AMATEUR BOAT BUILDERS' ASSOCIATION

November December 2012

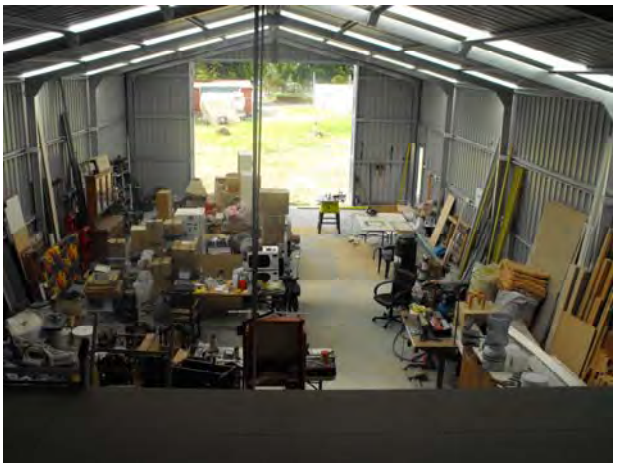
HERRESHOFF KETCH IN THE MAKING

November Technical Meeting (Bruce Cadee reports)

Unfortunately, there was a minor mix up regarding the meeting date with our scheduled speaker. A round table discussion promoted by your Editor developed into a full scale presentation by Ed Essers on his major project to build a large shed and then proceed with the building of his new Herreshof ketch.

Many thanks to Ed for giving a very informative presentation to the group at very short (in fact 'no') notice. The first stage of Ed's project was getting somewhere to make it happen. He is currently building a 19 m x 9 m Ranbuild shed on a friend's 4 acre property in Wungong. Ed gets a place to build his boat and when completed, his mate gets a shed. At one end, a 4.5 m x 2.5 m area with a 2.8 m high timber tongue and groove ceiling will provide basic accommodation with a mezzanine floor above. Outside, Ed has installed a 23,000 l water tank that was filled in 3 recent downpours. The electrics have been completed and now only the final touches remain.

A large shed for a large project

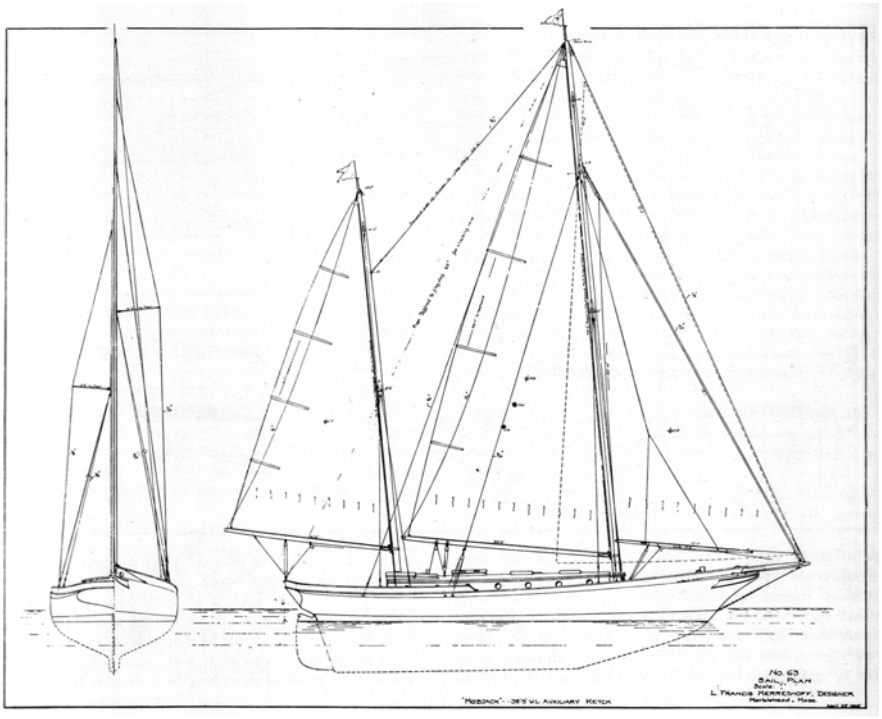


Inside view from the mezzanine storage above the accommodation area.

In Jan 2013, Ed will start construction of his 14m (45'-3") deck length, 4m beam, Mobjack design Herreshoff Ketch. The 14 pages of plans were purchased from Mystic Seaport Museum for $25 per sheet. Ed has converted the original Herreshoff 3/8" to the foot scale plans from inches and eighths to millimetres and has lofted the boat in MDF. The original design was in wood but Ed has made the design changes needed to construct it using 4 tonne of Aluminium. The total mass of the boat including ballast will be 17 tonne. The original plans are in great detail but Ed won't be following them exactly as he will be fabricating most of the fittings and framing for the fit out in aluminium.

Ed will increase the depth of the keel from the original 5’ to 5’-6” based on his ocean going experience. He will also make the keel wider than the original straight sided design. The lead ballast will be totally encased in the lower part of the aluminium keel. Above the ballast and below the floor will be integral 1500 litre water tanks.

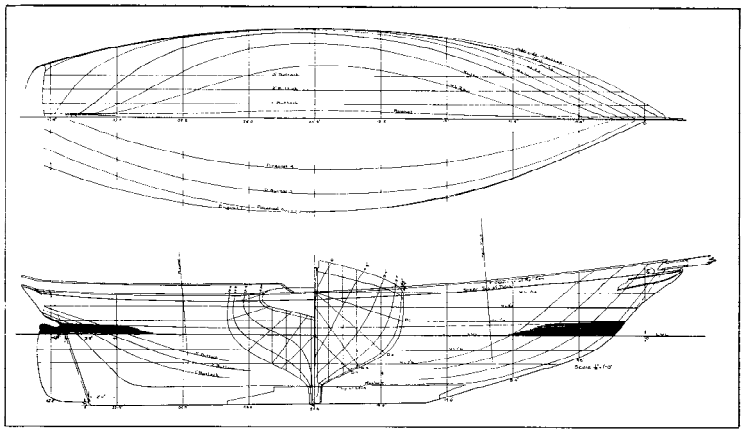
The boat will have a clipper bow, a transom stern and lots of tumble-home at the back end. The main mast will be 54’ above the deck. It will have a bowsprit with 2 fore sails. The main mast will be stepped off the keel and the mizzen from the deck. Ed plans to fabricate the masts and mast fittings from Aluminium. There will be no tabernacle fittings.



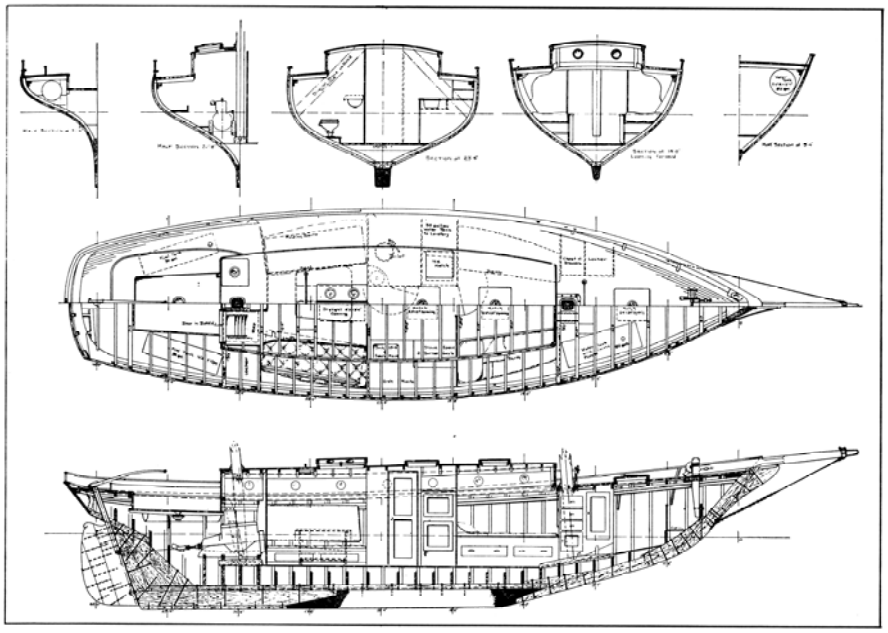
Ed will avoid the need for rolling machines by plating the hull with 600mm wide aluminium sheets set at an angle of 45 degrees running from the bow and stern. The 8mm plate will be MIG welded. This arrangement should give the “tough and waterproof” vesssel that Ed knows from 26 years experience in his former boat is essential for sailing in the Southern Ocean.

The boat will have no watertight bulkheads. The hull will be built right way up, with T-bar frames joined by flatbar stringers. These longitudinal stringers will first be welded at the front then bent to take the shape of the frames and progressively welded to each frame. Ed has a 10 tonne truck press to bend the T-bars to the required shape.

Ed has a dual bladed, counter rotating saw for cutting the aluminium. He has 3 pairs of blades but more importantly he has a mate who is a tool sharpener with all the right gear. The saw is ideal for cutting aluminium and as the blades counter-rotate, there is no grabbing or kickback. You can cut either forward or backwards.



The plates will be stitch welded to the longitudinal stringers, not the frames to minimise distortion of the hull plates. The hull plates are fully welded both inside and out. Starting from the centre, adjacent plates are made flush then tacked, made flush a short distance away then tacked again. This process continues working on both sides and outwards towards the ends of the boat. The inside is then fully welded using the same pattern. Finally the external welds are made after grooving out the partially welded joint. Ed may do the grooving with the dual bladed saw fitted with a depth stop. The backstep welding technique is used to minimise distortion.



The complete interior of the boat from floor to floor, stem to stern, under cockpit etc will be sprayed with 50mm of self-extinguishing polyurethane foam. The aluminium needs to be degreased before applying the foam. The foam will fill any gaps between the stringers and the hull plates. Ed has a welding technique that involves the use of a fan to blow away any melted foam if weld repairs are needed after the foam has been applied. He intends to install internal aluminium framing as the basis of a wooden fit out. Wood can be screwed into the flange of the aluminium T-bar frames.

The hull will be etched and painted but no filler will be used to fair the hull. Flap discs can be used to sand away any splatter or imperfections before painting.

To avoid corrosion, the electrical system will be totally isolated from the metal hull. Having no engines avoids problems earthing through the engines. All wiring will be in conduits using two wires to provide a return to earth rather than through the structure of the boat. Ed will avoid dissimilar metal corrosion by fabricating his own skin fittings from aluminium and using plastic seacocks.

A series of 3 x 2” pipes on each side of the boat will drain away any water on deck, discharging it above the water line. These same pipes will also be connected to the water tanks with 2 plastic valves in each drain. After a period of flushing, the valving will be changed over to allow rain water to be directed to the tanks.

A completed Herreshoff 45 ketch

In his previous boat, Ed had a bad experience using "Water Tank Black" to paint the internals of his tanks. Even after repeated flushing there was still an unpleasant taste. He replaced this coating with a cement wash incorporating a waterproofing ad-mixture which worked well. Chris Davis mentioned using UBITPLAST to extend the life of old tanks and Harry Speight will use a Jotun epoxy especially designed for this application.

There will be no permanent engines but he will have two electric outboards fitted inside wells with a lever to lower them when needed. These will be powered from 2 x 400 AmpHour Lithium Iron batteries. These high efficiency 3.6 Volt cells are now comparable in price to good quality deep cycle lead acid batteries of similar capacity. The electrical system will also include 6 x 80 Watt solar panels and a US Air Breeze wind generator. Ed pays around $135 for an 80 W panel these days compared with the first 40 W panel he bought in 1984 for $400. The solar panels will be mounted above a gantry at the stern and the wind Generator forward of the mizzen mast. Ed explained that mono crystalline solar cells are more compact and more efficient (say 19% compared with 15%) than the cheaper poly crystalline solar cells. He also explained that the noise from wind generators can be reduced by smoothing the blades with fine wet & dry.

Thanks again to Ed and we look forward to hearing and seeing more of this ambitious endeavour in the future.

'December' Toolbox Visit (Michael Wade reports)

Our December Tool Box Meeting at Harry Speight's was a chance to see the almost finished Farrier F82A that Harry has been working on for a long time, in fact the first visit from our group was on the 6th April 2002. At that time Harry told us he had already been on the project for two years and three months.

There have been two other visits to Harry's Retreat plus a visit to Boating Hardware in O'Connor to see some of the rigging being made, a trip to Henderson to unload the floats / outriggers / amahs ready for finishing (which did not properly proceed) and a visit to Exclusive Coatings in South Fremantle where the final finishing we now see was completed. A lot of the ground in terms of design and construction has been well covered by Mike Beilby in previous editions of our news letter June 02, Aug 04 and Jan 09 and there is a very good website for Farrier designs which has a lot of detail, see www.f-boat.com

Harry's project looks absolutely SUPERB with the mast stepped and all the standing rigging gleaming in the sunlight .The quality of the paint job by Exclusive Coatings is first class. Any short comings on the part of the builder would have been very apparent so the finished product is a tribute to both parties.

Harry gave us a demonstration of raising and lowering the Amas. The articulation, the design and construction is brilliant. In fact, there is a look of de Havilland about the whole job. The spelling of the word Ama in its various forms led to some research on Mike Beilby's part, and my suggestion would be another piece of marine / aeronautical nomenclature :- SPONSON

As the saying goes, 'a picture tells the story of a thousand words'. The complexity and extremely high standard of construction and finish that Harry has achieved is apparent from all the above images taken during the Toolbox visit.

Our thanks again to Harry for his hospitality and inspiration.

ADMINISTRATION NOTES

ABBA COMMITTEE

President/Editor	Chris Davis	9387 5042		
Sec/Treasurer	Bruce Cadee	9259 0844		
General Committee	Rob Bingham	9246 0202	Alun Dufty	9272 8905

FEBRUARY TECHNICAL MEETING

(Note that as previously advised the meetings will now be on the first Wednesday of every second month commencing February 2013)

The next technical meeting of ABBA will be held at the South of Perth YC as usual 7.30pm for an 8.00pm start on Wednesday, February 6th, 2013. Peter Leggatt has following up with our scheduled speaker for November, Henry Moorfield, and he will now address us on everything diesels at this February meeting. Henry is a very experienced diesel specialist who worked for a long period for George Monkhouse & Sons and has also recently run power stations. So, bring along your questions – this will be an outstanding opportunity to explore this subject.

FEBRUARY TOOLBOX VISIT

With the change in meeting date, the Toolbox visit will continue to be on the Saturday a week and a half after the meeting. However, for this visit only, the toolbox will be two and a half weeks after the meeting. This is due to our host being away at the Australian Wooden Boat Festival in Hobart during that period.

This will be a visit to past president Bob Walsh's project which is very near completion and launching. Some of you may remember previous visits to Bob's 10m David Payne design launch during the earlier phases of its build in 2007 and 2008. In the meantime, Bob has had to step back from ABBA affairs due to family health issues but he has generously offered to host this toolbox — another great opportunity to see an ABBA members project close to launching date.

That's on Saturday February 23rd from 2.00pm to 4pm at Bob's residence on the canals at
27 Moyup Way, South Yunderup.

LIBRARY

The ABBA Library has an extensive collection of books and magazines. Rosemary Nayler has now collected all the books from Mike Rogers and we are in the course of arranging some additional storage shelving to facilitate cataloguing so that they can be made more readily available for loan at meeting and toolbox times. Stay tuned.

ABBA — WHERE ARE WE GOING?

Your committee met in mid November to discuss the future directions for the Association following on from the discussions at the AGM. A good number of ideas were tabled and discussed and I indicated in the last newsletter that I would report on these in the next newsletter. I have attached a copy of the draft notes which I have now compiled from that meeting for your information and any comment/additional suggestions from members would be appreciated — either by email or catch me in person at the next meeting or toolbox visit.

VOLUNTEERS NEEDED to write up the meeting and toolbox visits for the next month.

Please email me before the technical meeting on Feb 6th or if you want to write up the toolbox visit let me know at the meeting. Remember, this is essential if we are to keep the 'boat' afloat.

Amateur Boat Builders Association

Notes from Committee Meeting 14 November, 2012

Attendees: Chris Davis, Bruce Cadee, Rosemary Nayler, Rob Bingham,
Apologies: Alun Dufty

Refresh on AGM discussion

ABBA is not sustainable in the long term if numbers continue to dwindle and the organizational efforts rest with just a few members. With Paul's (Thompson's) key role and sudden departure and the decreased attendances in the past 12 months, it has become very apparent that if we keep doing what we are doing, the slow downward spiral will lead us to doom not very far down the track. Hence, it would appear there is a need to 'regroup'.

- New approach to the newsletter (12 tasks each year – take one each and Chris Davis will do the photos and the editing). Invest in a digital recorder.
- What do the members want? input on what they want and what they don't see as a priority)

Committee input to future directions for the association

Why do we come along? – to get advice and share information from other members with specialist knowledge of particular issues. ie come along with problems to solve via input from other members or by referral to other sources of advice.

- Register of members boats including some details of each would assist those looking for assistance.
- Establishment of a technical knowledge base including directory of suppliers known by members in specialist areas (incl shipwrights).
- Development of an ABBA website (ref Paul Thompson, Mike Beanland).
- Negotiation of group discounts with suppliers.
- Promotion of association via ads, pamphlets etc

Activity priorities for meetings

Presentations on practical issues that solve problems for members.

- Boat builders/shipwrights (Igor -RPYC, Chris Bowman, Brian Phillips)
- Paints (Gary Martin)
- Propeller selection
- Sail design
- Diesel engines (Henry Moorfield, Geoff Truscott)
- 'Things in the water' and anti (prevention of) fouling
- Electrical systems in boats
- Kit boats (Aaron Woodall)

Activity priorities for toolbox visits

Reflections/links to the speaker subjects and practical guidance to amateurs.

- Boat builders premises
- Sextants/navigation and how to do it
- Sailmakers (Will Hammond, Steve Hartley, Robin Hicks)
- Canvas works (boat covers)
- Machine tools (Carba Tech, Beyond Tools)
- Visits to members or other known projects (Bob Walsh, Mick O'Shea, Ed Essers, PM @ Falcon)
- Picnic with members boats
- Maritime museums (Fremantle, Claremont, Taskers)

Other activities to consider

Covered in full above.

Newsletter

Volunteer members to be sought to write up each technical meeting and toolbox visit article. Chris Davis to arrange photos as required and edit the bi monthly newsletter.

Library

- Chris Davis to investigate availability of library shelving and convenient wheeled storage for transport of requested books to meetings.
- Books to be reviewed for currency and catalogued in spreadsheet format when above available.

Other business

Constitution – Rob Bingham has reviewed the current draft constitution ready for circulation to members for feedback.

Where to from here?

- Chris Davis to compile meeting notes and circulate to members for any comment/ additional suggestions.
- Meeting outcomes to form basis for tech meetings and toolbox visits in 2013.
- Chris Davis to follow up with Rob Bingham re the constitution review.

Close