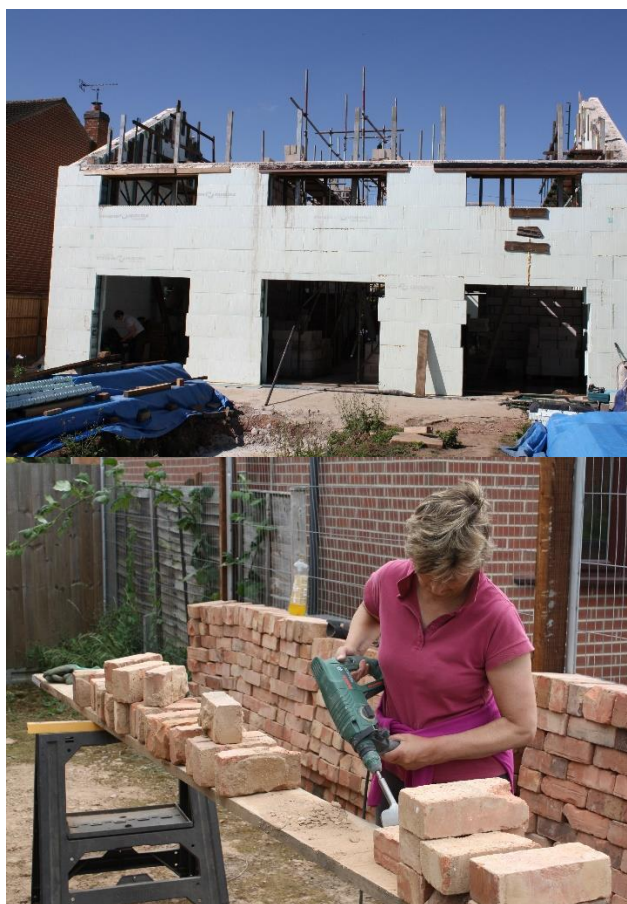


How two (oldish) people built an eco-house

The monthly meeting of Woodhouse Eaves WI on 19th March 2025 began in the usual way with welcoming visitors and members who hadn't been able to attend for some time, followed by updates from our various clubs and groups – lunch club, darts, skittles, WIGS (WI GrowerS) and the walking group. We discussed various options for a day out later in the year before tea, coffee and biscuits were enjoyed and we settled down to listen to our speakers for the evening.

Bob and Jane Johnson described how, at the ages of 56 and 57, with some DIY skills but no previous experience of house construction, they started planning and then building their own home, doing 80% of the work themselves. The first job was to demolish an existing bungalow, which took them eight months, recycling as much of the material as possible for re-use and to avoid taking waste off site. Some of the timber and floorboards were used to build a site office and store.



Bob and Jane designed the house themselves, based on a cube, with small north-facing windows and large south-facing windows. The most important design features were the insulation, triple-glazed windows, ventilation, airtightness and avoidance of thermal bridges. A mechanical ventilation heat recovery pump was used for the heating and ventilation system – the pump uses a condenser to extract heat from inside the house (generated from bodies, cooking, solar gain and showers) to heat incoming fresh air. Bob said it is a bit like living in a vacuum flask!

The house was built on an insulated reinforced raft. Lined and reinforced insulation channels, which had to be propped and braced as the concrete was poured into them, were used for the external walls. Glulam beams (made by gluing individual layers of timber together) were incorporated into the roof structure to create a vaulted ceiling. The roof used two layers of insulation and laths, laid at right angles, instead of the normal single layer, before being tiled.

Bob explained that the house does not conform to the principles of building an eco-house, on account of the materials used. However, the house is extremely energy efficient. The internal temperature is a constant 20-21° throughout the year with no gas, no boiler, no radiators and no log burner.

Several of the photographs showed Jane hard at work - removing the mortar from recycled bricks, tying the reinforcing mesh together and driving the dumper! We did see a photograph of Bob on the roof and he said that had been the hardest job for him, as he did not like working at height. The house took seven years to build from start to finish! It looks beautiful and is a testament to Bob and Jane's detailed planning, physical effort and stamina.

We all thoroughly enjoyed hearing Bob and Jane's story and thanked them for sharing it with us.

Judith Harrison