



Ministry  
of Defence

de&s

# **DES Ships Boats Survey and Trials Form Part 1A Condition Survey**

Version 1.1  
11 November 2024

<b>Prepared by:</b>	DES Ships Boats-EngSpt	██████████
<b>Approved by:</b>	DES Ships Boats-ISS-Eng1a	██████████
<b>Authorised for issue by:</b>	DES Ships Boats-ChfEng	██████████

### Version Control

Date Issued	Version	Author	Reason for Change
16 October 2023	1.0	██████████	Initial release
11 November 2024	1.1	██████████	Updates due to additional Survey and Trial forms creation

## SURVEY AND TRIALS

The Contractor shall provide the Authority with evidence of material state and performance before and after work has been conducted on Boats as part of their respective In-Service Support contracts. This is achieved through conducting Surveys and Trials as part of the standard upkeep core work package for each Boat. When tasked, the Contractor shall conduct Surveys and/or Trials outside of the standard upkeep work package (for example, following a major equipment change or following installation of new equipment).

The Authority has provided a guide for conducting and recording the evidence for the following Surveys and Trials:

- a. Condition Survey: A comprehensive Survey of the material state and performance of the Boat and its equipment and systems preceding a planned maintenance period. **Survey and Trials Form 1A** is to be completed for this activity.
- b. Functional Survey: A brief functional Survey of the material state of the Boat and its equipment and systems preceding an unplanned maintenance period. **Survey and Trials Form 1B** is to be completed for this activity.
- c. Harbour Acceptance Trials (HATs) and Sea Acceptance Trials (SATs): A Trial conducted to prove the material state and performance of the Boat and its equipment and systems following a planned maintenance period. **Survey and Trials Form 2A** is to be completed for this activity.
- d. Acceleration Trial: A Trial to establish the acceleration of the craft to its maximum average speed and evaluate this against the expected acceleration. **Survey and Trials Form 2B** is to be completed for this activity.
- e. High Speed Maneuverability Trial: A Trial to establish the maneuverability of the craft at its planing speed. **Survey and Trials Form 2C** is to be completed for this activity.
- f. Endurance and Fuel Consumption Trial: A Trial to establish the endurance and fuel consumption at its planing speed. **Survey and Trials Form 2D** is to be completed for this activity.
- g. Sea Keeping Trial: A Trial to establish the sea keeping abilities of the craft. **Survey and Trials Form 2E** is to be completed for this activity.
- h. Bollard Pull: A Trial to establish the load produced by the boat's propulsion. **Survey and Trials Form 2F** is to be completed for this activity.

Acceptable material state shall be defined as;

- Equipment or system in full working order;
- No damage that will impact or impede full and safe working use of equipment or system;
- No installation of equipment or adjacent equipment that will impact full and safe working use of the equipment or system.

On completion of the Survey and/or Trial, the Contractor shall notify the Authority of any deterioration that may impact the material state of the Boat or it's equipment and systems. The Contractor shall provide the Authority with a recommendation for rectification to bring it up to an acceptable material state.

On completion of the Survey and/or Trial (and all accepted recommendations have been rectified), the Contractor shall declare that the functionality and performance of the equipment and systems provided as evidence in the Survey and Trials forms will be upheld for the duration of the **12-month Guarantee Period** from completion of the work package unless prior agreement has been obtained.

The trials are to be witnessed by the Authority or Authority's Authorised Representative unless prior agreement has been obtained.

Copies of completed Survey and Trials forms are to be sent to the Authority and originals are to be retained by the Contractor.

## CONDITION SURVEY

Survey and Trials form 1A	<b>CONDITION SURVEY</b> <b>(This form covers all craft types)</b>		V 1.1 11/12/2024																												
Boat Type:	Boat Number:	Date:																													
<p>The Contractor shall conduct a Condition Survey of the craft using the enclosed form as guidance on areas and equipment to inspect.</p> <p>The material survey is to be in conjunction with the craft's relevant code (i.e., MGN280/Workboat Code/Grey Code) and craft BR.</p> <p><i>NOTE: The enclosed form has been designed to cover all Boats from enclosed wheelhouse craft, open craft, and yachts. Therefore, certain items detailed will be Not Applicable for some craft.</i></p>																															
<p><b><u>SURVEY SECTIONS</u></b></p> <table> <thead> <tr> <th><u>Sections</u></th> <th><u>Item number</u></th> </tr> </thead> <tbody> <tr><td>Hull</td><td>1</td></tr> <tr><td>Machinery</td><td>2</td></tr> <tr><td>Propulsion &amp; Steering</td><td>3</td></tr> <tr><td>Auxiliary Machinery</td><td>4</td></tr> <tr><td>Electrical</td><td>5</td></tr> <tr><td>Fire Detection/Fire Fighting</td><td>6</td></tr> <tr><td>Wheelhouse</td><td>7</td></tr> <tr><td>Open Boat Console</td><td>8</td></tr> <tr><td>Seating</td><td>9</td></tr> <tr><td>Navigation &amp; Communication</td><td>10</td></tr> <tr><td>Mast</td><td>11</td></tr> <tr><td>Lifesaving</td><td>12</td></tr> <tr><td>Accommodation</td><td>13</td></tr> </tbody> </table>				<u>Sections</u>	<u>Item number</u>	Hull	1	Machinery	2	Propulsion & Steering	3	Auxiliary Machinery	4	Electrical	5	Fire Detection/Fire Fighting	6	Wheelhouse	7	Open Boat Console	8	Seating	9	Navigation & Communication	10	Mast	11	Lifesaving	12	Accommodation	13
<u>Sections</u>	<u>Item number</u>																														
Hull	1																														
Machinery	2																														
Propulsion & Steering	3																														
Auxiliary Machinery	4																														
Electrical	5																														
Fire Detection/Fire Fighting	6																														
Wheelhouse	7																														
Open Boat Console	8																														
Seating	9																														
Navigation & Communication	10																														
Mast	11																														
Lifesaving	12																														
Accommodation	13																														
<b>Assessment Categories</b>																															
The material condition of the vessel is to be assessed against the following categories	A	Condition satisfactory, no sign of significant deterioration at present																													
	B	Deterioration evident but not to an extent which will immediately compromise the safety of the vessel. Monitor for further deterioration and take appropriate remedial action.																													
	C	Deterioration/unsatisfactory condition compromising seaworthiness of vessel evident.																													
	N/A	Not Applicable																													
The material survey is to be in conjunction with the craft's relevant code (i.e., MGN280/Workboat Code/Grey Code).																															

## Survey Report on Material Condition of Vessel

Item	Areas and items to examine	Material Condition			N/A	Observations and Recommendations
		A	B	C		
1.	<b>HULL</b>					
1.	Hull External. Confirm the external hull is in good condition. Note any damage and repairs.					
	a. Steel					
	b. Aluminium					
	c. GRP/ Composite					
	d. Wood					
2.	Sacrificial Anodes. Confirm all sacrificial anodes on the hull and external equipment are in good condition.					
3.	Sea Inlets & Outlets. Confirm in good condition					
4.	Draught marks. Confirm condition and accuracy.					
5.	Collar - Closed Cell Foam Fender. Confirm in good condition. (i.e., ORC craft)					
6.	RIB Collar - Inflatable. Confirm in good condition.					
7.	Additional Fixed Hull Fenders. Confirm in good condition.					
8.	Weather Deck. Confirm the external weather deck is in good condition.					
	a. Steel					
	b. Aluminium					
	c. GRP/ Composite					
	d. Wood					
9.	Weather Decks. Confirm non-slip surfaces are in good condition.					
10.	Weather Deck fittings. Confirm all fittings on the weather deck are in good conditions. (Cleats, bollards, stag horns etc)					
11.	Lifting Points & Craft Lifting Hooks (i.e., Henriksen). Confirm are in good condition and where applicable hooks mechanism are in date. Check load test certificates.					
12.	Freeing ports. Confirm clear of obstruction.					

13.	Anchor and Cable warp. Confirm in good condition.					
14.	Air Pipes. Confirm height above deck and means of closure with provision to prevent overpressure.					
15.	Watertight Doors. Confirm condition, can be opened both sides and secure space watertight.					
16.	Watertight Hatches. Confirm condition and secure space watertight.					
17.	Fire Hatches. Confirm are in a good condition.					
18.	Fire Flaps. Confirm are in a good condition.					
19.	Hull Internal. Confirm the internal hull is in good condition. Note any damage and repairs.					
20.	Confirm the Bilge area is in a clean condition.					
21.	Deckhead. Confirm deckhead is in good condition.					
22.	Bulkheads. Confirm all bulkheads are in good condition.					
23.	Internal Fire Doors & Hatches. Confirm are in a good condition.					
24.	Sea Inlets & Discharges Valves. Confirm shut off or non-return valves operate freely.					
25.	Ventilators. Confirm operate freely.					
26.	Buoyancy Tanks. Confirm are in a good condition					
27.	Ballast Tanks. Confirm are in good condition.					
28.	Fuel Tanks. Confirm are in good condition.					
29.	Skylights. Confirm are in good order and can be closed from the outside.					
30.	Portholes. Confirm are in good condition.					
31.	Authorised hull modifications. Confirm any modifications since the last survey are in good condition.					
32.	Unauthorised hull modifications. Confirm no					



	unauthorised modifications have taken place since the last survey.					
2. MACHINERY						
1.	Craft with in-board Main Engines - Machinery space. Confirm the space is clean, tidy, free of clutter. Signage is clear. Escape routes clearly signed.					
2.	Craft with in-board Main Engines. Confirm the engines are in a good condition and securely mounted with guards, exhausts, fuel lines securely installed.					
3.	Out-Board Motor Craft. For craft with OBM, confirm securing, fuelling and control systems are in good condition.					
4.	Out-Board Motor Craft with assigned OBMS. Confirm the OBM and propeller are in good condition.					
5.	Remote stops installed and functional.					
6.	Main Fuel. Check the following:					
	a. Type of fuel					
	b. Stowage					
	c. Signage					
	d. Shutoffs					
	e. Fuel filtering arrangements					
	f. Fuel filling arrangements.					
	g. Fuel tank vents and associated pipework.					
7.	Fuel Pipework. Confirm pipework is in a good condition and of the right material and secure.					
8.	Valves. Confirm remote means of closing valves on tanks that contain oil fuel, lubricating oil and other flammable oils, and valves operate freely.					
9.	Tanks for petrol engine craft. Confirm a suitable approved hydrocarbon gas detector fitted located under or adjacent to tank. Confirm no electrical equipment residing in the					

	vapour area, or are ignition protected.					
10.	Exhaust pipework. Confirm pipework is in a good condition of the right material and secure.					
11.	Engine cooling system. Confirm filter and seacock isolation in good condition and function correctly.					
12.	Fans. Machinery spaces and battery boxes if fitted. Confirm operation.					
13.	Compressed air. Confirm system is in a good condition. Check calibration of safety valves.					
14.	Bilge Pumps Powered. Confirm are in a good condition, free from obstruction and function correctly (ie Electrical powered pumps)					
15.	Bilge Pumps Manual. Confirm all hand operated bilge pumps in a good condition, free from obstruction and function correctly.					
16.	Bilge Alarms. Confirm all work correctly.					
17.	Pumps Fuel transfer. Confirm in good operating condition.					
18.	Pumps Bilge. Confirm in good operating condition. (Electrical and manual pumps.)					
19.	Pumps Ballast. Confirm in good operating condition.					
20.	Hydraulic system. Confirm in good condition without leaks.					
3.	PROPULSION AND STEERING					
1.	Propulsion shafts. Confirm in good condition and exposed shafts are guarded (Including Cardan shaft)					
2.	Steering Gear. Confirm in a good condition.					
3.	Propulsion. Confirm in a good condition.					
	a. Propeller (Open)					
	b. Propeller (Enclosed.)					
	c. Water Jet					
4.	AUXILIARY MACHINERY					

1.	Ramps. Confirm in good order and functions correctly. Confirm remote controls.					
2.	Anchor windlass. Confirm in good order and functions correctly. Confirm remote control.					
3.	Winches. Confirm in good condition. Confirm remote control.					
5.	<b>ELECTRICAL</b>					
1.	Alternators. Confirm are in a good condition, securely mounted, fitted with secure guards					
2.	Generators. Confirm are in a good condition, securely mounted, fitted with secure guards, exhausts, fuel lines.					
3.	Remote stops installed and functional.					
4.	Batteries. Confirm are in a good condition, securely mounted in a container, terminals covered to be electrically safe. Unobstructed ventilation for lead acid batteries.					
	a. Engine Start Batteries					
	b. Craft Power Batteries					
	c. Navs and Comms Batteries					
5.	Inverters. Confirm are in a good condition					
6.	Distribution Boards. Confirm are in a good condition.,					
7.	Electrical cables. Confirm are in a good condition and all cables securely clipped and terminated.					
8.	Sockets and Shore Supply connectors. Confirm are in good condition.					
9.	Lighting. Confirm are in a good condition, provide adequate lighting for all areas of the craft.					
6.	<b>FIRE DETECTION/FIRE FIGHTING</b>					
1.	Fire Plan. Confirm the craft has a fire plan.					

2.	Fire Detectors. Confirm in good condition and comply with the fire-plan.					
3.	Fire Alarms. Confirm in good condition and comply with the fire-plan.					
4.	Fire extinguishers. Confirm the craft is fitted with the right type, size and numbers of extinguishers for the relevant areas of the craft complying with the fire plan. Confirm in date status of all extinguishers.					
	a. CO2/CO2 with bayonet					
	b. Dry Powder					
	c. Foam AQQ					
	d. Water					
	e. Blanket					
	f. Fire Bucket					
5.	Fixed firefighting systems for machinery spaces (Pyrogen etc.). Confirm the system is in good condition and in-date.					
7.	WHEELHOUSE					
1.	Structure. Confirm the outer structure is in good condition.					
	a. Steel/Armour protection					
	b. Aluminium					
	c. GRP/ Composite					
	d. Wood					
2.	Skylights. Confirm are in good order and can be closed from the outside.					
3.	Windows. Confirm are in good condition.					
4.	Window Wipers and water jets. Confirm in good condition					
5.	Wheelhouse Doors. Confirm are in good condition and able to operate from both sides.					
6.	Craft Controls. Confirm all craft steering and engine controls are in a good condition. (Steering system, throttle, and gear controls etc)					
7.	Craft Machinery Instrumentation Alarms Indication. Confirm the instrumentation in the wheelhouse are in good condition.					
	a. Engine Instrumentation					

	b. Auxiliary systems indication. (i.e., generators)					
	c. Auxiliary systems Alarms					
	d. Steering Indication (i.e., rudder angle etc)					
	e. Propulsion and Trim Equipment indication.					
	f. Fire Alarms					
	g. Bilge Alarms					
	h. Engine Alarms					
<b>8. OPEN BOAT CONSOLES</b>						
1.	Console. Confirm the console structure is in good condition and secure to the craft.					
2.	Craft Controls. Confirm all craft steering and engine controls are in a good condition. (Steering system, throttle, and gear controls etc)					
3.	Craft Machinery Instrumentation Alarms Indication. Confirm the instrumentation on the console are in good condition.					
	a. Engine Instrumentation					
	b. Engine Alarms					
	c. Steering Indication (ie rudder angle)					
	d. Propulsion and Trim Equipment indication					
	e. Bilge Alarms					
	f. Engine Alarms					
<b>9. SEATING</b>						
1.	Non shock mitigation seating: Confirm in good condition and secured to craft.					
2.	Shock mitigation seating: Confirm in good condition and secured to craft.					
<b>10. NAVIGATION AND COMMUNICATION</b>						
1.	Navigation equipment. Confirm the correct operation and condition of the following:					
	a. Compass Gyro					
	b. Compass Fluxgate					
	c. Compass GPS					
	d. Compass Magnetic					
	e. Secondary back up compass					

	f. Deviation cards for the magnetic compasses.					
	g. Pelorus					
	h. Radar					
	i. GPS					
	j. ECDIS (using UKHO charts)					
	k. Chart plotter (using commercial charts - Navionics, Blue View etc)					
	l. Automatic Identification System (AIS)					
	m. Depth sounder					
	n. Speed and distance indicator					
	o. Voyage data recorder					
	p. Wind speed and direction indicator					
	q. Navtex					
	r. Navigation Lights.					
	s. Navigation Shapes					
	t. Radar reflector					
	u. Horn					
	v. Signalling Lamp					
2.	Internal communications.					
3.	VHF DSC Radio. Confirm in good condition and with correct MMSI loaded and licence.					
4.	VHF handheld Radios. Confirm in good condition and charged.					
11. MAST						
1.	Mast. Confirm all masts carrying navigation lights, antenna or other equipment are in good condition.					
2.	Mast Equipment. Confirm all equipment on the mast (navigation lights, antenna, radar scanner) are in good condition.					
3.	Yachts. Mast Sailing. Confirm all mast for sails and associated fittings are in good condition.					
12. LIFESAVING						
1.	Confirm the following are in good condition, in date and comply with the requirements					

	of the vessel type and passenger carriage. If these items are not held on board, state what arrangements are made.					
	a. Lifejackets					
	b. Life Rafts					
	c. Life Rafts Hydrostatic releases					
	d. Lifebuoys					
	e. Man Overboard recovery					
	f. Parachute flares					
	g. Handheld flares					
	h. Line Throwing apparatus					
	i. Waterproof torch					
	j. Medical Kit					
	k. EPIRB					
	l. SART					
<b>13. ACCOMMODATION</b>						
1.	Accommodation area. Confirm the area is in good condition and free of clutter. Ensure the 2 means of escape a clear to use and appropriately signed.					
2.	Smoke detectors. Confirm the space has been fitted with Fire Detectors and Alarms.					
3.	Galley. Confirm all appliances are in good condition.					
4.	Toilet. Confirm the toilet is in good condition and associated seacock operate freely.					

<b>General Boat Condition</b>		
The material condition of the vessel is considered as:		
<b>A</b>	Condition satisfactory, no sign of significant deterioration at present	<input type="checkbox"/>
<b>B</b>	Deterioration evident but not to an extent which will immediately compromise the safety of the vessel. Monitor for further deterioration and take appropriate remedial action.	<input type="checkbox"/>
<b>C</b>	Deterioration/unsatisfactory condition compromising seaworthiness of vessel evident.	<input type="checkbox"/>

Comments:
-----------

Survey Conducted By		
<u>Signature</u>	<u>Name</u>	<u>Date</u>