PEEL PORTS
GREAT YARMOUTH

Towage Guidelines

Great Yarmouth

Lead Marine Compliance Manager

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TOWAGE GUIDELINES

FOR THE PORT OF GREAT YARMOUTH

Document Information

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Introduction

These guidelines have been produced by Peel Ports Great Yarmouth in consultation with Pilots, Tug Masters and Port Users and reflect the content of the Guide to Good Practice on Port Marine Operations.

The purpose of these guidelines is to enhance the safety of towage operations with the Port of Great Yarmouth by providing a supporting framework to enhance the communications and teamwork between towage operators, tug masters, pilots and the Harbour Authority.

The Port of Great Yarmouth does not have an organic Port Tug Service due to the nature of the trade using the port and infrequent requirement for towage services. Consequently, all towage operations are currently classified as ‘Non-Routine’ and will be considered and approved on an individual ‘case by case’ basis.

A Non-Routine Towage Operation is defined as any towage operation involving or likely to include a combination of two or more towing and/or pushing vessels in an arrangement not previously risked assessed and reviewed by the Harbourmaster. Unusual project tows, such as the towage of large dead-ship vessels will also be considered as a Non-Routine Towage Operation.

The Operator or Tow Master of such a towage operation is required to provide the Harbourmaster with at least 5 working days advanced notice of the operation, where possible.

Where a Vessel Operator is in any doubt as to whether his planned towage operation should be classed as a Non-Routine Towage Operation, he must consult the Harbourmaster without delay, and at least 5 working days before any such towage operation is commenced. The Harbourmaster will decide whether a towage operation is to be classed as a Non-Routine Towage Operation and his decision is final.

Where operational availability allows, at the discretion of the Harbourmaster a shorter notification period may be permitted, provided the documentation is of an acceptable standard.

The provision of tugs for vessel or barge movements is therefore the responsibility of the shipping company or agent utilising their preferred contractor, in consultation with the Port Authority. Peel Ports Great Yarmouth retain the right to direct the minimum number, type and capabilities of the tugs to be used for a movement.

Acceptance of non-routine towage operations

In situations where a proposed tow, either within or into or out of the Port is identified as a Non-Routine Towage Operation, the following procedure shall be adhered to:

The Vessel Operator must:

1. Advise the Harbourmaster, at least 5 days in advance, of the intended operation;

2. Appoint a Tow Master; and

3. Provide all necessary resources and support to the Tow Master in order to allow him to meet his responsibilities - see Section 1.3.

The Tow Master must:

1. Submit a comprehensive operational risk assessment for the entire operation to the Harbourmaster;

2. Submit an appropriate passage plan and details of the towing configuration to the Harbourmaster at least 5 days in advance of the operation; and

3. Ensure that a proper record and audit trail of the planning and approval process, and the operation itself, is maintained.

Where a Tow Master, following submission of the required documents, is unable to complete the proposed tow, an alternative duly qualified Tow Master may be substituted. In such cases, the alternative Tow Master must undertake a full review of the submitted documentation or otherwise amend and re-submit the documentation to the Harbourmaster for acceptance.

Items 1 and 2 above may be submitted by persons other than the Tow Master provided the appointed Tow Master then complies with requirements in respect of reviewing and if necessary, resubmitting the documentation.

The Harbourmaster will:

1. consider the submitted operational risk assessment, and may state requirements for change;

2. discuss the likely pilotage requirements with the Pilotage Department, including, where appropriate and/or feasible, the early allocation of a pilot or pilots to undertake the pilotage act;

3. consider the associated passage plan, and may state requirements for change;

4. if necessary, identify and require the need for one or more trials or simulations of the planned towage operation;

5. as and when content, indicate his acceptance of the documentation to the document submitter; and

6. involve and advise LPS of the towage operation, as necessary.

CHAPTER 1

TOWAGE RECOMMENDATIONS

1.1 Requirement

As guidance for vessel and vessel owners considering the need for towage within the Port of Great Yarmouth, the following is a list of situations and circumstances for which tugs will be required:

- Dumb barges irrespective of size, shape or category.
- Submerged or semi-submerged equipment, objects or facilities.
- Dead ship or vessel.
- Any vessel with a defect on engines, control systems or rudders such that manoeuvrability is severely restricted or impeded compared to the design parameters. This condition is irrespective of vessel size.
- Any vessel with an LOA of over 70m in length and has no bow thruster, whilst manoeuvring stern first in the River Port.

The following are examples of situations when tugs may be required by the Port:

- Any vessel with an LOA of over 95m within the River Port.
- Outer harbour requires a bulk vessel in ballast over 120 meters with no or poor Bow Thruster to have a Tug and over 180m to have tug/s. A bulk vessel loaded over 120 meters with no or poor Bow Thruster to have a Tug and over 150m to have tug/s.

Peel Ports Great Yarmouth reserve the right to direct the minimum number, type and capabilities of the tugs to be used for any movement. The final decision rests with the Head of Marine Services SE Cluster, or his appointed deputy.

1.2 Decision to take tugs

Outside of the above circumstances the decision to take a tug or tugs remains at the discretion of the individual vessel Master. However, it is strongly recommended when considering the use of tugs within the port that the Port Authority and Pilots be involved in such deliberations at the earliest point as possible in the planning stage.

1.3 Considerations

When assessing the requirement for towage the following points should be taken into consideration:

- The dimensions of the vessel, barge or object to be moved. Specifically:
    - Length and beam, including any projections above or below the waterline.

- Gross tonnage.
- Wind, particularly its rate and direction compared to the vessels dimensions.
- The draught in relation to available water and under keel clearance.
- Significant wave height for safe working.
- The effect of tidal stream and prop wash on the submerged section of the vessel, barge or object.
- The visibility of the tug or tugs, as well as port infrastructure, from potential pilotage positions during the manoeuvre.
- The destination or departure point within the harbour. Specifically:
- The available manoeuvring room for the tug or tugs during the berthing, unberthing or manoeuvring operations.
- Potential choke points or restrictions within the harbour during the move. Especially when changing tug positions or picking up or dropping off the tow.

- The direction of travel of the vessel, barge or object.

- Is the transit to be conducted bow or stern first?

- The manoeuvrability of the vessel, barge or object. Specifically:

  - Is the object able to assist in the manoeuvring?
  - Is it a ‘Dead Ship’ tow?
  - Does the object/tow have a shorter turning circle in one direction?
  - What is the predicted stopping distance?

- The predicted or prevailing environmental conditions. Specifically:

  - Wind speed and direction throughout the move.
  - The predicted and actual tidal stream, both direction and strength.
  - The height of tide and available under keel clearance.
  - The presence of any fresh water run-off.
  - Tidal surges or tide under predicted heights.

- The available tugs. Specifically:

  - Their power. Do they, as a whole and individually, have sufficient power and reserve of power to safely conduct the move?
  - The type of drive, determining the manoeuvrability and the risk of girting.
  - The physical size of the tug in relation to the available manoeuvring room, depth of the berth, length of tow line.

  - The age of the tug, which will affect the remaining available power from classification.

- The familiarity of the crew with the port. Specifically:

  - Have they been to the port before?
  - Have they worked with the pilots before?
  - Are they comfortable with the tow orders used by the pilots?

1.4 Qualifications

When considering a towage provider, a Master or Agent should also consider the certification of the proposed tug as well as the qualifications held by the crew. The Maritime and Coastguard Agency set the minimum standards that need to be met.

Prior to the proposed towage operation, the Port Authority will need to be assured that the selected towing operator is sufficiently competent to conduct the operation. As a minimum the Master should hold a Certificate of Competency (CoC) to STCW standards with an MCA Towage Endorsement or approved equivalent. The crew should also have proof of training and familiarisation of the tug they are operating and the relevant towage techniques to be employed.

Failure to provide such proof will result in the tug not being approved to operate within the harbour limits and the towing operation not being authorised.

1.5 PEC Holders

Pilot Exemption Certificate (PEC) holders are not permitted to conduct pilotage with tugs and must take a Pilot for any move requiring a tug either as standby or attached.

CHAPTER 2

PREPARING FOR TOWAGE OPERATIONS

2.1 Planning and Coordination

A comprehensive plan should be agreed by all parties prior to the commencement of any towing operations. This should be reviewed considering the prevailing conditions and agreed again by the Master and Pilot prior to conducting the pilotage. Both the Pilot and Master should ensure the tugs are suitable for the task ahead and so positioned on the tow so as to ensure safe operation. The Pilot should have a sound knowledge of the tugs capabilities and limitations. Both Pilot and Master must be in total agreement before the towage operations begins.

The hiring of tugs and co-ordination of towage operations lies with the Master or Owner of the vessel, barge or object being towed. Once within the port limits the conduct of the tow lies with the Pilot, and as such all communication with the tugs during the operation will be through the Pilot. At all times it remains the overriding duty of the Master and Pilot to ensure the safe operation of the vessel, barge or tow, and the safety of all involved.

Tug manning will vary depending on the operation being conducted. The proposed manning of the tugs should be highlighted in the towing plan, and should be adequate and sufficient to ensure individuals are not exposed to undue risk, whilst ensuring the operation can be conducted safely and efficiently.

It is the duty of all involved in towage operations to ensure that individuals are not exposed to unnecessary risk. They should follow safe working practices, wear the correct PPE and ensure associated equipment is in date, tested and fit for purpose prior to use. They should also ensure they have been properly briefed on the operation, and their specific duties with regard to that operation. If at any time they are uncertain or in doubt as to the safety of a specific manoeuvre they should raise their concern immediately.

2.2 Approval

As discussed in the introduction all towage operations within the Port of Great Yarmouth are considered as ‘non-routine’. Consequently all towage operations must be notified in advance and be subject to a formal assessment by the port prior to approval being issued and the operation being undertaken.

A Towage Assessment form, Annex 1, must be submitted to the Port at least 2 weeks in advance of the proposed operation to allow the plan to be reviewed and approved. Where required short notice assessments can be undertaken, but will incur and additional cost. Ship-owners, towage contractors, Tug Masters, project managers and agents are advised

that the person responsible for the safety, planning and coordination of the proposed operation (and thereby acting as Towing Master) must be clearly identified and is responsible for the production of risk assessments, method statements and passage plans. All of which must be discussed and agreed with the harbour Authority prior to conduct of the operation.

2.3 Timing

When an agent or ship owner orders tugs to be in attendance the following timings are recommended:

- Entry:
  - At High Water Slack – Predicted High Water +1 hour 30 minutes
  - At Low Water Slack – Predicted Low Water + 1 Hour 30 minutes
- Departure:
  - At High Water Slack – Predicted High Water + 1 Hour 30 minutes
  - At Low Water Slack – Predicted Low Water + 1 hour 30 minutes

Outside of the slack water periods it is recommended that tugs are in attendance at least 20 minutes prior to the planned move.

2.4 Pilot/Vessel Master Exchange

For towage operations a comprehensive Pilot/Master exchange must be conducted prior to the commencement of the towage operation. It should be enhanced to include specifics of the operation and cover all the relevant factors, including the state of the tide, wind, visibility, ship/tow, tug type and characteristics, tow connection points, changes of tug position if required and specific berth requirements.

It is strongly recommended that the Master provide the Pilot with a general deck arrangement showing the layout and safe working load (SWL) of the mooring fittings, where known, and inform him about:

- Fairleads, chock, bollards and strong points that can be used for the towing operation.
- Areas of hull strengthened or suitable for pushing by tugs and relevant identification marks employed.
- Any special features such as controllable pitch propellers, thrusters, Azimuths etc.

The Pilot should advise the Master about:

- The Tug rendezvous time and position.
- The number of tugs and the mode of towage to be employed throughout the manoeuvre/evolution.
- The planned optimum ship speed when connecting and throughout the transit.
- The type of tug/tugs to be used and their rated bollard pull.

- The prohibition on the use of weighted heaving lines.
- High risk areas for the transit, with possible uses for the tugs.
- The use and positioning of the tugs for berthing and unberthing.
- The primary tug working channel (VHF Channel 11) and the secondary (VHF Channel 12 – Great Yarmouth Port Control).
- Maximum acceptable visibility.

2.5 Towlines

Where ever possible a dedicated towline should be used for towing operations within the Port. Where it is intended to use a mooring line, both the Pilot and Master should confirm both the state and strength of the proposed line before it is used.

2.6 Preparations Aboard the Tug

Prior to commencing any towage operation within the Port, the Tug Master should check and then confirm verbally to the Pilot that they are in a fit state, to conduct the tow. Confirmation of ready to tow implies that:

- The crew are competent, trained, briefed on the operation being undertaken, understand their specific duties and are wearing the correct PPE.
- The vessel is in the correct watertight integrity state in accordance with company/vessel orders for the operation being undertaken.
- That all equipment to be used is in date, tested and fit for purpose for the proposed towage operation.
- That the tugs engines, propulsion systems and steering gear is functional, free of defects and configured in the state required to conduct the proposed operation.
- That all towing hooks, emergency release systems and alarms have been tested, inspected for damage and are in fit state to conduct the proposed operation.

2.7 Tug Selection

The correct tug selection is an important part of towage operations. In addition to bollard pull and physical size, the drive employed by the tug makes a significant impact on both manoeuvrability and utility. Whilst not all tug types may be available for use the below diagram highlights the potential operational envelopes for differing drive type.

Conventional tugs are fitted with a standard propulsion system. There are variances of these types of tugs mainly being single or twin screw, with fixed nozzle and steerable rudder or steerable nozzle and with fixed pitch or variable pitch propeller. Conventional tugs connected at the stern of the vessel being assisted will have to work in the traditional way. This requires a lot of skill and experience from the tug Master and is considered to be the most inherently dangerous towing method for such a tug, due to the high risk of being pulled over sideways, which is called “girting”. Conventional tugs deliver the highest bollard pull in the forward direction and will mostly be used as a bow tug on a hawser. When connected at the stern of

the vessel being assisted, they will effectively be working in the “conventional” mode, also referred to as “stern to stern”. The “towing point” will be moved further aft from the towing hook by using a Gob-line and a “stopper” block. The use of the Gob-line is very important in order to avoid girting of the tug.

Azimuth Stern Drive (ASD) tugs are fitted with two (2) thrusters at the stern. The thrusters can be rotated independently through 360° (hence “azimuth”) thus the propeller thrust can be directed in any direction. Azimuth thrusters can have either fixed pitch propellers or variable pitch propellers with the latter providing for reversing of the propeller thrust. Azimuth stern drive tugs are fitted with a harbour towing winch which is located on the foredeck and a towing staple which is fitted forward of the winch for assisting at the stern (“bow to stern”) or at the bow (“bow to bow”) and/or a stern winch for assisting “stern to bow” in the conventional mode. This type of propulsion system provides for high manoeuvrability particularly during transit sailing, however it does have some limitations when combining thrust and direction resulting in a lower bollard pull.

Azimuth Tractor Drive tugs are fitted with two (2) azimuth thrusters at the bow (forward of midship) which have basically the same characteristics as the azimuth thrusters fitted on azimuth stern drive tugs. These tugs are fitted with a harbour towing winch which is located on the aft deck and a towing staple which is fitted aft of the winch. The stern and/or bow area is normally also heavily fendered, designed for push/pull operations.

Tug operators shall be responsible for drawing up, putting into operation, and monitoring an operation policy including safety standards covering all their vessels and operations within Peel Ports’ SHAs. Such standards shall not be less than set out as follows in this document.

Nothing in these standards shall supersede any more stringent requirements imposed by local installations, including oil terminals. Tug operators shall provide, and crew shall be familiar with all such requirements.

Certification and Documentation

All Tugs must have the following certification, maintained in date: Employees Liability Certificate

- Radio Licence Disc
- SUR 183 (Lifesaving appliances)
- Load line Certificate
- Deviation Card
- Document of Compliance and Safety Management Certificate (ISM or equivalent)

Publication or equivalent procedural manuals covering the following topics shall be maintained aboard for the use of the tug crew: -

- IMO – SOLAS Manual
- Company Marine Operations Manual
- Local Tide Tables
- Machinery operating instructions
- Spare Parts manuals
- Code of Safe Working practices for Merchant Seamen
- Marine Safety Notices
- Marine Guidance notes
- Approved stability book
- Chart Folio appropriate to local area
- Nautical Almanac
- Local Notices to Mariners
- Admiralty Notices to Mariners Ship Captain Medical Guide Red Cross First Aid Manual
- Oil Record Book
- Equipment Manufacturers Manuals and operating instructions
- Merchant Ship Search and Rescue Manual
- Guidance notes for Safety Officials
- Local Towage Guidelines
- Tug use in Port
- Company Contingency Plan Company Salvage Manual
- Collision Regulations
- Port byelaws.
- Port Pilotage Directions

CHAPTER 3

COMMUNICATIONS

3.1 VHF Communication

Communication is a vital component of safe towage operations. It is essential that all parties involved in the operation can communicate promptly and effectively throughout the operation. VHF is the main means for conducting this communication and as such, should be tested and proved correct prior to the commencement of any towage operation.

Communications via VHF should be clear, concise and unambiguous. On completion of the initial VHF communication check, transmissions should be kept to the absolute minimum to conduct the operation. All parties should continue to monitor both the working and secondary channels for the period of the operation to maintain an appreciation of the progress of the operation and in case of emergency.

VHF communications equipment should be fully charged and/or powered, tested regularly and be fit for purpose.

3.2 VHF Channels

The Primary channel for towage operations and working tugs in VHF Channel 11.

The Secondary channel is VHF Channel 12, which is also the main Port Operation Channel.

As Great Yarmouth runs a Local Port Service (LPS) the Pilot is to communicate with Port Radio (VHF Channel 12) on commencement and completion of any towing operation.

Tug Masters should maintain a listening watch on both the designated working channel and VHF Channel 12 throughout the operation.

3.3 Tug Control Instructions

It is important that any control instructions issued to tugs are clear, concise, specific, consistent and easily understood. To avoid any confusion within the Port of Great Yarmouth Pilots will use the following power and directional orders as laid out below:

Required Power

10% - Minimum

25% -

50% -

75% -

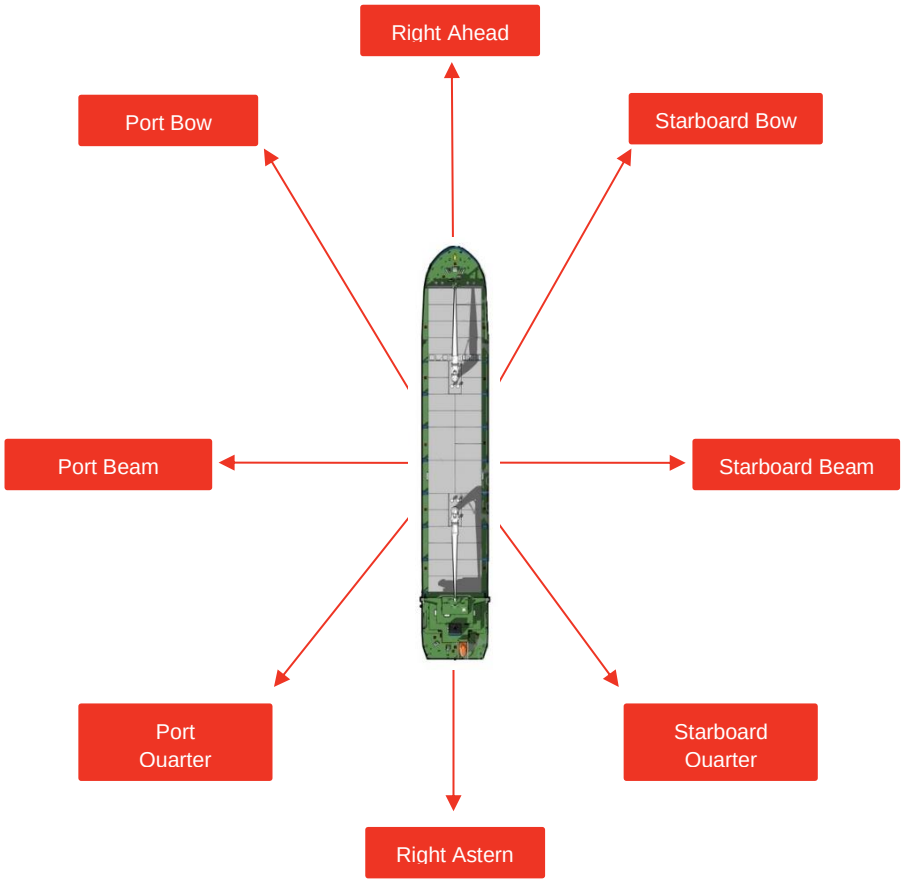
100% - Maximum

Other Terms

Easy – Minimum weight required to put tension into the tow.

No Weight – No weight or tension on the tow.

Lean On – Minimum power required to keep the tug in position against the hull/object.



CHAPTER 4

COMMUNICATIONS

4.1 Connection and Disconnecting Towing Gear

Prior to commencing a towage operation, the Master, in consultation with the Pilot and Tug Master have predetermined which towing gear is suitable for the intended operation and instructed the crew accordingly.

When using heavy lines, care should be taken in passing them to and from the tug to ensure the tug crew are clear to reduce the risk of injury should the line slip. If heaving lines are used to transfer the main tug line, the crew should stand clear of the throwing target area to reduce the risk of being hit by the ‘monkey’s fist’ or weighted bag. The use of dangerously weighted lines is not approved and should be reported to the Port Authority immediately.

When connecting lines, the tug crew should ensure that the towing gear is clear of obstructions and able to run freely. The paying out of the tow line should be done in a controlled, deliberate manner.

During disconnection care should be taken to ensure all tension and weight has been removed from the line, before towing gear is released. Gear should be returned in a controlled, deliberate manner. Specific attention should be paid to ensure the line is kept clear of the water to prevent fouling of the tug or tows rudders, propellers, superstructure or fendering. It should be monitored at all times to ensure it does not snag, catch or tighten unexpectedly during the process.

4.2 Tow Quick Release

Emergency quick release mechanisms on towing winches and towing hooks should be tested both locally and remotely where fitted, prior to the towage operation. All methods of ‘tripping’ and ‘run out’ operation are to be tested. Under no circumstances is towing equipment to be connected to any winch or hook that has a suspect or damaged release mechanism.

4.3 Common Towage Hand Signals

Communication between the tug and mooring deck/position is important, and it is advisable to use standard hand gestures in addition to VHF radio communications. These are particularly useful in passing securing information and determining towline length. The following are standard hand signals in common use.

SLACK OFF

Outstretched arm with hand open and flat being waved downward.

STOP

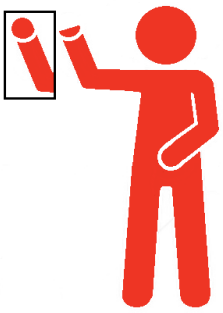
Both hands raised above the shoulders with open hands facing outwards.

LET GO

Sharp upward movement of the arm with the hand cupped towards the signaller.

HEAVE AWAY

Circular movement of the hand above the head



HEAVE SLOWLY

Raised hand with the fist being clenched and unclenched.

MADE FAST

Crossed arms in front of the body.

4.4 Girting (Girding)

Everyone involved in towage operations, be that Masters, Pilots or Tug Masters must have a clear understanding of girting and its consequences. They should be able to recognise the conditions when girting may potentially occur, and aware of the speed at which an incident may occur. Whenever operating tugs, they should be vigilant to ensure such conditions do not arise.

Girting occurs when a towline is secured amidships off a tug and leads off the beam. Should the line come under tension, this will exert a heeling moment on the tug, and should the force of that moment be sufficiently powerful can overcome the tug's righting lever causing it

to girt and potentially capsize. Due to the rapid nature of these incidents it cannot be assumed that the winch will pay out or that the towline part prior to a capsize incident.

Conventional tugs are particularly vulnerable to girting, and due to their relative lack of manoeuvrability, it may be impossible to extract them from a problematic situation.

Common causes of girting are:

- The assisted vessel turns abruptly and without warning away from the tug.
- The speed of the vessel is too high.
- The tug is too far astern of its intended position, compared to the speed of the vessel.

4.5 Use of Gob (Gog) Rope

It is at the discretion of the Tug Master/Operator as to whether a Gob/Gog rope is used during an operation. Should it be used then it should be inspected prior to the operation, be in good order and fit for purpose.

4.6 Seafarer Safety

Once the towline has been connected, both on the tug and the tow, this should be communicated to the Master, Tug Master and Pilot. Seafarers should then clear the area. Should it be necessary for a seafarer to remain on deck then they should stand in a safe area, clear of the line of recoil of the towing gear and their exposure time kept to an absolute minimum. The Pilot must be made aware of the requirement for seafarers to remain on deck prior to the operation commencing.

The tug, towing gear, associated tow equipment and exposed personnel must be continuously monitored for the duration of the operation and any changes in the circumstances or condition of these should be relayed to the Master and Pilot immediately.

4.7 Emergency Release

For the duration of the towing operation the crew should be aware of the requirement to release towing equipment in an emergency. They should be aware of the procedures and be able to do so safely and efficiently with little or no warning.

4.8 Speed

When making fast or letting go of any tug speed is a critical factor. The ideal speed, which is **through the water and not over the ground**, should have been agreed by all parties prior to the operation. The Pilot should ensure the vessels speed remains constant and exercise caution in using a vessels engine(s) when under tow. Particular caution should be exercised when a tug is working the stern of a vessel, where its performance and ability can be adversely affected by the wash from the assisted vessel. Where engines need to be used

then the application of power should be the minimum possible, informing the tugs in advance of the intended use of power and the reason for it.

In areas with a strong tidal steam a higher percentage of a tugs available power will be used in allowing it to maintain position on the assisted vessel and therefore its ability to assist will be reduced. Where a tug is made fast alongside they are most effective at slow speeds.

It remains the responsibility of both the Master, Pilot and Tug Masters to ensure the operation is conducted at a safe speed for all participating vessels throughout the operation.

4.9 Interaction

Interaction is a powerful force, when vessels are operating in close proximity to one another, this is especially true in towing operations. Pilots, Masters and Tug Masters are reminded that the effect increase exponentially as a vessels speed increases, or the flow of water around the larger object increases. This is particularly important in the final moments before a tug comes alongside, and all concerned should be mindful that a tug may need to use a greater portion of its available power to maintain position when in close proximity to the assisted vessel.

4.10 Tow Line Length

Tow line length should be carefully considered prior to commencing any towage operation. The benefits of opting for a long or short towline should be weighed against their hazards, against all parts of the transit. It is possible that tow line length may need to be adjusted, along with tug positioning during each stage of the transit through the harbour. If adjustments are required then, where these are to be done should also be planned in advance to minimise delay but also maximise the safety of all concerned.

Where tow line length is short, Pilots, Masters and Tug Masters should pay particular attention to vessel speed, due to the reduction in available time available for the Tug master to react to changes in course and speed of the assisted vessel.

CHAPTER 5

RESTRICTED VISIBILITY

5.1 Restricted Visibility During an Operation

Should visibility reduce to a level that it becomes restricted during a towage operation the Pilot, in consultation with the Master and Tug master will discuss the situation and agree a course of action to ensure the safety of all persons and vessels involved, given the location of the tow, and the prevailing environmental and vessel traffic conditions.

The Pilot will immediately inform Great Yarmouth Radio of the circumstances and the decisions made. They will then keep them updated of any further operational developments as well as any improvement or degradation of the visibility.

Some potential courses of action are:

- Let go the forward tug, or any other assisting tug and take the vessel to anchor.
- Use the tugs to turn the vessel, let go the tugs and the vessel proceeds outside the Port Limits.
- Let go the forward tug, or any assisting tug and have the tug assist in a pushing mode.
- Allow the tug to manoeuvre the vessel under the Pilot/Masters instructions. This may include using the tug to maintain the vessels position at a safe location in the Port.

Depending on location and traffic, the safest course of action may

The Tug Master should immediately inform the Pilot and Master and Port Control of any concerns he may have as to the safety of his tug and crew. If necessary the operation should be aborted as soon as it is safe to do so.

5.2 Restricted Visibility Exists or is Expected

Should restricted visibility exist or is expected to exist, the planned towage operation will be cancelled. The operation will be rescheduled for the first suitable period when visibility has improved, sufficiently to conduct the tow safely for the duration of the proposed operation.

The Port Authority retains the right to make a final decision on when visibility has improved sufficient for the operation to proceed.

CHAPTER 6

FURTHER GUIDANCE AND ADVICE

6.1 Guidance and Advice

Further guidance and advice for the conduct of towing operations within the Port of Great Yarmouth can be obtained from the Harbour Office and Pilots.

6.2 Other Sources

Further information on towage can be found at:

General:

http://eurotugowners.com/guidelines-for-safe-harbour-towage-operations/

http://www.workboatassociation.org/news/nwa-towage-good-practice-guide--published-december-2016/

Girting:

http://www.westpandi.com/globalassets/loss-prevention/loss-prevention-bulletins/west-of-england-pandi---the-risk-of-tugs-capsizing-due-to-girting.pdf

https://www.gov.uk/maib-reports/girting-and-capsize-of-tug-flying-phantom-while-towing-bulk-carrier-red-jasmine-on-river-clyde-scotland-resulting-in-1-person-injured-and-loss-of-3-lives