

Everything you ever wanted to know about firewood (and more...)

Woodburning stoves are enjoying a resurgence as homeowners start to appreciate the aesthetic appeal and environmental benefits of burning wood to heat their homes. However, it pays to understand a little about how to manage your firewood supply properly for a truly sustainable and trouble-free wood-burning experience.



What type of wood should I burn?

Both hardwood (from deciduous trees) and softwood (from conifers) are suitable for burning on a stove. Softwood is less dense, therefore it will burn more quickly and you will get less heat from the same volume of wood, however as it is lighter it's easier to handle and split for kindling, if necessary.

Within these two categories there are small differences between types of wood, e.g. oak is very dense and will burn quite slowly, however as long as the wood is dry and well seasoned any species should burn ok. Needless to say, however, steer clear of treated or painted wood, MDF etc as when burnt these release harmful chemicals into the environment; the acidic gases can also damage your stove and flue and invalidate any warranty.

Where should I get my firewood from?

The key to sustainable wood-burning is to source wood locally. Within south Hampshire there are a number of suppliers who generate firewood from local coppicing and thinning activities - these help to regenerate neglected woodland, absorbing carbon as new growth is encouraged and helping wildlife to re-colonise by letting in more daylight.

Try to steer clear of national suppliers - wood that is moved hundreds of miles, or even shipped from overseas, loses much of the carbon emission savings in transport emissions. National suppliers are invariably more expensive in order to cover their transport costs. Always ask potential suppliers where they source their wood as even local suppliers buy wood in from across the country sometimes.

Other sources to investigate are arborists and woodworkers - some will happily give wood away as it circumvents having to pay disposal charges.

How well seasoned should wood be?

Most stove manufacturers recommend that wood should be seasoned so that it has a moisture content of 20% or less. The damper your wood is, the less useful heat you will get out of it - more heat from burning will be used to boil off the moisture rather than heating your room. Burning damp wood has knock-on effects in increasing the amount of soot and tar in the flue, leading to air pollution and the risk of chimney fires.

Damp or unseasoned wood is also very difficult to light and/or keep alight, needing a lot more attention than dry, well-seasoned wood. As a rule of thumb, if you can hear any hissing from your logs when you open the stove door, then they are too damp.

If you burn a lot of wood then a moisture meter (*right*) is an excellent investment - these can be purchased from around £10, and will help you to gauge when your wood is ready to burn. When you measure moisture content, always split open a log with an axe and measure on the newly-exposed face - the ends dry first, therefore taking a reading on the outside without splitting will usually give the impression that the wood is drier than it really is.



When should I buy my firewood?

Many suppliers offering "well-seasoned" wood seem to take seasoned as meaning a moisture content of 25-30% - too damp to burn effectively. We recommend that you purchase firewood in spring and summer and store it for a few months to allow the sun and wind to dry it thoroughly in time for the heating season (see next page).

Another good reason to buy in the spring or summer is that it helps to even demand out from a supply point of view. Many people wait until autumn to order their wood, resulting in a rush of orders in October as the first frosts arrive. You can sometimes be left waiting weeks for a new delivery in the winter if your supplier can't keep up with orders, and you may also end up with wood damp from being stored in the rain, even if it is fairly well seasoned.

Everything you ever wanted to know about firewood (and more...)

How is firewood delivered?

Firewood is (or should be) supplied by loose volume, usually split and cut to a length of between 8 and 12 inches - sometimes you can specify shorter lengths if you have a particularly small stove.

The best value firewood is usually delivered as a loose tipper load - typically 1-2 cubic metres - however it can also be delivered in builder's/bulk bags. These bags are typically only 0.6 cubic metres, and hold a deceptively small amount of logs. When you are looking to order firewood, always ask the supplier what volume they are delivering - they should know even if they don't!

Typical prices at time of writing for loose loads of seasoned hardwood (e.g. oak, ash, beech) are £85 for 1.2 cubic metres, or £100 for 2 cubic metres. Softwood and unseasoned wood can sometimes be found offered a little cheaper.

How should I store my firewood?

As mentioned above, even firewood advertised as dry and seasoned usually needs further seasoning before it will burn well. If you burn a lot of wood during the winter it pays to have plenty of storage to ensure you have a continuous supply of dry wood - ideally a year's worth if you have the space.

Flat-packed logstores are available online which can store up to 2 cubic metres of wood - these can make a nice feature in the front or back garden. If you're ok with DIY you could also try making one yourself from old pallets. Many people store wood in an open covered porch or similar area - this can be more convenient for bringing into the house if it's dark and raining!

The key points to remember are that wherever you store wood for seasoning, it must be kept outside where the wind can help the process along. Stack wood off the ground (e.g. on old pallets) to help airflow and keep the wood dry - cover the top with a secured tarpaulin during the winter if the stack is out in the open, but make sure the stack sides remain uncovered.

How does burning wood help/harm the environment?

If you are careful to source your firewood from a sustainable source (see above) then you will be reducing your carbon emissions by approximately 95% once processing and transport are taken into account, compared to

heating your home with natural gas. Woods managed sustainably through practices such as thinning absorb carbon more quickly than unmanaged mature woodland, and over a number of years the carbon dioxide released by your fire will be absorbed by new growth.

On the downside, burning wood causes particulate emissions, which can be a problem in built-up areas - in smoke-control zones you must choose an 'exempt' clean-burning stove to reduce the contribution to air pollution.

The most damaging emissions are 'black carbon', caused by incomplete combustion - this usually happens as a result of burning damp wood, or letting your fire smoulder. Tell-tale warning signs are soot building up on stove glass, and visible smoke from your chimney (*right*). 'Black carbon' also contributes directly to global warming by absorbing more of the sun's radiation.



You can limit the generation of 'black carbon' by ensuring you only burn dry wood, getting your stove up to temperature rapidly and never fully closing the damper. A flue thermometer will help you to gauge how efficiently you are burning your fire. There will still be emissions from your flue, however those particulates generated when burning a hot fire are believed to counter the greenhouse effect on a short-term basis by helping to reflect the sun's warmth out to space, in contrast to 'black carbon'.

About Eastleigh Transition Network

Transition is a community-led response to pressures of climate change, fossil fuel depletion and increasingly, economic stagnation. Eastleigh Transition Network aims to support everyone living or working in the Borough of Eastleigh to plan for a 'transition' from our current total dependency on fossil fuels - to support our local economies and move towards a more viable and sustainable future. etnet.org.uk

About Expert Energy

Expert Energy are Romsey-based independent energy consultants providing energy-saving services to homes, businesses and other organisations. Services include energy surveys, thermal imaging and impartial advice on generating your own energy. expert-energy.co.uk