AMATEUR BOAT BUILDERS' ASSOCIATION

August September 2015

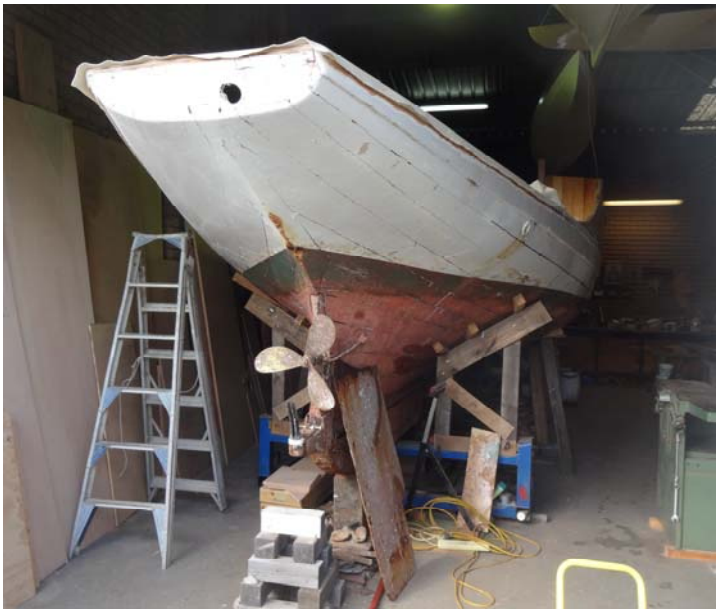
MAGGIE — A SUPERCENTENARIAN AND SOME

The September Toolbox visit was to the workshop of shipwright, Igor Bjorksen to see an old gaffer he is restoring. Igor has been working on boats since he was nine, this being as a volunteer in the restoration of a schooner in Melbourne. After ten years on this project, he went to sea on square riggers, sailing on the Leeuwin when first launched, and skippered various sailing ships during the 1990's. He also worked as a rigger during construction of the Endeavour and Duyfken replicas, and as a shipwright on the Duyfken. He has travelled throughout Australia and overseas as an itinerant rigger, but having met his wife-to-be whilst sailing, and with the arrival of kids, he put down roots in the steady vocation of shipwright (though he still carries out rigging work for the Leeuwin and other Oz based ships). Initially, he was based at C-Shed, Victoria Quay, before moving to his current workshop when C-Shed was closed.

Igor's current project that we went to see in his workshop was Maggie, a gaff cutter, owner built in Tasmania to an unknown racing design and previously named Ethel. Having been brought to WA, she has for many years been moored on the Swan at Freshwater Bay. Following a beaching due to a broken mooring, her owner has decided to have her fully restored.

Maggie was built in 1886 and is therefore 128 years old. She is a gaff rigged cutter with a 6 foot bowsprit and a boom that extends right to the stern. She is thought to have originally been an open racing boat and the original shear line can still be seen. In earlier times, she was shorter and had a transom approximately above where the propeller now is. She had a varied racing career under a number of rules until she was retired from racing in about 1920. She was converted to a cruising yacht with (as was common for Tassie conversions) a cabin being built out to the gunnels above the shear line forward as she appears today. She has also been lengthened to a fine stern well beyond where the transom originally was and a Tasmanian oak false keel secured with bronze bolts has been added.

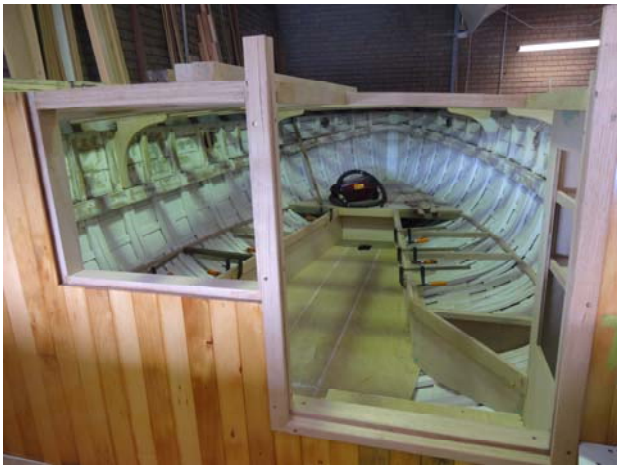
She has no centreboard and ballast is all internal. This is mainly in the form of lead internal ballast, but there is a block of concrete under the engine bed which has been left in place in the current restoration. In fact, Igor advised that concrete in old wooden boats is a good thing. She is ribbed with Blackwood which is very readily bent and steamed but does suffer from rot over a very long period of time. Her planking is Huon Pine and NZ Kauri and the planking is batten seamed ie. the seams are backed up by battens nailed inside, behind each seam. The planking is fairly lightweight being only 16 mm thick and the joints in the planks are scarfed. There is evidence around the dead wood area that she may have been copper sheathed at some stage and there is no evidence of any worm attack.



The brief for Igor's restoration project is to maintain as much of the original as possible. Given the extent of the restoration, Igor suggested that the cost would be not dissimilar to building a new boat of the same design from scratch. He has undertaken a considerable amount of re-

ribbing using copper fastenings in the traditional manner. The ribs were steamed into shape but Igor did indicate that soaking ribs is actually better because they cannot be 'overcooked'. When steaming, he suggested that the ribs be soaked overnight prior to steaming as this substantially assists the steaming process. (for Karri, the rule of thumb is 15 minutes in the steam box per quarter inch thickness of rib). Unlike the ribs, the planking is generally in good shape as would be expected with this type of timber. A major part of the job has been to replace the stem post entirely which has allowed refixing of the planking to the stem with silicon bronze fastenings throughout.

Igor has now completed the replacement of deck beams with laminated Victorian Ash (this is the same timber as Tasmanian Oak he tells us). The current work is to construct a basic fit out to the interior of the cabin whilst the deck is still open and hence provides better access. When this is complete, Igor will be planking the foredeck with tongue and groove Baltic Pine similar to the original and then using a traditional canvas covering technique to seal over both the foredeck and the aft deck, which has already been completed in plywood.



In regard to planking the question was asked about what type of caulking would be used. Igor indicated that there were 3 possible methods. He favoured routing the seam lines and inserting a Western Red Cedar spline. The spline would have a 2 degree taper and be sized to be inserted only half the depth of the seam. The spline would be glued with Resorcinal. Alternatively, Sikaflex or a more traditional cotton caulking method may be used. No decision on this has been made with the owner at this stage.

The engine is a very old one cylinder Yanmar with open valves and a large flywheel. Igor informed us that the model was unknown to Yanmar but given the castings are clearly Yanmar there is no doubt about its heritage. The engine is being completely overhauled elsewhere and is nearing completion ready to reinstall in the boat when required. Igor has been working on this project in conjunction with other work for about 10 months and there is a little way to go yet!

Another project that Igor is progressing is the building of a timber mast for the original Randall Rugged. This has reached the varnishing stage but Igor gave us some insight into the construction method. The mast is square and therefore had to be constructed very straight as there is no potential for correction in any rounding process which might be the case for a round mast. The mast was constructed as a box section and glued using Resorcinal which Igor prefers to epoxy for this application because it doesn't break down in the UV. Prior to gluing, the mast was varnished internally and a conduit fitted for electrical cabling. Resorcinal requires very clean surfaces and the gluing process involves pre-priming with water to slow the glue drying process. Resorcinol also requires good clamping pressure whilst the glue dries. It initially cures within 24 hours but a full cure takes 4 to 5 days. Igor noted that Resorcinal is convenient to use as it cleans off in water.

Hanging in the roof were another few of Igor's creations. One a sailing canoe with weighted leeboard which he had designed himself and another double ended Pete Culler design. There was also a 10 ft clinker dinghy which Igor had designed from a 12 footer but built with the beam of the 12 footer.

Igor and the pretty little 10 foot dinghy hanging in the roof.

During our visit, Igor kindly organised for us to inspect the projects in the adjacent shipwright's premises. Here we were able to see the original Randall Rugged design sloop (named Rugged) undergoing a major refurbishment. The hull had been stripped back to bare timber and was in course of being entirely epoxy sheathed to a very high standard. A refit was in progress internally and a new deck and cabin were to follow.

In the same shed was Delta, a well known old gaffer that has been seen at many Old Gaffer's Association gatherings on the Swan River over the years. She is undergoing major refurbishment and now looks considerably better than when we last caught sight of her in the Legend Boat Builders premises during a visit to see Brian Philips building of a 'modern' H28 five years ago (see Newsletter Nov/Dec 2010).

This was a most interesting afternoon in very traditional boat building surroundings. ABBA thanks Igor very much for sparing his time to show us his projects and for his most informative briefing on the restoration of the good ship Maggie. I'm sure this restoration will give her a new life of another 100 years.

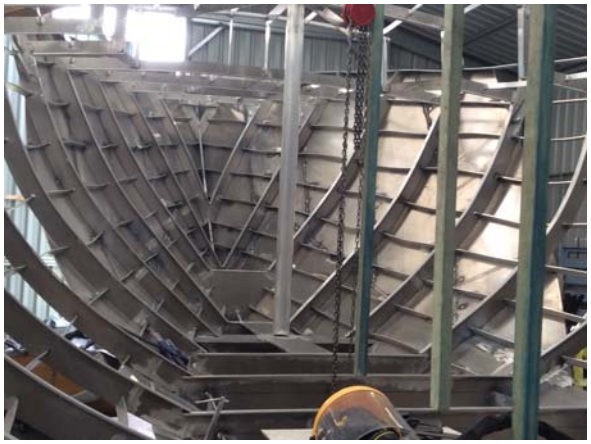
AUGUST — SHOW 'N TELL TECH MEETING

Our August meeting took the form of a Show 'N Tell night with three well known speakers from the crowd addressing us on the night — that's Ed Essers, Rob Bingham and Harry Speight.

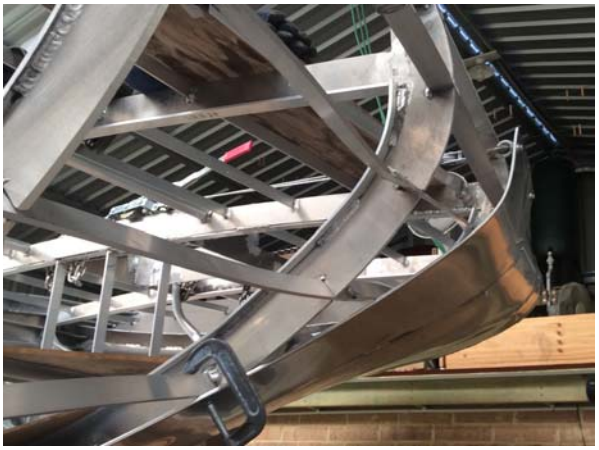
Ed Essers — An Update on the Building of His 14m Herreshoff Mobjack Ketch

Ed gave us an update on this major boat building project. The framing is now finished including the deck framing and the hatch and skylight surrounds are now also complete.

The main focus at present is the plating out of the hull which is advancing fairly quickly using block and tackles and come-alongs to gently pull the sheets into shape around the framing prior to welding each sheet to its adjacent sheet internally and externally. Ed noted that he is not welding the sheets to the framing until all of the sheeting is fitted.



This process is progressed one plate at a time alternating from one side of the vessel to the other. One edge of each plate is chamfered on the inside prior to welding to the adjacent plate. The outside of the joint is then grooved to provide good metal for the external weld. When required, Ed is using 3mm MDF to make a template prior to cutting the aluminium plates.



The boat has a 50 % ballast ratio which, having regard for its aluminium construction and the original design being for wooden construction, Ed has maintained by using 8 tons of lead in the keel area. He explained to us his method for installing lead ingots in the aluminium box keel structure and then pouring molten lead over the ingots progressively until the required amount of lead was in each box. Following this Ed welded pre cut aluminium plates over each box. This was done with a rig that Ed had constructed using half of a new LP gas bottle as a crucible mounted on a mobile frame with double pivot points. He used 2 burners, 1 below the crucible to keep the lead molten and 1 at the top to melt the lead ingots into the crucible.

Ed also explained construction of his chain plates made from 2 layers of 16 mm aluminium plate. The 25 mm hole to eventually accommodate the stays was fitted with a ferrule made from stainless steel tube pressed into the hole with Ed's 10 ton press. The ferrules were made over length by 12mm on each side so as to prevent the stainless steel rigging shackle from touching the aluminium. An anti seize compound was also used between the ferrule and the aluminium chain plate. Ed has also used a similar approach to manufacture the bob stay fitting. Some of the chain plates have now been fitted to the boat and the 2 mast compression posts are also installed.

Rob Bingham — Bruce's Heritage

Rob Bingham gave us a very interesting wrap up of the various 'lives' of his ski boat Bruce which he titled 'Bruces Heritage'. In his early years, Rob's family had a house on Lake Munmorah on the central coast of New South Wales and they spent a great deal of time sailing and water skiing in their spare time. Rob's father's name was Bruce and hence the name of the boat.

Bruce (the boat) is a Chickadee design by Andy Ellis in Sydney. This was in the days when fibreglass was being experimented with as a building material for small recreational craft. Bruce was purchased as a bare fibreglass hull by Bruce Batty and Jack Rice in 1960 and fitted out with wooden frames and a plywood deck. Rob's father, Bruce Bingham, purchased Bruce in 1962.

1950 255 Flathead Ford V8

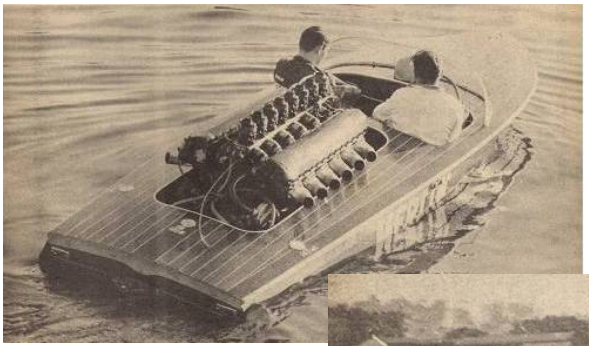
390 FE Series Ford Big Block

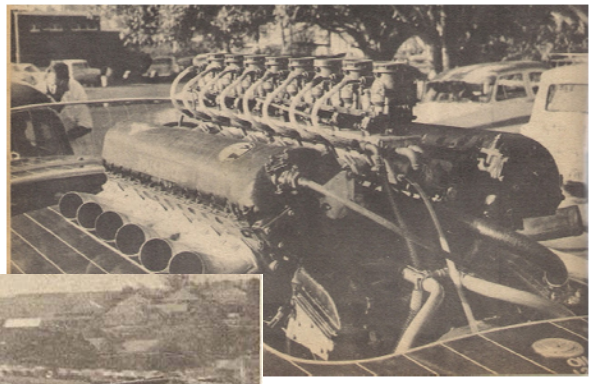
Bruce has had a number of inboard engines fitted over its long history. The original power plant was a 1950 flat head Ford side valve V8 with a direct drive (ie the propeller shaft was connected directly to the engine – no clutch). This was removed and replaced with a Ford big block 352 V8 in 1970. In 1977, the 352 blew up and a similar 320 engine was fitted. Bruce was regularly used for towing disabled skiers and show skiers on the Hawkesbury River but lacked the power to pull a 6 skier pyramid. To remedy this, a Ford 390 big block engine was fitted in 1983. This engine produced 400HP but still had a direct drive.

Between 1998 and 2000, Bruce was restored by replacing the frames and deck as well as all of the upholstery. This included the fabrication of new exhaust manifolds and a sump for the 390 from stainless steel to resist the rigors of Rottnest crossings.

When the 390 met its demise with three split bores in 2008, it was replaced with the current power plant which is a marinised Chevrolet 350 with a heat exchanger and clutch. Rob designed and manufactured the fully stainless steel heat exchanger and the direct drive engine water pump. This engine has been seriously worked over including porting and polishing.
It is now capable of driving the boat at 85 km/h and is the fastest boat in the Heirisson Island Water Ski Club. At a more leisurely pace of 40 km/h it uses only 16 L of fuel to get to Rottnest.

In closing, Rob presented photos of a similar Chickadee hulled 'Merlin' which was fitted with a V12 Rolls Royce engine. Freeboard was clearly not one of its strengths but did it go — 140mph!



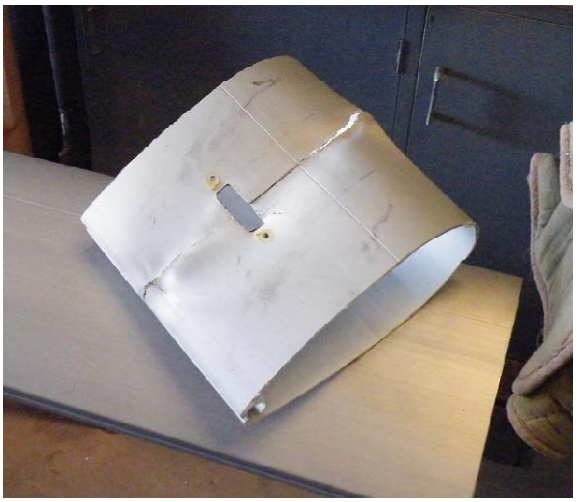


Harry Speight on Mast Straightening

Harry Speight addressed us on the approach to repairing his bent mast. This was the result of an apparent 50 knot gale that hit the Rockingham area in mid 2013. His Farrier F82A trimaran (see ABBA newsletter Nov Dec 2012) was folded and on its trailer.

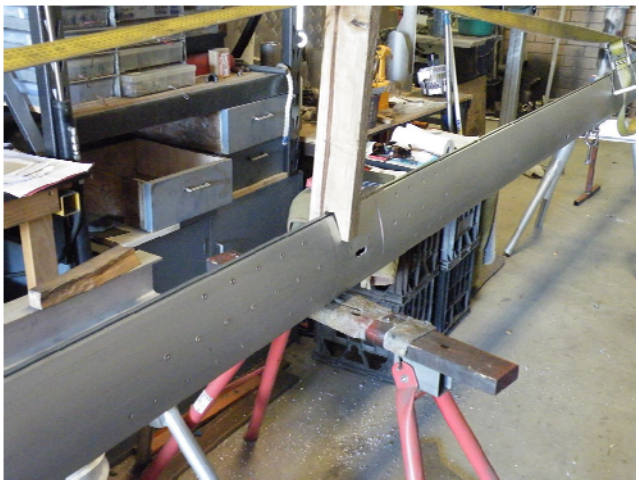
The whole rig was tipped over on its side and rested on the mast which bent when it hit the ground. The bend was at the lazy jack hoist position and it initially looked as if a new mast of the order of $8,000 was the only solution or alternatively a $3,000 cost to professionally straighten it.

Harry consulted Philippe Peche of 'Sailforce' (see ABBA newsletter June July 2013) in regard to a repair. A strategy involving cutting out the crushed section of mast and sleeving each side of it was developed.



A piece of identical mast section was available from the same design of boat that had tipped over at Fremantle Sailing Club two years previously. The sail track was removed from the mast section and the section was then squeezed in order to fit it inside the full size section.

At the same time, a compression tube was inserted where the lack of same had caused the spreaders to dimple the mast during the accident. With a full size piece inserted to replace the damaged section, the whole arrangement was riveted together to form a very strong repair.



Harry has calculated that the wind that would have been just enough to flip the rig was 50 knots and if the mast had been rotated head to wind, the wind load would have been approximately halved.

Harry subsequently devised a system of ground anchors to hold the boat down in the future. However, after a year of using this arrangement, Harry has been able to take up a pen in Mandurah which makes getting out on the water much more convenient.

Thank you to Ed, Rob and Harry for providing us with a great Tech Meeting Show 'N Tell which was appreciated by all members who attended.

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

2015 ANNUAL GENERAL MEETING

The 2015 AGM will be held in conjunction with **AND BEFORE** the October Tech Meeting (see below). Please arrive early so that the **AGM can commence at 7.45pm SHARP**. As usual this should be a fairly painless affair as all office bearers except yours truly are available to continue in their current role for the ensuing year. This includes Harry Speight who has volunteered another year's service on the proviso that he will not be continuing after the 2016 AGM.

A Note from your President/Newsletter Writer & Editor

As indicated during our discussion at the last Tech Meeting, I will not be standing for re election as President this year and I will also have limited availability to continue in the full role of newsletter writer as well as editor during the next 12 months. In regard to the newsletter, I have spoken to a number of members who have agreed to volunteer/be conscripted to write 1 or 2 articles each year. If this can be made to work, I will continue with the editorial role for the moment but will be actively looking for a volunteer to 'learn the trade' over the next 12 months. **With respect to the President's role, I strongly encourage you to consider volunteering. Without the other roles I have undertaken over the past few years, the President's role is largely one of coordinating and facilitating; and is not that time consuming by itself. Your nomination to me prior to or at the AGM would be appreciated.**

YES, I'M TALKING TO YOU….YES YOU… PUT UP YOUR HAND PLEASE!!!!!

OCTOBER TECHNICAL MEETING

Our next tech meeting will be on Wednesday 7th October, as usual in the Heritage Room at South of Perth Yacht Club, 7.30pm for an 8pm start. Aaron Woodall is returning as our guest speaker for this tech meeting. 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. On this occasion, Aaron will be addressing us on cathodic protection of underwater components/hulls, with specific focus on damage to wooden boat hulls.

NOVEMBER TOOLBOX VISIT

The next Toolbox will be on Saturday 7th November, as usual 2.00pm to 4.00pm. This Toolbox will be a return visit to Ed Essers workshop to inspect current progress on construction of his 14m Herreshoff Mobjack design aluminium ketch. Ed is anticipating that the hull will be plated and water tanks completed in situ and some deck plating installed.

Ed's address is 43 Moore Street, Wungong. Heading south out of Armadale on South Western Highway, Moore Street is on the right just over 3 kms from the Albany Highway traffic light intersection. Number 43 is the last house on the left hand side at the west end of Moore Street and Ed's shed is down the second driveway.

ADMINISTRATION NOTES (Cont'd)

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.

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

ADMINISTRATION NOTES (Cont'd)

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.