

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?

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. 4.8Kwh array of solar PV which generates over 4,000 kWh electricity per year.

EPC rating – “A”.

Why did you make these changes?

We wanted a very energy efficient house to minimise the energy required to heat and run it so that we would always be warm and it didn't cost the earth (both in money and environmental terms).

What were the approximate costs?

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 also 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 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's a bit more than that now!

We got onto the SEG tariff for the electricity we export to the grid late in 2020 and received over £400 last year.

What have been the effects on 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 and it is also very quiet as triple glazing lets virtually no sound through. It is also very economical.

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 (very unlikely) we wouldn't use a main contractor as we know what we are doing now.

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

We have spent the last 3 years renovating the garden which was devastated by the building work, it's not quite finished yet and we are still working on it. We had a glass porch fitted last year but can't 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.

Do you have 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.

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

No – on street and driveway parking, level access to the house.