



Case Study: Elvendon Country Estate

"...a completely new environmentally-friendly distributed heating system..."

PRIORY GOES FOR GREEN HEAT

Elvendon, a residential, farming and sporting estate in rural Oxfordshire, UK has recently undertaken a major building refurbishment programme, centred on Elvendon Priory. This has included a completely new environmentally-friendly distributed heating system designed, supplied and installed by Talbot's Ltd, the leading UK bio-fuel and waste-to-energy specialists. The groundbreaking new system incorporates some of the most advanced control technologies ever used for this type of heating installation.



They have installed a Talbot C4 unit with a rated output of 300kw/hour using advanced waste-to-energy combustion technology pioneered by Talbot's, the Elvendon Priory distributed heating system is fuelled entirely by renewable biomass in the form of woodchips, a CO2-neutral fuel. These are supplied principally from chipped and screened brush, forestry woodwaste and farm maintenance residue from the estate's own sustainable resources.

A major technological advance is the Programmable Computer Controller (PCC) which controls complete fuel handling and combustion system. This advanced system not only enables up to 300 hours of continuous operating data to be monitored, either on-site or remotely from Talbot's headquarters in Stafford, but also enables engineers to re-set, adjust or re-programme the complete heating system on-line from virtually any remote terminal or lap-top. This system ensures a controlled flow of hot water under all conditions while providing efficient total combustion, generating lower emissions levels than an equivalent domestic gas-fired boiler.

Fuel is stored in a top-fed silo with a diameter of two metres and a capacity of seven cubic metres, which provides a continuous supply for between three and five days depending on heat demand. Wood chips from the storage silo are fed to the combustion module by a screw auger via an agitator and air-locked rotary valve.

Above left: Elvendon Country Estate. Below: The Talbot's Programmable Computer Controller *in situ* at Elvendon.

