

# Belfast Harbour

## Towage Information



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## Introduction

This booklet has been produced to provide a source of information on tugs and towage procedures for Masters of vessels using Belfast Harbour. It should be read, as appropriate, in conjunction with the Port's Minimum Towage Guidelines which state minimum towage requirements for each berth within the port for various vessel sizes and types and the General Directions for Navigation within the port.

Towage within Belfast Harbour is provided commercially by 5 independent operators. Belfast Harbour does not provide towage. Whilst stipulating minimum towage requirements and regulating movements within the port through the Vessel Traffic Service (VTS), under normal circumstances Belfast Harbour are not involved with the contracting of towage services.

Within Belfast Harbour a Towage Committee has been established. This consists of representatives from: each of the towage companies, Belfast Lough Pilotage Services, PEC holders and Belfast Shipping Agents Association. The drafting of this document has been undertaken with the involvement of the committee.

## Minimum Towage Requirements

Belfast Harbour has published a document entitled Minimum Towage Requirements which is available for download at: <https://www.belfast-harbour.co.uk/port/marine-services>

These Towage Requirements state the minimum towage for each berth, broken down into categories consisting of ship's length, vessel orientation and whether or not they are fitted with a bow thruster. It should be noted that these are **minimum requirements** and in no way prevent the Master of a vessel or the Port Authorities from increasing the number or size of tugs as they see necessary. Where the requirements state 'individually risk assessed'; the Harbour Master, in consultation with the ship's Pilot and Master as appropriate, will decide upon the necessary towage.

## Towage Certificates

Provided certain conditions are met; vessels which call regularly to the port may be exempted from some or all of the minimum requirements. Such exemptions are subject to a procedure contained within the Port's Marine Safety Management System and, if successful, will result in the vessel being issued with a Towage Certificate. This certificate is valid for wind strengths below 20 knots only, above 20 knots Minimum Towage Requirements apply. Possession of a Towage Certificate does not prevent the Master of the vessel from using tug(s) should it be deemed necessary.

## Procedure for Obtaining Towage Services

Towage within Belfast Harbour is arranged through the local Shipping Agents.

All of the towage providers operating within the port can provide tug assistance at two hours notice. Therefore the Master should request any tugs he/she requires through his/her Agent taking this notice period into consideration.

Direct contact details for the Towage Providers are provided in Annex I of this booklet.

In exceptional circumstances, should Port Control be asked to contact tugs on behalf of the Master, the exact towage provider, type size and number of tugs should be clearly stated.

In cases of emergency, that is when the Master or Pilot of a vessel deem that towage is required to safely execute a transit or manoeuvre **that has already commenced**, the Port Controller is authorised to allocate any towage resources immediately available to go to the assistance of that vessel.

Nothing in this procedure prevents the Duty Harbour Master from allocating towage to any vessel as he/she considers appropriate.

Except in cases of emergency or otherwise as directed by the Duty Harbour Master, an inbound vessel requiring a tug for arrival will not be permitted to pass the Fairway Buoy until the tug has confirmed it is ready to be mobilised.

## Tug Types Available Within the Port

There are currently 8 tugs permanently based within the port, these fall into two established categories:

Omni-directional tugs (x 4)

Conventional tugs (x 4)

### 1. **Omni-directional tugs:**

Omni-directional tugs are tugs fitted with omni-directional propulsion units, either vertical Voith Schneider propulsion units or Azimuth Propellers.

Such units can deliver thrust in any horizontal direction, hence the term 'omni-directional'.

#### ***The propulsion units (two; side by side) can be situated:***

- a. under the bow, as is the case with Voith Schneider tugs and can be the case with azimuth propellers; such tugs are called tractor tugs.
- b. under the stern, as is the case with azimuth propellers; such tugs are called ASD-tugs (azimuth stern drive tugs).

### 2. **Conventional Tugs**

Single screw, twin screw or triple screw tugs, all called conventional tugs, are less manoeuvrable compared to tugs with omni-directional propulsion units.

Manoeuvrability of conventional tugs can be upgraded by installing specific rudder systems and/or bow thrusters. Another alternative is the use of steerable nozzles, which also increase manoeuvrability.

Details of each individual tug in the Port, including a description of their propulsion systems are provided in Annex II to this booklet.

*Note that for purposes of the Belfast Harbour Minimum Towage Requirements, the Tugs are classified by bollard pull strength rather than propulsion type:*

- Intermediate Tugs are tugs with a bollard pull of less than 20 tonnes.
- Large Tugs are tugs with omni-directional propulsion systems and a bollard pull greater than 20 tonnes.

## Methods of Tug Usage

Belfast Harbour Minimum Towage Guidelines specify the minimum number and bollard pull of tugs. Currently, the tugs within the port with bollard pull less than 25 Tonnes are twin screw tugs and those with bollard pull over 25 Tonnes are omni-directional tugs.

### Escorting:

Active Escorting or indirect towing – (when the tug is dragged through the water by the tow line during transit) is not currently undertaken within the Port.

Passive Escorting, whereby a tug shadows the progress of a ship during the transit, is undertaken at Master's / Pilot's discretion.

### Push / Pull

The push-pull operation means that the tug is connected to the assisted vessel by a short 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 short line.

Should only pushing be required, a tow line may not be necessary.

Due to the limited power of conventional tugs when running their propellers astern, their ability to pull-back on the line will be limited. As a rule of thumb, the maximum astern bollard pull of conventional tugs is approximately 65% of the ahead bollard pull.

When in Push / Pull use, ASD and conventional tugs will normally be bow-to, whilst tractor tugs will normally be stern to the vessel.

### On the line

On the line towing (also referred to as the European method as this is the traditional method of tug assistance in European ports) involves the towline being connected to the tug by a towing hook or towing winch. The location of the towing point will vary between tug types: conventional, ASD or Tractor.

#### ***When made fast to a vessel's bow:***

The effectiveness of tugs towing on a line will decrease with increasing headway. This is because, as headway increases, more of the tugs power is used in maintaining its position relative to the vessel, as opposed to being applied as an assisting force through the towline.

***When configured in a stern-to-stern tow:***

The following safety matters should be taken into account by the ship:

- Speed of the ship should be kept low, preferably less than 3 knots and never over 4 knots.
- Ship's propeller use to be limited to Dead Slow Ahead/Dead Slow Astern; should more engine power be needed this should be done in consultation with the Tug's Master.
- Similarly, ship's rudder use should be such that it does not cause any problem for the tug.
- When approaching the berth the ship's speed is to be lowered to approximately 1 knot in good time to enable the tug to reposition / drop gob rope to assist in mooring.
- Beware that tug may need to release tow line at short notice should a risk of girting arise\*.

**\*There are dangers associated with towing on the line; namely risk of girting and capsizing. Girting happens when the towline comes at right-angles to the tug. The tug is pulled bodily sideways through the water by its tow, which can lead to deck-edge immersion, flooding and capsize - unless the towline is released in good time. As a safety measure, all conventional tugs operating within Belfast Harbour are equipped with gob rope systems and on load release hooks. A gob rope system (or similar system) keeps the tow line low and fixed to the after end of the tug and, when operating stern to stern, can prevent the tug veering off course and presenting a dangerous aspect to the direction of travel. The location of the towing point on ASD tugs (when operating over the bow) and Tractor Tugs significantly reduces the risk of girting.**

## **Towage other than Harbour Towage**

The Master of a vessel engaged in towing or pushing, other than those engaged in harbour towage operations, shall give a minimum of 60 minutes notice to Port Control and shall specify the details of the tow.

Dead ship tows require the authorisation of the Harbour Master and are to be conducted in hours of daylight.

Vessels engaged in towing / pushing may only tow / push one other vessel / object at a time.

Tugs and tows will be subject to the Harbour's Pilotage Directions.

## Preferred VHF Etiquette When Working With Tugs

### *Establishing Communications:*

Bridge to Bridge Communication between the vessel being assisted and the tugs should primarily be established on the port operations frequency, VHF Channel 12. Thereafter a working channel should be selected by the Pilot / Master of the vessel being assisted for all subsequent tug and berthing communications – Usually VHF Ch. 8, 10 or 14.

On changing to the working channel, all vessels should radio check with the Pilot / Master.

Prior to the berthing manoeuvre, the plan pertaining to each tug should be passed by the Master/Pilot. This will include:

- The position of the tug relative to the vessel.
- If lines are to be used and whether they will be tugs lines or ships lines (Note: tugs in Belfast normally use tugs lines).
- Method of use, eg. On the line, push/pull, escorting.
- Berthing instructions and whether the vessel will swing prior to berthing.

### *Tug Position*

Throughout the manoeuvre the Master/Pilot should endeavour to keep the Tug's Master fully updated, with particular reference given to the desired position of the tug relative to the vessel. It should be borne in mind that it will take time for a tug to reposition during the operation, for example:

- From pushing to pulling (and vice versa).
- Pulling on stbd bow to pulling on port bow, etc.

This will mean the ship's Master / Pilot needs to anticipate the next required tug movement and communicate this to the tug in order to allow the Tug Master time to reposition:

- If working on the line, the tug may need time to change sides of the vessel or to change direction of thrust in the case of conventional tugs.
- If working in push/pull mode, the tug will need advance warning to either be **“out on the line”** ready to take the weight, or to **“come in ready to push”**.



## ***Tug Pushing/Pulling instructions***

In order to avoid possible confusion between differing bollard pull strengths of varying tugs, any instructions to tugs should state **force in Tonnes**.

<b><i>Examples of preferred VHF instructions between vessel and tug</i></b>	
Master/ Pilot	<b>Surrey, stand by to pull on stbd quarter</b>
Tug	<b>Surrey ready to pull on stbd quarter</b>
Master/ Pilot	<b>Surrey, 15 tonnes pull on stbd quarter</b>
Tug	When power is on <b>Surrey pulling 15 tonnes</b>
Master/ Pilot	<b>Surrey, increase to 20 tonnes pull</b>
Tug	<b>Increase to 20 tonnes</b> When power has been increased <b>Surrey pulling 20 tonnes</b>
Master/ Pilot	<b>Surrey, ease to 10 tonnes..... Pull 10 tonnes on stbd beam</b>
Tug	When in new position and at new power setting <b>Surrey pulling 10 tonnes on stbd beam</b>
Master/ Pilot	<b>Surrey, stop</b>
Tug	When power is off <b>Surrey all stopped</b>

### **Note:**

The tug master will keep that power setting and position relative to the ship until instructed to do otherwise by the Master / Pilot.

*Instructions with PORT or STARBOARD in them refer to the port or starboard side of the vessel being towed.*

## Annex I

### Contact details for Towage Providers within the Port

Towage Provider	Contact Details
<p><b>Svitzer</b></p>	<p>York Dock                      Belfast                      BT3 9AA                      Simon Mew, Port Captain  <a href="mailto:simon.mew@svitzer.com">simon.mew@svitzer.com</a>                      Dave Strand, Deputy Port Captain  <a href="mailto:dave.strand@svitzer.com">dave.strand@svitzer.com</a>                      Ita Dickson, Marine Assistant  <a href="mailto:ita.dickson@svitzer.com">ita.dickson@svitzer.com</a>                      +44 (0) 2890753431 Duty Master (24 Hours)</p>
<p><b>SMS Towage</b></p>	<p>Gotto Wharf 1                      Herdman Channel Road                      Belfast                      BT3 9LG  <a href="mailto:ops@smstowage.com">ops@smstowage.com</a>                      +44 (0) 2890 183333 (24 Hours)</p>
<p><b>John McLoughlin &amp; Son (Shipping) Ltd</b></p>	<p>Divis Berth                      Northern Road                      Belfast Harbour                      BT3 9AL  <a href="mailto:scotttasker@btconnect.com">scotttasker@btconnect.com</a>                      +44 (0) 2890351714                      +44 (0) 7786198975 (24 hours)</p>
<p><b>David Ferran &amp; Sons</b></p>	<p>2nd Floor Hurst House                      15-19 Corporation Square                      Belfast                      BT1 3AJ  <a href="mailto:justin@davidferran.co.uk">justin@davidferran.co.uk</a>  <a href="mailto:administrator@davidferran.co.uk">administrator@davidferran.co.uk</a>                      +44 (0) 2890 351 411 Dock Office (24 hours)</p>
<p><b>Waterfront Services (Michael F. Ewings (Shipping) Ltd.)</b></p>	<p>Michael F. Ewings (Shipping) Ltd.                      Hurst House                      15-19 Corporation Square                      Belfast                      BT1 3AJ                      +44 (0) 28 9024 2242 Office (24hours)  <a href="mailto:info@mfewings.com">info@mfewings.com</a>  <a href="mailto:mark@mfewings.com">mark@mfewings.com</a></p>

**Note:** Tug ordering is undertaken by ship's agent under normal circumstances.


## Annex II

### Tug Information.

Page 12:	Merchantman
Page 13:	Masterman
Page 14:	Svitzer Surrey
Page 15:	Svitzer Sussex
Page 16:	Sally McLoughlin
Page 17:	Eileen McLoughlin
Page 18:	Farset of Belfast
Page 19:	Michael Francis



## VESSEL IDENTIFICATION

<b>Vessel's Name:</b>	Merchantman	
<b>Operator:</b>	SMS Towage	
<b>Callsign:</b>	2IVH2	

## PERFORMANCE

<b>Maximum Speed:</b>	13 knots
<b>Bollard Pull:</b>	50 Tonnes
<b>Engines:</b>	2 x Caterpillar Type 3512B. 3200BHP
<b>Propulsion Type:</b>	2 x Rolls Royce Azimuth Stern Drive (ASD)

## TOWING EQUIPMENT

<b>Fwd:</b>	Single Drum Towing Winch – 25m /Min. Brake 100T hold
<b>Aft:</b>	Mampaey Towing Hook – Cert 50T

## VESSEL DIMENSIONS

<b>L.O.A.:</b>	24.39m
<b>Beam:</b>	9.15m
<b>Draught:</b>	4.4m
<b>GT:</b>	144.57

## CERTIFICATION

<b>MCA:</b>	Workboat Cat 2
<b>Class:</b>	Lloyds Register



### VESSEL IDENTIFICATION

<b>Vessel's Name:</b>	<b>Masterman</b>	
<b>Operator:</b>	SMS Towage	
<b>Callsign:</b>	2GXM9	

### PERFORMANCE

<b>Maximum Speed:</b>	13 knots
<b>Bollard Pull:</b>	45 Tonnes
<b>Engines:</b>	2 x Caterpillar Type 3512 B. 3200BHP
<b>Propulsion Type:</b>	2 x Rolls Royce Azimuth Stern Drive (ASD)

### TOWING EQUIPMENT

<b>Fwd:</b>	Single Drum Towing Winch – 25m/Min. Brake 100T Hold
<b>Aft:</b>	Single Drum 750m x 40mm Wire

### VESSEL DIMENSIONS

<b>L.O.A.:</b>	24.39m
<b>Beam:</b>	9.15m
<b>Draught:</b>	4.4m
<b>GT:</b>	144.26

### CERTIFICATION

<b>MCA:</b>	Workboat Cat 2
<b>Class:</b>	Germanisher Lloyd 100 A5



## VESSEL IDENTIFICATION

<b>Vessel's Name:</b>	Surrey	<b>SVITZER</b>
<b>Operator:</b>	Svitzer	
<b>Callsign:</b>	MPJV4	

## PERFORMANCE

<b>Maximum Speed:</b>	12.6 knots
<b>Bollard Pull:</b>	41.5 Tonnes
<b>Engines:</b>	2 x Ruston 6RK270M – 1439kw (1930bhp) @ 750rpm
<b>Propulsion Type:</b>	Twin Voith Schneider Propulsion Units

## TOWING EQUIPMENT

<b>Fwd:</b>	N/A
<b>Aft:</b>	(Brattvaag Hydraulics towing winch split drum )

## VESSEL DIMENSIONS

<b>L.O.A.:</b>	30.98m
<b>Beam:</b>	10.9m
<b>Draught:</b>	4.676m
<b>GT:</b>	378

## CERTIFICATION

<b>Certification Society</b>	Lloyds Register of Shipping
<b>Class:</b>	Lloyds Class +100 A1 Tug DOT Class IX



**VESSEL IDENTIFICATION**

<b>Vessel's Name:</b>	Sussex	<b>SVITZER</b>
<b>Operator:</b>	Svitzer	
<b>Callsign:</b>	MQVW2	

**PERFORMANCE**

<b>Maximum Speed:</b>	12.6 knots
<b>Bollard Pull:</b>	42 Tonnes
<b>Engines:</b>	2 x Rustons 6RK270M 2880Kw
<b>Propulsion Type:</b>	2 x Voith 28 G 11 185

**TOWING EQUIPMENT**

<b>Fwd:</b>	N/A
<b>Aft:</b>	Brattvag Hydraulic Towing winch with two drums

**VESSEL DIMENSIONS**

<b>L.O.A.:</b>	30.1m
<b>Beam:</b>	10.95m
<b>Draught:</b>	3.5m
<b>GT:</b>	378

**CERTIFICATION**

<b>MCA:</b>	MCA Class VII
<b>Class:</b>	Lloyds +100 A1 Tug DOT Class IX



**VESSEL IDENTIFICATION**

<b>Vessel's Name:</b>	<b>Sally McLoughlin</b>	
<b>Operator:</b>	John McLoughlin & Son (Shipping) Ltd	
<b>Callsign:</b>	2CRQ4	

**PERFORMANCE**

<b>Maximum Speed:</b>	10.3 knots
<b>Bollard Pull:</b>	23 Tonnes (18 Tonnes astern)
<b>Engines:</b>	2 x Doosan 4V222 – 596 kW (800 bhp each) @ 1800 rpm.
<b>Propulsion Type:</b>	Twin screw, fixed pitch in kort nozzles. Bow thruster.

**TOWING EQUIPMENT**

<b>Fwd:</b>	“H” Bitts; 10 tonne towing winch
<b>Aft:</b>	10 tonne towing winch; remote release Mampaey Towing Hook (on load release), remotely controlled gob rope winch.

**VESSEL DIMENSIONS**

<b>L.O.A.:</b>	16.0 m
<b>Beam:</b>	6.2 m
<b>Draught:</b>	2.9 m
<b>GT:</b>	46 (Displacement 107 tonnes)

**CERTIFICATION**

<b>MCA:</b>	Workboat Cat 2 (60 miles from safe haven), Pilot Boat Endorsement
<b>Class:</b>	-





### VESSEL IDENTIFICATION

<b>Vessel's Name:</b>	Eileen McLoughlin
<b>Operator:</b>	John McLoughlin & Son (Shipping) Ltd
<b>Callsign:</b>	2HAL5

### PERFORMANCE

<b>Maximum Speed:</b>	10.3 knots
<b>Bollard Pull:</b>	24.9 Tonnes (21.5 Tonnes astern)
<b>Engines:</b>	2 x Doosan 4V222 – 596 kW (800 bhp each) @ 1800 rpm.
<b>Propulsion Type:</b>	Twin screw, fixed pitch in kort nozzles. Bow thruster.

### TOWING EQUIPMENT

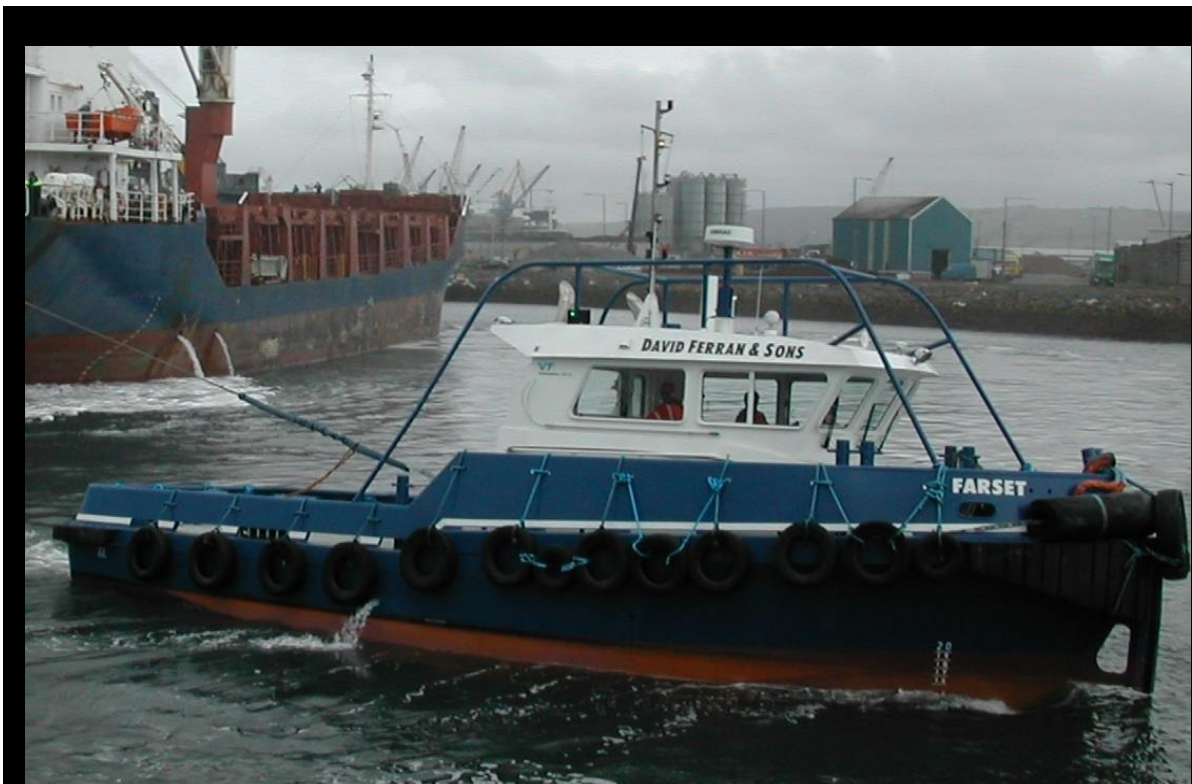
<b>Fwd:</b>	Towing winch 50 tonne Brake – 25 tonne Pull. Stainless steel bow towing lead
<b>Aft:</b>	10 tonne towing winch; remote release Mampaey Towing Hook (on load release), remotely controlled gob rope winch.

### VESSEL DIMENSIONS


<b>L.O.A.:</b>	16.0 m
<b>Beam:</b>	6.2 m
<b>Draught:</b>	2.9 m
<b>GT:</b>	46 (Displacement 107 tonnes)

### CERTIFICATION

<b>MCA:</b>	Workboat Cat 2 (60 miles from safe haven), Pilot Boat Endorsement
<b>Class:</b>	-



### VESSEL IDENTIFICATION

<b>Vessel's Name:</b>	<b>Farset of Belfast</b>	
<b>Operator:</b>	David Ferran & Sons	
<b>Callsign:</b>	MAKF8	

### PERFORMANCE

<b>Maximum Speed:</b>	12 knots
<b>Bollard Pull:</b>	14.8 Tonnes
<b>Engines:</b>	2 x Volvo Penta TAMD D12-550 – 408kW (550bhp) @ 1900rpm.
<b>Propulsion Type:</b>	Twin screw, fixed pitch in Kort nozzles.

### TOWING EQUIPMENT

<b>Fwd:</b>	-
<b>Aft:</b>	Swivel hook, quick release. Remotely controlled gob rope winch.

### VESSEL DIMENSIONS


<b>L.O.A.:</b>	15.43m
<b>Beam:</b>	5.45m
<b>Draught:</b>	1.7m half load condition
<b>GT:</b>	N/A (Displacement 55 tonnes half load condition.)

### CERTIFICATION

<b>MCA:</b>	Workboat Cat 3 (20 miles from safe haven), Pilot Boat endorsement
<b>Class:</b>	-



## VESSEL IDENTIFICATION

<b>Vessel's Name:</b>	<b>Michael Francis</b>	 <b>MICHAEL F. EWINGS</b> (Shipping) Ltd.
<b>Operator:</b>	MF Ewings (Shipping) Ltd.	
<b>Callsign:</b>	ZQHT6	

## PERFORMANCE

<b>Maximum Speed:</b>	10 knots
<b>Bollard Pull:</b>	13 Tonnes
<b>Engines:</b>	2 x Caterpillar 3408B TA/B – 700kW (940bhp) @ 1800rpm.
<b>Propulsion Type:</b>	Twin screw, fixed pitch in Kort nozzles.

## TOWING EQUIPMENT

<b>Fwd:</b>	Fixed post.
<b>Aft:</b>	Mampaey disc type towing hook, 15 ton SWL

## VESSEL DIMENSIONS

<b>L.O.A.:</b>	16.89m
<b>Beam:</b>	5.29m
<b>Draught:</b>	2.24m
<b>GT:</b>	N/A (Displacement 62 tonnes)

## CERTIFICATION:

<b>MCA:</b>	Workboat Cat 3 (20 miles from safe haven)
<b>Class:</b>	DT (MCA) - Tug.