

Reference	MCO-75	Issued	3/11/2022	Owner	Spain, Cathryn
Version	4.0	Review Due	3/11/2025	Author	Kindlen-Funnell, L
Type	UserDefinedField1	Classification	UserDefinedField2		
	The Safe Mooring of Vessels Guide 2016				Page 1 of 26



The Safe Mooring of Vessels Guide 2016

Table of Amendments		
Section	Details of Change	Signature

Contents

- SECTION ONE - INTRODUCTION5
 - 1.1. Responsibilities for the Safety of Personnel.....5
 - 1.2. Co-ordination of Mooring Operations5
 - 1.3. Self-Mooring Operations5
 - 1.4. Mechanical Mooring Devices6
- SECTION TWO - GUIDANCE TO BOATMEN AND LINESMEN7
 - 2.1. Preparations7
 - 2.2. Personal Safety8
 - 2.3. VHF Communications11
 - 2.4. Mooring Boats - Fitness for Purpose11
 - 2.5. Line Handling12
 - 2.6. Mooring Boat Operations14
 - 2.7. Unmooring.....15
 - 2.8. Damage.....15
 - 2.9. Boatmen Aboard Vessels.....16
- SECTION THREE - GUIDANCE TO PILOTS AND SHIPS' MASTERS17
 - 3.1. Ship-board Preparations17
 - 3.2. Mooring/Unmooring Operations18
 - 3.3. Damage.....18
- SECTION FOUR - GUIDANCE TO BERTH OPERATORS.....19
 - 4.1. Safety19
 - 4.2. Mooring Operations.....20
 - 4.3. Damage.....21
- SECTION FIVE - LOCAL MOORING PROCEDURES.....22
- SECTION SIX - COMMON HAND SIGNALS23
- SECTION SEVEN – FURTHER GUIDANCE AND ADVICE25

FOREWORD

The mooring and unmooring of vessels is potentially a hazardous operation. It is also an operation, which demands a high degree of teamwork. To be both efficient and safe, all involved must be properly trained and equipped, and must have a clear understanding of the contribution made by others, as well as their own role and responsibilities.

This Code has been compiled with the assistance of the port community and river users. It describes established good practice for the safe and efficient mooring and unmooring of vessels on the Thames and is published for the guidance of all involved, be they linesmen, boatmen, tug crews, ship's staff, masters, pilots or berth operators. Accordingly, it has been given wide circulation in anticipation that all concerned will wish to contribute to the achievement of safety by complying with its provisions.

The Code is reviewed and amended as necessary, but in any event at least every three years. This edition replaces the 2010 Code of Practice version, following a number of updates to this new guidance document.

July 2016

SECTION ONE - INTRODUCTION

1.1. Responsibilities for the Safety of Personnel

All those with a responsibility for personnel or equipment involved in the mooring of vessels have a duty to ensure that safe working practices are followed, and that associated equipment is fit for purpose. They should also ensure that those involved are properly trained. Thus, a vessel Master remains responsible not only for the safety of his crew onboard, but also when they are working at his direction in mooring operations. He is also responsible for the provision of their Personnel Protective Equipment (PPE).

Mooring is a 'dock operation' as defined in the Docks Regulations 1988. The responsibility for planning mooring operations lies with the Berth Operator as required by Regulation 5 of the 1988 Regulations.

The Berth Operator of a jetty or mooring buoy is also responsible for conducting a formal risk assessment of the mooring operation at the berth and for ensuring that all equipment provided by him is fit for purpose and well maintained. In addition, he should ensure that the work area is kept clear of hazards.

Where Linesmen or Boatmen are contracted to provide mooring assistance, it is the responsibility of the providing organisation as their Employer to ensure that appropriate PPE is provided and that all other equipment is fit for purpose. Similarly, where Linesmen or Boatmen are directly employed by a Berth Operator, it is the latter, again as the Employer, who is responsible for any associated equipment including the provision of PPE, and for determining safe levels of manpower.

Those Boatmen and Linesmen who are self-employed also have a responsibility to ensure the provision of appropriate PPE.

1.2. Co-ordination of Mooring Operations

Responsibility for co-ordinating a mooring operation lies with whoever has the conduct of the vessel, be that the Master or the Pilot. It is not the task of those providing mooring assistance.

The number of personnel employed in any mooring operation should be determined having due regard for the size of the vessel, the prevailing operational circumstances, the weather, and the state of tide.

In all circumstances, sufficient manpower should be provided to ensure that individual Linesmen or Boatmen are not exposed to undue risk, and that the operation can be conducted safely and efficiently. Due regard should also be given to the size, weight and scope of the mooring lines to be handled.

The practice of mooring/unmooring using a single Linesman is strongly discouraged, except where the size of the vessel and weight of mooring lines are such that the person concerned is not at risk.

1.3. Self-Mooring Operations

The mooring of vessels using members of the crew only is considered to be potentially dangerous. Suitably trained and experienced Boatmen and/or Linesmen should normally be

employed to undertake the operation. Self- mooring should only be attempted following formal risk assessment by the Berth Operator, as required by the Management of Health & Safety at Work Regulations 1999.

This risk assessment should take into account the size of the vessel in relation to the berth and/or mooring buoys, the potential dangers to personnel and the weather and tidal conditions. In all cases the potential risks to personnel should have been reviewed so as to ensure their safety.

It must be stressed that the Master of a vessel who authorises self-mooring, remains personally responsible for the safety of his crew. Where members of the crew are so employed, it is the responsibility of the Master to ensure that all risks have been fully assessed and that the crew is provided with appropriate PPE.

Regulation 4 of the Merchant Shipping (Means of Access) Regulations 1988 requires that access to and from the shore be provided in a safe manner. The Merchant Shipping Act 1995 (Part IV) is also relevant in this matter. Masters are advised to note their obligations when considering whether to use ships crew to moor/unmoor their own vessels.

1.4. Mechanical Mooring Devices

The technical details and operating procedures for such equipment must be discussed and agreed with the Harbourmaster during the development stages and should include as a minimum; detailed calculations of the mooring forces and suitability of the intended equipment as well as procedures to ensure the safety of the vessel and other river users in the event of a mechanical mooring equipment failure.



SECTION TWO - GUIDANCE TO BOATMEN AND LINESMEN

All personnel involved in mooring operations should be sufficiently fit and capable of the physical task in hand and should ensure that they have available appropriate PPE, and that they know how to use it. All PPE equipment should be cleaned, maintained and checked on a regular basis, as recommended by the manufacturer.



2.1. Preparations

Boatmen and Linesmen should normally be ready for work with mooring boats fully manned and equipment checked 15 minutes before the time ordered.

Equipment requiring testing includes the following:

- heaving lines and messenger ropes of sufficient strength for the job in hand;
- winches on the jetty for heaving in the messenger; shore wires or lines provided;
- quick release hooks;
- VHF radios; and
- mooring boats and associated equipment.

The person supervising the Linesmen/Boatmen should confirm with the Berth Operator the required mooring plan, and any specific positioning requirements. He should make VHF contact with the vessel in good time to check communications. He should also ascertain and agree the berthing arrangements and determine whether any non-standard arrangements are required by the Pilot or Master. In complex situations, it may be necessary for the supervisor to board the vessel in order to discuss arrangements with the Master or Pilot.

The supervisor should also establish whether fibre or wire moorings are to be used in order to ensure that there are sufficient persons available in the mooring boats and/or on the berth.

2.2. Personal Safety

Personnel involved in mooring operations:

SHOULD ALWAYS

- Wear approved and in-date self-inflating lifejackets and other appropriate PPE (e.g. hard hat, safety footwear, etc) throughout the operation.



- Ensure that the working area is safe and free from trip or slip hazards, particularly around bollards.
- Report any trip, slip or other hazards immediately to the Berth Operator.
- Ensure that all ladders are safe, in good condition and free from obstruction.
- Check the condition of mooring bollards, but stand well clear whilst waiting.
- Remain alert to what the vessel crew and fellow Linesmen are doing.



- Always hold a line by the side of the eye or the standing part. Throw the eye of a rope over a bollard or hook.
- Refuse a stranded or damaged wire whilst notifying the mooring Supervisor and vessel.

Personnel involved in mooring operations:

SHOULD NEVER:

Stand in the bight or eye of a mooring line at any time.



Uncontrolled when printed or downloaded



- Walk over a slack mooring line between a bollard and a ship. Stand astride, stand on or walk over taut mooring lines. Stand
- between a mooring line and the quay edge.
- Let a wire rope slip through the hands or slide a hand along a wire.
- Wear rings or other hand jewellery. Sit on the bollard or the quay edge.
- Stand behind a bollard when the ship is heaving alongside.
- Stand in a "DANGER ZONE", i.e. in the area into which a line under tension could recoil.



Reproduced with the kind permission of the Cayman Islands Shipping Registry

2.3. VHF Communications

VHF communications are a vital component of safe mooring operations. It is essential that those onboard a vessel, in the mooring boats and on the berth (both fore and aft) are able to communicate promptly should the need arise. Once VHF communications have been established and tested, mooring personnel should keep transmissions to a minimum and should normally only call when in doubt, or in an emergency.

Where tugs are being used, mooring personnel should consider monitoring the tug - ship VHF channel in order to have an appreciation of progress in the berthing/unberthing operation.

2.4. Mooring Boats - Fitness for Purpose

All workboats used within the Port of London are required to be inspected and licensed by the PLA as being 'fit for purpose'. As such, they should be sufficiently powerful to handle the size and weight of large mooring lines. The life saving equipment required by the PLA should be available for immediate use. They should be equipped with effective VHF radios.

Engines and other equipment should be maintained to the manufacturer's specifications and be properly serviced. Equipment such as heaving lines and messengers used to haul the ship's lines up the face of the berth or dolphin should be of appropriate length and strength. All equipment should be checked before the start of each operation.

Boats should be crewed such that they are capable of handling safely all the wires and ropes needed to complete the operation. It is strongly recommended that safe manning in mooring boats should include a Coxswain and at least one Linehandler. The person in charge of the boat should meet the minimum competency standards as specified.

2.5. Line Handling

Following extensive consultation with many experienced Linesmen on the Thames, the following guidance has been identified as being "best practice" and is published as part of the Code for the benefit of all conducting mooring operations on the Thames:

Mooring at a Berth

- Despite repeated calls by the PLA and the Maritime & Coastguard Agency (MCA) issuing a Safety Bulletin that advise weighted heaving lines are illegal and dangerous, there is still evidence to show that some vessels are occasionally using weighted heaving lines, which can cause serious injury. A weighted line should not be accepted by a Linesman. Linesmen should wear safety helmets at all times. Ship's crew should be instructed not to use weighted heaving lines and the PLA have issued instructions to Linesmen to cut off any weighted heaving lines and any added appendages if found to be used during mooring operations. Furthermore the removed sections will be retained as evidence in the event of any legal action against the vessel and/or user.
- Badly maintained or defective mooring lines can be dangerous, and should not be used. Where a mooring gang sees that a defective line has been supplied, the situation should be reported immediately to the vessel, which should provide a replacement.
- Linesmen should keep clear of the jetty edge when hauling lines ashore. Lines under tension should not be walked along a jetty. The weight should always be taken by one person whilst another walks a slack line up the jetty. Linesmen should be alert to the dangers posed by vehicles and cranes moving in the vicinity.



- All mooring lines on a bollard should be 'dipped' to facilitate prompt and easy release. Lines should only be "dipped" when slack, and when the weight of the line is held by another person or stopper. Where two Linesmen are so engaged, careful coordination between them is essential as the weight of the line is transferred to the bollard.
- Once a line has been placed on a bollard, slack should be taken in order to keep the line clear of the water. Lines should only be tensioned on the specific instruction of the Master or Pilot.

- Linesmen should never stand behind a bollard once a line has been placed on it. A line can come under rapid and sudden tension as a result of vessel movement, or listing. Injury to personnel in the vicinity can be caused when sudden tension causes a line to "snake". Where tension is extreme, it is possible that a line will part. In such circumstances, man-made fibre ropes and steel wires will recoil violently and can inflict serious injury or death.
- Wire ropes are prone to snagging, particularly near the splice. Mooring gangs should be alert to this risk and should take appropriate precautions.
- Forward and aft springs should not normally be put onto the same bollard, but if this is unavoidable, they should always be "dipped".
- In some circumstances, the Master or Pilot may instruct that breast lines are not to be run until the vessel is alongside and in position.
- Linesmen should not leave the berth until all lines have been made fast, and the Master and Pilot are satisfied that the vessel is securely alongside and have indicated their agreement for the mooring gang to stand down. Heaving lines and messengers should be returned to the ship or Berth Operator.
- On occasions when it is necessary for a Linesman to board a vessel underway to assist in the mooring operation, embarkation should be via a correctly rigged pilot ladder. Such Linesmen must report their presence on board to the vessel Master and remain under the direction of the Master or Pilot throughout their time onboard the vessel. (See also Section 2.9).

Mooring to a Buoy

- Extreme caution should be taken in circumstances where it is deemed necessary for a Linesman to climb onto a mooring buoy, the Master/Pilot should ask London VTS to advise vessels in the area to proceed at reduced speed, whilst Linesmen are running lines to the buoy.
- Mooring buoys fitted with hooks are inherently less dangerous than those with rings. Where however, a buoy is fitted with a ring, the mooring line should be passed through the eye of the ring and lashed back onto the standing part with at least three turns secured with a reef knot. If mooring lashings are required to be provided by the vessel, the Boatmen Supervisor should inform the Master/Pilot of this requirement in good time. Where the mooring line is a wire, a shackle should be used, which should be moused.
- Rope lashings used to secure a mooring line to a mooring ring should be a minimum 20mm in diameter by 2m in length, and be in good, clean condition.

Greenwich Ship Tier

- Special procedures are in place for the mooring of vessels at Greenwich Ship Tier. Mooring lines to the wing buoys of Greenwich Ship Tier should be secured using a short webbing strap (SWL 15t) and shackle (SWL 17t). To secure the strap to the buoy, the webbing strap should be looped one end through the hawser link of the buoy and the other end through the eye of the mooring line with the eyes of the webbing strap placed one in the bow of the shackle and the other against the pin of the shackle ensuring that the shackle is not fouled. An 'R' clip should then be inserted into the pin of the shackle to prevent any movement when secured.

- The webbing straps and shackles required for mooring at Greenwich Ship Tier are available from the PLA. Boatman should contact the PLA in good time prior to the vessel arriving to ensure that the equipment is available and provided onboard the mooring boats in preparation for mooring operations.



2.6. Mooring Boat Operations

- Care should be taken at all times to keep mooring boats clear of vessel propellers and tugs assisting in the mooring/unmooring operations. The Boatman in charge of a boat should not allow it to come in close to the stem or stern without having first obtained clearance from the Master or Pilot on VHF radio.
- Whenever possible, lines should always be run straight forward and aft. Once made fast to a bollard or buoy, heaving should not commence until the boat Coxswain has signalled that the boat is safe and clear.
- Mooring lines should be lowered into the boat and flaked down such that they can be readily hauled up the side of the jetty or dolphin. Mooring lines should be securely lashed in the boat before the boat proceeds to the jetty or dolphin, and in a manner which facilitates quick release in event of an emergency. A suitable cutting instrument should be immediately available in case of emergency. Lines should not be allowed to enter the water, particularly in the vicinity of propellers or thrusters.
- Where a strong on-shore wind or tidal set exists, extreme caution should be taken by all involved to ensure that a mooring boat does not get trapped between the vessel and the jetty. In circumstances where such risk potentially exists, close liaison between the Boatman in charge of the mooring boat and the Master or Pilot is essential.
- A Boatman in charge of a mooring boat should alert the Master or Pilot on VHF as soon as he considers that the situation is becoming dangerous. He should also take whatever avoiding action he deems necessary to ensure the safety of personnel.
- Where there is a risk of the mooring boat being trapped between the vessel and the jetty, consideration should be given to running springs to the jetty using heaving line/messenger from the ship.
- Where a tug is towing on a shortened line and its wash is hindering the control of a mooring boat, or otherwise putting it at risk, the Boatman in charge should notify the Master or Pilot, and ask for the towing line to be extended.

2.7. Unmooring

- Unmooring should not commence until the ship or shore gangway has been properly secured, or brow landed.
- No mooring line should be slackened or released except on the specific instruction of the Master or Pilot. Likewise, slackened lines should not be released until advised by the Master/Pilot as such lines may still be required for warping purposes.
- Linesmen should be aware that added tension can be put on a mooring line during an unberthing operation, and especially when using engines to “spring off”. Extra strain can also be put on mooring lines when using tugs, or when wind and tide are setting the vessel away from the berth.
- A mooring line should never be let go under tension. Once a line has been released from a bollard or hook, it should be walked clear of any obstruction, unless it has been released using a triggered slip hook. All personnel in the vicinity should stand well clear.
- When releasing a mooring line, care should be taken to hold it by the side of the eye, and to avoid hands getting between the line and the hook or bollard.
- When releasing a dipped rope, sufficient slack should be pulled through the eye of any other ropes, so that the eye of the line to be released may be pulled over the top of the hook or bollard. This will facilitate clearing any subsequent jam as and when the line is put under tension.
- Where a mooring is badly jammed, it may be necessary to slacken briefly other lines on the same bollard, whilst taking care not to release them.
- When releasing mooring lines at the stern, including after breast lines and backsprings, they should be controlled and if possible kept clear of the water to reduce the risk of fouling propeller(s). Berths can sometimes provide messenger lines to assist the process. They should not be released until the onboard mooring team confirm they can immediately haul onboard.

2.8. Damage

Any defects or damage to a berth or its infrastructure found before or occurring during the berthing operation should be reported as soon as possible to the Berth Operator, the Master or Pilot of the vessel and the Harbourmaster via the appropriate VTS Centre.



2.9. Boatmen Aboard Vessels

Boatmen and Berth Operators/Ships' Agents employing them on behalf of the vessel Master, are reminded that Boatmen (this is not a reference to Watermen providing shifting pilotage services) are employed to assist in the berthing/unberthing of a vessel. They are an important and integral part of the mooring operation, but it should be clear that the mooring operation is under the control of the vessel Master and /or Pilot, and no one else.

On those occasions when the mooring operation requires that one or more Boatmen board the vessel, they should:

- Make themselves known to the Master and/or Pilot before boarding the vessel and seek the permission of the Master to come on onboard and board only when it is safe to do so;
- Establish and agree their role in, and the requirements of, the mooring operation, with the Master and/or Pilot before the operation commences;
- Maintain effective communication with the Master and/or Pilot throughout the operation;
- Follow the instructions of the Master and/or Pilot; and
- Obtain the agreement of the Master and/or Pilot to depart at the conclusion of the berthing/unberthing operation, at an agreed time and in a safe manner, advising the Master and/or Pilot when they are clear of the vessel.

Any unexpected changes to the mooring plan/arrangements should always be made known to the Master and/or Pilot and a revised plan agreed. The Master and/or Pilot always remains in charge of the mooring operation, and Boatmen should take their instructions from the Master and/or Pilot.

SECTION THREE - GUIDANCE TO PILOTS AND SHIPS' MASTERS

When berthing and unberthing, it is the duty of the Master and Pilot to ensure that the vessel is handled in a safe and controlled manner, having due regard to the safety of those on the berth, in mooring boats as well as the crew of the vessel. Care should be taken that undue strain is not put on springs or other mooring lines and consideration should be given to the use of tugs over and above the recommended requirement in adverse weather conditions. Responsibility for co-ordinating the mooring operation lies with whoever has the conduct of the vessel, be that the Pilot or Master.

3.1. *Ship-board Preparations*

- Anchors should be cleared away and winches and capstans should have been checked before arrival at the berth.
- Mooring lines. Apart from a visual inspection by crews prior to berthing and periodic inspections whilst alongside, mooring lines should be periodically inspected along their entire length at least once a month. The wear along the rope should be externally examined and it is recommended that major damage should not be cropped out and replaced with a short splice as this will reduce the strength of the rope. If there is any doubt as to the strength or integrity of a rope then it should not be used and replaced immediately.
- All mooring lines not on tension winches or drums should be coiled or flaked neatly on deck ready for use.
- Lines on self-tensioning winches should be checked prior to use to ensure that they run freely and are not trapped on the drum.
- VHF communications should be established early with all involved in the mooring operation. Linesmen, Boatmen, Tugmasters and the Berth Operator should all be briefed on the mooring/unmooring plan and their role in it.



- Late changes to ETAs should be avoided. Where unavoidable, any such change should be forwarded to the Master/Pilot by the appropriate VTS Centre.

3.2. Mooring/Unmooring Operations

- Ship's crew should be instructed not to use weighted heaving lines and should they be found during mooring operations they should be cut off and retained as evidence in the event of any legal action against the vessel and/or user.
- No mechanical throwing devices are to be used.
- Before bringing a mooring boat under the bow to collect a line, the ship's anchors should have been secured i.e. not in use or being prepared for use. Similarly, a mooring boat should not be allowed under the stem or stern whilst thrusters and engines present a hazard. Boats should keep well clear of a dredged anchor.
- Where there is an on-shore wind or tidal set, particular care should be taken to ensure that the mooring boats are well clear before allowing the vessel to settle onto the berth. The running of lines should be monitored carefully. Attentive watch should be maintained on the appropriate VHF channel. Where the berth configuration and size of vessel permits, consideration should be given to running springs using heaving lines from the ship instead of using mooring boats.
- When paying out mooring lines from the ship, care should be taken to avoid excessive weight for the Linesmen by keeping the bight to a minimum and under control.
- Ship's mooring lines should not normally be used for towing operations except in an emergency, or where a proper risk assessment has been carried out. Where such use is authorised, extreme caution should be taken to ensure that the size and condition of the line are suitable and that it is kept slack and under control when lowering to the tug and making fast. Crew should stand well clear and be alert to the possibility of the hawser coming under sudden tension or a parted line snaking or recoiling.
- Care should be taken to ensure that the vessel is moored in the correct position, and as required by the Berth Operator, before mooring personnel are stood down.
- Appropriate lifesaving equipment should be supplied onboard the vessel at the mooring stations and should be available for immediate use.
- When running mooring lines ashore, they should normally be passed via the mooring boat crew, unless otherwise instructed by the Master or Pilot.
- The Master and Pilot of a vessel equipped with controllable pitch propellers or stern thrusters should be aware of the inherent dangers which exist in relation to after mooring lines.
- The Pilot should not leave the bridge or break communication with the Boatmen/Linesmen until the mooring operation is complete.

3.3. Damage

Any damage caused to the vessel, mooring boat or berth during berthing should be reported to the Berth Operator and the Harbourmaster via the appropriate VTS Centre immediately on completion of the operation.

SECTION FOUR - GUIDANCE TO BERTH OPERATORS

4.1. Safety

It is the duty of a Berth Operator (under Health & Safety at Work legislation) to maintain a safe work area, clear of potential hazards. To this end, a risk assessment should be conducted in respect of mooring and cargo handling operations at the berths.

It is also the responsibility of a Berth Operator to ensure that the berth dimensions and mooring arrangements are adequate to accommodate safely any ship intending to secure or work alongside. In particular, the Berth Operator should routinely establish the water depth available at the berth by conducting hydrographic surveys. The results of these surveys should be forwarded to the PLA Port Hydrographer.

Other precautions that should be taken include:

- Safe access to and from the berth should be provided.
- Ladders on jetties and dolphins should be properly maintained and checked regularly.
- Mooring dolphins should be provided with appropriate safety rails and personnel protection arrangements.
- At night and during poor visibility, the work area should be adequately lit. Mooring bollards not available for use should be boxed over or painted red.
- All persons engaged in the mooring operation should wear appropriate PPE.
- A means of de-icing jetties and dolphins should be available when weather conditions warrant such action.
- Lifesaving equipment, capable of being used at all states of the tide, should be positioned at appropriate intervals on a jetty.
- Disposition of bollards should be such that not more than 2 moorings have to be placed on a bollard at any one time.
- Bollards which become unusable for whatever reason should be reinstated to full serviceable condition as soon as possible and should be identified as out of service.



Uncontrolled when printed or downloaded

4.2. Mooring Operations

Shore-based mooring operations are subject to legislation enforced by the Health & Safety Executive. In particular, the Docks Regulations 1988 require that all mooring operations are properly planned and the Management of Health & Safety at Work Regulations 1999 require that written risk assessments of planned mooring operations are carried out.

In addition, Merchant Shipping legislation, enforced by the Maritime & Coastguard Agency includes similar requirements relating to ships' crews.

Effective communications should be established between the Berth Operator and the Boatmen/Linesmen. The Berth Operator should be aware of the latest ETA of the vessel, and of the number of Boatmen/Linesmen required to do the job. He should also ensure that sufficient numbers of Boatmen/Linesmen attend to ensure safety.

At a Jetty/Berth

- Berth Operators should normally provide a Responsible Person on the jetty to facilitate and oversee the mooring operation.
- Any specific requirement in respect of vessel position should be made known to the Linesmen Supervisor, who will relay the information to the vessel Master or Pilot.
- All equipment at the berth required for mooring should be checked before the operation commences. Any defects should be reported to the Linesmen and, if appropriate, to the vessel Master or Pilot.
- Jetty fendering should be checked prior to berthing. Where an obstruction exists on the jetty face, its existence and location should be reported to the vessel Master, Pilot (if carried) and the Harbourmaster.
- The details and location of any damaged fendering or fendering/berth face under repair should be reported to the Master and Pilot before the vessel berths.
- The Berth Operator should ensure that shore cranes are in the correct position, and that booms do not protrude beyond the jetty during berthing operations. Cranes not required for loading/discharging, and other potential obstructions, should be moved well clear of bridge wings and bow flare.
- Shore cranes should not be moved during the mooring operation, nor as the vessel approaches the berth.
- Bridge positioning signs or manifold connection flags (prominent and illuminated at night) should be used on the jetty to assist in positioning a vessel before landing.
- Consideration should be given to reducing the risk of chaffed lines by providing rope guides or running bars where small ships are expected to lie alongside over low water.

At a Buoy

- Where mooring buoys are fitted with rings, the shackle required for securing the mooring line should be of an appropriate safe working load and readily accessible.

Uncontrolled when printed or downloaded

- The buoy and its equipment should be well maintained. Suitable hand holds are to be provided if mooring requires personnel to board the buoy.

4.3. Damage

Any damage caused to the vessel, mooring boat or berth during berthing should be reported to the Master, Pilot and the Harbourmaster immediately on completion of the operation.

SECTION FIVE - LOCAL MOORING PROCEDURES

There are a number of local practices and procedures applicable at some berths and terminals on the tidal Thames. These include:

Shellhaven and Coryton:

- At Shell and Coryton, VHF Channel P2 (Channel 36) is used for mooring vessels over 11,000 gt and 160m in length. Channel 10 is used for all other vessels. If two vessels over 11,000 gt and 160m in length are berthing/unberthing at the same time, the vessel at Coryton will work Channel 10; the vessel at Shell will use P2.
- Tankers over 4,000 gt inbound for Canvey and Shell, should be prepared to rig a pilot ladder on the side nearest to the jetty to allow the Boatmen to board. Tankers over 11,000 gt or 160m inbound for Canvey, Shell, and Coryton oil and gas terminals will require to take a Berthing Pilot at Sea Reach No.6 or 7, which may necessitate a ladder being rigged on each side. Vessels should be given adequate notice of this requirement.
- The berth operator has produced its own 'Guidance for Mooring and Unmooring Operations' for use at the Coryton jetties.
- All VHF radios used in tanker mooring operations must be 'Intrinsically Safe'.

Northfleet Hope Container Terminal (London Container Terminal)

- Self-tensioning winches are not to be used by vessels using either the upper and lower berths. In addition, all vessels over 200m loa, when lying head-up on the upper berth are required to put out four head lines; or when lying head down on the upper berth, put out four stern lines.

SECTION SIX - COMMON HAND SIGNALS

The following hand signals are in common use :

1. An outstretched arm with hand open and flat being waved downwards means "slack off".
2. A sharp upward movement of the arm with the hand cupped towards the signaller means "let go" or "cast off".



1



2

3. Crossed arms in front of the body means "make fast" or "is made fast".
4. A circular movement of the hand above the head means "heave away".



3



4

5. Both hands raised above the shoulders, with open hands facing forward means "stop".
6. A raised hand with the fist being clenched and unclenched means "heave or hoist slowly" (inching).



5



6

SECTION SEVEN – FURTHER GUIDANCE AND ADVICE

Further guidance and advice can be found in the following publications:

- Code of Safe Working Practices for Merchant Seamen
- Current relevant Merchant Shipping Notices
- Docks Regulations 1988
- Management of Health & Safety at Work Regulations 1999
- Current relevant Merchant Shipping Acts

While the advice given in this Code of Practice has been developed using the best information currently available, it is intended purely as guidance to be used at the user's own risk. It is for the user to decide in each case whether, in the circumstances arising it is appropriate to use the guidance. No responsibility is accepted by the Port of London Authority (PLA) or by any person, firm, corporation or organisation who has been in any way concerned with the supplying of information, the compilation or publication of this Code. Or for the accuracy of any information or advice included in it or for any omission from it or for any consequences whatsoever resulting directly or indirectly from compliance with or adoption of this guidance.

This Guide and other PLA navigational information and advice, Byelaws and Directions can be viewed and downloaded from the PLA website at www.pla.co.uk.

Produced by: The Port of London Authority
London River House, Royal Pier Road, Gravesend, Kent DA12 2BG
Telephone: 01474 562 269 | Email: SafetyManagement@pla.co.uk