



Jonathan Milton

Small Craft & Yacht Surveyor

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REPORT ON SURVEY OF VESSEL - SHAULA

Type	Lock Fyne skiff gaff cutter		
Designer	G. L. Watson	Builder	Alan Edmunds – Isle of Skye
Year of Build	1984	Construction	Carvel – larch on oak
Bow	Straight	Stern	Double ended
Keel	Long	Ballast	Iron keel and internal ballast
LOA	10.21m – 33ft 6ins	Beam	3.05m – 10ft
Draft	1.68m – 5ft 6ins	SSR	69888
Machinery	Perkins diesel		
Steering	Tiller		
Type of survey	Structural		
Date	2 nd February 2015		
Place	Creekside Boatyard, Old Mill lane, Dartmouth		
Condition	Ashore on beach		
Weather	Overcast with sun later		



The details given above were obtained from various sources. They have not been verified and are not guaranteed.

SHAULA

This is to certify that I, Jonathan Milton, acting upon instructions from

**Steve Greig
Willow Tree Farm,
Hannington Wick
Swindon SN6 7RX**

attended the above mentioned vessel as she lay ashore at Creekside Boatyard, Old Mill Lane, Dartmouth on the 2nd February 2015 for the purpose of ascertaining her general condition prior to purchase.

SURVEY CONDITIONS

This report is a factual statement of the examination carried out within the limitations stated below and with opinions given in good faith as far as seen at the time of survey. It implies no guarantee against faulty design or latent defects or the suitability of the vessel for any purpose. The information contained in this report is confidential to the client commissioning the survey. Liability to any other person is excluded.

LIMITATIONS OF SURVEY

No ceilings, linings, joinery or fastenings were removed except as stated and I have not inspected woodwork or other parts of the structure or equipment which are covered, unexposed, inaccessible or otherwise unavailable at the time of survey and I am, therefore, unable to report that any such part of the structure or equipment is free from defect.

None of the fastenings or stern gear or keel bolts were drawn or removed for inspection (unless otherwise specified herein).

The machinery has not been inspected and therefore the mechanical condition of the engine is beyond the scope of this survey.

The gas and other services have been inspected where visible but have not been operated, (unless otherwise specified herein). The gas installation has not been pressure tested.

The fuel tanks have only been examined externally whilst in situ, they have not been pressure tested and their contents have not been tested for contamination.

Windows and hatches have not been pressure tested for water tightness. Skin fittings and valves have not been dismantled.

No internal ballast or anchor chain was removed (unless otherwise stated herein).

I have not examined any electronic devices, which are part of the vessel's inventory and so I am unable to report that any such item is free from defect.

This report does not seek to address compliance with any national or international codes, standards, or regulations.

Any dispute shall be subject to and governed by English law and shall be submitted to the non-exclusive jurisdiction of the Courts of England and Wales.

DETAILS OF SURVEY

GENERAL ARRANGEMENT

The vessel was found to be a heavy displacement double ended gaff cutter with a straight stem and a long keel. The rudder is mounted on the stern post. The deck layout comprises a foredeck with forehatch and the mast collar immediately forward of the coachroof, side decks and an aft deck with a hatch to the lazarette. The coachroof incorporates the saloon skylight and the main hatch. The cockpit has wood coamings and seats to port and starboard with lockers below the seats and a raised helmsman's seat athwartships aft. The main hatch leads to the accommodation as follows.

There is a step down onto the engine boxing from where companionway steps lead down to a navigation area to port and an 'L' shaped galley to starboard. The saloon has berths to port and starboard, the port berth extends to a double, and lockers outboard. An opening in the main bulkhead leads to the heads compartment to port and a seat over a tank to starboard. The forepeak has a workbench to port with storage under, a pipe cot to starboard and the chain locker forward.

Note: Recommendations are classed as follows:

- (A) **Immediately or prior to use.**
- (B) Within the current season or layup.
- (C) Within the next 2-3 years.

1. HULL BELOW WATERLINE

The hull is carvel planked in 1¼" larch over 2¾" x 4" sawn oak timbers at nominal 18" centres. The planks are galvanised nail fastened. When the hull was viewed from a distance slight hogging was noted in way of the port chain plates, but the seams are tight and an iron shoe and keel are fitted and I therefore do not consider this to be a serious cause for concern. The underwater surfaces of the hull are well coated in antifouling and are covered with a light coating of mud.

- 1.1 The vessel was inspected dried out on the side of a creek and there was 4" of mud below the port bilge runner which prevented access to the port side underbody planking over a 4' section amidships between the bilge runner and the keel. With the exception of the area described above the underbody was sounded at close intervals by hammer, no evidence of planking decay or damage was found.

2. KEEL

The vessel has a long keel with a cast iron ballast keel fitted in the form of a shoe.

- 2.1 The wood keel was sounded at close intervals by hammer, with the exception of a 4' section to port amidships, and found to be in good condition. There is no evidence of movement between the ballast keel and the wood keel.

3. RUDDER

The rudder is in wood and is supported at its base by a bearing on the aft end of the keel and at the top by a pintle and gudgeon on the stern post. The rudder is secured to the vessel by a bolt running through the pintle. There is no play in the lower bearing and the rudder is well coated.

- 3.1 The rudder was sounded at close intervals by hammer no defects were found.

4. STERNGEAR

A four bladed 25" bronze propeller is fitted on a 1½" stainless steel shaft and is fastened by a bronze nut and a locking nut which is secured by a split pin.

- 4.1 The propeller, retaining nuts and bearing housing were tested for dezincification by scraping and impact none was found.

5. ANODE

The following zinc sacrificial bar anodes are fitted:

- i. On the forward end of the ballast keel to port, which is 70% wasted.
- ii. On the aft end of the ballast keel to port, which is 50% wasted.
- iii. To the hull to port aft within sight of the stern gear, which is 40% wasted.

The effectiveness of an anode is reduced once it has wasted away by 50% or more.

RECOMMENDATION: Both keel anodes should be replaced. (B)

6. TOPSIDES

The topsides are painted in red enamel the seams are tight and the finish is to a reasonable standard.

- 6.1 The topsides were sounded at close intervals by hammer no evidence of decay or planking damage was found, but the following minor defects were noted.
- i. There is a small area of soft wood around a fastening to port forward of the forward port light.

RECOMMENDATION: The fastening should be drawn or drilled out, the small denatured area cut out and a graving piece fitted, and then the fastening replaced. (C)

- ii. The stopping over two fastenings to starboard below the bowsprit shroud chain plate has dried out and crumbled.

RECOMMENDATION: The stopping over the affected fastenings should be raked out and replaced. (C)

- 6.2 The rubbing strake was sounded at close intervals by hammer and an area of rot found to port 6" aft of the port running back stay chain plate running aft over 12". The top plank below the rot is thought to be in good condition, but was obscured by the running strake and so should be closely inspected once the affected section is cut out.

RECOMMENDATION: The area of rot should be cut out and a new section scarphed in. (B)

7. DECK AND COACHROOF

The vessel has a traditionally laid deck in teak over 2³/₄" x 5" oak deck beams at nominal 15" centres. The caulking has deteriorated and is in poor condition, particularly on the foredeck. The seams around the coachroof are paid in white putty and are lower than the level of the deck planks forming a gutter in which rain water can puddle. See Hull Internal item 10.2 below.

- 7.1 The teak was sounded at close intervals by hammer and found to be in good condition.

RECOMMENDATION: The deck seams should be raked out and re-paid to prevent deterioration of the internal structure of the vessel and her gear. (B)

- 7.2 The coachroof has a pine carcass with a laid teak top over a plywood sub roof. The coachroof and the laid teak were sounded at close intervals by hammer and found to be in good condition. The caulking is in poor condition similar to the deck caulking and is now due for replacement.

RECOMMENDATION: The seams in the laid teak coachroof top should be raked out and re-paid to prevent water ingress to the plywood sub-strate. (B)

8. COCKPIT

The cockpit has painted wood coamings and seats with lockers below them to port and starboard. There is a raised athwartships helmsman's seat aft and laid teak over plywood on the port and starboard seats.

8.1 The cockpit coamings, seats and well were sounded at close intervals by hammer and the following found:

- i. There are small voids below the laid teak on the seats on the port aft locker lid below the forward margin board outer corner. The caulking has let go on the mitred corner.

RECOMMENDATION: The failed seam should be raked and re-paid to prevent moisture ingress between the teak and the plywood. (B)

- ii. To starboard on the forward seat panel below the margin board aft outboard corner. The caulking is in good condition and no action is required.

8.2 The sole is in laid teak over a plywood sub sole. There are fixed forward and aft panels and a central hatch, which gives access to the stern gland. The teak was sounded at close intervals by hammer, no defects were found.

9. STEERING

Steering is by varnished oak tiller, which is fitted into a mortise in the rudder head and secured by through bolts. The tiller is well secured and is in good condition.

10. HULL – INTERNAL

Some 20% of the internal surface of the hull is open to inspection from within lockers, engine space and by removal of traps. The planking and timbers are painted white above the bilge and are in good condition with the following exception.

- i. The head of the 2nd frame aft of the mast to starboard is rotten in way of the top fastening. The lower areas of the frame were not inspected because they are obscured by the linings, but the heads of the 1st and 3rd frames, (either side of it), are in good condition.

I do not consider that it is worth stripping out the saloon furniture to repair the head of one frame, it would be uneconomic, and a defect in one frame does not compromise the structural stability of the vessel.

RECOMMENDATIONS:

- i. *The fastening should be drawn to check its condition and the condition of the topside plank. (C)*

- ii. *The frame head should be monitored with view to carrying out a repair if the furniture were altered or re-designed at any time in the future and to check on the condition of the topside plank which is fastened to it. (C)*
- 10.1 The deck beams, beam shelves, carlings, and stringers, bulkheads and partitions are in good condition where open to inspection.
- 10.2 There are deck leaks as follows:
 - i. In the forepeak to starboard of the forehatch.
 - ii. In the saloon to port between the inboard deck plank and the coachroof.
 - iii. In way of the boat heater.

See Deck item 7. Above.
- 10.3 The mast is keel stepped, the mast step was found to be well supported and in good condition.
- 10.4 The chain plates are bolted through the hull. There is no sign of movement or deterioration in way of the chain plates.

11. BILGE

The sole is in 1" painted spruce boards supported on wood sole bearers. The sole boards are tight in some areas making them difficult to lift, but they are otherwise in good condition as are the sole bearers where open to inspection.

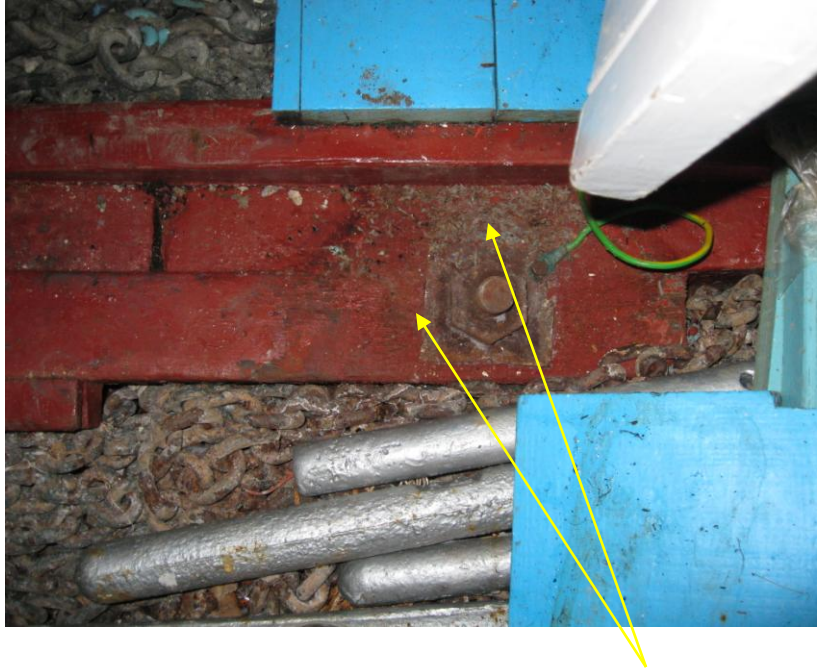
RECOMMENDATION: The sole boards should be re-fitted to allow easy removal. (C)

- 11.1 The bilge where open to inspection is well painted with red bilge paint, but is dirty with 5" of water in way of the pumps. The bilge is filled with internal ballast in the form of concrete between the floors, with the exception of the bilge pump sump forward of the engine and so only the top sections of the floors are open to inspection. There is additional internal ballast consisting of lengths of chain, cast iron sash weights and lead, the bilge also contains a quantity of other detritus/metal strips/spare gear. The cast iron is well painted, but none of the moveable internal ballast is secured.

RECOMMENDATIONS:

- i. *The detritus and other gear should be removed from the bilge and the bilge flushed through with a bilge cleaner. (B)*
- ii. *The loose ballast should be secured within the bilge if an extended offshore passage is planned. (C)*

- 11.2 There are 3x keel bolt ends exposed to inspection two forward of the mast and one aft of the heating stove. The keel bolts, their nuts and plate washers are in good condition where open to inspection. The keel bolts are bonded, (tied together electrically).



- 11.3 The floors in way of the keel bolts are affected by delignification. The worst affected is the floor in way of the forward keel bolt which is denatured to the depth of 1" due to the fact that the keel bolts are bonded. The electrochemical activity results in large numbers of electrons trying to dissipate at the cathode, the keel bolt. These electrons react with water and oxygen to form hydroxyl ions, creating an alkaline environment. This alkaline environment destroys the lignin, which is the natural binder in the timber. Bonding is a good way to protect the keel bolts in a dry environment however this is seldom the case in an older timber vessel and consequently bonding in a wooden vessel should be avoided.

The floors are large in section and the defect does not represent an immediate threat to the security of the structure of the vessel or the keel.

RECOMMENDATIONS:

- i. *The bonding wire should be disconnected. (B)*
- ii. *The floors should be repaired one at a time, by removing the keel bolt nut and plate washer, cutting out the delignified section of the floor and scarphing in a new section. The plate washer can then be re-fitted and the nut re-fastened. (C)*

12. BILGE PUMPING

A Whale Gusher Titan manual bilge pump is situated at the forward end of the cockpit starboard locker, it has a through deck fitting in the starboard side of the cockpit well. The pump is well secured and is in good condition. It is not known whether a strum box is fitted.

- 12.1 A Patay double action manual bilge pump is fitted in the heads compartment and evacuates outboard, via a change over valve, through the heads out skin fitting. The pump was not tried because the seacock was seized. The pump is well secured and the change over valve is in good condition. It is not known whether a strum box is fitted.

RECOMMENDATION: The bilge should be pumped out and the ends of the hoses in the bilge inspected. If strum boxes are not connected they should be fitted. (B)

- 12.2 An old electric bilge pump is situated in the bilge forward of the engine. It was not tried.

RECOMMENDATION: The electric bilge pump should be replaced with a new generation automatic electric pump. (C)

13. HATCHES AND DOORS

The forehatch is in wood a leak was noted onto the work bench below, but the hatch is otherwise in good condition.

RECOMMENDATION: The forehatch should be hose tested for leaks and the leak stopped. (B)

- 13.1 The sliding main hatch is in wood and is in good condition. The washboards were not available for inspection.

RECOMMENDATION: The main hatch washboards should be located and inspected prior to purchase. (A)

- 13.2 The heads compartment louvered door binds at the base.

RECOMMENDATION: The door should be re-fitted. (B)

14. WINDOWS AND PORT LIGHTS

The heads compartment opening port light is in bronze with a glass lens. The glass and the seal are in good condition.

14.1 The fixed port lights in the coachroof are in bronze with glass lenses they are in good condition.

14.2 The galley and the navigation area opening port lights are also in bronze with glass lenses. The glass and the seals are in good condition.

The port lights were not hose tested but there is no evidence of leaks on any of the port lights.

15. MACHINERY

The Perkins diesel engine was not inspected.

15.1 The propeller shaft is free to turn by hand. The stern gland is lubricated by a remote cylinder type greaser accessed through the cockpit starboard aft locker. The greaser is well secured and is in good condition.

- i. The majority of the stern gland is obscured by an electrical connection to the propeller shaft, but the starboard side of the stern gland was tested for dezincification by scraping and impact, none was found.

It should be noted that the stern gland cannot be serviced/re-packed without dismantling the electrical connection.

No opinion is given on the mechanical condition of the engine and it is recommended that a qualified marine engineer inspect and service the engine.

16. SKIN FITTINGS

The bronze skin fittings were tested for dezincification by scraping and impact, none was found. The log and depth transducers are well secured to the vessel.

16.1 The seacocks below the waterline were closely inspected as follows:

Use	Type	No. of hose clips	Operational
Head in	Traditional Stuart type bronze lever valve with filter	2	Yes
Head out	Blakes traditional tapered valve with retro fitted cranked handle	2	Seized
Engine in	Bronze gate valve with filter attached	2	Yes
Cockpit forward port drain	Bronze ball valve	2	Yes

Cockpit forward starboard drain	Bronze ball valve	2	Yes
Cockpit aft port drain	Bronze gate valve – no handle	2	-
Cockpit aft starboard drain	Bronze gate valve – no handle	2	-

RECOMMENDATIONS:

- i. The heads out seacock should be serviced. (A)*
- ii. The cockpit aft drain seacocks should either, be fitted with handles and serviced, or, replaced with bronze ball valve seacocks. (A)*

- 16.2 There is a bronze gate valve seacock with a bronze filler attached below the aft end of the saloon starboard berth. The valve is seized and there is a hose teed off the main hose run, which is not connected to anything and has an open end. I did not observe a skin fitting on the starboard underbody for this seacock during my exterior inspection of the underbody. (Re-inspection of the underbody was not possible because the tide had come in during the course of the survey).

RECOMMENDATIONS:

- i. The skin fitting on the starboard underbody should be re-inspected and tested for dezincification by scraping and impact. If it is found to be brittle or pink in colour it should be replaced. (A)*
- ii. If the seacock is no longer required it should be removed, the hole in the planking plugged and a backing block fitted. (B)*

17. DECK FITTINGS

The deck fittings were inspected and were found to be of adequate size and properly fastened to the vessel with the following exceptions:

- i. The cockpit bronze self tailing winches are stiff in operation.*

RECOMMENDATION: The cockpit winches should be serviced. (B)

18. MAST, BOOM, GAFF, BOWSPRIT AND RIGGING

The mast was stepped at the time of survey and was inspected to the height of 6ft above the deck.

- 18.1 The mast is in spruce and is black in colour due to lack of maintenance.

RECOMMENDATION: If there is no record of the mast having been un-stepped during the last 5 years the mast should be un-stepped and closely inspected prior to commissioning the vessel. (B)

- 18.2 The boom, gaff and bowsprit are in spruce and are black in colour due to lack of maintenance. The spars were inspected and no defects found.

RECOMMENDATION: The spars should be cleaned off and either re-oiled or re-varnished. (B)

- 18.3 The mast is gaff cutter rigged with one set of spreaders, top shrouds, forward and aft lower shrouds, a fore stay, topmast forestay and running back stays. The standing rigging is in served galvanised wire to deadeyes and lanyards. The forestay lanyard is chaffed. The condition of the standing rigging is unknown because it is served and could not be directly inspected.

RECOMMENDATIONS:

- i. The forestay lanyard should be replaced. (A)*
- ii. The standing rigging should be closely inspected prior to commissioning the vessel. (A)*

- 18.4 The guard wires are in 6mm 1x19 stainless steel wire with splicing clamps forward and pelican hooks to rigging screws aft. The guard wires are in good condition, but were not tensioned at the time of inspection.

RECOMMENDATION: The guard wires should be re-tensioned. (A)

19. GAS INSTALLATION

The gas cylinder in use is a 4.5Kg butane gas cylinder, which is carried on deck to starboard of the mast. A spare larger gas cylinder is stored to port of the mast. The gas cylinders are not secured to the vessel.

RECOMMENDATION: Restraints should be fitted for both gas cylinders. (B)

- 19.1 The cylinder in use is connected to the gas line by flexible gas hose. The hose is undated and so must be assumed to be date expired.

RECOMMENDATION: The gas hose should be replaced with flexible date stamped gas hose to BS 3212/2. (A)

- 19.2 The gas line is in seamless copper pipe from the forward side of the coachroof via a shut off valve at the forward end of the saloon to the outboard side of the cooker space. The end of the gas line on deck protrudes from the deck gland in the

forward side of the coachroof by some distance and is unsupported, which could lead to work hardening and eventual leakage. Much of the gas line is obscured from view and I consider it prudent when taking over a new vessel to test the gas line for leaks.

RECOMMENDATIONS:

- i. *The gas line should be pressure tested for leaks. (A)*
- ii. *The on deck end of the gas line should be cut back to only leave sufficient length protruding from the deck gland to fit the flexible gas hose. (B)*

19.3 A Smev two burner, grill and oven gimballed cooker is fitted, it was not tried but it is in good condition.

19.4 The cooker is connected to the gas line by flexible armoured hose. The flexible hose is undated and must therefore be assumed to be date expired.

RECOMMENDATION: *The flexible hose should be replaced with flexible armoured date tagged gas hose to BS 3212/2.*

All work to gas installations should be carried out by a competent fitter trained in marine gas systems.

20. FUEL

Two vented fuel tanks are fitted as follows:

- i. A cylindrical stainless steel tank is situated below the cockpit port locker sole. The tank has a deck filler on the starboard side deck and is well secured and in good condition where open to inspection.
- ii. A flexible plastic tank is situated below the aft end of the saloon port berth. The tank has a deck filler on the port side deck, but the tank is not secured to the vessel.

RECOMMENDATION: *The flexible fuel tank should be secured to the vessel with webbing straps. (B)*

20.1 The fuel delivery lines are as follows:

- i. From the starboard tank the fuel line runs in seamless copper pipe to a shut off valve below the saloon starboard berth and then via a short length of flexible hose it continues in seamless copper pipe to the first filter, which is situated below the sole forward of the engine. It then runs in seamless

copper pipe from the filter, via a change over valve, to the starboard side of the engine and then to the engine is flexible armoured hose.

- a. An additional fuel line is teed off after the shut off valve below the berth and runs forward via a shut of valve in flexible hose to the boat heater at the forward end of the saloon. The heater fuel line is in good condition where open to inspection.
- ii. The fuel delivery line from the port tank runs in flexible hose to a separate first filter, adjacent to starboard tank's filter, and then in seamless copper pipe to the change over valve.

The fuel delivery lines are well clipped and are in good condition where open to inspection. The flexible fuel hoses are unmarked and the standard of the hoses is not known.

21. ANCHORING AND MOORING

The vessel has the following ground tackle:

- i. The main anchor is a 35lb CQR on $\frac{3}{8}$ " galvanised chain. The anchor is of a sufficient weight to moor the vessel and is in good condition.

21.1 There was no kedge anchor on board at the time of inspection.

21.2 There are 3x fenders and various warps, sufficient to moor the vessel.

RECOMMENDATION: A kedge anchor should be put aboard, of a different pattern to the main anchor, together with a short length of chain and a suitable warp. (A)

22. FIRE FIGHTING

The following fire fighting equipment is carried:

- i. 1x 5kg Carbon Dioxide fire extinguisher rated 70B C. There is no expiry or service date marked on the extinguisher and it must therefore be assumed to be date expired.
- ii. 1x Fire blanket rated BS6575:1985.

RECOMMENDATION: For offshore cruising a minimum of 3x 1Kg fire extinguishers should be fitted, one in the forepeak, one in the saloon within reach of the cooker and one in a cockpit locker. They should have a minimum fire rating of 5A 34B C. (A)

23. SAFETY

There was no safety equipment on board at the time of inspection.

RECOMMENDATIONS:

- i. One life jacket should be carried for each person on board. (A)*
- ii. A pack of flares should be put aboard suitable for the vessel's intended area of cruising. (A)*

24. GENERAL COMMENTS

Shaula is in sound structural condition. She has been neglected over the past couple of years and the caulking in her deck seams has deteriorated resulting in several deck leaks. Her deck seams should be raked and re-caulked to stop the leaks, in order to prevent deterioration to her structure and her gear. Her mast and spars require cleaning off and re-oiling or re-varnishing.

There is additional work to do to put her in good order and I have listed below those items that affect the safety of the vessel and her crew and this work should be carried out as a priority.

When my recommendations listed below have been carried out she will be a good insurance risk and I recommend that cover be granted.

- 24.1 The main hatch washboards should be located prior to purchase. Item 13.1.
- 24.2 The heads out seacock should be serviced. Item 16.1
- 24.3 The cockpit aft drain seacocks should, either be fitted with handles and serviced, or, replaced with bronze ball valves seacocks. Item 16.1.
- 24.4 The underbody should be inspected to starboard below the aft end of the bilge runner to ascertain the condition of the skin fitting for the seacock below the aft end of the saloon starboard berth. Item 16.2
- 24.5 The forestay lanyard should be replaced and the standing rigging closely inspected prior to commissioning the vessel. Item 18.3.
- 24.6 The guard wires should be re-tensioned. Item 18.4.
- 24.7 The recommendations regarding the gas installation should be carried out. Item 19.
- 24.8 A kedge anchor should be put aboard of a different pattern to the main anchor together with a short length of chain and a suitable warp. Item 21.2.
- 24.9 The recommendations regarding fire fighting should be carried out. Item 22.

- 24.10 A life jacket should be carried for each person on board and a pack of flares put aboard suitable for the vessel's intended area of cruising. Item 23.
- 24.11 Other repairs and renovations are required to put her in good order, which do not affect the safety of the vessel and the time of inspection these are contained within the report.

Signed:

Jonathan Milton
Chairman
Yacht Designers & Surveyors Association



Date: 2nd February 2015