

# YOUR GUIDE TO USING A WOOD HEATER

Canberra's overall air quality compared to other cities is excellent; however has a winter particle pollution problem due to emissions from wood heaters used for home heating. Wood smoke contains a range of pollutants which can be harmful to the environment and your health. The particles in wood smoke are very small and are readily inhaled.

## EFFICIENT OPERATION OF YOUR WOOD HEATER

The key to clean and efficient wood heating is using your wood heater correctly. Incorrect use produces insufficient heat, causes pollution and wastes money. Get the most out of your wood heater:

- Buy the right size heater - a heater that is too large for an area will have to be turned down too often, resulting in reduced efficiency and smoke pollution.
- Always use the type of fuel listed on the heater's compliance plate or recommended by the manufacturer.
- Never overload your heater. It prevents efficient combustion and is also a waste of fuel. Many of the heat producing gases will be lost up the chimney, contributing to air pollution.
- Do not let your fire smoulder - a fire set on a low air setting causes excessive smoke pollution and wastes heat.
- Check your chimney for smoke regularly. If it is smoking excessively, you are wasting fuel and heat and adding to smoke pollution.

- Ensure your wood is dry and well seasoned so that it burns cleanly and efficiently. Unseasoned wood contains a great deal of moisture which delays efficient burning, causes smoke and other pollutants and leads to a loss of heat through the flue.
- Have your chimney or flue cleaned before each winter. Creosote, a dark brown tarry substance, builds up over time and is caused by burning your fire for long periods on a low air setting, or using unseasoned wood. A build up of creosote can cause excessive smoke and chimney fires.
- Do not burn plastics, wood that is painted, chemically treated or contaminated with chemicals or unseasoned wood (greater than 20% moisture content) as it is illegal under the *Environment Protection Act 1997*.

## SUCCESSFUL BURNING TECHNIQUES

Help reduce air pollution and save money on energy costs by using the following efficient heating techniques.

- To get your fire started, use kindling wood, paper and firelighters. Larger pieces of wood can then be added after a bed of coals has been established.



- Ensure you use dry, seasoned untreated wood so it burns cleanly and efficiently.
- Efficient burning only occurs when adequate air is supplied to the fuel. When you start your fire always leave air controls fully open. You can expect some smoke at first, but if you are operating your wood heater correctly there should be no visible smoke after 20-25 minutes.
- Keep your fire going at a steady rate.
- To obtain complete burning you need a high temperature and enough air flow so coals and flames glow brightly.
- If the fuel load has burnt down very low and only a few red coals remain, do not add large logs. Instead, add some paper and small wood pieces to get the fire re-started.
- Before reloading your heater, fully open the air control for about five minutes.
- After reloading, keep the air control open for at least 20 minutes to ignite the fresh load quickly and get it burning well.
- Where possible don't use your wood heater overnight. A fire on a low setting causes excessive smoke pollution and won't heat your house.

## BUYING AND STORING WOOD

Efficient burning from your wood heater can only be achieved if quality dry firewood is used at all times.

To get the most from your heater follow these simple tips for buying and storing wood:

- Always buy wood from an authorised firewood merchant. Firewood merchants must:
  - supply by weight not volume
  - supply only seasoned wood
  - provide a written statement of the weight of the load
  - offer mixed loads wherever possible.
- Generally, softwoods (e.g. pine) are light in weight and burn quickly, while hardwoods (e.g. red gum) burn longer and steadier. Ideal firewood is dense, dry and easy to split. Weight for weight pine generates the same heat output as other woods.
- Wood should be split to size and stored undercover in a dry and ventilated area. Stack wood on pallets or loosely off the ground in a criss-cross fashion to allow air to circulate freely.

## HEATER AND FLUE MAINTENANCE

- Efficient burning begins with basic heater maintenance. Whatever the age of your wood heater, use it correctly to reduce the need for repairs and servicing.
- Check your heater and flue prior to every heating season. Have your flue swept by a professional chimney sweep or you can do it yourself.
- Check the heater regularly. Firebricks can break and baffle plates can burn out. Seals around doors and ash removal trays should also be checked.
- Don't let ash build up higher than the base of the door.
- Make sure your chimney is high enough to disperse smoke. Australian Standard AS2918 requires a minimum clearance of 600 mm from any structure within a 3 m radius of the flue.
- A well-maintained heater and flue combined with correct fuel burning techniques will increase the efficiency of your heater.

## LEGAL REQUIREMENTS

If you follow the information provided, your wood heater should run cleanly and efficiently limiting smoke and environmental nuisance. Under Section 12 of the Environment Protection Regulation 2005 a person should not light, use or maintain a fire inside a building unless the person takes such steps as are practicable and reasonable to prevent or minimise the environmental harm caused, or likely to be caused, by the emission of pollutants into the air from the fire. If your wood heater produces excessive smoke and a complaint is received and validated, a warning letter or fine may be issued, or, depending on the circumstances, an Environment Protection Order (EPO) may be issued. A breach of an EPO is a serious offence and could lead to prosecution in court.

## FOR MORE INFORMATION

Contact the Environment Protection Authority by calling Access Canberra on 13 22 81.

Go to [www.accesscanberra.act.gov.au](http://www.accesscanberra.act.gov.au) for more information relating to air pollution

Updated February 2022

Further Information | Phone: Access Canberra on 13 22 81 | Email: [environment.protection@act.gov.au](mailto:environment.protection@act.gov.au) | Web: [www.act.gov.au/accesscbr](http://www.act.gov.au/accesscbr)

**Note:** This guidance material has been prepared using the best information available to Access Canberra. Any information about legislative obligations or responsibilities included in this material is only applicable to the circumstances described in the material. You should always check the legislation referred to in this material and make your own judgement about what action you may need to take to ensure you have complied with the law. Accordingly, Access Canberra extends no warranties as to the suitability of the information for your specific situation.