

West River 180

During the months of July and August 2001 I lost my last remnants of sanity, covered my back deck with plastic, and spent every spare moment I had building my own kayak.



Since I have yet to find a high performance plastic kayak, or a fibreglass one within my non-existent budget, I decided the only way to replace my beloved Narpa was to build my own. I haunted the kayak building forum sites and bookmarked every website I came across for 3 years before everything came together and I went for it.

There are 3 main types of home built kayaks that are within the abilities of anybody:

The fastest to build is the Skin on Frame. Copied from traditional kayaks, they are quick and cheap to build, but I discounted them because of the lack of bulkheads and thus storage (airbags are used). They also looked a bit fragile for my type of kayaking (read rock bashing).

The Strip built kayaks can only be described as works of art. Made from strips of wood (normally cedar) over a form and fibreglassed inside and out. Some of them are the most beautiful objects to ever float. I didn't choose this method because of my lack of skill in woodworking and the construction time involved.

My choice was the Stich and Glue method (S&G). Essentially plywood panels are cut to shape and then temporarily joined by twists of copper wire. Joins are then glued by epoxy, wire removed, and the whole hull fibreglassed for strength. With a bit of care this (and strip built) construction method can produce a kayak which is lighter yet stronger than a manufactured fibreglass yak. I found the process fairly easy and forgiving of mistakes (and I made plenty of those!).

Decision time - What design to choose?

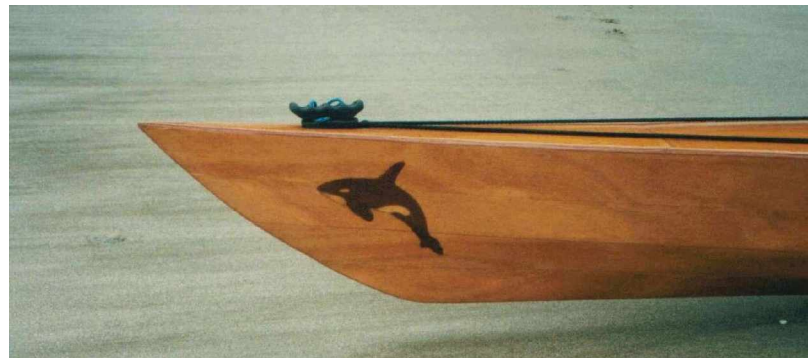
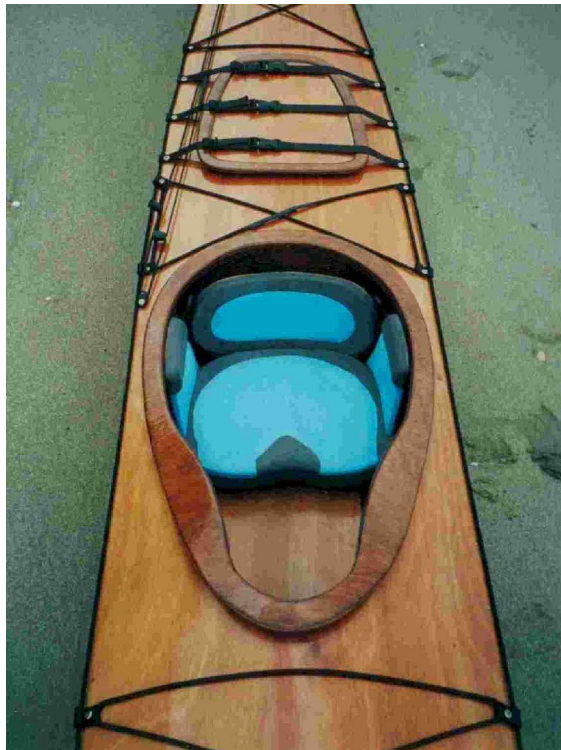
There are many great designs for homebuilt kayaks around. I was after a fast kayak which I could still take out in the rough and had enough storage for camping. After much indecision and some almost last minute changes, I decided on the West River 180. Plans for this design are available from [Chesapeake Light Craft](#). Before ordering the plans I

brought a book from [Amazon.com](https://www.amazon.com) called *The New Kayak Shop* by Chris Kulczycki. To my surprise and joy the offsets and plans for the WR180 were included in the book.

Cost and Time:

I didn't keep a log of my time building or the cost of materials, both of which started to get scary, but I estimate that it took me 170 hours and just under \$600NZ. Most S&G kayaks take around 80 (from kits) to 120 (from offsets) hours to build. Being a multi-chine boat the WR180 has twice as many panels to loft, cut, sew and glue then the more common hard chines. I also got fancy with inlays, two tone seat and hatch frames. This (and fixing my mistakes) probably accounted for the extra 50 hours.

By shopping around I managed to keep the cost down. I got the plywood and epoxy at bargain prices. Unfortunately I had no tools before I started so had to purchase everything needed. This pushed the cost over the \$1000NZ mark but I still have the tools to use on my next one. No special tools are needed and most households would already have them. The sale of the Narpa covered not only the cost of materials but also half my tools so in real terms the kayak only cost me time.



Oh for the smell of Epoxy!:

In fact the epoxy I was using didn't smell at all, but the building process was addictive. The main reason there are no construction shots in this site is that I was too busy building to take any. I am already thinking about my next one. For details on the building process, available designs, support, suppliers etc, take a look at the links below.

The WR180 Reviewed:

I am very happy with the final product. Although the various errors made in construction show close up, from a reasonable distance I reckon it looks pretty cool. The final weight came to 25kg which is extremely heavy for this type of kayak but still lighter than my Narpa. I had reinforced the hull more than called for in the plans (so reinforced I might call it "The Ice Breaker") and used a heavy ply for the cockpit coaming and bulk heads. This and my lack of skill in fibreglassing would have countered for the extra weight.

As performance goes, the WR180 tracks very well yet turns as easy as a much smaller boat when leaned. It takes a huge amount of gear without the extra weight effecting its handling. Being 5.55m long (5.25m waterline) and with a 56cm beam this boat is fast as touring kayaks go. I found that the acceleration wasn't much but when paddled at my cruising speed it motored along. I have had no problems with stability despite being much narrower than I am used to. I have paddled and surfed in 35 knot winds without any trouble at all. It has been correctly described to me as a "wet" kayak, but this just adds to the fun of paddling it!

I highly recommend the design to anybody after a performance touring kayak.



Recently I have made a new rudder blade out of ply and fiberglass. The aluminium blade supplied with the rudder kit was too wide and caught the wind. I have also changed the hip pad design to a tighter fit for rolling purposes (which I'm trying to teach myself). Next on the agenda are lower profile hatch covers, the installation of an electric pump and a knee tube for under deck storage. After 6 months of heavy use (February 2002) the varnish on the hull is starting to wear. I will renew this in the next couple of months. This is the advantage of building your own kayak, repairs and alterations are simply done. Hey you built it - repairs are no trouble!

Links:

New Zealand Designs:

I haven't come across any NZ designs on the web but [Sandy Ferguson](#) has some great ones that had me on the verge of indecision right until the last minute. My next one will most likely be one of his.

Another NZ design is the Sea Bear I and II available in kitset from Paddling Perfection, designed by Ron Augustine.

New Zealand Sites and Forums:

[James's Sea Kayak Page](#) : Local site about building a Cape Charles 17 including construction pics.

[NZ Kayak Builders](#): The first stop for any New Zealand builder. I had great support from the guys at this forum.

Overseas Designs:

[Chesapeake Light Craft](#) : Supplier of the WR180, they have a great site on Kayak building. Check out their tips.

[Guillemot Kayaks](#) : Fantastic site for Strip Built yaks (and a free S&G design)

[Pygmy Boats Inc.](#) : Another major S&G designer

[Redfish Custom Kayak and Canoe Company](#) : Beautiful Strip Built kayaks. Check out "The King"

[One Ocean Kayaks](#) : Great strip build designs. One of the most informative sites for the home builder.

[Shearwater Boats](#) : Both Strip Built and S&G plans available.

[San Javier Kayak](#) : Stich and Glue designs

[Volkskayak](#) : For those with limited storage, check out the 3 piece kayak (could apply to other designs as well).

[Squeedunk Kayaks](#) : S&G designer. Includes free offsets for a great kids yak.

Forums and building support:

[Kayak Building Bulletin Board](#) : No matter what sort of kayak you are building the answer to all your problems are here.

[CLC's Bulletin Board](#) : Very helpful for S&G builders.

[Heather's WR180](#) : Step by step photo essay about building the West River 180

There are hundreds of other sites on the web (and in my bookmarks), but these ones should get you started. Email me for anything specific - I should have a link for you.