



Local Government Air Quality Toolkit

# Neighbourhood smoke guidance note

Information for council officers to manage neighbourhood smoke to protect the community from smoke impacts

## Acknowledgement of Country

Department of Climate Change, Energy, the Environment and Water acknowledges the Traditional Custodians of the lands where we work and live.

We pay our respects to Elders past, present and emerging.

This resource may contain images or names of deceased persons in photographs or historical content.

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Published by:  
Environment Protection Authority and  
Department of Climate Change,  
Energy, the Environment and Water  
Locked Bag 5022, Parramatta NSW 2124  
Phone: +61 2 9995 5000 (switchboard)  
Phone: 1300 361 967 (Environment and Heritage enquiries)  
TTY users: phone 133 677, then ask for 1300 361 967  
Speak and listen users: phone 1300 555 727, then ask for 1300 361 967  
Email [info@environment.nsw.gov.au](mailto:info@environment.nsw.gov.au)  
Website [www.environment.nsw.gov.au](http://www.environment.nsw.gov.au)

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# 1. Introduction

This guidance note provides general information on the sources of neighbourhood smoke, applicable legislation to manage neighbourhood smoke and non-regulatory options to protect the community from neighbourhood smoke. It does not cover agricultural burning (which is covered in the Local Government Air Quality Toolkit – *Agricultural burning guidance note*).

Neighbourhood smoke refers to smoke originating from various sources within a residential area. This includes wood heaters, wood-fired cooking stoves, open fireplaces and open/backyard burning, including use of fire pits.

In New South Wales, day-to-day management of wood smoke emissions is at the local government level, supported by the NSW Government. Smoke from solid fuel heaters and open burning is regulated under the *Protection of the Environment Operations Act 1997* (POEO Act), *Protection of the Environment (Operations) Clean Air Regulation 2022* (Clean Air Regulation) and the *Local Government Act 1993* (LG Act).

For the purpose of this guidance note ‘solid fuel heater’ includes wood heaters, open fireplaces and wood-fired cooking stoves.

Councils have an important role in managing neighbourhood smoke to achieve positive outcomes for the community and the environment.

## 2. Sources of emissions to air

Burning produces emissions of smoke, particulates, partially combusted products, and associated odour. Each of these can have adverse off-site impacts if not properly managed.

Smoke contains a range of pollutants resulting from both the complete and incomplete combustion of the solid fuel. These pollutants include carbon monoxide and particulates of varying composition (respirable and inhalable). The fine particles consist of black carbon (i.e. soot) and other material formed through the incomplete combustion process of the solid fuel, such as the group of chemical compounds generally referred to as polycyclic aromatic hydrocarbons (PAHs), which may also adhere to the soot particles.

The main sources of air pollution from the domestic sector are solid fuel combustion heaters (wood heaters, fireplaces and wood-fired cooking stoves) and burning in open fires such as fire pits. Domestic solid fuel heaters are estimated to contribute significantly to air particle pollution in winter. For example, the Sydney air quality study (DPE 2022b) found that wood heaters specifically account for 20% of population-weighted annual average PM<sub>2.5</sub> concentrations across the NSW Greater Metropolitan Area (GMA). The associated health costs from premature death or years of life lost due to wood heaters is estimated to be \$2 billion per year in the NSW GMA, with wood heaters having the highest health impact of all major air pollution sources.

Wood heaters have been surveyed and found to contribute significantly to a range of air pollutants, as indicated in the Sydney air quality study (Part 4, Table 5). PM<sub>2.5</sub> emissions from wood heaters in the NSW GMA for example, are higher than from motor vehicles, non-road diesel and marine engines, and power stations.



The contribution of wood heaters to air pollution can also be significant in some regional areas, where the climate can be colder and wood heater ownership and usage is higher than in the GMA. For some people in some of these areas wood heaters may be the only viable and cost-efficient form of heating.



**Figure 1**      **A smoke affected community**

Source: Air Policy/DCCEEW

Solid fuel heaters are also a source of indoor air pollution and can pose a health risk to residents of a home. NSW Health has information about limiting exposure to indoor air pollution on its *Indoor air pollution* webpage (NSW Health 2022).

## 3. Managing air pollution

The environmental management and resolution of any air pollution-based nuisance or off-site impacts caused by smoke, particulates or odour from a residential premise is the primary responsibility of the homeowner or resident.

The following sections describe education approaches, planning controls and regulatory measures that can be considered and adopted.

### 3.1 Wood heater education

#### Community education

Smoke from residential solid fuel heating, commonly referred to as ‘wood heaters’, can contribute significantly to fine particle pollution.

By raising awareness about the harmful impacts of woodsmoke and the benefits of correct wood heater operation, community education programs can achieve substantial reductions in the number of excessively smoky chimneys.

Minimising the emission of visible smoke from wood heaters and fireplaces can have substantial health benefits for the community in view of the harmful impacts of wood smoke.

To help councils implement community education programs that target woodsmoke, the NSW Environment Protection Authority (EPA) has produced educational materials tailored for a range of media including radio, TV and social media. These include animations, printable resources, social media adverts and ‘myth busters’. For further information visit the EPA’s *Wood smoke resources for local government* webpage (EPA 2021d).

Figure 2 shows an example from the EPA *Council resource kit* for wood smoke emissions (EPA 2022a).

The EPA’s website also has information on wood heater emissions and tips for reducing wood smoke pollution that councils can refer to (EPA 2021b, 2021c).

#### Smoky chimney surveys

Councils may carry out a local smoky chimney survey from time to time, to identify chimneys that appear to be emitting excessive smoke (Figure 3). Householders may not be aware that their wood heater or fire place is smoking excessively and when given a brochure on correct operation or correct fuel source, it is likely that most householders will modify their practices to minimise smoke emissions.





**Figure 2** Example resource from the EPA's wood smoke *Council resource kit*  
Source: EPA (2022)



**Figure 3** Chimney emitting excessive smoke  
Source: Jane Barnett/Zephyr Environmental

## 3.2 Solid fuel heater regulation

A domestic solid fuel heater is defined under the Clean Air Regulation as a solid fuel burning appliance that is designed, manufactured or adapted for domestic use. However, certain heating appliances are excluded from certification requirements under Part 2 of the Clean Air Regulation and are explained further under ‘Solid fuel heaters – sale’ below.

The POEO Act and the Clean Air Regulation are the primary legislation for controlling emissions from domestic solid fuel heaters (and open burning/fire pits) in New South Wales. Approval for installation of solid fuel heaters may also be required under other Acts.

Excessive smoke provisions under the POEO Act apply to both wood heaters and open fireplaces with chimneys. The LG Act contains provisions for council officers to issue orders regarding smoke from a solid fuel heater impacting other residents.

The POEO Act and LG Act provide local councils with powers to issue notices and orders to mitigate neighbourhood smoke emissions.

### Solid fuel heaters – sale

Part 2 of the Clean Air Regulation targets the sale of ‘domestic solid fuel heaters’ of the slow combustion type as these have the potential to emit significant amounts of smoke if not designed and operated correctly. The Regulation applies to the sale of both new and second-hand solid fuel heaters, including those that are sold privately.

The Clean Air Regulation requires all domestic solid fuel heaters sold in New South Wales, other than those of the types listed in s 5(2) of the Regulation (i.e. open fire places, certain cooking stoves, pellet heaters and appliances intended solely for heating water or distributing heat through ducts), to meet the emission and efficiency limits specified, and to be compliant with Australian Standard AS/NZS 4013:2014: *Domestic solid fuel burning appliances – Method for determination of flue gas emission* and Australian Standard AS/NZS 4012:2014 *Domestic solid fuel burning appliances – Method for determination of power output and efficiency*.

Each heater model sold in New South Wales must have a certificate of compliance that the heater model has been tested in accordance with the Australian Standards and each heater must be marked accordingly. These certificates are issued based on test results from an accredited laboratory.

The Australian Home Heating Association maintains a list of certified wood heaters and their emission ratings on its *Is your wood heater compliant?* webpage (AHHA 2024).

### Solid fuel heaters – planning controls and approvals

The information provided in this guidance note in relation to possible planning controls and approvals required for solid fuel heaters is general in nature only. This is because the planning controls that apply and therefore the approvals required will depend on each individual proposal, and any required approvals will need to be considered on a case-by-case basis, taking into account the local government area (LGA), any applicable planning controls and the nature of the proposal.



In some circumstances, planning controls like local environmental plans (LEPs) and development control plans (DCPs) may apply to the installation of wood heaters or open fireplaces. This occurs in some areas of Sydney that are subject to high air pollution concentrations, and where population densities are increasing. Use of these controls will need to be determined on a case-by-case basis and their application will depend on whether development consent is required. Where consent is required, DCPs are a matter for consideration by the consent authority, otherwise they are prepared by councils to provide guidance on the installation of wood heaters and open fireplaces. DCPs do not require legislative compliance unless given force through an LEP or condition of development consent.

Further information on the planning process and air quality issues can be found in the Local Government Air Quality Toolkit – *Land-use planning guidance note*.

Planning measures like LEPs and DCPs can also reduce wood heater emissions by supporting energy efficient housing that reduces heating demand, and clean technologies such as electrical heating (e.g. heat pumps or reverse cycle air-conditioning) coupled with renewable energy.

Instances may occur where a homeowner self-installs a solid fuel heater in their home. Section 68, Part F(4) of the LG Act requires the installation of a solid fuel heating appliance to be approved by council. For further information see ‘Solid fuel heaters – installation’ below.

Some local councils have amended their DCPs to prohibit the installation of domestic solid fuel heating appliances for heating purposes. The installation of heating alternatives such as electric (ideally with solar panels) is encouraged.

In areas where domestic solid fuel heaters are allowed, councils might still consider the existing air quality, particularly if it is already subject to significant wood smoke, and what the cumulative impacts of approving further wood heater installations will be. This might involve referring to the NSW Government’s air quality monitoring station data for the area (NSW Government 2024), or any existing council or community low-cost sensor networks that can indicate particulate levels in certain parts of the LGA. A case might then be made by a local council; for example, where topography is unsuitable, for banning or restricting wood heater installations through DCPs or exempt or complying development.

Wood heater control examples in the DCPs in Table 1 are a useful reference (see Chapter 4 for links to these documents).

**Table 1**      **Examples of wood heater controls in development control plans**

<b>Development control plan</b>	<b>Provision</b>
Blacktown City Council Growth Centre Precincts Development Control Plan 2010 [Clause 4.1.3.2]	Development in residential zones: Open fireplaces, wood-fired heaters and slow combustion stoves are not permitted
Box Hill Growth Centre Precincts Development Control Plan [Clause 4.1.3]	Residential development: Open fire places and slow combustion stoves are prohibited
North Kellyville Precinct Development Control Plan 2018 [Clause 4.1.3]	Residential development: Open fire places and slow combustion stoves are prohibited
Oran Park Precinct Development Control Plan [Clause 8.1]	Open fireplaces and slow combustion stoves are prohibited
Turner Road Precinct Development Control Plan [Clause 8.1]	Open fireplaces and slow combustion stoves are prohibited
Waverley Development Control Plan 2012 (Amendment No. 9) [Clause 2.3]	Solid fuel heating and cooking systems are not permitted in any development

## Solid fuel heaters – installation

Installing domestic solid fuel heaters in homes requires council approval under s 68, Part F (4) of the LG Act. Details for approving installations are set out in Part 2, Division 5, Subdivision 4 of the Local Government (General) Regulation 2021.

Heater installation should be carried out by a professional tradesperson because installation must meet applicable provisions of the National Construction Code (AS 2022), and/or Australian Standard 2918:2001 – *Domestic Solid Fuel Burning Appliances – Installation*, and manufacturers' specifications. The Australian Standard details all installation requirements such as flue heights and clearances from structures that must be followed to minimise adverse health impacts from wood smoke to the homeowner and other residents. AS 2918:2001 also applies to fireplaces.

Even with appropriate installation, there are some situations when, due to the topography or the proximity of buildings, smoke emissions from a solid fuel heater can cause a nuisance to neighbouring dwellings.

If a wood heater is found to be non-compliant through not having LG Act s 68 approval and/or being installed without development consent if required under an LEP, it could be referred to a building compliance team within local government, for removal under relevant planning legislation.

Section 7 of the Clean Air Regulation prohibits a person from altering the structure of a heater, or from marking a heater as complying with the Australian Standard if it does not have a certificate of compliance.

## Case study – Wood smoke in Liverpool LGA

Note that this case study is for illustrative purposes only. It does not indicate a procedure that ARAs, authorised officers and enforcement officers should follow in all cases and does not constitute legal advice. Readers should seek their own legal advice in relation to their specific circumstances.

Wood heater smoke is an issue in Liverpool LGA due to the residential block sizes getting smaller and the natural topography (Sydney Basin inversion layer), which is conducive to trapping air pollution. To address wood smoke concerns and minimise impacts to residents, Liverpool City Council introduced installation requirements in 2019, including an odour impact assessment in certain zones to be submitted to council. The odour impact assessment is a desktop study to assess the topography, proximity to neighbours and proposed chimney height.

Liverpool City Council also requires details of the installer, manufacturer's specification (brand and model), floor plan and elevation of the building, showing the position of the heating appliance and flue when a person submits an application for installation under s 68 of the LG Act, although this is not a legislative requirement. Further, the following information must be provided to council:

- a certificate of compliance with AS/NZS 4012:2014 *Domestic solid fuel burning appliances – Method for determination of power output and efficiency* and AS/NZS 4013:2014 *Domestic solid fuel burning appliances – Method for determination of flue gas emission*
- installation details for the solid fuel heating appliance demonstrating compliance with AS/NZS 2918:2018 *Domestic Solid fuel burning appliances –*

Liverpool City Council requires all odour impact statements to be prepared by a suitably qualified air quality consultant who is either a:

- Certified Environmental Practitioner under the CEnvP Scheme administered by the Environment Institute of Australia and New Zealand (EIANZ)
- Certified Air Quality Professional under the CAQP Scheme administered by the Clean Air Society of Australia and New Zealand (CASANZ).

More information about Liverpool City Council's requirements can be found on its *Requirements for domestic oil or solid fuel heating appliance* webpage (LCC n.d.).

## Solid fuel heaters – regulation of emissions

There are a number of regulatory options for local councils to manage smoke from solid fuel heaters, as summarised in Table 2. Smoke abatement notices under the POEO Act rely on smoke being excessive.

Excessive smoke is defined in s 135A of the POEO Act as ‘the emission of a visible plume of smoke from a chimney for a continuous period of not less than 10 minutes, including a period of not less than 30 seconds when the plume extends at least 10 metres from the point at which the smoke is emitted from the chimney’.

**Table 2** Regulatory options for managing smoke from solid fuel heaters

Regulatory option	Example scenario
Section 96 POEO Act prevention notice (see below)	Use of a wood heater is carried on in an environmentally unsatisfactory manner
Section 135B POEO Act smoke abatement notice (see below)	A chimney on a residential premises is emitting excessive smoke
Section 124 LG Act order (see Local Government Air Quality Toolkit Module 2)	
Order 30 requiring compliance with an approval	To require a person to comply with the terms of an approval for a solid fuel heater installation
Section 125 LG Act notice to abate a public nuisance (see Local Government Air Quality Toolkit Module 2)	To require the owner of an existing wood heater to minimise pollution from the heater if the smoke is causing a public nuisance

For a council to be able to issue an order requiring a person to abate woodsmoke emissions under the LG Act s 125 (abatement of public nuisances), it will be necessary to obtain evidence (such as complaints or statements) that a person is responsible for a public nuisance.

If an owner or occupier repeatedly fails to operate a wood heater cleanly; for example, using dry seasoned wood or cleaning their flue, the council could consider education or, where an education approach has failed, refer to its compliance policies.

Councils’ powers to issue smoke abatement or prevention notices under the POEO Act and orders under the LG Act can be applied regardless of a wood heater’s age or type or whether a development application was required at the time of its installation. Councils’ powers also apply for smoke emitted from open fireplaces.

The following sections provide further information on issuing notices and orders in relation to smoke from wood heaters.



## Smoke abatement notices

Where a council considers education has not been effective in particular situations, enforcement action may need to be taken. Authorised officers may consider issuing a smoke abatement notice.

Part 5.4, Division 3 of the POEO Act addresses domestic air pollution by enabling a council authorised officer to issue a smoke abatement notice under s 135B to the occupier of a premises where excessive smoke from a domestic chimney is observed. The occupier receiving a smoke abatement notice has 21 days in which to fix the problem; for example, by having the flue cleaned, purchasing better quality firewood or seeking advice on how to operate the wood heater or fireplace cleanly.

Councils are encouraged to provide information or instruction on correct wood heater operation to a householder before they consider issuing a smoke abatement notice.

### Penalty notice for non-compliance with a smoke abatement notice

Failure to comply with a smoke abatement notice within 21 days without reasonable excuse is an offence under s 153C of the POEO Act and the maximum fine that can be imposed by a court is \$3,300. Council may issue a penalty notice under the POEO Act for this offence (with an on-the-spot fine of \$200 for an individual and \$400 for a corporation).

### Requirements for smoke abatement notices for domestic woodsmoke

The smoke abatement notice:

- must be in writing
- ceases to have effect after 6 months unless revoked sooner (i.e. it is intended to apply once per heating season)
- does not apply to a chimney in or on an incinerator to be used only in relation to smoke originating from outside a residence, or backyard burning generally
- does not prevent the emission of smoke that is not excessive smoke
- may be revoked by the appropriate regulatory authority or the authorised officer.

## Prevention notices

A prevention notice can be issued under s 96 of the POEO Act (see Local Government Air Quality Toolkit – Module 2) to an owner or occupier of a premises who uses a solid fuel heater ‘in an environmentally unsatisfactory manner’ to take such action to ensure the activity is carried on in future in an environmentally satisfactory manner. For example, the prevention notice could direct the owner or occupier to:

- not use a particular solid fuel heater
- ensure a particular solid fuel heater has adequate air supply to prevent smoke emissions
- burn only dry wood
- operate the solid fuel heater only between stated hours.

In general, a smoke abatement notice is a preferable option where it involves smoke from a domestic chimney and the smoke impacts are likely to be rectified by timely maintenance or improved operation. On the other hand, a prevention notice may be more suitable where council has identified actions to ensure the solid fuel heater is used in future in an environmentally satisfactory manner, such as actions to ensure the solid fuel heater has adequate air supply.

Local councils are responsible for responding to complaints about smoke and ash fallout from solid fuel heaters and open burning. The Local Government Air Quality Toolkit – *Resource pack* contains checklists for investigating complaints and conducting inspections.

Armidale Regional Council has incorporated wood smoke from domestic solid fuel heaters into its strategic and planning framework, as illustrated in the following case study.

## Case study – Armidale Regional Council wood smoke resources

Note that this case study is for illustrative purposes only. It does not indicate a procedure that ARAs, authorised officers and enforcement officers should follow in all cases and does not constitute legal advice. Readers should seek their own legal advice in relation to their specific circumstances.

Armidale Regional Council (ARC) recognises wood smoke as an air pollution issue and has developed a number of online resources for managing it.

### **Community Strategic Plan 2017–2027 (ARC 2017)**

The plan identifies wood-smoke pollution as a concern in the LGA and undertakes to ‘Partner with stakeholders to develop strategies and provide programs which improve air quality across the region, including the reduction of smoke pollution by using alternative energy sources.’ This action is reported on in the *ARC State of the environment report* (ARC 2021), including the number of wood heater installation approvals and wood smoke complaints investigated by council each year.

### **EcoARC – Council’s greenprint for sustainability (ARC 2020)**

This document supports the Community Strategic Plan and encompasses 9 key areas, including air. The scope and intent for air is to ‘Develop and implement a community endorsed Clean Air Plan to reduce the impact of wood smoke on health and air pollution’.

The document outlines a number of initiatives for addressing wood smoke, including:

- Determine the community’s level of awareness, perception and understanding of the wood smoke issue.
- Develop an agreed and community supported Clean Air Plan that includes intervention, education, best practice planning controls and reduction of illegal firewood collection.
- Develop an education program for, amongst other things, good set-up and operation of wood heaters to minimise air quality impacts.

### **Solid fuel heaters and wood smoke webpage (ARC 2024)**

ARC has put together a webpage that includes resources about solid fuel heaters and wood smoke, including:

- information about the health effects of wood smoke
- steps to help reduce air pollution if using a wood-burning heater
- an application form to be submitted to council before the installation or replacement of any solid fuel heater device (ARC 2019). This form includes a pre-installation checklist that requires the applicant to consider the heater’s compliance with Australian Standards and impacts on nearby premises.

## Alternatives to wood heaters – home heating solutions

Residents can be encouraged to consider alternative ways to heat their homes using low-emissions alternatives; for example, installing insulation, sealing gaps under doors and through floorboards, or using rooms in winter that are naturally heated by the sun during the day. Carpets or rugs can warm the floor surface and thick curtains or double glazing will reduce warmth escaping through windows.

Homes, including single rooms, can be heated by central heating or plug-in heating appliances. Reverse cycle air-conditioners (or heat pumps) are generally more efficient and also avoid transporting firewood to urban areas, saving energy and emissions.

Central heating options:

- ducted air
- hydronic system
- in-slab floor heating
- reverse cycle air-conditioner (or heat pump).

Heating options for single rooms:

- electric heater
- flued gas heater.

Residents should be encouraged to research the following before committing to using a wood heater in the long term:

- ongoing costs of operation, e.g. wood supplies
- maintenance to the heater to ensure consistent performance, e.g. chimney cleaning
- health impacts on you and your neighbours
- environmental impacts
- energy efficiency rating
- appropriate installation within the house (location is very important) and council approval.

### 3.3 Open burning regulation

A fire can only be lit outside in New South Wales in certain situations. The EPA *Open burning* webpage (EPA 2022b) can be used to check what fires are allowed under the Clean Air Regulation and when approvals and permits to burn are needed in each LGA.

Part 3 of the Clean Air Regulation establishes a general obligation for any person conducting a fire in the open to take all practicable measures to minimise or prevent air pollution (s 9). It does this by requiring people intending to conduct burning to consider:

- mitigating the potential for smoke impacting on a person, considering
  - wind direction
  - weather conditions
  - the likely length of burning time of the material
- taking reasonable measures to ensure the material being burnt is not wet
- burning only material that is suitable for disposal by burning, considering the possible effects on human health and the environment.

Burning of tyres, coated wire, paint or solvent containers or residues, and timber treated with copper chrome arsenate or pentachlorophenol is prohibited at all times across New South Wales (Clean Air Regulation s 10).

Section 12 of the Clean Air Regulation allows a local council listed in Schedule 1 to prohibit burning of certain material in its LGA, including domestic waste and vegetation, except with prior approval. The section below, 'Avoid open burning where possible', provides more information on open burning in LGAs.

Part 5.4, Division 2, s 133 of the POEO Act allows the EPA to issue an order to ban burning in the open, conditionally or unconditionally, on days when weather conditions mean that burning is likely to contribute to significant air pollution.

The EPA initiates the no-burn procedure by notifying the Rural Fire Service (RFS) 2 days before the proposed ban. Following discussions between the RFS and the EPA, the EPA finalises the no-burn notice on the day before it comes into effect.

The EPA must publish the no-burn order in the reasonably practicable way it is satisfied is most likely to bring the order to the attention of the persons to whom the order applies. Section 134 allows an authorised officer to issue a direction to extinguish a fire.

The Clean Air Regulation does not affect bush fire hazard reduction work allowed under the *Rural Fires Act 1997* (RF Act), the destruction of prohibited plants or drugs, or the burning of diseased animal carcasses.

Agricultural fires are permitted under s 15 of the Clean Air Regulation. Further information is provided in the Local Government Air Quality Toolkit – *Agricultural burning guidance note*.

Further information on issuing notices and directions in relation to smoke from open burning is provided in the following sections.

## Prevention notices

A prevention notice can be issued under s 96 of the POEO Act (see Local Government Air Quality Toolkit – Module 2) to a person burning a fire 'in an environmentally unsatisfactory manner'. For example, the prevention notice could direct the person to:

- not light a fire
- burn only certain fuels; for example, dry seasoned wood or in the case of recreational fires, other fuel allowed under the Clean Air Regulation
- light a fire only between stated hours.

## Offences

The table below outlines the open burning offences under the POEO Act and Clean Air Regulation for which council enforcement officers can issue a penalty notice.

**Table 3** Offences related to burning

Offence	Relevant part of the POEO Act or Clean Air Regulation
Failure to comply with a no-burn order issued under s 133 of the POEO Act	POEO Act s 135
Failure to comply with a direction to extinguish a fire issued under s 134 of the POEO Act	POEO Act s 135
Burn otherwise than by practical means to prevent or minimise air pollution	Clean Air Regulation s 9(1)
Burn prohibited items	Clean Air Regulation s 10(1)
Prohibited burning in a scheduled LGA	Clean Air Regulation s 12(1)



## Directions concerning fires

An authorised officer of a local authority or of the EPA can issue directions to extinguish a fire and to not light or maintain a similar fire at a premises for a specified period not exceeding 48 hours (POEO Act s 134) if either:

- the fire is prohibited by an order of the EPA under s 133 of the POEO Act or by the Clean Air Regulation
- air pollution from the fire is injurious to the health of any person or is causing or likely to cause serious discomfort or inconvenience to any person.

The authorised officer may give this direction to either:

- the occupier of the premises
- the person apparently in charge of the premises
- the person apparently in charge of the fire.

A direction to extinguish a fire, and to not light or maintain a similar fire at a premises for a period of up to 48 hours, overrides any approval for certain fires or incinerators granted under the Clean Air Regulation.

## Avoid open burning where possible

Part 3 and Schedule 1 of the Clean Air Regulation allow local councils to assess local conditions and select the appropriate level of control of burning for their area. Councils can nominate to be listed in the various parts of Schedule 1:

- under Part 1, no burning of any matter, including of any domestic waste or vegetation, is allowed unless approved by the EPA
- under Part 2, burning of vegetation is not allowed unless approved by the council (s 18 of the Regulation, providing the vegetation is grown on the premises); for example, on rural lots that do not have green waste collection
- under Part 3, burning of domestic waste is not allowed except where the domestic waste was generated on the residential premises where it is to be burnt and there is no domestic waste collection service to those premises (s 13 of the Regulation).

A council can list or change its listing in Parts 1, 2 or 3 of Schedule 1 by either a:

- formal proceeding and approval by a majority of council members
- decision made by delegation; for example, to the general manager.

Councils must also advise the EPA in writing of the change to their Schedule 1 listings.

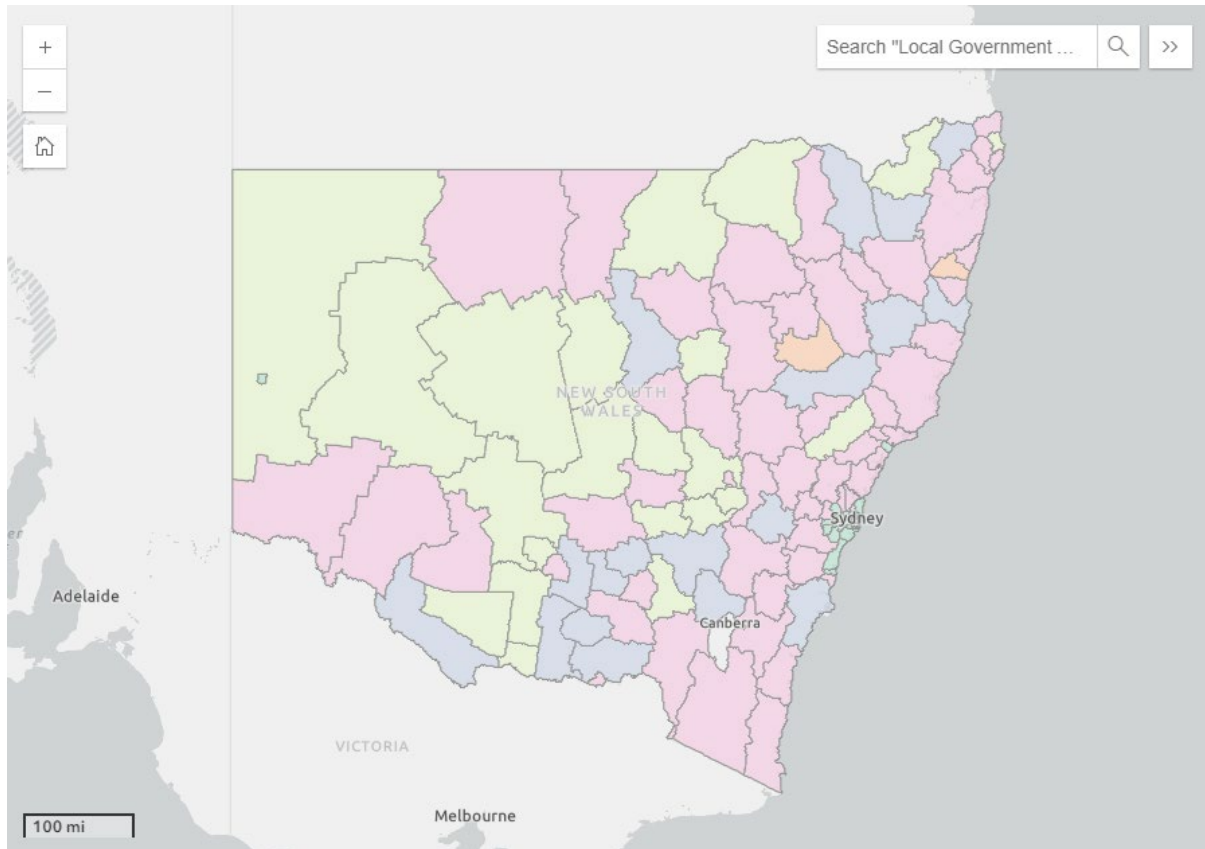
Open burning should be discouraged where possible as it does not represent good practice. Depending on the material being burnt, it could produce a range of harmful emissions including particulates, volatile organic compounds or other air pollutants. All reasonable and practical measures should be taken to avoid open burning, even in LGAs where this is allowed.

There are some things that could be considered in the management of these potential impacts, such as:

- limiting the size of the fire to be lit and ensuring the fire is supervised. This reduces the volumes of smoke produced and the dimensions of the smoke plume
- wind direction, e.g. is the wind blowing away from nearby residents or sensitive receptors
- the forecast duration of the prevailing wind should be checked and determined to be within the anticipated timeframe of the burn to avoid wind changes or shifts that could give rise to problems

- burning should not be scheduled after rain
- burn during daylight hours after early morning temperature inversions have broken up.

The EPA has developed a map showing what can be burnt and when this can take place in each LGA in New South Wales (Figure 4). This interactive map is on the EPA's *Open burning* webpage (EPA 2022b).



**Figure 4** Interactive map of NSW LGAs from the EPA's *Open burning* webpage

Key: ■ Can't burn anything; ■ Can't burn vegetation; ■ Can't burn domestic waste; ■ Can't burn vegetation or domestic waste; ■ No restrictions on burning vegetation or domestic waste. Source: EPA (2022b)

## Cooking and recreational fires

Except when a no-fire ban or statewide fire ban is in place, s 14 of the Clean Air Regulation allows recreational fires such as outdoor fire pits, barbecues and campfires, even when open burning is otherwise prohibited in an LGA, provided only the following fuels are used:

- dry seasoned wood
- liquid petroleum gas
- natural gas
- proprietary barbecue fuel, including a small quantity of fire starter.

Any person lighting a cooking or recreational fire in the open has a general obligation to prevent or minimise air pollution (Clean Air Regulation s 9).

## Case study – Backyard fire pits

Note that this case study is for illustrative purposes only. It does not indicate a procedure that ARAs, authorised officers and enforcement officers should follow in all cases and does not constitute legal advice. Readers should seek their own legal advice in relation to their specific circumstances.

**Issue:** Smoke emitting from backyard fire pits.

**Background:** Backyard fire pits are enjoyed by residents during the winter months but can result in council receiving smoke complaints. Issues include smoking for long periods, including overnight, with fires not being put out and left smouldering.

In this example, smoke was being emitted overnight from a fire pit.

**Response:** Following community complaints related to enduring smoke overnight, letters were sent to the managing real estate agent, occupier and owner of the property to make all parties aware of the concern. Phone calls followed between the real estate agent and occupants and the environmental health officer to discuss the type of wood, weather conditions and best methods for fully extinguishing fire pits.

A night-time investigation occurred but no offence was identified, and no further action was taken.

**Outcome:** The approach was one of informing and educating. No regulatory response was required but it was explained to the parties concerned that council may take further regulatory action if subsequent complaints were received.



**Figure 5** Open fire with clean fuel

Source: Jane Barnett/Zephyr Environmental



**Figure 6** Open fire with wet fuel

Source: Jane Barnett/Zephyr Environmental

## Notification and permits

The burning of waste materials and the management of vegetation (fuels) on properties are also of concern from the point of view of preventing the spread of bushfires as well as protecting the community through the lighting of fires.

In addition to open burning approvals required under the Clean Air Regulation, a permit may be required from fire authorities if a resident wishes to open burn material on their land. This must only be a material type permitted under the Clean Air Regulation. The following should be taken into consideration for permits:

- If the area where the fire will be lit is within a district controlled by Fire and Rescue NSW (FRNSW) a permit is always required for burning. This permit must be obtained from FRNSW and the fire operator will be expected to comply with all documented conditions in the permit (FRNSW 2024).
- If the area where the fire will be lit is outside the FRNSW area of control a permit is required if burning is to be conducted within the designated Bush Fire Danger Period from 1 October to 31 March. This permit can be obtained from the RFS and the fire operator will be expected to comply with all documented conditions in the permit (RFS n.d.).

Permits impose conditions on the way a fire is lit and maintained. They are usually issued for a period of 21 days and the operator will need to check their permit has not expired before undertaking final preparations to burn.

Fire permits are not required for the purpose of heating or cooking, provided that the fire is:

- in a permanently constructed fireplace
- at a site surrounded by ground that is cleared of all combustible materials for a distance of at least 2 m all around
- completely extinguished before leaving.

## Designated no-burn and total fire ban periods

The following should be taken into consideration for no-burn and total fire ban periods:

- Irrespective of permits, no burning is allowed during designated no-burn periods. Residents must check that a no-burn period is not in force in their district before initiating a burn.
- No burning is allowed during designated total fire ban periods. These are advertised widely in the media along with other no-burn periods. Residents must check that a total fire ban is not in force in their district before initiating a burn.

## Rural Fires Act 1997

Open burning is also regulated under the RF Act and Rural Fires Regulation 2022, for example by:

- establishing Bush Fire Management Committees that are required to prepare bushfire risk management plans and operations plans (RF Act ss 50 and 52)
- imposing duties on public authorities, owners or occupiers of land, including councils, to take notified steps and practicable steps to prevent the occurrence of bushfires (RF Act s 63)
- providing for hazard management officers to issue notices to owners or occupiers of land to carry out bushfire hazard reduction work specified in the notice on the land (RF Act s 66)



- authorising the RFS commissioner to carry out bushfire hazard reduction work where public authorities, occupiers or owners of land fail to exercise their duties under the RF Act (RF Act s 73)
- prohibiting the lighting of fires close to buildings in fire districts and rural fire districts without a permit (RF Act s 88)
- prohibiting the lighting of fires on land for the purposes of land clearance or for burning any fire break during bushfire danger periods without a permit (RF Act s 87)
- declaring total fire bans that prevent the lighting of fires (RF Act s 99).

## Case study – Backyard burning

Note that this case study is for illustrative purposes only. It does not indicate a procedure that ARAs, authorised officers and enforcement officers should follow in all cases and does not constitute legal advice. Readers should seek their own legal advice in relation to their specific circumstances.

**Issue:** Backyard burning of animal faeces, rubbish and soiled sheets. The burning generated smoke and a foul odour.

**Background:** A council officer observed a dark cloud of smoke coming from a residential property in the morning while driving in the LGA. No complaints had been received from neighbouring properties.

**Response:** The council officer visited the residential property and spoke to the resident. The officer observed the resident burning various plastics, animal faeces and newspaper soaked in cat urine in an outdoor fire pit. The council is listed in Part 3 of Schedule 1 to the Clean Air Regulation under which burning of domestic waste is prohibited. The resident was advised that it is an offence to burn such articles and was requested to dispose of these in a more appropriate manner. The resident was also sent an advisory letter.

The officer used powers under the POEO Act with references to the Clean Air Regulation in the advisory letter. The letter included observations made during the inspection and offences under the Clean Air Regulation that could lead to fines if the same issue occurred again.

**Outcome:** The issue stopped after the officer spoke to the resident and explained the harmful effects of the smoke and how waste should be disposed of.

## 4. References and other resources

All documents and webpages that are part of the [Local Government Air Quality Toolkit](#) are available from the EPA website.

### 4.1 References

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## 4.2 Example development control plans with wood heater controls

- [Blacktown City Council Growth Centre Precincts Development Control Plan 2010 \[Clause 4.1.3.2\]](#) [PDF 4.1 MB]
- [Box Hill Growth Centre Precincts Development Control Plan \[Clause 4.1.3\]](#) [PDF 9.4 MB]
- [North Kellyville Precinct Development Control Plan 2018 \[Clause 4.1.3\]](#) [PDF 8.0 MB]
- [Oran Park Precinct Development Control Plan \[Clause 8.1\]](#) [PDF 8.2 MB]
- [Turner Road Precinct Development Control Plan \[Clause 8.1\]](#) [PDF 8.6 MB]
- [Waverley Development Control Plan 2012 \(Amendment No. 9\) \[Clause 2.3\]](#) [PDF 20.9 MB]