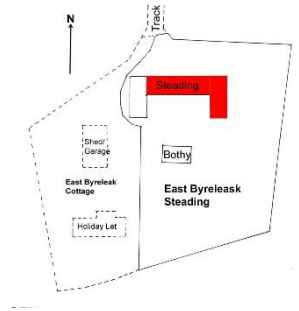


September 2018 – Roof Trusses



This visit was all about roof trusses for the east and north wings. We had changed the design of the east wing to use attic ('room-in-roof') trusses, not the raised-tie trusses specified by the architect. We had to scramble to work out the dimensions, without being on site to check them, so we ordered them with a quiet prayer that they would fit. The trusses for the north wing remained, as specified, raised-tie.

We arrived and started preparation work. We took delivery of all the tools and materials we would need, for once we had just about everything we needed, ahead of time. Ric arrived several days afterwards, just in time for the heavy labour.



Wallheads – we finished the four courses of concrete blocks along the east wing walls, that raise the roof to the designed height. Over that we laid the timber wallplates onto a thin bed of mortar and screwed them to the blocks.

North wing windows – we prepared 5 window sills from granite lintels

and installed them in the window openings in the north wing. Three of the windows need quoin stones and lintels before they can be built up to wallhead height ready for trusses – we only had time to get one of the windows partially completed.

Timber studwork – There is no wall where the north and east wings join, so we needed to build structural studwork across the gap to support the



attic trusses from underneath. Jill unwrapped damp proof membrane (DPM) from the foundation blocks we installed back in 2016, laid a damp proof

course on mortar and re-covered it

with the DPM. Then for good measure we covered it all with a layer of our rubbery tanking membrane – the blockwork ended up with a bit of a Michelin Man look to it! Ric cut lengths of timber to size,



dunked the cut ends in preservative and we used our nail gun, for the first time, to put it together in sections. The gun is a bit unwieldy, but is quite fun to use and we got 500+ nails done in an hour and a half. The next day we stood the sections up, nailed them together and screwed them down to the foundation blocks. And that was that.

Trusses delivered - The trusses arrived a day late. The first load in the morning was the 41 raised-tie trusses for the north wing. In the afternoon, we got the 23 attic trusses.

Between us, and with a helpful driver, we got the trusses lugged off the truck and leaned up against the nearest wall. We would not want to do it every day – they are very unwieldy and the attic trusses weighed a touch under 100kg each.

Attic trusses in the east wing – We developed a routine for handling the trusses. We loaded both ends of each one onto trolleys and screwed a batten to the top, to hold it upright. We wheeled them round to our big window, where we could just slide them through at 45 degrees, then push them upright once they were inside. We had a section of scaffold on casters and used our hoist to lift each truss off the ground until the ends of the rafters were above the wallplates. We pushed the scaffold round towards the installed trusses, and dropped the truss into the clips. It was rarely as smooth and

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simple as it sounds and it took us longer than we expected, but we got there. We used angle-brackets to fix the first one to the gable wall, then battens across the truss collars (the horizontal bars at upstairs ceiling height) to hold all the



others in place. We temporarily fixed diagonal battens across the rafters to keep it all rigid, particularly

through Storm Ali, with gusts over 70mph. The east wing has a gallery and open void from floor to roof at the south end, so the last few metres of roof structure is a pair of ridge boards that support rafters down each side. Ric did these after we headed back south. So we have a complete roof structure on our east wing.

Raised tie trusses on the north wing – our last day on site was getting Ric set up to work on his own. We got the first truss prepared, lifted over the wall and manoeuvred into position at the join with the east wing, nailing it to the ends of the rafters on the attic trusses. We put the second truss up and secured it with batten. We have the timber kit to finish tying the two rooves together and it will be comparatively straightforward for Ric to continue building the north wing roof.



Important things: The trusses are all the right size, although we did have to trim some of our concrete blockwork and notch the studwork; the ceilings heights in the east wing, upstairs & downstairs, are correct; the stair well for the east wing looks the right shape and size; we have the space to fit an escape window from the upstairs; we can accurately visualise room layouts; the ceiling in the north wing will be 3.5m above floor level and the rooms will look enormous.

To be done (hopefully) over the next few weeks...

Fascia board - Ric already had one length of fascia board in place and had worked out how to get a neat finish for when the roof boarding and slates go on.

Sarking boards – being Scotland, roof trusses are covered in wooden board – sarking – before the breather membrane and slates go on. We had three huge bales of freshly dipped (and heavy) sarking boards delivered – all 570 of them. Ric will work on covering the east wing and as much of the north wing as he can get prepared.

Breather membrane – will be stapled on over the sarking and will be open to the elements over the winter, until we move up in the spring and start slating the roof. I am working on the assumption that 6 months of Scottish autumn/winter/spring UV would equal the rated 4 months exposure in a more southerly clime.

North wing windows – complete building up three of the windows, install granite lintels over all 6 windows and three doors, then lay the wallhead across the top. This must be done before most of the remaining trusses can be put in place.