



Small Woods' Woodfuel Heating System Green Wood Centre



Today's technologically advanced Biomass Heat Systems have been designed to extract, utilise and store optimal levels of energy from wood or wood based products. They are very efficient making use of around 90% of the available energy from the logs burnt – compared to an ordinary domestic log burner which works at around 45% efficiency.

The Green Wood Centre installed such a system in December 2005, it has been working without any problems ever since. It was installed with the help of a grant from Onyx Environmental Trust (now Veolia).

The Green Wood Centre has a mini – district heating system, in which a heat main (a well insulated, flexible hot water pipe) runs the length of the site linking all buildings to the log burner. Ordinary radiators are fed from this pipe in each building. The hot water boiler is a 50KW log burner which is situated in the boiler house. The boiler burns around one wheelbarrow of logs per day in spring and autumn but more in winter and less in summer. It is lit freshly for each burn, and a controlled downdraught makes sure that all the wood is burnt and carries the emitted gases into a special ceramic combustion chamber where they are burnt at a high temperature to heat the water.



The hot water passes through the burn chamber and stored in a vast buffer tank in the Cruck Barn. Insulated water can stay hot for one week. Water is taken on demand around the site along the heat main to where the thermostatic controls have been turned on.

The logs are sourced from local coppice woods undergoing restoration by local volunteers.

The boiler has significantly reduced the amount of electricity used on site.

The local woodlands have been restored to an improved condition for biodiversity and timber production.