Causeway Coast & Glens Borough Council

Title of Report:	**Appointment of ES Committee to act as Duty Holder**
Committee Report Submitted To:	**Environmental Services Committee**
Date of Meeting:	**14th April 2026**
For Decision or For Information	**For Decision**
To be discussed In Committee ~~YES~~/NO	**Not in Committee**

Linkage to Council Strategy (2019-25)	
Strategic Theme	Protecting and Enhancing Our Environments & Assets
Outcome	Our natural assets will be carefully managed to generate economic and social returns without compromising their sustainability for future generations.
Lead Officer	Head of Capital Works, Energy and Infrastructure

Budgetary Considerations	
Cost of Proposal	~~£~~variable
Included in Current Year Estimates	**YES/NO – N/A**
Capital/Revenue	N/A
Code	N/A
Staffing Costs	N/A

Legal Considerations	
Input of Legal Services Required	**NO**
Legal Opinion Obtained	**NO**

Screening Requirements	Required for new or revised Policies, Plans, Strategies or Service Delivery Proposals.		
Section 75 Screening	Screening Completed:	Yes/~~No~~	Date: N/A
	EQIA Required and Completed:	~~Yes~~/No	Date: N/A
Rural Needs Assessment (RNA)	Screening Completed	Yes/~~No~~	Date: N/A
	RNA Required and Completed:	~~Yes~~/No	Date: N/A

Data Protection Impact Assessment (DPIA)	Screening Completed:	~~Yes~~/No	Date: N/A
	DPIA Required and Completed:	~~Yes~~/No	Date: N/A

1.0 Purpose of Report

1.1 To seek members consideration and decision to appoint the ES committee to act as the "Duty Holder" in line with the Port Marine Safety Code PMSC ensuring best practice and governance in the delivery of the marine management and safety systems within the code. The "Duty Holder" is defined as follows

A Duty Holder within the Port Marine Safety Code (PMSC) is the individual or group of individuals accountable for complying with the Code and ensuring safe and efficient marine operations in a harbour or marine facility. The duty holder represents the top-level management (such as a board of directors, harbour commission, or local authority committee) and is responsible for ensuring the organisation fulfils its statutory duties and maintains a, Marine Safety Management System (MSMS)

2.0 Background

2.1 The Port Marine Safety Code (PMSC) is a national standard for port marine safety in the UK, established to enhance safety for users, workers, and the environment in ports, harbours, and marinas. While not strictly mandatory, it provides a crucial, endorsed framework for statutory harbour authorities and marine facilities to manage safety through formal risk assessments and safety management systems. The PMSC has been developed and endorsed by the Maritime & Coast Guard Agency (MCA) which is a Government agency and represent a gold standard or best practice.

2.2 An audit was carried out and adopted by the Audit committee (May 2023) which made the following recommendation

"It is recommended that the updates to the Port Marine Safety Code to consider all facilities is carried out".

2.3 The latest publication is the Ports & Marine Facilities Safety Code (April 2025), which serves as the updated national standard for safe port marine operations in the UK. It replaces the 2016 version, bringing significant updates to technical aspects and broadening its application across all marine facilities, including berths, piers, and jetties. (a copy of the code is attached – appendix 1)

Key details of the April 2025 update include:

- **Renaming:** Updated to the "Ports & Marine Facilities Safety Code" to explicitly cover marine infrastructure beyond large ports.

- **Focus:** It reinforces a risk-based approach and clarifies the application of the Code to non-statutory facilities and smaller facilities, emphasizing proportional compliance.
- **Structure:** It is structured around 10 key measures, aligning with current "Designated Person" audits and health checks.
- **Compliance:** The Maritime and Coastguard Agency (MCA) oversees the code, and compliance is expected to be reported every three years, with a new exercise running in 2026.

The revised code and its associated guide, released in April 2025, aim to improve safety and management standards, ensuring a consistent approach across all UK marine facilities. Officer are currently assembling the Marine Management Safety System in alignment with the latest PMSC in conjunction with the associated plans and risk assessments.

3.0 Proposal

3.1 Members are appointed as the Duty Holder in line with the PMSC recommended governance (see section appendix 2 1.9 below). The PMSC recommends that the Duty Holder take time to gain a full insight and understanding of the organisations marine activities with a focus on the Marine Safety Management System.

3.2 It is further proposed that the ES Committee chair acts as the point of contact for the Designated Person to liaise as and when required on an operational need basis.

Appendix 2 – is the excerpt from the attached PMSC which clarifies the roles of the Duty Holder.

4.0 Recommendation:

4.1 It is recommended that Members consider proposals 3.1 and 3.2 above and that these proposals recommended to Council thereby appointing the ES committee as the PMSC Duty Holder and appointing the ES committee chair as the point of contact.

Appendix 2

1.1 Introduction

This section provides guidance on the following:

- demonstrating compliance with the Code
- publishing commitment to the Code
- specific policies on management of navigation, navigational safety, and environmental protection
- ensuring adequate resources are made available
- job descriptions
- operating manuals.

1.2 Summary

Section 1 of the Code states that the Duty Holder is accountable for their organisation's (e.g., individual port, statutory harbour, terminal, marina, pier or marine facility) compliance with the Code and its performance in ensuring safe marine operations. It details how that responsibility is discharged and is based on the following general principles:

- The Duty Holder is accountable for safe and efficient marine operations. The Duty Holder should make a clear published commitment to comply with the standards laid down in this Code.
- Executive and operational responsibilities for marine safety must be clearly assigned, and those entrusted with these responsibilities must be appropriately trained, qualified, experienced, and answerable for their performance.
- A 'Designated Person' must be appointed to provide independent assurance regarding the effective operation of its MSMS. The Designated Person must have direct access to the Duty Holder.

1.3 Demonstrating compliance with the Code

Compliance with the standards set by the Code is achieved in stages.

- Review and understand existing powers based on local and national legislation.
- Confirm compliance with the duties and powers under existing legislation.
- Assess all risks and consider means of eliminating/reducing them to ALARP (As Low As Reasonably Practicable).
- Operate and maintain a Marine Safety Management System (MSMS) based on Risk Assessment to ensure proper control over marine operations.
- Use appropriate standards of qualification and training for all those involved in safety management and execution of relevant services.
- Establish robust procedures for auditing performance against the policies and procedures to comply with the Code.
- Monitor the standard achieved using appropriate measures and publish the results.

The Code requires all organisations to demonstrate compliance with the Code by developing appropriate policies and procedures relevant to the scope and nature of the marine operations
that take place within the organisations authority.

An organisation must:

- Record and publish its marine policies and make available supporting documentation if required.
- Set standards of performance that it aims to meet.
- Regularly review and periodically audit actual performance.
- Publicly report on PMSC performance on an annual basis.

1.4 Publishing commitment to the Code

Implementing the Code is a matter of policy to be adopted by each organisation. This would include a commitment to the publication of a policy statement or periodic reports.

Organisations must develop, and once adopted, publish the policies which allow them to achieve the required standard. These include reports of their formal periodic reviews, setting performance against their plans and against the standard in the Code. As a minimum, plans and reports should be published every three years.

These policies and procedures must include a statement committing the organisation to undertake and regulate all marine operations in a way that safeguards the harbour, its users, the public and the environment.

The Code does not prescribe a form by which organisations are to report publicly regarding the safety of marine operations, but utilising websites for publishing reports and policies is often the most appropriate approach.

It is important that each organisation owns their own management plan, and it is for the Duty Holder to decide the priority, emphasis, and wording of the plan, just as much as the policies and procedures.

Some organisations will prepare statements specifically for the purpose, others may include a separate chapter in their annual report.
A management or business plan is likely to address more than marine operations and it is appropriate that these are set within this context. The coherence of a single document, or suite of linked documents, can be an advantage to ensuring that nothing is missed.

The reports required by the Code should include the following components:
- a statement of the aims, roles, and duties of the organisation as Duty Holder
- the overarching policies and procedures of the organisation to achieve those aims, including the commitment to implement the Code
- the objectives which support the overarching plans and policies
- a means of measuring their achievement against those objectives
- a review of how far the organisation has achieved its aims and objectives, and of

changes it proposes to its policies and procedures.

To have any practical effect, published aims and objectives need to be under-pinned by statements of policies and procedures, e.g., a training policy must be applied by adopting appropriate training and competence standards.

Aims and objectives are linked to the identified risks which are assessed and managed through its Safety Management System. The risks relate directly to the nature of the trade and operations within the port or facility.

Any changes in the nature of the business will also affect the risk. It is important for an organisation to consider the cost of managing different risks created in this way.

Some risks will remain even with limited commercial shipping activity, e.g., if the public retain access to the water. These may become significant if the revenue to manage them is reduced. In such circumstances it may be necessary to mitigate risk by regulatory action.

These aims may be linked to other functions, for example those of a company, a local authority, or other statutory body entrusted with harbour functions.

A statement of aims, encompassing marine operations may already have been made in a document relating to those functions e.g., a company annual report, a management plan, or some other policy statement.

Such statements should be the subject of regular review to ensure that they continue to fully reflect the commitments made pursuant to the Code.

The following sample statements illustrate the type of aims that an organisation might adopt to illustrate its commitment to its duties:

- Undertake and regulate marine operations to safeguard the harbour/ organisation, its users, the public and the environment.
- Run a safe, efficient, cost-effective, sustainable harbour/facility operation for the benefit of all users and the wider community.
- Fulfil its legal responsibilities whilst meeting the changing needs of all marine users.
- Maximize the quality and value for money of its services, and to maintain dues at a competitive level to attract users to the harbour or facility.
- Meet the national requirements in the Code.
- They must also recognise, explicitly, that the Duty Holder is accountable for meeting the standard the Code requires.

Following an organisations initial statement of compliance with and implementation of the Code, they should thereafter publish details of their formal periodic reviews, setting performance against their plans and against the standard in the Code.

1.5 Specific policies on management of navigation, navigational safety,

and environmental protection

In compliance with the requirements of the Code, the organisation/Harbour Authority will discharge where applicable its general and specific statutory duties in respect of:

• the regulation of traffic and safety of navigation within its authority
• the conservancy of the harbour and its seaward approaches
• the protection of the environment within the harbour and its surroundings
• ensuring as far as reasonably practicable the safety at work of its employees and other persons who may be affected by its activities
• facilitate the safe movement of vessels and craft into, out of, and within the harbour/facility
• conduct the functions of the Authority with special regard to their impact on the environment
• prevent acts of omissions which may cause personal injury to employees or others, or damage to the environment
• create and promote an awareness in employees and others with respect to safety and protection of the environment
• work with government agencies and others to comply with national legislation in respect of the management of environmentally designated areas and the biodiversity of harbour
waters. This includes 'where technically feasible and not disproportionately costly, 'measures to achieve 'good ecological statuses.

1.6 Ensuring adequate resources are made available

It is recommended that all Duty Holders take time to gain a full insight and understanding of the organisations marine activities, marine Safety Management System and supporting systems.
This can be achieved through a combination of briefings and operational visits. It is also important that the Duty Holder receives training / briefing on the PMSC specific to their roles and responsibilities. Organisations should also consider implementing a policy of PMSC Duty Holder refresher training.

Where the Duty Holder is defined as a Harbour Board, consideration should be given to appointing a member to the board who has relevant maritime experience, and who can function as the initial point of contact for the Designated Person. An authority's principal officers holding delegated responsibilities for safety would normally be expected to attend board meetings.

The Duty Holder is responsible for ensuring that adequate resources are provided to officers to enable them to manage marine operations effectively and to adhere to the stated marine and navigation policies, procedures, and systems, recognising that proper discharge of the organisations duties will otherwise be compromised.

This includes adequate resources for training which needs to be reflected in the relevant policy.

It is important that executive and operational responsibilities be assigned appropriately by organisations to suitably trained personnel. Training needs to be appropriate to the responsibilities assigned to everyone with a responsibility for the safety of marine operations.

In smaller organisations, where these functions are combined, it is important that there is a proper separation of safety and commercial functions.

1.7 Job descriptions

The use of formal job descriptions is considered good practice.

Some jobs related to marine operations are formal statutory appointments, e.g., Harbour Master, while others are related to legal functions and the exercise of the authority's statutory powers.

The assignment and delegation of legal functions including statutory powers must be formalised.

A Safety Management System also demands that the roles and functions upon which its operation depends are formally documented.

Visible delegation through job descriptions also provides a level of accountability in the measurement of achieving objectives – by showing that somebody has been given responsibility for a specific task.

1.8 Operating manuals

Operating manuals help to establish an auditable link between this Guide and the procedures adopted by each organisation. They seek to provide guidance on how to undertake a specific task.

It will sometimes be the case that objectives also correlate to a section in an operating manual. Long term or standing objectives should be assessed to see if their achievement might usefully be referred to in a manual.

An organisation's management or business plan might also be supported by documents which form part of the audit trail.
Each harbour or facility has individual characteristics, conditions, position, and mode of operation. Harbour Authorities are equally varied in type and size. Local powers and duties have therefore been conferred by local legislation, created specifically for the Harbour Authority to which it relates, so that each individual harbour may be operated efficiently and safely.

Local harbour legislation provides a legal framework within which the whole undertaking is conducted.

Some general legislation on topics contains matters for which a Harbour Authority holds itself accountable under the Code. It will therefore serve a useful

purpose for the authority's policy statement – and those who audit it – to point to the main pieces of legislation which establish its legal status and functions.

1.9 Municipal

Municipality owned ports should consider various factors in determining how they suitably appoint and train their Duty Holders. These include factors such as the structure of the council, relevant experience of councillors and local authority rules.

It is possible to appoint the Duty Holder as the full council and therefore all elected members, a sub-committee or an individual of the council, e.g. the Chief Executive or director. When considering the various options, local authorities will need to consider how they provide suitable and relevant training for the Duty Holder(s), which can be more challenging when it involves many councillors.

Municipal ports have previously sought legal advice on the liability of Duty Holders as some of the language in the PMSC may not be fully compatible with local authority rules. However, and appreciating that, the law can be subtly different around the UK, in general terms as local authority officers in England, Northern Ireland, Scotland and Wales typically act on behalf of their council, in almost all cases it is the council itself, as a corporate body, who will be responsible for any unlawful actions.

This can mean that in almost all cases, the description of the Duty Holder as being "accountable" both "individually and collectively" is not possible. However, despite these differences, councils with harbour assets have been advised to look to comply with the PMSC as much as is possible to assess, manage and limit risks and provide a suitable governance structure to oversee port and marine safety. Ports should therefore consider taking their own legal advice regarding the terminology when assessing their duties. Local authority Duty Holders may want to consider substituting the term "accountability", with the word "responsibility".

As with all port and marine owners and operators, municipal ports are expected to properly resource and train their undertakings. In England these responsibilities are set out in the DfT's Ports Good Governance Guidance document.

Maritime & Coastguard Agency

Safer lives, safer ships, cleaner seas

A guide to good practice on port and marine facilities

Contents

Introduction

This guide is intended to supplement the Ports and Marine Facilities Safety Code and it contains useful information with more detailed guidance on several issues relevant to the management of ports and other marine facilities.

The Code and this guide are applicable both to statutory Harbour Authorities and to other marine facilities which may not necessarily have statutory powers and duties.

These are collectively referred to in the Code as ‘organisations’, and may include, but not be limited to, the following examples:

- Competent Harbour Authorities (authorities with statutory pilotage responsible for
- managing a pilotage service)
- Municipal Port or Harbour Authorities
- Trust Port or Harbour Authorities
- Private Port or Harbour Authorities
- Marine berths, terminals or jetties

Whilst it is applicable to all ports, this guide should be applied reasonably and proportionately to each port.

It is designed to provide general guidance and examples of how an organisation could meet its commitments in terms of compliance with the Code.

This Guide should not be viewed as the only means of complying with the Code and for some organisations, it may not be the best means of achieving compliance.

Exposure from failing to comply with best practice

The following extract is from a successful prosecution of a Harbour Authority which was found to fail in its duty to adequately implement four foundational elements of PMSC compliance. This case demonstrates the importance that courts may place on authorities or organisations adopting ‘industry best practice’ and the exposure that they may face if they fail to take adequate steps towards compliance.

The Harbour Authority was subsequently fined for contraventions under section 3(1) of the Health and Safety at Work Act 1974:

> “To the charge that it was the Port Authority’s duty under the Health and Safety at Work etc. Act 1974, Section 3, to conduct their undertaking in such a way as to ensure, so far as was reasonably practicable, that persons not in their employment who may be affected by the conduct of the Harbour Authority’s undertaking were not exposed thereby to risks to their health or safety.”

Part of the indictment read that:

> "You failed to provide a safe system of work in that you did fail to provide a Safety Management System to reduce to a level as low as reasonably practicable the risks associated with marine operations in the Harbour Area, in terms of the Port Marine Safety Code, and failed to appoint a suitable individual or individuals to share the function of 'Designated Person' to provide you as the Duty Holder with independent assurance that your Safety Management System was working effectively and to audit your compliance with the Port Marine Safety Code."

Like the Code, the Guide does not have any legal force, though it does refer to existing legal powers and duties. Furthermore, while it describes typical legal powers and duties, it is not practicable for this Guide to cover the specific legal position for each Harbour Authority or organisation, and it should not be relied on for that purpose.

The Guide has been developed with representatives from industry, the Department for Transport (DfT) and the MCA. The Guide is designed to be a living document; one that will be maintained by the ports industry and can be reviewed and updated on an annual basis.

Proportional compliance

With the wide range of ports and marine facilities specified within its text, the Port and Marine Facilities Safety Code needs to remain flexible enough to be adopted by all. Therefore, when assessing compliance against the Code a proportionate approach helps provide a practical solution for all. Whilst it is expected that all 10 sections of the Code need to be considered by all the extent of compliance that is required under each section will vary. Some sections/part sections might be able to be scoped out completed, e.g. the pilotage sub section would not be relevant to facilities without CHA status.

Scoping exercise

When assessing the relevant level of proportionate compliance, a scoping exercise should be conducted, taking the form of a gap analysis or similar. This should form the basis for assessing compliance with the Code for each organisation and should record how each part of the Code is relevant to the operations, procedures, or processes of the organisation. Where any subsection or significant amounts of a section are scoped out, then a brief explanation of how this was established should be recorded.

Scoping exercise guidance by Code sections

The scoping exercise needs to be conducted by suitably trained and experienced personnel with knowledge of the organisation and its operations.

1. **Duty Holder**
   All organisations should have a Duty Holder, who is responsible for ensuring accurate assessment against the Code. As all organisations have a responsibility as a legal entity, this route of escalation of responsibility and decision making through the organisation should allow for a suitable Duty Holder to be identified.

2. **Designated Person**
   All facilities should have a suitably qualified and experienced Designated Person, able to provide the Duty Holder with independent assurance that the requirements of the Code are being met. The Designated Person section provides guidance on options that allow for differing sizes of facilities, such as reciprocal arrangements.

3. **Legislation**
   The relevant applicable legislation should be identified. Where an organisation is not a Statutory Harbour Authority (SHA) then some ports and harbours legislation may not be applicable, however other legislation such as Health and Safety will still apply and should be identified. Bylaws from an authority the organisation resides within may also need to be identified. Whilst it is reasonable for many facilities not to have their own Harbour Order, the requirement to keep powers and duties under review applies to all facilities. Therefore, the assessment of the suitability of their current powers, along with any need to seek further powers if required, should be recorded.

4. **Duties and powers**
   Many specific duties and powers come out of specific legislation such as a Harbour Act, therefore where legislation does not apply to the facility, it would be reasonable to scope these out of their compliance. However, consideration should also be given to common law duties such as duty of care to users to ensure these are identified and understood.

5. **Risk Assessments**
   Risk Assessments are a key requirement under safety legislation and codes and are therefore a requirement for all facilities. However, whereas an SHA would need to look at Risk Assessments for overall navigation safety within their defined limits, a small facility may only need to risk assess the area and tasks they control.

6. **Marine Safety Management Systems**
   A Marine Safety Management System (MSMS), to varying extents would be expected. In its most basic form, it should include any company Health, Safety or Environmental policies as well as any operational instructions and procedures that are in place. The Risk Assessments should then guide additional requirements beyond this. Where additional procedural or competency-based controls/mitigations are identified, then these

elements should also be incorporated into the MSMS. Where a facility adjoins, overlaps, or resides within another facility, then they should be aware of any elements of the other facilities MSMS that apply to them, such as permit to work requirements.

7. **Review and audit**
   Internal review and audit of systems should be in evidence, with the policy and frequency covered by a statement within the MSMS. These measures should be appropriate for the complexity and changeability of the MSMS. External audits fall under the responsibility of the Designated Person.

8. **Competence**
   As a minimum there should be evidence of the competence and suitability for the roles of the Duty Holder and Designated Person. Other roles coming under this section will vary and should include those that have duties relating to the safety of marine operations. A Harbour Master (for an SHA) or role covering equivalent responsibilities should be identified.

9. **Plan**
   To help demonstrate their commitment to marine safety, all organisations should publish a safety plan to illustrate how its policies and procedures will be developed and implemented to satisfy the requirement of the Port Marine Safety Code and improve safety every three years. The Duty Holder should also publish an assessment of the organisation's performance against the plan. The degree of both the content and detail of the plan is very much dependent on both the size of the facility and level of marine activity.

10. **Conservancy duty**
    Regardless of the size of the facility, all authorities have a duty to conserve their facilities to ensure that they are fit for use by all who use them and a duty of care to ensure that all vessels can utilise them safely. To achieve this, users of their facilities should be provided with adequate and up to date information regarding the conditions likely to be experienced. The degree of information and how it is shared will be dependent on the size of the facility and the level and frequency of its use.

Stating compliance

It is still the Duty Holders responsibility to state compliance for their facility once every 3 years during the compliance exercise, which will be announced by the MCA through a Marine Information Notice (MIN). The only exception to this is referenced in section 6.18 of the Code, where an SHA may include named facilities within their limits if there is a significant overlap in the safety management. However, this is only when an agreement is in place between the SHA and the facility.

Section 1: Duty Holder

1.1 Introduction

This section provides guidance on the following:

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1.8 Operating manuals

Operating manuals help to establish an auditable link between this Guide and the procedures adopted by each organisation. They seek to provide guidance on how to undertake a specific task.

It will sometimes be the case that objectives also correlate to a section in an operating manual. Long term or standing objectives should be assessed to see if their achievement might usefully be referred to in a manual.

An organisation's management or business plan might also be supported by documents which form part of the audit trail.

Each harbour or facility has individual characteristics, conditions, position, and mode of operation. Harbour Authorities are equally varied in type and size. Local powers and duties have therefore been conferred by local legislation, created specifically for the Harbour Authority to which it relates, so that each individual harbour may be operated efficiently and safely.

Local harbour legislation provides a legal framework within which the whole undertaking is conducted.

Some general legislation on topics contains matters for which a Harbour Authority holds itself accountable under the Code. It will therefore serve a useful purpose for the authority's policy statement – and those who audit it – to point to the main pieces of legislation which establish its legal status and functions.

1.9 Municipal

Municipality owned ports should consider various factors in determining how they suitably appoint and train their Duty Holders. These include factors such as the structure of the council, relevant experience of councillors and local authority rules.

It is possible to appoint the Duty Holder as the full council and therefore all elected members, a sub-committee or an individual of the council, e.g. the Chief Executive or director. When considering the various options, local authorities will need to consider how they provide suitable and relevant training for the Duty Holder(s), which can be more challenging when it involves many councillors.

Municipal ports have previously sought legal advice on the liability of Duty Holders as some of the language in the PMSC may not be fully compatible with local authority rules. However, and appreciating that, the law can be subtly different around the UK, in general terms as local authority officers in England, Northern Ireland, Scotland and Wales typically act on behalf of their council, in almost all cases it is the council itself, as a corporate body, who will be responsible for any unlawful actions.

This can mean that in almost all cases, the description of the Duty Holder as being "accountable" both "individually and collectively" is not possible. However, despite these

differences, councils with harbour assets have been advised to look to comply with the PMSC as much as is possible to assess, manage and limit risks and provide a suitable governance structure to oversee port and marine safety. Ports should therefore consider taking their own legal advice regarding the terminology when assessing their duties. Local authority Duty Holders may want to consider substituting the term “accountability”, with the word “responsibility”.

As with all port and marine owners and operators, municipal ports are expected to properly resource and train their undertakings. In England these responsibilities are set out in the DfT’s Ports Good Governance Guidance document.

Section 2: Designated Person

2.1 Introduction

Each organisation must appoint an individual as the Designated Person to provide independent assurance directly to the Duty Holder, through assessment and audit, of the effectiveness of the Marine Safety Management System in ensuring compliance with the Code.

2.2 Summary

The Duty Holder is responsible for appointing the Designated Person and ensuring that this is someone sufficiently qualified and experienced to provide the level of assurance that is necessary to comply with the Code.

There are no specific qualifications required for the role of the Designated Person. Therefore, prior to appointing an individual to the role, the Duty Holder should consider the functions applicable to the role and ensure that the individual is suitably experienced to undertake such functions or is able to attend training courses which will provide the necessary skills.

In considering the appointment the possession of at least one of the following criteria are considered advantageous in ensuring a suitable appointment:

- first-hand operational experience of a port/marine environment
- a current Harbour Master / Deputy Harbour Master at another port, perhaps under a reciprocal arrangement
- a member of the harbour board, provided they meet one of the above criteria and are not directly involved in setting up and maintaining the MSMS.

Additionally, best practice supports the view that a Designated Person should have:

- relevant first-hand experience of the port marine environment and how ports/terminals operate
- appropriate knowledge of shipping, shipboard operations, and port operations
- understanding of the design, implementation, monitoring, auditing, and reporting of Safety Management Systems
- understanding of audit techniques for examining, questioning, evaluating, and reporting.

It is acknowledged that there are numerous criteria than can be applied which lead to the appointment of a suitable Designated Person and it is for the Duty Holder to be demonstrably satisfied that they have adopted the best approach for their circumstances and organisation, as it is they who must demonstrate compliance with the Code.

Designated Person appointments may include someone who:

- works for the same port/group but is not directly linked to the operation of the MSMS
- is an external consultant
- is appointed under a reciprocal arrangement with another port/operator or organisation
- sits as part of a 'select committee' or 'board' where additional relevant knowledge is available to supplement their direct capabilities
- supplements their capabilities with the assistance of external consultants.

It is **not acceptable** for the Designated Person to also hold the position of Duty Holder.

Once appointed, specific terms of reference for the Designated Person should be issued that are separate and distinct from any other role the post holder may fill and should clearly identify the accountability of the Designated Person direct to the Duty Holder.

In many scenarios, the Harbour Master, any appointed deputies, assistants, or marine managers are directly involved in assessing and controlling the risks to navigation, as well as overseeing the operation of the Marine Safety Management system.

Therefore, for reasons of both impartiality and independence, they are not ideally placed to provide the necessary assurances to the Duty Holder; and, consequently, in all but extenuating circumstances, it is not recommended that the Harbour Master or anyone who reports through them is appointed as the Designated Person.

Notwithstanding the above, where the Harbour Master of a facility is also appointed as the Designated Person, then it is even more important that an external audit of the Marine Safety Management System is undertaken on a regular basis.

The Designated Person will take appropriate measures to determine whether the individual elements of the MSMS meet the specific requirements of the Code.

These measures will include:

- monitoring and auditing the thoroughness of the Risk Assessment process and the validity of the assessment conclusions.
- monitoring and auditing the thoroughness of the incident investigation process and the validity of the investigation conclusions.
- monitoring the application of lessons learnt from individual and industry experience and incident investigation.
- assessing and auditing the validity and effectiveness of indicators used to measure performance against the requirements and standards in the Code.
- assessing the validity and effectiveness of consultation processes used to involve and secure the commitment of all appropriate stakeholders.
- monitoring and auditing the effective and consistent application of the MSMS on port marine / facility operations

The role of the Designated Person **does not absolve** the Duty Holder and/or board members of their individual and collective responsibility for compliance with the Code.

Section 3: Legislation

3.1 Introduction

This section provides guidance on the following:

- reviewing a Harbour Authority's powers/legal status, including associated policies and procedures
- directions and byelaws
- harbour revision orders
- licensing
- enforcement.

3.2 Port marine safety legislation

There is a substantial body of applicable general national legislation, such as the Merchant Shipping Act 1995, but many of the principal duties and powers of a Harbour Authority are in local Acts, or orders made under the Harbours Act 1964.

This legislation includes powers to make byelaws. Section 3 of the Code explains how the local legislation can be changed.

A list of some examples of legislation applicable to ports in the UK include:

- Harbours, Docks and Piers Clauses Act 1847 - Construction of harbours, right to buy/lease land, Collection of fees, powers of a Harbour Master, Discharge of cargos/ballast, making byelaws, regulating the admission of vessels into or near the harbour, dock, or pier, regulating the shipping and unshipping, of all goods, preventing damage or injury to vessels etc.
- Dockyard Ports Regulation Act 1865 – Appointment and authority of the Kings Harbour Master.
- Harbours Act 1964 – Helped to modernise the system for Harbour Authorities levying charges on those using the harbour. Provides Harbour Authorities with a general power to set ship, passenger and goods dues.
- Dangerous Vessels Act 1985 - Empowers Harbour Masters to give directions to prohibit vessels from entering the areas of jurisdiction of their respective Harbour Authorities or to require the removal of vessels from those areas where those vessels present a grave and imminent danger to the safety of any person or property, or risk of obstruction to navigation.
- The Dangerous Substances in Harbour Areas Regulations 1987 - Regulations apply in every harbour area in Great Britain.
- Pilotage Act 1987 - Requires competent Harbour Authorities (CHA) to keep under consideration what pilotage services are needed to secure the safety of ships and gives them powers to: make pilotage compulsory and levy charges for the use of a pilot; grant Pilotage Exemption Certificates (PEC); and, authorise pilots within their district.

- Merchant Shipping Act 1995 - Consolidates much of UK's maritime legislation.
- Marine and Coastal Access Act 2009 - Establishes and empowers the Marine Management Organisation. Establishes rights of access to land near the English and Welsh Coast, makes provision in relation to works which are detrimental to navigation.

3.3 Legislation review

The first step for the organisation is to take stock of the powers, policies, systems and procedures that are in place having regard to an overall assessment of the risks to be managed. The level of detail required will depend partly upon the extent to which appropriate systems are already in place, but also influenced by the replies to your consultation, and publication of the safety policies adopted by each authority. It is a requirement of the Code that each authority's policies and procedures should demonstrate that they are based upon a full assessment of the hazards which must be managed to ensure the safety of the harbour and its users.

All legislation, including byelaws and directions, should be reviewed on a regular basis, preferably annually, to ensure that they remain fit for purpose in changing circumstances. The Code explains that the requirements for marine safety will be determined by a Risk Assessment. If the legal responsibilities cannot be discharged effectively using available powers and by other measures, and that authority does not have the powers to rectify the situation, then it should seek the necessary additional powers. In addition, it is good practice and effective governance to dispense with redundant or obsolete legal functions.

It is essential that all Harbour Authorities are aware of the legislation that affects them which includes local legislation. Harbour Authority boards and managers must understand clearly the meaning of all the relevant legislation which affects their harbour to avoid failing to discharge their duties or exceeding their powers.

3.4 Directions (usually referred to as special directions)

Where sections 52 and 53 of the Harbours Piers and Clauses Act 1847 have been incorporated into a Harbour Authority's local legislation, a Harbour Master has powers of direction to regulate the time and manner of ships' entry to, departure from and movement within the harbour waters, and related purposes. These powers are assigned for the purpose of giving detailed directions to specific vessels for specific movements, unless the powers have been extended for other purposes. Harbour Master's directions may be referred to as 'special directions' to distinguish them from 'general directions' given by the authority itself. Special directions are not for setting general rules but relate to specific vessels – or in an emergency, to a class of vessels on particular occasions.

The powers of direction are also exercisable by a Harbour Master's assistant – or any other person designated for the purpose in accordance with the authority's statutory powers. It is an offence not to comply with directions, although the master – or pilot – of a vessel is not obliged to obey the directions if they believe that compliance would endanger the vessel. It is the duty of a Harbour Master in exercising these powers to consider the interests of all shipping in the harbour. Directions may include the use of tugs and other forms of assistance.

It is best practice to provide staff who have delegated powers of a Harbour Master to issue special directions, with training and specific guidance and templates that help to ensure clarity on how and when a special direction can be delivered.

3.5 General Directions and Harbour Directions

Some Harbour Authorities have powers, through their local authority legislation, to give 'general directions', enabling them, after due consultation, to lay down general rules for navigation (subject to certain constraints) and regulate the berthing and movements of ships. These carry the force of law but are often easier to achieve and amend than using byelaws, and thus act as a useful mechanism for managing navigation and furthering safety. General directions and procedural provisions involve publication of proposed directions, but they do not need to be confirmed by the Secretary of State as is the case with byelaws.

Harbour Authorities would be well advised to secure these powers to support the effective management of vessels in their harbour. This can be achieved in two main ways:

- Through Harbour Revision Order under section 14 of the Harbours Act 1964 (the 1964 Act).
- Through designation under section 40a of the 1964 Act with the power to give harbour directions for the movement, mooring, management and equipment of ships. These powers are of the nature of general directions to support the effective management of vessels in their harbour waters. A non-statutory Code of Conduct on the use of the section 40a power has been agreed by the Department in conjunction with organisations representative of ports and port users. Further guidance on harbour directions can be found by using Regulatory Triage Assessment (legislation.gov.uk).

3.6 Harbour Revision Orders

The Harbours Act 1964 enables a Harbour Authority to amend statutory powers in their local legislation. It can be used to achieve various outcomes, one of which is to impose or confer additional duties or powers on a Harbour Authority (including powers to make byelaws). It can also be used in the context of the Code to substitute or amend existing duties and powers. It could be used for the purpose of (but not limited to):

- Improving, maintaining or managing the harbour marking or lighting the harbour, raising wrecks therein or otherwise making safe the navigation thereof.
- Regulating the activities of other individuals and groups in connection with the harbour and the marine/shore-side interface.
- Extending controls into the approaches of a harbour (for example, to extend compulsory pilotage beyond the harbour).

All proposals should, as far as is practical, be subject to extensive local consultation.

The processing and determination of harbour revision orders and other specified functions under the 1964 Act has been delegated to the Marine Management Organisation (MMO) for English harbours and Welsh non-fishery harbours, and other devolved authorities:

- Northern Ireland, Dept for Infrastructure
- SNI Scotland, Transport Scotland
- Wales, Natural Resources Wales.

The Marine Management Organisation (MMO) has issued guidance on applying for a harbour order. Organisations should discuss requirements and procedures with the appropriate authority and consult relevant authorities and interested parties locally before making an application. Organisations can request an informal review of the draft order before making an application to identify any fundamental issues. It is also recommended that independent legal advice is sought.

The authority assigned the responsibility will need to be satisfied that the order would:

- secure the improvement, maintenance or management of the harbour in an efficient and economical manner
- facilitate the efficient and economic transport of goods by sea
- be in the interests of sea-going, commercial and leisure vessels.

There are similar provisions for varying or abolishing such powers. If a harbour has become no longer viable or necessary, commercially speaking, partial or complete closure of that harbour can be achieved through a harbour closure order under section 17A of the 1964 Act and such orders will be handled by the appropriate government department dealing with Transport. For harbours which are still commercially viable, partial closure of that harbour can be achieved through a harbour revision order.

3.7 Byelaws

Many Harbour Authorities have powers under their own local legislation, for example if they have incorporated section 83 of the Harbours, Docks and Piers Clauses Act 1847, which allow them to make byelaws.

Byelaws may cover a wide range of subjects within the harbour and on the port estate, for example, the quayside and the regulation of vessels within the port.

On the marine side, this might include:

- navigational rules
- general duties of Masters
- movement of hazardous and polluting goods
- alcohol and drugs
- ferries, lighters, barges and tugs
- noise and smoke

- recreational craft including water-skiing, personal watercraft
- bathing
- speed limits
- licensing port craft
- licensing personnel (e.g. boatmen).

There is a brief description of the function and making of harbour byelaws under paragraphs 4.11 – 4.13 of the Code. The procedure for each authority is in its local legislation either through incorporated provisions, or its own provisions. Many Harbour Authorities now incorporate the more modern procedural provisions set out in sections 235 – 238 of the Local Government Act 1972. The 1972 provisions have been adapted by some authorities, to allow byelaws to be modified upon confirmation by the Secretary of State, as Section 237 (7) of the 1972 Act by itself does not permit this.

Making and changing byelaws is often perceived as a difficult and prolonged process. However, the process can be expedited if Harbour Authorities avoid common pitfalls and take the following steps:

- assess the risk and decide whether a byelaw would be the most appropriate method of mitigating the risk.
- make sure your authority has the relevant powers to make byelaws for the measures that are being proposed.
- make sure you can justify your proposal to consultees. Demonstrate that you have considered other options in addition to legislation. All proposals to improve safety of navigation in the harbour should be supported by a formal Risk Assessment.
- make sure you consult on your proposal before drafting the byelaw and again before you present the byelaw to the relevant Minister.
- demonstrate to the relevant minister or appropriate authority that the proposals can be clearly enforced and that resources exist for this purpose.
- get experienced advice or use a legal professional to draft the byelaw on your behalf.
- be persistent – Initial opposition to a proposal does not mean that it will fail. Try to resolve any confusion by addressing problems at the earliest opportunity and if appropriate, revise the proposal. If differences are unable to be resolved, you should still present the draft byelaw to the relevant minister for consideration. In these circumstances the applicant authority should give a full and reasoned explanation of the differences supported by a safety case and risk analysis.

Possible consultees might (but not necessarily) include:

- leisure users – sailors
- motor cruiser-users
- rowers
- personal watercraft users
- swimmers
- line handlers

- tug operators
- various associations and users' organisations
- trade unions
- vessel owners
- pilots
- vessel operators – inland waterways and deep sea
- local communities
- other local regulators – e.g., MCA
- adjacent port authorities
- local authorities
- RNLI
- RYA
- the Amateur Rowing Association (ARA).

3.8 Licensing

Some Harbour Authorities have responsibility for licensing port craft, personnel (local watermen) and works in, or adjacent to, navigable water. Some examples of activities which the authority may need to license, or seek powers to licence include the following:

- line handlers
- commercially operated craft e.g. local domestic ferry or passenger vessels

All Competent Harbour Authorities have power in the Pilotage Act to approve or issue a license for pilot boats. In all these processes, proper and appropriate standards and competencies need to be established and applied uniformly in the interests of safety and consistency. In practice, the best way to achieve this is by following and certifying pilot boats and crews under the appropriate vessel code of practice, such as the Workboat Code (GOV.UK) - *The safety of small Workboats and pilot Boats – a Code of Practice* (as amended). See below section 4.5 on pilot launches.

3.9 Enforcement

Byelaws and directions adopted to manage identified marine risks must be reinforced by an appropriate policy on enforcement; and each authority should have a clear policy on prosecution of those who breach byelaws and directions, which is in line with the safety assessment on which they are based. The enforcement policy should consider a wide range of possible measures of appropriate and proportionate enforcement, examples include:

- guidance and training with stakeholders
- verbal warnings and guidance, e.g. from afloat patrol staff or the HM
- written warnings
- formal prosecution through the courts

Authorities should also consider publishing an enforcement policy statement which can be displayed and promulgated to users. The statement should summarise and highlight that the authority has various duties and powers and explain the various approaches the authority may take regarding enforcement, from education through to court action if deemed necessary.

3.10 Consultation

Consultation is crucial to ensure that relevant parties are consulted on areas relevant to them, and this is summarized by:

- objectives of consultation in the context of the Code
- statutory requirement to consult
- benefits of consulting informally.

Safety in the port marine environment is rarely just a matter for the individual organisation e.g., Individual port, statutory harbour, terminal, marina, pier, marine facility or its third-party contractors. Users of any facility are required to minimize risk to themselves and others. In doing so they must be able to put forward to the organisation any views on the development of appropriate safety policies and procedures.

It follows therefore that organisations need to consult, as appropriate with two main groups: marine users, both commercial and leisure, in addition to any associated local communities.

While port marine operations may be understood by experienced port practitioners, they are less so by the wider public and some recreational users. It is therefore important to maintain an appropriate level of involvement with these groups.

Some substantial objectives of ‘consultation’ should be:

- Conveying to employees, users or others what some of their responsibilities are regarding their work or activity in the harbour or facility.
- Understanding and acceptance of the Duty Holder’s role and responsibility under the code as well as the Duty Holder’s policies and procedures.

A Safety Management System is only effective if the organisation responsible takes active measures to involve and secure the commitment of those involved. This applies both to the Risk Assessment, and to the subsequent operation, maintenance and ongoing development of the Safety Management System. Not all will be the organisations employees.

Consultation takes various forms. There are some specific statutory obligations. These should form the basis for general consultation with users and other interests. There should also be established formal procedures for consulting employees – including, in the case of Marine Operations, any person not directly employed, but who offers their services under a contract for services, either directly to the port, or indirectly through the ship-owner or their local representative.

3.11 Statutory and non-statutory consultation

The procedures for harbour orders revising the statutory powers and duties of an authority include explicit guidance on consultation and rights to objection. The appropriate Minister will direct who is to be statutorily consulted by service of notice.

There are also well-established procedures for advertising the making of **byelaws** which will be found in each authority's local legislation. Modern practice is to base these on the procedures for local authority byelaws. Details of procedures for making harbour orders and byelaws are discussed in Section 1 of the Guide; more information on the former can be found on Good governance guidance for ports - GOV.UK.

In both cases, however, it is good practice, and in the authority's interests, to have consulted those likely to be affected through 'informal' consultation before formalising proposals by applying for a harbour order or making byelaws. It is generally the case that the appropriate Minister does not have power to modify byelaws at confirmation stage – even to consider grounds of objection which the authority has accepted. If an authority is proposing changes to its powers or regulations as a result of a Risk Assessment, and has properly consulted about this, there is more likely to be general acceptance of its formal proposals. At any rate, likely grounds of objection will have been discovered and an opportunity found to deal with these informally.

Harbour Authorities typically consult the appropriate Minister's officials on draft orders and byelaws. Officials must be careful not to prejudice formal decisions to be taken later and will not therefore be ready as a rule to comment on the merits of proposals. The opportunity will be taken to promote wider consultation: officials giving advice will seek to understand how proposals relate to the Risk Assessment process.

3.12 Consultation during the Risk Assessment process

The general aim of consultation is to provide an opportunity for contributions to be made both to the identification of risk and its management. Risk management often depends less on formal regulation than on winning the understanding of those whose activities create the risk and securing their agreement to safer behaviour. Organisations are therefore encouraged to advertise when they are undertaking a Risk Assessment and seek ways of securing the widest possible response from those likely to both be affected in addition to those able to make a meaningful contribution to the process.

The Code does not require the outcome of Risk Assessments to be published in full, though some organisations may wish to do so. There may be well-found concern that drawing attention to risks would unduly alarm some stakeholders, in which case, the organisation might choose to issue a report outlining its risk management plan to explain the need for various measures that impinge on users. Whichever approach is adopted it is important that users are adequately informed of any measures adopted to mitigate against risks that may affect their activities.

3.13 User committees

Some authorities have established advisory or consultative committees for the purpose of facilitating users' contributions to Risk Assessment and of informing and updating users on the day-to-day management of marine operations in the port or facility. In some cases, the authority's local legislation requires them to do so in various ways. It is not necessary, however, for these arrangements to be in the authority's local legislation. The general approach is to identify the bodies or individuals needed to make such a forum properly representative. There are, however, examples where the authority may ask for a different nominee – a right to be exercised exceptionally and for substantive reasons which could be justified publicly.

The ultimate authority for managing the harbour rests with the legally constituted Harbour Authority. The Harbour Authority does not share its legal functions with a users' committee or forum; nor is a committee accountable in the way required of Harbour Authorities under the Code. It is good practice to have set out in advance in general terms the circumstances in which it will or will not involve such a committee – for example, where emergency action is required or there are commercial and other confidences.

3.14 Providing information to users

The counterpart of effective consultation arrangements is an effective means of communicating appropriate information, advice and education to harbour/facility users. Organisations should consider the most appropriate and effective methodologies to employ, certainly making use of appropriate technology including social media and websites to reach their target audience.

3.15 Local Lighthouse Authorities

It is important that all Local Lighthouse Authorities who are involved with the establishment, maintenance and navigational marking of the approaches to the harbour, identify all users and provide for effective consultation, notification and advice to ensure that users are fully informed of proposed developments or changes to the harbour as required by the General Lighthouse Authority (GLA). See Section 10- Conservancy Duty for further guidance on conservancy and aids to navigation.

3.16 Consultation with employees, contractors or other related service providers

Whilst responsibility for port marine safety remains with the Duty Holder, employees and others may in turn be accountable to the organisation through contracts of various kinds. While all are responsible for their own safety at work, this does not divide or dilute the organisations particular responsibility.

While decisions on policy and procedure are for the organisation itself to take, they also need to ensure that these decisions are effectively communicated to, and observed by, those whose activities are regulated or affected by these decisions.

A Harbour Authority or organisation is unlikely to employ all those who work in its port or facility. For example, pilots may be engaged through a contract for services with a pilot co-operative; tug crews and others may work for service providers either contracted to the port or to particular terminal operators. All employers have a responsibility for the safety of their workforce. Consulting and involving employees, as appropriate, on the organisations Risk Assessment helps them to discharge that responsibility.

Organisations regulation of port marine activities within their jurisdiction aims among other things to secure the safety of all those engaged in those activities in any capacity. It is to be expected that anybody whose safety is being so regulated may have something to contribute to a Risk Assessment or review of procedures and it is good practice to make an opportunity for them to participate. It may be appropriate in some cases to consult members of these groups through their own employers – and a consensus is most likely to be achieved in this way. At the same time, such groups may also have trade union representatives, who feel strongly that they should have an opportunity to contribute to the Risk Assessment. The Department considers that it is good practice to give provide that opportunity.

Section 4: Duties and powers

4.1 Introduction

This section is primarily directed towards Harbour Authorities, other organisations may however want to consider what legal powers and duties they have or should seek to promote navigation safety.

The duties of a Harbour Authority are of three types: statutory duties, imposed either in the local legislation for that authority or in general legislation, general common-law and fiduciary duties, such as duty of care, loyalty and confidentiality.

The Code identifies several duties and powers regarding the management of the following:

- safe and efficient marine operations
- open port duty
- appointment of a Harbour Master
- byelaws
- directions (usually referred to as special directions)
- general and harbour directions
- dangerous vessel directions
- pilotage and pilotage directions
- towage
- regulation of marine craft
- environmental duty
- emergency preparedness and response
- civil contingency duty
- authorisation of pilotage
- Pilotage Exemption Certificates
- collecting and setting of dues
- aids to navigation
- wrecks

The above areas are based on the following principles:

- Harbour Master should familiarise themselves with the extent of their legal powers under general and local legislation.
- powers to direct vessels are available – and should be used – to ensure safety of navigation.
- dangerous vessels and substances, and pollution, must be effectively managed.
- a pilotage service must be provided if required in the interests of safety.
- properly maintained aids to navigation must be provided, and any danger to navigation from wrecks or obstructions effectively managed.

These principles are developed in separate chapters of the Code, and in this guide.

4.2 General duties and powers

The Code identifies these general duties of Harbour Authorities relevant to port marine safety as the following:

- safe and efficient port marine operations
- Open Port Duty
- conservancy duty, including responsibility for the safe operation and maintenance of marine facilities
- revising duties and powers
- environmental duty
- Civil Contingencies duty
- Harbour Authority powers, which include:
  - take reasonable care, so long as the harbour/facility is open for public use, that all who may choose to navigate in it may do so without danger to themselves, other users' lives or property.
  - conserve and promote the safe use of the harbour/facility and prevent loss of life or injury through the organisation's negligence.
  - have regard to efficiency, economy and the safety of operation in respect to the services and facilities provided.
  - take such action that is necessary or desirable for the maintenance, operation, improvement or maintenance / legal requirements of the harbour / facility.

The Code gives an outline of the main related duties.

4.3 Legal duties and powers

Every Harbour Authority's safety plan must include a statement of the legal duties and powers. Plans and subsequent reports should state when these were most recently reviewed.

Duties and powers – whether in harbour orders, byelaws, general or Harbour Master's directions – should be developed from a considered approach to risk. Where statutory force is given to an authority's rules, the authority's plans should demonstrate that those rules clearly relate to the management of risks. Harbour Authorities should also be able to demonstrate, therefore, that they are equally clearly enforced, and plans should show that adequate resource is available for this purpose. Additional powers should only be sought – and, in the case of harbour orders, byelaws, and harbour directions, will only be granted – on that understanding.

Section 10 of this guide deals with the regulation of navigation; byelaws and directions are tools for this purpose. That section contains more guidance about how they can be used.

4.4 General, Harbour and Pilotage Directions

Port facility users have a specific right to be consulted where they are made subject to general, harbour and pilotage directions. They have no other convenient recourse against unreasonable directions, such as the right of objection to byelaws allows, although the non-statutory Code of Conduct on the use of harbour directions includes a procedure for dispute resolution.

There are sometimes quite specific requirements for the Chamber of Shipping to be consulted. This is to be regarded as a minimum, recognising that the port is likely to have users not represented in this way. Each authority should identify bodies which represent local users and adopt a policy to consult them about directions. They should also consider drawing proposed directions to the attention of other users by alternative means. The Code of Conduct on harbour directions specifically describes the formation of a Port User Group.

4.5 Pilotage

This section provides guidance on the following:

- the Competent Harbour Authority
- the bridge team and pilot
- safety Assessment
- agents and joint arrangements
- pilotage directions
- authorisation of pilots
- training
- pilot exemption certificates

4.5.1 Summary

Chapter 4 ‘Duties and Powers’ of the Code refers to the main powers and duties which Harbour Authorities who provide a pilotage service (as a Competent Harbour Authority (CHA) need to consider under the provisions of the Pilotage Act 1987. The following principles apply:

- Harbour Authorities are accountable for the duty to provide a pilotage service; and for keeping the need for pilotage and the service provided under constant and formal review.
- Harbour Authorities should therefore exercise control over the provision of the service, including the use of pilotage directions, and the recruitment, authorisation, examination, employment status, and training of pilots.
- Pilotage should be fully integrated with other port safety services under Harbour Authority control.
- Authorised pilots are accountable to their authorising authority for the use they make of their authorisations: Harbour Authorities should have contracts with authorised pilots, regulating the conditions under which they work – including procedures for resolving disputes.

4.5.2 The Competent Harbour Authority

CHAs should, through their boards, play a formal role in the recruitment, training, authorisation and discipline of pilots. They should also approve the granting of pilot exemption certificates (PEC) and the discipline of PEC holders.

IMO Assembly Resolution A960 makes several recommendations on how pilotage authorities should approach the training and certification of pilots in respect of certain operational procedures. CHAs are encouraged to act in accordance with this Resolution in the implementation of their duties and powers under the Pilotage Act 1987.

The national occupational standard (NOS) for pilots may be a useful resource in helping authorities to consider the training requirements of authorised pilots and how pilot training manuals might be best produced. Many ports also publish their pilot training manuals which may provide useful templates when considering the production of pilot training manuals. The NOS for pilots is a useful reference and should be referred to when considering pilot training.

It is likely that the Harbour Authority will delegate responsibility for the management of pilotage to the Harbour Master or another qualified executive officer, or in combination. These arrangements need to provide that the delegated powers are defined with clarity for each person; and the statutory role of the authority observed.

4.5.3 Bridge team and pilot

A pilot's primary duty is to use their skill and knowledge to protect ships from collision or grounding by safely conducting their navigation and manoeuvring whilst in pilotage waters. Nonetheless, the master and bridge team are always responsible for the safe navigation of the ship. Bridge procedures and bridge resource management principles still apply when a pilot is onboard. The bridge team must conduct a pre-passage briefing with the pilot to ensure a common understanding of the Passage Plan prior to its execution. pilots, masters and watchkeepers must all participate fully, and in a mutually supportive manner.

The master and bridge team have a duty to support the pilot and monitor their actions. This includes querying any actions or omissions by the pilot or any members of the bridge team, if inconsistent with the passage plan, or if the safety of the ship is in any doubt.

4.5.4 Conduct

Under provisions of the Pilotage Act 1987 the pilot is not merely an advisor but has legal conduct of the navigation of a vessel:

- **1987 Pilotage Act Sect 31** – "*pilot*" has the same meaning as in the Merchant Shipping Act 1894 and "*pilotage*" shall be construed accordingly. Section 742 of the Merchant Shipping Act 1894 states that a pilot will be classed as "*any person not belonging to a ship who has the conduct thereof*".

There are numerous cases which illustrate the point, which despite their age are still binding in law:

- **The Mickleham (1918).** This case considered the meaning of the word "*conduct*" and concluded that if a ship is to be conducted by a pilot it "*does not mean that she is to be navigated under his advice: it means that she must be conducted by him*".
- **The Tactician (1971).** In this case the judge also considered the meaning of the word "*conduct*". And stated: "*it is a cardinal principle that the pilot is in sole charge of the ship, and that all directions as to speed, course, stopping, and reversing, and everything of that land, are for the pilot*".

4.5.5 Training

To work effectively with the bridge team, the pilot should be trained in the principles of both Bridge Team Management (the focus being internal and external relationships and operational tasks of the Bridge Team) and Marine Resource Management (the focus being cultural issues and the role of the pilot).

4.5.6 Technical aids

Consideration should also be given to the risk reduction benefits of utilising proven technology that can provide additional complementary support, independent of ship systems, to both pilots and bridge teams.

4.5.7 Assessment

Pilots should be monitored and assessed in the effectiveness of work with the bridge team. This could be through peer review or other form of audit.

4.5.8 Level of mutual support for bridge team

Inevitably the level of mutual support will vary dependent upon several factors including trade, vessel size, systems available and crew numbers. However, the following are minimum requirements:

- capable - competent and properly qualified
- well prepared - e.g. charts, passage plan, machinery state, anchors, crew deployment
- responsive - be alert to the pilot requirements and monitoring the pilot and others' actions
- co-operative - positively answering pilot's questions and acting on directions
- acceptable level of English – clear understanding of standard marine vocabulary
- fully familiar with bridge equipment.

4.5.9 Reporting Substandard Performance

Pilots have a statutory duty to report ship deficiencies that may adversely affect its safe navigation to the CHA who should inform the MCA. This mechanism could be used to report substandard performance but if not, then the Safety Management System must include procedures to facilitate reporting to the CHA that can be acted upon immediately if necessary (e.g., if the vessel remains in port). Organisations should report ship deficiencies to their local MCA marine office, a map with contact details is available at Locations of MCA marine offices - GOV.UK.

4.5.10 Providing a service

The 1987 Act requires that the pilotage service provided by any CHA should be based upon a continuing process of Risk Assessment. Operating a pilotage service will involve consideration of the following factors:

- safety assessment
- agents and joint arrangements
- pilotage directions
- boarding and landing arrangements
- consultation
- pilotage regulations
- authorisation of pilots
- contracts with authorised pilots
- training
- rostering pilots
- incident and disciplinary procedures.

The following section gives further guidance on the above main factors that should be considered by any CHA providing pilotage services.

4.5.11 Safety assessment

Section 2(1) and 2(2) of the 1987 Act requires:

- Whether any, and if so, what pilotage services need to be provided to secure safety of ships navigating in or in the approaches to its harbour.
- Whether, in the interests of safety, pilotage should be compulsory for ships navigating in any part of that harbour or its approaches. If so, for which ships under which circumstances and what pilotage services need to be provided for those ships.

The hazards involved in the carriage of dangerous goods, pollutants or harmful substances by ship must be considered. These considerations should be addressed as part of an authority's overall Risk Assessment and Safety Management System (see Section 5 and Section 6 of this guide).

For the purposes of the Marine Safety Management System (MSMS), the provision of pilotage, whether by authorised pilots or Pilot Exemption Certificate (PEC) holders, is to be treated as a risk reduction measure, and be considered with other possible risk reduction measures to mitigate the risks identified within the Safety Management System and appropriate Risk Assessments.

The decision under Section 2 of the Act to provide pilotage services should be taken in the context of all risk reduction measures. It may be identified therefore that pilotage services would not positively affect risk reduction compared to other risk reduction measures and pilotage services deemed not required. The CHA should, however, be satisfied with the effectiveness of any risk reduction measure before relying on it.

A CHA with the powers to provide an effective and efficient pilotage service must be satisfied that it can do so competently. This means firstly that the CHA has the competence to assess and oversee authorised pilots, and those who may apply for Pilotage Exemption Certificates; and secondly, that they will have sufficient pilotage work to maintain their skills adequately.

It is important to note that an authority has two separate decisions to make:

- to identify the pilotage service required in the interests of safety (Section 2 of the Act)
- the scope of pilotage directions.

The service provided shall cover the requirements of all vessels required to have a pilot by the directions. However, the authority must also consider other points:

- Some vessels subject to directions may hold a Pilotage Exemption Certificate and therefore reduce the overall pilotage requirements.
- A vessel not subject to directions may nevertheless request (or be directed to engage) a pilot in the interests of safety (for example in unusual conditions such as poor weather, reduced visibility, unfamiliarity with, or lack of knowledge of, the port or due to fatigue) which could Increase pilotage service requirements.

- A vessel which holds a Pilot Exemption Certificate may also request the services of a pilot due to unusual environmental conditions, vessel condition or fatigue which will also Increase pilotage service requirements.

The principal point to be remembered is that the authority has a duty to provide the service required in the interests of safety (not in terms of the service required by the pilotage directions). The requirement is determined through the Safety Management System, which may identify alternative risk reduction measures where pilotage, and pilotage directions, would otherwise be needed.

If a risk is identified for which there is no satisfactory alternative to pilotage, the service provided must fully meet the requirements of the Code. Section 2 of the 1987 Act does not allow financial considerations to be used as a justification for not providing a pilotage service.

An authority which identifies the need to provide a pilotage service, incurs an obligation to find and maintain the resources and expertise.

4.5.12 Agents and joint arrangements

An authority may arrange for certain pilotage functions to be exercised on its behalf by such other persons as its sees fit, including a company established for the purpose, or another Harbour Authority. The Secretary of State also has power to appoint one authority as CHA for another's area. Two or more authorities may arrange to discharge such functions jointly. Under Section 11(2) of the Pilotage Act a CHA may assign all its pilotage functions other than the duty under 2(1) to another CHA. The following arrangements may not be assigned or shared:

- duty to continually review the requirements for a pilotage service
- authorisation of pilots
- arrangement under which its authorised pilots are engaged
- approval of pilot launches
- issuing of pilotage directions
- issuing of Pilotage Exemption Certificates.

These are all key elements which the MSMS should address as required under the Pilotage Act. Where other functions have been delegated, or there is a joint arrangement, the body or authority should be fully consulted in developing the system or consider having a joint Safety Management System. Authorities should also consider seeking a joint system for jetties and berths outside their jurisdiction, where their pilots may be providing a service.

Any delegation or joint arrangement should be subject to a formal contract with any other body used in this way (including another Harbour Authority) which fully recognises statutory obligations which cannot be delegated or shared. The contract should set out the decisions which the delegated or joint body may make, and any conditions to which this is to be made subject. There should be provision in such a contract to terminate the arrangement at any time to enable an authority to carry out delegated or joint functions itself, or to make some other permissible arrangement instead.

4.5.13 Pilotage directions

If a CHA decides in the interests of safety that pilotage should be compulsory in the harbour or any part thereof, it must issue pilotage directions. This requirement Is separate from any decision to provide a pilotage service. As noted above, an authority may decide to provide a service without making pilotage compulsory in some or all circumstances. Vessels are subjected to pilotage directions where the authority has decided that the management of safety so requires.

The authority's pilotage directions shall define the geographic area within which pilotage is identified as compulsory. These limits should be determined and assessed by means of formal Risk Assessment. If risk is identified in an area outside the statutory limits of a port, then there is a provision for port limits to be formally extended by harbour revision order, so that the risk may be managed. There is special provision in the 1987 Act for such extensions for pilotage purposes only.

Pilotage directions describe how pilotage applies to vessels using the port. The content of the directions should be driven principally by the results of the Risk Assessment. Directions must specify the ships or type of ship, and the geographical area, to which they apply; and in any circumstances in which an assistant pilot must accompany an authorised pilot.

Directions should specify vessel types. Ships have been specified in directions according to size (traditionally by length, but sometimes by draught, tonnage, beam etc.). Risk assessments provide an opportunity to consider the relevance of such criteria – and others, and whether they are the right way of deciding which vessels present a risk that is appropriately managed by compulsory pilotage.

4.5.14 Pilot boarding and landing arrangements

A revised code of practice entitled The Embarkation and Disembarkation of pilots, was prepared jointly by the UKMPA and the BPA, and the UKMPG Marine/Pilotage Working Group, and provides advice on pilot boarding and landing arrangements. CHAs are strongly recommended to refer to this code of practice when considering pilot boat and boarding operational procedures, Risk Assessments and safe systems of work.

Pilotage directions may include such supplementary provisions as the authority considers appropriate. This provision is used to designate pilot boarding and landing positions. The following are examples of considerations applying to the fixing of these positions, especially the seaward position:

- it must be in a safe place to transfer a pilot to and from a vessel
- it must allow for a pilot to be on board where the pilotage directions so require
- it must be where there is sufficient time and sea room to allow a proper master - pilot information exchange.

The requirements might also vary according to different types of vessels – and for other temporary reasons, such as adverse weather. Subject to the following two paragraphs, the

boarding and landing position is normally established at the limit to which the relevant pilotage direction applies.

4.5.15 Confirmation of pilot boarding arrangements compliance

Whilst relatively infrequent, several incidents of pilot ladder side ropes parting whilst pilots have been embarking / disembarking have occurred over recent years, some resulting In Injury.

CHAs are encouraged to adopt a control measure which requires the master of any ship boarding or landing an authorised pilot to make a verbal declaration via the local VTS/LPS or pilot cutter directly (if pilots will be boarded before first contact with VTS/LPS), that the pilot boarding arrangements are:

"Properly constructed, recently inspected, in good condition and rigged as per SOLAS and IMO requirements, including the supervision on deck by an officer."

If such declaration is not forthcoming, or the pilot/pilot launch crew detect that the ladder is not fit for purpose, it is recommended that the transfer should not take place and the ship be directed to safe anchorage or holding position until a suitable pilot boarding arrangements can be provided.

Section 7 of the 1987 Act allows for a range of circumstances to be accommodated by the pilotage directions. They may specify:

- the area and conditions in which a direction applies
- circumstances in which special arrangements might apply
- procedures in the event of a pilot not being available (such as in adverse whether making boarding or landing unsafe)
- different boarding and landing positions for different situations.

All of these must be identified in the Risk Assessment and reflected in the directions.

4.5.16 Waiving directions

There is no provision for pilotage directions, once given, to be waived or disapplied – other than by the making of new directions by the authority. This is not a matter on which a Harbour Master has discretion. It may be necessary for the directions to be carefully drafted to ensure that special circumstances in which they would otherwise apply are properly covered. Exceptions should be fully justifiable by reference to the formal Risk Assessment. It would not be appropriate, for example, to provide that pilotage is not mandatory in highly adverse conditions which make boarding or landing a pilot too dangerous to be undertaken, (subject to any overriding considerations to enable a vessel to be directed to a position of safety).

4.5.17 Consultation

Before issuing a new direction or directions, an authority must consult with ship owners whose vessels use the port, or those who represent them, and with those who conduct operations within the harbour (e.g., towage companies, pilots, etc.), though it may consult more widely if it chooses. An authority should publish its directions so that they are readily available to all who require them or are likely to be interested in them.

4.5.18 Pilotage regulations

Pilotage directions exist to define formally the broad structure of a pilotage service, and to define where, and for whom, compulsory pilotage applies. Harbour Authorities should provide a method of publishing these administrative requirements and details which support these directions. Some authorities refer to this published version as 'pilotage regulations'. These may include:

- arrangements for the application, assessment, approval, renewal and use of a pilotage Exemption Certificates (PEC)
- pilot authorisation procedures
- conditions governing the provision of the pilotage service
- how vessels should obtain the services of a pilot
- details of the local radio communications allocated for pilotage
- criteria for excepted ship status.

4.5.19 Authorisation of pilots

Each CHA may authorise suitably qualified pilots in its area. The 1987 Act says that authorisations may relate to ships of a particular description and to parts of the port. The Authority determines the qualifications for authorisation in respect of age, medical fitness standards, time of service, local knowledge, skill, character and otherwise.

Authorities should establish proper arrangements for assessing competence, in accordance with the National Occupational Standards, developed in parallel to this Code and for keeping fitness under review. These should be published and available to applicants.

Subject to the principle that it is for the Harbour Authority alone to decide (using appropriate procedures for delegation to its officers) that an authorisation should be given, it is for an authority, or its agent, to determine that a particular authorised pilot is appropriately qualified and fit to pilot any ship on any occasion. Authorities are accountable for these decisions. They and any agent should have discretion to decide not to allocate an authorised pilot for a period, or for particular ships, and this should be an accepted condition of every authorisation.

An authority may also suspend or revoke an authorisation after giving notice and allowing a reasonable opportunity for representations to be made, if it appears to the authority that the authorised person is guilty of any incompetence or misconduct affecting their capability as a pilot. The same applies if an authorised pilot has ceased to have the required qualifications; or level of medical fitness; or failed to provide evidence of continuing to meet any of the criteria. An

authorisation may also be suspended or revoked, on reasonable notice, if any contract or other arrangement under which the services of pilots are provided is terminated. Authorities should have formal procedures for these circumstances, incorporated in the contracts they have with authorised pilots. CHAs may wish to take legal advice in such matters.

Authorities should have procedures for re-validating authorisations at intervals of not more than five years. Harbour Authorities should not allow pilot authorisations to be held by persons who have not been rostered as working pilots for more than two years. Revalidation should include an assessment of competence sufficient to satisfy the authority that the pilot remains qualified to be authorised. The authority should consider re-assessing any authorised pilot who has not been active for any reason if it considers that competence may be in question. It should do that assessment, and arrange appropriate training, before allowing the pilot to be rostered. An example of a pilot training matrix is available at Annex D.

4.5.20 Contracts with authorised pilots

For the purposes of being able to regulate the provision of its pilotage service, each authority should have a contractual arrangement with its authorised pilots (whether under a contract of employment or a contract for services). This may be individual with each pilot or with an agent such as a pilot company. The contract should reflect the general conditions under which people are employed by the authority, including regulation of hours, leave, medical standards, training, incident reporting, discipline, employment protection, grievance and complaints procedures. The purpose of the contract is to regulate the relationship between the authority and its pilots in the proper interests of both. In the authority's case, it should retain sufficient control over the provision of the service which it has a statutory duty to provide under the Pilotage Act 1987.

4.5.21 Pilot training

Harbour Authorities should ensure that all their authorised pilots are trained and qualified to conduct the vessels to which they are likely to be allocated. They should not allow any pilot to be allocated if not appropriately trained and qualified. The training standards should be appropriate to the National Occupational Standards, developed in parallel with the Code. Every authorised pilot's training needs to be kept under review, with additional training provided as necessary before allocation to different types of vessels or to the use of new types of tugs. It is good practice for shipping companies, particularly regularly trading vessels under PECs, to also participate in pilot training programmes. These programmes promote shared good practice and team working. It is very beneficial for pilots to be required to carry out familiarisation trips with tugs as part of a formal refresher / training programme.

The emphasis on receiving positive confirmation of instructions given between pilots, tugs and shore side communications should be emphasised during training. The intended result being that all communications have been heard and understood and any vessel or engine movements can be expected by all parties involved.

4.5.22 Definition of practical and revalidation assessments for pilot and PEC candidates

A “Practical Assessment” is an examination of competency for a pilot or Pilotage Exemption Certificate (PEC) candidate, on a vessel they are not authorised to legally have conduct of.

A Revalidation Assessment or “Check Trip” is for a pilot or PEC, who is already authorised and can legally have the conduct of vessels under that authorisation.

All authorised pilots conducting a practical assessment or overseeing a qualifying trip, retain conduct of the vessel and remain legally responsible throughout the Pilotage Act. Assessments should only be conducted by senior authorised pilots.

4.5.23 Port pilotage assessment process (including Pilotage Exemption Certificates)

Every port should have a defined assessment process within its Safety Management System. Assessors should have received an appropriate level of training prior to conducting any assessment.

CHAs should consider utilising some of the following formats as part of the assessment / Training process:

- accompanied ship riding
- manned model courses
- ship simulators
- visits to VTS / LPS
- tug familiarisation trips
- written exams / assessments
- oral exams / assessments

4.5.24 Practical assessment process

Prior to boarding, the assessor should brief the candidate on the assessment process, confirm the individual roles and responsibilities of the assessor and candidate, fully review the candidate’s passage plan and agree limits when the assessor will intervene.

On boarding the vessel, the Master should be fully briefed by the assessor. This should include an explanation of the assessment process and confirm the roles and responsibilities of the candidate and assessor.

The assessor should confirm approval from the Master to continue the examination process.

Throughout the assessment the candidate should give some form of verbal commentary, either continuous or prior to commencing the next leg or a particular manoeuvre.

The assessor should immediately clarify any variation to the agreed passage plan or commentary, and where necessary, take timely intervention.

On completion of the assessment process, a full debrief should take place. This should include a record of the assessment, feedback from the candidate and identify areas of further training.

4.5.25 Rostering pilots

The shift patterns for any given pilotage service will vary depending on local circumstances, including the length of act, density of shipping, proximity of boarding and landing areas, etc. In designing shift patterns, care should be taken to ensure that pilots are suitably rested before commencing an act of pilotage, and that time has been allocated for the proper development of the pilotage passage plan. Reference should be made to Working Time Regulations 1998 and Working Time (Amendment) Regulations 2002. To support the above, the MSMS should reference a fatigue monitoring system or procedure to ensure that only appropriately rested pilots are allocated to conduct acts of pilotage. The MAIB report 'Contact with Oikos Jetty 2 by chemical tanker Ali Ka' (GOV.UK) into the Contact with Oikos Jetty 2 by the chemical tanker Ali Ka provides further insight into the importance of managing pilot's fatigue.

4.5.26 Additional pilots on board

Formal Risk Assessment should be used to identify any circumstances in which more than one pilot would be needed to conduct the navigation of a vessel safely.

4.5.27 Incident and disciplinary procedures

It is good practice for each authority to have a formal incident and disciplinary procedure in the event of a marine incident. This would be in addition to normal industrial incident and discipline procedures. It is good practice for Harbour Authorities to make provision for ship's masters to make reports, including confidential ones, of unsatisfactory performance by an authorised pilot, whether there has been an incident or not. Such provision must, however, be coupled with an equitable investigation procedure.

4.5.28 Pilotage Exemption Certificates

There are powers and duties which CHAs have, to exempt certain ship's officers from their requirements to take an authorised pilot. The use of these powers should follow these general principles:

- The standards for exemption certificates must not be more onerous than those required for an authorised pilot; but they should be equivalent.
- Exemption certificate holders and their employers are accountable to the issuing Harbour Authority for the proper use of any certificate.
- Harbour Authorities should have formal written agreements with certificate holders and their employers to regulate the use of certificates.

The requirements of a PEC system are outlined in Sections 8 and 15 of the Pilotage Act 1987 and in Marine Navigation Act 2013.

4.5.29 Eligibility for a PEC

The Act requires CHAs to grant a PEC only to a person who is a bona fide deck officer of the ship, or ships specified on the certificate. In practice, a large proportion of commercial shipping movements, especially ferries, are conducted by such officers with a PEC. Many are experienced not only to be familiar with their ship but also harbours which they visit regularly. The arrangements whereby applicants may qualify, obtain, and use a PEC should be laid down in the pilotage regulations, which normally accompany the pilotage directions. The pilotage directions will specify the type and size of vessels which are subject to pilotage and therefore, by definition, the vessels to which a PEC applies.

4.5.30 Award of certificates

When an applicant applies for a PEC the first step will be for the CHA to register the application and brief the candidate on what they are required to do before their application can be assessed.

Once the requirements have been determined, applicants who satisfy them have a right to exemption whilst serving as deck officer on the vessel for which they hold a certificate whether they choose to use it or not. It should be noted that CHAs are not allowed to withhold certification for reasons unconnected with an applicant's skill and experience, local knowledge and knowledge of English. (See 4.5.42 below regarding a CHA where there are exceptional navigational hazards). A Risk Assessment may show for example that special requirements apply if the vessel were to take tugs. In that case, the authority must choose whether it is reasonable to make the related skills a requirement for exemption; or whether to adopt an alternative risk management device. If the ship for which the master holds a PEC requires the services of tugs on a regular basis, then this experience and ability should be covered with other relevant matters in the assessment prior to granting a PEC.

4.5.31 Responsibility of the authority

A PEC is valid for one year from date of issue. Renewal should depend upon the CHA being satisfied with the conduct of the PEC holder. The PEC should only be renewed on confirmation that the holder's certificate of competency remains valid. The CHA should also ensure that the skill and local knowledge is still sufficient, and one way of doing this might be to satisfy itself that the applicant has conducted pilotage on similar vessels in the pilotage area(s), on a predetermined number of occasions.

There must be procedures to ensure that a PEC holder's local knowledge is kept permanently up to date. It is recommended that in cases where a PEC is not renewed continuously, any subsequent application by the previous PEC holder should require a further assessment and/or examination. Where a PEC is continuously renewed, it is recommended that the holder should be fully reassessed, and/or re-examined every five years.

4.5.32 CHA training

CHAs should offer an examination when required without undue delay. The CHA should also provide to the PEC holder, and the PEC holders employer relevant up to-date navigation information and may offer further training on aspects of the examination.

Where applicable, it is also recommended that applicants be required to visit, and to be briefed on, the VTS system. A full appreciation of how such a system can monitor and record the detailed track and manoeuvres of every ship, will often encourage higher standards of navigation than otherwise might have been the case.

4.5.33 Skill, experience and local knowledge

The granting of a PEC is dependent upon the CHA being satisfied, by examination or otherwise, that the applicant's skill, experience and local knowledge is sufficient for them to pilot their ship safely within the whole of the area of the harbour to which the authority's directions apply, or a specified part.

Qualifying for a PEC should not be more onerous than qualifying for an authorisation as a pilot in the same district; but the requirements should be 'equivalent'. However, it should be noted that a PEC relates to a particular vessel or vessels and may be restricted to a particular berth whereas a pilot's authorisation can cover a wide range of different vessel types and sizes and a range of different berths.

A checklist at the end of this section lists the criteria which a CHA should apply when assessing applicants for PEC.

If a CHA considers it necessary in the interests of safety for the person piloting the ship to speak English, a PEC may only be issued where the CHA is satisfied that the applicant's knowledge of English is sufficient for that purpose. This may be established during an oral examination or practical assessment.

4.5.34 Assessment of skill

Mariner's level of knowledge is, usually, in principle, confirmed by his certificate of competency. It is therefore fundamental that a PEC applicant holds a valid and relevant certificate of competency, which entitles them to hold the position as deck officer in the ship(s) named in the application. Experience has shown, however, that in practice, certificates of competency do not always reflect accurately an applicant's professional ability in ship handling. It is therefore recommended that consideration be given to confirming the overall competency of an applicant, together with their ability to communicate effectively in English, during the practical assessment of their local pilotage knowledge. A CHA should also ensure that the applicant's certificate of competency is applicable to the type and size of ship being navigated.

4.5.35 Assessment of experience

A deck officer's certificate of competence reflects achievement of a reliable and stringently examined standard in respect of the safe operation of a ship, and a minimum time spent at sea. They are not a record of service on ships of specific types and sizes. Experience of the relevant area, or part thereof, should be ensured by requiring a PEC applicant to complete several training acts in the company of an authorised pilot or a holder of a valid PEC for the area concerned.

Tripping should be undertaken on the ship, or class of ship, in which the PEC is to be used. The CHA must lay down the tripping requirement for its harbour or any part, if applicable. This requirement must specify the number of trips required by daylight and night. It may also specify the number of trips to be undertaken with an authorised pilot, rather than a PEC holder. The proportion of inward trips to outward trips may also be defined. To minimise the risk that qualifying trips being falsely claimed, the use of a Tripping Log is recommended. This should require the accompanying pilot or PEC holder to countersign to the effect that the PEC applicant had responsibility for pilotage of the vessel throughout the qualifying trip. Tripping Logs can also be validated by comparison with port records.

4.5.36 Assessment of local knowledge

The level of local knowledge can be assessed practically and by written and/or by oral examination. The level should be sufficient for the applicant to pilot their vessel with safety throughout the area covered by the PEC.

The checklist lists the criteria which the CHA should apply in assessing applicants. This includes both generic matters and local knowledge and should also include an assessment / inspection of passage plans which are in regular use to confirm their appropriateness. The MAIB report into the Grounding of the roll-on/roll-off passenger ferry Alfred provides further insight into the importance of ensuring PEC passage plans are routinely inspected / assessed for their appropriateness.

4.5.37 Responsibility of the authority – CHA's obligations

CHAs should provide PEC applicants with a clear statement of its requirements for exemption. These might be accompanied by a full set of byelaws, general directions. Passage planning documentation and other documentation necessary for safe navigation within the port.

4.5.38 Procedure for examining applicants

The CHA will establish a procedure for examining applicants for a PEC, to verify whether they meet the criteria set out in the checklist. The procedure should include an oral examination and/or a practical assessment, and may, in addition, at the discretion of the CHA, include a written examination.

The CHA will decide who should be responsible for the conduct of the examination. The Harbour Master may conduct the examination themself, or it may be delegated to a senior pilot, a representative of the pilotage committee, a board member or a dock master. The CHA will also consider whether decisions on the award of the PEC should be endorsed by a committee of the harbour board. They should also arrange for applicants to be given feedback on their performance in the examination(s).

4.5.39 Additional vessels

It is often the case that a PEC applicant will request his/her certificates to be valid for more than one vessel. However, where the other vessels involved differ significantly in size or manoeuvring characteristics, from that named in the original application, consideration should be given to requiring the applicant to demonstrate proficiency in those different vessels, before approving the addition of such vessels to his certificate.

4.5.40 Additional areas

A PEC holder may request that their certificate be extended to embrace additional areas of the port. In these circumstances, the requirements for additional tripping and/or further assessment should be specified in the pilotage regulations and should be fully satisfied before any such extension is approved.

4.5.41 Conditions governing the use of a PEC

After a PEC has been issued, the CHA should set out conditions attending to its use. Procedures / checklists should draw attention to the requirement under Section 15 of the Act for a Harbour Authority to be notified of the identity of the bona fide deck officer whose PEC is to be used (when a ship navigating pilotage waters has not requested pilot).

4.5.42 Authority not to grant a PEC

Under Section 8(3) of the Act a CHA may apply to the Secretary of State to be allowed not to grant certificates, if the CHA believes that exceptional navigational hazards exist within its pilotage district, such that safety considerations dictate that all vessels navigating within the district must take an authorised pilot. This provision is rarely used in practice.

4.5.43 Suspension or revocation of a PEC

A CHA may suspend or revoke a PEC where:

- The Authority is no longer satisfied that the PEC holder has the required skill, experience or local knowledge because of either an accident, incident or near miss or because it thinks that the person has provided false information.
- The Authority thinks that the person has been guilty of professional misconduct while piloting a ship.

- The Authority was notified that a person's certificate was to be used but the pilotage was carried out by a person who was neither an authorised pilot nor acting in accordance with a Pilotage Exemption Certificate.

Written notice must be given of the suspension or revocation of a PEC. While suspension of a PEC may have immediate effect, before revoking a person's certificate, a Harbour Authority must have given that person written warning stating the reasons for the proposed revocation and allowing them reasonable opportunity to make representations.

The maximum period for which a Pilotage Exemption Certificate may be suspended is 28 days though this may be extended by another 28 days (again given written notice) if necessary.

It is recommended that the procedure for suspending or revoking a PEC is documented in the pilotage directions.

4.5.44 Vessels operated by the CHA

It should be noted that any vessels operated, or owned by the CHA, are also bound by pilotage directions and regulations.

4.5.45 PEC criteria example template

An example of a template can be found in Annex F.

4.5.46 Pilot

Section 4 of this guide refers to the authorisation of pilots. Under the Pilotage Act, Harbour Authorities have the power to determine the qualifications for authorisation in respect of age, physical fitness, time of service, local knowledge, skill, character and otherwise. Authorities should establish proper arrangements for assessing competence, in accordance with the national occupational standards and for keeping fitness under review. These should be published and made available to applicants. Harbour Authorities also need procedures for re-validating authorisations at least once every five years, as referred to in IMO resolution A960.

Harbour Authorities should use clear assessment criteria, which set out the minimum standards to be achieved before initial authorisation and subsequent advancement to higher grades. When conducting interviews for pilotage selection and training, it is common practice for a pilot to be on the interview board, as they bring their expertise to the task of evaluating the qualities required. These criteria should specify in detail the examinations, assessments, qualifying trips, and other experience required at each stage of a pilot's advancement. Competency, in vessels of the next higher grade, should be assessed before a pilot is advanced to that grade. Harbour Authorities need to ensure that no pilot is assigned to conduct pilotage in a vessel or an area for which they are not fully qualified and trained.

Where pilots are themselves used to examine or assess other pilots, consideration should be given to them being accompanied by a person other than a pilot, such as a Harbour Master, to avoid a possible misconception that the process is other than objective and in accordance with defined procedures.

Arrangements should be put in place to monitor the activity patterns of individual pilots to ensure that they are able to maintain the necessary local knowledge and expertise in each part of the pilotage district, and in each type and size of vessel for which they are authorised to undertake an act of pilotage. Arrangements may be needed to ensure that pilots can make good any gaps in their current experience before they are assigned to a vessel, or an act in a part of the district, with which they have become unfamiliar. The practical performance of pilots should also be monitored so that any weaknesses are identified early, and remedial training initiated.

In helping pilots to maintain their skill levels at the highest standard, it is essential that they are given the opportunity to train with others who contribute to safety such as VTS operators and tug crews. Training simulators, where available, can also play a useful and cost-effective role in helping to maintain currency in berthing and ship handling techniques, as well as providing a mechanism for exercising emergency situations. Training in the use of newly developed systems such as transponders; carry aboard and other electronic chart systems should also be considered, where practicable.

If an assessment gives reason to doubt a pilot's continuing competence, prompt arrangements should be made for refresher training. CHAs are advised not to allow pilots to be rostered for work if they have not been actively employed as a pilot within the last six months, unless suitable refresher training has been undertaken. Such training should be followed by a formal assessment of pilotage skills.

4.6 Towage

This section provides guidance on establishing good practice for the safe operation of towage services within port, harbour and terminal limits including:

- Risk Assessment and towage guidelines
- towage types
- ship assist towage
- dead tows and project towage
- general towage
- tugs/workboats operator's approval and auditing
- training and certification

Procedures for towage in ports, harbours and at terminals need to be developed, managed and regularly reviewed by Harbour Authorities, tug operators, pilots and ship owners, to ensure a safe and efficient service. Procedures are to include responses to emergencies. Good planning communication and teamwork between all parties is essential.

4.6.1 Risk Assessment and towage guidelines

All towing operations in harbours should be risk assessed by Harbour Authorities. Based on that Risk Assessment the Harbour Authority, in consultation with other stakeholders, should develop specific towage guidelines which should be incorporated into their Safety Management Systems.

For routine ship assist towage, it is recommended that the guidelines include the minimum bollard pull, number and type of tugs for a ship of a particular size for each berth location. Guidelines should take account of assisted ship length, draft, manoeuvrability and anticipated SWL of bollards. Guidelines will have to be modified on the day depending on environmental conditions, any defects with the assisted ship and the capability of the tugs available. It is strongly recommended not to deviate from port towage guidelines.

When considering towage activities, it is appropriate for organisations to specify certain limitations. As a minimum it is recommended that the following be included in the towage guidelines:

- minimum acceptable visibility
- maximum swell conditions
- maximum speed through the water for both making fast the tugs and for the operation
- maximum wind strength and direction.

Guidelines on when to abort or cancel an intended towage operation, due to restricted visibility or the potential for restricted visibility, will depend on factors including manoeuvring room, duration of the tow, minimum speeds, abort contingency plans and the towage method employed. Organisations and towage providers should set limits for towage in restricted visibility and stipulate any special measures, necessary at other agreed levels of visibility, such as push/pull versus centre-lead towing, especially for the forward tug.

Swell conditions will not affect all facilities but, where they do, the ability of tugs to make fast safely, remain fast once connected without snatching or parting the towlines and being able to maintain position are critical considerations. Swell conditions will affect speed, and this must be discussed between the pilot and tug master. The tug master must have the final decision on whether to make fast the tow.

It is essential that the pilot/ship master agrees with the tug master, (as part of the pre-operation interchange) what the ship's speed through the water will be when the tug is made fast and thereafter. Excessive speed will cause dangerous interaction between the ship and tug and can lead to serious damage to the tug, ship and potential fatalities, especially when the tug is working bow to bow with the assisted vessel.

The Pilots' Pocket Guide and Checklist gives additional specific guidance on:

- checklist and communications
- developing the pilotage plan and master/pilot exchange
- vessel familiarisation
- closed-loop communications
- briefings and debriefings
- best Practice in Harbour Towage:
  - at all times
  - pre-arrival
  - making fast and manoeuvring
  - end of tow/departure
- points of good seamanship for assisted ship's crew
- restricted visibility
- tug types
- messenger and heaving lines
- towing points and girting
- hydrodynamic Interaction
- escort towage
- pilot and tug master liaison meetings

It is recommended that Competent Harbour Authorities ensure the Pilots' Pocket Guide and Checklist - *Working safely with harbour tugs - reducing the risks in port towage* is made available to pilots.

MCA guidelines should be used to ensure that tug crews are appropriately trained and qualified. They should also include the need for tug crews to train with pilots. pilots, Pilotage Exemption Certificate (PEC) holders and tug masters', should conduct regular liaison meetings, safety workshops, visits including pilots tripping on tugs and tug masters accompanying pilots and all parties attending simulator and refresher training together. Trips should cover as varied a selection of towage activities as possible including active escorting (where applicable). It is recommended that, at minimum, liaison meetings between facility representatives, pilot associations and towage providers take place every quarter.

Open reporting of incidents and candid exchanges are essential to gain maximum benefit from any lessons learned. The Pilots' Pocket Guide and Checklist includes bullet points for items to be discussed at liaison meetings including identification of good practice and improvements. Any accidents and near misses should be thoroughly reviewed and relevant MAIB reports discussed with changes to guidelines being made if necessary.

Tugs/workboats and operator's approval

Organisations should develop their own criteria for approving tug and workboat operators who regularly operate within the organisation's jurisdiction. Section 4.7.6. provides further guidance, but the criteria should focus on confirming that the provision of towage or workboats is appropriate to the configuration of the port or facility and can sufficiently support the requirements of the towage guidelines (e.g. bollard pull certificates) and any other port or facility requirements.

4.6.2 Towage Types

There are several different types of towage operation each of which brings its own challenges and risks. These can be summarised as:

- **Ship assist towage** or assisting vessels making way, typically during entering or leaving and/or shifting berth within a harbour.
- **Dead tows** or assisting vessels without propulsion including, but not limited to, barges, pontoons, dredgers, rigs which typically involves vessels entering and leaving harbour being towed by a sea-going tug or other vessel.
- **General towage** including towage of smaller barges, pontoons, rigs normally within harbour limits and marine construction equipment.
- **Project towage** including unusual events which require special consideration.
- **Escort towage** facilitating the safe transit into and out of the port, sometimes as a precautionary measure.

Towage can be undertaken utilising several different methods and in many differing configurations including over the bow, over the stern, pushing, pulling, using long or short towlines, fixed or adjustable lengths, with or without towing bridles, lashed alongside ("hipped up") and using single or multiple tugs.

The choice of method will depend on the type/size of the assisted vessel and type/ size/capability of the tug or workboat. The tug master and crew must be suitably qualified and experienced and are competent to not only to conduct the manoeuvre but also advise if the plan and/or its execution is unsafe.

4.6.3 Ship Assist Towage

Larger facilities are likely to have resident commercial towage operators with smaller operations having their own arrangements or mobilising tugs from elsewhere on an ad hoc basis.

Ship assist towage can be an extremely hazardous activity and good teamwork is essential to safe operations.

If escort towage is required by the port or terminal operator for the safe transit into and out of the port, they should develop their own escort guidelines in association with relevant Harbour Authorities. Escorting may include escorting passively (tug running free with the vessel) or

actively (tug made fast normally centre lead aft). The vessel requiring escort must be equipped with suitable towing arrangements to deal with the forces applied by the tug during the operation. These escorting criteria should be readily available and confirmed prior to arrival. The equipment would normally consist of a bollard of the required SWL or a chock arrangement, and a fairlead of adequate strength. All parties involved (master, crews and pilots) should be trained and practiced in the operation through regular pilot/tug master training and liaison. Pilots, ships and Tug Masters exchange of information should include agreement on suitable speed.

Where possible, centre lead forward towage is to be risk assessed and alternative methods such as push/pull used. Tugs forward of assisted vessels are in a vulnerable position with little scope to manoeuvre clear in event of an emergency.

When a vessel piloted under a PEC requires a tug, it is recommended that a pilot be engaged as PEC holders have limited experience in tug handling and are not normally engaged in tug/pilot PMSC meetings. Best practice within ports is to have an additional endorsement for PEC holders which requires further training and tripping with pilots.

4.6.4 Dead tows and project towage

Dead tows, unusual objects and non-routine towage events will require individual assessment, including Risk Assessment, and planning.

For arrivals and departures from/to sea, dead tows should be pre-approved by the facility utilising a towage plan format which includes Risk Assessment and method statements regarding:

- harbour tug positioning and utilisation
- whether the tow is to be transferred from the sea tug: transferring tows creates additional hazards, particularly handling heavy equipment, and whether the sea tug remains fast until the tow is alongside will depend on berth characteristics, locks etc., the characteristics of the sea tug and the availability of suitable harbour tugs
- riggers or line handlers being transferred to the tow to recover sea gear, emergency tow lines and to prepare the tow for berthing
- weather limitations and sea state
- suitability of destination berth and whether adjacent berths need to be cleared
- number of suitably experienced pilots required for the sea tug and/or tow.

For in-harbour non-routine tows, key decisions should be recorded and the person (acting as towing or barge master) who is responsible for the safety of the manoeuvre and the towage plan, should be clearly identified.

This person is responsible for:

- conducting an appropriate Risk Assessment/safety case to be submitted to the Harbour Authority

- producing a method statement
- the passage plan
- the safety of the manoeuvre.

The facility should give written approval for the tow to go ahead once the towage plan has been reviewed and agreed.

In exceptional circumstances, and for major projects, the use of simulated trials is to be considered.

Pilots training should include towage events of non-routine towage including dead tows utilising a variety of tug types.

4.6.5 General towage

Some ports and harbours will have multiple towage activities being conducted by small tugs and workboats that are routine, repetitive and may be conducted with standard plans.

Although guidelines cannot prescribe definitive procedures for all possible towage activities, since each operation will present individual and sometimes unique challenges, facilities are recommended to issue general directions to ensure safe practice.

It is not recommended to utilise a tug, workboat or other vessel that is not designed or equipped specifically for towing. For example, a fishing vessel conducting a rescue of another fishing vessel may need to release the tow to a suitable harbour tug or workboat before entering restricted waters. Equally, vessels performing routine towage supporting a dredging project should not be used to berth a ship. This practice has resulted in tragedy in the past and should only be undertaken by an experienced ship-assist master in an emergency situation.

4.6.6 Training and certification

Where tugs and workboats are working with pilots and/or other craft in the performance of towage, teamwork, toolbox talks, briefings and clear communications are essential. Team training on location, in simulators and at safety workshops should be prescribed by facilities. Operational information exchange between pilots and tug masters' is highly commended.

More information on training can be found in Section 8.8.

4.7 Regulation of marine craft - small commercial vessels

This section provides guidance on the operation and regulation of Small Commercial Vessels. This includes (but is not limited to) vessels in operations such as:

- commercial diving
- mooring and buoy laying and maintenance
- passenger/personnel movements
- pilot launch operations
- dredging and survey
- guard/patrol vessel operations
- general towage
- ship assist towage

4.7.1 Summary

'Small Commercial Vessels' are non-convention vessels (sub<500GT), often utilised within a harbour to carry out the support activities of a Harbour Authority to assist ships to and from berth, maintain the assets and infrastructure of a harbour and the safety of navigation and the hydrographic regime. These may also include small commercially operated vessels including passenger carrying vessels, that regularly operate commercially within the organisation's jurisdiction. Some of these activities are covered in earlier parts of this guide; this section gives guidance.

There are several general principles when operating or sub-contracting the operation of small commercial vessels:

- The authority should ensure that small commercial vessels which are used in the harbour are fit for purpose and that crew are appropriately trained and qualified for the tasks they are likely to perform.
- The authority should ensure that the tasks that small commercial vessels are likely to perform in the harbour are risk assessed and that the appropriate tools and protective equipment are supplied to enable to work to be carried out safely.
- Byelaws and the power to give directions and or license some activities and vessels are available for these purposes.

Marine services may be provided by the Harbour Authority itself or sub-contracted to commercial organisations operating on-site. Specialist services, like salvage and diving, are likely to contracted on a case-by-case basis, mobilised from off site and may not be available at short notice. The guidance in this section should apply equally, irrespective of the way the service is provided.

Harbour Authorities have a duty to ensure the safety of those employed to work on or from their tugs, launches and workboats. They have a similar duty where they contract such vessels. Proper training is one means to this end: it is not optional.

4.7.2 Regulation of Small Commercial Vessels

Regulation of Small Commercial Vessels for Harbour use (primarily achieved via coding), is split into the following ways:

- small commercial vessels required to operate at sea
- National legislation requires vessels which operate commercially “at sea”, i.e., outside category C and D waters to be certificated and to comply with defined codes of practice, as follows:
    - Merchant Shipping (Small Workboats and Pilot Boats) Regulations 2023, which gives effect to the code of Practice for the Safety of Small Workboats and Pilot Boats (Workboat Code Edition 3).
    - Merchant Shipping (Vessels in Commercial Use for Sport or Pleasure) Regulations,1998 which gives effect to the following codes of practice:
    - The Code of Practice for Safety of Large Commercial Sailing and Motor Vessels (Part A of the REG Yacht Code),
    - The Safety of Small Commercial Motor Vessels (The Yellow Code),
    - The Safety of Small Commercial Sailing Vessels (The Blue Code) and
    - The Safety of Small Vessels in Commercial Use for Sport or Pleasure Operating from a Nominated Departure Point (NDP) (The Red Code)

Alternative Construction Standards can also be used as an equivalent standard to the above codes.

4.7.3 Small commercial vessels not required to operate at sea

A Harbour Authority may set its own standards for small commercial vessels within its jurisdiction which do not proceed to sea, however in practice reference to the above codes / standards is more common.

Local legislation may empower Harbour Authorities to register, inspect and license small commercial vessels. Where this is not the case, the authority’s Risk Assessments should show some form of agreement with commercial operators about the maintenance and proper use of these vessels. It may be appropriate for the authority to consider seeking these powers.

If a Harbour Authority does not have the power to license activities (and insist on the use of a code of practice) they should come to formal, documented agreements with providers and ensure that they are invited to port user group forums. They may also wish to seek the appropriate powers.

In either case owners/operators of small commercial vessels should conduct a formal Risk Assessment of their procedure in accordance with MGN 636.

4.7.4 Ship assist tugs

Ship Assist Tugs may or may not be small commercial vessels. Some Ship Assist Tugs under 24m may choose to certify as per Merchant Shipping (Small Workboats and pilot Boats) Regulations 2023. Ship Assist Tugs of more than 24 metre registered length, 150 GT or 350 kW will be classed by an IACS approved Class Society and follow their standards as per the requirements of the Merchant Shipping Regulations.

4.7.5 Fit for purpose (suitability)

Harbour Authorities should ensure that all Small Commercial Vessels used in their harbours are 'fit for purpose' for any use to which they are involved with. If such workboats are required to 'go to sea' they must comply with the Merchant Shipping (Small Work Boats and Pilot Boats) Regulations 2023 and the associated Safety of Small Work Boats and Pilot Boats a Code of Practice. Work boats which do not go to sea may proportionately meet the above code on a voluntary basis in lieu of another standard. A further code of practice, The Embarkation and Disembarkation of Pilots, is published by the British Ports Association in conjunction with UKMPA. Harbour Authorities should use Risk Assessment to identify where hazards exist and what mitigation measures are required. This process should apply equally to any activity undertaken by any small commercial vessels.

A key part of successful small commercial vessel inspection is consistency. To facilitate this, Harbour Authorities should prepare a set of criteria for the inspections. These criteria should be based on national standards, laws, agreed codes of practice, manufacturers handbooks and other similar information. The criteria should also refer to the minimum manning and competency standards for the vessels crew.

The results of the inspection, and any restrictions on the vessel's use, should be recorded and discussed with the vessel's owner and operator.

This guidance should apply equally to any vessel used to provide marine services; irrespective of its owner/operator or the way the inspection is carried out.

4.7.6 Vessel (and operator) approval and auditing

It is recommended that facilities develop their own criteria to approve all vessels and operators. Such criteria should include inspections of the vessels themselves (possibly the operators management) and may, where the legal process exists, include a licensing regime.

This recommendation extends beyond Small Commercial Vessels under 24m to Ship Assist Tugs of all sizes.

When assessing a vessel, its operator and its crews' suitability to operate, the following issues should be considered:

- master and crew experience and in-house training
- master and crew certification
- master's knowledge of relevant directions, bye laws, contingency plans and guidelines (if any)
- master's knowledge of generic or own passage plans
- master's knowledge of stability, watertight integrity and vessel interaction
- master's knowledge of operators' MSMS, the Harbour Authorities' MSMS (if appropriate the bridging document), including environmental operating limits
- capability of the vessel
- ability of the vessel and crew to respond to emergency situations (if appropriate including the bridging document)
- crew's general safety culture, toolbox talks, pre-operational briefings
- PPE standards and knowledge of required use
- charts relevant and in date
- communication equipment checks
- certification, condition and maintenance standards of the vessel
- P&I liability cover held and level
- drills are conducted, particularly PIW/MOB exercises
- Risk Assessments and contingency plans are relevant, understood and used infrastructure
- such a berths and access to shore power, usually provided by the port owners, is fit for purpose, and that means of safe access and mooring of Small Commercial Vessels is provided
- bollard pull certification is available as per towage guidelines
- tug skippers / crews are aware of specific port emergency arrangements such as established casualty evacuation points or protocols.

Towage specific criteria:

- master's knowledge of towing stability, watertight integrity when towing, girting and vessel and pilot interaction towing
- winch / hook emergency release mechanisms proven, and frequency of testing evidenced.

4.7.7 Training and certification

Commercial vessels required to operate at sea

The MCA documents within Workboat Code edition 3 (2023), the safe manning requirements for sea going commercial vessels under 24m.

Existing vessels that are certificated under the Brown Code, its equivalent standard published in the technical Annex to MGN 280(M), or Workboat Code Edition 2, Amendment 1 shall meet the requirements of Workboat Code Edition 3 by the vessel's next renewal examination or three years after the date of entry into force of the Workboat Code Edition 3, whichever is later, except, where references to previous requirements are explicitly specified within individual sections of the Workboat Code Edition 3 they may comply with such requirements.

Workboat Code Edition 3, 2023

The Work Boat Code Edition 3 is recognised as an equivalent standard to full compliance with the Merchant Shipping (Small workboats and Pilot Boats) Regulations 2023, SI 2023/1216, ("the enabling Regulations").

The Work Boat Code Edition 3 applies to commercial vessels of under 24m in Load Line Length that operate to sea and to pilot boats of any size operating either at sea or in categorised (i.e., inland) waters.

The Work Boat Code Edition 3 aims to provide, in a single document, all the information needed for the design, construction, engineering, electrical systems, hull systems, fire protection and provision of firefighting, navigation and radio equipment. It includes the requirements for manning and of the qualifications needed for the crew, plus the carriage of dangerous goods, towage, remotely operated unmanned vessels and alternative fuels and propulsion systems.

Commercial vessels not required to operate at sea

Some vessels are not subject to these regulations. In this case, Harbour Authorities should have procedures for ensuring they are properly maintained, equipped and manned and used only for purposes for which they are capable. Harbour Authorities should have regard to their own capabilities when carrying out these inspections and may use commercial organisations if they do not have the competence in-house.

Risk assessment should form the basis of locally developed codes of practice and particular attention should be paid to circumstances where the operation requires more personnel than that necessary for the safe and compliant navigation of the vessel, and/or when the operation of specialist equipment is necessary.

Vessels engaged in towing

Qualifications should be legally appropriate for the size and type of vessel in operation. The MCA does not determine qualifications for personnel operating tugs within ports and harbours but does support and approve training schemes for towage which form the basis for standards available to facilities.

These requirements are:

- **Boat Masters Licence** (BML) or commercially endorsed equivalent with Towage Endorsement (BML TE): Seen as the minimum requirement to conduct any towage operation in harbour or at sea in workboat coded vessel.
- **Certificate of Competence** (CoC) as per Workboat Code edition 3, with a Voluntary Towage Endorsement (VTE): a British Tugowners Association (BTA) and The Workboat Association (WA) jointly supported scheme which includes a detailed towage-specific syllabus recognised by the MCA covering recorded training, assessment and independent examination. Holders do not need to undertake the Boat Master Licence (BML) Tier 1 and 2.
- **STCW Tug Mate/Master Certificate of Competency** (CoC): This scheme, and its small vessel Engineer equivalent, are those that are considered “best practice” on ship assist tugs, of tugs more than 24 metres registered length, 150 GT or 350 kW.
- **STCW Restricted or Unlimited Master Certificate of** Competency (CoC): Persons holding STCW Certificates of Competence entering the towage industry should be subject to a bespoke in-house training scheme – relevant parts of the VTE syllabus could be utilised as a basis for such schemes.

Organisations should satisfy themselves that towage operators have suitable in- house training and assessment schemes for their tug masters, which address tug types and local conditions, skills and experience.

Joint collaborative training

On board all Small Commercial Vessels, teamwork, toolbox talks, briefings and clear communications are essential. Team training on location, in simulators and at safety workshops should be prescribed by Harbour Authorities as well as sector good practice guides. Operational information exchange between different working groups, for example, pilots and tug masters’ is highly commended and should be strongly encouraged by the Harbour Authority.

More detail on training can be found in Section 8.

Pilot launches

Harbour Authorities should ensure compliance with the boarding and landing Code of Practice. pilots should be instructed not to use facilities which do not comply with statutory safety requirements. Failure to board a pilot for this reason does not entitle a master to proceed without a pilot where his vessel is subject to pilotage directions.

4.8 Regulation and management

4.8.1 Commercial diving operations

Divers employed by Harbour Authorities, or in harbour areas, are typically engaged in survey operations, construction work, clearing foul propellers and other underwater maintenance operations.

The Health and Safety Executive regulate commercial diving in the UK under the Diving at Work Regulations 1997. The Health and Safety Commission has produced a set of five mandatory Approved Codes of Practice (ACOP); one for each section of the commercial diving industry. Typically work carried out in docks and harbours falls within the scope of the Commercial diving projects inland/inshore ACOP. Divers engaged in commercial operations must be qualified to HSE recognised standards and must operate within the approved code of practice.

There are several parties involved in any diving project all of whom have specific responsibilities. The HSE considers these to be:

- the diving contractor
- the diving supervisor
- the client
- others (e.g., vessel operators and owners of the site).

Harbour Authorities that commission work with diving companies should:

- ensure that they appoint a diving contractor who is competent to undertake the duties
- ensure that the site is safe to use; consider whether any known underwater or above water plant under their control may cause a hazard to the dive team including locks, weirs, intake and discharge points causing suction or turbulence, and ships propellors
- identify known hazards to the diving contractor, such as tides, currents, location of underwater obstructions and contaminated water
- support the diving supervisor and diving contractor in the event of an emergency
- consider issuing a notice to mariners to warn of diving operations and restrict speeds past dive sites.

It is recommended that the Harbour Authority establishes a diving permission system to work to control diving operations.

Where the Harbour Authority is not the client, it is recommended that the Harbour Master establishes a permit to work system for diving operations that are to be carried out within harbour limits and that this:

- ensures the Harbour Authority is made aware in advance of planned diving operations
- ensures that the diving contractor is aware of known hazards within the diving area (sluices, intakes, ship movements, underwater obstructions, currents and tides etc.)
- confirms that the dive team is competent and suitably equipped.

- ensures that the diving contractor is aware of their responsibility to notify the Harbour Authority of diving activities.

Where the Harbour Authority is the diving contractor then they must comply with the provisions of the Diving at Work Regulations 1997 and the appropriate ACOP.

N.B. Clearing a fouled propeller is considered to be a work activity but the task is sometimes done by a recreational diver who claims to receive no payment. This places them outside the scope of the Diving at Work Regulations. However, it is strongly recommended that Harbour Authorities, whether they are the client or not, mandate that the law and ACOP are followed in these circumstances.

4.8.2 Recreational diving

The Recreational Diving Projects ACOP will apply when at least one of the divers involved in the diving project is at work. An example of this is when an instructor is employed to teach students.

The Diving at Work Regulations 1997 apply when at least one diver taking part is at work. At work in this context means as an employee or as a self-employed person.

4.8.3 Mooring

Harbour Authorities have powers in byelaws and directions to regulate the mooring of vessels in the harbour. The Marine Safety Management System (MSMS) should govern the use of these powers. Appropriate use should be made of mooring plans. These should not necessarily be left to the master or pilot: it may be appropriate to promulgate agreed requirements after discussion with users and pilots. Authorities should also ensure that mooring parties meet the industry's competence standards and have access to appropriate training including mooring processes and procedures referenced in the MSMS. Some Harbour Authorities have the powers to licence boatmen for running lines and assisting with the mooring of vessels. In these cases, Harbour Authorities should mandate the use of national guidelines or, if they are not available, a locally developed code of practice. Ports Skills and Safety have produced a guidance document (Sip 005) on Mooring, which should be used when considering training, operational procedures and Risk Assessments related to mooring operations.

4.9 Emergency preparedness and response

This section provides guidance on the following:

- The Civil Contingencies Act 2004
- Dangerous Goods in harbour areas
- explosive licences
- Control of Major Accident Hazard regulations
- prevention of Oil Pollution
- procedures and emergency plans for dealing with fumigated cargoes
- working with other authorities and organisations
- managing Search and Rescue
- port and National Emergency Plans

The Code states that a Safety Management System should make preparations for emergencies, and these should be developed implemented, maintained, operated effectively and revised periodically.

4.9.1 Civil Contingencies Act

The Civil Contingencies Act 2004 provides a single framework for civil protection in the UK. The Act is separated into two parts: local arrangements for civil protection (Part 1) and emergency powers (Part 2). Part 1 of the Act (and supporting Regulations and statutory guidance on emergency preparedness) sets roles and responsibilities for those involved in preparing for emergencies, at the local level. The Act divides responders into two categories:

- Category 1 – Local authorities, emergency services, health and miscellaneous
- Category 2 – Utilities, transport, health and safety

Harbour Authorities" fall within a category 2 organisation. This category of responder is viewed as "co-operating bodies" under the Act and are less likely to be involved in the heart of the planning work but will be heavily involved in incidents that affect their sector or operations, including compliance with other legislation. Duties placed on category 2 responders are those of co-operation and information sharing with category 1 responders. This usually works within a multi-agency planning framework, including participation in Local Resilience Forums and emergency management training and exercising events.

With respect to the Civil Contingencies Act 2004, "Harbour Authority" means a Harbour Authority, within the meaning of the Harbour Act 1964 section 4(9), which means a person engaged (whether or not in the exercise and performance of statutory powers and duties) in improving, maintaining or managing a harbour.

It is usual to think of emergencies as unexpected, the challenge to those with professional responsibilities for safety is not to be taken by surprise. Contingencies to be considered, where appropriate, can range from designating places of refuge and potential beaching points for vessels, to considering the effects of a port asset failure. The emergency might be a vessel

suffering from a flooding engine room to a vessel fire. Alternatively, the emergency could be with general maritime public events or pleasure boating. Whatever the situation, by taking a planned approach, exercising the effectiveness of such a plan and modifying the plan, when necessary, will reduce the impact of any emergency.

4.9.2 Dangerous goods

The Dangerous Goods in Harbour Areas Regulations (DGHAR) 2016 define the meaning of a dangerous goods and sets out the requirements for entry into the harbour area. It includes the Harbour Master's powers, marking and navigation of vessels, handling of dangerous goods, bulk liquids, packaging and labelling, storage and explosives. It requires the preparation of emergency plans by Harbour Authorities.

Before Dangerous Goods can be handled within a harbour area, the Harbour Authority must prepare an effective emergency plan. The Harbour Authority must consult the emergency services and any other body it considers appropriate in the preparation of such a plan. The Harbour Authority can appoint inspectors to enforce the entry of dangerous goods into the harbour area and ensure the marking and navigation of vessels is carried out in a safe manner. This is particularly important to ensure third parties maintain adequate safety standards.

A Harbour Master also has powers to prohibit the entry into a harbour of any vessel carrying dangerous goods, if the condition of those goods, or their packaging, or the vessel carrying them is such as to create a risk to health and safety, and to control similarly the entry on to dock estates of dangerous goods brought from inland (as prescribed in the DGHAR). The Harbour Master also has powers to regulate the movement of vessels carrying dangerous goods. Prior notice must be given to bring dangerous goods into a harbour area from sea or inland. The period of notice is normally 24 hours, although the Harbour Master has some powers of discretion on both the period and form of the notice. Harbour Authorities have a duty to prepare emergency plans for dealing with dangerous goods.

The Merchant Shipping (Dangerous Goods and Marine Pollutants) Regulations 1997 implement Chapter VII of the International Convention for the Safety of Life at Sea (SOLAS), the requirements of Annex III of the International Convention for the Prevention of Pollution from Ships (MARPOL) and Article 4 of Council Directive No. 93/75/EEC. For dangerous goods and marine pollutants in packaged form these Conventions are administered through the provisions of the International Maritime Dangerous Goods (IMDG) Code. The Regulations define the responsibilities of several persons in the packaged goods transport chain from shipper or consignor through to its destination or consignee.

4.9.3 Explosives

It will be the case that if the Harbour Authority handles certain types of explosives, then an explosives license will be required. Explosives licenses are issued by the HSE, the procedure for application is set out in Part 5 (Reg. 16) of the DGHAR. The Harbour Authority must have a separate explosives plan. The Harbour Authority must appoint an Explosives Security Officer if explosives are being handled. The Harbour Authority must keep a record for a period of 5 years of all explosives handled.

The Harbour Authority may also be classified as the berth operator and owner. Under these circumstances they should take all precautions to minimise the effects of fire and explosion. Adequate access to berths must be ensured at all times.

4.9.4 Control of Major Accident Hazard Regulations (COMAH)

If certain dangerous goods are stored in large quantities, then the Control of Major Accident Hazard Regulations (COMAH) Regulations will apply. This legislation applies to the operator of the specific site, it also considers the type of substance, the quantity stored and what other combinations of product are stored in the area. The outcome of this will dictate the tier in which the site will be placed, either top-tier or lower-tier. Guidance can be obtained from the HSE about top-tier and lower-tier sites.

4.9.5 Fumigants

It has long been the practice to fumigate certain containerised (e.g., wood products) and bulk (e.g., cereal and animal feed) cargoes in transit on board ship. The process of marine fumigation begins with fumigant application to the cargo at the load port, continues with fumigant exposure during the voyage and ends with degassing and fumigation control at the discharge port.

Fumigated cargoes, transported by sea, should be carried in accordance with the International Maritime Organization's (IMO) Recommendations on the Safe Use of Pesticides in Ships. Vessels carrying fumigated cargoes should notify the port prior to arrival. Phosphine (from aluminium phosphide, magnesium phosphide or direct from cylinders) is the only fumigant currently approved under the IMO Recommendations. It is toxic to humans and has proved fatal at exposures above the exposure limit (see MAIB Accident Flyer 1/2008).

UK ports should put into place procedures and emergency plans when dealing with fumigated cargoes. Communication and cooperation of all involved parties on ship and shore are important in providing effective safety for those who might be affected by exposure to fumigants and other toxic substances.

The following guidance should be consulted by organisations handling vessels who undertake marine fumigation:

- The HSE publication HSG251 – *Fumigation: Health and safety guidance for employers and technicians carrying out fumigation operations* (updated in 2015)
- MSN 1917 (M) *Carriage of cargoes: requirements for the same use of pesticides in ships*
- MGN 700 (M) *Carriage of cargoes: guidance on the safe use of pesticides in ships*

4.9.6 Dangerous vessels

Section 4 of the Code notes that, under the Dangerous Vessels Act 1985, a Harbour Master may give directions prohibiting the entry into, or requiring the removal from, the harbour of any vessel if, in their opinion, the condition of that vessel, or the nature or condition of anything it contains, is such that its presence in the harbour might involve a grave and imminent danger to the safety of persons or property or risk that the vessel may, by sinking or foundering in the harbour, prevent or seriously prejudice the use of the harbour by other vessels. The Harbour Master must have regard to all the circumstances and to the safety of any person or vessel.

Directions given under the Act by a Harbour Master may be over-ridden by the Secretary of State. This power is likely to be exercised through Secretary of State's Representative for Maritime Salvage and Intervention (SOSREP), having assumed powers of intervention relating to the salvage of the casualty. It is good practice to use the formal statutory procedures, where appropriate, since they provide a framework for managing responsibility for a casualty.

4.9.10 Prevention of pollution

Oil spill contingency plans should be based upon a thorough and up to date Risk Assessment, that assesses the likelihood, consequence and mitigation of different pollution risks.

There is also a duty on Harbour Authorities, under the Merchant Shipping (Oil Pollution Preparedness Response and Co-operation Convention) Regulations 1998 (the OPRC Regulations), to prepare a plan to respond to oil spills in their waters for approval by the Maritime and Coastguard Agency on behalf of the Secretary of State. The MCA has published guidance to ports concerning Contingency planning for marine pollution preparedness and response which should be referred to by organisations when considering emergency plans, exercises and related procedures.

It is good practice, through local procedures, for the management of the risk of oil pollution to be part of the overall Marine Safety Management System for marine activities in the port. Measures to respond to pollution, should it arise, should be part of that system, and in line with their approved OPRC oil spill contingency plan.

A Harbour Master may detain a vessel if they have reason to believe that it has committed an offence by discharging oil, or a mixture containing oil, into the waters of a harbour as per Section 144 of the Merchant Shipping Act 1995. In addition, removal of salvage of a vessel also

needs to be considered but further information about wreck removal is covered under Section 10 Conservancy Duty.

Notice must be given to a Harbour Master before oil is transferred at night to or from a ship in any harbour as per Section 135 of the Merchant Shipping Act 1995.

This requirement may be supplemented by harbour byelaws regulating transfers at any time. Byelaws may also regulate the offloading of oily water and oil waste residues. All oil and other chemical spills into harbour waters must be reported to the Harbour Authority as per Section 136 the Merchant Shipping Act 1995. Statutory Instrument 1998 No.1056 states that Harbour Masters' must also report all incidences of pollution to HMCG without delay.

Harbour Authorities' powers are wide enough to empower them to clear oil spills from their harbour. All oil spills into harbour waters are to be reported and Harbour Masters have powers to board ships to investigate possible offences as per Section 136 and 259(6) Merchant Shipping Act 1995.

4.9.11 Scope of Harbour Authority responsibilities

The MCA Merchant Shipping Oil Pollution Preparedness, Response and Co-ordination Convention) Regulations 1998 (the OPRC Regulations) for Ports and Harbours apply if a port or harbour operates vessels over 400 GT or oil tankers over 150 GT or has a turnover of more than £1 million per annum. The Regulations also apply to ports and harbours in environmentally designated locations, or where the Secretary of State is of the opinion that there is a risk of pollution of more than 10 tonnes. The 1998 Regulations are now the principal legislation on counter pollution from a Harbour Authority perspective.

The obligation in the Regulations relates to pollution, or risk of pollution, by oil being discharged into harbour waters. The requirement is to plan to mitigate oil pollution from the harbour waters, and from structures owned by the Harbour Authority. **In the event that shoreline cleanup is required, ports and harbours should satisfy themselves of where responsibility for affected areas lies** (please refer to the National Contingency Plan).

Harbour Authorities should have in place sufficient equipment to adequately deal with a Tier 1 response. appropriate to their oil spill Risk Assessment. A/B Category Ports and Harbours are also required to have an appropriate contract in place with an Accredited Oil Spill Response Organisation (OSRO) to respond to a Tier 2 spillage. If the MCA declares a Tier 3 incident in or nearby a port or harbour, then the MCA will take charge of the response.

4.9.12 Incidents threatening pollution and safety

Under Schedule 3A of the Merchant Shipping Act 1995, the SOSRep has the power to give directions to a Harbour Authority, a Harbour Master, land facility, etc.

Directions may or may not be given in writing (though if not given in writing they will be confirmed in writing as soon as is reasonably practicable). Persons to whom a direction is given must try to comply with the direction in a manner which avoids risk to human life. A person who does not comply with the direction or intentionally obstructs anyone acting on behalf of the Secretary of State is subject, on summary conviction, to a fine of up to £50,000 on summary conviction (there is no limit to the fine following a conviction on indictment).

4.9.10 Places of refuge

The SOSRep is the Competent Authority concerning the accommodation of ships in need of assistance and requesting a place of refuge. If requested, the MCA, appropriate Environment Group and where necessary Local Government Authorities, will assess potential places of refuge if the SOSRep so requests. Analysis and assessment considerations will encompass a very wide range of physical, environmental, practical, logistical and socio-economic factors. It is therefore good practice for Harbour Authorities to plan for the reception of a casualty and to make any such plan part of their emergency planning.

4.9.11 Government support for large spills (Tier 3)

Under the Merchant Shipping Act, the UK Government has prepared a National Contingency Plan (NCP) to manage very large spillages. The plan details Harbour Authorities' powers and SOSRep's function.

The Port Oil Spill Contingency Plan should be complementary to the NCP. The pollution potential assessment might identify that spillages more than the Tier 2 limit may occur and, unless the Harbour Authority also plans a response more than Tier 2, the Government's help under the NCP will be required. In any event, there is a power to intervene in all cases.

The National Contingency Plan assumes that, for an incident occurring inside a Harbour Authority's jurisdiction, the Harbour Master will be in control of the incident response from the outset, although they may not remain so. Command and control may pass to SOSRep or the MCA – either because it is a very large spillage, or because **Powers of Intervention** have been exercised. It is crucial that Harbour Authority plans consider this scenario. To avoid confusion during an incident, it must be clear how the Harbour Authority's resources (including its personnel) will fit under the MCA or SOSRep's command and control structure under the NCP. It is also important to identify as clearly as practicable, in the Harbour Authority's plan, the circumstances in which that transfer of control is likely to occur.

4.9.12 Consultation

Effective plans, such as Oil Spill Contingency Plans (OSCP) should be compiled in consultation with adjacent ports, adjacent local authorities, the appropriate fisheries body, (if appropriate), statutory nature conservation bodies, the Standing Environmental Group and appropriate Environmental Regulators.

4.9.13 Resources

A Harbour Authority should have an adequate number of trained personnel capable of managing a Tier 1 pollution incident. Additional resources needed to cope with a Tier 2 spillage will be provided by the accredited Tier 2 responder, but can include mutual help agreements with other ports, oil companies and local authorities. OPRC Category A/B ports and Harbour Authorities must demonstrate in the plan and through the arrangements they have in place that they can respond to a Tier 2 spillage.

4.9.14 Working with other authorities

Those preparing Harbour Authority emergency plans should consult other interested agencies from the start. They may be formally consulted before plans are submitted for final approval, but this process may be quicker if the agencies are involved throughout. Many of these agencies also have statutory obligations to meet. The specific responsibilities of each agency can be obtained from them.

4.9.15 Police

The role of the police is:

- the protection of life and property
- act as overall co-ordinators of any major incident on land
- secure evidence and protect the scene
- investigate the incident if they suspect a crime has been committed
- identification of the dead, on behalf of the coroner
- prevention of crime.

In the event of a major incident outside of the port area the police are overall co-ordinators, but this is not the case in the event of a port marine incident unless it is suspected a crime has been committed.

4.9.16 Emergency services

The Harbour Master, and the master of any vessel involved, should give every reasonable assistance to the fire, police, ambulance and other emergency services for dealing with, alleviating or preventing any emergency. At any fire, the Senior Fire Officer shall have sole charge and control of all operations subject to the overall authority of the master if on board ship (Fire Services Act 1947 and Fire Precautions Act 1971) although they are not in charge of ship safety and other marine matters.

4.9.17 Environmental agencies

Environmental Agencies are responsible for pollution prevention guidance and water quality in all controlled waters, which include ground waters, fresh waters, estuaries and relevant territorial waters (these extend 3 miles seaward from specific baselines). It is recommended that organisations enter formal relationships with applicable environmental agencies, emergency services and other authorities. Some examples could include:

- emergency services
- local council authorities
- MOD, bomb disposal
- Marine Management Organization, for marine licensing
- environmental agencies
- neighbouring Harbour Authorities
- government agencies, immigration, UK border agency, MCA

4.9.18 Health and safety at work

Management of Health and Safety at Work Regulations and the Health and Safety at Work Act place upon the Organisation a duty of care to take all reasonable and practical measures to ensure the safety of employees and the public. This means that the employer must plan to control all work activities that may put people, property or the environment at risk.

The organisation should have in place processes or procedures which control activities under the Safety Management System for controlled work such as:

- hot work
- cold Work
- diving
- entering enclosed spaces
- bunkering or refuelling of vessels / craft
- vessels requiring engine immobilisation

4.9.19 Search and Rescue (SAR)

The MCA have a national plan to manage major seaborne SAR incidents. This is an integrated response relying upon voluntary bodies such as the RNLI and local resources.

HM Coastguard is responsible on behalf of the Department for Transport for the co-ordination of Civil Maritime Search and Rescue within the United Kingdom Search and Rescue Region (UKSRR). The UK SRR includes those areas within port and harbour limits.
When alerted or notified by a Harbour Authority, or in the event of being the first recipient of an alert or notification, HM Coastguard will liaise closely with and support the Harbour Authority by co-ordinating the “Search and Rescue” phase of any Distress incident within harbour limits.

A Distress incident is defined in the International Aeronautical and Maritime Search and Rescue Manual (IAMSAR) (Vol. 1) as being a situation wherein there is a reasonable certainty that a vessel or other craft, including an aircraft or a person, is threatened by grave and imminent danger and requires immediate assistance.

The Harbour Authority will remain responsible for approving movements and activities within the harbour/port's limits. HM Coastguard will cooperate and coordinate with the Harbour Authority to ensure that harbour traffic and overall safety of port/harbour operations is maintained, and that the SAR response is efficient and effective. SAR helicopters and rescue boats/lifeboats will ensure that they communicate effectively with the Harbour/Port Authority to ensure safety of navigation and safety of personnel and other vessels or craft engaged in responding to the SAR emergency.

This will require that HM Coastguard and the Port/Harbour Authority maintain continuous communication, both on radio frequencies in use and by telephone.

4.9.20 National and regional plans

Major incident plan

In England and Wales, the Police, in response to Home Office instructions, have drawn up a plan to manage a major incident. Its structure is based upon a tiered level of response:

- Gold (strategic)
- Silver (tactical)
- Bronze (operational).

The gold, silver and bronze categorisations relate to the function of the post rather than the seniority of the officer dealing with the emergency.

The plan works based on mutual support with each organisation involved in the incident providing personnel to provide the relevant expertise.

Regional plans

Each region within the UK has a Maritime Rescue Coordination Centre (MRCC) specifically designed to manage offshore and inshore incidents. The CGOC also has a resident MCA Counter Pollution Officer for that region who is responsible for managing pollution incidents that occur outside Port Limits.

Pollution

Some areas have regional counter pollution plans, which have been compiled with the input of all relevant agencies, they detail:

- sensitivity of information
- prioritisation

- locations for shoreline response centres and marine response centres.

These plans act as an umbrella support to individual; port and organisational plans and provide a bridge to The National Contingency Plan.

Local non-port Plans may include:

- Environment Agency-flood warning and defence
- chemical sites
- local authority emergency and contingency

Port Plans may include:

- Search and Rescue
- oil spill contingency
- media
- civil unrest
- grounding
- sinking
- fire
- pollution
- air pollution (toxic cloud)
- chemical spillage
- bomb threat / terrorism
- medical emergency
- hazardous substances washed ashore
- International Ship and Port Security (ISPS) Code

Information about planning can be obtained from:

- Easingwold Emergency Planners College
- Nautical Institute Publication ‘The Work of the Harbour Master’
- local authority emergency planners
- emergency services have dedicated personnel who will help (they will also advise what information they will expect from you)
- major organisations e.g. BP, Shell, and ICI etc., have dedicated departments who will provide advice
- visits to other ports and facilities.

Harbour Authorities should plan generically as they cannot predict and prioritise all possible incidents.

Harbour Authorities should consider the implications of external incidents e.g. a chemical plant having an incident creating a toxic plume that drifts across the port.

It is important to consider all the port characteristics including:

- tidal port or locks (in some cases both)
- type of industry in the port or close to it
- types of cargo that are brought into the port
- industry within the port
- environmental considerations.

Plan development

The following areas should be considered in your planned approach:

- planning for existing facilities and vessels
- planning for a new type of vessel or trade
- planning a new facility within the port or close to it
- planning for a major event
- planning for an exercise
- planning for an emergency response and major incident.

It should be considered that even the smallest of vessels can cause big problems. The plans should consider the size of the problem and how best to manage it, the following levels of port incident may help:

- minor – the Harbour Authority can deal with it with limited resources
- port incident – requires additional resources/expertise
- major incident – requires many resources and expertise.

Capability of the port

This will dictate whether the port can manage an incident or even have the resources to carry out effective in-house planning. Elements of the plan may include:

- location of Command and control
- manpower
- record keeping
- event recording
- financial records
- resources
- impact upon the business
- cordons
- security arrangements
- specialists support
- corporate image
- external intervention
- accommodation
- documentation
- continuity
- good communications

- picture building facilities
- decision-making (pre-planned)
- the effect of events covering prolonged periods (Watch keeping)
- duty rostering and rest period location
- media.

Training exercises

Guidance on designing and carrying out emergency training exercises can be found in the Exercise Planners Guide. Training may include:

- seminars – good for rolling out new plans
- tabletop exercises – very cost efficient, enables good control of the exercise and enables the big picture
- live exercise large scale – enables real-life real-time scenarios to run.

4.9.21 Capabilities and limitations of the facilities which organisations can offer to support vessels requiring emergency assistance

This guidance is based primarily on the experiences arising out of a fire on the main vehicle deck of the “Commodore Clipper” (MAIB Report No 24/2011) which can be found at:

This raised issues for ports largely concerned with berthing and access. As a result of the incident, ports were recommended to identify and list both the capabilities and limitations of the facilities they could offer in support of vessels requiring emergency assistance once they were alongside.

In such a case the prime areas for consideration are:

- berth availability
- ship’s position at berth (bow/stern or side doors) and effect of this on access
- tidal limitations of portable gangways
- berth access and potential restrictions including:
  - quay side access restrictions due to gangway building structures
  - availability of suitable portable gangway equipment
  - position on berths/ships where gangway equipment can be rigged
  - availability of appropriate equipment to lift gangway to ship (or other plant)
  - landing stages to receive evacuees from lifeboats
  - plant and equipment availability
- availability of technical expertise such as:
  - technical staff to burn off ships’ rails to gain access
  - divers
  - plant operators

Ports will also need to consider how support from cargo handling equipment and other port infrastructure might be provided to the principal vessel types they receive which can assist in dealing with the emergency. Below are some examples of support equipment which might be deployed.

Ports are recommended to carry out a trial to assess their respective strengths and weaknesses, and to ensure that full use of all available resources has been considered.

Examples of support equipment may include:

- RoRo trailer tugs/tractors
- cherry pickers
- cranes
- portable gangways
- FLTs
- baggage conveyors
- marine plant/vessels

4.9.22 Port security

The introduction of the International Ship and Port Facility Security (ISPS) Code in 2004 placed several new responsibilities upon Harbour Authorities. The impact on ports has varied, depending upon their status.

The Port Security Directive thorough the Port Security Regulations 2009 (S.I. 2009/2048) as amended has developed the ISPS concept of security at the ship/port interface and extended it to the wider ‘port estate’. The Regulations allow the establishment of Port Security Authorities, each appointing a Port Facility Security Officer. The primary function of the Port Security Authority will be to undertake and maintain a Risk Assessment of port and maritime security in its area of jurisdiction. However, enforcement of port security legislation will remain with the Department for Transport.

Section 5: Risk Assessment

5.1 Introduction

Employees, seafarers, and port users alike, have the right and expectation that they will remain safe at work and on location. An organisation, its' employers, and employees (including subcontractors) have a responsibility to ensure the health, safety, and welfare at work of all seafarers, shore employees and other users of the Port or facility.

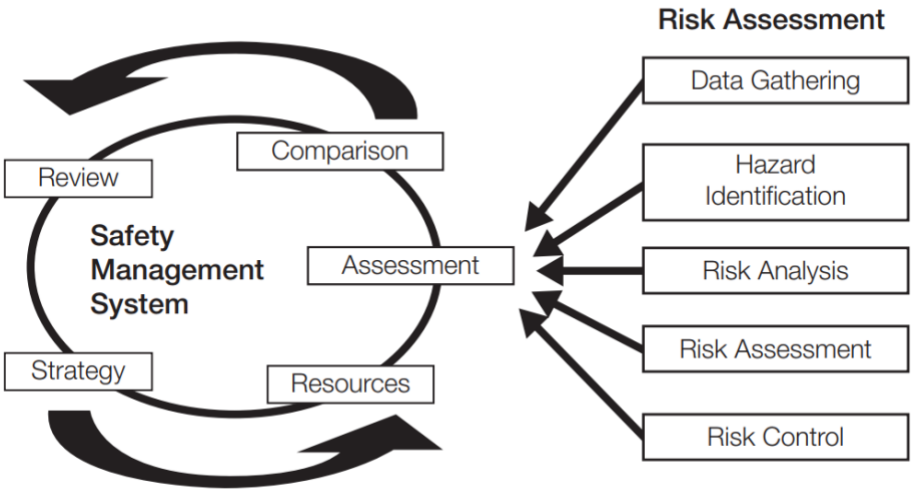
Employees have a duty to take reasonable care for the occupational health and safety of themselves and others, and to cooperate with their employer and the Port in matters of health, safety, and welfare. By creating a culture where everyone takes responsibility for a safe working environment and takes care of themselves and one another, many work-related accidents and incidents can be avoided if this culture is embedded into the organisation.

If organisations and their employees are fully informed and aware of the risks to their health, safety, welfare, the marine environment, property and navigation safety they are much more likely to ensure they avoid the risks and remain safe. This knowledge is attained through Risk Assessment and in other ways throughout our lives including training in theory and practical application, information, observation, instructions, supervision, and personal experience.

There are no fixed rules about how Risk Assessment should be undertaken, however key principles such as tolerability and ALARP are explained in section 5.3. The assessment will depend on the type of location, the nature of the operation, and the type and extent of the hazards and risks. The intention is that the process should be simple, but meaningful. The relevant legislation regarding Risk Assessments should be referred to when deciding on what methodology will be employed. There is a statutory requirement that relevant employees and affected persons must be informed of any significant findings of the assessment and measures for their protection, and of any subsequent revisions made. It is therefore advisable that openly shareable copies of Risk Assessments are published in suitable manners for relevant employees and Port users and that there is a process for regular revisions to be carried out.

One of the main principles which the code promotes, is the strong link between Risk Assessment and the use of the Marine SMS to control and manage identified marine and navigational risks. With that in mind this section should be read in conjunction with section 6 Marine Safety Management System.

Figure 1 - Relationship between Risk Assessment and Safety Management System



5.2 Risk Assessment

The Risk Assessment process identifies hazards present, analyses the level of risk, considers those in danger and evaluates whether hazards are adequately controlled, considering any measures already in place.

Effective Risk Assessments should:

- correctly and accurately identify all hazards
- identify who may be harmed and how
- determine the likelihood of harm arising
- quantify the severity of the harm
- identify and disregard inconsequential risk
- record the significant findings
- provide the basis for implementing or improving control measures
- provide a basis for regular review and updating, including after an incident has occurred.

Potential language difficulties should be considered. Temporary staff, visitors, or seafarers, or people requiring reasonable adjustments who are not fully familiar with an organisation's Safety Management System (SMS), or other operational details should be considered where relevant.

This section makes a distinction between a hazard and risk. IMO Guidelines definitions are:

- hazard- something with the potential to cause harm, loss or injury
- risk- the likelihood of a hazard occurring combined with the consequence of the hazard (outcome).

To ensure that the risks are as low as reasonably practicable (ALARP) the following risk management steps can be applied:

- Consultation- data gathering, incident report data, stakeholder feedback
- Identify Hazards- understand what risks exist (continuation of consultation)
- Evaluate the Risk- determine the likelihood cause and severity of the risks. Assess if the Risk is ALARP (weigh the cost of further reducing the risk against the safety benefit achieved).
- Action the Risks:
    - risk acceptance- the risk is an acceptable level without further control measures required.
    - risk mitigation- implement all reasonable safety measures to reduce the risks
    - risk avoidance- if the risks cannot be eliminated or reduced to a tolerable level, can the risk be transferred to an outside source, or the activity/ operation ceased.
- Monitor- review existing risks, new risks and different risk mitigation options, either in response to incident investigation or within a standard review period including assessing inputs to an incident reporting database.

Figure 2 – risk management process

One way to compare risk levels is to use a matrix approach. An example of a risk matrix is shown in Figure 3.

Figure 3 – risk matrix (source HSE website)

Risk Based Approach - Risk Model (Initial Decision Matrix)

Possible injury risk/ possible health risk	Number of possible casualties at one time	Likelihood: Probable	Likelihood: Possible	Likelihood: Remote	Likelihood: Nil/negligible
Serious Personal Injury (fatal or major) or Serious Health Effect (permanent, progressive or irreversible condition, or permanently disabling)	Multiple	Red	Red	Red	Amber
	Single or low	Red	Red	Amber	Amber
Significant Injury (RIDDOR reportable) or Significant Health Effect (non-permanent, reversible or non-progressive condition, or temporary disability)	Multiple	Red	Amber	Amber	Green
	Single or low	Amber	Amber	Green	Green
Minor Injury (non-RIDDOR, first-aid only) or Minor Health Effect (conditions not included above)	Multiple	Amber	Green	Green	Green
	Single or low	Green	Green	Green	Green

Colour key
Red = follow up complaint as a priority

Amber = follow up complaint
Green = do not follow up complaint

5.3 Methodology to assessing risk

Any Risk Assessment must address the occupational and visiting risks to the health and safety of users. The assessment of risks must be 'suitable and sufficient', but the process need not be overcomplicated. This means that the amount of effort that is put into an assessment should depend on the level of risks identified and whether those risks are already controlled by satisfactory precautions or procedures.

ALARP stands for As Low as Reasonably Practicable and is a risk management principle. The concept is based on reducing risks to a level where further reduction would be disproportionate to the benefits gained, typically due to factors like cost, time, or technological feasibility.

In essence, ALARP involves a balance between the cost of reducing a risk and the benefit gained in terms of reduced harm or danger. A risk is considered ALARP when all possible measures to reduce it have been implemented, unless the cost of further mitigation is grossly disproportionate to the reduction in risk. The outcome of a Risk Assessment methodology would normally identify risk into the following three categories:

- intolerable – risk reduction required regardless of cost

- tolerable if ALARP – relevant good practice in place, and risk reduction measures applied
- broadly acceptable – relevant good practice in place.

When organisations are considering ALARP principles, they may also need to carefully determine tolerability levels in terms of consequence which will help to set the level at which a risk may cross from Broadly acceptable, to tolerable if ALARP, to intolerable.

The assessment is not expected to cover risks that are not foreseeable.

Management review and lessons learnt

Once Risk Assessments are in place, it is essential that they form part of a process of regular review, whether this is on a planned basis or triggered by an incident occurring, where the investigation process may require a review of appropriate Risk Assessments. It is normal practice for Risk Assessment reviews to be undertaken on an annual basis, however the Marine SMS should prescribe the frequency of these planned reviews. This step will ensure that lessons learnt can be captured and any required amendments to procedures or other elements of the Marine SMS are made.

5.4 Triggers for Risk Assessment review

Risk Assessments are required to be completed whenever a new operation, working environment or task is being carried out or planned for the first time, when the methodology of operations changes or if there are changes in scope of operations. These activities can vary from large infrastructure projects that will require significant and detailed supporting Risk Assessments as part of the consenting process, to more operational or task-based activities.

Risk Assessments must be reviewed and updated on a regular basis, including after an incident has occurred, to ensure that they reflect any significant changes of equipment or procedure or the circumstances at the time, e.g., the weather or level of expertise of those carrying out the task.

Risk Assessments should be seen as a continuous process. In practice, the risks in the workplace must be assessed before work begins on any task for which no valid Risk Assessment exists.

There are 4 commonly used types of Risk Assessment, all requiring to be used in conjunction with each other.

5.5 Formal Risk Assessment

The safety management objectives of a Port should, amongst other things, assess the risks associated with all identified hazards in respect of its activities, personnel, and the environment, and establish appropriate safeguards.

Formal Risk Assessment can help in the evaluation of new regulations for maritime safety and protection of the marine environment or in making a comparison between existing and possibly improved operations, with a view to achieving a balance between the various technical and operational issues, including the human element, and between maritime safety or protection of the marine environment and costs.

These Risk Assessments, sometimes known as generic Risk Assessments, should therefore be carried out at a high level in the Company by appropriately knowledgeable and experienced personnel, and the results used to ensure that appropriate safeguards and control measures are contained within the Port's SMS in the form of policies, procedures, and work instructions.

Formal Risk Assessment consists of five parts:

- identification of hazards (a list of all relevant accident scenarios with potential causes and outcomes)
- assessment of risks (evaluation of risk factors)
- risk control options (devising regulatory measures to control and reduce the identified risks)
- cost benefit assessment (determining cost effectiveness of each risk control option)
- recommendations for decision-making (information about the hazards, their associated risks and the cost effectiveness of alternative risk control options is provided).

Further details on Formal Risk Assessment can be found on the IMO website.

5.6 Task based Risk Assessment

In addition to the general requirements under UK statutory law, an appropriate Duty of Care requires that a suitable and sufficient assessment shall be made of the risks to the occupational health and safety of employees and public arising in the normal course of their activities or duties.

Whilst it is clear that the Port management can assess the generic risk of, for example, working at height, working with electricity, movement about the Port, etc., it is not possible for them to conduct a Risk Assessment for changing a specific light bulb on the boom of a crane on a given day - because they would not be able to take into account all the factors that were applicable at that time on that exact piece of equipment. For this reason, it is essential that any generic Risk Assessments are used in context, and not seen as being suitable for specific tasks. For this task-based Risk Assessments should be carried out by those involved in the work.

For specific high-risk jobs that are not routine, such as working aloft or enclosed space entry. These should relate to the specific persons who will be involved in the work and valid only for the duration of that specific job. Meaning nobody can start similar work without knowingly assessing the risks on the day first.

In all cases, Risk Assessments should be carried out by a competent person or persons who understand the work being assessed. It is also preferable that employees who will be involved in the work should also be involved in the assessment process.

5.7 Dynamic Risk Assessment

This is an informal assessment of day-to-day risks carried out as you are going about your work and life in general. It is a technique used to ensure that we perform even the most mundane of tasks without getting hurt. It is used to always maintain awareness of our environment and aid in the identification and control of immediate hazards as we go about our work. Use of personal assessment of risk should be developed and encouraged.

This is about taking a few minutes to step back, look at the job to be done, consider what could go wrong and how it may occur, and what steps you can personally take to avoid any incident occurring. As the work is proceeding, you should also monitor the worksite for any change in conditions that might alter the hazards and controls in place. If there is any concern, stop the work, re-assess the controls and, if necessary, re-plan and re-assess the task.

Although every task being carried out in a Port should be subject to Risk Assessment, this does not mean that a Risk Assessment needs to be written every time a simple task is carried out. The existing Risk Assessment must be referred to as part of a toolbox talk (stage 3) before the task can commence to ensure that the hazards and controls are fully understood, still relevant and appropriate.

It is important to note that dynamic Risk Assessments should be used in addition to Formal Risk Assessments and not as a replacement.

5.8 Toolbox talk

A toolbox talk is a tool which can be used in support of a Formal Risk Assessment and Dynamic Risk Assessment. Its prime purpose is to communicate the outcome of a Risk Assessment with the wider workplace.

When carrying out a toolbox talk, it is important to actively involve those carrying out the work/activities and others who may be at risk, e.g. employees from other departments, sub-contractors and other Port users who may be affected by the activities. Full and active participation should be encouraged, and any questions or concerns discussed and taken into consideration. Once finished, confirm that all fully understand their role in the task and the precautions in place (‘closed-loop communication’). This should then be recorded along with details of any relevant Risk Assessment referred to.

A toolbox talk should be conducted prior to any work being carried out that involves more than one person and where there is significant risk to persons, assets, or environment.

5.9 Monitoring effectiveness

Once a task commences, it is important to monitor the work site for any changes in conditions that might alter the hazards and controls in place. If there is any concern, stop work.

In all cases, on completion of the task, it is important to record or feedback any lessons learned and make improvements for next time including, where appropriate, reviewing and updating existing Risk Assessments. Everyone should be encouraged to contribute.

It is recommended that a proactive hazard-reporting system with empowerment and expectation for immediate corrective action is also in place and that information on hazards and risks is shared as widely as possible.

Maintaining a safe working and leisure environment in Ports and Harbours is a shared responsibility of all users. All persons have a role to play, and they can adversely affect others by their acts and/or omissions. For these reasons, it is important that:

- there are well-defined rules and guidelines, which are clearly understood
- responsibilities are clearly defined
- consequences of unacceptable (safety) behaviour are made clear
- there is a fair, transparent, and consistent response to unacceptable safety behaviour, commonly referred to as a ‘Just Culture’.

5.10 Examples

The UK Health and Safety Executive provides a toolkit of examples on their website, including:

- Introduction to managing health and safety
- Steps needed to manage risk
- Risk assessment template and examples
- Common workplace risks

Other toolkits / methodologies can also be found on the IALA website which include the Simplified IALA Risk Assessment which is commonly used in maritime scenarios.

The MAIB report on the collision between ro-ro passenger ferry Red Falcon and moored yacht Greylag highlights the importance of marine Risk Assessments in harbours.

Section 6: Marine Safety Management System

6.1 Introduction

A Marine Safety Management System (MSMS) is a high-level document which describes in detail the framework for the management and co-ordination of all marine activities, safety policies and procedures, necessary to ensure the safe facilitation of marine operations. Every organisation should develop, implement, and maintain a Safety Management System, examples may include the following functional requirements:

- marine safety, environmental and enforcement policies
- navigational and safe working Risk Assessments
- health and safety protection policy
- marine safety plan
- responsibilities of the Harbour Master and other marine personnel
- training matrix and records for marine personnel
- procedures to ensure safe navigation of vessels
- emergency plans and procedures
- reporting and investigation of accidents procedure
- maintenance plans and inspection records of vessels and equipment
- management reviews and audit regime
- forms and checklists.

6.2 Planning a Marine Safety Management System

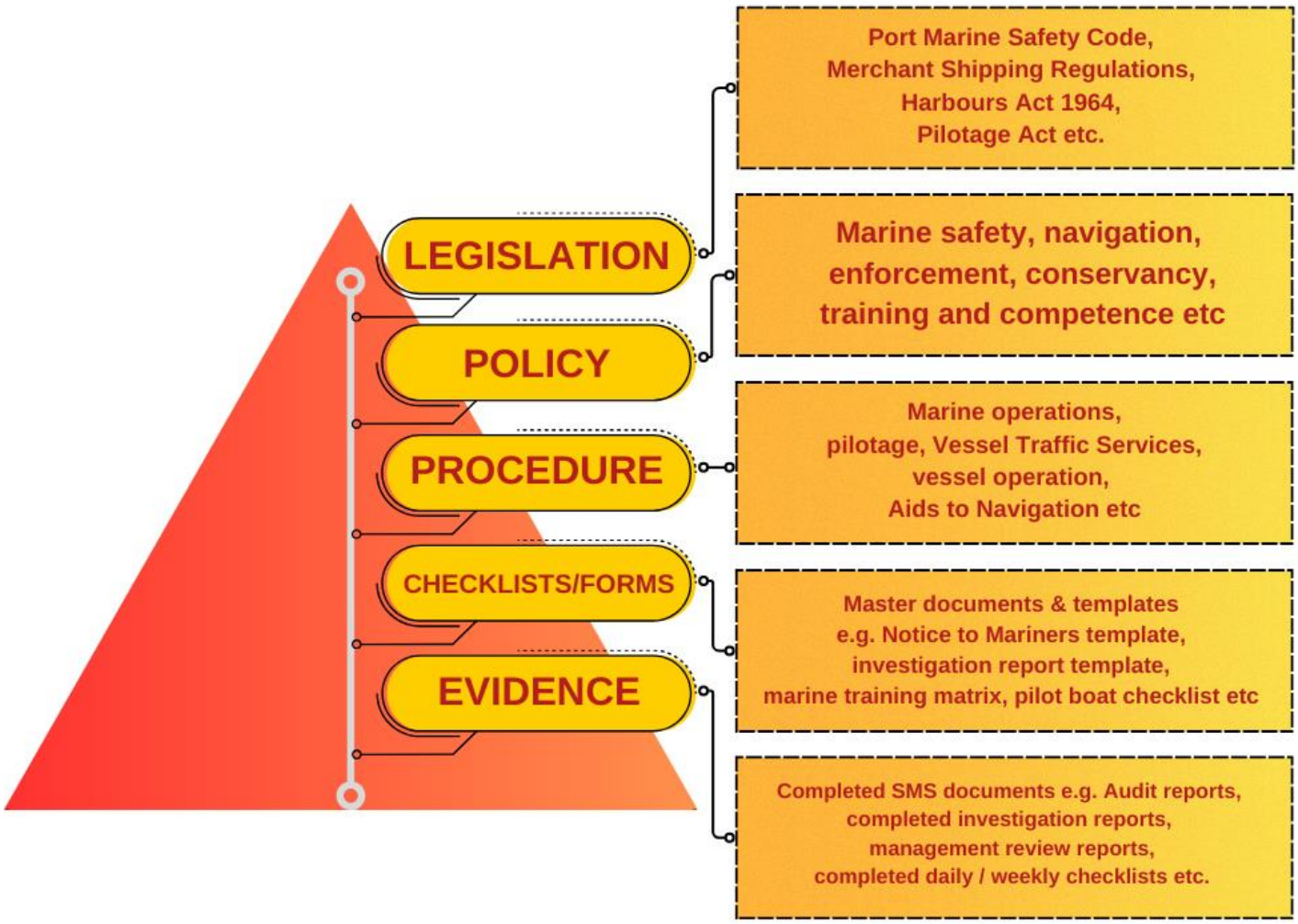
A Marine Safety Management System (MSMS) should be developed using a risk-based approach, Risk assessments and risk control measures should be identified in the MSMS.

Many ports publish their MSMS and make them available via the web. One example published by the Port of London Authority can be found here. Smaller organisations may want to consider the applicability to their organisation.

Your MSMS should be developed with significant input from persons working at the organisation (employees and service providers operating within the port marine environment) and supported by a series of Risk Assessments. The MSMS once completed should be readily available to all those who will use the system, including relevant sections which may be required by port users, should be published.

The following diagram presents an overview of the general outline of an MSMS.

Figure 4 - Overview of a MSMS



6.3 Description of the marine safety policy

Organisations must be aware of their legislative duties and powers and should first refer to any relevant national and local legislation (particularly applicable to SHA's).

As part of their commitment to facilitating the safe navigation and operation of vessels the Harbour Authority must also highlight its policy commitments. Advice about what a Harbour Authority should include in its marine safety policy is covered under Section 1 of this Guide.

Organisations should make the following commitments (to safety policy):

- to manage the relevant assets safely and efficiently
- to discharge existing statutory duties and powers
- to maintain relevant equipment to agreed industry standards
- to recruit and train marine operational staff to nationally agreed competence levels
- to ensure that staff are sufficiently trained for emergencies and contingencies

Reference also needs to be made to the impact on different port operations and departments. Remember that one of the core elements of the Code is that all persons involved in the safety of navigation should be competent (i.e., appropriately qualified and experienced).

6.4 Organisation

A Description of the organisational roles and responsibilities of marine staff for maintaining safety should be included within the MSMS and, where applicable may include:

- the Duty Holder
- the designated person
- chief executive
- Harbour Masters and their deputies, assistants, and other managers who may be responsible for ensuring the safety of navigation
- pilot
- VTS operator
- marine operative
- hydrographic surveyor
- tug crew
- other employees
- users / agents
- the public
- forums and committees that are in place to implement policies.

Reference should also be made to the impact on different port operations and departments. Remember that one of the core elements of the Code is that all persons involved in the safety of navigation should be competent (i.e., appropriately trained, qualified and experienced).

6.5 Implementation

This section should identify what the procedures on the major aspects of marine safety within the port (including the approaches) and document how Risk Assessment should be carried out and the emergency response procedures that will come into force in the event of an incident. It should also set out how personnel can make themselves familiar with the documentation and what is required under the MSMS.

Common issues which are addressed under the Port procedures section of the MSMS:

- Regulating the safe arrival, departure, and movement of all vessels. The different types of vessels and/or activities should be identified, and rules and standard procedures should be summarised for each type.
- Procedures for protecting the public from dangers arising from marine activities.
- Procedures for handling adverse conditions (e.g. high wind, restricted visibility).
- Environmental management – Identify acts or omissions that may cause personal injury to employees or others or damage the environment.
- Port marine operations – summarise procedures for:
    - ensuring that anchorages are safe – considering the size of vessels; potential weather conditions and disseminating this information to users
    - managing and marking wrecks
    - positioning and maintaining aids to navigation
    - dredging and other civil engineering works
    - conducting surveys and disseminating the results to mariners
    - application of compulsory pilotage

6.6 Measuring performance

Harbour Authorities must have a database or system to record incidents (including near misses). Performance can be measured against:

- periodic audits and audit findings
- reviews
- safety inspections
- following a report of an incident or near miss
- an incident investigation
- following an informal report/observation
- pilotage
- availability of Aids to Navigation

The organisation is expected to evaluate performance and identify any lessons learnt and improvements to be made to operational procedures.

6.7 Audit and review

A systematic audit and review must be carried out to ensure the MSMS is being operated effectively. An internal audit must be carried out annually and a statement about the performance standard of the organisation should also be included in the annual report.

An external audit or peer review should take place every three years, informing the 3-yearly publication of the marine safety plan and the organisation's performance against the previous plan, as required by the Code. The designated person will present any findings from the audit/peer review process to the Duty Holder for their consideration and any remedial action.

A peer review of the MSMS (i.e., undertaken by one organisation on behalf of another organisation) is an acceptable form of external audit. Both must be undertaken by competent persons (by evidence of qualifications and experience) and the organisation undertaking such a review must be independent of the organisation that it is reviewing in both operational and commercial terms. Ultimately, it is the Duty Holder's responsibility to satisfy themself that a peer review will provide an appropriate level of oversight and independence to meet the requirements as defined by the Code.

As part of the audit/review process the MSMS also needs to reflect any lessons learned from other port marine organisations and in particular take note of, and incorporate as necessary and appropriate, the recommendations and conclusions of any related MAIB investigations.

Together these elements constitute a continuous cycle over time, aimed at ensuring continued achievement of safety goals, and relevance of policies, plans and procedures, and continuous improvement in safety performance.

All procedures for the ongoing management of the MSMS, including audit and review procedures should be outlined within the system.

6.8 Bridging document

Where two separate organisations with different responsibilities and procedures interact on operational matters, a bridging document or some form of agreement or MOU should be considered. The purpose of the bridging document is to define how the Marine Safety Management Systems (MSMS) co-exist and interact on Health, Safety and Environmental issues.

Bridging documents are already used across various industries such as petroleum, mining, energy and construction and are sometimes known as an Interfacing document. Where areas of responsibility or operations overlap or adjoin, a bridging document allows for these to be deconflicted and an agreement between both parties on safety procedures, proportionate to the level of interaction.

The document takes the role of a framework to manage the safe interaction between the two organisations, by providing clarity on any gaps and which systems/procedures are used where

there is duplication. In establishing if a bridging document is required and the corresponding scope of it, the following should be considered:

- Identify interfaces and Simultaneous Operations (SIMOPS) between the two organisations that may result in conflict or requires further alignment.
- Identify relevant sections of MSMSs that relate to these interfaces/SIMOPs.
- Identify potential conflicts between policies, procedures and Safe Systems of Work.
- Identify interactions in Emergency response situations and whether these are already covered by other emergency response agreements.

Where minimal overlap of Safety Management Systems is present the bridging document would be proportionate, only needing to cover the areas that overlap or have been identified as requiring further alignment. If the required information is covered by alternative arrangements (declarations/MoUs etc), then it should be considered if these already meet the functional requirements of maintaining safety and therefore not requiring further procedural work by means of a Bridging Document. It should be noted that if a major conflict in procedures between the two organisations is found even with an active Bridging document in place, then this should trigger a review of those documents and the conflict.

The scope of the bridging document is set based on this assessment of interactions. Areas that may be included are:

- key safety contacts in each organisation
- definition of area/operations and parties covered by the document
- roles and responsibilities relating to the safety of each party
- policies and procedures that apply and the primacy of such procedures (e.g. PPE policy)
- operational working procedures
- Safe Systems of Work (including a Permit to Work system) application to operations and the interaction between each organisation, including an agreement on hierarchy of such systems.
- details on how to effectively report incidents, accidents and near misses between organisations
- emergency response contacts and flow diagram
- define audit and monitoring responsibilities to ensure the effectiveness and robustness of the bridging document and agreed processes.

It should be remembered that producing a bridging document should allow for both parties to contribute, utilising the relevant expertise from each side.

Emergency response contacts are often an important part of a bridging document. Where this already exists within another document agreed between various parties, then this may be referenced to prevent duplication. However, it is best practice to keep initial notification/response information in as few places as possible, therefore it is recommended that a copy of the initial response section of any document is kept with the bridging document,

providing a single refence point of contacts for an operator, sometimes known as a project communications chart.

Good practice within bridging documents has often utilised flow diagrams and/or key contacts posters as a summary page or annex that can be displayed in offices, control/VTS centres for duty managers/operators and therefore should be written in a common agreed language and include easy to understand procedures and processes designed for the end user rather than purely overriding policy and senior management level.

Organisations described above should also ensure that they are part of one another's regular stakeholder user groups to help support and maintain regular consensus and collaboration.

6.9 Incident reporting and investigation

This section provides guidance on the following:

- incidents involving death or crime
- national regulatory framework regarding incident investigation
- statutory reporting requirements
- local reporting requirements
- Harbour Authority investigations
- accident investigation training

The duties of an organisation (in particular a Harbour Authority) may include an obligation to conserve and facilitate the safe use of the facility and a duty of care against loss caused by the organisation's negligence. Such losses may be caused by accidents within the organisation's area of jurisdiction.

Organisations should hold themselves publicly accountable for the duties they have to the public interest. They should treat these duties as primary. Their Boards / Duty Holder are accountable for the standards they set, the resources they allocate to safety and for the effectiveness of the systems they choose to adopt.

The Code relies upon the principle that duties and powers in relation to marine operations should be discharged in accordance with a Marine Safety Management System (MSMS). That system should be informed by and based upon a formal Risk Assessment. The aim is to establish a system covering all marine operations which ensures that risks are both tolerable and ALARP.

It is recognised however, that no matter how informed the Risk Assessment process and how effective the safety management regime is, accidents and incidents do occur. Such accidents and incidents may involve death, serious injury, collision, pollution and other undesirable outcomes and they may involve breaches of national or local laws.

It is therefore essential that the MSMS addresses the potential for incidents to occur and to provide instruction and guidance on any investigations that may be required as a result. The

Duty Holder can be assured that their obligations for compliance have been addressed by ensuring that a robust, rigorous, investigation has been carried out.

Investigations of accidents have two essential purposes:

- to determine the cause of the accident, with a view to preventing a recurrence of that accident
- to determine if an offence has been committed.

In the first case, the role of the organisation is similar to that of the Marine Accident Investigation Branch (MAIB) and it is quite likely that the MAIB will be involved in an investigation.

It is also important to recognise that, if an offence has been committed, the police may also have a duty to investigate. The Marine Safety Management System needs to contain a clear statement recognising this and to establish the relationship between the organisation, the police, the HSE or MCA. This statement should establish which authority has primacy for any investigation and the hierarchy of the other agencies. An example of an accident investigation process flowchart is included in Annex E.

6.9.1 Definitions

To provide clarity of direction and purpose to this Guide to Good Practice, the following official definitions are adopted.

Accident - an accident may be any marine casualty or marine incident. Accidents may be classified (in order of severity) as follows:

- very serious marine casualties
- serious marine casualties
- marine incidents.

Casualty - a marine casualty is an event or sequence of events that has occurred directly by or in connection with the operation of a ship and resulted in any of the following:

- the death of, or serious injury to, a person
- the loss of a person from a ship
- the loss, presumed loss or abandonment of a ship
- material damage to a ship
- the stranding or disabling of a ship, or the involvement of a ship in a collision
- material damage to marine infrastructure external of a ship, that could seriously endanger the safety of the ship, another ship or any individual
- pollution, or the potential for such pollution to the environment caused by damage to a ship or ships.

Very serious marine casualty - an event or sequence of events that has occurred directly by or in connection with the operation of a ship and resulted in any of the following:

- the total loss of a ship
- loss of life
- severe pollution.

Serious marine casualty - an event or sequence of events that has occurred directly by or in connection with the operation of a ship, does not qualify as a very serious marine casualty, and resulted in any of the following:

- fire
- explosion
- collision
- grounding
- contact
- heavy weather damage
- ice damage, or a suspected hull defect resulting in:
  - the immobilisation of the main engines
  - extensive accommodation damage
  - evere structural damage including penetration of the hull under water rendering the ship unfit to process
  - pollution
  - a breakdown that necessitates towage or shore assistance.

Marine Incident - an event or sequence of events other than those listed above which has occurred directly in connection with the operation of a ship that endangered, or if not corrected would endanger the safety of a ship, its occupants or any other person or the environment. Near misses are marine incidents.

An accident does not include a deliberate act or omission with the intention to cause harm to the safety of a ship, an individual or the environment.

Serious injury is:

- a fracture, other than to a finger, thumb or toe
- any loss of a limb or part of a limb
- dislocation of the shoulder, hip, knee or spine
- loss of sight, whether temporary or permanent
- penetrating injury to the eye
- any injury to a person employed or carried in a ship which occurs on board or during access, which results in incapacitation for more than three consecutive days (excluding the day of the accident)
- any other injury leading to hypothermia, unconsciousness, requiring resuscitation or requiring admittance to a hospital or other medical facility as an in-patient for more than 24 hours.

Severe Pollution - a case of pollution which, as evaluated by the coastal State(s) affected or the flag State, as appropriate, produces a major deleterious effect upon the environment, or which would have produced such an effect without preventive action.

6.9.2 Incidents involving death or crime

The police will take primacy in any investigation involving death or crime. When someone dies in a work-related incident, several different organisations will require to work with the police to ensure that the incident is investigated and that the reasons for the death are understood. The police will investigate any possible offence and on behalf of the coroner.

A police investigation may also be necessary to establish if other criminal offences have been committed. Different organisations have different but important roles in this process and good co-ordination is vital to ensure that the investigation is as smooth and as seamless as possible. Close liaison with the police, therefore, is essential in such incidents.

6.9.3 Drink and drugs

Under the provisions of the Railways and Transport Safety Act 2003, the Harbour Master has the power to detain a vessel, if they suspect, for example, that a mariner (master, pilot, seaman) has committed a drink or drugs related offence when on duty. The power can be exercised only if the Harbour Master summons a police officer before, or immediately after the vessel is detained. The power of detention lapses after the police officer has decided whether to administer a preliminary test and has notified the Harbour Master of that decision. Additionally, the police should be advised whenever an accident occurs in the harbour area and the Harbour Master suspects that drink or drugs is a contributory factor.

6.9.4 National regulatory framework

The legal framework for incident investigation is effectively summarised in the Memorandum of Understanding (MOU) between the MCA, the MAIB and the HSE for health and safety enforcement activities at the water margin and offshore:

- The MCA is responsible throughout the UK for implementing the Government's maritime safety policy.
- The MAIB investigates accidents related to ships and crew.
- The HSE investigates land-based accidents, and accidents occurring on offshore installations.

The MOU aims to identify which organisation will take the lead in investigations where they share a common interest, particularly at the ship/shore interface.

Its purpose is to ensure effective co-ordination between those organisations, where their duties for health and safety enforcement and accident investigation overlap at the water margin, offshore and on inland waterways.

The organisations undertake to use their best endeavours to co-operate effectively to enable and assist each other to carry out their responsibilities and functions, and to maintain effective working arrangements for that purpose. Such co-operation should improve the effectiveness of each of the parties and avoid difficulties which may arise from uncoordinated approaches by the organisations.

An MOU also exists between the MAIB and the National Police Chief's Council (NPCC)3. The aim of this MOU is to ensure effective investigation of marine accidents in England, Wales and Northern Ireland, while maintaining the independence of all parties and reinforcing the importance of close co-operation between MAIB and the police. In summary:

- MAIB investigates accidents related to ships and crew
- HSE investigates land based, shore-based personnel and offshore accidents
- The Police will investigate accidents involving death or life-threatening injury.

In general, HSE is responsible for enforcing the Health and Safety at Work Act (HSWA) in respect of land based and offshore work activities, including loading and unloading a ship, and for all work activities carried out in a dry dock.

The MCA is responsible for enforcing all Merchant Shipping Regulations in respect of occupational health and safety, the safety of vessels, safe navigation and operation (including manning levels and crew competency). Merchant Shipping health and safety regulations extend to all those working on the ship and to all shipboard activities carried out by the crew under the control of the ship's master.

Where there is overlapping legislation, the accident investigation provisions are set out in the appropriate chapter of the MOU, but each organisation can call on the expertise of the other as the need arises.

It should be noted that there may be situations where there is a duty to report the same accident to both the HSE (under 'RIDDOR' regulations) and the MAIB (under Merchant Shipping Accident Reporting Regulations). In these situations, the person filing the report with one organisation will be advised and the report passed to the other3.

6.9.5 Statutory reporting requirements

Marine Guidance Note 564: marine casualty and marine incident reporting, is addressed, inter alia, to Harbour Authorities. It explains the reporting requirements of the Merchant Shipping (Accident Reporting and Investigation) Regulations 2012.5 – 'the Regulations'. Details of what should be reported are given in Annexes of the Notice.

Harbour Authorities should report any accident of which they are aware to the Chief Inspector of the MAIB by the quickest means available. Accidents on board ships in ports, except for those involving stevedores or workers ashore, are covered by the Regulations and should be reported. Accidents involving shore-based workers or commercial divers should be reported to the Health and Safety Executive (HSE). Accidents involving recreational divers should be

reported the British Sub Aqua Club (BSAC). However, should the accident to a stevedore or shore worker, commercial or leisure diver relate to the operation of a ship, then MAIB should be informed in addition to HSE, or BSAC.

The MAIB's Accident Reporting Form (ARF) provides a convenient format for reports but plain narrative giving the above information may be used if the form is not available. As full an account as possible should be given whether the form is used or not. The list of items given in the MGN is not intended to be limiting and any matter should be included which will help to make the circumstances clear or to show how similar accidents may be prevented. Sketches, plans and photographs of the damaged areas, taken both before and after the event, are often helpful and may be attached to the report.

6.9.6 Local reporting requirements

Notwithstanding the statutory reporting requirements outlined above, the MSMS should also define the requirements for local (internal) reporting of accidents. It is not sufficient for an organisation to only consider accidents that require statutory reports- the process of continual improvement envisaged by the Code cannot be achieved if there is not a mechanism by which non-compliance with the objectives of the MSMS, for example as a result of an accident, is identified, analysed and steps are taken to mitigate such non- compliances.

It is essential that there is an effective system for reporting of near misses. It is possible that a near miss incident did not become a more significant event because of last-minute action by one of the parties involved who realised that immediate action was necessary. However, the fact that a near miss incident did occur may be symptomatic of a systemic weakness in the MSMS.

Such incidents, therefore, need to be reported and to be investigated at an appropriate level.

6.9.7 Harbour Authority investigations

Harbour Authorities have a responsibility to investigate marine incidents in harbour waters and the MSMS should contain clear procedures on the levels and purposes of accident investigations that will be expected of a Harbour Authority. Those procedures should also identify who will be responsible for carrying out the investigations. Harbour Authorities may be aided by the Marine Accident Investigators' International Forum Manual which provides investigators with a basic platform from which to develop the necessary skills to carry out efficient and effective investigations, and to provide a ready reference tool.

For example, in the event of a collision between two vessels in the approaches to the port with one vessel under compulsory pilotage and the other under control of a PEC holder, there will be a need to ensure that the investigating officer is independent of the incident. In a small port where the Harbour Master is also the authorised pilot, it would be inappropriate for them to carry out the investigation.

It may be desirable to identify the need to engage external resources to carry out an investigation. This may be by contractual arrangements with an external contractor or by agreement with a (neighbouring) larger port which may have sufficient resources. It should be remembered that other bodies such as MAIB may rely upon investigations undertaken by Harbour Authorities.

6.9.8 Purpose of marine incident investigations

The MSMS should carry clear procedures to be adopted with respect to accident investigation. Those procedures should provide clear indicators to the authority's officers on how to determine, at an early stage, the purpose of the investigation. It is to be noted that the investigations of marine incidents have two essential purposes:

- to determine the cause of the incident, with a view to preventing a recurrence of that incident (or similar)
- to determine if an offence has been committed: if so, there may be the need, on the part of the organisation, to initiate enforcement action that may lead to prosecution or through an agency of another authority such as the Police or the MCA

6.9.9 Conduct of an investigation

Procedures should be established and maintained for a consistent approach to safety and environmental accidents, incidents and breaches of regulations. Such procedures should clearly establish the requirements for:

- reporting
- investigating
- analysing
- documenting

By following this process for such accidents means they should also include provisions for reporting near misses.

A reported accident should be investigated as soon as practicable so that essential facts are not overlooked, or the evidence destroyed by other activities.

The initial stage of fact gathering will often take place under time and resource pressures. It is essential that as much factual detail about the accident is obtained as soon as possible.

Whatever the purpose of an investigation – i.e., is it to determine cause and to prevent recurrence or is it to determine if an offence has been committed? – the investigation should be carried out in a robust and rigorous manner such that all possible aspects are covered.

Alternatively, or additionally, it may become apparent that there is a need for some form of disciplinary action against an employee. Organisations should prepare, adopt and publish an enforcement manual detailing the policy and procedures for accident investigation. The investigation should be carried out in an independent manner – as noted above, in small ports it

would be inappropriate for the Harbour Master / duty pilot to carry out an investigation into their own incident.

The IMO adopted an Assembly Resolution A.849 (20) – Code for the Investigation of Marine Casualties and Accidents. The aim of this Code is "to promote a common approach to the safety investigation of marine casualties and incidents."8 The Annex to the Resolution provides the detail of the Code and the Appendix gives 'Guidelines to assist investigators in the implementation of the Code'.

6.9.10 Publishing information

Where it is determined that an Accident Investigation will be carried out to determine the cause of the accident, with a view to preventing a recurrence of that accident, it is important to ensure that appropriate results of the investigation are made widely available to employees as soon as possible. It may also be appropriate to make these results available to the public.

The causes of the accident and the recommendations and requirements for further accident prevention should be clearly identified. The MSMS should contain procedures on how this information is disseminated and the measures to be adopted to ensure that the recommendations are adopted and implemented.

Where it is determined that an Accident Investigation will be carried out to determine if an offence has been committed, it may be desirable to publish the findings with respect to cause at an early stage but the details with respect to possible breaches of legislation should not be published until all legal proceedings have taken place.

6.9.11 Training

Accident Investigation requires a level of skill that will not generally be available to most employees. Organisations should consider who may be required to carry out an investigation and to ensure that appropriate and effective training programmes are available to those personnel.

Training programmes should be based around, but not limited to:

- PMSC
- Guide to Good Practice
- the IMO Code for the Investigation of Marine Casualties and Incidents – A.849(20)
- amendments to the Code for the Investigation of Marine Casualties and Incidents (IMO Resolution A.849(20) – A.884(21)
- HSE Enforcement Guide (England and Wales), (Scotland) and (Northern Ireland)
- the Marine Accident Investigators' International Forum Investigation Manual

The **AIMS** of the course should be to provide staff with a full understanding of their statutory duties and obligations to report and investigate accidents, practical steps in conducting accident investigations and writing accident reports, as well as providing them with an understanding of the processes involved in applying and enforcing those duties and obligations.

The **OBJECTIVES** of the course should be that, at the end of the course, delegates will:

- Be able to apply their understanding of their responsibilities and obligations to investigate accidents and to make appropriate recommendations to prevent or minimise future occurrences.
- Have gained an insight into the most common accidents that have occurred, along with an understanding of their possible causes – the possible connection between human behaviour and the organisational culture of the company.
- Understand how to interview witnesses.
- Understand how to obtain evidence.
- Understands how to analyse that evidence to provide effective and achievable recommendations to prevent recurrence.

Consideration should be given to appropriate International and UK Legislation, as to accident investigation and reporting. The course should include references to the MSMS.

Section 7: Review and audit

7.1 Introduction

As per section 6 (Marine SMS) A systematic audit and review must be carried out to ensure the MSMS is being operated effectively. An internal audit must be carried out annually and a statement about the performance standard of the organisation should also be included in the annual report. An external audit or peer review should take place every three years, informing the 3-yearly publication of the marine safety plan and the organisations performance against the previous plan, as required by the Code. The designated person will present any findings from the audit/peer review process to the Duty Holder for their consideration and any remedial action.

A peer review of the MSMS (i.e., undertaken by one organisation on behalf of another organisation) is an acceptable form of external audit. Both must be undertaken by competent persons (by evidence of qualifications and experience) and the organisation undertaking such a review must be independent of the organisation that it is reviewing in both operational and commercial terms. Ultimately, it is the Duty Holder's responsibility to satisfy themself that a peer review will provide an appropriate level of oversight and independence to meet the requirements as defined by the Code.

As part of the audit/review process the MSMS also needs to reflect any lessons learned from other port marine organisations and in particular take note of and incorporate as necessary and appropriate, the recommendations and conclusions of any related MAIB investigations.

Together these elements constitute a continuous cycle over time, aimed at ensuring continued achievement of safety goals, relevance of policies, plans and procedures, and continuous improvement in safety performance.

7.2 Measuring performance

Organisations must have a database or system to record incidents, including near misses. Performance should be measured against periodic audits; reviews; safety inspections; following a report of an incident, an incident investigation or an informal report/observation. The organisation is expected to evaluate performance and identify any lessons learnt and improvements to be made to operational procedures.

As part of this process, the MSMS needs to reflect the lessons learnt from other ports and incorporate the recommendations and conclusions of any port related MAIB investigation, as appropriate.

Organisations can access Annex A for a copy of the PMSC aide-memoire which can be used to help carryout auditing and assurance checks against the code.

Section 8: Competence

8.1 Introduction

This section provides guidance on the following:

- National occupational standards
- Harbour Masters
- pilots
- VTS operators
- marine and LPS operatives
- tug crews
- hydrographic surveyor
- training and development

8.2 Summary

This section of the Guide discusses the need for organisations to ensure that everyone, who has responsibilities or is involved with safety of navigation, is qualified and competent to do the job. Organisations must ensure their staff meet the nationally agreed standards of competence, or alternatively be able to show that their local competency standards are fully equivalent.

The general principles in relation to staff competence and development under the code are:

- Systems developed by an organisation with the aim of making best use of appropriate powers are likely to fail unless those people assigned any role in the system are competent and trained to nationally agreed standards.
- The foundation to these standards is an understanding that securing port safety is a team operation demanding an appreciation of the work of other specialists.
- Organisations should assess the fitness of all persons appointed to positions with responsibility for the safety of navigation.
- Organisations should adopt a training strategy that develops a shared understanding of their Safety Management Systems and promote the involvement of port users in training programmes.

8.3 Overview

To ensure that competent personnel are employed, organisations must:

- Use the published national occupational standards (or an equivalent set of standards) as a basis for recruiting and developing staff, as part of their training strategy.
- Employ an agreed assessment methodology to enable the standards to be applied.
- Review whether existing staff meet the standards.
- Ensure personnel have the necessary professional qualifications, certificate of competency (or are working towards them).
- Ensure personnel have enough relevant experience (dry and wet-side) to be effective in the post.

8.4 Occupational standards

Some sectors within industry have developed National Occupational Standards (NOS). NOS identify key job roles within a particular sector, break each role into its component activities and define the performance, behaviours, and knowledge that an employee needs to undertake the activity. The NOS reflect best practice within industry and, as such, provide a useful benchmark against which individual employee performance can be measured. They can therefore be adapted for use as management tools covering a range of employer functions including recruitment, employee development and managing performance.

Ports Skills and Safety (PSS) is the port industry's organisation for health, safety, skills, and standards. It has published NOS for port marine personnel, as well as guidance notes on Competency Management System, to illustrate some of the ways in which the port sector NOS can be utilised within a port organisation. They cover:

- Harbour Masters
- marine pilots
- Vessel Traffic Services.

NOSs are also available which form the basis for NVQ/SVQ Level 2 and 3 qualifications for the following:

- marine operations
- passenger operations
- stevedoring
- supervisory roles in port and maritime operations (level 3).

PSS, in conjunction with the Institute for Apprenticeships and Technical Education (IfATE), has also developed the following apprenticeship schemes:

- Port Operative Level 2 apprenticeship
- passenger, ferry, and cruise operations
- cargo operations
- port marine operations officers
- port operations.

PSS, in conjunction with Skills Development Scotland (SDS), has developed the Modern Apprenticeship in Maritime Occupations at SCQF Level 5 in Scotland for the following areas:

- workboat operations
- port operations
- sea fishing
- deck rating and
- engine room rating

The PMSC represents an agreed national standard for the discharge of a Harbour Authority's legal marine safety functions. Harbour Authorities rely on professional people to operate

effectively and depend on the training and skills which those people gain and subsequently apply to their responsibilities. National occupational standards specify what port personnel need to do and the associated knowledge and understanding that enables them to perform as required. This is important for:

- recruitment and selection of new personnel
- reviewing whether existing employees meet these standards
- providing a framework for existing personnel interested in career development and advancement.

Assessment against the NOS will then confirm that employees have the required skills and knowledge for their role. Qualifications based on the NOS will also help.

Many people, particularly mariners, already have qualifications and it is already widespread practice to require these for port professional positions. The Code does not comment on this practice. However, these qualifications, whilst an indicator that some of the skills and knowledge are present, are not in themselves sufficient to meet all the requirements under the NOS.

The development of a qualification framework involves PSS collaborating with key stakeholders, principally employers, professional associations and potential providers of training and education to ensure that the industry's requirements are capable of being delivered. The intention of a framework is to recognise and build upon existing provision, as appropriate. For example, the Nautical Institute currently runs a Harbour Master's Certificate Scheme, based upon its publication *The Work of the Harbour Master A Practical Guide*, can articulate its existing provision with the proposed framework to gain recognition of its scheme.

PSS has developed the Harbour Master's Certificate in partnership with the UK Harbour Master's Association (UKHMA). The certificate is a voluntary qualification that demonstrates capability, knowledge and understanding of the current national occupational standards for Harbour Masters. It Is recognised by the Maritime and Coastguard Agency (MCA) and the Department for Transport (DfT).

8.5 Harbour Master

The Code provides details on the appointment of a Harbour Master.

The Harbour Master is a statutory appointment and the Harbour Authority power to appoint them is modelled on section 51 of the Harbours, Docks and Piers Clauses Act 1847. Under the Act the term Harbour Master includes both the Harbour Master and any assistants.

A Harbour Master has a combination of statutory and management functions, the way in which these functions are divided will differ from port to port. Harbour Authorities should pay particular care to the definition of the Harbour Master's responsibilities and functions in their circumstances.

8.5.1 Qualifications for Harbour Masters - Harbour (HM), Deputy (DHM) and Assistant Harbour Master (AHM) Qualifications

Professional qualifications have been introduced and continue to be developed to ensure that new and existing personnel have the necessary skills and competency to undertake the role and responsibilities normally associated with the role of a Harbour Master. Further work continues to be undertaken by industry to ensure that certified training /qualifications are available for:

- existing personnel working in the field of navigational safety, who want to develop their skills
- ex-mariners with seagoing qualifications, but lacking shoreside experience and qualifications
- new entrants without any maritime experience.

Since the national occupational standards were published, several initiatives in developing professional qualifications have started.

Bodies including but not limited to the UK Harbour Masters Association (UKHMA), Port Skills and Safety, Lloyds Maritime Academy, and the Nautical Institute have introduced rigorous assessment processes leading to recognised Harbour Master qualifications which may be endorsed, upon request, by the MCA.

At a time when recognised seafarer qualifications, particularly at STCW level, are becoming a rarer commodity in the UK port recruitment market, it is timely that recognised Harbour Master qualifications have been introduced which deal directly with the role and responsibilities of today's Harbour Master. It is, however, acknowledged that there are other worthy qualifications in existence that are already held by many Harbour Masters and other qualifications that may be developed and introduced in the future.

The UKHMA have also developed a programme of Continuing Professional Development (CPD) that can be used by existing Harbour Masters and their Deputies and Assistants.

8.6 Vessel Traffic Service Operator

Section 10 of this guide discusses the management of navigation.

Harbour Authorities should use various methods to monitor and manage vessels using their harbour. These methods should allow appropriate information, advice, and directions to be passed between the Harbour Master or port and ships in the harbour. Where the formal Risk Assessment indicates a requirement, a VTS should be established and operated in accordance with internationally agreed guidelines. These services may vary quite considerably from port to port.

The IMO STCW 1978 Convention was amended, including significant changes to include recommendations on VTS training. More recently, IMO Resolution A.1158(32) provided guidelines on the recruitment, qualifications, and training of VTS operators. The subsequent IALA recommendation R0103 provided detailed standards for the training and certification of VTS personnel. This recommendation also included details of VTS model courses:

- C0103-1 - VTS Operators Training
- C0103-2 - VTS Supervisor Training
- C0103-3 - On-the-Job Training
- C0103-4 - On-the-Job Training Instructor
- C0103-5 – VTS Revalidation Process

UK VTS certification Logbooks are available to VTS operators following a structured MCA approved training programme based on the IALA C0103 model courses. This is not an entitlement to practice in a particular port as an authorised VTS operator. In all cases, this will be subject to successful completion of the VTS provider's on-the-job training assessment and examination. The proposed national occupational standards, and related assessment criteria will support this. On successful assessment some VTS providers now authorise their VTS operators in much the same way as pilots. This is not, of course, a statutory arrangement.

The Logbook requires an annotation of an annual assessment by the port. In addition, the C0103 VTS Operators certificate requires to be kept current by attendance at a recurrent training course every three years or attainment of an equivalent MCA approved in-house refresher training. This will be checked when logbooks are submitted to the MCA every 5 years for re-validation. The MCA publishes further guidance regarding VTS training and certification in MGN 434.

8.7 Marine and LPS operatives

An organisation should ensure that vessels or craft which are used in the harbour or facility are fit for purpose and that crew are appropriately trained and qualified for the tasks they are likely to perform.

Marine operatives are employed in a wide variety of jobs throughout the industry. In deciding what qualifications are required, either as a prerequisite for recruitment or in subsequent training, organisations should identify the tasks the person is to perform. The national vocational qualifications developed by PSS cater for several of these and indicate the scope of training likely to be needed.

This guide refers to Local Port Services (LPS). The scope of marine operative training may in some circumstances include the requirement for LPS training which should be specific to the organisation's requirement. Some UK marine colleges provide LPS training courses.

Other possible components of marine operative training may include:

- basic sea survival
- boat handling
- emergency response
- equipment handling (cranes, vehicles, alarms etc.)
- first aid
- information technology
- personal safety
- VHF operations and procedures
- basic marine engineering skills.

Additionally, the following certificates may be appropriate for marine operatives:

- MCA Boat Masters License
- RYA Coastal/Yacht Master License (with commercial endorsement)
- RYA Powerboat level 2 (with commercial endorsement)

It should be noted that STCW 1978 as amended, which was brought into effect by the Merchant Shipping (Training and Certification) Regulations 1997 (S.I. 1997/348) on 1 February 2002, has introduced a Certificate for Inshore Craft, namely Inshore Craft – Master Reg 11/3 (restricted).

8.8 Tug crews

Training programmes in respect of tug crew have been developed by the Maritime and Coastguard Agency (MCA) in conjunction with the British Tug owners Association (BTA). Harbour Authorities should ensure that tug crew working in their waters meet the required standards through the towing guidelines discussed in section 4.6.1.

The STCW certificates listed below will be required as a minimum for tug masters and deck watch keepers aboard tugs **over 24m length** and to engineers aboard tugs of more than 750kW registered power.

- Inshore Tug Master Reg ll/3 (Restricted)
- Inshore Tug Watchkeeper Reg ll/3 (Restricted)
- Inshore Tug Chief Engineer Reg lll/2 (Restricted)
- Inshore Tug Chief Engineer Reg lll/3 (Restricted)

The STCW deck officer certificates listed above were replaced in June 2013 by:

- Master (Tug) less than 500GT near coastal Reg II/3
- Master (Tug) less than 3000GT near coastal Reg II/3
- Officer of the Watch (Tug) less than 500GT near coastal Reg II/3
- Officer of the Watch (Tug) less than 3000GT near coastal Reg II/3

Masters of tugs who have not followed these routes and hold instead some other Certificate of Competency, may in addition hold a Voluntary Towage Endorsement for General, Ship Assist or Sea Towage (MGN 468 (M), Amendment 1) as appropriate.

Engineers working aboard tugs should hold appropriate certification, as per MSN 1904, or hold higher STCW certification.

References:

- MGN 495 (M+F) - Certificate of Competency for Master and Officer of the Watch Tug less than 500GT and 3000GT near coastal and Certificate of Proficiency for Tug Rating
- MGN 468 (M) Amendment 1 - Voluntary Towage Endorsement Scheme
- MSN 1904 (M+F) - UK Requirements for Engineer Officer Small Vessel Certificate of Competency

8.9 Hydrographic surveyors

Section 10 of this guide deals with hydrographic surveying. The need for in house hydrographic surveying skills will vary widely from port to port, depending upon the nature and the stability of the seabed and hydrographic regime, and the type and density of shipping.

The requirement for recognised hydrographic qualifications depends on a Harbour Authority's circumstances. Qualifications may be unnecessary in cases where a port surveys only to monitor the hydrographic data or charts published by others (e.g., UKHO). However, when it gathers and publishes survey data for use by the public or inclusion into the official Admiralty chart, the training and qualifications of those who involved should be demonstrably appropriate. Surveys should be conducted with due regard to the International Hydrographic Office Standards for Hydrographic Surveys (IHO) Special Publication No. 44.

Professional qualification as a hydrographic surveyor is normally achieved by attending relevant academic courses (preferably those accredited by the IHO), or through training provided by commercial providers. Continuing professional competence may be demonstrated by acquiring chartered status from the Royal Institution of Chartered Surveyors, or IMarEST in the UK. Harbour Authorities looking to recruit personnel with a view to them achieving associate membership of the Royal Institution of Charted Surveyors (RICS) or IMarEST, should bear in mind that a suitable foundation degree e.g., hydrography, oceanography, or land survey, may be helpful. Harbour Authorities should encourage their surveyors to become members of The Hydrographic Society UK as this offers opportunities for continuous professional development, as well as providing information about available courses and relevant professional conferences.

Further useful guidance is also available from the International Hydrographic Bureau (IHB) in their publication 'Standards of Competence for Hydrographic Surveyors', which it publishes on behalf of the IHO and the Fédération Internationale des Géomètres (FIG) and the International Federation of Hydrographic Societies (IFHS) who have developed the Hydrographic Professional Accreditation Scheme (HPAS) to provide international recognition to hydrographic professional in demonstrating competency, educational background and career development.

8.10 Development and training good practice

All employees undertaking port marine activity as part of their work must undergo training and assessment to ensure that they are competent to carry out their assigned roles.

The training and assessment of employees should be undertaken by competent people and carried out at regular intervals to provide the organisation with assurances that individuals are maintaining the appropriate skills and knowledge to undertake their assigned activities. The learner must not be placed in a position of uncontrolled risk during the training or assessment.

In addition, no employee should be expected to undertake duties that might carry risk until they have received suitable and sufficient instruction, information and training in line with the appropriate marine Safety Management Systems.

All tasks and activities require underpinning knowledge. It is not sufficient to understand what to do, without knowing **why** it is done in a particular way or how it fits into the broader picture of the business activity.

It is good practice for employees to be formally assessed at the end of a course or training period. The test is to ensure that the employee has core knowledge of the working environment and its hazards. An acceptable standard must be agreed in line with the appropriate National Occupational Standard and set out in the port's training policy.

- All ports are expected to have a training policy and on-the-job, practical training should take place in line with this policy.
- Training and assessment, undertaken by approved and competent staff, should cover the content that is relevant to the port and employees' requirements.
- It is good practice for employees to receive on-the-job training before being put forward for formal assessment.
- Employees who have been undertaking the tasks competently for some time, may not require any training before being formally assessed. If, however they fail the assessment, they will require further training.

Local records should be kept of all training and assessment conducted, an example of a port marine training assessment and certification record sheet can be found at Annex C.

An example of a training matrix can be found at Annex B.

Section 9: Plan

9.1 Introduction

To help demonstrate its commitment to prioritising the continued safety of those within its jurisdiction an organisation should publish a marine safety plan for marine operations at least once every three years.

Though the format of each organisations safety plan will be for it to determine, the plan should illustrate how the policies and procedures will be developed to satisfy the requirements under the Code.

Formation of a plan should be a collaborative process, with organisations consulting regularly with its stakeholders to help identify areas for improvement and develop strategies to achieve this.

The plan should commit the organisation to undertake and regulate marine operations in a way that safeguards the harbour, its users, the public and the environment.

It should refer to commercial activities, the efficient provision of specified services, and the effective regulation of vessels.

It should consider both challenges and opportunities and explain how commercial pressures would be managed without undermining the safe provision of services and the efficient discharge of its duties.

In addition, information and data gathered from the monitoring and auditing of the Marine Safety Management System (MSMS) should be used to support analysis and help measure an organisations performance against its plan.

An organisation should then publish a report detailing an assessment of its performance against the safety plan.

As a minimum requirement, both plans and reports should be published every three years.

Section 10: Conservancy Duty

10.1 Introduction

This section provides guidance on the following:

- conservancy duty
- hydrographic survey requirements
- promulgation of navigation and hydrographic information
- dredging
- Aids to Navigation (AtoN)
- wrecks
- regulating harbour works

10.2 Summary

A Harbour Authority has a duty to conserve the harbour so that it is fit for use as a port, however other non-statutory organisations may be required to fulfil similar duties. The Harbour Authority also has a duty of reasonable care to see that the harbour is in a fit condition for a vessel to be able to use it safely.

Organisations should provide users of the harbour or facility with enough information about conditions, such as depths of water, local Notices to Mariners, etc.

Harbour Authorities have duties and powers as local lighthouse authorities (or providers of local aids to navigation) and specific powers in relation to wrecks.

10.3 Admiralty charts

Harbour Authorities should provide regular information required for Admiralty Charts and publications. The UK Hydrographic Office provides a standard process and governance for data and information supply.

10.4 Prevailing conditions

In addition to information about general conditions, organisations should also have procedures to make available timely information on prevailing and forecast meteorological conditions such as wind, tide and other factors liable to be affected by the weather and the way the harbour or facility is used.

10.5 Anchorages

A Harbour Authority's MSMS should make appropriate provision for safe anchorages in the harbour and its approaches, considering the size and type of vessels likely to require them, the needs of other shipping – including passing shipping, and the local conditions.

10.6 Reviewing changes

The need for survey should be considered if harbour operations are changed – for example the use of berths; the reception of larger vessels – and significant increases in harbour traffic which may require additional passing places, anchorages, etc.

10.7 Works in harbours

Works in harbours are liable to interfere with navigation. The Safety Management System should have appropriate provision for this, should works be undertaken. There will be a need for a special assessment in each case where new hazards are likely to arise. The Safety Management System should provide for the regulation of dredgers and other craft associated with such works.

A description of the duty is outlined below. A Harbour Authority has a duty to conserve the harbour so that it is reasonably fit for use as a port, and a duty of reasonable care to see that the harbour is in a fit condition for a vessel to use it. The Code says that the conservancy duty covers several points:

- survey, using appropriate specifications based on international standards, as regularly as necessary in accordance with good practice guidance
- find and mark the best navigable channels
- place and maintain navigation marks in the optimum positions which are suitable for all conditions
- have a risk-based approach and keep a vigilant watch for any changes in the sea- or riverbed affecting the channel or channels and move or renew navigation marks as appropriate
- keep proper hydrographic and hydrological records
- ensure hydrographic information is published in a timely manner
- provide regular returns and other information about the authority's local aids to navigation as the relevant GLA may require.

Where a Harbour Authority states that there is a certain depth of water at a part of the harbour over which vessels may pass, it must use reasonable care to provide that the approaches to that part are sufficient, under normal conditions, or give warning that the advertised depth has not been maintained.

Conservancy includes not only monitoring but also covers the protection of navigation and the hydrographical regime in a harbour, and also, if applicable, covers the licensing of construction and dredging in order that the safety of navigation is not adversely affected.

10.8 Hydrography

Harbour Authorities have a duty to find, mark and monitor the best navigable channel or channels in the harbour. A statement of the measures adopted should be included in the published policies and plans. Effective arrangements to publish appropriate hydrographic information (charts, warnings about recent navigational hazards) must also be in place.

10.8.1 The general requirements of a hydrographic survey

Hydrography is the precise determination of navigational information, and the provision of charts and other navigational products for use by the mariner and those with a responsibility for conservancy.

The International Hydrographic Organization (IHO) provides information on the concepts involved in hydrography as well as guidance to plan and execute hydrographic surveys. Further guidance can be found in IHO publication SP44, IHO standards of survey and the UK Hydrographic Office publication 'A Guide to Bathymetry'. The 'Harbour Masters' Guide to Hydrographic and Maritime Information Exchange' which is jointly produced and sourced from the UK Harbour Masters Association and UK Hydrographic Office can be referred to for further guidance.

10.8.2 Position

Survey data must be positioned relative to a geographical co-ordinate reference frame. Positions should be referred to WGS84 datum, or the WGS84 compatible datum ETRS89 datum, when using Global Navigation Satellite Systems (GNSS) such as GPS.

All positioning systems should employ a suitable correction methodology and be fully calibrated before the start of each survey. Additionally, confidence checks should be conducted. Daily checks are recommended but, at a minimum, checks should be conducted at the start and end of the survey.

10.8.3 Bathymetry

The entire survey area should be covered in a systematic manner. The pattern and spacing of survey lines should be carefully considered before starting the survey, to meet the requirements of IHO S44 survey standards. Systematic errors in the data must be resolved, with sufficient sounding density to discover all obstructions and shoals. If shoals are discovered, they must be investigated further in greater detail. Leading lines must be sounded along and, if sounded with a single beam echo sounder, a detailed examination undertaken using side scan sonar.

All survey equipment should be adequately calibrated prior to commencing survey operations.

All soundings must be reduced to Chart Datum by applying observed tidal heights or using ellipsoidal survey methods with a verified separation value/model.

10.8.4 Wrecks, obstructions and other dangers to navigation

The position of, and least depth over, every shoal, rock, bank, wreck and other obstruction that is a danger to safe navigation must be determined by close examination. Recommended methods for determining the least depth over features can be found in the UK Hydrographic Office publication ‘A guide to Bathymetry’.

10.8.5 Tidal heights and tidal streams

Observations of the rise and fall of the tide should be made to reduce soundings to a common datum as well as to provide data suitable for tidal analysis. This enables the predictions in the tide tables produced by the UK Hydrographic Office to be of better quality.

The means of obtaining tidal data, either by tide pole and/or tide gauge should be referenced to Chart Datum and/or Ordnance Datum. The tide gauge/pole should be levelled to a physical benchmark referenced to chart datum or Ordnance Datum

Modern tide gauges usually have telemetry links, which allow real time tidal heights to be monitored remotely and then broadcast to vessels in the area. Where real time tidal heights are available, it is also possible to compare the actual tidal height at any one time with that the predicted height, and to present any difference graphically. This is particularly useful in assessing the meteorological effects on tides.

Measurements of the tidal stream and current will be required throughout the survey area.

10.8.6 Coastline and topography

The position of the high and low water lines must be fixed, and the nature of the foreshore described. All land features and conspicuous objects of any interest to the mariner that help them recognise the coast and determine their position must be carefully fixed. The heights of such objects must also be found.

10.8.7 The survey process

The surveying process is divided into five major stages with each stage divided into a number of groups of instructions or procedures and these are detailed below:

Table 1: Five stages of the surveying process

Stage	Group	Instruction or Procedure
Preparation	Planning	Find out what survey information already exists and plan data collection.
	Calibration	To remove instrument errors from survey equipment before doing any observations.
Data Gathering	Verification	To ensure that the instruments are gathering information to the correct standard during survey operations by comparison with other instruments.
	Observation	To make observations and check them on the survey line or in the field
	Data Logging	To store observed information and transfer to a data processing system
Data Processing	Editing	To ensure the removal of invalid data
	Selection	To select valid data
	Data Storage	To store relevant information in analogue or digital formats
Data Analysis	Quality	To determine the quality of surveyed data and compare it to the required standard
	Coverage	To determine that sufficient valid data has been surveyed
Data Rendering	Reports	To report dangers before the completed survey is rendered
	Plots	To render data as graphics
	ROS	To write the Report of Survey
	Digital Data	To render digital data
	Field Records	To render field records

10.8.8 Contracting a survey

When contracting a survey on behalf of an organisation the below items should be considered and stipulated in the contract if necessary:

- Define the survey area for data collection and minimum depth requirements for coverage within survey area.
- Define the what the purpose of the survey is and the appropriate standard for data collection such as International Hydrographic Organization (IHO) Order of survey to be undertaken – (S-44 Edition 6.1.0).
- Define Coordinate reference system and Vertical datum. i.e., World Geodetic System 1984 (WGS84) and Chart Datum.
- Confirm Tidal solution to be used, e.g., Local Port tide gauge or Global Navigation Satellite Systems (GNSS) Tides.
- Confirm Timeline of collection – consideration for tides, vessel movements, dredging campaigns.
- Confirm data deliverables and the give permission to the contractor to share data as necessary e.g., XYZ files with the UK Hydrographic Office.
- Data to be shared with the UK Hydrographic Office should also have a completed H275 form which provides all the necessary metadata to enable the data to be processed and used. The H275 is available online.

Data should be submitted to the commissioning body (organisation) and the UKHO promptly after the survey's completion so updates can be promulgated to port users.

10.8.9 Frequency of survey

The finding, marking and monitoring of the best navigable channel, or channel in a harbour, is an essential part of the formal hazard assessment and Safety Management System. There needs to be a clear understanding between the Harbour Authority and any other berth or facility operator about responsibility for arranging surveys alongside a berth.

The need and frequency of surveys should be determined by formal Risk Assessment. It should reflect the stability of the seabed and its susceptibility to change. The depth of available water, in relation to the draught of vessels using that water, is also a consideration. Given that the depth of water and stability of the seabed will often vary within a port, it is recommended that an overall survey plan be drawn up which meets the need for surveys at varying times in different areas.

Surveys are needed to produce charts and intervals between surveys of the whole harbour below high water vary and may also be different for different parts of the harbour.

More frequent periodic surveys will be necessary where the depth of water is known to fluctuate in areas critical to navigation. These surveys need not be as extensive as a main survey and should aim to establish any variation since the last survey, thus enabling a warning to be given and any appropriate remedial action to be taken and change of bathymetry should be shared with UKHO at the earliest convenience.

Incident assessments may also indicate a survey requirement. For example, where a vessel has grounded, it is important for the area to be re-surveyed as soon as possible to check the accuracy of published information; and to ensure that any resultant disturbance to the bed does not present a hazard to other vessels. It is also prudent in the event of a grounding, to establish promptly the depth of water available at the time of the incident in case of subsequent dispute.

Post-incident surveys should also be conducted whenever there is a risk that the navigation channel has been compromised in some way, such as might happen when a large object is known to have fallen in the water. The conservancy duty demands that re-survey findings must be published in accordance with the guidance cited in this section.

10.9 Survey and navigation information

A Harbour Authority is responsible to ensure that the mariner is provided with the necessary information to ensure the safe passage of their vessel in the port. It is vital for procedures to be in place to make sure that this information is given out as soon as possible.

The UK Hydrographic Office (UKHO) is responsible for compiling and publishing charts for all tidal waters around the UK, together with the Admiralty charts and Sailing Directions. Section 10.3 of the Code requires Harbour Authorities conducting surveys to arrange to provide the UKHO with the results of their surveys. UKHO has a portal for the easy submission of this data.

The Harbour Authority must give a suitable warning as soon as they become aware, through survey or other means, that the water available to the mariner is less than that promulgated in nautical charts and publications. Such warnings will normally be broadcast by the Harbour Authority in the first instance over the appropriate VHF channel(s).

Where a local Notice to Mariners is issued, distribution should include the UKHO, all pilots authorised by the authority, all current PEC holders, and masters of vessels not subject to compulsory pilotage. Shipping agents also need to be included, so that they are alerted to the changes.

The UKHO will decide if the local Notice should be promulgated more widely as an Admiralty Notice to Mariners. To avoid the need for frequent chart corrections it is sensible to arrange with UKHO that in areas prone to depth fluctuations the minimum water available is that shown on the Admiralty Chart

Where changes within harbour limits may impact on the safe navigation of passing coastal traffic or vessels approaching the port, Harbour Authorities, particularly local lighthouse authorities (see below), should inform the UKHO Radio Navigation Warning section (which operates a 24/7 service).

Contact details are included on the front cover of Admiralty Notices to Mariners and on the UKHO website. The UKHO will determine if a Coastal Navigation Warning will be issued through the Coastguard Coast Radio Stations.

Such changes may include:

- casualties to aids to navigation particularly a principal fairway buoy or major category 1 lights with ranges beyond harbour limits
- new wrecks or shoals and their marking located towards the outer limits of the port
- closure of a port or anchorage in exceptional circumstances
- the failure of local VHF radio navigation services.

The UKHO drafts these warnings, but the MCA is responsible for their transmission.

Where tidal heights vary from that predicted, warnings should be made over the appropriate VHF channel. Where tidal variations potentially affect vessels alongside or at a mooring, consideration should be given to alerting the relevant shipping agents if the vessel risks taking the ground or could otherwise be put at risk. In some areas, the tidal information available to an organisation may be useful for warning of possible local flooding.

10.9.1 Dredging

Harbour Authorities typically have a statutory power in their local legislation to dredge for the maintenance and improvement of channels.

There are two main types of dredging which organisations may need to consider:

- **Maintenance dredging** - Maintenance dredging is done to maintain existing access to the port or facility and discharges the responsibility to ensure that all vessels using the port or facility may do so safely. It is undertaken on a routine basis to maintain the level of water at the depth advertised on charts. It is important that Risk Assessments deal with this requirement. Maintenance dredging should be planned for the sake of efficiency and to minimise environmental effects. Advertised depths should be determined and reviewed, having regard to the need to ensure the safety of commercial and recreational vessels using the port. Water depth may be reduced to a level less than that charted, or otherwise promulgated, for example because no user any longer requires the charted depth to be maintained. However, appropriate warnings to mariners must be given and charts up-dated as soon as reasonably practicable.
- **Capital dredging** - Capital dredging can take the form of deepening or widening an existing channel. Occasionally, it may be necessary to construct an entirely new channel to facilitate access to a new facility. Capital dredging involves improvement of access for example to allow bigger and deeper vessels, longer optimum tidal windows and the provision of passing places, etc. Capital dredging may often be prompted by commercial considerations. However, a Risk Assessment might also identify a safety requirement for better access – even for vessels already using the port.

10.9.2 Controls on dredging

Where the Crown Estate or, in the case where the ownership rights of the seabed of the harbour have been delegated, their permission for dredging operations is likely to be needed.

A Harbour Authority's statutory power to dredge is almost invariably subject to consent to dispose of dredged materials in tidal waters. This consent is required from the Marine Management Organisation (England), Natural resources Wales (Wales), Marine Scotland (Scotland) and their equivalents under the devolved administrations. This requirement is usually found in the Harbour Authority's local legislation alongside the power to dredge. It mirrors – and takes the place of – the requirement in Part II of the Coast Protection Act 1949. The 1949 Act will also apply if dredging is proposed beyond the limit (usually the harbour limit) of the Harbour Authority's power to dredge. The consenting Department can advise which control applies. Capital dredging may require additional powers, for which a harbour order is required.

Consent to dredge is subject to the Marine Works (Environmental Impact Assessment) Regulations 2007. The Directive which these regulations transpose imposes controls on 'projects'. This means that consideration must be given to the dredging and disposal of material, even though the consent requirement may relate to the disposal only. Consents may also be subject to the The Conservation of Habitats and Species Regulations 2010, which impose severe restrictions and special tests on works which may adversely affect a European site. There are similar controls on harbour orders in Schedule 3 of the Harbours Act 1964 (as amended). It is even more likely in these cases that an environmental assessment will be required, or that adverse effects on a European site will have to be considered.

A license to dispose of dredged spoil at sea must also first be obtained in accordance with the Marine and Coastal Access Act 2009 or Marine (Scotland) Act 2010 section 4 if in Scotland.

Seabed samples will be required from the areas in which it is proposed to dredge for chemical analysis. The means and location for spoil disposal must also be agreed and approved with all the relevant authorities. Early consultation with all parties concerned, including those who navigate or fish in the area is strongly advised.

10.9.3 Dredging and hydrography

It is good practice to undertake a hydrographical survey before dredging work commences and when it has been completed. This will establish the need and the basis for any contract, as well as ensuring that the contract has been fulfilled. Post dredging survey information should always be supplied to the UKHO. Locally produced charts should also be revised promptly after dredging work.

10.10 General Lighthouse Authorities

10.10.1 Local Lighthouse Authorities (LLA)

The LLA has responsibility for providing and maintaining buoys and lights within its limits, and in some cases their limits where AtoN have been specifically requested by the LLA, but the establishment of a light or mark, or any alteration to existing lights and marks, may only be done with the prior approval of the GLA.

LLA's are obliged to give the GLA's all information concerning the lighthouses, buoys and beacons under their management as the GLA may require.

10.10.2 Availability criteria

All Harbour Authorities must establish and maintain aids to navigation within their area of responsibility in accordance with the criteria laid down by the GLAs unless otherwise agreed.

LLAs have a responsibility for ensuring that any aids to navigation within the port established, and/or maintained by a third party also meets these standards. LLAs which are not Harbour Authorities must also categorise their aids to navigation based on these criteria.

The categories, detailed below, are based on Guidelines developed by the International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA).

The three IALA categories are to be applied according to the importance of a particular aid for safety of navigation:

- Category 1 – 99.8% availability – AtoN of vital navigational significance
- Category 2 – 99.00% availability – AtoN of important navigational significance
- Category 3 – 97.00% availability – AtoN of necessary navigational significance

Availability is calculated over a 3-year period.

Each LLA must adopt, state and accomplish the availability targets and response priorities for individual aids to navigation, in consultation with the GLA.

Each LLA therefore have clearly laid down procedures for responding to casualties to aids to navigation within timescales laid down by the GLAs, including those for issuing Notices to Mariners and any other such warnings to mariners as may be deemed appropriate.

10.10.3 GLA superintendence

The GLA guidance also considers reporting and inspection of AtoN. The GLAs have a mandatory reporting system which allows for an authority to monitor its aids systematically. This can be used by the authority's management system to generate reports at intervals determined by their internal management policy and the relevant GLA.

Care is needed to ensure that anticipated performance for aids to navigation are checked and that the level of provision of aids to navigation is both appropriate and practical having regard to the identified risk. Provision has to be acceptable to the GLA and it is therefore recommended that their advice is sought before any consent or sanction is applied for under the appropriate legislation.

10.10.4 Casualties and alterations

Harbour Authorities, and LLAs (that may not be Harbour Authorities), are responsible for notifying users of casualties to any aids to navigation within the port as well as notifying UKHO where appropriate. This notification should normally be by means of local broadcasts but may involve Coastal Navigational Warnings on Navtex and/or through the Coastguard Coast Radio stations. However, the issue of a Local Notice to Mariners may be more appropriate in cases where the casualty is likely to take more than 5 days to rectify.

When an LLA intends to establish, discontinue, or alter an AtoN a Risk Assessment should be undertaken examining the likely impact on safe navigation of vessels expected to operate in the area. It may also be appropriate to conduct a local user consultation into the planned alterations to the AtoN configuration of the area. In the case of major changes to the AtoN arrangement of a port prior consultation with the GLA and consultation of relevant IALA guidelines would be appropriate.

In addition, alterations to AtoN's must be notified to users and the UKHO, where such alterations affect the advertised characteristics of the aids to navigation. Wherever possible, this notification should be conducted in advance of any change taking place. The procedures laid down in respect of Notices to Mariners should consider the UKHO timescales for publishing Admiralty Weekly Notices to Mariners.

10.11 Wrecks

A Harbour Authority's MSMS should require a Risk Assessment to be undertaken of any wreck in, or in or near the approaches to, a harbour.

The authority's powers to raise, remove, destroy and mark a wreck which is, or is likely to become, a danger to navigation should be exercised having regard to that assessment, with the aim of reducing the risk to as low as reasonably practicable.

In the event of a vessel becoming a wreck in or near the approaches to port limits, the process of removing the wreck by the Harbour Authority is laid down in Section 252 of the Merchant Shipping Act 1995.

The Code explains that Harbour Authorities must exercise their wreck marking and removal powers where, in their opinion, a wreck is – or is likely to become – an obstruction or danger to navigation. They have a duty to have regard to the environment in the exercise of this and all other duties and powers. A Risk Assessment should be undertaken for any wreck in, or near the approaches to a harbour. The authority's powers to raise, remove, destroy, and mark a wreck which is, or is likely to become, a danger to navigation should be exercised having regard to that assessment, with the aim of reducing the risk to as low as reasonably practicable. The relevant GLA should be consulted, and the UKHO should be informed of wrecks within port limits. It is also important to note that each SHA has either Statutory or Bylaw powers under the Dangerous Vessels Act to issue directions preventing a vessel from entering port if it may pose a hazard to other vessels by sinking or foundering.

A Harbour Authority's Safety Management System should require a Risk Assessment to be undertaken of any wreck in, or near, the approaches to a harbour. The authority's powers to raise, remove, destroy, and mark a wreck which is, or is likely to become, a danger to navigation should be exercised having regard to that assessment, with the aim of reducing the risk to as low as reasonably practicable.

10.12 Abandoned vessels

If a vessel is abandoned, or if the owner has made no valid attempt to remove a vessel that has been sunk or stranded, then the Harbour Authority or conservancy authority may act to raise or remove or destroy the vessel if it is an obstruction or danger to navigation or to lifeboats engaged in the lifeboat service (section 252 Merchant Shipping Act 1995).

Where Harbour Masters have powers under section 57 of the Harbours, Docks and Piers Clauses Act 1847 (unserviceable vessels to be altogether removed from the harbour), they are able to remove, but not destroy, any unserviceable vessel located within the harbour, and should do so wherever they present a risk to safety.

10.13 Salvage

A Harbour Authority may:

- take possession of, raise, remove or destroy the whole, or any part of the vessel, and any other property to which the power extends
- mark the location of the vessel until it is raised, removed or destroyed in consultation with the relevant GLA
- subject to various restrictions, sell the vessel or part of the vessel so raised or removed and any other property recovered during the exercise of the above powers
- mark the location of buoys, lights or other physical devices, or the transmission of information, for example, by virtual AIS, about the location in consultation with the relevant GLA.

Harbour Authorities may have additional powers under legislation other than section 252 of the Merchant Shipping Act (removal of wrecks) that enable them to recover the costs of removing wrecked or abandoned vessels from the vessel owner, particularly where such costs are not covered by the proceeds of any sale. For example, Harbour Masters have powers under the Harbour, Docks and Piers Clauses Act 1847 where it has been incorporated into local harbour legislation.

It is recommended that before embarking on the removal of the vessel (unless the vessel poses a serious and imminent risk to life), a Harbour Authority should ensure that:

- the receiver of wreck at the MCA is contacted by email (row@mcga.gov.uk), is provided with information about the vessel and is notified of the intention to remove it, (more information can be found on Report wreck material - GOV.UK)
- there is a well-documented reason for the authority to require the removal of the vessel, e.g., navigational safety/environmental considerations. Purely aesthetic reasons are not a valid reason.
- ownership of the vessel is established beyond any doubt or evidence obtained to show that the vessel has been abandoned.
- notice is given to the owner (if known) or posted on the vessel or in a public place that the authority intends to take possession of the vessel and raise, remove or destroy it (so that the owner has a reasonable opportunity to remove the vessel himself).
- any sale is well advertised in the local press.
- where the wreck has not sunk, and is still visible, a photographic record of the vessel's condition is made before any attempt is made to salvage it.
- if the vessel is beyond the salvage or dispersal capabilities of the authority, a reputable salvor or wreck removal contractor is engaged to carry out the work under a recognised wreck removal contract (wreckhire, wreckcon, wreckfixed, etc.)
- it has suitable insurance to cover any residual liability.
- any such salvor or wreck removal contractor submits a detailed salvage plan covering.
- the method of raising the vessel including whether explosives are to be used.
- any temporary lay-by berth for the vessel.
- arrangements for limiting environmental damage.

- if pollution does occur, how it will be dealt with.
- agreed delivery location/beaching site/drying berth.
- diving operations connected with the salvage operation, and an assurance that they are to be carried out in accordance with the relevant diving regulations.
- a suitable plan for the final disposal of the vessel, whether this involves sale of the entire vessel or part thereof.

Section 4 of this guide refers in several places to powers exercisable in relation to marine pollution by the Secretary of State's Representative (SOSRep). These include powers in relation to the command and control of salvage. If the salvage of a wreck is associated with a risk of significant pollution, the Harbour Master must immediately inform the MCA and intervention powers may be exercised directing the salvor to give SOSRep information. A decision on whether the salvor has the capability to carry out the necessary salvage actions, in terms of experience, personnel and material will be for SOSRep to determine and, if necessary, whether to set up a salvage control unit.

Harbour Authorities and Local Lighthouse Authority (LLAs) must therefore establish clearly defined procedures to deal with the timely raising, removal, or dispersal to a safe clearance depth of a wreck which in their opinion is likely to become an obstruction or danger to navigation, or danger to persons. These must include proper exercise of their powers to lay down emergency Aids to Navigation pending such raising, removal or dispersal. If it is impractical to arrange for such clearance, then the wreck must be permanently marked to the required standard in consultation with the relevant GLA. Periodic surveys should also be carried out to check the position of dangerous wrecks.

10.14 Regulating harbour works

Some Harbour Authorities have the powers to license works where they extend below the high watermark and are thus liable to effect navigation. Such powers do not, however, usually extend to developments on the foreshore.

Some Harbour Authorities are statutory consultees for planning applications, as a function of owning the seabed, and thus being the adjacent landowner. Where this is not the case, Harbour Authorities should be alert to developments on shore that could adversely affect the safety of navigation.

In any case Harbour Authorities should ensure that the MMO or appropriate licensing authority consults them regarding any applications for works or developments in or adjacent to the harbour area.

Where necessary, consideration should be given to requiring the planning applicants to conduct a Risk Assessment to establish that the safety of navigation is not about to be put at risk.

Examples of where navigation could be so affected include:

- high constructions, which inhibit line of sight of microwave transmissions, or the performance of port radar, or interfere with the line of sight of aids to navigation
- high constructions, which potentially affect wind patterns
- lighting of a shore development in such a manner that the night vision of mariners is impeded, or that navigation lights, either ashore and onboard vessels are masked, or made less conspicuous.

There is a British Standards Institution publication on Road Lighting, BS5489. Part 8 relates to a Code of practice for lighting which may affect the safe use of aerodromes, railways, harbours and navigable Inland waterways.

10.15 Aids to Navigation

10.15.1 Introduction

This section provides guidance on the following:

- establishing the requirement for management of navigation
- Local Port Services (LPS)
- Vessel Traffic Services (VTS)
- monitoring and communicating with port traffic
- port passage planning
- Master / pilot exchange
- harbour patrols
- recreational navigation
- subsea pipelines and cables

10.15.2 Summary

This Section of the guide relates to measures that Harbour Authorities or other organisations could use to manage navigation. The Code concentrates on those available in statute, but there are others that are important, including agreements with users and education.

The general principles in relation to the management powers of Harbour Authorities are as follows:

- Ports have byelaws and directions, which every user must obey as a condition of his or her right to use the harbour.
- Harbour Authorities have a duty to make proper use of the powers to make byelaws, and to give directions (including pilotage directions), to regulate all vessel movements in their waters.
- These powers should be exercised in support of the policies and procedures developed in the authority's Marine Safety Management System and should be used to manage the navigation of all vessels.
- Harbour Authorities should have clear policies on the enforcement of directions and should monitor compliance.
- Powers of direction should be used requiring the use of port passage plans in appropriate cases – whether vessels are piloted or not.

All aids to navigation, both fixed and floating, should have their positions accurately recorded. Lit fixed marks should have their sectors and characteristics regularly checked where necessary. The mean positions of floating marks should be determined from observations taken at full ebb and at full flood. All local lighthouse authorities are required to advise the relevant GLA of position details for the aids to navigation.

Many devices are used to assist navigation, including navigation marks, lights, beacons, buoys, AIS and RACONs. These will be referred to collectively in this guide as Aids to Navigation (AtoN).

The Code explains that each Harbour Authority, and any other existing Local Lighthouse Authority, is the Local Lighthouse Authority (LLA) for their area. Every Harbour Authority has the duty to conduct and maintain the marking or lighting of a harbour or any part of the harbour within the Harbour Authority's area or harbour.

The GLA for England and Wales is Trinity House. In Scotland it is the Northern Lighthouse Board, and in Ireland and Northern Ireland, the Commissioners of Irish Lights. Where AtoNs lie within the limits of a port but are solely or mainly used by vessels transiting through the area en route to another port, then it is common for the GLA to retain responsibility.

A Local Lighthouse Authority should exercise its functions in accordance with a MSMS. The provision and level of aids to navigation provided should be based on formal Risk Assessment. The characteristics and availability of all aids to navigation should comply with internationally agreed guidelines, applied in consultation with the General Lighthouse Authority.

10.15.4 Public right to navigate

There is a public right of navigation in tidal waters, subject to the payment of proper tolls and dues, and to the provisions of any laws regulating the operation of the harbour. These laws may impose special restrictions on the otherwise general freedom of navigation. It follows that a Harbour Authority's right to regulate the entry and movement of ships within the port to ensure safety of navigation must be conferred by statute. The Code describes the related 'open port duty', and conservancy duty of Harbour Authorities.

10.15.5 Regulatory functions

The Code also describes the various powers likely to be available for statutory regulation of navigation in a harbour. These may be in the Harbour Authority's statutes, in byelaws, in the power to give directions, or in general directions. General Directions are rules which apply to all ships within the harbour area.

Control of the port is a function usually exercised by the Harbour Master and/or designated deputies or an appropriately qualified / experienced individual.

The level and complexity of control required by the organisation to manage navigation should be determined by Risk Assessment and may vary dramatically dependent on the size, location and complexity of vessels or craft using the harbour or facility.

There are four main powers available to a Harbour Authority to regulate ship movements:

- **Byelaws** – provide a general framework for rules of navigation which apply to all vessels – including speed limits, defining fairways, anchorages, etc. – and which can be treated as unlikely to require frequent or short-term amendment.
- **Special directions** – may be given by the Harbour Master: these directions are time and vessel specific and are apt for operational purposes of short duration and for emergencies.
- **General or harbour directions** – Some Harbour Authorities have more effective powers of general direction or harbour direction to be given by the authority itself. Directions should apply to all vessels including where a vessel is conducted by a pilot or the holder of a Pilotage Exemption Certificate.
- **Pilotage directions** – may generally be given by Harbour Authorities which have the power to regulate navigation: these determine the circumstances in which pilotage is to be compulsory.
- **Dangerous vessel directions** – are a special case, permitting a Harbour Master to remove a vessel from the harbour in clearly defined circumstances: they may be over-ruled by the Secretary of State.

The use of all these powers should be governed by the authority's formal Risk Assessment process and need to support the Safety Management System. It is to be noted, in this connection, that the master, or pilot, of a vessel is not obliged to obey directions if they believe that compliance would endanger the vessel. It is therefore essential that the use of all these powers should be clearly based on a proper assessment of the safety of the harbour and vessels using it.

10.15.6 Establishing the requirement

This guide deals only with general principles of good practice and offers some examples of how small medium and large organisations could deal with management of navigation. It recognises that a Vessel Traffic Services (VTS) or the requirement for pilotage is essential in some cases but is not appropriate in others where perhaps a lower degree of control or management is required. A formal assessment of navigational risk, as required by the Code, will determine what management of navigation measures are required, and to what degree monitoring, controlling, or managing traffic needs to be taken in mitigating risk. Where VTS is not required it is assumed that an organisation is providing a form of Local Port Service (LPS) which the organisation deems appropriate.

Management of a harbour or facility begins with determining which activity is safe and where it can take place, having regard to the physical constraints and the variety of activities being undertaken. Effective tools need to be in place which will ensure as far as practicable, that these determinations are carried through in practice.

10.15.7 Local Port Services (LPS)

Provision of an LPS is designed to improve port marine safety and co-ordination of services within the port community by dissemination of information to vessels and berth or terminal operators. It is concerned with the management of the port or facility, by the supply of information on berth and port conditions. Provision of LPS 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.

The main difference arising from the provision of LPS and that of VTS (discussed below) is that it does not manage traffic, nor is it required to have the ability and / or the resources to respond to developing unsafe situations, so there is also no requirement for a vessel traffic image to be maintained. As such, the training requirement for its operators is less comprehensive. There is also no requirement for an LPS to be designated by the Maritime and Coastguard Agency.

Although there are no nationally defined training standards for those who provide LPS, it is the responsibility of the organisation to define what LPS it should provide including what skills and competencies its staff require.

There are several maritime colleges and consultants in the UK that can provide tailored training for staff involved in the provision of LPS.

Key considerations in defining the size and scale of LPS will be:

- equipment deemed necessary
- level of operator competence required
- complexity of the advice and information required to be exchanged
- volume and nature of traffic and the degree of risk it represents.

Examples of LPS may include the provision of some of the following services and information:

- berthing information
- availability of port services
- details of shipping movements
- meteorological and hydrological data.

10.15.8 Vessel Traffic Services

SOLAS Chapter V Regulation 12 states Vessel Traffic Services (VTS) contribute 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 from possible adverse effects of maritime traffic. A VTS in the UK must be operated by staff trained to the appropriate UK national requirements based on the IALA C0103 international model courses, and their qualifications are kept current and valid.

The VTS must be designated as such by the MCA in its capacity as the National Competent Authority for VTS. In the UK, several ports have determined via navigational Risk Assessment that the volume of traffic or the degree of risk justifies a VTS.

A port operated VTS is concerned with vessel traffic to and from a port or harbour/s, while a coastal VTS is concerned with vessel traffic passing through the area. A VTS could also be a combination of the two. All VTS providers should ensure that ALRS Vol. 6 are regularly reviewed, and any updates provided to UKHO.

Where the organisation has determined that a VTS is not required, it is generally assumed that some other form of navigation management is required such as LPS.

Some of the below sources of information should be referred to for further advice or guidance on VTS and LPS.

- IMO resolution A.1158(32) Guidelines for Vessel Traffic Services
- MGN 401 (as amended) Navigation: Vessel Traffic Services (VTS) and Local Port Services (LPS) in the UK
- IALA VTS manual
- MGN 434 (as amended) Navigation: Vessel Traffic Services (VTS) – Training and Certification of VTS Personnel

Tools available to assist with managing navigation may include the following and help to determine the use of channels, any specific routing measures, compulsory pilotage, and other navigational regulations:

- means of marking out the harbour
- aids to navigation
- anchorages
- mooring areas
- local charts
- slipways / landing points
- pre-arrival / departure information
- meteorological and hydrological data
- VTS rules or procedures
- LPS procedures
- requirement for pilotage
- regulated navigation zones
- collision avoidance rules
- anchorage regulations
- reporting points.

Tools to facilitate communication between those managing the port and its users are also important. Written communication through local charts, Notices to Mariners, Port Handbooks, newsletters are also valuable tools. They may all be supported in turn by dialogue with as many users as possible. This can be directly with individual users, or through agents, advisory committees, user groups and clubs, or other methods of education.

10.15.9 Traffic management

An organisation's primary duty is to ensure the safe and efficient use of the harbour by those who have a right to use it and navigate in its waters. This includes a duty to regulate navigation using available powers and other means. Exercise of this function depends upon communication with users and is typically located where port communications from vessels are managed.

The extent to which traffic management is required depends upon several factors, the following are some of the items which should be considered by the Risk Assessment:

- Access to the open sea and approach channels.
- Traffic density – high or low degree of management needed to avoid a collision.
- Tidal ranges, or other limitations which impose special conditions of entry or departure, e.g., locks, bridges and rivers.
- Vessel characteristics, which could have consequences for other navigation or require the assignment of specified channels, e.g., deep draught vessels.
- Whether cargo is handled by ships at anchor, moored to buoys, or berthed alongside.
- Types of cargo handled e.g., dangerous and pollutant goods (LNG, LPG, crude oil, chemical products in bulk, explosives, etc.) and their effect on other navigation.
- Volume and types of recreational craft.
- Presence of high-speed craft, passenger ferries and local ferries.
- Availability, monitoring, and potential overloading of port VHF frequencies.
- Under-keel clearances, and / or air draft restrictions.
- Port and river regimes, depth of water, sand banks, bars, shoaling patterns; meteorological conditions, tides, and currents.
- Berth locations.
- Proximity of the navigation channel to shore structures (particularly hazardous ones)

When setting out to plan, monitor, or control, the movements of vessels, it is first necessary to establish the nature of the requirement, before looking at options for meeting it. The following questions are amongst those which may need to be considered:

- Where are the port or facility boundaries or jurisdiction?
- What powers does the Harbour Master hold?
- What are the options for achieving the required level of monitoring/control?
- To what degree is traffic management necessary to ensure safety?

The powers to regulate navigation are bound by the organisation's jurisdiction, port or VTS limits as appropriate. The navigational Risk Assessment should determine if these boundaries are in the correct place. The need to regulate depends upon the vessels using the port, or likely to do so, and the hazards in the harbour from which they need to be protected. Management is achieved by various means- observing, advising, educating as well as enforcing formal rules. The resources required to manage navigation effectively depend on the measures which need to be taken. These may be simple and inexpensive or involve sophisticated equipment and specially trained operators as discussed above regarding VTS and LPS.

Operators providing VTS, or LPS all operational staff, must be fully conversant with the disciplines and procedures required by their responsibilities, and the overall structure and capability of the system. Section 8 of this guide discusses the competencies and knowledge required.

10.15.10 Vessel Traffic Monitoring reporting requirements

The owner or master of a ship which is subject to these requirements must provide information about the vessel, cargo and its passage to the organisation as required. The organisation is required to forward this information to the MCA by the quickest possible means (as prescribed by the Merchant Shipping (Vessel Traffic Monitoring and Reporting Requirements) regulations 2004 (SI 2004 No 2110).

10.15.11 Monitoring and communicating with port traffic

The management and monitoring of vessel traffic is reliant on effective communication, appropriate monitoring equipment, the availability of relevant information and the strategic planning of vessel movements.

Several methods may be used to monitor the movement of traffic within port areas. They include:

- visual observation
- VHF surveillance
- radar surveillance
- sensor track fusion
- Closed Circuit Television (CCTV)
- Automatic Identification System (AIS).

10.15.12 In-port communications

In-port communication links may be appropriate in addition to links provided for communication with vessels. These can typically include:

- VHF communications with tugs, pilot cutters, and other harbour craft
- low power UHF radio for use in berthing/docking operations
- high power UHF radio for the transmission of data, such as GPS digital corrections for precision surveying, etc
- computer networks and mobile telephones
- fixed data links (analogue and digital) for transmission of remote sensor information
- fibre optic land lines for transmission of broad band sensor and other data.

10.15.13 Procedures

Clear guidance on operational procedures should be formally documented in an Operational Procedures manual which should form part of the MSMS. Examples of VTS Operational Procedures Manuals are available from IALA.

Special Directions may be issued by those whom local powers allow, such as the Harbour Master or those who have delegated powers. A vessel may ignore, or decline to comply with a special direction, only for reasons of safety. A good example of a special direction is the requirement for a vessel to take a minimum number of adequately powered tugs in adverse weather conditions. In such circumstances it is important that staff have clear instructions, guidance, or operational procedures on how to issue a special direction and the appropriate method of recording such.

It cannot be assumed that all port users will operate VHF and making it a requirement can only be enforced when spot checks are practicable or where local legislation enables ports to issue General Directions. Where VHF is widely used, there is also significant potential for cluttering port VHF channels with unnecessary transmissions. Users may need to be educated in maintaining a listening watch. This can often be achieved through education training sessions, recreational guidance, and continuous consultation, including the use of Port User Groups.

VTS Systems incorporate sophisticated tracking, way-time calculations and perimeter alerts that are more versatile than basic marine radar equipment. Most incorporate electronic charts and can track vessels in relation to charted features and not just those detected by radar. They therefore allow more effective and efficient vessel traffic monitoring from shore. VTS Systems provide a real time, accurate representation of the area applicable.

10.15.14 AIS

IMO Resolution A.917(22) recognises the use of AIS information to assist collision avoidance decision making between ships whilst emphasising that it does not replace but supports other systems such as radar and that the user should not rely on AIS as the sole information but should make use of all safety relevant information available.

MGN 324 (as amended): navigation: watchkeeping safety – use of Very High Frequency (VHF) radio and Automatic Identification System (AIS) on the Safety of Navigation urges caution in the use of AIS data and recommends that AIS data should not be used as the primary source of collision avoidance information.

Whilst AIS has the potential to provide valuable additional information to both ships and those managing navigation ashore, the transmission of incomplete or erroneous data has the potential for mariners or those ashore to draw incorrect conclusions.

Organisations should be alert to the need to validate AIS data before relying on it themselves. VTS also has a very important role in monitoring that shipping in their area is not transmitting incomplete or erroneous data.

Vessels that are not transmitting mandatory AIS fields (as described in SOLAS Ch V 2.4.5.1) or are transmitting voluntary fields that are in error such that safety of navigation is compromised, should be informed so that the vessel can correct the AIS data as soon as possible.

Organisations should report AIS errors that have not been rectified and have a potentially significant impact on the Safety of Navigation; reports should be sent to local MCA marine offices.

10.16 Port passage plan

It is recognised that a port passage plan is a static description, often best demonstrated pictorially, containing general information regarding how vessels or craft would normally be expected to access the harbour, it should also contain other relevant local information to aid the process of Port passage planning. Examples of port passage plan documents from the Port of London and Poole Harbour are available to reference online. The act of port passage planning is the act of planning a specific passage, considering relevant dynamic information, which enables the safe and efficient entry or exit of a vessel into the harbour. Port passage planning will be undertaken by both the vessel and pilot. An example some specific port passage planning is also contained in the links above. The ICS Bridge Procedures Guide contains outline advice for the conduct of MPX processes and a sample checklist.

The development of a port passage plan and the continuous monitoring of the vessel's progress during the execution of the plan are essential for safe navigation and protection of the marine environment. Harbour Authorities' and Harbour Masters' powers to regulate the time and manner of ships entry to, departure from and movement within their waters serve to complement port passage planning.

A Harbour Authority's powers of direction should be used to require the use of port passage plan in appropriate cases – whether vessels are conducted by a pilot or not. The powers to regulate the time and manner of ships entry to, departure from and movement within their waters serve to complement port passage planning. Port passage plans should be operated and enforced under the powers of direction.

The object of a port passage plan, as required by the Code is to ensure that:

- all parties know relevant details of any port passage in advance
- there is a clear, shared understanding of potential hazards, margins of safety, and the ship's characteristics
- intentions and required actions are agreed for the conduct of the port passage – including the use of tugs and their availability and any significant deviation should it become necessary
- it serves as an aid to assist a pilot in relaying any specific port passage details during a pilot/master exchange.

10.16.1 Scope of passage planning requirements

The need for Passage planning applies to all vessels as described in SOLAS V Regulation V/34. IMO resolution A893(21) sets out the requirement for passage planning and includes some guidance for recreational vessels.

Port Passage plans should be flexible. It is the responsibility of a pilot, on embarkation, to brief the master on his proposals for the pilotage passage plan within the pilotage area. This plan should be agreed with the master as soon as practicable. The plan will make allowance for any variations of tide and other local circumstances such as vessel movements, berth availability etc. It is important not to constrain the pilot's need to react to unforeseen circumstances; but deviations from the agreed plan should be discussed with the master, and when relevant, with VTS, and recorded.

10.16.2 Passage abort procedures

Plans adopted for passages should be recorded in a way which can be accessed by the relevant people in the case of an incident investigation, or for the Harbour Authority to implement spot checks. These can be used as a reference for pilot training, revalidation and as assurance that passage plans are being completed correctly.

In some Ports, particularly in ports with long river or estuarial characteristics where tidal constraints are evident, it will be necessary to develop abort procedures. In developing such procedures ports should consider turning points for different sizes of vessel, the notice needed for all involved to execute an abort and to the need for stakeholders – particularly berth holders – to give due warning of berth unavailability and the potential impact on navigational safety. Passage record keeping Plans adopted for passages should be recorded – ideally on the chart or other plan record. Harbour Authorities should satisfy themselves that they can secure access to these records in any case where they may be needed for incident investigation. The recording of Port passage plan records also allows the Harbour Authority to implement spot checks to assure themselves that port passage plans are being completed appropriately and can very often be used as a reference during pilot training or revalidation.

10.16.3 Passage record keeping

Access to proper records makes it much easier for the port to monitor the port's Safety Management System, and to investigate incidents. It is also in the interest of all concerned that, in the event of an incident, it is possible to demonstrate that the master was properly briefed by the pilot (if one was used), and that there was an agreed pilotage passage plan. This is a routine duty of the bridge team. However, it is not necessary or practical for a Harbour Authority to retain records on charts. Indeed, particularly in the case of an outbound vessel where the voyage is continuing, charts are not removed where this would put the master in breach of his statutory obligations. In the event of an incident, recordings of the VHF and the VTS track may well be enough to provide the critical evidence. There are examples of simple documentation, completed by the pilot and agreed with the master, which together with a radar archive and other VTS records is likely to be sufficient for most purposes.

10.16.4 Master/pilot exchange

IMO Assembly Resolution A960 include, at Annex 2, a summary of the respective responsibilities of master and pilot. It recommends that they should exchange information regarding navigational procedures, local conditions and the ship's characteristics, and that this information exchange should be a continuous process that generally continues for the duration of the act of pilotage. The pilot's presence on board does not relieve the master or officer in charge of the navigational watch from their duties and obligations for the safety of the ship. It is important therefore, that enough time is allowed for the pilot to safely board the ship; and that the pilot, the master and the bridge personnel are aware of their respective roles in the safe passage of the ship, before the act of pilotage commences.

The master, bridge officers and pilot share a responsibility for good communications and understanding of each other's role for the safe conduct of the vessel in pilotage waters. Masters and bridge officers have a duty to support the pilot and to ensure that his actions are always monitored.

A port passage guidance document provides a general framework for the preparation and agreement of specific passage plans for transits in the port. This preparation depends upon an exchange of information between master and pilot. This includes but goes further than the statutory requirements. The Pilotage Act 1987 requires a certain minimum exchange of information between the master of a ship and the pilot. In addition, the Merchant Shipping (Port State Control) Regulations 1995 (SI 1995 No. 3128) requires a pilot to report to the Port State (MCA), through the Harbour Authority where appropriate, any ship deficiencies that may affect its safe navigation.

The master/pilot exchange of information needs to be both detailed and structured, if the respective roles of the pilot and the master are to be integrated to best effect.

It should include as a minimum the following:

- The provision by the pilot of detailed local navigational information, including his recommended pilotage passage plan. Such details will assist the master to update his own plan and charts.
- Details on how the bridge is managed, and who fulfils what functions will also assist the pilot to work effectively with the bridge team.
- Presentation by the master to the pilot of a completed standard pilot card. In addition, information should be provided on rate of turns at different speeds, turning circles, stopping distances and, if available, other appropriate data.
- Discussion of any special conditions such as weather, depth of water, tidal currents and marine traffic which may be expected during the passage.
- Discussion of any unusual ship-handling characteristics, machinery difficulties, navigational equipment problems or crew limitations which could affect the operation, handling or safe manoeuvring of the ship.
- Information on berthing arrangements; use, characteristics and number of tugs; mooring boats and other external facilities.
- Information on mooring arrangements.
- Confirmation of the language to be used on the bridge and with external parties.

This should ensure that the vessel has an agreed passage plan, and that the vessel position can be monitored independently on the bridge whilst the pilot has the conduct of the ship. It is not good practice to excuse regular visitors and others from passage planning requirements. They should find compliance easier than strangers to a port or infrequent visitors. However, the notification requirements may be modified appropriately (e.g., limited to modifications to “standard” passage plans already on file).

Basic exchange of information is mentioned in the 1987 Pilotage Act within Part II section 18.

The IMO Resolution A960 recommends details of MPX processes.

The ICS Bridge Procedures Guide contains outline advice for the conduct of MPX processes and a sample checklist.

To help avoid misunderstandings, and to overcome any possible language problems, an oral exchange between master and pilot should be complemented by written details. Such details will also facilitate the provision of a record of the exchange, should it ever be necessary to establish who said what. Table 2 describes what should be included in Master/pilot records.

Table 2: Master/pilot records

Master to pilot	**The pilot card** This should provide, in clear, written/diagrammatic format all relevant information and details regarding the vessel and its equipment including any defects which may affect the navigation of the vessel, the IMO standard pilot card provides a good template.
Pilot to Master	**Pilotage passage plan** This should provide a written/chart/schematic containing all information relevant to the passage from pilot station to berth, including any tidal constraints and abort plans.
Pilot to CHA/MCA	**Ship deficiency reports** Pilots have a statutory duty to report ship deficiencies that may adversely affect its safe navigation. These should be reported to the Harbour Authority which should, in turn, inform the MCA. (If any such defects are of major concern, the pilot should not commit the vessel to a passage in confined waters but instead abort the proposed movement to a place of safety).

Harbour Authorities or their agents should arrange for pilots to be tasked in adequate time to prepare passage plans.

Harbour Authorities or their agents should ensure that systems exist for the provision of relevant information for their pilots and ensure that they operate properly.

10.17 Harbour patrols

Harbour launches or similarly identifiable port craft carrying out patrols can play an important role in the management of navigation within port jurisdictions.

These craft have a wide range of functions, which will, to some extent depend upon the size of the port and the internal management structure. Their presence acts as a visible encouragement to users to navigate with care, whilst providing a means of enforcement should such action be necessary. Their presence also enables available assistance to any users in difficulty or distress.

Where harbour personnel are used to enforce local rules, it is important that they are suitably trained to deal with confrontation, and the procedures to be followed if formal action becomes necessary, including the proper gathering of evidence.

The management of such craft, and the standards to be applied, are discussed below.

Typically, the objectives of a harbour patrol function include:

- maintaining a visual presence in the port area, and in so doing representing the Harbour Master on the water.
- enforcing port byelaws and directions.
- collecting evidence following an incident and conducting preliminary investigations.
- conducting spot checks on vessel navigational documentation.
- assisting craft in difficulty and responding to other emergencies.
- acting as Forward Control/On-Scene Commander respectively during port emergencies and SAR incidents.
- escorting vessels as required (e.g., vessels restricted in their ability to manoeuvre).
- control and directing vessel traffic (e.g., during partial port closures).
- monitoring craft licensed by the Harbour Authority.
- monitoring jetty and other navigation lights and aids.
- conducting routine surveillance of licensed works and moorings.

10.18 Recreational navigation

In some harbours, recreational activity is predominant, and it presents management requirements whether or not other forms of shipping activity are also present.

Recreational users are not always well-trained, safety conscious, experienced boat handlers affiliated to local clubs; or the RYA; neither do they all have detailed knowledge of their harbour of residence. Harbour Masters have traditionally given passage planning advice to recreational users without making a distinction regarding their affiliation or experience. There is, however, a real need in most harbours for educating recreational users about the Harbour Authority's role and responsibilities as they relate to different harbour functions.

Recreational navigation includes a wide range of differing activities and craft types, ranging from offshore power boats, cabin cruisers, yachts, sailing dinghies, rowing sculls, canoes, personal watercraft, and water-ski boats. The requirements and priorities of such sports are often at variance – both with each other and with other harbour users and interests (including conservation of the environment). Good management, use of appropriate powers, and consultation are all needed to strike a balance. Conflicts can be resolved, and it is recommended that such issues are approached openly, without bias, and demonstrably with the overall objective of ensuring the safety of navigation.

A Risk Assessment is likely to identify potential conflicts between both commercial and recreational users, as well as between different classes of recreational user. Many of these conflicts are best managed by arranging some form of segregation, bearing in mind that an authority's powers are to regulate – and not prohibit – the right of navigation.

Byelaws provide the main formal statutory mechanism for managing recreational navigation. Large recreational craft can also be subject to General Directions.

Subjects typically covered include:

- requirement to maintain VHF communications
- speed limitations in specified areas
- prohibitions on defined recreational activities close to beaches, navigational channel, or environmentally sensitive areas
- restrictions on the use of deep-water channels by shallow draught vessels
- navigation restrictions in the vicinity of specified port infrastructure
- establishment of zones for designated recreational activities.

When preparing byelaws and general directions, consultation with the recreational boating communities is strongly recommended, even if the byelaw or direction in question does not directly affect recreational navigation. Accusations of bias towards one form of navigation at the expense of another are best countered by wide and open consultation in all matters.

Where Risk Assessment identifies a need to confine certain recreational activities, such as water skiing, or the use of personal watercraft, to designated “zones”, consideration needs to be given as to how such zones are to be marked, and how craft are to be permitted to access them. The size and location of such zones should permit the users to operate their craft safely and appropriately. They should only be established after full consultation with users and others potentially concerned, or affected, by the activity. Where zones are created for certain recreational activities such as water-skiing and personal watercraft use, consideration should be given to promoting appropriate qualifications to use them. Therefore, the water-ski boat driver’s qualifications (already well established) and the personal watercraft qualifications (not so well established) would become part of the standard process. This would answer many of the criticisms concerning uneducated and irresponsible use. It would also feature prominently in any Risk Assessment.

10.19 Event planning

Organisers of recreational events should ensure that they consult with Harbour Authorities and port marine organisations regarding events both on and over the water, about the need for Risk Assessments. The need will be proportional to the activity; Harbour Authorities may be able to agree that formal assessments are not needed for some low-key leisure activities. Those intending to hold a recreational event for which any form of Risk Assessment will be required should be encouraged to consult the Harbour Master at the earliest opportunity. Formal approval to such events can then be made subject to a proper Risk Assessment conducted by the event organiser. Where an event occurs regularly, the scope of subsequent Risk Assessments may be adjusted accordingly. In approving any event, the Harbour Master needs to be satisfied that risk to the safety of navigation, or other port users has been effectively mitigated. The Harbour Master also needs to ensure that the event organiser has consulted with, and has met the requirements of, the MCA (Coastguard), the RNLI, local emergency services, and local authority where appropriate. Also, if applicable the event should consider the guidance provided by, and with the approval of, the national bodies representing the types or classes of craft or vessel participating. The RYA has prepared a series of standard templates for various categories of event and Harbour Authorities may wish to refer to these.

Any requirement for additional Harbour Authority resources, be they navigational marks, craft to patrol, control, or escort the event, or any emergency or SAR response resources, would normally be at the expense of the event organiser. The same would normally apply to any public safety or emergency provision considered necessary by the police or other emergency services.

Having conducted a Risk Assessment, and following any advice or requirement of the Harbour Master, the event organiser should be required to promulgate clear details of the event, including where appropriate:

- names of event organisers and officials
- list of participants
- list of authorities consulted
- timetable and programme of events
- arrangements for controlling the event, including any special communications, i.e., contact telephone numbers, VHF channels and call signs
- any navigational constraints being imposed, e.g. restricted areas, or partial port closures
- emergency arrangements
- media arrangements.

Depending on the scope of the event, it may be appropriate to publish the full Risk Assessment and associated mitigating measures.

Where recreational events are a common feature of a harbour, consideration should be given to drawing up a Code of practice for the planning and implementation of such events, thereby providing early guidance to any organisation so minded.

10.20 Dialogue with the recreational port user

The co-operation of recreational users is best assured by comprehensive consultation and dialogue. To this end, Harbour Authorities should consider making available to all port users, including recreational users, published material of relevance to the safety of navigation, including:

- byelaws and general directions
- notices to mariners
- port guides
- details of the facilities available to visiting recreational users
- advice on passage planning, including the identification of any areas of high-density recreational activity
- port emergency arrangements
- the International Collision Regulations.

The promulgation of this information may be achieved by direct provision or through articles and features in local press and radio and using notice boards in key locations.

The use of a web site will also greatly assist general awareness of the port and the details of its regulatory regime. In addition, such a medium is well suited to promulgating current operational issues such as details of relevant shipping movements, tidal data, etc.

Current operational information is usually broadcast to all port users, including recreational users so equipped, on VHF radio from the Port Information or VTS Centre where one exists.

Regular dialogue with the recreational users should be achieved by means of liaison meetings, and participation on working groups and committees.

With the advent of Safety Management Systems, there is a need for all port users, including the recreational user, to contribute to the hazard identification and Risk Assessment process, and subsequently to assist in reviewing the safety of navigation. This can be achieved through the medium of appropriate local committees.

10.21 Education and training

In discharging their responsibilities for the safety of navigation, organisations should take a keen interest in helping to educate recreational users and others about safety on the water. To this end, they should encourage recreational users to attend training courses run by the RYA and other associations. They should also consider giving talks to selected groups of the local community on port operations and navigational safety issues.

Additionally, the inclusion of educational information, and projects in support of local schools and colleges on a Harbour Authority's web site can be a most effective way of influencing prospective recreational users of the port. The use of social media is often a very effective way of communicating educational messages to recreational users.

10.22 Facilities for the recreational user

Facilities provided for the recreational user often require specialised management. These include:

- moorings design and specification of moorings and mooring areas, maintenance schedules etc.
- alongside berths maintenance, access, security, collection of charges, provision of services, waste disposal, emergency arrangements etc.
- drying grids, safety inspections, maintenance of safe drying area including marine licensing requirements for works below mean high water.
- slipways for launching/recovery of trailed craft. Requirement for maintenance and manning, supervision of launching and recovery where necessary, enforcement and collection, parking of trailers.
- slipways for careening and repairs. Health & safety requirements, waste reception for contaminants.
- boat lifts, cranes, hoists health & safety requirements, training for crane operators etc, storage, shoring arrangements ashore.

- provision of fuel health & safety, pollution prevention, emergency procedures, formal safety inspections for installations.
- supply of electricity health & safety, prevention of misuse, failsafe devices.
- shore side services including showers, toilets etc., repair and maintenance, compliance with regulations, access for people with disabilities, security.
- conservancy facilities in addition to those necessary for large vessels marking of secondary channels, maintaining depth in secondary channels and other areas, removing obstructions in areas of recreational activity.

10.23 Leisure moorings

Organisations are often required to provide, license, or regulate leisure moorings to meet demand, but also to facilitate the safety of navigation. A clear policy on areas to be used for leisure moorings should be established.

This should take into consideration the need to:

- maintain safe navigational channels
- ensure that a selected position considers size and type of craft, swinging areas, depths of water, type of seabed, and the need for safe access to and from the mooring areas
- ensure that environmental/hydrographic regimes are not adversely affected.

In providing or licensing moorings, consideration needs to be given to the design and construction of mooring gear. Moorings owned by the Harbour Authority must be fit for the purpose, regularly maintained and checked. Those licensed by the authority should be to minimum specifications laid down as guidelines or requirements.

A published mooring plan of each area of the harbour should be maintained, which clearly identifies the positions of all moorings.

In providing moorings and other facilities, a Harbour Authority should consider the use of contracts or agreements to ensure that any requirements for insurance, and other criteria are defined and met.

10.24 Marinas

Establishing a marina within a harbour area requires careful planning and consultation. Local authority planning permission will almost certainly be required. The resulting density of boat traffic will need to be reflected in port pollution and other emergency plans. All marinas are required to put into operation waste reception management plans.

Traffic management procedures may be needed to facilitate entry into, and departure from, a marina. Lighting levels in and around a marina, whilst serving their purpose, must not impede the safety of navigation at night in the port area adjacent to a marina. Noise levels within marinas may need to be controlled.

Access to shore from a marina must be safe and fit for purpose. The maintenance of life saving appliances throughout the marina is a fundamental responsibility of the marina operator.

An effective liaison needs to be maintained between a marina operator and the respective Harbour Authority.

Specific guidance on managing marinas can be found from the British Marine and Yacht Harbours association guidelines.

10.25 Houseboats

Some organisations may permit houseboats to be moored within their jurisdiction. Such permission is often controlled by license, issued by the organisation. Before such a license is granted, local planning permission may be required, as well as the approval of the riparian landowner. Adjacent landowners should also be consulted. Waste disposal facilities, including those for sewage, need to be provided.

10.26 Shoreside lifesaving equipment

The provision of shore side lifesaving equipment is normally the responsibility of the relevant riparian landowner, including, where appropriate, the Harbour Authority. The availability of such equipment should be considered when conducting Risk Assessments. Riparian authorities have a duty of care to ensure that adequate lifesaving equipment is made available, despite its vulnerability to abuse by vandals.

In principle, lifesaving equipment should be established as indicated by Risk Assessment. Such equipment should include recovery methods, means of raising the alarm and guidance on how to call the emergency services. The availability of RNLI assets should be considered when conducting Risk Assessments.

10.27 Subsea pipelines and cables – use and hazards

Subsea pipelines and cables are normally used to transport oil and gas from offshore production installations as part of national infrastructure or within port areas or between different countries. The pipelines may lie either directly on the seabed or buried under it. It follows that pipelines can be vulnerable to ships' anchors, which may cause damage when they drag over the pipeline, land on it or when they snag the pipeline and potentially pull it out of the seabed. Pipelines are also vulnerable to grounding damage.

Pipelines and cables used in UK waters vary in diameter, but most are in the range 10cm to circa 125cm. In general, smaller pipes are more at risk of being snagged and ruptured, and larger pipes are more at risk of being scraped, dented or gouged and displaced, causing damage to coatings and potentially loss of containment. Even if a pipeline is not ruptured at the time that the anchor strike occurs, any damage could lead to cracks that grow and result in seepage or failure in the future. Displaced pipelines also become more vulnerable to damage (including scouring of the adjacent seabed) due to tidal currents and trawling activities.

Pipeline and cable operators are required to prepare a major accident prevention document (MAPD) in respect of subsea pipelines, in which relevant damage and pollution hazards are identified, risks assessed and where necessary appropriate risk control measures established to reduce the associated risk of the presence and use of the pipeline to acceptable levels. Where subsea pipelines lie within port areas, the development of the operator's MAPD will necessarily require them to liaise closely with the relevant organisation.

The consequences of damage to a subsea pipeline or cable could include loss of life, injury, fire, explosion, loss of buoyancy around a vessel and major pollution, but in more serious cases, is also likely to result in significant commercial and economic impact as the associated distribution system is closed or restricted to very limited operation.

10.27.1 Guidance to organisations

Organisations need to be aware of the presence of any subsea pipelines in its area of responsibility. It should recognise and assess the potential for damage to those pipelines from shipping and fishing operations, and the associated potential consequences of such damage as part of its navigational Safety Management System.

Following review, and where, deemed necessary, organisations should ensure they have in place appropriate emergency plans and operational procedures for the management of vessel traffic in the vicinity of pipelines and cables within their area of responsibility. Close consultation and liaison with the pipeline or cable operator is essential.

Plans and procedures should take account of, or provide for, the following:

- liaison between Harbour Authorities and pipeline / cable operators to assess whether any subsea pipeline or cable within their area of responsibility is at risk of being damaged by marine activities under the management or control of the organisation or presents a pollution or other hazard.
- a Harbour Master's assessment of the need for any restrictions taking into account any relevant information such as pipeline / cable type, contents, protection measures, the nature of the seabed, the depth of the pipeline or cable, the depth of water or the size and/or type of vessel likely to be anchoring or operating in the immediate area.
- a description of such pipelines or cables, their location and accurate details of pipeline / cable routes through the port area. Locations should be recorded on appropriate, up to date charts and where available, the port's Vessel Traffic Services displays. Pipeline or cable details should be documented and include: the fluid the pipeline conveys (e.g., natural gas, crude oil etc.), the diameter, the wall thickness, the operating pressure, and the current name and emergency (24/7) contact details for the pipeline operator.
- any restrictions on anchoring, fishing or navigation associated with a pipeline or cable in the port area and the provision of advice and/or direction on suitable safe anchorages clear of subsea pipelines for all vessels within their jurisdiction. This guidance should be developed in consultation with pipeline or cable operators and take into consideration the risks of dragging anchor Harbour Authorities should also promulgate any advice or direction as part of the port's navigational Safety Management System.

- the establishment of suitable monitoring arrangements of vessels underway and at anchor in the vicinity of subsea pipelines or cables. This should include operational procedures and the responsibilities of Harbour Authority staff for monitoring vessels and for informing vessel masters of the presence of pipelines / cables.
- arrangements agreed with pipeline and cable operators on alerting procedures should a risk of imminent damage to a pipeline be identified to include contact arrangements.
- documented contingency plans for effective response to pipeline or cable damage or the threat of damage to a pipeline, which should be developed in consultation with the pipeline operator(s) and other responsible and relevant agencies such as the:
  - Department of Energy, Security and Net Zero
  - Health and Safety Executive
  - General Lighthouse Authorities
  - Maritime & Coastguard Agency
- periodic reviews with pipeline / operators of the emergency arrangements and associated contingency plans to consider changes to:
  - pipeline or port uses
  - Harbour Authority and pipeline operator responsibilities
  - contact details.
- regular briefings to all relevant staff to ensure that they are familiar with the associated procedures and plans.
- periodic testing of contingency plans in respect of pipeline emergencies and their emergency arrangements with pipeline operators to include testing of incident notification arrangements and emergency response exercises with the pipeline operator and appropriate agencies.

Contingency planning should consider the need for early notification. Where a vessel is dragging its anchor and may ultimately endanger a subsea pipeline, advance notice may enable the pipeline operator to minimise the impact of an incident through reduction of operating pressure or closing of valves and mobilisation of their response teams.

Where a pipeline lies within the VTS Area but outside port limits, Harbour Authorities should liaise with the MCA to agree responsibilities and contingency planning.

In line with The Pipelines and Safety Regulations 1996 section 26, Harbour Authorities may charge a fee to the pipeline operator for the preparation, review, revision and testing of the emergency procedure.

This 'aide memoir' is to assist those conducting PMSC reviews, auditing, assurance activities and health checks. Where there is a relevant item listed below, there is an assumption that the organisations Marine SMS should include an appropriate reference. It is not to be construed as a statement of compliance to all or part of the Code.

Port or Marine Facility Details

Name & Business address	
Telephone	
Email	

Brief description of the organisations port marine activities

1. Duty Holder

PMSC / Guide Ref	Requirement	Y / N / NA
1.2 Guide	**Has a Duty Holder been appointed?**	
SMS ref.		
MCA note		
1.2 Guide	**Is a Designated Person appointed?**	
SMS ref.		
MCA note		
1.2 Guide	**Has the Duty Holder made a clear published commitment to comply with the standards laid down in the PMSC?**	
SMS ref.		
MCA note		
1.2 Guide	**Have operational responsibilities for marine safety been clearly assigned, and are those entrusted with these responsibilities appropriately trained, qualified, and experienced?**	
SMS ref.		
MCA note		
1.3 Guide	**When was the last review of existing powers based on local and national legislation undertaken and did this confirm compliance with duties and powers under existing legislation?**	
SMS ref.		
MCA note		
1.3 Guide	**Is there a process of risk assessment including eliminating/reducing risk to ALARP?**	

PMSC / Guide Ref	Requirement	Y / N / NA
SMS ref.		
MCA note		
1.3 Guide	**Is a Marine Safety Management System in place and maintained to control marine Ops?**	
SMS ref.		
MCA note		
1.3 Guide	**Do staff hold appropriate standards of qualification and training?**	
SMS ref.		
MCA note		
1.3 Guide	**Is audit used to measure policies, procedures and compliance with the code?**	
SMS ref.		
MCA note		
1.6 Guide	**How does the Duty Holder maintain insight and understanding of the organisations marine activities?**	
SMS ref.		
MCA note		
1.6 Guide	**Does the Duty Holder receive PMSC training / briefing specific to their role?**	
SMS ref.		
MCA note		
1.6 Guide	**Do any of the Duty Holders have relevant maritime experience, and if so, do they function as the initial point of contact for the Designated Person?**	
SMS ref.		
MCA note		

PMSC / Guide Ref	Requirement	Y / N / NA
1.6 Guide	**How does the Duty Holder ensure that adequate resources are provided to manage marine operations effectively and to adhere to the stated marine and navigation policies, procedures, and systems?**	
SMS ref.		
MCA note		
1.9 Code	**When was the last statement of compliance submitted to the MCA?**	
SMS ref.		
MCA note		

2. Designated Person

PMSC / Guide Ref	Requirement	Y / N / NA
2.1 Guide	**Does the DP provide independent assurance directly to the Duty Holder that the Marine SMS is working effectively in ensuring compliance with the Code?**	
SMS ref.		
MCA note		
2.2 Guide	**Does the DP have a thorough knowledge and understanding of the requirements of the Code (and the GTGP) and associated marine legislation?**	
SMS ref.		
MCA note		
2.2 Guide	**How does the DP Monitor and audit the effective and consistent application of the Marine SMS on port marine / facility operations?**	
SMS ref.		
MCA note		

3. Legislation

PMSC / Guide Ref	Requirement	Y / N / NA
3.3 Guide	**What is the legislation that's applicable to the organisation in terms port marine safety?**	
SMS ref.		
MCA note		
3.3 Guide	**When did the organisation last carry out a review of its applicable legislation?**	
SMS ref.		
MCA note		
3.4 Guide	**Can the organisation issue Special Directions and is there provision for this responsibility to be delegated to other persons other than the HM?**	
SMS ref.		
MCA note		
3.5 Guide	**Can the organisation issue General or Harbour Directions?**	
SMS ref.		
MCA note		
3.7 Guide	**Does the organisation have any byelaws?**	
SMS ref.		
MCA note		
3.8 Guide	**Does the organisation have any licencing powers?**	
SMS ref.		
MCA note		
3.9 Guide	**Does the organisation have and publish an enforcement policy?**	

PMSC / Guide Ref	Requirement	Y / N / NA
SMS ref.		
MCA note		
3.10 & 3.14 Guide	**Does the organisation have a mechanism for consulting and communicating with port marine stakeholders, contractors and marine staff, e.g. port user groups and employee forums / committees?**	
SMS ref.		
MCA note		
3.12 Guide	**Does the organisation have a mechanism for consulting with port marine stakeholders when reviewing risk assessments?**	
SMS ref.		
MCA note		

4. Duties and Powers

PMSC / Guide Ref	Requirement	Y / N / NA
4.5 Guide	**Is a pilotage service provided and if so when was the last pilotage review, ?**	
SMS ref.		
MCA note		
4.5.5 Guide	**Is bridge team and resource management principles included in the pilot training syllabus?**	
SMS ref.		
MCA note		
4.5.7 Guide	**Are pilots subject to regular assessment such as peer review assessment?**	
SMS ref.		
MCA note		
4.5.9 Guide	**Are there procedures that prescribes the process of reporting ship deficiencies to MCA?**	
SMS ref.		
MCA note		
4.5.13 Guide	**Are pilotage directions available and regularly reviewed?**	
SMS ref.		
MCA note		
4.5.14 Guide	**Are there robust procedures in place that prescribe arrangements for pilot boarding and landing and pilot boat certification and operations?**	
SMS ref.		
MCA note		

PMSC / Guide Ref	Requirement	Y / N / NA
4.5.14 & 15 Guide	**Are there robust procedures, SSOW and risk assessments in place that prescribe arrangements for pilot boarding and landing? And is the Embarkation and disembarkation of pilots code of practice referenced?**	
SMS ref.		
MCA note		
4.5.19 Guide	**Are procedures and records available for authorization of pilots?**	
SMS ref.		
MCA note		
4.5.21 Guide	**Is there a policy in place for revalidation of pilots and PEC holders?**	
SMS ref.		
MCA note		
4.5.23 Guide	**Are there processes and procedures in place to manage PEC holders?**	
SMS ref.		
MCA note		
4.5.25 Guide	**Are there procedures in place that support the safe and efficient rostering of pilots and do they ensure fatigue management is considered when assigning acts of pilotage?**	
SMS ref.		
MCA note		
4.6.1 Guide	**Are towage guidelines and associated risk assessments in place concerning towage and do they include limits for towage in restricted visibility and details of tug master & pilot/ship master exchange of information including ship's speed through the water when making fast?**	

PMSC / Guide Ref	Requirement	Y / N / NA
SMS ref.		
MCA note		
4.6.1 Guide	**Is the Pilots' Pocket Guide and Checklist made available to pilots?**	
SMS ref.		
MCA note		
4.6.1 & 4.7.6 Guide	**Is there a process in place for tug / workboat operator approval?**	
SMS ref.		
MCA note		
4.6.6 Guide	**Is training between tug crews, and pilots supported?**	
SMS ref.		
MCA note		
4.7.3 Guide	**Is there a process for management / licensing of small commercial vessels and their crew (whether owned or operated by the organisation or not)?**	
SMS ref.		
MCA note		
4.8 Guide	**Is there a process for regulation and management of commercial diving?**	
SMS ref.		
MCA note		
4.8.2 Guide	**Does the organisation control / regulate recreational diving within their jurisdiction?**	
SMS ref.		
MCA note		

PMSC / Guide Ref	Requirement	Y / N / NA
4.8.3 Guide	**Does the organisation regulate the provision of mooring and berthing services and does the Marine SMS refer to supporting procedures & policies?**	
SMS ref.		
MCA note		
4.9 Guide	**Are emergency plans in place, up to date and regularly exercised?**	
SMS ref.		
MCA note		
4.9.11 Guide	**Is an oil spill contingency plan approved and in place and are MCA returns submitted?**	
SMS ref.		
MCA note		

5. Risk Assessment

PMSC / Guide Ref	Requirement	Y / N / NA
5.2 Guide	**Is a formal navigational risk assessment in place, regularly reviewed (including by appropriate stakeholders) on a planned basis or after an incident has occurred?**	
SMS ref.		
MCA note		
5.6 Guide	**Is a system of task-based risk assessments in place considering marine tasks undertaken by staff?**	
SMS ref.		
MCA note		
5.7 Guide	**Does the organisation place an emphasis on dynamic risk assessment and is this promulgated to staff in training / briefings etc?**	
SMS ref.		
MCA note		

6. Marine Safety Management System

PMSC / Guide Ref	Requirement	Y / N / NA
6.0 Guide	**Is there a safety management system in place which includes procedures, policies, and staff roles and responsibilities?**	
SMS ref.		
MCA note		
6.6 Guide	**Is there a process for measuring the Marine SMS's performance?**	
SMS ref.		
MCA note		
6.7 Guide	**Is there a process for audit and review of the Marine SMS?**	
SMS ref.		
MCA note		
6.8 Guide	**Does the organisation sit within or adjacent to a neighbouring organisation where consideration of overlapping areas of responsibility should be considered, such as bridging documents or MOU's?**	
SMS ref.		
MCA note		
6.9 & 6.9.6Guide	**Does the organisation have incident reporting (including near miss) and investigation procedures in place?**	
SMS ref.		
MCA note		

PMSC / Guide Ref	Requirement	Y / N / NA
4.5.9 Guide	**Does the organisation have procedures in place to ensure that ship deficiencies that may adversely affect navigation are reported to the MCA?**	
SMS ref.		
MCA note		
6.9.10 Guide	**Are lessons from investigations published and shared within the organisation with a view to preventing a recurrence?**	
SMS ref.		
MCA note		

7. Review & Audit

PMSC / Guide Ref	Requirement	Y / N / NA
7.1 Guide	**Is an annual internal audit and accompanying annual report statement undertaken and published to confirm that the Marine SMS is being operated effectively?**	
SMS ref.		
MCA note		
7.1 Guide	**Is an external audit and accompanying marine safety plan undertaken and published against the organisation's performance of the PMSC and the previous version of the marine safety plan at least every 3 years?**	
SMS ref.		
MCA note		

8. Competence

PMSC / Guide Ref	Requirement	Y / N / NA
8.10 Guide	**Is there a published training policy in place?**	
SMS ref.		
MCA note		
8.3 Guide	**Are National Occupational Standards referenced as a basis for recruitment and development of staff?**	
SMS ref.		
MCA note		
8.10 Guide	**Is a Marine Training Matrix available that describes all of the organisation's marine personnel and what their training, experience and qualification requirements are (including any refresher training)?**	
SMS ref.		
MCA note		
8.10 Guide	**Are training records maintained and reviewed (course completion certification etc.)?**	
SMS ref.		
MCA note		
8.10 Guide	**Are records of assessment / training maintained (training record books, on the job training records) and used to ensure staff have met the required competencies before being taking on roles and responsibilities?**	
SMS ref.		
MCA note		

9. Plan

PMSC / Guide Ref	Requirement	Y / N / NA
9.1 Guide	**Is a marine safety plan published every 3 years?**	
SMS ref.		
MCA note		
9.1 Guide	**Has a report detailing an assessment of the organisations performance against the safety plan been published?**	
SMS ref.		
MCA note		
9.1 Guide	**Were stakeholders consulted as part of drafting the plan?**	
SMS ref.		
MCA note		

10. Conservancy Duty

PMSC / Guide Ref	Requirement	Y / N / NA
10.3 Guide	**Does the organisation provide regular updates on depth of water and other relevant information to UKHO?**	
SMS ref.		
MCA note		
10.4 Guide	**Is timely information on prevailing and forecast meteorological conditions such as wind, tide and other factors made available to users?**	
SMS ref.		
MCA note		
10.5 Guide	**Does the Marine SMS make appropriate provision for safe anchorages?**	
SMS ref.		
MCA note		
10.11 Guide	**Does the Marine SMS refer to the identification, management and marking of wrecks?**	
SMS ref.		
MCA note		
10.14 Guide	**Does the Marine SMS refer to management of harbour works (permissions, licenses, Notices to Mariners etc.)?**	
SMS ref.		
MCA note		
10.8.9 Guide	**Is there a hydrographic survey plan in place and are the results of these surveys promulgated on a regular basis?**	
SMS ref.		
MCA note		
10.8.5 Guide	**Is the tidal regime, monitored, understood and promulgated (including via UKHO)?**	

PMSC / Guide Ref	Requirement	Y / N / NA
SMS ref.		
MCA note		
10.10.4 Guide	**Are local Notices to Mariners issued?**	
SMS ref.		
MCA note		
10.10.1 Guide	**Does the organisation have Local Lighthouse Authority responsibilities?**	
SMS ref.		
MCA note		
10.12 Guide	**Has the organisation considered any appropriate actions or procedures around managing abandoned or the salvage of vessels?**	
SMS ref.		
MCA note		
10.15 Guide	**Are there procedures in place to support the maintenance and provision of aids to navigation?**	
SMS ref.		
MCA note		
10.15.7 & .8 Guide	**Are there procedures in place to support safety of navigation and provide where necessary consistent procedures for those managing LPS or VTS?**	
SMS ref.		
MCA note		
10.16 Guide	**Is there a passage plan in place that describes (often pictorially) how vessels or craft would normally be expected to access the harbour or facility and are these checked periodically?**	
SMS ref.		

PMSC / Guide Ref	Requirement	Y / N / NA
MCA note		
10.16.4 Guide	**Is a Master / Pilot Exchange template available and used**	
SMS ref.		
MCA note		
10.17 Guide	**Does the organisation support the provision of an 'on-water presence' such as harbour patrols and does this include any enforcement functions?**	
SMS ref.		
MCA note		
10.18 Guide	**Do the organisations stakeholders include recreational users and if so how are they managed and are there risk assessments in place to mitigate conflicts between commercial and recreational activity users?**	
SMS ref.		
MCA note		
10.19 Guide	**In terms of event planning and other large scale activities, is there a requirement for stakeholders to consult / seek permission from the organisation?**	
SMS ref.		
MCA note		
10.23 Guide	**Does the organisation license, manage or support the provision of moorings?**	
SMS ref.		
MCA note		
10.24 & 6.8 Guide	**Are there any marinas within the organisation's jurisdiction and is there effective liaison between the marina and the organisation?**	
SMS ref.		

PMSC / Guide Ref	Requirement	Y / N / NA
MCA note		
10.26 Guide	**Has the organisation considered the provision of appropriate shoreside lifesaving equipment within their jurisdiction?**	
SMS ref.		
MCA note		
10.27 Guide	**If the organisation has any subsea pipelines or cables within its jurisdiction does the Marine SMS recognise and assess the potential damage that could be caused from shipping and fishing operations and prescribe appropriate mitigations?**	
SMS ref.		
MCA note		

Annex B: An example of a training matrix used by ABP

Key	M = Marine ENV = Environment H&S = Health & Safety S = Security G = Group / Generic	1 = Legal mandatory 2 = ABP mandatory 3 = Desirable S = Essential in Specific Cases

ABP | KEEPING BRITAIN TRADING

Port Marine Employee Training Matrix

Category	In/ Ex	Requirement	Course	Refresher	Harbour Master/ Dock Master	Deputy Harbour Master/ Dock	TA (Marine) / Designated Person / HOM	Marine and Marina Manager	Data Centre / Coordinators	VTS AHM	VTSO	Coxswain	Deckhand	Assistant Dock Master/ Pier Master / LPS	Marine Operative/ lock gate Operator	Marina Staff	Marine Supervisor	Hydrographer	Marine Pilot
G	In	ABP Corporate induction for all new starters	ABP Corporate induction	None	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
G	In	ABP Group Induction for all new starters	Working Safely in ABP	None	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
G	In	Awareness of other ABP functions	Secondment to other ports / departments as required	None	3	3		3	3	3	3	3	3	3	3		3	3	3
G	Ex	Dealing with the media	ABP Media Course	None	3	3													
G	Ex	People management skills and ability to assess peers	Leadership programme	None	2	2	2			3				3					
ENV	In	Environmental awareness and managing Port Waste	E-Learning Harbour Master's Contribution to the Environment	None	2	2		3		3				2			3		
ENV	Ex	Oil Spill incident co-ordination or response	MCA Oil Spill Training - Full 4P for managers.	Refresher - 3 years	1	1													
ENV	Ex	Oil Spill incident co-ordination or response	MCA Oil Spill Training - 2P for operational staff	Refresher - 3 years	2	2		2		2		S	S	S			S	S	

Annex C: Port Marine Training, Assessment and Certification Record Sheet - Example previously provided by ABP (as guidance only)

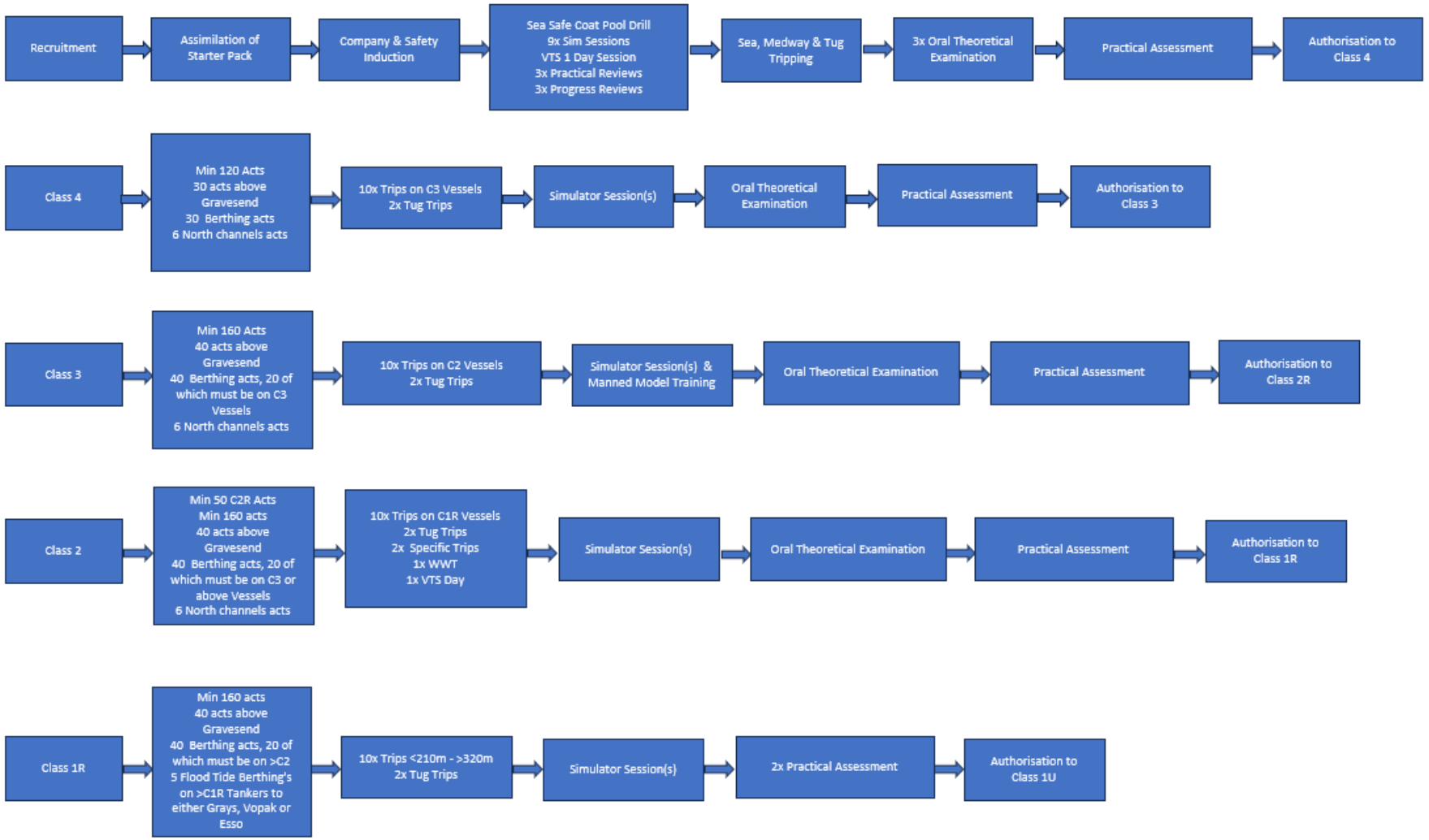
CandidateName: _____

General Port Marine:

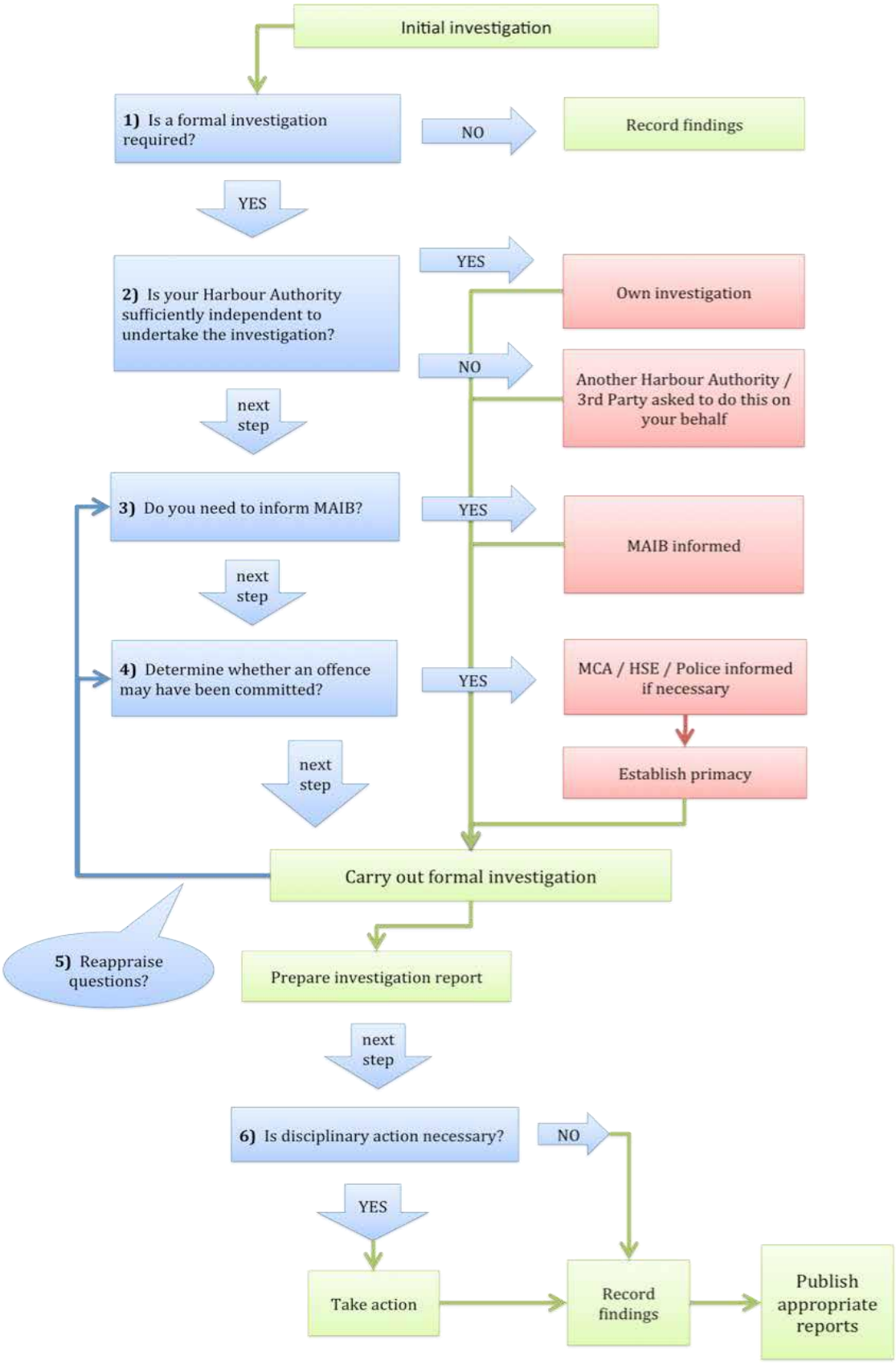
Element	**GENERAL PORT MARINE** In accordance with operating instructions/SSOW and commercial considerations, the candidate:	Trainer Signature	Date	Assessor Signature	Date
1.1	Can describe local Port Marine Management Structure and how it relates to ABP Group Management structure				
1.2	Has seen and read local Port Marine Operations Manual				
1.3	Can identify the main parts of the Dock(s)/Berth(s) and can describe the functions of the main working areas				
1.4	Can describe the layout of the lock(s) at the port (where applicable)				
1.5	Can describe the layout of the lock(s) sluices at the port (where applicable)				
1.6	Can describe the basic principles of lock operation (where applicable)				
1.7	Can describe the basic ship types, layouts and propulsion systems of main vessel groups using the port				
1.8	Can explain and correctly use relevant nautical terms and parts of a ship i.e. Port Quarter/Starboard Quarter				
1.9	Can describe the tidal patterns and water conditions in the harbour/surrounding area				
1.10	Can describe the effect of tidal patterns/ water conditions on vessel operations and port safety				
1.11	Can give the names of different ropes and describe the function they perform				
1.12	Can describe the risks associated with mooring ropes/wires and warning indications of breaking				
1.13	Has seen and read local SSOW/RA, can explain their purpose and where and when they should be referred to				
1.14	Has received a set of current Working Instructions for tasks relating to their duties				
1.15	Can explain the process for reporting of potentially dangerous situations/near misses/unsafe practices				
1.16	Can identify the general hazards of their working areas (e.g. moving vehicles, overhead cranes, slips/trips etc)				

Element	**GENERAL PORT MARINE** In accordance with operating instructions/SSOW and commercial considerations, the candidate:	Trainer Signature	Date	Assessor Signature	Date
1.17	Can identify specialised hazards associated with particular work areas (e.g. chemical, petroleum jetties, explosives)				
1.18	Can point to/describe the locations of firefighting equipment in the main work areas				
1.19	Can describe the types of fire for which each piece of fire equipment is suitable				
1.20	Can point to/describe the locations of life saving equipment (life buoys, dock ladders) on quays, lock and dock jetties				
1.21	Can describe the main categories of potential marine emergencies and explain the appropriate action in the event of each				
1.22	Can point to/describe the locations of First Aid equipment and explain how to contact a First Aider				
1.23	Can point to/describe the location of oil spill equipment locker and explain what equipment is stored there				
1.24	Communicated using a VHF radio				
1.25	Took a reading and recorded dock water levels				
1.26	Accurately read draughts				
1.27	Reported a fault/damage, or described the process for doing so				
1.28	Completed a damage form and obtained a witness statement or described the process for doing so				
1.29	Marked damage or described the process for doing so				
1.30	Correctly issued a Permit-to-Work				
1.31	Correctly issued a Permit-to-Dive				

Annex D: Pilot Training Matrix



Annex E - Flowchart for Accident Investigation Process



Annex F: Pilotage Exemption Certificate (PEC) Criteria Example Template

GENERIC
Valid certificate of competency as deck officer
Bona fide deck officer responsible for navigation
Evidence of current medical fitness
Vessel name plus size
Thorough understanding of own vessel handling characteristics
Knowledge of squat and interaction
Is able to communicate sufficiently for the purposes of safety in English
Is able to prepare, implement and provide pilotage passage plan
Is able to prepare and implement blind pilotage passage

GENERIC
Relevant knowledge of Pilotage Act 1987
Relevant knowledge of Port Marine Safety Code including standards for marine pilots

LOCAL KNOWLEDGE
Port regulations
Speed limits
Local notice to mariners
VTS
PI
Communications – VHF channels
Communications – local sound/light/shape signals inc, traffic signals
Channels/tracks/widths/depths/buoys/track distances/escapes depths
Navigation marks and aids
Coastal features
Tidal streams, prevailing wind
Restricted visibility procedures
Berths/wharves/jetties
Local knowledge – anchorages and no anchoring areas
Local knowledge – docks, locks
Local knowledge – prohibited areas/submarine cables, pipelines etc.
Tidal limitations/constraints
Emergency plans, oil spill contingency plans
Harbour tug – knowledge
Other harbour activities – recreational areas, diving locations etc.
Knowledge of local traffic patterns
Abort positions

PROCESS
Registration of candidate
Tripping *(Inwards/outwards & daytime/nighttime)*
Practical assessment

Familiarisation visits *(tugs, VTS, PI, port & terminal)*
Written examination
Oral examination *(maybe conducted as part of the practical assessment)*
Feedback procedures

CONDITIONS OF USE
No other duties whilst conducting pilotage
To be adequately rested and fit
Adequate bridge manning levels and support for PEC holder
Updating of knowledge capability
Reporting of incidents to HM without delay, written report o/c
Record of passages conducted to be maintained & presented if required
Required to report to HM when instructed
Required to report defective Aids to Navigation
Required to report onboard defects
Renewal and variation criteria (period of validity clearly stated on certificate)
Suspension criteria
Restrictions relating to use of tugs

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THE EMBARKATION & DISEMBARKATION OF PILOTS

CODE OF SAFE PRACTICE

Revised June 2025

Next Review due Spring 2028

BRITISH PORTS ASSOCIATION

UKMPA

UK HMA

UK MAJOR PORTS GROUP

PORT SKILLS & SAFETY

IMPROVING STANDARDS THROUGH COLLABORATION

Contents

INTRODUCTION

This code is designed to assist Competent Harbour Authority (CHA's) and Pilot organisations, to establish safe operating procedures for all Pilot boarding and landing operations, derived by risk assessment.

This 2025 revised edition of the Code of Safe Practice for the Embarkation and Disembarkation of Pilots is considered to be essential reading for all those involved in the Pilotage Service.

The transfer of a Pilot between pilot boat and ship presents significant risks that need to be carefully managed. This Code gives guidance to improve the control of these risks.

This version of the Code has been prepared jointly by the United Kingdom Maritime Pilots Association (UKMPA) Technical and Training Committee, the UK Harbour Masters' Association (UKHMA), Port Skills and Safety and the BPA/UKMPG Marine Pilotage Working Group.

The Code recognises SOLAS regulations and United Kingdom legislation and has been linked in the Port & Marine Facilities Code, Guide to Good Practice and Pilot Transfer Operations (IMPA). . A list of relevant documents is included at the back of the Code, along with further information on Personal Protective Equipment (PPE) which gives guidance on correct use and self-checks to be carried out on lifejackets and lifesaving equipment.

The IMO's Maritime Safety Committee has adopted a revision to SOLAS Regulation V/23 and new mandatory performance standards for pilot transfer operations which will enter into force on 1 January 2028. The new requirements will apply to new installations of pilot transfer arrangements from 1 January 2028, and to existing installations on SOLAS ships[1] from their first survey after 1 January 2029, and on non-SOLAS ships from 1 January 2030. The IMO has also taken steps to encourage voluntary early implementation of the new requirements before 1 January 2028 by flag State Administrations. The joint Associations of this Code support this position. The updated provisions can be viewed via the QR code below.

The Code acts as a guide to safe practice for all those involved in all Pilot transfer operations. It not only covers the act of transfer from pilot boat to ship and vice versa but also addresses issues such as the pilot boat itself, boarding and landing areas, training and use of PPE.

Interactive Pilot Transfer Poster

June 2025

DISCLAIMER

This guidance has been produced jointly by the British Ports Association, the United Kingdom Maritime Pilots Association, the UK Harbour Masters' Association, the UK Major Ports Group, and Port Skills and Safety ("the Five Associations") to assist CHAs and pilot organisations in establishing safe operating procedures for pilot boarding and landing operations and while reasonable care has been taken by the Five Associations in its production the Five Associations do not accept any responsibility or liability (individually or jointly) for any action taken or not taken in reliance on the guidance or for the use of the guidance by any person. The Five Associations shall not be liable to any person for any loss or damage howsoever arising from the use of this guidance. This disclaimer is not intended to limit or exclude liability for death or personal injury caused by negligence on the part of the Five Associations or any matter that it would be unlawful for the Five Associations to exclude or limit liability.

[1] For the purposes of this guidance, a SOLAS ship is a ship to which SOLAS Chapter I applies. A non-SOLAS ship is any other ship.

NOTE

Regulations, instruments, and guidance referred to in this document are correct at the time of publishing. However, such material may be amended from time to time and the reader should always seek the current version.

1. THE PILOT BOAT

1.1 The Competent Harbour Authority (CHA) must ensure that the pilot boat/boats in their service meet the relevant requirements of:

a. Merchant Shipping (Small Workboats and Pilot Boats) Regulations 2023 (SI 2023 No. 1216)
b. The Workboat Code Edition 3 – Maritime & Coastguard Agency (MCA)
c. The legacy Codes for boats built before December 2023, until WB3 adoption parameters complied with.
d. Manning of Pilot Boats – MGN 50(M)
e. The Port & Marine Facilities Safety Code
f. The Guide to Good Practice on Port & Marine Facilities
g. A Small Workboat engaged as a pilot boat from time to time, should comply with the Workboat Code as it applies to its duties as a Small Workboat and, in addition, comply with the requirements for a dedicated pilot boat for which the vessel's workboat certificate should be appropriately endorsed.

1.2 All Pilots and pilot boat crew should receive initial training and familiarisation with regard to the position, stowage and operation of all safety equipment aboard each pilot boat they use, as per the vessel safety plan, which is recommended to be used.

1.3 Prior to leaving the berth, and at least once per watch, the pilot boat coxswain should ensure that their boats are in all respects ready for sea. All openings e.g. hatches, access to below deck spaces and the engine rooms should be closed when underway at sea.

1.4 Prior to leaving a berth, the coxswain and crew should familiarise themselves with the position and stowage of the safety equipment fitted to that particular pilot boat.

1.5 On joining in harbour or at sea, the Pilots should familiarise themselves with the position and stowage of the safety equipment fitted to that pilot boat.

1.6 Where reasonably practicable, arrangements should be made for the mooring ropes of pilot boats to remain at the berth when the boat is at sea. Any additional ropes, not left ashore, should be properly stowed in a safe location.

1.7 The decks of the pilot boat should be clear of all unnecessary obstructions allowing clear passage and movement for the Pilot and crew. Where deck lighting is fitted, it should be tested in accordance with the operator's and manufacturer's procedures.

1.8 An up-to-date and accurate log should be maintained on board each pilot boat. Entries should include details of all periodic safety and equipment checks, drills and defects.

1.9 Pilots should not hinder the coxswain in the navigation of the pilot boat, for example by impeding their view of the radar, AIS, and/or the use of the pilot boat's VHF. This is particularly important in conditions of reduced visibility.

1.10 When circumstances require, coxswains should not hesitate to ask the Pilot for advice or for assistance in order to reduce their operational workload.

2. LEAVING THE BERTH

2.1 The pilot boat should not leave a berth unless it is, in all respects, ready for sea.

2.2 The pilot boat should be crewed in compliance with MGN 50 (M).

2.3 The pilot boat should not operate outside the terms of its MCA Pilot Boat Certificate, (PB1), which should be clearly displayed on board.

2.4 CHAs should have procedures in place, to ensure that at any time, the location and numbers of persons on board the pilot boat are known.

2.5 Where reasonably practicable, the position of the Pilot boat should be monitored from ashore. This is especially important in heavy weather and restricted visibility (see sections 11 and 12).

2.6 Pilots and pilot boat crew should be made aware of the potential dangers associated with wearing auto inflating lifejackets within the pilot boat and the associated difficulties that would arise in a capsize / flooding situation (See Annex 2).

3. PILOT BOARDING AREAS

3.1 CHAs have a responsibility to identify and evaluate areas for the safe boarding and landing of Pilots. The following should include, but not be limited to:

a) Sea Room for the manoeuvre
b) Depth of water
c) Shelter
d) Seabed gradient
e) Traffic and communication
f) Proximity of traffic and potential wash

3.2 Charted boarding locations provide general guidance for arriving vessels and may be varied as required in order to provide the safest place for a Pilot transfer in the prevailing conditions. The boarding area should be determined based on a formal navigational risk assessment and should provide sufficient sea room to accommodate an aborted inward passage, if necessary, once the pilot assumes conduct. Additionally, the location should account for the duration and scope of lee courses relative to the size of the vessels served.

3.3 Dynamic and formal risk assessments should be undertaken to identify environmental limits of transfer operations. A framework of safe operational limits may be published, to enable operational staff and port stakeholders, to be aware of weather conditions likely to delay or suspend pilot transfer operations.

In assessing such a framework, where established, consideration should be given to:

a) Wind speed and direction anemometers
b) Wave rider buoys or equivalent, to determine wave height
c) Local meteorological forecasting services or apps
d) Record keeping of weather conditions, by boat crews.

In marginal conditions the pilot boat crew, in conjunction with the Pilot, should make a dynamic assessment of the conditions at the boarding area, before confirming it is safe to commence or continue boarding and landing operations.

4. ON APPROACHING THE SHIP

4.1 CHAs should establish reporting procedures, whereby VHF radio contact is established between the pilot boat and ship (or VTS as appropriate) on the specified channel published in the Sailing Directions and ALRS Vol 6.

4.2 The coxswain of the pilot boat should establish the position of the ship to be served and where there is more than one ship in the vicinity, should establish the relative positions and expected movement of all vessels in the area.

4.3 Before a pilot transfer operation and after consultation with the Pilot involved, the pilot boat coxswain, or VTS should advise the ship to be served:

a) Advise VTS or onshore monitoring site as to the intended transfer plan when on station.
b) The side for the Pilot transfer arrangement and height above the water.
c) Type of ladder, appropriate to the freeboard.
d) Recommended course and speed to provide an appropriate lee. Particular care and attention should be paid in recommending a course and speed that avoids the pilot boat boarding in following sea and swell with the potential to broach.
e) Sequence number where more than one ship is to be served.
f) When transferring more than one Pilot, the total number to be communicated between ship and pilot boat.
g) Any additional requirements, such as heaving lines or intention for man ropes
h) Masters must verbally confirm to the VTS/LPS that the Pilot transfer arrangements have been maintained, inspected and rigged under the supervision of a responsible officer in accordance with SOLAS Regulation V/23 and to provide a safe and efficient means of (dis)embarkation. This should include verbal confirmation that the pilot ladder and means of securing the pilot ladder at intermediate length are type approved and that pilot ladders, manropes and securing ropes are not more than 36 months old, from the date of manufacture. (It is recommended that copies of the certification are forwarded alongside other pre-arrival requirements.) The Pilot may wish to sight the certification on request during the Master/Pilot information exchange (MPX) and these should be displayed in a prominent and accessible place in the ship, in accordance with SOLAS Regulation I/16.
i) For ships with a freeboard of more than 9m, a combination arrangement is required by SOLAS Regulation V/23, which should be rigged with a minimum platform height of 5m above the surface of the water or at a specific height as locally determined for the given conditions. (See Annex 3)
j) The traffic in the vicinity and risks associated with interaction with these vessels should be considered.

The Pilot should ascertain that the Pilot access area on the ship is free from obstructions, the Coxswain should establish this when speaking to the vessel. This should apply even if a ladder is not required.

4.4 On approaching a ship from a near head-on position on the same side as the pilot ladder is rigged, care must be taken to ensure the wash created by the pilot boat does not interfere with the safe boarding or landing operation. This may require the pilot boat to remain clear of the pilot ladder until the wash created has cleared down the ship's side. Consideration should be given to passing down the opposite side and approaching the ladder from aft, in order to minimise the effect of the pilot boat's own wash on the transfer operation.

4.5 Particular caution should be taken when serving a ship at anchor, which is unable to manoeuvre to make a lee, particularly at slack water. The ship may need to be underway and making sufficient way so that the pilot boat can maintain position alongside the vessel before a Pilot transfer operation.

4.6 During the approach to the ship, both the Pilot and assisting deck hand shall remain in the wheelhouse of the pilot boat until it is settled at reduced speed, in the lee of the vessel.

4.7 At night the pilot boat deck should be illuminated before anyone goes on deck.

4.8 At night, during the final approach, the pilot boat searchlight should be turned on to assess the sea conditions, illuminate the pilot ladder and the foredeck of the pilot boat. Care must be taken not to dazzle personnel on deck or adversely affect the night vision of persons on the bridge, or on the deck of the ship to be served.

4.9 The decision to place the pilot boat alongside the vessel to be served should ultimately be the responsibility of the Coxswain. The Coxswain should take into consideration factors including but not limited to: adverse weather conditions, traffic density, any vessel obstructions or side overhangs, or wash when assessing the risk to personnel and/or the launch by coming alongside.

4.10 If there is any doubt at any time about the condition or compliance of the ladder arrangement in accordance with SOLAS requirements or safety of the transfer operation, the Pilot should not transfer.

4.11 All non-compliant or (potentially) unsafe ladders and transfer arrangements and any near miss incident associated with the transfer operation, must be reported to the CHA and MCA as soon as it is safe to do so (see section 9).

4.12 Whilst undertaking the transfer operation, the pilot boat radar should be placed in standby mode, unless due to the prevailing conditions it would impact the navigational and situational awareness (see section 12.3 regarding restricted visibility).

4.13 During restricted visibility, it is recommended that whenever possible, a ship to be served is approached around its stern and not across the bow. CHAs should ensure that coxswains are fully familiar with the requirements of the collision regulations governing navigation in restricted visibility.

5. THE SHIP

5.1 Ships have a duty to rig their pilot ladders in accordance with SOLAS Regulation V/23. A copy of the poster showing IMO requirements and IMPA recommendations – "Required Pilot Transfer Arrangements" is included in Annex 1 to this Code. Local requirements relating to the ship's side required and height above the water should be passed via radio prior to the ship's arrival. It should be noted that the provisions of SOLAS are a minimum, and there are ports around the World, where sea/swell conditions allow local authorities to establish a reduced maximum climb height as a condition of pilotage without compromising the safety of Pilots (See Annex 3). Where such requirements are established, they should be publicised and be non-discriminatory, applying to all ships of the same type and size.

5.2 Pilot transfer operations should not be undertaken on ships that do not fully comply with transfer arrangements as referred to in section 5.1 above. It is the responsibility of the vessel to ensure a safe working environment is provided for the Pilot once embarked.

5.3 The pilot ladder should be rigged and secured at the appropriate pilot transfer position on the ship's side or at the side door if fitted. This should be as near amidships as possible and on the parallel body of the ship, clear of all discharges.

5.4 In order to allow the ladder to sit flush against the ship's side a list should be avoided. If a list cannot be avoided, the ladder should be rigged on the side which will allow it to remain flush against the side of the ship.

5.5 During Pilot transfer, the responsible officer, must be in direct contact with the bridge. This should normally be by radio.

5.6 During the transfer, the ship should maintain adequate steerage at the speed requested by the pilot boat Coxswain. Turning propellers are a potentially life-threatening hazard to persons involved in transfer operations.

5.7 During a Pilot transfer operation, a ship should not be stopped in the water, or its engines put astern, except in an emergency or when requested by the pilot boat coxswain.

5.8 When transferring a pilot with a combination arrangement, the accommodation ladder must always lead aft.

5.9 The accommodation ladder must be rigged at an appropriate height to ensure the pilot boat can lie alongside the pilot ladder section with sufficient allowance for sea/swell, preventing any part of the pilot boat or personnel from contacting the accommodation platform. Where local conditions permit, it is advisable to minimise the risk of a fall from height by utilising a combination arrangement, where feasible, provided that the lower platform remains horizontal and the slope angle of the accommodation ladder does not exceed 45 degrees at the reduced height (See Annex 3).

5.10 When using a combination arrangement, the accommodation ladder should be secured to the ship's side, with both an inboard and outboard stanchion rigged on the platform next to the ladder. The pilot ladder must be firmly attached to the ship's side not less than 2m above the lower platform of the accommodation ladder. It is the vessel's responsibility to ensure that the means of securing the ladder is suitable and fit for purpose.

6. PILOT EMBARKATION OPERATION

6.1 The decision to put a pilot boat alongside a ship is the responsibility of the pilot boat Coxswain (see section 4.9).

In all cases, the decision to board the ship is the responsibility of the Pilot involved. In making the decision, the pilot should take into consideration factors including but not limited to:

a) Environmental conditions.
b) Physical capabilities of the Pilot.
c) Suitability of transfer arrangements, such as the presented setup and ladder condition.
d) Conduct and condition of the vessel.

6.2 When on deck both the deckhand and the Pilot must wear appropriate PPE as required and approved by the CHA and worn in accordance with manufacturer's instructions.

6.3 It is strongly recommended that whilst on deck the deckhand is secured to the pilot boat by an approved method, that does not restrict their freedom of movement. This should also be made available to the Pilot. There are a number of factors for consideration for a Pilot to make an informed decision on tethering on, which are expanded on in the linked UKMPA circular on Tethered Rail Systems. Any local CHA practices on Pilot tethering should be supported by an appropriate risk assessment.

6.4 Provided that the ladder has been rigged at the correct height, the deckhand should proceed forward, using the safest route (normally the outboard side). Some CHAs have a practice of requiring the lower steps of the ladder to be brought on board the pilot boat to avoid the risk of the ladder becoming strained should the boat pin it to the ship's side. This practice is not without risk and is not practised universally. CHAs should undertake their own risk assessments and decide upon their own control measures to deal with this risk. The deckhand should visually inspect the condition of the ship's transfer arrangements including if it is safe to do so, by placing weight onto the bottom of the ladder (while hooked on).

6.5 In considering the safest route from cabin to the ladder, the following should be taken into account:

a) The width of the deck.
b) The location and usability of the safety rail.
c) If the inboard route is taken, the likelihood of the boat rolling against the side of the ship, restricting the area between the deckhouse of the pilot boat and the flat of the ship side with resulting crush injury risk. The safest and recommended route is to use the outboard side of the pilot boat unless specific port risk assessments can safely mitigate the inboard route due to vessel design.
d) The exposure to the elements especially when a good lee is not possible, or there is passing traffic if the outside route is used.
e) The heel of the pilot boat during transfer.
f) The proposed transfer location on the side deck.
g) The ability of the Coxswain to view the transfer operation.

6.6 When a retrieval line is considered necessary to ensure the safe rigging of a pilot ladder, the line should be fastened at or above the lowest spreader step and should lead forward. The retrieval line should not hinder the Pilot nor obstruct the safe approach of the pilot boat.

6.7 Where the ladder's height needs adjusting, the Coxswain should inform the ship. The Pilot and deckhand should be recalled to the wheelhouse whilst the ladder is being adjusted. The transfer should not be resumed until receiving confirmation the ladder is secure at the correct height.

6.8 In adverse weather conditions the risk associated with transfer operations are heightened. The experience and skill of the Coxswain are crucial in determining whether the situation remains within safe operational limits. Before proceeding, onboard discussions among all parties should identify and address any inconsistencies with these safety parameters.

6.9 Neither the Pilot nor the deckhand should proceed from the cabin until the pilot boat is in the lee of the ship and the decision to proceed with the transfer has been made by the Coxswain. This decision should only be made when all parties agree that a safe transfer can be completed by the agreed method. If any party has any doubts, the transfer should be aborted and the process reconsidered.

6.10 Before stepping onto the ladder, the Pilot should inspect the permanent marking of the lowermost spreader step for information on the date of manufacture, and visually assess the condition and establish by communication with the officer at the top of the ladder, that the pilot ladder (and man-ropes if applicable) are secured to dedicated strong points using an approved method. If the top of the pilot ladder is unattended, the Pilot should not attempt to embark.

6.11 The timing of stepping from the pilot boat to the ladder requires the use of proven techniques, e.g. using the top of the wave to step onto the ladder and the roll of the ship to aid the ascent. If conditions are such, that in the opinion of the Pilot a safe transfer cannot be made, then the attempt should be abandoned.

6.12 A clear agreement whether the pilot boat should remain alongside or not during the transfer should be made between Pilot and Coxswain prior to the Pilot leaving the cabin. Note: studies show serious bodily injury can occur from falling from increased heights at which point a fall into the water may afford increased survival prospects. Considerations should involve:

a) The height of climb and considerations as per Annex 3.
b) The pilot ladder arrangement including the potential of requesting lower climb options.
c) The prevailing environmental conditions and the ease of station keeping for the pilot boat.

If, under these circumstances, the pilot boat leaves the ship's side particular care must be made not to foul the ladder.

6.13 For shorter climbs (see Annex 3), it may be appropriate for the pilot boat to remain alongside until the climb is completed. As with all transfers, the deckhand should ensure the pilot boat does not foul the ladder when leaving the ship's side.

6.14 Nothing should be worn over PPE that might interfere with its normal operation at any time. Please refer to Annex 2.5 for details of why this is not recommended. If the Pilot has a bag or equipment, it is recommended that it be transported by the deck hand to ensure the Pilot can concentrate on assessing the transfer arrangements. A heaving line should be used to lift the bag or equipment onto the ship after the Pilot has completed the transfer. The ship must be informed of this process in advance.

6.15 The use of man ropes to assist the Pilot is the personal choice of the Pilot involved and should be provided or removed as required. This information should be passed to the ship at the earliest opportunity, to allow time for rigging or removal.

7. LOW FREEBOARD SHIPS

7.1 When the ship to be served has a freeboard near to, or less than, that of the pilot boat particular caution should be as these transfers can be amongst the most hazardous.

In these circumstances, there may be insufficient parallel body for the pilot boat to work against. Such situations can be worsened further if both the ship and the pilot boat are rolling or pitching. The potential for damage to the pilot boat or injury to Pilot and deck crew is increased. There is also an added possibility that the pilot boat may become hung up on the ship's side.

7.2 Before the transfer takes place, the coxswain and Pilot must be satisfied that the pilot boat is sufficiently stable alongside the ship for the transfer operation to be safely completed.

7.3 The Pilot should not stand outside the rail of the ship waiting for an opportunity to transfer.

A side gate entrance should only be used if the gap between the stanchions is 70cm to 80cm, extending 120cm above the deck and have a diameter between 32mm-36mm.

7.4 When making the decision to transfer, the Pilot should give consideration to factors including but not limited to:

a) The availability of suitable handholds or stanchions at deck level.
b) The time taken to affect the transfer, particularly in adverse weather and any induced motion that may develop
c) The deck condition including if the deck is awash.
d) Vessel fendering.
e) Interaction between the pilot boat, the ship and proximity of parallel hull space.
f) The physical capability of the Pilot.

8. PILOT DISEMBARKATION OPERATION

8.1 Prior to departure, the Pilot may wish to sight the certification relating to pilot transfer arrangements, which should be readily available onboard (SOLAS Regulation I/16), and request verbal confirmation from the Master that the pilot transfer arrangements have been maintained, inspected and rigged under the supervision of a responsible officer in accordance with SOLAS Regulation V/23 and to provide a safe and efficient means of (dis)embarkation. This should include verbal confirmation that the pilot ladder and means of securing the pilot ladder at intermediate length are type approved and that pilot ladders, manropes and securing ropes are not more than 36 months old, from the date of manufacture.

As with embarkation, communication should be established between the ship and the pilot boat and the transfer arrangements confirmed in advance. The decision to disembark from a ship to the pilot boat rests entirely with the Pilot involved.

8.2. Before leaving the bridge, in addition to the normal handover exchange of Conduct information , the Pilot should inform the master of:

a) The requested disembarkation course and speed with anticipated helm or engine movements required to facilitate transfer.
b) VHF channels for communication with pilot boat.
c) Any adjustments to the pilot ladder required by pilot launch.

8.3 As per 6.12, no transfer is free from risk, but it is essential to understand the change in severity with increased height and reduce this exposure where possible, such as requesting a combination arrangement when the platform height can be adjusted to remain rigged in a safe and compliant position. (See Annex 3)

8.4 On arrival at the pilot access area the Pilot should confirm the condition and securing of the pilot ladder both visually and from the officer on station. The Pilot should check their PPE is correctly donned. Any bag should be lowered to the Pilot boat by heaving line, once the Pilot has completed the transfer, on the deck of the pilot boat. Refer to section 6.13. Note: Any non-compliance or (potentially) unsafe arrangement should be reported to the CHA and MCA Marine Office immediately and the arrangement must not be used until the non-compliance is rectified (see section 9).

8.5 The pilot boat deck hand should be at the bottom of the ladder to ensure that the ladder is rigged at the correct height and clear. On smaller descents, prior to stepping onto the ladder, the Pilot should check that the pilot boat is lying alongside and has not fouled the pilot ladder.

8.6 During the descent the deckhand should advise the Pilot how many steps to go to the deck of the pilot boat. As the Pilot is stepping from the ladder the deck hand is to be on hand to provide a timely warning of danger and to give physical assistance to the Pilot if required.

In adverse weather the stepping off point may not be the lowest step, therefore clear communication between the deck hand and Pilot is essential.

8.7 It is strongly recommended that whilst on deck, the deck hand is secured to the pilot boat by an approved method which does not restrict their freedom of movement.

8.8 It is recommended that the Pilot make their way to the cabin followed by the deck hand. The deck hand may be required to receive the Pilot's bag or equipment. The return to the cabin should be made by the safest route, noting guidance in section 6.5.

8.9 Once clear of the ladder, the deck hand should check the decks are clear and safe before proceeding back to the cabin. The Coxswain should not leave the lee of the ship until all personnel are safely in the cabin. Once clear of the ship, the Coxswain should call the ship on VHF and inform them that the pilot boat is clear and that the ship can resume its passage.

9. REPORTING OF DEFECTIVE OR NON-COMPLIANT PILOT TRANSFER ARRANGEMENTS

9.1 Responsibility for the safe transfer of Pilots and marine personnel rests with each person involved in the activity to include Pilots, pilot boat crew, Master & crew, pilotage providers, CHA, vessel owner & operators. All parties should be conversant with regulations and ensure safety is not compromised.

9.2 Issues with defective or non-compliant pilot transfer arrangements continue to be faced across the international port marine and pilotage industry. It is essential that deficiencies of defective or non-compliant pilot transfer arrangements are properly captured and reported to the Competent Harbour Authority, Maritime and Coastguard Agency, Marine Accident Investigation Branch and the ship concerned. The following provides some best practice on reporting:

a) **Pilots and Pilot Boat Crew.** It is highly likely that the Pilot or pilot boat crew will be the first persons to observe the defective or non-compliant pilot transfer arrangement. CHAs should ensure that pilots and pilot boat crew are familiar with local reporting arrangements and will always be fully supported to stop the transfer operation on the grounds of safety if necessary.

b) **Competent Harbour Authority.** CHAs should have robust reporting mechanisms and protocols in place, that ensure reports can be submitted to them quickly and efficiently (including out of hours). Reporting in a timely manner is essential as the Harbour Master may need to give a direction that results in delay or cancellation of boarding / landing operations. Reports can be submitted in a variety of ways including the following:

I. Verbal reports made to VTS / LPS via VHF or mobile phone.
II. By calling a Harbour Master or their representative
III. Via email
IV. By utilising approved reporting apps

c) **Maritime and Coastguard Agency Local marine office.** The local MCA marine office should be made aware of any report as soon as possible in order for potential port state control action to be considered. Reports should include as much detail as possible, including photographs (if available) and ref to which element of SOLAS / international recommendation the arrangement is thought to have breached. A list of MCA marine office contact details can be found here.

d) **Maritime and Coastguard Agency Headquarters.** When reports are submitted to an MCA marine office, MCA headquarters should also be included in copy. The MCA is capturing statistics centrally to monitor and maintain

a central database. The following email address should be used to ensure MCA HQ are included in copy: HQ_Inspectionops@mcga.gov.uk, navigationalsafety@mcga.gov.uk

e) **Marine Accident Investigation Branch.** The MAIB wish to receive reports and are maintaining a database to monitor trends. Reports to MAIB can be submitted using the following email address: ISO@maib.gov.uk

f) **The Vessel**. It is important that the ship is made aware of any issues with defective or non-compliant pilot transfer arrangements immediately. Whilst this is likely to be done via the Pilot / pilot boat crew or perhaps VTS / LPS in the first instance, it is important that a formal written report is followed up from the CHA to the ship / agent. If the incident involves an outbound vessel this is particularly relevant and consideration should also be given to informing the next port of call.

10. LEAVING THE SHIP'S SIDE

10.1 Unless a specific manoeuvre is detailed, the vessel should, as a standard practice, maintain the requested course and speed until the pilot boat has safely cleared. However, it is essential for the Pilot to brief the Master to maintain communication with the pilot boat to provide any follow-up guidance, if required, in the event the pilot boat has difficulty clearing the vessel's side. This ensures the Coxswain can request any necessary helm or engine adjustments to facilitate a safe break away.

11. HEAVY WEATHER OPERATIONS

11.1 In heavy weather, pilot boats should proceed at a speed compatible with sea conditions and pilot boat design. Sufficient allowances should be made in passage timings to avoid undue physical strain on personnel.

11.2 In fast pilot boats, use should be made of the seating provided in an appropriate manner, together with seatbelts where fitted. Amendment 4 of MGN 436 reflects evolving knowledge and best practice including the use of shock mitigating technology and data.

11.3 To avoid injury on passage, the stowage of ancillary equipment should be designed to be clear of seating areas, with particular emphasis on the space around head and shin.

11.4 Loose equipment or stores should not be carried unless properly stowed.

11.5 In such weather conditions the risk associated with boarding operations are heightened. Neither the Pilot nor the deck hand should proceed from the cabin until the pilot boat is in the lee of the ship and decision to proceed with transfer has been made by the Coxswain.

12. RESTRICTED VISIBILITY

12.1 The pilot boat must be allowed extra time on task in order to proceed at a safe speed in restricted visibility.

12.2 In all cases of restricted visibility, when approaching the ship, the deck hand should provide lookout and assistance until the Coxswain has a fully developed situational awareness. When leaving a ship the Coxswain will, as far as practicable, remain alongside the ship until the deck hand can keep a lookout.

12.3 Where fitted, the Pilot boat radar should be operational and in use, except whilst alongside engaged in a pilot transfer (see section 4.12), unless due to the prevailing conditions it would impact on the navigational and situational awareness. Once the Pilot is safely on board, use of the radar should continue.

12.4 Pilot boat AIS should be operational and used.

12.5 Pilot boat fog signal shall be operational and sounded in accordance with the International Regulations for the Prevention of Collision at Sea (ColRegs).

12.6 In restricted visibility it is imperative that VHF contact is established with the ship to be served. The ship's position, course, speed and position relative to other ships or navigational marks should be confirmed.

13. MAN OVERBOARD PROCEDURES

13.1 In the event of a man-overboard incident it is essential to locate the casualty and maintain them in sight, a task to which all crew and Pilots on board must devote their whole attention.

13.2 Coastguard, Port Authorities and shipping must be informed immediately and lengthy communications should be avoided. The speed of sighting and recovery remain the priority.

13.3 Once the casualty is located, and as the pilot boat is being positioned, retrieval equipment should be prepared and deployed as appropriate.

13.4 The method of recovery will depend on the equipment carried and the prevailing weather conditions.

13.5 A full report of the man-overboard incident is to be submitted in accordance with the CHA procedures and national legislation

13.6 A standard Emergency Action Plan should be agreed and shared by all parties, with regard to the onward casualty handling.

14. TRAINING FOR PILOT BOAT OPERATIONS AND RETRIEVAL OF CASUALTIES

14.1 Prior to using a pilot boat, all Pilots and pilot boat crews should receive training appropriate to their roles and responsibilities. This includes but is not limited to

a) Pilot boat operations
b) Familiarisation with the Boarding and Landing Code and current regulations
c) Training in how to recognise a compliant or non-compliant pilot transfer arrangement
d) Position, stowage and correct use of pilot boat safety equipment, such as immersion suits and medical stores
e) Operation and use of all man overboard equipment.
f) Donning of and the correct use of PPE.

14.2 Coxswains and pilot boat crew should be trained in the operation of the boat, its systems, pilot transfer operations and whole-body vibration issues. Competence should be demonstrated, recorded and maintained through a systematic process

14.3 Success of a rescue from the water is directly related to:-

a) The competence and training of those undertaking the rescue.
b) Familiarity with all recovery equipment, including alternative secondary systems.
c) Emergency life support skills, including artificial resuscitation.
d) The ability to identify and provide treatment for cold-water shock, and hypothermia.
e) The personal survival skills of the casualty in the water.

Therefore, it is essential, all persons involved in pilot boat transfer operations, who may be involved in rescue from the water, should be competent in these areas as a minimum.

14.4 A retrieval drill for pilot boat crew and check listing of recovery equipment should be carried out on a regular basis and at no more than 6-month intervals to ensure a satisfactory level of competence. Where possible, this training should be undertaken in a realistic environment, representative of the prevailing conditions at the transfer position.

All drills and checks should be recorded with an appropriate logbook entry.

14.5 Pilots are a resource in the rescue of another Pilot and/or pilot boat crew member. They should therefore receive the same training and meet the same drill practice standards as pilot boat crews in sections 14.3 and 14.4 above. Where possible, training should be at intervals in line with pilot boat crew training but not exceeding yearly.

14.6 All sea-going pilotage staff should be trained in Personal Survival Techniques.

14.7 All CHAs engaged in pilot boat operations should develop and have in place, emergency plans relating to pilot transfer operations.

14.8 An enhanced Immediate Emergency Care course should be considered as the required standard above the STCW Basic First Aid provisions for both pilot boat crews and Pilots.

15. TRANSFER OPERATIONS INVOLVING NON-REGULAR SHIPS

15.1 The CHA should, in consultation with Pilots, identify non-regular and unusual ships. The CHA, in conjunction with the Pilot and vessel operators, should risk assess in advance, any Pilot transfer operations involving non-regular or unusual ships.

15.2 High-speed craft and some Ro-Ro's, which do not have parallel sides that allow the ladder to lie flat, may request the Pilot to travel to and from the ship, from its port of origin.

15.3 Other non-regular vessels may pose additional issues that need to be addressed. Ladders should be sited midships not forward, away from fixed fenders and overhanging obstructions, suitable lighting directed so as not to affect pilot boat crew vision and overboard discharges.

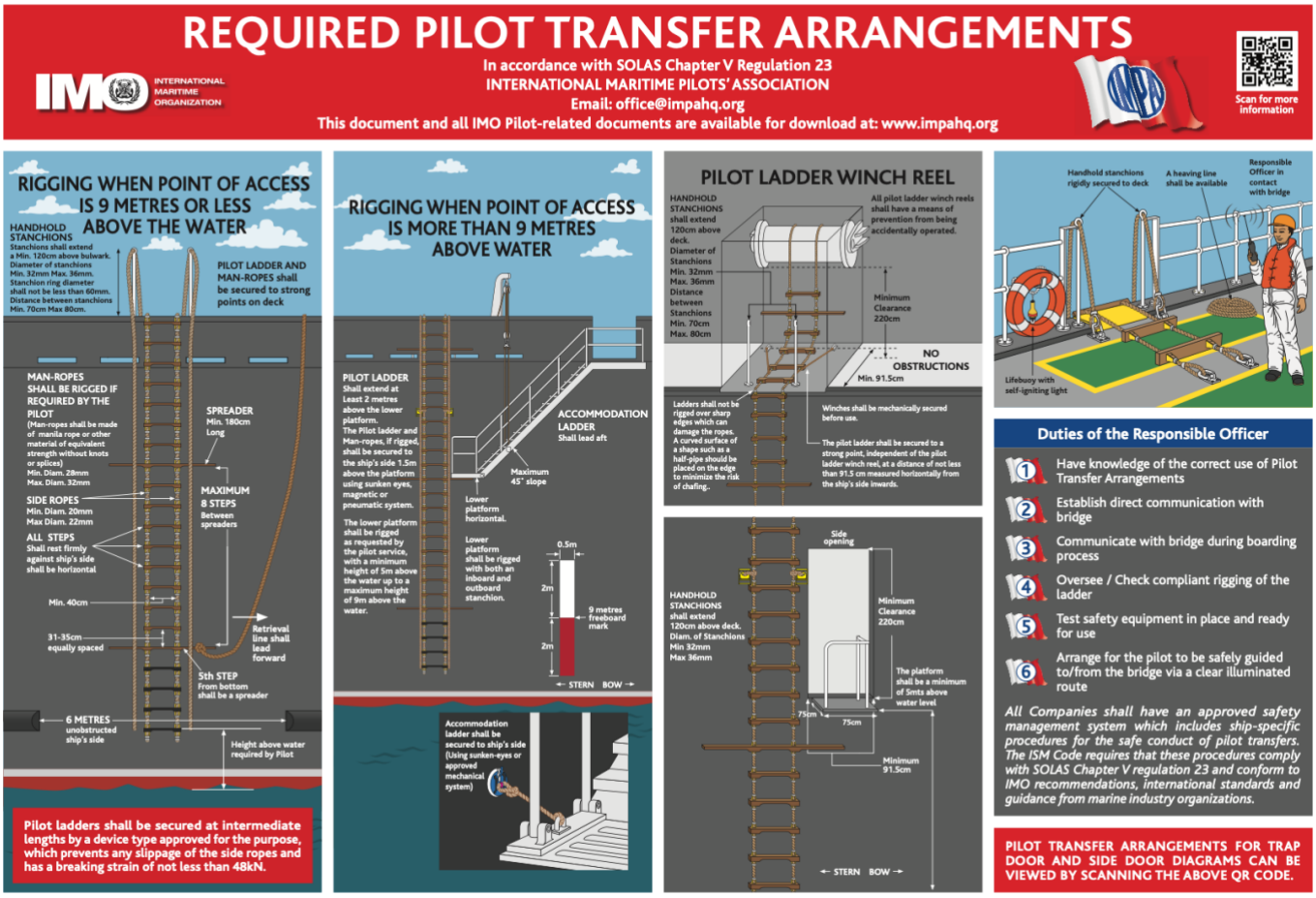
15.4 Tug and tows. When a Pilot transfer is to a tug the approach may have to be from forward of the beam to avoid the towing equipment. Transfer should be through a gate in bulwark and if no gate is available provision should be made for suitable stanchions with dimensions as per 7.3, with a means of climbing over the bulwark.

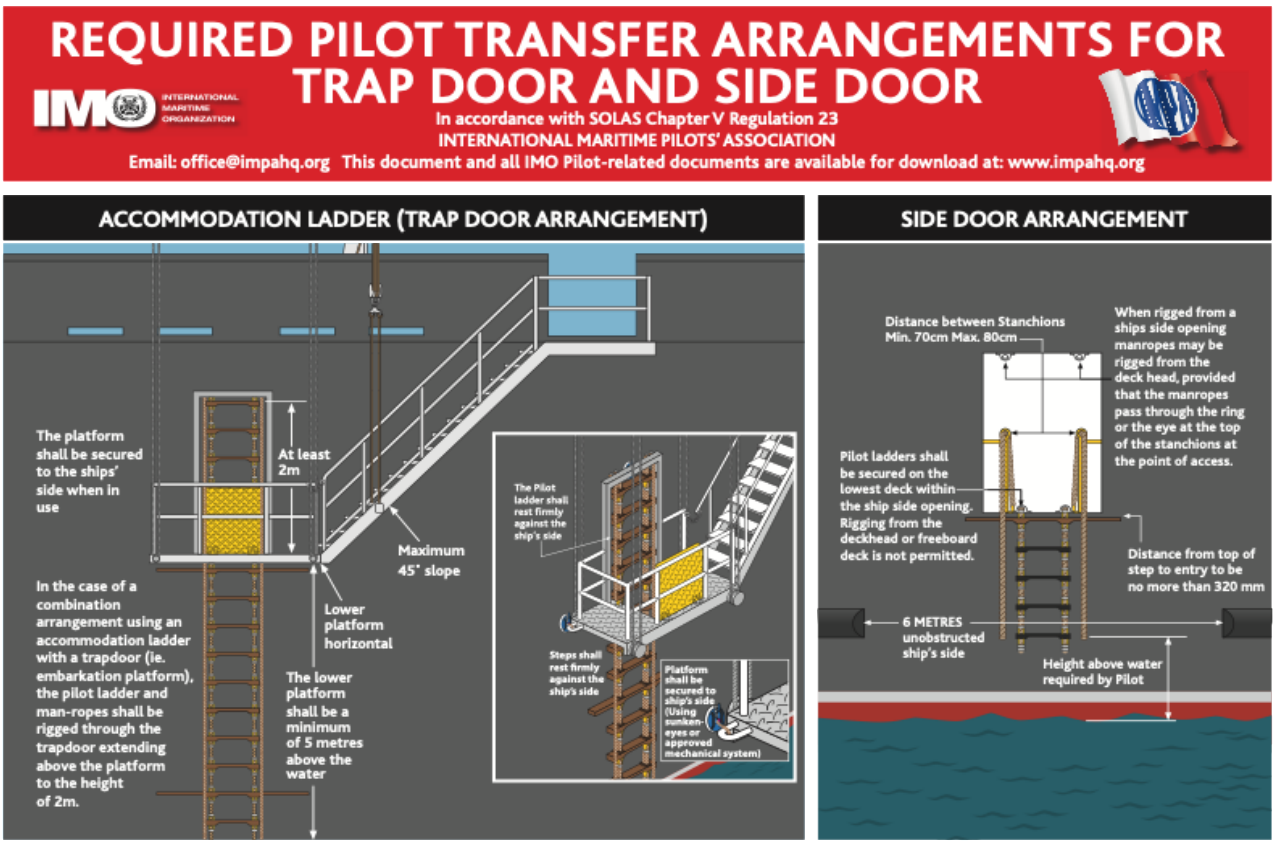
15.5 Boarding an unmanned tow cannot be conducted in accordance with this Code and therefore a special procedure following a risk assessment should be developed. When transferring to an unmanned barge, the transfer arrangements should be closely inspected prior to use.

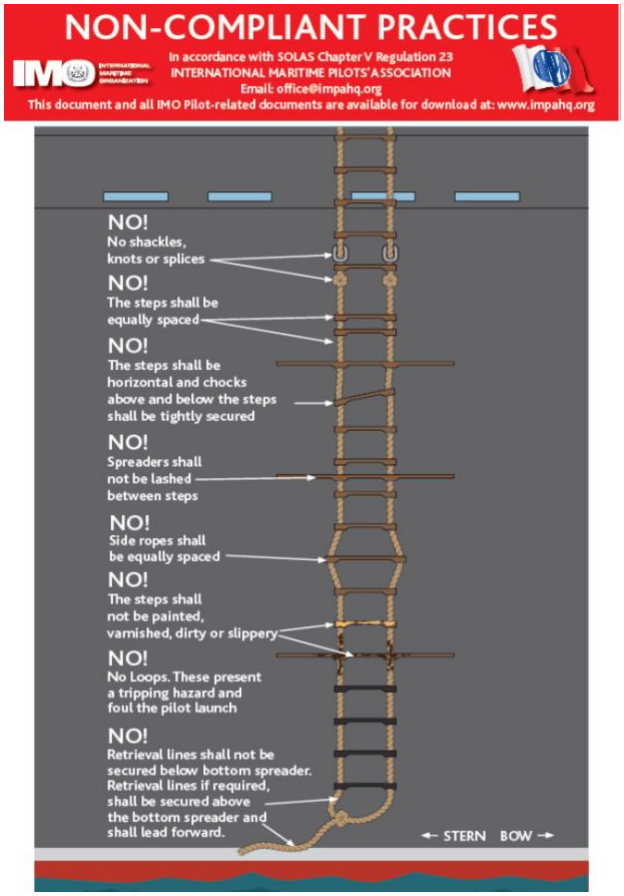
16. PILOT TRANSFER BY HELICOPTER

16.1 CHAs anticipating the introduction of a helicopter service for Pilot transfer operations must involve stakeholders in the production of appropriate procedures for normal operation and emergency response. These are to be based on a comprehensive risk assessment and with reference to industry best practice, including the ICS Guide to Helicopter/Ship Operations (6th edition).

Annex 1


REQUIRED PILOT TRANSFER ARRANGEMENTS
IMO INTERNATIONAL MARITIME ORGANIZATION
In accordance with SOLAS Chapter V Regulation 23
INTERNATIONAL MARITIME PILOTS' ASSOCIATION
Email: office@impahq.org
This document and all IMO Pilot-related documents are available for download at: www.impahq.org
Scan for more information
RIGGING WHEN POINT OF ACCESS IS 9 METRES OR LESS ABOVE THE WATER
HANDHOLD STANCHIONS
Stanchions shall extend a Min. 120cm above bulwark. Diameter of stanchions Min. 32mm Max. 36mm. Stanchion ring diameter shall not be less than 60mm. Distance between stanchions Min. 70cm Max 80cm.
PILOT LADDER AND MAN-ROPES shall be secured to strong points on deck
MAN-ROPES SHALL BE RIGGED IF REQUIRED BY THE PILOT
(Man-ropes shall be made of manila rope or other material of equivalent strength without knots or splices) Min. Diam. 28mm Max. Diam. 32mm
SPREADER Min. 180cm Long
MAXIMUM 8 STEPS Between spreaders
SIDE ROPES Min. Diam. 20mm Max Diam. 22mm
ALL STEPS Shall rest firmly against ship's side shall be horizontal
Min. 40cm
31-35cm equally spaced
Retrieval line shall lead forward
5th STEP From bottom shall be a spreader
6 METRES unobstructed ship's side
Height above water required by Pilot
Pilot ladders shall be secured at intermediate lengths by a device type approved for the purpose, which prevents any slippage of the side ropes and has a breaking strain of not less than 48kN.
RIGGING WHEN POINT OF ACCESS IS MORE THAN 9 METRES ABOVE WATER
PILOT LADDER
Shall extend at Least 2 metres above the lower platform. The Pilot ladder and Man-ropes, if rigged, shall be secured to the ship's side 1.5m above the platform using sunken eyes, magnetic or pneumatic system.
The lower platform shall be rigged as requested by the pilot service, with a minimum height of 5m above the water up to a maximum height of 9m above the water.
ACCOMMODATION LADDER Shall lead aft
Maximum 45° slope
Lower platform horizontal.
Lower platform shall be rigged with both an inboard and outboard stanchion.
0.5m
2m
2m
9 metres freeboard mark
STERN BOW
Accommodation ladder shall be secured to ship's side (Using sunken-eyes or approved mechanical system)
PILOT LADDER WINCH REEL
HANDHOLD STANCHIONS shall extend 120cm above deck. Diameter of Stanchions Min. 32mm Max. 36mm Distance between Stanchions Min. 70cm Max. 80cm
All pilot ladder winch reels shall have a means of prevention from being accidentally operated.
Minimum Clearance 220cm
NO OBSTRUCTIONS Min. 91.5cm
Ladders shall not be rigged over sharp edges which can damage the ropes. A curved surface of a shape such as a half-pipe should be placed on the edge to minimize the risk of chafing.
Winches shall be mechanically secured before use.
The pilot ladder shall be secured to a strong point, independent of the pilot ladder winch reel, at a distance of not less than 91.5 cm measured horizontally from the ship's side inwards.
HANDHOLD STANCHIONS shall extend 120cm above deck. Diam. of Stanchions Min 32mm Max 36mm
Side opening
Minimum Clearance 220cm
The platform shall be a minimum of 5mts above water level
75cm
75cm
Minimum 91.5cm
STERN BOW
Handhold stanchions rigidly secured to deck
A heaving line shall be available
Responsible Officer in contact with bridge
Lifebuoy with self-igniting light
Duties of the Responsible Officer
1 Have knowledge of the correct use of Pilot Transfer Arrangements
2 Establish direct communication with bridge
3 Communicate with bridge during boarding process
4 Oversee / Check compliant rigging of the ladder
5 Test safety equipment in place and ready for use
6 Arrange for the pilot to be safely guided to/from the bridge via a clear illuminated route
All Companies shall have an approved safety management system which includes ship-specific procedures for the safe conduct of pilot transfers. The ISM Code requires that these procedures comply with SOLAS Chapter V regulation 23 and conform to IMO recommendations, international standards and guidance from marine industry organizations.
PILOT TRANSFER ARRANGEMENTS FOR TRAP DOOR AND SIDE DOOR DIAGRAMS CAN BE VIEWED BY SCANNING THE ABOVE QR CODE.


REQUIRED PILOT TRANSFER ARRANGEMENTS FOR TRAP DOOR AND SIDE DOOR
IMO INTERNATIONAL MARITIME ORGANIZATION
In accordance with SOLAS Chapter V Regulation 23
INTERNATIONAL MARITIME PILOTS' ASSOCIATION
Email: office@impahq.org This document and all IMO Pilot-related documents are available for download at: www.impahq.org
ACCOMMODATION LADDER (TRAP DOOR ARRANGEMENT)
The platform shall be secured to the ships' side when in use
At least 2m
Maximum 45° slope
Lower platform horizontal
The lower platform shall be a minimum of 5 metres above the water
In the case of a combination arrangement using an accommodation ladder with a trapdoor (ie. embarkation platform), the pilot ladder and man-ropes shall be rigged through the trapdoor extending above the platform to the height of 2m.
The Pilot ladder shall rest firmly against the ship's side
Steps shall rest firmly against the ship's side
Platform shall be secured to ship's side (Using sunken-eyes or approved mechanical system)
SIDE DOOR ARRANGEMENT
Distance between Stanchions Min. 70cm Max. 80cm
When rigged from a ships side opening manropes may be rigged from the deck head, provided that the manropes pass through the ring or the eye at the top of the stanchions at the point of access.
Pilot ladders shall be secured on the lowest deck within the ship side opening. Rigging from the deckhead or freeboard deck is not permitted.
Distance from top of step to entry to be no more than 320 mm
6 METRES unobstructed ship's side
Height above water required by Pilot



Annex 2

A2.1. All Pilots and pilot boat crew should wear appropriate PPE as identified by the duty holder's associated risk assessment process. When selecting and issuing PPE, the duty holder should:

a) Choose products that are UKCA and/or CE marked in accordance with the Personal Protective Equipment (Enforcement) Regulations 2018 as amended – See the Product Safety and Metrology etc. (Amendment) Regulations 2024
b) Choose equipment that suits the user, including but not limited to the size, fit and weight of the PPE. If the users help choose it, they will be more likely to use it.
c) CHA's must ensure that different items of PPE that must be worn together are compatible and effective.
d) Instruct and train people how to use PPE, tell them why PPE is needed, when to use PPE and what its limitations are.
e) Choose Pilot coats and leggings that aid the reduction of cold water flushing whilst not impeding the wearer's ability to climb or routinely overheat in normal wearing.

There is no statutory minimum set of PPE for a Pilot or pilot boat crew undertaking pilot transfer operations. The following has been identified by industry as best practice. However, it may not be suitable in all circumstances. The duty holder must conduct a risk assessment to identify so far as is reasonably practicable an appropriate set of PPE to mitigate their risks.

a) SOLAS water switched light
b) Water switched or manual strobe light
c) Facial splash guard
d) Crotch straps or beaver tail
e) Rear crew assist becket

f) Locator beacon (PLB, AIS, VHF DSC)
g) Whistle, to attract attention
h) High visibility reflective tape to meet Class 2 Regulations
i) Protective headgear to an appropriate international standard
j) Protective footwear should be non-slip and anti-static and reinforced toecaps should be considered as part of a risk-based policy.
k) Lifejacket covers should be Hi-Viz with vertical retro-reflective tape (this is to ensure that the lifejacket does not compromise the high visibility of a class 2 or class 3 coat when walking through the quayside areas).

A2.2 Pilots and pilot boat crew should receive training when new PPE is issued and regular checks should be undertaken in accordance with the manufacturer's recommendations. In addition, refresher training is recommended at intervals not exceeding 5 years.

A2.3 Recommended daily checks before donning lifejacket, pilot coat and helmet include:

a) Check service history and next service date
b) Check the Co2 cylinder is screwed in and hand tight
c) Check the firing mechanism is ready
d) Check the oral tube cover is in the correct position
e) Check lights and beacon are operational
f) Check lifejacket or pilot coat for any signs of damage
g) Check helmet for any signs of damage

A2.4 After donning lifejacket or pilot coat

a) Ensure all buckles, zips and clips are correctly fastened
b) Ensure crotch straps are correctly fitted and tightened
c) Ensure helmet chin strap is securely fastened
d) Ensure that beacons are in the armed position

Note the wearing of crotch straps with lifejackets is essential, to prevent the lifejacket from rising up above the head.

A2.5 Unless used as part of an approved PPE system and appropriately risk assessed, the wearing of rucksacks and bags whilst climbing a ladder is not recommended for the following reasons:

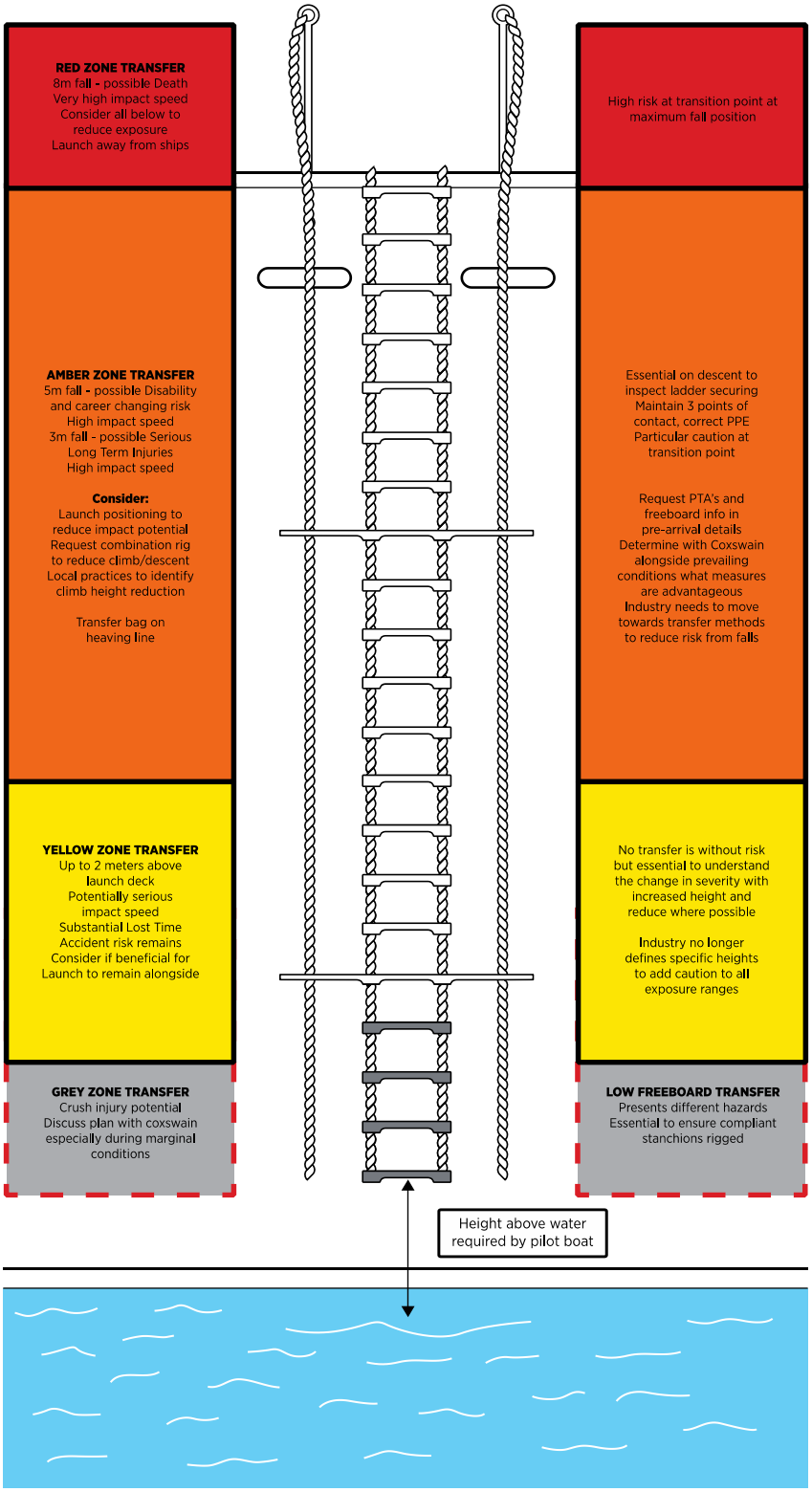
a) Wearing a bag will impair the ability to climb
b) A bag with the straps over the shoulder or across the chest can impair the inflating of a lifejacket or pilot coat
c) When falling from a ladder the shape and size of the bag will affect the stresses on the body when hitting the water
d) The angle of float created by a lifejacket or pilot coat could be compromised by pockets of air within the contents of the bag

A2.6 In addition to meeting the recommended requirements of the ENG1 medical fitness standard and the physical requisites demonstrated during a Personal Survival Techniques (PST) course, Pilots should maintain a level of fitness appropriate to the specific demands of their local transfer operations.

Annex 3

CLIMB ZONES

Exposure and Risk from falling from height for Freeboards of 9m or less above the water



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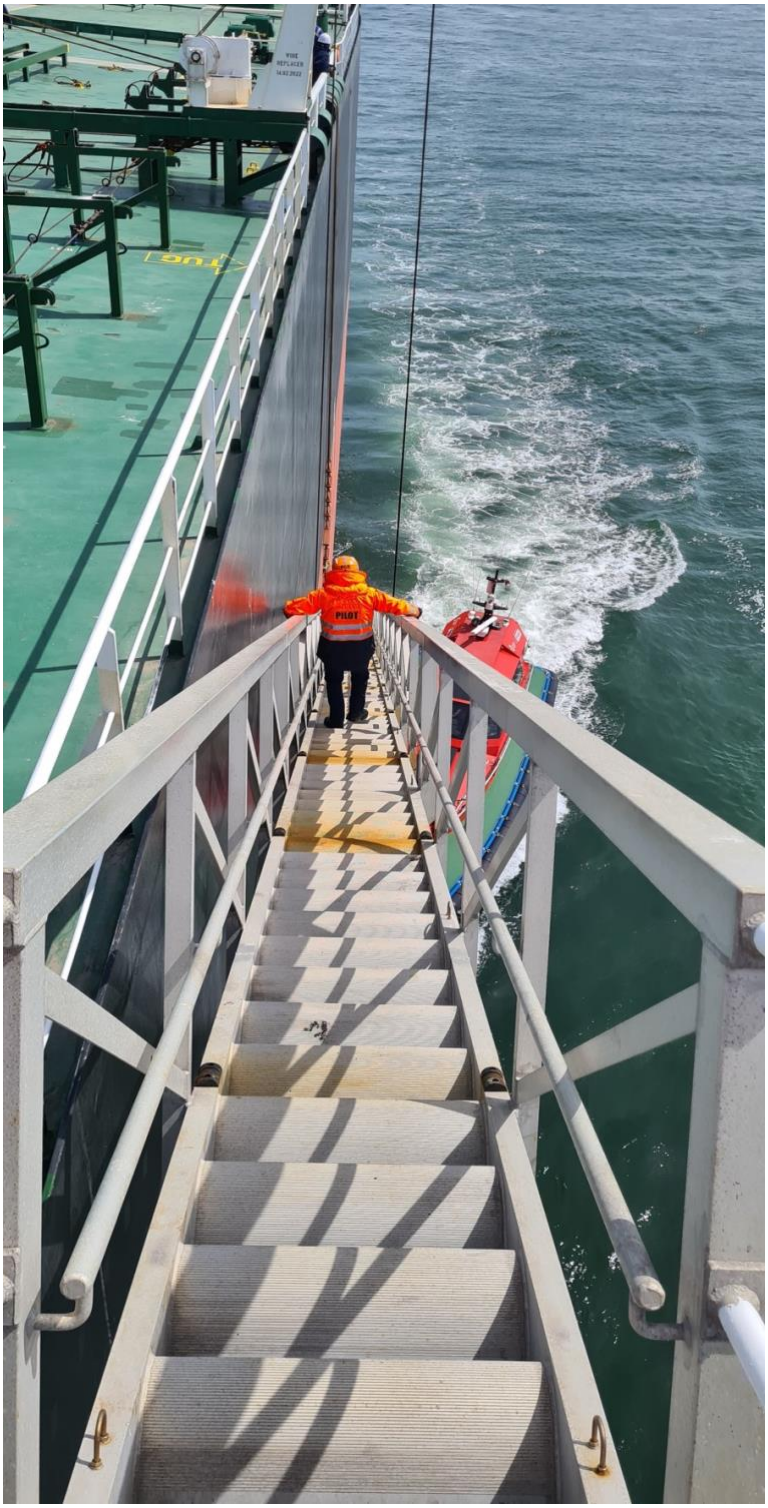
[2] See p12, p47, p73 & p77 of Report of the Drafting Group MSC 110/WP.7 25 June 25

[3] A1045(27), A1108(29) & MSC.1/Circ.1428 to be revoked 1 April 2030


PILOT