

## **SOUTH SHROPSHIRE CLIMATE ACTION BUILDINGS RETROFIT CASE STUDY**

### ***FORMER COUNCIL HOUSE WITH MODERN ELECTRIC STORAGE HEATERS***

#### **Background**

The house was built c.1953 as a council-owned property.



It is three-bedroomed, semi-detached, of brick/concrete construction (including concrete guttering) and would have had wooden doors and windows.

Originally, it had a separate bathroom and toilet on the upper floor, a larder-room and coal-'hole' adjacent to the kitchen and one downstairs central living room off the hall entrance.

There was a central chimney in the living room with (I think) a back-burner range which provided heating and hot water. I think there was also a coal-fired range for cooking in the kitchen.

The house had access to electricity and mains-water drainage/sewage but not to gas, which was installed at a later time.

The house is the last of 16 (8 semi-detached) properties, built across the bottom of Gallows Bank.

Its orientation is south-west/north-east; it is exposed to the prevailing winds but also benefits from daytime sunlight.

All the gardens are steep and many were cultivated for vegetables.

The soil is heavy clay.

At some point, the properties changed from council-owned to housing association-owned and it then became possible to purchase them privately.

This was one of the properties which had been privately purchased.

#### **Interim**

By the time I bought the house in 2011, extensive changes had been made.

Wooden doors and windows had been replaced by UPVC double-glazing; no letterbox in front door.

Gas central heating had been installed.

Gas cooking had replaced the range in the kitchen.

A log-burner had replaced the range in the living room.

Cavity wall insulation had been installed.

The garden had been 'terraced' and 5 trees had been planted.



The larder and coal-‘hole’ had been converted into a downstairs toilet and a utility room which housed a washing machine and dish-washer.

A water meter fitted.

### Current

Since 2011:

The loft has been insulated to government specifications.

The log-burner has been replaced with a more efficient model which is mainly fuelled by wood from the garden trees.

12 PV panels have been installed on the roof.

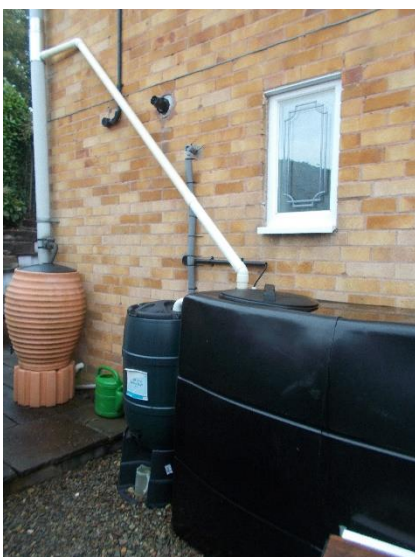


A (lithium ☺) battery has been installed in the loft to harness electricity generated by the PV panels.

Any excess electricity is fed into the grid.

A surface-level rainwater harvesting tank has been installed which feeds the downstairs toilet and washing machine (no dishwasher). Any overflow is fed into a water butt for garden use.

A second larger water butt has been installed for garden use.



Gas central heating system has been replaced with electric storage heaters.



Gas water heating has been replaced with an instant electric water heater.

An electric shower has been installed.

A Smart Meter has been fitted.

Indoor lighting is being replaced with LED bulbs.

Various solar powered garden/shed lights have been installed (with limited success/endurance).

### Future

Possibly install triple-glazed windows / doors.

Possibly install a domestic wind turbine to harness the prevailing winds.