Firewood – some tips to get the best out of it

These guidelines have been produced to help you get the best out of it and your firewood stoves and boilers.

Burn dry wood.

Burning dry wood:

Gives you the maximum heat possible from the timber.

Keeps the fire burning without any problems.

Avoids the build up of waste substances in the stove, flue and chimney and the problems associated with this.

Newly cut wood is very wet
When a tree is cut down or pruned, the resulting cut timber can be very wet – up to over 70% water in some cases. The cut timber should be properly dried before it is burned as firewood.

Burning wood which is not dry

Causes tar and the build up of other waste substances in the stove and the flue, which can lead to chimney fires and chimney corrosion.

Is inefficient – all the fire's energy goes into driving the remaining water out of the log rather than producing heat.

Doesn't produce much heat. Wet logs smoulder, produce smoke and steam and don't produce many flames or burn well.

Shortens the life of your boiler if your stove is fitted with one.

Can be extremely damaging when burned in combination with solid fuel. Much of the solid fuel supplied nowadays has a high sulphur content. When water vapour from wood combines with sulphur, you are likely to precipitate sulphurous acid on to any cold surfaces within your system.

How do I ensure that my firewood is dry?

When you contact your firewood merchant about a delivery, ask how long the firewood has been seasoned, and how it has been seasoned.

Fully seasoned firewood should have been stacked in a well ventilated location and

a) if your supplier operates in a drier part of the country it should have been seasoned in this way for 2 years; or

b) if your supplier operates in a damper part of the country it should have been seasoned under accelerated conditions (e.g. in a polytunnel) to ensure that it is as dry as possible.

If you are in any doubt whether your supplier has fully seasoned your firewood, you should arrange to stack it for the necessary length of time to let it finish drying out properly before you use it.

If you are stacking your timber at home to get the best drying effects, ensure that it is sawn and split, then stack it off the ground, for example on pallets:

- Out of doors, in an open sided shed or structure so that fresh air can circulate around each piece of firewood.
- Under a roof or eaves.
- If you live in a damp part of the country, it is possible that the "dampness" of the air will prevent the timber from becoming sufficiently dry through standard air drying. In this case, you should consider using a more proactive form of drying. For example, you can stack the wood on pallets in a polytunnel which is open at both ends, facing into the prevailing wind. That way, drying can be carried out, relatively quickly, by a combination of wind and solar energy.

As a temporary measure, you can cover firewood with a tarpaulin, but this is not recommended as a permanent solution. Stacked wood will also dry if it is left open to the elements, but it will dry much more slowly, and may be prone to developing rot.

What woods burn best?

When wood is dried thoroughly and burned in a closed stove, there is virtually no difference in energy output between hard and soft woods. The main difference between hard woods and soft woods is the volume of the wood you will need to burn. Well seasoned softwood logs provide a good flame and burn well, but burn out more quickly than a hardwood log of the same volume.

The weight of softwood is around 50% bulkier in volume than the same weight of hardwood, so to obtain the same heat output from softwood logs as from hardwood logs you will need to use 50% more volume.

A reputable firewood supplier will be able to tell you what type of timber you can expect to receive from them, and they will also be able to give you advice.

How much firewood will I need?

There are no straightforward answers to this question. The amount of firewood you will need may range from a few bags to several tonnes per year, and depends on a number of factors. These include:

- the size and insulation levels of your house,

- whether or not you use firewood regularly,
- whether you use it to heat a room, your hot water and / or your whole house, and
- how warm you like to keep your room or house.

Your firewood supplier should be able to provide you with an indication of how much firewood you are likely to need to meet your specific requirements.

How do I get the most out of my firewood?

If you burn logs on an open fire, it is worth bearing in mind that this is only about 10% efficient (i.e. 90% of the heat produced by the logs goes up the chimney), compared with the 70%+ efficiency of many wood burning stoves.

There are a number of clean burn stoves on the market, so if seeing living flames is important to you, you can still see the flames from your wood fire while burning your firewood efficiently.

Your firewood system will run most efficiently if your chimney heats up quickly when the fire is first lit. One way of achieving this is using a "low-mass" chimney system. An existing chimney can be converted to a low-mass chimney. Ask your stove supplier for further details.

Keep your stoves clear of tar and other waste substances. If your stove and/or chimney are showing signs of excessive tar and soot deposits, **and you do not have a steel sectional flue or flexible flue liner,** you can use a chemical cleaning powder. It is recommended that this are used in conjunction with sweeping the chimney.

Your chimneys should be inspected at least twice per winter season and swept as necessary.