



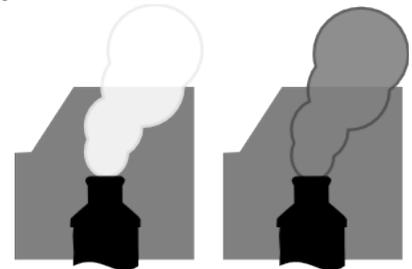
**SMOKE** isn't just dirty and unpleasant, it is a nasty poison which can damage the health of people even a long way away. This leaflet is about how to be a good neighbour and operate your wood stove so that it makes lots of heat but very, very little smoke.

## What Smoke is

Smoke is tiny particles of fuel which haven't burned properly. With care, you can operate your stove so that it burns almost all of its own smoke, giving you much more heat for less fuel and almost nothing visible out of the chimney at all. **But every log, chimney and fireplace are different, so, while we can give you good advice, the only way to learn what works best for you is to keep nipping outside to take a look at the chimney. If you see dark smoke, other than just a little when first lit, your stove isn't burning well.**

## Dark Smoke and White Smoke

The nasty stuff is 'dark' smoke - visible against a light sky but difficult to see at night or on a dark background. White 'smoke' is mostly harmless water droplets, visible against a dark background but difficult to see against a light sky.



White Smoke

Dark Smoke

## First - Make sure your chimney is right

Your chimney creates the 'draught' which sucks air into the stove to burn the fuel - and burn the smoke. The chimney needs to be tall, smooth, fully sealed and very, very hot inside to work properly. If your stove persists in smoking, it may be a good idea to have the draught tested - if it is less than about 12 Pascals, there are likely to be problems.

## Get the Right Logs

When wood is cut down its cells are full of water. Burning such 'green' wood wastes heat in making steam, produces acid tars which will damage your stove and chimney, and it makes *lots* of smoke. Logs must be 'seasoned' - dried out to a maximum of 15 to 20% water - which usually means splitting them to expose the insides and leaving them in a well-ventilated dry place for about a year. The difference is huge - a dry log gives roughly *double* the heat per kg and produces far, far less smoke

### GOOD WOOD

**A good, dry, seasoned, wood log:**

Will feel dry

Will have a hollow sound when tapped

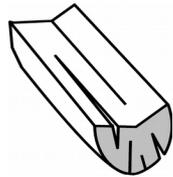
Will usually be free from bark

Often has cracks in the end where it has dried out

Will usually have been split, not left 'in the round'

Will burn easily and cleanly

Will usually measure about 100 to 200 mm across



### BAD WOOD

**A bad, unseasoned, wood log:**

May feel damp and dense. May have moss or mould

Will have a dull sound when tapped

May have bark firmly attached

May be solid and free from radial cracks

May be round. May have leaves attached

Will hiss, spit and smoke when burned

May be in big, big pieces



Very dry joinery waste can be a fine fuel, but watch out - it is often softwood, which can re-absorb water if stored in damp conditions.

## 1 Light the fire fast with little sticks...

Use one or two firelighters together, or some screwed up dry newspaper, under a handful of very dry little 'kindling' sticks to get the fire going very hot and very quick. You'll probably find that having both the lower ('primary' or 'underfire') and upper ('secondary' or 'overfire' or 'airwash') stove air controls fully open works best, but with some chimneys you may need to open the stove door a little to give an extra boost.

## 2 ...get it hot with a small log or two...

Once the fire is really hot and well lit, gently add a very small log or two. Put them criss-cross, so air can circulate between them. Tightly close the stove door, and, when the logs are burning well, adjust the air controls to give a lazy, translucent, mauve flame with no smoke.

## 3 .....adjust with care...

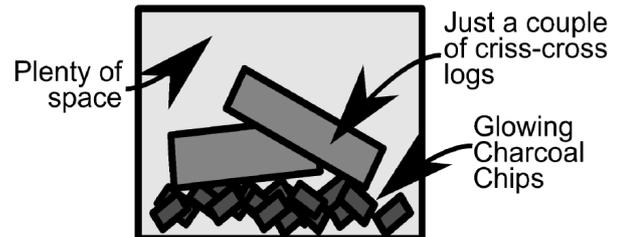
It is usually best to have the stove's upper control somewhat open and the lower air control almost completely closed. But this depends on the nature of the fuel, the chimney, the air supply, the room and the weather, so it may take some experience to find out which settings are best for you. There is no straightforward answer - keep checking that chimney!

## 4 ....fuel up little and often!

Once the logs start to break up, use the poker to very gently tap them down into an even bed of glowing charcoal. Then keep the fire going by adding just one or two logs every hour or so - this way you may be amazed how much smoke-free heat you can get from so little wood.

Don't have a fire blazing away with vigorous yellow flames, or filled to the top with logs, it will be wasting much of its heat and producing dangerous smoke.

## 5 ....If the fire dies down, don't just fill it back up with big logs - first get it really hot again with some little kindling sticks.



Plenty of space

Just a couple of criss-cross logs

Glowing Charcoal Chips



Keep checking that chimney!

**SAFETY TIP:** Always ensure your home has functioning smoke and carbon monoxide detectors!

Under the UK Clean Air legislation Local Authorities can declare 'Smoke Control Areas' where it can be an offence to emit smoke, to obtain or use smoky fuels, and where you are required to burn either an 'authorised' smokeless fuel (which doesn't include wood in the UK) or to use an 'exempted' stove.

Contact your local authority to see how this applies to you, or go to <http://smokecontrol.defra.gov.uk>

## **Legislation**

### **UNITED KINGDOM**

"The Clean Air Act 1993 and Smoke Control Areas"

Under the Clean Air Act local authorities may declare the whole or part of the district of the authority to be a smoke control area. It is an offence to emit smoke from a chimney of a building, from a furnace or from any fixed boiler if located in a designated smoke control area. It is also an offence to acquire an "unauthorised fuel" for use within a smoke control area unless it is used in an "exempt" appliance ("exempted" from the controls which generally apply in the smoke control area).

In England appliances are exempted by publication on a list by the Secretary of State in accordance with changes made to sections 20 and 21 of the Clean Air Act 1993 by section 15 of the Deregulation Act 2015. Similarly in Scotland appliances are exempted by publication on a list by Scottish Ministers under section 50 of the Regulatory Reform (Scotland) Act 2014. In Northern Ireland appliances are exempted by publication on a list by the Department of Agriculture, Environment and Rural Affairs under Section 16 of the Environmental Better regulation Act (Northern Ireland) 2016. In Wales appliances are exempted by regulations made by Welsh Ministers

Further information on the requirements of the Clean Air Act can be found here: <https://www.gov.uk/smoke-control-area-rules>

Your local authority is responsible for implementing the Clean Air Act 1993 including designation and supervision of smoke control areas and you can contact them for details of Clean Air Act requirements

### **REPUBLIC of IRELAND**

A ban on the burning of smoky coal and other prohibited fuels now applies in all smoky coal ban specified areas to complement the ban on the marketing, sale and distribution.

Complaints regarding the marketing, sale, and distribution of prohibited fuels or smoky emissions from the use of prohibited fuels in smoky coal ban specified areas should be reported to the environment section of your local authority.

Further information on the requirements can be found here [www.environ.ie/en/Environment/Atmosphere/AirQuality/SmokyCoalBan](http://www.environ.ie/en/Environment/Atmosphere/AirQuality/SmokyCoalBan)