MAIB
MARINE ACCIDENT INVESTIGATION BRANCH

ACCIDENT REPORT

SERIOUS MARINE CASUALTY REPORT NO 11/2015 MAY 2015

For all enquiries:

Email: maib@dft.gsi.gov.uk
Tel: 023 8039 5500
Fax: 023 8023 2459

Barfleur

Contact with chain of chain ferry *Bramble Bush Bay*

Poole

16 July 2014

SUMMARY

At 0626 (UTC[1]+1) on 16 July 2014, the RoPax[2] ferry *Barfleur* made contact with one of the chains of the chain ferry *Bramble Bush Bay*, causing the chain to part. The chain and its corresponding hydraulic drive motor on board *Bramble Bush Bay* had to be replaced following the accident, while *Barfleur* received only minor damage to its rudders, starboard propeller and skeg.

The investigation found that *Barfleur*'s high speed and close proximity to *Bramble Bush Bay,* which was moored in its normal 'out-of-service' position on the south side of the entrance to Poole Harbour, caused the vessels to interact. The resultant lateral movement of the chain ferry resulted in its chains being lifted. *Barfleur*'s track south of the fixed white leading light line, coupled with the low height of tide and the resulting squat effect on *Barfleur*'s draught, led to *Barfleur* making contact with the chain ferry's 'out harbour' chain.

A recommendation has been made to *Barfleur*'s owner, Brittany Ferries, aimed at improving bridge team procedures when entering port to ensure the passage is planned and monitored effectively. A recommendation has also been made to Poole Harbour Commissioners to specify in the port passage plan that the harbour speed limit refers to speed through the water.

[1] Universal co-ordinated time

[2] RoPax - Roll on Roll off passenger ferry

Bramble Bush Bay

Barfleur

FACTUAL INFORMATION

Narrative

At 2120 on 15 July 2014, the RoPax ferry *Barfleur* departed Cherbourg, France, bound for Poole, UK[3], with a draught of 5.2m[4]. The weather was fine with light winds and good visibility. The ship arrived in Christchurch Bay in the early hours of 16 July, and then drifted to delay its entry into Poole Harbour for its 0700 scheduled berthing.

At 0550, the officer of the watch (OOW) restarted the main engines and began the approach to the entrance to Swash Channel **(Figure 1)**. The master arrived on the bridge shortly afterwards. He checked the tidal information and weather conditions, and was briefed by the OOW. It was daylight, and there was a light breeze with good visibility and a predicted spring tide ebb stream running through the harbour entrance.

At 0613, as *Barfleur* passed Bar Buoy, the master called Poole Harbour Control (PHC) on VHF radio, and was informed that the tidal height at North Haven was 0.7m. At 0622, as *Barfleur* passed Channel Buoy, the master took the con and reduced the ship's speed over the ground (SOG) to 10 knots. At 0625, with the ship passing close to Buoy '10', he altered *Barfleur*'s course to 299°(T[5]) with the aim of turning the ship onto the centre of the approach channel marked by the white sector of the leading light.

At 0626, as *Barfleur* passed the chain ferry *Bramble Bush Bay*, which was moored in its normal 'out-of-service' position a few metres off South Haven slipway, the chain ferry started to move laterally south-east **(Figures 2a** and **2b)**. *Barfleur*'s master then applied starboard helm to initiate a planned turn into Brownsea Road. As *Barfleur*'s stern passed over the chains of *Bramble Bush Bay*, the chain ferry stopped and then moved laterally north-west before eventually coming to rest **(Figure 2c)**.

Barfleur's chief engineer felt a vibration and called the bridge to ask what had happened. With the bridge team unaware of any problems, the chief engineer started to check the machinery, as the ship continued its inbound passage.

At 0628, the chain ferry's crew reported to PHC that *Barfleur* had caught and parted a chain. PHC then notified *Barfleur* on VHF radio. As the ship was proceeding in a confined channel, there had been no apparent change in the ship's handling characteristics, and the chief engineer had found no problems with the propulsion or steering systems, the master decided to continue with the passage to the ro-ro[6] berth in Poole.

Shortly after 0628, the chief officer arrived on *Barfleur*'s bridge to relieve the OOW, who then made his way to his mooring station. After the ship was secured alongside the ro-ro berth, tanks and void spaces were sounded but no water ingress was revealed.

Damage

With no apparent damage to *Barfleur*, the ship departed Poole as scheduled and proceeded to Cherbourg, where a diver survey revealed some minor damage to both rudders **(Figure 3a)**, one tip of the starboard propeller **(Figure 3b)**, and the underside area of the skeg.

The 'out harbour' chain of *Bramble Bush Bay* **(Figure 4)** parted as a result of the accident, and was replaced with a new chain on the same day. The parted chain had been scheduled for replacement at the beginning of August 2014. The hydraulic drive motor for that chain on *Bramble Bush Bay* was also damaged and required replacement, and the ferry returned to service on 18 July.

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[3] United Kingdom

[4] metre(s)

[5] True

[6] Roll on, Roll off

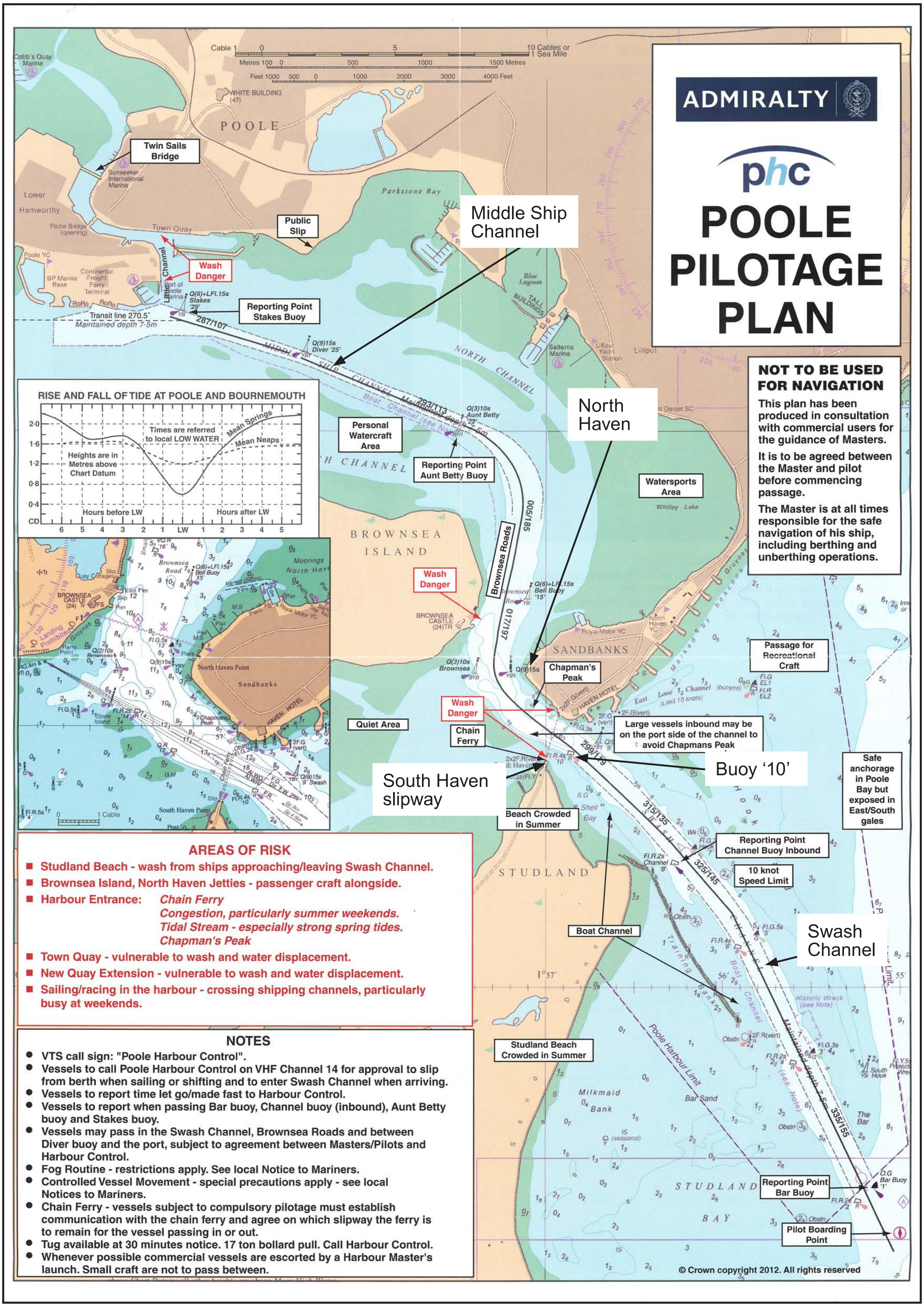
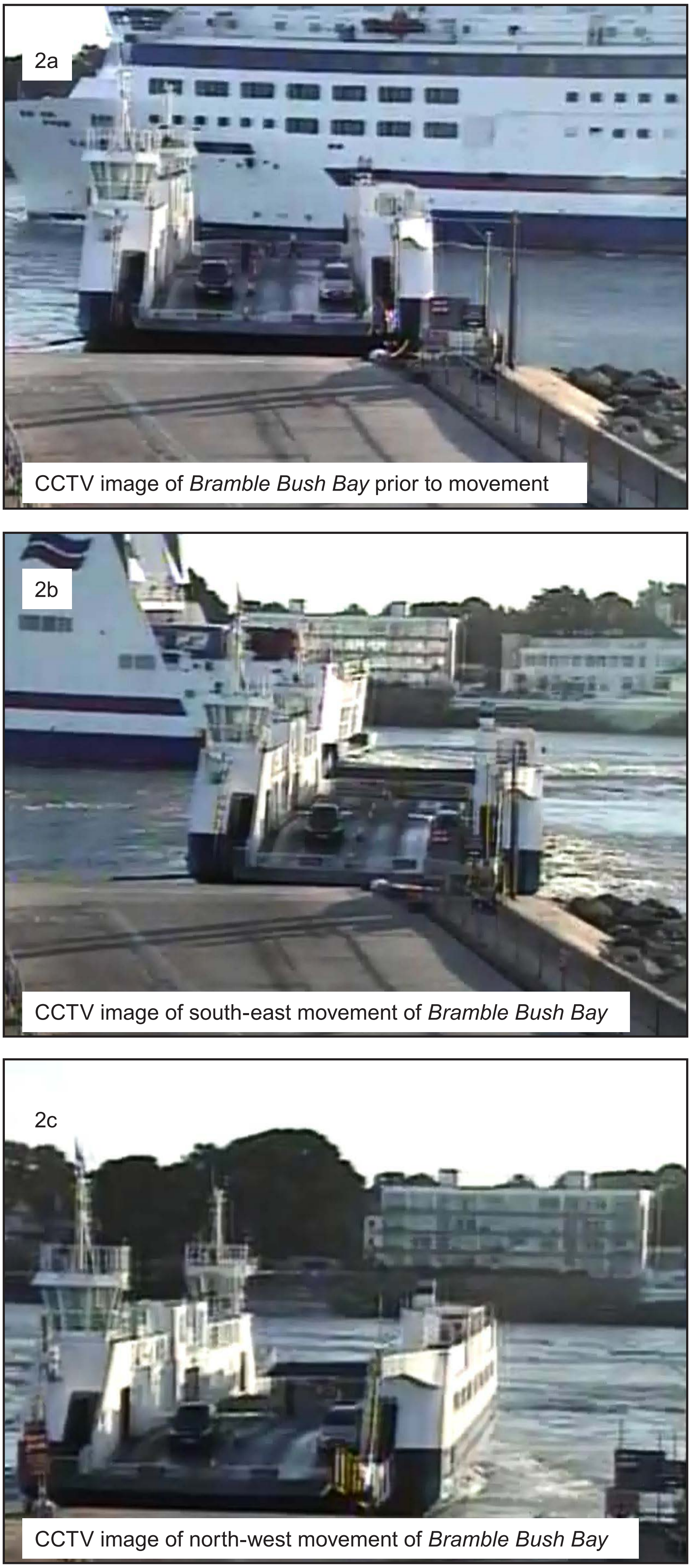


Figure 1: Poole Pilotage Plan


2a

CCTV image of *Bramble Bush Bay* prior to movement

2b

CCTV image of south-east movement of *Bramble Bush Bay*

2c

CCTV image of north-west movement of *Bramble Bush Bay*

Figure 2: CCTV image sequence

Figure 3a: Damage to Barfleur's port rudder

Figure 3b: Damage to Barfleur's starboard propeller

Figure 4: Parted 'out harbour' chain

Poole Harbour

Poole Harbour is an extensive natural estuary with significant areas of shallow water; a channel with a minimum depth of 7.5m is maintained from the open sea to the port of Poole (Figure 1). The large estuary and narrow harbour entrance lead to strong tidal streams through the harbour entrance, particularly during spring ebb tides, when the mean spring rate is 4-5 knots.

Poole Harbour Commissioners is the competent harbour authority for Poole Harbour. The harbour control office is manned 24 hours a day, providing a vessel traffic service for commercial vessels operating in and out of the harbour.

The Poole Pilotage Plan indicated the recommended inbound and outbound route, a speed limit of 10 knots, wash danger areas and other information for mariners **(Figure 1)**. A local notice to mariners had been published in 2013, highlighting the potential hazard to small vessels posed by the displacement effect of ships proceeding in Middle Ship Channel.

The port handles approximately 3,600 shipping movements per year, with just under 3,000 conducted by pilotage exemption certificate (PEC) holders. To obtain a PEC, at least 40 movements are required to be carried out under supervision, including at least five in darkness, five inbound and five outbound. The first twelve, the final eight and at least one movement in darkness are required to be completed with a pilot embarked. The other required movements can be carried out under the supervision of a PEC holder. A PEC is valid for 1 year provided a sufficient number of movements are carried out; revalidation is based on the number of movements undertaken and a 'check-ride' being completed with a pilot.

In 2008, as a result of a risk assessment carried out for a larger ferry using the port, a sectored light was installed at the entrance to Poole Harbour. The fixed white sector of the light provides visual confirmation that a ship is proceeding in the deepest water available while entering Poole Harbour, thereby avoiding Chapman's Peak (a sandbank located to the north of the leading light line). The sectored light is activated by mobile telephone when a ship is due to enter or leave the harbour. Tide gauges are located at North Haven and at the ro-ro berth in Poole. At the time of the accident, the height of tide at the harbour entrance was 0.5m and it was approximately 1 hour before low water.

The Navigational Safety Management Plan (NSMP) details how the harbour authority complies with the Port Marine Safety Code (PMSC). It includes policy, duties and responsibilities, risk control measures, system operation and control information, and the NSMP audit and review process. Underpinning the NSMP, the harbour authority maintains a navigation risk register, which specifically includes consideration of a collision between a commercial ship and the chain ferry.

Barfleur background and crew particulars

Barfleur had been operated mainly between Cherbourg and Poole since its construction in 1992. The ship had twin outward turning controllable pitch propellers, twin spade rudders and two bow thrusters. The crew were French nationals.

The master, who was 54 years old, held a master's unlimited STCW [7]II/2 certificate of competency (CoC) and had served in that rank for 10 years. He held a PEC for Poole Harbour in respect of *Barfleur, Cotentin* and *Armorique*, and had operated in and out of Poole Harbour for about 3 years. He had served on *Barfleur* for 5 months prior to the accident, and had completed a bridge resource management course in January 2013.

The OOW, who was 52 years old, held a master's STCW II/2 CoC limited to vessels of less than 3,000gt[8]. He had served for 29 years with Brittany Ferries, the last 20 years on the Cherbourg-Poole route.

When entering Poole Harbour, *Barfleur*'s bridge team consisted of the master, the OOW and a helmsman. *Barfleur*'s safety management system (SMS) required the master to inform the bridge team of his intended track, and the OOW to alert the master should the ship deviate from that track.

On final approach to the ro-ro berth, it was standard procedure for the chief officer to relieve the OOW on the bridge.

Navigation into Poole Harbour

Barfleur's primary means of navigation was paper charts, but its bridge was fitted with an electronic chart system (ECS) that had display screens on the centreline and bridge wings. The bridge was also equipped with two Sperry Marine radars.

In addition to visual cues, including the sectored light, the bridge team routinely used two radar variable range markers (VRM) to monitor *Barfleur*'s track while entering Poole Harbour. One VRM was set at 0.04nm[9] to indicate the approximate distance at which to pass the Swash Channel buoys in order to maintain a mid-channel track; the other was set at 0.09nm to indicate the approximate distance at which to pass the Sandbanks peninsular in order to follow the fixed white leading light line and so clear Chapman's Peak **(Figure 5)**.

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[7] International Convention on Standards of Training, Certification and Watchkeeping for Seafarers 1978, as amended (STCW Convention)

[8] gross tonnage

[9] nautical mile

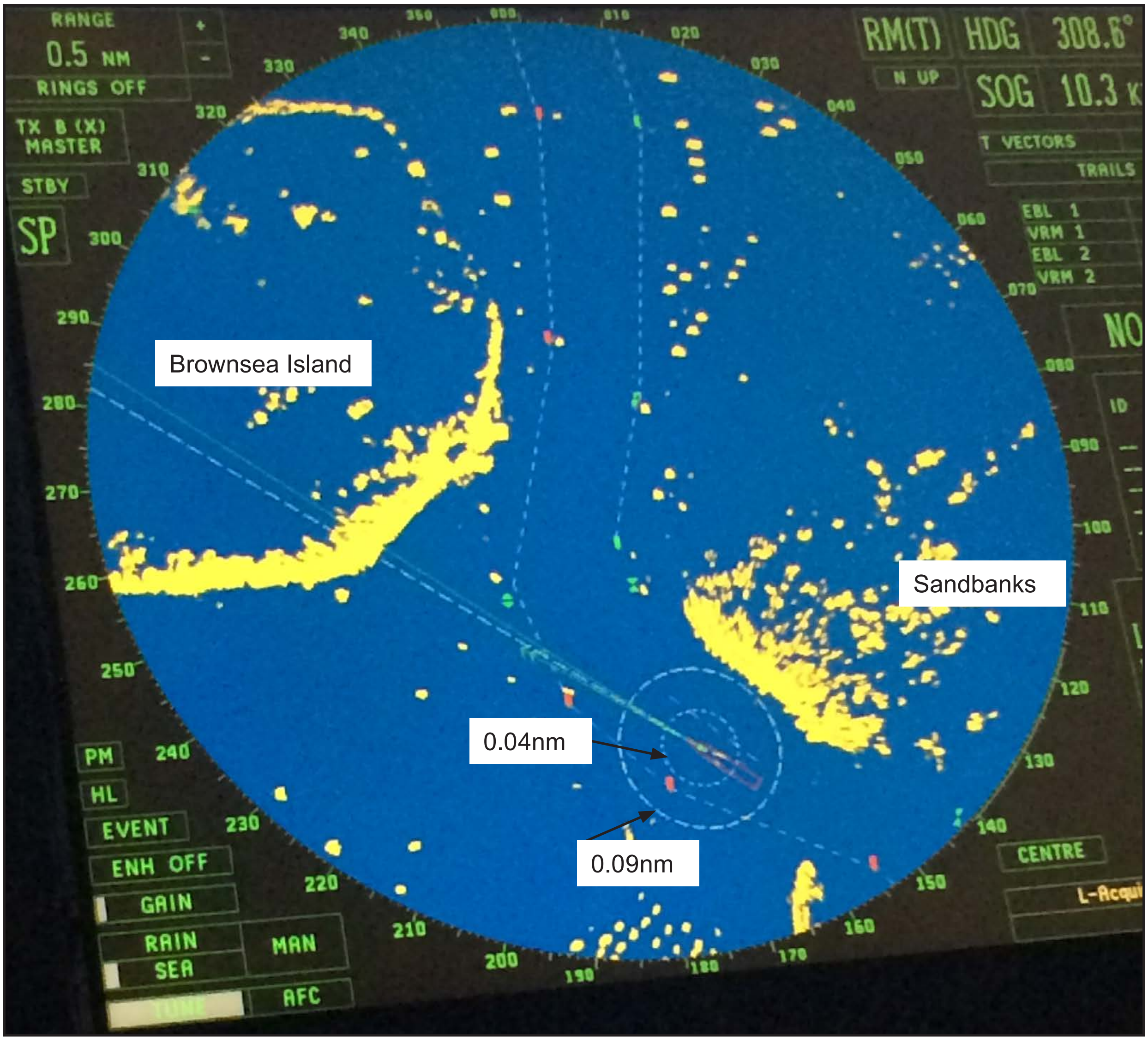

Figure 5: Radar with VRMs in use

Bramble Bush Bay background and particulars

Bramble Bush Bay was built in 1994 and replaced a smaller chain ferry. The vessel was equipped with two hydraulic drive motors that pulled it along two chains secured across the harbour entrance. The vessel's normal daily service was from 0700 to 2300. However, it was permanently manned with at least two crew so it could ferry emergency vehicles across the harbour entrance at night.

All craft of 50m or under in length and not subject to compulsory pilotage were obliged to give way to the chain ferry while entering or leaving the harbour. Vessels subject to compulsory pilotage, were required to contact PHC to agree which side of the entrance the chain ferry would remain while the vessel passed. The chain ferry would normally hold at the south side unless it was waiting for an emergency vehicle to arrive at the north side.

During the night, *Bramble Bush Bay* was moored in a set position a few metres off South Haven slipway, with its loading ramp raised, to enable the vessel to remain afloat at all states of tide. At the time of the accident, the chain ferry was moored in its normal 'out-of-service' position.

Annual chain depth surveys of the 'in harbour' and 'out harbour' chains were undertaken, the last in October 2013 **(Figure 6)**. Between surveys, minor adjustments were made to the chains to ensure a correct balance of tension and length to enable the chain ferry to operate effectively.

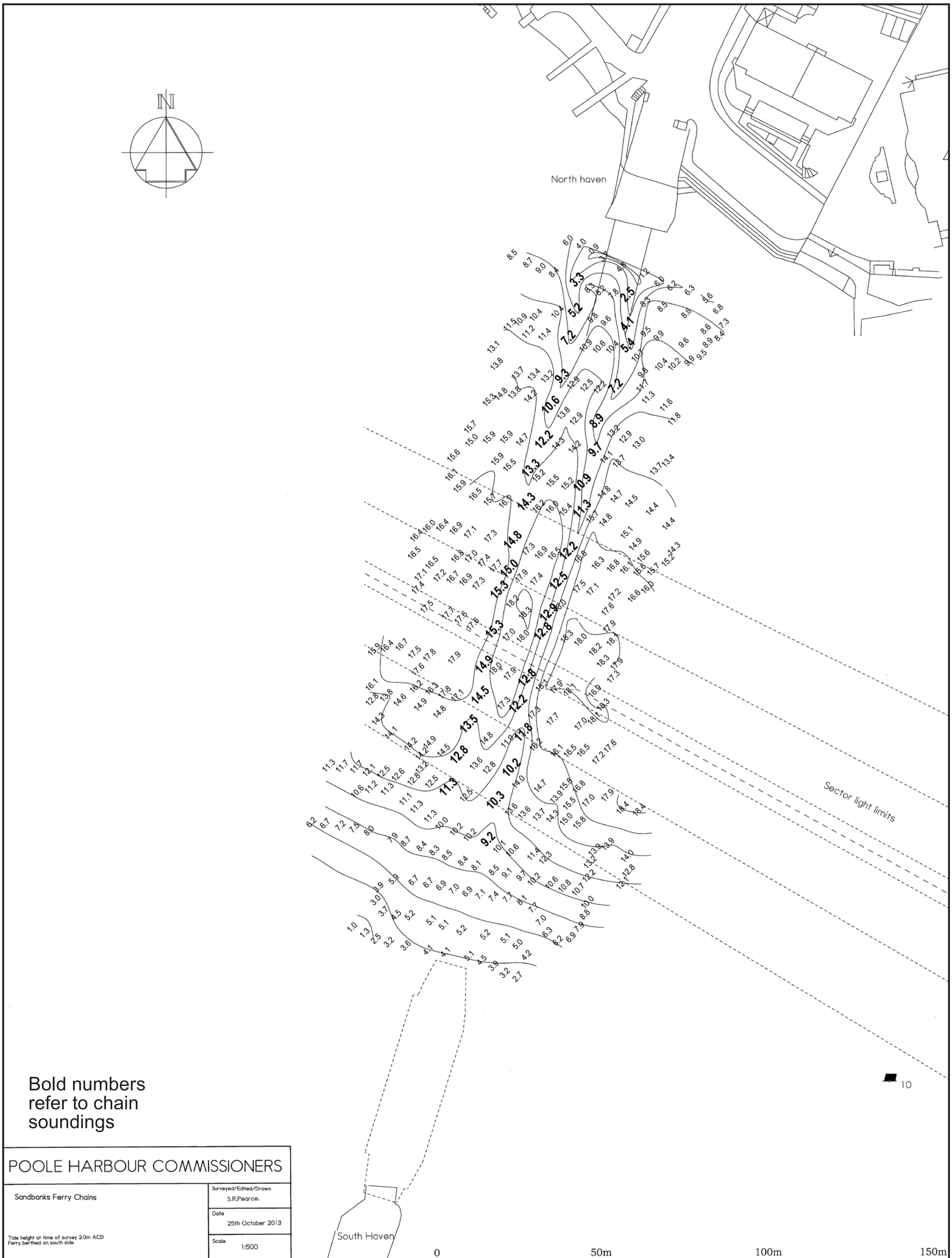

Figure 6: Chain survey

With *Bramble Bush Bay* moored at South Haven slipway, the annual chain survey carried out in October 2013 indicated maximum 'in harbour' and 'out harbour' chain depths below chart datum of 15.3m and 12.9m respectively. In view of their catenary, the chains were liable to move laterally in a strong ebb tidal stream, effectively reducing their depth by up to 1m.

Published navigational guidance

Marine Guidance Note (MGN) 199 (M), 'Dangers of interaction', is published by the UK Maritime and Coastguard Agency (MCA). The MGN draws attention to the effects of hydrodynamic interaction on vessel manoeuvrability, and describes some incidents that illustrate the dangers.

The International Chamber of Shipping (ICS) Bridge Procedures Guide provides comprehensive guidance on bridge procedures, including passage planning and monitoring.

Similar accidents

In 1996, while entering Poole Harbour, *Barfleur* made contact with the 'out harbour' chain of *Bramble Bush Bay,* causing the chain to part and resulting in minor damage to *Barfleur*. The accident was investigated by the harbour authority, which recommended that when ferries pass through the harbour entrance the chain ferry should remain at the South Haven slipway with its loading ramp deployed.

ANALYSIS

The contact

Using Automatic Identification System (AIS) data and tidal stream predictions, *Barfleur*'s speed through the water as it passed *Bramble Bush Bay* was estimated. *Barfleur*'s speed was 14-15 knots and its track was found to be 20m to port (south) of the approach channel centre as marked by the fixed white light leading.

Although the October 2013 survey showed the 'out harbour' chain to have a charted depth (CD) of 12.8m in the centre of the approach channel marked by the sector light, and at the time of the accident this was increased by a tidal height of 0.5m (12.8 + 0.5 = 13.3m); the

- reduction in chain depth due to lateral movement of the chain ferry caused by interaction with *Barfleur* (6.5m),
- reduction in chain depth due to the spring rate ebb stream (1m), and,
- *Barfleur*'s increased draught due to speed induced squat (5.2m + 0.5m = 5.7m)

had the effect of reducing the ferry's underkeel clearance at the 'out harbour' chain to a theoretical 0.1m (13.3m – [6.5m + 1m + 5.7m] = 0.1m).

However, as the AIS of Barfleur's track show, the ferry was 20m to port of the approach channel centreline and this had the effect of eroding this small margin.

Shallow water effects and interaction

The pressure distribution that develops around a ship moving through the water has no apparent effect when in deep water. However, when in shallow water or narrow channels, or close to other vessels, its influence can be significant.

When in shallow water or in narrow channels, a ship's underkeel clearance can be reduced by the effect of squat due to the low pressure that is introduced under the ship when compared to the high pressure at its bow and stern. Squat is directly proportional to the square of the ship's speed through the water and its block coefficient. Estimates of squat are often provided on a ship's bridge to inform passage planning.

One such estimate was provided on *Barfleur*'s bridge **(Figure 7)**, which suggested an increase in draught of 0.7m when travelling at 8 knots with 1m underkeel clearance. This estimation alone was not particularly useful as it provided no means for interpolating or estimating squat values for other speed and depth combinations.

EFFET D'ACCROUPISSEMENT

(Estimé)

Hauteur d'Eau Sous la quille	Vitesse Loch	Augmentation du Tirant d'Eau
m.	Nds	m.
m.	Nds	m.
1 m.	8 Nds	0,70 m.

Figure 7: Squat estimate posted on bridge of Barfleur

Interaction between two vessels passing in close proximity can occur in any depth of water but it is intensified by the effect of shallow water as squat amplifies the pressure difference along the hull. In this accident, *Barfleur* was passing *Bramble Bush Bay* at a range of 60-70m. Given the low state of the tide, this distance was sufficiently small for the interaction between the two vessels to cause the chain ferry to move approximately 8m laterally. Similar to squat, the extent of interaction is proportional to the square of the ship's speed through the water. Travelling at 10 knots, as directed by the Poole Pilotage Plan, rather than 14-15 knots would have halved *Barfleur*'s interaction effect with *Bramble Bush Bay.*

High speed is beneficial in ensuring a ship remains responsive to the helm. However, the implications of squat, wash and interaction must also be considered and an appropriate compromise adopted.

Relevant guidance on the dangers of interaction can be found in the UK MCA's MGN 199 (M).

Passage planning and monitoring

Barfleur's passage plan was based on the Poole Pilotage Plan **(Figure 1)**. For transiting the harbour entrance, the Poole Pilotage Plan included an inbound course of 299º(T) and a speed limit of 10 knots. Details of the sectored light, the white sector of which corresponded to the 299º(T) course, were included on the enlarged chart inset, and 'Wash Danger' areas were marked to emphasise the importance of limiting speed through the water.

It is apparent that given the bridge team's familiarity with *Barfleur* entering Poole Harbour without incident at various states of tide, traffic and weather, their main focus was on preventing the ship grounding on Chapman's Peak. By setting a radar VRM at 0.09nm, the bridge team were able to ensure that, while on a heading of 299º(T), *Barfleur* passed no closer than 0.09nm to the Sandbanks peninsular and therefore safely cleared Chapman's Peak. However, as demonstrated on the day of the accident, a passing distance of more than 0.09nm generated little concern.

Barfleur's bridge team's familiarity with the track normally followed when entering Poole Harbour and the methods used to monitor the vessel's progress had led to an acceptance that the track and position monitoring methods were valid in all circumstances and conditions. With his focus on leaving Chapman's Peak clear to starboard, *Barfleur*'s master was encouraged to pass close to Buoy '10' when turning the ship onto a course of 299º(T) even though this placed the ship south of the fixed white leading light line. Then, with no means of readily identifying the point at which to safely initiate the turn to starboard into Brownsea Roads, his inclination was to alter course sooner rather than later to avoid the possibility of the ship overrunning the turn.

Navigational best practice, guidance for which is provided in the ICS Bridge Procedures Guide, would have been to turn *Barfleur* onto the fixed white leading light line as early as possible while still transiting Swash Channel. Then, by visually monitoring the sectored light and by using radar parallel indexing, *Barfleur*'s heading would have been adjusted as necessary to maintain a track that followed the leading light line until it was necessary to turn the ship to starboard into Brownsea Roads. Radar parallel indexing could have continued into Brownsea Roads to ensure that the starboard turn was conducted clear of all identified dangers, including Chapman's Peak.

The intention of *Barfleur*'s bridge team was to follow the Poole Pilotage Plan on every arrival and departure. However, in view of the variable nature of tide, traffic and weather, a key element missing from the ship's passage plan was information on the extent the ship could safely deviate from the intended track, given the prevailing conditions. For example, a 20m deviation to the south of the fixed white leading light might have been safe with a greater tidal height and at a slower ship's speed. However, at the time of the accident, the tidal height of 0.5m coupled with *Barfleur*'s speed of 14-15 knots through the water made such a deviation unsafe. A more detailed consideration prior to arrival at the approach channel of the constraints imposed by the prevailing tidal, traffic and weather conditions would have enabled the bridge team to determine what safety margins existed and to take account of them in the ship's passage plan.

Bridge teamwork

After briefing the master following his arrival on the bridge at shortly after 0550, the OOW had little further involvement in preparations for entering Poole Harbour. Contrary to the requirements of *Barfleur*'s SMS, the master did not inform the bridge team of his intended track, and relied on the experience of the OOW to alert him should the ship deviate from the normal track.

Without a full understanding of the master's intentions and no proper consideration of the extent to which the ship could safely deviate from the intended track, the OOW was restricted in the practical assistance he could provide the master.

As promoted in the ICS Bridge Procedures Guide, a bridge team that has been well briefed with a clear plan is better prepared to maintain good situational awareness, and to promptly address developing hazardous situations. While *Barfleur*'s master had received bridge resource management training, the OOW had not. Ideally, such training should be delivered to members of a particular bridge team on a single course. If this had been the case, the OOW might have been more effectively engaged during the inbound passage.

Speed limit

The Poole Pilotage Plan was a readily available resource to all mariners using Poole Harbour. Owing to the significant areas of shallow water in the harbour, a 10-knot speed limit was imposed, primarily to minimise wash. Although not specified in the Poole Pilotage Plan, the speed limit was intended to refer to speed through the water.

Due to the prevailing strong ebb tidal stream, *Barfleur*'s SOG of 10 knots when entering Poole Harbour on 16 July corresponded to a speed through the water of 14-15 knots. *Barfleur* was able to maintain adequate steerage at a speed of 10 knots through the water, as proven by numerous previous arrivals and departures at that speed. Therefore, *Barfleur*'s speed of 14-15 knots through the water was needlessly high, thereby causing unnecessary squat, wash and interaction.

The harbour authority's procedures required PHC to notify a ship entering the port of the tidal height when the tide gauge at North Haven was reading less than 1m. This was intended to alert masters to the increased potential for squat, wash and interaction when transiting the harbour and so promote closer attention to limiting the ship's speed. Despite PHC's report of 0.7m tidal height at North Haven on 16 July, *Barfleur*'s bridge team gave no consideration to reducing the ship's speed to satisfy the speed limit, indicating a misunderstanding of the purpose of the speed limit within the port. Clarification that the speed limit is intended to refer to speed through the water and not SOG would be beneficial to ensure harbour users are not left in any doubt about which limit applies.

Voyage Data Recorder (VDR)

Following the accident, *Barfleur*'s master instructed the OOW to press the 'save' button on the ship's voyage data recorder (VDR). Although the OOW engaged the 'save' button for 5 seconds as stipulated in the instructions posted in French next to the button, he did not follow the on-screen instructions, which were in English and required the 'save' button to be pressed again to confirm the saving operation. Consequently, no data covering the accident was saved on the VDR.

A VDR recording is an important asset when conducting a safety investigation following an accident. The VDR system must be fully functional at all times. An SMS needs to include unambiguous instructions in a language understood by the crew on how to check that the system is working correctly, how to save VDR data following an accident, and how to verify that such data has been saved.

CONCLUSIONS

- *Barfleur* passed closer than usual to *Bramble Bush* Bay, at a higher than normal speed, and in a lower than normal depth of water. These three elements combined to cause unnecessary squat, wash and interaction with *Bramble Bush Bay*.

- Interaction between *Barfleur* and *Bramble Bush Bay* resulted in the chain ferry moving laterally south-east, causing its chains to rise and, consequently, their depth to reduce.

- *Barfleur* was proceeding south of the recommended route and in excess of the harbour authority's speed limit, thereby reducing *Barfleur*'s underkeel clearance, and resulting in the ship contacting the 'out harbour' chain of *Bramble Bush Bay*.

- *Barfleur*'s bridge team's familiarity with the track normally followed and the methods used to monitor the vessel's progress led to an acceptance that the track and position monitoring methods were valid in all circumstances and conditions.

- *Barfleur*'s passage through the harbour entrance had not been planned or monitored in accordance with navigational best practice, guidance for which is provided in the ICS Bridge Procedures Guide.

- *Barfleur*'s passage plan did not contain information on the extent to which the ship could safely deviate from the planned track, given the prevailing conditions.

- Without a full understanding of the master's intended track and no proper consideration of the extent to which the ship could safely deviate from the intended track, the OOW was restricted in the practical assistance he could provide the master.

- The speed limit imposed by the harbour authority was not specified in the Poole Pilotage Plan as speed through the water.

- *Barfleur*'s bridge team did not consider reducing the vessel's speed in the prevailing circumstances and conditions. This indicates a misunderstanding of the purpose of the speed limit within the port. Appropriate guidance on the dangers of squat, wash and interaction is provided in the UK MCA's MGN 199 (M).

- A lack of clear instructions for the VDR in *Barfleur*'s SMS led to no data being saved following the accident.

ACTION TAKEN

Poole Harbour Commissioners has completed an investigation, as a result of which it has:

- Reiterated to its pilots and PEC holders the importance of following the Poole Pilotage Plan.
- As part of it routine review of the port's safety management system, undertaken to review and revise where necessary:
    - The Poole Pilotage Plan.
    - The navigation risk register.
    - The local notice to mariners on ship displacement and wash effects on small vessels.
- Recommended:
    - Greater frequency of chain ferry chain surveys.
    - Modelling to assess the variables affecting the chain catenary.
    - An investigation of methods to prevent transverse movement of the chain ferry while large ferries are passing.

RECOMMENDATIONS

Brittany Ferries is recommended to:

126/2015 Review and revise bridge procedures to ensure that for port entry:

- Bridge team members are fully aware of their respective roles.
- The passage plan includes port entry and aspects to be considered in differing tidal, traffic and weather conditions.
- A pre-arrival briefing is conducted covering the passage plan and the master's specific requirements.
- The bridge navigational equipment is used to full effect.

127/2015 Provide clear instructions to ensure VDR data is saved and verified following an accident or marine incident.

Poole Harbour Commissioners is recommended to:

128/2015 Specify that the speed limit contained in the Poole Pilotage Plan refers to speed through the water.

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

SHIP PARTICULARS

Vessel's name	*Barfleur*
Flag	France
Classification society	Bureau Veritas
IMO number/fishing numbers	9007130
Type	RoPax
Registered owner	Brittany Ferries BAI SA
Manager(s)	Brittany Ferries BAI SA
Construction	Steel
Length overall	157.65m
Length between perpendiculars	146.35m
Gross tonnage	20,133
Minimum safe manning	56 (with up to 900 passengers)
Authorised cargo	Vehicles and passengers

VOYAGE PARTICULARS

Port of departure	Cherbourg
Port of arrival	Poole
Type of voyage	International
Cargo information	Vehicles and passengers
Manning	59

MARINE CASUALTY INFORMATION

Date and time	16 July 2014 at 0626
Type of marine casualty or incident	Serious marine casualty
Location of incident	Poole Harbour
Place on board	Rudders, starboard propeller and skeg
Injuries/fatalities	None
Damage/environmental impact	Minor damage to both rudders, the starboard propeller and the skeg of *Barfleur*. Parting of the chain ferry's 'out harbour' chain and damage to the corresponding hydraulic drive motor on *Bramble Bush Bay*.
Ship operation	On passage
Voyage segment	Transit
External & internal environment	Wind: light breeze Visibility: good
Persons on board	59 crew, 138 passengers