

Proposed new objective, policies and methods (excluding rules)

**Objective AQL5 PM<sub>10</sub> ambient air quality in Kaiapoi Clean Air Zones 1 and 2**

**Objective AQL5**

**Objective for PM<sub>10</sub> ambient air quality in Kaiapoi Clean Air Zones 1 and 2**

- (a) In the Kaiapoi Clean Air Zone 1, improve ambient air quality so that on and after 31 August 2013 the concentration of PM<sub>10</sub> is ~~less than~~ 50 µg/m<sup>3</sup> (24-hour average) or less, with no more than one annual exceedence.
- (b) By 31 August 2013 achieve an overall 68% reduction in concentrations of PM<sub>10</sub> in Kaiapoi Clean Air Zone 1 by:
- (i) ensuring outdoor burning practices do not contribute any PM<sub>10</sub> during the time when Objective AQL5 may not be met; and
  - (ii) preventing an overall increase in emissions from other discharge sources, including large scale fuel burning devices, unless:
    1. the emissions are offset by reductions from other emission sources, beyond the reductions achieved through the implementation of this Plan; or
    2. the emissions will not contribute to the ambient PM<sub>10</sub> concentrations during the time when Objective AQL5 may not be met; and
  - (iii) reducing the emissions from small scale solid fuel burning devices by the amount that is sufficient to achieve the overall reduction target; and
  - (iv) ensuring that the influence of PM<sub>10</sub> emissions from Kaiapoi Clean Air Zone 2 on PM<sub>10</sub> concentrations in Kaiapoi Clean Air Zone 1 does not increase, and is reduced over time.

**Explanation and principal reasons**

Objective AQL5(a) defines the ambient air quality PM<sub>10</sub> concentrations to be achieved in Kaiapoi by 31 August 2013. Objective AQL5(b) details the level of reduction necessary to achieve the ambient air quality PM<sub>10</sub> concentration, and in order to meet this, the changes in PM<sub>10</sub> emissions required from different sources.

PM<sub>10</sub> ambient air quality in Kaiapoi is currently poor. Monitoring shows that this poor air quality generally occurs in winter under calm weather conditions when inversion layers form. These excessive concentrations of PM<sub>10</sub> are associated with numerous health problems ranging from minor irritation of eyes and nose to exacerbating existing respiratory and cardiac problems among small children and the elderly. The benefits of reduced concentrations of PM<sub>10</sub> include; reduced numbers of premature deaths, reduced hospitalisation, reduced restricted activity days, reduced lost work days, reduction in medication use and reduced nuisance effects associated with smell, smoke and materials soiling.

Objective AQL5(a) is the same as the PM<sub>10</sub> ambient air quality standard specified in the Resource Management (National Environmental Standards Relating To Certain Air Pollutants, Dioxins, and Other Toxics) Regulations 2004 (NESAQ). In September 2005, because of poor PM<sub>10</sub> ambient air quality, the Kaiapoi airshed was gazetted in accordance with Regulation 3 of the NESAQ. Under the terms of the NESAQ, failure to achieve the national environmental standard for PM<sub>10</sub> after 31 August

2013 means that no resource consent for the discharge of PM<sub>10</sub> that would adversely affect that airshed can be granted (Regulation 19). A holder of an existing resource consent allowing the discharge of PM<sub>10</sub> that requires replacement after 31 August 2013 would not be able to obtain a replacement consent. Further, it means a person would not be able to establish an activity within the Kaiapoi airshed, or an activity that contributes PM<sub>10</sub> contaminant to the Kaiapoi airshed, if that activity requires resource consent to be obtained for the discharge of PM<sub>10</sub>.

At the time of public notification, monitoring from the year 2006 recorded the 'worst' PM<sub>10</sub> ambient air quality concentrations on record, both in terms of the extent that 24-hour concentrations exceeded 50 µg/m<sup>3</sup> and the total number of days on which the 24-hour average of 50 µg/m<sup>3</sup> was exceeded. Objective AQL5(a) must be met under the 'worst case' meteorological and emission conditions. Accordingly, the 2006 monitoring results are used as the basis for calculating the reductions required. The 'second-highest' 24-hour average concentration from 2006 is used as the 'management value' in order to recognise the provision for one permissible annual exceedence. For Kaiapoi the second highest 24-hour average concentration from 2006 must be reduced by 68% in order to meet the Objective AQL 5(a). To achieve this reduction in PM<sub>10</sub> concentrations, the same percentage reduction of PM<sub>10</sub> emissions is required (68%).

PM<sub>10</sub> emissions forecasts for Kaiapoi indicate that without significant intervention, PM<sub>10</sub> emissions will not reduce by 68% by 31 August 2013. Together, domestic home heating (94%) and the industrial/commercial sector (2%) account for 96% of total PM<sub>10</sub> emissions. Domestic home heating is the dominant source of PM<sub>10</sub> emissions.

Achieving the necessary emission reductions relies upon:

1. Domestic home heating (small scale solid fuel burning devices) reducing emissions by approximately three quarters.
2. The industrial/commercial sector (large scale fuel burning devices and other forms of PM<sub>10</sub> emissions) not increasing.
3. No contribution to PM<sub>10</sub> concentrations from other non-transport anthropogenic sources from within Kaiapoi Clean Air Zone 1. The most likely source is from outdoor burning.
4. No increase, and over time a decrease, in emissions from sources located within Kaiapoi Clean Air Zone 2 that have the potential to negate any reductions gained from within Kaiapoi Clean Air Zone 1 itself.

The objective does not address emissions from the transport sector - emissions from this sector are a matter that cannot be effectively controlled through this regional plan. The emission contribution from motor vehicles is minimal. Total emissions from this sector are predicted to decrease as fuel quality increases and more efficient vehicles enter the vehicle fleet.

There are a number of uncertainties associated with the achievement of Objective AQL5. These include:

1. The 1:1 relationship between PM<sub>10</sub> concentrations and emissions. This relationship may be affected by the time of day, location and characteristics of individual emission sources.
2. The contribution from environmental (non-anthropogenic) sources. These sources include sea-salt and dust. It is assumed that these sources will be limited to 4µg/m<sup>3</sup> of ambient PM<sub>10</sub>.
3. The contribution to ambient PM<sub>10</sub> from anthropogenic sources other than domestic home heating, industrial/commercial and transport sectors. Other potential sources include outdoor burning. It is assumed that there will be no contribution.
4. The emissions from domestic home heating, industrial/commercial and transport sources in the year 2013. These are forecast under a 'business as unusual' scenario.

5. The absolute and relative emissions from domestic home heating sources, which are based on estimates of the:
  - a. typical emission performance from different types of small scale solid fuel burning devices;
  - b. fuel use
  - c. method of operation.These are assessed as part of the forecasts made.
6. The future choices made by individuals and organisations when replacing existing solid-fuel burners. It is assumed that the future choices will be similar to the current choices being made.
7. The effectiveness of rules in this Plan in achieving the replacement, or upgrading of, small and large scale fuel burning devices. It is assumed that there will be 100% compliance with the relevant rules.

In introducing the measures to achieve Objective AQL5, it is necessary to ensure that these do not:

1. Result in a failure to achieve Objective AQL2 in relation to pollutants other than PM<sub>10</sub>.
2. Prejudice the ability for the airshed in the long-term to meet the PM<sub>10</sub> Regional Ambient Air Quality Target set out in Objective AQL2.

Environment Canterbury will monitor changes in PM<sub>10</sub> concentrations in this airshed. If monitoring indicates that the Objective AQL5 will not be met by 2013, Environment Canterbury will initiate further measures.

### **Policy AQL30 Avoid discharges from open fires in Kaiapoi Clean Air Zones 1 and 2**

#### **Policy AQL30                      Avoid discharges from open fires in Kaiapoi Clean Air Zones 1 and 2**

Except as provided for by Policies AQL33, AQL34 and AQL35, avoid the discharge of PM<sub>10</sub> from open fires that do not meet Policy AQL11:

- (a) in Kaiapoi Clean Air Zone 1, that exist as of 1 January 2008 from the earliest of the following dates:
  - (i) 1 May 2010; or
  - (ii) the date upon which there is a registered transfer of ownership of the site on which the open fire is located; and
- (b) in Kaiapoi Clean Air Zones 1 and 2, that did not exist as of 1 January 2008.

#### **Explanation and principal reasons**

Domestic home heating accounts for the significant proportion of PM<sub>10</sub> emissions within the Kaiapoi airshed. Of all the different domestic home heating small scale solid fuel burning devices, open fires produce a relatively high level of PM<sub>10</sub> emissions per appliance. This is because open fires have low combustion efficiency and are an inefficient form of space heating.

As of 2006 within Kaiapoi Clean Air Zone 1 there were a significant number of open fires in use. While this number is reducing, without further intervention a significant proportion of these open fires will remain in use in 2013. In order to achieve Objective AQL5, except as provided for in Policies AQL33, AQL34 and AQL35, emissions from open fires must cease and emissions from new open fires avoided.

Where open fires exist, sufficient time is provided to enable households to change from this form of home heating, while also ensuring that Objective AQL5 will be met. In order to achieve this, emissions from open fires must cease by 1<sup>st</sup> May 2010, or 'time of property sale', whichever is the earliest.

The 'time of property sale' provision recognises the significance of selling and purchasing property. It ensures the new owner has no expectation that there is the ability to use an existing open fires.

In both Kaiapoi Clean Air Zones 1 and 2 new discharges from open fires are to be avoided. Within Clean Air Zone 1, this is a component of reducing overall emissions from small scale solid fuel burning appliances. Within Clean Air Zone 2, this will ensure that new emissions from open fires in this zone do not increase PM<sub>10</sub> concentrations in Clean Air Zone 1.

### **Policy AQL31 Emissions from enclosed burners in Kaiapoi Clean Air Zone 1**

#### **Policy AQL31 Emissions from enclosed burners in Kaiapoi Clean Air Zone 1**

In Kaiapoi Clean Air Zone 1, reduce PM<sub>10</sub> discharges from enclosed burners by:

- (a) except as provided for by Policies AQL33, AQL34 and AQL35, avoid discharges from enclosed burners installed before 1 January 2001, that do not meet Policy AQL11, from the earliest of the following dates:
  - (i) 1 May 2010; or
  - (ii) the date upon which there is a registered transfer of ownership of the site on which the small scale solid fuel burners is located;
- (b) except as provided for by Policies AQL33, AQL34 and AQL35, avoid discharges from enclosed burners, installed after 1 January 2001 but before 1 June 2002, that do not meet Policy AQL11, from the earliest of the following dates:
  - (i) 31 August 2013; or
  - (ii) the date upon which there is a registered transfer of ownership of the site on which the small scale solid fuel burner is located;
- (c) avoid discharges from new enclosed burners, other than pellet fires, in all situations where:
  - (i) a small scale solid fuel burning device did not exist as of 1 January 2008; or
  - (ii) at the time of installation, an existing small scale solid fuel burning device is not being replaced by the new enclosed burner: and
- (d) encourage people to replace small scale solid fuel burning devices with non-solid fuel burning heating appliances and pellet fires.

## Explanation and principal reasons

Prior to June 2002, a variety of enclosed burners were installed in Kaiapoi. Each type of enclosed burner results in a different level of PM<sub>10</sub> emissions – generally the older the enclosed burner the greater the emissions that result from its use. In order to achieve Objective AQL5, PM<sub>10</sub> emissions from these older burners must be avoided.

These older enclosed burners are the most common form of small scale solid fuel burning devices in the Kaiapoi Clean Air Zone 1. Collectively, they result in the largest proportion of PM<sub>10</sub> emissions from domestic home heating. While the number of older enclosed burners is reducing, without further intervention a significant proportion will remain in use in 2013.

Policy AQL31 specifically recognises the different age and emission performance of the older enclosed burners, together with households investment associated with these. Reflecting this:

1. Where enclosed burners were installed before 1 January 2001, emissions must cease by 1<sup>st</sup> May 2010, or 'time of property sale', whichever is the earliest.
2. Where enclosed burners were installed between 1<sup>st</sup> January 2001 and 1<sup>st</sup> June 2002, emissions must cease by 31<sup>st</sup> August 2013, or 'time of property sale', whichever is the earliest.

The 'time of property sale' provision recognises the significance of selling and purchasing property. It ensures the new owner has no expectation that there is the ability to use an existing enclosed burner that does not meet Policy AQL11.

In addition, if enclosed burners are installed and used where small scale solid fuel burners do not currently exist, or if a significant proportion of the older enclosed burners are replaced by enclosed burners complying with Policy AQL11, Objective AQL5 will not be met. Therefore, at the time of change it is necessary to influence the choice of home heating installed, while providing for a range of home heating alternatives. Policy AQL31 addresses this by:

1. Avoiding solid fuel enclosed burners in situations in which they do not exist, with the exception of pellet fires.
2. Encouraging people to replace existing enclosed burners with non-solid fuel home heating appliances and pellet fires.

Pellet fires provide a 'least PM<sub>10</sub> emission' solid fuel option for people. They result in a significantly lower 'real-life' PM<sub>10</sub> emissions per appliance than some other forms of enclosed burners meeting Policy AQL11. This is because the operation of pellet fires is highly automated, allowing little opportunity for operator behaviour to detrimentally affect PM<sub>10</sub> emission performance.

## **Policy AQL32 Replacement of enclosed burners *small scale solid fuel burning devices* that meet Policy AQL11 in Kaiapoi Clean Air Zone 1**

### **Policy AQL32 Replacement of enclosed burners *small scale solid fuel burning devices* that meet Policy AQL11 in Kaiapoi Clean Air Zone 1**

In the Kaiapoi Clean Air Zone 1, avoid the discharge of contaminants into air from enclosed burners *small scale solid fuel burning devices* that meet Policy AQL11 where the discharge occurs 15 years after the date of installation, except where the enclosed burners emission performance of the device:

- (a) — continues to meet the standards in Policy AQL11 be the same or better than when the discharge was first legally authorised; and
- (b) — is the same or better than a discharge from enclosed burners permitted under this Plan at the time when the discharge from the device would otherwise be required to cease.

### **Explanation and principal reasons**

Policy AQL32 recognises that, with technological advances, the emission performance of small scale solid fuel burning devices is improving. In general, emissions are considerably lower from modern small scale solid fuel burning devices than older models. It is anticipated that this trend will continue into the future. Therefore, by ensuring the timely phase-out of older enclosed burners, this policy will result in emissions reducing in the airshed. In addition, this policy reduces uncertainty as to quantum and length of the contribution of these enclosed burners to the PM<sub>40</sub> concentrations within the airshed.

Studies undertaken indicate that the average life of an enclosed burner to be between 12 and 20 years. The 15 year life for an enclosed burner is adopted to maintain consistency with the requirements for Christchurch. This will avoid confusion between the rules pertaining to these airsheds which are located in close proximity.

A mandatory phase-out time of 15 years means that there is only a relatively small cost associated with any acceleration of the need for a household to change an enclosed burner. This is because many households will have replaced an older enclosed burner anyway, and for those yet to be replaced, the remaining life of the burner is small.

Provision is made for continued PM<sub>40</sub> emissions from individual enclosed burners that are older than 15 years. This reflects that the effective life of an individual burner can vary. This will need to be assessed on a case-by-case basis.

Policy AQL32 seeks to ensure that small scale solid fuel burning devices permitted under Policy AQL11 and Rule AQL2, continue to comply with those standards after 15 years of use.

Studies undertaken indicate that the average life of an enclosed burner is between 12 and 20 years. Over the course of its life, the emissions performance of a burner can diminish. This could result in increased ambient PM10 concentrations beyond 2013, which could jeopardise air quality improvements made in previous years and increase the risk of breaching Objective AQL5 (and the NESAQ). Provision is made for continued PM10 emissions from these burners, if after 15 years of installation, it can be demonstrated that the burner continues to operate as well, or better, than it did when first installed. This will need to be assessed on a case-by-case basis.

This policy is also intended to cover open fires or older enclosed burners which have been retrofitted with pollution control technology, or other small scale solid fuel burning devices which have been approved under Policy AQL11 and Rule AQL2. In the absence of information on the longevity of such

devices, a permitted discharge period of 15 years after installation of the pollution control equipment is consistent with the requirements for enclosed burners and is therefore considered appropriate.

## **Policy AQL33 Best practicable technology for enclosed burners in Kaiapoi**

### **Policy AQL33**

### **Best practicable technology for small scale solid fuel burner~~ing~~ devices in Kaiapoi Clean Air Zone 1**

In the Kaiapoi Clean Air Zone 1, allow discharges from small scale solid fuel burning devices if:

- (a) a small scale solid fuel burning device is not being replaced as specified in Policy AQL31(c)(i) and (ii), the performance of the new small scale solid fuel burning devices achieve the standards set out in Policy AQL11 when operated under a range of conditions representative of the real-life operation of the ~~burner~~ device;
- (b) a small scale solid fuel burning device is being replaced, the performance of the new small scale solid fuel burning devices are the same or better than ~~burners~~ devices achieving the standards set out in Policy AQL11.

### **Explanation and principal reasons**

At this time small scale solid fuel burning devices meeting Policy AQL11 are considered to be, when viewed from a PM<sub>10</sub> emissions perspective, the best practicable option for solid fuel home heating. However, in the future alternative forms of small scale solid fuel burning devices, or existing small scale fuel burning devices fitted with special emission control technology, may become commercially available. These may perform better from an 'emissions per appliance' perspective than ~~enclosed burners~~ small scale solid fuel devices meeting Policy AQL11. Policy AQL33 provides specific guidance on how this change in technology is to be provided for.

A stricter emissions control approach is to be applied to small scale solid fuel burning devices where these are to locate in new situations. This reflects the limitations set out in Policy AQL31(c), and the need to ensure such emissions do not undermine the achievement of Objective AQL5. In recognition of the difference between 'tested laboratory' emissions and 'real life' emissions, the stricter approach requires consideration of the 'real-life' emissions of the small scale solid fuel burning device under consideration.

Where an ~~enclosed burner~~ small scale solid fuel device is being replaced, provided the 'tested laboratory' emission performance of the burner is the same or better than an ~~an enclosed burner~~ small scale solid fuel device meeting Policy AQL11, the emissions are to be allowed on the same basis as the ~~burner~~ device meeting Policy AQL11.

## **Policy AQL34 Small scale solid fuel burning device exemptions in Kaiapoi Clean Air Zone 1**

### **Policy AQL34 Small scale solid fuel burning device exemptions in Kaiapoi Clean Air Zone 1**

In the Kaiapoi Clean Air Zone 1, allow the discharge of PM<sub>10</sub> from any small scale solid fuel burning device that is located in a heritage building meeting all of the following criteria:

- (a) located in a building that is listed as a heritage building in Appendix 28.1 of the Waimakariri District Plan; and
- (b) the device and chimney are original features of the building.

#### **Explanation and principal reasons**

Policy AQL34 provides exemptions for discharges from small scale solid fuel burning appliances which do not meet Policy AQL11 that are located in buildings of historic value.

It is recognised that the installation and use of heating alternatives may affect the existing heritage value of a building. Where these alternatives can be installed without compromising the heritage value, it is preferable that the older device is replaced with a suitable alternative device. Nevertheless, the overall judgement of Environment Canterbury is that retaining the authentic appearance in recognised historic buildings in Kaiapoi should be provided for. This will allow people to observe the buildings in a manner that is befitting of the authenticity of the building. Policy AQL34 sets the criteria by which these discharges to air from open fires, pot bellies, coal ranges or other similar historic fuel burning devices are allowed. The heritage buildings are identified using Appendix 28.1 of the Waimakariri District Plan and are as set out in Schedule AQL4.

## **Policy AQL34A Mitigate adverse financial social and health effects**

### **Policy AQL34A Mitigate adverse financial, social and health effects of the implementation of the clean air policies in the Kaiapoi Clean Air Zone 1**

**In the Kaiapoi Clean Air Zone 1, mitigate the adverse financial, social and health effects from the implementation of Policies AQL30 and AQL31 by facilitating mechanisms so that clean heating and improved insulation are available to all households, particularly low income households.**

#### **Explanations and principal reasons:**

There is an underlying concern that the existing problem of poor and inadequate heating of some households in Kaiapoi would be aggravated by the imposition of the rules relating to this town.

When open fires and older style enclosed burners are phased out, some households will not find it easy to meet the costs of replacements. It is considered that assistance to those who face difficulties meeting the cost of changing appliances is inextricably linked to the implementation of measures to eliminate emissions from open fires and older style small scale fuel burning devices.

## **Policy AQL35 Emergencies in Kaiapoi Clean Air Zone 1**

### **Policy AQL35 Emergencies in Kaiapoi Clean Air Zone 1**

**In the Kaiapoi Clean Air Zone 1, allow the discharge of PM<sub>10</sub> from any small scale solid fuel burning device for the duration of cessation of electricity supply as a result of an electricity network disruption:**

- (a) when the cessation of supply has been notified in advance and will extend for a period greater than 3 hours; or**
- (b) when the length of the cessation of supply is unknown at the time that the supply is terminated.**

#### **Explanation and principal reasons**

Policy AQL35 provides for the discharge to air from small scale solid fuel burning devices not provided for in this Plan when electricity supply is disrupted and this disruption cannot be planned for. The policy recognises the need to heat homes in the cases of emergency. It is not intended to allow exemptions where intentional electricity disconnection occurred.

## **Policy AQL36 Industrial and commercial emissions in Kaiapoi Clean Air Zones 1 and 2**

### **Policy AQL36 Emissions from large scale fuel burning devices in Kaiapoi Clean Air Zones 1 and 2**

**Allow the discharges of PM<sub>10</sub> from large scale fuel burning devices in the Kaiapoi Clean Air Zones 1 and 2, provided that:**

- (a) the discharge does not result in Objective AQL5(b)(ii) not being met; and**
- (b) the best practicable option to minimise PM<sub>10</sub> emissions is adopted:**
  - (i) within Kaiapoi Clean Air Zone 1, for existing and new large scale fuel burning devices; and**
  - (ii) within Kaiapoi Clean Air Zone 2, for new large scale fuel burning devices;**

**unless**

- (c) the person discharging has offset those emissions by reducing emissions from other sources, beyond the reductions achieved through the implementation of this Plan; or**
- (d) the emissions will not contribute to the ambient PM<sub>10</sub> concentrations in Kaiapoi Clean Air Zone 1 during the time when Objective AQL5 may not be met.**

#### **Explanation and principal reasons**

The contribution of emissions from large scale fuel burning devices to PM<sub>10</sub> ambient air quality concentrations in Kaiapoi Clean Air Zone 1 is considerably lower than the domestic home heating sector. However, it is important that overall emissions from large scale fuel burning devices do not increase compromising the gains achieved by reducing emissions from the domestic sector.

Policy AQL36 provides for the overall emissions within Kaiapoi Clean Air Zone 1 from large scale fuel burning devices to remain at 2006 levels, unless any increase in emissions:

1. Is offset by reductions from other emission sources.
2. Does not contribute to the ambient PM<sub>10</sub> concentrations in Kaiapoi Clean Air Zone 1 during the time when Objective AQL5 may not be met.

Any emission offset must be a 'real' offset. It must be clearly distinct and distinguishable from any reductions expected to otherwise be achieved through the implementation of the Regional Plan. If this is not the case, the offset may undermine the achievement of Objective AQL5.

The policy also recognises that emissions from large scale fuel burning devices can be reduced by ensuring that best practicable options are being adopted. Best practicable options may include; more stringent operating standards, improved levels of cleaning and maintenance, improvements in efficiency of fuel use; changes in fuel type or quality, and the use of different pollution control technology. The effect of this is to provide for an increase in the number and/or size of large scale fuel burning devices within the Clean Air Zones, without creating an overall increase in emissions.

There is a different approach to managing existing large scale fuel burning devices located Kaiapoi Clean Air Zone 1 and those located in Kaiapoi Clean Air Zone 2. This is a reflection of the influence emissions in these different locations have on PM<sub>10</sub> concentrations in Kaiapoi Clean Air Zone 1. It is only when a new large scale fuel burning device is being installed in Kaiapoi Clean Air Zone 2 that best practicable option PM<sub>10</sub> reduction measures need be considered.

### **Policy AQL37 Restrict discharges to air from outdoor burning in the Kaiapoi Clean Air Zone 1 and 2**

#### **Policy AQL37 Restrict discharges to air from outdoor burning in the Kaiapoi Clean Air Zones 1 and 2**

In the Kaiapoi Clean Air Zones 1 and 2 avoid the discharge to air of contaminants associated with any outdoor burning where such discharges occur between May and September inclusive, except where such discharges occur from the burning of vegetative material in the following circumstances:

- (a) where it is impracticable to remove vegetative material because of unsuitable access, and such vegetative material will result in a fire risk if not removed or will damage structures if not removed; or
- (b) where the financial implications of the alternatives to burning vegetative material are prohibitive; or
- (c) when summer fire risk restrictions prevent burning vegetative material during March and April; or

**(d) in Clean Air Zone 2 only:**

- 1. in accordance with a bylaw promulgated by the Waimakariri District Council under the Local Government Act 2002, which controls outdoor burning at that location, with the purpose of protecting public health from high ambient concentrations of PM10; or**
- 2. when the discharge results from the outdoor burning of diseased vegetation from primary production on production land which is necessary to be burned for quarantine or disease control purposes;**

and

- (d) where the outdoor burning can be undertaken so as not to contribute to the ambient PM<sub>10</sub> concentrations in Rangiora/ Kaiapoi Clean Air Zone 1 during the time when Objective AQL5 may not be met.

#### Explanation and principal reasons

Outdoor burning in Kaiapoi Clean Air Zones 1 and 2 has the potential to significantly elevate PM<sub>10</sub> concentrations in Kaiapoi Clean Air Zone 1. The adverse effects of outdoor burning on PM<sub>10</sub> concentrations that would result in Objective AQL5 not being achieved are to be avoided, particularly where other practicable and cost efficient waste disposal methods exist.

*It is recognised that occasionally, during the winter months, horticultural and agricultural activities require some types of diseased vegetative matter arising from primary production activities to be disposed of by burning in order to control disease. In these situations, when the storage of the diseased material (until after winter) poses a threat to production processes and there is no viable alternative disposal technique, it is recognised that some provision should be made for burning to occur. However, this should only be permitted in Clean Air Zone 2 and under very tightly controlled conditions which prevent PM10 emissions from contributing to ambient PM10 concentrations in Clean Air Zone 1.*

*A bylaw, promulgated by the Waimakariri District Council under the Local Government Act, 2002, could provide more flexibility in allowing outdoor burning to take place in Clean Air Zone 2, under conditions when the emissions from this activity would not contribute to breaches of Objective AQL5 or the National Environmental Standard for PM10 within the Kaiapoi Clean Air Zone 1.*

## Methods

### Methods to Implement Policy AQL30 to AQL37

The methods used or to be used to implement Policies AQL30 to AQL37 are set out below.

#### Method AQL30(a) Investigation

Environment Canterbury will continue to undertake monitoring and investigations into the extent of wintertime air pollution in Kaiapoi. This process will involve the following steps:

- (i) ongoing ambient air quality and meteorological monitoring;
- (ii) preparation of an emissions inventory, which identifies key sources and how they change over space and time;
- (iii) atmospheric dispersion modelling studies and exposure assessments to determine the spatial extent and frequency of areas where pollution levels exceed target values and their impacts;
- (iv) analysis of current trends and projection for future trends in emissions;
- (v) analysis of the options for improving air quality and their cost effectiveness; and
- (vi) determining community views on the options for improving ambient air quality.

#### Method AQL30(b) Information and promotion

Environment Canterbury will produce and disseminate information and educational material, and co-ordinate as appropriate with territorial authorities and other agencies, to:

- (i) advise of the requirements of the regional rules within this Plan
- (ii) advise of the availability of a clean air and energy efficiency financial assistance programme
- (iii) improve energy efficiency of combustion processes of fuel burning devices
- (iv) encourage the use of alternative clean technology in home heating
- (v) promote energy efficiency (including the benefits of insulation)
- (vi) promote and support research into, and the development of, cleaner burning small scale solid fuel burner technology
- (vii) promote the use of facilities to dispose of wastes that shall no longer be burned
- (viii) promote waste minimisation, including reduction, recycling and reuse of household waste and composting of garden wastes
- (ix) promote the prior notification of neighbours of the occurrence of outdoor burning.

#### Method AQL30(c) Financial assistance

Environment Canterbury will consider implementing a 'clean air and energy efficiency' financial assistance programme to provide targeted support of lower income households to enable them to replace open fires and enclosed burners by:

- (i) subsidising the costs of replacing *open fires and* enclosed burners; and
- (ii) subsidising the costs of home energy efficiency improvements.

#### Method AQL30(d) Development of funding and delivery partnerships

Environment Canterbury will, in conjunction with Waimakariri District Council, develop and maintain relationships with central government, businesses and agencies that can assist in the provision, including funding, and delivery, of a financial assistance programme.

Method AQL30(e) Regional rules

Environment Canterbury will apply regional rules in Section 3 of this Plan.

Method AQL30(f) Resource consents

Resource consents may be granted for activities which discharge contaminants into air from fuel-burning devices. These may involve discharges into air. Environment Canterbury will apply Policies AQL30 to AQL37, as relevant, when considering such applications.

Method AQL30(g) Review of resource consents

Regional Rules AQL93, AQL94 and AQL95 shall affect, under section 130 of the RMA, the exercise of existing resource consents for discharges of contaminants. When these rules become operative, Environment Canterbury may serve notice, under Section 128 of the RMA, on the holders of all such resource consents of its intention to review the conditions of their resource consent, where in Environment Canterbury's opinion, it is appropriate to do so in order to enable the standards and terms set by the rule to be met.

Method AQL30(h) Compliance and enforcement

Environment Canterbury will monitor the exercise of resource consents within Kaiapoi and take appropriate action where this is shown to be necessary. Environment Canterbury may apply for enforcement orders, issue abatement notices and use other enforcement mechanisms in Part XII of the RMA.

Method AQL30(i) Variation or plan change

Environment Canterbury will, on an ongoing basis, consider the appropriate enclosed burner standard, together with the appropriate testing methodology, that best implement Policy AQL33. If technological advancements result in a new standard and/or testing methodology better implementing Policy AQL33 than current rules in the regional plan, it will consider changing these rules to reflect this new standard and/or testing methodology.

Method AQL30(j) Waimakariri District Council

Environment Canterbury will collaborate with Waimakariri District Council to:

- (i) prepare and implement bylaws under the Local Government Act 2002 to control:
  - (1) nuisance from smoke;
  - (2) gross point sources of PM<sub>10</sub> pollution;
  - (3) outdoor burning in the Kaiapoi Clean Air Zone 2 between 1 May and 30 September each year
- (ii) collect and share information gathered as a result of functions and duties in the Building Act 2002, Resource Management Act 1991 and Health Act 1956; and
- (iii) make information available to the public about the availability of financial assistance.

## Proposed regional rules

**Add to Table 3.1 Summary of rules**

Discharges to air from small scale solid fuel fuel burning devices and large scale fuel burning devices in Kaiapoi Clean Air Zones 1 and 2				
Area rule applies	Rule N <sup>o</sup>	Description	Activity Status	Page N <sup>o</sup>
Kaiapoi Clean Air Zone 1	AQL85	Open fires not installed before 1 January 2008	Non-complying	
Kaiapoi Clean Air Zones 1 and 2	AQL86	Outdoor burning	Non-complying	
<u>Kaiapoi Clean Air Zone 2</u>	<u>AQL86A</u>	<u>Outdoor burning of diseased vegetation from production land in winter</u>	<u>Permitted</u>	
Kaiapoi Clean Air Zones 1 and 2	AQL87	Enclosed burners or open fires contained within heritage buildings	Permitted	
Kaiapoi Clean Air Zone 1	AQL88	<del>Enclosed burner permitted by Rule AQL2</del> <u>Small scale solid fuel burning device installed after 1 June 2002</u>	Restricted discretionary	
	AQL89	Open fires existing on 1 January 2008	Non-complying	
	AQL90	Enclosed burner installed before 1 January 2001	Non-complying	
	AQL91	Enclosed burner installed after 1 January 2001 but before 1 June 2002	Non-complying	
	AQL92	Small scale fuel burning device installed in a new situation	Non-complying	
Kaiapoi Clean Air Zones 1 and 2	AQL93	New large scale fuel burning devices fired by solid fuel or light fuel oil	Discretionary	
Kaiapoi Clean Air Zone 1	AQL94	Existing large scale fuel burning devices fired by solid fuel or light fuel oil	Discretionary	
Kaiapoi Clean Air Zones 1 and 2	AQL95	Large scale fuel burning devices fired by solid fuel or light fuel oil that do not meet the standards set by Rules AQL93 and AQL94	Non-complying	

## Rule AQL85 Open fires not installed before 1 January 2008 in Kaiapoi Clean Air Zones 1 and 2

### Rule AQL85 Open fires not installed before 1 January 2008 in Kaiapoi Clean Air Zone 1 and 2 – non-complying activity

Activity	Conditions		Cross Ref.
<p>Notwithstanding Rule AQL4, and except as prohibited by Rules AQL5 and AQL6, the discharge of contaminants into air in the Kaiapoi Clean Air Zones 1 and 2 from the burning of any fuel in any open fire not already installed before 1 January 2008, unless building consent was issued and any amendments incorporated in the building consent for the installation of the open fire before 1 January 2008, is a non-complying activity.</p>			<p><b>Policies:</b> AQL30 AQL33</p>

## Rule AQL86 Outdoor burning in Kaiapoi Clean Air Zones 1 and 2

### Rule AQL86 Outdoor burning in Kaiapoi Clean Air Zones 1 and 2 – non-complying activity

Activity			Cross Ref.
<p>Notwithstanding Rules AQL28, AQL29, AQL30, AQL31, AQL32, AQL33 and AQL34, and except as <i>permitted by Rule AQL86A</i> or prohibited by Rules AQL36 and AQL37, the discharge of contaminants into air in the Kaiapoi Clean Air Zones 1 and 2 from outdoor burning during the months of May, June, July, August and September, is a non-complying activity.</p> <p><i><u>This rule shall have effect in Kaiapoi Clean Air Zone 2 at any time that a bylaw, promulgated by the Waimakariri District Council under the Local Government Act 2002, specific to controlling outdoor burning during the months of May to September for all of Kaiapoi Clean Air Zone 2 with the purpose of protecting public health from high ambient concentrations of PM10, does not exist.</u></i></p>			<p><b>Policies:</b> AQL37</p>

## Rule AQL86A Outdoor burning of diseased vegetation from production land in winter

### Rule AQL86A Outdoor burning of diseased vegetation from production land in winter in the Kaiapoi Clean Air Zone 2 – permitted activity

<u>Activity</u>	<u>Conditions</u>	<u>Cross Ref.</u>
<p><u>Notwithstanding Rules AQL35 and AQL86, and subject to Rules AQL36 and AQL37, during the months of May, June, July, August and September, the discharge of contaminants into air in the Kaiapoi Clean Air Zone 2, from outdoor burning of diseased vegetation on production land, which is zoned rural in the Waimakariri District Plan, is a permitted activity.</u></p>	<ol style="list-style-type: none"> <li><u>1. Burning shall only be undertaken when the diseased material originates from production land as a result of the production of primary products, including prunings from production trees.</u></li> <li><u>2. Burning shall only be undertaken when required for quarantine or disease control purposes</u></li> <li><u>3. Burning shall only occur of diseased vegetation sourced from no more than 2 adjoining properties where that vegetation has been derived or used, and burning shall be undertaken on one of those properties.</u></li> <li><u>4. The amount of material to be burnt on one property at any one time shall have a footprint not greater than 4 metres by 4 metres and shall not be piled higher than 2 metres from ground level.</u></li> <li><u>5. The discharge shall not occur from the combustion of material with a moisture content of more than 25% dry weight, or if the moisture content cannot be determined, the material shall have been left to dry for at least six weeks prior to burning and within the two days prior to burning there shall have been less than 5 mm of rainfall.</u></li> <li><u>6. The discharge shall not occur outside the hours of 8 am to 2 pm.</u></li> <li><u>7. The discharge shall not occur when the wind causes particles such as smoke to move towards Kaiapoi Clean Air Zone 1.</u></li> <li><u>8. The discharge shall only occur if the wind speed is not less than 5 metres per second, measured at 1 metre above ground level.</u></li> <li><u>9. The discharge shall not occur within 100 metres upwind, or 50 metres in any other direction, from any sensitive activity that is not located on the property where burning occurs.</u></li> <li><u>10. The dispersal or deposition of particles shall not cause an objectionable or offensive effect beyond the boundary of the property where the discharge originates.</u></li> <li><u>11. The burn shall be supervised at all times.</u></li> <li><u>12. Equipment shall be present in order that the fire can be extinguished within a maximum time of 30 minutes by the person supervising the burn.</u></li> <li><u>13. A wind speed monitor shall be present which is capable of recording the wind speed at the site of the burn.</u></li> <li><u>14. Environment Canterbury shall be given notice of the burn a minimum of 2 hours in advance of the burn. Notification must either be provided in writing or by contacting the Environment Canterbury Pollution Hotline on 0800 765 588 or any future equivalent.</u></li> </ol>	<p><b><u>Policies:</u></b> <u>AQL37</u></p>

	<p><u>15. Written records of burning shall be kept. The records shall include:</u></p> <ul style="list-style-type: none"><li><u>(a) Condition of the material burned</u></li><li><u>(b) Size of the burn</u></li><li><u>(c) Time of day of the burn</u></li><li><u>(d) Duration of the burn</u></li><li><u>(e) Wind speed and direction during the burn</u></li><li><u>(f) Equipment present to extinguish the burn</u></li><li><u>(g) Supervisor present</u></li></ul> <p><u>The written records shall be provided to Environment Canterbury within 24 hours of being requested.</u></p>	
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## Rule AQL87 Enclosed burners or open fires contained within heritage buildings in Kaiapoi Clean Air Zone 1

### Rule AQL87 Enclosed burners or open fires contained within heritage buildings in Kaiapoi Clean Air Zone 1 – permitted activity

Activity	Conditions		Cross Ref.
<p>Notwithstanding Rules AQL1, AQL89 and AQL90, and except as prohibited by Rules AQL5 or AQL6, the discharge of contaminants into air in the Kaiapoi Clean Air Zone 1 from the burning of any fuel in any enclosed burner or open fire that is located in a heritage building listed in Schedule AQL4(c) Exemption heritage buildings in Kaiapoi is a permitted activity.</p>	<ol style="list-style-type: none"> <li>1. The discharge shall not be dangerous or noxious beyond the boundaries of the property where the discharge originates.</li> <li>2. The dispersal or deposition of particles shall not cause corrosion, or have noxious, dangerous, offensive or objectionable effects on the environment beyond the boundary of the property where the discharge originates.</li> <li>3. The discharge of odour shall not cause an objectionable or offensive effect on the environment beyond the boundary of the property where the discharge originates.</li> <li>4. The sulphur content of the fuel to be burned shall not exceed 0.5% by weight.</li> <li>5. The solid fuel burning device and chimney are original features of the building</li> </ol>		<p><b>Policies:</b> AQL34</p>

**Rule AQL88 ~~Enclosed burner permitted by Rule AQL2~~ Small scale solid fuel burning device installed after 1 June 2002 in the Kaiapoi Clean Air Zone 1**

**Rule AQL88 ~~Enclosed burner~~ Small scale solid fuel burning device installed after 1 June 2002 permitted by Rule AQL2 in the Kaiapoi Clean Air Zone 1 – restricted discretionary activity**

Activity	Conditions	Restriction of discretion	Cross Ref.
<p><i>Notwithstanding Rules AQL1 and AQL2 and <del>except as controlled by Rules AQL89, AQL90 and AQL91, or</del> prohibited by Rules AQL5 and AQL6, the discharge of contaminants into air in the Kaiapoi Clean Air Zone 1 from the burning of any solid fuel in any <del>enclosed burner</del> <u>small scale solid fuel burning device</u> permitted by Rule AQL2; <u>is a restricted discretionary activity</u> after the later of the following dates:</i></p> <p>(1) 1 May 2010, or</p> <p>(2) from the day 15 years following the date of its first installation as recorded by the relevant building consent</p> <p><del>is a restricted discretionary activity.</del></p> <p>Public notification and service of notice:</p> <p>In accordance with section 94D(2), an application for resource consent required by this rule does not need to be notified, and in accordance with section 94D(3), notice of such an application does not need to be served.</p>	<p>None</p>	<p>1. Existing and predicted future emission performance of the <del>enclosed burner</del> <u>small scale solid fuel burning device</u> under a range of operating conditions when compared with its manufacturer's design performance at the time of installation.</p> <p>2. <del>Existing and future emission performance of the enclosed burner under a range of operating conditions in relation to enclosed burners authorised by this Plan at the time of the resource consent application.</del></p> <p>2. <u>Duration of consent</u></p>	<p><b>Policies:</b></p> <p>AQL32</p> <p><u>AQL33</u></p>

## Rule AQL89 Open fires existing on 1 January 2008 in Kaiapoi Clean Air Zone 1

### Rule AQL89 Open fires existing on 1 January 2008 in Kaiapoi Clean Air Zone 1 – non complying activity

Activity	Conditions		Cross Ref.
<p>Notwithstanding Rule AQL1 and <del>AQL2</del>, and except as permitted by Rules <u>AQL2 and</u> AQL87 or prohibited by Rules AQL5 and AQL6, the discharge of contaminants into air in the Kaiapoi Clean Air Zone 1 from the burning of any fuel in any open fire <u>is a non complying activity after</u> <del>from</del> the earliest of the following dates:</p> <p>(a) 1 May 2010; or</p> <p>(b) the date upon which there is a registered transfer of ownership of the site on which the open fire is located;</p> <p>is a non complying activity.</p> <p>For the purposes of this rule, “transfer of ownership” does not include:</p> <p>(a) a transaction in which a person who was a registered proprietor of the land at the date of notification of this rule, remains or becomes a registered proprietor (whether or not the only registered proprietor) of that land after the transfer; or</p> <p>(b) a transaction in which the transferee is a trustee of a trust, and one or more of the transferors is a beneficiary of that same trust; or</p> <p>(c) a transaction for which a legal contract was entered into before this rule was publicly notified.</p>			<p><b>Policies:</b></p> <p>AQL30</p> <p>AQL33</p>

## Rule AQL90 Enclosed burner installed before 1 January 2001 in the Kaiapoi Clean Air Zone 1

### Rule AQL90 Enclosed burner installed before 1 January 2001 in the Kaiapoi Clean Air Zone 1 – non complying activity

Activity	Conditions		Cross Ref.
<p>Notwithstanding Rule AQL1 and <del>AQL2</del>, and except as permitted by Rules <u>AQL2 and</u> AQL87 or prohibited by Rules AQL5 and AQL6, the discharge of contaminants into air in the Kaiapoi Clean Air Zone 1 from the burning of any fuel in any enclosed burner installed before 1 January 2001 <u>is a non complying activity after</u> <del>that does not meet Rule AQL2</del> from the earliest of the following dates:</p> <p>(a) 1 May 2010; or</p> <p>(b) the date upon which there is a registered transfer of ownership of the site on which the enclosed burner is located;</p> <p>Is a non complying activity.</p> <p>For the purposes of this rule, “transfer of ownership” does not include:</p> <p>(a) a transaction in which a person who was a registered proprietor of the land at the date of notification of this rule, remains or becomes a registered proprietor (whether or not the only registered proprietor) of that land after the transfer; or</p> <p>(b) a transaction in which the transferee is a trustee of a trust, and one or more of the transferors is a beneficiary of that same trust; or</p> <p>(c) a transaction for which a legal contract was entered into before this rule was publicly notified.</p>			<p><b>Policies:</b></p> <p>AQL31</p> <p>AQL33</p>

## Rule AQL91 Enclosed burner installed after 1 January 2001 but before 1 June 2002 in the Kaiapoi Clean Air Zone 1

### Rule AQL91 Enclosed burner installed after 1 January 2001 but before 1 June 2002 in the Kaiapoi Clean Air Zone 1 – non complying activity

Activity	Conditions		Cross Ref.
<p>Notwithstanding Rules AQL1 and AQL2, and except as <i>permitted by Rule AQL2</i> <u>or</u> prohibited by Rules AQL5 and AQL6, the discharge of contaminants into air in the Kaiapoi Clean Air Zone 1 from the burning of any fuel in any enclosed burner installed after 1 January 2001 but before 1 June 2002 <i>is a non complying activity after</i> that does not meet Rule AQL2 from the earliest of the following dates:</p> <p>(a) 31 August 2013; or</p> <p>(b) the date upon which there is a registered transfer of ownership of the site on which the enclosed burner is located;</p> <p>Is a non complying activity.</p> <p>For the purposes of this rule, “transfer of ownership” does not include:</p> <p>(a) a transaction in which a person who was a registered proprietor of the land at the date of notification of this rule, remains or becomes a registered proprietor (whether or not the only registered proprietor) of that land after the transfer; or</p> <p>(b) a transaction in which the transferee is a trustee of a trust, and one or more of the transferors is a beneficiary of that same trust; or</p> <p>(c) a transaction for which a legal contract was entered into before this rule was publicly notified.</p>			<p><b>Policies:</b></p> <p>AQL31</p> <p>AQL33</p>

## Rule AQL92 Small scale solid fuel burning device installed in a new situation in Kaiapoi Clean Air Zone 1

**Rule AQL92 Small scale solid fuel burning device installed in a new dwelling or building, or a dwelling or building that does not have a small scale fuel burning device; or in an extension or alteration to a dwelling or building that does not have a small scale fuel burning device in Kaiapoi Clean Air Zone 1 – non-complying activity**

Activity			Cross Ref.
<p>Notwithstanding Rule AQL2, with the exception of discharges of contaminants into air from pellet fires permitted by Rule AQL2, and except as prohibited by Rules AQL5 and AQL6, the discharge of contaminants into air in the Kaiapoi Clean Air Zone 1 from the burning of any fuel in any small scale solid fuel burning device which is located in:</p> <p>(a) any dwelling or building for which building consent was issued after 31 December 2007, including any extension or alteration to that dwelling; or</p> <p>(b) any dwelling or building that did not have a small scale solid fuel burning device:</p> <p style="padding-left: 20px;">(i) at 31 December 2007, including any extension or alteration to that dwelling or building; or</p> <p style="padding-left: 20px;">(ii) existing and operational within a six month period before the time at which the new small scale solid fuel burning device is proposed to be installed</p> <p>is a non-complying activity, unless building consent was issued and any amendments were incorporated in the building consent in accordance with the Building Act 1991 for the installation of the small scale solid fuel burning device complying with Rule AQL2 before 1 January 2008.</p> <p>For the purposes of this rule, pellet fire means an enclosed burner that solely burns pellet fuel which is made from untreated sawdust bonded together by the woods natural resins through the process of pelletization creating individual pellets of between 6mm and 8mm in diameter and a maximum length of 38mm.</p>			<p><b>Policies:</b></p> <p>AQL31</p> <p>AQL33</p>

## Rule AQL93 New large scale fuel burning devices fired by solid fuel or light fuel oil in Kaiapoi Clean Air Zones 1 and 2

### Rule AQL93 Combustion of solid fuel or light fuel oil in new large scale fuel burning devices in the Kaiapoi Clean Air Zones 1 and 2 – discretionary activity

Activity	Standard	Discretion	Cross Ref.
Notwithstanding Rules AQL24, AQL26 and AQL27, and except as prohibited by Rule AQL12 or controlled by Rule AQL12A, the discharge of contaminants into air in the Kaiapoi Clean Air Zones 1 and 2 from the burning of solid fuel or light fuel oil in any large scale fuel burning device installed after the date of notification of this variation to the NRRP is a discretionary activity.	The concentration of total suspended particulate in combustion gas discharged from all emission stacks, measured according to the requirement described in Schedule AQL6, shall not exceed 250 milligrams per cubic metre of air adjusted to 0° Celsius, dry gas basis, 101.3 kilopascals and 12% carbon dioxide.	Unlimited	<b>Policies:</b> AQL36

## Rule AQL94 Existing large scale fuel burning devices fired by solid fuel or light fuel oil in Kaiapoi Clean Air Zone 1

### Rule AQL94 Combustion of solid fuel or light fuel oil in existing large scale fuel burning devices in the Kaiapoi Clean Air Zone 1 – discretionary activity

Activity	Standard	Discretion	Cross Ref.
Notwithstanding Rules AQL24, AQL26 and AQL27, and except as prohibited by Rule AQL12 or controlled by Rule AQL12A, the discharge of contaminants into air in the Kaiapoi Clean Air Zone 1 from the burning of solid fuel or light fuel oil in any large scale fuel burning device installed and operated before the date of notification of this variation to the NRRP is a discretionary activity.	The concentration of total suspended particulate in combustion gas discharged from all emission stacks, measured according to the requirement described in Schedule AQL6, shall not exceed 300 milligrams per cubic metre of air adjusted to 0° Celsius, dry gas basis, 101.3 kilopascals and 12% carbon dioxide.	Unlimited	<b>Policies:</b> AQL36

**Rule AQL95 Large scale fuel burning devices burning of solid fuel or light fuel oil that do not meet the standards set by Rules AQL93 and AQL94 in the Kaiapoi Clean Air Zones 1 and 2**

**Rule AQL95 Large scale fuel burning devices burning of solid fuel or light fuel oil that do not meet the standards set by Rules AQL93 and AQL94 in the Kaiapoi Clean Air Zones 1 and 2– non-complying activity**

Activity			Cross Ref.
Notwithstanding Rules AQL24, AQL26 and AQL27, and except as prohibited by Rule AQL12 or controlled by Rule AQL12A, the discharge of contaminants into air in the Kaiapoi Clean Air Zones 1 and 2 from the burning of solid fuel or light fuel oil in a large scale fuel burning device that requires resource consent under Rules AQL93 and AQL94 but does not meet the standards of those rules, is a non-complying activity.			<b>Policies:</b>  AQL36

Note:

Rule AQL95 applies only to:

- (i) existing large scale fuel burning devices burning solid fuel or light fuel oil in the Kaiapoi Clean Air Zone 1; and
- (ii) new large scale fuel burning devices burning solid fuel or light fuel oil in the Kaiapoi Clean Air Zones 1 and 2;

which do not comply with the conditions set out in rules AQL93 and AQL94. Existing large scale fuel burning devices in the Kaiapoi Clean Air Zone 2 are not covered by Rule AQL95. For the purposes of this rule, new devices are those installed after the date of notification of the variation (27 October 2007).

### Proposed addition to 3. 4 Information to be provided with resource consent applications

#### **3.4.10 Information to be provided for resource consent applications for discharges to air from enclosed burners small scale solid fuel burning devices installed after 1 June 2002 permitted by Rule AQL2 in the Kaiapoi Clean Air Zone 1 (Rule AQL88)**

Resource consent applications for discharges to air from enclosed burners small scale solid fuel burning devices installed after 1 June 2002 permitted by Rule AQL2 must include the following information:

- (a) description of the type of device, year of manufacture and installation, and particulate emission rates for that device at the time of installation as tested in accordance with the requirements of this Plan at the time of installation;
- (b) description of any modifications made to the device since at the time of installation;
- (c) an assessment of the current emissions performance of the device relative to its performance at the time of installation;
- (d) an assessment of the likely emissions performance of the device over the period for which the resource consent is being sought;
- ~~(e) an assessment of the current and likely emissions performance of the device relative to the performance of the equivalent enclosed burner able to be installed as a permitted activity in accordance with this Plan at the time of the resource consent application is made;~~
- (ef) any other information which, in the opinion of a resource consent officer of Environment Canterbury, is necessary or desirable to assess the effect which the proposed activity may have upon the environment.

## Proposed addition to 3.5.9 Regional rules

### 3.5.9.8 Regional rules for discharges in Kaiapoi Clean Air Zones 1 and 1

#### **Rule AQL85 Open fires in Kaiapoi Clean Air Zones 1 and 2 not installed before 1 January 2008 – non-complying activity**

Rule AQL85 controls the discharge of contaminants into air from open fires not installed before 1 January 2008, or if not installed on that date were not subject to the necessary building consent.

Open fires are recognised as being high emitters of PM<sub>10</sub>. Any new open fires are required to obtain resource consent as a non-complying activity. The purpose of allowing application to be made is to consider consenting discharges to air from new open fires if pollution control devices are fitted implementing Policy AQL33. Fitting such pollution control devices may result in the ongoing emission performance of open fires being less than enclosed burners permitted under this Plan (Rule AQL2). 'Emission performance' in this regard should take into account both emissions(g/kg) and thermal efficiency.

#### **Rule AQL86 Outdoor burning in Kaiapoi Clean Air Zones 1 and 2 – non-complying activity**

Rule AQL86 controls the discharge of contaminants into air from outdoor burning of materials during the winter months, namely May through to September.

Outdoor burning in Kaiapoi Clean Air Zones 1 and 2 during winter months has the potential to significantly elevate PM<sub>10</sub> concentrations in Kaiapoi Clean Air Zone 1. Outdoor burning should be avoided during this period unless Policy AQL37 is met. Other than the situation provided for by Rule AQL86A, the consent application for a non-complying activity will enable the circumstances by which outdoor burning to be carefully considered.

This rule does not apply in Clean Air Zone 2 if a bylaw regulating outdoor burning in Clean Air Zone 2 from May to September is promulgated by the Waimakariri District Council under the Local Government Act, 2002.

#### **Rule AQL86A Outdoor burning of diseased vegetation from production land in the Kaiapoi Clean Air Zone 2 in winter – permitted activity**

Occasionally, during the winter months, horticultural and agricultural activities require some types of diseased vegetative matter arising from primary production activities to be disposed of by burning in order to control disease. In these situations, when the storage of the diseased material (until after winter) poses a threat to production processes and there is no viable alternative disposal technique, it is recognised that some provision should be made for burning to occur. However, this should only be permitted under very tightly controlled conditions which prevent PM10 emissions from contributing to ambient PM10 concentrations in the Kaiapoi Clean Air Zone 1.

This permitted activity rule is intended to capture only primary production activities occurring on production land, which is zoned for that purpose in the Waimakariri District Plan. Under these circumstances enabling burning during the winter months furthers the community's well-being. As such, the material permitted to be burned is limited to 'diseased vegetation' which must be burned to control the disease. The material to be burned must be from that property, or the 2 adjoining properties, which must be production land, zoned Rural in the Waimakariri District Plan and within the Kaiapoi Clean Air Zone 2.

The conditions set out within Rule AQL86A seek to prevent emissions from contributing to ambient PM10 concentrations in the Kaiapoi Clean Air Zone 1, by (i) minimising the amount of material burnt at any one time on one property; (ii) ensuring that the material burned is not 'wet'; and (iii) ensuring that burning does not take place at times when inversion layers can develop and when ambient

concentrations of PM10 are at their highest. As such, burning may only occur between 8am and 2pm, when the wind is blowing away from the Kaiapoi Clean Air Zone 1 and when wind speeds are greater than 5 metres per second. For ease of interpretation, a wind speed of 5 metres per second is equivalent to 10 knots, 18 kilometres per hour, and approximately 4 on the Beaufort Scale, which is the 'speed at which dust and loose paper are raised and small branches begin to move'. However, a wind speed monitor must also be present at the burn, so that the fire can be extinguished if the wind speed drops below 5 metres per second.

Burning should be supervised at all times by a suitable person, capable of extinguishing the fire, if the conditions for discharge (such as wind speed, wind direction, time of day) are not met. The necessary equipment must be available in order that, if required, this person can extinguish the fire within a maximum time of 30 minutes, so that there is no continued discharge to air.

Environment Canterbury must be informed of the intention to burn at least 2 hours before burning commences in writing, or by telephoning Environment Canterbury's Pollution Hotline. Records must be kept of all burning, including the condition of the material (percentage moisture content or drying time), the volume of the material (footprint and height), dates and times of burn (including duration of discharge), persons present, wind speed and wind direction. These records shall be provided to Environment Canterbury on request.

**Rule AQL87 Enclosed burners or open fires contained within heritage buildings in Kaiapoi Clean Air Zone 1 – permitted activity**

Rule AQL87 controls the discharge of contaminants into air from enclosed burners or open fires within heritage buildings in Kaiapoi Clean Air Zone 1, when those devices are original features of those buildings. This rule provides certainty as to what buildings are exempt from the requirements of Rules AQL89 and AQL90.

**Rule AQL88 ~~Enclosed burner~~ Small scale solid fuel burning device installed after 1 June 2002 permitted by Rule AQL2 in the Kaiapoi Clean Air Zone 1 – restricted discretionary activity**

Rule AQL88 controls the discharge of contaminants into air from ~~enclosed burners~~ small scale solid fuel burning devices installed after 1 June 2002 permitted by Rule AQL2.

~~Emission performance of enclosed burners is improving over time. Tighter emissions criteria and technological advances mean that, in general, modern solid fuel burners emit less PM<sub>10</sub> than older models. To ensure a timely phase out of older models, a 15-year life for an enclosed burner was selected to be consistent with the requirements for Christchurch. This will avoid confusion and perception of unfairness. Further, a 15-year phase out period means the costs associated with replacing appliances will be relatively small as some existing burners will have been replaced and for those remaining, their remaining operating life is limited.~~

Over the course of its life, the emissions performance of a small scale solid fuel burning device can diminish. This could result in increased ambient PM10 concentrations beyond 2013, which could jeopardise air quality improvements made in previous years and increase the risk of breaching Objective AQL5 (and the NESAQ). Provision is made for continued PM10 emissions from these devices if, after 15 years of installation, it can be demonstrated that the device continues to operate as well, or better than it did when first installed.

Council's discretion is limited to the existing and future emission performance of the ~~enclosed burner~~ small scale solid fuel burning device to ensure the ambient air quality as identified in Objective AQL5 is achieved. ~~The consent application for a restricted discretionary activity will require an assessment of the effects of the discharge in the Kaiapoi Clean Air Zone 1.~~ The duration of consent will be determined on a case-by-case basis.

**Rule AQL89 Open fires in Kaiapoi Clean Air Zone 1 existing on 1 January 2008 – non-complying activity**

Rule AQL89 controls the discharge of contaminants into air from the burning of any fuel from existing open fires (those that existed as of 1 January 2008) that do not meet Rule AQL2.

Rule AQL89 requires discharges to cease unless resource consent is obtained. The purpose of allowing application for resource consent to be made is to consider consenting discharges to air from open fires if pollution control devices are retro-fitted implementing Policy AQL33. Retro-fitting such pollution control devices may result in the ongoing emission performance of open fires being less than enclosed burners permitted under this Plan. 'Emission performance' in this regard should take into account both emissions(g/kg) and thermal efficiency.

**Rule AQL90 Enclosed burner installed before 1 January 2001 in the Kaiapoi Clean Air Zone 1 – non-complying activity**

Rule AQL90 controls the discharge of contaminants into air from enclosed burners installed before 1 January 2001 that do not meet Rule AQL2.

Rule AQL90 recognises that at an individual appliance level enclosed burners installed prior to 1 January 2001 that do not meet Rule AQL2 are high emitters of PM<sub>10</sub>. The rule requires discharges to cease unless resource consent is obtained. The purpose of allowing application for resource consent to be made is to consider consenting discharges to air from these enclosed burners if pollution control devices are retro-fitted implementing Policy AQL33. Retro-fitting such pollution control devices may result in the ongoing emission performance of an older enclosed burner being less than enclosed burners permitted under this Plan. 'Emission performance' in this regard should take into account both emissions(g/kg) and thermal efficiency.

**Rule AQL91 Enclosed burner installed after 1 January 2001 but before 1 June 2002 in the Kaiapoi Clean Air Zone 1 – non-complying activity**

Rule AQL91 controls the discharge of contaminants into air from enclosed burners installed after 1 January 2001 but before 1 June 2002 that do not meet Rule AQL2.

This rule recognises that at an individual appliance level enclosed burners installed prior to 1 June 2002 that do not meet Rule AQL2 are high emitters of PM<sub>10</sub>. The rule requires discharges to cease unless resource consent is obtained. The purpose of allowing application for resource consent to be made is to consider consenting discharges to air from these enclosed burners if pollution control devices are retro-fitted implementing Policy AQL33. Retro-fitting such pollution control devices may result in the ongoing emission performance of an older enclosed burner being less than enclosed burners permitted under this Plan. 'Emission performance' in this regard should take into account both emissions(g/kg) and thermal efficiency.

**Rule AQL92 Small scale solid fuel burning device installed in a new situation in Kaiapoi Clean Air Zone 1 – non-complying activity**

Rule AQL92 controls discharge of contaminants into air from small scale fuel solid fuel burning devices, except for discharges from pellet fires permitted in Rule AQL2, installed in a new situations. New situations include:

1. Any new building and dwelling.
2. Any building and dwelling that does not have a small scale fuel burning device.
3. Any extension or alteration to a building or dwelling that does not have a small scale fuel burning device.

In part, this rule will result in a reduction in emissions from small scale solid fuel burning devices over time, including that once a device is removed, it is not reinstalled or replaced by another small scale solid fuel burning device (except for pellet fires) in the future. The purpose of allowing application to be made is to consider consenting discharges to air from small scale solid fuel burning devices if Policy AQL33 is met. This may result in the ongoing real-life emission performance of the small scale solid fuel burning device being less than enclosed burners permitted under this Plan. 'Emission performance' in this regard should take into account both emissions(g/kg) and thermal efficiency.

**Rule AQL93 New large scale fuel burning devices fired by solid fuel or light fuel oil in Kaiapoi Clean Air Zones 1 and 2 – discretionary activity**

Rule AQL93 controls the discharge of contaminants into air from new large scale fuel burning devices.

Coal and wood burning boilers and heaters are the primary sources of particulate matter discharged from large scale fuel burning devices. The amount of particulate matter discharged varies according to the design and operation of each appliance and the type of fuel used. Analysis indicates that the overall amount of fuel used in large scale fuel burning devices is likely to increase during the life of the Plan. The most simple and cost-effective method of reducing overall particulate emissions from new large scale fuel burning devices is to require compliance with a maximum particulate emission concentration limit of 250 mg/m<sup>3</sup>. The 250 mg/m<sup>3</sup> limit is the 'starting point' for the consideration of the best practicable option to reduce PM<sub>10</sub> emissions in any given situation.

**Rule AQL94 Existing large scale fuel burning devices fired by solid fuel or light fuel oil in Kaiapoi Clean Air Zone 1 – discretionary activity**

Rule AQL94 controls the discharge of contaminants into air from existing large scale fuel burning devices fired by solid fuel.

Coal and wood burning boilers and heaters are the primary sources of particulate matter discharged from large scale fuel burning devices. The amount of particulate matter discharged varies according to the design and operation of each appliance and the type of fuel used. Analysis indicates that the overall amount of fuel used in large scale fuel burning devices is likely to increase during the life of the Plan. The most simple and cost-effective method of reducing overall particulate emissions from existing large scale fuel burning devices is to require compliance with a maximum particulate emission concentration limit of 300 mg/m<sup>3</sup>. The 300 mg/m<sup>3</sup> limit recognises the additional cost of retro-fitting pollution control measures. It is the 'starting point' for the consideration of the best practicable option to reduce PM<sub>10</sub> emissions in any given situation.

**Rule AQL95 Large scale fuel burning devices burning of solid fuel or light fuel oil that do not meet the standards set by Rules AQL93 and AQL94 in the Kaiapoi Clean Air Zones 1 and 2– non-complying activity**

Rule AQL95 controls the discharge of contaminants into air from large scale fuel burning devices fired by solid fuel or light fuel oil which do not comply with conditions of Rules AQL93 and AQL94.

Only a small number of existing and new large scale fuel burning devices fired by solid fuel or light fuel oil are expected to fail to comply with the conditions of Rules AQL93 and AQL94. Potentially, this small number may discharge PM<sub>10</sub> contaminant that results in a significant increase in the PM<sub>10</sub> concentrations in Kaiapoi Clean Air Zones 1.

## Proposed additions to Schedule AQL4 Exempt Heritage Buildings

**Schedule 4(c) Exemption heritage buildings in Kaiapoi**

<b>District Plan Site No.</b>	<b>Site Address</b>	<b>Site Name</b>	<b>Legal Description</b>
H012	188 Williams Street Kaiapoi	Bank of New Zealand building and fence	Lot 1 DP 36550
H013	250 Williams Street Kaiapoi	Chadwell	Lot 1 DP 331683
H014	45 Charles Street Kaiapoi	Riverside Centre	Lot 6 DP 919
H015	5 Meadow Street Kaiapoi	Cottage	Pt RS 320
H016	52 Sewell Street Kaiapoi	Cottage	Pt RS 320
H017	65 Sneyd Street Kaiapoi	Cottage	Pt RS 366
H018	73 Sneyd Street Kaiapoi	Cottage	Pt RS 366
H019	259 Williams Street Kaiapoi	Cottage	Lot 1 DP 320188
H020	145 Williams Street Kaiapoi	Courthouse Museum	RS 39906
H021	14 Beswick Street Kaiapoi	House	Lot 4 DP 23453
H022	7 Meadow Street Kaiapoi	House	Lot 1 DP 27593
H026	35 Ranfurly Street Kaiapoi	Kaiapoi Woollen Mill (former)	Lot 3 DP 49595
H027	53 Fuller Street Kaiapoi	Methodist Church	Pt Lot 1 DP 37286
H028	53 Fuller Street Kaiapoi	Methodist Parsonage (former)	Pt Lot 1 DP 37286
H029	56 Sewell Street Kaiapoi	Old St Paul's Manse	Lot 3 DP 5089
H030	65 Charles Street Kaiapoi	Kaiapoi Railway Station	Lot 15 DP 919 Lot 1 DP 42983
H032	23B Cass Street Kaiapoi	St Bartholomew's Church	Lot 3 DP 26905
H034	183 Main North Road Kaiapoi	The Cream House	Lot 2 DP 33541 Lot 2 DP 69220 Lot 1 DP 70266
H102	56 Cass Street Kaiapoi	Cherryvale	Lot 1 DP 56058