

# SUSTAINABLE AGRICULTURE



## Community Supported Woodlands and Hedges

### Wood fuel and other benefits from small woodlands and hedges

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### Chapter 2: What small woodlands and hedgerows can offer to communities

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## Chapter 2 What small woodlands and hedgerows can offer to communities [and vice versa]

### 2.1 Biodiversity and heritage

Hedges can tell us much about the historic development of our surroundings, including changes in agricultural and horticultural methods and definitions of ownership. Irregularly-shaped fields next to woodlands may indicate old assart boundaries i.e. where trees have been cleared for agricultural land. Small woodlands also contain archaeological evidence for human activity, such as charcoal burning and mining, where the abandoned site has been left for nature to reclaim.

Until the 1950s most hedges were laid or coppiced around every 15 years, with the wood being used as fuel for cooking and heating. The wood was also used for rural practices, such as tool making, wattle for building, and pea sticks for crop growing. Small woodlands on farms were a local source of firewood and were also used for recreation, for example for shooting and hunting. In terms of management, horses were the common form of power with the ability to negotiate slopes and awkward spaces.

The post-war availability of machinery brought in tractor-mounted reciprocating hedge trimmers and flails, which encouraged annual hedge trimming and 'tidy' hedgerows. Coal and electricity were cheap so there was less demand for firewood; and climate change had not been thought about, so burning fossil fuels was not an issue. As a result, there was a gradual decline in the biodiversity of hedges and woodlands as their management was neglected or abandoned.

This situation started to change in the 1990s, when farm environment grants made it worthwhile to manage hedges in the traditional way. This came in time to prevent hedge-laying skills from disappearing completely, ensuring that the benefits of this process – continued growth, a stock-proof barrier, and guaranteed wood harvest – persisted. Conversely, small woodlands have had less support than hedges and as a result have deteriorated or been grubbed out altogether. Biodiversity has suffered as dominant tree species have suppressed other species through lack of management. Coppiced trees become leggy, overgrown and often collapsed, while the regrowth of seedling trees are suppressed and deformed by deep shade.

Rising electricity and gas costs and concerns about climate change have made the potential for using woodfuel from hedges and woodlands more attractive. Recognition of the biodiversity qualities of hedges and woodlands, and the importance of positive landscape character and our heritage to our quality of life have also raised the profile of sustainable management of these landscape features.

*Thanks to the Dartmoor Circle Community Toolkit for information within this section*

### 2.2 Wood fuel and other wood products

Whilst wood fuel is a popular product for community groups there may also be other options which can be considered and are discussed in this section.

#### 2.2.1 Wood fuel

Over the last few years, because of rising fuel prices and climate concerns, the installation of wood-burners has risen – but reliable supplies of good quality, dry firewood are difficult to find, and firewood prices are rising. Although many wood-burners and stoves are very efficient, a lot of wood is needed to heat homes, water and for cooking.

The **wood fuel production cycle** generally begins after leaf fall in November with tree, shrub and hedge-cutting work. This stage should finish at the end of February, when the sap rises and birds start nesting. A management plan should detail the felling / coppicing work to be undertaken and identify priorities (see Chapter 4). If there is a hedge to be laid at the same time, a suitably experienced person will be needed to select suitable stems and lay them. You may have a suitable person in your group, or look at [www.devonruralskillstrust.co.uk](http://www.devonruralskillstrust.co.uk) for

training information.

All wood has the same calorific value, although green wood from different species can have a different water content, making it heavier to transport for the value of potential heat. For example, freshly felled poplar has 60% water content, while ash has 35%. Wood cut in the autumn has less water content than wood cut in the spring, and is said to have the least when cut during the waning moon. Depending on the ease of access to the hedge/wood, the firewood may be shared out after each session, or stacked on site to be moved and shared later. This is not an exact process – for example, if members know the size of their wood-burner, they can select wood that fits their stove, but the whole process relies on a spirit of goodwill within the group, and will also depend upon the membership agreement (see Chapter 3).

Wood should be properly seasoned (dried) before it is burnt. If you burn green wood, a lot of the heat produced has to be used in drying out the wood rather than heating the room, it produces more smoke, and may leave tar deposits in the chimney, ultimately damaging it. Wood should ideally be sawn and split green, before storing. It is a good idea to build or use a large, well ventilated log store – if wood is cut in the winter and stored properly for use the next winter, it will produce very little tar and burn efficiently.

Hazel from hedges can make a good fuel wood as it does not have as many other uses as hazel from managed and coppiced woodland. You can use the winter tree identification guide in this toolkit to help identify the species in your hedgerow – or ask the landowner. ‘Woodlands: A practical handbook’ includes a table which provides the properties of different species of wood as a fuel.

*Thanks to the Dartmoor Circle Community Toolkit for information within this section*

## 2.2.2 Wood Products

In the past, and increasingly today, in managed woodlands there is a huge range of products which can be produced from woods and hedges. Products available will be dependent upon the type and quality of the wood.

A management plan for the wood / hedge is important here. It should identify where there is useful timber in the woodland or the hedge that can have uses other than firewood.

In neglected hedges and woods the timber value is generally low due to years of shading, and this produces distorted and misshapen stems. However, there may be remnants of earlier productive management in woodland where some larger trees were allowed and encouraged to grow straight and healthy through pruning. A thick, straight four metre length of tree can have a good value, provided it has not been damaged or is rotted internally. If you suspect there may be some valuable timber that is permitted and desirable to fell as part of the management plan it may be useful to seek professional advice and/or consult with the landowner. Such wood could be used for planking, furniture making, and construction.

Other woodland products include wood for turning, polewood for rustic garden constructions, stick furniture, bean poles and pea sticks. Hurdle making may be an option if there is a supply of good quality hazel. Basket and other woven constructions can be produced if suitable well-grown willow is on the site.



Source: Rivenwood Coppice

Charcoal making could be an option if the woodland / hedge site has difficult access. The table below provides some pros and cons. 'Woodlands: A practical handbook' includes a section on charcoal.

Charcoal: Pros	Charcoal: Cons
Lighter than wood (10 – 15%) so can be carried out easily after being made on site	Investment cost in suitable kiln or retort
Good quality charcoal is a saleable product	Needs skillful production to avoid losing the whole batch being made! May take days (and nights) of carefully watching the fire
Can be used for stoves, fires, barbeques, compost and drawing	Has to be stored dry, bagged and dispatched to outlets. Has a relatively short shelf life before reabsorbing moisture unless kept very dry.

'Woodlands: A practical handbook', other references and internet sources such as from the Silvanus Trust<sup>1</sup> can give you many more ideas that could be considered by the group before everything is turned into firewood logs.

### 2.3 Amenity value

The outdoors is a nurturing as well as a sometimes challenging place to be. Woodlands, trees and hedges are thought to be beneficial to health by helping to lower blood pressure, and practical work with trees can provide good cardiovascular exercise and create social interactions through group working and developing new skills.

Woodlands and hedges, as part of the managed, semi-natural landscape, are valuable resources for people to enjoy through walking, nature study, play, picnicking etc. Visitors to a woodland or hedgerow can be encouraged to participate in the practical work, and invited to meet the group and the landowner from time to time. Remember to publicise such events.

Access arrangements to woodlands are important to maintain and should form part of a woodland management plan, including path and gate maintenance.

### 2.4 Forest Schools and outdoor learning

The idea of 'Forest Schools' originated in Europe in the early 20th century as a way of teaching about the natural world (The Forest Education Initiative (FEI))<sup>2</sup>.

Participants travel by foot (if possible) to a local outdoor environment, preferably woodland, to learn 'in the outdoors' on a regular and sustained basis. It is a long-term, participant-led educational process that promotes, observes and explicitly supports the social, emotional and physical development of children, young people and adults (FEI)



<sup>1</sup> <http://www.silvanustrust.org.uk/index.php?page=resources-and-publications>

<sup>2</sup> [http://www.foresteducation.org/woodland\\_learning/forest\\_schools/background\\_to\\_fei\\_schools/](http://www.foresteducation.org/woodland_learning/forest_schools/background_to_fei_schools/)

In the 1990s childcare students and lecturers from Bridgwater College applied the idea to childcare provision, in their Early Years Excellence Centre. The idea has since grown and Forest Schools are spreading throughout Britain to over 30 areas. The Forest Education Network is now establishing new network support for wider woodland learning initiatives across England. The recently established Forest School Association also provides advice and support to its Forest School members in England and the UK as a whole (FEI).

## 2.5 *Care Forestry*

Woodland work can also develop as part of the Care Farming model, which is described as “the therapeutic use of farming practices”. Go to <http://www.carefarminguk.org> for more information