

ABP Humber Estuary Services: Marine Risk Assessment



Humber Estuary Services : Marine Risk Assessment

Assessment No: 1058 Designation: River Transit Date: 25/01/2006
 Port: Lower Humber Ship Type: General Cargo
 Location: All Hazard Description :
 Hazard Category: Collision With Another Ve **POLLUTION FROM BUNKERS**
 INJURY TO PERSONS
 DAMAGE TO VESSEL

Events Which May Create Hazard:

- E1 VESSEL ENGINE CONTROL SYSTEMS MALFUNCTION)
- E2 IMPROPER SHIP HANDLING IN PREVAILING CONDITIONS
- E4 INCORRECT TOWING MANOEUVRES
- E6 PILOT ERROR *C4 C11 C17*
- E9 TUG ENGINE FAILURE
- E10 TUG TOWING WIRE PARTS
- E21 INCORRECT PROCEDURES ONBOARD VESSELS
- E29 FAILURE OF KEY COMPONENT
- E31 HUMAN ERROR
- E32 POWER FAILURE
- E37 PILOT NOT COMPETENT FOR WORK
- E53 COMPETENT PERSON FROM VESSEL NOT ON BRIDGE

Existing Control Measures:

- C3 TRAINING OF SHIP'S MASTER/CREW
- C4 TRAINING OF PILOTS
- C6 TRAINING OF TUG CREWS
- C11 OPERATIONAL AIDS TO NAVIGATION
- C12 PASSAGE PLANNING
- C15 CORRECT USE OF TUGS
- C33 AVAILABILITY OF POLLUTION RESPONSE EQUIP.
- C36 PORT EMERGENCY PLAN
- C37 PORT OIL SPILL CONTINGENCY PLAN
- C38 HUMBER CLEAN OIL SPILL CONTINGENCY PLAN
- C39 HUMBER EMERGENCY PLAN
- C46 PROVISION OF TRAINED PILOTS
- C47 CONTROL OF P.E.C.s

Likely Frequency of Hazard Occurrence 2

Port Operation Impact: 2 Environment Impact: 3 People Impact: 2
 Port Risk Rating: 4 Environment Risk Rating: 6 People Risk Rating: 4

Recommendation/Notes

Completion Date: 25/01/2006 By: Marine Pilot AND
 Date of Last Review: 30/01/2006 Reviewed By: Review Period: Annually

Risk Scale

Risk Matrix

Frequent	5	5	10	15	20	25
Reasonably Possible	4	4	8	12	16	20
Remote but Possible	3	3	6	9	12	15
Very Unlikely	2	2	4	6	8	10
Extremely Unlikely	1	1	2	3	4	5
Frequency		1	2	3	4	5
Consequence		None	Minor	Slight	Serious	Major

Risk Scale Definitions

Risk Value	Assessment Conclusion
20 and above	Unacceptable region: Unacceptable risk requiring immediate action or cessation of operations
14 - 19	Upper ALARP region: Significant risk, requiring evaluation. Action should be taken unless impractical or costs of measures to reduce risk are grossly disproportionate
6 - 13	Lower ALARP region: Risk above acceptable level requiring evaluation. Action required unless costs exceed improvement from risk reduction measures
1 - 5	Acceptable region: Risks broadly acceptable, provided they are kept under review

Hazard Frequency

Level	Description	Indicative Frequency
1	Extremely unlikely	1 or more times in 50 years
2	Very likely	1 or more times in 25 years
3	Remote but possible	1 or more times in 10 years
4	Reasonably probable	1 or more times in 5 years
5	Frequent	1 or more times in per year

Hazard Impact

Level	Port	Environment	People
1	< £2000 (None)	None	None
2	Negligible (Minor) (>£2000)	Negligible (Minor) (>£2000)	Minor (single slight injury)
3	Minor (Slight) Bad local publicity or short-term loss of dues, revenue etc (>£20,000)	Minor (Slight) Tier 1 (Small operation) oil spill or environmental amenity impaired	Slight Multiple minor or single major injury
4	Moderate (Serious) Bad widespread publicity, temporary port closure or prolonged restriction of navigation. (>£200,000)	Moderate (Serious) Tier 2 (regional assistance) oil spill, localised flooding or multiple amenities impaired.	Serious) (Multiple major injuries or single fatality)
5	Major Port closes, navigation seriously disrupted for more than 1-2 days, Long term loss of trade (>£2,000,000)	Major Tier 3 (national assistance) oil spill, widespread flooding or extensive damage to amenities.	Major (More than one fatality)

ABP General Notice to Pilots
No. 06/2003 - Bridge Procedures



GENERAL NOTICE TO PILOTS

NO. 06/2003

Gentlemen

BRIDGE PROCEDURES

During a recent incident an outbound vessel made contact with a buoy and shortly after grounded in the vicinity of the No. 31 Buoy.

At the time of the incident there was only the Master and Pilot on the Bridge. The vessel was navigating in restricted visibility.

A contributing factor to the incident was that the Pilot had the helm and was therefore unable to devote his attention to the radar and indeed take an overview of the situation.

In such circumstances it is incumbent on the Pilot to ensure that the Master provides a helmsman and that the pilot himself is free to monitor the radar and overall conduct of the vessel's navigation.

The ICS Bridge Procedures Guide 3.4.2 states, "in areas of high traffic density, in conditions of restricted visibility and in all other potentially hazardous situations, the helmsman should be available on the bridge, ready at all times to take over steering control immediately."

Modern vessels, in particular those designed for river transits, which have River Radar and rate of turn indicators at the helm seat, can be steered by the Pilot as he gets an overview from this position.

DEPUTY PILOTAGE OPERATIONS MANAGER

17 January 2003

Notice to Coxswains - Standard Marine Vocabulary

NOTICE TO ALL **COXSWAINS**

STANDARD MARINE VOCABULARY

During the current MAIB enquiry into the collision between 'Audacity' and 'Leonis' on 14 April 2007 a number of issues concerning our operational procedures have been highlighted.

One such issue involves the terminology used by pilot launch coxswains when pulling clear of a vessel having embarked/disembarked a pilot.

The phrase transmitted to the master is often along the lines of "*clear of you now, back on course*" which is a colloquialism we understand to mean that the master can resume manoeuvring of his vessel without let or hindrance because the launch is clear of him.

However, as MAIB have pointed out, the master is likely to interpret the "*back on course*" literally as an instruction to resume a certain heading and this then borders on remote pilotage.

To avoid confusion the coxswain should simply relay the message that the pilot launch is now clear of the vessel.

In general communication please make every effort to use standard marine vocabulary so that ships' masters (whose first language may not be English) are left in no doubt as to what is meant.

HARBOUR MASTER, HUMBER

22 June 2007

www.humber.com

Notice to Humber Harbour Staff -
Collision Between *Audacity* and *Leonis*

STAFF NOTICE

AHMs AND VTSOs

COLLISION BETWEEN *AUDACITY* AND *LEONIS*

14 APRIL 2007

The collision between these vessels in restricted visibility in the precautionary area South East of Alpha Buoy has been the subject of an internal investigation as well as an on-going MAIB (full) investigation.

From our internal investigation I have identified a number of actions, one of which applies to you as members of the VTS team.

In this incident a call from VTS Humber to the Audacity to specifically draw attention to the position of Leonis may have helped in focusing the bridge team of Audacity on the developing situation.

A pro-active approach of this sort is appropriate if complex situations are developing and such approach does not conflict with the defined role of VTS Humber as a traffic organisation service.

Notwithstanding the above advice, responsibility for the safe conduct of the vessel and compliance with the Colregs remains the duty of the master, assisted by pilot and bridge team.

HARBOUR MASTER, HUMBER

24 May 2007

IALA Recommendation V-127
On Operational Procedures for Vessel Traffic Services

IALA Recommendation V-127
On
Operational Procedures for Vessel
Traffic Services

Edition 1

June 2004



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IALA Recommendation on Operational Procedures for Vessel Traffic Services June 2004

THE COUNCIL

NOTING the function of the Association with respect to safety of marine navigation, the efficiency of maritime traffic and the protection of the marine environment;

NOTING ALSO the VTS Operating Procedures set out in paragraph 2.5.3 of Annex 1 of the International Maritime Organization Resolution A.857(20) on “Guidelines for Vessel Traffic Services” (VTS);

NOTING FURTHER the VTS Operational Rules and Procedures described in the IALA VTS Manual;

HAVING CONSIDERED the proposals made by the VTS Committee;

ADOPTS the Operational Procedures for Vessel Traffic Services set out in the annex to this recommendation; and

RECOMMENDS that VTS Authorities take into consideration the Annex to this Recommendation when developing Operational Procedures.

Annex

Operational Procedures for Vessel Traffic Services

1 INTRODUCTION

The purpose of vessel traffic services (VTS) is to improve the safety and efficiency of navigation, and protect the marine environment and/or the adjacent shore area, work sites and offshore installations from possible adverse effects of maritime traffic¹. VTS may also have a role to play in maritime security.

VTS authorities are responsible for ensuring that the objectives of a VTS are met. This includes ensuring that the standards set by the competent authority for levels of service and operator qualifications are adhered to. Levels of delegated authority applying to VTS staff should be clearly identified in the documented internal operational procedures of a VTS. Such procedures should be an integral part of a verifiable safety management system for the VTS. A properly implemented quality control programme approved by the competent authority can ensure that the standards set for the type and level of service are consistently maintained, and that the service is delivered safely and effectively.

This Recommendation has been prepared as to assist VTS authorities in identifying key aspects that should be considered when developing operational procedures for a VTS Centre. The list is neither mandatory nor exhaustive and should be adapted to suit individual needs. In preparing this Recommendation it is recognised that:

- The nature of the tasks and activities to be performed will depend on the capability of the VTS, the VTS area and the type and level of services to be provided. In general, these tasks and activities all involve collecting, processing, evaluating and disseminating information. The collection and dissemination of this information will involve both internal and external communications, while information will be processed within the VTS Centre itself. The level of decision-making that can be taken within the VTS centre should be clearly identified.
- The objectives of the VTS can only be met through co-operation and trust among users of the service, VTS personnel and allied services. This can only be achieved through the reliability of the VTS information, which is dependent on the assured availability, continuity and quality of the service provided to all stakeholders.

A clear distinction is made in this document between internal and external procedures².

Internal Procedures – *procedures that cover the day-to-day running of a VTS centre or sub-centre, including the operation of systems and sensors, interactions among the staff and the internal management of data.*

¹ IALA VTS Manual, 2002, pp 11

² IMO Resolution A.857(20), Guidelines for Vessel Traffic Services, Annex 1, 2.5.3

External Procedures – *procedures that govern the interaction with participating vessels and allied services (defined as services actively involved in the safe and efficient passage of the vessel through the VTS area).*

A further distinction is made between routine procedures and those related to incidents such as search and rescue and environmental protection.

Clearly defined operating procedures, particularly those relating to external communications, will assist the user in understanding information or instructions given by the VTS.

Finally, it is recommended that all operational procedures be documented in handbooks or manuals, both printed and electronic. These standard operating procedures should be an integral part of regular training exercises, and adherence to procedures should be monitored.

2 Internal VTS Procedures

VTS authorities should develop and document procedures for all operations, both routine and emergency, internal to the VTS. The following are examples of the type of operational activities for which procedures should be developed. The list is neither mandatory nor exhaustive.

2.1 Routine Procedures

2.1.1 Gathering and Recording of information

The period of time for which information gathered by a VTS is required to be stored should be identified in internal procedures. This time period should be such that it allows for the full retrieval of data post-incident/accident, in compliance with national requirements and those of the incident/accident investigation procedures of the VTS authority and other interested parties. This type of information may include:

- Communications (internal and/or external);
- Sensor data (i.e. data used to generate the traffic image such as radar, CCTV, AIS);
- Shipping information data (e.g. vessel and cargo data, including vessel movement information);
- Meteorological and hydrological data; and
- Data from other sources.

Provision should be made for the storage, security, retrieval and presentation of this information.

2.1.2 Operational staff

The number of operators at any time should be based upon safe and efficient operations in the VTS area to meet the operational needs and should be reflected in the human resource planning, including staff rotation and rest period arrangements within any given shift or watch.

2.1.3 Equipment operation, maintenance, calibration and updating

All manuals and handbooks for equipment operation, maintenance (preventative and remedial), calibration and updating should be properly maintained and be readily available to the appropriate personnel.

Key considerations include:

IALA Recommendation V-127 – Operational Procedures for VTS
Edition 1.0 - June 2004

- Operation of equipment, to cover all normal and emergency procedures;
- Determination of acceptable availability criteria for equipment;
- Categorization and prioritization of maintenance and defects;
- Calibration of all sensors within specified tolerance level; and
- Updating of equipment (hardware and software) and their associated manuals/handbooks.

2.1.4 *Interaction with allied services*

This should include the *internal* component of the interaction with, for example:

- Pilots
- Tug operators;
- Shipping agents;
- Government agencies, including law enforcement agencies; and
- Commercial organisations.

2.1.5 *Public Relations*

There should be a documented policy for dealing with the media and public. Issues for consideration may include:

- Nominated lead agency for public relations; and
- Protection of sensitive information.

2.1.6 *Security*

Procedures should be in line with local and national requirements and should be clearly documented. They should, as a minimum, ensure the security:

- Data transmission and storage;
- VTS personnel; and
- VTS buildings and structures,

Procedures should reflect any involvement of the VTS with the PFSP (Port Facility Security Plan) as per the International Ship and Port facility Security Code (ISPS).

2.1.7 *Training*

There should be arrangements for regular assessments and application of appropriate measures for compliance in accordance with IALA Recommendation V-103.

2.1.8 *Watch handover*

Watch handover arrangements should be formalised and should include, as an example, information on:

- *Present traffic situation;*
- *Expected / developing traffic situations;*
- *Incidents and special operations (e.g. SAR or military operations);*
- *Environmental conditions;*
- *Equipment performance / availability;*
- *Status of allied services;*

- *Personnel availability;*
- *Appropriate times for watch handover; and*
- *Method for documenting the handover*

Further guidance on the principles for watch handover can be sought from the IMO International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1975, as amended in 1995 and 1997 (STCS Convention) Section A-VIII/2 part3-1.

2.1.9 *Vessel handover*

The arrangements for vessel handover between adjacent sectors should be clearly laid down. Components may include:

- Mutual understanding of the handover procedures;
- Identification of information to be communicated between operators (e.g. communication channel, vessel identification, etc)
- Method for documenting the handover

2.1.10 *Maintenance of marine publications*

A VTS authority should ensure that arrangements are in place for maintaining, updating and disseminating nautical and associated publications (paper and electronic).

2.2 **Emergency Procedures**

A VTS authority should have documented contingency plans to ensure the safety of VTS personnel and for the continuity of operations in the event of an emergency. The authority should have plans to address events such:

- System Failure:
 - *Loss of external communications,*
 - *Loss of internal communications,*
 - *Loss of functionality of sensor equipment,*
 - *Loss of port information management system.*
- Internal emergencies, for example fire and flood;
- Forced evacuation of VTS centre;
- Personnel medical emergencies; and
- Security incidents.

The following may be included in these plans:

- *Remedial action*
- *Callout procedures*
- *Fall-back options*
- *Recording*
- *Post-emergency evaluation*

3 **External VTS Procedures**

VTS authorities should develop procedures governing routine operations external to the VTS, covering interactions between the VTS, participating vessels and allied services. External

information exchange should be standardised as much as possible, using IMO Standard Marine Communication Phrases (SMCP) (reference Resolution A.918(22)).

The following topics may be considered for inclusion. The list is neither mandatory nor exhaustive and should be adapted to suit local needs.

3.1 Routine Procedures

3.1.1 Pre-Arrival Information

Pre-arrival information is basic information regarding the vessel and its intent to enter the VTS area. The VTS authority should specify the format and timing of pre-arrival information. Aspects for consideration may include:

- Content of Pre-arrival:
 - *Route plan,*
 - *ETA,*
 - *IMO number,*
 - *Vessel draught,*
 - *Hazardous, dangerous or polluting cargo details,*
 - *ISPS security level,*
 - *Information about any vessel defects or deficiencies, or*
 - *Other specified details;*
- Communication requirements for participating vessels;
- Processes to ensure advanced information has been obtained;
- Procedures for non-compliance; and
- Procedures for information exchange with allied services

3.1.2 Vessels Entering VTS Area

When a vessel enters the VTS Area procedures for the following actions should be considered:

- Procedures for establishing communications and verifying vessel identity and position;
- Requirements for initial information exchange, which may include:
 - *Confirm reporting requirements*
 - *Provide relevant traffic information*
 - *Provide navigational / fairway information*
 - *Establish compliance with IMO requirements (charts and publications, passage plan, mechanical defects, personnel shortfalls)*
- Procedures for updating information with allied services.

3.1.3 Vessels Transiting VTS Area

Procedures should be established for vessels transiting a VTS area. These may include:

Mandatory Participation

- Identification of reporting requirements for the category/categories of service provided;
- Provision of relevant information to participating vessels at regular intervals or on demand or deemed necessary by the VTSO, including:
 - *Environmental conditions,*

- *Traffic situation,*
- *Navigational conditions,*
- *Traffic separations/overtaking restrictions,*
- *Warnings and restrictions concerning the movement of traffic in the area.*
- Special provisions for vessels carrying hazardous dangerous or polluting cargo;
- Compliance with pilotage directions and any special requirements for a pilot vessel being off station;
- Procedures for non-compliance by a vessel with the requirements and procedures laid down for the VTS area; and
- Procedures for information exchange/update on allied services.

Voluntary Participation

- Consideration of requirement to track/monitor and communicate with vessels not required to participate in the VTS; and
- Procedures for information exchange/update on allied services.

3.1.4 *Vessels at Anchor*

Procedures should be established for vessels at anchor in a VTS area. Depending on the capability of the VTS to monitor the vessel position under prevailing conditions, these may include:

- Anchorage assignment;
- Communication requirements;
- Reporting requirement for vessels prior to leaving the anchorage;
- Non-compliance by a vessel with the requirements and procedures laid down for the VTS area; and
- Information exchange/update with respect to allied services.

3.1.5 *Vessels at Berth*

Procedures should be established for vessels at berth in a VTS area. Depending on the capability of the VTS to monitor the vessel position under prevailing conditions, these may include:

- Reporting requirements for vessels on arrival at berth;
- Security requirements and/or level;
- Special requirements to maintain communications watch;
- Need for restrictions for other vessels passing the berth;
- Reporting requirement for a vessels prior to leaving the berth;
- Non-compliance by a vessel with the requirements and procedures laid down for the VTS area; and
- Exchange/Update information exchange/update with respect to allied services

3.1.6 *Vessels Departing the VTS Area*

Procedures should be established for vessels departing the VTS area. These may include:

- Reporting requirement for vessels prior to departing the area;
- Non-compliance with the VTS area requirements; and
- Handover requirements with adjacent or next VTS.

3.1.7 *Transition between Adjacent VTS Areas*

Procedures should be established for vessels transiting between adjacent VTS areas. The handover arrangements may include:

- Transfer of vessel information such as identification, cargo, destination and ETA destination;
- Process for continuous communication procedures; and
- Process to ensure vessel monitoring.

3.1.8 *Adverse environmental conditions*

In situations of adverse environmental conditions within the VTS area, such as poor visibility, strong currents or tidal streams, high winds, etc. special procedures may be required. These may include:

- Restriction or prohibition on movement
- Additional reporting requirements
- Additional separation between vessels

Special consideration may need to be given depending on vessel characteristics and local geography.

3.2 Emergencies Procedures

The services of the VTS centre should be maintained during any emergency response.

3.2.1 *Collision, Capsize, Sinking, Grounding, Fire On Vessel, Man Overboard*

Procedures should be established to deal with incidents such as collision, capsizing, sinking, grounding, fire on vessel, 'man overboard', which may include the following actions:

- Alert rescue co-ordination centre;
- Inform relevant regulatory authority/ies;
- Inform relevant emergency services;
- Act on local call-out procedures;
- Consider back-up VTS personnel;
- Promulgate information concerning incident to vessels in VTS area;
- Restrict traffic in the area;
- Activate tugs and other support units; and
- Ensure all recording equipment is operating correctly.

3.2.2 *Pollution*

Pollution incident procedures should be established. The following actions may be included:

- Inform relevant regulatory authority/ies;
- Alert relevant environmental authority;
- Assess scale of incident and call in specialist support as appropriate;
- Promulgate information concerning incident to vessels in VTS area; and
- Restrict traffic in the area.

3.2.3 *Places of Refuge*

Places of Refuge procedures should be developed, depending on national requirements and the particular arrangements arising out of the implementation of IMO Resolution A.949(23) Guidelines on Places of Refuge for Ships in Need of Assistance.

3.2.4 *Medical Emergency*

Procedures for medical emergencies should be established. Actions may include:

- Inform MRCC rescue co-ordination centre;
- Inform coastal radio station;
- Consider special manoeuvring requirements

3.2.5 *Vessel Not Under Command (NUC)*

Procedures in the event of a “vessel not under command” should be established. Actions may include:

- Promulgate information concerning incident to vessels in the VTS area;
- Obtain detailed information about on board situation;
- Maintain communication with vessel;
- Assess vessel’s proximity to danger (danger to vessel itself and other traffic);
- Activate tugs and other support units if appropriate.

3.2.6 *Security incident*

Procedures in the event of a security incident should be established. Procedures should reflect any involvement of the VTS with the PFSP (Port Facility Security Plan) as per the International Ship and Port facility Security Code (ISPS).

3.2.7 *Protest Action*

Procedures should be established to respond to protest action against a vessel transiting the VTS area. Actions may include:

- Alert responsible authority;
- Act on local call-out procedures, including VTS manager;
- Promulgate information concerning incident to vessels in the VTS area;

Throughout any protest action, the safety of ships and protestors is paramount

3.2.8 *Natural Disaster*

Natural disaster procedures should be established to deal with situations such as earthquake, tidal wave, fire, exceptional weather conditions. Actions may include:

- Promulgate information to vessels in the VTS area;
- Act on local call-out procedures;
- Inform rescue co-ordination centre.

Humber Pilotage Directions - Proposed Amendments to Pilot Boarding Stations

Our ref G.12a-95-08 PJC/ss

11 January 2008

Dear

HUMBER PILOTAGE DIRECTIONS – PROPOSED AMENDMENTS TO PILOT BOARDING STATIONS

On 14 April 2007 a collision occurred between the inbound vessel “Leonis” and outbound “Audacity” in fog near the pilot boarding station at Alpha Buoy in the approaches to the Humber.

The incident prompted a full investigation by the Marine Accident Investigation Branch (MAIB) which in turn led to a full review by us, as Harbour Authority, of our risk assessments for all operations within our area of coverage. As a result of that review we have identified a number of ways in which we can improve the control, monitoring and separation of shipping traffic in the Precautionary Area to the east of Spurn Light Float where the three outer traffic separation schemes converge and thereby improve navigational safety.

It is proposed that changes be made to the pilot boarding and landing stations as shown on the accompanying chartlet and detailed in the accompanying block.

The main boarding and landing position currently lying east of Alpha Buoy will be split and moved to form an inward boarding position PB1 and a separate outward disembarkation point. This will create a physical separation of 8 cables between the respective boarding and landing positions. Additionally, two new positions will be established (PB2 and PB3) for the boarding of large or complicated vessels which are approaching from either New Sand Hole or Sea Reach (Rosse Reach is not used by such vessels because of draught restrictions). By boarding large and complex vessels further seaward it gives the pilot more time to become familiar with the vessel and bridge team before encountering the more confined waters and higher traffic density around Spurn Light Float and the Inner Traffic Separation Scheme. The deep draught pilot boarding and landing station to the north east of Humber Light Float will remain unaltered and applies to all vessels subject to the Humber Passage Plan.

The pilotage charges for vessels required to board their pilot at PB2 or PB3 will not be affected – they will still be charged as if boarding at PB1.

It is important that changes such as this have the prior knowledge and support of local stakeholders and river users and I therefore intend to allow a six week period for any feedback you have to offer before moving towards formal implementation of the changes which would be promulgated by a Notice to Mariners.

I look forward to receiving any feedback by 25 February 2008.

Yours sincerely

HARBOUR MASTER, HUMBER

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Pilot Boarding Positions

PB 1 (Papa Bravo 1)	53 33.3 N 0 15.0 E	Spurn Light Float	Main embarkation position
PB 2 (Papa Bravo 2)	53 34.4 N 0 16.5 E	South Binks	Large Vessels using New Sand Hole TSS
PB 3 (Papa Bravo 3)	53 33.2 N 0 18.0 E	Inner Sea Reach	Large Vessels using Sea Reach TSS
Deep Draft Vessels	53 39.8 N 0 22.0 E	Humber Light Buoy	Vessels subject to the Humber Passage Plan (over 40000 dwt. or with a draught of 11 metres and over or Gas Carriers over 20000 m ³ capacity) In & Out
R. Trent & R. Ouse	53 44.1 N 020.5W	Riverside Quay Albert Dock Hull	Vessels exempt from compulsory pilotage but requiring a pilot for the Ouse or Trent
Outward	53 32.5 N 0 15.0E	Haile Sand	Dis-embarkation all vessels NOT subject to the Humber Passage Plan

Longitude 0° 10' East from Greenwich

PROPOSED AMENDMENTS TO PILOT BOARDING STATIONS 2008

