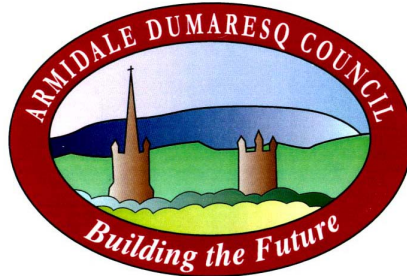


Armidale Dumaresq Council



POL134: POLICY FOR SUSTAINABLE DOMESTIC ENERGY USE AND LOCAL AIR QUALITY (incorporating Local Approvals Policy for Solid Fuel Heaters)

As adopted 7 June 2010 Min No. 131/10

This document represents Council's policy at the time of printing and is subject to regular review. Readers should check with Council's staff for amendments to the Policy.

Applies to:	<i>Planning and Environmental Services</i>
Attachments	<i>Nil</i>
Officer Responsible	<i>Manager Environmental Health</i>
Associated Documents	-
Legislation	<i>Local Government Act 1993 as amended Local Government (General) Regulation 2005 Protection of the Environment Operations Act 1997 Protection of the Environment (Clean Air) Regulation 2002</i>
History	<i>Version No 1 10.010/03* of 24 February 2003. Version No 2 10.048/06* 25 November 2006 Version No 3 131/10 – 7 June 2010</i>

POLICY OBJECTIVES

- To improve community health and life expectancy by reducing exposure to toxic fine particle, air Particulate Matter 2.5 micron, (PM2.5) pollution.
- To promote and increase the responsible and efficient use of resources to meet energy needs in homes in Armidale Dumaresq.
- To improve ambient air quality in Armidale’s urban area, having regard to relevant standards and legislation.
- To support Council’s vision for “Excellent Lifestyle – Sustainable Growth”.
- To implement this Policy in a manner which is fair to our community, balancing consideration of local climate, environmental sustainability, and community health.
- To set a feasible air pollution reduction target for the Armidale urban area.

STRATEGIES

To utilise a range of strategies in pursuit of the above objectives, including:

- Effective dialogue and action with the community, together with appropriate education, incentives, regulation and resources.
- Advocacy with industry and government.
- Consistent and clear assessment of Applications to Council for approval to install solid fuel (including wood fuel) heating appliances, under relevant legislation.
- Providing clear information and procedures for ensuring compliance with relevant legislation;
- Monitoring and reporting of ambient air quality in Armidale against appropriate targets and standards.
- Securing ongoing funding and resourcing in support of this Policy.
- Making Policy adjustments to reflect evolving circumstances including recorded air pollution levels, including a review commencing in March 2012 with a view to further adjustments as may be considered appropriate at that time.

PART 1 - POLICY BACKGROUND

Why do we need this Policy?

This document replaces Council's previous Air Quality Policy adopted in 2004. The new Policy has been developed by Council's Domestic Energy Committee as part of its ongoing work to improve the efficiency and sustainability of energy use in our homes and improve local air quality.

Given our cold winter climate and the need to maintain warmth and comfort for residents, the Policy seeks to address home heating needs for the future. Heating can consume a large proportion of household energy budgets. By increasing reliance on renewable energy sources, such as solar energy, households can not only reduce recurrent energy costs, but also ensure that our community is helping to address environmental issues including climate change.

At present, many of our residents also continue to rely on solid fuel (wood) heaters for home heating. However, the smoke generated from these appliances contains a complex mixture of gases and fine particles, which together cause local air pollution. The level of pollutants in wood smoke emitted from a home heater varies, depending on factors such as the type, operation and maintenance of the heating appliance, as well as the quality of the firewood used.

Generally, though, Armidale's level of woodsmoke pollution is greater than other similar communities, due to its valley topography, high pressure meteorological conditions (low wind and cloud cover) and severe cold temperatures in winter months. These factors create an optimum environment for a temperature inversion layer, effectively 'trapping' woodsmoke pollution in the Creeklands and slopes on either side of Armidale's urban area, especially on winter mornings.

Woodsmoke pollution of our local airshed is a serious health risk, particularly to certain groups in the community, such as the elderly and the young. For example, NSW Health reports¹ that fine particles from woodsmoke and other toxins can cause various health problems, including respiratory illnesses such as asthma, emphysema, and bronchitis, an increase in the severity of lung disease, as well as the aggravation of various heart conditions including vascular complications from diabetes. Long term exposure can also lead to damage to the nervous, reproductive, developmental and immune systems. In addition, some air toxins have been associated with cancer.

NSW Health also advises² that "*Australian studies have demonstrated that [particulate] levels in homes with wood heating are much higher than in homes without wood heating, and that the use of wood-fired home heaters in many regional towns is associated with elevated indoor levels of particulate matter, even in homes that do not use wood heaters.*" Likewise the Australian Lung Foundation has suggested that there is no safe level of exposure to particle pollution and recommends the use of alternative measures to wood heaters for domestic climate control³.

¹ http://www.health.nsw.gov.au/factsheets/environmental/wood_smoke_pub.html

² Ibid.

³ <http://www.lungfoundation.com.au/content/view/99/104>

PART 1 - POLICY BACKGROUND (cont)

What has Council done to date?

Mindful of these issues, and increasing community consciousness about the need for responsible environmental management, community health and energy efficiency, Council has worked on many initiatives from the mid-1990's onwards. These have been intended to improve ambient air quality in Armidale and at the same time increase the knowledge and uptake of evolving and sustainable domestic energy products and services. In particular, Council has:

- Established a community reference group (now a full advisory Committee to Council) to assist with appropriate policy direction and implementation;
- Provided significant financial incentives, such as interest free loans and subsidies for insulation and new heating systems/technologies;
- Undertaken a range of public education and related media programs on domestic energy efficiency, including the construction of a display home;
- Obtained related Government funding to supplement local program resources;
- Monitored air quality in Armidale and regularly reported the results to the community;
- Conducted smoke patrols and issued abatement notices for excessively smoking chimneys; and
- Maintained a dialogue with relevant Government agencies and industry groups, including making submissions for future actions and initiatives.

The Challenge Remains . . .

In spite of this wide range of actions, local air quality measurements by Council indicate that in winter 2009, Armidale was still experiencing significant air pollution, well above national recommended levels for fine air particle (2.5 Microns - PM2.5) concentrations⁴.

This is of concern, but not altogether surprising, as most housing stock in Armidale pre-dates the initiatives listed above, and home heating and other energy systems are only occasionally replaced. Moreover, most older housing stock was developed without regard to passive solar and other energy efficient housing techniques that are now readily available to home builders.

Council's role in local education and appropriate financial support therefore remains critical, alongside State/Federal Government action to subsidise retrofitting existing housing for improved energy efficiency. Further, while legislated arrangements prescribe the maximum requirements Council can make in relation to some relevant matters for this Policy (e.g. the NSW 'BASIX' scheme for energy and water efficiency in new housing) appropriate local regulation is still possible in some areas, as outlined in this document.

This Policy has been developed within this context.

⁴ National Environmental Protection Measure for Ambient Air Quality, 2003 as amended, National Environment Protection Council – see :
http://www.ephc.gov.au/sites/default/files/AAQ_NEPM_Ambient_Air_Quality_NEPM_Varied_scaleplus_Final_200305_1.pdf . Air quality results recorded from Council's particle monitor are available on request and published regularly on Council's web site. Trends in particulate levels should become clearer as data is added to readings collected since June 2008.

PART 2 - OTHER POLICY INFORMATION

Generally

Council's position remains to accept and consider applications for the use of wood heaters within the local government area. Indeed legal advice in 2009 has confirmed that the banning of wood heaters is not possible under the current legislative framework in New South Wales. However, Council will continue to encourage the community to consider alternative approaches to home heating and home design which minimise the potential for pollution and encourage the use of renewable resources.

Council will also seek to ensure that responsible staff are fully trained in legislative and technical aspects relevant to this Policy.

Education and Incentives

Educational efforts are a key part of any strategy to promote sustainable domestic energy use and tackle wood smoke pollution levels in the city. Education efforts require a clear, co-ordinated and sustained effort to be effective and show returns. Research into the effectiveness of community-based social marketing by the University of New England (UNE) will help to demonstrate the importance of education is in the mix of strategies in future.

In this regard Council will:

- Develop and implement an education strategy in relation to sustainable domestic energy use and local air quality, with attention to important stakeholder groups including young people, who will influence future community preferences and behaviour, as well as the elderly and socially disadvantaged or vulnerable members of the community;
- Give special emphasis in community education initiatives to renewable, low impact energy sources, such as solar and wind energy, together with relevant design, installation and (where relevant) necessary approval considerations (eg under NSW planning legislation);
- As far as practicable, keep the community informed of appropriate practices, initiatives, programs, products and services and cost implications in relation to sustainable domestic energy use and local air quality;
- Seek to raise awareness of the health impacts of heating sources (eg solid fuel and unflued gas heaters), while confirming that the use of wood heaters is not banned under this Policy;
- Lobby relevant agencies and industry associations for more sustainable, good quality firewood supplies and for industry regulation in this area (*Note: collection of firewood from Council's road reserves without approval is illegal. See also Council Policy 089-Roads*);
- Endeavour to fund, or seek external funding for incentives relevant to this Policy, targeting those in special need in the community such as the elderly and socially disadvantaged persons;

PART 2 - OTHER POLICY INFORMATION (cont)

Education and Incentives (cont)

- Annually review its incentives program to take account of emerging needs and opportunities, and using incentives to support desired policy outcomes, such as the submission of applications to install any new solid fuel heaters and removal of unflued gas heaters, etc.; and
- Monitor and report on the social and environmental impacts of implementing its education and incentives strategies.

Research and Development

Much research surrounds the development and application of technologies for using and saving energy in the home, including on processes and strategies found to be successful in other geographic areas. However, to be effective and trusted by the community, research and development needs to be made specific to the local physical and social environment.

In particular Council will:

- Continue to work with UNE, and seek to collaborate on any research-based projects that strategically align its work with government, industry and community objectives;
- Promote its work within this area to government, industry and community;
- Use feasible and practical indicators to monitor and report on the effectiveness of projects.

Resources and Funding

Council will:

- Seek funding to resource the domestic energy strategy by applying for grants and developing funding partnerships e.g. with government, industry and community;
- Seek opportunities and other forms support including in kind support in connection with equipment and services;
- Maintain a service of responding to wood smoke pollution complaints (see Part 4) and responding to enquiries on matters concerning domestic energy;
- Endeavour to ensure responsible staff are appropriately trained in technical and legislative matters relevant to this Policy.

PART 2 - OTHER POLICY INFORMATION (cont)

Air Quality Monitoring and Reporting for Armidale, including Targets

- Council staff will monitor the urban air quality in Armidale with the use of properly maintained appropriate fine particle monitoring equipment;
- Council will in particular measure for fine air particles (PM2.5), given the significant negative health effects of such airborne pollutants; and will seek to obtain chemical analysis of the chemical constituents of the particulate matter sampled to verify its sources (eg woodsmoke vs other airborne particulates such as vehicle emissions).
- Council will use the results of the monitoring to raise awareness in the community, complement education initiatives, measure the performance of strategies and provide support for representation to government;
- Council will carry out air quality monitoring consistent with the methods and protocols of the National Environmental Protection (Ambient Air Quality) Measure (NEPM) as far as practicable⁵;
- Council will regularly publish the results of local air quality monitoring in the local media, on Council's website and other appropriate public forums. Results will be presented in an easy to read and meaningful form and in 'real time' form if possible;
- Council may also undertake mobile air quality monitoring from time to time, including surveys at night, to supplement its routine monitoring activities, in order to assess impacts in different parts of the urban area and at different times;
- Council will publish information on ambient air quality issues as part of its Annual and State of the Environment Reports;
- Council will aim to bring about a reduction of PM2.5 levels in Armidale's urban area by at least 10% averaged over the winter season each year, discounting periods when levels are elevated due to environmental events beyond Council or community control (e.g. dust storms and bushfires). Should these reductions not be achieved more stringent policy measures may be required.

⁵ *Council does not employ environmental scientists and the information derived may not be considered conclusive for the purposes of any legal proceedings or statutory reporting, for example under the National Environment Protection Measure (NEPM) for Ambient Air Quality July 2003.*

Full compliance with the NEPM is not required as Council has no participating agreement with the National Environment Protection Council Act 1994. Results will be compared to the relevant levels cited in the NEPM.

PART 3 - LOCAL APPROVALS FOR SOLID FUEL / WOOD HEATERS

Background

The NSW Government requires that Council approval must be obtained for domestic oil or solid fuel heater installations⁶. This part of the document deals with Council's local regulatory requirements for the installation of solid fuel / wood heaters. In particular, this section is a Local Approvals Policy under Part 3 of Chapter 7 of the Local Government Act 1993 and its related Regulation.

In many respects NSW law prescribes what Council can require in relation to the installation of solid fuel heaters, specifically in terms of construction standards. Moreover under current legislation, Council has no power to ban the installation of wood heaters, although it can prescribe maximum design emission levels for devices (see Part 3 below).

Council will keep evolving legislation and standards in this area under review and may adjust this Policy from time to time in the light of any changes.

Council will also invite subdividers of new residential estates to consider imposing "smoke free" covenants on new allotments, which would preclude future owners from installing solid fuel heaters on those properties.

Why is an Approval required?

Unlike most other domestic appliances, these devices can have significant implications for householders and their neighbours.

Solid fuel heater installation needs to be carried out in accordance with the Building Code of Australia (BCA) and relevant Australian Standards in order to avoid fire risk in buildings, for example. In addition, the selection and installation of solid fuel heating devices can have implications for local air quality. Thus the choice of a device with lower particulate emission levels, and the correct design and installation of a flue for discharging emissions is also important.

All these factors are taken into consideration in the approval process, as is the use of an appropriately qualified and experienced installer. Under the Act, financial penalties may be imposed by the Courts for installations undertaken without Council approval. Moreover, installations that are carried out without approval may also void a building's fire insurance cover.

The subsequent operation of these devices and selection of good quality, dry firewood is also critical to minimising woodsmoke and maintaining a clean, healthy environment. Heater operation can also be regulated by Council, if required, under NSW pollution control legislation (see Part 4 of this Policy).

⁶ Local regulation of solid fuel heater installations in New South Wales occurs under Chapter 7 – Part 1 – Approvals of the *Local Government Act 1993*, which requires at s.68 Table F(4) that Council approval be must obtained for the installation of "a domestic oil or solid fuel heating device, other than a portable appliance".

PART 3 - LOCAL APPROVALS FOR SOLID FUEL / WOOD HEATERS (cont)***Exemptions - Are there any exemptions applicable in relation to approvals for solid fuel/wood heaters?***

There are no exemptions under this Policy from the need for Council approval under the Local Government Act for the installation of any domestic oil or solid fuel heating device, other than a portable appliance. However, if you include details of such a device in a Development Application (DA) to Council for building work under the Environmental Planning and Assessment Act 1979, then a separate Local Government Act approval need not be sought⁷.

In the assessment of any such DA, Council will still consider the relevant approval criteria discussed below.

Criteria to be considered by Council in deciding whether to grant approvals for the installation of Solid Fuel Heating Appliances***1. Australian Standards***

In considering applications for the installation of solid fuel (including wood fuel) heating appliances Council will take into consideration the relevant Australian/New Zealand Standards applicable to the design and installation of such appliances which are current at the date that the application is made to Council (* see notes overleaf). **This is also subject to the following additional requirements to apply to applications received on or after 1 March 2011:**

A For any solid fuel heater to be installed in new homes approved on or after that date on land zoned for urban purposes under Council's Local Environmental Plan (land zoned 2, 3, 4, 5, 6, 7(b), and 10):

- The particulate emission factor measured under AS/NZS 4013 – 1999 – Domestic Solid Fuel Burning Appliances – Method for Determination of Flue Gas Emission, must be no greater than 2.5g/kg (grams of particulate emissions per kilogram of fuel burned); together with
- a minimum average heating efficiency factor of 57% measured under AS/NZS 4012 - 1999 – Domestic Solid Fuel Burning Appliances – Method for Determination of Power Output and Efficiency.

B For any other solid fuel heater installation in Armidale Dumaresq:

- The particulate emission factor measured under AS/NZS 4013 – 1999 – Domestic Solid Fuel Burning Appliances – Method for Determination of Flue Gas Emission, must be no greater than 3g/kg (grams of particulate emissions per kilogram of fuel burned); together with
- a minimum average heating efficiency factor of 57% measured under AS/NZS 4012 - 1999 – Domestic Solid Fuel Burning Appliances – Method for Determination of Power Output and Efficiency.

⁷ Per cl.70 of the Local Government (General) Regulation 2005

PART 3 - LOCAL APPROVALS FOR SOLID FUEL / WOOD HEATERS (cont)

Criteria to be considered by Council in deciding whether to grant approvals for the installation of Solid Fuel Heating Appliances (cont)

1. Australian Standards (cont)

Explanatory Information: All appliances sold for domestic installation must carry a compliance plate and details of their emissions test results under AS 4013. The Standard specifies a maximum test emission level of 4g/kg, expressed as grams per kilograms of wood burnt; with the lower the grams of particulate emitted the less potential for pollution. *Given our local circumstances as outlined in this document, Council's Policy requires that new heater installations shall only involve devices with a maximum test emission level of 2.5 – 3 g/kg, depending on location.*

Likewise, the Policy requires more efficient burning devices measured as the percentage of heat output/energy input per AS 4012 (see Section 7).

While Council is aware that there are concerns about testing methods under the Standards and will lobby for this issue to be addressed, for the time being this Policy requires that all appliances to be used in our local area are selected from reported better performing devices, the test results for which have been included on the Australian Home Heating Association's web site - <http://www.homeheat.com.au/certified.php>.

Details are often recorded on the back of appliances and visible in the retailer's showroom. Council will also request industry/manufacturers to ensure this information and the minimum air setting (mm³) is shown in this way or can be provided with audit/specification documents to accompany applications for new installations.

These requirements will be kept under review to take account of evolving device manufacture and availability, as well as developments in applicable standards. Council may also consider the introduction of stricter standards for installations in new homes which have received energy efficiency certification under the NSW BASIX scheme.

For further information please contact Council's Environmental Health Unit (02 6770 3872).

**Note: Current Australian Standards:*

At the time of publication of this Policy, relevant Australian/New Zealand Standards for solid fuel burning appliances included:

AS/NZS 2918 – Domestic Solid fuel burning appliances – Installation

AS/NZS 3689 – Domestic Solid fuel burning appliances – Design and Construction

AS/NZS 4012 - Domestic solid fuel burning appliance - Method for determination of power output and efficiency

AS/NZS 4013 – Domestic Solid fuel burning appliances – Method of determination of flue gas emission

AS/NZS 4886 - Domestic solid fuel burning appliance - Pellet heaters - Determination of flue gas emission

AS/NZS 5078 – Domestic solid fuel burning appliances - Pellet heaters - Method for determination of power output and efficiency

AS/NZS 60335.2.102 - Household and similar electrical appliances - Safety - Particular requirements for gas, oil and solid-fuel burning appliances having electrical connections.]

PART 3 - LOCAL APPROVALS FOR SOLID FUEL / WOOD HEATERS (cont)

Criteria to be considered by Council in deciding whether to grant approvals for the installation of Solid Fuel Heating Appliances (cont)

2. *Building Code of Australia (BCA)*

Under the relevant legislation (cl.69, Local Government (General) Regulation 2005), new installations of solid fuel (including wood fuel) heating appliances must also comply with Part 3.7.3 of the Code (Housing Provisions, Class 1 and 10 buildings) and Part G2 of the BCA for other classes of buildings. Again, to ensure your installation meets the relevant standards, Council recommends the work is undertaken by an appropriately qualified and experienced installer.

3. *Principles of Ecologically Sustainable Development*

Under the relevant legislation (s.89(1)(c) of the Local Government Act 1993), Council is also required to consider these principles in determining applications:

“Ecologically sustainable development requires the effective integration of economic and environmental considerations in decision-making processes. Ecologically sustainable development can be achieved through the implementation of the following principles and programs:

- (a) the precautionary principle—namely, that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.
In the application of the precautionary principle, public and private decisions should be guided by:
 - (i) careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and*
 - (ii) an assessment of the risk-weighted consequences of various options,**
- (b) inter-generational equity—namely, that the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations,*
- (c) conservation of biological diversity and ecological integrity—namely, that conservation of biological diversity and ecological integrity should be a fundamental consideration,*
- (d) improved valuation, pricing and incentive mechanisms—namely, that environmental factors should be included in the valuation of assets and services, such as:
 - (i) polluter pays—that is, those who generate pollution and waste should bear the cost of containment, avoidance or abatement,*
 - (ii) the users of goods and services should pay prices based on the full life cycle of costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste,*
 - (iii) environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structures, including market mechanisms, that enable those best placed to maximise benefits or minimise costs to develop their own solutions and responses to environmental problems.”**

PART 3 - LOCAL APPROVALS FOR SOLID FUEL / WOOD HEATERS (cont)

Other Matters relating to approvals for the installation of solid fuel heating appliances in Armidale Dumaresq

Pre Application

- Council will respond to enquiries regarding wood heater installations and supply a full list of permitted wood heater models and their emission levels to prospective Applicants. Where possible, Council will also advise enquirers to investigate other forms of heating that may be suitable for their homes.
- Prior consultation with neighbours about proposed installations is recommended and may allow relevant concerns to be addressed in an amicable fashion.
- Installations in houses on steep hills should also be given careful consideration, as cold air flowing from high ground into valleys may carry smoke from houses positioned uphill to those downhill. Also, the pooling of cold air in valleys can cause smoke to be trapped near the ground and drawn into homes that have a fire burning. In areas where any of these situations is likely to occur, home owners should consider alternatives to solid fuel heating.
- Application forms will carry a health warning “*Woodsmoke Damages Your Health and alternative forms of heating should be considered*”.

During Assessment

- Council will seek confirmation from applicants for wood heater installations that they have considered other forms of heating and heat conservation measures.
- Council will supply educational information to the immediate neighbours of the subject property. This material will cover the correct operation of solid fuel (including wood fuel) heating appliances and appropriate fuel selection and storage, as well as advice about rights and responsibilities for operators and their neighbours.

Post Application

- Council will provide and maintain an installation compliance checklist for residents, appliance installers and inspectors of such installations, based on AS/NZS 2918 and Part G2 of the Building Code of Australia. Council will need to be satisfied that the installer in each case has relevant knowledge and experience to undertake the required work and will inspect installations when advised they are complete.
- Council will supply educational information to applicants with all approvals issued. This material will cover the correct operation of solid fuel (including wood fuel) heating appliances and appropriate fuel selection and storage, as well as advice about rights and responsibilities for operators and their neighbours.

Other Considerations

- Council will also lobby relevant Government agencies to introduce improved arrangements to discourage installations without approval and to improve design standards to limit harmful emissions from appliances.
- In the administration of approvals for the installation of solid fuel (including wood fuel) heating appliances, Council will monitor evolving experience and practice and have regard to the other matters outlined in this Policy and to changes in legislation and standards in this field.

PART 4 - ENFORCEMENT

Appropriate action is required to support the approval requirements under s.68 of the Local Government Act (1993) (LGA) to install wood heaters, and also to support the reduction in excessive smoke production in actively burning fires. Initial investigations and dialogue with the community will be conducted with courtesy and compassion before any legal action is considered.

Note: Council also has enforcement powers in relation to other energy installations if installed without necessary Council approvals or in such a way as to cause pollution nuisances, including noise pollution, to neighbours. If in doubt please contact Council's Environmental Health Unit on telephone (02) 6770 3872.

Solid Fuel Heater Installations

Council Officers will conduct roadside visual audits,, dependant on the annual availability of staff resources, to help check on heater operation and whether approvals exist for heaters that may have been installed.

Council Officers will apply the following process where solid fuel heaters have been installed with no approval:

- request the owner to show written cause and explain their actions;
- a requirement to have the installation surveyed and reported on by a qualified fitter including compliance with relevant Standards and local approvals policy;
- to have the installation altered, moved, replaced or removed;
- consider action for an offence under s.626 of the LG Act, attracting fines, via the Local Court, of up to 20 (twenty) penalty points (\$2,200 as at the time of completing this Policy).

Council reserves the right to issue appropriate cautions to installers of illegally-fitted wood heaters where appropriate.

Excessive Smoke Production

Council Officers will act upon reports of excessive smoke emission from domestic solid fuel heaters, from members of the public and from Council Officer patrols.

Enforcement procedures outlined below are to be followed in the event of excessive wood smoke emissions. These include **any or all** of the following steps:

Level 1

1. Provide a letterbox flyer that specifies the time and date when excessive smoke was observed and provides information on how to improve operation of the wood heater or fireplace. Include Council's process on handling smoke complaints. Record the address where a letterbox flyer has been lodged for Council's database.
2. Check the residence and if excessive smoke is being emitted, try to make contact with the householder, either face-to-face or by a phone call.

PART 4 - ENFORCEMENT (cont)

Excessive Smoke Production (cont)

Level 2

1. Provide letter box or door step flyer and card for householder to contact Council's Environmental Health Officer to discuss the issue.
2. Inform the householder about their chimney continuing to emit excessive smoke. Find and record the reasons for the excessive smoke. Provide further information or a demonstration of correct heater operation, insulation or alternative heating options. Consider carefully any special householder/occupant circumstances including social/financial disadvantage or vulnerability. If these circumstances apply contact relevant agencies for assistance, otherwise issue warning about the potential to issue a Smoke Abatement Notice issued under the Protection of the Environment Operations Act, 1997, Section 135B.

Level 3

1. Check warned residences and if excessive smoke is observed decide whether to issue a Smoke Abatement Notice. Again, consider carefully any special householder/occupant circumstances including social/financial disadvantage or vulnerability. If these circumstances apply contact relevant agencies for assistance. Otherwise, record details and ensure the Notice is issued within 7 days. *Note: Smoke Abatement Notices apply 21 days after their issue and extend for 6 months after issue. If during this period the chimney is seen to be excessively smoking and offence is committed⁸.*

Excessive smoke is defined 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 (see s. 135A POEO Act). (Note: s. 135A of the Act defines 'chimney' and 'residential premises).

2. Periodically check residences with current Smoke Abatement Notices and act as appropriate. A PIN may be issued for failure without reasonable excuse to comply with the Notice under Section 135C(1) POEO Act. The maximum penalty that a court may impose for not complying, at the time of completing this Policy, was \$3,300.
3. If problems persist, consider potential for further action (eg Prevention Notice under the Protection of the Environment Operations Act, 1997).

⁸ Council's legal jurisdiction to act upon wood smoke emissions is limited to those which are found by an Authorised Officer of Council to be "excessively smoking" as per the definition quoted above.



Public Health Fact Sheet

Bushfire Smoke

Introduction

Western Australia is subjected to regular bushfires, particularly through the summer months. In addition to the health hazards associated with extreme heat, and the potential physical injuries such as burns, fires result in large volumes of smoke. This bushfire smoke poses an additional health risk. The major killers from bushfires are the radiant heat, dehydration and asphyxiation.

Most of Australia's most devastating bushfires have happened where they have raged through dense eucalypt forests into the suburban fringes of major cities. Every few years exceptionally devastating fires occur. The most recent was in 1983 (Ash Wednesday), when fires raged through parts of Victoria and South Australia, leaving 76 people dead.

Risks

Large particulate matter, such as burning debris, irritates the eyes, nose, throat and lungs. The finer particles are able to penetrate deep in to the lung tissue and are more harmful. Smoke also contains toxic gases, such as carbon monoxide, carbon dioxide and nitrogen oxides.

Those at greatest risk of harm from bushfire smoke are:

- Those with respiratory disease, especially asthma
- Smokers
- Those with heart disease
- Children
- The elderly

Triggers

Air pollution is commonly measured as an index based on the levels of ozone, nitrogen dioxide and fine particles. The index is known as the RPI (Regional Pollution Index). The RPI is considered to be high when it is greater than 50 and hazardous when it reaches levels of 200 or more, as in the event of a bushfire. Health alerts will be broadcast for readings in the high range for specific risk groups (e.g. asthmatics). If the RPI is in the hazardous range, a general health alert will be issued.

Signs and Symptoms of Exposure

The gases and fine particles which are produced during a bushfire can exacerbate underlying respiratory disease, e.g. asthma, chronic bronchitis and allergic disease, causing:

- Difficulty breathing
- Cough
- Chest tightness



They may also exacerbate underlying heart disease causing:

- Chest pain
- Palpitations
- Difficulty breathing
- Fatigue

It is the particulate matter that is of greatest concern for those with heart disease.

When smoke levels are high, even healthy people may experience some of these symptoms.

Prevention

The most important consideration is to minimise exposure to smoke. To do this:

- Pay attention to media reports
- Minimise activity outside
- When inside, keep windows and doors closed
- Use an air conditioner, if you have one, switched to 'recirculate' (or take an air conditioned break in a public building)
- Minimise additional pollution by not smoking or using candles or wood fires. Do not vacuum or use unflued gas appliances
- If you suffer from heart or lung problems, make sure you always have at least 5 days' worth of medication with you.

When smoke conditions become 'hazardous', rest indoors. Outside sporting events should be postponed. Sensitive individuals should consider moving away from the area temporarily, if possible.

Dust masks do not provide adequate protection from bushfire smoke.

What to do in the event of illness

If you suffer from asthma, ensure that you have enough medication for 5 days and ensure that you have discussed an action plan with your doctor. If you experience worsening of your asthma that does not respond to usual measures, or you experience new breathing problems or chest pain, seek medical help.

Who to contact for further information

If you require further information on bushfire smoke, contact the Environmental Health Directorate on 08-9388 4999 or your Local Government Environmental Health Officer.

Acknowledgement: Information for the document was sourced from the Queensland Health 'Bushfire Smoke' Public Health Fact Sheet (June 2007).

(Last amended: January 2008)

