

# Cargo Proa Prototype

## Building Blog



### JANUARY 2021

Only 2.5 days this week due to a branch falling on the power lines behind the sheep shed. The joys of a farm build site.

Big news is that Rob R donated a fridge and microwave! Cold drinks make a huge difference when it is 35C and high humidity. He also bought in a box of delicious home grown grapes, most of which I devoured on the drive home. Too much sugar, my brain was still whirring (in circles, unfortunately) at 2 am.

We got the sides on one 6m end of the lee hull. Several lessons learnt, but it all ended well. Male and female joins on flat panels work well. Right angles are easy. The volunteers got the 2nd deck/bottom infused, looks good apart from a kink where the mould frame moved due to too small a bag. A pretty easy fix, but probably not worth the effort. They also prepped the 3rd piece for infusion.

Bulkheads are next. I am making these by adding stiffening (the eps from Bunnings, \$Aus50 for 30mm x 2.4 x 1.2m/1.25" x 8' x 4') to one of the side panels which is of dubious quality. It was a great infusion, but a cold night. The next morning, to ensure it had cured enough to demould I heated it without vacuum. The resin softened and air got in. Patience, grasshopper! Square section hulls are so easy to make, it is a pity they look so ordinary. 800 x 800/32" x 32" looks small on 24m/80' long drawings, but the 6m/20' piece is quite large. Certainly large enough to get inside to install the bulkheads, which will make it easier.

The first truss we built is a 2D piece of beam size. Rob R adjusted the test jig to take it and magnify the weight by 2.5. Loaded it up and at 500 kgs/ 1,100 lbs, the diagonals buckled, but due to the shape of the sample, didn't break. Fascinating. We will beef up the diagonals and try again. Rob R has also made the bottom piece of the 'light, easily

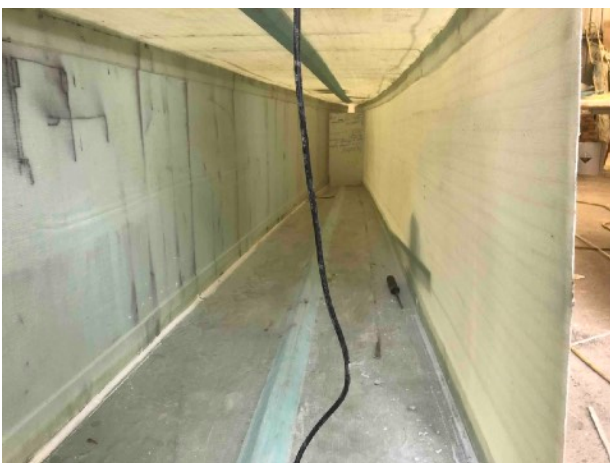
broken' sample beam. Diagonals and testing next week, followed by some table repairs (grinding off resin which did not go where it should during infusions) and full size beams which will be a change from making flat panels. We are still having discussions about how to build the beams, so it's probable that they will be different.



2D beam test



2D beam test



Lee hull end