Annex 1

Merchant Shipping Notice 1796 (M+F)
Vessel Traffic Services (VTS) - Designation of
VTS Stations in the United Kingdom

Maritime and Coastguard Agency

MERCHANT SHIPPING NOTICE

MSN 1796 (M+F)

Vessel Traffic Services (VTS) - Designation of VTS Stations in the United Kingdom

Notice to all shipowners, Port and VTS Authorities, VTS Operators, Masters and Deck Officers of Merchant Vessels and Skippers and Watchkeepers of Fishing and recreational Vessels.

This notice should be read with the Merchant Shipping (Vessel Traffic Monitoring and Reporting Requirements) Regulations 2004

Summary

1. This notice identifies and designates UK VTS for the purpose of requiring compliance by shipping with regulations 6 and 7 of the Merchant Shipping (Vessel Traffic Monitoring and Reporting Requirements) Regulations 2004, implementing European Parliament and Council Directive 2002/59/EC.

2. Provides the formal identification of UK vessel traffic services (VTS) within UK waters for the benefit of the compliance of shipping with the Regulations and SOLAS Chapter V, Regulation 12.

3. VTS contributes to safety of life at sea, safety and efficiency of navigation and protection of the marine environment, adjacent shore areas, work sites and offshore installations.

1. Statutory requirements

1.1 Regulation 2(1) of the Merchant Shipping (Vessel Traffic Monitoring and Reporting Requirements) Regulations 2004 (the "2004 Regulations") defines a vessel traffic service as a service:

"(a) which is designed to improve the safety and efficiency of vessel traffic and to protect the environment and which is capable of interacting with that traffic and responding to traffic situations developing in the VTS area; and

(b) which, in relation to a service operated by the United Kingdom, either alone or in conjunction with one or more States, is a service provided from within the United Kingdom which has been designated by the MCA in writing and is specified in a Merchant Shipping Notice."

1.2 This notice is the Merchant Shipping Notice to which those Regulations refer.

1.3 Schemes which are designated for the purposes of the 2004 Regulations are listed in the annex to this MSN.

1.4 Where the MCA designates a VTS, which is operated in accordance with the IMO Guidelines, those vessels which are subject to the 2004 Regulations must comply with the rules of that VTS

2. Application

The Rules of the 2004 regulations apply to all ships except:

.1 all ships less than 300 gross tonnage;

.2 warships, naval auxiliaries and other ships owned or operated by the Government of an EEA State which are used for non-commercial public service;

.3 fishing vessels;

.4 traditional ships;

.5 recreational craft having a length of less than 45 metres.

However all vessels irrespective of size and type may be required to comply with VTS rules within port limits because of local port legislation.

3. Rules of the VTS

3.1 When passing through a VTS area, ships shall make reports and respond to calls on the designated radio channel for that VTS.

3.2 Additional “rules” for each designated VTS are in the Admiralty List of Radio Signals Volume 6.

4. Maintenance of standards in accordance with IMO Guidelines

4.1 The port authority identified in the designation is responsible for ensuring that the VTS is operated in accordance with IMO Guidelines on Vessel Traffic Services (Resolution A.857).

5. Requests by port authorities to become “designated” VTS

5.1 Application is made by the authority to the MCA at the address given at the end of this notice. The MCA will inform the authority if MCA officials intend to visit the VTS centre, and will confirm in writing whether the VTS is designated or if the MCA intends to remove or amend details of an existing designation.

5.2 Designation by the MCA will be subject to the receipt of:

.1 confirmation by the port and VTS authority that the VTS will be operated in accordance with the IMO Guidelines on Vessel Traffic Services (Resolution A.857);

.2 satisfactory details about the VTS; and

.3 confirmation of the statutory UK powers required for operation of the VTS in question.

6. Promulgation of information on designated VTS

6.1 Ships cannot be expected to comply unless the VTS is properly identified and information on additional rules is made fully available by the normal means of promulgating such information to the mariner.

6.2 Information will be published in subsequent versions of the annex attached to this notice and the Admiralty List of Radio Signals Volume 6 updated in Weekly Notice to Mariners.

More Information

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Safer Lives, Safer Ships, Cleaner Seas

Annex 1

PORT VTS CENTRE	SERVICE LEVEL
Aberdeen	TOS, INS
Belfast	TOS, INS
Bristol Channel (Severn VTS)	INS
Bristol Port (Avonmouth & Portbury)	TOS, INS
Cardiff, Barry, Swansea, Newport, PTalbot	INS
Dover (Channel Nav Inf Service)	INS
Dover Port Control	TOS, INS
Forth and Tay Navigation Service	TOS, INS
Harwich Haven	TOS, NAS, INS
Humber Estuary	TOS, NAS, INS
Larne	TOS, INS
Liverpool	INS
London Port Control Centre (Gravesend)	TOS, NAS, INS
London Thames Barrier Nav. (Woolwich)	TOS, NAS, INS
Medway	TOS, INS
Milford Haven	TOS, INS
Nab	INS
Peterhead	TOS, INS
Plymouth	TOS, INS
Poole	INS
Portsmouth	TOS, INS
Southampton	TOS, NAS, INS
Sullom Voe	TOS, NAS, INS
Sunk (Precautionary Area)	INS
Tees and Hartlepool	TOS, INS
Tyne	INS

TOS = Traffic Organisation Service: A service to prevent the development of dangerous maritime traffic situations and to provide for the safe and efficient movement of vessel traffic within the VTS area.

NAS= Navigational Assistance Service: A service to assist on-board decision making and to monitor its effects, especially in difficult navigational or meteorological circumstances or in the case of defects or deficiencies.

INS=Information Service: A service to ensure that essential information becomes available in time for on-board navigational decision making.

(See MGN 238 as amended for full description of service levels)

Annex 2

Marine Guidance Note 238 (M+F)
Vessel Traffic Services (VTS) and
Port Information in the United Kingdom

Maritime and Coastguard Agency

MARINE GUIDANCE NOTE

MGN 238 (M+F)

Vessel Traffic Services (VTS) and Port Information in the United Kingdom

Note to Port and VTS Authorities, VTS Operators, Masters and Deck Officers of Merchant Vessels and Skippers and Watchkeepers of Fishing and recreational Vessels.

This note should be read in conjunction with MGN 239 and MGN 240.

Summary

The purpose of this guidance note is to amplify the international definitions of VTS in the UK national context and assist Statutory Harbour Authorities in the implementation of a new VTS or the review of an existing VTS. They will also be used by the Maritime and Coastguard Agency (MCA), as Competent Authority for VTS, when implementing a Coastal VTS.

Key Points

- This note is developed from existing international guidelines; IMO Resolution A.857(20), MSC/Circular 952 & the IALA VTS Manual (2002) but takes into account of the UK's specific situation.
- It defines the UK's interpretation of VTS.
- It complements the Port Marine Safety Code and the Guide to Good Practice on the management of safety in ports.

Note

Although this MGN is aimed essentially at shore based establishments, there is merit in its distribution to a wider audience. To promote awareness of the important contribution that VTS and Port Information make to the maritime industry and to indicate the approach to VTS adopted in the UK, it is appropriate that all recipients of VTS and Port Information receive this information.

The Port Marine Safety Code and the Guide to Good Practice were published by the Department for Transport (DfT) in March 2000 and March 2002 respectively.

1 INTRODUCTION

The term VTS is used in this document in the same specific sense as in the International Maritime Organisation (IMO) and the International Association of marine Aids to navigation and Lighthouse Authorities (IALA) documentation referenced.[1] It also specifies a standard for training leading to a certificate (V-103/1 and V-103/2).[2] The term VTS is used to describe systems that both have the functionality specified and are operated by people trained to the V-103 standard. The training standards have been developed to encompass VTS operations ranging from provision of an Information Service to Traffic Organisation Service. The latter may be more than the requirements many ports derive from their risk assessment (see MGN 240).
This note provides guidance for those harbour authorities with – or proposing – all types of VTS, which necessarily require operators to be trained to the V-103 standard and the provision of, at least, an Information Service.

Two types of VTS are recognised; Port and Coastal. A Port VTS is mainly concerned with vessel traffic to and from a port or harbour or harbours, while a Coastal VTS is mainly concerned with vessel traffic passing through the area and usually only an Information Service is rendered.

In implementing a VTS the Statutory Harbour Authority needs to consider which of the three categories – Information Service, Navigational Assistance Service and Traffic Organisation Service - it will provide, as this will dictate the manning and equipment requirements. Similar considerations should be taken into account when implementing provision of Port Information
(see section 5 of the Note).

Recognising that in the UK the responsibility for most VTS lies with Statutory Harbour Authorities, these guidelines should be read in conjunction with International Maritime Organisation (IMO) Resolution A.857(20) Guidelines for Vessel Traffic Services, the International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA) RecommendationV-119,[3]
The Implementation of Vessel Traffic Services, the IALA VTS Manual (2002), the Port Marine Safety Code and the Guide to Good Practice.

The EU Directive 2002/59/EC, adopted by the European Council on 19 December 2001, which repealed Council Directive 93/75/EEC, addresses the establishing of a community monitoring and information system for maritime traffic. One implication of this Directive is the networking and utilisation of Automatic Identification System (AIS) information by 2007 and the exchange of VTS information between Member States by 2008. The MCA, as the Competent Authority, is responsible for ensuring UK compliance with the Directive and thus needs to ensure that future developments in VTS are consistent with UK policy. In this respect, it is recommended that Statutory Harbour Authorities should consult the MCA about their future plans.

This note also identifies the need within the UK for a type of service where a VTS is assessed as excessive. It defines the concept of Port Information for national use and gives guidance on when such a type of service may be considered appropriate.

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1 IMO Resolution A.857(20) and the IALA VTS Manual 2002
2 MSC/Circular 952
3 IALA Recommendation V-119 (Recommendation on the Implementation of Vessel Traffic Services), September 2000

2 OBJECTIVES

It is important to consider the objectives that a VTS or provision of Port Information is intended to achieve. These need to be clearly defined and be subject to regular review. They also need to be reflected in the type of serviceprovided.

In setting objectives, it may be helpful to recall that the purpose of vessel traffic services is to improve the safety and efficiency of navigation, safety of life at sea and the protection of the marine environment and/or the adjacent shore area, worksites and offshore installations from possible adverse effects of maritime traffic. VTS may contribute to port and general maritime security.

The precise objectives of any VTS will flow from the Formal Risk Assessment and will depend upon the particular circumstances in the VTS Area and the volume and character of maritime traffic. They will also need to take into account the capability of expertise and technology available.

3 LEGAL BASIS

Regulation 12[4] of the revised Chapter V of the International Convention for the Safety of Life at Sea requires Contracting Governments to arrange for the establishment of VTS where, in their opinion, the volume of traffic or the degree of risk justifies such services. The regulation also requires that :

- Contracting Governments planning and implementing VTS wherever possible follow the guidelines developed by the IMO.[5] In relation to the UK, the MCA is the Competent Authority for VTS for the purposes of those Guidelines.

- The use of VTS may only be made mandatory within the territorial waters of a Coastal State.

Under local Acts of Parliament, harbour authorities usually have duties to protect their harbours and regulate the approaches to them. It will be for each harbour authority to consider what is required as regards the provision of VTS or Port Information under its statutory duties.

When the European Union Directive on Community Vessel Traffic Monitoring and Information Systems[6] is implemented in the UK, it is likely to be done by regulations under section 2(2) of the European Communities Act 1972.

3.1 Liability

Liability arising from an incident following compliance with VTS guidance can only be decided on a case-by-case basis in accordance with national law. Consequently, a Statutory Harbour Authority / Competent Authority for VTS should take into account the legal implications in the event of a shipping incident where VTS Operators may have failed to carry out their duty competently. Similar considerations should be taken into account in the provision of Port Information.

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4 SOLAS V, 2002

5 IMO Resolution A.857(20)

6 EU Directive 2002/59/EC

4 VTS CATEGORY

4.1 Introduction

A clear understanding of the distinction between the different categories of VTS is fundamental in the choice of service to be provided, its implementation, maintenance and periodic review.

Definitions of the three categories of service are provided by IALA and IMO documentation however these are broad interpretations designed to provide guidance only.

The purpose of this section, therefore, is to document the interpretation of the different categories of service, as adopted by the United Kingdom. Furthermore it amplifies the relationship between each category of service and explains the level of interaction, between VTS and vessel, appropriate in each case.

The following is an explanation of each category of service as recognised by the UK Competent Authority for VTS.

4.2 Information Service[7]

Defined by IMO as 'a service to ensure that essential information becomes available in time for on-board navigational decision-making'. The information service comprises broadcasts of information at fixed times or when deemed necessary by the VTS Authority or at the request of a vessel, and may include for example :

(1) Reports on the position, identity and intentions of other traffic;

(2) Waterway conditions;

(3) Weather;

(4) Navigational hazards;

(5) Any other factors that may influence the vessel's transit.

4.3 Navigational Assistance Service[8]

Defined by IMO as 'a service to assist on-board navigational decision-making and to monitor its effects, especially in difficult navigational or meteorological circumstance or in case of defect or deficiencies.' There may be occasions when an increased or new risk makes it appropriate to enhance the service through the additional provision of a Navigational Assistance Service. The IMO Resolution explains the key tenets of this service as :

(1) A service that is intended to assist in the navigational decision making process on board and to monitor its effects.

(2) Particularly relevant to :
a) Difficult navigational circumstances;
b) Difficult meteorological conditions;
c) Vessel defects or deficiencies.

(3) A service that is rendered at the specific request of a vessel or by a VTS Authority when deemed necessary.

(4) A service that is provided only on specified occasions and under clearly defined circumstances.

(5) The beginning and end of navigational assistance should be clearly stated by the vessel or the VTS and acknowledged by the other party.

The IALA VTS Manual[9] indicates that Navigational Assistance Service can fall into one of two categories, depending on whether navigational information or advice is given. Navigational Assistance Service consisting only of the giving of navigational information is referred to in this guidance as Contributory. Navigational Assistance Service consisting of the giving of navigational advice as well as navigational information is referred to as Participatory. The definitions, particularly of the Participatory service, are open to interpretation and for the avoidance of doubt their meaning is refined and expanded as follows.

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7 IMO Resolution A.857(20) paragraph 1.1.9.1
8 IMO Resolution A.857(20) paragraph 1.1.9.2
9 IALA VTS Manual section 2.2.3

4.3.1 Contributory Navigational Assistance Services

A Contributory Navigational Assistance Service is solely the provision of factual navigational information to assist the on-board decision making process. The information is provided either in response to a specific request from a vessel or when the VTS Authority perceives that the information would be of use to the vessel.

A Contributory Navigational Assistance Service may include information on :

(1) Courses and speeds made good;

(2) Positions relative to fairway axis and waypoints;

(3) Positions, identities and intentions of surrounding traffic;

(4) Warnings of dangers.

4.3.2 Participatory Navigational Assistance Service

In a Participatory Navigational Assistance Service, the VTS can become involved in the on-board decision making process by providing navigational advice. Through the exchange of information between vessel and VTS, an agreed course of action may emerge. However, any recommendations from the VTS must be result orientated and must not include specific instructions on courses to steer and speed through the water. As with the Contributory service, it is provided on specific request or when perceived necessary by the VTS Authority, in the interests of safety.

Dependent on the complexity of the situation and the level of risk mitigation required, consideration should be given to the following :

(1) Authorisations of operators providing the service and recording of such authorisations;

(2) The need to reflect this category of service in the On the Job Training of VTS Operators;

(3) Operator work load during Participatory Navigational Assistance Service, including other responsibilities and activities, and the number of vessels being monitored or advised;

(4) Use of a discrete frequency;

(5) Increased traffic restrictions;

(6) The requirements of the Pilotage Act 1987.

4.4 Traffic Organisation Service[10]

Defined by IMO as 'a service to prevent the development of dangerous maritime traffic situations and to provide for the safe and efficient movement of vessel traffic within theVTS Area.'

The provision of a Traffic Organisation Service includes a comprehensive and dedicated service, throughout the declared service period, without which the long term planning of traffic movement and developing situation would not be possible. This service is, by its nature, more comprehensive than an Information Service, the capability of which it necessarily includes.

Where the risks identified through the formal risk assessment are such that the only appropriate mitigating measure is the provision of service that monitors vessel traffic movement and enforces adherence to governing rule and regulation, a Traffic Organisation Service should be considered appropriate.

[10] IMO Resolution A.857(20) paragraph 1.1.9.3

A Traffic Organisation Service is concerned with, for example :

(1) Forward planning of vessel movements;

(2) Congestion and dangerous situations;

(3) The movement of special transports;

(4) Traffic clearance systems;

(5) VTS sailing plans;

(6) Routes to be followed;

(7) Adherence to governing rules and regulations.

Instructions given as part of a Traffic Organisation Service shall be result orientated, leaving the details of the execution to the vessel.

5 PORT INFORMATION

Some ports will identify from their risk assessment the need to provide a VTS as specified in the IMO and IALA documentation. To accommodate all other ports, the UK has chosen to introduce Port Information. This service is applicable to those ports where it has been assessed that a VTS, as described above, is excessive or inappropriate. They will not, therefore, require to train their operators to the V-103 standard. The term Port Information is used in this document to describe the services provided by such ports – it does not imply a lower standard, or a poorer service to customers. The main difference arising from provision of Port Information is that it does not provide VTS. As such, the training requirement for its operators is less comprehensive and the operators are unlikely to be certified to the V-103 standard.

Provision of Port Information is designed to improve port safety and co-ordination of port services within the port community by dissemination of port information to vessels and berth or terminal operators. It is mainly concerned with the management of the port, by the supply of information on berth and port conditions. Provision of Port Information can also act as a medium for liaison between vessels and stevedores or allied services, as well as providing a basis for implementing Port Emergency Plans.

Identification of the threshold between Port Information and VTS may be difficult to determine. It is likely to be port specific and will only become clear following the risk assessment process, when all mitigating factors have been considered. Port Information is applicable where interaction is unnecessary to fulfil the statutory requirements of the harbour authority's duties with regards to navigational safety. It is not required to have the ability and or the resources to respond to developing traffic situations. Neither is there a requirement for a vessel traffic image[11] to be maintained.

Key considerations will be :

(1) The complexity of the advice and information required to be exchanged;

(2) The equipment deemed necessary;

(3) The level of operator competence required.

Examples of Port Information may include:

(1) Details of shipping movements;

(2) Visibility in the area;

(3) Wind speed and direction;

(4) Tidal height;

(5) Berthing information;

(6) Preferred anchorages.

[11] IMO Resolution A.857(20), paragraph 1.1.8

It should be noted that whilst this list appears similar to that for an Information Service the key issue is whether the port interacts with the vessel traffic or not. Training for the provision of Port Information shall be based on the selection of appropriate modules, or elements thereof, from the V-103 syllabus, depending on the equipment and capabilities used. Annex 1 shows the minimum requirement however training must also include any additional equipment or capability used. Annex 2 lists the modules contained in the V-103 syllabus.

The table at Annex 1 contains details of equipment and capabilities considered to be the minimum requirement for each type and category of service.

6 RELATIONSHIP BETWEEN SERVICES

The relationship between the various types (Port Information and VTS) and categories of service (Information Service, Navigational Assistance Service and Traffic Organisation Service) is illustrated in the following diagram.

VTS builds on Port Information and it can be seen that the categories of VTS are cumulative, with an Information Service being an essential building block of both Traffic Organisation Service and Navigational Assistance Service.

7 SERVICE STRUCTURE

The structure consists of three elements, namely : Operational; Technical and Administrative. Whilst the following text relates specifically to the development of a VTS some of the aspects addressed may also be applicable when considering the provision of Port Information.

7.1 Operational Structure

A determination needs to be made as to whether the VTS should be provided from one or more centres. Technical, financial and environmental aspects will need to be taken into account, although the final decision may be dependent on other factors, such as jurisdictional boundaries.

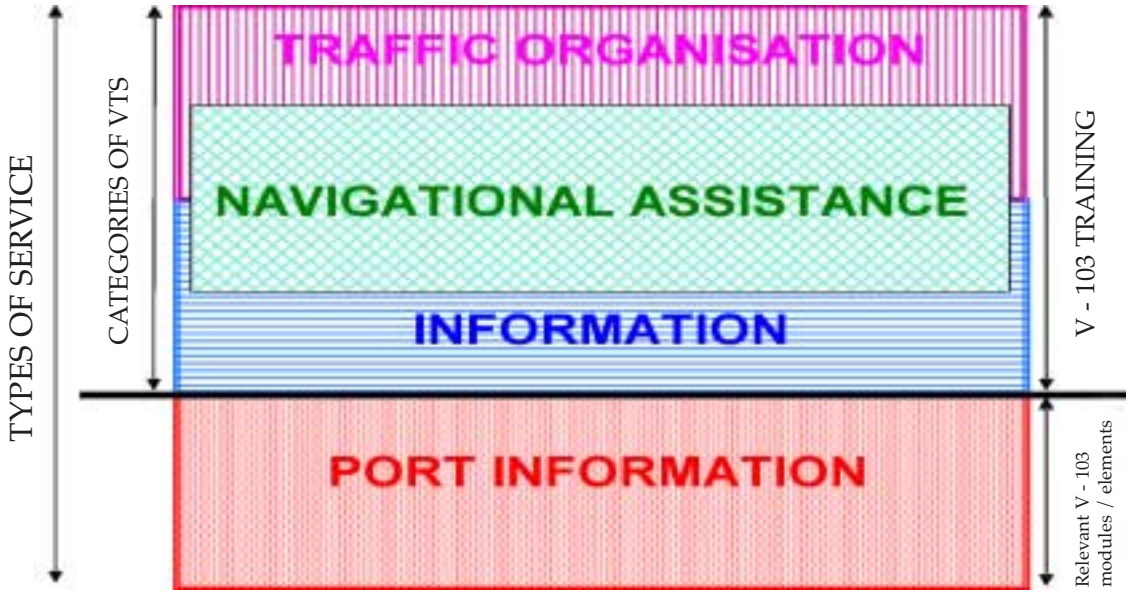

Figure 1 Relationship between types and categories of service

Further information can be found in the IALA VTS Manual 2002 Chapter 3 – Structuring a VTS

7.2 Technical Structure

The major technical factor is likely to be an assessment of the coverage of the VTS Area, which is likely to be obtained by radar and / or AIS. This may indicate that two or more radars or base-stations are necessary to provide complete coverage of the VTS Area. The information detected by several base-stations or radars can be transmitted to one VTS Centre if required. Other technical aspects of the infrastructure relate mainly to the full integration of sensors with the means provided for analysing the resulting data and the consequent transmission of any resulting analysis.

Further information on Technical Structure can be found in the IALA VTS Manual 2002 Chapter 3, sections 3.2 and 3.3.

7.3 Administrative Structure

The administrative aspects of the infrastructure provide the means by which the continued operation of a VTS or provision of Port Information is enabled. These include but are not limited to :

(1) The preparation of procedures for operation of the service and their periodic review.

(2) The recruitment and training of personnel[12], including operational, maintenance and support staff, the preparation of personnel structures including leave and duty rosters.

(3) The maintenance, repair and cleanliness of the VTS Centre and outstations / location from where Port Information is provided.

(4) The provision of facilities necessary to support the operation of the VTS Centre / location from where Port Information originates.

(5) Financial matters, including the funding of the VTS / provision of Port Information, staff payment, contractual arrangements and other budgetary matters.

Further information on Administrative Structure can be found in the IALA VTS Manual 2002 Chapter 3, section 3.2.4, and Chapter 5.

8 AUDITING AND REVIEWING PERFORMANCE

The evaluation of a VTS or provision of Port Information should determine if the purpose it was implemented for is still relevant and its objectives are being achieved. This requires auditing and reviewing of performance in accordance with the Statutory Harbour Authority's Safety Management System[13] (see MGN 239). The evaluation is intended to ascertain the effectiveness of the VTS in meeting its objectives, with respect to mitigating the risks of collisions or groundings in the VTS Area.

The VTS or Port Information provided will depend on the result of the Formal Risk Assessment, which in turn will identify the standard and the performance indicators against which the VTS or Port Information will be evaluated. To be effective there needs to a continuous process of internal review. The objectives of the VTS or provision of Port Information, therefore, need to be kept under review, bearing in mind changes in operations, operational methods, personnel and the availability of technology, to ensure that the objectives set for the VTS or provision of Port Information remain applicable and are being achieved.

At the request of a Statutory Harbour Authority, the Competent Authority for VTS (MCA), may assist with the evaluation process, with a view to ensuring compliance with UK best practice and international recommendations.

The overall evaluation of the VTS or provision of Port Information should be preceded by an assessment of the effectiveness of the equipment, manning and procedures involved.

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[12] All operational VTS personnel must be qualified in accordance with the IALA Recommendation for the training and certification of VTS personnel V103 (IALA VTS Manual 2002, Chapter 5, sections 5.2 and 5.3).

[13] Port Marine Safety Code Part Two, paragraphs 2.1.10 and 2.1.11 and the Guide to Good Practice, paragraphs 4.3.13 and 4.3.17.

PORT INFORMATION AND VTS EQUIPMENT AND CAPABILITY TABLE

Service / Category	Equipment														Capabilities					
					Radar				Traffic Image											
	VHF	VHF / DF	Telephone	Facsimile	Marine	Marine + Tracking System	VTS + Tracking System	AIS Base-station	Manual Plotting facility	Electronic Chart / GIS	Dynamic	Meteorological Sensors	Hydrological Sensors	CCTV	Equipment performance monitoring	Redundancy	Data Recording	Data Management System	Data Export	Log & record keeping
Port Information	✔	O	✔	✔	O	O	O	O	O	O	O	O	O	O	✔	✔	O	O	O	✔
Information Service	✔	O	✔	✔	O	O	O	O	✔	O	O	✔	✔	O	✔	✔	✔	✔	✔	✔
Navigational Assistance Service	✔	O	✔	✔	O	✔	O	O*	O	✔	✔	✔	✔	O	✔	✔	✔	✔	✔	✔
Traffic Organisation Service	✔	O	✔	✔	O	O	✔	O*	O	✔	✔	✔	✔	O	✔	✔	✔	✔	✔	✔

Key
✔ Required
O Optional
O* Optional but likely to become mandatory after implementation of the EU Directive on Vessel Traffic Management
GIS Geographic Information System
Note. The use of equipment marked optional carries with it the requirement that its operators are properly trained.

EXPLANATION OF EQUIPMENT AND CAPABILITIES IN ANNEX 1

VHF – Marine band

Very High Frequency radio, capable of working in the marine band on the channels identified and in sufficient numbers to provide the service and channels declared for the area.

VHF Direction Finding (VHF / DF)

Very High Frequency radio direction finding equipment in sufficient numbers and at appropriates locations to assist in the confirmation of the source of VHF communications.

Telephone – Landline

Shore-side telecommunications network with the capability to deal with all operational and emergency demands, including Allied Services.[14]

Facsimile
Indicates availability of this service, which is connected to the shore-side telecommunications network.

Marine radar

Indicates stand alone marine radar without automatic tracking.

Marine radar and tracking system

Indicates stand alone marine radar with automatic tracking capability i.e. ARPA

VTS radar and tracking system

Indicates a dedicated fully functional VTS radar and display system.

AIS (Automatic Identification System) base-station

Indicates availability of a base-station compatible with the IMO approved AIS. This will also need to be compatible with the requirements of the EU Directive on Vessel Traffic Monitoring.[15] In this respect, it is recommended that the MCA should be consulted about future developments.

Manual plotting facility

Any means for manually maintaining a traffic image i.e. magnetic board or paper chart.

Electronic Navigation Chart or Geographic Information System

Indicates the use of an electronic chart display showing the physical and navigational characteristics of the area.

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14 IMO Resolution A.857(20) Annex 1, paragraph 1.1.10
15 EU Directive 2002/59/EC

Dynamic Traffic Image

Indicates the use of a real-time display of the traffic image.

Meteorological sensors

Indicates the availability of the necessary sensors to provide real-time meteorological information to stakeholders.

Hydrological sensors

Indicates the availability of the necessary hydrological sensors to provide real-time hydrological information to stakeholders.

CCTV (Close Circuit Television)

Indicates the use of CCTV in the provision of the service / category of service declared

Equipment performance monitoring

Indicates the ability to monitor the performance of all equipment used in provision of the service / category of service declared, including a planned maintenance system.

Redundancy

Indicates the presence of sufficient equipment to ensure continuity of the service / category of service declared under realistic fault conditions.

Data recording

Indicates the ability to record all operational data concerned with the compilation of the traffic image. This will typically include radar / AIS data and all communications and will permit the replay of data in support of incident analysis.

Data management system

Indicates the use of a fully integrated system that effectively manages all of the information necessary to provide the declared service / category of service.

Data export

Indicates the capability to meet the requirements of the EU Directive on Vessel Traffic Monitoring.[16] In this respect, it is recommended that the MCA should be consulted about future developments.

Log and record keeping – automatic or manual

Indicates a means of recording all activities within the area, which may be either electronic or manual. In more sophisticated systems this is likely to be incorporated in the data recording / data management system.

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[16] EU Directive 2002/59/EC

TRAINING AND CERTIFICATION

1 Requirements of the model course V-103/1 – VTS Operator Basic Training[17]

In order to discharge the duties required by VTS all operational personnel shall obtain a VTS qualification before being considered competent to act as a VTS Operator. A person should, therefore, be considered capable of carrying out the duties of a VTS Operator when in possession of:

(1) A valid VTS Operator's certificate issued on behalf of the Competent Authority for VTS.

(2) An appropriate endorsement in a VTS Certification Log issued on behalf of the VTS Authority.

The V-103/1 model course comprises 8 modules. These are :

(1) Language

a) Structure of the English language as applied to voice communication;
b) Specific VTS message construction;
c) Standard phrases;
d) Collecting information.

(2) Traffic Management

a) Regulatory requirements;
b) Roles and responsibilities;
c) VTS environment;
d) Principles of waterway and traffic management;
e) Traffic monitoring.

(3) Equipment

a) Telecommunications;
b) Vessel Traffic Management Information Systems;
c) Radar;
d) Audio, video and other sensors;
e) VHF / Direction Finding (VHF / DF);
f) Tracking systems;
g) Equipment performance monitoring;
h) Evolving technologies.

[17] IALA Recommendation V-103 and MSC/Circular 952, dated May 2000

(4) Nautical knowledge

a) Chartwork;
b) Collision regulations;
c) Aids to navigation;
d) Navigational aids (shipborne);
e) Shipboard knowledge;
f) Port operations.

(5) Communication co-ordination

a) General communication skills;
b) Communications;
c) Log and record keeping.

(6) VHF radio

a) Radio Operator practices and procedures;
b) VHF radio systems and their use in VTS;
c) Operation of radio equipment;
d) Communication procedures, including SAR.

(7) Personal attributes

a) Personal interaction and human relation skills;
b) Responsibility.

(8) Emergency situation

a) National and international regulations;
b) Response to contingency plans;
c) Prioritise and respond to situations;
d) Co-ordination with and support to Allied Services;
e) Record activities concerning emergencies;
f) Maintain a safe waterway throughout emergency situations;
g) Internal / external emergencies.

The IALA syllabus further expands on the modules and elements detailed above and further information can be found in Model Course V-103/1 – Vessel Traffic Services Operator Basic Training.

Training for the provision of Port Information shall be based on the selection of appropriate modules or elements, depending on the equipment and capabilities used. In addition to the minimum requirement detailed in Annex 1, training must also include any additional equipment or capability used.

Further VTS qualifications including VTS Supervisor endorsement shall be awarded only following the completion of an accredited training programme.

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Marine Guidance Note 239 (M+F)
Vessel Traffic Services (VTS) and Port Information,
Responsibilities of the UK Competent Authority,
Statutory Harbour Authority and VTS Authorities

MARINE GUIDANCE NOTE

MGN 239 (M+F)

Vessel Traffic Services (VTS) and Port Information, Responsibilities of the UK Competent Authority, Statutory Harbour Authorities and VTS Authorities

Note to Port and VTS Authorities, VTS Operators, Masters and Deck Officers of Merchant Vessels and Skippers and Watchkeepers of Fishing and recreational Vessels.

This note should be read in conjunction with MGN 238 and MGN 240, which contains information about Port Information.

Summary

The purpose of this guidance note is to set out the national responsibilities of the Maritime and Coastguard Agency (MCA) as the United Kingdom "Competent Authority for VTS" and those of individual "VTS Authorities" in pursuance of IMO Resolution A.857(20) and MSC/Circular 952. This note recognises the responsibilities, particular to the UK, vested in individual ports as "Statutory Harbour Authorities" through relevant legislation, the Port Marine Safety Code and the Guide to Good Practice.

Key Points

- This note is developed from existing international guidelines; IMO Resolution A.857(20) & IALA VTS Manual (2002) and takes into account the UK's particular situation.
- It defines the responsibilities of those authorities concerned with VTS and the provision of Port Information in the UK.
- It complements the Port Marine Safety Code and the Guide to Good Practice on the management of safety in ports.

Note

Although this MGN is aimed essentially at shore based establishments, there is merit in its distribution to a wider audience. To promote awareness of the important contribution that VTS and Port Information make to the maritime industry and to indicate the approach to VTS adopted in the UK, it is appropriate that all recipients of VTS and Port Information receive this information.

The Port Marine Safety Code and the Guide to Good Practice were published by the Department for Transport (DfT) in March 2000 and March 2002 respectively.

1 Introduction

The term VTS is used in this document in the same specific sense as in the International Maritime Organisation (IMO) and the International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA) documentation referenced.[1] This describes three categories of service (Information Service, Navigational Assistance Service and Traffic Organisation Service) by reference to their functionality. It also specifies a standard for training leading to a certificate (V-103/1 and V-103/2). The term VTS is used to describe systems that both have the functionality specified and are operated by people trained to the V103 standard. The training standard has been developed to encompass VTS operations ranging from provision of an Information Service to Traffic Organisation Service. The latter may be more than the requirements many ports derive from their risk assessment. However, this guidance is intended for those harbour authorities with – or proposing – all types of VTS, which necessarily require operators to be trained to the V103 standard.

These guidelines should be used in conjunction with IMO Resolution A.857(20) Guidelines for VTS, IALA Recommendation V-119, The Implementation of Vessel Traffic Services, the IALA VTS Manual 2002, the Port Marine Safety Code and the Guide to Good Practice.

2 Areas of Responsibility

The MCA is the Competent Authority for VTS within UK territorial waters. This includes the assessment of the need and type of Coastal VTS (see MGN 240 section 3) within those waters but excluding the areas of jurisdiction of individual Harbour Authorities. The Competent Authority for VTS may also be a VTS Authority in its own right for waters outside the limits of individual Harbour Authorities.

A Statutory Harbour Authority is responsible for assessing the need and type of VTS, or the need for Port Information, within its own port limits in accordance with the Port Marine Safety Code. Where it is decided that a VTS is required, the Statutory Harbour Authority becomes the VTS Authority within its own port limits.

The VTS Authority is responsible for the operation of the categories of service prescribed within the area designated for each individual VTS. A VTS Authority may initiate the exchange of information with vessels approaching its service area, in order to ensure the smooth integration of traffic into the VTS Area.

[1] IMO Resolution A.857(20) and the IALA VTS Manual 2002

3 **Competent Authority For VTS**

Responsibilities of the MCA, as the Competent Authority for VTS, are as follows :

(1) Leading on national policy for UK VTS;

(2) Providing advice to government on legislation with respect to the operation of a VTS within UK territorial waters;

(3) Establishing and reviewing the national standards and definitions for the three categories of VTS;

(4) Establishing and reviewing the national standards and definitions for provision of Port Information;[2]

(5) Assessing the need for Coastal VTS within territorial waters but outside the areas of jurisdiction of Statutory Harbour Authorities;

(6) Establishing VTS Authorities for Coastal VTSs, ensuring that necessary arrangements are in place and setting the objectives and types of service offered by them;

(7) Establishing and reviewing training standards for all VTS personnel and those who provide Port Information;

(8) Providing accreditation of trainingcolleges involved in VTS training and conducting a regular review of training and training standards;

(9) Developing guidelines for VTS manning and equipment standards;

(10) Ensuring that any reporting requirement for incidents involving VTS aligns with the national reporting requirements for navigational incidents;

(11) Providing guidance to assist VTS Authorities in evaluating the performance of their VTS;

(12) Maintaining a database of UK VTS and their capabilities;

(13) Audit and review the performance of Coastal VTSs, recommending and facilitating improvements, where necessary.

4 **Statutory Harbour Authority**

The powers of individual Statutory Harbour Authorities have been established by or under an Act of Parliament. They have powers and duties within defined geographical areas. In the context of VTS their responsibilities include the requirement to :

(1) Establish the need for a VTS or provision of Port Information by means of a Formal Risk Assessment into the safety of navigation, as required by the Port Marine Safety Code and taking into account the standards established by the Competent Authority for VTS;

(2) Establish the category of VTS or whether Port Information is to be provided, based on the outcome of a Formal Risk Assessment;

(3) Ensure that a legal basis for the operation of a VTS is provided for;

(4) Ensure the VTS has been delegated the appropriate authority to fulfil its duties;

(5) Where a VTS is established, act as a "VTS Authority" as indicated below;

(6) Publish details and the types of service that are to be provided in the appropriate nautical publications. (see Annex 1);

(7) Provide information on all published services, including the details of radio watches, designated frequencies, hours of operation and the defined type(s) of service offered.

[2] See MGN 238 or MGN 240

5 **VTS Authority**

VTS contributes to safety of life at sea, safety and efficiency of navigation and protection of the marine environment, adjacent shore areas, worksites and offshore installations from possible adverse effects of maritime traffic.[3] In pursuance of these objectives, VTS authorities should :

(1) Operate the VTS within national and international guidelines and legislation (see Annex 2);

(2) Ensure that operators are trained to the appropriate national standards and that their qualifications are kept current;

(3) Establish operating procedures for VTS and for the implementation of emergency contingency plans;

(4) Carry out regular training and exercises for VTS staff in operating and emergency response procedures;

(5) Regularly review VTS operations to ensure that the service is harmonised with ship reporting, routeing instructions, aids to navigation, pilotage and port operations as appropriate;

(6) Report any apparent infringement of byelaws and directions to the appropriate authority;

(7) Maintain appropriate standards of communications on channels assigned for VTS purposes;

(8) Ensure that appropriate manning is available to provide the type of service declared taking into account the guidance issued by the Competent Authority for VTS;

(9) Ensure that equipment appropriate to the type of service declared is available, taking into account the guidance issued by the Competent Authority for VTS;

(10) Ensure that VTS personnel are vested with the appropriate authority and / or delegations required to fulfil their duties;

(11) Audit and review the performance of Port VTSs in accordance with the Port Marine Safety Code, recommending and facilitating improvements where necessary.

[3] SOLAS Chapter V, Regulation 12 (1)

PROMULGATION OF DETAILS AND TYPES OF SERVICE

1 Details

As a minimum, the following information should be promulgated where a VTS / Port Information is provided:

(1) Type of service (Port Information / VTS);

(2) Category of VTS (Information Service / Navigational Assistance Service / Traffic Organisation Service);

(3) Contact details and VTS / Port Information callsign;

(4) Details of service to be provided;

(5) Areas of coverage;

(6) Hours of service;

(7) Categories of vessel required, expected or encouraged to participate;

(8) VHF Radio frequencies;

(9) Reporting points;

(10) Format and content of reports required.

2 Publications

Statutory Harbour Authorities should provide the details above to the MCA, who are the UK's Competent Authority for VTS, for compilation of the UK VTS database and to UKHO for promulgation of appropriate details in the Admiralty List of Radio Signals Volume 6 and on Admiralty Chart(s).

Ports with VTS services are encouraged to provide details to IALA for promulgation on the World VTS Guide website.

ANNEX 2

NATIONAL AND INTERNATIONAL GUIDELINES & LEGISLATION

The following documents provide the framework for VTS Operations:

International Convention for the Safety of Life at Sea (SOLAS V, 2002) – Regulation 12	Vessel Traffic Services. Came into force on 1 July 2002
IMO Resolution A.857(20)	Guidelines for Vessel Traffic Services. Adopted on 27 November 1997.
IALA VTS Manual 2002	
IALA Recommendation V-103	Standards for Training and Certification of VTS Personnel. May 1998.
IALA Recommendation V-119	Implementation of Vessel Traffic Services. September 2000.
IALA Guidelines on Risk Management	Published December 2000.
Harbours Act 1964	
Harbours Act (Northern Ireland) 1970	
Port Marine Safety Code	Published March 2000.
Guide to Good Practice	Supplementary information concerning the Port Marine Safety Code, published March 2002.
Acts, Orders and Byelaws pertaining to individual Ports	
Resolution A.918 (20)	Standard Marine Communication Phrases. November 2001.
Resolution A.851 (20)	General principles for ship reporting systems and ship reporting requirements, including guidelines for reporting incidents involving dangerous goods, harmful substances and / or marine pollutants. November 1997.
MSC/Circular 952	IALA Standards for training and certification of Vessel Traffic Services (VTS) personnel. Adopted May 2000.

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Annex 4

Marine Guidance Note 240 (M+F)
Assessment of the need for
Vessel Traffic Services (VTS) or Port Information

Maritime and Coastguard Agency

MARINE GUIDANCE NOTE

MGN 240 (M+F)

Assessment of the need for Vessel Traffic Services (VTS) or Port Information

Note to Port and VTS Authorities, VTS Operators, Masters and Deck Officers of Merchant Vessels and Skippers and Watchkeepers of Fishing and recreational Vessels.

This note should be read in conjunction with MGN 238 and MGN 239.

Summary

The purpose of this note is to assist Statutory Harbour Authorities in assessing the contribution that VTS or provision of Port Information can provide in mitigating risk following a Formal Risk Assessment and to aid the decision making process in judging the need for establishing a VTS or the review of an existing VTS, as part of traffic management.

Key points:

- This note is developed from existing international guidelines; IMO resolution A.857(20), MSC/Circular 952 & IALA VTS Manual (2002) and takes account of the UK's particular situation.
- It will be used by the Maritime and Coastguard Agency (MCA), as the Competent Authority, in assessing the need for a Coastal VTS.
- Other statutory authorities concerned with the need for the safety of navigation should use this note as a guide in determining whether there is a need to establish a VTS.
- It complements the Port Marine Safety Code and the Guide to Good Practice on the management of safety in ports.

Note

Although this MGN is aimed essentially at shore based establishments, there is merit in its distribution to a wider audience. To promote awareness of the important contribution that VTS and Port Information make to the maritime industry and to indicate the approach to VTS adopted in the UK, it is appropriate that all recipients of VTS receive this information.

The Port Marine Safety Code and the Guide to Good Practice were published by the Department for Transport (DfT) in March 2000 and March 2002 respectively.

1.0 INTRODUCTION

The term VTS is used in this document in the same specific sense as in the International Maritime Organisation (IMO) and International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA) documentation referenced.[1] This describes three categories of service (Information Service, Navigational Assistance Service and Traffic Organisation Service) by reference to their functionality. It also specifies a standard for training leading to a certificate (V-103/1 and V-103/2). The term VTS is used to describe systems that both have the functionality specified and are operated by people trained to the V-103 standard. The training standards have been developed to encompass VTS operations ranging from provision of an Information Service to Traffic Organisation Service. The latter may be more than the requirements many ports derive from their risk assessment. However, this guidance is intended for those harbour authorities with – or proposing – all categories of VTS, which necessarily require operators to be trained to the V-103 standard.

These guidelines should be used in conjunction with IMO Resolution A.857(20) Guidelines for VTS, IALA Recommendation V-119, The Implementation of Vessel Traffic Services, IALA Guidelines on Risk Management, the IALA VTS Manual 2002, the Port Marine Safety Code and the Guide to Good Practice.

2.0 ESTABLISHING THE REQUIREMENT

Every harbour is different and the requirement to manage navigation varies from one to another. These guidelines can only deal with principles of good practice. They recognise that vessel traffic management systems are essential in some cases but are inappropriate in many others. A formal assessment of navigational risk, as required by the Port Marine Safety Code will determine what management of navigation is required and whether, and to what degree, monitoring and traffic organisation needs to play a role in mitigating risk.

A Statutory Harbour Authority's primary duty is to ensure the safe and efficient use of the harbour by those who have the right to use its facilities and navigate its waters. This includes a duty to regulate navigation using available powers. Exercise of this function depends upon communication with users and is typically located where port communications from vessels are handled. The term Port Information and VTS are, thus, applied to this function in these guidelines.

3.0 VTS

VTS contributes to safety of life at sea, safety and efficiency of navigation and protection of the marine environment, adjacent shore areas, worksites and offshore installations from possible adverse effects of maritime traffic. The service should have the capability to interact with the traffic and to respond to traffic situations developing in the VTS area.[2] VTS may contribute to port and general maritime security.

A clear distinction needs to be made between a Port VTS and a Coastal VTS. A Port VTS is mainly concerned with vessel traffic to and from a port or harbour or harbours, while a Coastal VTS is mainly concerned with vessel traffic passing through the area and usually only an Information

[1] IMO Resolution A.857(20) and the IALA VTS Manual 2002
[2] SOLAS Chapter V, Regulation 12 (1)

Service is rendered. Although an Information Service may be independent, a Navigational Assistance Service will include an Information Service, whilst a Traffic Organisation Service will normally include both Information and Navigational Assistance Services.

The benefits of implementing a VTS are that it allows identification and monitoring of vessels, longer term planning of vessel movements and provision of navigational information and assistance. It can also assist in prevention of pollution, the co-ordination of pollution response and the protection of the marine environment.

The efficiency of a VTS will depend on the reliability and continuity of communications and on the ability to provide good and unambiguous information. The scope of possible risk mitigation measures will depend on the system's capability of detecting a developing dangerous situation and on the ability to give timely warning of it.

The precise objectives of any VTS will depend upon the particular circumstances in the VTS Area and the volume and character of maritime traffic. However, it should be recognised that VTSs are seen as an important tool for mitigating risk for any authority charged with responsibility for the safety of navigation.

Guidelines for VTS are laid down by the International Maritime Organisation (IMO) in IMO Resolution A.857(20). As stated, VTS can be made up of one or more of three services, namely:

(1) Information Service – a service to ensure that essential information becomes available in time for on-board navigational decision-making;[3]

(2) Navigational Assistance Service – a service to assist on-board navigational decision-making and to monitor its effects;[4]

(3) Traffic Organisation Service – a service to prevent the development of dangerous maritime traffic situations and to provide for the safe and efficient movement of vessel traffic within the VTS area.[5]

Further guidance on the UK definitions of the three categories of VTS can be found in MGN 238.

4.0 PORT INFORMATION

Some ports will identify from their risk assessment the need to provide a VTS as specified in the IMO and IALA documentation. To accommodate all ports the UK has chosen to introduce Port Information. This service is applicable to those ports where it has been assessed that a VTS, as described above, is excessive or inappropriate. They will not, therefore, require to train their operators to the V-103 standard. The term Port Information is used in this document to describe the services provided by such ports – it does not imply a lower standard, or a poorer service to customers. The main difference arising from provision of Port Information is that it does not provide VTS. As such, the training requirement for its operators is less comprehensive and the operators are unlikely to be certified to the V-103 standard.

Provision of Port Information is designed to improve port safety and co-ordination of port services within the port community by dissemination of port information with vessels and berth or terminal operators. It is mainly

[3] IMO Resolution A.857(20) paragraph 1.1.9.1
[4] IMO Resolution A.857(20) paragraph 1.1.9.2
[5] IMO Resolution A.857(20) paragraph 1.1.9.3

concerned with the management of the port, by the supply of information on berth and port conditions. Provision of Port Information can also act as a medium for liaison between vessels and stevedores or allied services, as well as providing a basis for implementing Port Emergency Plans.

Identification of the threshold between Port Information and VTS may be difficult to determine. It is likely to be port specific and will only become clear following the risk assessment process, when all mitigating factors have been considered. Port Information is applicable where interaction is unnecessary to fulfil the statutory requirements of the harbour authority's duties with regards to navigational safety. It is not required to have the ability and/or the resources to respond to developing traffic situations. Neither is there a requirement for a vessel traffic image[6] to be maintained.

Principal considerations will be:

(1) The complexity of the information required to be exchanged;

(2) The equipment deemed necessary;

(3) The competence of the operators.

Examples of Port Information may include:

(1) Details of shipping movements;

(2) Visibility in the area;

(3) Wind speed and direction;

(4) Tidal height;

(5) Berthing information;

(6) Preferred anchorages.

It should be noted that whilst this list appears similar to that for an Information Service the key issue is whether the port interacts with the vessel traffic or not.

5.0 5THE ASSESSMENT PROCESS

5.1 General Assessment

A Statutory Harbour Authority is required to conduct a Formal Risk Assessment of the area for which it has responsibility for the safety of navigation.[7] The assessment process includes the following phases:

(1) Risk Assessment Phase;

(2) Inception Phase;
(3) Feasibility and Design Phase;
(4) Cost / Benefit Phase.

5.2 Risk Assessment Phase

The risk assessment should start with a review of the organisation, its culture, policies, procedures and priorities, and assess the existing safety management structure and identifying any relevant marine hazards and risks. This assessment may be based on the identification of casualty categories within the given area, such as collisions and groundings. However, one of the main difficulties faced in undertaking any form of risk assessment is that, in many cases, the full consequences of recorded casualties are not available. Instead they must be estimated by expert judgement. One must also take into consideration that the future is not a simple extension of history, so more refined methods must be applied to assess the estimated casualty costs and other consequences for the

[6] IMO Resolution A.857(20), paragraph 1.1.8
[7] Port Marine Safety Code, Part Two, section 2.2

next ten years or so by taking into account all foreseeable trends. Risk estimation and evaluation form vital inputs to any risk assessment.

The traditional approach to safety in the maritime industry has been to react to problems and issues as they occur. This approach is not based on a clear understanding of the hazards or risks involved, nor of the overall risk profile of the procedures or systems involved. The development of the process of Formal Risk Assessment formalised the review, analysis and assessment of procedures and systems in order to anticipate problems before they develop into accidents. The use of Formal Risk Assessment techniques is recommended. The IALA Guidelines on Risk Management contain further details on risk assessment.

5.3 Inception Phase

In the Inception Phase, all relevant problems in the maritime area concerned should be defined and analysed. Further, as a second step in the process, operational objectives should be established with the ultimate aim of alleviating the defined problems. The last step in this phase is to identify the most appropriate traffic management tools, in terms of effectiveness and costs, to alleviate the defined problems.

5.3.1 Applicability of VTS[8]

A VTS may be particularly appropriate in an area that includes any of the following :

(1) High vessel traffic density;

(2) Vessel Traffic carrying hazardous cargoes;

(3) Conflicting and complex navigational patterns;

(4) Difficult hydrographical, hydrological and meteorological elements;

(5) Shifting shoals and other local navigational hazards;

(6) Environmental sensitivities and constraints;

(7) Interaction between vessel traffic with other marine-based activities;

(8) Existing or planned VTS in adjacent waters and the need for co-operation between neighbouring states/ports if appropriate;

(9) Narrow channels, port configuration, bridges, areas where vessels are manoeuvring or areas where the progress of vessels may be constrained;

(10) Existing or foreseeable changes in the traffic pattern resulting from port or offshore terminal developments or offshore exploration and exploitation in the area.

5.3.2 Applicability of Port Information

Provision of Port Information may be appropriate in an area where a VTS would exceed the outcome of the Formal Risk Assessment.

5.4 Feasibility and Design Phase

The overall objective is to produce a system that meets the requirements of the Statutory Harbour Authority and against which the design can be validated, verified and tested before development. There are normally two levels or sub-phases in defining the requirements of a VTS or the provision of Port Information. They are:

(1) The development of an overview of the

[8] Guide to Good Practice 7.2.5 / 6

system and an intermediate level of detail about the level of the system's function, operation and environment, referred to as the feasibility sub-phase, and;

(2) The development of the detailed technical specification of requirements, referred to as the design sub-phase.

The factors that need to be considered include:

(1) Delineating the VTS Area / area over which Port Information is to be provided:
   a) Local geography;
   b) Local prevailing meteorological and hydrological conditions;
   c) Numbers of vessels and categories;
   d) Commercial factors;
   e) Other maritime activities.

(2) The location of the VTS Centre.

(3) Environmental aspects
   a) System users and user requirements
   b) Maritime users;
   c) Allied services;
   d) Port operations;
   e) Adjacent VTSs
   f) Emergency services;
   g) Other stakeholders.

For further detailed information see IALA VTS Manual 2002.

5.5 Cost/Benefit Phase

After completion of the Design and Risk Assessment phases, a Cost Benefit Analysis should be carried out to determine whether the expected reduction in risk is justified in terms of the level of investment required. Both the additional direct and indirect benefits and prospects that a VTS or provision of Port Information might offer, including additional value added services for the traffic in the future, as well as the benefits to shore based port operations, should be taken into consideration.

Indirect benefits should include an estimation of costs that would otherwise have been incurred in the event of an incident, based on the projected difference the frequency of occurrence of such incidents before and after implementation of any changes.

For further detailed information see IALA VTS Manual 2002, chapter 2, paragraph 2.1.5, IALA VTS Manual 2002 Annex 2, IMO MSC/Circular 829 & MEPC/Circular 335 of 17 November 1997 on "Interim Guidelines for the application of Formal Safety Assessment (FSA) to the IMO rule making process".

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Annex 5

Extract from IMO Resolution A.857(20)
Guidelines for Vessel Traffic Services

ANNEX 1

GUIDELINES AND CRITERIA FOR VTS

PREAMBLE

1 These Guidelines are associated with SOLAS Regulation V/8-2 and describe the principles and general operational provisions for the operation of a vessel traffic service (VTS) and participating vessels.

2 Contracting Governments should take account of these Guidelines when planning, implementing and operating vessel traffic services.

3 These Guidelines should be used in conjunction with the applicable Guidelines and Criteria for Ship Reporting Systems, resolution MSC.43(64) and the IALA VTS Manual.

1 DEFINITIONS AND CLARIFICATIONS

1.1 The following terms are used in connection with vessel traffic services:

.1 "Vessel traffic service" (VTS) - a service implemented by a Competent Authority, designed to improve the safety and efficiency of vessel traffic and to protect the environment. The service should have the capability to interact with the traffic and to respond to traffic situations developing in the VTS area.

.2 "Competent authority" - the authority made responsible, in whole or in part, by the Government for safety, including environmental safety, and efficiency of vessel traffic and the protection of the environment.

.3 "VTS authority" - the authority with responsibility for the management, operation and co-ordination of the VTS, interaction with participating vessels and the safe and effective provision of the service.

.4 "VTS area" - the delineated, formally declared service area of the VTS. A VTS area may be subdivided in sub-areas or sectors.

.5 "VTS centre" - the centre from which the VTS is operated. Each sub-area of the VTS may have its own sub-centre.

.6 "VTS operator" - an appropriately qualified person performing one or more tasks contributing to the services of the VTS.

.7 "VTS sailing plan" - a plan which is mutually agreed between a VTS Authority and the master of a vessel concerning the movement of the vessel in a VTS area.

.8 "VTS traffic image" - the surface picture of vessels and their movements in a VTS area.

.9 "VTS services" - VTS should comprise at least an information service and may also include others, such as a navigational assistance service or a traffic organization service, or both, defined as follows:

.9.1 An information service is a service to ensure that essential information becomes available in time for on-board navigational decision-making.

.9.2 A navigational assistance service is a service to assist on-board navigational decision-making and to monitor its effects.

.9.3 A traffic organization service is a service to prevent the development of dangerous maritime traffic situations and to provide for the safe and efficient movement of vessel traffic within the VTS area.

.10 "Allied services" - services are services actively involved in the safe and efficient passage of the vessel through the VTS area.

.11 "Hazardous cargoes" - include:
.11.1 goods classified in the International Maritime Dangerous Goods (IMDG) Code;
.11.2 substances classified in Chapter 17 of the IMO International Code for Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC) Code, and in Chapter 19 of the IMO International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk (IGC) Code;
.11.3 oils as defined in MARPOL Annex I;
.11.4 noxious liquid substances as defined in MARPOL Annex II;
.11.5 harmful substances as defined in MARPOL Annex III; and
.11.6 radioactive materials specified in the Code for the Safe Carriage of Irradiated Nuclear Fuel, Plutonium and High Level Radioactive Wastes in Flasks on Board Ships (INF) Code.

2 GENERAL CONSIDERATIONS FOR VESSEL TRAFFIC SERVICES

2.1 Objectives

2.1.1 The purpose of vessel traffic services is to improve the safety and efficiency of navigation, safety of life at sea and the protection of the marine environment and/or the adjacent shore area, worksites and offshore installations from possible adverse effects of maritime traffic.

2.1.2 A clear distinction may need to be made between a Port or Harbour VTS and a Coastal VTS. A Port VTS is mainly concerned with vessel traffic to and from a port or harbour or harbours, while a Coastal VTS is mainly concerned with vessel traffic passing through the area. A VTS could also be a combination of both types. The type and level of service or services rendered could differ between both types of VTS; in a Port or Harbour VTS a navigational assistance service and/or a traffic organization service is usually provided for, while in a Coastal VTS usually only an information service is rendered.

2.1.3 The benefits of implementing a VTS are that it allows identification and monitoring of vessels, strategic planning of vessel movements and provision of navigational information and assistance. It can also assist in prevention of pollution and co-ordination of pollution response. The efficiency of a VTS will depend on the reliability and continuity of communications and on the ability to provide good and unambiguous information. The quality of accident prevention measures will depend on the system's capability of detecting a developing dangerous situation and on the ability to give timely warning of such dangers.

2.1.4 The precise objectives of any vessel traffic service will depend upon the particular circumstances in the VTS area and the volume and character of maritime traffic as set forth in 3.2 of these Guidelines and Criteria.

2.2 Responsibilities and liability

2.2.1 Where two or more Governments have a common interest in establishing a VTS in a particular area, they should develop a co-ordinated vessel traffic service on the basis of an agreement between them. Where a co-ordinated vessel traffic service is established, it should have uniform procedures and operations.

2.2.2 In planning and establishing a VTS, the Contracting Government or Governments or the competent authority should:

.1 ensure that a legal basis for the operation of a VTS is provided for and that the VTS is

operated in accordance with national and international law;

.2 ensure that objectives for the VTS are set;

.3 ensure that a VTS authority is appointed and legally empowered;

.4 ensure that the service area is delineated and declared a VTS area; where appropriate, this area may be subdivided in sub-areas or sectors;

.5 determine the type and level of services to be provided, having regard to the objectives of the VTS;

.6 establish appropriate standards for shore- and offshore-based equipment;

.7 ensure that the VTS authority is provided with the equipment and facilities necessary to effectively accomplish the objectives of the VTS;

.8 ensure that the VTS authority is provided with sufficient staff, appropriately qualified, suitably trained and capable of performing the tasks required, taking into consideration, the type and level of services to be provided and the current IMO Guidelines on the recruitment, qualifications and training of VTS operators given in Annex 2;

.9 establish appropriate qualifications and training requirements for VTS operators, taking into consideration the type and level of services to be provided;

.10 ensure that provisions for the training of VTS operators are available;

.11 instruct the VTS authority to operate the VTS in accordance with relevant IMO resolutions;

.12 establish a policy with respect to violations of VTS regulatory requirements, and ensure that this policy is consistent with national law. This policy should consider the consequences of technical failures, and due consideration should be given to extraordinary circumstances that result.

2.2.3 In operating a VTS the VTS authority should:

.1 ensure that the objectives of the VTS are met;

.2 ensure that the standards set by the competent authority for levels of services and operators qualifications and equipment are met;

.3 ensure that the VTS is operated in conformity with relevant IMO resolutions;

.4 ensure that the VTS operations are harmonized with, where appropriate, ship reporting and routeing measures, aids to navigation, pilotage and port operations;

.5 consider, where appropriate, the participation of the pilot both as a user and provider of information;

.6 ensure that a continuous listening watch on the designated radio frequencies is kept and that all published services are available during the operational hours of the VTS;

.7 ensure that operating procedures for routine and emergency situations are established;

.8 in a timely manner, provide mariners with full details of the requirements to be met and the procedures to be followed in the VTS area. This information should include the categories of vessels required or expected to participate; radio frequencies to be used for reporting; areas of applicability; the times and geographical positions for submitting reports; the format and content of the required reports; the VTS authority responsible for the operation of the service; any information, advice or instructions to be provided to participating ships; and the types and level of services available. This information should be published in the appropriate nautical publications and in the "World VTS Guide".

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* Refer to MSC/Circ.586 on the IALA/IAPH/IMPA World VTS Guide.

2.2.4 The liability element of an accident following compliance with VTS guidance is an important consideration which can only be decided on a case-by-case basis in accordance with national law. Consequently, a VTS authority should take into account the legal implications in the event of a shipping accident where VTS operators may have failed to carry out their duty

competently.

2.2.5 Contracting Governments should ensure that ships flying their flag comply with the requirements of vessel traffic services. Those Contracting Governments which have received information of an alleged violation of a VTS by a ship flying their flag should provide the Government which has reported the offence with details of any appropriate action taken.

2.3 VTS services

The following guidance concerning the services that are rendered by a VTS should be taken into account:

2.3.1 The information service is provided by broadcasting information at fixed times and intervals or when deemed necessary by the VTS or at the request of a vessel, and may include for example reports on the position, identity and intentions of other traffic; waterway conditions; weather; hazards; or any other factors that may influence the vessel's transit.

2.3.2 The navigational assistance service is especially important in difficult navigational or meteorological circumstances or in case of defects or deficiencies. This service is normally rendered at the request of a vessel or by the VTS when deemed necessary.

2.3.3 The traffic organization service concerns the operational management of traffic and the forward planning of vessel movements to prevent congestion and dangerous situations, and is particularly relevant in times of high traffic density or when the movement of special transports may effect the flow of other traffic. The service may also include establishing and operating a system of traffic clearances or VTS sailing plans or both in relation to priority of movements, allocation of space, mandatory reporting of movements in the VTS area, routes to be followed, speed limits to be observed or other appropriate measures which are considered necessary by the VTS authority.

2.3.4 When the VTS is authorized to issue instructions to vessels, these instructions should be result-oriented only, leaving the details of execution, such as course to be steered or engine manoeuvres to be executed, to the master or pilot on board the vessel. Care should be taken that VTS operations do not encroach upon the master's responsibility for safe navigation, or disturb the traditional relationship between master and pilot.

2.3.5 A VTS area can be divided into sectors, but these should be as few as possible. Area and sector boundaries should not be located where vessels normally alter course or manoeuvre or where they are approaching areas of convergence, route junctions or where there is crossing traffic. VTS centres in an area or sector should use a name identifier. The boundaries should be indicated in the appropriate nautical publications and in the "World VTS Guide".*

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* Refer to MSC/Circ.586 on the IALA/IAPH/IMPA World VTS Guide.

2.4 Communication and reporting

2.4.1 Communication between a VTS authority and a participating vessel should be conducted in accordance with the Guidelines and Criteria for Ship Reporting systems and should be limited to information essential to achieve the objectives of the VTS.** IMO Standard Marine Communication Phrases should be used where practicable.

** Refer to the Guidelines and Criteria for Ship Reporting Systems, paragraph 2.2, Communication. Resolution

MSC.43(64).

2.4.2 In any VTS message directed to a vessel or vessels it should be made clear whether the message contains information, advice, warning, or an instruction.

2.5 Organization

2.5.1 Elements of a VTS

In order to perform the required tasks a VTS organization requires adequate staff, housing, instrumentation and procedures governing operations and interactions between the various elements. The requirements in each field are determined by the particular nature of the VTS area, the density and character of the traffic and the type of service that is to be provided. Consideration should be given to the establishment of back-up facilities to sustain and maintain the desired level of reliability and availability.

2.5.2 Tasks that may be performed in accordance with the service rendered

2.5.2.1 A VTS should at all times be capable of generating a comprehensive overview of the traffic in its service area combined with all traffic influencing factors. The VTS should be able to compile a traffic image, which is the basis for its capability to respond to traffic situations developing in its service area. The traffic image allows the VTS operator to evaluate situations and make decisions accordingly. Data should be collected to compile the traffic image. This includes:

.1 data on the fairway situation, such as meteorological and hydrological conditions and the operational status of aids to navigation;

.2 data on the traffic situation, such as vessel positions, movements, identities and intentions with respect to manoeuvres, destination and routing;

.3 data of vessels in accordance with the requirements of ship reporting and if necessary any additional data, required for the effective operation of the VTS.

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* Refer to the Guidelines and Criteria for Ship Reporting Systems. Resolution MSC.43(64).

2.5.2.2 Vessel's reports by communication between vessels and the VTS Centre should also be used as a major source of necessary data.

2.5.2.3 To respond to traffic situations developing in the VTS area and to decide upon appropriate actions the acquired data should be processed and evaluated. Conclusions from the evaluation need to be communicated to participating vessels. A distinction should be made between the provision of navigational information, being a relay of information extracted from the VTS sensors and the traffic image, and the provision of navigational advice, where a professional opinion is included.

2.5.3 Operating procedures

Where operating procedures are concerned, a distinction should be made between internal and external procedures. Internal procedures cover operating instruments, interactions among the staff and the internal routing and distribution of data. External procedures cover interactions with users and allied services. A further distinction should be made between procedures governing the daily routine and procedures governing contingency planning such as search and rescue and environmental protection activities. All operational procedures, routine or contingency, should be laid down in handbooks or manuals and be an integral part of regular training exercises. Adherence to procedures should be monitored.

2.5.4 Database

A VTS authority should have, if necessary for the operation of the service, a database with the capacity to retain, update, supplement and retrieve data once collected. Any data retained in a system for further use should be made available only on a selective and secure basis.

2.6 Participating vessels

2.6.1 Vessels navigating in an area where vessel traffic services are provided should make use of these services. Depending upon governing rules and regulations, participation in a VTS may be either voluntary mandatory. Vessels should be allowed to use a VTS where mandatory participation is not required.

2.6.2 Decisions concerning the actual navigation and the manoeuvring of the vessel remain with the master. Neither a VTS sailing plan, nor requested or agreed changes to the sailing plan can supersede the decisions of the master concerning the actual navigation and manoeuvring of the vessel.

2.6.3 Communication with the VTS and other vessels should be conducted on the assigned frequencies in accordance with established ITU and SOLAS chapter IV procedures, in particular where a communication concerns intended manoeuvres. VTS procedures should stipulate what communications are required and which frequencies should be monitored. Prior to entering the VTS area, vessels should make all required reports, including reporting of deficiencies. During their passage through the VTS area, vessels should adhere to governing rules and regulations, maintain a continuous listening watch on the assigned frequency and report deviations from the agreed sailing plan, if such a plan has been established in co-operation with the VTS authority.

2.6.4 Masters of vessels should report any observed dangers to navigation or pollution to the VTS centre.

2.6.5 In case of a complete failure of the vessel's appropriate communication equipment the master shall endeavour to inform the VTS centre and other vessels in the vicinity by any other available means of communication of the vessel's inability to communicate on the assigned frequency. If the technical failure prevents the vessel from participation or continuing its participation in a VTS, the master should enter in the vessel's log the fact and reasons for not or further participating.

2.6.6 Vessels should carry publications giving full particulars on governing rules and regulations regarding identification, reporting and/or conduct in the VTS area to be entered.

3 GUIDANCE FOR PLANNING AND IMPLEMENTING VESSEL TRAFFIC SERVICES

3.1 Responsibility for planning and implementing a VTS

It is the responsibility of the Contracting Government or Governments or Competent authorities to plan and implement vessel traffic services or amendments to such services.

3.2 Guidance for planning a vessel traffic service

3.2.1 Local needs for traffic management should be carefully investigated and determined by analysing casualties, assessing risks and consulting local user groups. Where the risks are considered VTS-addressable, in cases where monitoring of the traffic and interaction between Authority and participating vessel is considered to be essential, the implementation of a VTS, as an important traffic- management instrument, should be considered.

3.2.2 A VTS is particularly appropriate in an area that may include any of the following:

.1 high traffic density;
.2 traffic carrying hazardous cargoes;
.3 conflicting and complex navigation patterns;
.4 difficult hydrographical, hydrological and meteorological elements;
.5 shifting shoals and other local hazards;
.6 environmental considerations;
.7 interference by vessel traffic with other marine-based activities;
.8 a record of maritime casualties;
.9 existing or planned vessel traffic services in adjacent waters and the need for co-operation between neighbouring States, if appropriate;
.10 narrow channels, port configuration, bridges and similar areas where the progress of vessels may be restricted;
.11 existing or foreseeable changes in the traffic pattern resulting from port or offshore terminal developments or offshore exploration and exploitation in the area.

3.2.3 In further deciding upon the establishment of a VTS, Contracting Governments or competent authorities should also consider the responsibilities set forth in 2.2 of these Guidelines and Criteria, and the availability of the requisite technology and expertise.

3.3 Further guidance on vessel traffic services

3.3.1 VTS Authorities should, in the planning of the VTS to be established, make use of available manuals prepared by and published by appropriate international organizations or associations.

3.3.2 The following references should also be consulted for further details:

.1 IMO Guidelines and Criteria for Ship Reporting Systems (resolution MSC.43(64))
.2 General Principles for Ship Reporting Systems and Ships Reporting Requirements, including Guidelines for Reporting Incidents Involving Dangerous Goods, Harmful Substances and/or Marine Pollutants (resolution A.851(20))
.3 The IALA vessel traffic services Manual
.4 IALA/IMPA/IAPH/World VTS Guide

Annex 6

Extract from Directive 2002/59/EC of the European Parliament
and of the Council of 27 June 2002

TITLE I

SHIP REPORTING AND MONITORING

Article 4

Notification prior to entry into ports of the Member States

1. The operator, agent or master of a ship bound for a port of a Member State shall notify the information in Annex I(1) to the port authority:

(a) at least twenty-four hours in advance; or

(b) at the latest, at the time the ship leaves the previous port, if the voyage time is less than twenty-four hours; or

(c) if the port of call is not known or it is changed during the voyage, as soon as this information is available.

2. Ships coming from a port outside the Community and bound for a port of a Member State carrying dangerous or polluting goods, shall comply with the notification obligations of Article 13.

Article 5

Monitoring of ships entering the area of mandatory ship reporting systems

1. The Member State concerned shall monitor and take all necessary and appropriate measures to ensure that all ships entering the area of a mandatory ship reporting system, adopted by the IMO according to Regulation 11 Chapter V of the SOLAS Convention and operated by one or more States, of which at least one is a Member State, in accordance with the relevant guidelines and criteria developed by the IMO, comply with that system in reporting the information required without prejudice to additional information required by a Member State in accordance with IMO Resolution A.851(20).

2. When submitting a new mandatory ship reporting system to the IMO for adoption or a proposal to amend an existing reporting system, a Member State shall include in its proposal at least the information referred to in Annex I(4).

Article 6

Use of automatic identification systems

1. Any ship calling at a port of a Member State must, in accordance with the timetable set out in Annex II(I), be fitted with an AIS which meets the performance standards drawn up by the IMO.

2. Ships fitted with an AIS, shall maintain it in operation at all times except where international agreements, rules or standards provide for the protection of navigational information.

Article 7

Use of ship's routing systems

1. Member States shall monitor and take all necessary and appropriate measures to ensure that all ships entering the area of a mandatory ships' routing system adopted by the IMO according to Regulation 10 Chapter V of the SOLAS

Convention and operated by one or more States, of which at least one is a Member State, use the system in accordance with the relevant guidelines and criteria developed by the IMO.

2. When implementing a ship's routing system, which has not been adopted by the IMO, under their responsibility, Member States shall take into account, wherever possible, the guidelines and criteria developed by the IMO and promulgate all information necessary for the safe and effective use of the ship's routing system.

Article 8

Monitoring of the compliance of ships with vessel traffic services

Member States shall monitor and take all necessary and appropriate measures to ensure that:

(a) ships entering the area of applicability of a VTS operated by one or more States, of which at least one is a Member State, within their territorial sea and based on the guidelines developed by the IMO, participate in, and comply with, the rules of that VTS;

(b) ships flying the flag of a Member State or ships bound for a port of a Member State and entering the area of applicability of such a VTS outside the territorial sea of a Member State and based on the guidelines developed by the IMO, comply with the rules of that VTS;

(c) ships flying the flag of a third State and not bound for a port in a Member State entering a VTS area outside the territorial sea of a Member State, follow the rules of that VTS wherever possible. Member States should report to the flag State concerned any apparent serious breach of those rules in such a VTS area.

Annex 7

Extract from SI 2004 No.2110 - The Merchant Shipping
(Vessel Traffic Monitoring and Reporting Requirements) Regulations 2004

2004 No. 2110

MERCHANT SHIPPING

The Merchant Shipping (Vessel Traffic Monitoring and Reporting Requirements) Regulations 2004

Made

10th August 2004

Laid before Parliament

16th August 2004

Coming into force

20th September 2004

"United Kingdom waters" means the sea or other waters within the seaward limits of the territorial sea of the United Kingdom;

"VTS" means vessel traffic service;

"vessel traffic service" means a service -

(a) which is designed to improve the safety and efficiency of vessel traffic and to protect the environment and which is capable of interacting with that traffic and responding to traffic situations developing in the VTS area; and

(b) which, in relation to a service operated by the United Kingdom either alone or in conjunction with one or more States, is a service provided from within the United Kingdom which has been designated by the MCA in writing and is specified in a Merchant Shipping Notice.

Competent authority

3. For the purposes of these Regulations -

(a) as regards the United Kingdom, the competent authority shall be the MCA;

(b) as regards an EEA State other than the United Kingdom, the competent authority shall be the authority designated as such by the EEA State in question in accordance with article 22 of the Directive.

Application

4. - (1) Subject to paragraph (2), and unless otherwise stated, these Regulations, apply to -

(a) all United Kingdom ships wherever they may be; and

(b) all non-United Kingdom ships whilst they are in United Kingdom waters.

(2) [____] these Regulations do not apply to -

(a) ships of less than 300 gross tonnage, unless otherwise stated;

(b) warships, naval auxiliaries and other ships owned or operated by the Government of an EEA State which are used for non-commercial public service;

(c) fishing vessels;

(d) traditional ships;

(e) recreational craft having a length of less than 45 metres.

(3) [____] in relation to a ship, these Regulations do not apply to -

(a) bunkers of less than 5,000 tonnes; and

(b) the stores and the equipment,

for use on board that ship.

(4) For the purposes of regulation 10, in relation to a ship, bunkers for use on board that ship shall not be regarded as dangerous or polluting goods.

(5) [deleted]

(6) In this regulation, "length", in relation to a recreational craft, means either -

(a) 96% of the total length of the craft on a waterline at 85% of the least moulded depth measured from the keel line; or

(b) the length from the foreside of the stem to the axis of the rudder stock on that waterline,

whichever is the greater, and where the craft in question is designed with rake of keel, the waterline on which the lengths referred to in (a) and (b) are measured shall be parallel to the designed waterline.

PART 2

SHIP REPORTING AND MONITORING

Notification prior to entry into port

5. - (1) This regulation applies to -

(a) a United Kingdom ship bound for a port located in an EEA State; and

(b) a non-United Kingdom ship bound for a port located in the United Kingdom.

(2) The owner, agent or master of a ship referred to in paragraph (1) shall notify the authority of the port to which the ship in question is bound of the information specified in paragraph (3) in accordance with paragraph (4).

(3) The information referred to in paragraph (2) is -

(a) the name, the call sign, the IMO identification number or the maritime mobile service identity number of the ship;

(b) the port of destination;

(c) the estimated time of arrival at the port of destination, or if required by the authority of the port in question, the pilot station for that port;

(d) the estimated time of departure from the port of destination referred to in sub-paragraph (c); and

(e) the total number of persons on board the ship.

(4) The information shall be notified -

(a) if it is known to which port the ship is bound, at least 24 hours before the arrival of the ship;

(b) if the duration of the voyage is less than 24 hours, no later than the time of departure from the previous port; or

(c) if it is not known to which port the ship is bound until less than 24 hours before the arrival of the ship at the port in question, as soon as possible after it becomes known that the ship is bound for that port.

(5) Where information has been notified in accordance with paragraph (2), the master of the ship in question shall notify immediately the authorities of the port to which the ship is bound of any changes to that information.

(6) A port authority in the United Kingdom to whom information has been notified pursuant to this regulation shall, on receipt of that information, pass it to the MCA by the quickest means possible.

Vessel traffic services within territorial seas

6. - (1) The master of a United Kingdom ship shall ensure that, when the ship enters an area in respect of which a VTS is operated in accordance with the IMO guidelines by -

(a) an EEA State within the territorial sea of that EEA State; or

(b) co-operating States within the territorial seas of those co-operating States,

the ship shall participate in, and comply with, the rules of that VTS.

(2) The master of a non-United Kingdom ship shall ensure that, when the ship enters a relevant area in respect of which a VTS is operated in accordance with the IMO guidelines, the ship shall participate in, and comply with, the rules of that VTS.

(3) In this regulation -

(a) "co-operating States" means two or more States of which at least one shall be an EEA State;

(b) "nautical chart" and "nautical publication" have the same meaning as they have in regulation 2 in Chapter V of the Annex to the SOLAS Convention;

(c) "relevant area" means an area within the territorial sea of the United Kingdom;

(d) "rules", in relation to a VTS, means the most recent rules which have been -

(i) published in a nautical chart or a nautical publication, or

(ii) promulgated so that masters of ships ought reasonably to be aware of them.

Vessel traffic services outside territorial seas

7. - (1) Paragraph (2) applies to -

(a) a United Kingdom ship; and

(b) a non-United Kingdom ship which is bound for a port in the United Kingdom.

(2) The master of a ship referred to in paragraph (1) shall ensure that, when the ship enters a VTS area outside the territorial sea of an EEA State and that VTS is operated in accordance with the IMO guidelines by -

(a) an EEA State ; or

(b) co-operating States,

the ship shall participate in, and comply with, the rules of that VTS.

(3) The master of a non-United Kingdom ship which is not bound for a port in the United Kingdom shall ensure that, when the ship enters a VTS area outside the territorial sea of the United Kingdom and that VTS is operated by -

(a) the United Kingdom; or

(b) two or more States one of which is the United Kingdom,

the ship shall follow the rules of that VTS whenever possible.

(4) If the MCA is of the opinion that a non-United Kingdom ship has failed substantially to comply with paragraph (3), the MCA shall report that failure to the flag State of the ship in question.

(5) In this regulation, "co-operating States" and "rules", in relation to a VTS, have the same meaning as they have in regulation 6.

Annex 8

Extract from Navigations Operations Manual -
VTS & Data Centre

NAVIGATION
OPERATIONS MANUAL – VTS & DATA CENTRE

PAVIS

Introduction

The PAVIS system provides a fully integrated administration and information system for Pilotage and Vessel Traffic Services. The system is used on two sites although other ABP sections and authorised agencies are able to use the system. The two sites are:

- VTS Humber at Spurn Point
- Data Centre at Port House, Hull

Each of the sites has a particular role to play.

System

VTS Humber situated at Spurn Point provides the traffic monitoring and control function.

The Data Centre, situated at Port House, Hull, provides the information assembly part of the system.

This gives a clear point of entry for agents to pass information and requirements for pilots for all Humber, Trent and Ouse ports, jetties, *etc.*, and give a clear role for VTS. So far as VTS is concerned the river will be divided into two districts, namely:

- VTS Humber Approaches
- VTS Humber

A Note From The Harbour Master

There is a clear distinction between “mandatory” duties and “voluntary” duties and this needs to be clearly understood when analysing VTS tasks. Those powers and responsibilities granted to the Harbour Master by the 1972 British Transport Docks Board Act, Byelaws 1990 and General Directions are mandatory (*i.e.* he/she must do them), particularly the overall responsibilities to ensure safe navigation. In discharging these responsibilities on behalf of the Harbour Master, VTS MUST DIRECT VESSELS. It is, for example, the Harbour Master’s responsibility to direct vessels awaiting berths to a safe anchorage within the Harbour. In doing so, however, they must not attempt to interfere with the Master/ Pilot’s conduct of his vessel, *i.e.* they must not attempt to pilot it. Any advice given in this respect is voluntary and must be requested.

User and Task Analysis

AHM Tasks and Job Responsibilities

AHM Job Responsibilities

An AHM, based at Spurn Point is required to take the following roles.

- The boarding and landing of pilots and the monitoring of the
- Pilot launches *(AHM Approaches)*
- VTS duties
- In charge of Data Centre at night and at times when Senior Management is not available.

Inbound Vessels

- To be the first point of contact for all vessels.
-
- To be responsible for all vessels from first point of contact up to 100 yards below the Skelton railway bridge near Goole and to the south side of the Stone bridge at Gainsborough.
-
- The boarding of pilots and the monitoring of the pilot launches. *(AHM Approaches)*

Movement Vessels

To be responsible for all movements on the river.

Outbound Vessels

- To be responsible for all vessels from first point of contact out to the limits of the district.

- The landing of pilots and the monitoring of the pilot launches. (AHM Approaches)

AHM Tasks

- At the start of the shift carry out verbal hand over with present AHM. (Information is available on the upriver and down river summary screen of present logged in user).

- Log in to PAVIS.

- Check unread e-mail (Possibly System indicator).

- Perform VTS duties and boarding and landing of pilots and the monitoring of pilot launches.

- Review upriver, down river and anchorage list to clarify status of approaches.

- Monitor all ships that are underway (arriving, departing and moving) or are likely to get underway within the next 12 hours.

- Monitor upriver bound, down river bound, anchored and vessels sheltering from the weather.

- Receive contact from arriving or departing ship via VHF radio.

- Identify ship via ship name.

- Create new ship if unknown to PAVIS ship database.

- Verify vessels' voyage is expected in the Humber.

- Create new 'simple' vessel voyage report if unknown to PAVIS (the remainder to be completed by MIO's in Hull).

- Inform MIO's in the Data Centre at Port House, Hull of new voyage and request completion of vessel voyage report.

- Receive ship details from ship and change details if required (i.e. draft of vessel).

- Review ship status and change as appropriate.

- Receive voyage details (ETA, ETD, defects, Schedule II, cargo, PEC details etc.) and update voyage report.

- Review and confirm ships berthing orders.

- Contact MIO's if there is a problem with berthing orders.

- Advise vessel of orders.

- If vessel is to miss tide then send vessel to anchorage after confirmation with vessel/agent/owner.

- Receive radio contact from vessel at reporting point, and enter reporting point details such as time and free text.

- Pass vessel on to the other Assistant Harbour Master (when vessel has passed designated hand-over point).

- Receive radio contact from vessel at reporting point.

- Enter reporting point details such as time and free text.
- Enter details on vessel entering dock or anchoring.
- Receive radio contact from vessel stating that it is about to leave the anchorage.
- Record voyage progress details, *e.g.* reporting point information.
- Enter details such as time and free text.
- Passage Plan vessel monitor and Resolve Passage Plan issues
- If vessel is to miss tide advise vessel to move to an anchorage.
- Prepare and broadcast the 2 hourly broadcast sheets.
- Receive radio contact about incidents and Manage Incidents.

Note: there are two main VHF frequencies used by VTS Humber at Spurn Point, Channels 12 and 14.

Tasks Specific to Pilotage

- Review list of vessels and pilots allocated to vessels.
- Verify that vessel requires or has been allocated a pilot.
- Request a pilot allocation from the MIO in Data Centre Hull.
- Review availability of allocated pilot at Spurn Point.
- Contact MIO in Data Centre at Hull and request new pilot allocation.
- Maintain pilot boarding list.
- Request pilot to board pilot launch.
- Tell Coxswain of pilot launch which ships to visit for pilot allocation and the radar anchor circles reference of each anchored ship and record boarding time.
- Monitor distribution of pilots.
- Monitor ships that have pilots on board or have orders to carry pilots.
- Receive radio contact from distributed pilot.
- Confirm details from pilot and produce notes.
- Receive radio contact from boarded pilot.

General Tasks

- Carry out short verbal hand-over to on-coming AHM.
- Log out of System.

VTS, Humber

Call Sign "**VEE TEE ESS HUMBER**"

Continuous listening watch on VHF Channels 16, 14 and 12

Working VHF Channels 14 and 12

Channel 14 in the Humber Approaches to the meridian of longitude through the No. 4A Cleeness Light Float

and

Channel 12 from this meridian through No. 4A Cleeness Light Float to 100 yards downstream of the Skelton Railway Bridge at Goole on the Ouse and the south side of the Stone Bridge at Gainsborough on the Trent.

All telephone, facsimile and telex messages are done through the Data Centre at Port House, Hull.

- **TEL:**
- **FAX:**
- **TELEX:**

Discharging Responsibilities On Behalf Of The Harbour Master, Humber

The power to regulate vessel traffic in the Humber, Trent and Ouse is conferred upon the Harbour Master (and through him upon all VTS operatives), by the British Transport Docks Act 1972. These powers are given effect by "general" and "special" directions to navigation and by the Humber Navigation Byelaws 1990. It is important to realise, however, that in conferring powers upon the Harbour Master, the Act also confers a duty

upon him to exercise those powers. Thus, if he observes that a vessel is navigating unsafely and is, for example, about to run aground or perhaps to collide with another vessel then he has a duty to do everything in his power to prevent a mishap taking place. In doing so, however, he should avoid giving direct pilotage advice if at all possible.

In addition he has a duty to inform vessels about the condition of the river, warn them of any hazards to navigation which currently exist, and direct them to comply with the law and particularly with the Byelaws.

In the case of “Passage Plan” vessels he must ensure that they conform to the provisions of the Plan and must advise them of any serious or unwarranted departures from it.

He must provide the initial response to any serious marine emergencies which occur within the harbour and must use all of the resources available to him to contain the situation until it can be handed over to the appropriate authority. This will normally be HM Coastguard where there is a threat to human life. In the case of an oil pollution incident, this is to be dealt with by ABP as per the “Humber Clean” plan.

AHM Tasks and Job Responsibilities

AHM Job Responsibilities

An AHM, based at Spurn Point is required to take the following roles.

- The boarding and landing of pilots and the monitoring of the
- Pilot launches *(AHM Approaches)*
- VTS duties
- In charge of Data Centre at night and at times when Senior Management is not available.

Inbound Vessels

- To be the first point of contact for all vessels.
-
- To be responsible for all vessels from first point of contact up to 100 yards below the Skelton railway bridge near Goole and to the south side of the Stone bridge at Gainsborough.
-
- The boarding of pilots and the monitoring of the pilot launches. *(AHM Approaches)*

Movement Vessels

To be responsible for all movements on the river.

Outbound Vessels

- To be responsible for all vessels from first point of contact out to the limits of the district.

- The landing of pilots and the monitoring of the pilot launches. (AHM Approaches)

AHM Tasks

- At the start of the shift carry out verbal hand over with present AHM. (Information is available on the upriver and down river summary screen of present logged in user).

- Log in to PAVIS.

- Check unread e-mail (Possibly System indicator).

- Perform VTS duties and boarding and landing of pilots and the monitoring of pilot launches.

- To ensure that transport arrangements by launch or vehicles are properly planned and programmed to ensure sufficient and economical use.

- The Assistant Harbour Master shall maintain due subordination, sobriety and good order amongst the Pilots at the station and shall report to the Harbour Master, Humber, any act of disobedience, negligence or misbehaviour.

Compulsory Pilotage

- A ship which is being navigated in an area and in circumstances in which pilotage is compulsory for it by virtue of a pilotage direction

- shall be :-

    - under the pilotage of an authorised Pilot accompanied by such an assistant, if any, as is required by virtue of the direction; or

    - under the pilotage of a Master or First Mate possessing a Pilotage Exemption Certificate in respect of that area and ship.

- If any ship is not under pilotage as required by subsection (i) above after an authorised Pilot has offered to take charge of the ship, the master of the ship shall be guilty of an offence and liable on summary conviction to a fine not exceeding level 5 on the standard scale.

- If the master of a ship navigates the ship in an area and in circumstances in which pilotage is compulsory for it by virtue of a pilotage direction without notifying the Competent Harbour Authority which gave the direction that he proposes to do so he shall be guilty of an offence and liable on summary conviction to a fine not exceeding level 2 on the standard scale.

Rights of Pilots

- An authorised Pilot may, within the harbour in relation to which or a part of which he is authorised, supersede as the pilot of a ship any unauthorised person who has been employed to pilot it.

- If the Master of any ship navigates it in any part of a harbour under the pilotage of an unauthorised person without first notifying the Competent Harbour Authority that he proposes to do so, he shall be guilty of an offence.

- If an unauthorised person pilots a ship within a harbour knowing that an authorised pilot has offered to pilot it, he shall be guilty of any offence.

- If the master of a ship navigating within a harbour knowingly employs or continues to employ an unauthorised person to pilot the ship after an authorised pilot has offered to pilot it, he shall be guilty of any offence.

- For the purpose of this section :-

    - a person is an unauthorised person if he is neither an authorised pilot nor the holder of a Pilotage Exemption Certificate in respect of the ship and the area in question; and

    - any person (other than the master or one of the crew of a ship) who is on the bridge of the ship or in any other position from which the ship is navigated (whether on board or elsewhere) shall be deemed to be piloting the ship unless he proves otherwise.

- Any person who is guilty of an offence under this section shall be liable on summary conviction to a fine not exceeding :-

    - in the case of an offence under subsection (ii) above, level 2 on the standard scale; and

    - in the case of an offence under subsection (iii) or (iv) above, level 4 on the standard scale.

- A competent harbour authority may make reasonable charges in respect of the pilotage services provided by it.

Launch Crews

Launch crews are under the direct control of the AHM for the Approaches, on duty. Any coxswain who is unable to carry out his duties for whatever reason, or refuses a duty, or is insubordinate over the VHF, should be instructed to tie the launch to the buoy, weather permitting, and should be dismissed from the watch.

The Harbour Master, Humber to be informed immediately.

Responsibility For Staff At the Pilot Station

The AHM for the Approaches is responsible for the following staff at the Humber Pilotage Control Station :-

- Part-time staff (RNLI)
- Launch crews
- Engineers

Defects regarding the launches or equipment in the Control Tower to be reported to the Marine Manager.

VTS General Information

The main function of the Vessel Traffic Service, Humber, is to ensure that the Harbour Master, Humber's obligations under the Merchant Shipping Acts and other various rules and regulations are met and also to ensure that shipping and others obey those rules laid down in the General Directions for Navigation in the Humber (No.1), (now in the Standing Notices to Mariners as No. S.H 1), the Byelaws, the various Notices to Mariners and other Rules and Regulations.

Its secondary function is to provide vessels with the information from the PAVIS.

General Working Practice

Records :

Written or computerised record of happenings on the river or elsewhere which could prove of importance at a later date must be kept.

It cannot be emphasised too strongly the need to develop good habits in record keeping as the station is always under scrutiny and in the past others have tried to lay the blame for incidents unfoundedly at VTS Humber's doorstep.

Broadcasts :

Shipping is kept updated of any information reaching the station which will directly concern them, immediately after it has been obtained, in addition to further promulgation, if necessary, at the two hourly broadcast.

Non-Reporting Vessels

Assistant Harbour Master should peruse and note ships which have not reported at required reporting points. Their agents should be asked to remind the Masters of their obligations. The Assistant Harbour Master may either do this themselves but in the case of persistent offenders this can be drawn to the attention of the Harbour Master, who will issue a letter of reprimand.

Logging Of Information

All important information should be **recorded** in the **VTS Humber Daily River Report.**

All matters of concern should be recorded, as frequently we are called upon for information on quite obscure incidents and times and dates are quite easily forgotten.

What may seem of no consequence at the time can often prove to be important to someone else and when called upon for confirmation from the VHF tapes, some idea of date or time can make all the difference in how long it will take to extract the information.

It is best to get into the habit of logging data on a regular basis rather than to log on a '**hit or miss'** basis.

Poor Visibility

INTERNATIONAL REGULATIONS FOR PREVENTING COLLISIONS AT SEA
RULE 19

THE HUMBER NAVIGATION BYELAWS 1990
BYELAW 6

STANDING NOTICE TO MARINERS – S.H.1 SECTION6
STANDING NOTICE TO MARINERS - NO. S.H.19