◄ Joinery in treated SA Pine, ready for assembly

Compost heap Screen

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Wooden structures intended to survive more than a few years outdoors require some thought. Repeated exposure to moisture followed by drying out makes most wood, vulnerable to fungal attack. So, if possible, use treated timber or weather resistant wood such as Teak. CCA or Creosote treatment will inhibit fungal attack. Creosoted timber has the added benefit of resisting weathering, whereas CCA treated wood does weather, and so must be finished with an outdoor rated finish. However, since the design I had in mind required some joinery, and Creosote impregnated timber is unpleasant to work with, CCA treated SABS grade S5 pine was used. S5 is a structural grading and does provide some level of quality assurance.

Completed, ready for varnishing. This is the back that will face onto the fence►▲

Joinery cut – ready to assemble►

A compost heap is a hostile environment, as it is infested with fungi and bacteria all going about their business of breaking down the vegetable matter. To keep them active, the moisture content has to be kept up making a harsh environment.
A disadvantage of CCA treated wood, is that it is often delivered with a high moisture content from the treatment process, and as the wood dries, it can warp. CCA treated wood offcuts should treated as toxic waste – they shouldn't be burned or put onto the compost heap.

Is the interests of longevity, I used joinery that will shed water. Although I glued the joints, I also pinned them with dowels to cater for the eventual failure of the glue. I used white PVA glue – epoxy glue would have been better, albeit much more expensive.
For the top rail, I joined the posts to the rail, using blind mortises in the underside of the rail and tenons cut on the top of the posts. The posts were joined to the lower rail using a bridle joint. The upper

surfaces of both rails were chamfered, so as to shed water.
The cladding was housed into a slot on the underside to the top rail for mechanical support. The length of cladding used made it quite flexible, so housing one side in the groove provided support.

The groove was cut using a Stanley plow plane with a 10mm cutter. There was no power for a router where the screen was assembled, so the groove was cut in-situ, by hand.

The joinery was marked out using a marking gauge and cut by hand using a tenon saw. The mortises were cut by hand using a firmer mortise chisel.

Then the frame was glued up and adjusted for square by measuring the diagonals. The joints were pinned using 10mm dowels, glued in place. (see picture)

Glued up, checking for square►

One of the challenges in working with wood at this scale, is that the wood is never completely straight. CCA treated timeber in particular is inclined to warp. By carefully selecting pieces and orientating them according to how they are warped, the best can be made of what is available, and flaws may not even be visible to the unschooled eye. When squaring up frames, a large rafter square may mislead you, because the members may all be slightly bent. Each joint could be locally square but the whole frame could be crooked. Provided the sides are correctly dimensioned, you can measure the diagonals to square up the frame.

The siding I used has a machined overlap, so the sides locate against each other, to provide some support. I used the straightest pieces to start at the top where they would be most visible and ended up with worst at the bottom. With some judicious clamping, all the pieces fitted together to make a neat siding. The ends of the siding were screwed to the posts using copper-coated decking screws intended for outdoor use.

◄Two coats of Dulux Timba-preservative with a mahogany stain were used to protect the wood against weathering.

Attaching cladding – one drill for drilling, the other for screwing in the copper-coated decking screws, that will hopefully not rust.►

◄Not all the pieces were as straight as I would have liked. I saved the worst for last, but with some careful clamping, they were made to fit.