

Triangle Boat Bench

June 21st 2017

FAO Dave Brookes

I have been asked to provide a proposal for how the rowing boat might be converted into a bench - and allocated 4 hours design time for this task. Hence the basic plan and description.

There are several challenges here. The boat is designed to be light and with strength for purpose: to resist the inward pressure of the water it moves in. The hull is also curved front to back and left to right and of course constructed from ship-lapped, thin, plywood - in other words, no straight lines, no flat surfaces. So the difficulty is to make it both strong enough for the new use and securely mounted to avoid damage from any twisting or impact. It also has to be weather proof.

The attached sketches are a basic (not to scale) side view and section to indicate the basic idea.

Capping and stiffening. The top of the boat will be capped in 18mm exterior plywood; the rim, or top edge, having first been strengthened with wood added internally. It will also have an external trim applied (which will need to be laminated due to the curve) to add strength and rain protection. The seating cut out is similarly boxed out in the same plywood to create a 'compartment' (first bulkheads left and right of cut out, then seat base and seat back) before addition of decking (both as available in the recycled plastic and new treated timber as required) as sitting surface and backrest. The addition of this plywood, firmly fixed, will provide strength, rigidity and prevent rain from collecting in the boat - and feet etc. coming into contact with the inside of the hull - the weakest point. *Particularly necessary as a section of hull must be cut out.* It will have a small degree of outward fall to allow rain to run off.

Mounting the boat. The concrete cradles (3 in total) would be cast in 'moulds' (formwork) *directly to the upturned boat* - thus they will be a perfect match to the curves and uneven planking of the hull and therefore support it in contact. They will also provide a heavy/solid fixing point from inside the hull into the concrete. They would then be placed on a shallow bed of 20mm gravel that can be levelled and also will provide a soakaway directly under the boat/bench.

Finishing. My suggested fee (see below) does NOT include the preparing and finishing of the existing structure - which cannot be done using the paint that will be used on the new bare plywood/softwood - I will however help oversee this if necessary and will paint the newly added material.

PLEASE NOTE. This is a fairly unique piece of work and whilst I think this proposal is viable, there will be experimental elements - I have discussed it with Dave who has good judgement and we agreed this would be worth proceeding with. *However, I cannot predict a life expectancy for the bench nor guarantee it.*

Costs.

Materials: Plywood - 2 sheets 8 x 4; soft and hardwood as required; additional decking; sand, cement, aggregate; 20mm gravel; fixings and glues; paint - OSMO Country Colour..

NB. This is an ESTIMATE and does NOT include other suitable paint to use on boat surfaces.

£300.00

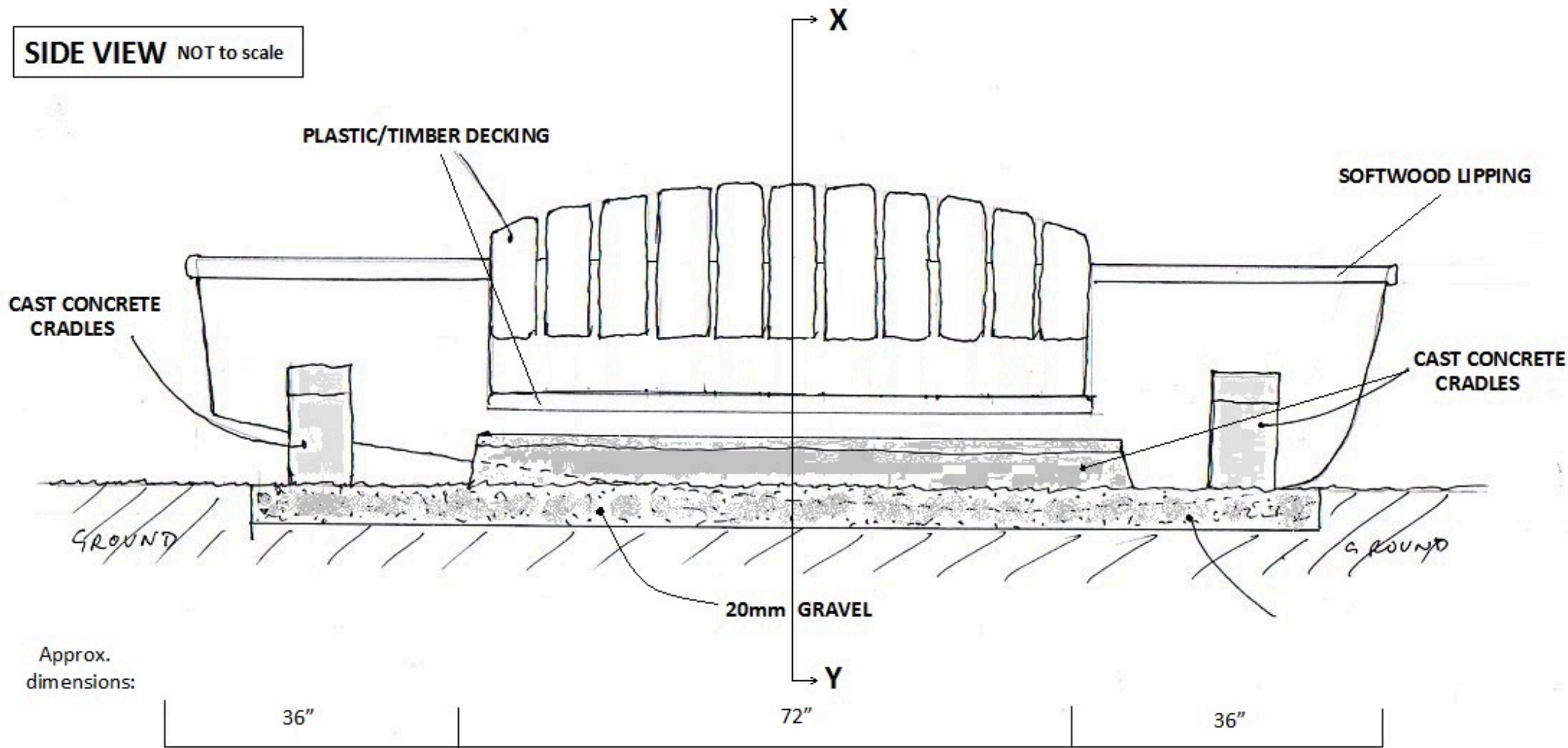
Labour.

£1,000.00

This fee is a fixed price - I will work to a finish regardless of any (quite likely) extra hours required. At my current hourly rate (for 'good causes') this will cover 55.5 hours. AND it will require volunteer input - one and occasionally two people willing to help me as required. As discussed with Dave B.

Paul Speight, Wood Solutions.

SIDE VIEW NOT to scale



SECTION X Y

