bridge watchkeepers. It was used extensively by both Master and Mate and, significantly, by the Mate during the time leading up to the grounding. CITA's chair was purpose built, fixed to the deck of the wheelhouse and positioned ergonomically, so that the radar display unit, helm and engine controls were within easy sight and reach of the watchkeeper.

CITA was fitted with a functional watch alarm designed to ensure the watchkeeper remained awake. A typical installation, when switched on, will sound at regular intervals and has to be manually silenced and re-set by the officer of the watch. If it is not, perhaps because the watchkeeper has fallen asleep or has been taken ill, it will continue to sound, sometimes with an increased volume. If not cancelled it may progress to sounding in the living accommodation or in the master's cabin at an even higher volume. CITA's watch alarm was switched off, not only during the voyage terminated by the grounding but, by all accounts, for some time previously.

A voyage data recorder was not fitted.

1.6 THE CREW

CITA was manned by a master, mate, engineer, three deck ratings, an engine rating and a cook, all Polish nationals. They were initially engaged through the Szczecin branch of a manning agency called IES Warsaw. The Owners opened the contract with IES in March 1995 and were aware it was due to expire at the end of March 1997, a few days after the accident. It had been the intention of the Owners to continue to employ the same crew, although the arrangement of the contract would have been different.

Both the Master and the Mate held Certificates of Competency issued by the maritime authority of Poland, under the provisions of the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978 (STCW 78). Poland ratified this Convention in 1983 prior to it coming into force for that state in 1984. Certificates issued by any party state to STCW 78 may be accepted by Antigua & Barbuda which does not have an examination system of its own. The Mate's Antiguan certificate had been

issued because he produced an equivalent Polish certificate. Antigua & Barbuda became a party state to STCW 95 on 5 May 1997, after the accident to CITA.

The Master was born in 1953 and holds a Certificate of Competency as Master Mariner (No Limits), which was issued to him in 1993. He initially joined the Company as Chief Mate, being promoted to Master in 1994. He took command of CITA in Rotterdam on 9 March 1997.

The Mate was born in 1962 and holds a Certificate of Competency as Deck Officer Class 2, issued to him in April 1996. He also holds a Certificate of Competency as Chief Mate, issued to him by the Antigua & Barbuda authorities. He had served as a watchkeeping officer for seven years but, prior to September 1996 when he was appointed to CITA, had never previously served as a Mate.

The main duties of the Mate were to take the 12 to 6 bridge watch at sea and supervise the loading, securing and unloading of the cargo in port, with the assistance of the crew as necessary.

The Polish Maritime Authority has been asked to verify the validity of the Master's and Mate's Certificates, but have not yet responded.

From the time CITA started loading at around 2200 on 24 March at Southampton, the Mate had little sleep. He was required to supervise the loading which continued throughout the night and finished shortly before the ship sailed, a few minutes before 1000 the next morning. The precise amount of sleep he managed to achieve during the night of 24/25 March has not been accurately determined but he was observed on deck at various times during this period. Between sailing and commencing his watch at 2300 on 25 March he had two periods of sleep; 3½ hours in the afternoon and 3 hours in the evening, making an aggregate of 6½ hours in the previous 24 hours. STCW 95 does permit an exceptional minimum of 6 hours in a 24 hour period, but these must be consecutive hours.

1.7 SHORE SUPERINTENDENT

The Superintendent was born in 1943 and holds a Certificate of Competency as Master Mariner, issued to him by the German maritime authorities. He is an experienced shipmaster and had been employed as the Owner's Superintendent since 1991.

1.8 THE MANAGEMENT OF CITA

As a time chartered vessel, CITA's manning technical management, and safe operation, were the responsibility of her Owners. By the terms of the charter agreement the Owners were, in essence, required to provide the vessel with a Master and crew to accept the containers arranged by the charterers, secure them on board and transport them to their nominated destination ports. The selection of the Master and crew and the manner in which they were to carry out these tasks were matters for the Owners who were ultimately responsible to the government of Antigua & Barbuda, CITA's flag state authority.

Neither the Master nor the Mate had received any written instructions or guidance from the Owners as to how watches were to be conducted, how other duties were to be carried out and to what standard. The Superintendent admitted quite frankly that neither he nor

Mr Gorke (CITA's manager) had issued any written instructions or standing orders to the Master, only verbal ones "when necessary".

1.9 WATCHKEEPING

International standards for watchkeeping in any vessel are laid down in STCW 78 and STCW 95. The convention in force at the time of CITA's grounding was STCW 95 which came into operation on 1 February 1997. The Owners, through the professional qualifications of the Superintendent and the Master and Mate of CITA would have been aware of STCW 78 Convention because it had been ratified by both Germany and Poland.

The provisions of STCW 95 include a mandatory code appertaining to manning and operational matters. The Convention and Code address watchkeeping at sea and set out certain principles to be observed in keeping a navigational watch, including the keeping of a lookout. Relevant parts of the text read as follows:

"Each Administration shall, for the purpose of preventing fatigue;

1. *establish and enforce rest periods for watchkeeping personnel; and*

2. *require that watch systems are so arranged that the efficiency of all watchkeeping personnel is not impaired by fatigue and that duties are so organised that the first watch at the commencement of a voyage and subsequent relieving watches are sufficiently rested and otherwise fit for duty...*

   ... All persons who are assigned duty as officer in charge of a watch... shall be provided a minimum of 10 hours of rest in any 24 hour period...

   ... The hours of rest may be divided into no more than two periods, one of which shall be at least 6 hours in length.

   ... The minimum period of 10 hours may be reduced to not less than 6 consecutive hours provided that any such reduction shall not extend beyond two days...

   ... The lookout must be able to give full attention to the keeping of a proper lookout and no other duties shall be undertaken or assigned which could interfere with that task. The officer in charge of the navigational watch may be the sole lookout in daylight provided that on each occasion,..." (this is followed by conditions which should be taken into account such as weather, visibility and traffic density).

Both STCW 78 and STCW 95 state that an officer of the watch's performance should not be impaired by fatigue. They also permit him to be the sole watchkeeper by day but not by night, although the wording of the text makes this only implicit. The United Kingdom, a party state to both STCW 78 and STCW 95, made regulations in 1982 to implement the STCW 78 watchkeeping requirements not only for United Kingdom ships but also for all other ships when in United Kingdom waters. CITA was in United Kingdom waters from her departure from Southampton to the place of the accident.

In 1986 a Merchant Shipping Notice (M 1263) was issued by the United Kingdom. This stated that reports had been received of ships navigating during the hours of darkness without a lookout in addition to the officer of the watch. The Notice made it clear that this

practice was contrary to STCW 78 and the 1982 UK Regulations and warned that a master of a ship who contravened any of the requirements of the Regulations would be guilty of an offence and liable to a penalty.

This Notice applied to all vessels when in UK waters irrespective of flag state or whether the flag state was a party to STCW 78, but was not actually addressed to masters of non-UK ships. The watchkeeping requirements in STCW 95 were implemented by new Regulations which came into force in June 1997, and superseded the 1982 Regulations. Similarly, a new Merchant Shipping Notice MSN 1682 superseded M 1263, but was likewise not addressed to masters of non-UK ships.

Although all party states must accept STCW 78 and STCW 95, there is evidence from other accident investigations that many owners consider the decision to have two persons on watch at night should be left to the master's judgement based on weather, visibility, navigational requirements and other circumstances. The evidence indicates that many coastal and short sea trading ships continue to navigate in North European waters, including those of the United Kingdom, at night with only one watchkeeper. Their owners 'turn a blind eye' to minimise crew costs to remain competitive in these trades. CITA was operated with only one watchkeeper on the bridge at night.

CITA, when in United Kingdom waters, was required to comply with the watchkeeping provisions of STCW 78 although her flag state authority was not then a party to it. Non-United Kingdom ships in United Kingdom ports are subject to Port State Control. This is an internationally co-ordinated system of inspection and enforcement agreed between most of the maritime states of Northern Europe under a memorandum of understanding, implemented in 1982. Ships visiting port states are liable to unannounced inspections for compliance with international conventions. CITA was inspected in a United Kingdom port in June 1994 during which no deficiencies were recorded. Three further inspections were carried out subsequent to 1994, each time with no recorded deficiencies. Because of this good record she was not inspected at Southampton before sailing on her last voyage.

1.10 THE ISLES OF SCILLY

The Isles of Scilly, an archipelago of some 200 islands, lie some 28 miles west of Land's End. The Isles have an economy based on tourism and the production of flowers for export. They form the only Marine Park in the United Kingdom, containing 23 sites of Special Scientific Interest and support many species of flora, bird and marine life. The designated area is one of Outstanding Natural Beauty and Heritage Coast. The islands are located at a busy shipping cross-roads with traffic separation schemes to the east, south and west. The economy of The Isles of Scilly is susceptible to severe disruption through environmental damage. There have been around 900 recorded shipwrecks on, or in the vicinity of, the islands in the past 700 years.

The Isles of Scilly Council had, in the two years preceding this accident, developed a strategy for responding to major incidents. An 'Emergency Procedure Guide' had been produced and training of personnel in designated roles had been undertaken. The Emergency Procedure Plan was implemented at about 0645 on 26 March in response to the CITA grounding and an incident room was opened in the council chamber of St Mary's Town Hall at 0815.

SECTION 2
Analysis

The Inquiry set out primarily to establish the reasons why:

(i) the CITA ran aground.

(ii) the containers broke free with such apparent ease.

2.1 MANNING, WATCHKEEPING AND DUTY HOURS

Like most feeder container ships, CITA ran to a tight schedule. Again, like most vessels of her type, commercial pressures ensured that manning was no more than the minimum required and that bridge watchkeeping was shared between Master and Mate. Sleep patterns by watchkeeping officers who work six hours on and six hours off are constantly being interrupted and although, in theory, both officers are able to enjoy six hours rest between watches, the schedule makes this almost impossible to achieve. Furthermore, there is no guarantee that officers can sleep for the whole of their six hours off duty and in practice it is rarely, if ever, achieved.

Notwithstanding the requirements of STCW 78, it is considered that CITA's schedule would have made proper rest and sleep virtually impossible for the Mate. Although all the evidence indicates he gave the appearance of being awake and alert, the cumulative effects of long hours of duty and interrupted sleep in the 24 hours prior to the accident contributed to his inability to remain awake throughout his six hour watch on the morning of 26 March. There is no evidence to indicate he had a minimum of six consecutive hours sleep in the 24 hours prior to the accident, which is the agreed minimum permitted by STCW 95. Furthermore, research has shown that an individual's performance falls off markedly between the hours of 0200 and 0600 as body temperature falls.

It is assessed that the Mate was suffering from the effects of fatigue and lack of sleep when he took over the watch at 2300.

The Master and Mate were also in contravention of STCW 78 and the United Kingdom's Merchant Shipping Notice M 1263 by keeping watches on their own on the night of the accident. Had a second man been present on the bridge of CITA at night he should have been able to ensure the Mate remained awake and in any event, would have been aware that something was seriously amiss in time to prevent the grounding. The Inquiry has revealed that lone watchkeeping at night was a regular practice on board CITA; the Master had no instructions from the Owners to do otherwise. In fact, he had no instructions about any aspect of CITA's operations.

When questioned about directives given to the ship on watchkeeping matters, the Superintendent told the Inquiry that the Owners did give a (verbal) instruction that there

were to be two watchkeepers on the bridge at night. He added that he was unaware that CITA was operating with only one. It appeared to the Inquiry that it was, in fact, most unlikely that the Superintendent ever asked what watchkeeping regime was actually in place. The Superintendent went on to say that the instruction for two watchkeepers had been given to the previous master and it was "normal for one captain to pass it to the next". There is no evidence that this ever happened on board CITA. It is assessed that management directives on watchkeeping matters were, at best, seriously lacking in effectiveness and were, more likely, non-existent.

The M Notice informing non-UK ships of the statutory requirement to have two people on the bridge at night in UK waters was not specifically brought to the attention of those ships when they arrived in UK ports. There was no evidence to indicate that CITA was aware of this requirement.

2.2 WATCHKEEPER'S CHAIR

Other factors contributing to the ease with which the Mate fell asleep include the provision of a chair for the watchkeeper and the failure to use the watch alarm.

Watchkeepers' chairs have been accepted by flag state authorities, owners and masters as a fact of life. This is in marked contrast to earlier practices where any chair provided in the wheelhouse was there for the exclusive use of the pilot or the master, when particular circumstances, such as long pilotage passages or long periods of adverse conditions, justified their use. Watchkeepers keeping regular watches on the bridge were expected to remain on their feet, even in physically uncomfortable conditions in heavy weather. The system worked.

There is nothing fundamentally wrong with watchkeeping from a chair, particularly in ships fitted with an integrated bridge system, but there are significant drawbacks especially for a lone watchkeeper, and special provision must be made to ensure that he can, and does, remain awake and alert throughout his watch. No such provision existed in CITA. Watchkeeping at sea with modern aids can be extremely dull with nothing to stimulate the mind other than a sense of responsibility. CITA's Mate was on his own, levels of arousal were low, the chair was probably comfortable, he was short of sleep, the watch alarm was switched off, it was the middle of the night, steering was by autopilot and the ship's position was obtained by reading Latitude and Longitude from the GPS. It is assessed that there was nothing on board CITA to stimulate the Mate or to prevent him from falling asleep, regardless of whether he was suffering from fatigue.

2.3 BRIDGE WATCH ALARM

CITA's watch alarm was switched off, not only on the night of the accident but, apparently, at all other times. The Superintendent was originally unaware that the ship was even fitted with such an alarm. He had not discovered this himself, but had been told about it by the previous Master. He had given no directions on its use and had left it to the new Master as to whether or not it was to be used. The Master told the Inquiry that "we have a watch alarm but we don't use it. There were no instructions from the Owners, written or verbal, about its use". He should have, in his capacity as master of a vessel in which there were only two watchkeepers, used his initiative and insisted on having the watch alarm switched on regardless of whether he had been instructed to or not.

It is considered that the Superintendent failed to give any effective direction on the use of the watch alarm and that the Master failed in his duty to have a working alarm switched on whenever the vessel was at sea.

2.4 NAVIGATION

All the evidence indicates that CITA's navigation instruments and steering equipment, including the autopilot, were functioning correctly both before and at the time of grounding. Their malfunction as a cause of the accident has therefore been discounted. It is also apparent that the conduct of the navigation prior to the course alteration to starboard, south of Lizard Point, had been satisfactory.

A crucial factor in the reconstruction of events is determining when the Mate fell asleep. The Inquiry did consider the possibility that (contrary to his own account) he had actually fallen asleep before CITA even reached the alter course position off Lizard Point and that the vessel continued on the previous course and was set towards the Isles of Scilly by the north going tidal stream. However, the tidal stream would not have been strong enough for that to happen.

It appears most likely that the Mate did alter course to starboard to the new track south of Lizard Point. When he subsequently found himself to the north of the planned track he made an alteration of course to port. It is assessed he fell asleep at some time thereafter and before he made any further course adjustment.

The Mate recalled his temporary course correction to port as being "about 7°". If this was so, and it was made about an hour after the course alteration off Lizard Point with the vessel to the north of the intended track, CITA would have passed to the north of the Scilly Isles. It is more likely that the course correction, if made after about an hour on the 282° course, was considerably more than seven degrees, perhaps ten or fifteen degrees. The Inquiry's reconstruction of CITA's track is on the assumption that the course change to port was significantly more than 7° and that CITA was set on to the Isles of Scilly by the tidal stream which was predominantly north-going at the time. Whatever course was actually set by the Mate, the indisputable fact remains that it eventually led to CITA grounding on the Isles of Scilly.

In any event, while the Mate slept, CITA must have passed so close to Wolf Rock with its conspicuous lighthouse and its white light flashing every 15 seconds that it is impossible to say in the reconstruction whether she passed to the north or the south of it. Had CITA struck Wolf Rock, an isolated pinnacle surrounded by deep water, the results could have been catastrophic for both the ship and all on board.

After passing Wolf Rock, CITA crossed the southern approaches to the Land's End Traffic Separation Scheme which is used by about 50 ships every day. A collision with one of them could also have had fatal consequences. With no-one awake there was nothing, other than the Scilly Isles, to stop CITA continuing on a westwards course. There was no way-point alarm to indicate that the ship had reached the wheel-over position at the southern end of the Traffic Separation Scheme. The existence of an exclusion zone around the Isles of Scilly would have been meaningless in the circumstances and would have done nothing to prevent this accident. Grounding was inevitable and eventually occurred sometime before 0330 on Wednesday 26 March 1997. Between the time the Mate fell asleep and CITA going aground she travelled about 35 miles. The ship's speed on grounding is assessed to have been 13 knots.

The causal factor for the accident was that CITA was steering a course that eventually led to her running aground and, given the circumstances prevailing on board, there was nothing in place to prevent it.

2.5 THE LOADING OF THE CONTAINERS

In addition to determining the causes of the grounding, the Inquiry examined the reasons why the containers broke free with such apparent ease.

It has not been possible to determine exactly what securing arrangements were in force when CITA loaded her containers, either before or after arriving at Southampton. During the course of the investigation a visit was made to a feeder container ship, similar to CITA, at Southampton Container Terminal. The loading procedure and the way containers were being secured for sea were observed.

Although it is impossible to say whether the loading techniques were similar to those used in CITA there is confidence that they were. In the lower hold, the containers (some of which remained from a previous port) were landed on cones on the floor of the hold and on double headed cones between each tier, to act as placing guides and to prevent lateral movement. The tops of the upper tier in the hold had 'distance pieces' or clamps secured on the corner fittings, additionally to restrict lateral movement. However, there was nothing to restrict vertical movement other than the closed hatch cover above the top tier and the weight of the containers on the hatch cover.

Ring bolts, as probably fitted in CITA, were fitted to the floor of the hold, to provide secure anchoring points for lashings to hold the containers down. These had not been used for some considerable time, in fact most of the accessible ones were found to be completely seized up so were evidently never used.

Special attention was paid to the closing of hatches. After the hold stowage was completed the hatch covers were closed by the crew. Weather deck hatch covers were, as expected, provided with a means of holding them down and making them weathertight. This is a Convention requirement regardless of what top weights may be placed on the hatches. However, the hatch cover of the vessel visited was found to have less than half the holding down clamps (sometimes known as 'dogs') in use on each section of closed hatch cover. The closed sections had containers, loaded at an earlier port, in the hold below and on the hatch sections above; this was how the vessel had arrived from sea. Had this vessel run ashore and taken a heavy list as CITA did, the hatch cover sections would have soon become detached, leaving the containers in the hold free to be washed out or float away.

Regardless of whether these shortcomings applied in CITA, it is apparent that in some ships at least, the necessary securing arrangements for the closure of hatches are not being followed. In some modern container vessels, both large and small, hatch covers are no longer fitted.

The Inquiry established that containers stacked above the hatch covers started to break free once CITA's list had reached about 50°. Although it is unlikely the ship would roll to this extent in a seaway, it has happened in other vessels and securing arrangements should be capable of holding containers at such an angle. Nevertheless it is probable that most of the containers on deck only became detached because of CITA's considerable list after the grounding. This imposed stresses on the lashings and locking devices beyond those which

could reasonably be expected on passage to Belfast in the worst foreseen weather conditions. There is indisputable evidence to indicate that the twist locks on some of the recovered containers had been bent by the forces they were subjected to.

Nothing in the Inquiry indicated that CITA's crew failed in their duty to secure the containers above deck properly. However the degree of securing is often dictated by the anticipated weather expected for the passage. Bad weather was not expected for the passage to Belfast.

It is possible that containers in the hold were not secured downwards and that the hatch covers had not been fully and independently secured in CITA for the passage to Belfast. It is equally possible that reliance had been placed on the top weight of the containers on the hatch covers and the favourable weather forecast for the passage to Belfast to ensure they remained firmly in place. A sustained list of 70° to starboard had not been foreseen.

2.6 CONTAINER SALVAGE

After the grounding, containers floated away from CITA or drifted towards the shore and stranded when the tide fell. Of those that floated away, some progressively flooded and sank whereas others stayed afloat and were located and towed into port. Several of these were found by fishermen and towed to Newlyn, a major fishing harbour near Penzance.

The salvaged containers created unwelcome congestion problems in Newlyn where they obstructed berths for other fishing vessels. Some, which appeared to be progressively sinking, were lifted out of the water by mobile crane and landed on the quay, to cause congestion difficulties of a different order. It was readily recognised that these containers and their contents, could be the subject of salvage awards to those who had recovered them and towed them into harbour. However, few people understood what procedures should be followed and found reliable advice hard to come by.

In layman's terms, the word 'wreck' is usually taken to mean the ship herself. However, in maritime law the meaning of the term extends to include parts of the ship, her equipment and cargo, whether found in the sea or on the shore. Under the United Kingdom Merchant Shipping Acts, an official known as the Receiver of Wreck is appointed to take charge of wreck temporarily, and to co-ordinate claims for both possession and salvage award. The office of Receiver of Wreck is permanent, so a Receiver does not have to be appointed after each accident. For more than 100 years Receivers of Wreck have been appointed from amongst Coastguards, customs officers and officers of the Inland Revenue. The Receiver at the time of the CITA accident was an official of HM Coastguard, based at its headquarters in Southampton.

The statutory duty of any person who finds, or takes possession of, wreck is to report to the Receiver who will give appropriate instructions for its retention, disposal or despatch. The basic role of the Receiver is to bring finders and owners of wreck together so that arrangements can be made between them for its return to the owner and the payment of any due salvage award to the finder. In most cases, a legitimate finder can expect a salvage award. The prime function of the Receiver of Wreck is to take formal control of what often is, and certainly was in the case of CITA, a very confused situation. There were practical difficulties, initially because many finders or 'temporary custodians' of containers, or goods from them, were unaware of what they had to do until their statutory obligations were promulgated through the local media.

The Receiver was involved both during and after the incident in tracing insurers and urging them to take action to have the goods removed. Until the insurers or owners could be contacted nothing could be done about the disposal of their property. This meant that some temporary custodians of containers incurred harbour dues or other expenses which were not reimbursed. In fact, some dues exceeded the value of empty or partly loaded containers and the finders either abandoned them or attempted to sell them. The problem was compounded by the diversity of the cargo, much of it in relatively small quantities, and the large number of cargo owners or insurers involved. Many of the owners/insurers were based outside the United Kingdom and could not easily be traced. Once identified they could not be persuaded to take prompt action. Strict enforcement of the statutory procedures for the finding or salving of all this 'wreck' was a difficult task. The Receiver was still working to resolve many outstanding claims four months after the accident.

The Inquiry concluded that there is a requirement for clearer guidance to be provided for anyone likely to be confronted with wreck.

2.7 POLLUTION CONTROL MEASURES

Some containers carried by CITA contained cargo that although not defined as hazardous was damaging to the environment and became very time consuming to recover. Polyester sheeting used in the manufacture of video tapes became a major nuisance.

It is estimated that at the time of grounding CITA was carrying 90 tonne of bunker fuel and 35 tonne of diesel fuel. It is estimated that some 98% of it was accounted for with 160 cubic metres being successfully removed during the salvage operation. Some 2-3% of the oil escaped during the transfer operation. Some pollution of the shoreline occurred.

The Inquiry also established that the Isles of Scilly Council had difficulty identifying who was accountable for sunken containers that, for some time after the accident, continued to discharge cargo ashore. Further difficulties were encountered by local authorities when trying to make claims on the ship owner and P&I club both of whom resided outside the United Kingdom and were outside the jurisdiction of the UK courts.

A full account of the measures taken to deal with the pollution hazards resulting from the accident is given in "The CITA Incident – A Report by The Coastguard Agency's Marine Pollution Control Unit."

Polyester sheeting on the Jetty at Hugh Town

SECTION 3
Conclusions

3.1 FINDINGS

(i) CITA met the requisite standards for classification and, subject to verification by the Polish Maritime Authorities, was manned by properly certificated officers.

(ii) Navigation instruments and steering equipment were operating satisfactorily at the time of the accident.

(iii) The standard of operational safety management of CITA, so far as bridge manning and the use of the watch alarm was concerned, was totally inadequate.

(iv) It is doubtful whether the Owners had verbally instructed the previous Master to have a second person on navigating watches at night. If they did, it is highly unlikely that the previous Master passed on this verbal instruction to his successor.

(v) Neither the Owner nor the Superintendent issued any instructions to the Master of CITA on standards of watchkeeping or any other matters relevant to her safe operation.

(vi) Both Master and Mate kept night watches on their own in contravention of STCW 78.

(vii) The Mate had less than adequate sleep during the 24 hours prior to starting his watch.

(viii) The Mate had charge of the ship for the period leading up to the grounding.

(ix) The Mate conducted the majority of his watch from the comfort of a chair.

(x) The Mate conducted the early part of his watch satisfactorily. His last known action prior to falling asleep was to adjust the ship's course so that he could regain track. However, the course selected would, when projected westwards, result in the vessel grounding on the Isles of Scilly unless a further course alteration was undertaken.

(xi) The Mate fell asleep while in charge of the ship, some time after the vessel had passed Lizard Point while heading westward towards the Land's End Traffic Separation Scheme.

(xii) There was no-one other than the Mate on the bridge during the final hours of CITA's voyage and no-one else on board was awake.

(xiii) A bridge watch alarm was fitted but not switched on.

(xiv) There was no way-point alarm to alert the Mate that the ship had reached its wheel over position at the southern end of the Land's End Traffic Separation Scheme

(xv) CITA grounded on Newfoundland Point, Isles of Scilly, shortly before 0330 on Wednesday, 26 March 1997 and subsequently became a constructive total loss.

(xvi) The Master and crew of CITA were safely evacuated, one man was injured in the process.

(xvii) Oil pollution following the accident was light but the presence of containers and their contents, whether drifting, washed ashore or sunk presented local authorities with major problems.

(xviii) The Marine Pollution Control Unit of The Coastguard Agency and the Council of the Isles of Scilly had emergency plans which were successfully put into effect.

(xix) There is no system in place for bringing specific Merchant Shipping Notices which are applicable to non-UK ships when in UK waters to the attention of the masters of those ships.

(xx) It is probable that containers stowed in the hold spaces were not fully secured.

(xxi) The containers stowed on deck were adequately secured for the foreseen weather conditions on the passage to Belfast.

(xxii) The hatch covers on the weather deck may not have been fully secured.

(xxiii) After the accident, many finders and temporary possessors of containers or their contents were unaware of their statutory obligations.

(xxiv) The Receiver of Wreck experienced practical and unforeseen difficulties in contacting many owners or insurers of cargo from CITA. Some were outside the UK and, once contacted, could not be persuaded to arrange the prompt removal of their goods.

3.2 CAUSES

The following causal factors were identified:

(i) CITA's officer of the watch, the Mate, had selected a course to steer that would, unless subsequently changed, lead to her running aground on the Isles of Scilly.

(ii) The Mate had fallen asleep once he had selected the course to steer.

The following underlying causes were identified:

(i) The Mate was short of sleep

(ii) The Master failed to ensure a second person was keeping watch on the bridge at night.

(iii) The Master failed to use the bridge watch alarm and failed to instruct the Mate to use it.

(iv) The Owners failed to provide the Master with any written standing instructions and guidance as to his responsibilities for the safe operation of the ship, in particular the maintenance of safe watchkeeping arrangements.

(v) The crew of CITA probably failed to fully secure the containers in the hold or fully secure the hatch before proceeding to sea.

SECTION 4
Recommendations

4.1 PRELIMINARIES

During the course of this Inquiry, the Marine Safety Agency (now the Maritime and Coastguard Agency) of the Department of Transport (now Department of the Environment, Transport and the Regions) brought prosecutions against the Master and the Mate of CITA for offences under Section 58 of the Merchant Shipping Act 1995. Both defendants appeared at Southampton Magistrates Court on 13 October 1997 and pleaded guilty to the charges. The Master was fined £2,000, the Mate was fined £1,500 and each was ordered to pay £250 towards costs.

The Inquiry makes no recommendations for any further action to be taken against the Master or the Mate.

No interim safety recommendations were made during the Inquiry.

The following recommendations are made.

4.2 MARITIME AND COASTGUARD AGENCY

4.2.1 When revising instructions to surveyors for the assessment of shipboard manning and hours of work and rest, particularly on coastal vessels having only two bridge watchkeepers (including the Master), comments should be included to the effect that surveyors should pay particular attention to the assessment of written instructions provided by the owner for watchkeeping arrangements and to the correct functioning of watch alarms, where fitted.

4.2.2 Although Merchant Shipping Notice M.1263 has been superseded, the Maritime and Coastguard Agency should issue a Marine Guidance Note, addressed to the owners, operators, masters, deck officers and seamen of both UK and non-UK vessels, drawing attention to the fact that UK legislation requires a lookout to be posted in addition to the officer of the watch during the hours of darkness.

4.2.3 The Maritime and Coastguard Agency should investigate methods of widening the circulation of information notices affecting non-UK vessels, using the Internet and other means.

4.2.4 Pursue through IMO a way to make it clear to all other party states the requirement for a lookout in addition to the officer in charge of the watch during hours of darkness, as the requirement is not explicit in the wording of paragraph 15 of Section A-VIII/2 of STCW 95.

4.3 DEPARTMENT OF THE ENVIRONMENT, TRANSPORT AND THE REGIONS

4.3.1 The Department should bring this report to the notice of the relevant authorities in Antigua and Barbuda advising them that a ship on their register was sailing in UK waters without regard for STCW 78 or abiding by UK Statutory Instruments on bridge watchkeeping standards. An assurance should be sought that following Antiguan and Barbudan ratification of STCW 95 in May 1997, owners, masters and watchkeeping officers on ships flying their flag now fulfil their obligations under STCW 95 regulations when sailing in UK waters. The authorities should also be invited to state how the requirements are being enforced. A copy of the communication with the authorities in Antigua and Barbuda, including any reply, should be forwarded to the IMO Secretary General.

4.3.2 To note the difficulties encountered by the Receiver of Wreck when trying to identify who was accountable for the removal of sunken containers containing goods that, although not hazardous, damaged the environment. Clear guidelines should be produced stating the procedures to be adopted by authorities dealing with cargo washed ashore, drifting or sunk after a marine accident.

4.3.3 Consider both national and international measures to clarify financial responsibilities for dealing with wrecked ships and lost cargoes which create hazards to human health, living resources and marine life, damage amenities or interfere with other legitimate uses of the sea. Consider developing through the IMO an appropriate international mechanism to ensure that compensation is available to meet such financial responsibilities.

4.4 THE RECEIVER OF WRECK

Should promulgate clear guidance and advice to all local authorities and police forces with coast or estuarine responsibilities of the procedures to be followed whenever a marine accident occurs and significant quantities of wreck, including cargo, may be found or taken possession of by other vessels or by members of the public. Such guidance should allow for the possibility that some cargo may not be identifiable.

SECTION 5
Figures

LIST OF FIGURES

Figure 1: **Chart of Saint Mary's, Isles of Scilly, showing Location of Grounding**

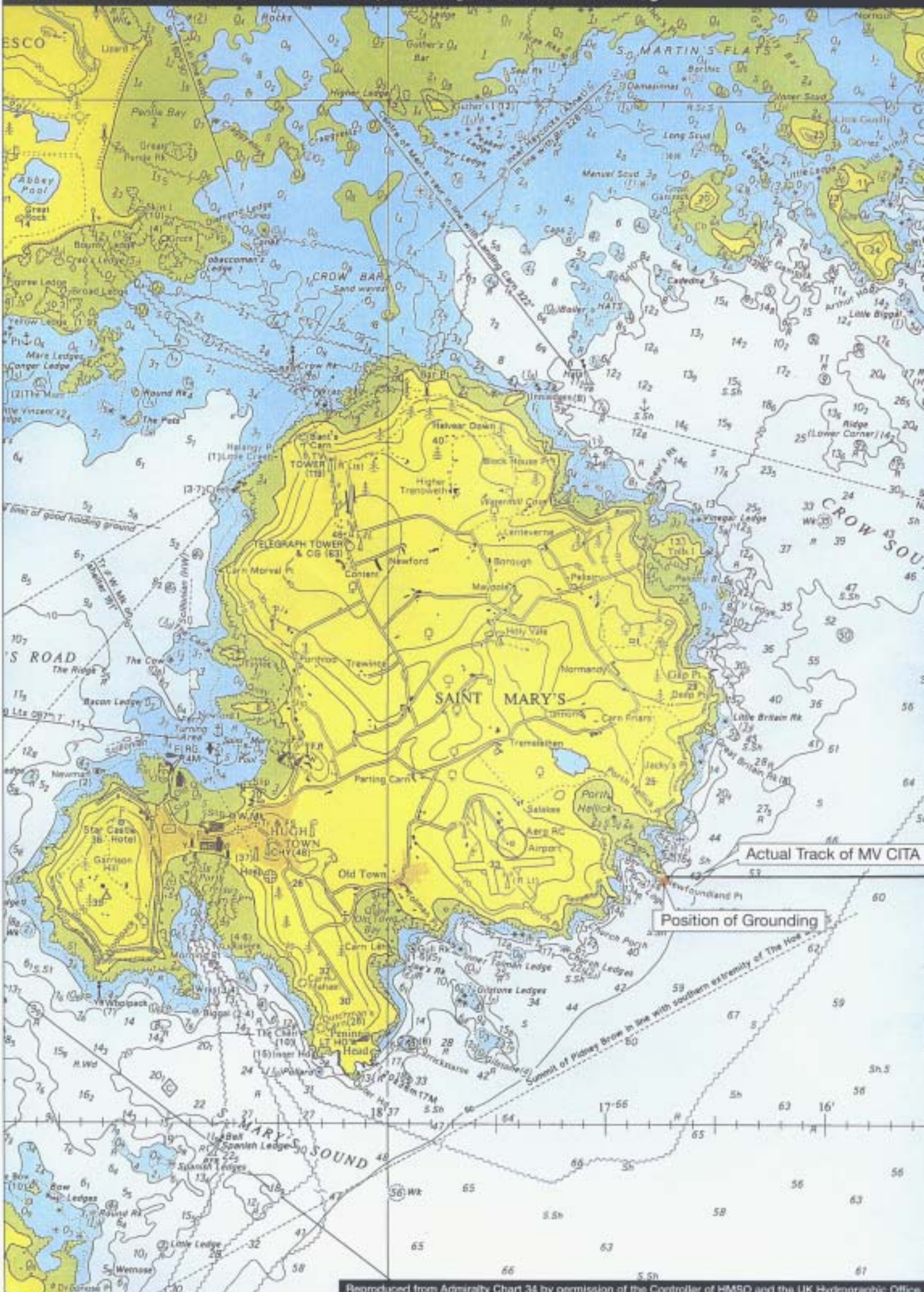


Figure 2: **Actual and Intended Tracks of CITA**

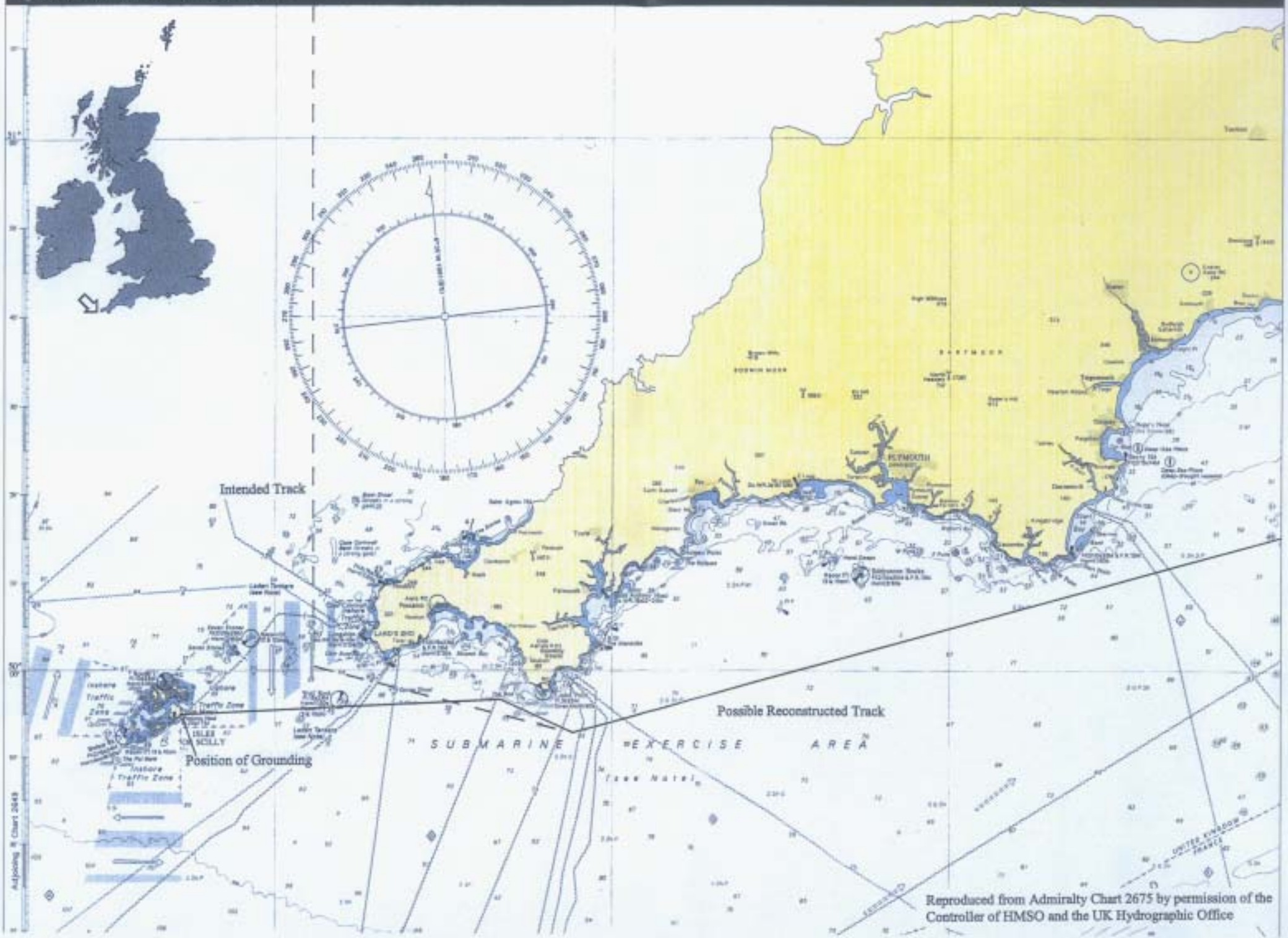


Figure 3: **MV CITA aground off Newfoundland Point, Isles of Scilly**

[Photograph courtesy of Air Atlantique]

[Photograph courtesy of Air Atlantique]

Figure 4: **Merchant Shipping Notice M.1263**

DEPARTMENT OF TRANSPORT MERCHANT SHIPPING NOTICE NO. **M.1263**

NAVIGATIONAL WATCHKEEPING: KEEPING A LOOK-OUT

Notice to Shipowners, Ship Operators, Masters, Deck Officers and Seamen

1. The Department has received reports that some ships are navigating during the hours of darkness without a look-out posted in addition to the officer of the watch.

2. This practice is contrary to the requirements of the international Standards of Training, Certification and Watchkeeping Convention 1978, to which the United Kingdom is a party. The watchkeeping requirements of this Convention are applied to sea-going UK ships (other than fishing vessels and pleasure craft) by means of the Merchant Shipping (Certification and Watchkeeping) Regulations 1982. Paragraph 6 of Schedule 1 to these Regulations requires a look-out to be posted in addition to the officer of the watch during the hours of darkness. A look-out should also be posted at any other time during restricted visibility or when the prevailing circumstances indicate such action is desirable in the interests of safety. The contents of this paragraph are reproduced in the Appendix to this Notice.

3. The master of a ship who contravenes any of the watchkeeping requirements specified in the Certification and Watchkeeping Regulations or the requirement to keep a look-out in accordance with Rule 5 of the Prevention of Collisions Regulations is guilty of an offence and liable on Conviction to a penalty.

Department of Transport
Marine Directorate
London WC1V 6LP
December 1986

Figure 4: **Merchant Shipping Notice M.1263**

APPENDIX

EXTRACT FROM SCHEDULE 1 TO THE MERCHANT SHIPPING (CERTIFICATION AND WATCHKEEPING) REGULATIONS 1982

6. **Look-out**

In addition to maintaining a proper look-out for the purpose of fully appraising the situation and the risk of collision, stranding and other dangers to navigation, the duties of the look-out shall include the detection of ships or aircraft in distress, shipwrecked persons, wrecks and debris. In maintaining a look-out the following shall be observed:

(*a*) the look-out must be able to give full attention to the keeping of a proper look-out and no other duties shall be undertaken or assigned which could interfere with that task;

(*b*) the duties of the look-out and helmsman are separate and the helmsman shall not be considered to be the look-out while steering, except in small ships where an unobstructed all round view is provided at the steering position and there is no impairment of night vision or other impediment to the keeping of a proper look-out. The officer in charge of the watch may be the sole look-out in daylight provided that on each such occasion:

(i) the situation has been carefully assessed and it has been established without doubt that it is safe to do so;

(ii) full account has been taken of all relevant factors including, but not limited to:

state of weather
visibility
traffic density
proximity of danger to navigation
the attention necessary when navigating in or near traffic separation schemes;

(iii) assistance is immediately available to be summoned to the bridge when any change in the situation so requires.

Figure 5: **Merchant Shipping Notice MSN.1682(M)**

MARINE SAFETY AGENCY

MERCHANT SHIPPING NOTICE

MSN 1682 (M)

Safe Manning, Hours of Work and Watchkeeping. Application of STCW 95

Notice to Owners, Managers, Masters, Deck & Engineer Officers and Ratings of Merchant Ships.

This Notice supersedes Notices M781, M1102, M1103, M1207, M1263, M1501 and M1602 and should be read in conjunction with M1473 and M1558

This Merchant Shipping Notice contains the detailed mandatory requirements specified by the Secretary of State under the Merchant Shipping (Safe Manning, Hours of Work and Watchkeeping) Regulations 1997 and gives guidance on the application of the Regulations. These Regulations implement in the UK the requirements of the 1978 International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW 78), as amended in 1995 (STCW 95). The Regulations apply to seagoing United Kingdom registered merchant ships and to other ships when they are in United Kingdom national waters.

MSOSb
Marine Safety Agency
105 Commercial Road
Spring Place
Southampton
SO15 1EG
Tel: 01703 329231
Fax: 01703 329252

April 1997

Safe Ships Clean Seas

An executive agency of THE DEPARTMENT OF TRANSPORT

Figure 5: **Merchant Shipping Notice MSN.1682(M)**

1.0 SAFE MANNING, HOURS OF WORK AND WATCHKEEPING

Introduction

1.1 The Safe Manning, Hours of Work and Watchkeeping Regulations 1997 place clear responsibilities on companies owning or operating UK-registered seagoing ships, and other ships whilst in United Kingdom waters, to ensure that their ships are manned with personnel of appropriate grades who have been properly trained and certificated. The numbers of certificated officers and certificated and non-certificated ratings must be sufficient to ensure safe and efficient operation of the ship at all times. All ships of 500 gt or more are required to hold a safe manning document and owners or operators of ships below 500 gt may also find it advantageous.

1.2 The owner or operator of a United Kingdom registered ship is required to make an assessment of the numbers and grades of personnel necessary for safe operation. These should be sufficient to ensure that:

1.2.1 the required watchkeeping standard can be maintained and that personnel are able to obtain sufficient rest;

1.2.2 personnel are not required to work more hours than is safe in relation to the safety of the ship;

1.2.3 the master and seamen can perform their duties in accordance with the framework of operational guidance in section A-VIII of the STCW Code;

1.2.4 the master and seamen are not required to work such hours or under such conditions which may be injurious to their health and safety.

Proposals based on the assessment should be submitted to the Marine Safety Agency (MSA) which, when satisfied that the proposed manning levels are adequate, will issue a safe manning document.

Safe manning

1.3 Previously, the Department of Transport has specified minimum numbers of certificated officers and the grades of certificates which should be held for different types of ships and power levels, and in some cases the numbers of ratings. The new Regulations take a less prescriptive approach. The responsibility to ensure that ships are safely, sufficiently and efficiently manned rests with owners and managing operators. Guidance on determining appropriate manning levels is given in paragraphs 2.1 to 2.8 below.

1.4 In order to avoid possible problems at a later stage, owners and operators are recommended to consult with seafarers' representatives and the MSA on their proposed manning when new ships are at the design stage and in advance of registering existing ships in the UK.

1.5 In the event of any disagreement between the owners and official seafarers' representatives regarding manning levels, the MSA will consider any views put forward and may require a revision of the manning levels, if so justified. In such cases it may be necessary to arrange for some form of practical demonstration of the ability of the crew to carry out the essential tasks in the context of the principles of safe manning. Similarly, in the event of any change in the equipment, construction or use of the ship which may affect the safe manning level, the owner or operator should make an application for the issue of a new safe manning document.

Specialist ship types

1.6 Offshore support vessels present special problems because of the diverse nature of their operations and the conditions under which they are required to operate. Owners are particularly reminded of the restrictions placed on working hours under the Regulations and should set manning levels accordingly.

Figure 5: **Merchant Shipping Notice MSN.1682(M)**

1.7 Shipowners and operators must ensure that the master, officers and ratings on tankers, and the master, officers, ratings and other personnel on ro-ro passenger ships have completed the training required by the Regulations which is specified in sections A-V/1 and A-V/2 of the STCW Code. All crew members on high speed craft must have completed the training required under the SOLAS High Speed Craft Code, and masters and officers having an operational role must hold a Type Rating Certificate as required by the SOLAS Code. On passenger ships generally, the need to handle large numbers of passengers unfamiliar with the marine environment must be taken into account in determining manning levels. Personnel should be appropriately trained and certificated and owners and operators must give particularly careful attention to the requirements for minimum numbers of trained crew to take charge of survival craft.

Safe manning documents

1.8 When the MSA has agreed proposals regarding manning of a particular ship, a safe manning document will be issued for that ship in a format which complies with the requirements of SOLAS 1974, as amended. It should be retained on board and be available for inspection whenever required by an authorised person.

2.0 DETERMINATION OF SAFE MANNING LEVELS

Principles

2.1 The MSA will consider a ship to be safely manned if the crew includes sufficient officers and ratings with appropriate skills and experience to ensure that the following capabilities are available (these reflect principles in IMO Resolution A.481 (XII), which should be consulted when determining safe manning levels):-

2.1.1 maintain a safe bridge watch at sea in accordance with regulation VIII/2 of STCW 95, which includes general surveillance of the vessel;

2.1.2 moor and unmoor a vessel effectively and safely;

2.1.3 operate and maintain effectively all watertight closing arrangements including the ability to mount an effective damage control party;

2.1.4 operate and, when practicable, maintain efficiently, all fire equipment and lifesaving appliances provided including the ability to muster and disembark passengers and non-essential personnel;

2.1.5 manage the safety functions of a vessel at sea, when not under way;

2.1.6 maintain a safe engineering watch at sea in accordance with regulation VIII/2 of STCW 95, and also maintain general surveillance of spaces containing main propulsion and auxiliary machinery;

2.1.7 operate and maintain in a safe condition the main propulsion and auxiliary machinery to enable the ship to overcome the foreseeable perils of the voyage;

2.1.8 maintain the safety arrangements and the cleanliness of machinery spaces to minimise the risk of fire;

2.1.9 provide for medical care on board ship;

2.1.10 maintain a safe radio watch in accordance with 1974 SOLAS and ITU regulations, as amended;

2.1.11 maintain the precautions and safeguards necessary to protect the marine environment in accordance with MARPOL 73/78 as amended.

2.1.12 maintain safety in all ship operations whilst in port.

Establishing safe manning requirements

2.2 The MSA requires all ships to be sufficiently and efficiently manned for their safe operation, having regard to the nature of their work and their location. To ensure safe and efficient operation, a minimum level of manning should be determined. To make that assessment, owners and operators should take account of the following factors:-

2.2.1 the length and nature of voyage and trading area;

Figure 5: **Merchant Shipping Notice MSN.1682(M)**

2.2.2 any special requirements of the trade involved;

2.2.3 number, size (kW) and type of main propulsion units and auxiliaries;

2.2.4 size of ship (gt);

2.2.5 construction and technical equipment of ship.

2.3 In conjunction with these factors, the IMO principles of safe manning (see paragraph 2.1 above) and the need to ensure that personnel do not work more hours than is safe, the owner or operator should:-

2.3.1 identify all the functions to be undertaken on board during a representative voyage;

2.3.2 identify the skills and experience required to perform those functions;

2.3.3 identify those functions in normal operations which need to be undertaken concurrently;

2.3.4 determine the minimum numbers of personnel required to undertake concurrent operations safely;

2.3.5 establish working arrangements (including - in accordance with regulation 13 of Chapter V of the SOLAS Convention - the establishment of a working language on a passenger ship) to ensure the master and crew are capable of undertaking concurrent and continuing operations with respect to their skills and training;

2.3.6 ensure that the working arrangements allow for sufficient rest periods to avoid fatigue and draw up work schedules accordingly.

Guidance on appropriate manning levels

2.4 The tables at Annex 1 provide guidance on the numbers of certificated deck and engineer officers appropriate to different sizes of ships, tonnages and trading areas. As the watchkeeping arrangements for the engineering department and the demands placed on personnel vary significantly according to the level of automation, numbers are not given for engineer officers. These tables only provide guidance; owners and operators must take all relevant factors into account before finalising their manning proposals.

2.5 The number of ratings required will be determined by the factors summarised at paragraphs 2.2 and 2.3 above. Owners and operators should additionally seek to obtain a good balance between skilled and less skilled and between experienced and less experienced ratings.

Nationality Restrictions

2.6 The Merchant Shipping (Officer Nationality) Regulations 1995 do not permit foreign nationals (other than Commonwealth citizens; EEA nationals, or a national of a State other than an EEA State which is a member of the North Atlantic Treaty Organisation) to serve as master of a strategic ship (a United Kingdom ship of 500 gt or more which is a cruise ship, a product tanker or a ro-ro ship). There are no other nationality restrictions applying to UK-registered ships.

Watchkeeping

2.7 The Regulations require the master of any ship to be responsible for the overall safety of the ship. He must also ensure that the watchkeeping arrangements are adequate for maintaining safe navigational watches at all times, including the provision of a lookout as required by the International Regulations for the Prevention of Collisions at Sea 1972, as amended. The chief engineer officer of any ship is required to ensure that the engineering watch arrangements for the ship are adequate at all times for maintaining a safe engineering watch.

2.8 The principles applying to the keeping of a safe watch are in section A-VIII/2 of the STCW Code and must be followed in order to comply with the Regulations.

Transitional Arrangements

2.9 During the transition period between 1 February 1997 and 31 January 2002 when both STCW 78 and STCW 95 certificates

Figure 5: **Merchant Shipping Notice MSN.1682(M)**

will be valid, owners may man ships with officers holding STCW 78 certificates in accordance with the endorsements thereon. Regulation 5(4) allows for safe manning documents issued under the Merchant Shipping (Safe Manning Document) Regulations 1992 to remain in force until 31 January 2002. If, however, there is any change in circumstances which is relevant to such a safe manning document, the shipowner or operator must inform the MSA, providing all relevant information. The MSA will then review the document's continuing validity or approve fresh proposals from the owner or operator.

3.0 HOURS OF WORK

Introduction

3.1 The Merchant Shipping (Safe Manning, Hours of Work and Watchkeeping) Regulations 1997 revoked the Merchant Shipping (Hours of Work) Regulations 1995. The new regulations implement the STCW 95 requirements (section A-VIII/1 of the STCW Code) and retain elements of the 1995 Hours of Work regulations which implement in the UK part of the International Labour Organisation (ILO) Merchant Shipping (Minimum Standards) Convention 1976, No. 147.

Working arrangements

3.2 Every operator of a ship and employer is obliged to ensure that the master, officers and seamen do not work more hours than is safe in relation to the performance of their duties and the safety of the vessel. The same responsibility is placed on the master in relation to the seamen. Manning levels should be such as to ensure so far as possible that the time and place available for taking rest periods are appropriate for achieving a good quality of rest. Operators will also want to take into account section B-VIII/1 of the STCW Code which provides further guidance about fitness for duty.

3.3 Operators are required to ensure that a schedule of duties is produced setting out the hours of work and the rest periods. It should provide that the master, officers and all other seamen do not work more hours than is safe in relation to the safety of the ship. In devising the schedule operators should take account of factors such as:-

3.3.1 trade and type of operation;

3.3.2 type and size of ship;

3.3.3 construction and technical equipment of ship;

3.3.4 manning levels and changes in crew numbers due to crew changes and sickness;

3.3.5 maximum period of continuous watchkeeping;

3.3.6 minimum rest periods;

3.3.7 total workload;

3.3.8 the seriousness of irregular working hours and their contribution to fatigue causation and the importance of scheduling reasonably stable watchkeeping hours over a voyage.

3.4 Changes should not be made to the schedule unless they can be justified by substantially altered work patterns made necessary, for example, by a change in trading pattern or other significant factor. Where it is known that a vessel engages in an irregular trading pattern or that working hours are unlikely to be uniform this can be taken into account and recorded in the schedule. The consultation process referred to in paragraph 3.5 below also applies to changes in the schedule.

Consultation

3.5 Operators of ships are required to seek the views of the master when first drawing up a schedule of duties for a ship or ships. The master of a ship should seek the views of his officers and shall seek and convey to the operator the views of the ship's safety committee or the seamen or their representatives or a trade union as appropriate. The final decision on the schedule rests with the operator who will have the responsibility to ensure that the schedule is safe in relation to the safety of

Figure 5: **Merchant Shipping Notice MSN.1682(M)**

the ship and the performance of duties. The master must ensure that, as far as reasonably practicable, the schedule is adhered to. Of course, in an emergency or when unforeseeable events occur, changes may well be unavoidable. Regulation 9(8) requires that, once a schedule has been completed by the operator, it must be displayed prominently in the crew accommodation on board the vessel for the information of all the seamen.

Records

3.6 A record of all deviations from the schedule's requirements is to be kept on the ship. Any suitable form of record is acceptable provided that the record is always accessible to those authorised to carry out inspections; the record must be retained for a period of up to five years. There is no need to rewrite the schedule for each voyage so long as it is applicable to the voyage in question and the composition of the crew for whom it was originally intended has not changed.

3.7 The overriding aim is to ensure that a proper record of agreed work patterns exists on board for the benefit of crew members and inspecting authorities, and that the record may be matched to each individual crew member involved by means of other documents such as the crew list.

Exceptions for emergencies

3.8 The Regulations recognise that situations may arise in which a master or seaman may be required to exceed the schedule's duty periods. These include emergencies which threaten the safety of the ship or the environment or put life at risk. Where a master or other seaman exceeds the scheduled hours of work in this manner, and has worked during his rest period, his name must be entered in the record required to be maintained, together with the reason for the excess.

4.0 APPLICATION FOR A SAFE MANNING DOCUMENT.

Information to be provided

4.1 When applying to the MSA for a safe manning document, owners or operators should submit a clear and concise explanation of how the proposed manning level has been determined and how it takes account of the guidance in paragraphs 2.1 to 2.8 above and the hours of work provisions in the Regulations. The MSA will be able to make a quick assessment of the application if the owner or operator can demonstrate that all the factors and principles in those paragraphs have been taken into account.

4.2 Applications for a safe manning document should be made by the owner or a person authorised to act on his behalf, on a form which is obtainable from any MSA Marine Office. The form sets out the information required by the Agency. In accordance with the Agency's usual practice a fee will be charged. All applications should be sent to:

The Marine Safety Agency,
Seafarers' Standards Branch,
Spring Place,
105 Commercial Road,
Southampton SO15 1EG

Tel: 01703 329234

4.3 Any general questions relating to the application or the document and any questions relating to manning should be addressed to the Marine Safety Agency as above.

Figure 5: **Merchant Shipping Notice MSN.1682(M)**

Table 1 **ANNEX 1**

GUIDANCE ON APPROPRIATE MANNING LEVELS - CERTIFICATED DECK OFFICERS

Trading Area	Size of Ship (gt)	Number of officers to be carried		
		STCW 95 Regulation		
		II/2	II/2 or II/1	II/3
Unlimited	3000 or more	2 (a)	2 *	
Unlimited	500 or more but less than 3000	1 (b)	2 (c) *	
Unlimited	less than 500	1 (d)	2 *	
Near-coastal	less than 500			2 (e)
Near-coastal	500 or more	1 (f)	2 (c)(f) *	

Note: All navigation watch ratings must hold STCW II/4 certification.

a. One of the certificates must be for master on ships of 3000 gt or more.

b. This certificate must be for master on this range of tonnage (or for 3000 gt or a superior certificate).

c. If STCW II/1 certificates only are held, the holder designated as chief mate must have at least 6 months OOW experience whilst holding STCW II/1 certification.

d. This certificate must be for master on ships of 500 gt or more but less than 3000 gt.

e. One certificate to be for master on ships of less than 500 gt in a near-coastal area (or a superior certificate).

f. These certificates are to be for an unlimited area, or for any other area which includes the near-coastal area within it, and have appropriate tonnage limitations.

*** May be 1 if master keeps watch or where the length of voyage is short enough to ensure adequate rest periods for watchkeepers.**

Figure 5: **Merchant Shipping Notice MSN.1682(M)**

Table 2

GUIDANCE ON APPROPRIATE MANNING LEVELS - CERTIFICATED ENGINEER OFFICERS

Trading Area	Registered Power (kW)	Number of officers to be carried		
		STCW 95 Regulation		
		III/2	III/3	III/1
Unlimited	3000 or more	2 (a)		(f)
Unlimited	750 or more but less than 3000		2 (b)	(f)
Near-coastal	750 or more but less than 3000		2 (c)	(f)
Near-coastal	350 or more but less than 750		1 (d)	1 (e)

Note: All engine room watch ratings are to hold STCW III/4 certification (except on vessels of less than 750 kW).

a. The chief engineer is to have chief engineer certification for 3000 kW or more.

b. The chief engineer is to have chief engineer certification for at least 750 kW or more but less than 3000 kW (or a superior certificate).

c. The chief engineer is to have chief engineer certification for 750 kW or more but less than 3000 kW for near-coastal or unlimited service.

d. A Senior Marine Engine Operator's Licence holder may be used instead of a STCW III/3 certificate holder for service as chief engineer. The holder may serve in a dual capacity deck and engine-room, provided service is not as master; the ship is not a tanker; the ship is classed UMS and has full bridge control, and high level bilge alarms in machinery spaces; and engine-room alarm systems are relayed to accommodation or bridge.

e. A Marine Engine Operator's Licence holder may be used instead of a STCW III/1 certificate holder. The holder may serve in a dual capacity in deck and engine-room departments under the same conditions as outlined in (d) above.

f. All watchkeeping officers to hold at least STCW III/1 certificates.

Figure 6a: Fixing and locking arrangement for container stowage

Figure 6b: Damaged container twist lock

Figure 6c: Fixing and locking arrangement for container stowage

Figure 6d: Container lashings