

Making a Greenland Paddle - New Zealand style

~by Sandy Ferguson

The following describes how to make a paddle reasonably easily and with as little wastage as possible.

This could be your first Greenland paddle in which case these dimensions are a good starting point and once you've tried it and used it a little, the next one can be tailored to your specific requirements. The KASK handbook has some details in the section by Kerry Howe and this uses some of his suggestions with specific dimensions.

Tools - a panel saw, about \$10, plane or surfboard plane, a wide blade chisel but not essential, and a work bench with a vice or a B&D Workmate. Sandpaper, 60, 80 and 180 grit. An orbital sander but not essential. Lots of plastic "C" clamps made from 60 mm and 40 mm pipe. An angle-grinder with flapper disks makes cutting off large volumes, bits of epoxy and fairing the tips, easy.



Some tools including sanding flapper disks and a roll of sandpaper

Materials - cedar plank, kwila offcuts (~ 50 mm of decking), epoxy (about 100 ml). SS or brass wire if tips are fitted.

A 2.2+ metre length of western red cedar, 80-90 mm x 20 mm. The piece I got was actually 19 mm thick and though 90 mm wide, I made an 85 mm wide paddle. Finished paddle length described here is 2200 mm and the cedar part is 2150 mm long with 25 mm long kwila tips. If you don't want to add tips, allow for extra cedar unless you actually want a shorter paddle. I am 6' (183 cm) tall so if you are a bit shorter, the loom could be a little shorter and the blades adjusted to get a length equal to your height to the start of your fingers (fingers will curl over end of paddle) with your arm straight up. This is a reasonable start point. The next paddle can be trimmed as you feel necessary.

Mark out the shape, blades 800 mm long, width 85 mm at the ends, 40 mm at the inner where they meet the shoulders. Each shoulder 30 mm long and loom 490 mm. The shoulders can be 20 mm if you wish a greater transition angle. If you want to make a storm paddle, the loom will be 200 mm or the length over two fists side by

side and probably the blades shorter by 80 mm each. I've just done a 30 mm shoulder to get round a knot otherwise I'd probably have gone for 20 mm shoulders. If the plank is a little longer than needed, the ends can be trimmed to square them and also cut off any splitting at the ends.

So, my lengths are -

Blade 800 mm, shoulder 30 mm, loom 490 mm, shoulder 30 mm, blade 800 mm.

The widths are -

End 85 mm, end of blade/start of shoulder 40 mm, loom 32 mm, narrow end of blade 40 mm, other end of paddle 85 mm.

The loom cross-section dimensions I used are about 32 mm x 38 mm and we will almost get that thickness by laminating the cut-offs, 10 mm on each side of the paddle on the sides that are the "flat" of the blade. The actual finished dimensions were 32 mm x 35 mm, thinner than the preferred 36-38 mm due to the 19 mm plank thickness and the saw blade thickness (0.8 mm) when splitting the 19 mm. This loom might not suit you (might still be too big) but it shouldn't need to be any thicker so can be made smaller. My looms are rectangular, some prefer an oval. I'd suggest trying rectangular and rounding things as you prefer.

Cut out the shape of the paddle, keeping each cut-out piece on each side of the paddle in one piece. The saw can be made to go "round" the curve enough not to loose too much wood.



*The rough shape of the paddle has been cut.
The loom is now being roughly cut to shape*

Mark the mid thickness all round the edge of the paddle and a centre line on each side. Take each of the offcuts and split these (saw them) so that you have 4 equally shaped pieces.



Splitting the offcuts



The side pieces have been cut out and the bottom one has been split.



Both split (Storm paddle with short loom)



One of the split pair on the paddle where it will be glued (Storm paddle)

Take one pair and with what were the outside edges of the plank, glue these together and these to the paddle such that their join lies along the centre line marked on the flat of the paddle.

Clamp together with plastic "C" clamps and bricks or some such weights to hold it all down. Once dry, turn the paddle over and repeat on the other side with the other pair.



Two split pieces have been glued together, outer edge to outer edge. They have in turn been glued to the paddle. In the middle they are much wider than the loom and this will be cut off later. Note the clamps used and weights where clamps can't reach.

Now to the shaping. Mark at the ends of each blade, 12 mm blade thickness in the middle tapering to 6 mm at the edges.



The end of the paddle marked

When finishing, those straight lines will actually be shaped as curves to make symmetrical foil section shapes and the edges of the blades reasonably sharply rounded. Clamp the loom. The wide sections of the glued on pieces are left until after the blades have been shaped so that the vice is clamping on to wood that will later be removed.



Showing the overlaps over the loom which the vice will clamp on to

Start planning, from the end of the shoulder to the tip and also shaping the curve of the blade.



Shaping the blade

You have 4 surfaces to do this to. Take the edges down to no thinner than 4 mm. The laminated pieces will be planned back from the tips by about 300 mm as the blade is tapered down. Once the shape starts to approach the finished size, use sandpaper. An orbital sander, if you have one, speeds the operation but if not, hand sanding with 60 grit should take the wood off reasonably quickly.



The paddle has been shaped and it is just possible to see the glue lines. Note that the pieces glued on are now shaped back by at least a third of the length of the blade.

If tips are to be fitted, cut two 25 mm lengths of kwila. I dowel the tips so while the wood is still square, drill 3 holes. I use brass or SS wire, about 3 mm diameter so drill the holes a little bigger. It is probably a good time to also drill the holes in the ends of the paddle. As the dowels don't need to be a tight fit, accuracy isn't tight, they'll be surrounded by epoxy. Mark the tips so that you know which one goes where and which way up. Mark the curve of the foil of the blade on the drilled ends of the tips and draw a curve for the shape of the tips. A full semicircle shaped tip will take more wood and be heavier than the suggested 25 mm long tips. Roughly cut the curve of the tip and then shape. Here I use an angle grinder with a sanding disk (flapper disk -

disk is flat and the sanding pieces are like pedals). Also roughly shape the foil section of the tips. Glue the tips on.



Kwila tip glued to the cedar blade

Finish the shaping of the paddle and tips. Coat the paddle with raw linseed oil and turpentine 50:50 mix using a rag or paper towel. Hang the rag/towels out to dry, not bundled up in a rubbish bag as it is possible for them to burst into flames, so I've been told. Leave the paddle for a day or so to dry and sand again with 180 or finer sandpaper and re-oil. It will need sanding a few times to get it really smooth. I sometimes take a sheet of sandpaper with me when I go paddling with a new paddle. Stop and have a cup of coffee and give the paddle a quick sand.