BEFORE THE ENVIRONMENT COURT

ENV-2007-CHC-000277

IN THE MATTER	of the Resource Management Act 1991
AND	
IN THE MATTER	of appeals pursuant to Clause 14 of the First Schedule to the Act
BETWEEN	**ASSOCIATION FOR INDEPENDENT RESEARCH (AIR) INCORPORATED** **Appellant**
AND	**CANTERBURY REGIONAL COUNCIL** **Respondent**

MEMORANDUM OF CONSENT

THE DAY OF 200

WYNN WILLIAMS & CO
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CHRISTCHURCH

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MAY IT PLEASE THE COURT:

1. The Appellant has lodged an appeal to the Environment Court against the decisions of the Canterbury Regional Council on its submission to the Proposed Canterbury Natural Resources Regional Plan ("the PNRRP"), in relation to the topic of Christchurch and Urban Domestic Burning, and in relation to other topics.

2. Mr Mark Oakenshield and Transit New Zealand (now "New Zealand Transport Agency") are section 274 parties to this appeal.

3. It has been agreed that the appeal (as it relates to Christchurch and Urban Domestic Burning) could be resolved by making the changes to Chapters 1 and 3 of the PNRRP which are specified in the draft consent order which is attached to this memorandum for the Court's consideration.

4. Except as is necessary to enable the making of the orders sought in this Memorandum, the appeal by Association for Independent Research (AIR) Incorporated, as it relates to Christchurch and Urban Domestic Burning, is hereby withdrawn.

5. In coming to this agreement, the Association for Independent Research (AIR) Incorporated continues its opposition to the Resource Management (National Environmental Standards Relating to Certain Air Pollutants, Dioxins, and Other Toxics) Regulations 2004, and maintains its position that managing indoor air quality is necessary to achieve public health outcomes, but accepts that its appeal to the PNRRP is not the process within which to advance these positions.

6. The parties respectfully request that the Court endorse the suggested amendments.

7. No party seeks an order of costs.

..... 13 November 2008

P Anderson for Association for Independent Research (AIR) Incorporated Date

.....	.....
P James for New Zealand Transport Agency (formerly Transit New Zealand)	Date
.....	.....
Mark Oakenshield	Date
.....	.....
M Perpick, Counsel for the Canterbury Regional Council	Date

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BEFORE THE ENVIRONMENT COURT

Environment Judge sitting alone under section 279 of the Act

IN CHAMBERS at

CONSENT ORDER

Introduction

1. The Court has read and considered the appeal and the memorandum of the parties dated .

2. Mark Oakenshield and Transit New Zealand are section 274 parties to the appeal.

3. The Court is making this order under section 279(1)(b) of the Act, such order being by consent, rather than representing a decision or determination on the merits pursuant to section 297. The Court understands for present purposes that:

    a. All parties to the proceedings have executed the memorandum requesting this order;

b. All parties are satisfied that all matters proposed for the Court's endorsement fall within the Court's jurisdiction, and conform to relevant requirements and objectives of the Resource Management Act, including in particular Part 2.

Order

4. Therefore the Court orders, by consent, that:

   a. The changes to Chapters 1 and 3 of the Proposed Canterbury Natural Resources Regional Plan which are specified in Appendix One to this Order be made; and

   b. There is no order for costs.

DATED this day of 200

.....

Environment Judge

Without Prejudice

Appendix One: Changes to Chapters 1 and 3 of the Proposed Canterbury Natural Resources Regional Plan

Chapter 1

1. Add to **1.2.2 Definition of terms** a definition of **Fuel** as follows:

   Fuel *means any material used for, or involving, the production of heat or energy, including by the process of combustion*

2. Amend **1.2.2 Definition of terms,** definition of **small scale fuel burning device** as follows:

   Small scale fuel burning device *means all heating devices using solid fuel, gas, diesel, oil or other liquid fuels having a net heat output of 40 kilowatts or less, regardless of the nature of the premises where the device is installed. It includes open fires and enclosed burners~~, but does not include unflued gas heaters, or gas hobs or gas ranges used for cooking~~.*

Chapter 3

3. Amend **Policy AQL14 Prohibit open fires,** the associated **explanation and principal reasons** and associated **methods** as follows:

Policy AQL14: Prohibit open fires

(a) In the Christchurch Clean Air Zone 1, prohibit from 1 January 2006 the use of open fires during April to September inclusive, except:

(i) as provided for in Policy AQL17; or

(ii) when the open fire is permanently retrofitted with a robust pollution control device which results in the open fire reliably meeting the standards in Policy AQL11.

(b) In the Christchurch Clean Air Zones 1 and 2, prohibit after 1 June 2002 the installation of a new open fire.

Explanation and principal reasons

Open fires were not officially approved for use in Christchurch under the Clean Air Act 1974 and have not been permitted for installation since 1982. Nevertheless, in 1999 there were 17,300 open fires in use in Christchurch on a typical winter's night. On such nights, open fires burning coal and wood contribute approximately 42% of domestic heating emissions of PM_{10} for all of Christchurch (remembering domestic heating emissions make up

90% of PM_{10} concentrations). Emissions from open fires are anywhere between four and seven times greater than those from an appliance meeting the 1 g/kg criteria (open fires using wood 12 g/kg, coal 21 g/kg, modern enclosed burner 3 g/kg).

Policy AQL14 applies in the period of April to September inclusive. During these months Christchurch's PM_{10} ambient air concentrations do not meet Objective AQL3.

Policy AQL14(a) recognises that in order to achieve a reduction in emissions it is clear that, as a first principle open fires should be prohibited from use. The use of open fires is not decreasing at significant rates and they will not naturally cease to be operated.

In addition to this, open fires are a very inefficient form of heating. They have an average operating efficiency of at most 15%. In extreme cases, the chimney draws more heated air than the fire produces and the "heating" device may have a negative 10% operating efficiency.

Open fires are also an expensive form of heating. The cost per kWh of useable heat energy for open fires in Christchurch is 26 cents for wood burning and 28 cents for coal. This is compared with 6 cents per kWh for a heat pump or enclosed wood burner and 12 cents per kWh for a plug in heater. (See report by Greer & Bicknell - 2001:39).

The date of 1 January 2006 is provided to allow sufficient transition away from the use of open fires. Further, the provisions of section 105(1)(d) of the RMA mean that the regional rule implementing this policy will not have effect until the rule is operative. The date of 2006 is set with this in mind.

To ensure that no new open fires are installed in the Christchurch Clean Air Zones 1 and 2, Policy AQL14(b) was proposed. Thus the current ban on installation that applies to the majority of the Christchurch Clean Air Zone 1 under the Transitional Regional Plan now extends to the Christchurch Clean Air Zone 2. It seeks to maintain the status quo of emissions from the rural parts of the Christchurch airshed, which contribute to Christchurch's wintertime air pollution problem.

The prohibition of open fires would result in a net present value benefit of between $218m and $395m. This benefit is made up of costs of fuel savings, a reduction in hospital admissions and restricted activity days. A prohibition on open fires is the most cost efficient option of achieving Objective AQL3.

The policy recognises that it may be possible to install equipment (a pollution control device) in, on, or attached to, the open fire so that the open fire meets the standards set out in Policy AQL11. As of 2008, such devices are not commercially available in New Zealand. If such devices become available, before allowing emissions from open fires with the equipment installed, as part of the resource consent process it will be important to consider the longevity, robustness and reliability of the emission reductions that may be achieved. These considerations will include: how technically complex the pollution control device is; the likely ongoing performance of the device once installed; the risk of failure of the device; how easily the pollution control device may be bypassed or disconnected; what ongoing maintenance of the device is required and how this is to be provided for.

Methods

The methods used or to be used to implement Policy AQL14 are:

...

Method AQL14(d) Regional rules

Environment Canterbury will:

(i) *apply Regional Rules AQL7, AQL9 and AQL10 in Section 3.3 to prohibit the discharge of contaminants to air from combustion of fuel in open fires.*

(ii) *apply Regional Rule AQL11A in Section 3.3 to consider allowing the discharge of contaminants to air from combustion of fuel in open fires retrofitted with a pollution control device which results in the open fire reliably meeting the standards set out in Policy AQL11.*

(iii) *Environment Canterbury will consider reviewing the appropriateness of Rule AQL10 and the associated plan provisions if emissions from open fires are shown to be reliably reduced to that of an enclosed burner meeting Rule AQL2 by the combustion of low PM_{10} emitting fuel. As part of any review, Environment Canterbury will consider the effectiveness of the use of low PM_{10} emitting fuel, the extent to which the fuel is readily and reliably available and accessible, and whether it is practicable to restrict emissions from open fires to only those resulting from the use of low PM_{10} emitting fuel.*

(iv) *Environment Canterbury will consider reviewing the appropriateness of Rule AQL10 and the associated plan provisions if emissions from open fires are shown to be able to be reliably controlled so that all emissions cease as a result of the prediction of high pollution events and the high pollution events themselves can be accurately predicted.*

...

4. Amend **Policy AQL15 Phase out older style enclosed burners in the Christchurch Clean Air Zone 1**, the associated **explanation and principal reasons**, and the associated methods as follows:

Policy AQL15 Phase out older style enclosed burners in the Christchurch Clean Air Zone 1

In the Christchurch Clean Air Zone 1 prohibit from 1 January 2008 or 15 years after the date of installation, whichever is the later date, the discharge of contaminants to air during April to September inclusive from the combustion of any fuel in any enclosed burner not meeting the standards of Policy AQL11, except this shall not apply to those enclosed burners:

(a) identified in Policy AQL17; or

(b) when the older style enclosed burner is permanently retrofitted with a robust pollution control device which results in the older style enclosed burner reliably meeting the standards in Policy AQL11.

Explanation and principal reasons

Policy AQL15 recognises that older enclosed burners are more polluting than 'new generation' models provided for in Policy AQL11 and seeks to promote cleaner methods of home heating.

Policy AQL15 applies in the period of April to September inclusive. During these months Christchurch's PM_{10} ambient air concentrations do not meet Objective AQL3.

Tighter emission criteria and technological advances mean that, in general, modern solid fuel burners emit considerably less suspended particulate than older models. Accelerating the phase-out of older burners will reduce overall emissions.

Most of the operating burners in Christchurch do not meet the 1 g/kg emission standard.

Waiting for natural replacement will not result in sufficient reductions. The policy will bring forward reductions in emissions and in a manner that is certain, because it is known more precisely when a burner will no longer be used.

15 years has been chosen on the basis of a number of estimates, which identify the average life of a burner to be between 12 and 20 years. This is in recognition that the life of a burner can vary depending on the frequency of operation, the manner in which it is operated and whether only appropriate fuels have been burnt in it.

A mandatory phase-out time means that both the costs and emission reductions associated with the accelerated phase-out of enclosed burners are relatively small. This is because most of the burners would be replaced anyway so this policy has relatively little financial impact. However, the key benefit associated with this policy is the reduction in uncertainty associated with meeting the air quality target, as the replacement of old burners will be compulsory rather than voluntary. The mandatory phase-out of high emission appliances adds certainty to achieving the desired outcome by ensuring households do not continue to use enclosed burners beyond the burners' useful life.
It recognises that many householders may be unaware of the age of their burner and thus provides that age is to be determined by reference to official records maintained by the Christchurch City Council. In those instances where the householder has failed to obtain a building permit or consent to authorise the installation of the burner in question, the phase-out deadline would be 1 January 2008.
The total net benefit of this policy is a net present value cost of $55m to $98m.
The policy recognises that it may be possible to install equipment (a pollution control device) in, on, or attached to, the older style enclosed burner so that the older style enclosed burner meets the standards set out in Policy AQL11. As of 2008, such devices are not commercially available in New Zealand. If such devices become available, before allowing emissions from older style enclosed burner with the equipment installed, as part of the resource consent process it will be important to consider the longevity, robustness and reliability of the emission reductions that may be achieved. These considerations will include: how technically complex the pollution control device is; the likely ongoing performance of the device once installed; the risk of failure of the device; how easily the pollution control device may be bypassed or disconnected; what ongoing maintenance of the device is required and how this is to be provided for.

Methods

The methods used or to be used to implement Policy AQL15 are:

...

Method AQL15(d) Regional rules

Environment Canterbury will:

(i) apply Regional Rule AQL11 in Section 3.3 to prohibit the use of older style enclosed burners in the Christchurch Clean Air Zone 1.

(ii) apply Regional Rule AQL11A in Section 3.3 to consider allowing the discharge of contaminants to air from combustion of fuel in older style enclosed burners retrofitted with a pollution control device which results in the older style enclosed burners reliably meeting the standards set out in Policy AQL11.

(iii) Environment Canterbury will consider reviewing the appropriateness of Rule AQL11 and the associated plan provisions if emissions from older style enclosed burners are shown to be reliably reduced to that of an enclosed burner meeting Rule AQL2 by the combustion of low PM_{10} emitting fuel. As part of any review, Environment Canterbury will consider the effectiveness of the use of low PM_{10} emitting fuel, the extent

to which the fuel is readily and reliably available and accessible, and whether it is practicable to restrict emissions from older style enclosed burners to only those resulting from the use of low PM_{10} emitting fuel.

(iv) Environment Canterbury will consider reviewing the appropriateness of Rule AQL11 and the associated plan provisions if emissions from older style enclosed burners are shown to be able to be reliably controlled so that all emissions cease as a result of the prediction of high pollution events and the high pollution events themselves can be accurately predicted.

...

5. Amend **Table 3.1 Summary of Rules** by adding as follows:

Christchurch Clean Air Zone 1	*AQL10*	*Open fires from 1 January 2006 in April to September inclusive*	*Prohibited*	
	AQL11	*Non-complying burners older than 15 years before 1 January 2008 in April to September inclusive*	*Prohibited*	
	AQL11A	*Non-complying enclosed burners or open fires retrofitted with pollution control devices*	*Discretionary*	

6. Amend **Rule AQL3 Oil or gas burning heating devices anywhere in Canterbury – permitted activity** as follows:

Rule AQL3 Oil or gas burning heating devices anywhere in Canterbury – permitted activity

Activity	*Conditions*		*Cross Ref.*
Except where prohibited by Rules AQL5 or AQL6 the discharge of contaminants into air from the burning of diesel, kerosene, alcohols, ethane, methane, blended heating oil, or other oil fuels, (excluding re-refined oil), or liquid petroleum gas in any small scale fuel burning device ~~or unflued gas heater~~, is a permitted activity.	*1. The dispersal or deposition of particles shall not cause an objectionable or offensive effect beyond the boundary of the property where the discharge originates.* *2. The discharge shall not be dangerous or noxious beyond the boundary of the property where the discharge originates.* *3. The discharge of odour beyond the boundary of the property from which it originates shall not cause an odour which has an offensive or objectionable effect on the environment.* *4. Contaminants discharged may only be derived from combustion of fuel authorised or approved for use in the device by Environment Canterbury.* *5. The sulphur content of the diesel, kerosene, alcohols, ethane, methane, blended heating oil, or other fuel oils, (excluding re-refined oil), or liquid petroleum gas to be burned shall not exceed 0.35% by weight.*		

7. Amend **Rule AQL10 Open fires from 1 January 2006 in the Christchurch Clean Air Zone 1 – prohibited activity for which no resource consent shall be granted** as follows:

Rule AQL10 Open fires from 1 January 2006 in April to September inclusive in the Christchurch Clean Air Zone 1 – prohibited activity for which no resource consent shall be granted

Activity			*Cross Ref.*
Except where permitted by Rule AQL8, or subject to a resource consent granted in accordance with Rule AQL11A, the discharge of contaminants into air in the Christchurch Clean Air Zone 1 from the burning of any solid fuel in any open fire during the months of April, May, June, July, August and September from the later of the following dates: (a) *1 January 2006; or* (b) *the operative date of this rule;* *is a prohibited activity for which no resource consent shall be granted.*			

8. Amend **Rule AQL11 Non-complying enclosed burners older than 15 years from 1 January 2008 in the Christchurch Clean Air Zone 1 – prohibited activity for which no resource consent shall be granted** as follows:

Rule AQL11 Non-complying enclosed burners older than 15 years from 1 January 2008 in April to September inclusive in the Christchurch Clean Air Zone 1 – prohibited activity for which no resource consent shall be granted

Activity			*Cross Ref.*
Except where permitted by Rules AQL2, AQL3 or AQL8, or discretionary under Rule AQL11A, the discharge of contaminants to air in the Christchurch Clean Air Zone 1 from the burning of any solid fuel in any enclosed burner during the months of April, May, June, July, August and September after the later of the following dates: (a) *1 January 2008; or* (b) *15 years following the date of its first installation, as recorded by the relevant building permit or building consent;* *is a prohibited activity for which no resource consent shall be granted;* *provided that, if no building consent or permit to install the device was issued, or if such a consent or permit was issued but specifies no date of installation, then the date upon which discharge of contaminants becomes a prohibited activity under this rule is 1 January 2008.*			

9. Add **Rule AQL11A Non-complying enclosed burners or open fires retrofitted with pollution control devices in the Christchurch Clean Air Zone 1 – discretionary activity** as follows:

Rule AQL11A Non-complying enclosed burners or open fires retrofitted with pollution control devices in the Christchurch Clean Air Zone 1 – discretionary activity

Activity	***Standards and terms***		***Cross Ref.***
Except where prohibited by Rules AQL5 and AQL6, the discharge of contaminants to air in Christchurch Clean Air Zone 1 from the burning of any solid fuel in: *(a) any open fire otherwise prohibited by Rule AQL0, or* *(b) any enclosed burner otherwise prohibited by Rule AQL11,* *which is retrofitted with a pollution control device that results in the open fire or enclosed burner meeting the following standards:* *(a) emissions of no more than 77 milligrams of total suspended particulate emissions per megajoule of space heat output, calculated by:* *(i) determining the total suspended particulate emissions for each test run, when tested in accordance with AS/NZS4012:1999 and AS/NZS4013:1999 or the functional equivalent for appliances excluded from these standards. Where the nominated test fuel is wood then the test shall be carried out using softwood in accordance with the requirements of AS/NZS4014.2:1999; and* *(ii) determining thermal efficiency for space heating for each test run as described in AS/NZS4012:1999; and* *(iii) calculating the emissions per megajoule of heat output as the total suspended particulate emission rate (g/kg) described in (i) divided by the calorific value of oven-dry fuel (e.g. wood 20.1 MJ/kg), and dividing that value by the space heating efficiency as described in (ii) for that test run, and then by averaging the emissions per megajoule results for all of the test runs; and* *(b) thermal efficiency, for space heating only as described in AS/NZS4012:1999 of 50% or greater.* *is a discretionary activity.* *For the purpose of this rule, a "pollution control device" is equipment permanently installed in, on, or attached to, the open fire or enclosed burner.*	None		

10. Amend **3.5.9.1 Regional rules for discharges to air from small scale fuel burning devices**, by adding **Rule AQL11A Non-complying enclosed burners or open fires retrofitted with pollution control devices in the Christchurch Clean Air Zone 1 – discretionary activity**, as follows:

Open fires from 1 January 2006 in April to September inclusive in the Christchurch Clean Air Zone 1 – prohibited activity for which no resource consent shall be granted

...

Rule AQL11 Non-complying enclosed burners older than 15 years from 1 January 2008 in April to September inclusive in the Christchurch Clean Air Zone 1 – prohibited activity for which no resource consent shall be granted

...

Rule AQL11A Non-complying enclosed burners or open fires retrofitted with pollution control devices in the Christchurch Clean Air Zone 1 – discretionary activity

The intent of this rule is to provide for an open fire or the older style enclosed burner retrofitted with a pollution control device to be able to discharge in Christchurch Clean Air Zone 1 if that discharge is consistent with or less than that which may reasonably be expected from an enclosed burner permitted under Rule AQL2.

The rule provides for consideration as a discretionary activity of allowing discharges from the use of installed equipment (a pollution control device) in, on, or attached to, an open fire or the older style enclosed burner. As of 2008, such devices are not commercially available in New Zealand. If such devices become available, before consenting emissions from an open fire or older style enclosed burner with the equipment installed, it will be important to consider the longevity, robustness and reliability of the emission reductions that may be achieved. These considerations will include: how technically complex the pollution control device is; the likely ongoing performance of the device once installed; the risk of failure of the device; how easily the pollution control device may be bypassed or disconnected; what ongoing maintenance of the device is required and how this is to be provided for.