

## Property Information Sheet



### Name and Address

Ruth and Terry,  
Lock House,  
Broomfield Road,  
Newport  
TF10 7PW

### Property Description

Solid wall construction in brick for original house built to Thomas Telford's design in 1834. Extensions in 1984 and 2016 brick cavity walls with rock wool infill.

### What changes have you made to your home?

We demolished a poorly constructed, ugly turn of the century flat-roofed extension which leaked. The Thomas Telford house had been extended to give a second bedroom in the 1880s and again in 1984, access to which was made by partitioning off a corridor through the bedrooms. A corridor and bathroom were added on the opposite side of the house in a similar style in 2016. We removed all the plaster from the solid walls and insulated them with 40 and 60mm thick woodfibre insulation dependent on whether they were 2 or 3 bricks thick. All the walls were later plastered with lime plaster to maintain breathability. The loft was insulated with 270mm fiberglass. The floors were dug up and underfloor heating installed, with a screed on top of 100mm rigid foam insulation on concrete. Under the 3 suspended floors 50mm rigid foam was fitted between the joists. Temperature controls are in each room. PV panels were installed on the roof generating 3.9kWp. Diverter switch heats our hot water. A NIBE air source heat pump was installed with storage tanks and controls in our small cellar. We also fitted a mechanical ventilation heat recovery system. 2 Solar Spotlight tubes were fitted in a cloakroom and hall where it was not possible to fit windows. Surprisingly the prism cover collects moon light and even the light from a streetlight, meaning switching on lights is rarely necessary. Lastly a wood burning stove by Chilli Penguin which has a small oven on the top was put in the dining room.

### Why did you make these changes?

The house was difficult to heat and was never comfortable. It was inefficient and required huge energy inputs. The previous occupant had a gas combi boiler, but the house was poorly insulated with many leaks e.g., in the original airing cupboard there was a void in the roof space. We wanted energy efficiency without losing the character of this historic house.

### What were the approximate costs?

Not possible to give accurate costs as we were building a garage and extensions and totally renovating and rectifying previous poor workmanship. We also worked alongside a small building firm, and we did a lot of the woodwork and labouring ourselves i.e., removal of plaster, fitting the solid wall insulation, cutting bricks in half for the brick layer to ensure we could copy the original English brick bond on the extension etc. Underfloor heating plus floor screed approx. £6,221, the ASHP and tanks approx. £10,000 and approx. £7,000 for the PV. MVHR cost £3,700, solar spots cost £712 and cutting off the gas supply cost £1,100.



What have been the approximate energy savings?

We have low energy use. We expect to pay £ 620 this year to Good Energy including Standing Charges. Before making these changes heating the house was impossible, the solid walls would run with condensation and the existing double glazing.

What have been the effects on your home?

A warm, draught-free house in Winter, and a cool house in Summer. The air is always fresh with no need to open windows.

Who undertook the work?

Heat Pump: iHeat in Oswestry. They sorted out problems we had with our original installers. They are no longer recommended NIBE installers.

Solar PV: Pure Electric

MVHR: Energy Zone in Cleobury Mortimer.

Would you recommend them?

All of these were excellent and understood what they were doing.

What else would you like to do? And why haven't you done them yet?

Grey water recycling. Ran out of energy to pursue this. Battery storage or purchase an ev car. No suitable car is yet available and we do not use our fuel-efficient car much anyway. We have kept the relatively new uvpc double glazing as it seemed wasteful to replace it.

Have you considered any measures but rejected them? Please give details of what and why.

Do you have any further comments?

We found you need to do your homework and understand what is being done. We realised the initial heat pump installers may have been on courses but obviously lacked experience and didn't fully understand what they were doing.

Are there any access issues? Eg steep steps, lack of parking.

No but limited parking on our property and some local parking in nearby