

# Wood Fuel

## – a case study



**Chiltern  
Woodlands  
Project**

Registered Charity No. 1002512



*Bellingdon Brickworks - Log stack*



*Wood fired kiln*



*Bricks of distinction*

As part of our LEADER funding the Chiltern Woodlands Project organised a visit for woodland owners to H G Matthews Ltd Brickworks at Bellingdon, near Chesham, Bucks.

The brickworks has three operations that use wood as a fuel and they also sell wood stoves, fire places and wood boilers, plus bags of dried firewood and kindling.

See [www.hgmatthews.com/fireplaces/stoves/default.html](http://www.hgmatthews.com/fireplaces/stoves/default.html)

H.G. Matthews bricks are used to repair and extend some of the most prestigious buildings in England. In order to be able to offer authentic bricks they decided to produce a range, fired in open clamps, using wood as the fuel. This method of production dates back to the 18th century.

[www.hgmatthews.com/brickmaking/bricks/wood\\_fired\\_bricks.html](http://www.hgmatthews.com/brickmaking/bricks/wood_fired_bricks.html)

Wood firing produces subtle colour variation as well as beautiful glazing which can be a perfect match for historic buildings. Wood also has the advantage of being a renewable form of energy and wood is sourced from their own managed woodland and neighbouring properties.

- The brickworks has recently installed 4 wood chip boilers to produce heated air to dry the bricks. These attract the **Renewable Heat Incentive** payments and have replaced an older wood chip system, which replaced an oil system.
- Once dry the bricks are either fired in **traditional wood fired kilns** or the expensive oil fuelled kilns. The bricks fired in the wood kiln have a different colouration and pattern making them particularly suitable for building conservation and restoration work and attract a higher price than mass produced bricks. Each kiln uses over 50 tonnes of logs per firing and has 14 fires which need to be fed by hand every hour. Two people are needed to do this working 12 hour shifts. Firing is continuous with heat building steadily for about 3 and a half days.



*Jim Matthews with wood fired bricks*

# Wood Fuel – a case study

Continued



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Stack of split wood by kiln

- They have a **log billet boiler** in a small external metal unit (see photo) that produces heat and hot water for the offices. This is a 75 Kwatt system that takes 34 inch logs (86cm) to heat a 1,000 litre hot water tank. It requires feeding with logs once or twice a day. Heat is piped to the office. The piping is expensive and costs about £40 / metre to install. The heat that is produced is metered.

The nearby beech and oak woodlands and young broadleaved plantations on the estate have been marked for thinning with felling consent (felling licence) obtained from the Forestry Commission.

This market provides a good opportunity to carry out thinning operations in the woods to improve their condition and let light in which benefits the ground flora and many species of wildlife and will encourage natural regeneration.

A long term management plan will be prepared for all the woods on the estate to ensure that wood fuel is produced on a sustainable basis.



Wood boiler unit at Bellingdon Brickworks

New woods have been planted in recent years linking existing ancient woodlands and helping provide a resource for the future.



New woodland - Dundridge estate

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You can download information sheets from:  
[www.chilternsaonb.org/woodlands-project](http://www.chilternsaonb.org/woodlands-project)

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