

Wood-fuelled heating – Norbury Park Sawmill, Surrey

Existing or Proposed Project:	Workshop boiler: EXISTING – Commissioned January 2003 Kiln boiler: EXISTING – Commissioned early 20 th C.
Location:	Norbury Park Workshop, Mickleham, Surrey, RH5 6DN (OS Ref: TQ160537)
Owner / Developer:	Surrey County Council, managed by Surrey Wildlife Trust
Description:	A heat-only wood-fuelled combustion boiler system



Background:

Norbury park lies within the Surrey Hills Area of Outstanding Natural Beauty and consists of 520 hectares (1,300 acres). It is situated west of the River Mole and the A24 between Westhumble and the borders of Fetcham and Great Bookham.

The Surrey County Council-owned park is owned by Surrey Wildlife Trust and is made up of a mixture of woodland, grassland and various areas of farmland. Due to the range of habitats it is an important haven for many plants and animals and a large part of the park has been designated a Site of Special Scientific Interest.

Many of the woods in Norbury Park are managed to provide timber. Some trees are coppiced (cut at ground level) to provide poles for fencing and charcoal-making. Hazel and sweet chestnut coppice add diversity to the woodland; the Wildlife Trust replants with trees native to this area that are suited to the chalky soil (i.e. beech, yew, ash and cherry), gradually replacing the exotic species.

Norbury Park Wood Products produces furniture, signs and picnic tables, and is FSC accredited. Their on-site commercial sawmill has installed a renewable energy woodchip boiler, which re-cycle wood waste from the process and provide heat to the workshop.

Technology / Scope of Project:

In early 2003, after an investigation by Surrey Wildlife Trust into the possibilities for sustainable heating and an end use for waste shavings and off-cuts, they installed a 44 kW rated wood-fuelled boiler (see photo) to heat the wood workshop. The South East England Development Agency (SEEDA) provided a grant of around £7,500 to assist with the purchase of the boiler.

The boiler is a Talbott's T1.5 warm air system, made and installed by Talbott's Ltd, the Staffordshire-based wood heating specialists. This system is automatically fed and can take shavings, chips and sawdust for fuel, which are naturally readily available from the workshop floor and the sawmill itself.

The owners are very pleased with the installation's performance and find that the heat output exceeds expectations, especially in winter-time. The average power setting used over the year is 8.5kW, and in a typical year the furnace will consume wood at a rate of ?? oven-dried tonnes annually.

Importance to the South East:

There are an estimated 75 sawmills in the South East of England, as the most wooded region of the UK, but it is not known how many of these exploit the free fuel at their disposal in using a modern, efficient wood-fuelled heating system. The capacity for replications of the Norbury Park situation is therefore potentially quite significant.

If all these sawmills were converted and experienced a similar usage level, they could in total be displacing the emission of 1,500 tonnes of CO₂ equivalent (tCO₂) greenhouse gases every year. This is assuming the alternative was oil heating; on the other hand if the heaters that were being replaced was electrical, over 2,400 tCO₂/year could be displaced by sustainable boilers in South East sawmills.

The vast potential in this respect also for wood workshops, furniture factories and carpentry businesses would also bear further investigation. All have industrial residues which could be put to beneficial and local use as renewable fuel for heating, assuming that their timber is sourced from local, sustainably-managed woodlands or forestry, as at Norbury Park.

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