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1.5 Excellent firewoods and those to avoid

Firewoods widely recognised as 'excellent'

Woods that are widely considered excellent for burning are largely of high density, with high heat output. When fully seasoned, these types of woods will provide a long-lasting hot burn, though frequently your fire will benefit from burning these woods in a mix with a lower density wood emitting a strong but short-lived flame.

Amongst these 'excellent' firewoods, those that are probably the favourites in the UK are **oak**, **beech, birch** and **ash**. These are the firewoods offered by most hardwood suppliers.

Other firewoods commonly known in the UK to be 'excellent' include **almond, apple, hawthorn and** (some think) **robinia.** These woods are much less widely available, but may sometimes be obtained from specialist sources or may be offered from trees felled locally to you.

Suppliers' special enthusiasms

Just a word about some further types of firewood that certain suppliers have adopted for particular merits that include good burning qualities - and fast growth which makes them economical. Amongst these are **larch**, **eucalyptus** and **hornbeam.** A word about each of these follows.

One of the UK's most visible suppliers, Firewood Express, based in Arbroath, acclaims **larch.** Larch (photo right) is said to be "a hard softwood" and is also stated by the supplier to be "the best bang for buck'" firewood available, as a result of its high energy output, quick growth and plentiful supplies. To quote Firewood Express further:

> "Although a softwood, (larch) is the best quality softwood available. It has a great **calorific (energy)** density (actually improved **gram** for **gram** over hardwood due to the relatively energy-dense resins)."

An award-winning supplier, Wildwood Fuel, of Cornwall, has created its own **eucalyptus** woodlands for a highly sustainable kiln-drying operation, stating:

> "Eucalyptus was a clear winner when deciding which trees we would be planting at Wildwood. These trees have many amazing properties that make them uniquely suited to become the perfect kiln dried logs."

Wildwood Fuel points to eucalyptus characteristics of fast growth (an astonishing 2m per year), high density and a high natural oil content, leading to a hot-burning and long-lasting fuel.

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Harvested eucalyptus wood behind growing young trees.

A Yorkshire-based supplier called Fitzpatrick Fuels sings the praises of **hornbeam,** a dense hardwood. Hornbeam is not especially well known as a firewood in the UK, nor available from most suppliers.

Hornbeam has a long burn duration with high heat output and an excellent flame. The supplier states:

> "Hornbeam firewood has a similar appearance to ash firewood. However, it is much heavier and has a similar calorific value to oak logs".

Hornbeam logs

The rather decorative appearance of 'African Ironwood', nickname of imported Namibian firewood.

A Berkshire-based firm, Wood Junkies imports "sustainably sourced **Namibian firewood**" with a moisture content of less than 2%.

Wood Junkies point to their 'Ready to Burn' certification and say:

> "Our wood has virtually zero smoke production, burns at high temperature and lasts far longer than other fuel woods.

Firewoods generally considered 'poor'

Trees that are generally considered to produce particularly poor firewood include **willow, alder, lime, poplar, chestnut, horse chestnut** and **wellingtonia** (giant redwood). These woods suffer various problems, including mediocre flame and spitting - but mostly they are deemed poor as a result of low heat output.

In sum, every tree species is individual in terms of the characteristics of the firewoods that it produces. Check the table at Annex A for a comprehensive listing.

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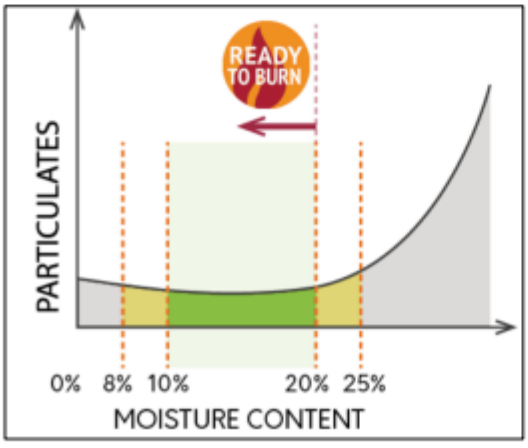
2 Moisture content MATTERS

2.1 Say 'no' to wet wood

The burning of unseasoned wood leads to incomplete combustion and has many negative outcomes. The most important of these are listed below.

- Fires that are hard to start and difficult to keep going.
- A serious loss of heat output, largely caused by the energy taken up in evaporating moisture before the wood can burn.
- Excessive smoke, often heavy blue or black, together with unpleasant smoky smells.
- More popping and spitting than the seasoned version of the same wood, increasing the risk of carpet fires and other damage from open fireplaces.
- Dirty firebricks and stove interiors, together with sooty clouding of the glass in stove windows and, ultimately, shortening of stove life.
- Excess of particulate matter, polluting the air in homes and damaging health.
- Dirty residues over all surfaces in the home, needed much dusting or wiping down. Especially problematic for the brightness of walls and curtains.
- Rapid creosote build-up in the flue and chimney, potentially causing damage to your flue lining, whilst increasing the need for cleaning and the risk of chimney fires.
- Harmful emissions and environmental damage well beyond the confines of your own home.

Do note that if the wood is wet, not because it is unseasoned but because it has been exposed to rain or placed on damp ground after seasoning, this is a different matter in terms of the time that will be taken to dry it out. If you can get water-wet wood to a warm place with free air flow, it will dry out surprisingly quickly and will then again be ready for use. In contrast, unseasoned wood will take months to reach a suitable level of dryness.



We talk about Hetas, Woodsure and the Ready to Burn scheme on pages 33 - 35.

Here, we'll simply note that the scheme identifies an upper limit of 20% moisture content in order for a firewood log to be deemed suitable for burning.

It can be seen from the graph on the left that particulate emissions in the burning process start to increase above 20% moisture content, and increase substantially above 25%.

The graph is promoted by Hetas and Woodsure to underline the dangers of burning firewood logs with a moisture content above 20%.