



Case Study: Maes y Ffynnon, Cerrigydrudion, Conwy

Solar Twin were approached Salem Myer Simpson in July 2005 on behalf on Conwy County Council. The council were interested in integrating solar thermal to sheltered housing in the county as part of an improvement programme. Six properties had been identified as a pilot project.

Client:



The installation.

The buildings are of standard construction and consist of 3 pairs of semi-detached, single storey bungalows. Roof pitch was at approximately 40 degrees and of a construction allowing panels to be fitted directly onto the roof using our standard procedure as outlined in our method statement. Panels were mounted to the most southerly aspect of each property and within 2 metres of the header tank. Pumps were mounted underneath the panels in the roof void and in line with the water level in the header tanks.

Internal piperun was through the roof void to the airing cupboard, directly below the header tank and connected directly to the existing hot water cylinder. Water hardness levels were confirmed with Welsh Water and were of a level where no water hardness control measures were required.



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Performance

The panels are mounted at 40 degrees, and face between south east and south west. Each Solartwin panel generates approximately 900kWh per annum.

The main metal is mainly hydro-electrically made aluminium, with a lower environmental impact than aluminium made using fossil fuel. For durability, external screws / bolts are stainless steel. The absorber coatings are black. Double glazing is UV-stable polycarbonate. Double, rather than single glazing optimises performance in winter and in windy sites. Insulation is zero-ODP pentane-blown rigid foam.

Main Contractor:



Maes y Ffynnon, Cerrigydrudion Technology Datasheet:

Renewable energy type: Solar thermal
Application: Domestic hot water
Number of collectors: 6 (1 per household)
Orientation: South
Angle of tilt: 40 degrees
Collector total aperture: 16.8 sqm

Pump type: 24V variable speed
Power supply: 5 Watt PV cell (x6)
Backup fuel: Oil
Global warming target: save 6000 kg CO₂ p.a.
Manufactured in: England
Panel type: freeze-tolerant