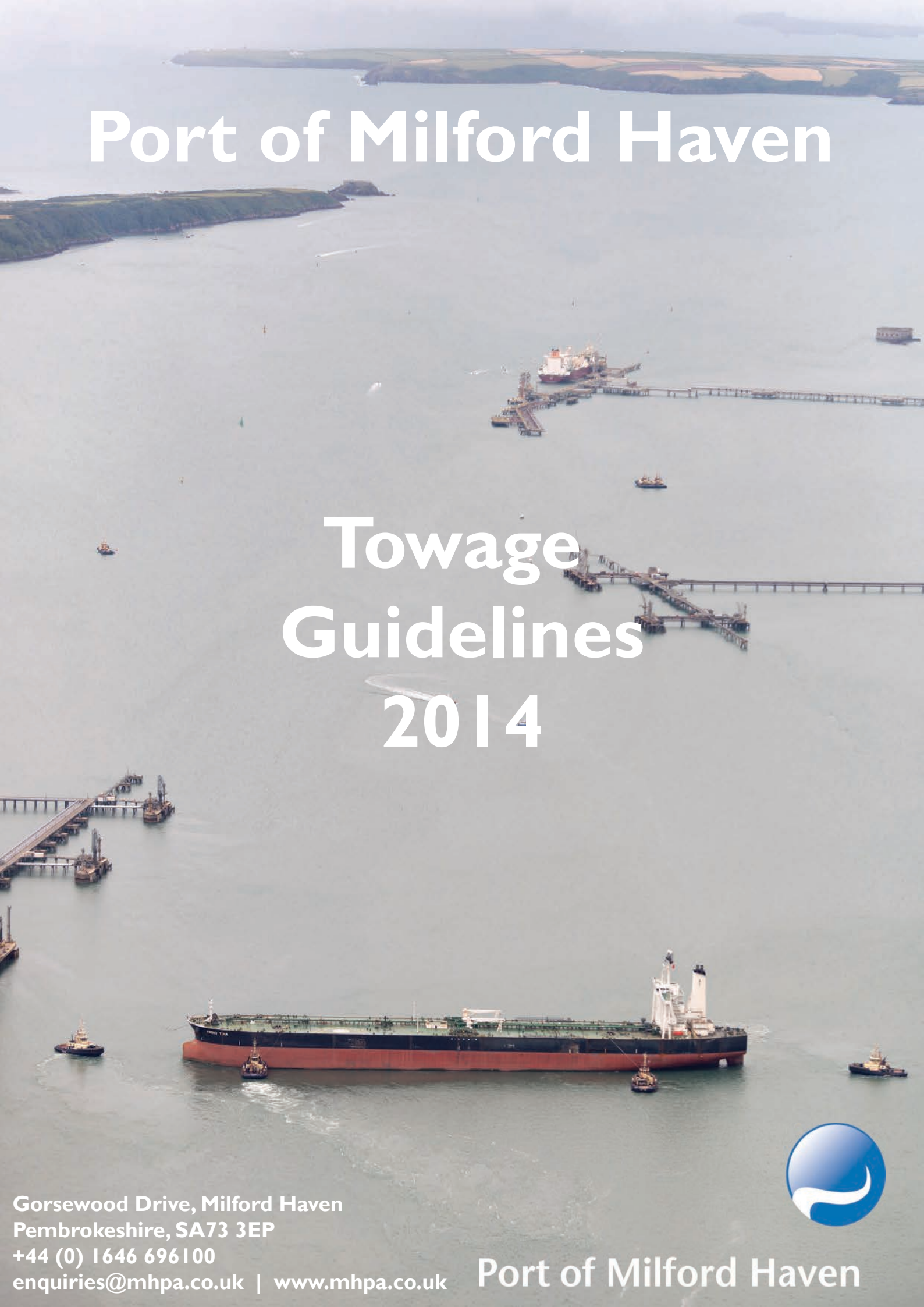
Port of Milford Haven

Towage Guidelines 2014



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Port of Milford Haven

PORT OF MILFORD HAVEN

SHIP TOWAGE GUIDELINES

CONTENTS

1. **INTRODUCTION** 2
2. **PREPARING FOR TOWAGE OPERATIONS** 2
   a) **Planning and Coordination** 2
   b) **Pilot/Vessel Master Exchange** 3
   c) **Pilot/ Master/Tugmaster Exchange** 4
   d) **Preparations on-board the tug** 4
   e) **Communications** 5
   f) **Tow Master Requirements on Dumb Tows** 10
3. **TOWAGE OPERATIONS** 11
   a) **Connecting and disconnecting towing gear** 11
   b) **Safe speed** 12
   c) **Interaction** 12
   d) **Tug Escorting** 14
   e) **PEC Requirements** 17
   f) **Towage in Restricted Visibility** 18
4. **TUG REQUIREMENTS** 19
5. **FURTHER GUIDANCE & ADVICE** 21

1. INTRODUCTION

Ship Towage is a vital service required for the safe and efficient movement of vessels within the Port of Milford Haven.

The purpose of this guide is to provide generic and specific instructions to the Ship's Master, Tug's Master and Pilot engaged in tug assisted navigation and also the scope for using tugs as a means of reducing risk.

The Port of Milford Haven has used both simulation and "real" trials to prove the effectiveness and safe operation of tug assist moves. These trials have involved both pilots and tug masters.

Examples of these are:

May 2001:- Simulation at Fleetwood College to ascertain the suitability of single tug usage on shuttle (DP) tankers.

Active tug escort simulation trials at Marin. Real escort trials off the entrance to Milford Haven with the VLCC "Magnitude" in November 2001.

Simulation trials at Marin pre-LNG arrival 2009.

Escort and emergency training at Marin April 2009.

Simulated LNG Q-Flex moves to Dragon LNG, HR Wallingford, April 2010.

A course covering general workboats as ship handling tugs specifically include connection with their duties within Milford Haven was held March 2005.

2. PREPARING FOR TOWAGE OPERATIONS

a) Planning and Coordination

Before beginning towing operations, a comprehensive plan, as part of the ship's port passage plan and the Pilot's own plan, should be agreed by the Master and Pilot, where a Pilot is embarked. This should take account of all relevant factors, including tide, wind, visibility, ship size, type and characteristics, and specific berth requirements. A good knowledge of the type and capabilities of the tugs allocated to the job is important, in order that the Master / Pilot can ensure tugs are both suitable for the task ahead and positioned on the vessel so as to be most effective to facilitate a safe operation.

Any conflict or mismatch between the required manoeuvre and the tugs allocated must be resolved before the towage operation begins.

Responsibility for co-ordinating a towage operation lies with whoever has the conduct of the vessel being towed, be that the Master or the Pilot. Communication with the tugs will be through the pilot. When berthing and unberthing, it is the duty of the Master / Pilot to ensure that the vessel is handled in a safe and controlled manner, having due regard to the safety of all those involved, including the assisting tugs, line-handlers or mooring gangs and other port users as appropriate.

The number of personnel employed in any towage operation should be determined having due regard for the size of the vessel and the prevailing operational and environmental circumstances. In all cases, sufficient manpower should be provided to ensure that individuals 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 towing gear and lines to be handled.

All those with a responsibility for personnel or equipment involved in assisting the towage / 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, adequately briefed in their duties and issued with, and use, suitable and effective personal protective equipment (PPE).

b) Pilot/Vessel Master Exchange

In addition to the standard information passed to the Pilot, it is recommended that the Master provides the Pilot with a plan showing the layout and safe working load (SWL) of the mooring fittings and inform him:

- which fairleads, chocks, bollards and strong points can be used for towing;
- the SWL of this equipment;
- areas of hull strengthened or suitable for pushing by tugs and relevant identification marks employed;
- any special features (e.g. controllable pitch propellers, thrusters etc.);
- power available at fairleads

The Pilot should advise the Master of the following:

- the tug rendezvous time and position;
- the number of tugs and the mode of towage;
- the planned (optimum) ship speed when connecting the tugs' lines;
- whether the ship's or the tug's lines are recommended for use;
- the type of tugs to be used and their bollard pull;
- if escorting, the maximum towline force that the tug may generate at escort speeds;
- maximum planned speed for the passage;
- the method by which the ship's crew should heave and release the tug's towline;
- a dedicated crew member to monitor tug and tug's line during heave and release;
- the prohibition on the use of weighted heaving lines;
- that on release, the tug's gear should be lowered back under control;
- areas of the transit posing particular risks with respect to the possible use of the tug;
- intentions with regard to use and positioning of each tug for berthing manoeuvres;
- intentions with regard to use of tugs in an emergency (escort operations); and
- primary and secondary VHF channels for use in the operation.

c) Pilot/ Master/Tugmaster Exchange

- The Pilot / Master and Tugmaster should, as a minimum, discuss the following issues:
- the SWL of the vessel's chocks, bollards and strong points to be used for towing;
- the tug hook up point, taking into account the prevailing weather and sea conditions, for escorting operation (if appropriate) and berthing;
- the planned (optimum) ship speed when connecting to the tug's lines;
- if active escorting, the start point of the escorted passage;
- the maximum speed of the tug;
- passage details in their entirety while accompanied by the tugs, particularly details of any swing, manoeuvre, release position and sequence of release;
- berthing details in their entirety, including tug positioning around the vessel's hull and the vessel's required position on the berth;
- intended and emergency use of ship's anchors;
- any unusual items regarding the particular vessel as gleaned from the Master / Pilot exchange;
- if appropriate, any shallow water or bank effect areas where significant surges may be experienced that might add to the tug loads;
- the Tugmaster should advise the Pilot / Master (as far in advance as possible of the scheduled manoeuvre) if the tug is experiencing a failure or reduction in its ability to manoeuvre or deliver full bollard pull;
- when confirming that the tug is fast and ready to assist, the Tugmaster should also confirm both the tug's name and her position on the vessel.

d) Preparations on-board the tug

Operations such as mooring and towing impose very great loads upon ropes or wires, gear and equipment. As a result of the imposed loads, sudden failure in any part of the system may cause death or serious injury to personnel. Tugmasters should avoid men being stationed at or unnecessarily near towing gear.

Working in the bight of a wire or rope formed by the lead from the winch or windlass round and through the fairleads and over-side should be avoided. In any case, the consequences of failure in any part of the system must be carefully considered and effective precautions taken.

All fixed and running gear including ropes shall be carefully maintained, tested, certified and regularly inspected against wear, damage and corrosion. Particular attention is drawn to the need to ensure that fairleads, lead bollards, mooring bitts etc. are used appropriately and within their design capabilities and effectively secured to a part of the ship's structure which is suitably strengthened.

The emergency release mechanisms on towing hooks and winches must be tested, both locally and, where fitted, remotely, at frequent intervals to ensure correct operation. All towing equipment in use should be inspected for damage before undertaking and after

completing a towage operation. The release mechanism should be capable of being released on the bridge, locally and in a blackout.

Tug crews involved in towage operations on deck will always wear approved and in-date self inflating lifejackets and other appropriate PPE throughout the operation. They should ensure that the working area is safe and free from trip or slip hazards and remain alert to what the vessel crew is doing.

Mooring winches and other equipment shall be maintained to the manufacturers' specifications and be properly serviced. Equipment such as heaving lines and messengers should be of appropriate length and strength. All equipment shall be checked before the start of each operation. Life saving equipment shall be available for immediate use.

When a tug is engaged on any towage operation all watertight openings must be securely fastened. All watertight openings shall be marked with a sign stating that they are to remain closed during towage operations. Any such openings used whilst moving about the tug during a towage operation are to be re-secured immediately after use.

e) Communications

VHF Working Channels

VHF Channels signals, 8, 10, 9, 12, 15

Whistle Signals

Whistle signals to be used between tug and tow

A power driven vessel and any vessel being towed by it when signalling to each other by means of a whistle shall use the following signals and no others:-

a) Signals to or from a towing vessel ahead:

Tow ahead – one prolonged blast followed by three short blasts.
Tow to port bow – one prolonged blast followed by two short blasts
Tow to starboard bow – one prolonged blast followed by one short blast.
Cease tow – one prolonged blast followed by six short blasts in succession.

b) Signals to or from towing vessel astern:

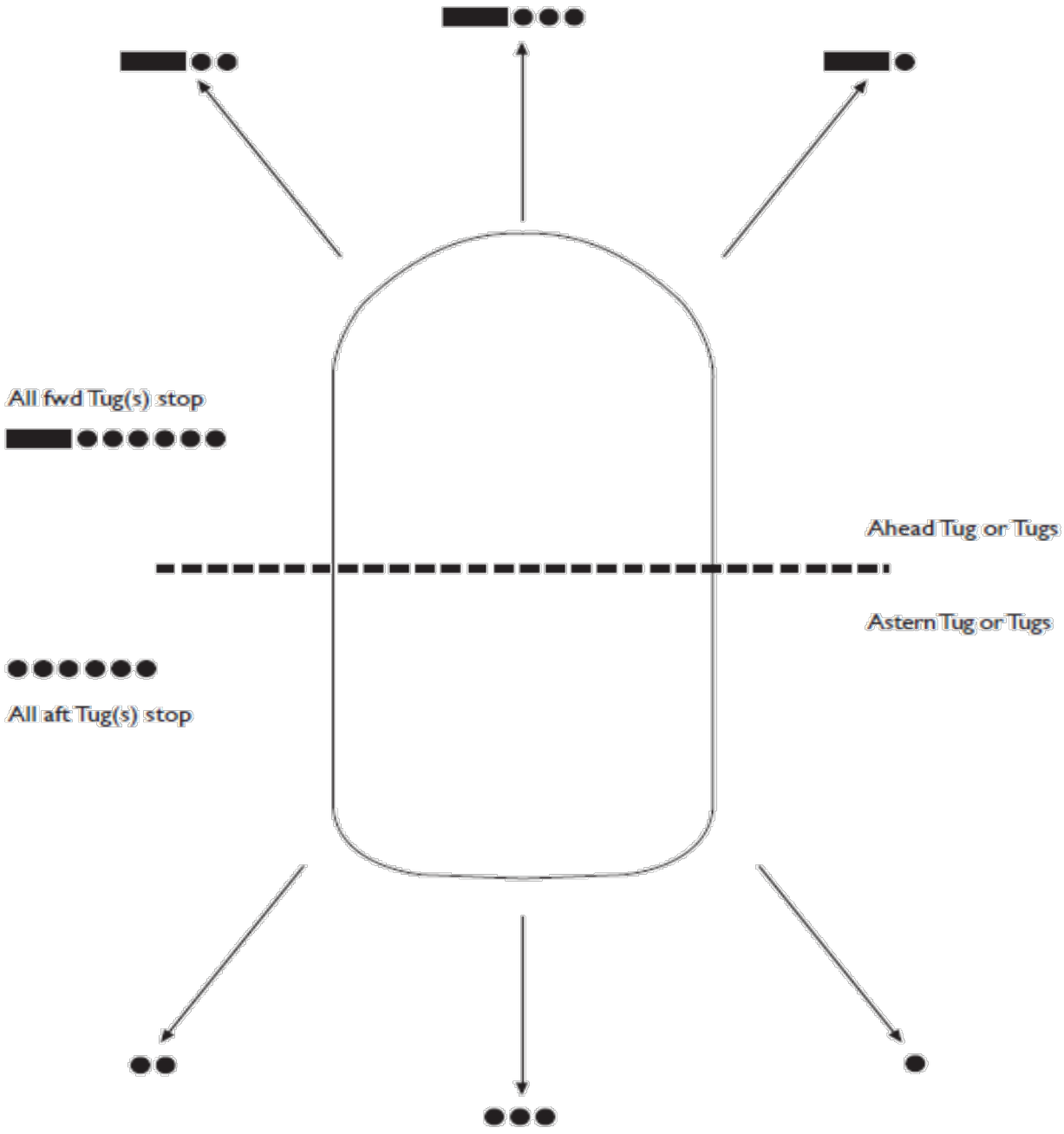
Tow astern – three short blasts.
Tow to port quarter – two short blasts.
Tow to starboard quarter – one short blast.
Cease tow – six short blasts in succession.

c) Signals to all towing vessels:

Hold in position – one prolonged blast followed by one short blast followed by one prolonged blast followed by one short blast.

Let go – one prolonged blast followed by two short blasts followed by one prolonged blast.

Emergency Whistle Signals



Morse signals to/from tugs indicate direction to move ship

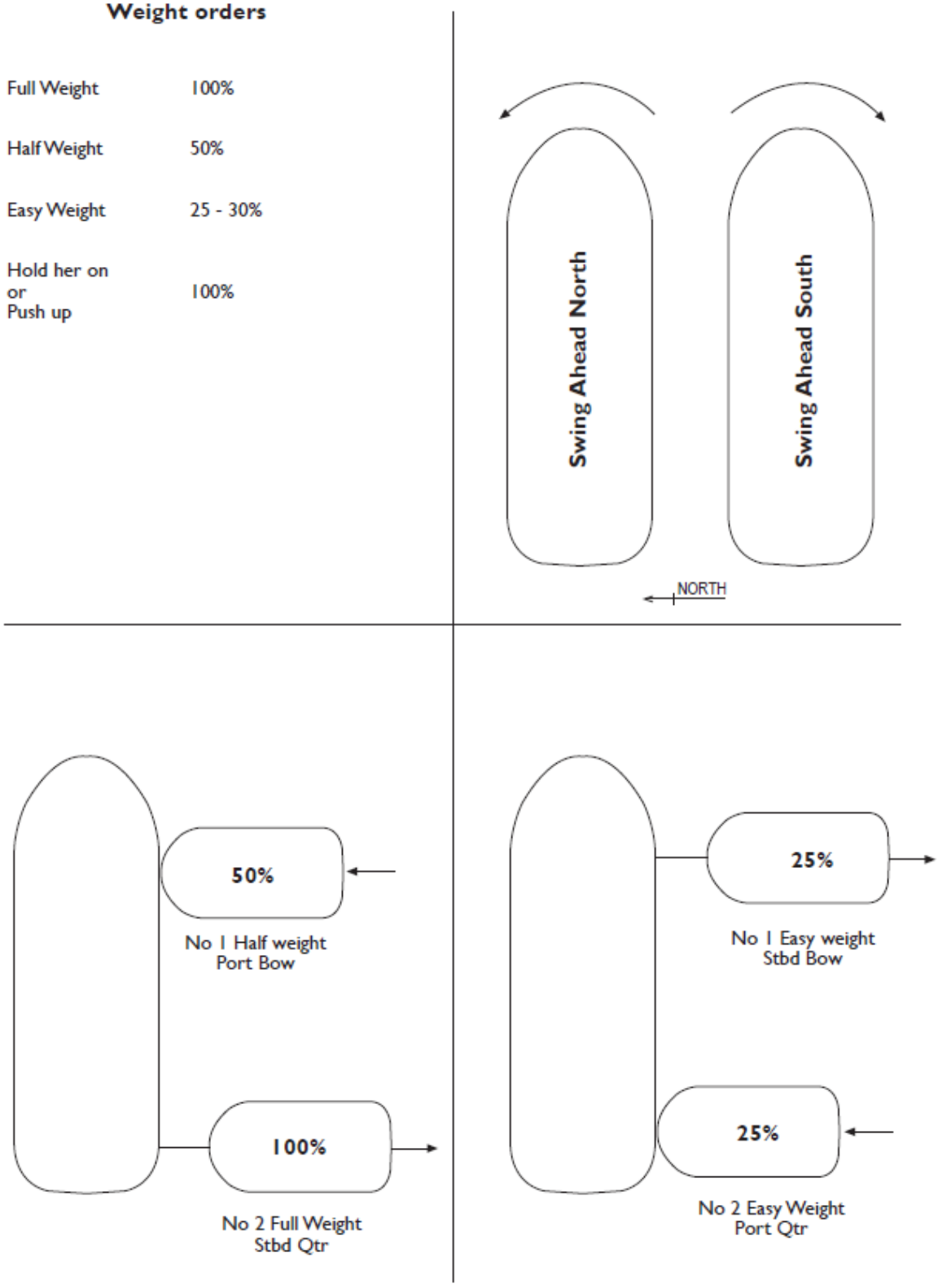
Signals for all tugs

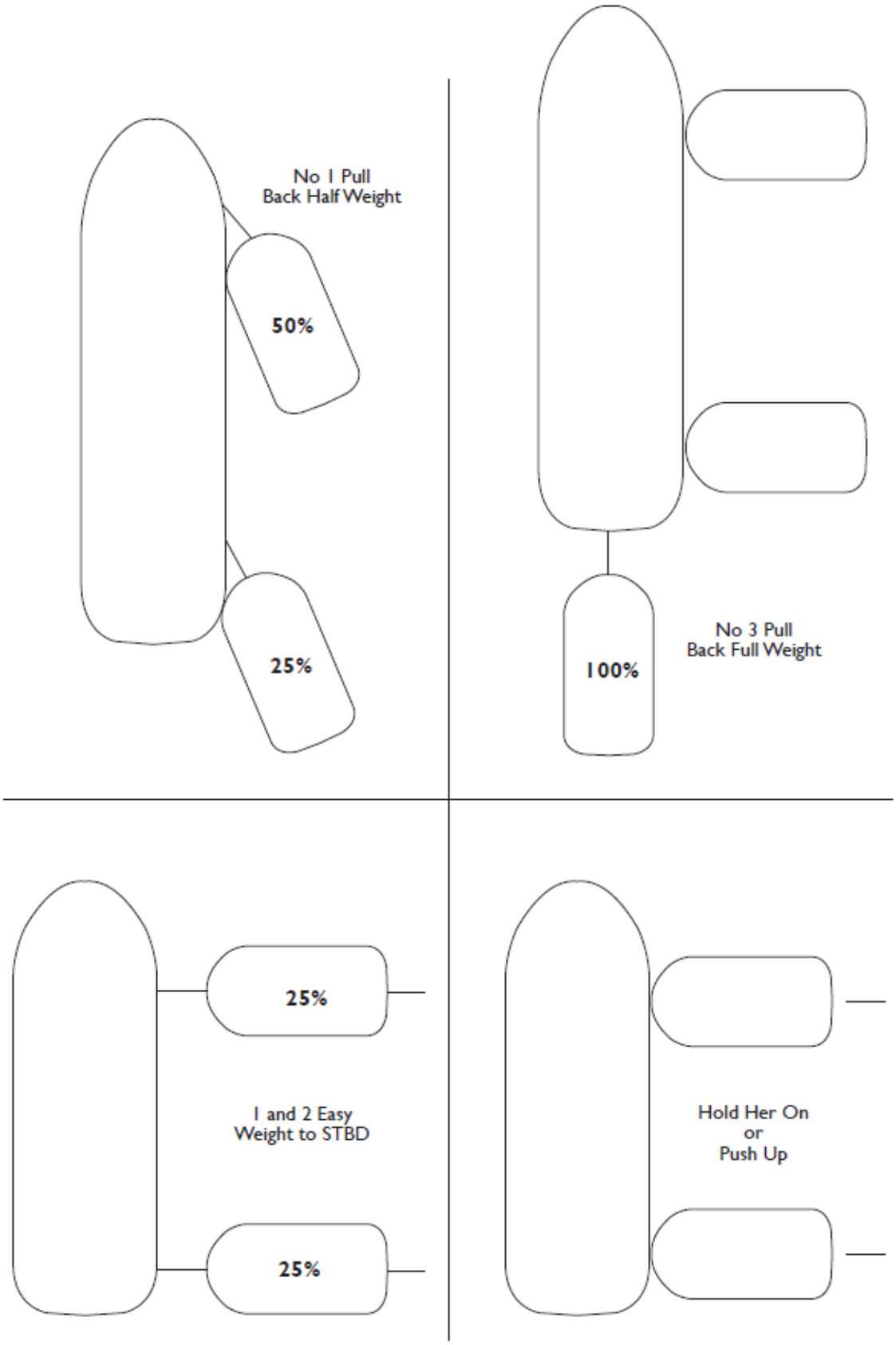
= Hold in position

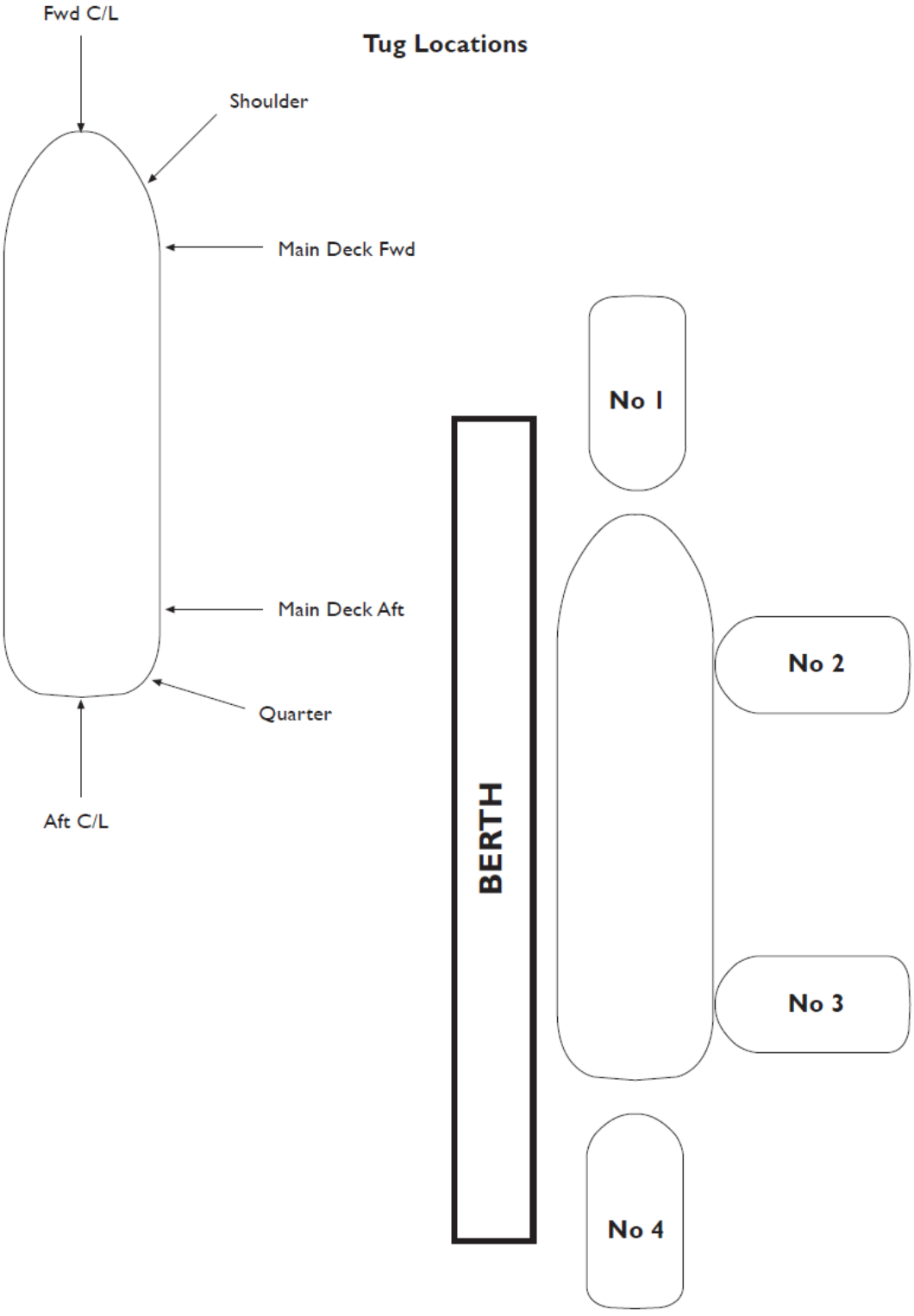
= Let go or knock out (also from tug to ship

Weight orders

Full Weight	100%
Half Weight	50%
Easy Weight	25 - 30%
Hold her on or Push up	100%




No 1 Pull
Back Half Weight
50%
25%
No 3 Pull
Back Full Weight
100%
25%
1 and 2 Easy
Weight to STBD
25%
Hold Her On
or
Push Up



Tug Locations

Numbering System

f) Tow Master Requirements on Dumb Tows

Routine and non piloted

A Towmaster should be nominated for each tow.

The Towmaster will present a tow plan to the Harbourmaster in good time for a review and for permission to be given or other requirements to be accommodated. The tow plan should include taking all the action a prudent Master or Pilot would in having conduct of the operation. This tow plan should include but not be limited to:

Risk Assessment
Method Statement
Number and position of tugs
Type of tug (e.g. push/pull, on hip etc.)
Use of particular tugs
Position of tugs
Use of release mechanism
Manning
Passage plan berth to berth

Regular dumb tow operations e.g. barges, pontoons and leisure operations may be covered with a generic tow plan and details of Skipper/Master/Coxswain qualifications e.g. STCW, Voluntary Endorsement Scheme (MGN 486(M) or other.

Non Routine Dead Tows

The same principle applies to dead tows involving piloted or non piloted craft, e.g. large barges to Gelliswick Bay beach and large, disabled commercial vessels entering or departing Milford Haven.

The nominated Towmaster should present the tow plan as before to the Harbourmaster for approval. This will not unreasonably be withheld but will involve marine staff from MHPA in the decision. To that end, sufficient time must be given for the tow plan to be reviewed.

In the case of complex dumb tows, a Harbourmasters Working Group may be convened consisting of appropriately skilled personnel to ensure that all risks have been considered.

Marine Accident Investigation Branch (MAIB) reports on Chiefton, Ijsselstroom and Flying Phantom Incidents are available for information on the MAIB website: www.maib.gov.uk.

3. TOWAGE OPERATIONS

a) Connecting and disconnecting towing gear

Before arrival at the tug connecting position, the Pilot / Master shall establish effective communications with each tug and agree working channels. Likewise, effective communications must be established between the bridge and the vessel's crew at 'stations' and they should confirm that they are ready to receive the tug.

The vessel's speed must be reduced to that which allows a safe rendezvous and connection with the tug. The required speed should be agreed in advance between the Master / Pilot and with all Tugmasters involved. At all times during the connecting process, the Pilot / Master should be aware of the position and intention of all relevant shipping movements in the area.

The Pilot / Master should ensure that his planning takes full account of the time taken to connect each tow, especially if adverse conditions are likely to extend this process. Account should also be taken of potential language difficulties, which may lead to confusion. Vessel mooring parties should be fully briefed and the Pilot / Master should check when in doubt and be confident that his instructions are being followed.

Ships heaving lines should be readily available and of a suitable make up. **Extra weights must NEVER be inserted in the 'Monkey's Fist' or attached to the heaving line.** A small canvas sandbag is the towage industry's preferred option. Ship's personnel should wherever possible, agree with the tug crew the area where the heaving line is to be thrown, to allow the recipients to move clear. When connecting to the vessel, the tug crew should ensure that the towing gear is clear of any obstructions, able to run freely and is released from the tug in a controlled manner. The ship shall not test the bow or stern thrust controls prior to berthing at the time when the tug is under the bow or stern passing a line. Changes in speed and or course should also be avoided while the towing gear is being connected as it may not be possible for tugs to react sufficiently quickly to sudden increase or decrease in a ship' speed/direction. Where a change in speed /course is necessary, the Pilot / Master should ensure that all tugs involved in the operation are advised in good time.

Svitzer Marine Ltd. tugs may use a compressed air line throwing apparatus to efficiently send a line from the tug to the ship's crew. Before any such exercise is undertaken, the Tugmaster will advise the Ship's Master and Pilot so that appropriate instruction can be passed to crew at stations.

The Pilot / Master shall maintain contact with the Tugmaster / vessel crew throughout the process. He should be ready to revise the intended tug position if the Tugmaster reports any restrictions at the chosen position, e.g. large flare, overhanging anchor or unsuitable push up point. The Pilot / Master must keep all those involved up to date on the plan and apprised of any changes to the agreed plan.

During disconnection, both the vessel's and tug's crew on deck should be aware of the risk of injury if the towing gear is released from the tow in an uncontrolled manner and avoid standing directly below. They should also be aware that any towing gear which has been released and is still outboard may 'foul' on the tug's propeller(s), steelworks or fendering, causing it to come tight unexpectedly. The towline should always be lowered onto the tug deck, never just 'cast off' and left to run, unless specifically directed by the Tugmaster.

The positioning of tugs on a vessel is a matter for discussion between the Pilot / Master and the Tugmaster, having full regard for the areas of the hull which should be avoided, e.g. watertight doors, between frames etc. The forward tug is especially vulnerable when passing up the tow line. This tug has to position itself very close under the bow, sometimes under 1 metre from the ship's water plane. The Tugmaster will be concerned about any bulbous bow or other underwater protrusion, the proximity of the flare of the bow etc. At the same time the Tugmaster is countering the hydraulic pressure wave that exists around the bow to avoid severe interaction.

Flares or cut-aways at the bow or stern are of particular concern and can increase the dangers of interaction. Extra caution should be taken by Pilots / Masters when the tug is making fast under a flare / cutaway, especially when the vessel is moving / swinging towards the tug. The danger is compounded at night with the risk of shadows from deck lighting.

b) Safe speed

Speed is a critical factor for the tug when making fast and letting go. When considering speed it is the **speed through the water** that is of concern. It is generally accepted that 5 to 8 knots is appropriate when making fast and letting go Svitzer tugs in the Haven; however, due consideration should be given to tugs manoeuvring astern.

For other, possibly smaller, tugs a safe speed may be lower and this should be discussed between the Master, Ship Master and Pilot.

For Escort duties entering the West Channel, the optimum speed for the tug to be effective is 8 knots.

Caution must be exercised when using the engines whilst the tugs are working. The stern tug will be affected by the wash and every tug will be affected by the change of speed either up or down, and a rapid change in speed is all the worse. If the situation dictates the use of the engines, the minimum that the situation allows should be used and the tugs should be informed of what the ship is about to do as it will affect their own actions.

In strong tidal conditions a high percentage of the tug's power may be utilised in maintaining position on the vessel before applying thrust to the vessel. If the tugs are made fast alongside they are at their most effective with a minimal ship speed through the water.

c) Interaction

Interaction and its effects on the tug and its handling are well known, and appreciated in port/harbour towage. Pilots, Masters and Tugmasters are reminded that these effects are multiplied as the vessel's speed increases. Areas of high and low pressure exist in and around the ship's hull and these areas can cause adverse movements of smaller vessels in close proximity. The speed of water flowing between the tug and the vessel increases at the

last moment as the tug comes alongside. As this happens the tug therefore has to increase speed to maintain the same speed as the vessel. The Tugmaster has to compensate for the tug either being drawn in or pushed off the vessel.

In areas where interaction exists, and when manoeuvring alongside a vessel, the Tugmaster should be aware of the possibility of underwater obstructions such as bulbous bows, stabiliser fins etc.; and areas of the ship's side, such as pilot doors, which are to be avoided. The Pilot/Master and the crew should be aware of interaction and the effect it may have on the tug. Marine Guidance Notice 199(M) – Dangers of Interaction – provides further guidance and information on the effects of interaction, including when manoeuvring at close quarters.

RUNNING AGAINST THE TIDE

Masters and Pilots should be aware that it is sometimes difficult to manoeuvre a tug into position against the tide without putting any weight on the towline. Sometimes it may be appropriate for a tug to run with the vessel stern first to make fast and thus be ready to tow in the same direction.

PRECAUTIONS DURING TOWAGE OPERATIONS

Once the towing gear is connected, the crew should indicate this to the Tugmaster and then clear the area. Any crew that are required to remain on deck should stand away from the towing gear in a safe position. If the crew are required to attend the towing gear during a towing operation, the length of time exposed should be kept to a minimum.

On both tug and ship, the crew must be aware of the 'snapback zone' as detailed in the Code of Safe Working Practices for Merchant Seamen and the OCIMF publication 'Mooring Equipment Guidelines'.

During towage operations the towing gear equipment and personnel should be continuously monitored and any change in circumstances immediately relayed to the Tugmaster. This is particularly important on tugs where the Tugmaster has a restricted view of the towing area/personnel. Tug and vessel crews should be aware that the towline may have to be release in an emergency situation, and that this may occur without warning.

Ships crew confirm with tug crew that tow is secure. The Tugmaster, having verified with the tug and vessel' crews that the towline is fast to the vessel, must confirm this with the vessel's bridge. The Pilot / Master should then re-confirm this to the Tugmaster, thus completing the communication loop. Sometimes it is not possible for the Tugmaster to see the crew on deck due to structural design or at night when they may be obscured by deck lighting on the ship.

Tugmasters, Pilots and Masters should be aware, at all times, of the position and intentions of mooring boats, especially in strong tidal conditions, at night or during restricted visibility or adverse weather conditions. This is particularly important in circumstances where visibility is limited from the tug's wheelhouse and ship's bridge. Remember that bow and stern thrusters, and the wash from tugs and the vessel being assisted, can all cause significant problems for mooring boats, especially when they are in close to the vessel and/or tug(s),

picking up and running with lines. Controllable pitch propellers are a separate but equally dangerous hazard.

The Pilot or Master should never use the vessel's engines without confirming with the Boatmen and / or Line handlers as to the position of the mooring boats

Sound signals can be used as a warning on occasions when vessel noise compromises VHF monitoring.

d) Tug Escorting

ACTIVE ESCORTING

GUIDELINES FOR PILOTS

(1) Active escorting will be weather limited, the decision to connect and the position of the start of the escort will be made after agreement with the tug Master. The active escort tug will determine if he can make fast using swell height as shown on the Turbot Bank ODAS buoy or similar data source. He will also proceed to sea to determine conditions if marginal.

(2) Weather permitting, inbound vessels will be escorted from zone 4 to the rendezvous position with the berthing tugs, outbound vessels will be escorted from a position off the berth until clear of the entrance buoys in zone 3 or when ordered to disconnect by the Pilot (see attached).

(3) Pilots are to ascertain from the Master which leads and bollards are suitable for attaching the towline.

(4) **Pilots are to advise the Master:**

a. The likely towline forces to be encountered.

b. The speed of passage and the speed of the tug.

c. Method by which the ships crew should take on and release the towline.

d. Areas of transit posing particular risks with respect to possible use of the tug.

e. Primary and secondary VHF channels and the availability of a rate of turn indicator and its operational state.

Pilot/Tug Master Exchange:

a. Position and SWL of attachment point.

b. Mode of escorting depending on conditions. This will always be active on LNGC.

c. Berthing arrangements and repositioning of escort tug.

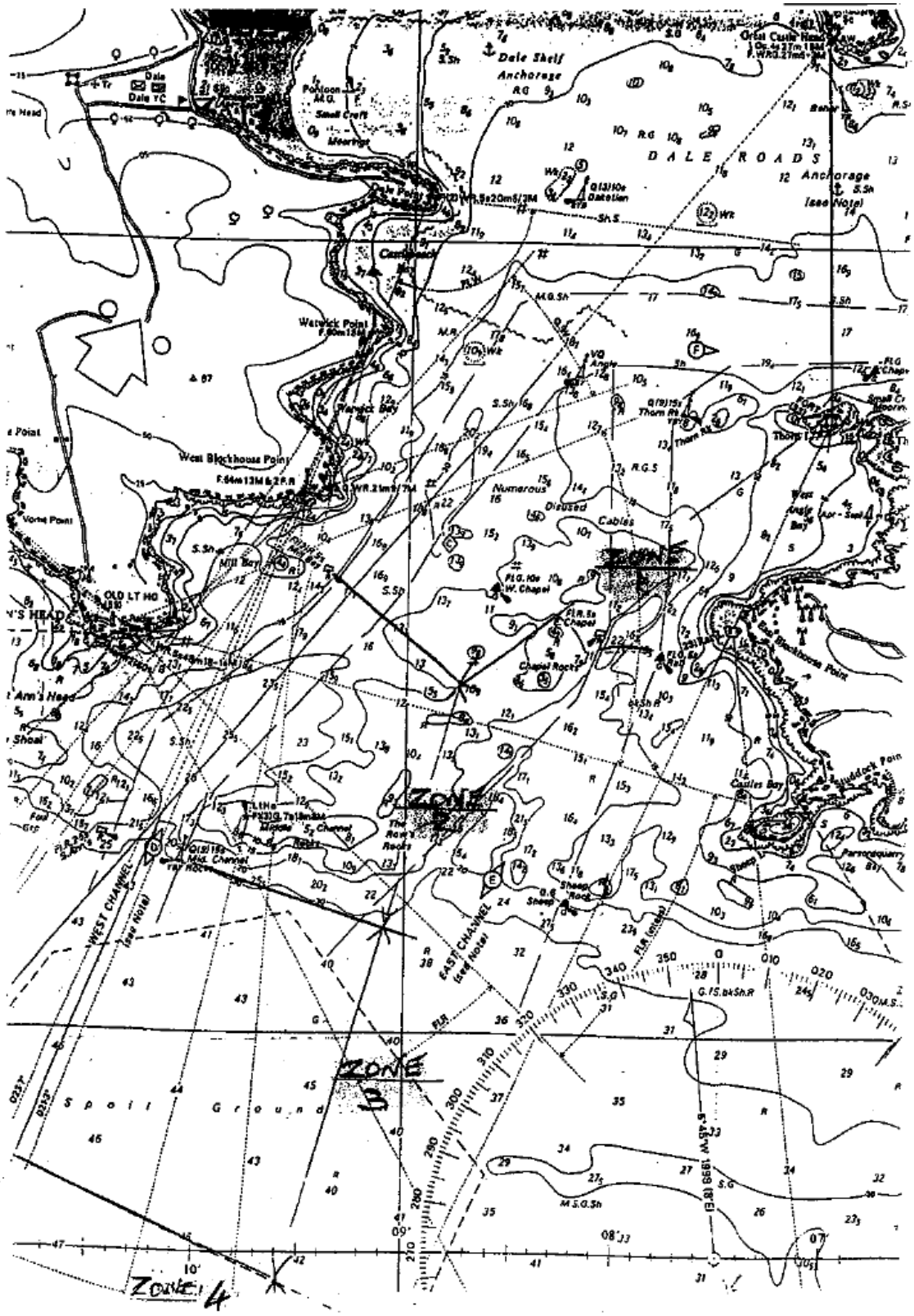
d. Any unusual characteristics of the vessel as gleaned from the Master.

e. Pilots and tug Masters should endeavour to keep each other fully informed during all stages of the operation particularly where safety and navigation are concerned. If an emergency situation arises the speed and ROT of the vessel should be broadcast to the tug Master at regular intervals.

Nominated Tugs:

a. Only authorised active escorting Tugmasters are to be utilised.

b. All refiner and LNG tugs are escort notated and specific tugs are dedicated to LNGC escorting.


Dale Shelf Anchorage
DALE ROADS
Anchorage
Dale
Dale YC
Pontoon
Small Craft Moorings
Castlemorris
Warwick Point
Parrock Bay
West Blockhouse Point
Numerous Disused Cables
Mill Bay
OLD LT HO
W. Chapel
Chapel Rocks
East Blockhouse Point
Castles Bay
Sheep Rock
The Rowy Rocks
WEST CHANNEL (see Note)
EAST CHANNEL (see Note)
Spoil Ground
ZONE
ZONE
ZONE 4

GUIDANCE FOR SHIPS MASTERS

The port of Milford Haven has introduced escorting as a risk control measure designed to improve the safety of vessels navigating within the jurisdiction of the Authority.

Active escorting is seen as the most effective measure though passive escorting is also beneficial.

Active escorting will only take place if the sea state is acceptable to both the pilot and tug master.

From time to time vessels may be required to participate in escorting exercises. However, whenever possible, we will seek to both reach agreement with Masters and minimise delays.

Master/Pilot Exchange

(1) In addition to the standard information to be passed between Pilot and Master, it is recommended that the Pilot is provided with a simple A4 arrangement of the poop deck area showing the layout and safe working load (SWL) of the mooring fittings and inform him of the appropriate point for towing.

(2) The Pilot will provide additional information to the Master over the escorting process.

Escorting is compulsory for:

a. All loaded tankers of 50,000 tonnes deadweight and above.

b. Certain loaded vessels between 25,000 and 50,000 tonnes deadweight carrying persistent oil cargo at the discretion of the Harbourmaster.

c. All LNGC.

e) PEC Requirements

Tug Use for PEC - Requirements to Gain/Maintain Certification

- Knowledge of methods of ship/tug communication in Milford Haven. Tug numbering, positioning and terminology used.

- Knowledge of the Milford Haven tug fleet and its capabilities (Svitzer Marine Ltd, Williams Marine Ltd).

Svitzer DVD (towage compendium, basic introduction to tugs and towing) can be used with recommendation to also use 2nd edition 'Tug Use in Port' by Capt. Henk Hensen.

- Knowledge of the different tug types and their advantages and disadvantages – conventional, ASD, Voith.

Svitzer DVD and 'Tug Use in Port'.

- Trip on a Milford Haven harbour tug – one trip every three years to discuss operational limits, capabilities, etc. with tug Master.

- Tripping with Milford Haven pilot – one trip every three years.

- Tug use included in PEC examinations.

- Tug use to be included in any simulator training.

- Option ***not*** to have tug endorsement and to take pilot for berthing if harbour tug use is required.

- The requirement for this endorsement does not apply to Williams' workboat/tugs or Svitzer lineboats, if no dynamic towing is involved.

These requirements will be phased in but no PEC will be issued/reissued after the phase in period – three years from date of adoption which was 2012.

f) Towage in Restricted Visibility

Should visibility become restricted during a towage operation, the Pilot / Master and the Tugmaster will discuss the situation immediately and agree upon a course of action to ensure the safety of all persons and vessels involved given the location, environmental and vessel traffic conditions, seeking the advice of Port Control as appropriate.

The Pilot or Master will advise Port Control of the circumstances and any decisions made immediately, keeping Port Control informed of any operational developments, or any improvement or deterioration of the visibility.

The Tugmaster should immediately inform the Pilot / Master and Port Control of any concerns that he may have as to the safety of his tug and crew. The Pilot / Master and Tugmaster should take immediate action to ensure the safety of both the tug and the assisted vessel. If necessary the operation should be aborted as soon as it is safe to do so.

PROCEDURES WHEN RESTRICTED VISIBILITY EXISTS OR IS EXPECTED

- Towage operations should not normally take place in visibility of less than those described in Port Guidelines for visibility;

- The pick up speed in reduced visibility to be a maximum of 3-5 knots through the water;

- Tugmasters may request the Pilot / Master to take all way off the vessel and the tugs manoeuver the vessel.

- Tugmaster to confirm watertight integrity of tug, Pilot / Master to inform tug if they observe any exterior openings on the tug that are not closed, and which affect tugs' watertight integrity.

- Pilot / Master and Tugmaster to agree the plan, which should be recorded;

- During operations in restricted visibility the Pilot / Master of the assisted vessel shall provide well in advance all engine movements, thrusters movements and alterations of course;

- Both Pilot / Master and Tugmaster shall inform the other of any changes in their circumstances that will impact on the agreed plan.

4. TUG REQUIREMENTS

TUG USAGE FOR BERTHING OF CRUDE CARRIERS

Up to 100,000 DWT	-	Minimum of 2 tugs
100,000 to 150,000 DWT	-	Minimum of 3 tugs
Over 150,000 DWT	-	Minimum of 4 tugs

Loaded VLCCs with double side skin and double bottoms, because of their deep draught and high freeboard may be required to take 5 tugs in strong winds. Seventy two hours notice is required for the 5th tug.

It must be recognised that the above are only general guidelines and may be varied to pilots' discretion, depending on weather and known ship's limitations. Tug numbers may be reduced depending on ship's equipment, i.e. bow and stern thrusters, twin screw, high lift rudders, DP capability, etc. Tug numbers may also be reduced for un-berthing operations at Pilots' discretion.

For all movements of vessels over 25,000 DWT regardless of thrusters, at least one tug to be in attendance. All other tug requirements for all other ships will be to Pilots discretion as agreed with the Master.

TUG USAGE FOR MOVEMENT OF LNGC

LNGC will be provided with 4 tugs, one of which will be an active escort. The tug at the bow will always make fast through the centre lead.

Milford Haven Tugs

BUILDER	TYPE	TONNES BOLLARD PULL (TBP)	NUMBER
5 South Hook Tugs:			
Niigata	e.g. Svitzer Musselwick	83	3
GE	e.g. Svitzer Kilroom	117	1
GE		95	1
All are twin screw Azimuth Stern Drive tugs and if making fast do so over the bow using their own gear.			
Line boats		8	2
All have bollard pull of 8 tonnes, are twin screw and can be used for pushing only.			
3 Oil Tugs:			
Niigata	e.g. Svitzer Ramsey	86	1
GE		105	1
GE		95	1
All are twin screw Azimuth Stern Drive tugs and if making fast do so over the bow using their own gear.			
Line boats		8	4
All have bollard pull of 8 tonnes, are twin screw and can be used for pushing only.			
1 Dragon Tug:			
GE	e.g. Svitzer Waterston	95	1
All are twin screw Azimuth Stern Drive tugs and if making fast do so over the bow using their own gear.			
Williams Marine See the current fleet list held in Port Control – July 2014. These vessels and barges are subject to availability within the Port.			

5. FURTHER GUIDANCE & ADVICE

- Further guidance and advice can be found in the following publications:
- Tug Use in Port: A Practical Guide – Nautical Institute;
- Recommendations for Ships' Fittings for use with Tugs – OCIMF, MEG3;
- The Ship handlers' Guide – Nautical Institute;
- Current relevant Merchant Shipping Notices;
- MGN 468(M) Voluntary Towage Endorsement Scheme
- Code of Safe Working Practices for Merchant Seamen;
- Management of Health & Safety at Work Regulations;
- Current relevant Merchant Shipping Acts;
- Port of Milford Haven Guidelines
- Report on safe tug procedures compiled by International Tug Masters Association and Nautical Institute
- Oil Companies International Marine Forum (OCIMF) 'Mooring Equipment Guidelines'.

While the advice given in these Guidelines 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 Milford Haven or by any person, firm, corporation or organisation which has been in any way concerned with the supplying of 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.

These Guidelines and other local navigational information, Byelaws and Directions can be viewed and downloaded from the Port of Milford Haven website at www.mhpa.co.uk.