



Port marine safety code: Part two - measures

Table of contents

- [Part Two - Measures](#)
- [2.1. Setting a Standard](#)
- [Published policies and plans](#)
- [Taking stock](#)
- [Legal duties and powers](#)
- [Safety assessment and management](#)
- [Continuous assessment and review](#)
- [The 'ALARP' principle](#)
- [Competence standards](#)
- [Good practice](#)
- [2.2. Risk Assessment and Safety Management](#)
- [Safety policy](#)
- [Organisation](#)
- [Safety management systems](#)
- [Measuring performance](#)
- [Auditing and reviewing performance](#)
- [Emergency Planning](#)
- [Consultation](#)
- [Risk assessment](#)
- [Risk control](#)
- [2.3. Conservancy duties](#)
- [Hydrography](#)
- [Admiralty charts](#)
- [Prevailing conditions](#)
- [Aids to navigation](#)
- [Anchorage](#)
- [Wrecks](#)
- [Reviewing changes](#)
- [Works in harbours](#)
- [2.4. Regulation and management of navigation](#)
- [Available powers](#)

- [Collision Regulations](#)
 - [Enforcement](#)
 - [Link to safety management system](#)
 - [Vessel Traffic Services](#)
 - [Directions and passage plans](#)
 - [Port passage guidance](#)
 - [Scope of passage planning requirements](#)
 - [Role of harbour authority on port passage guidance](#)
 - [Publication of port passage guidance](#)
 - [Passage record keeping](#)
 - [Dangerous vessels](#)
 - [2.5. Pilotage](#)
 - [Agents and joint arrangements](#)
 - [Assessing the need](#)
 - [Providing the service](#)
 - [Compulsory pilotage](#)
 - [Waiving directions](#)
 - [Excepted vessels](#)
 - [Two pilots](#)
 - [Authorisation of pilots](#)
 - [Contracts with authorised pilots](#)
 - [Training](#)
 - [Boarding and landing procedures](#)
 - [Allocating pilots](#)
 - [2.6. Pilotage exemption](#)
 - [Award of certificates](#)
 - [Training](#)
 - [Use of certificates](#)
 - [Pilotage charges and exemption](#)
 - [2.7. Marine Services](#)
 - [Tugs](#)
 - [Pilot launches and workboats](#)
 - [Moorings](#)
-

Part Two - Measures

2.1. Setting a Standard

2.1.1. The chapters in Part 2 of this Code are about the way in which harbour authorities carry out the duties and powers described in Part 1. The aim of the Code is to set a nationally agreed standard for this purpose. This Part summarises the measures an authority must take to meet that standard. It is applicable to authorities of all sizes. The standards are based on these general principles: -

A. Harbour authority boards are accountable for their duties and powers, and should measure themselves against nationally agreed standards.

B. Harbour authorities should publish policies, plans and periodic reports setting out how they comply with the standards set by the Code.

C. Powers, policies, plans and procedures should be based on a formal assessment of hazards and risks, and harbour authorities should have formal safety management systems.

D. The aim of a safety management system is to ensure that all risks are tolerable and as low as reasonably practicable.

E. Safety management systems depend upon competence standards applied to all parties involved - these have been developed in parallel to the Code.

F. Harbour authorities should monitor and adopt good practice - A Good Practice Guide is also being developed in parallel to the Code.

Published policies and plans

2.1.2. All harbour authorities should develop policies and procedures in accordance with the standard in this Code, and should publish the policies and procedures they have adopted to achieve the required standard. Harbour authorities should publish amendments to their plans. They should also publish reports of their formal periodic reviews, setting performance against their plans and against the standard in the Code. The form of each authority's plan and reports will be for it to determine, so long as it covers properly the requirements of the Code. Reports should be at not less than three-year intervals: additional reports may also be appropriate.

2.1.3. A harbour authority's policies and procedures should include a statement of policy committing the authority to undertake and regulate marine operations in a way that safeguards the harbour, its users, the public and the environment.

2.1.4. Harbour authorities exist to facilitate the public right to use a harbour, and to safeguard the public interest in the safety of its operation. These obligations are funded by dues. A harbour authority should manage commercial pressures so as to be able to discharge these duties effectively. These are not conflicting obligations. The authority should undertake to support commercial activities in the harbour through the safe and efficient provision of specified services, and the effective regulation of shipping within the harbour. Its policy statement should identify the measures it has adopted to this end.

2.1.5. Compliance with the standard set by this Code is achieved in stages. There should be a considered assessment of risks and the means of reducing them; proper control over ship movements in harbour waters; and the use of appropriate standards of qualification and training for all those involved in the management and execution of services. Systems should be put in place and operated effectively which manage the identified hazards and risks. Standards achieved should be monitored, using appropriate measures. There should also be a procedure for auditing performance against the policies and procedures that the authority has adopted in order to comply with the Code.

Taking stock

2.1.6. The first step is therefore 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 will also be determined by the requirements that follow in this Code for consultation on, 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 have to be managed to ensure the safety of the harbour and its users.

2.1.7. A thriving business and good safety facilities are crucially interdependent - poor safety standards will eventually cost money. To trade commercial constraints against safety needs is the wrong approach. A harbour authority should have a clear view of its business purpose; and identify the implicit risks. It should then identify measurable risk management objectives and assess costs and benefits or any alternative mitigation measures. Every authority should decide whether the risks implied in the way it conducts its business are worthwhile - asking whether the value of an activity justifies the cost of managing the risks associated with it. These decisions will lead it to adopt a cost-effective management plan for the accepted risks.

Legal duties and powers

2.1.8. This Code uses harbour authorities' duties and powers as the basis upon which to establish a standard for safe port operations. Every harbour authority's plans should therefore include a sufficient statement of these powers. Plans and subsequent reports should say when these were most recently reviewed.

2.1.9. Duties and powers - whether in harbour orders, byelaws, or 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, 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. Powers should only be sought - and, in the case of harbour orders and byelaws, will only be granted - on that understanding.

Safety assessment and management

2.1.10. An authority's powers will only effectively discharge its duties, and comply with this Code, if they are maintained by reference to a full risk assessment and safety management system. Authorities should adopt a structured and systematic methodology, aimed at enhancing marine safety within their jurisdiction and the harbour approaches, including protection of life, health, the marine environment and property, by using risk and cost/benefit assessments. A positive, analytical approach is needed, considering past events and accidents, but examining potential dangers and the means of avoiding them.

Continuous assessment and review

2.1.11. The process of assessment is continuous, so that new hazards and changed risks are properly identified and addressed, but there is also a place for periodic formal review. It is for each authority to determine how often to do a formal review, and to justify its decision in its published plan. A safety management system should be documented. The system is inadequate if it does not prompt a review when circumstances demand one. Local plans should therefore be reviewed as necessary - whenever new considerations need to be reflected. As a guide, a formal review of the whole plan is likely to be needed at least every five years: authorities will be expected to justify longer intervals in their published plans.

The 'ALARP' principle

2.1.12. The aim of assessing and managing marine operations in harbours is to reduce risk **as low as reasonably practicable** ('ALARP'). It is important that the judgement of risk is an objective one, and the size or financial position of the authority are immaterial to making it. The degree of risk in a particular activity or environment can, however, be balanced on the following terms against the time, trouble, cost and physical difficulty of taking measures that avoid the risk. If these are so disproportionate to the risk that it would be unreasonable for the people concerned to incur them, they are not obliged to do so. The greater the risk, the more likely it is that it is reasonable to go to very substantial expense, trouble and invention to reduce it. But if the consequences and the extent of a risk are small, insistence on great expense would not be considered reasonable.

2.1.13. Risks may be identified which are **intolerable**. Measures must be taken to eliminate these **so far as is practicable**. This generally requires whatever is technically possible in the light of current knowledge, which the person concerned had or ought to have had at the time. The cost, time and trouble involved are not to be taken into account in deciding what measures are possible to eliminate intolerable risk.

Competence standards

2.1.14. Systems developed by an authority with the aim of making best use of appropriate powers will fail unless those people assigned any role in the system are competent and trained to nationally agreed standards. This Code will be supported by competence standards designed for a wide range of specialist tasks. 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.

2.1.15. Harbour authorities should assess the fitness of all persons appointed to positions with responsibility for safety of navigation. If they do not use the competence standards associated with this Code, they should be able to show that theirs are fully equivalent.

2.1.16. Harbour authorities should promote the involvement of port users in training programmes. They should adopt a training strategy that develops a shared understanding of their safety management systems.

Good practice

2.1.17. The Code is also supported by a Guide to Good Practice on Marine Operations in Ports. This will be kept under review and developed as good practice is developed and published by authorities pursuant to the Code. Authorities' policies and procedures should make full use of developed good practice.

2.2. Risk Assessment and Safety Management

2.2.1. The Code applies to the regulation of marine operations by harbour authorities the well-developed principles of formal risk assessment and safety management systems. This chapter outlines the approach which harbour authorities should take, following these general principles: -

A. Every harbour authority has a statutory duty to manage safety and should have a safety management system for marine operations in its waters, developed after a formal risk assessment.

B. The safety management system should be described in a published document, setting out the authority's policies and procedures relating to the regulation of marine operations.

C. Every harbour authority's statutory powers to regulate marine operations should be exercised in accordance with the harbour authority's safety management system.

D. The safety management system should include verification and audit procedures.

E. The safety management system should deal with preparedness for emergencies.

2.2.2. The key elements of successful safety management are -

- effective safety policies setting a clear direction for the organisation to follow;
- an effective management structure and arrangements in place for delivering the policy;
- a planned and systematic approach to implementing the policy through an effective safety management system;
- performance is measured against agreed standards to reveal when and where improvement is needed;
- the organisation learns from *all* relevant experience and applies the lessons.

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.

Safety policy

2.2.3. Harbour authorities should develop a safety policy for marine operations within their jurisdiction. This requirement itself makes a contribution to safety by obliging those responsible to consider its importance, and the need for practical and formal safety systems. The policy should be published, both to demonstrate the authority's commitment to the policy and also to ensure the involvement of harbour users. The management of any harbour under statutory powers should be based on a clear safety policy adopted by the harbour authority. Harbour authorities should make the following commitments -

- to manage the relevant assets of the authority safely and efficiently;
- to discharge the duties and powers described in earlier chapters of this Code;
- to maintain relevant harbour equipment to agreed industry standards;
- to recruit and train operational staff to nationally agreed competence levels;
- to ensure that staff are properly trained for emergencies and contingencies.

Organisation

2.2.4. A harbour authority's safety policy should promote a positive safety culture, fostered by the visible and active leadership of senior management. Its aim should include the motivation and empowerment of staff to work safely, not just to avoid accidents. Policy and related procedures should be underpinned by effective staff involvement and participation, and sustained by effective communication and promotion of competence.

Safety management systems

2.2.5. Harbour authorities have a statutory duty to manage safety, under health and safety regulations. The purpose of the Code is not to replace this duty but to set out how the principles apply to marine operations. The particular risks associated with these operations bring their own safety management requirements, based on an appropriate assessment of port marine activities. The principles and objectives, however, are not fundamentally different.

2.2.6. The aim of a safety management system is to minimise risks. Risk assessment methods are used to decide on priorities and to set objectives for eliminating hazards and reducing risks. Wherever possible, risks are eliminated through selection and design of facilities, equipment and procedures. If risks cannot be eliminated, they are minimised by physical controls, or as a last resort, through systems of work. Performance standards are established and used for measuring achievement. Specific actions to promote a positive safety culture are identified.

2.2.7. Every harbour authority's policies should be supported by procedures to:-

- regulate the safe arrival, departure and movement within the harbour of all vessels;
- protect the general public from dangers arising from marine activities within the harbour;
- carry out all its functions with special regard to their possible environmental impact;
- prevent acts or omissions that may cause personal injury to employees or others, or damage the environment.

Measuring performance

2.2.8. A safety management system should include means of active self-monitoring to ensure that the system is functioning. If controls fail, reactive monitoring needs to discover why by investigating accidents, or incidents, which could cause harm or loss. The objectives of monitoring are to determine the immediate causes, and to identify the underlying causes and the implications for the design and operation of the safety management system.

2.2.9. The function of a 'designated person' is to provide independent assurance directly to the 'duty holder' that the safety management system is working effectively. It should be assigned accordingly. A safety management system should include proper record procedures so that the duty holder and designated person can be satisfied that the system is functioning properly. Incidents and complaints about safety should be promptly investigated; and the incident and investigation both properly recorded.

Auditing and reviewing performance

2.1.10. A safety management system should include provision for systematic review of performance based on information from monitoring and from independent audits of the whole system. A strong commitment is needed to continuous improvement involving the constant development of policies, systems and techniques of risk control.

2.1.11. Performance is assessed by internal reference to performance indicators and by external comparison with the performance of business competitors and good practice. Performance should also be recorded in reports published by each harbour authority.

Emergency Planning

2.2.12. A safety management system should include preparations for emergencies - and these should be identified as far as practicable from the formal risk assessment. Emergency plans need to be published and exercised.

Consultation

2.2.13. A safety management system is only effective if the authority responsible takes active measures to involve and secure the commitment of all concerned. This applies both to the formal assessment, and to the subsequent operation of the management system. Not all will be the authority's employees. Harbour authorities should proceed in full consultation with all interests, and their published policies should cover these interests' involvement in safety management.

2.2.14. Harbour authorities should consult as appropriate among those likely to be involved in or affected by the safety management system they adopt. This opportunity should be taken to develop a consensus about safe navigation in the harbour. Parties include the authority's authorised pilots, the harbour master and his navigation staff - including port control, towage providers and tugmasters, lock keepers, berthing parties, masters and ship's officers with pilotage exemption certificates, and other port users as far as possible.

Risk assessment

2.2.15. A safety management system should be informed by and based upon a formal risk assessment of the port's marine activities, a documented, structured and systematic process comprising -

- the identification and analysis of risks;
- an assessment of these risks against an appropriate standard of acceptability;
- a cost-benefit assessment of risk reducing measures where appropriate.

Every authority should make such a formal, documented assessment. A safety management system cannot rely upon informal procedures or partial evaluations; systems and procedures should be developed through a considered and comprehensive process. A safety management system provides for the implementation and monitoring of the results of the formal assessment.

2.2.16. There should be a critical appraisal of all routine and non-routine activities. Those involved should not just include employees, but others including members of the public, contractors and users of the port.

2.2.17. Assessing risks to help to determine precautions can be qualitative or quantitative. Quantified risk assessment is not a requirement, and may not be practicable. Legal limits may apply in some cases. Risk assessments should be done by competent people, especially when choosing appropriate quantitative risk assessment techniques and interpreting results.

Risk control

2.2.18. All final decisions about risk control methods should take into account relevant legislation, which establishes minimum standards. Human factors should be considered. The aim is reduce risks as low as reasonably practicable (see chapter 2.1 above). There is a preferred hierarchy of risk control principles -

- eliminate risks - by avoiding a hazardous procedure, or substituting a less dangerous one;
- combat risks - by taking protective measures to prevent risk;
- minimise risk - by suitable systems of working.

If a range of procedures is available, the relative costs need to be weighed against the degree of control provided, both in the short and long term.

2.3. Conservancy duties

2.3.1. This chapter is about the general requirements imposed upon a harbour authority under the conservancy duty:-

A. A harbour authority has a duty to conserve the harbour so that it is 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.

B. Harbour authorities should provide users with adequate information about conditions in the harbour.

C. Harbour authorities have duties and powers as local lighthouse authorities; and specific powers in relation to wrecks.

Hydrography

2.3.2. Harbour authorities have a duty to find, mark and monitor the best navigable channel or channels in the harbour. This task is an essential part of a formal hazard assessment and safety management system. They should include in their published policies and plans a statement of the measures adopted for this purpose.

2.3.3. Harbour authorities should have effective arrangements to publish appropriate hydrographic information, including not only charts but supplementary information including especially warnings on recently identified navigational hazards.

Admiralty charts

2.3.4. Harbour authorities should provide regular information required for Admiralty Charts and publications. The UK Hydrographic Office provides a standard form of agreement for these arrangements.

Prevailing conditions

2.3.5. In addition to information about general conditions, harbour authorities 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 is used.

Aids to navigation

2.3.6. A local lighthouse authority should exercise its functions in accordance with a safety management system. 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.

Anchorage

2.3.7. A harbour authority's safety management system should make appropriate provision for safe anchorages in the harbour and its approaches, taking into account the size and type of vessels likely to require them, the needs of other shipping - including passing shipping, and the local conditions.

Wrecks

2.3.8. A harbour authority's safety management system 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.

Reviewing changes

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

Works in harbours

2.3.10. 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 in particular for the regulation of dredgers and other craft associated with such works.

2.4. Regulation and management of navigation

2.4.1. This chapter is about the powers which harbour authorities have to make byelaws and give directions. These powers give statutory force to requirements of the safety management systems developed under this Code. The use of these powers should follow these general principles:-

A. Ports have rules in byelaws and directions, which every user must obey as a condition of his or her right to use the harbour.

B. Harbour authorities have a duty to make proper use of powers to make byelaws, and to give directions (including pilotage directions), to regulate all vessel movements in their waters.

C. These powers should be exercised in support of the policies and procedures developed in the authority's safety management system, and should be used to manage the navigation of all vessels.

D. Harbour authorities should have clear policies on the enforcement of directions, and should monitor compliance.

E. Powers of direction should be used to require the use of port passage plans in appropriate cases - whether vessels are piloted or not.

Available powers

2.4.2. 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.
- **harbour directions** - may be given by the harbour master: these directions are time and vessel specific, and are most apt for operational purposes and for emergencies. Some harbour authorities have more effective powers of general direction to be given by the authority itself ¹. 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, and should 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 he believes that compliance would endanger the vessel. It is therefore essential that the use all of these powers should be clearly based on a proper assessment of the safety of the harbour and vessels using it.

Collision Regulations

2.4.3. The Collision Regulations ² apply to all vessels upon the high seas and in all waters connected therewith navigable by sea-going vessels. They generally apply in harbours, but not in land-locked channels. Nothing in the rules interferes with the operation of special rules by an appropriate authority (including a harbour authority). Such special rules should conform as closely as possible to those in the Regulations. Thus, a byelaw made by a harbour authority will prevail if inconsistent with the Regulations, but there must be strong reasons for making or confirming such a byelaw. Byelaws should be considered to meet circumstances for which the Collision Regulations do not provide. A byelaw which deals with the same subject as a provision in the Regulations will exclude the application of that provision.

Enforcement

2.4.4. Byelaws and directions adopted in order to manage navigation risk should be backed by an appropriate policy on enforcement. Where, for example, directions are adopted in the interests of safety to ensure that vessels using the harbour are appropriately manned, this should be monitored with the assistance of port controllers and pilots.

2.4.5. Where statutory powers are linked to a proper process of assessment, so that rules relate to identified risks, they should be equally clearly enforced. It is therefore important that the power to give directions is properly controlled by the delegation procedures adopted by the authority. Communications to vessels should be in a specific language which makes clear whether it is advice or a direction that is being given.

2.4.6. Each authority should have a clear policy on prosecution, which is consistent with the safety assessment on which its directions are based. Authorities should not expect enforcement to pay for itself, or adopt a policy with that objective.

Link to safety management system

2.4.7. The authority's safety management system needs to make proper use of all the available powers. There should be a demonstrable connection between powers adopted and the formal risk assessment.

2.4.8. Rules required in the interests of safety of navigation should be given legal power by means of byelaws or directions. Authorities without appropriate powers to manage navigation risks identified by their formal risk assessment should consider seeking them.

Vessel Traffic Services

2.4.9. Harbour authorities use various methods to monitor and communicate with vessels using their harbour. These should allow appropriate information, advice and directions to be passed between the harbour master or port control and ships in the harbour. Where the formal risk assessment indicates a requirement, a functional radar or radio-based vessel traffic services should be established and operated in accordance with internationally agreed guidelines.

Directions and passage plans

2.4.10. 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 compliment port passage planning. Passage plans are therefore to be operated and enforced as an adjunct to the powers of direction.

Port passage guidance

2.4.11. The next part of this chapter deals with the adoption by harbour authorities of port passage guidance as an adjunct to the powers of direction already described. This guidance is to be given legal force by the harbour authority's statutory powers. They are to be used in conjunction with master/pilot exchange forms, which ensure that both have information needed for an agreed pilotage passage plan.

2.4.12. The object of port passage guidance as required by this Code is to ensure that -

- all parties know relevant details of any particular 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.

2.4.13. Harbour authorities should use directions not only to require the use of plans, but also the advance preparation of appropriate passage plans by visiting ships' masters, including masters and ships officers exercising pilotage exemption certificates. Authorities should monitor compliance with such requirements.

Scope of passage planning requirements

2.4.14. The use of passage planning is not confined to vessels conducted by a pilot, but should also be required for vessels conducted by the user of a pilotage exemption certificate, and on vessels excepted from an authority's pilotage directions.

2.4.15. Passage plans may be dispensed with for particular kinds of vessel if the formal risk assessment has established that they are not necessary for the management of risk in such cases. As a general rule it is acceptable to exclude those vessels for which the harbour authority's byelaws give sufficient control - for example, recreational vessels. There is, however, no objection to including such vessels if that is necessary and practicable.

Role of harbour authority on port passage guidance

2.4.16. Harbour authorities should take the lead in promoting the use of passage planning. They should take an overall view of the scope and content of port passage guidance for use in their areas. Published safety policies should state and justify the conclusion they reach. They should seek to establish general guidance - in simple cases for any entry to the port; in others, elaborated for particular berths, ship sizes, cargoes, conditions, tidal constraints, tug allocation, holding areas, etc.. Particular attention should be paid to critical port movements, for example the movement of deep draught vessels to particular berths.

Publication of port passage guidance

2.4.17. Authorities should take appropriate steps to publish up to date guidance or general plans adopted by the port.

2.4.18. Passage plans are not immutable. 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 port control, and recorded with reasons.

Passage record keeping

2.4.19. Plans adopted for particular 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.

Dangerous vessels

2.4.20. The potential need to give directions in relation to a dangerous vessel should be addressed in the harbour authority's safety management system. There should be clear procedures for the harbour master to use in assessing all the relevant considerations when a case arises. Since the power of direction can be over-ruled by the Secretary of State, it is desirable to have an understanding with the Maritime & Coastguard Agency about the circumstances in which a dangerous vessel might require access to, or to be kept in, a harbour. This will not displace the statutory obligation on the Secretary of State, or his representative, to consult in particular cases.

¹ The report on the Review of the Pilotage Act proposed legislation to permit all authorities with powers in relation to the regulation of shipping movement to give general directions - this has not yet progressed.

² The Merchant Shipping (Distress and Prevention of Collision) Regulations 1996 (SI 1996 No 75)

2.5. Pilotage

2.5.1. This chapter is about the powers and duties which harbour authorities have to provide a pilotage service. The use of these powers should follow these general principles:-

A. 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.

B. 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.

C. Pilotage should be fully integrated with other port safety services under harbour authority control.

D. 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.

Agents and joint arrangements

2.5.2. A harbour authority may arrange for certain pilotage functions to be exercised on its behalf by such other persons as it sees fit, including a company established for the purpose, or another harbour authority. Two or more authorities may arrange to discharge such functions jointly.

2.5.3. These arrangements may not be used to assign or share -

- the duty to keep the need for pilotage under review;
- the authorisation of pilots;
- the employment arrangements for its authorised pilots;
- the approval of pilot launches;
- the issue of pilotage directions;
- the issue of exemption certificates.

2.5.4. These are all key elements of the safety management system required by this Code. Where other functions have been delegated, or there is a joint arrangement, the other body or authority should be fully consulted in developing the system. It is open to more than one authority operating a joint arrangement for pilotage to have a joint safety management system.

2.5.5. 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 protects statutory obligations. 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 in order to enable an authority to carry out delegated or joint functions itself, or to make some other permissible arrangement instead.

Assessing the need

2.5.6. Every harbour authority with powers to regulate navigation in its waters should keep under consideration the need for pilotage services to be provided to secure the safety of ships navigating in or in the approaches to its harbour. This consideration should be part of the authority's formal risk assessment. There is a specific duty to have regard in particular to the hazards involved in the carriage of dangerous

goods or harmful substances by ship. The requirement should be kept under constant review to take account of changes in the use of the harbour. Paragraph 2.1.11. requires a review of an authority's whole plan not less than at five year intervals: pilotage directions should have more frequent re-assessment at not more than three-year intervals.

2.5.7. The process of review is used to establish whether pilotage should be compulsory for ships navigating in any part of that harbour or its approaches and, if so, for which ships and in which circumstances and what pilotage services need to be provided for those ships. This is to be determined on grounds of safety only. It should be covered by the formal risk assessment required by this Code, and the requirement kept under review in the harbour authority's safety management system.

Providing the service

2.5.8. Each competent harbour authority should provide the pilotage services it considers to be needed. This duty is not discharged simply by authorising one or more pilots: it includes the management of the service, ensuring that the person assigned as pilot to every vessel taking one is fit and appropriately qualified for that task. The service should be managed in a way which allows such control.

Compulsory pilotage

2.5.9. Compulsory pilotage is imposed by means of directions. Directions should define the circumstances in which pilotage is to be compulsory. A considered approach should be taken to this. Pilotage directions should specify how and to which vessels they apply, and in what circumstances. It may be that pilotage is appropriate for a class of vessels in some circumstances and not others.

2.5.10. A pilotage direction may specify that it does not apply for example to a vessel under the command of a licensed waterman. It may also be appropriate, for example, not to require pilotage while a dredger is working within the pilotage limit but when it is transiting from the sandbanks to a river berth. A direction might also, for example, exclude certain vessels from compulsory pilotage except in 'circumstances' such as poor visibility. It is always necessary for these cases to be decided by reference to the authority's formal risk assessment, which must provide assurance to the authority that risks remain properly managed; and on the competence of those excepted from pilotage by these means.

2.5.11. The master of a vessel may ask for a pilot even when not required to take one by pilotage directions. These may be special circumstances - for example, the master is unfamiliar with the port, or traffic or weather conditions are difficult. The authority should allow for such requests when providing the pilotage service. An authority is obliged to satisfy itself that any vessel representing that it is not covered by the pilotage directions is entitled to do so. A harbour authority should monitor such requests carefully and refer to them when reviewing whether in any such circumstances pilotage should become compulsory.

Waiving directions

2.5.12. 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 or port controller should have 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 is unlikely to be appropriate, for example, for directions not to apply in highly adverse conditions which make boarding or landing a pilot too dangerous to be undertaken.

Excepted vessels

2.5.13. Pilotage directions may not apply to certain small vessels and other means need to be identified to manage any risks associated with these. The formal risk assessment may confirm that other vessels need not be subject to pilotage directions provided any risk relating to them can be effectively managed by other means

Two pilots

2.5.14. The 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.

Authorisation of pilots

2.5.15. Each competent harbour authority may authorise suitably qualified pilots in its area. Authorisations may relate to ships of a particular description and to particular parts of the harbour.

2.5.16. Authorities should 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 competence standards developed in parallel to this Code and for keeping fitness under review. These should be published and available to applicants.

2.5.17. Authorities should have procedures for re-validating authorisations not less than every 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. Re-validation 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.

2.5.18. Authorities are empowered to make appropriate arrangements for the provision of the services of authorised pilots. A contract of employment should be offered unless a majority of the relevant authorised pilots have agreed otherwise. Authorities should be able to show that any alternative arrangement does not fetter its ability to fulfil any of the requirements of this Code.

2.5.19. It is for the harbour authority alone to decide (using appropriate procedures for delegation to its officers) that an authorisation should be given. Subject to that principle, 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.

Contracts with authorised pilots

2.5.20. 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 control over the provision of the service for which it is accountable.

2.5.21. The contract between an authority and its authorised pilots should also take account of any contract the authority has made with another body or authority to have pilotage functions discharged on its behalf.

2.5.22. An authorised pilot's contract should enable the authority or its agent to decide that a particular pilot may, or should not be allocated to a particular ship on a particular occasion. Authorities should ensure that any arrangements by which the operation of the pilotage service is delegated reserve this control.

2.5.23. An authority may refuse to authorise any person who does not accept the arrangements it has made for providing the pilotage service. An authority may also - after giving notice and allowing a reasonable opportunity to make representations - suspend or revoke an authorisation if it appears to the authority that the authorised person is guilty of any incompetence or misconduct affecting his capability as a pilot or has ceased to have the required qualifications - or failed to provide evidence that he so continues. Authorities should have formal procedures for these circumstances, incorporated in the contracts they have with authorised pilots.

Training

2.5.24. Harbour authorities should ensure that all their authorised pilots are trained so as to be 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 competence standards developed in parallel with this Code. Every authorised pilot's training needs to be kept under review, with additional training provided before allocating to different types of vessels or to the use of new types of tugs.

Boarding and landing procedures

2.5.25. A harbour authority's safety management system should be used to identify safe pilot boarding and disembarkation areas. Every harbour authority's safety management system should incorporate the requirements of the Merchant Shipping (Pilot Transfer Arrangements) Regulations 1999, and the requirements of the accompanying Merchant Shipping Notice. There is also a Boarding and Landing of Pilots by Pilot Boat Code of Practice. They should take steps to ensure that pilots do not board or land from vessels in conditions contrary to these requirements.

2.5.26. A pilot is not to be taken out of his area without reasonable excuse. The pilot cannot be disembarked, however, while the vessel is subject to compulsory pilotage under pilotage directions. If the risk assessment shows that it is acceptable in some or all cases for a pilot to be disembarked within the port limit, this should be reflected in the geographical limit of the appropriate pilotage directions.

Allocating pilots

2.5.27. Authorities or their agents should arrange for pilots to be allocated in adequate time to prepare passage plans. To comply with the Code, 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.

2.6. Pilotage exemption

2.6.1. This chapter is about the powers and duties which harbour authorities have to exempt certain ships' officers from their requirements to take an authorised pilot. The use of these powers should follow these general principles:-

A. The standards for exemption certificates must not be more onerous than those required for an authorised pilot; but they should be equivalent.

B. Exemption certificate holders and their employers are accountable to the issuing harbour authority for the proper use of any certificate.

C. Harbour authorities should have formal written agreements with certificate holders and their employers to regulate the use of certificates.

Award of certificates

2.6.2. Authorities have a duty to issue pilotage exemption certificates to appropriately qualified mariners, and are not allowed to withhold one for reasons unconnected with an applicant's skill and experience.

2.6.3. Harbour authorities should have formal procedures for assessing the suitability of applicants. The standards adopted by harbour authorities should be equivalent to the national guidelines developed in parallel to this Code for the issue of exemption certificates. The standards and procedures adopted by each authority should be published and available to applicants. Where an authority's pilots participate in the assessment process, it is necessary to have an additional independent element of validation.

Training

2.6.4. Harbour authorities should satisfy themselves that would-be certificate holders are properly trained on the conduct of the vessel or vessels to which a certificate applies.

Use of certificates

2.6.5. An exemption certificate may only be used *bona fide* by the master or first mate of a vessel, and only if that vessel is named on the holder's certificate.

2.6.6. The holder of a certificate is directly accountable to the issuing authority for its proper use. The holder's employer - and, where the holder is serving as *bona fide* mate, the master - are similarly accountable.

2.6.7. Authorities should make agreements with certificate holders and their employers, setting out agreed conditions on which certificates are issued to ensure the use certificates only in accordance with the terms on which they are issued. The agreements should bind holders and employers to co-operate with procedures for checking the proper use of certificates and investigating irregularities. They should include a commitment that a certificate will be surrendered if mis-use is proved. They should allow the authority to take reasonable steps to satisfy themselves about the continuing competence and medical fitness of the certificate holder.

2.6.8. If the ship is not being navigated under the pilotage of a master or bona fide first mate who has a valid certificate for the ship, it becomes liable to take a pilot where pilotage directions apply. The ship is not exempt merely by virtue of having a certificate holder on board.

Pilotage charges and exemption

2.6.9. Pilotage authorities may make reasonable charges in respect of any vessel which is subject to its pilotage directions but is under the pilotage of a master or first mate holding a pilotage exemption certificate in respect of the area and ship in question, and there is a right to object to the charges set.

2.7. Marine Services

2.7.1. This chapter is about various marine services, including the use of tugs and workboats in a harbour, and the provision of moorings. The following general principles apply -

A. An authority's safety management system should cover the use of harbour craft and the provision of moorings.

B. The formal safety assessment should be used to identify the need for, and potential benefits for safety management, of harbour craft.

C. The authority should ensure that harbour vessels or craft 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.

D. Byelaws and the power to give directions are available for these purposes.

Harbour craft include tugs, pilot boats and workboats.

Tugs

2.7.2. The need for tugs should be included in the risk assessment - taking account not only of vessels which need their assistance to navigate in the harbour (whether as an active or passive escort), but also of the scope for using tugs as a means of reducing risk. An assessment may identify that additional use of tugs is an appropriate means of adequately reducing a particular risk.

2.7.3. The assessment should have regard to the capacity of available of tugs. If tugs are provided commercially, this may be determined by the operator's judgement of the likely work. If commercial provision of tugs is not enough for the effective management of relevant risk, the authority will have to identify other means of doing so. These may impose restrictions on harbour operations. Options include augmenting commercially provided towing resources - including the authority contracting tugs itself.

2.7.4. Where a need for tugs is found, harbour authorities should develop towage guidelines from their risk assessment and incorporate them in their safety management system. The guidelines should be based on an objective assessment of safety, not on economic considerations. They should take account of the physical conditions of the harbour and the characteristics of vessels using it. There should be effective procedures in place to keep the guidelines up-to-date and to enforce them with directions. Towage guidelines should be developed in consultation with users and pilots. It is not a function of towing guidelines to restrict access to the provision of services by properly qualified suppliers.

2.7.5. The use of tugs for berthing, unberthing and escorting is a matter for the master - and for agreement with a pilot, where embarked. If a master does not wish to follow the guidelines, against the professional judgement of a pilot, the harbour master should be referred to for special directions. The harbour master may direct a ship to wait for appropriate conditions in these circumstances.

2.7.6. Towage guidelines, and related directions, should be used to ensure the use of tugs with appropriately trained and qualified pilots and crew. Competence standards developed for inshore tug personnel should be used for this purpose. The safety management system should provide wherever possible for tug crews to train with pilots and other port marine personnel.

Pilot launches and workboats

2.7.7. Harbour authorities have a duty to approve the use of vessels as pilot launches. Authorities should not approve any vessel as a pilot launch that does not satisfy the Merchant Shipping (Small Work Boats) Regulations 1998 and the associated Safety of Small Work Boat and Pilot Boat Code of Practice.

2.7.8. 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.

2.7.9. Authorities should also ensure that workboats used in their harbours comply with the Merchant Shipping (Small Work Boats) Regulations 1998 and the associated Safety of Small Work Boat and Pilot Boat Code of Practice, and that they are fit for purpose for any use to which they are put.

2.7.10. Harbour authorities have a duty to ensure the safety of those they employ 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.

Moorings

2.7.11. Harbour authorities have powers in byelaws and directions to regulate the mooring of vessels in the harbour. The safety management system 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.