

building a recreational rowing scull



The completed stitch and glue Pittwater.

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Rowing is a recreation that I'd recommend to anyone who wants a good form of exercise, that's guaranteed not to wreck your joints, or put you in danger of being run down on the roads etc. The Pittwater Scull designed by Sydney designer David Payne is an ideal boat – lightweight, inexpensive, easily handled as a cartopper, and a joy to row.



Hull stitched together.



Bulkheads stitched in.

When I came to build my Pittwater I realised that the construction method required it to be built on a strongback using station moulds to set the shape. But the shape of the boat lends itself perfectly to stitch and glue construction, a much simpler and elegant method for any single chined hull. So with David's agreement I set out to convert it to stitch and glue construction. That entailed building the hull twice.

The principle of stitch and glue boatbuilding is that accurately prepared panels can be stitched together and these will set exactly the designed shape of the hull. It is then glued using epoxy glue along all the joints to create a strong, watertight monocoque structure. All that is required is that set of accurately drawn panels to get started. But how do you adapt the curved lines of a hull to flat sheets of plywood? It's called resolving the lines.

In this modern age, there should be plenty of computer CAD programs that will do that job, however seriously professional ones require a large investment in money and time. After spending some time on trial versions such as Delftship it became obvious that I couldn't get the accuracy required to produce satisfactory panels, so it was back to the traditional way – first build the hull on a building jig, then pull it apart, check it all, then reassemble it by the stitch and glue method.

After setting up the station moulds on a strongback one marks and cuts out plywood panels to form the sides and bilges, these of course must be trimmed exactly to shape and fitted as though they would be the finished boat. (I actually could use MDF for this job, knowing it would never enter the water). Then it was disassembled and those panels were used as



Deck being taped on.



Sliding seat girders.



Rigger under construction.



David Payne officiated at launching.

templates to cut out real panels from 4mm Pacific Maple marine plywood. These were checked for fairness and to ensure that both sides of the hull were exactly identical before doing a trial stitching together. Fortunately all fitted well, so I was able to use those panels to make production templates and drawings before doing the final assembly.

So on to the real job, the photos show some stages of stitch and glue, panels joined together ready for gluing, installing bulkheads which provide strength to the hull as well as essential buoyancy compartments, fitting the deck using lots of packaging tape, and experimental fittings for the sliding seat and rowlock riggers. The riggers (wings which support the rowlocks at a wider beam of 1.6m since the hull itself is only 0.76m) are still under development, a DIY form instead of the expensive aluminium profiles found on proper competition rowing sculls, and these Mark I models have certainly performed well.

Happily, David Payne just happened to be visiting the Sunshine Coast when I was ready to launch the boat, so he came along to check it all and give his

approval. So the final photo shows David checking out this latest iteration of his creation. I'm delighted with the Pittwater, it's stable, easy to handle and very slippery in the water. A real delight to row.

Pittwater plans are available from David Payne (www.payneyachts.com). Plans and materials also available from BoatCraft Pacific, 07 3806 1944, www.boatcraft.com.au

They are available as offsets for direct layout, as full sized paper patterns, and also pre-cut plywood panels with complete kit of materials.

PITTWATER VITAL STATISTICS:

Length	4.77m (hull comes out of two sheets of plywood)
Beam	0.80m
Weight	23kg
Materials	Pacific Maple 4mm marine ply, Bote-Cote epoxy, Epoxy and Purbond glue, Hoop Pine and Paulownia timber, fibreglass, Aquacote finish coatings.