

Woodland Crafts and Produce

This chapter is all about what you can obtain from your wood. We shall first look at topics relating to timber production we mentioned in Chapter 3, namely:

- how to assess quality and quantity of timber;
- advertising trees for sale in magazines like *Woodlots* and via websites;
- how to sell trees to contactors; and
- typical prices for timber.

We then look at the rewards of using your own timber whenever you can, comment on wood turning, making and using stakes, and finally using green timber. This eclectic group arises from personal interest and by way of illustrating the potential since we can't cover everything in a short book. We won't say much more about firewood or Christmas trees which we covered in Chapter 3.

The basics of timber production

I mentioned at the beginning of the book that inviting a professional forester to cast an eye over your wood, even for



only an hour, will handsomely repay itself. You will have a good idea if there is timber of worth, when and how it is best managed, and what steps to take, and you'll probably learn lots more besides. But even if timber production and earning income is of no concern, knowing what you have or don't have as the case may be enriches your knowledge. What I do here is provide rough and ready guidance to help get you in the right 'ball park' as the Americans would say.

If your wood is newly planted or none of the trees is over 8 m (25 ft) tall you can skip the next section since your trees are still too small to be saleable as timber. The exception is hazel coppice, but we will comment on this and other coppices a little later.

How much timber do you have?

In the trade timber is mostly sold by the cubic metre of volume which, for freshly felled unseasoned logs, equates very, very approximately to a ton in weight. We will stick with this more familiar measure. What one needs to do is work out how much you have of each main species. You need to know the number of trees and their average size.

To find out the number of trees in a small wood, and if trees are in rows, you can count every one or (say) every fifth one and work out the total. If rows are not obvious sample your wood by randomly¹ locating square plots of 10 × 10 m. Mark the corners and count the trees inside the plot. For a 2 ha (5 acre) wood lay out 10 plots, for a 5 ha (12 acre) wood 15 plots should do unless the wood is very variable. Now calculate the average number of trees per plot, multiply by 100 to discover the number of trees per hectare, and then multiply by your wood's total area for the total number of trees.

Once you know the number of trees of each species you next need to estimate the average volume or weight of timber. Here we become very imprecise, but you'll at least get an idea. When

¹ An objective though not entirely random way is to begin at a corner of a wood. Then take as many paces into it equal to the first two digits of your credit card number. Where you stop is your first plot. Pace on the distance equal to the next two digits on the card for the next plot and so on. If you reach the other side of the wood, turn round, take a different direction, and continue until you have ten or more plots.



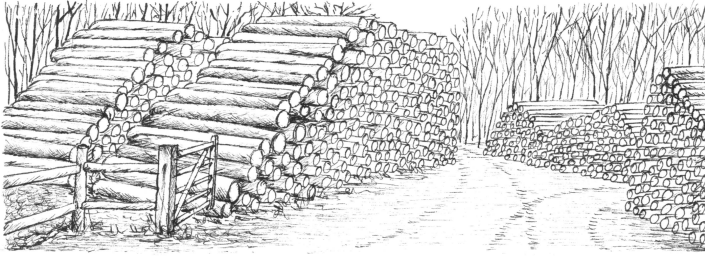
counting every fifth tree or the ones in a plot, measure their diameter as well – diameter is measured 1.3 m above ground. You can use an ordinary linen tape measure and your GCSE maths to convert circumference to diameter! The table below gives an approximate weight of timber according to diameter of the trunk. I originally drew up this table for an article about estimating amounts of unseasoned firewood *if all parts of the tree are used*, but it will hold crudely for timber in general.

Diameter of tree (cm)	Approximate weight of wood (tons)
10	0.02–0.04
20	0.2–0.3
30	0.6–0.8
40	1–1.4
50	1.8–2.4
60	3–4
70	5–7

The table shows that trees with diameters greater than 20 cm are pretty big and ones above 40 cm very sizable indeed. Unskilled operators should not attempt to fell trees any bigger than 10 cm diameter at the most.

To complete your rough estimate, I suggest you total up how many trees are around the 10 cm diameter mark, then how many are around 20 cm, and so on and then multiply the number in each diameter class by the weight given above. This will give a better result than working out an overall average diameter to get an average weight.

Remember, all this is very crude, but it will tell you whether you have something like 100 tons of timber in your wood rather than 500 tons, or vice versa. The illustration overleaf shows piles and piles of logs at the entrance to my wood. At the time I only owned 22 acres of woodland, and about 630 tons of logs came from just part of it and from just removing the pines from among beech trees, it was not a clear felling. Although many readers will not be interested in this side of forestry, eventually all woods need some thinning out and a lot of timber can result.



Not a priority for many, but using or selling your own timber can help with income and reduce Britain's imports

What makes timber good quality for selling?

I added 'for selling' to the subtitle because for many purposes, such as wildlife, amenity, or firewood, timber quality is irrelevant. But if you want to sell timber, and many small woods contain trees of value, quality is the key to price. It has four elements.

Quality firstly means species. Of the broadleaves, good oak and ash fetch better prices than good beech or birch, while willow – apart from the specialised cricket bat market – is virtually unsalable. Of the conifers, Douglas fir and larch usually sell readily, pines can be more difficult, and while good spruce is in demand, poor material is only fit for pulping. Added to this are specialised markets for prized timbers like walnut, sycamore with a curly grain, wild cherry with vein, but don't worry about these unless it interests you.

Secondly, good quality means large size. Small trees are of little or no value regardless of species. Prices increase rapidly with size. An oak of 25 cm diameter may sell for firewood – if you are lucky, a good one of 75 cm may go for several hundred pounds. Occasionally a tree can be too big, like a large old hulk of a seaside pine, simply because sawmills cannot cope with the dimensions.

Thirdly, good quality means defect-free. A log must be free of decay or bad deformity and big knots.

Finally, good quality means straight. Straight logs are transported more efficiently and when sawn the outturn from them is very much higher than from bent or forked ones which result in a lot of waste.



So, a buyer looking at your trees will be keeping an eye out for large, straight, blemish free trees of the species of interest.

How to advertise trees for sale

Most timber sold by private owners, is by 'standing sale'. That is the owner sells the trees while they are still standing. The job of cutting them, extracting the logs, and hauling them to a mill is done by the purchaser. It saves the hassle of doing the dangerous operations yourself. Of course, big companies and the Forestry Commission have their own felling gangs, but I don't expect many readers will be in this league.

The minimum a buyer needs to know is which trees are on offer. So you need to identify these and mark them clearly say with a spot of paint. Everything else about your wood, whether you have the appropriate felling licence, the quality of access, the terrain, the total amount on offer, will be evident when the potential buyer visits though it helps to have this information in advance. But how does one find a buyer in the first place?

Never underestimate your neighbours, so ask around if someone has sold timber in the last couple of years. If it went well, you have your recommendation. Failing that some Forestry Commission offices maintain lists of who might purchase timber. If a professional forester has visited your wood, do raise this topic. Trade magazines like *Forestry and British Timber* and *Forestry and Timber News* always have 'Timber wanted' adverts as do *Smallwoods* and the *Quarterly Journal of Forestry*. Following up an advert will quickly tell you what is being sought, and so set you on the right track.

For my part the Southeast England magazine 'Woodlots' run by East Sussex County Council is a must. It's like the 'Exchange and Mart' of forestry and is particularly helpful for the small owner. Other regions have networks or local associations that help timber sales like *Yorwoods* in Yorkshire, *Cumbria Woodlands*, *Chiltern Woodlands Project*, *Sylvanus Trust* in the West County, and *Anglia Woodnet*. Also there is the national 'Ecolots' which grew out of the success of 'Woodlots'. Most selling through *Ecolots* is web-based, so access it via the internet: www.ecolots.co.uk. Advertising in *Woodlots* is free and it succeeds in putting sellers and buyers in touch. Every advertisement I've placed has brought a sale even if not the price my inveterate optimism hoped for!



Many large private owners contract out woodland management, including selling timber, to a consultant or a management company such as Tilhill or English Woodlands. For small woodland owners not only will this be costly, but it takes away part of the very fun that buying a wood brings.

Selling to contractors

Several people who respond to adverts in *Woodlots* are actually timber contractors. Most are highly reputable and will be willing to visit your wood provided you can offer for sale at least 20 tons of decent timber. Of course they would prefer 200 or 2000 tons, but a good lorry load is the minimum most will consider. After looking at what you've got and assessing factors like access, if they are interested they will offer a price of around a few pounds per ton, unless what you have is exceptional.

Once you accept an offer a contract needs to be drawn up making explicit what is being sold, how long the purchaser has got to take his trees (2 years is normal), when payment is due, what insurance cover the purchaser must have to indemnify you against accidents, how tidy the contractor should leave the site, and other terms and conditions. A map showing the area where the trees are and the access routes is essential.

Instead of advertising you can circulate particulars directly to local contractors. These are rather like an estate agent's for a house sale, and describe what is on offer and what special conditions may be laid down. For example in my wood the main track must always be kept free for Network Rail staff, so timber operations must work round this.

Typical prices for timber

I'm not going to say much other than give you an idea of prices of standing trees. Remember in very general terms a 'ton' equals 'cubic metre'. And remember, too, prices vary enormously.

Small size material for firewood or pulping	£0–5 per ton
Medium sized trees for fencing, chipping and small logs	£5–10 per ton
Large conifers for sawmilling	£10–30 per ton



Large hardwoods for sawmilling	£20–80 per ton
Large hardwoods of exceptional quality	up to £250 per ton

Assessing coppice

Coppice is sold by area, say one acre. A buyer will look at it for density of stems, their straightness, freedom from kinks (especially hazel), thickness and such factors as ground conditions, proximity to a track and so on. However, there is an enormous amount of neglected and overgrown coppice unfit for traditional usage which needs bringing back into rotation first before it is saleable for anything other than perhaps firewood.

Using your own produce

Owners of small woodlands, possibly more than those of large estates, have a yen to use their woodland's produce as well as other forms of enjoyment. This desire can lead to interesting results and not a few benefits. Of course, the possibilities depend on the type of woodland, but let's look at some of them.

Supplies for the garden and home

If you have hazel coppice, or any type of coppice or young woody growth, finding bean poles, pea sticks and other vegetable patch and gardening props and supports will be easy. But what about rustic fencing, or your own decking, or making a seat out of a fallen oak – the sapwood might decay in a few years but the heartwood will remain for at least two decades and often longer? Talking of durability, sweet chestnut is the equal of oak in this respect and Lawson cypress may even better it. So there is a use for the poles from the overgrown hedges of suburbia!

These remarks about fencing were prompted by using Douglas fir from my own wood to replace the fence at its entrance now that the beech thinning is complete and the last lorry has uplifted the final consignment. Douglas fir is moderately durable and I hope will last up to 15 years. The trees used were 47 years old and were ones in the subdominant or suppressed crown class but still alive, with long slender stems to make rails, while thick enough at the base to produce a post or two. Despite their slow growth from a



life in heavy shade these otherwise valueless trees had developed good heartwood. If the job had been in early winter the tops of one or two of them would have made a passable Christmas tree. But I did the fencing in April and May and just contented myself with relishing the resin-rich aroma of Douglas foliage.

And the thought of foliage leads naturally to decorative uses of it in the home along with bark, cones, mistletoe at Christmas and other gatherings from the wild.

Energy

Perhaps collecting firewood is the most obvious use for one's own produce, always provided you have a house with a fireplace and chimney! Little more needs to be said apart from reminding ourselves what we noted in Chapter 3 that firewood is a green form of energy. If you cook or keep warm by burning wood, necessarily you are not using a fossil fuel like oil, coal or gas, so your net impact on carbon dioxide increase in the atmosphere is neutral – a tree grows by absorbing carbon dioxide through its leaves to make wood. Cutting firewood is a wintertime activity and what you cut one winter is best used for the next so that what you burn in the grate is well-seasoned. Dry wood burns well and gives out much heat. Green logs don't. They are full of water, and much heat is used driving it off.

More adventurous

So far I have confined remarks to produce that you can easily obtain without recourse to contractors or taking a chainsaw course. But clearly there is no limit in reality: friends of ours bought a dilapidated house with a 23 acre coppice with standards just weeks before the great storm of October 1987. The oaks felled by the storm provided all the flooring needed in the restoration of the property.

Wood for turning

There is a special delight in a gift of a bowl or goblet or paper knife or delicately crafted ornament carved or turned from wood from one's own patch. My brother received an ash 'thing bowl', as we



called it in our childhood, for his 60th birthday. This is the most recent of many gifts to relatives and friends turned from pieces of yew, oak, wild cherry and even birch from the wood. There are woodturners galore. So popular is the hobby that at least three dedicated magazines can be found in a large newsagents.

Most woodturners acquire their material as off-cuts from sawmills, DIY stores, fallen trees, and other bits and pieces. Garages become cluttered, and garden sheds inaccessible as all sorts and sizes of wood are stored waiting their turn(!) and, importantly, slowly seasoning. My brother-in-law's late father-in-law(!) was a keen wood turner and he used old toilet seats as a wonderful source of tropical hardwood! Forgive the rash of exclamation marks, but they convey my own journey of discovery into this world of woodturning. But as a woodland owner, can one sell material to this particular market?

What wood turners look for

Most woodturning seeks to display grain, figure, colour or patina, or an unusual feature like a knot cluster. The woodturner's expertise is seeing the potential and, like a diamond cutter, using his craft and skill to bring it out for all to admire. But, few woodturners give much thought to where their raw material originally came from and make the link back to the tree itself. They appear content just with the piece of wood that holds interest.

I am fortunate that twice the Hampshire Woodturners Association have visited my wood. I want to share this in a little detail to show what a delicatessen woodland can be. Within reason I offered to fell any tree, standing or fallen, if it might hold some turning interest. I was armed with a chainsaw. This is what happened.

1. The first tree was a small beech about 15 cm in diameter that had died about two years before from beech bark disease. I cut it at the base and whoops of delight revealed that the feature known as 'spalting' – dark lines like a artist's fine pen and ink sketch – were present. Several two foot lengths were cut off the stem for the woodturning visitors. The spalting feature occurs at a very early stage of 'decay', but does not continue to extend when turned into an artefact or brought indoors.



2. The next tree was an oak with a burr – a nobbly swelling on the side of the trunk – that I thought they would like. I was right in thinking that burrs are interesting, but this one was too small and no one wanted it. A large burr, that swells out from a tree like a heavily pregnant mum, are much sought after.
3. Farther into the wood we passed an uprooted birch, perhaps 40 or 50 years old, that was steeply leaning but not on the ground. I was asked to cross-cut it. This was dangerous, as is dealing with all hung up or blown trees. But this birch had been prostrate for several years and so, gingerly, I began cutting into the trunk. Eagle eyed I watched for any shifting of weight or tightening of cut, but there was none. The passage of time must have eased the huge tensions uprooted trees possess, and I safely cut right through. The cross-section exposed was a jigsaw of pale yellows, pinks and ochres across the surface! Several bits were cut and added to other trophies destined for the lathe.
4. Nearby was a 70-year-old ash with a huge limb rising from near its base. It was of coppice origin and I remarked that the tree would be much improved if this limb was removed. So remove it I did and was asked to cut it into 4-foot lengths. Subsequently the lengths were ‘quartered’ into ‘sixths’ – I am sure you get my meaning – using a sharp wedge and mallet to provide cleft ash for turning into chair legs.
5. The next tree was a long fallen yew that blew down in the storm of 1987. Much was still sound and the wood, with its deep pink heart, is always of interest. Several pieces were cut from branches.
6. The last stop was where a great oak had been felled five years before the wood of which possessed the rare and valuable feature called ‘brown oak’. This is natural chocolate brown staining caused by the beefsteak fungus. Discarded wedges from the felling still lay about – at least until my woodturning visitors found them!

Lessons for a woodland owner

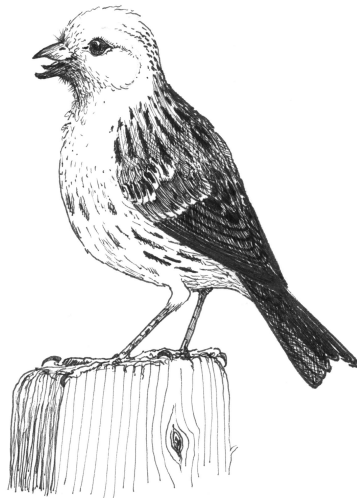
I learnt much from the visits of the woodturners. They look at trees and bits of wood with a different eye. It has added to my own interest in our woodland, and not least that I could make a little



money from trees that were totally unsaleable to the usual timber markets. But before one gets too excited, woodturners are quickly satisfied in terms of quantity and the size of this niche market for any one woodland is unlikely to be large. Nevertheless, I hope that relating the woodturners visits in the way I have has shown you that there are other products that can come from a small woodland or even the odd tree. The usual premium placed on large, defect-free, straight stems has no place, quite the opposite in fact. Just as in the Bible we learn that God looks not on the outward appearance of man but on the heart, the woodturner weighs up what might be inside a tree.

Making and using stakes

Every woodland owner can make use of stakes. They are needed for fencing, for corner posts or gate posts, for name boards or fixing warning signs, while short stakes are used to stop vehicles encroaching soft ground. Thin stakes are needed to support tree shelters and other guards of newly planted trees. And, that's not all: birds perch on them, and where else do you put a mug of piping hot coffee? Most if not all the stakes you'll need can be obtained from your own wood.



This yellowhammer knows what a post is for



What makes a good stake?

A stake, like any other product, must be 'fit for purpose'. This means it must be (a) straight and of the right dimensions, (b) strong, and (c) durable i.e. resist decay, even in ground contact, for many years. Other desirable qualities are an ability to hold nails, be resistant to splitting, and for the surface to be free of splinters, snags and other hazards.

Tree species that make good fencing material

Most conifers (softwoods) produce straight uniform stems and, therefore, make potentially good stakes. Not all are naturally durable, and unfortunately not all that lack durability will accept preservative well. For broadleaves (hardwoods) the situation is even more variable, and it is also more difficult to find and cut a high proportion of straight stems. Below are some species worth considering. Ones left out like spruce, birch and poplar are unsuitable.

Species	Straightness	Natural durability*	Uptake of preservatives	Other factors
CONIFERS				
Pines	very good	fairly poor	fairly resistant	
Larches	very good	good	fairly resistant	good stakes
Douglas fir	very good	fairly good	resistant	
Cypress**	good	good	fairly resistant	good stakes
Yew	moderate	good	resistant	fine gate posts
BROADLEAVES				
Ash	good	poor	fairly good	may split
Beech	moderate	poor	good	
Oak	poor	very good	resistant	use heartwood fine gate posts
Sweet chestnut	good	very good	resistant	good stakes
Sycamore	good	poor	good	

* natural durability: poor = decays in under 5 years; good = will last about 15 years

** Lawson and Leyland cypress and the similar red cedar make durable stakes



Sizes of stakes and other fencing materials

Size depends on usage: for example gate posts, strainers or corner posts will need to be thicker than fence posts simply acting as wire supports in a long run of fence. The following sizes are illustrative.

Netting and tree stakes	0.9 – 3.0 m long	5–10 cm diameter
Fence posts (ordinary)	1.2 – 2.0 m long	min. 6 cm top diameter
Strainers/corner posts	up to 2.3 m long	min 12 cm top diameter
Gate posts	up to 2.6 m long	15–25 cm top diameter

Struts and anchoring stakes are typically 2 m long about 10 cm diameter. Rails are the appropriate length and at least 5 cm diameter.

Other types of stakes will have different dimensions. Supports for tree shelters can be cleft chestnut, rough sawn (3 cm) battens, or small stakes (3–4 cm diam). Hedging stakes, set every metre through a newly laid hedge at about 80°, need only be 3–6 cm diameter.

Cutting and preparing posts and stakes

Stakes usually come from first or second thinnings in plantations, coppices, or from the tops of trees in later thinnings. Once the felled tree is delimited, stake lengths are cut according to need. Most stakes, especially from conifers, are used 'in the round'. However, a large diameter stake can be split (cleft) into two, or sometimes more pieces. Traditional oak post and rail fences are cleft as is the special form of chestnut fencing where palings are wired together – and are often seen cordoning off building sites.

Pointing stakes can be done on a sawbench with a circular saw, but do ensure that you are trained and wear protective clothing. If you only have a few stakes to point, then use a hand axe. Make sure the axe is sharp. Hold the stake firmly at about 25° off vertical and rest the end for pointing on an old tree stump, log or discarded plank of wood. Start trimming off the bottom 15–25 cm with vertical strikes of the axe to create a taper of about 25°. Once one face is tapered turn the stake a half rotation and taper off the



second face. This will leave a wedge shape. Trim the sides of the 'wedge' to fashion the third and fourth faces and so complete the pointing. There's no need for a sharp point, which is easily broken off, a small square end is best.

Preservative treatments

Where non-durable timber is used for stakes or other fencing material that will be in ground contact, preservative treatment is essential. However, simply painting a surface application of a product will not do, despite claims on the container, though diffusion of borate-based preservatives is sometimes possible. For some species the sapwood will retain preservative but the heartwood won't. Some sawmills have on-site preservative treatment plants and may be willing to treat your stakes. It is generally simpler to use species that have some natural durability such as larch, yew, cypress, oak and sweet chestnut.

Note that it is now illegal to use creosote – for me, though, its smell still evokes happy childhood memories of helping my father 'creosote' the garden fence every few years.

A few tips when using stakes

Space does not permit a detailed description of erecting a fence, but here are a few tips from the best of all classrooms, experience in my own wood.

1. Always open up a hole with a crowbar before driving in the stake. This guides the stake down at the right place, helps keep it vertical, and you discover what the soil is like and whether there are stones. Also, the actual driving in of the stake will be easier.
2. Use a proper sledge hammer, not the back of a 7lb axe(!). Better still use a stake-driver i.e. a 1 m long iron tube sealed at one end and with handles, that slips over the top of the stake. Using an up and down pumping action the tube's weight drives in the stake.
3. If the top of the stake becomes badly scuffed or split, cut off the top 1 cm or so with a bow saw after the stake has been fully driven home. Alternatively chamfer (trim back) the edge around the top and splitting will be unlikely.



4. One-quarter to one-third of a stake's length should be driven below ground.

Happy staking.

Using greenwood

Today there is great interest in using freshly cut wood in the round, that is not sawn, and using unseasoned timbers for rustic purposes or even for buildings. Ben Law's famous house built from woodland produce using traditional skills has sparked widespread interest. There are really two key points to note.

Firstly, one works with nature's natural shapes. One looks for a bend or a fork or a certain length for a particular purpose to minimise shaping and cutting the wood itself. Added to this splitting with the run of the grain is preferred to sawing to help optimise strength as the fibres of the wood are not cut.

The second point is that the wood or timber dries *in situ*. As it dries (seasons) some twisting, shrinking, cracking and other movement is inevitable; changes which can go on for a long time. As I write this I am seasoning a 6 ft plank of 3'' × 7'' oak cut from my own wood to use as a mantelpiece. I am, of course, only using the heartwood. And this tests one's patience: it dries very slowly proceeding at about 1'' of thickness per year. Only in about 3 years time will all seasoning induced movement stop and the mantelpiece be ready for life in the warm and dry!

It's good to work with nature, but recognise you are using a very different product from the dried, planed and shrink wrapped offerings of your local DIY store.