FUTURE READY HOMES **Green Open Homes 2025**

marches energy agency

Property Information Sheet

Name and Address

Anne and Roland
Swn-y-Nant,
37 Llanforda Rise,
Oswestry,
SY11 1SY

Property Description

New build Passive House built 2019 (not certified but built to Passive House standards and modelled using the Passive House planning package). Built in blockwork with timber frame, triple glazed windows and reconstituted roof slates.

What changes have you made to your home / what green features did your home come with?

We bought a bungalow with a view to renovation and chose Passive House architects who felt that demolition and a new build was the best option. We did a room plan and the architects designed us an ultra-low energy house. The house is square (most energy efficient as least outside walls). It has a raft foundation comprising 250mm dense polystyrene (Jablite EPS) with 250mm concrete (containing the underfloor heating pipes) on top. Blockwork walls with 250mm Permarock EPS insulation outside. Warm roof with 400mm Warmcell insulation. Our roof is made of an OSB box with dividers. The whole house is encased in a complete tea-cosy of insulation. The windows and doors are triple glazed and the whole house is very airtight (0.5 airchanges / hr), so we need a Mechanical Ventilation and Heat Recovery system (MVHR) which extracts moist air from kitchen and bathrooms passing it through a heat exchanger to heat fresh air brought into living and bedrooms. We have a roof overhang on south side to reduce overheating which provides a lovely veranda. A 9kw gas boiler runs the underfloor heating, two towel rails upstairs and the hot water occasionally. 4.8kW array of solar PV panels which generates over 4,000 kWh electricity per year.

Why did you make these changes / choose a home with these features?

We wanted a very energy efficient house to minimise the energy required to heat and run it. This allowing us to always be warm but in a way that does not cost the Earth; both in terms of money and the environment.

What were the approximate costs of each of the changes you made?

Excluding the design process and demolition of the bungalow – approximately £260,000. Aiming to build to Passive House standard increases costs due to higher specification on things like windows and doors, more insulation and with an airtight house, a MVHR system is needed. Far more attention to detail and care is needed from the builders which takes time. It is estimated that building to Passive House standard adds 10 -15% to the build costs.

What have been the approximate energy savings?

It now takes only 1.5kW to heat the house. We have underfloor heating downstairs and two towel rails upstairs and the heating is only on for around 3 months a year. We use under 3000kWh of gas per year (last year it was 2200 kWh) and around 1300kWh of electricity from the grid. Our first year (2020) gas bill was only £96. It has since gone up a bit more. We got onto the SEG tariff for the electricity, exporting to the grid late in 2020 resulting in us receiving over £400 in 2022.

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What have been the benefits to you / your home?

It is very comfortable to live in, the temperature does not change much due to the thermal mass of the floor slab and all the insulation. The home is also very quiet as triple glazing lets virtually no sound through. It has been very economical. Our Energy Performance Certificate (EPC) is rated A.

Who undertook the work?

Passive House architects – Simmonds Mills http://simmondsmills.com/
Structural Engineer – BJSE https://www.bjse.co.uk/services
Passive House Builder and main contractor - Ecovert https://www.ecovertsolutions.co.uk/our-work/oswestry/
Windows, doors and MVHR – Green Building Store https://www.greenbuildingstore.co.uk/swn-y-nant-shropshire/#prettyPhoto

Would you recommend them?

Yes, but if we ever built again, which is very unlikely, we would not use a main contractor as we know what we are doing now.

What else would you like to do?

We have spent the last few years renovating the garden, which was devastated by the building work, so it is a working progress. We had a glass porch fitted in 2022 but cannot think of anything else we want to do.

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

The only measure that can improve our EPC is to install solar thermal but that would be of no benefit as our solar PV heats all the water for over 10 months of the year.

Any further comments?

Choosing to build your own home, even with a main contractor means giving up at least 1 year of your life and an awful lot of hard work.

Visiting instructions / information

There is on-street and driveway parking and level access to our home.