

Woodland Management for Wood Fuel



Chiltern Woodlands Project

Registered Charity No. 1002512



Air dry wood



Wood boiler



Modern stove

The woods of the Chilterns have survived for centuries because they were an economic resource supplying London and local markets with wood fuel and other woodland products.

Lack of management is contributing to a decline in the biodiversity of our woodlands. Bringing undermanaged woods into active management can benefit a range of flora and fauna, including rare and threatened species. By ensuring woods are made up of several stages - new planting, clear ground, mature trees and younger areas, more species will be present thereby increasing biodiversity.

There are many **benefits from actively managing woodlands**. These may include one or a combination of the following

- Timber production
- Landscape enhancement
- Recreation
- Shooting
- Wildlife conservation (biodiversity)
- Wood fuel, either as logs or chips
- Shelter (in various forms)
- "Ecosystem services" - such as pollution, flood control and carbon storage

Careful woodland management

Careful woodland management can improve the woodland habitat for many species of native wildlife. Many woods have become dark, shady places with a restricted range of species, letting in light allows many woodland flowers to flourish hence providing food for a wide range of associated species including birds, butterflies, bats etc. For guidance and further information visit www.forestry.gov.uk/eps

One option that currently is likely to produce a considerable amount of benefit and economic return is wood fuel. This can often be produced by selectively thinning out poorer and deteriorating trees so that others can develop into higher value, larger timber trees.

Wood fuel

Woodfuel is wood that is burned to generate heat or electricity. It can be a clean, sustainable, low-carbon form of renewable fuel.

www.biomassenergycentre.org.uk/

There are **three main types of wood fuel** that can be used to produce heat and hot water very efficiently using modern systems.

With high and increasing oil prices, use of wood for heating has great benefit but it does take **forward planning**, particularly if you are using your own woodland for your fuel supply. You should consider your fuel needs at least one year ahead, so that the wood can be cut and dried before use. Stoves can be linked to hot water storage tanks and central heating systems.

1 Logs - the traditional wood fuel market, is currently buoyant. Most hardwoods can be used but some prefer to use species such as ash and beech, which are the commonest trees in the Chilterns. Logs should ideally be dried for at least a year so that they produce more heat. Modern stoves are much more efficient than open fires.



2 Wood chips - suitable for larger heating systems, you need to produce dry material and use an appropriate chipper. All species can be used but hardwood logs sold for firewood have a higher value so chips are most commonly made from lower value conifers. Storage of the woodchips requires investment and is a key part of the process, which can be fully automated.





3 Pellets - need processing elsewhere and so are the most expensive form of wood heating. Pellets are made by compressing sawdust. They are usually made from softwoods ie conifers. They are suitable for small scale automated heating systems.



Forestry harvesters are more frequently used in conifer plantations where their computerised cutting head can sort and cut conifers in seconds into different grades of logs, so a single tree may produce a top quality saw log a second quality timber and knotty tops suitable for wood chips

If you want to produce your own **firewood for your own use** then you may be able to do so without needing a felling licence, but this depends on how much material you want to burn each year and what your woodland is able to produce. You will need a felling licence if you fell more than 5 cubic metres every calendar quarter.

In the Chilterns many **broadleaved** (beech and oak) woods will increase in growth by perhaps 2 to 4 tonnes per hectare per year. Faster growing broadleaves such as ash and cherry may produce double this amount. **Conifers** may put on 10 - 20 tonnes a hectare a year, depending on the species and growing conditions.

Grants

Current information about the Forestry Commission's **grants and felling licences** available under their English Woodland Grant Scheme are shown on their website. See www.forestry.gov.uk

A requirement is that woodland management should meet the **UK Forestry Standard**.

To qualify for Forestry Commission grants you need to register with the Rural Payments Agency for a Single Business Identifier number and also have all the land shown on the Rural Land Register.

Decide what you want to do for the benefit of the wood and what your objectives are: this will help you make decisions about which trees you want to fell. Get advice.

For further information and advice
Contact John Morris, Chiltern Woodlands Project
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www.chilternsaonb.org/woodlands-project.html
Registered charity no 1002512

Why wood fuel?

One of the simplest ways to produce energy from biomass is to burn it. Wood chip, wood pellets, logs and straw can all effectively be burned to produce heat or electricity at a range of scales, from small domestic wood boilers to large scale district heating systems.

Nearly half of our energy consumption is used for heat but currently less than 1% is renewable heat sourced from biomass. The use of renewable heat is expected to increase with the introduction of the **Renewable Heat Incentive**.

Buckinghamshire and the Chilterns has a large potential for the installation of biomass boilers. The Renewable Heat Incentive was published in March 2011. It offers financial support to encourage the uptake of renewable heat. It will pay per kWh of heat produced from renewable sources for 20 years

Oil is likely to run out in the next 40 years if we use it at the current rate. There is a drive to cut carbon emissions in order to reduce the impact of climate change. Burning wood in modern systems produces less carbon than alternatives such as oil or coal and growing more trees absorbs more carbon.

The Woodfuel Implementation Plan (2011) outlines how woodfuel can be promoted by increasing wood supply by bringing more privately owned woodlands into active management. See www.forestry.gov.uk/forestry/INFD-6PGGQR

Wood heating systems require investment but should be considered for both new builds and replacement of old oil burning systems.

The change from oil or electricity to biomass can bring large financial savings. A 50% saving can be achieved per kWh when substituting oil with wood chip, and 75% when replacing electricity with wood chip. Fuel prices currently provide a strong incentive for the uptake of woodfuel; with the cost of wood chip currently 2.9p/kWh and oil and electricity at 5.8p/kWh and 12.0p/kWh respectively

See **Biomass Action Plan for Buckinghamshire and the Chilterns (2011)** for more information
www.buckscc.gov.uk/assets/content/bcc/docs/sustainability_fund/biomass_action_plan.pdf

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