callidus design limited

Project Profile

Project Description: **Biomass Boiler & District Heating Installation**
Location: Press Mains, Coldingham, Berwickshire
Client: Perthshire Biofuels
Project Value: £90k
Project Duration: January - July 2010
Sector: Renewables / Sustainability

Callidus Design was appointed by Perthshire Biofuels to carry out the design of a new Biomass Boiler & district heating installation at Press Mains in Coldingham.

The design included all appropriate facilities for delivery and storage of the wood chip used in the Biomass Boiler and the provision of appropriate thermal storage to suit both the hot water and heating load pattern within the 5 holiday cottages and farmhouse which were being served by the new installation. Careful consideration was given to the volume of thermal storage to ensure that the system incorporated sufficient thermal mass to avoid excessive cycling of the Biomass boiler. This ensured the boiler operates at maximum efficiency for longer periods and that the boiler operating life will be maximised. Provision was also made for extension of the district heating system to two future bungalows.

As the holiday cottages and farmhouse were all remote from the proposed boiler house location, a network of underground pipework was installed to distribute the heating water from the boiler to a series of individual heat exchangers. Localised secondary distribution systems were then employed to service the hot water & heating requirements to each property.

The intention of owner and operators of Press Mains is for the new Biomass boiler to be supplied with wood chip sourced from their own local forest. The forest is operated in a sustainable manner, with a tree planting programme ensuring that all wood chip consumed by the Biomass boiler will be offset by the planting of new trees. The locality of the fuel source will also lead to an even lower carbon footprint for the site due to the reduction in equivalent CO_2 emissions created by the relatively small fuel transportation distance.