

Little Mead

Little Mead is an old cottage with solid stone walls. In 2007 we added a modern extension with cement-block insulated walls. The windows have been replaced throughout with double-glazed units and the loft floor has been insulated with glass-fibre insulation. The ground floor also has under-floor heating throughout, while the top floor has radiators. While the extension was being built, we also installed a rainwater-rainwater harvesting system that supplies water to the toilets and washing machine.

Our gas combi-boiler was nearing the end of life and we wanted to replace it with an air-source heat pump with the aim of decarbonising our central heating / hot water. We were advised we should consider some form of wall insulation to bring down heating costs. We decided to go ahead with interior wall insulation, and chose a 60mm wood-fibre insulation with a lime-plaster finish. This was also to restore some 'breathability' to the old walls, so vapour could move in and out of the old solid wall. Also we added an extra layer of loft insulation.

As a result of the insulation work, Gregors, our heating contractors, were able to specify a smaller 9kw heat pump unit, and judged that the radiators upstairs would not need replacing with larger ones. (A heat pump supplies hot water to rads at a lower temperature than a gas boiler) Our old boiler was replaced with the heat pump in June and the installation took about a week. With the government boiler upgrade grant of £5000 (now £7,500) the cost of the system was around £7,300. The heat pump unit is located outside, and an insulated water tank sits inside with domestic hot water and a central heating unit, taking up about the same footprint as our gas boiler but more headroom. We are entering our first spell of colder weather, and so far the new central heating is working well. We leave the heat pump on, and control the temperature with thermostats and thermostatic radiator valves. The heat pump is quiet in operation and we have yet to run out of hot water – so far we're very pleased with the results!