

Marking broadleaved trees for thinning



Chiltern Woodlands Project

Registered Charity No. 1002512



Marking unthinned plantation



Mature beech for thinning



Extraction track

Thinning is about making choices on the future development of the woodland. You can keep the trees you want, by species, shape, colour etc and reduce the numbers of other trees.

The work must tie in with the **felling licence conditions** from the Forestry Commission and those of an approved woodland management plan.

Dead and dangerous trees do not need felling consent.

Thinning provides an opportunity to consider tree safety and remove potential hazards.

Ground conditions should be taken into account when marking to ensure the safety of contractors working on steep slopes or near powerlines etc.

It is important to consider what size and type of equipment contractors carrying out the work will need to use.

Decide if you want to mark trees to be retained, or those to be removed and inform the buyer or contractor what the marks mean.

Start to mark the thinning from stacking areas, extraction tracks and access points.

High value broadleaved trees are often marked with **paint numbers** as this makes them easier to keep track of. (This can also be helpful on TPO sites etc where there

may be a difference of opinion on felling and a further discussion may be needed)

Lower value trees, such as firewood, can be marked with **paint spots or bands**. Trees should all be marked from the same side so they are clearly visible to the contractor. Spots are sometimes used on opposite sides so trees can be found quickly.

A **line thinning** is often the first step in a young broadleaved plantation as this will provide access tracks to extract the logs. The trees either side of the line will benefit from more light and close the canopy over the next five or so years. Trees can be felled along the line.

If you are thinning out 20% of the trees a line thinning would remove every fifth row. If the rows are very clear you can just mark the start and end of the row.

The **next thinning**, after perhaps five to ten years, can work to the sides from this rack, removing the poorest trees.

Selective thinning - consider the form of the tree and remove poorer, damaged or diseased stems; those with forks, leaning, bent or twisted trunks, poor canopy etc and favour the strongest straightest trees with clean stems.

Fell poor trees in order to let light in to aid existing natural regeneration. Remove larger poor or deteriorating trees to let light onto younger growth.

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Continued



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Density - Broadleaved trees may have been planted at between 1,000 and 2,500+ trees per hectare and as they grow and mature gradually need to be thinned down to the best 70 to 200 trees per ha (depending on species).

Care is needed not to remove too many trees at one time as this could lead to wind damage.

Do not worry about understorey trees. It is canopy competition that is more important.

List all the trees marked for felling by species as you go, (if you work in pairs one can mark and the other record).

Do a **sample measure** of at least 10% (or 50+ trees) to get diameter at breast height (1.3m from ground). From this the approximate volume can be worked out.

Trees are measured at breast height 1.3 metres from the ground on the uphill side of the tree (but avoiding branches or lumps).

Estimated tree volumes (from Ken Broad's Caring for Small Woods)

Diameter in cm at breast height	Approx volume broadleaves cubic metres
5	0.01
10	0.04
15	0.1
20	0.25
25	0.4
30	0.6
35	0.9
40	1.2
45	1.5
50	1.9
60	2.6
70	3.3

The volume measure could have a 50% margin or error depending on height of tree.

NB volume of branchwood is not included and this may double the amount of firewood on some mature trees.

More accurate figures can be found in Forestry Commission **Tariff Tables**.

For the purpose of firewood 1 cubic metre is approximately 1 green tonne, but this varies with species of tree. It may lose 20% or more of its weight as it dries in the open in a year.

Other considerations:

Remember to consider **protected species**, such as bats, and leave some suitable trees for them.

Large standing dead wood should be retained, where it is safe to do so, eg rotting snags. Also leave some large rotten logs for habitat.

Lop and top (branchwood) can normally be left either cut and scattered on the ground to rot or piled as "habitat" heaps. There is no need to have fires.



Numbered tree



After thinning

Contact John Morris, Chiltern Woodlands Project

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You can download information sheets from:

www.chilternsaonb.org/woodlands-project

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