

Chiltern Woodland Burial Park

Green burial ceremonies warmed by woodfuel



The Chilterns Woodland Burial Park is the first partnership of its kind between the Forestry Commission and Woodland Burial Parks. Opened in June 2009, the centre saw over 40 ceremonies in its first 6 months of operation. The three new sustainably constructed buildings are all heated by a woodfuel boiler. The fuel used in the boiler is produced during the routine woodland management of Wilton Park, the Forestry Commission owned woodland in which the park is located. Careful tree-by-tree management of these woodlands is benefiting wildlife, reducing the centres fuel bills and offering bereaved relatives and other visitors a safe and attractive place to enjoy and reflect.

objectives

- For the burial park to be as sustainable as possible, both in terms of its green credentials and its long-term on-going maintenance. The company has a strong environmental ethos; for example all its buildings are constructed from FSC certified wood and crushed recycled concrete is used to create new paths.
- To heat the three new buildings; the Reception, the Gathering Hall and the Woodland Hall
- To reduce fossil fuel use and costs and future-proof the park against fuel price increases
- To provide an outlet for wood generated by the 30ha (72 acre) mixed woodland near Beaconsfield in Buckinghamshire, some of which has ancient woodland origins.

actions

- The company's Director of Design and Development John Dejardin decided to install their first woodfuel boiler at their Epping site in 2007 following two fact-finding trips to Scotland and the Czech Republic, where he visited several woodfuel installations. The Chilterns Park boiler followed in 2009.
- A self-powered Heizohach 6-300 chipper was purchased to process the seasoned wood. This is shared between the Epsom and Chiltern sites.
- A third site, currently being developed near Cannock is also expected to be heated with woodfuel.

achievements

- There has been virtually no down-time since the boiler was installed. The staff attribute this to the selection of the high-specification Gilles boiler.
- There is no back-up fossil fuelled system, except an immersion heater for hot water and small electric room heaters. These have not yet been required.
- The system runs on tick-over during the summer to heat hot water
- There is no requirement for this boiler to have an accumulator tank
- The fuel requirements fit in very well with the Park's woodland management activities
- Two public footpaths run through the park, and the buildings are used on occasion as a centre for training, meetings and school visits. This helps to increase awareness, provide educational opportunities and increase community involvement.

key facts

- The boiler is a 49 kW Gilles woodchip boiler
- Hot water is pumped underground through highly insulated district heating pipe from the boiler house a distance of about 200 metres to the three new buildings. From there a network of under-floor heating pipes delivers consistent heat to the rooms and halls.
- The above-ground hopper can hold up to 30 cubic metres of woodchip, which at peak demand will last approximately one month
- A moisture meter is used to check that the wood is dry enough to chip
- The park supplied 90% of its fuel requirement in the first 6 months, and local supplier Practicality Brown supplied the remaining 10% when the moisture content of their wood was slightly too high.
- The woodland is managed on a continual thinning basis, which means that it always has a continuous cover of trees. Sufficient woodfuel can be provided from the Park using this method for at least 20 years.
- The hopper is filled with chip directly from the chipper
- Costs

Boiler - £32,000

Flue - £3,200

District heating mains – £24,600

Fuel store - £12,800

Under floor heating – £12,800

quotes

"Its really great to look out of the windows and see our fuel growing less than 100 yards from our offices" Jez Perkins, Woodland Manager, Woodland Burial Parks

"It is great to install a system on a site where the fuel resource is genuinely internally sustainable. The team on site have been enthusiastic about this system which should afford better woodland management and a low cost heating solution.", Nat Bacon, Energy Innovations

"Periodic thinning, especially of the conifers, is a great way to gradually return this woodland back to native broadleaf species whilst providing a locally grown, carbon lean fuel source " Jo Mason, Beat Forester Chilterns, Forestry Commission.

partners

Forestry Commission
Energy Innovations (boiler supplier)
Practicality Brown
Buckinghamshire County Council
Imtech G&H

funding

The boiler was entirely funded by Woodland Burial Parks Ltd.

lessons learnt

- Reduce the number of contractors involved in the installation wherever possible.
- Use an on-going service contract with a reliable contractor
- The chipper should be continuously fed with wood to create the right quality chip
- Avoid using a square hopper with a circular feed mechanism as this creates void spaces where chip can accumulate.