TOWAGE GUIDELINES

Falmouth Docks and Engineering Company
Marine Operations Department
A&P Falmouth
The Docks
Falmouth
TR11 4NR
UK
+44 (0) 1326 214 666
MOM@AP-Group.co.uk

Contents

ASSOCIATED DOCUMENTS

- AP(G)7000(c) Rev 1 - Falmouth Towage Assets (Falmouth)
- AP(G)7001(c) Rev 1 - Specific Vessel Towage Allocation (Falmouth)

PART 1 - INTRODUCTION

Falmouth Docks and Engineering Company (FDEC), in complying with the requirements of the Port Marine Safety Code (PMSC) has identified towage as a mitigating factor to reduce the risk of certain marine operations. As such FDEC requires an adequate number of approved tugs to be available to safely support ship operations within the harbour area.

These tugs must be 'fit for purpose', with the crews adequately trained and qualified for the tasks they are likely to perform. Additionally, the pilots who use these tugs should be competent to do so, having been trained to agreed standards. The information in this document lays down the criteria that towage operations, their management and towage users should meet.

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. There are two main parts to the guidelines, the first deals with the administrative process and the second addresses the physical aspects of towage.

These guidelines have been produced after consultation with all operational stakeholders and are a minimum standard as they are used as a mitigation in the management of navigational marine risk. There is no mechanism for reducing towage requirements, except through a reassessment and revision of this document. These Towage Guidelines will be reviewed periodically in order to ensure that they remain current.

PART 2 – PREPARING FOR TOWAGE OPERATIONS

Planning and Co-ordination

A comprehensive passage plan should be prepared by the pilot and / or master, taking account of all relevant factors, including tide, wind, visibility, the ship's size, type and characteristics, and the berth or buoy operator requirements.

A good knowledge of the type and capabilities of the tugs allocated to the job is important, in order that the pilot or master can ensure that tugs are suitable for the task ahead and positioned on the vessel so as to be most effective, and 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, Tow Master or the Pilot.

When berthing and un-berthing, 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 all those involved.

Pilot / Vessel Master Exchange

In addition to the standard information passed to the Pilot, it is recommended that the master provide the Pilot with a deck General Arrangement showing the layout and safe working load (SWL) of the mooring fittings, where known, and inform him where appropriate:

- Which fairleads, chocks, bollards and strong points can be used for towing;
- Areas of hull strengthened or suitable for pushing and relevant identification marks employed;
- Tugs towlines and pennants should be used for all towage operations.

The Pilot should advise the Master

- The tug rendezvous position;
- The number of tugs and the mode of towage;
- The type of tugs to be used and their bollard pull(s);
- Maximum planned speed for the passage (No more than 6 knots if tug assistance is required);
- Masters should be briefed that both the St Piran & Percuil tow from hooks on fixed length gear. To deploy and recover the tow rope tug crews have to recover the tow gear by hand, there is a manual handling risk associated with this and the Master must ensure their crew only let go the tow gear when directed to by tug deckhands and lower the gear back to the tug in a controlled manner;
- The use of appropriately weighted heaving lines;
- Areas of the transit posing particular risks with respect to the possible use of the tug;
- Primary and secondary VHF channels for use in the operation.

Pilot / Tug Master Exchange

The Pilot and Tug master should discuss the following:

- The tug connection point, taking into account the prevailing weather and sea conditions;
- Passage details while accompanied by the tug(s), particularly details of any swing/berthing manoeuvre, release position and any abort points and procedures as required;
- Any unusual items regarding the particular vessel as gleaned from the Master/Pilot exchange;
- Any failure or reduction in the tug's ability to manoeuvre or deliver full bollard pull.

Pilot / Boatmen & Linesmen Exchange

Mooring operations using a boat should be conducted in line with the relevant authorities' guidelines. All personnel involved in the mooring operation should be aware of the special considerations required namely:

- Awareness of the mooring boat's position;
- Tugs and vessels should not manoeuvre unexpectedly;
- Required position for running lines;
- What lines require running.

Preparations and Considerations onboard ship

Tug Operations impose very great loads upon ropes or warps, gear and equipment. The Code of Safe Working Practices for Merchant Seamen sets out certain precautions which should be taken. Sudden failure in any part of the system may cause death or serious injury to personnel.

The consequences of failure in any part of the system must be carefully considered and effective precautions taken. On-board ship, particular attention is drawn to the need to ensure that pedestal roller fairleads, lead bollards, mooring bitts and posts etc are:

- Used appropriately within their design capabilities;
- Correctly sited;
- Effectively secured to a part of the ship's structure which is suitably strengthened.

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. Equipment such as heaving lines and messengers should be of appropriate length and strength. All equipment should be checked before the start of each operation.

Watertight Integrity

The watertight integrity of the tug should be maintained at all times. When a tug is engaged on any towage operation all watertight openings should be securely fastened. All watertight openings should 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 should be re-secured immediately after use.

PART 3 – COMMUNICATIONS

Communications

Tug Working Channel VHF 11 with secondary channel VHF 74

VHF communications are a vital component of safe towage operations. It is essential that those on board the ship, the tug(s), mooring boats, and those on the shoreside, are able to communicate promptly throughout the towage operation, should the need arise.

Once VHF communications have been established, tested and pilot/tug master/linesmen information has been exchanged, personnel should keep transmissions to a minimum and should normally only call when in doubt, to confirm actions, give pertinent information or in an emergency.

Mooring personnel should monitor the tug/ship VHF working channel to have a proper appreciation of progress in the mooring operation.

In all communications clear identification of the parties communicating must be used to prevent misunderstanding. The Tug master should be kept informed of large alterations of course and standard Marine Communication Phrases (SMCP) should be adopted to aid communication. Pilot Instructions to the Tug should be clear, concise and follow convention. Instructions should be acknowledged by the Tug Master.

Loss of Communications

In the event of loss of communications, the emergency means is via whistle signals. The following whistle signals are to be used between the tug and tow until VHF communications can be re-established.

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.

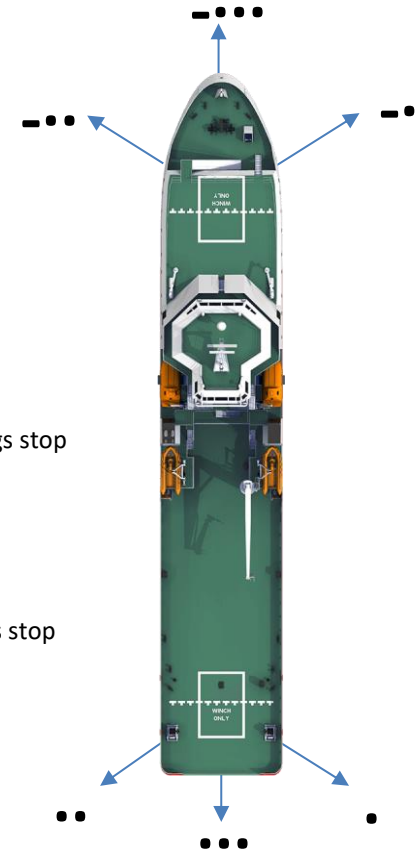
Signals to or from a towing vessel astern:

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

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 Whilst Signals



All fwd tugs stop

All aft tugs stop

Signals for all tugs

= Hold in position

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

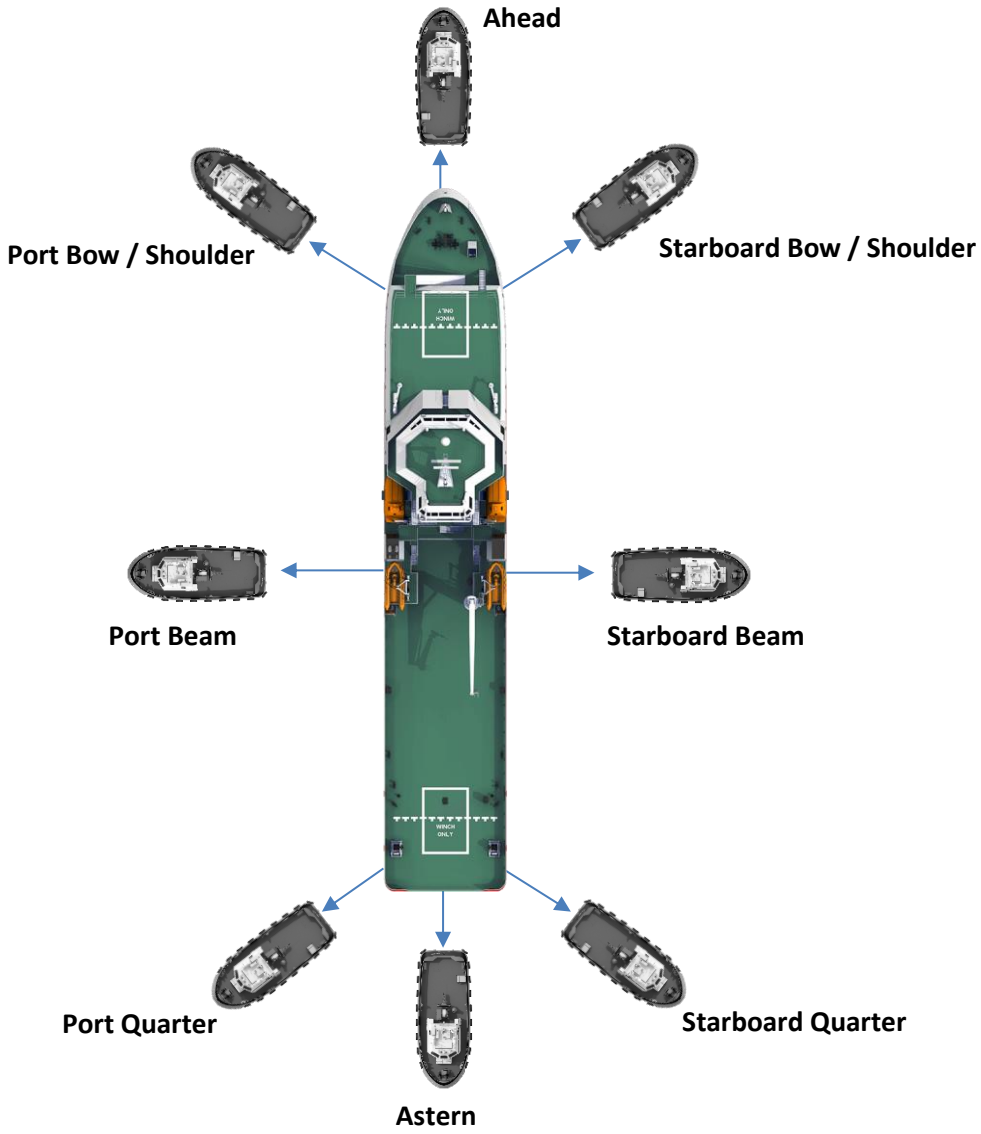
Master or Pilot instructions to the Tug

To avoid confusion and errors, Pilots will ask for tug power and directional requirements as follows.

The power required will be indicated as percentages:

100%	Full
75%	Three Quarters
50%	Half
25%	One Quarter
“Minimum” or “Easy” or “Tight Line”	Line is just tight visibly or gear is simply just engaged when leaning on for a push.
“No Weight” or “All Stop” or “Slack Line”	Line is visibly slack (not in the water) or tug is holding position/barely touching the ship side ready for a push.

The direction of pull will be indicated as shown below:



PART 4 – FALMOUTH PORT TOWAGE

Tug Acceptance Criteria

Below lists criteria to be met for approval for a tug/workboat to be used for ship assistance towage in Falmouth Docks. Copies where required of below documentation should be provided to Marine Operations Department, Falmouth Docks and Engineering (FDEC) prior to any tug being used.

- Tug must be fit for purpose and coded for towing operations. Where possible, the tug should be Omni-directional. Screw tugs could be considered on a case-by-case basis with particular care paid to positioning these tugs in the most effective and safest position. Owners to provide vessel spec sheet stating tug's maximum sustainable bollard pull certified within the last three years;
- Details of compliance to a coding body;
- Record of Qualification and Experience of Master;
- Shipboard emergency procedures;
- Owners/Operators emergency contact details;
- Details of Towage equipment i.e. spec / tests / quick release method;
- Insurance - The Towage Operator must have in place and maintain P&I insurance for third party liability risks;
- Audit - The Towage Operator must keep accurate and up-to-date records relating to:
    a. Compliance with regards to the towage service, including; the Towage fleet and all other equipment, training, insurance policies, professional qualifications and certificates held by the towage operator, certification and inspection records for equipment.
    b. A&P shall be entitled to audit the Towage Operators compliance with these requirements.
- Agreement of UK Standard Conditions for Towage.

To assist with the allocation of Towage assets, there are two additional reference documents available:

- APPENDIX 1 - GENERIC VESSEL TYPE TOWAGE ALLOCATION
    - This document outlines the recommended allocation of port tugs according to the type of job (client vessel) and what towage assets are available.
- AP(G)7001(c) Rev 1 - Specific Vessel Towage Allocation (Falmouth)
    - This document outlines specific case studies of vessels that are frequent visitors, or with specific characteristics that may dictate an increase or decrease in the allocation of towage assets.

Tug Crews

Standards of tugs and crews are set by the Maritime and Coastguard Agency. All tugs must comply with these standards and the tugs must be safely and adequately manned. In addition, Tug Masters are required to meet local knowledge standards as determined by the duty Marine Operations Manager. Where out of port tugs are operating within the docks, if required, a local Tug Master or Pilot can be onboard to assist. Where a Pilot is provided to give local knowledge advise, they are not engaged to provide instruction on tug handling.

Notice and Towage Operations

Tugs are available in Port 24 hrs a day, 365 days a year at a minimum of 6 hours' notice. Initial tug orders should be through a local port agency / vessel owner / operator with a minimum of 12hrs prior to required time. Note, if no port agent is appointed Falmouth Towage reserves the right to withhold Towage Services until they have received a Purchase Order.

Special Category Movements

It is recognised that due to the considerable variations in vessel size, shape, condition and degree of capability, certain vessel movements may not be adequately covered by these guidelines. In these circumstances, the vessel will be defined as a "Special Category Case" and an individual assessment of the planned movement undertaken – refer to AP(F)7014 Rev 2 - PMSC FM014 Special Category Movement Form. This is particularly pertinent when a damaged or disabled vessel is to be moved within the port.

The method for implementing a special category assessment should consist of the relevant Port Authority and the Duty Pilot completing the Special Category move form (AP(F)7014 Rev 2 - PMSC FM014 Special Category Movement Form). The completed document is then emailed to relevant distribution list. The special category acts as an assessment of the risk and the methods of mitigating such risks, which shall be firstly determined by local knowledge and experience.

Should they be required the Duty Marine Operations Manager, shall advise the details and capability of possible charter tugs available for special category move.

Contingency planning shall be an integral part of the assessment. The results of the assessment shall be taken by the duty Pilot with him on the ship, to discuss with the vessels master or owner's representative, where upon the special category assessment becomes a guide for the ship move and forms the basis for the passage plan to be agreed and discussed with the Master during the Master / Pilot exchange.

PART 5 – APPLICATION OF THE GUIDANCE FOR THE USE OF TUGS FOR SHIP ASSIST IN THE PORT OF FALMOUTH

Introduction

This section seeks to provide guidance on ship towage practices as used in Falmouth, the guidance draws upon nationally documented generic towage practice advice and additionally identifies those towage procedures specific to Falmouth. They should be read in conjunction with the British Tug Owners Association Pilot's Pocket Guide and Checklist.

Please also refer to the Tug Safety Flyer in APPENDIX 2 – TUG SAFETY FLYER.

Types of Operation

Standby on Berth

Standby on berth means the tug is fully manned with engines running, lines singled up ready for a fast departure should the vessel require the tug at short notice. The tug should be prepared to make fast, or push-pull at the Pilots/Masters discretion.

Standby in Attendance

Standby in attendance means the tug is fully manned, off the berth and in close attendance to the vessel if they are required at short notice. They should be prepared to make fast, or push-pull at the Pilots/Masters discretion.

On the Line / Made Fast

'On the line' towing means the tug is connected to the assisted vessel by a towline normally made fast on or close to the centre-lead forward or aft. The towline is connected to the tug by a towing hook, winch or secured to the towing bitts.

Push-Pull

The push-pull operations means that the tug is connected to the assisted vessel by a tow line and remains in close proximity to the vessel. This enables the tug to push on the vessel, but then check/control the vessel by pulling-back on the tow line.

Push Only

Push only operations mean the tug remains in close proximity to the vessel, positioned in a manner to push on the vessel where required as per the direction of Master or Pilot.

Dead / Cold Ship / Barge Move

A dead ship is defined as a vessel in a condition under which the main population system and auxiliaries are not in operation due to the absence of power. Towing barges and dead ships by their nature require careful consideration and as such are subject to an individual risk assessment (Special Category Move).

Tugs Available in the Port of Falmouth

Falmouth Towage, a subsidiary of A&P Falmouth provides a Harbour Towage service to vessels in Falmouth and Truro out to Falmouth Pilot Station. Vessels can operate further by arrangement, tugs are manned and maintained to MCA standards, meeting the required National Standards. All harbour towage in the Port is undertaken under UK standard conditions of towage, 1978.

- Additional 3rd party vessels are sourced from outside the port, which are detailed in AP(G)7000(c) Rev 1 - Falmouth Towage Assets (Falmouth)

Towing Equipment

Towing hooks / winches and alarm bells, if fitted, should be inspected regularly. The emergency release mechanisms on towing hooks and winches should be tested at frequent intervals to ensure correct operation, both locally and when fitted remotely. All towing equipment in use should be suitable for the task required, certificated and inspected for damage before undertaking and after completing a towage operation

Personal Protective Equipment (PPE)

Tug crews involved in towage 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;
- Remain alert to what the ship's crew is doing.

Tug Connection

Before arrival at the tug connecting position, the pilot or master should establish effective communications with the tug(s) and agree working channels. The vessel's speed should be reduced to that which allows a safe rendezvous and connection with the tug(s). The required speed should be agreed in advance with the tug master involved. Before commencing a tow the tug master should determine which towing gear is suitable for the operation and instruct the crew accordingly.

When receiving heaving lines, the tug crew should be aware of the risk of injury through being struck by a 'monkey's fist' or other weighted object attached to the line. The ship's crew 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 a tow, 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 should not test the bow or stern thrust controls / ships whistle at the time when the tug is under

the bow or stern passing up a line. Deck lights maybe required to be reduced to allow the tug to make a safe approach.

- The Pilot or Master should maintain radio contact with the tug throughout the process;
- He should be ready to revise the intended tug position if the tug master reports any restrictions at the chosen position, e.g. large flare, overhanging anchor or unsuitable push up point. The pilot or master must keep all those involved appraised of any changes to the agreed plan;
- The Pilot should always advise the tug master before making headway on the vessel, allowing the tug to move to a suitable position for towing while making way. The positioning of tugs on a vessel is a matter for discussion between the pilot/master and the tug master(s), having full regard for the areas of the hull, which should be avoided, e.g. watertight doors, between frames etc;
- If the tugs are made fast alongside or pushing they are at their most effective with a minimal ship speed through the water.

Disconnecting

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.**

Crew Safety during Towing Operations

Once the towing gear is connected, the ship's crew should indicate this to the tug crew and then clear the area and, if required to remain on deck, stand 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 and the associated Tug Master should be informed. During towage operations the towing gear equipment and personnel should be continuously monitored and any change in circumstances immediately relayed to the pilot.

This is particularly important on tugs where the tug master has a restricted view of the towing area/ personnel. Crew should be aware that the tow may have to be released in an emergency situation.

Safety of Boatmen and Mooring Boats

Tug Masters, pilots and masters should be aware, at all times, of the position and intentions of mooring boats, especially in adverse weather conditions. This is particularly important in circumstances where visibility is limited from the tug 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. When running aft breast or stern lines, the Pilot/Master should never use the vessel's engines without confirming with the Linesmen as to the position of the mooring boat.

Gog / Stopper Rope

A suitable gog rope or wire should be used where it is identified, through the position of the tug in assisting the tow or the nature of the operation, that the tow line is likely to reach such an angle to the fore and aft line of the tug that a 'girting' situation may arise.

Speed

Most ship towage manoeuvres should be carried out with the minimum of way on the ship. Exercising caution when using the engines while the tugs are working. The aft 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. The maximum planned speed for the passage should not exceed 6 knots.

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. Some speed is required at times, the tugs generally like to have less than 5 knots through the water. This normally gives them the necessary way to assist them to manoeuvre close to the ship while it gives them plenty of power in reserve should they have to break away.

Towage in restricted visibility

Towage during restricted visibility should be avoided. Preferably postponed until conditions improve. Guidance from FDEC's Procedures should be adhered to.

Tug & Tows

The majority of this document is aimed at towage assistance operations for arriving and departing ships. However, there are occasions when towage occurs which is not specifically identified in this guide such as barge towing. Whenever there is a need to conduct this type of operation in the harbour area then a non-routine towage form (AP(F)7013 Rev 1 - PMSC FM 013 Application for Towage Operation) is to be completed and submitted to the Marine Operations Department for approval.

Poor Weather

During periods of poor weather, Falmouth Docks and Engineering Company's Duty Marine Operations Manager or their deputy, may board vessels alongside to discuss with Vessel's Master, mooring arrangements and the use of tugs to keep the vessels safely berthed.

If there is likelihood that the weather conditions may pose a significant risk to the Tug Crew/Tug/Towing Gear, the Tug Master should immediately inform the Pilot/Master of any concerns that he may have. The Pilot and Tug Master should take immediate action to ensure the safety of the assisted vessel/tug/tug crew and, if necessary, the operation aborted as soon as it is safe to do so.

APPENDIX 1 - GENERIC VESSEL TYPE TOWAGE ALLOCATION

General Notes

Below tables are based on minimum available tug bollard pull (Percuil 15T BP), with a maximum of 20knts wind speed unless otherwise stated, for movements above this criteria a discussion between the Dockmaster and the Duty Pilot should take place to ensure plans are reviewed prior to the move

The tables are based on minimum requirements compiled for conventional vessels of varying length and manoeuvring aids, taking into account the forces likely to be exerted by wind, current and wave action along with industry best practice and have been subject to independent review from a subject matter expert. These tables are subject to review and should be considered in conjunction with any port infrastructure changes. In addition to this base line criteria, there are numerous other factors which need to be included in the overall assessment of tug support. This is to include but not limited to:

- Vessel Draft, Weather Forecast, Predicted Tide, Sea State, Vessel defects / damage, Berth, Orientation on Berth, Sea Room available, Vessel Windage

It should be noted however, that in cases where the vessel's Master refuses to accept the Dockmaster's and Pilot's advice in respect of the number of tugs required to facilitate a safe operation, the Dockmaster may impose the required number of tugs by special direction. These tugs will be charged to the ship owner/Agent.

Allocation requirements

1. Vessels carrying DPG cargo in excess of 100m LOA within Dockyard waters requires a minimum of 1 x tug in attendance with the vessel;
2. All passenger vessel's in excess of 100m LOA are to have a tug on short notice standby from lighthouse to berth or visa versa;
3. Vessels with special requirements, i.e. high speed ferries may substitute tugs for workboats due to bollard SWL and construction but this would be based on special category review and discussion with Master, Dockmaster and Pilot;
4. Any vessels employing towage services within the Dockyard <75m combined LOA must have an appropriately experienced Master onboard, vessels 75m> combined LOA a Pilot is required;
5. Based on specific ships handling characteristics or history at the Dockmaster and Pilots discretion, towage allocation can be increased based on experience in handling of that or sister vessel's of the same class. The list of these vessel's will be available from the Marine Operations Dept on request;
6. The Dockmaster / Tug Master reserves the right to withdraw the offer of towage services where the weather conditions /swell height pose a significant risk to tug crews. There could be occasions where this could delay arrival or departures of vessels;
7. Reference Specific Vessel Towage Allocation table to check for specific allocations that fall outside of generic vessel allocations.

Terms

SNS = Short Notice Standby. Tug, crewed with engines running on its berth

WB = Workboat

Dead Ship = Vessel has limited or no propulsion and/or defective manoeuvring systems.

Table 1

Roads to Docks Berth, visa versa

Based on no more than 20knts of wind – Above this the Pilot and Marine Operations Manager should agree in advance of pilot boarding

	<20m to 49.9m	50m to 99.9m	100m to 119.9m	120m to 149.9m	150m to 169.9m	170m to 199.9m	200m to 249m
Dead Ship or ship with defect	Special Category Move	Special Category Move	Special Category Move	Special Category Move	Special Category Move	Special Category Move	Special Category Move
Single screw (No Thruster)	0	50m to 75m = 0 76m to 99.9m = 1 WB SNS	1	2	2	3	Special Category Move
Single screw with enhanced rudder + Bow Thruster	0	0	1	1	2	2	Special Category Move
Twin Screw / Enhanced twin rudder & Bow Thruster	0	0	0	0	0	0	0
Twin Screw / Azimuth Propellers / Voith, Enhanced twin rudder & Bow Thruster + Stern thruster (DP)	0	0	0	0	0	0	0

Table 2

Roads / Berth to Docks Drydock

Based on no more than 20knts of wind – Above this the Pilot and Marine Operations Manager should agree in advance of pilot boarding

	<20m to 49.9m	50m to 99.9m	100m to 119.9m	120m to 149.9m	150m to 169.9m	170m to 199.9m	200m to 249m
Dead Ship or vessel with defect	Special Category Move	Special Category Move	Special Category Move	Special Category Move	Special Category Move	Special Category Move	Special Category Move
Single Screw (No Thruster)	0	1 tug + 1 WB	1 tug + 2 WB's (unless suitable towage can be taken into the dock)	3 tugs + 1 WB (unless suitable towage can be taken into the dock)	3 tugs + 1 WB	3 tugs + 1 WB	Special Category Move
Single screw with enhanced rudder + Bow Thruster	0	0	1	1	2	2	Special Category Move
Twin Screw / Enhanced twin rudder & Bow Thruster	0	0	0	0	1	2	Special Category Move
Twin Screw / Azimuth Propellers / Voith, Enhanced twin rudder & Bow Thruster + Stern thruster (DP)	0	0	0	0	1	1	Special Category Move

Table 3

Docks Drydock to berth / Roads

Blue – With no work being undertaken on any propulsion or manoeuvring systems inc thrusters and steering

Red – With work carried out on any propulsion and or manoeuvring systems inc thrusters and steering

Black – Allocation applies for all scenarios

Notes - The below requirements are set as a minimum of what would be required to hold the ship should equipment fail, until such time that the required amount of towage assets could be mustered to move the ship to a place of safety. Should the vessel be able to undertake a complete set of function tests prior to undocking refer to **Blue** allocations (successful basin trials prior to sailing).

Based on no more than 20knts of wind – Above this the Pilot and Marine Operations Manager should agree in advance of pilot boarding

	<20m to 49.9m	50m to 99.9m	100m to 119.9m	120m to 149.9m	150m to 169.9m	170m to 199.9m	200m to 249m
Dead Ship or vessel with defect	Special Category Move	Special Category Move	Special Category Move	Special Category Move	Special Category Move	Special Category Move	Special Category Move
Single Screw (No Thruster)	0 1 WB	1WB 1WB + 1 SNS	1	2	2	3	Special Category Move
Single screw with enhanced rudder + Bow Thruster	0 1WB	0 1WB + 1 SNS	1	1	2	2	Special Category Move
Twin Screw / Enhanced twin rudder & Bow Thruster	0 1WB	0 1WB	0 1	0 1	1 SNS 1	1 SNS 1 + 1 SNS	Special Category Move
Twin Screw / Azimuth Propellors / Voith, Enhanced twin rudder & Bow Thruster + Stern thruster (DP)	0 1WB	0 1WB	0 1 SNS	0 1 SNS	0 1 SNS	0 1 SNS	Special Category Move

APPENDIX 2 – TUG SAFETY FLYER

Falmouth Tug Safety Instructions
For the attention of deck crew


St Piran


Percuil

St Piran & Percuil operate on tow lines direct from a quick release tow hook

Use PANAMA lead

Use safe heaving line

Do NOT let tug go until instructed by PILOT

6 KNOTS MAXIMUM

Ensure officer has visual for securing and releasing tug

DANGER - FOULED PROPS CAN KILL
Control the release of tug line
(slack away using MESSENGER)