



AMATEUR BOAT BUILDERS' ASSOCIATION

February March 2015

THE BUILDING OF 'CHARLOTTE'

Our speaker for this meeting was long time ABBA member Klaus Sussenbach who presented to us on the building of his Norwalk Island Sharpie "Charlotte".

"Norwalk Island Sharpies (or NIS's as they are known) were designed by Bruce Kirby in the US and are one of the North American style sharpies that are rigged as cat-ketches with un-stayed rigs and centre boards. Klaus launched his boat in 1998, having commenced construction two and a half years previously, in 1996, and has covered a lot of sea miles since. The vital statistics of Charlotte are as follows;

Length 26 feet

Draft 0.4m of water,
board up, and a generous 1.8m,
board down

Rig Cat rigged with two
masts

Sail area 31.6 sq metres

Ballast 500Kgs

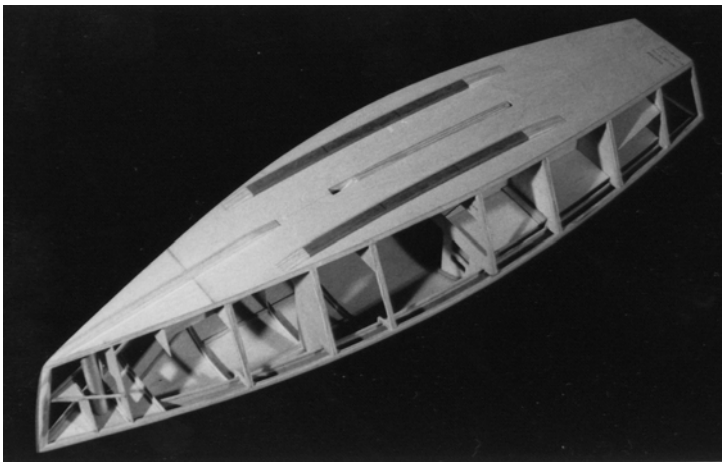
Design reference — refer
website www.nisboats.com



Members may also wish to refer to the newsletter that details the journey of Klaus and Charlotte to the Kimberley region in which former editor, Mike Beilby, has recorded more detail in regard to the NIS designs and Charlotte in particular. This is contained in the November December 2010 newsletter filed on the ABBA website at www.abba.org.au under the Library tab.

So.....enough of the background!

Klaus commenced the presentation by 'tabling' a very impressive 1/10th scale model of Charlotte which he had built before he started building the real thing. The model allowed us all to get a good initial appreciation of both the overall external features of the NIS design as well as the internal construction viewable through cutaway sections of the model. This also highlighted the initial challenges of converting the plans from imperial to metric which is Klaus' more natural measurement system.



Whilst working through the conversion process, he collected together the tools and materials needed for the project. In this regard, he recommended good quality sanding (torture) boards with two good handles. Other tools included a special sander made up for getting into corners, joggle sticks and circle guides for working around curves and of course the boat builders best friend – lots of clamps. He also made up the teak plugs and corner pieces and the aluminium window surrounds. Klaus explained how he created a triangular cross section fillet from an initially square timber in a process that allowed the fillet to be clamped to the main component ahead of gluing. Finally, a major recommendation was the purchase of a plastic welding gun which he used to heat the epoxy overflow glue which could be removed easily using a blunt chisel at about a 22 degree angle. *I'm sure this one little gem of information could save us all many hours of clean up time.*

With this introduction, Klaus moved to a photo presentation that traced the construction of Charlotte from the model to the launch and sail. Your editor will try to capture this in words and pictures in the following pages of this newsletter.

Readers should note that no boat building project is ever 'finished' and Klaus has addressed a number of modifications to Charlotte along the way. These include mast raising systems and a change from aluminium masts to carbon fibre, a change from a swinging rudder to a dagger one, installation of a forward collision bulkhead, modifications to the bunks and installation of water tanks at the companionway and current modifications to the centerboard.



Melting the lead external ballast into a 150mm x 75 mm mould with a brick

Each bulkhead was fully made up in the workshop before any assembly proceeded



Bulkheads assembled on the building frame, chines and gunwales in place and the centrecase being lowered into position. Klaus noted that the chines were fabricated from two pieces of timber



Using a planer angle attachment and straight edge to prepare plywood scarp joints

Bottom and side skins have been completed and the whole hull glassed over. The aperture for the outboard motor and the centre board slot can be clearly seen. The centerboard is constructed from jarrah and oregon and has a lead shoe.



The cast lead ballast was carefully lowered and then bolted through the upside down hull, faired in with jarrah blocks at the ends and then filleted and glassed over to become integral with the hull structure. The overlapping heavy sail cloth seals for the centre case were also fitted.



Klaus sanded the hull with the long boards previously procured and used an air supplied breathing apparatus during this process.

The big moment arrives and the finished hull is rolled over using a lay shafts and pulley technique in the workshop



Framing for the cabin and superstructure takes shape. Klaus pointed out that he maximised the painting of future inaccessible areas during this phase of the project.

The first of two curved skins that form the cabin top is glued into position over the completed frames. The cabin top is two layers of 4mm ply with the second layer vacuum bagged on. Note the cabin sides are already completed including window cutouts.





Cabin, decks and cockpit construction complete and fit out well advanced. Hatches matching the cabin top curve have also been constructed and fitted. Hatches were fitted with brass strips for the sliders. The cockpit is self draining and the companion way was made narrower than plan and the bulkhead doubled up to accommodate lockers accessible from inside the cabin. Seating comprises teak strips on top of the cockpit lockers.

Filling and sanding proceeds on the hull, deck and superstructure and primer is applied.



The topsides glisten following application of the gloss topcoats. Klaus used two pack after initially finding that single pack paint was not hard enough.



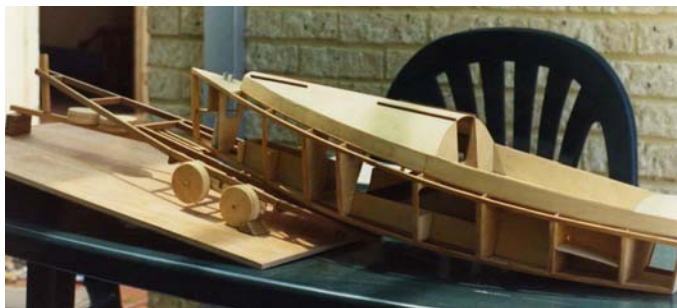
A really professional internal fit out with a great deal of room for the size of the boat — looking forward in the view above and looking aft in the view to the right.



What a sight — Charlotte complete on the trailer and ready to launch.



Klaus has developed three mast raising and lowering systems starting with the one on the left and now using the one on the right. In the process, he has converted from the original aluminium masts to much lighter carbon fibre ones. Talk to Klaus if you need to know more detail.



The design of the trailer for Charlotte commenced along similar lines to the boat building project with a scale model to fit the boat model.

The trailer was also built and further evolved based on experience over time. This is the initial Mark 1 version.



At the final stage 3 of the refinement, the current trailer looks like this. Note the 'dolly' at the back end that picks up the bow of the boat and runs up the rails in the middle. The fold down guides at the back also assist the process of guiding the boat into the correct position on the trailer, particularly useful when there are no helpers and a beam on breeze!

Thanks to Klaus for a first rate presentation which was demonstrative of amateur boat building at its best. Not only a well thought through and implemented project at every stage but the very sound Charlotte that resulted has now proved her worth over 9,900 sea miles. Well done Klaus.

A PRETTY TRADITIONAL FIFTEEN FOOTER

Our first Toolbox Visit for 2015 was to long time member Michael Wade's workshop in Kalamunda. Mike is building a "Navigator" designed by New Zealander, John Wellsford. This is a 15' long sloop rigged, open sailing boat. The plywood construction appears to be multi chined (4 per side) but is actually of lapstrake construction with five major plywood panels comprising the bottom and sides each side of the keel area. Members had previously visited Michael's project at the upside down framing stage and at the turnover stage so it was great to see her much nearer to completion during this visit. In this regard, the construction details have been well described in the March April 2003 newsletter (follow the Library tab on the website www.abba.org.au to access all the previous ABBA newsletters)

The major statistics of the Navigator are as follows;

- Length 14' 10" (4.5m)
- Beam 6' (1.8m)
- Draft 3'4" (1.0 m) approx board down
- Weight 308 lbs (140 Kg)
- Sail Area 136 ft² 12.6 m²



The Navigator is constructed over a building frame with frame stations at 500mm centres. The frames and bulkheads are from 6mm ply forward and 9mm ply from amidships aft, doubled up at the stringer notches. The transom and deck are both 6mm ply. 9mm is also used in the bottom panel and the centre case sides while three layers of the same material are laminated up to make the stem. The second to fifth strakes, or panels, are 6mm ply, which will make the boats lighter above the waterline.



The centre case has an internal width of 50mm, a chord of around 500mm and an overall length of 1.3m. This sounds fairly massive but the drawings detail the aerofoil section to be developed below the waterline in full scale so there is a good deal of timber to be faired away. This boat will not be a lightweight - it's being very solidly built and looks set to be a very stable cruising/coastal camping vessel rather than a racy dinghy. The drawings indicate that the final waterline is based on an all up weight of 440 Kg so with some allowance for mast, sails and rigging she has the ability to carry something in excess of 250 Kg of camping gear or afternoon tea, whatever you choose to use her for.



The drawings detail three alternative rigs – gaff/gunter, sloop and lugsail. Mike is planning to rig his Navigator as a gaff-rigged sloop .





And as our long time scribe Mike Beilby observed during the last visit, boatbuilding is far from being Michael's only hobby. He's into old machinery from tractors through to workshop tools and machines and is currently restoring several of them. He's also built sailplanes in the past so he's more than capable of high quality woodworking. Once again it was an extremely interesting visit, followed by a fine afternoon tea, and we thanks Mike and Sheila very much for their hospitality.



ADMINISTRATION NOTES

ABBA COMMITTEE

President/Editor	Chris Davis	9387 5042
Sec/Treasurer	Bruce Cadee	9259 0844
General Committee	Rob Bingham	9246 0202
	Ed Essers	0406 050 989
	Harry Speight	9295 4518
Library	Rosemary Nayler	9455 1470

APRIL TECHNICAL MEETING

Our next tech meeting will be on Wednesday 1st April, as usual in the Heritage Room at South of Perth Yacht Club, 7.30pm for an 8pm start. Our speaker for this meeting will be ABBA member Roselt Croeser. Roselt is a mining consultant by profession, a yachtie by inclination and a serial dinghy builder! He's been a member of TCYCWA for around 13 years and, in that time, has owned an MB21, a Space Sailer 18 and a Laurent Giles Vertue. Members will remember that Roselt surprised us all with the amount of detail associated with junk rig when he presented to us on this subject last year. Well, Roselt has kindly volunteered to address us again — this time on wind vane steering. I'm sure there will be plenty of surprises in this subject too. Expect a very interesting night.

MAY TOOLBOX VISIT

The next Toolbox will be on Saturday May 2nd, as usual 2.00pm to 4.00pm at Aaron Woodall's premises, AJW Shipwrights, 13 Lerista Court, Bibra Lake. Members will remember that Aaron presented to us on timbers, fixings and glues used in boat building in August, 2013.

Aaron is a professional shipwright and Director of AJW Shipwright, a business that he has established to specialise in modern and traditional fine wooden boat construction and ship's carpentry. The major project currently in the workshop is a major refurbishment of Blue Riband, a twin screw game fishing boat designed by Raymond Hunt and thought to have been built by Back and Mather. She is a large semi-displacement vessel about 50 years old and very well known on the Swan. She should be at the "engineering" stage at the time of our visit; i.e. drilling the shaft log, fitting the propeller shaft etc.

As well as inspecting Aaron's shipwright work, there will be an opportunity to discuss the range of timber, quality plywood and fixings which are suitable for our projects and which he is able to supply. Aaron also supplies kit boats and runs boat building courses.

So....no shortage of subject material which should be of great interest to us all. Another great Toolbox visit to look forward to.

SPECIAL NOTE -- SHIRTS & ABBA LOGOS

Don't forget — if members wish to bring along their own shirts to the next meeting then Bruce Cadee can arrange for logos to be embroidered. Members can bring as many shirts as they like but the club will pay for up to 2 logos. If we could do this in batches if at all possible this would be best for our supplier.

ADMINISTRATION NOTES (Cont'd)

ABBA LOGO

Members are reminded that Bruce Cadee has made arrangements with Shaun Luong of Image Embroidery at 26 Tulloch Way, Canning Vale (Phone 9456 2324 Mobile 0403 250 389) for an embroidered ABBA logo. The logo can be applied to your own clothing (assuming it can be accommodated in their equipment) or to shirts, caps or hats purchased through Image Embroidery. Feel free to call in on Shaun to look at the limited range of clothing he has on site or visit the following web sites to choose your preferred style, size and colours. The weblinks below are only examples of the wide range available. Half chest measurements are included on the web sites to help ensure you select the correct size. Ladies styles are also available.

Clothing (excluding Logos)

Style 1300 – Aussie Pacific Mens Murray Polo, Navy/White/Ashe or White/Navy/Ashe - **\$20.00 + GST each**

Weblink: http://www.aussiepacific.com.au/the-murray-polo-navy-white-s?color=Navy%2FWhite%2FAshe&primary_color=Navy&secondary_color=White

Style 1304 – Aussie Pacific Mens Eureka Polo, Navy/White/Ashe or White/Navy/Ashe - **\$21.00 + GST each**

Weblink: http://www.aussiepacific.com.au/mens/polos/eureka-polo-sky-navy-s?color=Sky%2FNavy%2FAshe&primary_color=Sky&secondary_color=Navy

Hats/Caps (excluding Logos)

Style 4199 – Headwear Brushed Heavy Cotton Cap, White/Navy (many other colours available too) - **\$6.50 + GST each** **Weblink:** <http://au.headwear.com.au/productDetails.cfm?&prodID=53&prodCatID=2&pageNumber=1>

(Also refer poly/cotton legionnaires hats Styles 4057 or 4126 for maximum sun protection under website sub heading 'Hats, Visor & Beanies' <http://au.headwear.com.au/productList.cfm?&pCategoryID=7>)

Style 4199 – Headwear Brushed Heavy Cotton Cap, White/Navy (many other colours available too) - **\$6.50 + GST each (includes poly/cotton legionnaires hats for maximum sun protection under website sub heading 'Hats, Visor & Beanies')**

Weblink:

Style 4223 – Brushed Sports Twill Bucket Hat, White/Navy (many other colours available too) - **\$8.00 + GST each**

Weblink: <http://au.headwear.com.au/productList.cfm?&pCategoryID=7&page=2>

To make your annual membership even more value for money, ABBA will pay for up to 2 logos per financial year to be applied to your items of clothing. The current cost to ABBA is \$7.15 per logo. There is no intention for this to be an ABBA uniform so the choice of style and colour is totally yours. If you are seen wearing the logo while building, working on or using your boat or anywhere for that matter it might get people asking questions and wanting to join our association. You are free to deal direct with Image Embroidery but please ensure you get an itemised invoice showing a separate price for the logo and present this to Bruce Cadee for reimbursement. Bruce Cadee is happy to take orders and liaise with Image Embroidery if you so wish.