



green woodworking



what is it?

'Green' in this context refers to the working of wet or unseasoned wood that has recently been felled or harvested. Freshly cut wood contains a lot of water which will eventually evaporate, causing shrinkage. This 'wetness' can be of benefit in some green woodworking joints which rely on shrinkage to produce a tight fit. Wood can still be considered green for up to a year if left in a round log before being worked. Techniques for shaping green coppiced wood follow the grain, producing softer flowing surfaces - but increased strength, as the wood's linear fibres remain intact. Green woodworking requires a different set of skills and tools to modern carpentry, as well as a closer understanding of the nature of wood and the character of different trees. Originally, all woodworking would have been green. These techniques evolved to shape unseasoned wood when it was soft and pliable, and the wood simply dried over time after it had been worked.

Once a piece of wood is seasoned, it's no longer referred to as green. Seasoned traditionally meant planked timber air-dried for at least a year. During this time the moisture content drops below decomposition level (below 21%) and a substantial amount of shrinkage takes place. Nowadays, most timber is kiln-dried down to below 12% moisture content, and modern carpentry relies almost exclusively on supplies of milled and kiln-dried timber. Green woodworking techniques generally involve splitting and working with the grain rather than sawing through it, causing minimal distortion of the wood during shrinkage and seasoning.

The techniques of Green woodworking cross many disciplines, from boat and house building to expressive arts, furniture-making and home crafts. Many of our customs, expressions and works of art have been inspired by these traditions. Green oak timber framing is also enjoying a revival. This technique is mainly used for barn and house construction. Frames are assembled from large sawn or hewn timbers connected with mortise and tenon joints and fixed with wooden pegs.

what are the benefits?

- Green wood is soft and therefore easy to work with hand tools; this reduces the need for power tools, which are noisy, dangerous, require electricity and can cause dust-related respiratory problems.
- Work can be done outdoors in the fresh air directly after the tree is felled - it's healthy, and gives a sense of connectedness to the trees and to the natural environment generally.

- Most green woodworking products are made from coppiced hardwood; coppicing is the practise of cutting back trees before they reach maturity, after which they re-grow - a bit like a haircut. Trees managed in this way have been know to survive many times their normal life span. Humans have been coppicing for so long that some insects and plants have evolved to prefer this type of habitat; coppicing is a sustainable system of woodland management.
- Most general building timber now is imported softwood; green woodworking has developed around using local wood which means lower embodied energy - in other words, the amount of energy used in its harvesting, transportation and processing. For example, sawn timber has an embodied energy value of around 580kW per tonne, and if it is imported it may be 3 times this much. Brick has an embodied energy value 4 times the above figure, cement 5 times, glass 14 times, steel 24 times, aluminium 46 times and plastics 77 times. Wood you've hand cut has an embodied energy rating of practically zero.
- We have very little woodland left in Britain. Most of what we do have is softwood plantation; native British broadleaf woodland supports a richer diversity of wildlife. Re-establishing economic demand for these woodlands encourages their planting and protection; every bit of wood you use from Britain may also mean less de-forestation or illegal logging elsewhere in the world.



Using a pole lathe.



Log, tools and carved spoons.

what can I do?

You can give it a go by attending a course, and get more information from books. Then, if you're serious, get a basic collection of hand tools, plus a shave horse and pole lathe, after which you can start making kitchenware, presents, toys, furniture, garden structures and general fixings for the home. Your skills will improve with experience and experimentation.

You can make your own shave horse and pole lathe - there are plans online (see resources). Both are what green woodworkers call a 'third hand'. A shave horse is a leg-operated vice and a pole lathe is a leg-operated piece of kit for turning wood using hand-chisels. Both are pretty much essential for a green woodworker. With a pole lathe you can make anything round/cylindrical, like bowls, chair legs, rounders bats etc, and with a shave horse you can make anything square/flat, or with flat edges, like roof shingles, spatulas etc.

A basic toolkit to get started would include:

- froe, for splitting wood
- side-axe, for rough shaping-up (you might manage with a well-sharpened axe / carving axe)
- draw-knife, to finely tune wood on a shave horse

- set of turning chisels to use with a pole lathe
- gouge chisels and spooning knives for carving

Most trees have properties that lend themselves to certain uses. For your first project, cherry, birch and sycamore are good for small carved items, although pretty much any hardwood will do the job. Ash is good for furniture-making as it's so strong (and pretty), and oak or sweet chestnut are good for outdoor work as they are very durable.

It's a useful, enjoyable craft for all ages - safe for kids as you don't need power tools, and easy to get started as you don't need a workshop with power, extractor fans etc. If you don't have access to woodland, try coppice-products.co.uk, where you'll find wood for sale. Look up local foresters or tree surgeons, who might be happy to give you wood for free if you collect.

resources

- see lowimpact.org/green-woodworking for more info, links, courses & books, including:
- Ray Tabor, *the Encyclopedia of Green Woodworking*
- Rebecca Oaks & Edward Mills, *Coppicing & Coppice Crafts*
- Michael O'Donnell, *Turning Green Wood*
- bodgers.org.uk: Association of Pole Lathe Turners & Green Woodworkers - pole lathe plans
- coppice-products.co.uk - source of wood
- woodsmithstore.co.uk: green woodwork tools
- wholewoods.co.uk: courses, building, stays
- greenwoodworking.com: shave horse plans



Shave horses with draw-knives.

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