

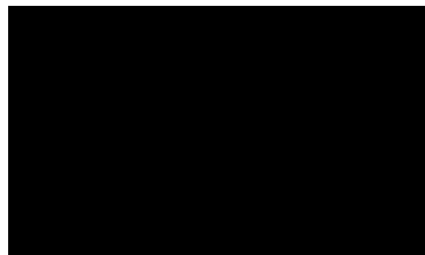
Hull only report for **Tranquelo**



for [REDACTED]
on the
22nd of November 2025

Report prepared by [REDACTED]

Of



At the request of 

This survey was carried out on the 22nd of November 2025 at Stoke On Trent Boat Building Marina the Above being the owner.

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1. Scope of Survey

- i. The scope of this survey is to assess the integrity of the hull. Where tests have been made are detailed in the text. References to condition are in relation to the vessels age (i.e., good condition does not necessarily mean new).

2. Conditions of Survey

The vessel was chocked ashore at Stoke On Trent Boat Building marina. The hull had been pressure washed off and areas were cleaned off on the base plate. All external parts were accessible except from where the vessel was supported on the steel axel.

3. Recommendation notes

- i. These will not be made concerning or other minor defects although relevant suggestions may be made in text. Recommendations I consider serious enough to affect insurability or safety of the vessel will be identified according to the scale A = serious (to be rectified immediately) and B = less serious (to be carried out at the earliest possible convenience or within 2 years). C = General maintenance (to be carried out on next pull out for maintenance).

**Recommendations will be printed in red for quick reference.
They will be contained in the text as well as in a separate
section at the end of this report.**

4. Factors limiting the survey.

- A.** The mechanical condition of the engine and its installation are outside the scope of this inspection and report.

- B.** The gas tanks, tanks and pipework were not included in this survey. No opening up was carried out and the tanks were not filled for the purpose of testing.

- C.** Those parts of the structure which were covered, unexposed, or inaccessible were not examined or tested where expressly mentioned in this report. No dismantling was carried out during this survey. It must, therefore, be clearly appreciated that significant areas of the internal surfaces of the hull and deck remained unavailable for close examination. In some cases, it is not possible to detect latent and hidden defects without destructive testing, this is not possible without owner's consent.

- D.** The opinions expressed in this report are given in good faith but imply no guarantee against faulty design or workmanship.

- E.** The validity of any CE marking and the confirmation of conformance or otherwise of this vessel to the RCD, the EMC Directive and the Machinery Directive are outside the scope of this inspection and report. The inspection did not include an assessment of compliance with the requirements of any Authority.

- F.** This Report has been prepared for the use of Commissioning Client and no liability is extended to others who may see it.

- G.** This report is based on observations and findings at the time of inspection. No liability or responsibility for any deterioration, defect, or loss arising after the date of inspection will be accepted beyond a period of six (6) months from the date of this report. After this period, no legal action or claim may be made against the author or commissioning party in relation to the contents or findings of this report.

5. Craft details

Overall length: 45ft approximately

Craft type: Cruiser narrowboat

Builder: Chapell & Wright

Year of construction: 1990

Original Steel Thickness: base: 10mm

Hull sides: 6mm

Counter plate: 10mm

Bss expiry date: 09/2028

Index No: 47876

Vat Status: Assumed paid

6. Hull

6.1 Hull Description

The vessel is of **flat-bottomed steel construction**, typical of a traditional narrowboat design. The hull form consists of a flat base plate with vertical hull sides and standard bow and stern construction.

A **weed hatch** is fitted directly above the propeller aperture, providing access for the removal of fouling and debris from the propeller. The propeller and rudder assembly are positioned aft of the swim section, with the **rudder stock passing through a rudder tube** located immediately below the weed hatch. The rudder is securely attached to the **skag**, which provides both support and alignment for the steering gear and propeller assembly.

6.2 Counter plate

The counter plate has undergone pressure washing and was inspected and thickness tested, indicating a nominal thickness of 10mm readings ranging from 10.0 to 8.6mm were taken all over the counter. Light pitting, with depths measuring 1mm or less, were identified during inspection.

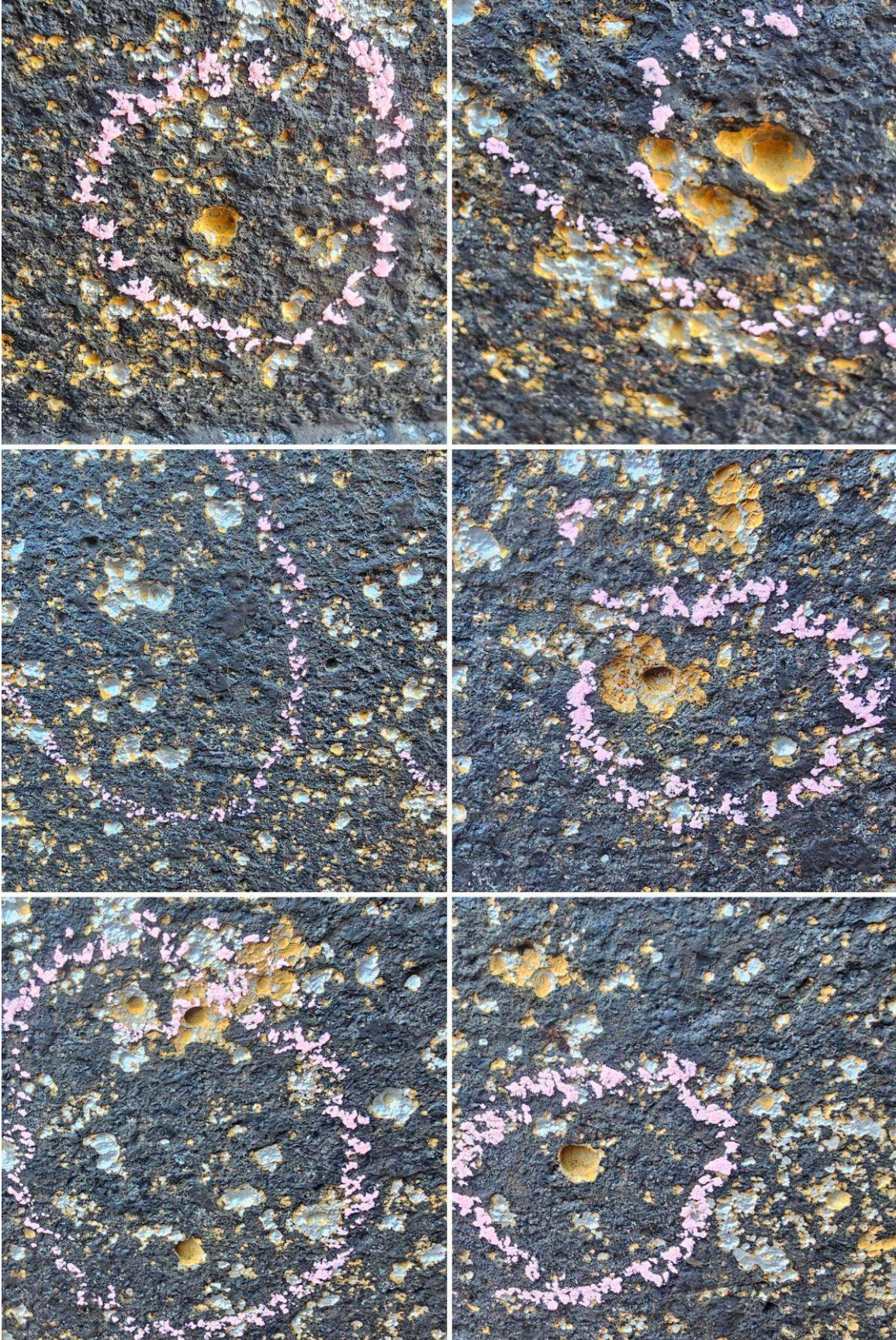
6.3 Hull sides

The hull sides were **pressure washed** thoroughly to remove surface deposits and enable an effective visual and ultrasonic inspection. Thickness measurements were taken systematically along the **waterline** and **chine**. Readings ranged from **6.0 mm to 4.5 mm**, with the lowest recorded value of **4.5 mm** located on the **starboard side, Section 7**, at the waterline.

A visual examination revealed **widespread areas of both light and deep pitting** across the hull sides. Pitting depths measured between **1 mm and 4.5 mm** on plating of **5.9 mm** original thickness. Several of these pits represent significant material reduction requiring attention.

***A* Recommendations – Hull Sides**

- **Grit blast the hull sides to bare metal to fully expose the extent of pitting and corrosion.**
- **Puddle weld all pits greater than 3 mm in depth to restore plate integrity.**
- **Once repairs are complete, treat the hull sides with a marine-grade two-pack epoxy resin coating system to provide long-term corrosion protection.**



A series of around 120 ultrasound readings were taken using a Cygnus 2 Ultrasonic Thickness Gauge.

This is an ultrasonic thickness gauge which ignores any subsequent paint coatings and was calibrated at the time of survey. The readings were taken along the sides, base plate, and counter plate, weed hatch. It should be recognised that the readings do not make allowance for fine pitting of the steel plate, so where pitting is severe, local plate thickness may be substantially less than that indicated, even if over a tiny area. Any severe pitting will be recorded separately. It should also be recognised that this survey represents the plate thickness obtained in many locations, some specifically chosen following visual inspection and hammer-sounding, and so is believed to be representative of general condition, but there can be no guarantee that areas of more severe corrosion do not lie in untested areas – in this respect it is sometimes the case that wastage of plating (or even pitting) occurs very locally – and generally from within the hull – to a severe degree while satisfactory thickness readings are obtained a few centimetres away.

6.4 Base plate

Selective areas of the base plate were **cleaned back to bare steel** to allow for inspection. The base was heavily coated in mud, and several areas showed visible surface rust. The original base plate thickness is **10 mm**.

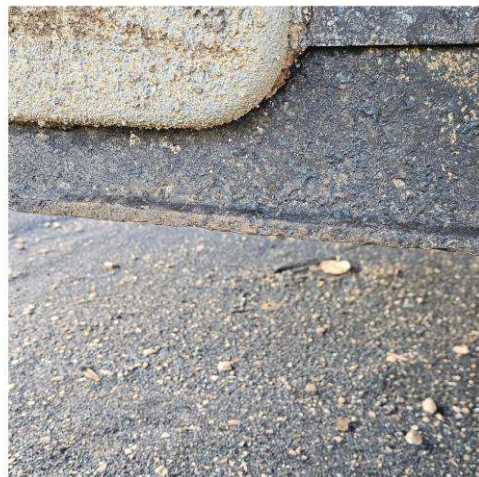
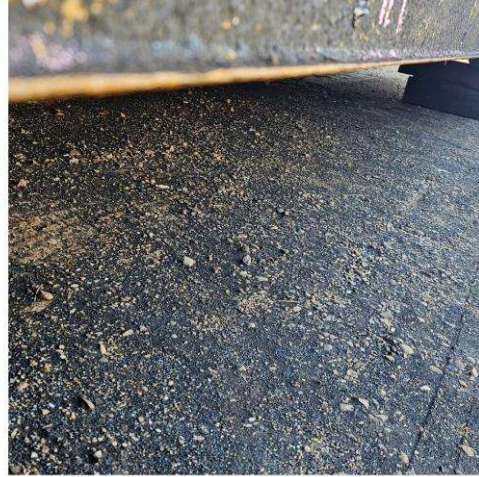
Ultrasonic thickness readings taken along the **centreline** ranged from **8.0 mm to 10.0 mm**, with visible pitting between **1 mm and 3 mm** in depth. These pitted areas still retain adequate remaining thickness and are considered structurally sound.

However, thickness readings taken approximately **200 mm inboard from the edges** of the base plate ranged from **2.5 mm to 5.0 mm**, with pitting depths of **1 mm to 3 mm**. These readings indicate **significant material loss**, leaving these edge sections with **very low remaining steel thickness**.

The **wear edge** of the base plate was also found to be heavily thinned, with some sections reduced to **approximately 2 mm** in thickness. This level of deterioration is consistent with prolonged abrasion and edge wear.

***A* Recommendations – Base Plate**

- **Grit blast all affected areas of the base plate to bare metal to fully expose the extent of corrosion, pitting, and wear.**
- **Fully weld 6 mm × 200 mm mild steel plates along the straight sections of the vessel's base to reinforce the low-thickness areas and restore structural integrity.**
- **Fit and fully weld additional 6 mm plating around both stern corners to protect these high-wear zones and compensate for the reduced plate thickness.**
- **These welded plates will also serve as a new sacrificial edge, replacing the worn original and providing ongoing protection against abrasion and impact.**



6.5 Ultrasound testing's

	<u>Original thickness</u>	<u>Max/min</u>	<u>Average cygnus 2</u>
	<u>mm</u>	<u>readings mm</u>	<u>readings mm</u>
Hull base plate	10mm	10mm/2.5mm	7.5mm
hull sides port	6.0mm	6.0mm/5.3mm	5.9mm
hull sides starboard	6.0mm	6.0mm/4.3mm	5.9mm
Counter plate	10.0mm	10.0mm/8.6mm	8.8mm
Rudder	10mm	10mm	10mm
Skeg	6mm	6mm	6mm
Weed hatch	6.0mm	5.6mm/5.9mm	5.6mm
Rudder tube	N/A	N/A	N/A
Chine weld	25mm	25mm/20mm	20mm

6.6 Hull Coatings

The hull was **pressure washed** to remove surface deposits and reveal the underlying steel condition. Very little effective hull protection remained, indicating that the previous coating system had largely deteriorated. The vessel had been previously coated in **bitumen-based hull paint**, most of which had worn away, leaving the steelwork exposed to corrosion.

***A* Recommendations – Hull Coating**

- **Grit blast the hull to bare metal to remove all remaining bitumen, rust, and surface contaminants, ensuring a clean and properly prepared surface.**
- **Following preparation, apply a marine-grade two-pack epoxy resin coating system to provide long-term, high-durability corrosion protection; or, as an alternative maintenance option,**
- **Recoat the hull with a high-grade bitumen hull paint, ensuring sufficient film thickness is achieved for effective protection.**

6.7 Rubbing strakes

Vessel Configuration:

Protection: Equipped with 50mm convex D bars, fully welded top side and fully welded overheads.

Function: These bars absorb contact and prevent structural damage to the hull.

Condition of Rubbing Strakes

Bow and Side Rubbing Strakes: Good condition

Stern Rubbing Strake: Good condition

7. Cathodic protection

***B* Recommendations – Cathodic Protection**

- **Replace the existing anodes at the vessel's next scheduled pull-out.**
- **Fit four 2.5 kg sacrificial anodes, positioned as two per side, to provide effective cathodic protection for the previously unprotected areas of the hull.**
- **Ensure all anodes are securely welded and electrically bonded to the hull for optimum performance.**

8.Steering

The **rudder cup** was found to be in **poor condition**, with noticeable play present in the lower rudder support, indicating wear and reduced effectiveness of the bearing surface.

The **top rudder bearing** was inspected and found to be in **good condition**, with no signs of play or excessive movement detected.

***A* Recommendations – Steering**

- **Replace the rudder cup to eliminate play and restore proper support for the rudder stock.**



9. Stern gear

The vessel is fitted with a 1½-inch propeller shaft running through a **brass cutlass bearing**. The bearing was found to be in poor condition, with excessive signs of wear. **Evidence of water ingress or dripping** was observed at the time of inspection, indicating that the stern gland and associated components are **not** performing effectively.

***A* Recommendations – Stern gear**

- **Replace Stern gear**



10. Weed hatch

The weed hatch was inspected, ultrasonic thickness measurements were taken, recording plate thickness values ranging from **6.0 mm to 5.6 mm**. Light pitting was observed in several areas, with pit depths of **1 mm or less**. The measurement point was located approximately **5 inches above the waterline**.

Overall, the weed hatch and its surrounding structure were found to be in **good condition** at the time of inspection, with no signs of significant corrosion or structural deterioration.

11. Rudder tube

The rudder tube is constructed from a **steel pipe** providing support and alignment for the rudder stock. Due to the small internal diameter, ultrasonic thickness measurements could not be obtained.

A visual inspection confirmed that the pipe appears to be of substantial wall thickness; however, **surface rust and corrosion** were visible both internally and externally. No signs of active leakage were observed at the time of inspection.

12.Recommendations

1. *A* Recommendations – Stern gear

- **Replace Stern gear**

2. *A* Recommendations – Steering

- **Replace the rudder cup to eliminate play and restore proper support for the rudder stock.**

3. *B* Recommendations – Cathodic Protection

- **Replace the existing anodes at the vessel's next scheduled pull-out.**
- **Fit four 2.5 kg sacrificial anodes, positioned as two per side, to provide effective cathodic protection for the previously unprotected areas of the hull.**

Ensure all anodes are securely welded and electrically bonded to the hull for optimum performance

4. *A* Recommendations – Hull Coating

- **Grit blast the hull to bare metal to remove all remaining bitumen, rust, and surface contaminants, ensuring a clean and properly prepared surface.**
- **Following preparation, apply a marine-grade two-pack epoxy resin coating system to provide long-term, high-durability corrosion protection; or, as an alternative maintenance option,**
- **Recoat the hull with a high-grade bitumen hull paint, ensuring sufficient film thickness is achieved for effective protection.**

5. *A* Recommendations – Base Plate

- Grit blast all affected areas of the base plate to bare metal to fully expose the extent of corrosion, pitting, and wear.
- Fully weld 6 mm × 200 mm mild steel plates along the straight sections of the vessel's base to reinforce the low-thickness areas and restore structural integrity.
- Fit and fully weld additional 6 mm plating around both stern corners to protect these high-wear zones and compensate for the reduced plate thickness.
- These welded plates will also serve as a new sacrificial edge, replacing the worn original and providing ongoing protection against abrasion and impact.

6. *A* Recommendations – Hull Sides

- Grit blast the hull sides to bare metal to fully expose the extent of pitting and corrosion.
- Puddle weld all pits greater than 3 mm in depth to restore plate integrity.
- Once repairs are complete, treat the hull sides with a marine-grade two-pack epoxy resin coating system to provide long-term corrosion protection.

12 Conclusion

The inspection has identified significant areas of corrosion, pitting, and wear on both the base plate and hull sides of the vessel. The recommended remedial works, including grit blasting, welding of reinforcement plates, and application of a marine-grade epoxy coating, will restore the vessel's structural integrity and offer enhanced long-term protection against further deterioration. Timely implementation of these measures is essential to ensure continued safe operation and to prolong the vessel's service life.



Tel: [REDACTED]
Mob: [REDACTED]
Email: [REDACTED]



www.boatsafetyscheme.org

BSS Examination Report: BSSER-488039/24

Information from the checks by the above Examiner concerning the boat and systems detailed below

Signed: _____ PIN: 711

Examined on: 27/08/2024

Boat Details:

Name: Tranquilo

Category of checks: Private

Nav. Authority: Canal & River Trust

Reg./Index/Mark: 47876

The Examiner noted the following fuels or items on board this boat:

Diesel fuel and/or system: Yes

Solid fuel appliance and/or solid fuel fired steam engine: Yes

Petrol fuel and/or system: No

Paraffin, kerosene, or other fuel and/or system: No

Portable Generator: No

Portable LPG canister(s) and/or appliance(s): No

Electrical DC power: Yes

Installed LPG system: Yes

Electrical AC power: Yes

LPG Test method (*B=Bubble tester M=manometer NT=Not Tested*): M

If NT this is why:

Your boat has been examined by the BSS Examiner above against the category of Checks relevant to the class of vessel indicated above. The BSS Examination is a way of verifying that your boat meets your navigation or harbour authority's minimum safety Requirements. The Requirements help reduce the risks of fire starting & spreading, explosions, pollution and carbon monoxide poisoning. Visit boatsafetyscheme.org for more information.

BSS Certification

Did the boat meet all the applicable minimum safety requirements?

Yes

If yes, the expiry date is 16/09/2028

Was a warning notice issued? **No** Was the examination terminated? **No**

See examiner's comments for details, if 'Yes' is the answer in either field.

The full details of any Checks that have not passed and why, are given in the examiner's comments section which is attached if relevant. Any Check item that is marked with an 'R' (Required) must be addressed in order for the boat to pass.

If the boat complies with the Requirements, this document should be considered as a report of a BSS Certification. However, it is the entry of this information on the central BSS database, and not this Examination report, that will be used by your boat licensing authority to confirm that your boat met the mandatory BSS Requirements on the day.

A BSS Examination is not a full condition survey of a vessel - to understand the scope of a BSS Examination and the nature of the Examination Report, please read About the BSS Examination and BSS Examination Report. If your examiner has not provided you a copy of that document, please ask for one, or view the information at www.boatsafetyscheme.org/boat-examination/arranging-the-examination/about-the-bss-certificate

Examiner's comments linked to: BSSER-488039/24

Boat Name: Tranquilo

Examination Date: 27/08/2024

Examiner: [REDACTED]

Check Items marked as required (R) are linked to navigation authority requirements and must be addressed in order for the boat to pass.

Check Items marked (A) are advice. The boat owner bears the responsibility for the safety of the crew concerning advice items. These will not prevent a boat passing.

'Additional Observations' (AO) are linked to potential risks identified by the BSS Examiner that are either not associated with any BSS Requirements, or may be identifying a future potential risk.

Check
Item

Check Item Details

Further Details Of The Examiner's Observations And
Findings

About the BSS Examination Report

This document reports the findings of your boat's BSS Examination which is to satisfy the question: 'Does your boat meet all the applicable navigation or harbour authority minimum safety requirements on the day it was carried out?' The question has three possible answers:

Yes – In this event, the report can be considered a receipt-style certificate. It indicates that your boat met all the applicable minimum requirements on the day of examination. You should take note of the expiry date in forward planning your next BSS examination.

It is the entry of this information on the central BSS database, and not the BSS Examination Report, that will be used by your boat licensing body as evidence of your boat's BSS certification status. Keep the certification information with the boat's records and pass it on if you sell the boat.

Yes, but some advice checks did not pass – All the information in the paragraph above applies; however the examiner found advice check items that could not be passed (marked with an 'A'). Although privately-owned boats do not have to comply with advice checks to achieve BSS certification, each one represents best-safety practice and meeting them all is highly recommended. Any listed in the report may be material to the vessel's insurance and the boat owner's duties under the law of occupier's liability.

No – Checks marked 'R' for 'required' have not passed and these items must be addressed to achieve BSS certification. Again as above, addressing any issues linked to any checks marked 'A' included in the report are highly recommended. Full details of what has failed, why and what must be achieved will be provided by your examiner.

Warning notices – these are issued when the examiner has found, or has cause to suspect, that your boat presents a significant and immediate risk. You should arrange, or carry out, works to make the boat safe as soon as possible. The general nature of the risk and any checks associated with Warning Notice will be identified by your examiner.

About the BSS Examination and its limitations

Please note: the BSS Examination findings, and examination report, relate only to the facts observed at the time of the BSS Examination. It is not evidence of compliance with the navigation authorities' requirements at any other time.

The owner's on-going responsibility: it is crucial to maintain the vessel in good condition in accordance with the safety requirements; and, any other licensing, registration or mooring conditions of the relevant navigation or harbour authority. The validity of a BSS pass result may be affected and can be cancelled if the vessel is not properly maintained; and/or non-compliant alterations are made; or if a hire boat or other type of non-private boat is examined against the 'private boat' category of BSS checks.

A BSS examination and examination report relates only to the relevant version of the BSS Examination Checking Procedures published on boatsafetyscheme.org. Depending upon the nature of the specific check, the examination may be confined to items that can be seen, reached or touched.

A BSS examination is not a full condition survey, nor is it an indication that the vessel is fit for purpose. For example, it does not cover the condition of the hull or deck, the integrity of through-hull fittings or the stability of the boat and it isn't the same as having your boat serviced and doesn't check its general mechanical condition.

Prospective boat purchasers are strongly advised to satisfy themselves about all aspects of a vessel's condition by commissioning a pre-purchase survey before committing themselves to becoming new owners. Some surveyors are also authorised BSS Examiners and may be willing to carry out a BSS examination whilst surveying the craft if contracted so to do.

About the BSS

The Boat Safety Scheme (BSS) is a public safety initiative of the Canal & River Trust and the Environment Agency. The BSS aim is to ensure, through independent verification, that boats meet the navigation authorities' minimum safety requirements.

The BSS requirements, the examination checks, including 'advice' checks and general information on the BSS, may be viewed and/or downloaded from www.boatsafetyscheme.org including safety information on avoiding fire, electrical risks and carbon monoxide poisoning on boats.

If you have doubts as to whether the Examination Report is a valid record, please contact the BSS Manager, c/o Canal & River Trust Registered office: National Waterways Museum Ellesmere Port, South Pier Road, Ellesmere Port, Cheshire, CH65 4FW or phone 0333 202 1000 or email bss.enquiries@boatsafetyscheme.org

ESTIMATE

Date
4 Feb 2026

Expiry
16 Dec 2025

Quote Number
QU-0276

Reference
Blacking,
Chines, Stern Gear & Pool
Welding

VAT Number
383247777

Floating Projects Ltd
Middlewich Wharf
Canal Terrace
Middlewich
Cheshire East
CW10 9BD
UNITED KINGDOM

blacking, chines, stern gear & pool welding

Dry dock boat
Steam Wash
Supply and fit 200mm x 6mm sheet to Stbd & Port sides as a new sacrificial chine.
Supply and fit new anodes x 4
Supply and fit new rudder cup
Pool weld pits of greater than 3mm to hull sides
Treat with Isopropyl Alcohol
Apply 2 coats of blacking (bitumen)
Supply and fit new stern gear

Notes:

Have also quoted for standard blacking - the majority of the cost of the previous quote you had was for the grit blasting and 2 pack which is arguably un-economical for a boat of this age and therefore value.

Description	Quantity	Unit Price	VAT	Amount GBP
Blacking	45.00	16.50	20%	742.50
Additional dry dock time for extra works (per day)	8.00	60.00	20%	480.00
Isopropyl treatment	1.00	150.00	20%	150.00
Supply and fit anodes	4.00	125.00	20%	500.00
Supply and fit new rudder cup	1.00	150.00	20%	150.00
Supply and fit Stern Tube				

Description	Quantity	Unit Price	VAT	Amount GBP
Stern Tube Assembly 1 1/2"	1.00	375.00	20%	375.00
Labour - cut out old stern tube and weld in new stern tube	1.00	600.00	20%	600.00
Supply and fit new sacrificial chines				
Steel for chines (per 3000mm x 200mm x 6mm)	6.00	100.00	20%	600.00
Labour - chines	1.00	1,500.00	20%	1,500.00
Labour - pool welding - NOT POSSIBLE TO KNOW HOW MUCH TIME REQUIRED -- HOW MANY PITS / HOW MUCH TIME REQUIRED???	1.00	1,500.00	20%	1,500.00
			Subtotal	6,597.50
			TOTAL VAT 20%	1,319.50
			TOTAL GBP	7,917.00

Terms

Thank you for your business enquiry.

All estimates are provided and produced as accurately as possible to the best of our ability. They are based on the information provided to us, the work requested and any (non-destructive) visual assessment.

Final invoices shall reflect the amount of work undertaken and maybe less or more than the estimate as appropriate.

Boat charter estimates are subject to availability which will be confirmed upon receipt of booking request, and a booking is only accepted upon such confirmation being made by us to you and an invoice being raised for the booking.

T&Cs for works by Middlewich Wharf:
<https://www.middlewichwharf.co.uk/terms-of-business/>

T&Cs for boat hire by Floating Holidays:
<https://floating-holidays.co.uk/hire-terms/>