

Orkney Islands Council Marine Services Towage Guidelines

Utilisation of Tugs

Masters and Pilots are expected to follow these guidelines in conjunction with the port's general directions and deviate from them only on the grounds of safety.

Tugs used by OIC Marine Services Harbour Authority

The tugs normally used for operations are the "Odin of Scapa", "Thor of Scapa", "Freyja of Scapa" and "Harald". All four tugs are certificated, powerful and highly manoeuvrable. However, Masters and Pilots should always be aware of the limitations of tugs and their equipment and the circumstances under which these limitations are prevalent. Technical details of the above tugs along with information on their crew competence and training can be found in Annex 1.

From time-to-time alternative tugs are used (e.g. when the regular tugs are away for refit or extra tugs are required for operational purposes). Information on these can be obtained from Orkney Marine Services.

Tow Lines

The tug lines supplied to the Orkney Marine Services tugs are designed to withstand all reasonable forces they are likely be subjected to during towage operations. They are to be used wherever possible. In the event of this being impractical (e.g. where the ship leads are too small to accept the tug lines), a good ship's line should be used. The Pilot, Ship's Master and Tug should agree on this procedural deviation.

The Pilot, Shipmaster and Tug Masters should confer with regard to the maximum strain the rope is likely to withstand. Bollard safe working load should also be established and passed onto the Tug Master.

Berthing / unberthing

OIC Marine Services requires the use of tugs for the operation of berthing and unberthing certain vessels at piers, anchorages and moorings in Scapa Flow. The use of tugs with large ships will improve the efficiency of the operation but their requirement is primarily one of safety.

It is important that the Pilot's intentions for the use of tugs for berthing and unberthing are included in his Port Pilotage Plan. The Pilot and Master should reach agreement in the initial Pilot/Master exchange of information.

The variation on matters such as ship sizes, ship characteristics and the prevailing weather conditions make it impractical to issue detailed guidelines for the use of tugs for each conceivable act of Pilotage to or from a specific mooring. It is therefore left to the Pilot, in conjunction with the Master's support and guidance, to use the tugs to best effect. It is incumbent upon the Pilot to base his decisions on an objective assessment of safety and not on economic considerations. His decisions should take into consideration the physical aspects of the harbour area in which the ship is operating, the present weather and tidal situation and on the characteristics of the vessel being piloted.

During the manoeuvre the Pilot should ensure that: -

1. Any concerns a Tug Master may have concerning the safety of his tug and its crew are addressed as quickly as possible;
2. The Tug Masters are kept informed of the ship's main engine movements, significant alterations in course, thruster movements or anything else which may affect their tug or their understanding of the manoeuvre.

Pilot / Tug Communications

As soon as practical after boarding a ship requiring towage services, the Pilot should establish communication with all the operational tugs and satisfy himself that reception is satisfactory on the preferred working radio channel. If he changes from one radio to another, he should ask each tug for another radio check.

Other than for initial contact, Pilots should not communicate with tugs on the Orkney VTS working frequency (channel 11). The working channels for communication with tugs are channels 9, 10 and 13.

Instruction given to tugs should be clear, concise and unambiguous. For manoeuvring orders, only the accepted port vocabulary should be used. The working terminology in ascendancy of power required is in Tons pull or push.

The name of the tug to which the order applies should be called first followed by the command.

For directional "pulls", compass points relative to the ship should be used, for example "Harald – slow pull 2 points abaft the beam".

Vague and informal terminology (e.g. "a wee bit more" or "down a touch") should not be used.

Tugs will repeat all orders to ensure that they have been understood.

In the event of radio failure, the manoeuvre will be aborted.

Tug Escort Guidelines

The tugs employed in Scapa Flow and Kirkwall Harbour are essentially harbour and coastal tugs and are not designed to work effectively at anything other than harbour speeds. Masters and Pilots should bear this in mind while under tug escort. It is appreciated that there may be occasions when tides, weather and a ship's steering characteristics may dictate the safe speed of a vessel in confined waters; the ship's speed should be set with consideration of the need for indirect towage and discussed with the tug Master.

The number of tugs to be used for escorting is detailed on the table in Section 3.2 below. This gives the number of tugs that are recommended to be used in each of the three areas, however, these figures are only applicable when there is a Pilot on board the ship being escorted. When a Pilot deems it safe to terminate the act of Pilotage and disembark the ship, then the requirement for active tug escort in that area is dispensed with prior to him leaving the bridge.

The decision on whether to use escort tugs actively or passively should be agreed between the Master and Pilot after having discussed the environmental conditions and the ship's manoeuvring characteristics. The final decision on how to use the tugs rests with the Pilot. Active escort should not take place at speeds above 10 knots.

It is important that the Pilot's intentions for the use of tugs for escorting, whether passive or active, are included in his Port Pilotage Plan and therefore part of the initial Pilot/Master exchange. It is also important that the Pilot gives tug master's a broad outline of the plan at

an early stage and keep them informed of his intentions with regard to course and/or speed as the vessel movement progresses.

Level Of Tug Escort Required

For the purpose of outlining the requirements for tug escort, Scapa Flow and approaches have been divided into areas A, B and C (see map). Each area poses its own particular hazards: -

- A: exposure to weather and exceptional tide flows;
- B: proximity to land; and
- C: proximity to anchored ships.

Area*	Quantity of pollutants	No. of Tugs	Mode
A	>5,000 tonnes	1	Stand By
B	>5,000 tonnes	1	Passive
B	>15,000 tonnes	2	Minimum 1 active
B	>170,000 tonnes	3	Minimum 1 active (slow speed)
C	>15,000 tonnes	2	Passive
C	>170,000 tonnes	2	Minimum 1 active

* See Map

In addition to the above table, it is recommended that any crude oil tanker in ballast should be escorted in Area A by one tug in standby mode and in Area B by one active tug escort and in area C by one tug in passive mode.

Having taken into consideration the weather conditions and the manoeuvring characteristics of the vessel being Piloted the Pilot has discretion to dispense with any escort tug in Area C. If the Pilot wishes to reduce the number of tugs from that stated in the guidelines, then he must notify the duty Marine Officer. The duty Marine Officer will record any reduction in the number of tugs used in the operations room log.

Note: Tugs escorting vessels transiting Area A should stand by close south of the line dividing Areas A and B.

Active Escorting

3.3 Active Escorting

Active escorting is generally accepted as being the more effective method of providing a tug escort, particularly with larger vessels. In some areas three escort tugs are required for vessels carrying more than 170,000 tonnes of pollutants and Pilots should consider securing all three for escort. Active tug escorting is only permitted where there is an OIC Marine Services Pilot on board.

In considering the use of an active escort using more than one tug, the Pilot must first discuss his plan with the tug masters to ascertain the placement of the tugs with due regard to the proximity of the other tugs and the deck layout of the ship for the tug line leads.

There are impracticalities with the use of active escorts on smaller vessels where the disadvantages can often outweigh the advantages. Pilots may wish to confer specifically with the Master on this matter.

Sufficient crew should always be stationed ready to tend the tug's line; the Pilot should have this confirmed by the escorted vessel.

Passive Escorting

Wherever possible, passive escorting should be conducted with the tug less than 1 cable from the vessel being escorted. Sufficient crew should always be stationed ready to secure the tug at short notice.

Priorities and Convoys

Occasionally the situation arises where two or more vessels require a tug escort simultaneously. This may occur where: -

- a) One vessel is sailing while another is arriving: or
- b) Where the vessels are arriving or sailing together.

In the case of (a), vessels arriving are to be given priority.

In the case of (b), two vessels may proceed a safe distance apart in convoy providing the guidelines on the required number of tugs and their deployment are followed as closely as circumstances permit. This will necessitate the use of an extra tug or tugs where available. The Harbour Master or Deputy Harbour Master (Operations) should be advised prior to any such movement, and no such movement may occur without his prior approval.

In situations where more than two ships are due to arrive or sail simultaneously, then only two may be escorted at any one time.

Responsibility

It is the responsibility of the Pilots to be familiar with and comply with the Tug Escort Guidelines.

It is the responsibility of the Harbour Master to review the Tug Escort Guidelines in the event of a significant change in operations.

It is the Tug Master's responsibility to ensure that his tug and crew are ready and on station for escort duty at the specified time.

It is the Duty Marine Officer's responsibility to advise Tug Masters of forthcoming movements and the number of tugs required.

Emergency tug deployment

In emergency situations and exceptional circumstances, all tugs are to make themselves available at Master/Pilot's request as soon as possible while within the harbour area.

In the event of any emergency* situation within the approaches to Scapa Flow and the Pentland Firth the Marine Officer will request a tug/s to muster in readiness to attend the casualty. The Harbour Master, Duty Harbour Master or the Deputy Harbour Master (Operations) must be advised immediately following such action being taken and fully briefed

on the incident. Deployment of tugs must be sanctioned by either the Harbour Master, Duty Harbour Master or the Deputy Harbour Master (Operations), unless the tug is responding to a Mayday distress call.

The Marine Officer will liaise with the Pilot/Master of any vessel berthing/unberthing, arriving/sailing to arrange for tug/s release from existing duties where necessary

Figure 1. Tug escort areas for Scapa Flow and approaches

