

Battlesteads Hotel Wark, Hexham, Northumberland.

HEAT FROM THE SUN—SOLAR THERMAL—CANOPY



Battlesteads Hotel decided in 2007 to carry out an extensive renovation, and move towards to a lower carbon business model. Revolution Power were hired as energy consultants through the MIDAS programme, to give advice to owner Richard Slade. A feasibility study ascertained the best possible solution to the heating systems and hot water requirements.

It was decided that the best option was to fit a Bio-Mass Boiler using waste woodchips from local sources. Also to complement the system a Solar Thermal Solution was introduced to pre-heat hot water in a buffer tank. Using a Schuco canopy system means that the maximum solar benefit can be gained on a building with no south facing roof. The canopy also provide the optimum slope of panels for all-year round solar energy.

At Battlesteads they grow their own herbs and use local suppliers. They also have wood burning stoves in the lounge areas. The Battlesteads Hotel has now got a renewables heating and hot water solution and is aiming in the right direction to be carbon neutral.



Battlesteads Country Inn & Restaurant

Battlesteads Hotel is an establishment in Northumbria which is expanding to provide more accommodation and general facilities.

The hotel has an emphasis on organic and locally sourced produce, and is looking to promote its green credentials through both its ethical food policy and energy use.

Currently the hotel provides food for both residents and non-residents and has 14 bedrooms.

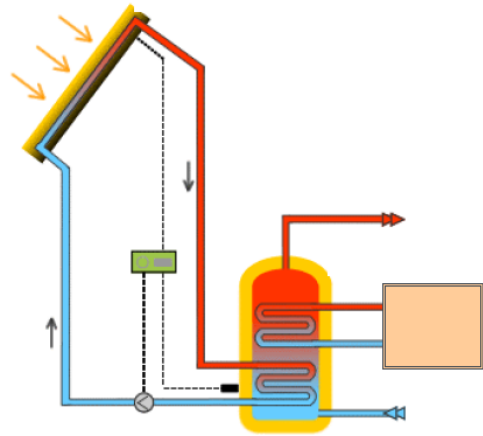
Above: The boiler house which incorporates a Bio-Mass Boiler, Solar Thermal Water Heating, a mini observatory for investigating the night sky in one of the clearest visibility area's in England and two owl roosts. Notice the green hopper which stores the wood chips and feeds into the Bio-Mass Boiler.

How does it work?

The solar collectors on the roof transfer the heat radiation from the sun through a copper back plate and into an anti-freeze based fluid in copper pipes which pumps through to the bottom coil in the hot water cylinder. This heats up the water in the cylinder and switches off when the water is up to temperature. A system should provide 50 to 70% of the domestic hot water needs per year. The beauty of a solar thermal system means that your boiler doesn't need to be on in the summer for domestic water needs.

The Benefits

- Canopy optimises solar energy (south facing, perfect angle)
- Provides free hot water heating
- Extends your boiler lifespan
- Adds value to your property
- Grant assisted



Above: Schuco 3 panel canopy system.

50% of this installation was funded by the National Park from their Sustainable Energy Fund.

Altogether there is 8.1m² of Solar Collector Area which should provide 400+ litres of hot water per day.

Further information

www.revolutionpower.co.uk or

(01325) 320910 / 07823 771234

www.battlesteads.com or (01434) 230209

www.northumberlandnationalpark.org.uk