

S1356 – Pre-purchase full condition survey report on:

British Folkboat [REDACTED]



For



Surveyed at [REDACTED] on [REDACTED]

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Nominated Coding Surveyor



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Tonnage Measurer

Report on sailing yacht [REDACTED]

This survey was carried out on the instructions of:



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1) General notes.

a) Responsibility

Any responsibility is to the above client only and their insurers, and not to any subsequent owner of the vessel under survey or holder of this report. Copyright is retained by Medusa Marine and copies must not be made or distributed without specific permission of the copyright holder.

b) Location

The vessel was laid up ashore at [REDACTED]

c) Purpose and scope of survey

This survey was carried out under Medusa Marine standard terms and conditions. These are available on our website:

<http://medusamarine.co.uk/index.php/terms-and-conditions/>

The survey was commissioned by the purchaser for the purpose of establishing the condition of the vessel prior to completion. Unless otherwise stated, the vessel was not surveyed for compliance with any build standards (RCD) or operational codes of practice or local licenses. The vessel has also not been surveyed for suitability for any particular purpose or location. This survey report is a factual statement of the surveyor's examination as carried out and his opinion given in good faith as to the relevance of disclosed facts and defects so far as seen. It implies no guarantee against faulty design or latent defects.

d) Limitations

Areas inspected were limited to openings and access available during normal operations and maintenance of the vessel. No fastenings or skin fittings were removed, keel bolts drawn or joinery or head linings removed. Closed compartments were visually inspected by means of a Ridgid CA100 endoscopic camera. Materials used in the construction were tested as far as was possible by industry standard Non Destructive Test (NDT) test equipment.

Unless the vessel was afloat, the mechanical condition of the engine was not covered by survey, only the installation and components normally available to routine maintenance could be assessed. If afloat, only assessment of the engines no load running condition was possible without a full sea trial. Surfaces coated with layers of paint cannot be examined for damage which is only evident on the substrate beneath the paint coat. Sails where present, were examined for general condition. The sails were not set, so no assessment of fit, shape or stretch could be made. Spars and rigging, where stepped, could only be examined visually from deck and ashore. All these limitations are subject to an assessment of what is reasonable and practicable due to the condition and location of the vessel under survey.

Navigational equipment, electrical installations and domestic appliances were assessed subject to battery charge or shore power if available. If there was no opportunity for sea trialling the vessel, no assessment of the vessel and her equipment under seaway conditions was possible. No opinion could be made or responsibility undertaken for condition or defect of those aspects of the vessel not accessible or evident due to the above limitations.

e) Recommendations

Recommendations have been subdivided into two categories. All recommendations are annotated thus and are summarised at the end of the report

Category 1 (Cat 1) recommendations are safety and seaworthy related defects, and below waterline defects which should be corrected before the vessel is put into commission.

Category 2 (Cat 2) recommendations relate to defects which affect the operation of the vessel in normal use and should be attended to at the earliest opportunity. They do not however, affect the safe operation of the vessel.

Category 3 (Cat 3) recommendations relate to conditions which are cosmetic or comfort related and may affect the perceived value of the vessel. They could be attended to at the owner's discretion.

2) The Vessel specifications and description

Note: Dimensions and measurements given have been derived from manufacturers published data, and have not been verified by survey.

LOA:	7.87 metres
LWL:	6.05 metres
Beam:	2.19 metres
Draft:	1.22 metres
Displacement: (light)	2.150 tonnes
Ballast	1.050 tonnes
Builders:	J G Parham & Son, Emsworth, Hants
Model or Type:	British Folkboat
Year:	[REDACTED]
Registration (part one):	[REDACTED]
Sail no:	[REDACTED]
Designer:	Tord Sundén / J G Parham
Construction:	Wooden hull and deck
Engine/gearbox:	1 x Yanmar 1GM 10
Sail area jib:	97.25 sq ft
Sail area main:	169.53 sq ft
Rig:	2/3 fractional rig sloop

This vessel was built before the 16th June 1998 and therefore is not subject to the requirements of the Recreational Craft Regulations (SI 1996/1353). It was built before the 2005 (Directive 2003/44/EC) which includes environmental emission limits.

Vessels that were built before 1st January 1985 and within the EU prior to 1992 are considered VAT paid. This boat was built in the EU before 1985 so proof of VAT status is not needed. The vessel is showing a UK Flag (part one) registration. This is a full proof of title with provenance back to the builders. These registrations need to be renewed every 5 years and may have lapsed.

Tord Sundén was commissioned by the Scandinavian Yacht Racing Union to design a low cost and easily sailed cruiser/racing yacht. It resulted in 1942 in the original Folkboat. This was a clinker built wooden hulled sloop with a large open cockpit and a low coachroof covering a small cabin usually consisting of two bunks and minimal furniture. The design was hugely successful, performing far better than expected.

Many thousands of vessels were built and it became known as the 'Nordic Folkboat' identified by the F sail logo. In the UK there was a drive to develop the Folkboat as a one design racing class with the inclusion of an engine and proper accommodation and a slightly larger sail area to compensate for weight. Many UK builders, including Parhams, built hulls to the one design rule in carvel but with many different cockpit and coachroof layouts.

In 1961 the Folkboat Association of Great Britain was formed and standardised the design which became generally known as the 'British Folkboat'. These are identified with the sail logo FB. In 1966 a carvel built wooden version and then a fibreglass version of the original Nordic design was developed by Marieholm and called the 'International Folkboat' or IF class, identified by the sail logo of an F inside a circle.

[REDACTED] is a British Folkboat built by Parhams in [REDACTED]. All three classes regularly race together worldwide with over 7000 vessels still in use. The design is of a relatively light displacement hull with undistorted lines. A bold sheerline with moderate flare and a spoon bow leads to a round bilge and reverse garboard hull form with midships tumblehome and a steeply raked transom stern.

The raked stem leads to an encapsulated semi-long keel with a cut away forefoot. The rudder is hung on the raked keel and transom with a long tiller extending into the cockpit under a main sheet bridle. The afterdeck incorporates a good sized lazarette. The cockpit has twin short lockers to provide space for the quarter berths beneath. The engine is mounted under the bridgedeck and a hatch in the cockpit sole gives access to the stern gear.

The 2/3 fractional sloop rig is conventional for a performance rig of the era. There are single inline spreaders, continuous cap shrouds and aft lower shrouds to the main mast. There are jumper struts and diamonds at the hounds. There are twin forestays and a backstay with a cascade tensioner.

The accommodation provides for up to four berths. The whole starboard side is taken up by two longitudinal berths. The portside has twin berths but separated by the small galley box. The forward berth extends into the forepeak with a trotter box. The forepeak is entirely made over to sail stowage. This would usually have housed a sea toilet on the starboard side but this has either never installed or has been removed.

3) Survey details

a) Hull general

Hull construction is built on a framework of 1 ¼" x ¾" moulded steam bent Canadian Rock Elm timbers. The framing timbers are pitched at an average 7" spacing and span between the beam shelves and the keelson. The timber heads are clamped between the sheer clamp, which also acts as the deck beam shelf, and the sheerplank. The timber heels appear to be rebated into the keelson although this cannot be seen without dismantling.

There is a single full length stringer of a 2" x 1" section of Honduras mahogany at the turn of the bilge. Planking is carvel laid Honduras mahogany of 5/8" thickness. These are of an average 4" width except the garboard strake which is up to 7". They are shaped and tapered toward the stem and transom. All planking was originally full length and there are no stealers.

Some planks have been repaired with sections let in and joined by butt straps. The planking is riveted to the timbers by copper boat nails clenched with copper roves. There are two fasteners per plank staggered to prevent grain splitting. The plank ends are hooded into rebates at the stem and the aft deadwoods, and landed onto the transom at the stern. All fastened by silicon bronze wood screws.

There are eleven transverse sawn oak floors. These are 2" thick sawn and shaped oak, pitched at every two framing timbers. Some of the floors appear to have been replaced with oak sections to the same pattern. Seven of the floors carry the long through keel fasteners. These are lengths of ¾" wrought iron threaded at each end and appear to be fastened through galleries within the keel casting. The seventh and foremost fastening is through the tapered section of the keel at the forefoot.

The centre spine structure is probably all of oak. The stem and stemson are scarf jointed sawn sections of 2" and 4" width respectively with the stem shaped to a cutwater and probably originally shod with a metal stem band. These sections are nibbed and bolted into the keel and keelson which are 4" and 6" width respectively. The keel deadwoods have triangular oak infills fore and aft to shape into the bearding line.

The transom would have been fabricated from horizontal mahogany planking but might have been replaced by plywood as there are no evident lap joints visible internally. The transom panel is fastened to a 2 ½" x 1 ¼" wide sawn stern post which carries the rudder hangings. The hull planking is landed on to shaped 1" thick x 3" sawn quarter frames fastened to the transom. The stern post is butted to the keelson and a stern knee is nibbed into the keelson and stern post and through bolted to both.

Full deck beams forward and the jack beams to the side decks are 1 ¼" x ¾" oak rebated into into 4" x 1" beam shelves. The jack beams are straight and the foredeck beams are sawn cambered. The carlines to the coachroof and cockpit are laminated from 3 off ¾" thick mahogany strakes reducing in height to provide rebates to land the jack beams and a shelf for the deck.

The deck is laid of sheets of 5/8" plywood sheathed with a nylon Cascover scrim sealed and bonded with Cascophen resourcinol adhesives. This sheathing is carried up the coachroof sides and sealed under a quadrant moulding and over the deck edge and secured under a teak hardwood rubbing band. The same treatment is used to the cambered coachroof top with the scrim sealed under a half round moulding.

The cockpit is constructed between 2 non-watertight partial bulkheads of mahogany veneered plywood panelling on hardwood framing. The cockpit is constructed between the two bulkheads and is lined in the same panelling. There are two locker lids per side constructed of mahogany veneered plywood boards. The locker shuts have shallow drainage channels moulded but no fall, so the majority of surface water will drain into the lockers which are open to the bilge.

The coachroof sides and cockpit coamings are constructed of solid mahogany. These have mahogany battens top and bottom internally to hide fastenings and also so that rebates are constructed to land the coachroof beams. There are rebated apertures cut through for the window glazing. The cambered coachroof top is plywood laid over sawn and tapered oak beams pitched at 11" centres.

The coachroof beams are 2 ¼" x 1" at the centre tapering to 1 ¾" x 1" at the rebates. The saling beam supporting the mast step is a 3" x 2" sawn and tapered oak beam with steel fish plates bolted each side spanning compression posts stood onto the forward most keel floor. It is not known if these steel plates are original.

The construction and scantlings are typically of a relatively lightly built vessel intended for good performance with minimal accommodation. The appearance is that she was built to fairly closely copy the Nordic Folkboat International Association class rules. The change to carvel construction needed added framing with more closely spaced timbers and stringers to compensate for some loss of planking stiffness. The keel stepped mast in the Nordic class has been changed to keel stepped to improve the usable accommodation space.

b) Bottom and keelson internal

The hull bottom was surveyed internally where accessible. All was seen to be painted in a red bilge paint. This is of a varied finish but none appeared to be of a recent application. Access for inspection was limited by some fixed joinery and some installation of electrical, cooking and heating appliances.

All accessible internal hull structure was tested for condition by hammer sounding and spike testing. Elm, when kept in a continuous state of either dry or wet conditions can remain sound and unaffected by fungal decay. High concentration of salt in wood can act as a preservative provided it is not flushed out by fresh water.

Moisture readings were taken with a Tramex Marine Moisture meter. This meter is a capacitance type tester equipped with a scale for hardwood as a percentage scale of 0% to 30%. The following moisture content levels are given as a guide.

- 11% to 18% Normal for hardwood at 60% to 80% relative humidity.
- 19% - 26% Timber may support mould and biological growth.
- 26% - 29% Timber is susceptible to developing wet rot.
- 30% plus Moisture content has reached fibre saturation point

All hull bottom planking internally read high, between 24% and 28%. The presence of paint will influence the readings depending on the thickness and type. This is a judgement based on experience and considering that the planking was sound when hammer and spike tested there was no clear evidence of softness or wet rot in the planking.

Soundings can also identify attack from wood boring infestation. No evidence was found in the internal areas that could be accessed. Borers are only found in the mid to the low intertidal range, usually in wooden piers and pilings. This vessel has apparently been moored on an all tide swinging mooring, so it has not been in a high risk area.

Where sounded the centre spine structure was sound and firm. The framing timber heels appear to be rebated into the keelson without limber holes and the crooks where water can be trapped along the bearding line at the stem and stern are not filled with pitch as is sometimes seen. This can lead to rot in the timber heels but although there was some slight softness found by spiking, it was not considered significant.

There is a continuous fall on the keelson to a deep bilge beneath the engine for the collection of bilge water. There are limbers cut into the bottom of the transverse floors for the passage of bilge water. Some original transverse floors show cracks across. This is typical of oak and does not weaken the wood in the way that the grain direction has been used. The saloon sole boards are in solid teak resting on stretchers across the keelson. These are in good sound order and have brass lift rings inset.

The keel floors around the iron keel fastenings showed deposits of white crystallised hydroxide. This is caused by the metal producing hydroxides when oxidising in the presence of water. These hydroxides can lead to delignification where the highly alkaline crystals attack the lignin resin which binds the woods cellulose fibres together.

This leads to softening and a woolly appearance to the wood, sometimes called Angel Hair. The fact that this is appearing around the fasteners suggest that water may be penetrating up the keel bolts rather than general bilge water as there is little evidence that there has been a persistent high level of bilge water in the vessel.

There is softening of the keel floors around two of the fasteners at the after end of the keel. Others shown that the floors have been rebated back and graving pieces placed under the fasteners to make them up the original height. This delignification has probably been an issue in the past and the graving pieces are consequent repair.

This may have been done without actual removal of the bolts as there are hydroxide deposits around the bolts where graving pieces have already been inserted and possibly still leaking. The damaged keel floors should be replaced and the bolts withdrawn and replaced as necessary to prevent further leakage.

Recommendation

(Cat 2) Repair the damaged keel floors and remove and or replace the keel bolts.

The hull framing timbers to the hull bottom were examined and a large number require repair. This is at the convex reverse garboard where the timbers are stressed without being supported on the side in tension. This is usually relieved in build by machining a radius to the exposed edges. The amount of failure suggests that the oak was not green or not steamed for long enough. The usual rule is an hour of steaming per inch of thickness.

This can be done by doubling up with sisters. The sisters should be steam bent to shape from green oak and riveted with copper boat nails clenched with roves. They should extend to at least the third plank from the crack or failure in the original timber each side. The splits, if extending to less than half the timber thickness can be repaired by the addition of a steel strap on the convex face clamping the sprung section back into shape.

There is a total of 43 timbers to the hull each side. For reference they are numbered from the stem. In the saloon the timbers that are split and need repair are numbers 15 to 26 on the port side and 17 to 26 on the starboard side. In the engine space and cockpit the timbers were seen to be cracked needing doubling. These are numbers 27 to 37 on both sides.

Recommendation

(Cat 1) Repair the cracked and split framing timbers to the hull bottom

The lack of stability caused by the fractures has allowed the hull to 'work' when sailing. There are visibly open seams between the planks below the waterline. These will take time to take up although Honduras mahogany has a higher coefficient of moisture expansion than more modern African mahogany species. There are two seams to the port side beneath the galley where tracking stains of mud show where seams have been leaking

It would be recommended to use a product such as Slick Seam when launching. This is a wax and silicate based caulking compound designed to adhere to wet wood and provide a temporary seal as the wood takes up. The surplus will be squeezed out over time and wash away. This is to prevent damage to the engine and other fittings if the hull takes too long to become tight allowing the water level to rise too high inside the vessel.

Recommendation

(Cat 2) Apply Slick Seam to the open seams when the vessel is launched.

c) Bottom and keel external

The hull bottom planking was examined by hammer and spike and tested for moisture. The bottom is covered by a layer of green antifouling and is a recently applied coating. This is a particularly heavy application and effectively disguises the seams. When hammer sounded there were many apparently 'soft' areas found.

When tested by spike the softness was a debonding of the paint layer away from the surface of the wood. This was all local to caulked seams and when the debonded paint layer was flaked off the wood was seen to be sound when spike tested. The original caulking appears to be payed by a white lead putty which was dry and loose with separation from the wood on both planks.

The hull bottom was tested for moisture but all was affected by the heavy coatings and so unrepresentative. Particular attention was paid to the hood ends, garboards and transom landings. These all sounded and spiked as good and appeared to lay fair to the stem and deadwoods. There were several apparent knuckles in the hull bottom where the planking didn't lay perfectly fair due to the cracked timbers internally. These should tighten up and recover shape when the timbers are doubled up.

Despite the recent re-painting of the bottom, there was a tracking stain of leakage from the bilge running from the hood ends into the deadwood sternpost aft. This was corrosion stained so apparently in way of one of the keel bolts. There is also a tracking stain running from the garboard seam on the port side. These both show failed caulking seams.

The antifouling layer was about 10 coats of old wasted layers of paint. There did not appear to be a primer layer on the wood or in the plank edges. When using an oil based putty it is important to paint the wood, including the plank edges to the seam, with a primer. Wood with a relatively high porosity will draw the oil out of the putty causing it to shrink and crack.

It would be advisable to remove all the old antifouling from the hull bottom and prime and re-caulk or tighten the existing caulking to the below waterline seams. Before paying the seams they should be primed with a metalised primer. Ideally the seams should be payed with modern seam fairing compound which is more stable than a traditional lead putty.

Recommendation

(Cat 1) Strip the hull bottom back to bare wood, caulk, prime and paint seams, and pay with modern seam compound

The ballast keel externally was seen to be in a good and sound condition without evident surface corrosion although all had been recently repainted. This has apparently been partially re-fastened. There is no bottom hanging for the rudder to the heel of the keel. This is shaped purely to prevent warps or nets to becoming caught between the rudder and the sternpost.

d) Topsides internal

The topsides construction was surveyed where accessible, being limited by some internal joinery. The topsides planking internally was seen to be in a generally clean and well varnished condition.

The timbers to the topsides internally were examined. There were sections on both sides forward where the timbers have been repaired in the past by letting in a new section with nibbed scarf joints. These joints are quite short and only joined by two or three copper rivets. They have not been glued.

There were cracks seen in the timbers to the topsides either side of these past repaired timbers suggesting that they were either damaged and not identified previously or have been put under additional stress by the movement in the repair scarfs. Cracked timbers to the topsides forward were 10 and 11 port side and 12, 13, 15, 16, 17 on the starboard side.

There are also cracks to the timbers aft, 30 on the port side and 30 & 31 starboard side. To the lazarette there were cracks to timbers 40 and 41 port side. This means that some timbers are cracked in two places, in the topsides and in the bilge. These cracked framing timbers must be doubled up with sisters.

Recommendation

(Cat 1) Repair the cracked topsides framing timbers with sister frames.

e) Topsides and transom external

The topsides were viewed from all angles and seen to be quite fair and true. There were some signs of knuckles from failed frameworks internally, but the hull appears to have held its shape well. The sheerline and the stem was progressive with a sweet sheer and no sign of hogging or sagging.

Externally the topsides have been recently painted with a single component white paint. The seams were showing with cracks in the film of paint where there has been movement. planking appears to be in generally sound order. All the planks were hammer sounded and the hooded plank ends and the butt joints were all spike tested as sound. There was some slight softening at the hoods, but this was well clear of the fasteners.

The only part that doesn't appear to have been recently re-painted is the blue boot top stripe. There were visibly open seams externally in this section on both sides at the bows. Daylight can be seen through a seam at the bows when viewed internally. There is also an open seam at the hood ends to the stem on the port side.

These seams would be just above the waterline. There is an issue with seams in this location. The planking will not take up when launched, but if some flooding were to bring these seams to the waterline then water ingress would rapidly accelerate and overcome any small bilge pump. These seams clearly need to be recaulked before the vessel could be launched.

f) Sheerline and deck construction

The sheer clamp can be seen over nearly all its length and appears to be in good sound condition being a varnished finish. It is in mahogany which is unusual in a structural member. Externally, the rubbing band is in good condition with some light indents and abrasions.

The deck edge has a teak upstand extending from the bows to the quarter. This is as a toe rail for security and there are scuppers cut into the underside for surface water to drain. There are also cut outs for the chainplates which pass behind the rubbing band. The cap shroud chainplates are galvanised and painted iron straps fastened through the topsides. The fasteners are through the sheer clamp and a hardwood pad that extends down the first two planks from the sheer plank.

On the port side the fastener has compressed into the sheer plank and the hardwood has been damaged and weakened by some localised rot. This fastening should be removed and the sheer clamp repaired with a graving piece before the fastener is replaced with a larger backing washer. The other chain plates appear sound although they have been recently re-painted.

Recommendation

(Cat 2) Remove the port side upper chainplate fastener, repair damaged sheer clamp and re-install

The deck was measured for moisture. Generally, all was at a good low level of between 15% and 20%. There were however three places where moisture levels were up to 90% and sometimes at the saturation point. Where these points could be examined internally the plywood was found to be soft to spike and blackened by water ingress. These were by the port forward stanchion base, between the sampson post and forestay chainplate and around the starboard pushpit base.

Inside the toe rail are the stanchion mounts. These are bronze castings bolted into the deck and they are secured by lengths of studding that pass through the deck and extend past the sheer clamp internally to a plywood backing plate beneath. This compresses the deck and where moisture has entered, the deck plywood has become damaged and softened.

The forestay is a long strap that passes through the deck and a king plank beneath the deck and is secured to a plate through bolted to the stem. There is clear water ingress in the deck around the chainplate with waterstaining between the kingplank and a deck beam beneath. The starboard pushpit base is fastened similarly to the stanchion with long studding that extend beneath a deck beam where it is rebated into the sheer clamp. The plywood beneath has become saturated with leakage.

All these fittings should be removed, the deck covering stripped off locally and the plywood thoroughly dried. If the plies are still intact, the plywood can be hardened with a saturating epoxy. If damaged then a repair section must be inserted. This can be cut back in overlapping layers of the plies so that the repair section is let in to replicate the plywood construction. The Cascover can then be repaired and the fittings re-bedded with new sealants and fasteners

Cascover itself is no longer available. The repair sections will need to be done with epoxy and a light 200 gsm woven rovings of glass cloth. The epoxy resin will not bond naturally to exposed nylon cloth so it must be abraded to achieve a mechanical bond. The repairs can be faired back and re-painted with a non-slip deck paint. The epoxy must be covered without too long a delay as it is not UV stable.

Recommendation

(Cat 2) Remove fittings and sheathing, and repair the water damaged deck areas and reinstate all with new sealants and fasteners

g) Coachroof and cockpit

The cockpit coamings are an extension of the coachroof sides in solid mahogany and generally in good order although the varnish is failing and ought to be re-finished. The main companionway bulkhead plywood panelling was sound when hammer tested, even in the corners which is a vulnerable area. There is a good cockpit cover which is well fitting. All was measured for moisture ingress and found to be at a satisfactory level.

The cockpit seating and cockpit well sides are also in a sound order but in failing varnish. The cockpit is not self draining overboard but will drain into the sump in the keel. The cockpit sole boards are in solid teak resting on stretchers across the after engine space. These are in good and sound order and lifted by flush folding lift rings. All the varnishwork should be stripped, prepared and re-varnished to protect from damage.

Recommendation

(Cat 3) Protect all the external brightwork with varnish to protect from degradation.

The cockpit coamings and coachroof sides are mounted on the carlines. These were laminated sections of mahogany. They are visible in the saloon and are in good sound order. They are difficult to view in the cockpit due to the close proximity of the cockpit seating but they could be spike tested. They spiked as quite soft particularly on the starboard side and they also measured at 27% to 29%% moisture.

The wood is bare, so this is a real reading unaffected by paint or varnish. It is assumed that these have been wetted by run off from the coaming sides as there is no drip rail and being unprotected has saturated the wood. The carlines should be thoroughly dried and then treated with a borate solution to kill any active spores. They should then be protected by a saturating epoxy and a coat of varnish but not until the moisture content is below 18%.

Recommendation

(Cat 2) Treat and protect the cockpit carlines with varnish once dried

The coachroof top was also tested for moisture and was generally satisfactory except for some high readings around the mast step. The mast step is supported on a saling beam of a larger than normal section than the standard coachroof beams. This has been strengthened by galvanised steel fish plates bolted through from both sides. The plates extend to be supported by compression posts which form the companionway into the forepeak.

There are clear signs of water damage to the saling beam below the mast step and tracking stains of corrosion. These do not appear to be from the steel plates and the galvanising is in sound order beneath a peeling coat of paint. The structure appears to be quite sound in compression.

The leakage and corrosion staining is probably coming from the fasteners where they pass through the coachroof top. The mast step should be removed and the sheathing peeled back to examine the plywood. This should be repaired in the same way as the damaged parts of the deck. The sheathing and the mast step replaced, rebbed with new sealants and fasteners.

Recommendation

(Cat 2) Remove mast step and sheathing, and repair the water damaged plywood. Reinstate all with new sealants and fasteners

The coachroof carlines were examined and seen to be in sound condition except for the forward corners where they are rebated into a foredeck beam. This is where the coachroof corner construction sits and this is always a problem area on a wooden vessel. This is a complex structure with many different grain directions. Wood expands three times as much radially to the grain and ten times as much tangentially as it does along the grain.

When a complex structure is not fully protected from changes in moisture levels by an intact coating of paint or varnish, the individual elements fight against each other, opening up joints and allowing saturation to occur. This has led to water damage and the joint on the port side is seen to be leaking water onto the joinery beneath.

The starboard side is also softened by saturation but does not actually appear to be leaking water though into the vessel. Externally, the hardwood faces and corner posts on the port side are water stained beneath the varnish. This must be repaired. The structure should be stripped of any coating and then thoroughly dried, the softened parts cut back to sound wood and treated with a borate solution to kill any active spores.

If cutting back removes less than one third of the thickness of any element it can be repaired with a graving piece. Any more than one third and the whole element should be replaced or taken back to a free section where a new piece can be scarfed in with a minimum 6:1 feather. It should then be protected by a saturating epoxy and a coat of varnish but not until the moisture content is below 18%.

The trotter box is directly beneath the beam on the port side. The water damage does not appear to have weakened the structure but there is some slight spring to the deck and a short strut could be added between the carline and the trotter box to give some support.

Recommendation

(Cat 2) Treat and repair the carline forward corners to the coachroof both sides.

h) Hatches windows and ventilators

The main companionway hatch is an all joinery construction of mahogany veneered plywoods and hardwoods. This slides over brass runners set onto hardwood upstands to ensure that surface water is run off over the coachroof. The companionway is closed by a pair of hinged doors also in joinery with a louvered vent in the top panel of each door. The hatch slides easily and all is in good condition but in need of re-finishing externally as already noted.

In the forward coachroof top is an opening hatch. This is an all joinery construction of a box shape hinged at the forward edge with an external handle to open. There is no stay so the hatch is either fully open or shut. It is in good sound condition and is large enough to act as an emergency escape hatch although maybe not large enough for all crew. The forward hinge is a good detail as it prevents a breaking wave from flooding the forepeak.

There are eight windows to the coachroofs. There are two pairs of fixed deadlights each side with acrylic glazing set into rebates in apertures cut into the mahogany hardwood coachroof sides. The acrylic is seated in a sealant and trimmed externally with trapezoidal bronze frames screw fastened into the hardwood.

These are in a fair condition with the glazing still with good clarity. Replacement of the glazing would be quite simple and has probably been done recently. There are no frames internally and the aperture is just radius edged. This had been varnished and is mostly missing on the lower edges. This is probably not due to leakage but just condensation.

Between these fixed windows is a small circular portlight each side. These are bronze framed with toughened glass glazing. The opening frames are side hinged with a single dog clamp opposite closing the frames on rubber seals. These are both in good order and appear to be free of evident leaks.

There is also a pair of small single circular deadlights, one in the coachroof forward face and the other in the starboard companionway bulkhead. These are a toughened glass pane held in a bronze frame set into an aperture and fastened through to a bronze retaining internally. These are also both in good sound and apparently leak free condition.

Ventilation is provided by louvres in the companionway doors. These are efficient at drawing air through the vessel when laying to the wind as the companionway bulkhead is in a low pressure area. This requires an air intake and there is no other form of ventilation other than by opening the forehatch. It would be recommended to install a Tannoy type dorade ventilator in the forepeak hatch top to allow for a good circulation of air which is essential in a wooden vessel.

Recommendation

(Cat 3) Consider installing a dorade ventilator to the forepeak hatch

i) Deck gear and fittings

A cast alloy stem head fitting includes a single iron roller fitting shaped for warp. This fitting wraps around the stem head and is fastened through the deck and by a strap down the stem. It is in good and secure condition. Aft of the stemhead fittings is a square section sampson post with a cross pin. This is passed through the king plank and tied into a deck beam beneath and then stood onto the stemson. This is good and secure and there are cast stainless steel handed fairleads either side at the bows.

On the foredeck are chocks for a CQR plough anchor and the anchor chain is passed through a forward facing spurling pipe to the forward bilge. There is no dedicated chain locker and the chain lays in the bilge between the forward transverse floors. Wooden mooring cleats are mounted on the after deck and handed fairleads on the transom. The cleats are angled so that mooring warps cross over. These mooring fittings are all well seated and secure.

The forestay chainplate is mounted aft of the sampson post on the foredeck. This is a galvanised steel strap with a welded flange that seals to the deck. The strap is passed through the king plank and bolted to a fork plate which is in turn bolted through the stemson aft of the sampson post. This is all galvanised and in good secure order with no sign of corrosion or hydroxide damage. This is above the static waterline.

The shroud chainplates are galvanised iron straps fastened through the sheer plank and sheer clamp internally. There is a hardwood pad between these elements to prevent compression and this then extends down to the planking with two further through fasteners. These are well seated and secure with no sign of movement other than the defect detailed previously. The lower shroud plates are slightly longer than the caps spanning an extra plank. In a very fractional rig the lowers usually carry the higher rigging loads.

The backstay is pinned to a pair of straps fastened into the transom. These are not visible internally so are wood screws fastened into the after deck and transom structure. There is no sign of failure or movement although all surface fasteners are covered with a fresh coat of paint. Also on the transom edge is a single rowlock which is assumed to be for a sculling or for emergency steering but no suitable oar or sweep was seen on board.

The headsail sheets are led through Tufnol thimble fairleads on the side decks to a pair of Tufnol bottom acting winches mounted on the coamings. These are in good working condition with positive sounding ratchets. The main sheet is on a bridle with blocks attached to eye bolts in the after deck. These have good sized hardwood backing pads below and are well seated and secure.

j) Safety equipment

The vessel is equipped with a tubular galvanised steel pulpit and stainless steel pushpit. The pulpit is a one piece four legged fabrication and is secured into the deck by two bolt fixings on each foot. These are mounted on hardwood pads to spread the load and all well seated and quite secure. This carries the combination navigation side lights and a pair of loops for a single upper guardwire.

The pushpit is a similar full width stainless steel fabrication. It is mounted similarly to the pulpit with four legs each with two bolt fixings but these are direct into the deck. This pushpit is probably not original. It is also well seated and secure but with some leakage issues as already detailed. There are cast bronze bases for two stanchions each side as already detailed, but no guardwires or stanchions were seen on board.

There are good hand holds in a pair of full length teak hand rails along each side of the coachroof. The teak is in fair condition and well secured. It is left bare and unvarnished. There are good secure harness strong points in the cockpit but no jackstays installed along the side decks. These would be advisable if the vessel is to be used for offshore or overnight passages.

Recommendation

(Cat 1) Install jack stays to the side decks if taking the vessel offshore or overnight

There was no horseshoe lifebelt or danbuoy seen although there was a man overboard rescue sling and a pair of harnesses. There is also a folding plastic boarding ladder. A lifebelt should be provided and located where it is ready for immediate deployment. It should be marked with the vessels name and home port and be equipped with a floating light on a tether.

Recommendation

(Cat 1) Install a horseshoe lifebelt complete with floating light and mark the lifebelt with the vessels name and port of registry.

k) Skin fittings and seacocks

Note; Bronze is conventionally an alloy of copper and tin, but the term is now popularly used to describe a wider range of copper based alloys which have no tin content but zinc and other elements which can provide similar dezincification resistance. There is no non-destructive test for alloy composition which is practical within the scope of this survey. Where visible casting marks indicate a particular alloy, it will be described. Otherwise, where the term 'bronze' or 'brass' is used in this report it denotes a copper based alloy of indeterminate composition. (See explanatory note 7)

There are two through hull fittings below the waterline. Both are in the forward engine space. On the port side is a ¾" ISIS DZR brass ball valve for the engine seawater cooling intake. This is in good order and the handle was free turning when tested. The hose was tug tested and found to be secure and it was secured by double worm drive hose clips. Opposite is an old skin fitting that could not be identified. It appears to no longer serve any purpose and it should be removed. Any unnecessary through hull fitting is a potential liability.

Recommendation

(Cat 1) Remove redundant skin fitting and make good hole with graving piece

Brass valves should be regularly monitored for signs of dezincification where the brass turns a red carrot colour and the valve sounds dull when hammer tested. There is often also a white crystalline deposit of zinc hydroxide from the zinc oxidising out of the brass. When replacing valves or skin fittings always use dezincification resistant alloys which will be marked DZR or CR or with the alloy classification CW602N or CZ132.

There are no tapered wood bungs for emergency use. Tapered softwood bungs of the appropriate size should be individually located adjacent to each fitting so that they are available for immediate use in the event of failure. Electrical bonding wires are not attached to the valves. This is no longer considered best practice as it can be counter productive unless anodes are located close to the skin fittings being protected. *(see explanatory note 8)*

Recommendation

(Cat 1) Install appropriately sized tapered softwood bungs to each skin fitting for closing in the event of failure.

I) Engine

The engine is a Yanmar 1GM10. The serial number could not be read as the plate is missing. This is a 318cc single cylinder, naturally aspirated, raw water cooled diesel engine delivering 9 hp at 3600 rpm. The engine is cooled with seawater drawn from the skin fitting and pumped via an engine driven Jabsco type pump into the exhaust elbow. The intake hose runs through a seawater strainer located on top of the intake valve.

When the engine is at full working temperature a thermostat diverts the sea water through the block and head before entering the exhaust elbow. The exhaust is in exhaust hose and runs to a Vetus plastic swan neck silencer aft of the engine and then to a loop inside the transom. It is discharged through a stainless steel and rubber exhaust fitting in the starboard transom. All the exhaust was in good condition.

The engine was seen to be in a weathered but fair cosmetic condition. There was some superficial surface corrosion and flaking of paint around the top of the block and head. This could indicate past overheating as the Yanmar paint is usually very tolerant and well adhered. The injector appears to have been recently re-fitted, presumably in order to be serviced, and the starter motor is a replacement or re-wound item as it is not in the original paint.

The exhaust elbow was in good condition and has possibly been replaced as it is a vulnerable item to corrosion. The oils were clean and free of particulates and the oil level was well filled. The engine has probably not been run since the oils were replaced. The alternator belt was adequately tensioned and there were few signs of rubber powder deposits which would indicate a wearing belt.

The engine is set on resilient mounts. These are set on steel beds bolted between the transverse floors. The resilient mount rubbers were good with no signs of powdery decomposition. The steel mount plates were well painted in a red oxide paint and quite satisfactory. The engine control levers operated satisfactorily. There is a single lever engine control on the starboard cockpit side with a stop lever alongside

The engine instrument panel is mounted in the cockpit below the companionway. This contains an audible and visible warning system for oil pressure, water temperature and alternator output. The warnings sounded when switched on and engine started instantly when tested and idled with no unusual sounds, vibrations or significant emissions of smoke. All the warning lights and the siren extinguished indicating there was good oil pressure and alternator output.

The engine is mated to a Kanzaki KM2P reduction and reversing gearbox with a reduction ratio of 2.62:1. The gearbox oils could not be checked as the dip stick was too tight to remove without risk of breakage. This should be investigated. The oils should be checked for level and colour. It should be a clear pale gold colour. Any brown discolouration can be a sign of burning from a slipping clutch. Metallic particles can be gear wear. Gear box oils should be changed at every other engine oil change and are often overlooked.

Recommendation

(Cat 2) Check the gearbox oils for level condition and colour

m) Fuel system

Diesel fuel is stored in a small cylindrical brass fuel tank under the after deck on the port side. This is filled from a flush deck filler in the deck above. There is no sender or gauge and fuel level can be measured by a dip stick directly into the filler in the top of the tank. The tank has a small sump in the bottom and fuel is drawn from a drain fitting in the sump. There is also a second fitting with a valve which can be used to draw off any water contamination.

There is a shut off valve at the drain fitting and fuel is delivered by flexible fuel hose to a CAV 296 type cartridge filter in the forward engine space starboard side. This filter has a glass bowl water separator and no water or bacterial gel was seen in the bowl when viewed. The fuel was seen to be red diesel.

Fuel is then delivered by flexible fuel hose to the injector pump and then returned to the tank in the same hose. All was seen to be in good order and free of any evidential leakage. The fuel hose was all to marine fire resistant specification ISO 7840 A1.

n) Stern gear

The output flange is bolted directly to a clamp type coupling with an R&D flexible drive. The gearbox output flange holds a 7/8" stainless steel propeller shaft which exits the hull in a bronze shaft log through the hull stern post. This has white metal bearings at each end and the shaft log is filled with grease. The shaft is snug in the bearings.

Grease is supplied from a greaser in the port cockpit locker. The shaft log has a conventional packing gland at the inboard end. There are smuts of grease on the hull bottom around the gland and grease smeared onto the shaft. This suggests that the gland is leaking and needs to be repacked.

Recommendation

(Cat 1) Re-pack the stern gland

The shaft exits the hull in the stern tube and the propeller works in an aperture formed in the rudder. The shaft is non-magnetic indicating it is a good marine quality 300 series austenitic stainless steel. There is a hull anode installed on the hull with studs in the after engine space. There was no electrical continuity between the propeller shaft and the anode studs as the plastic coupling was acting as an insulator.

There is a steel collar positioned around the shaft but this was not making an electrical contact. A bonding wire should be installed across the bolts of the flexible coupling and a resistance of less than 0.5 ohms should be recorded for effective cathodic protection.

Recommendation

(Cat 2) Install a bonding wire across the R&D coupling and establish electrical continuity

The propeller is a 12" diameter three bladed right hand conventional propeller fitted to the shaft on a threaded tapered keyway and nut, seized with a split pin. The propeller was seen to be in a fair condition with no obvious sign of dezincification or cavitation damage although it was coated in a heavy coat of antifouling. The propeller was not visibly marked for size or pitch.

The propeller showed slight magnetic flux when tested with a magnet indicating that it was probably Manganese Bronze. This is not true bronze but a trade marked zinc brass with the addition of manganese for some dezincification protection. It also contains some iron which accounts for the slight magnetism.

A calculation using the engine specification, hull dimensions and displacement indicates that a speed of 5.3 knots is possible with a 12 x 7 three blade propeller. This calculation also shows the engine is slightly underpowered for the vessel with 5.9 knots being the vessels displacement speed which would require an engine delivering 11 hp. These calculations are based on a lightly loaded vessel with a clean bottom.

o) Steering system

The steering is by a transom hung rudder. The rudder is fabricated from wood with a wooden stock and cheeks creating a tapered slot for the tiller to be inserted at the head stock. There are three rudder hangings. The lower two are of pintles to the stern post and gudgeons to the rudder. The upper hanging is a double gudgeon with a through bolt. The rudder is free moving with little play evident in the hangings.

The rudder is painted to match the hull. It was hammer tested and moisture tested and found to be sound except for the lower aft part where the moisture read high and the painted antifoulings had extensively flaked off. The moisture has affected adhesion and when spike tested the wood was found to be softened. This should be stripped back to bare wood and the wood dried hardened with saturating epoxy and filled and faired.

Recommendation

(Cat 2) Strip the water damaged part of the rudder blade, dry, harden and fill and fair.

The tiller is a solid spar of Ash. This is slightly curved and shaped to a hand hold. It is in a good coat of varnished and in a fair cosmetic condition and sound for its purpose.

p) Mast spars and standing rigging

The main mast is an aluminium spar by Nordic Mast and supplied by Rig Magic of Levington. It has single inline spreaders and jumper struts. The mast is silver anodised and is sound with no evident corrosion around any of the riveted fittings. The mast appeared to be almost in an as new condition. It is understood to be installed in 2005

The mast is a thin walled section but well supported. The mast was unstepped and laying on trestles alongside the vessel. The mast is stepped on the coachroof and is supported below by a saling beam across the companionway in the bulkheads separating the forepeak from the saloon. There are no signs of failure, movement or mast compression in the coachroof although there are corrosion stains from leakage as already detailed

The spreaders are attached to riveted stainless steel fabricated roots. There was no movement in the roots in the mast when stressed. The mast is rigged with continuous cap shrouds and aft lower diagonal shrouds. There are twin forestays and a single standing back stay with a bridle and cascade tensioner. There are twin jumper struts at the hounds braced by diamond stays.

The boom is a wooden spar of spruce. This was originally set up for roller furling and still uses the original Turner ratchet roller furling gear as the gooseneck, but the boom has been adapted to slab reefing which has enabled it to be set up with a proper kicker. The gooseneck pivot has been modified to suit the mast track and the pivot pin is snug and sits vertically.

The forestays, back stay and cap shrouds are all in 5mm 1x19 stainless steel wire with roll swaged terminals and open bodied rigging screws. Aft lower shrouds are in 6mm 1 x 19 wire. The swages were examined for correct forming, corrosion and signs of splitting. All appeared to be sound and the rigging screws had been adequately seized by split pins. The rig upper terminations are spoon headed forged terminations which engage in reinforced slots in the mast wall. These also surveyed well

The standing rigging is understood to be the same age as the mast, replaced in 2005 and all appears to be in good condition. The rig was unstepped for lay up which is good practice. This will extend the life of a rig by reducing tension in the wires and prevent harmonic vibration causing work hardening and fatigue.

q) Sails and running rigging

There were five sails seen on board at the time of survey. The mainsail is a cross cut slab reefed sail by Jeckells of Wroxham. This is well used but in a fair and serviceable condition. It is in a white Dacron polyester with conventional battens and hoisted on sliders. The cloth is faded from its original colour and softened by use.

The genoa is a white Dacron cross cut sail by Wilkinson Sails of Conyer. This is in a similar well used condition, faded from its original colour and softened by use. The jib is also by Wilkinson Sails and of a similar construction and in a similar condition. These are both hoisted on stainless steel carabiner clips and are both probably of the same age.

There is a third jib by Suffolk Sails. This is in a newer condition, less used but badly stained by rust marks. The sail is a white Dacron cross cut sail with galvanised piston hanks. This has probably been stored unused in a damp environment. Also seen is a red nylon symmetrical spinnaker. This appears to be sound and undamaged in the parts that can be seen. There is no makers patch seen. The sail has lost some crispness but is probably quite serviceable. Sails can only be fully assessed for fit, shape and set when hoisted and sailed close hauled.

r) Sea toilet and heads compartment

There is no dedicated heads compartment.

s) Fresh water system

There is no fresh water storage system

t) Galley and chart table

The galley consists solely of a box on the port side amidships dividing the two berths. This has a fold down front as a work surface and exposes a cast iron original 'Primus' spirit stove. This stores paraffin fuel in a pressurised tank in the base and it is fully gimblalled on an iron frame. This appears to be in a good working condition but could not be tested.

The box lid can be set up as a heat shield above to protect the coachroof head which is a good detail. There are no other galley fittings. There is no fresh water storage system and a plastic bowl appears to be used for washing up. There is work top space beside the stove and storage space for supplies behind and beneath the sleeping berths either side of the galley box.

u) Electrical system

There is a single battery installed in the bilge in front of the galley box. This is a Platinum 70 amp/hr automotive battery. The battery was drop tested for power. All batteries gradually lose capacity over time due to the sulphur in the acid solidifying on the lead plates. This process is accelerated whenever a battery is left for long periods at a low state of charge. The sulphation increases resistance and prevents the battery from accepting and delivering a charge.

The battery is rated at 630 CCA (Cold Cranking Amps) which means that it should be capable of delivering 630 amps for 30 seconds whilst maintaining a minimum effective voltage. When drop tested with an electronic battery tester the bank delivered 265 amps showing that the bank had lost over 50% capacity. This will deliver voltage but the voltage will drop under a heavy load.

The battery is engaged by an isolator switch in a small box under the starboard berth. This supplies the engine start circuit and also a panel with six toggle switches on the starboard side. All the switches were operated and the appliances tested. There is a single swivel light to the saloon which worked. The depth sounder powered up and gave a reading although the vessel was out of the water. Sound travels faster through water than air so the reading displayed was deeper than actual.

There are pulpit mounted navigation lights and a combination tricolour and anchor light on the mast truck. As the mast was unstepped only the pulpit light was connected but this worked when tested. There is also a pair of deck flood lights to the mast spreaders which were in good apparent condition and the combination light to the mast truck was removed and stored on board. This was also in good condition although not tested. There were no other devices seen on board although more are listed in the inventory.

v) Gas system

There is no gas system on board

w) Fire fighting equipment

There is a single small dry powder fire extinguisher seen on board. This is old and does not have a service record card. There is also a fire blanket on the bulkhead alongside. Fire extinguishers should be subject to annual inspection and a discharge test every five years. These small units would usually be cheaper to replace than have them discharge tested and re-charged.

On a vessel of this size there should be two extinguishers to 5A 34B and one extinguisher should be located where it is accessible from outside the accommodation. If an automatic extinguisher is to be installed in the engine space it must be a gas extinguisher with HFC22, FM36 or FE200 extinguishant. Powder type extinguishant can cause serious damage if ingested into a running engine. (*See explanatory note 11*)

Recommendation

(Cat 1) Service or replace all the fire extinguishers

x) Bilge pumping

There are two manual bilge pumps on board. In the cockpit is an old Whale bronze piston pump in the bridgedeck. The piston was stuck and wouldn't lift and there is no hose connected. This is assumed to be redundant. Mounted beneath the starboard bunk is a modern Whale Gusher double acting manual pump which draws from a hose in the bilge and discharges through the topsides.

The pump handle is tethered alongside and the pump discharged water effectively when tested. There is no non return valve in the large diameter hose so water was able to flow back into the bilge and it could not be emptied. It would be recommended to install a non-return valve in the hose.

Recommendation

(Cat 2) Install a non-return valve in the bilge pump hose

y) Fit out

The fit out is typical of a wooden yacht of the period. All bulkheads and panel work internally is in a good coat of white paint with the hardwood mouldings in a varnished finish. All the hull sides are varnished and varnish work to the engine box and storage compartments under the deckhead. The coachroof head and deck heads have white paint to the flat work and varnish to the mouldings.

This combination of finishes is popular because the contrast of finishes highlights the structure of the vessel internally. The white paint also serves to light and brighten the accommodation which would otherwise be dark and gloomy due to the minimal natural light generally available from a classic yachts coachroof glazing.

The general condition of the accommodation finishes is good but with some varnishwork requiring tidying. There is little evident damage to the joinery from leakage from the deck or coachroof fittings where they can do harm. The white paintwork could also benefit from some re-finishing, particularly to the forepeak deckhead.

There is basic upholstery to the sleeping berths. This is in a hardwearing tan vinyl with piped seams. This is mostly intact but has lost some shape to the cushions. The windows have printed cotton curtains which are slid on wooden curtain poles. These are in good effective condition.

The saloon sole is in heavy solid teak boards with brass lift rings. These are in good order. The engine box is an all joinery construction with a small step beneath with storage space under. The bridgedeck, engine box and bottom step are all covered by Treadmaster composite non-slip sheeting. This provides good security when negotiating the companionway.

The accommodation is heated by a cast iron solid fuel stove. This is top loading with an ash tray to the base and a vent. The top is flat so can be used as an alternative cooking hob. The stove has a stainless steel flue that passes out through the coachroof with a rain cap to the top. The flue appears to be long enough for effective exhaust, usually recommended to be at least one metre. This stove must not be lit whilst crew are asleep as it could cause oxygen depletion in the accommodation. The stove was not tested.

z) Additional equipment

The following equipment was seen on board the vessel. Inclusion in this list does not necessarily imply that it is included in the sale inventory.

Sestrel gimballed main steering compass, good condition

NASA Clipper depth display in cockpit, powered up, working, no signal

Three hurricane lamps

Hand bearing compass

Brass cased aneroid barometer

CQR bower anchor on deck, chain and warp, not measured

Smaller CQR anchor below deck

CQR pattern plough anchor below deck

Light tan polyester canvas sail cover, good condition

Light tan polyester canvas main hatch cover, good condition

Light tan polyester canvas chimney cover, good condition

Light tan polyester canvas cockpit cover, good condition

Aluminium boathook

Folding plastic boarding ladder

Folding ball and cone day signal shapes

Pastimo Lifesling

Two safety harnesses

Quantity of paints, cleaning materials and chemicals

Tools, engine service parts and general spares

Red ensign and ensign staff

Deck scrubber

Quantity of warps and fenders

Aluminium Kettle

4) Summary of recommendations This summary is a check list. Full details can be found in the body of the report. Page ref numbers are given (p#)

Category 1 recommendations are safety related defects or below waterline issues which should be corrected before the vessel is put into commission

- (p9) Repair the cracked and split framing timbers to the hull bottom*
- (p10) Strip hull bottom, caulk, prime, paint, pay seams with modern compound*
- (p10) Repair the cracked topsides framing timbers with sister frames.*
- (p17) Install jack stays to the side decks if taking the vessel offshore or*
- (p17) Install a lifebelt complete with floating light and mark with name and port*
- (p18) Remove redundant skin fitting and make good hole with graving piece*
- (p18) Install appropriately sized tapered softwood bungs to each skin fitting*
- (p20) Re-pack the stern gland*
- (p24) Service or replace all the fire extinguishers*

Category 2 recommendations relate to defects which affect the operation of the vessel in normal use and should be attended to at the earliest opportunity. They do not affect the seaworthiness of the vessel or security of the crew.

- (p8) Repair damaged keel floors and remove and or replace the keel bolts.*
- (p9) Apply Slick Seam to the open seams when the vessel is launched.*
- (p12) Remove port side chainplate fastener, repair sheer clamp and re-install*
- (p12) Remove fittings and sheathing, repair water damage and reinstate all*
- (p13) Treat and protect the cockpit carlines with varnish once dried*
- (p14) Remove mast step and sheathing and repair the water damage*
- (p14) Treat and repair the carline forward corners to the coachroof both sides*
- (p19) Check the gearbox oils for level condition and colour*
- (p20) Install bonding wire across R&D coupling for good electrical continuity*
- (p21) Strip water damaged part of rudder blade, dry, harden and fill and fair.*
- (p25) Install a non-return valve in the bilge pump hose*

Category 3 (Cat 3) recommendations relate to conditions which are cosmetic or comfort related and may affect the perceived value of the vessel. They could be attended to at the owner's discretion

- (p13) Protect all external brightwork with varnish to protect from degradation*
- (p14) Consider installing a dorade ventilator to the forepeak hatch*

5) Conclusions

Folkboats were, and have continued to be very popular boats. There are many small cruisers from later eras which owe their origins to the Folkboat design. The design provided comfortable compact accommodation combined with good racing performance and also proven ocean going potential at an affordable price. They still have a strong following of enthusiastic and committed owners.

[REDACTED] is now 60 years old and has some typical 60 year old boat issues. There will always be a gradual deterioration in the fabric of a vessel considering the hostile environment in which it has to live and the stresses and strains to which it is subjected. This boat has been well used and that shows up in many of the fittings and equipment.

The vessel has also been in the current ownership for 42 years. This is often not good for a vessel, particularly a wooden one. It is often only when a vessel changes hands that the condition below the surface is properly examined. Also, long term owners see only very gradual deterioration and blind themselves to things that are very obvious to a fresh pair of eyes.

The recommendations list is very long and includes some suggestions for improving the efficiency of the vessel and bringing it up to current standards of safety. The other issues listed unfortunately make this vessel a major project. There is some serious weakness in the hull and it is surprising that it has held its shape in the way that it has.

There are more fractured framing timbers than sound ones. But the fully cracked timbers are fortunately not all at the same seam and sequential, and the split timbers are not all right through. These all need to be addressed now as the inherent weakness will cause further failure to occur in a domino effect. If put to sea and the vessel became over pressed in a seaway she could open up with serious results. Even if recovered, once the hull shape is lost it cannot be restored.

There are many good things about this vessel. She will sail very well and the elegant lines and provenance of the design will always attract admiring glances. She has a good engine, mast, sails and rig. The deck and coachroof has minor defects but are actually in relatively good condition for their age. The hull planking is sound and there are some classic bronze fittings. The interior has the traditional feel of a classic yacht.

All can be repaired however if promptly addressed, and the nature of repair is not complex. For the right person and at the right price, [REDACTED] could be a very good prospect. But she is a restoration project and cannot be considered as properly seaworthy in her present condition.

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[REDACTED]