

*Part 3:  
'The Ship That Flew'*

# Learning from the Longships



Furniture maker David Jones' little Viking ship, described in W49 and W50, is close to launching but first, like the eponymous craft in Hilda Lewis' classic book for children, she must fly.

With photographs by the author.

**A**s the Spring progressed, so did the hull and once all 20 planks were joined together, timber for the frames was selected for the appropriately curved grain and cut to shape to fit the interior. The gunwale had an L-shaped section running the full length which was tapered and steamed to make the bend at either end to give some durability on the top edge.

The three main frames were set out from the centre and placed 4' (1.2m) apart for rowing purposes, backed up with extra frames at 2' (0.6m) intervals not only to provide added support for the hull but also to support the planking when it was fitted at a later stage. The main three frames also have cross rails to support the seats and knees supporting the upper planks. All run into one another and great care has to be taken not to create a weak spot when nailing together. In olden times, wooden nails – treenails, pronounced 'trunnels' – were created by driving semi-dried square pegs through a hole drilled in a steel plate, hence the saying 'a square peg in a round hole'.



However, in this case they were turned with a slight outward curve at one end, so that when driven home the peg filled the hole completely. The excess length of the peg was cut to form the interior wedge and to cut the split in the peg, a small jig was made consisting of a block of wood screwed to the bench with a hole the diameter of the peg. The ½" (12mm) peg was pushed through the hole to meet the blade of a jigsaw in an appropriate slot. The wedge has to be heavily serrated, otherwise when driven home there is

the possibility that the wedge will slide out again. I found that the last action is to hit both the inside and outside simultaneously to pull everything up tight. All pegs close to the waterline were cut flush and smoothed off whilst those closer to the top just had the excess trimmed off.

I based the keber or thole pins on the skiffs inside the Gokstad which were full thickness above the hull but rebated to half their thickness lower down, so that they sat in a long U-shaped channel in the hull, then pegged into the hull. For





me, this would have meant cutting through all my reinforced edging, so I reversed the rebate to the inside face and also put 45° ends to trap the wood into the packers as there is a great deal of strain when rowing. Finally, to stop the keber from being pulled out, the whole group was treenailed together with the grown, naturally curved knees. The spacing was such that one end coincided with the knee and the seating frame. The seat to seat measurement was 4' (1.2m), the seat to rowing point was 1' (0.3m) away and about 8" (200mm) up.

At either end of the boat, the breasthooks were made out of fish tails. These are the last pair of branches at the top of a tree and are prone to damage as when the tree falls they are the last to hit the ground. Learning where the strength lies in these timbers has surprised me, as they are only strong in certain areas but the knotted grain, especially where the oars meet the inner curve of the keber, is incredibly tough, even when green.

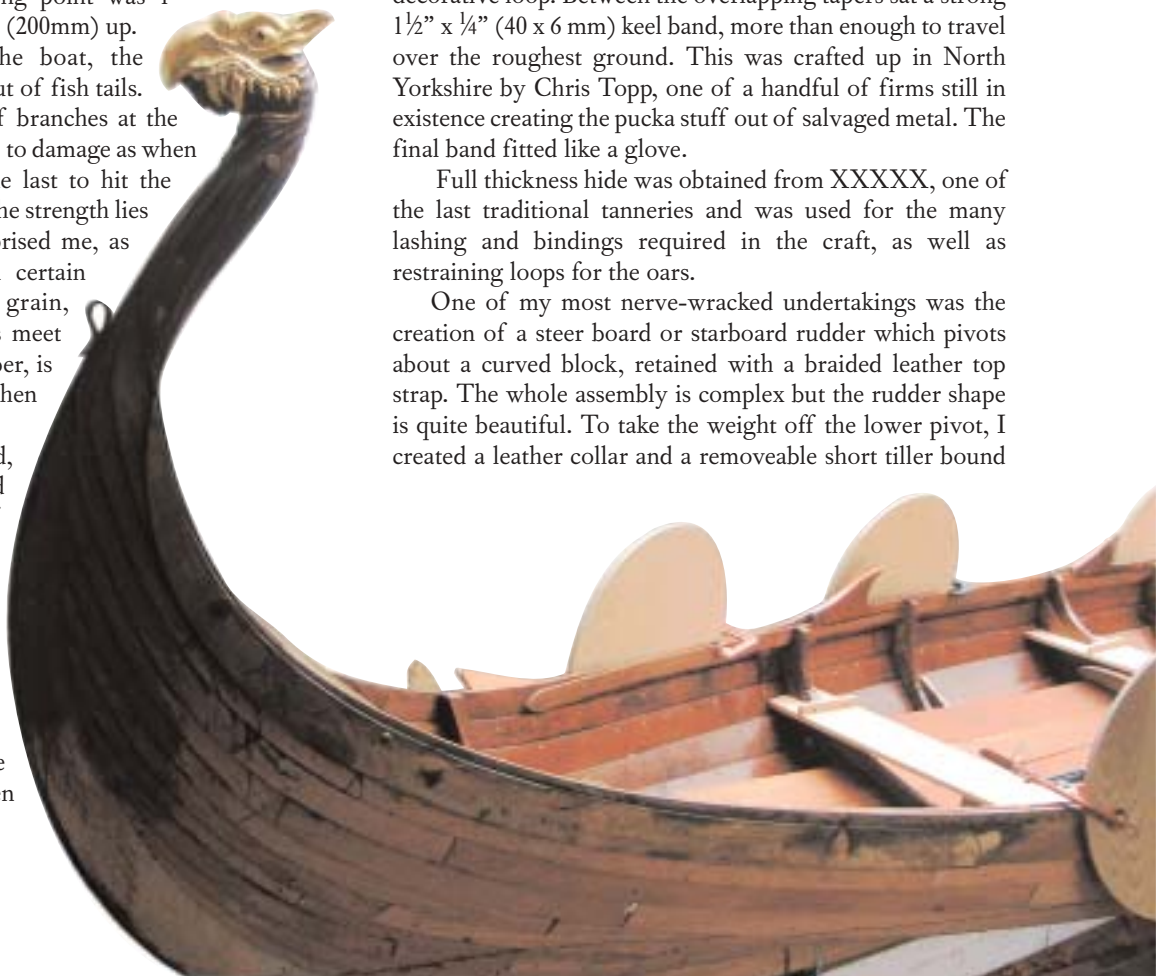
Prior to being installed, each frame was dressed with several coats of Stockholm tar, Danish oil and turpentine, as any area left untouched would dry too quickly and be more prone to deterioration. In fact, as the year has progressed, I've been amazed at the stability of green oak when

sealed in this way. I chose Danish oil as one of the ingredients instead of raw linseed oil for the interior as Danish oil has very active drying agents and does not remain sticky. The seats, rudder, mast and spar were the only items that were finished traditionally.

As I envisage my little boat ultimately taking to salty water, I decided to invest in a true wrought-iron keel, forged and tapered at both ends and finished with a practical but decorative loop. Between the overlapping tapers sat a strong 1½" x ¼" (40 x 6 mm) keel band, more than enough to travel over the roughest ground. This was crafted up in North Yorkshire by Chris Topp, one of a handful of firms still in existence creating the pukka stuff out of salvaged metal. The final band fitted like a glove.

Full thickness hide was obtained from XXXXX, one of the last traditional tanneries and was used for the many lashing and bindings required in the craft, as well as restraining loops for the oars.

One of my most nerve-wracked undertakings was the creation of a steer board or starboard rudder which pivots about a curved block, retained with a braided leather top strap. The whole assembly is complex but the rudder shape is quite beautiful. To take the weight off the lower pivot, I created a leather collar and a removeable short tiller bound





to the rudder with leather.

The mast step, although robust and easy for locating the mast, was not as fine as the mast fish of the Gokstad ship. The 12' (3.7m) long mast was created from two pieces of Douglas Fir, as was the 9' (2.7m) spar. In an attempt to make everything smooth, I initially pushed one end into one of the drive wheels of the power feed of the spindle moulder whilst pushing the other into a large bearing supported on a trestle. With this 'slow spit' arrangement and a belt sander revolving in the other direction, it worked quite well. However, when Mark Edwards told me to slim certain sections down, I did it the traditional way with draw knife and spoke shave.

The sail design was copied from the Nordlandbat described by Sigbjorn Windingstad in W44; I assumed that, both vessels being similar in size, its sail would work equally well on mine. I wanted to get close to the authentic sail material, so I insisted on hemp rope and linen although I needed to search the internet until I came up with a linen supplier in Ireland. The rigging for these boats is very simple: a forestay to pull against when raising the mast and two shrouds set 2' (0.6m) back behind the mast with shroud needles for quick release. To this, add a sail raised via a block and held in place by 4 lines, either all made off at the stern or diagonally tied off to give some crosswind ability. To this end, I reinforced the first 4' (2.4m) of the top planks fore and aft, so that simple belaying pins can be used.

With my deadline of the Thames Traditional Boat Rally at Henley on Thames looming, a determined and frenzied work programme got the final elements of the boat completed. The main challenge then was to get her to water! The front walls of the shed were raised and a working party of obliging neighbours assembled to manoeuvre the boat 130' (40m) down the garden. For the first year, the whole boat had been held in place by 8 small metal straps to the hog and props at either end nailed into the stem and stern post. The only other concession to stability, for when I needed to





climb about inside the boat, was a small prop on either side. This meant that on the moving day, it took less than 10 minutes with a screwdriver to free her. I had estimated some 90 minutes to get the boat down the garden, navigating the pond and squeezing between the fence and a large pear tree. In fact, it took less than 5 minutes. It took only six of us to carry her comfortably and at one point, to test the traditional methods of boat handling ashore, three of us managed easily to roll her along on 6" (150mm) diameter logs. The boat was then placed upside down in a cradle hastily fabricated the night before. I then had just one week to paint the bottom with raw linseed oil, tar and turpentine, fit the keel band and then for better protection, apply roofing tar below the waterline.

At the end of the week, an 80 tonne crane moved into position – following the necessary road closures and police attendance – and to great cheers from a large crowd, *Lille Draken* was hoisted over 100' (30m) to the road outside. Simple shields had been made and tacked on the sides for effect and the gold leaf of our dragon's head glistened in the sunshine. It was a proud moment!

During the course of the following week, thanks to Rosemary at Mark Edwards' boathouse, the linen sail was sewn with a beautiful Celtic cross. A lead inscription to the gods was sealed behind leather in the bow of the boat to wish

her well on her future voyages and in preparation for her launch at Richmond on 18 June.

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