

## Jenna Howe – February report

It's been an eventful month, with lots going on since my last update!

We did our diesel engine level one course, which was super interesting. The International Boatbuilding Training College has a fully functional diesel engine so we could put our new theoretical knowledge of how they work to the test and practise bleeding the system from different points, and changing the oil, filters, and impeller.



*The engine we got to work on  
on  
changing a filter*



We learned how to make both carvel and clinker planks:  
*Carvel on the right, clinker on the left.*

Getting the right angles for the clinker planks to fit together was much harder than anticipated, and took a few attempts to get something even close to good enough. Carvel is easier, you just have to hollow out the centre of the plank with a bollow plane, so it will fit nicely onto the frames.

Next we learned about how to make patterns for things, sort of like big stencils, to ensure that something you make will fit into an existing structure. You can use them for pretty much anything, from making bulkheads to cutting lino for your bathroom floor.



Before getting started on the patterns themselves, we made dummy sticks to use in the process. These are small, rectangular bits of good quality plywood, of known width and length, with a nut and bolt through the middle as a handle; and in this case painted with imaginative flair to prevent losing them on the floor in a pile of wood shavings.



*True works of art*

### How to make a pattern

#### Ingredients

- Plywood, cardboard, or similar to make the pattern from
- The need to make something fit exactly into a space
- Dummy sticks
- Jigsaw or some other way to cut the plywood (or whatever)
- Nails
- Hammer
- Long flexible batten

## Method

1. You first need some ply, or cardboard, or anything flat and strong enough to hold its shape, in approximately the shape of the thing you want to make. In our case, we were making bulkheads for a little 9ft dinghy, and we cut up some ply for our pattern with a jigsaw.
2. Then you place your ply (or cardboard etc) in the space you want to make the pattern from.
3. Now, you know the dimensions of your dummy sticks, so if you place one of them with an edge flush to the edge of the space you're replicating, and the other edge on the plywood, you can mark off that edge on the plywood. Put a note of the length/width of the dummy stick, then move it a bit further around and repeat.
4. When you think you have enough marks on there to give a good representation of the shape, remove your plywood, and place it on the material you want to make your finished article out of. If it's for the bathroom floor, then your lino, if it's a bulkhead in a boat, then whatever wood you're planning to make it from.
5. Now use your dummy sticks again. We'll be replicating what we just did, but in reverse. So find one of the markings you just made on the pattern, check the size of the dummy stick used to make it, and find that dummy stick. Place it with one edge on the mark, and the other end should be overhanging onto the material underneath. Mark the edge of the dummy stick onto the lower material. Repeat for all marks.
6. Tada! You should now have the shape you want marked out onto your material.
7. If you need a nice curve to join up your marks, this is where the nails and batten come in. Starting hammering in nails, bending the batten around them until you have a nice smooth line that hits all your points, and draw it on.
8. Now you just have to cut it out and hope for the best!



*Getting a nice fair line (photo by Josephine Leertouwer)*

While the others were doing wire splicing, I learned how to make trunnels (treenails) and graving pieces. Trunnels are fastenings that could be used in place of nails or nuts and bolts, made entirely from wood, hence the original name, 'treenails'.

*Caption: How the trunnels start out.*

These little dowels are kept in place with small wedges at either end.



Graving pieces are small, normally diamond-shaped pieces of wood let into planks to repair small patches of rot or other damage. The easiest way to make sure they fit properly is to cut out

your diamond shaped piece first, draw around it over the damaged piece, then chisel out a hole to fit the piece. You also slightly undercut the edges of the piece, which should, in theory, fill up any gaps around the edges when it's glued in.



Maynard, my instructor, did such a great job of teaching these, I really feel like I could put in a graving piece for real!

I spent some of my spare time making a little tea light holder in walnut, for my mum.



She was very pleased with it :D

At the end of this week, we went on a family outing to the Historic Dockyard Chatham, where we spent one day focusing on historic vessel conservation methods, visiting *HMS Gannet*, *HMS Cavalier*, and *HM Submarine Ocelot*. It was great to see the museum people again and have the whole group back together.

The next day we had a masterclass on different types of rig and traditional navigation methods with Tom Cunliffe, visiting the dockyard's fantastic collection of models to see examples of the different kinds of rigs. He spoke with so much passion, it was inspiring – and made me really miss sailing.



:

*All of us gathering around to learn about using parallel rules*



*We learnt how to use sextants*





A traditional log that would be trailed behind the boat, as the blades on the end spun around in the water, the number of miles travelled on the dial would slowly increase.

Unfortunately, I spent the next week in bed with the flu, dreaming of the sailmaking/repairing classes I was missing out on.



When I was finally well enough to get back to college, we spent a day learning how to weld, which was so much fun. The instructor was a professional welder called Steve, who works down the road from the college. His workshop was full of odd little bits and pieces: a metal bed frame leaning against the wall in pieces, a bouquet of metal roses, and many different metalworking tools.



We started off with a cup of tea on his sofa upstairs discussing health and safety, the theory of welding, and the different types there are. Tea drunk, we moved downstairs to try both mig and stick welding little bits of scrap metal together to get a feel for each type.

*Me trying stick welding (amazing photo by Janice Fleming)*

Then later we tried plasma cutting, practising our new-found skills by making abstract art, i.e. sticking random bits of scrap metal together, realising it looks a bit like a chicken, and then deciding to make it into a chicken. We named him Ken. Janice, his co-parent, is taking him home to live in her parents' garden.



Then later we tried plasma cutting, practising our new-found skills by making abstract art, i.e. sticking random bits of scrap metal together, realising it looks a bit like a

*Janice and I collaborated to create the amazing Ken the chicken.*



*Matt with his finished bird/crow/chicken creature called Rodney (photo by Josephine Leertouwer)*



After welding, we had a chance to use the sawmill to cut up a big oak log into inch planks.

Sawmilling! (photo by Josephine Leertouwer)

Then we used the lathe to make bowls and cute little mushrooms

*Caption: Cute mushrooms I also made on the lathe, now functioning as windowsill decorations. Sat next to a little purse made for me by Josephine, and a dice box made for me by Matt when they were doing sailmaking and leatherwork. And Chloe my aloe vera.*

We had an afternoon of basic plumbing, looking at a Jabsco toilet and talking through the basic structure of it and where it's most likely to get blocked (Yay!). It was super useful to see and get an idea of where to start if I ever needed to unblock a toilet.

The last weekend we were in Lowestoft there was a letter carving course at the International Boatbuilding Training College, which I chose to do. It was really interesting to learn the proper techniques for this from Gary Breeze, who has so much experience.

Carving chisels are somewhat different to carpenters' chisels. The straight and skew ones generally have a bevel on both sides, are quite rounded in profile, and a little rounded across the cutting edge. This means the corners are less likely to dig in, and they will only have a single bevel instead of two, like a carpenter's chisel.

We started off with fairly simple 'runic' letters, and then moved on to Roman letters, which were more of a challenge because there are a lot more fiddly little corners and horizontals that go with the grain.

Carving horizontals with the grain are difficult to get a really nice finish on because you tend to separate the fibres in the wood instead of cutting through them cleanly. Slightly frustrating, especially when carving roman letters.

Now just getting ready to move to Maldon!