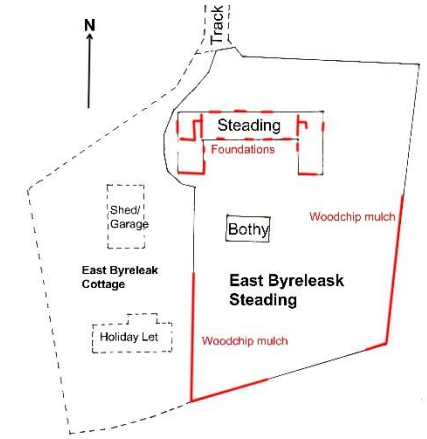
July 2016 – Foundations

Well we got our building warrant approved on schedule (back in May) so we can at last start building! Ric had agreed to do 2 three-week slots in 2016, this was the first. We had done a lot of planning before we got up there and agreed that we would work on opening-up new doorways, building foundations, then laying drains. We had estimated quantities and spent days trying to get an account set up with Jewson. We ordered a cement mixer and a dumpy level. Aberdeen Tree Specialists had got back and dropped off a second load of woodchip.



We got up there before Ric and spent a day learning how to use the level.

Caravan: Ric was pleasantly surprised by the caravan – he seemed to have assumed we had bought a little touring model - and promptly moved in. He worked in his own time getting the caravan gas working, using his own bottle until I got ours organised. Then temporary electricity and hot & cold water supplies. The only thing missing was a connection to a drain – our composting toilet was still very much needed.

Odd Jobs: We multi-tasked for the first few days – getting the woodchip on the weed membrane, doing a proper survey with the level, buying a pile of good quality granite from our neighbour, trying to get hold of George, hiring a digger from Ellon Timber and starting to open up the future front door. We bought a concrete breaker, angle grinder and 50m hosepipe.

I gave up on Jewson, they could not sort out an account that was useful to us. I went back to Ellon Timber and ordered materials for foundation concrete – 16 tonnes of aggregate, 120 bags of cement and four sheets of steel reinforcing mesh. They were slightly cheaper anyway.

Foundations: Once the digger arrived, Ric created the front door and opened up another bricked-up opening. I spent a week with shovel and breaker, digging out the foundation trenches for the 14 small openings that will become doorways or be built up into windows. Most needed to be 65cm deep to allow 20cm concrete and 45cm below ground to protect from frost heave. The front door needed to be 90cm deep to let us run the water pipe indoors. The ground was either solid clay or equally solid compacted grits. Except for two openings where we found massive blocks of stone that we couldn't hope to remove. Ric had three long stretches that he could use the digger on – the gable-end foundation and two complicated runs, at each end of the north leg, which will support parts of the roof, the garage wall and staircases. Ric

finished that then cut up the reinforcing mesh for each trench. We got some plain reinforcing bar to make pegs to hammer into the base of each trench, to mark the correct levels and depths of concrete.

The missing drain: Ric had trouble digging out the gable-end trench because of boulders and ended up going rather deeper than we needed. In doing so he solved one of the big mysteries about our property. The architect knew of a drain somewhere under the west end of the steading, that he knew we would need to do something about. I had had visions since then of expensive feats of civil engineering. Ric broke into a clay pipe right at one end of the trench, close to where our electricity cable had originally run. We got in there with a shovel and dug out a clay T-piece. One arm headed towards the adjacent property/electricity cable but was completely blocked within a foot or so. The other arm went north under the steading. It was running quite a bit of water, draining down to the south. We had thoughtfully bought 50m of blue water pipe, to connect the caravan water supply, we were able to push 35m of it up the pipe before it ran out or turned a corner. That would take it towards the north boundary of our property, meaning we can intercept it and re-route into our drainage system. A satisfyingly cheap option. We used guttering, glued in with some of our better clay, to temporarily run the water into the drain.

Concrete: Then a week of mixing concrete. We thought about ready-mix, but knew we could not hope to barrow it to all the trenches in any sensible timescales. Ric passed on his concrete mixer expertise and we were soon able to mix two barrow-loads at a time, about 170kg. We got very creative with scaffolding boards to get to all corners of the building. We put about 7cm of concrete in each trench, laid reinforcing mesh on it and poured concrete to the tops of the pegs. Thus even the long runs were within a couple of cm of the correct level, which will make the next stage – the blockwork - much easier.

Blockwork: At this point we had run out of time and had to head south.

We ordered three pallets of concrete blocks and left Ric to spend a week starting the blockwork. He put clay pipe in for the lost drain and lintelled over it. For doorways and the internal runs we need a single course of blocks up to ground level. For windows and gable-end we needed an outer course up to ground and an inner course to floor slab level. At some point we will then fill the gaps between with concrete. Ric made good progress but unsurprisingly did not get finished.

Jill & Andy Walker