



# Port information notice

**Number:** 04  
**Year:** 2018  
**To:** All port operators, owners, masters and agents of vessels  
**Issued:** 11 June 2018  
**In force:** 2007 - 04; 2010 - 04; 2013 - 02, 04, 06; 2015 - 01, 04, 05, 06; 2016 - 01,02,03.,04; 2017 - 01,02; 2018 - 01,02, 03,04

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## Passage Planning Support Document

Mariners are advised to give due consideration to the following information and recommendations for the passage planning process, when boarding a Haven (Harwich Haven Authority) pilot at the Sunk pilot station.

### Disclaimer/ useful links

These recommendations are not intended to supersede, substitute or interfere with-

1. Any precautions or actions which the pilot, master or bridge team may be required to take in accordance with the COLREGs (Convention on the International Regulations for Preventing Collisions at Sea, as amended), by the ordinary practice of seamen, or by the special circumstances of the case.
2. Harwich Haven Authority's statutory documents and publications such as Pilotage Directions, General Directions, Byelaws, etc. or the Information for Masters and PEC Holders (all of which can be accessed online at [hha.co.uk](http://hha.co.uk) in the [downloads](#) section).
3. Required passage planning process including appraisal, planning, execution and monitoring (also referring to all appropriate publications such as Charts, ALRS, ALL, etc.).

Mariners are referred to BA 8064 (Port Approach Guide- Harwich and Felixstowe) and ALRS Vol 6 (Harwich) as may be amended. Vessels bound for berths in Felixstowe can find additional information in the Shipmasters information guide also available on the [Port of Felixstowe website](#).

### Background

The Marine Accident Investigation Branch (MAIB) report into the grounding of an Ultra Large Container Ship (ULCS) in August 2016 contains a recommendation to "consider providing provisional pilotage plans to vessels and VTS prior to Pilot embarkation".

### Scope

With an increase in ultra large vessels arriving via the Sunk Pilot station, the Authority would like to provide additional information to assist masters and bridge teams in their passage planning process (appraisal, planning, execution and monitoring).

This document aims to help develop a better 'shared mental model' of the period under pilotage and reduce the chances of a 'single point of failure'.

Although constructed with a primary focus on Ultra Large Vessels (defined by the Authority as any vessel over 310m LOA), many elements apply to any vessel required to take a Haven pilot at the Sunk Pilot Station and Masters/ bridge teams are advised to take due consideration of factors mentioned herein that may be pertinent for their vessels.

## **Section I. Pre- pilot boarding**

1. VHF Channels-
  - (a) Monitor VHF 14 (Sunk VTS) whilst in the Sunk VTS area. The pilot boat will communicate with you on this channel for pilotage operations and even during the pilot transfer if required.
  - (b) Monitor VHF 09 (Sunk Pilots) until the pilot boat is approaching your vessel.
  - (c) Once your pilot is on board, monitor VHF 14 (Sunk VTS) and VHF 71 (Harwich VTS).
  
2. Positioning recommendations-
  - (a) Do not pass the Sunk Pilot diamond (located close west of the W1/ W2 buoys), until the Haven pilot is on the bridge of your vessel and in agreement.  
This is in order to allow sufficient sea room and time for:
    - The pilot to proceed from the boarding point to the bridge.
    - A comprehensive master pilot exchange.
    - The Pilot to be ready to take the Con (navigational conduct) of your vessel.
    - The Pilot to then adjust the vessel's course/ speed for passing other traffic, for port congestion and for berth availability.
    - Slow down, stop and drift, or take a 360° turn if required, for the above reasons.
    - Correct positioning of the vessel for successfully making the turn into the Harwich Deep Water (D.W.) Channel entrance at the South Shipwash buoys.
  - (b) Position your vessel in the appropriate turn order (if more than one vessel is to be served) maintaining sufficient sea room to allow for a safe manoeuvre in providing a lee.
  - (c) Be aware of the tidal rate and set, as well as the effect of the wind upon your vessel, especially when the vessel is at slow speed.
  - (d) Any lee courses (heading) and speeds requested by the pilot boat are recommendatory. You must first allow for any navigational hazards or other vessels and adjust your vessel's heading and speed for boarding the pilot only when you consider it safe to do so. It may be prudent to wait until the pilot boat is approaching your vessel before altering, as your vessel may end up out of position by altering too early.
  - (e) Plan on maintaining the lee course (heading and speed) until the pilot boat is clear of your vessel (otherwise the boat may become trapped alongside due to interaction).
  - (f) Communicate your intentions to the Pilot launch on VHF 14.
  
3. Tidal rates and sets-
  - (a) Typical spring tides can reach over 2.5 kts at their strongest and set in a NNE (ebb) or SSW (flood) direction in areas to seawards of the Platters buoy.
  
4. Speed-
  - (a) Requested boarding speeds are typically between 6- 8 kts over the ground.
  
5. Pilot boarding arrangements-
  - (a) Ensure your pilot boarding arrangements are in accordance with SOLAS regulations, IMO resolutions and the "Boarding Arrangements for Pilot" wheelhouse guidance poster.
  - (b) Keep a heaving line ready at the embarkation point, in case a pilot bag is required to be transferred.
  
6. Lights, shapes and Sound Signals-
  - (a) Display the correct lights and shapes and sound the correct signals as required by COLREGs (Convention on the International Regulations for Preventing Collisions at Sea, as amended), for a vessel in your circumstances (as well as for a vessel constrained by her draft, if applicable), at all times (including the periods for which a pilot is on board).
  
7. Bridge Manning levels-
  - (a) Bridge manning must be in accordance with your company and flag state procedures, in compliance with local legislation (See Harwich Haven Authority- General Directions for Navigation, links provided on page 1) and appropriate to the circumstances.

- (b) The bridge team in restricted waters and/ or during Pilotage (in normal conditions of weather and visibility) would normally be expected to comprise the Master and/ or officer of the watch, a lookout and a helmsman.

## **Section II. After boarding pilot, MPX**

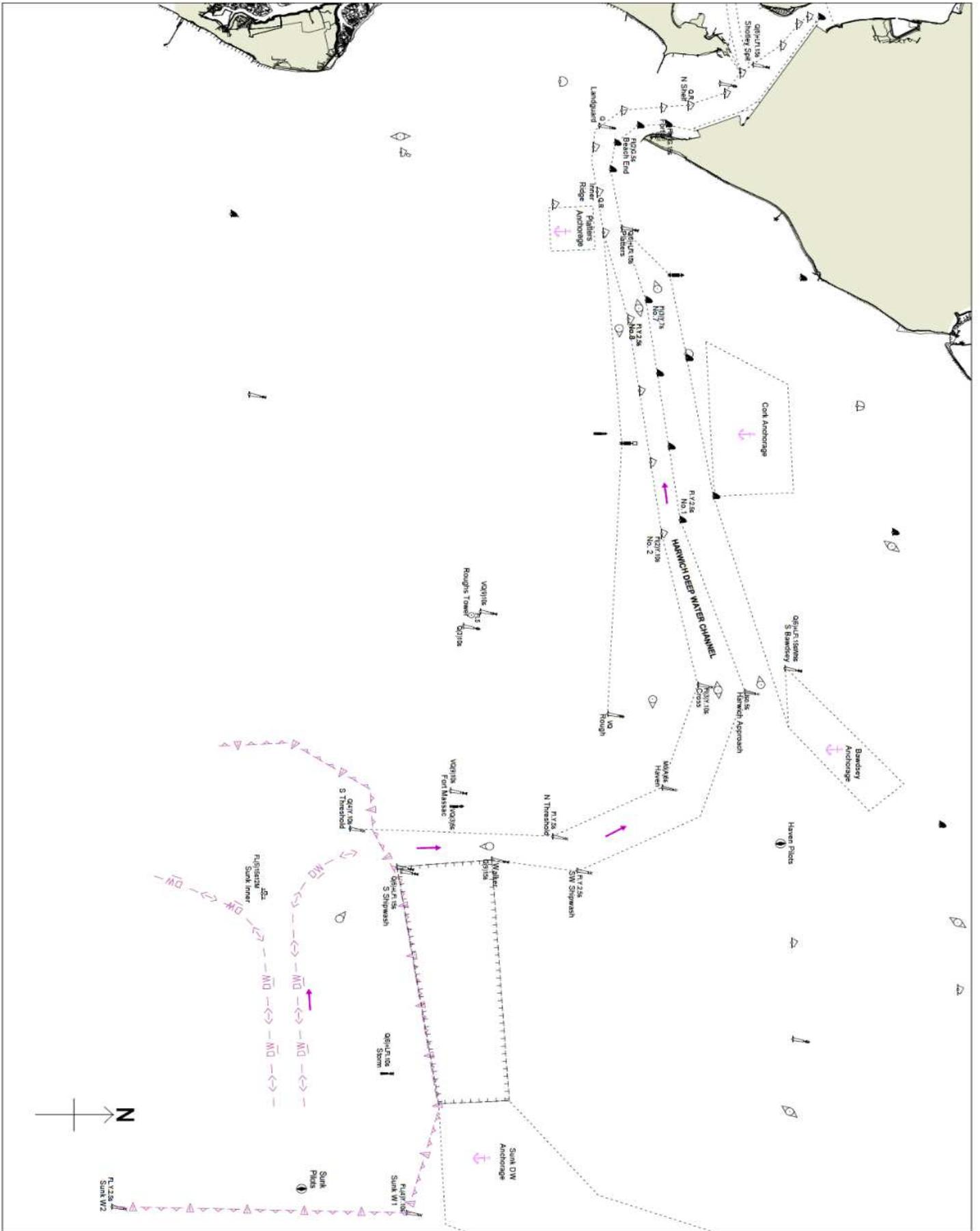
1. MPX-
  - (a) Along with setting up navigational equipment and situational awareness tools, the pilot will commence a detailed master- pilot information exchange (MPX) to ensure a shared mental model of the circumstances and conditions surrounding the intended act of pilotage.
2. PPU as visual representation of MPX-
  - (a) The pilot may use the Portable Pilot Unit (PPU) screen and/ or the ship's Charts/ ECDIS as a visual representation of the MPX; for emphasising points considered appropriate.
  - (b) For more information about the pilot's PPU, see Section III. Bullet points 11 (a) and (b).
3. PLT04 form-
  - (a) The pilot will bring and complete a "Master pilot exchange for Port Pilotage Plan" (PLT04 form) as part of the MPX process. Please ensure you have read, understood and contributed to this form, before signing the declaration at the bottom.
4. Pilot Card-
  - (a) The pilot will check your vessel's Pilot Card.
  - (b) Please ensure your Pilot Card is up to date and contains relevant information that will help the pilot to understand your vessel.
5. Other information and any defects-
  - (a) Offer the pilot any other information that may be pertinent to the safe passage and manoeuvring of your vessel. This includes machinery and equipment defects or differences in equipment design/ operation. If in any doubt, it is better to share information, rather than withhold it.
  - (b) Please do not hesitate to request any additional information you may want.

## **Section III. Once the pilot has the conduct of navigation**

1. VHF channels-
  - (a) The pilot will report to Sunk VTS and usually monitor VHF 14 until the Walker buoy.
  - (b) VHF 09 is no longer required.
  - (c) The pilot will report to Harwich VTS on VHF 71 to confirm vessel maximum draft and defects, confirm berthing details and clearance, obtain meteorological data, confirm tug requirements and check for any expected traffic.
  - (d) Upon leaving the Sunk VTS area, the pilot will work on VHF 71 with Harwich VTS and may also monitor harbour tug frequencies (VHF 12/ 10) if other vessels in the harbour are manoeuvring using tugs.
  - (e) Approaching the 7/ 8 buoys, the pilot will be discussing towage arrangements with the tugs on the selected tug-working channel (VHF 12/ 10) and communications with the tugs and quayside will continue on that nominated channel thereafter. Berthing arrangements including clearances to adjacent ships may be discussed (if this information is not already known) with the Felixstowe Dock Tower on VHF 74.
2. Positioning and routing considerations-
  - (a) The pilot will usually follow the deep- water track (as shown on your charts) from the pilot boarding diamond to the South Shipwash buoys.
  - (b) The pilot will usually maintain a centre- line transit along the D. W. Channel all the way into the Harbour (other than when otherwise required such as for passing other vessels).

- (c) Passing other vessels is usually done in parallel sections of the D. W. Channel, East of the Platters buoy (unless over 395m LOA; in which case East of 5/ 6 buoys).
3. Speeds-
- (a) In consultation with the bridge team and dependent upon the prevailing circumstances and conditions (including UKC), the pilot will agree target speeds for various sections of the transit.
  - (b) The speed limit between 1/ 2 buoys and the Platters buoy is 17 kts over the ground.
  - (c) The vessel's speed will be reduced such that the first tug (usually the aft tug to be made fast on the centreline of your vessel) will be made fast at usually no more than 10 knots through the water.
  - (d) The speed for transiting the Beach End is usually between 6 and 8 knots through the water, to ensure optimum speed for escort towage, with minimum lateral drift from the centre line.
  - (e) The target speed for exiting the Beach End turn inwards is 6 knots (or below), in order to make the forward tug fast (especially if being made fast bow- to- bow).
  - (f) Thereafter, speed is progressively reduced for manoeuvring.
4. UKC considerations-
- (a) We make an allowance of 10% of the vessel's current maximum static draft, to maintain adequate UKC.
5. Radius of turn and course changes (approximate)-
- (a) South Shipwash turn = 0.85' radius with 90° alteration.
  - (b) North Threshold turn = 0.80' radius with 35° alteration.
  - (c) Haven Buoy turn = 0.80' radius with 45° alteration.
  - (d) H.A. Buoy turn = 0.80' radius with 35° alteration.
  - (e) Beach End turn = 0.5' radius with 100° alteration.
6. Mooring considerations-
- (a) It is important the vessel lands parallel alongside and with minimum velocity, to avoid any damage to the vessel, quayside fenders, the quay face, or gantry cranes (lateral speed below 0.2 Kts).
  - (b) Due to the large forces (wind/ tidal current) acting upon the vessel it may be challenging to arrest fore/ aft motion until enough lines are fast. It is important to adhere to the agreed order for making fast mooring lines.
  - (c) FT6 / 7 and F8 / 9 berths' fenders have Teflon faces and are designed to allow the vessel's hull to slide. Thus, they do not offer much friction for reducing the V/L's fore and aft movement when alongside.
7. Towage considerations-
- (a) See attached guidance for "Making tugs fast at Felixstowe". This guidance is of particular importance when making fast the forward tug "bow to bow".
  - (b) Ultra large vessels LOA  $\geq$  355m and  $\leq$  395m LOA are required to use a minimum of two 60t BP tugs for arrival/ departure (may be reduced to 1 with master/ pilot agreement). One (min 60 t) tug must be made fast aft using the centre lead on the vessel, prior to the Rolling Ground buoy (if inbound) or retained fast aft (if departing). If intending to use powered indirect towage a 2<sup>nd</sup> tug must also be available aft for the Beach End transit.
  - (c) Ultra large vessels greater than 395m LOA are required to use a minimum of two 60t BP tugs for arrival/ departure. One escort tug must be made fast aft, using the centre lead on the vessel, prior to the Rolling Ground buoy (if inbound) or retained fast aft (if departing). A 2<sup>nd</sup> tug must also be available aft for the Beach End transit inward and outward bound.
  - (d) The number of tugs required and method of deployment will be based upon the occasion (characteristics of the vessel, UKC, Berth, Manoeuvre, tidal current, wind, etc.).
  - (e) All decisions regarding tug recommendations are made in the interest of safety of life, the environment, property and protection of infrastructure.

8. Visibility Considerations-
  - (a) If the visibility falls below 0.5 NM in any part of the Harwich Haven Authority's area, restricted visibility regulations will be put in force (See Information for Masters and PEC Holders on [hha.co.uk](http://hha.co.uk) under [downloads](#))
  - (b) If the visibility falls below 0.5 miles, restrictions may apply to tugs working your vessel (dependent on tug SOPs).
  - (c) If the visibility falls below 0.2 miles, tugs may not work your vessel. However if your vessel is already committed, they will attend provided your vessel goes straight alongside without swinging (dependent on tug SOPs).
  
9. Wind limiting criteria-
  - (a) For vessels over 365m LOA, steady mean wind speeds not to exceed 30 knots, gusts not to exceed 35 kts prior to commencement of the vessel transit or berthing/ unberthing process.
  - (b) Beam wind load predictions are calculated by multiplying the length of the vessel by the height from the top of the highest tier of containers loaded on the vessel to the water level. This resultant 'block stow height' is used to also take some account of wind force exerted on the fore and aft faces of containers due to any empty bays.  
Thereafter a formulae or tables are used to find the corresponding beam wind load force.
  - (c) Sample Beam wind load prediction tables are attached.
  
10. Shared mental model, Single point of failure, seeking clarification-
  - (a) The term shared mental model refers to a (desired) scenario where all the team members including bridge team and others, as mentioned in (b) below, have a shared understanding of the tasks to be performed, the elements affecting these, the methods to be used and also the input required by each team member to accomplish these tasks.
  - (b) The pilot relies on timely input and exchange of information from multiple sources including the bridge team, vessel's crew at stations, the tugs, the quay side supervisor and VTS.
  - (c) The term single point of failure is the recognition of a situation where a single failure would probably result in a failure of the objective (for example tow line failure whilst transiting the Beach End in case escort towage was required to achieve sufficient rate of turn).
  - (d) The master and bridge team should support the pilot and work together as a team to mitigate against a single point of failure (for example- pilot error) by maintaining a high level of situational awareness, cross checking the actions taken by all and the consequences thereof.
  - (e) Throughout the act of pilotage, the shared mental model will need to be kept updated in real time, by sharing amongst the bridge team and others (Tugs, VTS, vessel's crew, quay side supervisor, etc.) as required.
  - (f) There should be no hesitation in seeking clarifications at any point and any questions or doubts should be addressed positively, in order to retain the shared mental model and protect against a single point of failure.
  
11. Situational awareness tools, PPU-
  - (a) In addition to 10 (a) above, the pilot will use all available means to maintain situational awareness including visuals, vessel's radar, vessel's ECDIS and usually (on Ultra Large Vessels) the pilot's Portable Pilot Unit (PPU).
  - (b) The PPU is employed as an additional risk mitigation strategy, as a tertiary source of situational awareness. The pilot will use this only as an additional layer and part of a scanning of all means of situational awareness including visuals, Radar and ECDIS.
  - (c) The PPU's small form factor, quick set up time and ease of use have been designed to cause minimum distraction for the pilot and reduce the likelihood of any detracting of the pilot from the bridge team environment.



For illustration only

# Sample



## Master pilot exchange for Port Pilotage Plan

### Pilotage details

Vessel's name	_____	Date / time	_____	(POB)
Pilot from / to	_____	Berth depth	_____	(Charted/Declared)
V/L characteristics	_____	V/L defects	_____	
At berth -	Port side alongside <input type="checkbox"/>	Starboard side alongside <input type="checkbox"/>	Pilot card sighted <input type="checkbox"/>	Displacement considered <input type="checkbox"/>
	Passage plan checked <input type="checkbox"/>	Abort points discussed <input type="checkbox"/>	Routing agreed* <input type="checkbox"/>	VTS informed <input type="checkbox"/>

### Tidal data

HW time	_____	LW time	_____
HW height	_____	LW height	_____

### Calculations for U.K.C / wind loading / S.W.Ls and tugs required

Location / charted depth	_____	V/L LOA (m)	_____
Height of tide / time	_____	Lateral windage area	_____
Min. available depth	_____	Wind speed / direction	_____
V/L maximum draft	_____	Beam wind loading	_____
Static U.K.C	_____	Thrusters / power	_____
10% allowance / other	_____	V/L bits / leads S.W.L.	_____
Difference + or -	_____	Tugs required	_____

### Illustration of position of berth, spacing, tug deployment and direction of wind / current

### VHF Channels in use



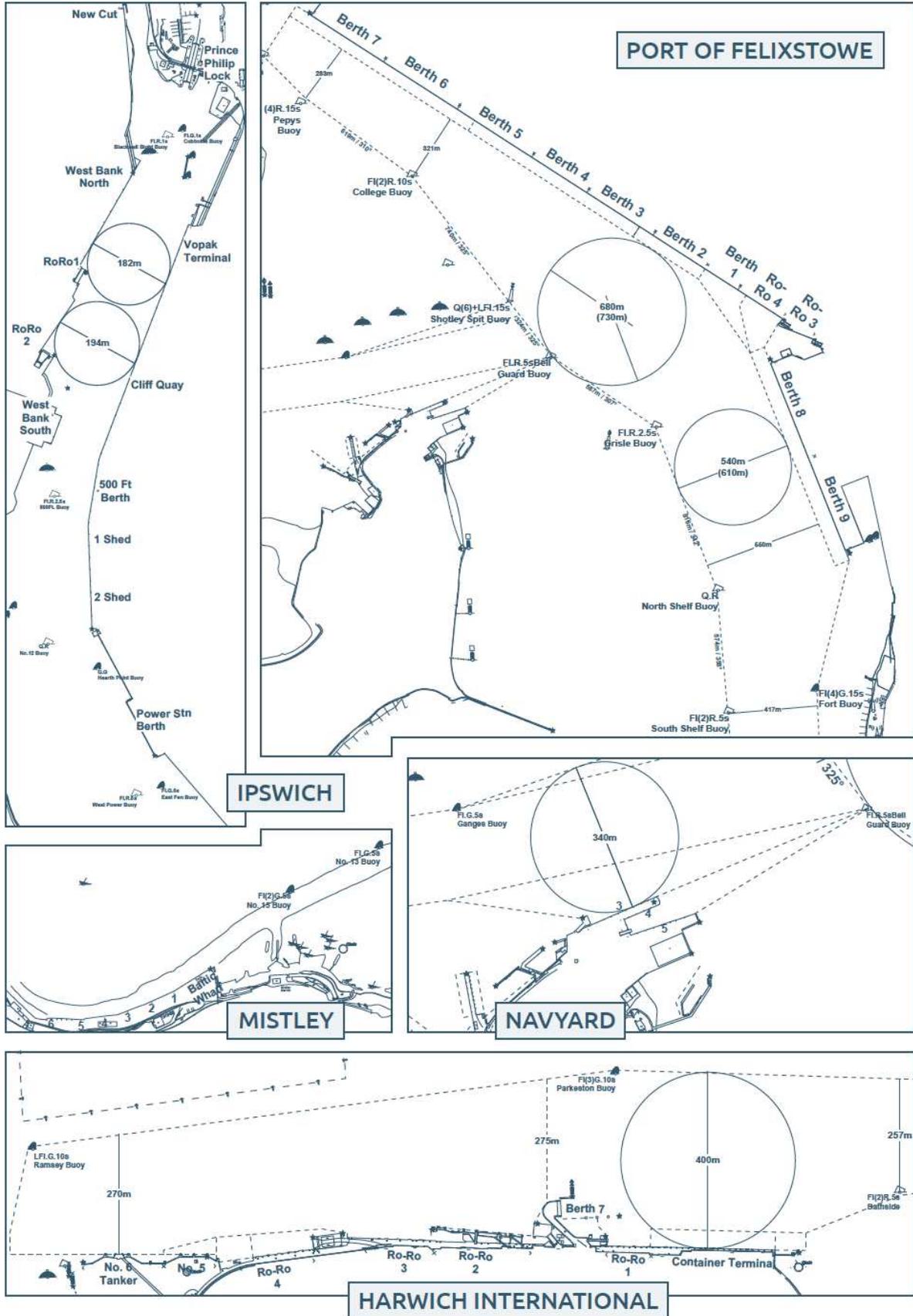
Harwich VTS VHF 71	<input type="checkbox"/>
Sunk VTS VHF 14	<input type="checkbox"/>
Ipswich ONS VHF 68	<input type="checkbox"/>
Felixstowe VHF 74	<input type="checkbox"/>
Parkeston VHF 13	<input type="checkbox"/>
Tugs VHF 12	<input type="checkbox"/>
Tugs VHF 10	<input type="checkbox"/>
Other - VHF	<input type="text"/>

### \* Master / Pilot additional remarks (including routing details, berth exchange information and any tidal window)

### Declaration

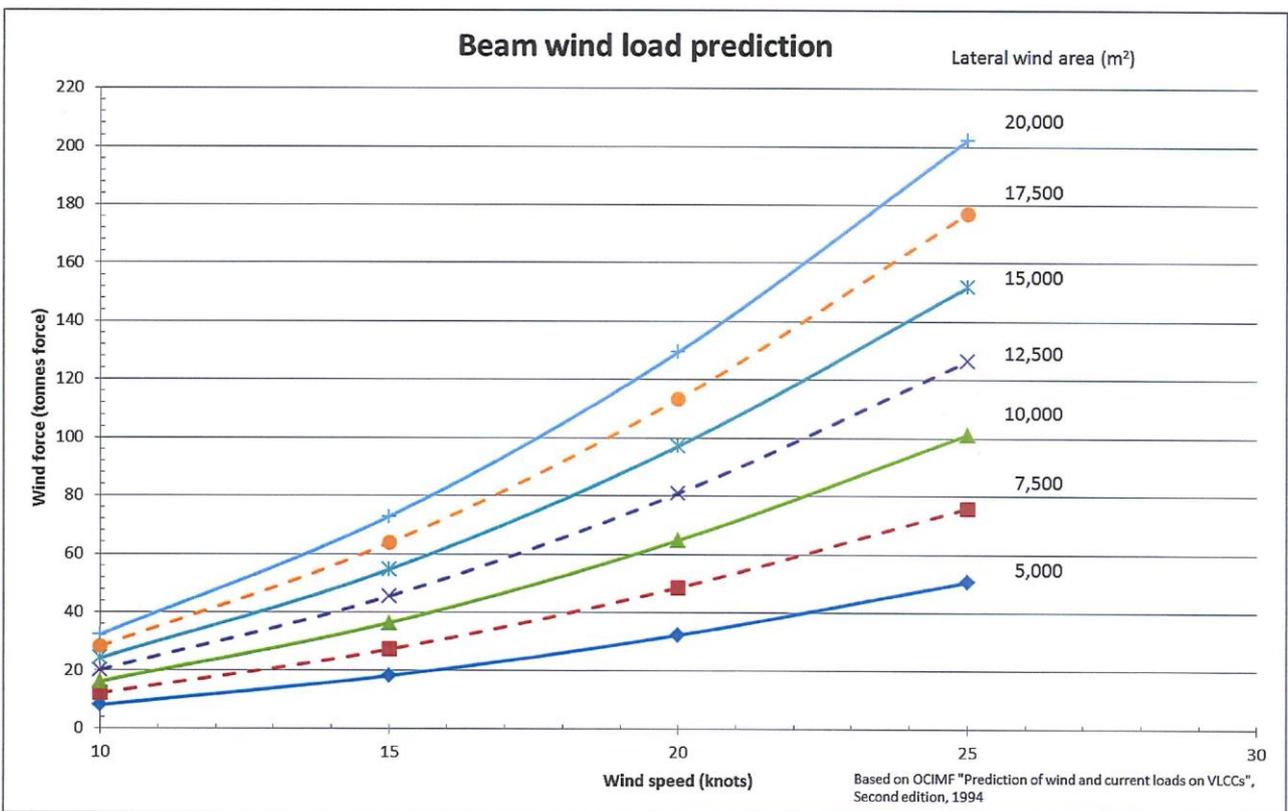
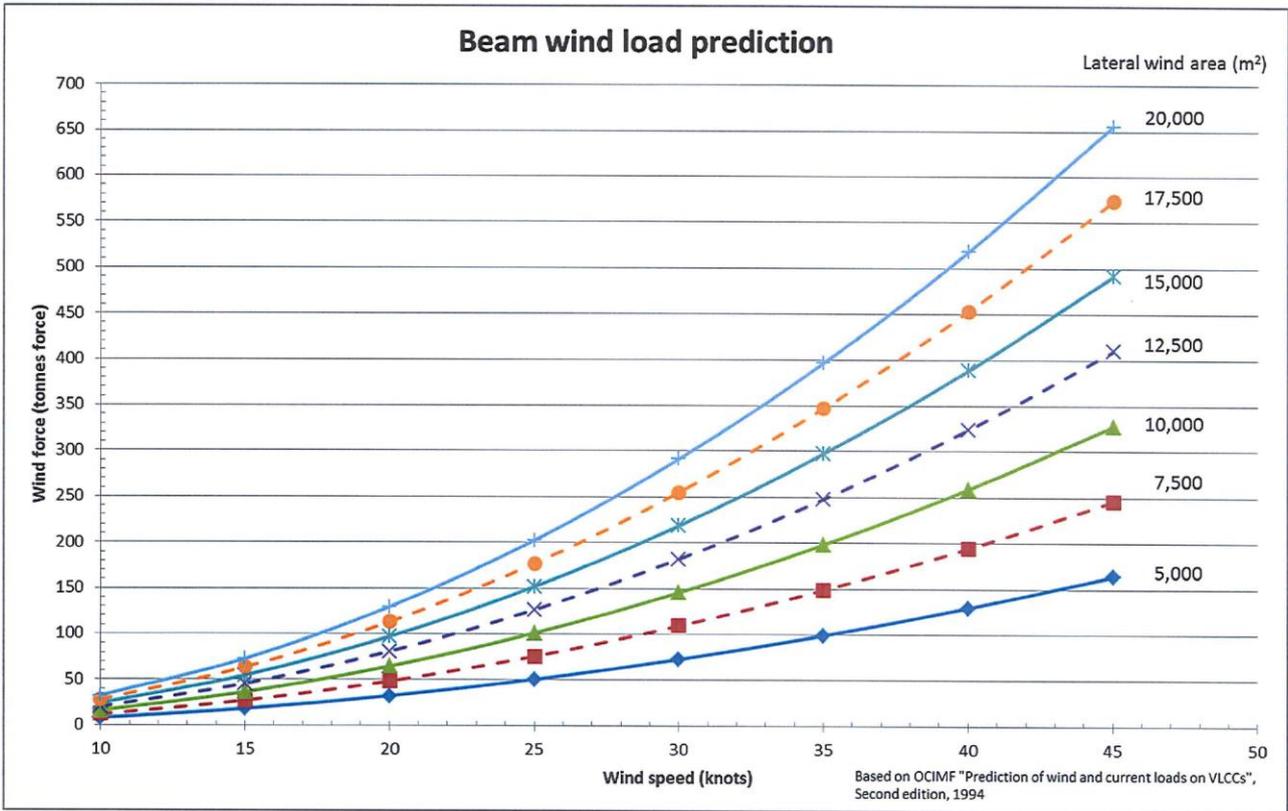
The intended passage and relevant information has been discussed between the Master and Pilot. This could change during the passage. If in doubt, the Master and bridge team are encouraged to seek further clarification at any time. **Harwich Haven Authority requests that your bridge is kept smoke free for the Pilot.**

Pilot name	_____	Master name	_____
Signature	_____	Signature	_____



For illustration only

# Sample



# Making Tugs Fast at Felixstowe



Harwich Haven Authority



**NO!**

NO SHIP MESSENGER LINE! ONLY HEAVING LINE FROM SHIP!

(...TUG BOAT WILL SUPPLY MESSENGER)



SHIP'S HEAVING LINE- MUST BE WITH SANDBAG OR MONKEY FIST KNOT ONLY!



**NO!**

MUST HAVE WEIGHT! ...BUT NOT DANGEROUS OBJECTS!



**NO!**



USE PANAMA LEAD ONLY!



ONLY PUT EYE OF TUG LINE ON BITT!

**...THANK YOU!**

Captain M Dunn  
Harbour Master & Marine Manager