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## WOOD SMOKE

### What are some problems with wood smoke?

Wood smoke is a pollutant that can adversely affect our health as it contains very small airborne particles that can be trapped in our lungs when we breathe. These fine particles can aggravate respiratory illnesses such as asthma and emphysema and also affect people who have heart conditions. Elderly people and very young children are the most at risk.

Research has confirmed that the smoke produced by incorrectly operated domestic wood heaters is the main cause of the brown 'stain' that often appears in the Perth skies during winter, particularly on cold windless days. This pollution problem is called haze and is unfortunately getting worse.

### What can I do to help?

#### Store Right

The use of dry firewood makes a large difference in how much pollution your wood heater produces. Wet or green wood doesn't generate much heat, causing the wood heater to smoke excessively.

- If you stock pile wood during summer, you can ensure there is an adequate supply of firewood for winter and allow sufficient time for the wood to dry and become well seasoned (keep for 4 – 6 months). Hardwoods are preferable to softwoods (pinus radiata).
- It is now illegal for fire wood retailers to sell wood with moisture content of more than 20% moisture. Dry wood should be light pink and make a hollow cracking sound when two pieces are banged together.
- Split logs dry faster than large logs, so it is recommended that you split your wood into pieces about 10 – 15cm thick before you store it.
- Store your firewood loosely in a place that is well ventilated and protected from the weather.



#### Burn Bright

A continuously smoking fire is the most obvious sign of inefficient burning. A properly operated heater should only be smoky when it is first lit or when additional wood is added. Careful operation and maintenance of your wood heater will result in the economical use of wood saving you time and money.

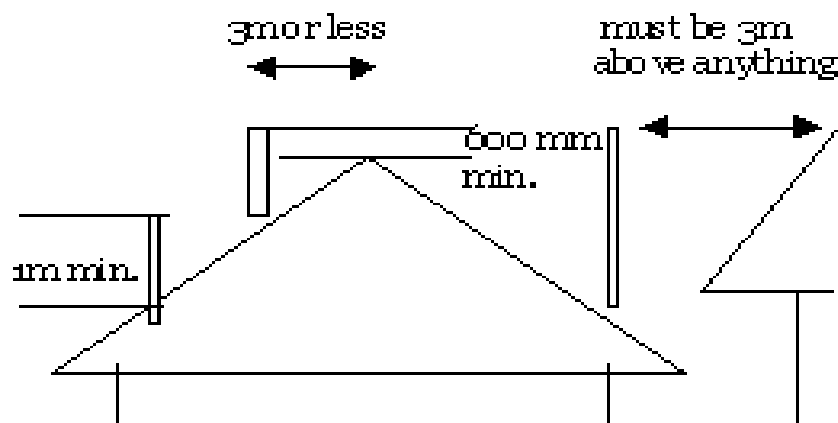
- Clean your chimney regularly. A build up of soot in your chimney will reduce the fire's efficiency and can cause chimney fires. Never burn household rubbish or chemically treated wood in the heater as you may produce toxic or corrosive gases.
- The fire should be started using kindling wood, firelighters or paper so that a hot fire can be obtained as soon as possible.
- Larger pieces of wood can then be added in a crisscross fashion after a bed of coals has been established. The air controls should be left fully open for 30 minutes as it will heat quickly, burn the wood completely and cleanly.

Every time you add more wood to your fire, leave the air controls open for 15 – 20 minutes to allow the new wood to burn properly, you may then turn down the controls to give a comfortable fire.

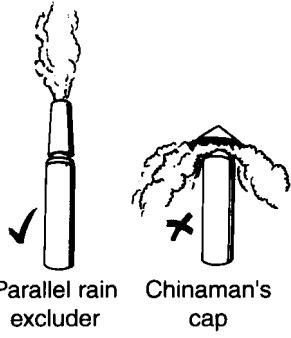
- Do not shut the flue down over night or when you leave the house as this also cause excessive smoke that may fall on your neighbours. Let the fire burn out completely overnight. An insulated house will hold enough heat to keep your home warm.
- An efficient fire should have bright swirling flames and red glowing embers, the chimney should have little or no visible smoke coming from it. Check your chimney regularly and if it is smoking too much open the flue to allow proper airflow.

### Choosing a Suitable Wood heater

- The heater should be manufactured and installed to Australian Standard AS 4013.
- The size of the heater is very important. A heater that is too large for the room space produces unnecessary heat that will need to be turned down reducing efficiency, creates smoke and fouls the flue with creosote.
- The heater should have a flue that extends 1 metre above roof penetration. This can be reduced to 600mm if the flue is within 3 metres of the roof ridge.
- Where possible the flue should be fitted with a venturi cowl or parallel rain excluder that encourages smoke to travel vertically rather than a Chinaman's cap, which restrict airflow.



**NB: Recommended distances for chimneys**



Should you require further information please contact one of the City's Environmental Health Officers on 98419333.

**\*\* DISCLAIMER \*\***

This information sheet is a guide only. Verification with original Local Laws, Acts, Planning Schemes, and other relevant documents is recommended for detailed references. The City of Albany accepts no responsibility for errors or omissions.

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