

# WAVELENGTH 780

Newsletter - No. 13

January 2013

An occasional newsletter for interested followers of the Wavelength 780



*'Wavelength' anchored near Awinya Ck. under the coloured sands of the Yathon Cliffs, Fraser Island, 2010*

## **Hullo Folks,**

Another year has passed. I trust you and your family have enjoyed a happy Christmas and are looking forward to a more prosperous 2013. I have not done any significant cruises in 2012 and can only dream of being back in an anchorage like that above! Another sailing adventure with 'Wavelength' is on the drawing board for this year however.

The past year has been tough for many involved in the boating community as prices on new and second hand vessels have dropped considerably over this period.

However it is not all bad news for those who may be contemplating starting on the exciting challenge of building their own yacht. In Australia at least, our strong dollar against that of other countries, together with depressed chandlery sales,

means that bargains are to be found on materials and yachting hardware for those in a position to take advantage of this circumstance.

As many will have noted in earlier newsletters, (available on the website [www.wavelengthmultihulls.com](http://www.wavelengthmultihulls.com)) a third Wavelength 780 was launched earlier in the year. Neil, the builder, has been re-acquainting himself with the myriad waterways of Moreton Bay as a solo sailor. He has joined a local boating club with facilities that make it easy for him to launch and retrieve his boat single handed.



On one of his outings, the anti-foul on the bottom of his boat was significantly scratched. It was an easy matter to do the necessary minor repairs by raising the boat on four custom made stands, made from builder's 'acrow' props with welded on stabilising bases.



*Props 'wound up'*

These props are fitted under each beam just outboard of the folding struts. By winding up the 'worm' threads on the props, the boat can be jacked up to a sufficient height to allow the trailer to be wheeled out from under the boat.



The accompanying photos show the system being used when Neil first fitted his boat onto its trailer.



## Ted's Canoe



What, I hear you ask, does a story about canoes have to do with the Wavelength Trimaran? Last year Ted, builder of Wavelength 780 No.2, (and some earlier boats!) suffered a bout of 'Boat Builder Withdrawal Syndrome', characterised by the usual symptoms, which include an addiction to the smell of cedar dust, sticky fingers, and a desire to yet again be clothed in the boat builder's attire of epoxy stiffened T-shirt and shorts! In order to get his necessary 'fix', Ted went close to overdosing by contemplating building another 'Wavelength', however sanity prevailed when he opted to satisfy his craving with a more modest project. "Why don't I have a go at building a canoe using the 'Wavelength' strip ply/glass technique", Ted mused.

Now if one is to go on the web and google 'canoes', a veritable Pandora's Box of ideas will appear.



Canadian Fur Traders canoe

Starting with the traditions of the Native American Indians and their birch bark canoes, through to their development by Canadian fur traders of the nineteenth century and on to the plethora of designs for enthusiasts and home builders in the twentieth century, any number of projects abound on the net and elsewhere to inspire the most fastidious craftsman or practical boatbuilder.



Typical cedar strip plank 'Redbird' canoe

A name that stands out in the canoe universe is Ted Moores and his influential book, "Canoeecraft".

One of his designs, the 'Redbird', based on the style of canoe favoured by the Canadian fur traders of past generations has become a 'classic'. It is estimated that they now number in the hundreds, both home and professionally built.



Ted's version of the 'Redbird' canoe at L. Sampsonvale

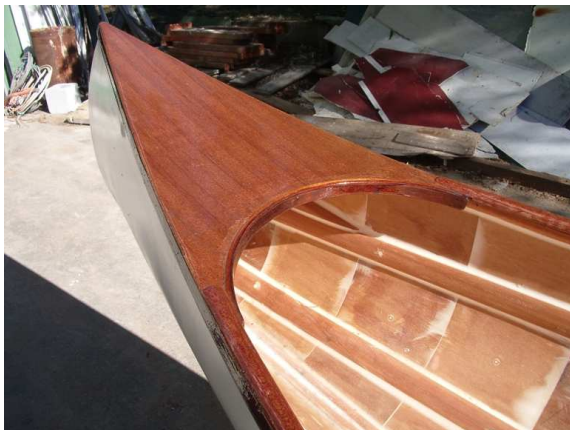
Ted, a mature gentleman not accustomed to the ways of browsing the internet, came across an article on Ted Moores' 'Redbird'

design in a friend's copy of "Wooden Boats 2012 - Small Boats" catalogue. Based on the stated dimensions and an approximate lofting of the lines of the canoe, Ted developed a female half batten mould, split on the longitudinal centreline, and constructed in a similar manner to that used for the building of the Wavelength 780 tri.



*Internal view*

Unlike the number of frames required to set up a male mould for a conventional strip plank build of the 'Redbird', considerably fewer frames are needed for the female batten mould. Further, as the hull of this particular canoe design is symmetrical end for end, the two halves can be built in the same mould without the need to reverse the mould frames.



*End finish*

I'm sure you will all agree that Ted has done a great job with this experimental

build. Two of Ted's friends who have had the pleasure of a test run on a local lake commented:

*"Ted has done another wonderful job. I had a go and it paddled beautifully. We were flying, probably faster than our 720! (A Trailertri)*

*Regards  
Phillipa & Allan"*



*Ted & Marg paddling their own canoe!*

The vertical seams of the strip ply hark back to the appearance of pitch sealed seams of some of the native birch bark canoes. Ted has also set the seats low for greater stability. As for weight, it has come in at around twenty nine and a half kilos (65lb), which is similar to the quoted weight range for a strip plank version. A lighter weight canoe is potentially possible using modified stringer sizes, use of micro balloons in lieu of Q-cells, a modified glass layup and of course, selection of a light weight ply with the necessary flexibility for the job.

### **More Wavelengths to start building!**

After a quiet year in 2012, I am pleased to report that another Wavelength 780 is expected to start construction in the New Year (2013) in **country Victoria**.

Meanwhile in **north Queensland**, Albert, an early plan buyer who had to put his Wavelength building project on hold while he recovered from family and personal medical setbacks, as well as the additional burden of flooding following Cyclone Yasi, now expects to make a start on his Wavelength tri construction this year.

In **Western Australia**, Paul has sent some photos of his project from a couple of months back.



*A great shot illustrating the ply strip layup*



His main hull is being built at 'Duck Flat Wooden Boats' in South Australia. He is hoping it will soon be ready to transport back to W.A. where he can complete the assembly of floats and beams and final fitting out of his tri.

*(If I were in W.A., the cruising delights of the Shark Bay area and the dolphins of Monkey Mia would be beckoning! Ed. See [www.sharkbay.org](http://www.sharkbay.org) )*



*Dolphins at Monkey Mia*

Away from the sea and up in the range country at **Blackbutt in Queensland**, Alan is working on his project as time permits. Alan reports:



*“So my little project is slowly (and I emphasise, ‘slowly,’ coming together.... We have been travelling around the past few months, so little has been achieved. I am pleased to show you that I have made some progress though...”*



*“I am finally getting the settee, quarter berth, and V-berths into position.”*

*“The cockpit flooring is starting to take shape. I am just doing my templates for them now. These will save me time when I get around to the starboard side.*

*As a boat builder, I have heard of peel-ply but never really been interested in it. I recently discovered the benefits of using it. I have been using the peel-ply over the top of the double bias tape when joining the bulkheads to the main hull joint. It helps feather the edge of the glass back to the glass on the main hull, which makes for a lot less sanding.”*



Having finished his floats, the port half of the main hull is now nearing completion.

### **Wavelength Survey**

Since going public with the plans for the Wavelength on [www.smalltrimarans.com](http://www.smalltrimarans.com) and later on the dedicated website, [www.wavelengthmultihulls.com](http://www.wavelengthmultihulls.com), I have received many complimentary comments and enquiries about the Wavelength 780. Understandably, some of these enquiries have been about possible variations of the design, including a larger version, a racing version and custom component supply, among others.

To date, my main aim has been to upgrade the plans and Building Manual based on experiences with boats currently on the water while retaining the emphasis on the original design concept of the Wavelength as a very comfortable well performed cruising tri built with ‘medium’ technology materials suited to home building. Longer term experience with the Wavelength has shown that it has fulfilled this design brief

admirably in most respects. The current plans incorporate a number of refinements from the original Wavelength prototype and Wavelength No. 2. These add a little more load carrying capacity and further refinement to the original construction specifications, as well as additional detail in the Building Manual.

Although a '**Designer Enquiry Service**' remains an important part of the plan package, current builders have found the Builders Manual, plans and annotated templates sufficiently comprehensive, such that there is little need for recourse to the designer to answer questions.

The time has arrived when I am ready to consider further design possibilities. As mentioned in earlier newsletters and elsewhere, The 'Wavelength 780' has been a retirement design project. I am interested in extending my design concepts and also in developing services that the **wavelengthmultihulls** website can offer potential builders. To this end, I have added a *Wavelength Newsletter Reader Survey* at the end of this Newsletter. It would be much appreciated if you could find the time to answer the questions relevant to your interests and circumstances and return your responses via an email attachment.

The survey results will help me decide if there is enough interest for me to pursue a particular design direction and/or add some custom component supplies on the website.

With thanks for your co-operation,

*Bob Foster*

### **Wavelength 780 Plans:**

#### ***Special Discount until 30<sup>th</sup> June 2013***

For those of you who would like to build a Wavelength 780, a special discount will be offered to new plan buyers until the end of the financial year (2012 – 2013). The significant costs of printing and postage of the plans will be waived, with a further discount of \$50.00 off the current cost of plans.

#### **Your Price – Australian \$850.00**

(This is effectively a 21% reduction on the previous cost of acquiring plans)

Payment by Bank Cheque or Money Transfer – Account details available on placement of Plan Order

To view past Newsletters and see further information on the Wavelength 780, visit the website -

[www.wavelengthmultihulls.com](http://www.wavelengthmultihulls.com)

---

If you no longer wish to receive this newsletter, reply to the email with 'unsubscribe' in the subject line.

## Wavelength Newsletter Reader Survey

\*\*\* (Tick or comment in box if applicable)

I remain interested in building a Wavelength 780

If 'Yes', main reason preventing commencement of the project

I have bought/started building another design. Type?

**I am interested in building a Wavelength 780 if the following options are available:**

Manufactured metal components for the folding system are available

Manufactured fibreglass /carbon moulded beam bottoms and tops are available. (Final joining will be required)

I would prefer to build the WL 780 if plans are available for foam sandwich construction (including carbon fibre beams)

*The Wavelength 780 main and float hulls have been designed as easily driven hulls for fair/moderate weather sailing with an upper level performance being in the region of 20 knots in experienced hands. It is anticipated that an optimised boat for racing would add another 4-5 knots to this upper range and more importantly, would give higher sustained average speeds in moderate conditions.*

I am interested in a Wavelength 780 optimised for racing in local Trailerable Trimaran fleets.

*(Includes all, or most of the following modifications: foam sandwich construction, carbon fibre beams, slightly wider beam and larger floats, daggerboard in lieu of centreboard, omission of the external grounding keel and optional longer cockpit/shorter cabin with a simplified internal layout, plus slightly larger rig with the option of a masthead spinnaker.)*

I would be interested in building a stretched version of the Wavelength 780 (Limited to 8.5m using the existing scantlings and construction technique):

For cruising



Optimised as above for racing

I am interested in a larger cruising trimaran, exceeding 8.5 metres, along similar design lines to the Wavelength 780.

(If commenced, this would be a new design from scratch.)

**Details;**

Approximate preferred length

Trailerable

Trailerable with Permit only

Trailerability not important

Preferred construction material

Other Preferred features:

---



---



---

I would be interested in a design for a light, low cost trailerable plywood tri day sailer/camper in the 18 - 21' (5.5 - 6.4m) size range, built using the Wavelength 780 construction techniques.

**Any other comment/wish list you may like to add to any of the above questions:**

---



---



---

**\*\*\* It would be much appreciated if you could take part in this survey.**

**Step 1.** Print out the Survey (pages 8-9 of Newsletter)

**Step 2.** Fill out any questions that may apply to you

**Step 3.** Scan and save to file

**Step 4.** Attach to an Email with 'Wavelength Survey' in the Subject line.

Send to Bob Forster - [forster305@ozemail.com.au](mailto:forster305@ozemail.com.au)

**Name:** (N.F.P.)

**Email Address:**