

WAVE SHELF



Better
Homes
and Gardens
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This shelf can be made from a single sheet of furniture-grade plywood, which costs less than \$100. Building it is a breeze – all you need is a jigsaw, a power saw, if making the large, straight cuts yourself, a household iron and standard woodworking tools.



This unique bookcase is wonderfully arty – it breaks away from the boxiness of standard units

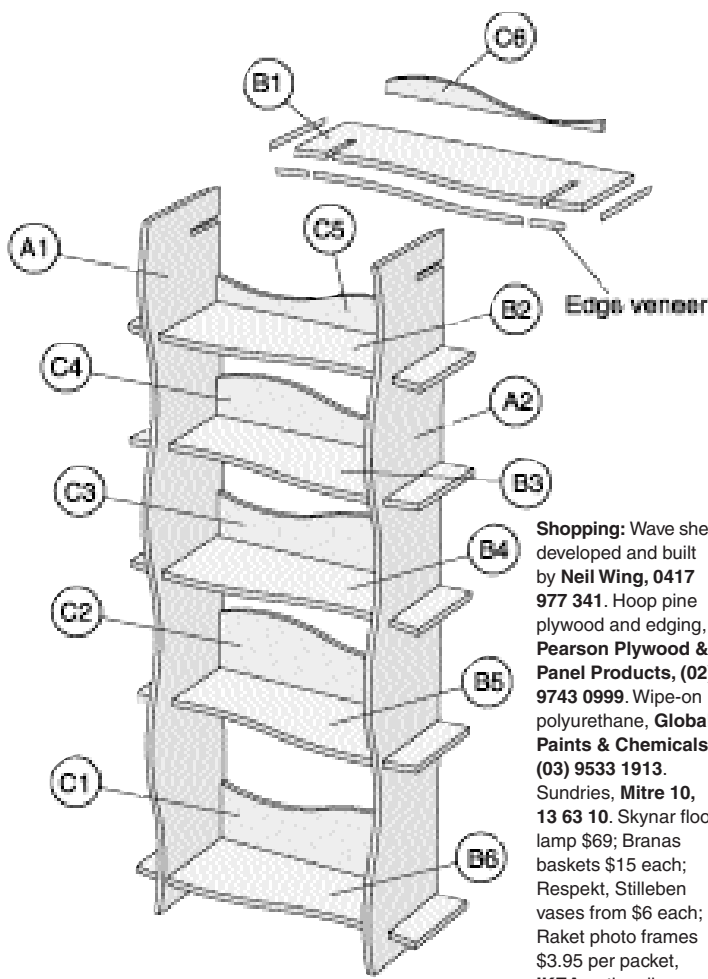
Gather your supplies

ITEM	PART	SIZE	MATERIAL
A1,A2	Side (makes 2)	1800 x 610 x 17mm	Plywood
B1-B6	Shelves (3 make 6)	795 x 510 x 17mm	Plywood
C1-C6	Backs (6)	various 597 x 17mm	Plywood

All components are cut from one sheet of 2400 x 1200 x 17mm hoop pine plywood.

You'll also need

800 x 100mm cardboard or thin plywood strips; 22mm hoop pine edge veneer; PVA adhesive; 40mm wood screws; colour-matched plastic screw caps; wipe-on polyurethane



Here's how

Step 1 Before setting out the sheet, give it a sand all over. Using a soft pencil, set out the sheet into rectangles as shown in the diagram, leaving room between pieces to allow for the width of the saw cut (about 3mm). Cut out the rectangular pieces, which are shelf pairs, before marking in and cutting the curves.

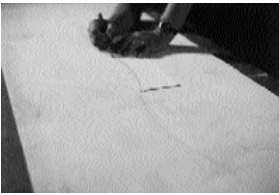
A power saw with a sharp, fine-tooth blade will give good results. Cut along a straight edge, set to allow for the distance between the blade and the edge of the saw base plate. If you can't cut them yourself, a timber yard can cut them into pieces for you for a modest fee.

Step 2 Referring to the diagram, draw a set-out

line down the centre of sides (A). Measuring from the bottom, mark in intervals of 595mm along the line. Also, draw set-out lines down the centre of the shelves (B).

Step 3 The set-out lines on the backs (C) are off-centre. Referring to the diagram, on C1,C2, the set-out line is 155mm from the C1 side, on C3,C4, it is 115mm from the C3 side and on C5,C6, the line is 55mm from the C5 side.

Step 4 On a strip of cardboard or thin piece of plywood, make up templates for the curves. Either use the templates here or draw your own arcs with a radius of 455mm for the sides and shelf backs, and 800mm for the shelves. The segment height used for the waves is only 25mm deep. Cut out the templates.



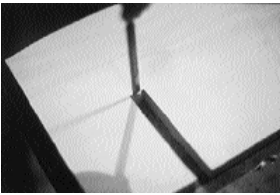
Step 5 Align the templates with the set-out lines on the shelf and back components, and in the case of the sides, slide the template along

to each 595mm mark to get the repeated pattern of successive waves. The templates are used full length to mark in curves on the backs and shelves. Mark each of the shelves and the backs to keep them in their correct positions.

Step 6 Along the straight back of the sides and the curved front of the shelves, mark in slots for the cross-halved joints as shown in the diagram. These slots enable the assembly of the interlocking components.



Step 7 Before cutting out, fit a splinter guard (which may be an optional accessory) to your jigsaw, to lessen the chance of wood breaking out at the top surface as the jigsaw cuts upwards. Cut along the curved lines.

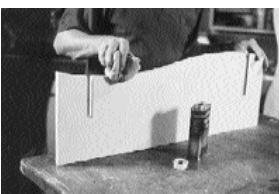


Step 8 When cutting out the slots, cut into

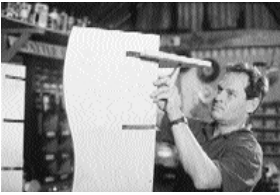
each corner, working on the waste side of the set-out line, then across to the opposite corner to leave a little triangle at the slot end. Use a chisel to clean out the remainder. Check the fit of an offcut of the plywood – it should be a snug fit. If necessary, sand the inside surfaces of the slot to ease slightly.



Step 9 Veneer the side edges, then the wavy front. Place the veneer glue side down on the edge, then set a household iron to hot and run it over the veneer, to melt the glue. The glue should be melted in 10 seconds and will stick as soon as it cools. Follow this immediately with a soft wooden block to ensure the veneer is well glued. Cut out the slots on curved edges of shelves after the veneer has been glued in place. As you iron each piece, trim around the edges with a utility knife, then lightly sand to clean up the edges.



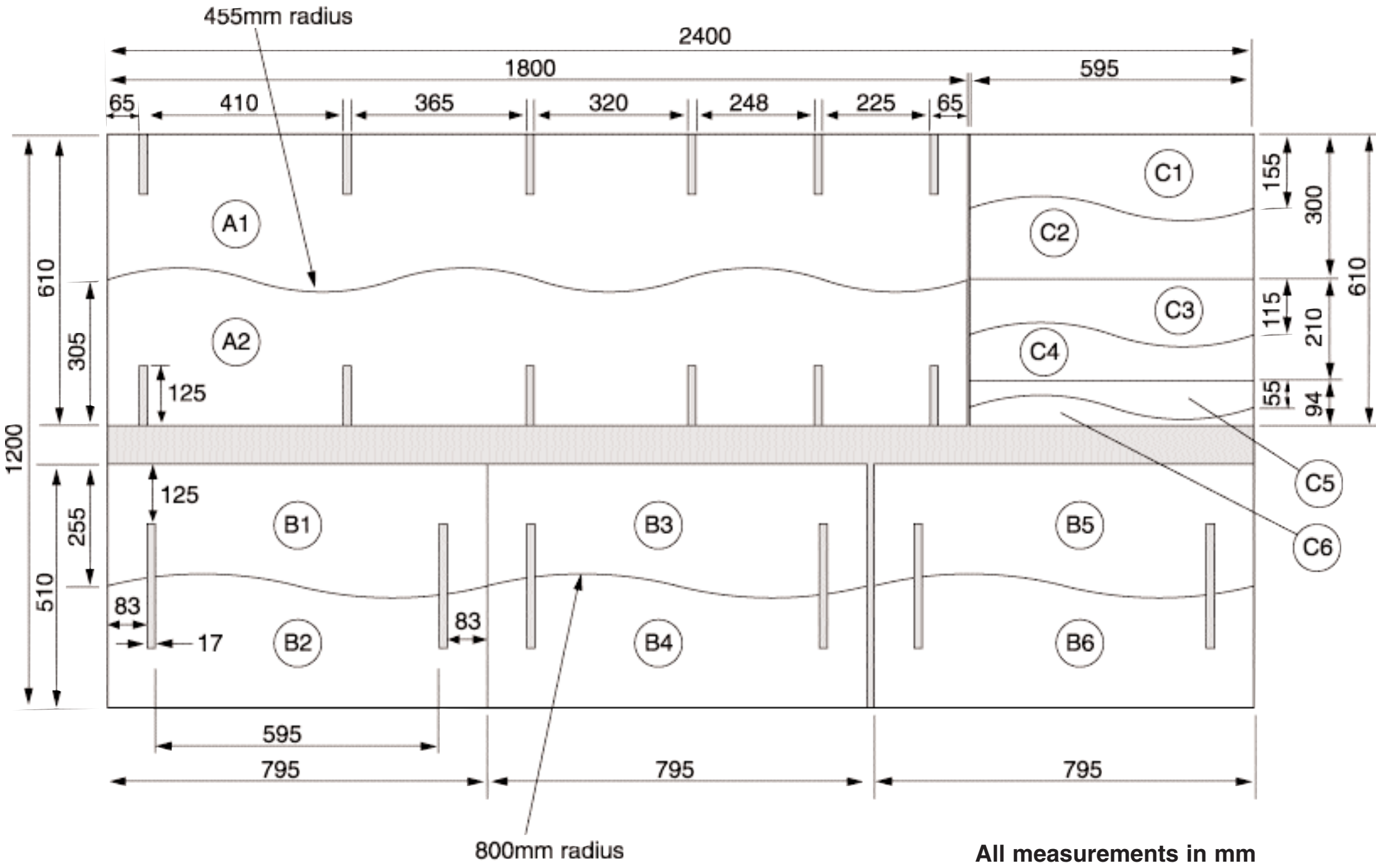
Step 10 After preparing the 2 sides, 6 shelves and 6 backs, give a final sand, then apply 3 coats of polyurethane, sanding lightly with 320-grit paper between coats.



Step 11 Slot in the top and bottom shelves, tapping in with a rubber mallet. Install the other shelves, alternating the waves with each shelf.



Step 12 Predrill screw holes to take countersunk screws, then screw on backs with 3 screws from underside of each shelf and 1 from each side. The crest of a back wave should correspond with the trough of its shelf wave. The largest back goes at the base, with each one above being the next size down.



Use a splinter guard on your jigsaw to surf the waves without wipe-outs

Side template

Shelf template

square = 25mm grid