

Penpont Estate, near Brecon, Powys  
Woodfuel proves the natural choice for a country estate



# “Mid-Wales estate supplies all it's own heat and develops a **woodfuel supply business**”



Magnificently situated in the rolling hills of southern Powys on the banks of the River Usk, Penpont lies in the middle of a 2000 acre working rural estate, including 150 acres of neglected mature woodland. The house is the centrepiece of a remarkable group of buildings spanning various periods, including a church, Dower house, stables, workshops, a dovecote on stilts and a 19th century conservatory.

Time has stood still at Penpont for much of the last century. This has contributed greatly to the unspoilt charm and tranquillity that characterise the house and grounds. However, over the last twelve years a challenging yet sympathetic restoration programme has been undertaken, aiming to develop a vibrant rural business that will ensure a viable future for the estate.



Fully automatic Binder boiler and high-volume accumulator tank.

**“State of the art biomass system heating listed house and tourist accommodation complex”**

The privately owned Grade II\* listed house has been home to the same family since it was first built in about 1666. In 1992 Gavin and Davina Hogg, with their two sons, moved in and opened up the house and grounds to the public for the first time in its history. They have gone on to provide a unique venue for events and small conferences, and for groups seeking a country location for walking, fishing and activity breaks.

Taking advantage of an onsite resource, the natural choice for heating the restored complex was clear. And today, the buildings are once again heated by wood following the installation of a state of the art Binder woodchip boiler.

Gavin comments, “The self-contained Courtyard Wing provides accommodation for up to 17 people within six bedrooms. Here we’ve housed the new boiler to supply full

central heating and hot water for our guests. It also provides 'added value' as a very effective way of drying off boots and coats after a day out in the great outdoors!”

“Around the house lie sweeping lawns, the old Victorian rose and walled gardens and extensive woodland. This is now being managed to provide a year round supply of wood chip, providing heat and hot water for the family and guests. For accommodation businesses heating costs are a significant overhead and we are lucky to be able to supply our own fuel, also helping bring our woodlands back under management.”

The Wood Energy Business Scheme was able to offset the cost of chipping equipment as well as the capital cost of the boiler and system itself. The Hoggs are now also planning to develop this element as a spin-off business in itself, to supply biomass-quality woodchip for other businesses installing boilers, and to offer a chipping service for nearby woodland owners.

Penpont Estate is run with a sustainable ethic very much in mind. The heating system has been designed so that it will eventually heat all the main estate buildings, which include the estate house, holiday wing, stable block, granary workshop, laundry cottage, dairy cottage and three new holiday cottages.

**The installation Binder RRK 130-250, 149kW**

Application	Space heating and hot water for all the main estate buildings, which include, Estate House, Holiday wing, Stable block, Granary Workshop, Laundry Cottage, Dairy Cottage, and 3 proposed Holiday Cottages.
Date commissioned	October 2005
Installers / suppliers	Supplied & installed by Wood Energy Ltd

**Fuel self supply wood chip**

Fuel store	40m³ subterranean bunker
Delivery frequency during heating season	Monthly
Fuel specification	G50 woodchip (up to 55% moisture content)
Estimated annual fuel consumption	100 tonnes
Annual fuel cost (2006 Q1 market prices)	£4,500

**Estimated Savings**

Cost savings vs Oil	£6,368 per annum (2006 Q1 prices)	
CO <sub>2</sub> Emissions	Woodfuel	11.06 tonnes
	Oil	77.42 tonnes
	SAVING	66.36 tonnes



The Heizohack drum chipper producing a consistent biomass quality chip.



Constant monitoring of water temperature and flue emissions ensures maximum operating efficiency.

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