

**PART G. CHAPTER THREE - RECOMMENDATIONS****Chapter 3 - General Submissions ## 03-000 00 00**

<b>Number</b>	<b>Name of Submitter</b>	<b>Summary of Submission</b>
<b>3</b>	R. Marsh	Embark on an education process; encourage development of the log fire with respect to clean burning; enforce dry firewood sales from recognised suppliers.
<b>6</b>	M.A. Victor	Ecan must lobby central government to ensure there is adequate generating and line capacity to cover increased electricity requirements as Christchurch switches to electric heating.
<b>27 (point 1)</b>	D. Child	The Council could inspect log burners after they are 15 years old to see if they meet the standards before replacing them.
<b>27 (point 2)</b>	D. Child	There should be alternative forms of heating (in event of power cuts).
<b>30 (point 1)</b>	M. de Lacey	Need policy for education and promotion of clean burning woods eg willow and poplar and to encourage the growing of these fast growing woods.
<b>30 (point 2)</b>	M. de Lacey	Need policy for new burners - they should not have damper controls.
<b>30 (point 3)</b>	M. de Lacey	Wood merchants should be banned from selling less than ultra dry wood.
<b>31</b>	A. & H. Grant	Put resources into an educational campaign targeting those who do not operate wood burners efficiently, rather than banning wood burners.
<b>34</b>	Kiwi Pellet Fires NZ Ltd	The objective of the air plan is to lower emissions over the city. By replacing existing solid fuel burners with pellet fires PM10 levels will lower by approximately 98%. No decision requested.
<b>38</b>	P.V. Haughey	The public should be educated to use other heating during frosty nights when air pollution is likely.
<b>45</b>	S. & A. Thomas	Oppose the proposal to ban wood burners. Rethink the plan; establish procedures to ensure people burn dry, clean fuel; subsidise the price of efficient wood burners for those with open fires.

<b>Number</b>	<b>Name of Submitter</b>	<b>Summary of Submission</b>
<b>50</b> <i>(point 1)</i>	M. Chester	Exclude wood burners from any type of subsidy or incentive.
<b>50</b> <i>(point 2)</i>	M. Chester	Ban all wood burners from Christchurch urban areas from 2008 unless they produce almost zero emissions; wood should only be obtained from outlets where it has been inspected by Ecan for moisture content; provide heavy penalties for those using wet wood.
<b>52</b>	S.A. Corry	There is no policy outlining the reasons for the conditions relating to stack height etc. If stack heights are less than roof level, should they be extended to mitigate effects? No decision requested.
<b>55</b>	J.G. Harris - City Firewood	Allow subsidy for new generation low emission solid fuel burners, and allow an open policy with regard to accessibility of low emission solid fuel burners for everyone.
<b>59</b>	L. Birnie	Agree with the removal of fires, but only if people on low incomes and the elderly can be provided with assistance to meet the cost of conversion and the ongoing costs of gas and electricity.
<b>60</b>	D. Broadbent	Some financial assistance could be made for people to have a large gas cylinder installed on their properties so that gas can be delivered at a reasonable cost for the elderly.
<b>70</b>	H.D. Johnson	Research and encouragement should go into producing models (solid fuel burners) of high efficiency.
<b>75</b>	J. Knox - Guardians of the Styx	Investigate underground water heat pumps as used in Finland as an alternative heating source to 'approved burners'.
<b>81</b>	S. Wells	The proposed mitigation measures in the form of subsidies for low income earners cannot bind future councils. No decision requested.
<b>86</b>	J.P. & D.P. Scott	Review and take into account research by Applied Research (Nelson).
<b>88</b> <i>(point 1)</i>	P.T. Knowles	Put in place a guarantee for ongoing, controlled and affordable electricity for low to middle income households through subsidies or capped pricing.

Number	Name of Submitter	Summary of Submission
<b>88</b> <i>(point 2)</i>	P.T. Knowles	Provide protection from penalties for using solid fuel to keep warm during electricity supply failure or when there are no other means of heating available.
<b>94</b>	N.A. Griffith	Require all wood merchants to use an agreed procedure for drying wood, and to store dried wood under cover for an agreed period of time.
<b>97</b>	Foodstuffs (South Island) Ltd	<p>Add a new policy, explanations and methods as follows:</p> <p><b>'Policy'</b> "To recognise and provide for internal combustion equipment that provides electricity network load shedding during times of peak electricity demand and/or for emergency situations; while, avoiding and mitigating adverse effects on the environment.";</p> <p><b><u>Explanation and principal reasons</u></b> "This policy recognises the important contribution to the region made by internal combustion equipment (eg diesel generators), which provides electricity for network load shedding during times of peak electricity demand and/or for emergency situations. The use of the internal combustion equipment to generate electricity by institutions (eg hospitals, police and councils) and businesses helps reduce the peak demand for electricity from the local grid, usually greatest on cold, wet southerly days. This practise not only assists in avoiding the need to upgrade electricity networks, with consequent savings to the community, but also substantially reduces power charges to those institutions or businesses using the equipment. The ability to use the internal combustion equipment for network load shedding also means the equipment is likely to be better maintained, which is critical, if the equipment is to be used successfully during times of electricity shortages or outages. Notwithstanding the importance of internal combustion equipment for these purposes, controls are placed on chimney height and design, emission velocity, and equipment maintenance to avoid or mitigate any potential adverse effects from the air emissions.";</p> <p><b><u>Methods</u></b> "The methods used or to be used to implement the policy are:</p> <p><b><u>Method (a) Information and promotion</u></b> Environment Canterbury will produce and disseminate information and educational material to improve the energy efficiency of internal combustion equipment.</p> <p><b><u>Method (b) Regional rules</u></b> Environment Canterbury will apply Regional Rules AQL 15, 16 and 17 in Section 3.3 to control internal combustion equipment (large scale fuel burning devices) in the Christchurch Clean Air Zones</p>

Number	Name of Submitter	Summary of Submission
		<p>1 and 2, and will apply Regional Rules AQL 25, 26 and 27 in Section 3.3 to control internal combustion equipment (large scale fuel burning devices) in the Canterbury region outside the Christchurch Clean Air Zones 1 and 2.</p> <p><u>Method (c) Resource Consents</u> No resource consent shall be required for less than 300 kilowatt internal combustion equipment in Regional Rules AQL 15 and 25. Resource consents shall be granted for internal equipment discharges identified as a controlled activity in Regional Rules AQL 16 and 26, subject to appropriate conditions. Where conditions can not be complied with, resource consents for the discharge to air would be assessed as a discretionary activity (Regional Rules AQL 17 or 27) and consents may be granted or declined. Regional Rules AQL 15, 16, 25 or 26 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 conditions or the standards and terms set by the rule to be met. The holders of resource consents shall comply with the conditions or standard and terms of Regional Rules AQL 15, 16, 25 or 26 from the date at which the new conditions on their resource consent commences under section 116 of the RMA.</p> <p><u>Method (d) Compliance and enforcement</u> - per Air Plan see Method AQL 19(d).</p> <p><u>Method (e)</u> - per Air Plan see Method AQL 19(e).</p>
<b>98</b> <b>(point 1)</b>	R.J. Best	Regional Council should take on board that clean burning appliances of high efficiency and cleanliness can be built, and review the Air Plan to take into account the new technologies and abilities that exist within the Canterbury region.
<b>98</b> <b>(point 2)</b>	R.J. Best	Many of the emission stack requirements in the Plan will act as an obstacle to the installation of some new technology systems. No decision requested.
<b>98</b> <b>(point 3)</b>	R.J. Best	Review the test methods used to grade the performance of domestic log burners. Ensure that any tests indicate the level of materials other than particulates, that may, or may not be contained in the flue gases, and the size of emitted particulates.

<b>Number</b>	<b>Name of Submitter</b>	<b>Summary of Submission</b>
<b>98 (point 4)</b>	R.J. Best	Regional Council must take steps to become fully informed on emerging new technologies
<b>101</b>	C.L. Sampson - Linwood Resource Centre	Have central government provide incentives for sun powered hot water heating.
<b>104</b>	L. Smith	Regarding paragraph 4, the figure of 12 cents per kWh is not true for all; the submitter is paying 12.54 cents per kWh. No decision requested.
<b>107</b>	P.W. Melhopt	The installation of second hand burners in Timaru that fail to meet Christchurch standards should be deemed unsuitable in South Canterbury.
<b>112</b>	Solid Energy New Zealand Ltd	Add a new policy requiring Regional Council to actively seek and/or support reliable reasonably priced sources of energy having low PM <sub>10</sub> emissions for Christchurch. Make any consequential amendments to the plan.
<b>116</b>	G. Halstead	Coal should be banned and fire wood merchants should be required to sell only dry firewood.
<b>126</b>	D.T.S. Moorhouse	Before log burners are condemned, open fires should be banned; monitor logfires for pollution.
<b>133 (point 1)</b>	S. Schmetzer	Regional Council should teach people to operate their wood burners properly, and fine households who repeatedly offend.
<b>133 (point 2)</b>	S. Schmetzer	Encourage the development of efficient wood burners. Would like to see Regional Council and the City Council co-operate to develop new technology.
<b>136</b>	J.L. Hoare - Association For Independent Research (AIR)	Air Plan requires a provision allowing for the retro-fitting in the field of an emission control device to the flue or chimney of burners which have failed, or probably would fail, to pass any standard.
<b>158</b>	W.T. Storey	Initiate an emission control on all exhaust gases from automobiles and air conditioning units.
<b>164</b>	S. Shackleton	Burn only dry wood.
<b>167 (point 1)</b>	Royal Forest & Bird Protection Society Of New Zealand Inc, (South Canterbury Branch)	No new open fires should be allowed in rural towns and larger urban centres eg Timaru, Waimate, and Ashburton.

<b>Number</b>	<b>Name of Submitter</b>	<b>Summary of Submission</b>
<b>167 (point 2)</b>	Royal Forest & Bird Protection Society Of New Zealand Inc, (South Canterbury Branch)	Stronger action is required to ensure that new homes are energy efficient, to retain heat and require less heating. Use education, support greater controls in legislation dealing with building standards, encourage district councils to do more to promote efficiency and by setting an example.
<b>183</b>	D. Harrington	Ecan could look into finding someone who could supply an efficient filter to fit chimneys.
<b>194</b>	B.A.Stead	Encourage wood burner manufacturers to reduce emissions.
<b>200</b>	J. Ponsonby	Place emphasis on alternative methods of reducing emissions including education and realistic financial assistance to encourage change at a sustainable level over time.
<b>202</b>	Bridgestone/Firestone NZ Ltd.	Add a new policy, explanations and methods as sought by submitter 97 - Foodstuffs (South Island) Ltd. - see above.
<b>203 (point 1)</b>	Christchurch Home Heating Action Group	Place emphasis on alternative methods of reducing emissions including education and realistic financial assistance to encourage change at a sustainable level over time.
<b>203 (point 2)</b>	Christchurch Home Heating Action Group	Set sustainable air emission targets which enable and encourage innovation and technological improvements to meet standards or targets over time rather than prescribing the method of achieving such targets.
<b>221</b>	J. & G. Pijpker	Carry out proper research to find more economical ways of using solid fuels, and to develop low emission burners.
<b>222 (point 1)</b>	E.H. Dally	Insert new policy - encourage and provide assistance in the form of monetary funding for the development of zero emission solid fuel burners.
<b>222 (point 2)</b>	E.H. Dally	Research solid fuel burners available in Canada and elsewhere which are fitted with catalytic converters.
<b>225</b>	St George's Hospital Inc	Add a new policy, explanations and methods as sought by submitter 97 - Foodstuffs (South Island) Ltd. - see above.

<b>Number</b>	<b>Name of Submitter</b>	<b>Summary of Submission</b>
<b>228</b>	W. & R. Teeuwen	Regional Council should ensure that the supply of electricity is guaranteed for home heating purposes. If not, it should seek the input of national Government.
<b>273</b>	H.B. & J.J. Thomas	Reintroduce the 4 hectare rule previously in the Draft Air Plan and reduce the area to 1/2 hectare.
<b>276</b>	D. Homersham	Use a freephone number, the newspaper front page, radio, television and a website to indicate when not to burn. Declare Christchurch a clean air city and have children educated through an independent 'AirCare' organisation, addressing both solid fuel burning and vehicle pollution.
<b>277</b>	J.C.E. Mercer	Encourage manufacturers to develop woodburners that are more efficient and allow the installation of burners that meet low emissions at the raised benchmark.
<b>280</b>	J.B. Stott	State clearly that Regional Council's energy policy is to reduce, as far as reasonably possible, the use of electricity and fossil transport fuels for heating.
<b>281</b>	Appleby Engineering Ltd	Add a new policy, explanations and methods as sought by submitter 97 - Foodstuffs (South Island) Ltd. - see above.
<b>287</b>	K.R. Stevenson	Tighten insulation and building standards.
<b>293</b>	C.J.B. & V. Burrows	Regional Council should, each year, promote good practice with domestic wood burners , viz: chimneys should be cleaned out at least once yearly; only absolutely dry wood should be used; and wood burners should not be damped down overnight.
<b>294 (point 1)</b>	M.B.D. Sadler	Regional Council should support a coke making plant on the West Coast, and a by law requiring initially the purchase of one bag of coke for every bag of coal.
<b>294 (point 2)</b>	M.B.D. Sadler	Regional Council should support the development of very low emission burners and/or smoke-scrubbers.
<b>294 (point 3)</b>	M.B.D. Sadler	Have less reliance on bans and prohibitions.
<b>312</b>	L. Hawkey	Deliver brochures to customers with their wood delivery.

Number	Name of Submitter	Summary of Submission
321	B.J. Swale	Commence and continue the development of techniques for the satisfactory use of firewood for domestic home heating. Publicise the techniques for good use of firewood for home heating.
329	Lyttelton Port Company Ltd	<p>Add a new policy and explanation and principal reasons as follows:</p> <p><u>Policy</u> “To recognise and provide for internal combustion equipment that provides electricity network load shedding during times of peak electricity demand and/or for emergency situations; while, avoiding and mitigating adverse effects on the environment.”</p> <p><u>Explanation and principal reasons</u> “This policy recognises the important contribution to the region made by internal combustion equipment (eg diesel generators), which provides electricity for network load shedding during times of peak electricity demand and/or for emergency situations. The use of the internal combustion equipment to generate electricity by institutions (eg hospitals, police and councils) and businesses helps reduce the peak demand for electricity from the local grid, usually greatest on cold, wet southerly days. This practice, not only assists in avoiding the need to upgrade electricity networks, with consequent savings to the community, but also substantially reduces power charges to those institutions or businesses using the equipment. The ability to use the internal combustion equipment for network load shedding also means the equipment is likely to be better maintained, which is critical, if the equipment is to be used successfully during times of electricity shortages or outages. Notwithstanding the importance of internal combustion equipment for these purposes, controls are required for diesel generators outside the Clean Air Zones but within close proximity of sensitive activities. These controls may include chimney height and design, emission velocity, and equipment maintenance to avoid or mitigate any potential adverse effects from the air emissions.”</p>
331	J.F. Ball	Provide financial assistance for the installation of replacement complying woodstoves.
337	Pedersen Read Ltd	Add a new policy, explanations and methods as sought by submitter 97 - Foodstuffs (South Island) Ltd. - see above.

<b>Number</b>	<b>Name of Submitter</b>	<b>Summary of Submission</b>
<b>343</b>	Christchurch International Airport Ltd	Add a new policy, explanations and methods as sought by submitter 97 - Foodstuffs (South Island) Ltd. - see above.
<b>344</b>	D. Brown - Woolover Limited	Have an education programme to teach the public the correct wood procurement policy, correct fire settings overnight, and to ensure that wood is bought at least nine months before being burnt.
<b>350</b>	J.M. Syddall	Provide education on how to operate small scale domestic burning devices with minimum emissions.
<b>351 (point 1)</b>	N. Crutchley	Those caught burning inappropriate materials should have their fire removed; wood merchants should lose their licence if selling wet wood after a substantial fine.
<b>351 (point 2)</b>	N. Crutchley	Lobby the government to subsidize electricity costs for Christchurch, and have government change the law in the RMA.
<b>351 (point 3)</b>	N. Crutchley	Convert to smokeless fuels - should be required by law in Christchurch, and Regional Council should have the power to enforce such laws.
<b>352</b>	Feltex Carpets Ltd	Add a new policy, explanations and methods as sought by submitter 97 - Foodstuffs (South Island) Ltd. - see above.
<b>363</b>	Carter Group Ltd	Add a new policy, explanations and methods as sought by submitter 97 - Foodstuffs (South Island) Ltd. - see above.
<b>368</b>	Orion New Zealand Ltd	Add a new policy, explanations and methods as sought by submitter 97 - Foodstuffs (South Island) Ltd. - see above.
<b>372</b>	New Zealand Post	Provide an economic analysis of the effects of not permitting network load shedding and permit network load shedding.
<b>380</b>	J. Bird	Have the City Council/Regional Council organise a scheme for cheap power supply during days of no fires.
<b>407</b>	The Christchurch Press Company Ltd	Add a new policy, explanations and methods as sought by submitter 97 - Foodstuffs (South Island) Ltd. - see above.

<b>Number</b>	<b>Name of Submitter</b>	<b>Summary of Submission</b>
<b>408</b>	Hagley/Ferrymead Community Board	Regional Council should lobby central government for changes to the Building Act. Building standards relevant to Canterbury's climate should be developed and housing insulation requirements strengthened.
<b>422</b>	N.B. Woolf	Regional Council could recommend that people only use wood burners and open fires during the coldest months - June, July, August and September. Provide pamphlets outlining the reasons for the restrictions and impose fines if they are not met.
<b>423 (point 1)</b>	P. Sintes	Change policy regarding wood burner emissions and efficiency quantification.
<b>423 (point 2)</b>	P. Sintes	Institute a system of grading wood burning devices.
<b>424</b>	S. Lukey - Kennedys Bush Road Neighbourhood Association	Encourage new houses to have insulated walls, ceilings, floors and double glazing. Regional Council should encourage the development of new technologies that are renewable and non-polluting and have information on these available. Solar power and correct orientation of houses to the sun should be built into the energy saving programme.
<b>430 (point 1)</b>	A.J. Sleigh	Emphasis should be given to electric heating.
<b>430 (point 2)</b>	A.J. Sleigh	Renewable non polluting forms of electricity generation should be encouraged.
<b>433 (point 1)</b>	Rockgas Ltd	Submitter seeks a general exclusion for all gas burning small scale space heating and water heating appliances from the need to seek a resource consent for such appliances. No decision requested.
<b>433 (point 2)</b>	Rockgas Ltd	The Plan needs to take account of the increased use of gas for small scale space heating and water heating purposes and encourage a range of alternatives to traditional coal and wood burning devices rather than seeking the use of electricity which may have a significantly greater environmental impact on the overall national environment than the burning of gas. No decision requested.

<b>Number</b>	<b>Name of Submitter</b>	<b>Summary of Submission</b>
<b>433</b> <i>(point 3)</i>	Rockgas Ltd	The Plan needs to make specific provision for small scale gas burning devices used for space heating and water heating including, but not limited to, continuous flow water heaters, space heaters for all small scale purposes including domestic and industrial applications, open gas fired convector fires, portable or fixed convection heaters, portable cabinet heaters for both indoor and outdoor uses, and gas fired barbecues. No decision requested.
<b>433</b> <i>(point 4)</i>	Rockgas Ltd	The Plan does not allow for recent changes in technology relating to small scale gas burning devices used for space heating and water heating and has not fully recognised the use of gas as an alternative to electricity for space and water heating . No decision requested.
<b>438</b> <i>(point 1)</i>	P. Stark	Add a new policy to ban the sale of coal to the public.
<b>438</b> <i>(point 2)</i>	P. Stark	Add a new policy to stop people running fires all day everyday.
<b>440</b>	Dr S.P. Krumdieck -	Ban the sale or resale of any non EPA approved wood burning appliance.
<b>445</b>	G. & F. Harman	Regional Council should consider, along with the City Council, becoming a non profit electricity retailer.
<b>457</b>	R. & M. Shaw	Let old people have heat they can afford, with clean logburners or pellet fires.
<b>459</b>	R. Greenhough	Encourage the development and use of wood burners, new and improved burners, and scrubbers.
<b>461</b>	E. Scott	Look into the new NZ made, NZ designed, extremely efficient wood burners.
<b>536</b>	B. Brosnahan	Ensure wood merchants supply dry wood.
<b>580</b>	D. Anker	Take steps to ensure that only dry, clean burning firewood may be sold.
<b>725</b>	L. Papps	Look into pellet fires.

<b>Number</b>	<b>Name of Submitter</b>	<b>Summary of Submission</b>
<b>896</b>	G.M. Sheed	Clamp down on merchants selling green wood and people burning scraps.
<b>966</b>	M. Newton & J. Kelcher	Have mandatory moisture testing of firewood, with minimum standards.
<b>F112</b>	Solid Energy New Zealand Ltd	Oppose submission 438 (point 1).
<b>F326</b>	L.H. Wills - Ilam & Upper Riccarton Residents Association Inc	Support submission 351 (point 1).
<b>F327</b>	D. Jamieson	Oppose submission 368.
<b>F329 (point 1)</b>	Lyttelton Port Company Ltd	Support submission 202.
<b>F329 (point 2)</b>	Lyttelton Port Company Ltd	Support submission 225.
<b>F329 (point 3)</b>	Lyttelton Port Company Ltd	Support submission 281.
<b>F329 (point 4)</b>	Lyttelton Port Company Ltd	Support submission 337.
<b>F329 (point 5)</b>	Lyttelton Port Company Ltd	Support submission 343.
<b>F329 (point 6)</b>	Lyttelton Port Company Ltd	Support submission 352.
<b>F329 (point 7)</b>	Lyttelton Port Company Ltd	Support submission 363.
<b>F329 (point 8)</b>	Lyttelton Port Company Ltd	Support submission 368.
<b>F329 (point 9)</b>	Lyttelton Port Company Ltd	Support submission 407.
<b>F329 (point 10)</b>	Lyttelton Port Company Ltd	Support submission 97.
<b>F341</b>	Heinz Wattie's Ltd	Oppose submission 351 (point 3).

<b>Number</b>	<b>Name of Submitter</b>	<b>Summary of Submission</b>
<b>F342</b>	Canterbury Breweries Ltd	Oppose submission 351 (point 3).
<b>F347</b>	Federated Farmers of New Zealand (Inc)	Support submission 363.
<b>F352</b>	Feltex Carpets Ltd	Oppose submission 351 (point 3).
<b>F353</b>	Canterbury Meat Packers Ltd	Oppose submission 351 (point 3).
<b>F365 (point 1)</b>	Meridian Energy Limited	Support submission 6.
<b>F365 (point 2)</b>	Meridian Energy Limited	Support submission 97.
<b>F365 (point 3)</b>	Meridian Energy Limited	Support submission 202.
<b>F365 (point 4)</b>	Meridian Energy Limited	Support submission 225.
<b>F365 (point 5)</b>	Meridian Energy Limited	Support submission 281.
<b>F365 (point 6)</b>	Meridian Energy Limited	Support submission 337.
<b>F365 (point 7)</b>	Meridian Energy Limited	Support submission 343.
<b>F365 (point 8)</b>	Meridian Energy Limited	Support submission 352.
<b>F365 (point 9)</b>	Meridian Energy Limited	Support submission 363.
<b>F365 (point 10)</b>	Meridian Energy Limited	Support submission 368.
<b>F365 (point 11)</b>	Meridian Energy Limited	Support submission 407.

<b>Number</b>	<b>Name of Submitter</b>	<b>Summary of Submission</b>
<b><i>F365</i></b> <b><i>(point 12)</i></b>	Meridian Energy Limited	Support submission 329.
<b><i>F401</i></b> <b><i>(point 1)</i></b>	NZ Vegetable & Potato Growers' Federation Inc. and NZ Fruitgrowers' Federation Inc.	Support submission 329.
<b><i>F401</i></b> <b><i>(point 2)</i></b>	NZ Vegetable & Potato Growers Federation. Inc. and NZ Fruitgrowers' Federation Inc.	Oppose submission 438 (point 1).
<b><i>F3038</i></b>	D.C. Bell - Ilam/Upper Riccarton Residents Assn	Oppose submission 352.

### **Submission Clarification**

#### Submissions 3, 59

These submissions relate to the "Clean Air Now" booklet that was distributed to Christchurch households in 2002. The two submissions do not refer to specific provisions in Chapter 3. It can be inferred that they relate to specific proposals in Chapter 3 such as the phasing out of woodburners, the banning of the use of open fires in Christchurch, Clean Air Zone 1, and the provision of financial assistance and incentives. Both submitters were advised that their submissions would be considered as part of the current process.

#### Submission 34

The Commissioners were advised that clarification was sought from the submitter. It confirmed that it sought that pellet fires should be allowed.

### **Consideration**

#### Submission 3

The submitter seeks that education processes be undertaken.

The Commissioners were told that the Regional Council has a communications strategy in place in relation to the use of solid fuel burners in homes. It has available pamphlets on how to use burners properly. The Clean Heat Project is actively promoted and it can be taken advantage of so that householders can change their existing solid fuel burners to cleaner forms of heating. The Environment Canterbury website contains significant amounts of information. There is a schools programme available on air quality issues. A Heating Advisory Service was available in 2003 and 2004. People could ask for specific advice on how to use their burners. A qualified person would go to households on request to discuss issues further. Since 2005 there has been an ongoing communications strategy to keep the public informed on air quality issues. This strategy is currently being reviewed to make it more effective. It is backed up by significant advertising.

The Commissioners agree that education is important and they would encourage the Regional Council to continue the programmes that are in place, and if appropriate to further them.

The submitter also seeks the further development of low emission burners. Policy AQL11 and Rule AQL2 indirectly encourage the development of low emission solid fuel burners by permitting the use of those burners that meet the 1 g/kg and 65% thermal efficiency criteria. Any new burner that does not meet these criteria needs to have a resource consent before it can be used.

With respect to enforcing dry firewood sales by recognised suppliers, the Commissioners accept that the Regional Council's powers are limited in this regard. They were told that the Regional Council encourages consumers to request dry firewood and to use the Consumer's Guarantees Act when they are buying their firewood. If they want dry wood and they are not satisfied with the wood they receive, they are encouraged to talk directly with their supplier and request that they receive what they ordered. However some choose to buy unseasoned firewood and season it themselves. The Council can measure any wood that is of concern to the consumer to determine if it is dry or wet. Essentially the Commissioners consider that there is little more that the Regional Council can do. It has no power to mandate the sale of dry firewood only.

It is recommended that the submission be accepted in part, and also rejected in part. No changes are recommended as a result of this submission.

#### Submissions 6, 228, Further submission F365 (point 1)

The submitters seek that the Regional Council should lobby Central Government to ensure there is adequate generating and line capacity to cover increased electricity requirements if and when Christchurch switches to electric heating. Control of the electricity industry is largely in the hands of Central Government and the Commissioners were told that the Regional Council has lobbied and will continue to lobby Central Government to ensure there is adequate generating and line capacity for Canterbury. The Commissioners consider that this is appropriate and would hope that it will continue. They also note that Orion advised them that the Electricity Commission is addressing the issue and that it is confident that more generation will become available over time. It is

recommended that these submissions be accepted but that there be no changes as a result.

Submission 27 (point 1)

The submitter seeks that the Regional Council should undertake an inspection of woodburners once they are 15 years old to assess whether or not they meet the 1g/kg and 65% thermal efficiency criteria. If a woodburner met the criteria at the time of installation, then there is no provision requiring that it be replaced after 15 years. The Council does not have jurisdiction under the Act to test burners in private homes without the owner's permission. It is limited as to what can be tested. Any requirement to the contrary in the NRRP would be legally ineffective. No change is recommended as a result of this submission, and it is recommended that it be rejected.

Submission 27 (point 2)

The summary of this submission did not accurately reflect what was sought. The submission stated that "in Canada, every home has to have an alternative form of heating and we should here." This assertion was made in the context of power cuts and uncertainty of supply. As was noted above Orion assured the Commissioners that the Electricity Commission is addressing these issues and it is confident that more generation will come on line in time. There are also alternative forms of clean heating available to consumers such as gas, diesel, and pellet fires. The NRRP allows for the replacement of existing open fires and woodburners with complying woodburners in many situations. Legally it is doubtful if the Regional Council could require every home in Christchurch or Canterbury to have alternative forms of heating. No change is recommended as a result of this submission, and it is recommended that it be rejected.

Submission 30 (point 1)

The submitter sought a policy providing for education and the promotion of clean burning woods.

The NRRP contains methods which provide for the dissemination of information and educational material to advise of the requirements of the NRRP. Moreover the Regional Council is already active in this regard - see the discussion above in relation to submission 3 - ## 03-000 00 00.

Policy AQL1 specifies the moisture content of wood that can be used on a small scale fuel burning device - it must be 25% dry weight or less. No specific wood species is recommended. If a woodburner meets the 1g/kg and 65% thermal efficiency criteria, then, as the Commissioners understand it, it does not matter what type of fuel is used.

No change is recommended as a result of this submission, and it is recommended that it be rejected.

### Submission 30 (point 2)

The submitter seeks that new burners should not have damper controls. Rule AQL2 (condition 3) in the NRRP provides that complying “devices shall be capable of being operated on a high, medium and low burn rate”. The rule is intended to ensure that there is sufficient air in an enclosed burner for it to operate. Dampening down an enclosed burner restricts the air supply - in some situations that may be appropriate. The Commissioners doubt that it is necessary to include an additional condition in Rule AQL2 to require that burners should not have damper controls. Moreover it is doubtful if any such condition would control manufacturers. No change is recommended as a result of this submission, and it is recommended that it be rejected.

### Submissions 30 (point 3), 94, 116, 438 (point 1), 536, 580, 896, 966, Further submissions F112, F401 (point 2)

The majority of these submitters sought that there should be controls on wood merchants; and some sought a ban on coal.

With respect to controls on wood merchants requiring them to sell dry wood, as noted above in relation to submission 3 ## 03-000 00 00 - the Regional Council encourages consumers to buy dry wood and to use the Consumer’s Guarantees Act 1993. If they require dry wood and are not satisfied, they can talk directly with their supplier and request that they receive what they ordered - dry wood. Some people however buy unseasoned firewood and season it themselves. Environment Canterbury can measure any wood that is of concern to the consumer to determine if it is dry or wet. The Commissioners were told that the Council did consider the option of licensing wood merchants but chose not to do, as it was considered that under the Act, it has no ability under a regional plan to control, via rules, firewood sold by vendors. The Commissioners agree with this approach.

With respect to banning coal, further submitters F112 and F401(point 2) oppose submission 438 (point 1). The Council seeks to place emission criteria of 1g/kg and 65% thermal efficiency on new enclosed burners, regardless of fuel type (but subject to conditions) – Rule AQL2. As was noted earlier, the Council did consider prohibiting the domestic use of coal in 1999 pursuant to the provisions of the Transitional Regional Plan. In the event it did not do so.

The Commissioners consider that the NRRP is heading in the right direction. The 2002 emissions inventory noted that the use of coal in metropolitan Christchurch had declined significantly (-25%) since 1999, and that it was expected that it would continue to reduce. Further the Commissioners note that Solid Energy stated that it believes that coal should only be burnt where its impact is minimal and environmentally acceptable. The Commissioners were told that a phased approach for the withdrawal of coal from the domestic market by Solid Energy for Christchurch came into effect from 2006. Solid Energy is not the only coal supplier in Canterbury but it is a major supplier to the local market. Its stance is positive and it is likely to result in further reductions in the use of coal. An absolute ban would seem to be unnecessarily draconian at this point of time.

With respect to people burning scraps on their fires - a point raised by submitter 896 - the Council has a communications strategy which details what should and what should not be burnt, and it can undertake enforcement action on a case-by-case basis if it is required to do so. The process allows for a warning to be given, then an abatement notice, then an infringement notice. If all else fails, prosecution can be initiated.

No change to the NRRP is recommended as a result of these submissions, and it is recommended that they are rejected.

Submissions 31, 38, 45, 133 (point 1), 164, 293, 312, 321, 344, 350, 422

The submitters variously seek that resources should be put into educational campaigns, eg to target those who do not operate wood burners efficiently, to encourage the use of other forms of heating during frosty nights when air pollution is likely, and seeking to ensure that people burn dry, clean fuel. Some seek that the Council should subsidise the cost of efficient wood burners.

As noted in the consideration of submission 3 above - ## 03-000 00 00 - the Council has a major communications strategy with respect to the use of solid fuel burners in the home, and it has pamphlets on their proper use. The Clean Heat Project promotes the change of existing solid fuel burners to a cleaner form of heating and subsidises the cost in appropriate cases. A Heating Advisory Service was available in 2003 and 2004. Since 2005 there has been an ongoing communications strategy to keep the public informed of air quality issues. These strategies are under review, and the Commissioners endorse their further use.

Further, and as noted in the consideration of submission 30 (point 1) above - ## 03-000 00 00 - the NRRP contains methods which provide for the dissemination of information and educational material.

Policy AQL16 promotes voluntary non regulatory measures to phase out solid fuel as a source of heat in dwellings. The Council has a smog forecast on its website during the winter months and this forecast has been broadcast on the radio during the winter months in Christchurch to encourage voluntary initiatives to change to reduce pollution. Pollution records are printed in The Press.

However, the Commissioners consider that, in itself, education is not enough to reduce air pollution. It is an important complementary provision to other means. The Commissioners agree that a mix of regulatory and non-regulatory methods is the best option to try and improve air quality in Canterbury.

Submission 133 (point 1) also seeks that households should be fined if they repeatedly offend. The Regional Council is able to initiate enforcement action on a case-by-case basis if it is required. Repeat offending is likely to lead to prosecution. What penalty (if any) is imposed is ultimately for the Courts - but as a generalisation, repeat offending may mean that a Court will impose a more significant sanction for subsequent transgressions.

No change is recommended as a result of these submissions, and it recommended that they be rejected.

#### Submission 34

Submitter 34 considers that if all existing solid fuel burners including multi-fuel burners and wood burners (an estimated total of 45,750 units) were replaced with pellet fires that emit no more than 1.6g/kg (real life), then PM<sub>10</sub> levels would lower significantly. This may (or may not) be correct, but in the Commissioners' view it is not for the Regional Council to sanction a monopoly by requiring that all households change to one particular type of appliance. Moreover the reporting officers queried whether the use of pellet burners alone will reduce the proportion of weighted emissions sufficiently to meet the 2013 air quality target mandated by the NES. No change is recommended as a result of this submission, and it is recommended that it be rejected.

#### Submission 50 (point 1)

The submitter sought that wood burners should be excluded from any type of subsidy or incentive. The Clean Heat Project is the Council's financial incentive and assistance programme designed to assist people to change to cleaner forms of heating. Currently the programme extends to ultra low emission solid fuel burners (meeting 40mg/MJ<sub>out</sub>). For some reason and rather unhelpfully the Clean Heat Project uses a different unit of measurement - namely mg/MJ<sub>out</sub> - to that contained in the NRPP. The Commissioners were told that this essentially combines g/kg and thermal efficiency. The 1 g/kg and 65% thermal efficiency criteria apparently equate to approximately 76mg/MJ<sub>out</sub>. The Commissioners consider this discrepancy below. Generally it seems that the ultra low emission solid fuel burners obtainable under the Clean Heat Project will better the NRPP criteria. If that is the case it does not matter that they may burn wood. The Clean Heat Project is reviewed annually and any change to this programme can be made through the annual review and annual plan process. No change is recommended as a result of this submission, and it is recommended that it be rejected.

#### Submission 50 (point 2)

This submission was in two parts - a ban on all woodburners for 2008, and controls on the use of wet wood.

The second part of the submission has been addressed above in relation to submission 30 (point 3) and various similar and related submissions - ## 03-000 00 00. It was there noted that the Council encourages consumers to use the Consumer's Guarantees Act 1993 when they are buying their firewood. Environment Canterbury can measure any wood that is of concern to the consumer to determine if it is dry or wet. It was also noted that the Council considered the option of licensing wood merchants but chose not to do so as it was considered that under the RMA, the Council has no ability under a regional plan to control, via rules, firewood sold by vendors. The Commissioners agreed with this

approach. For the reasons already advanced, no change is recommended in this regard.

The first part of this submission - seeking that all woodburners should be banned from 2008 - produced considerable debate, and the reporting officers placed considerable emphasis on it.

The target reduction in PM<sub>10</sub> emissions under the NRRP - Objective AQL3 at p3-35 - would see no more than one annual exceedance (averaged over three years) of 50 ug/m<sup>3</sup> (24 hour average) by 2012. It is proposed that this will be attained by a suite of rules, including a ban on the use of open fires from 2006, a prohibition on the installation of solid fuel burners into new homes and homes currently using non solid fuel heating methods, and a ban from 2008 on the use of non complying woodburners which have been installed for more than 15 years.

As noted above, the Ministry for the Environment has recently put in place the Resource Management (National Environmental Standards relating to certain air pollutants, dioxins, and other toxics) Regulations 2004. They set a national environmental standard (NES) for PM<sub>10</sub> of no more than one annual exceedance of 50 ug/m<sup>3</sup> (24 hour average) by 2013.

There are differences between the two targets; in particular the attainment dates, and the averaging periods. Significantly under the NES, resource consents for discharges to air cannot be granted in non complying areas from 2013 (or from as early as 2005 if an activity could cause at any time, the concentration of PM<sub>10</sub> in the air shed to increase above the straight line path).

The reporting officers set out to determine whether the targets set in AQL3 and in the NES are likely to be attained. They undertook an estimated emissions forecast for Christchurch for the period 2010 to 2021.

The potential impact of the NRRP rules on PM<sub>10</sub> emissions had been previously assessed. However the Commissioners were told that a number of changes had occurred since that work was conducted. In particular, an emissions inventory completed in 2002 provided officers with up to date data on the various numbers of various heating appliances in residential use, and revised emission estimates. There is data available which gives a more reliable changeover rate for appliances, and there is revised real life emission data which suggests (albeit from very limited testing) that emissions may exceed those previously used in assessments. These changes have substantial implications for predicting trends in air quality discharges.

The revised emission forecasts suggested that under a full compliance scenario, attainment with objective AQL3, and with the NES, cannot be achieved until 2015. Moreover, this is based on a relatively optimistic assessment, in that it does not allow for the uncertainties associated with emission factors, or for potential non compliance. If these factors are taken into account, it may be that the NES is not achieved within the analysis period - 2010 to 2021.

The NRRP target requires a 77% reduction in PM<sub>10</sub> emissions - the NES target a 73% reduction - from total emissions estimated to occur in 2002. The biggest reduction has

to come from residential heating appliances, because that sector is the primary source of PM<sub>10</sub> pollution. This is shown in the following table:

**PM<sub>10</sub> emission goals (24-hour wintertime emissions)**

<b>Source sector</b>	<b>2002 emissions (tonnes)<sup>A</sup></b>	<b>Emission goal Objective AQL3 and NES (tonnes at 2012/13)</b>
Residential heating	6.5	0.7
Industrial and commercial	0.95	1.1
Motor vehicles	0.94	0.45
<b>Total</b>	<b>8.4</b>	<b>2.3 t</b>

Assuming that the model inputs are accurate, the Commissioners were told that a total of some 41,980 appliances needs to be removed in Christchurch by 2013 to meet the NES target. Of these, it is now predicted that only 12,380 can be replaced with a cleaner woodburner, and that the remaining appliances - 20,600 - need to be replaced with cleaner heating alternatives such as electricity or gas.

Currently the regulatory provisions contained in chapter 3 do not directly require these changes.

Officers suggested that there are various ways to achieve the desired air quality targets. They discussed rationing, ie determining how the acceptable number of solid fuel burners can be allocated amongst households. The Commissioners were told that there are various approaches to rationing - including the following:

- (a) Removing the ability to replace non complying burners older than 15 years (policy AQL15, and rule AQL11) with solid fuel burners. This would effect approximately 32,400 burners. It would require a new rule in the NRRP, but the officers considered that submission 50 point 2 may allow this rule to be put in place.
- (b) In relation to complying burners, either:
  - allowing no replacements;
  - limiting the economic life of complying burners and not allowing replacement;
  - allowing the replacement of complying burners with another complying burner or pellet fire;

- allowing the replacement of complying burners only with a complying pellet burner.
- (c) Forcing more regular change in small scale solid fuel devices - thereby providing a greater opportunity for influencing the types of home heating used.
- (d) Allowing the replacement of all solid fuel burners with complying pellet fires only.
- (e) Ensuring that a fixed proportion of existing replacements convert to electricity, gas or diesel heating, with all remaining replacements converting to pellet burners.

The Commissioners were told that the Regional Council has not previously wished to put in place a rationing process. Officers considered however that, with the promulgation of the NES, and given the consequences of missing the PM<sub>10</sub> target by 2013, the increase in risk may now make a regulatory approach to rationing more appropriate.

An alternative to rationing is to require the design and operation of wood heaters with better performance standards with respect to emissions. If solid fuel burners can be designed and operated to achieve lower emission levels, a greater number of solid fuel burners could be allowed to operate in Christchurch within the assimilative capacity of the air shed. To achieve the required reduction to 0.7 tones per day by 2012, the maximum emissions from each burner would be in the order of 5.7 grams per day per household. The Commissioners were told that there is no solid fuel burning appliance currently available that meets that criterion, and that only oil and gas fired burners can comply.

The Commissioners were told that an alternative may be to permit the replacement of those solid fuel appliances which existed in 2002 with heating appliances that do not exceed 15 grams per day per appliance, or alternatively to replace all solid fuel appliances which existed in 2002 that have not yet reached their 15 year economic life, with heating appliances that do not exceed 11 grams per day per appliance.

Any of these options involves the adoption of more stringent standards for solid fuel burners than are contained in the NRRP (or in the NES). There would need to be both a design standard (ie laboratory testing of heating appliance performance) and an operational standard (ie a field test to ensure insitu compliance). The following would need to be covered:

- (a) different emission standards for small scale solid fuel burners;
- (b) a requirement to change small scale solid fuel burners earlier than the 15 year life currently provided for in rule AQL11;
- (c) a laboratory standard test procedure more stringent than those in either the NRRP or the NES;
- (d) an operation performance standard to confirm real life emission standards;

- (e) an areal emission limit to ensure local air quality is not comprised.

The Commissioners were told (and they accept) that this approach could only be achieved by way of a variation.

Yet a further approach would be to specify emission performance standards rather than technology controls, and to incorporate rules for emission performance in the NRRP. Once again, this would require a variation.

The Commissioners were presented with a summary of options if Christchurch is to reach the air quality targets by 2012/2013. As noted above the Commissioners were told that the estimated existing 41,980 solid fuel burners must be replaced with no more than 12,380 complying burners meeting the 1g/kg and 65% thermal efficiency criteria. The options presented were as follows:

- (a) The option least likely to achieve the NES is to retain the position presently contained in the NRRP. While the NRRP has provisions which seek to phase out older style burners from 2008, they can be replaced with a complying burner. This allows the community to make a change to cleaner heating when older appliances reach 15 years old (or in 2008 if the burner is 15 years or older at that date), in a way, and at a rate, that they can afford.
- (b) An option that retains the ability for small scale fuel burning devices to replace existing enclosed burners, is to:
- allow replacement of non complying burners with pellet burners only. This assumes that there will be a mix of appliance types taken up by the community and that all non complying burners that must be replaced are replaced by 2013;
  - require resource consents for replacement solid fuel burners (whether they are complying enclosed wood burners or complying pellet burners);
  - reduce the economic life of a non complying solid fuel burner to say 12 years, to accelerate the replacement of non complying burners. (This option is beyond the scope of submission 50 point 2.)

The Commissioners were told that this option involves a significant risk that the NES target will not be achieved by 2013.

- (c) The option most likely to achieve the NES target is to:
- phase out pre 2001 non complying burners and not allow these to be replaced with any form of complying solid fuel burning device;
  - phase out all solid fuel burners and not allow these to be replaced with any form of complying solid fuel burning device. While this would be very likely to achieve the NES target by 2013, it is beyond the scope of the NRRP as currently drafted.

- (d) An option likely to meet the AQL3 and the NES targets, but it seems not available to the Commissioners, is to introduce more stringent performance standards for heating appliances to ensure that the assimilative capacity for the air shed and the local area is not exceeded.

The recommendation of the officers was that the NRRP should be amended so that pre 2001 non complying solid fuel burners can only be replaced with non solid fuel burning appliances. This would effect the owners of approximately 32,400 appliances which are estimated to require replacement by 2013. The recommendation would require a new rule.

Provisions to this end are not contained in the NRRP as notified. The Regional Council has not notified a variation seeking such provisions. Nor did it lodge a submission in this regard. Rather the officers (belated) suggested that submission 50 - filed by Mr Chester - could be used to attain this end.

In a minute addressed to the Regional Council and to submitters dated the 15<sup>th</sup> of August 2005 the Commissioners signalled their concern at this suggestion.

The Commissioners noted that officers' recommendation was a significant change, which was proposed to be made by way of partial acceptance of a submission which had been made.

Having further considered the matter, the Commissioners consider that there are significant implications for a large number of householders - estimated at some 32,400. The recommendation now made was not foreshadowed at the time the NRRP was notified. It was raised for the first time in the course of the hearing in August 2005. It had not been previously signalled in earlier phases of the hearing. There was no full analysis as required by section 32 of the Act, and the Commissioners do not consider that they have sufficient information before them to enable them to undertake that task. They are particularly concerned at the financial and social implications for affected households.

In their minute referred to above the Commissioners expressed the preliminary view that if Environment Canterbury wished to advance the recommendation made by its officers, it should undertake a variation to the NRRP to ensure that there is full public knowledge of and participation in the plan process. Having considered the matter in more detail, the Commissioners remain of the view that that course is appropriate. The consequences of failing to meet the NES target will be draconian and they will fall largely on the industrial and commercial sectors. The Commissioners consider that it is highly likely that further and more stringent provision will have to be made in the NRRP to ensure that the NES target can be met, and within time. They do not however consider that this should be done on an ad hoc basis. A variation is the appropriate means to undertake a task of that magnitude and significance, and the Commissioners so recommend to the Council. It is recommended that submission 50 (point 2) be rejected.

## Submission 52

This submission asserts that there is no policy outlining the reasons for stack height conditions.

Rules AQL1 to AQL3 as notified contain stack height conditions. The explanation to Rule AQL2 clearly states the reasoning for the stack height conditions for enclosed burners (page 3-143):

*“Discharge from a chimney at a height above the roof of the dwelling minimizes down-wash of the contaminant plume in the building wake, thereby preventing high ground level concentrations of contaminants (including high levels of carcinogens such as polycyclic aromatic hydrocarbons) close to the source.”*

There is no equivalent explanation in relation for rules AQL1 or AQL3. The Commissioners consider that there should be and they so recommend. However they doubt that a policy is necessary - therefore they recommend that the submissions be accepted in part only.

The Commissioners were told that NZS 7421:1990 “Specification for installation of solid fuel burning appliances” was used in preparing the NRRP. They were also told that that standard has been revised along with AS 2918-1990 “Domestic solid fuel burning appliances – Installation”, so that there is now a joint Australian/New Zealand Standard – AS/NZS 2918:2001 “Domestic solid fuel burning appliances – Installation”. This standard contains the now applicable standards for stack heights for solid fuel burners.

As noted the NRRP used NZS 7421:1990 for the stack height conditions contained in Rules AQL1 to AQL3. That standard used to require that the minimum height of a flue system should be more than 3 m from the highest point of the roof and should be 900 mm above the roof penetration.

This standard has now been revised and relevantly AS/NZS 2918:2001 now reads as follows:

*“The flue exit shall be located outside the building [...] in which the appliance is installed so that-*

- (a) [...].*
- (b) the minimum height of the flue system within 3 m distance from the highest point of the roof shall be 600 mm above that point;*
- (c) the minimum height of a flue system further than 3 m from the highest point of the roof shall be 1000 mm above roof penetration;*
- (d) no part of any building lies in or above a circular area described by a horizontal radius of 3 m about the flue system exit; ...”*

There are submissions on rules AQL1 - AQL3, including submissions on the appropriateness of the stack height conditions. This matter is considered further below in relation to these rules.

### Submission 55

The submitter seeks a subsidy for new generation low emission solid fuel burners and suggests that the Regional Council should allow an open policy with regard to accessibility of low emission solid fuel burners for everyone.

With respect to the first point, low emission burners are an option under the Clean Heat Project when other forms of solid fuel heating are being replaced. In certain circumstances subsidies can be available. The Commissioners do not consider that it is necessary to go further. The Clean Heat Project subsidies are targeted and in the Commissioners' view that is appropriate.

With respect to the second point, it is unclear what the submitter is seeking. Presumably the submission is referring to all households, including new homes and existing homes that do not have existing solid fuel burners, because the policy contained in the NRRP as notified allows replacement only of existing burners. As noted above - submission 50 (point 2) - ## 03-000 00 00 - a significant number of solid fuel burners must be replaced by 2012/13 if the air quality targets are to be met. There is no room for leeway, and, as matters stand the Commissioners consider that the current policy direction contained in the NRRP should be maintained.

No change is recommended as a result of this submission, and it is recommended that it be rejected.

### Submissions 59, 88 (point 1)

Submitter 59 agrees with the removal of fires if there is assistance available for people on low incomes and for the elderly to convert to cleaner forms of heating and for the ongoing costs. Submitter 88 sought that electricity should be affordable through subsidies or capped pricing.

Policy AQL18 seeks to mitigate the adverse financial, social and health effects of the Plan's clean air policies. In Christchurch, the Clean Heat Project is aimed at assisting and encouraging people, who currently have solid fuel heating to install cleaner forms of heating (including flued gas, electricity, diesel, and low emission burners), and appropriate insulation. The programme can include a grant towards a replacement burner and insulation. For low income households, there is the possibility that replacement will be fully funded.

However, there is no financial assistance for ongoing costs. Rather the programme is aimed at reducing emissions to the air by changing to cleaner forms of heating.

The Commissioners were told that Environment Canterbury considered grants for ongoing costs, but decided that it was difficult to assess the additional increased costs of changing to a cleaner form of heating and that it decided not to pursue this option. The Commissioners are not able to revisit that decision. They also note that there are alternative funding avenues that people can use if they are having difficulty in paying for their ongoing heating needs. The issue can be raised when the Council's annual plan is being considered. If there is to be any change in the policy direction for the Clean Heat

Project or provision made for ongoing costs, then these will need to be budgeted for, and these matters are best considered as part of the annual plan process. The Commissioners also repeat their comments in relation to submissions 6, 228 and F365 (point 1) above - ## 03-000 00 00.

No change is recommended as a result of these submissions, and it is recommended that they be rejected.

#### Submission 60

The substance of this submission is evaluated above in the consideration given to submissions 59 and 88 (point 1) ## 03-000 00 00. The observations there made are adopted.

The submission also seeks financial assistance for the fitting of gas cylinders. Suppliers of liquid petroleum gas to households generally hire the cylinders and they have a cylinder replacement service so that the empty gas cylinder can be replaced with a full one as necessary. The provision of financial assistance, or the way in which gas cylinders are provided, is beyond the reach of the NRRP.

No change is recommended as a result of this submission and it is recommended that it be rejected.

#### Submissions 70, 133 (point 2), 194, 294 (point 2), 459, 461, 725

These submitters feel that research and encouragement should go into new technology - especially for solid fuel burners of high efficiency.

The NRRP allows for solid fuel appliances (including pellet fires) that meet the 1g/kg and 65% thermal efficiency criteria to be installed anywhere in Canterbury, except in Christchurch Clean Air Zone 1 where a complying burner can be installed only as a replacement burner. In effect, these provisions encourage the development of more efficient burners.

With respect to Environment Canterbury and Christchurch City Council co-operating to develop technology devised by individual inventors, that is an option that can be pursued outside of the plan process. It is not an appropriate option for inclusion in the NRRP.

No change is recommended as a result of these submissions, and it is recommended that they be rejected.

#### Submission 75

The submitter suggests that Environment Canterbury should investigate the use of underground water heat pumps as an alternative to approved burners.

It is unclear from the submission what exactly is being sought. As the Commissioners understand it there are district wide energy systems overseas which produce steam, hot water (or chilled water) at a central plant and then pipe that energy out to buildings in the district for space heating, domestic hot water heating and air conditioning. Individual buildings do not need their own boilers or furnaces, chillers or air conditioners. Insofar as the Commissioners are aware there are no district energy systems in Canterbury for household heating. Moreover the Commissioners suspect that the cost of any such system would be prohibitive. No change is recommended as a result of this submission, and it is recommended that it be rejected.

#### Submission 81

This submission noted that the proposed mitigation measures which make subsidies available do not bind future Councils. The Clean Heat Project is a ten year programme that the Regional Council has undertaken to enable and encourage those households that use solid fuel heating to replace their burners with cleaner appliances. There are three programmes – one for low income households (those on a Community Services Card), one for landlords, and one for anyone who has a solid fuel burner or open fire. The Clean Heat Project is reviewed annually. As a matter of law it cannot bind future councils. Policy AQL18 does seek to mitigate, inter alia, adverse financial consequences. It can also be changed in the future - but only with public participation. The Clean Heat Project is one way of fulfilling policy AQL18. Ultimately councillors are responsible for these matters, and they in turn can be held to account in local body elections. No change is recommended as a result of this submission, and it is recommended that it be rejected.

#### Submission 86

It is unclear what the submitter is seeking. It was submitted that the Regional Council should consider research undertaken in Nelson. The Commissioners are unclear as to what that research is. In an event they note that Rule AQL2 provides the criteria which enclosed burners must meet if they are to comply. If any particular burner meets the criteria, then subject to the rules its use will be a permitted activity under Rule AQL2. No change is recommended as a result of this submission, and it is recommended that it be rejected.

#### Submission 88 (point 2)

The submitter seeks that there should be protection from penalties for those using solid fuel to keep warm during electricity supply failures, or when there is no other means of heating available.

Policy AQL17(b) refers to exemptions which would allow the discharge of contaminants from any small scale solid fuel burning device “in emergencies where electricity is cut off for an extended period”. The explanation to policy AQL17(b) notes as follows:

*“Policy AQL17(b) provides an exemption in those emergencies where electricity supply is obstructed for long periods. It is not intended as allowing exemptions where intentional electricity or gas disconnection has occurred. Environment Canterbury considers this amounts to an exemption to the provisions of section 330 of the RMA, in accordance with section 18(2) of the RMA. This policy shall therefore provide security of heating supply in those cases of real emergency.”*

Section 330 of the Act provides for emergency works. The Commissioners are not sure that it would necessarily protect individuals burning solid fuel where electricity is cut off for an extended period. They are recommending that there needs to be a specific rule to implement Policy AQL17.

If this recommendation is accepted the Commissioners consider that in general the NRRP will provide for the concerns raised. No change is recommended as a result of this submission, and it is recommended that it be rejected.

Submissions 97, 202, 225, 281, 329, 337, 343, 352, 363, 368, 372, 407, and Further submissions F327, F329 (points 1, 2, 3, 4, 5, 6, 7, 8, 9 and 10), F347, F365 (points 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 and 12), F401 (point 1), F3038

Various submissions have been made in relation to the specific rules controlling discharges from diesel-fired generators. These submissions are dealt with below. For present purposes the submitters sought (or opposed) a new policy in relation to the use of generators for network load shedding during times of peak electricity demand. The main concerns noted in the submissions in support of the policy are summarised as follows:

- The plan has the effect of discouraging the use of generators for electricity network load shedding and it may create additional financial costs and operational inconveniences.
- With regard to improving air quality in Christchurch (in particular PM<sub>10</sub>), controlling generators is significantly less cost-effective than controlling solid fuel burners. This has not been adequately represented by an analysis of costs and benefits in the section 32 report.
- The benefits of the use of generators for load shedding are not adequately recognised by the Plan. The use of such generators reduces the need to run inefficient coal-fired power stations in stand-by mode for grid support. Additional use of diesel generators for network load shedding would reduce the cost of the predicted increased demand for electricity, particularly from those who no longer use solid fuel burners as a result of rules in the Plan.
- The efficiency of the existing electricity network could be compromised, as load shedding by diesel-fired generators is an important part of the existing infrastructure.
- Diesel generators are not generally operated for load shedding at a time when the ambient air quality guideline for PM<sub>10</sub> in Christchurch is exceeded.

- The rules in the NRRP imply that resource consents for load shedding generators could be refused.
- The restriction of the permitted and controlled activity rules to generators operated for less than 100 hours per year is arbitrary and too restrictive. This limit should be increased to 350 hours per year, with no limit for emergency use.
- All generators (including those used for load shedding) with a net output of less than 300kW should be classified as permitted activities. All generators having a net output of greater than 300kW should be classified as controlled activities. In the case of Christchurch International Airport Ltd, the requested limit between the two activities is 500kW.
- The term “emergency” should be defined to include a national electricity generation shortage (as defined by the Minister of Energy).

Relevantly, the submissions noted that the existing policies in the Plan do not provide for or recognise the important function of generators in the Canterbury context given their significant benefits and their comparatively small impact on ambient air quality.

The Transitional Regional Plan currently requires resource consents for discharges from all diesel-fired generators with an output of greater than 40kW within the Christchurch City Council area. Many Christchurch businesses already hold discharge permits for existing generators used for load shedding, including Christchurch Hospital, St Georges Hospital, Burwood Hospital, Chateau on the Park Hotel, Telecom, General Cable, Orion and several others. In such cases where generator discharges are legally authorised, the rules in the Plan will not have any immediate impact.

The Commissioners were told that the emission rate of some contaminants (notably NO<sub>2</sub> and PM<sub>10</sub>) from diesel-fired generators is significant when compared to emissions from external combustion equipment of similar output rating. The Commissioners note and accept the explanation on page 3-151 of the Plan, to the effect that the use of generators for more than emergency purposes can result in significant contributions to localised concentrations of contaminants. The Commissioners therefore consider that it is appropriate that the effects (including cumulative effects) of emissions from load-shedding generators should be assessed via the resource consent process. Such an assessment is likely to involve dispersion modelling of the generator discharges and any other significant nearby emission sources. Conditions could be imposed (eg for increased stack heights and improved combustion technology) to ensure that any adverse effects are adequately mitigated.

The Commissioners also note that the position is likely to be affected by the Resource Management (National Environmental Standards Relating to Certain Pollutants, Dioxins and other Toxics) Regulations 2004.

The rules in Chapter 3 as notified [Rules AQL15, AQL16, AQL25 and AQL26] allow stand-by generators to be operated as permitted activities. There are currently a significant number of such stand-by units operated in Christchurch without consent. The obvious benefits of these emergency generators are accepted and any potential adverse effects are reduced by their low frequency of operation. Several submitters have expressed concern that the proposed 100 hours per year operational limit is too

restrictive, given the need for regular maintenance and testing and the need for possible extended use during a major emergency situation.

The Commissioners in their consideration of Rule AQL15 at ## 03-074 02 00 note that on the evidence presented by submitters at the hearing, the localised effects of load shedding may be infrequent and minor, depending upon the circumstances of the case. Further, it was noted by the reporting officers that resource consent applications for load shedding activities in the Christchurch Clean Air Zone have generally been granted, albeit subject to conditions. Nevertheless the Commissioners' view is that there could be adverse local effects that should be addressed through a discretionary consent process, even if that discretion is restricted. Their recommendation at the location noted above is for Environment Canterbury to notify a variation to enable load shedding to be undertaken provided a consent is obtained as a restricted discretionary activity.

A definition of "emergency" that expressly includes a national electricity generation shortage or similar as an emergency event as well as other emergency events is not considered necessary given the above recommendation and because section 330 of the Act provides for 'emergency works' in certain situations.

Further submission F327 opposes submission 368 and notes that insufficient analysis has been done to support the claim load shedding occurs "on cold, wet southerly days." The submitter provides a cursory analysis that suggests that the activity usually occurs at times when there is high pollution. The Commissioners were told that load shedding can occur at any time of the day with the main peak periods between 7.00 to 10.00 am in the morning and 5.00 to 8.00pm in the evening. This has the potential to coincide with the high levels of particulate matter particularly during the winter months. They therefore accept the further submission in part.

Further submission F3038 opposed submission 352 with respect to the statement that the "internal combustion diesel generators contribute to an extremely small amount of PM emissions. When combined with other pollutants from the factory and other sources this contributes to the generally poor quality of air in Christchurch." While the PM<sub>10</sub> emissions from diesels generators comprises a small portion of the overall industrial emissions, the further submitter is correct because the concern is with the cumulative effect of all emissions; it is these effects that must be managed. In the context of generators, the potentially significant localised impacts also require management. Chapter 3 currently manages these effects through the resource consent process. It is recommended that this further submission be accepted in part.

Submission 372 seeks that an economic analysis of the effects of permitting or not permitting network load shedding be provided. The Commissioners agree that specific economic analysis was not done on network load shedding. However there is a partial analysis in Section 16, Products of combustion – large scale fuel burning devices (industrial) (pages 68 to74; 59-61), and in particular, in Section 16.2 - Contaminants discharged (pages 70 to74). Further analysis is also found under Section 24 of the Section 32 Report (pages 132 to 166). The Commissioners consider that these analyses assist - albeit that they are not as fulsome or specific as might be expected. They recommend that this submission be accepted in part.

In the Commissioners' view it is appropriate to consider the use of internal combustion equipment that provides electricity network load shedding on a case-by-case basis

through the resource consent process. Therefore, there is no need to insert a new policy, explanation and methods as requested.

Change is recommended as a result of these submissions, and it is recommended that those submissions which sought that further provision should be made for load shedding should be accepted in part.

Submissions 98 (points 1 and 4), 136, 277

The submitters seek that the NRRP should allow for clean burning technologies that will allow the use of the full range of solid fuels in a safe and efficient manner in domestic appliances. The technologies could involve the retrofitting of a gas scrubbing filtration system to existing open fires, existing woodburners, new solid fuel burners or new appliances in new homes. There may be other options such as improved combustion or a heat recovery system.

As noted in the consideration given to submission 70 and related submissions above, ## 03-000 00 00, the NRRP allows for solid fuel appliances that meet the 1g/kg and 65% thermal efficiency to be installed anywhere in Canterbury, except in the Christchurch Clean Air Zone 1 where a complying burner can only be installed as a replacement burner. In the Commissioners' view, these measures encourage the development of more efficient burners.

The Commissioners agree with the submitters that the NRRP should accommodate such appropriate new technologies as may become available. The primary concern is with emissions to the atmosphere from any particular appliance. If new technologies result in the development of new appliances which comply with the emissions criteria detailed in rule AQL2, then they should be considered. The same applies to any new technology which can be retrofitted to existing appliances.

They requested the reporting officers and the submitters - in particular submitter 98, Mr Best - to liaise, to see whether or not a suitable rule could be agreed. In the event no agreement could be reached.

The Commissioners considered the various alternatives discussed between the reporting officers and Mr Best. They have also considered the relationship between the proposed amendment, and the NES. The Commissioners consider that the appropriate rule to provide for new technologies should be considered by way of a variation. Accordingly they recommend that the Regional Council should consider a variation to provide for the development of new technologies, and for the installation of small scale solid fuel burning devices which achieve an emission standard of not more than 0.01 grams of total suspended particulate per kilogram of fuel burnt. The new rule will have to tie in with the NES, and the Commissioners have already recommended that a variation be considered in that regard.

### Submissions 98 (point 2)

The submitter expressed concern at the emission stack requirements and the effect they may have on the installation of some new technologies.

The explanation to Rule AQL2 states the reasoning for the stack height conditions for enclosed burners (page 3-143).

As noted above - submission 52, ## 03-000 00 00 - the NZS 7421:1990 “Specification for installation of solid fuel burning appliances” has been revised along with the AS 2918-1990 standard “Domestic solid fuel burning appliances – Installation” so that there is now a joint Australian/New Zealand Standard – “AS/NZS 2918:2001 Domestic solid fuel burning appliances – Installation”.

The Commissioners were told that the relevant standards do envisage that some kinds of solid fuel burning appliances may not require a vertical flue. They were referred to AS/NZS 2918:2001 - Domestic Solid Fuel Burning Appliances - Installation - page 23. They also note that the NRRP allows for the use of solid fuel burners that do not comply with Rule AQL2 as non-complying activities under Rule AQL4. This allows for the effects of the discharge from any such appliance (including an appliance with an emission stack that does not comply with the rules) to be considered on a case-by-case basis.

No change is recommended as a result of this submission.

### Submission 98 (point 3)

The submitter seeks that the test methods used to grade the performance of domestic woodburners should be reviewed, and that they should measure other contaminants, including the size of particulates. The submitter seeks that “any test must cover all operating conditions not just those of low, medium, and high output when the fireplace is already up to full temperature. The fireplace should be tested during startup, and also when the fire is heavily refuelled when the fire is almost out, and in other areas of this nature. It is only by doing this that we will be able to assess the true pollution potential of the fireplace.”

This submission is dealt with in the discussion on Rule AQL2 below as this is the provision in the NRRP that is specific to the testing of appliances.

No recommendation is required at this stage.

### Submission 101

The submitter seeks that central Government should provide incentives for sun powered hot water heating.

The Commissioners were told that the Energy Efficiency and Conservation Authority has a Solar Water Heating Finance Assistance Programme. This programme apparently

gives homeowners and businesses the chance to seek an interest free loan to help pay for the purchase and installation of solar water heating systems. The Commissioners also note that the use of sun powered hot water systems is not precluded by the NRRP.

No change is recommended as a result of this submission.

#### Submission 104

The explanation for Policy AQL14 on page 3-39 provides an assumed general heating cost associated with various sources of heating. This was based on a report prepared by Greer & Bicknell in 2001. They made various assumptions in relation to energy costs based on data from a heating costs survey conducted by the Consumers Institute in 2000, to allow for a survey carried out in 1999.

The Commissioners note that there will inevitably be ongoing changes in price. In their view it is not necessary for a statutory plan to reflect the most up to date prices available, but the plan should record where the data was derived from to avoid any misunderstanding in the future. It is recommended that the submission be accepted in part.

#### Submission 107

This submission relates to the installation of second band burners in Timaru. The NRRP requires that enclosed burners meet the 1g/kg and 65% thermal efficiency criteria before they can be installed into a home anywhere in Canterbury (excluding new homes and existing homes without solid fuel heating in the Christchurch Clean Air Zone 1 where it is proposed that no burner can be installed). Therefore, unless a second-hand burner meets the criteria of 1g/kg and 65% thermal efficiency, it could not be installed anywhere in Canterbury without a resource consent.

No change is recommended as a result of this submission, but it is recommended that it be accepted.

#### Submissions 112, 351 (point 2)

Submitter 112 seeks an additional policy requiring Environment Canterbury to actively seek and/or support reliable and reasonably priced sources of energy having low PM<sub>10</sub> emissions for Christchurch. It is submitted that unless Christchurch homeowners have access to reliable, reasonably priced home heating, there will continue to be opposition to efforts to clean the city's air by imposing restrictions on options for home heating. Submitter 351 (point 2) seeks that Environment Canterbury should lobby the government to subsidize electricity costs for Christchurch due to Christchurch being in a unique geographical situation. She also suggests that the government should change the law in the Resource Management Act 1991.

The Commissioners do not consider that it is necessary to include an additional policy as requested as there are a variety of methods in the Proposed NRRP that work towards the proposals advanced by the submitters. These include information and promotion that require Environment Canterbury to promote energy efficiency and the use of cleaner heating (flued gas, electricity, diesel); the financial incentives and assistance programme (the Clean Heat Project) which can subsidise the costs of replacing enclosed burners with cleaner forms of heating (flued gas, electricity, diesel and low emission solid fuel burners) and home energy efficiency improvements (insulation); and the Regional Energy Strategy which is one of the primary methods identified in the Regional Policy Statement for giving effect to the energy outcomes sought by Environment Canterbury. The Regional Energy Strategy seeks to encourage efficient energy use and demand management to reduce dependence on energy. The Commissioners were told that these matters are being presented and advocated to central Government, as are the issues of the adequacy of electricity generation and line capacity for Canterbury.

No change is recommended as a result of these submissions, and it is recommended that they are rejected.

#### Submission 126

This submitter seeks that before log burners are “condemned”, open fires should be banned, and that log burners should then be monitored for pollution.

The Commissioners doubt that there is sufficient time for this luxury, given the introduction of the NES as noted above. Further and in any event, it is clear from the data available to date that log burners are contributing significantly to the PM<sub>10</sub> problem in Christchurch. The NRRP is proposing to prohibit the use of open fires when the plan becomes operative and to phase out non-complying burners from 2008 once they are 15 years old. In many circumstances these fires can be replaced with a complying solid fuel burner. Monitoring of ambient air in Christchurch will continue.

No change is recommended as a result of this submission, and it is recommended that it be rejected.

#### Submission 158

The submitter seeks that there should be emission controls on all exhaust gases from automobiles and air conditioning units. The submitter objects to the banning of enclosed wood burners as other forms of heating are not viable for health reasons.

In broad terms the NRRP proposes to allow the replacement of existing burners with complying burners and proposes to prohibit the installation of solid fuel burners into new homes or homes that currently do not have burners in the Christchurch Clean Air Zone 1. Outside this area, complying burners can be installed anywhere in Canterbury. A total ban of enclosed wood burners is not being proposed.

With respect to initiating an emission control on all exhaust gases from automobiles or air conditioning units, first, the Commissioners doubt that the Regional Council has any jurisdiction over automobiles which can be appropriately exercised by rules in a regional plan. There would be very real difficulty for automobiles which come into Canterbury from outside the region.

In regard to exhaust gases from air conditioning units it is unclear what the issue is with this form of heating/cooling. As the Commissioners understand it, air conditioning units have an outdoor compressor unit and an indoor unit that circulates the warm/cool air. The reporting officers advised that they were unaware of any problems with emissions from air conditioning units.

No change is recommended as a result of this submission, and it is recommended that it be rejected.

#### Submission 167 (point 1)

The submitter seeks that no new open fires should be allowed in rural towns or in larger urban centres e.g. Timaru, Waimate and Ashburton.

Subject to various exceptions, rule AQL4 makes the discharge of contaminants from open fires a non-complying activity anywhere in Canterbury. A resource consent application will be considered on a case-by-case basis. Section 3.4.2 on pages 3-131 to 3-132 details the information to be provided for resource consent applications for discharges to air from non-complying small scale fuel burning devices. The last two paragraphs of the explanation to Rule AQL2 on page 3-145 also provide a clear indication of the conditions that may be imposed on any consent granted.

No change is recommended as a result of this submission, and it is recommended that it be accepted in part.

#### Submissions 167 (point 2), 287, 408, 424

Submitter 167 also seeks that new homes are energy efficient, the use of education, and greater controls in legislation dealing with building standards, to encourage district councils to do more to promote efficiency and set examples. Submitter 287 is concerned that there is little mention of insulation and building standards and seeks that they are tightened. Submitter 408 seeks that Environment Canterbury should advocate to central Government for changes to the Building Act. Submitter 424 seeks that new houses should have insulated wall ceilings, floors and double glazing and that Environment Canterbury should encourage the development of new technologies that are renewable and non-polluting. The submitter also seeks the use of solar power (panels) and correct orientation of houses to maximize the use of the sun.

Building standards under the Building Act provide for energy efficiency in the building of new homes. The Building Industry Authority administers the Building Code. Local variations to the Building Code are permitted where they are specifically identified.

Environment Canterbury is not responsible for the implementation of the Building Act. This is a territorial authority function. The Commissioners were assured that Environment Canterbury does actively lobby for the adoption of better insulation standards, as well as for standards which promote energy efficiency.

Arguably Chapter 3 could seek to require higher insulation standards in new homes if this would reduce the emissions of PM<sub>10</sub> from small scale solid fuel heaters. Rather chapter 3 prohibits the use of small scale solid fuel burning devices in new homes or existing homes that currently do not have a small scale solid fuel burner. Given this it would be difficult to justify having specific energy efficiency standards within Chapter 3 for new homes. They make no significant contribution to the PM<sub>10</sub> problem.

The Commissioners are satisfied that there are a variety of methods in the NRRP and outside it that work towards the intent of the decisions requested by the submitters. They do not think that more is required or that the Regional Council can significantly advance matters.

With respect to Environment Canterbury encouraging new technologies, the NRRP allows for solid fuel appliances that meet the 1 g/kg and 65% thermal efficiency to be installed anywhere in Canterbury, except in the Christchurch Clean Air Zone 1. This criteria encourages the development of more efficient burners. Environment Canterbury provides an up-to-date list of wood burners that meet this criteria on their website.

No change is recommended as a result of these submissions, and it is recommended that they be rejected.

### Submission 183

The submitter seeks that the Council should find someone who could supply an efficient filter to fit chimneys.

The substance of this submission has been considered above in relation to submissions 98 (points 1 and 4), 136, and 277, ## 03-000 00 00, where technologies such as a gas scrubbing filtration system were referred to. As was there noted the NRRP allows for solid fuel appliances that meet the 1g/kg and 65% thermal efficiency to be installed anywhere in Canterbury, except in the Christchurch Clean Air Zone 1 where a complying burner can only be installed as a replacement burner. If Rule AQL2 cannot be met, then a resource consent under Rule AQL4 will need to be applied for. This allows for applications to be considered on a case-by-case basis. The Commissioners in that context recommended that the Regional Council consider a variation to accommodate the development of new technologies. They adopt that reasoning.

No change is required as a result of this submission, and they recommend that it is rejected.

Submissions 200, 203 (point 1)

The submitter seeks greater emphasis on alternative methods of reducing emissions including education and realistic financial incentives to encourage change at a sustainable level over time.

As already noted Environment Canterbury has a communications strategy with respect to the use of solid fuel burners in the home, and has pamphlets on their proper operation. The Clean Heat Project also enables people to change their existing solid fuel burners to cleaner forms of heating. The Environment Canterbury website contains significant information, including specific education pages for children. There is a schools programme available on air quality issues. A Heating Advisory Service operated in 2003 and 2004. Since 2005 there has been an ongoing communications strategy to keep the public informed on the air quality issue. This strategy is currently being reviewed to make it more effective. The Commissioners have observed that these programmes are valuable and recommended that they should continue.

No change is recommended as a result of this submission, and it is recommended that they are rejected.

Submission 203 (point 2)

The submitter seeks that emission targets should be set, which would enable and encourage innovation and technological improvements.

Objectives AQL2 and AQL3 set the ambient air quality target for Canterbury and Christchurch respectively. Policy 11 and Rule AQL2 prescribe the emission standards for enclosed burners (1g/kg and 65% thermal efficiency) and Rule AQL2 prescribes the methods to test whether appliances comply with the emission standards.

The following reasoning is provided within the submission:

“To the extent that the proposed objectives, policies and rules seek to prohibit the installation and/or use of certain forms of solid fuel domestic heating, they fail to recognise that improvements in emission standards can also be achieved through the type of solid fuel used and the technology, efficiency and methods of use of any fuel burning device.

The proposed objectives, policies, rules ought not to prescribe the method but should enable the people and community of Christchurch to utilise better performing appliances.”

The Commissioners agree in a broad sense with these assertions. They have already recommended in the context of submission 98 and various related submissions, ## 03-000 00 00, that Environment Canterbury should consider initiating a variation to accommodate changes in technology. This should accommodate the position advanced by the submitter.

No change is recommended to the NRRP to deal with this submission. They recommend that it is accepted.

#### Submission 221

The submitter disagrees with the need to reduce the use of wood and coal for home heating and suggests that proper research should be carried out to find more economical ways of using solid fuel (fans, pumps, insulation, education, suitable wood etc) and that research should be undertaken to develop low emission burners.

As noted above research has shown that the majority of wintertime air pollution is attributable to the burning of wood and coal on domestic fires. In order to meet the air quality target contained in the NRRP, significant reductions from the emission levels determined by various emission inventories is required. This has resulted in the provisions in the NRRP.

Policy AQL11 and Rule AQL2 encourage the development of low emission solid fuel burners by only permitting the use of new low emission solid fuel burners that meet 1 g/kg and 65% thermal efficiency. Any other burner that does not meet this criteria needs to have a resource consent before it can be used. The Commissioners accept that having these criteria will encourage more research into the development of low emission burners.

No change is recommended as a result of this submission, and it is recommended that it is rejected.

#### Submission 222 (point 1)

The submitter seeks a new policy whereby Environment Canterbury would encourage and provide monetary assistance for the development of close to zero emission solid fuel burners.

The NRRP allows for solid fuel appliances that meet the 1g/kg and 65% thermal efficiency to be installed anywhere in Canterbury, except in Christchurch Clean Air Zone 1 where a complying burner can be installed only as a replacement burner. This criteria is encouraging the development of more efficient burners.

With respect to Environment Canterbury providing monetary assistance for this development, in the Commissioners' view this is an option that is best pursued outside of the regional plan.

No change is recommended as a result of this submission, and it is recommended that it be rejected.

### Submission 222 (point 2)

The submitter seeks that research is undertaken on Canadian solid fuel burners that are fitted with catalytic converters.

As noted in relation to submission 222 (point 1) above, the NRRP allows for solid fuel appliances that meet the 1g/kg and 65% thermal efficiency to be installed anywhere in Canterbury. These criteria should encourage the development of more efficient burners. There is nothing to preclude the development of a solid fuel burner with a catalytic converter.

No change is recommended as a result of this submission, and it is recommended that it be rejected.

### Submission 273

This submission relates to Rules AQL9, AQL10 and AQL11 which are dealt with below. One of the solutions suggested by the submitter is the reintroduction of the four hectare rule in the draft plan and preferably with a reduction in area to half a hectare. The submitter questions why peri-urban areas have been included in Clean Air Zone 1 (which has stricter rules in relation to domestic heating).

The option of imposing restrictions on the basis of the size of the property from which the emissions originate was considered in earlier drafts of the Air Plan as is noted on pages 196 to 198 of the Section 32 Report. The Draft Air Plan 1998 proposed that the rules would apply to all areas within the Christchurch City Council boundaries. The main reasons for this were the certainty associated with the proposed area definition and the inclusion of all areas likely to impact on PM<sub>10</sub> concentrations in Christchurch. However, it was noted in submissions filed at that time, that such a rule would catch many areas in which emissions are less likely to result in adverse effects because of their low density.

Three options were further examined as a result and they were discussed in CRC Report No U99/43. They were:

1. Defining an area within the CCC boundary;
2. Rules based on property size within the CCC area; and
3. Rules based on the distance of a dwelling to the closest boundary.

Report U99/43 recommended that the air plan rules relating to domestic heating should apply only to properties less than four hectares within the territorial limits of Christchurch. This approach was considered the technically justifiable method because of the relationship between property size and emission density, and consequently the potential for contribution to high ambient pollution. The analysis then undertaken indicated that four hectares was an adequate property size and that PM<sub>10</sub> emissions from solid fuel burning appliances on such a property would be dispersed without significant adverse effect on ambient air quality.

However, there were technical limitations with implementing this option. They are noted on page 197 of the section 32 report.

Environment Canterbury then commissioned the Centre for Atmospheric Research at the University of Canterbury to undertake a study into the extent of the Christchurch airshed. The results of this study helped form the basis for defining the Christchurch Clean Air Zones 1 and 2 in the NRRP and they were presented in Officer Report No 3 on 31 August 2004. As a result, at page 202 of the Section 32 Report it is noted that:

*“... from the Wilton (1999) and Sturman et al (2000) reports, in association with continued ambient air quality monitoring, Council decided that using the territorial administrative limits of Christchurch City was inappropriate to apply the strictest of the methods relating to reducing emissions from domestic heating, outdoor burning and industrial emissions as there were differences in contributions of PM<sub>10</sub> concentrations to the Christchurch airshed. Nevertheless, the Council also acknowledged that the outer areas of the main residential areas of Christchurch did contribute to PM<sub>10</sub> concentrations due to the meteorological and topographical effects of the airshed and some means of reducing emissions from these areas was required. Thus the Christchurch Clean Air Zone 2 is to act as a buffer for the ambient air surrounding Christchurch. The Christchurch Clean Air Zone 2 is where the less stringent methods relating to domestic home heating are to apply in association with tighter outdoor burning and industrial emission methods.”*

The Council considered that defining areas within the CCC boundary is more effective than imposing restrictions on the basis of the size of the property from which emissions originate (whether this is four hectares or half a hectare) due to:

- (a) the movement of emissions around the city;
- (b) potential future land use changes;
- (c) preciseness of the emission model between ambient air quality effects in areas when differences are small;
- (d) the fact that mitigation policies are needed for the whole of the city; and
- (e) for ease of administration.

This conclusion is supported at pages 195-196 of the Section 32 report, where the airshed boundary is discussed and it was noted as follows:

*“The wintertime air pollution situation in Christchurch has been studied intensively for many years, by many people. Our recent studies over the last few years are simply a more refined attempt to understand the meteorology of the region, and how this affects pollution. A similar intensive study was carried out by the DSIR between 1960 and 1964. The results of this culminated in the legislation creating the Clean Air Zone over Christchurch city. This early study faced some of the same questions we have before us today – such as, is there any merit in dividing the airshed into regions with different controls, as emissions and effects are different across the city? They decided not. The science did not support this, and the problems in ‘drawing boundaries’, and having different control regions were assessed as unworkable. Exactly the same conclusions can be reached on the basis of all the recent work.*

*There is little doubt that some areas contribute more or less to the problem, either by virtue of their emissions, or by their particular location and meteorology. It has been suggested that locations east of Ferrymead Bridge, for instance, contribute relatively low amounts of air pollution, and should be excluded from controls. However:*

- (a) it would be very difficult to decide on scientifically based criteria for deciding where any dividing line should be;*
- (b) this might be the situation now (although this point is debatable, as some very recent measurements have shown that Sumner is at least as badly affected as the central city), but not necessarily so in future if uncontrolled emissions are allowed;*
- (c) one could equally argue that even stricter controls should be placed on older inner-city suburbs that have higher than average emissions;*
- (d) residents in other outer suburbs with lower than average emissions (say Avonhead, Marshlands etc) could argue for exemptions; and*
- (e) it is hardly equitable for people who might be quite close neighbours to have different controls imposed.*

*Finally, we have some evidence from the modelling and university studies, in particular the Sturman et al (2000) report, that emissions from particular suburbs can move around the city and contribute to elevated pollution concentrations in suburbs several kilometres away. The result supports the proposal that mitigation policies are needed for the whole of Christchurch city, not just for particular suburbs.”*

In summary, Clean Air Zone 1 defines an area within the Christchurch City Council administrative boundary which includes as much of the high density housing areas as is reasonably possible (including areas likely to be developed in the future as indicated in the Christchurch City Plan) and excludes as many rural areas as is reasonably practicable.

While the NES applies the wood burner Regulations 22 to 24 to “*buildings on a property with an allotment size of less than 2 hectares*”, this area applies on a nationwide basis. The Commissioners accept that it is appropriate for Chapter 3 to have larger management areas as described by Christchurch Clean Air Zones 1 and 2, so that strict management measures can be applied to various sources of combustion (small scale solid fuel burning devices, large scale fuel burning devices and outdoor burning) in Christchurch to try to ensure that emissions of PM<sub>10</sub> from all sources and its effects are reduced over time.

No change is recommended as a result of this submission, and it is recommended that it be rejected.

#### Submission 276

The submitter suggests that education, not regulation, should be pursued and seeks that Environment Canterbury should provide the public with information on when not to burn through such mechanisms as a freephone number, front page of a newspaper, radio, television, website, and an independent “AirCare” organization that children can use to educate others.

The Commissioners have already noted - ## 03-000 00 00, submission 3 - the Regional Council's significant efforts in relation to education and the dissemination of information. They have observed that education is effective and is a complementary provision to other means, and that in their view a mix of regulatory and non-regulatory methods are needed to improve air quality in Canterbury. They adopt their observations and reasoning.

They do note that Environment Canterbury has a communications strategy with respect to the use of solid fuel burners. This includes the provision of information to the "Press" on PM<sub>10</sub> levels during the winter. This is recorded in the weather section of the newspaper in the form of a bar graph. They were also advised that Environment Canterbury ran a trial which broadcast 'high, medium and low smog alerts' in the winter of 2004 on Christchurch: Lite FM, More FM and Classic FM, and in Timaru on Port FM. A telephone service for air pollution forecasts was trialled in the 2005 winter. There was advertising on regional television in 2004 and the television stations are provided with smog forecasts. It is of course up to the media to decide whether or not to provide this information to their consumers.

While an independent "AirCare" organisation is not specifically promoted by Environment Canterbury, there are already existing organisations which promote air quality improvement.

The Commissioners have accepted that these various strategies will not alone achieve Objective AQL3 or the NES requirements for Christchurch, or Objective AQL2 and the NES requirements for the rest of Canterbury. In their view there is no other realistic option but to use regulation in conjunction with non-regulatory methods such as education and the dissemination of information.

No change is recommended as a result of this submission, and it is recommended that it is rejected.

#### Submission 280

The submitter seeks that the Plan should clearly state that Environment Canterbury's energy policy is to reduce, as far as reasonably possible the use of electricity and fossil transport fuels for heating.

Environment Canterbury has a Regional Energy Strategy which seeks to encourage the community to move towards a more secure future by reducing Canterbury's dependence on non-sustainable sources of energy. The Regional Energy Strategy is one of the methods referred to in Chapter 3.

The Regional Policy Statement 1998 – Chapter 14: Energy - requires Environment Canterbury to promote the use of energy from renewable sources consistent with the sustainable management of natural and physical resources, as well as to promote energy conservation and efficient energy use. The Regional Energy Strategy is one of the means identified in the Regional Policy Statement 1998 for addressing regional energy issues. The Commissioners do not consider that it is necessary to repeat the Regional Energy Strategy further in the NRRP.

No change is recommended as a result of this submission, and it is recommended that it is rejected.

Submission 294 (point 1)

The submitter suggests that open fires should be able to burn coke and seeks that Environment Canterbury support a coke-making plan on the West Coast and implement a by-law requiring initially, the purchase of one bag of coke for every bag of coal.

The NRRP requires all solid fuel burners to meet the 1g/kg and 65% thermal efficiency criteria regardless of fuel type. Coke could be used. Open fires are tightly controlled in order to ensure that Objective AQL3 will be met.

The Commissioners agree with the reporting officers that any funding decision of the type requested by the submitter should be advanced through the Annual Plan process rather than the NRRP process.

No change is recommended as a result of this submission, and it is recommended that it be rejected.

Submission 294 (point 3)

The submitter seeks less reliance on bans and prohibitions.

The Commissioners have acknowledged that education is effective as a complementary provision to other means, and noted that in their view a mix of regulatory and non-regulatory methods are needed to improve air quality in Canterbury - submission 3, ## 03-000 00 00. The consideration given to submissions 200 and 203 (point 1), ## 03-000 00 00, above refers to some of the non-regulatory methods being used.

In their view, if the ambient air quality targets for PM<sub>10</sub> are to be achieved both regulatory and non-regulatory methods are needed. The NRRP provides for a range of methods in its endeavours to achieve the ambient air quality target.

No change is recommended as result of this submission, and it is recommended that it be rejected.

Submission 331

The submitter seeks that Environment Canterbury should provide financial assistance for the installation of replacement complying woodstoves.

The Clean Heat Project is Environment Canterbury's financial incentives and assistance programme designed to encourage households that use solid fuel to heat their main living to replace existing burners with cleaner forms of heating. Cleaner forms of heating

include heatpumps, flued gas, flued diesel, or a low emission wood burners. Energy efficiency in the form of insulation is also an important part of the programme.

No change is recommended as a result of this submission, and it is recommended that it is rejected.

#### Submissions 351 (point 1), F326

The submitter seeks that those caught burning inappropriate wood should have their fire removed, and that wood merchants should lose their licence if selling wet wood after a substantial fine. Further submitter F326 supports this submission.

Environment Canterbury considered the option of licensing wood merchants but chose not to do this as it was considered that under the RMA, Environment Canterbury has no ability under a regional plan to control, via rules, firewood sold by vendors, or the licensing of merchants. The Commissioners agree with this approach. There are remedies open to customers who request dry wood and who do not receive it, and the Regional Council can assist in this regard by measuring the moisture content of wood sold.

Enforcement can be undertaken if people burn wet wood. The procedure will be the same as for any incident and the action taken will depend on the severity of the incident. The process is for a warning to be given, then an abatement notice, then an infringement notice, and then, finally, prosecution can be sought.

No change is recommended as a result of this submission, and it is recommended that it be rejected.

#### Submissions 351 (point 3), F341, F342, F352, F353

Submitter 351(point 3) seeks to have smokeless fuels used in Christchurch. This is opposed by the further submitters noted.

The Commissioners note the observations in section 35.3.1.2 of the Section 32 report (page 238) where the following is stated in relation to the use of smokeless fuels:

*“With the exception of the pellet-fuel industry, which makes specialised fuel for use in specifically designed domestic appliances, and a small production of pressed firewood productions, there is no smokeless fuel production for Christchurch.*

*The use of new or composite fuels is still relatively low throughout New Zealand, there is limited information on their emissions but it appears they may not provide large reductions in emission. One of the constraints is the relative costs compared to wood and coal, and while some composite fuels are attractive from waste recycling view point, it remains difficult to compete with the overall energy efficiency of sustainable wood fuels in particular.”*

There is no challenge to these observations and the Commissioners understand that the position has not changed. No change is recommended as a result of this submission, and it is recommended that the submission be rejected.

#### Submission 380

The submitter seeks that the Christchurch City Council/Environment Canterbury should promote and subsidise cheap power supplies, especially during days of no fires.

Section 35.3.6.4 (page 253-254) of the Section 32 report considered the use of fuel taxes, emission charges, equipment use charges and other economic instruments that could be used to address emissions to ambient air quality. It was considered that this method could not be implemented by Environment Canterbury as it is not involved in the supply of electricity, it does not have the authority to regulate the prices of appliances, and it does not have the ability to impose financial penalties on those who choose to continue to pollute. Moreover it was observed in the section 32 report that the costs of providing substantial subsidies would be high (page 254 of the Section 32 Report).

Environment Canterbury can and as far as the Commissioners are aware does advocate central Government for reduced electricity prices. In the Commissioners' view this should continue.

It is recommended that this submission is accepted in part but that no change be made to Chapter 3.

#### Submission 423 (point 1)

The submitter seeks that Environment Canterbury adopt changes in policy regarding wood burner emissions and efficiency quantification. The reasoning provided for this is as follows:

*“Environment Canterbury’s current method of assessing and reporting the performance of solid fuel burners does not recognise the importance of efficiency. Efficiency is assessed as the useable heat transferred into the room compared to the heat which is wasted up the chimney or flue. Higher efficiency solid fuel burners use significantly less fuel to produce the amount of heat necessary to warm the house. Regardless of measured emission levels, it is a simple fact that burning less fuel produces less air pollution. Therefore all solid fuel burner ratings ought to be based on a level playing field ratio of useful heat output to particulate emission. A power to emission factor. It makes more sense to know how much pollution a burner emits for the amount of useable heat it produces, rather than how much pollution a kilogram of fuel yields. These figures, expressed in grams of particulate emitted per megajoule of useful heat, are readily available from compliance testing. As an example, inefficient and high emission older wood burners emit in excess of 280 milligrams of TSP per megajoule. The Ethos ultra low emission burner was tested at just 38 mg/mj.”*

It is understood that the issue raised by the submitter relates to the units of measurement that are used, rather than the testing methodology per se.

It is noted that prior to the NES being gazetted, there were concerns about the inconsistency of units used in various contexts - eg under section 369 (the Transitional Regional Plan – 1.5 g/kg), the Clean Heat Project (40 mg/MJ<sub>out</sub>) and the NRRP (1g/kg and 65% thermal efficiency). This inconsistency is shown as follows:

- NRRP – Rule AQL2 essentially permits enclosed burners that meet both 1g/kg **and** 65% thermal efficiency as two independent criteria (and these burners are to be approved using the s369(11) process); and
- Clean Heat Project – uses a different unit of measurement for solid fuel burners, namely mg/MJ<sub>out</sub>. This combines g/kg and thermal efficiency. It has already been noted that 1 g/kg and 65% thermal efficiency equates to approximately 76mg/MJ<sub>out</sub>.

A solid fuel burner could meet the Clean Heat Project criterion of 40 mg/MJ<sub>out</sub> but not the NRRP criteria. An example is the Pellet Fireplaces New Zealand Enviro EF2 model. This burner burns very cleanly (0.49 g/kg) but the estimated efficiency is just under the 65% thermal efficiency threshold (64% thermal efficiency). This corresponds to 38mg/MJ<sub>out</sub> which is within the Clean Heat Project criteria. Clearly, if the NRRP allowed the conversion of g/kg to mg/MJ<sub>out</sub>, then the Enviro EF2 burner would easily meet 76mg/MJ<sub>out</sub>.

The NES were gazetted in September 2004. The design and thermal efficiency standard for woodburners is 1.5 g/kg **and** 65% thermal efficiency. These criteria came into force on 1 September 2005. Both must be met under the NES otherwise the discharge from a woodburner is a prohibited activity if installed on an allotment of less than 2 hectares in size. The NRRP (and in turn, the Clean Heat Project) cannot be less strict than the NES and as a result any future appliance will need to meet both the g/kg and thermal efficiency criteria.

Therefore, the Commissioners recommend that the units of measurement remain as they are currently written in the NRRP.

No change is recommended as a result of this submission, and it is recommended that it be rejected.

#### Submission 423 (point 2)

The submitter suggests that a system of grading solid fuel burners according to their emission/efficiency factors is necessary.

Rule AQL2 uses the testing methodology described in AS/NZS4012:1999 and AS/NZS4013:1999 for assessing whether or not a burner meets the 1g/kg and 65% thermal efficiency criteria requirement. The Commissioners were told that these tests are replicable and that they provide a reliable indication of performance. The use of these testing methodologies also provides a grading system by which burners can be assessed. The performance data of each appliance tested is shown on the approved woodburner website which is updated whenever new burners meet the criteria and when an existing burner's 'installation approval date' expires. This provides consumers with a

significant amount of information in simple terms and enables realistic comparisons to be made.

This system does not go as far as the submitter requests. However, the Commissioners consider that the current process does enable a comparison to be made of emission/efficiency levels. If a wood burner manufacturer can produce a burner with lower emission or higher efficiency levels then the current testing reports will show that data and allow consumers to decide which burner is best for their situation.

No change is recommended as a result of this submission, and it is recommended that it is rejected.

#### 430 (points 1 and 2)

The submitter seeks that the NRRP should provide greater emphasis on electric heating as a means of reducing air pollution, and on renewable non polluting forms of heating.

The NRRP provides for a range of clean heating alternatives. So does the Clean Heat Project. Options include flued gas, flued diesel and electricity, and complying solid fuel burners. It is proposed that no small scale solid fuel burning appliances should be permitted to be installed in new dwellings or dwellings that currently do not have solid fuel burning appliances. Other clean heat alternatives are permitted.

Control of the electricity industry is an issue for central Government. The Commissioners were told that it is looking at ways to encourage the use of alternatives. The National Energy Efficiency and Conservation Strategy apparently provides strategic direction for various programmes designed to improve energy efficiency and promote the use of renewable energy. Central Government provides guidance to local authorities and others with responsibilities under the Act with respect to ensuring sustainable energy issues are effectively addressed in Resource Management Act 1991 processes and documents.

The Resource Management (Energy and Climate Change) Amendment Act 2004, introduced three new matters into section 7 (Other matters) in Part II of the Resource Management Act 1991, namely:

- (ba) – 'The efficiency of the end use of energy'
- (i) – 'The effects of climate change'
- (j) – 'The benefits to be derived from the use and development of renewable energy'.

It is incumbent upon the Commissioners to consider these matters, and they have done so. The NRRP does not directly address these issues. In the Commissioners' view it may well be appropriate for it to do so. It is open to the Regional Council to review its planning instruments, to provide a stronger directive at local level so that planning decisions made better reflect New Zealand's climate change policies as well as promoting energy efficiency and renewable energy.

However any amendments made to the NRRP, or to other operative documents that have been developed under the Resource Management Act 1991 need to go through

the appropriate planning process. The Commissioners recommend to Environment Canterbury that it consider initiating a variation dealing with these various matters.

No change is recommended to the NRRP as a result of these submissions, but it is recommended that the submissions are accepted in part.

#### Submission 433 (points 1, 2, 3 and 4)

The submitter seeks a general exclusion for all (flued and unflued) gas burning small scale space heating and water heating appliances from the need to seek a resource consent for such appliances.

First it is noted that the definition of “small scale fuel burning device” excludes unflued gas heaters. Therefore, with respect to unflued gas burning small scale space heating appliances no resource consent is required. The same applies to gas hobs and gas rangers used for cooking.

Rule AQL3 of the Proposed NRRP permits flued oil or gas burning heating devices anywhere in Canterbury, provided the conditions in Rule AQL3 are met. If the conditions in Rule AQL3 are not met, then any discharge would become a non-complying activity, requiring a resource consent under Rule AQL4.

Reporting officers initially recommended that Chapter 3 should be amended to provide an exemption for continuous flow heaters (70kW or less) ## 03-071-01-00. Their evaluation is relevant here and it is repeated.

“Discussions with the Energy Safety Service, the LPG Association and with Rinnai New Zealand Limited, highlighted that the external continuous flow water heaters that are being installed into domestic situations for home water heating usage, range in size from 35kW to 70kW input. The emissions from these devices are primarily carbon oxides, nitrogen oxides and water. The amount of particulate matter emitted is very small.

The Gas Act 1992 and its associated regulations and standards, prescribe the installation and appliance standards that all gas fitters and users must comply with. These consider the safety elements of using and installing the gas appliance, including the location and ventilation of the appliance.

Currently, the NRRP may require that external continuous flow water heaters meet the conditions of two rules in the Proposed NRRP, those being Rule AQL3 and AQL13. There are different conditions on these rules and with discussions with the industry with respect to stack height, effectively requiring horizontal flues to get a resource consent, and vertical efflux discharge conditions being unnecessary and impractical due to the legislative framework for the use and installation of gas appliances, it is considered appropriate to insert a new rule to provide for external continuous flow water heaters which are to be likely to be used in the domestic situation.

It is noted that if, for any reason, the external continuous flow water heater did produce any nuisance, or offensive or objectionable effects, then the conditions in the new rule would require that such a device require a resource consent.”

In a later report (see Policy AQL5 Avoid odour nuisance ## 03-017 26 00), the recommendation was to amend the wording of Condition 4 as follows:

*The discharge shall not cause an odour which has an offensive or objectionable effect on the environment beyond the boundary of the site where the discharge originates.*

In addition, officers recommended (see Policy AQL6: Avoid dust nuisance), that there should be an amendment to the wording of condition 4 as follows:

*The dispersal or deposition of contaminants including particles shall not cause corrosion, or have noxious, dangerous, offensive or objectionable effect on the environment beyond the boundary of the site where the discharge originates.*

The consideration of submission 118 at ## 03-071 01 00 provides the scope to make continuous flow water heaters of less than 40kW a permitted activity. The reporting officer has at that location recommended a new condition permitting such devices up to 70kW which goes beyond the scope of the submission. The Commissioners considered two options. The first was to add a new rule as requested by the submitter. This would have had the benefit of making what could plainly be considered a common practice with little if any adverse effects permitted. The scope of the submission however did not provide for additional conditions or consequential changes. The second alternative was to recommend that Environment Canterbury consider a variation to the plan to provide for such appliances up to 70kW as recommended by the reporting officer as a permitted activity. This will provide a comprehensive solution to the shortcomings identified by that submitter. On balance, the Commissioners have favoured the comprehensive solution and recommended that Environment Canterbury notify a variation to that effect. They have recommended that submission 118 can be accepted in part.

Given their contribution to air quality improvement, the Commissioners agree that small scale gas appliances used for water heating should not need a resource consent and whether or not they have a flue. Any such requirement would be unduly onerous.

The submissions can be accepted in part and amendments are recommended accordingly.

#### Submission 438 (point 2)

The submitter seeks a new policy to “disallow people to run fires all day everyday”.

The difficulties in enforcing set timeframes regulating when people can light fires make this option ineffective. The weather is variable and it could well be appropriate to have some form of heating outside any timeframes set. This option is similar to the compulsory no burn days option that was considered in the section 32 report (pages

240-241) and which was considered to be 'ineffective' (page 262). The Commissioners agree with that assessment. The proposal is in practical terms unworkable.

No change is recommended as a result of this submission, and it is recommended that it be rejected.

#### Submission 440

The submitter seeks a ban on the sale or resale of any non-EPA approved wood burning appliance.

The Proposed NRRP controls the discharge of appliances by specifying emission and thermal efficiency criteria – 1g/kg and 65% thermal efficiency respectively. It also controls where such appliances can/cannot be installed.

The option of controlling the sale of fuel or appliances was considered - section 32 report (pages 241-242). It was thought to be ineffective (page 262) because it is arguable that such technique is not available for use by regional councils. As stated on page 241 of the Section 32 report, "a very strict approach to Environment Canterbury's powers under the Resource Management Act 1991 would restrict it to classifying discharges as permitted, non-complying, prohibited etc on the basis of the discharge itself". The Commissioners agree with this approach.

No change is recommended as a result of this submission, and it is recommended that it be rejected.

#### Submission 445

The submitter seeks that Environment Canterbury should take the initiative regarding electricity costs and consider becoming a non-profit electricity retailer.

The Commissioners were told that central Government, through the Electricity Commission, has a Government Policy Statement on Electricity Governance (released in October 2004) which includes policies on consumer protection such as a policy on low fixed charges and arrangements for the benefit of low income domestic consumers.

If the option proposed by the submitter is to be pursued, it should be done outside of the current plan process.

No change is recommended as a result of this submission, and it is recommended that it should be rejected.

#### Submission 457

The submitters refer to their own situation and suggest that clean log burners or pellet fires should be allowed.

The NRRP permits the replacement of existing operational fireplaces with a complying burner that meets the criteria of 1g/kg and 65% thermal efficiency. The Clean Heat Project can provide financial incentives and assistance to enable and encourage those households that use solid fuel burners to heat their main living area to replace these burners with cleaner forms of heating. There is also an insulation component within this programme.

No change is recommended as a result of this submission, and it is recommended that it be rejected.

## **Recommendations**

### **Reject**

Submissions 3 (in part), 27 (points 1 and 2), 30 (points 1, 2 and 3), 31, 34, 38, 45, 50 (points 1 and 2), 55, 59, 60, 70, 75, 81, 86, 88 (points 1 and 2), 94, 98 (point 2), 101, 112, 116, 126, 133 (points 1 and 2), 158, 164, 167 (point 2), 183, 194, 200, 203 (point 1), 221, 222 (points 1 and 2), 273, 276, 280, 287, 293, 294 (points 1, 2 and 3), 312, 321, 331, 344, 350, 351 (points 1, 2 and 3), 408, 422, 423 (points 1 and 2), 424, 438 (points 1 and 2), 440, 445, 457, 459, 461, 536, 580, 725, 896, 966, 3038, Further submissions F326, F327.

### **Accept**

Submissions 6, 98 (points 1 and 4), 107, 136, 177, 203 (point 2), 228, 277 and Further submissions F112, F341, F342, F352, F353, F365 (point 1), F401 (point 2).

### **Accept in part**

Submissions 3, 52, 97, 104, 167 (point 1), 202, 225, 277, 281, 329, 337, 343, 352, 363, 368, 372, 380, 407, 430, (points 1 and 2), 433 (points 1, 2, 3 and 4), Further submissions F329 (points 1 to 10), F347, F365 (points 2 to 12), F401.

## **General Recommendations**

- (a) Consider a variation to ensure that the NES target can be met by 2013 - see discussion in relation to submission 50 (point 2) above.
- (b) Consider a variation to provide for new technologies as discussed in relation to submission 98 and related submissions above.
- (c) Consider a variation to provide for load shedding as a restrictive discretionary activity.

- (d) Consider a variation to insert a new rule into the small scale devices section of the rules as follows or to similar effect:

**Rule AQL3(a) Gas burning continuous flow water heating devices 70kW or less anywhere in Canterbury – permitted activity**

**Activity**

Except where prohibited by Rules AQL5 or AQL6, the discharge of contaminants into air from the burning of liquid petroleum gas in any continuous flow water heating device 70 kW or less, is a permitted activity.

**Conditions**

1. The dispersal or deposition of contaminants including particles shall not cause corrosion, or have an noxious, dangerous, offensive or objectionable effect on the environment beyond the boundary of the site from which the discharge originates.
2. The discharge shall not cause an odour which has an offensive or objectionable effect on the environment beyond the boundary of the site from which the discharge originates.

**Explanation**

**Rule AQL3(a) Gas burning continuous flow water heating devices 70kW or less anywhere in Canterbury – permitted activity**

Rule AQL3(a) recognises that well-maintained and correctly operated liquid petroleum gas-fired continuous flow water heating devices used in the in the home situation, which can range from 35kW to 70kW input, are unlikely to cause localised air pollution problems. The emissions from liquid petroleum gas-fired continuous flow water heating devices contribute very little PM<sub>10</sub> contaminants per kilogram of gas, with the majority of contaminants being carbon oxides, nitrogen oxides and water that are emitted.

The Gas Act 1992 and its associated regulations and standards, prescribe the installation and appliance standards that all gas fitters and users must comply with. These consider the safety elements of using and installing gas appliances, including the location and ventilation of the appliances.

If gas burning heating devices meet the specified criteria in Rule AQL3(a) and the associated conditions, then the effects of any resulting discharge into air should be minimal. If the conditions cannot be met, then the activity becomes non-complying under Rule AQL4 and will require a resource consent.

Make a consequential amendment to Rule AQL13 as follows:

**“Rule AQL13 External combustion of gas 5 MW or less in the Christchurch Clean Air Zones 1 and 2 – permitted activity**

Except where permitted by Rule AQL3(a), the discharge of contaminants into air from the burning, in the Christchurch Clean Air Zones 1 and 2, of natural gas or liquefied petroleum gas, from any external combustion equipment having a net combined heat output capacity within one property of greater than 40 kilowatts and less than or equal to 5 megawatts, is a permitted activity.”

**Amendments required**

- (a) Amend the explanations to Rules AQL 1, and AQL3 to explain the need for stack height conditions as follows:

*“Discharge from a chimney at a height above the roof of the dwelling minimises down wash of the contaminant plume in the building wake, thereby preventing high ground level concentrations of contaminants (including high levels of carcinogens such as polycyclic aromatic hydrocarbons) close to the source.*

- (b) Amend the last sentence of the fourth paragraph on p 3-39 to add the following after the words “plug in heater”: - “(See report by Greer & Bicknell - 2001:39)”.

**Further General Submissions ## 03-000 00 00**

<b>8</b>	G.M. Keeley - Primary Producers Co-Operative Society Ltd, Christchurch	Undertake a review of the means for assessing individual discharges to air to be incorporated by way of a Plan change.
<b>13</b>	P. Pink	Advertise the air pollution levels on the front page of the "Press", in colour and easy to read.
<b>24</b>	T. & J. Cornish	Support the Air Plan.
<b>27</b>	D. Child	Plan does not recognise that pollution comes from cars. No decision requested.
<b>30</b>	M. de Lacey	Highly polluting and non-renewable resources e.g. coal should be phased out first.
<b>47</b>	L.L.J. Griffiths	Hedges, trees etc which shade buildings should be subject to the same regulations as buildings - i.e. required recession plane.
<b>49</b>	P. & M. Consedine	The air plan is surrounded in controversy and does not have scientific support - it should not be imposed on all residents. No decision requested.
<b>51</b>	D.W. King	Supports the proposals put forward, but is concerned with the long time frame; too much tolerance is being

<b>(point 1)</b>		exhibited towards high output heaters. No decision requested.
<b>51 (point 2)</b>	D.W. King	All councillors should be given a copy of a reprint from the Engineers for Social Responsibility Newsletter and also an article from the Northern Outlook.
<b>52</b>	S.A. Corry	The policies and objectives should be cross referenced to the relevant rule, and vice versa.
<b>54</b>	M. Adams	Would like to see all fire restrictions in place for Christchurch and surrounding areas sooner rather than later.
<b>60</b>	D. Broadbent	Should be a hefty fine for those that breach the plan once it is implemented.
<b>64</b>	D.J. Harrison	Prepare Chapter 3 again, in a more lucid and easily understood way, and then make it available for further submissions.
<b>70</b>	H.D. Johnson	Submitter queries whether household cleaners, perfume, herbicides, pesticides, hairspray and after shave should be banned. No decision requested.
<b>71 (point 1)</b>	G.M. & G. Moss	Regarding the availability and sustainability of non-renewable sources of energy for heating, Ecan should do its homework in all areas of supply of fuels, for future generations and our city.
<b>71 (point 2)</b>	G.M. & G. Moss	Submitter feels that the "so-called scientific research figures" regarding PM10 and the published figures on the number of deaths caused by pollution each year in Christchurch are highly questionable.
<b>75</b>	J. Knox - Guardians of the Styx	Recommend deliberate tree planting projects along river margins.
<b>81 (point 1)</b>	S. Wells	Submitter is concerned that the proposed Air Plan will have significant adverse effects on the health of the community. No decision requested.
<b>81 (point 2)</b>	S. Wells	Submitter does not believe that the assessment of health effects has met the analytical criteria of the RMA. No decision requested.
<b>92</b>	D. Minchington	More public awareness of UN clean air levels. Ban wood burners on bad days.

<b>94</b>	N.A. Griffith	Arrange for reliable retired persons on hill suburbs to monitor smoke sources and pass on the information to Ecan. Suggests someone on Cashmere Hill with clear sight lines to the south and to the west, and another on St Andrews hill with sight lines to the west and to the coast. Have "visitors" identify the street or farm and exert influence (to deal with the smoke).
<b>105</b>	C.H. Levin	Proceed with the Plan as notified or substantially similar.
<b>106</b>	J. Fone	Sort out and regulate the electricity supply authorities before phasing out and banning solid fuel heaters.
<b>112</b>	Solid Energy New Zealand Ltd	Reorder the Plan so that relevant rules are inserted immediately after the policy, explanation and methods. Rewrite the rules so that they are easy to follow and do not need extensive cross-references to other rules. Make any consequential amendments to the Plan.
<b>120</b>	Christchurch City Council/Waimairi Community Board	There is an unnecessarily harsh impact on the domestic sector compared with the requirements proposed for the commercial and industrial sector. No decision requested.
<b>134</b>	P.T. Palmer	All the available data should be examined by competent, independent epidemiologists, health professionals, air quality scientists, and heating engineers before conclusions are reached about how to improve air quality in Christchurch, or regulations are introduced to do this.
<b>136 (point 1)</b>	Association For Independent Research (AIR)	Put in place an effective public relations exercise based on compliance monitoring with emphasis on gross emitters.
<b>136 (point 2)</b>	J.L. Hoare - Association For Independent Research (AIR)	Recommend that relevant data etc, be examined and assessed by an independent panel of air quality scientists, engineers, epidemiologists and other health professionals before binding decisions are made.
<b>146</b>	T. Hodgson - Styx Residents Group	Make amendments to the rules and assessments to enable consideration to be given to activities that occur close to sensitive living zones such as those that were in the CCC plan.
<b>147</b>	Ashburton District Council	Delete rules that do not identify an activity with specific and identified adverse effects on the locality on which they are being imposed.

<b>153</b>	P.M. Heffernan	Add new objective - AQL22 - Reduce Heat Waste; Require that the windows of new buildings be double glazed.
<b>155</b>	D. Scott - Federated Farmers Of New Zealand Inc, Mackenzie Branch	Prefix policies with 'For urban areas...'
<b>162</b>	H.S. Stedman	Environment Canterbury has not adequately appreciated the efficiency and cleanliness of properly working solid fuel burners compared with the costs of heating an older house with electricity, gas or oil. No decision requested.
<b>164</b>	S. Shackleton	Have a close look at the contribution to smog made by traffic and industrial smoke. Have the CCC stop burning coal.
<b>171</b>	Mrs I. Scott & Mrs A. Lingard	Ecan has not set up a policy for sustainability, and has encouraged a blanket ban on the use of natural resources. No decision requested.
<b>190</b>	G. van der Krogt	Compare the air quality of Christchurch with that of Auckland and look at the number of open fires and wood burners they use.
<b>201</b>	Ministry For The Environment	Amend Chapter 3 to refer to the revised 2002 Ambient Air Quality Guidelines.
<b>216</b>	Hurunui District Council	Reword technical conditions throughout the chapter into non-technical and easily understood terminology or provide an example or descriptor alongside the condition.
<b>231</b>	G. Bishop	There should be more effort to investigate the development of low emission wood burners.
<b>271</b>	D. Kelly	Implement air plan as proposed as quickly as possible.
<b>287 (point 1)</b>	K.R. Stevenson	Reduce verbage in the Plan, and have a simple preview/statement of purpose and intent.
<b>287 (point 2)</b>	K.R. Stevenson	Work more closely with the CCC.
<b>338</b>	Transit New Zealand, Christchurch	Make greater use of the restricted discretionary class of activity in the Plan.

<b>347</b>	Federated Farmers Of New Zealand Inc, North Canterbury Branch	All Issues, Objectives, Policies and Methods should relate to specific situations, which are scientifically measured and justified, otherwise these should be deleted.
<b>351</b>	N. Crutchley	A change to cleaner healthier heating should be enforced, have zero tolerance on smoking chimneys and burners.
<b>356</b>	R. Robins	Use 'smog alert' broadcasts.
<b>365</b>	Meridian Energy Limited	Extend the submission period to ensure that an overlapping submission period is provided for all chapters of the proposed NRRP.
<b>379</b>	Christchurch City Council, Civic Offices	Include the relevant definitions either as footnotes or list separately within the Chapter to which they apply.
<b>386 (point 1)</b>	Te Runanga O Ngai Tahu	Add macrons to words and those on maps in a manner consistent with Chapter 2 of the proposed NRRP. Make any other consequential amendments to the Plan.
<b>386 (point 2)</b>	Te Runanga O Ngai Tahu	Include cross referencing to Chapter 2 where appropriate. Make any other consequential amendments to the Plan.
<b>388 (point 1)</b>	K.A. Adams	Add Issues and Recommendations on pollen drift from genetically altered organisms.
<b>388 (point 2)</b>	K.A. Adams	Supports the inclusion of the terms 'dangerous' or 'noxious'.
<b>388 (point 3)</b>	K.A. Adams	Delete the terms 'offensive' and 'objectionable' throughout the plan and seeks objectivity in matters of regulation and law.
<b>391 (point 1)</b>	Carter Holt Harvey Panels MDF Ltd	The NRRP (Chapter 3) should adopt an effects based approach.
<b>391 (point 2)</b>	Carter Holt Harvey Panels MDF Ltd	Include an additional issue and objective which supports the policies which acknowledge reverse sensitivity. Include rules and alternative methods to ensure the effects of reverse sensitivity are adequately managed. Make all consequential amendments to the Plan.

<b>403</b>	Board of Air Line Representatives of New Zealand Inc	Amend the Plan to ensure that discharges to air from aircraft whether or not located on industrial or trade premises, are permitted activities, without performance standards. Provide appropriate explanatory text, issues, objectives, policies and rules. Make any other consequential amendments to the Plan as necessary.
<b>404</b>	AgResearch Ltd, Lincoln	Retain Chapter 3 (with specific exceptions).
<b>405 (point 1)</b>	Timaru District Council	The emphasis should be towards achieving renewable non polluting energy as required by Central Government National Energy Efficiency, to obtain clean air.
<b>405 (point 2)</b>	Timaru District Council	The emphasis should be on achieving 'no polluting energy' and that this is inconsistent with Chapter 5, Water Quality Draft NRRP, which seeks to prevent hydro electric generation on Canterbury rivers.
<b>405 (point 3)</b>	Timaru District Council	There needs to be more detailed analysis in respect of the costs or benefits (of the Proposed Plan?). No decision requested.
<b>411</b>	NZMP Ltd	Undertake a review of the means for assessing individual discharges to air and incorporate by way of a Plan change.
<b>413</b>	A. Gillanders	Supports the submission made by Federated Farmers of NZ - submission 347.
<b>416</b>	NZMP	Undertake a review of the means for assessing individual discharges to air and incorporate by way of a Plan change. Make other changes necessary to give effect to this submission.
<b>420</b>	P. Allan	Impartially analyse all submissions on the air Quality Chapter.
<b>423 (point 1)</b>	P. Sintes	Reassess air inventory calculations using real data from actual 'in situ' tests on solid fuel burning devices.
<b>423 (point 2)</b>	P. Sintes	Clarify which Report U01/91 is valid, as there are two reports with different data and information.
<b>424</b>	S. Lukey - Kennedys Bush Road Neighbourhood Association	The focus of attention should be on areas where the pollution in Christchurch is at its greatest.

<b>425</b>	B. Anderson - Mild Greens Initiative	Ecan should assist bioSAFE develop a concept with a clear deliverable strategy, structure and implementation.
<b>427</b>	BP Oil New Zealand Ltd, Shell NZ Ltd, Mobil Oil NZ Ltd & Caltex NZ Ltd	Delete all references to land and water discharges in the Air Chapter. Make any consequential amendments to the plan where necessary.
<b>428</b>	Transpower NZ Ltd	Delete all references to land and water discharges in the Air Chapter. Make any consequential amendments to the plan where necessary.
<b>429 (point 1)</b>	Selwyn District Council	Identify urban areas in Canterbury by population size (or projected population growth over the next 10 to 15 years), geographic and climatic variables, and discharges from domestic, transport and industrial sources, which have ambient air quality issues now or in the next 10 to 15 years. Apply provisions in the plan to manage ambient air quality issues in these areas only. Make any other consequential amendments as necessary.
<b>429 (point 2)</b>	Selwyn District Council	Add a new issue, objectives, policies and rules to address the effect of discharge of aerosols from the spraying of effluent and treated sewage. Make any other consequential amendments as necessary.
<b>433</b>	Rockgas Ltd	Many of the provisions in the Plan are not effects based and are therefore contrary to sound resource management planning and practice. No decision requested.
<b>434 (point 1)</b>	Mainland Poultry Ltd	Withdraw Chapter 3, and notify new provisions which are necessary to achieve the purpose of the RMA, and based on sound resource management techniques and are supported by a robust and comprehensive Section 32 analysis. Make any other additional or consequential amendments as necessary.
<b>434 (point 2)</b>	Mainland Poultry Ltd	Submitter is concerned with the wording of some of the Objectives and Policies of Chapter 3; submits they are unreasonable and inflexible and are not focussed on environmental outcomes, so that it may be difficult to grant any consent assessed against them. No decision requested.

<b>435</b> <b>(point 1)</b>	Tegel Foods Ltd	Withdraw Chapter 3, and notify new provisions which are necessary to achieve the purpose of the RMA, and based on sound resource management techniques and are supported by a robust and comprehensive Section 32 analysis. Make any other additional or consequential amendments as necessary.
<b>435</b> <b>(point 2)</b>	Tegel Foods Ltd	Submitter is concerned with the wording of some of the Objectives and Policies of Chapter 3, being unreasonable and inflexible and are not focussed on environmental outcomes, so that it may be difficult to grant any consent assessed against them. No decision requested.
<b>436</b>	Coal Association Of New Zealand	Supports Ecan's emissions inventory and analysis.
<b>445</b>	G. & F. Harman	Rather than commissioning a research report, the councillors should find out about matters such as alternative heating, the economic impact of phasing out open fires and wood burners, and talk to the elderly, and low/average income families and show them how they can afford alternative heating.
<b>465</b>	K. Durie	Clean up some other emission(s).
<b>468</b>	J.A. Jarmey	Consider in the Plan the prospect of power shortages and declining Maui gas reserves.
<b>886</b>	L.G. Rennie	Revisit the air plan.
<b>893</b> <b>(point 1)</b>	L. Reid	Provide information on the number of demolitions of domestic homes in Christchurch over the last five years, and ascertain whether this trend will continue. Also provide information on the number of open fires in action compared with five years ago.
<b>893</b> <b>(point 2)</b>	L. Reid	Provide figures on the number of complaints of wet wood delivered by merchants versus the number of prosecutions over the last five years. How much wet wood is being burned? Is everyone being educated enough regarding pollution caused by wet wood?
<b>893</b> <b>(point 3)</b>	L. Reid	Provide figures (percentage) on the amount of smog produced by domestic fires versus commercial operations and vehicle emissions, and are certain parts of Christchurch worse than other areas?

<b>893 (point 4)</b>	L. Reid	Have subsidised advertising on still dry nights, reminding people not to burn if possible.
<b>894</b>	P.J. & N. Parker	Revisit the proposed Plan.
<b>895</b>	A. McNaught	Provide information on the air testing procedures.
<b>909</b>	P.W. Moller	Endeavours to reduce air pollution need to be balanced against other matters.
<b>981</b>	P.E. Millward	Investigate the smog of Los Angeles.
<b>1101</b>	N. Clark	Would like to see an immediate start on the proposal to clean up the air.
<b>2059</b>	G. Goodwin	Supports Ecan's efforts to clean Christchurch's and Canterbury's air.
<b>F13</b>	P. Pink	Support submission 13.
<b>F216</b>	Hurunui District Council	Oppose submission 435 (point 1).
<b>F217</b>	M. Day	Support submission 429.
<b>F341</b>	Heinz Wattie's Australasia Pty Ltd	Support submission 391 (point 2).
<b>F342</b>	Canterbury Breweries Ltd	Support submission 391 (point 2).
<b>F347 (point 1)</b>	Federated Farmers of New Zealand	Support submission 429 (point 1).
<b>F347 (point 2)</b>	Federated Farmers of New Zealand	Support submission 429 (point 2).
<b>F365</b>	Meridian Energy Limited	Support in part submission 405 (point 2).
<b>F401 (point 1)</b>	NZ Vegetable & Potato Growers Fed. Inc. and NZ Fruitgrowers' Fed Inc.	Oppose submission 153.
<b>F401 (point 2)</b>	NZ Vegetable & Potato Growers Fed. Inc. and NZ Fruitgrowers' Fed Inc.	Support submission 201.
<b>F401 (point 3)</b>	NZ Vegetable & Potato Growers Fed. Inc. and NZ Fruitgrowers' Fed Inc.	Oppose submission 388 (point 1).

<b>F401 (point 4)</b>	NZ Vegetable & Potato Growers Fed. Inc. and NZ Fruitgrowers' Fed Inc.	Support submission 391 (point 2).
<b>F429</b>	Selwyn District Council	Support submission 147 above.
<b>F435 (point 1)</b>	Tegel Foods Ltd	Oppose in part submission 388 (point 3).
<b>F435 (point 2)</b>	Tegel Foods Ltd	Support submission 391 (point 2).

### **Submission Clarification**

#### Submission 136(point 1)

The submission is considered below in the context of section '3.7 Air quality monitoring and review' ## 03-184-01-00.

#### Submission 351

This submission relates to Policy AQL2(b)(ii). It is considered in that context ## 03-010 37 00 - 03-011 13 00.

#### Submission 386 (points 1 & 2)

These submissions were made specifically in relation to chapters 1 and 2 respectively, but expressed in such a way that they applied to other chapters in the NRRP. It has been assumed they also apply to Chapter 3.

#### Submission 403

The Board of Airline Representatives of New Zealand notes that discharges into air from aircraft (as moveable sources) may be covered by section 15(2) of the RMA. It submits that when moveable sources such as aircraft are located on industrial or trade premises, discharges from those sources should not be considered to be discharges from the industrial or trade premises. The submitter acknowledges that some may contend that section 15(1) of the RMA could apply to moveable sources when they are located for any period of time on industrial or trade premises. If moveable sources are seen as falling within section 15(2), the submitter notes that they may be required to obtain resource consent in the event that a rule is included in a regional plan that specifies that air emissions from moveable sources require consents and are no longer permitted activities.

Submission 405 (points 1, 2 & 3)

These submission points are under the heading 'general' in the submission. No specific relief is sought.

Submission 433

The submission made is under the heading 'general submission'.

**Consideration**

**Introduction**

The Commissioners have adopted the approach taken by the reporting officers and considered the submissions under the following general headings:

1. Process,
2. Withdrawal or review of Chapter 3,
3. Scope of Chapter 3,
4. Alternative fuel sources,
5. Presentation of Chapter 3,
6. New provisions,
7. Spatial application of Chapter 3,
8. Existing provisions in Chapter 3,
9. Information and advocacy,
10. Monitoring and enforcement, and
11. Support for Chapter 3.

**Process**

Submission 51 (point 2)

Submitter 51 suggests that information which was attached to the submission should be provided to Environment Canterbury's councillors. This information focused on the benefits of insulation and solar energy storage in buildings. The information was provided to support the submitter's concerns about Chapter 3 and the targeting of subsidies.

The Commissioners were advised that all submissions were made available to councillors. This means that submission 51 and the material which was attached to it, has been provided to councillors.

No change is required to Chapter 3 in response to this submission, and it is recommended that it be rejected.

#### Submission 365

Submitter 365 seeks that the submission period for Chapter 3 should be extended to overlap with that for other chapters of the NRRP.

This is a matter of process and for Environment Canterbury to decide. It has been considered above - see submissions 42, and 338 (point 2), 370, 371 and further submission F 365 (points 2 and 3) and F 401 (point 1), all at ## 00-000-00-00. The Commissioners adopt the reasoning given in relation to those submissions. No change to Chapter 3 is recommended and it is recommended that the submission is rejected.

#### Withdrawal or review of Chapter 3

##### Submissions 434 (points 1 and 2), 435 (points 1 and 2), F216

Submitters 434 and 435 (opposed by submitter F216) seek that Chapter 3 should be withdrawn and re-notified in a form that meets Environment Canterbury's obligations under the RMA and to the satisfaction of the submitter.

The submissions are unhelpful. They do not identify how the regional council has failed to meet its obligations under the Act. Rather, criticism is levelled and change is sought without identifying which provisions should be changed or how. The formulation of the plan is the responsibility of Environment Canterbury. It has certain statutory responsibilities and it has sought to fulfill them. The Commissioners are not aware of any particular failure by the Council to meet its obligations under the Act.

No change in response to these submissions is recommended, and, with the exception of F216, it is recommended that they be rejected.

##### Submissions 8, 411, 416

These submitters seek that Environment Canterbury should undertake a review of the means for assessing individual discharges to air and incorporate any changes required to Chapter 3 by way of a plan change.

If the Commissioners understand the concern correctly, the issue raised by the submitters is that they consider that the Regional Ambient Air Quality Targets contained in Chapter 3 should not be applied to both urban and rural situations; rather they should differentiate between localised 'hotspots' and more widely dispersed impacts. These concerns are considered below ## 03-026-33-00, 03-026-34-00, and 03-026-37-008.

Moreover the submitters seek a plan change. The relief sought is not directly open for the Commissioners. Any overall review of the provisions in Chapter 3 outside the submission process is for Environment Canterbury. In other contexts the Commissions have recommended that Environment Canterbury should consider preparing a variation or variations to Chapter 3. No doubt it will consider those recommendations. That is as far as the Commissioners can go in this regard.

No change is required, and it is recommended that the submissions are rejected.

#### Submission 465

This submitter sought that other emissions should be cleaned up as opposed to wood burners. No specific changes to Chapter 3 were identified.

Chapter 3 is targeted primarily at those sources of PM<sub>10</sub> emissions which have been identified as being the main contributors to Canterbury's (and in particular Christchurch's) winter PM<sub>10</sub> problem – principally small scale burners and solid fuel burners (which include wood burners) in domestic homes. The research undertaken suggests that if these burners are not controlled, little progress can be made to address the PM<sub>10</sub> issue. Other sources of PM<sub>10</sub> are also addressed in Chapter 3 such as industry, motor vehicles and outdoor burning.

No change is required and it is recommended that the submission is rejected.

#### Submission 886

This submitter seeks that Chapter 3 should be revisited. No specific changes were identified in the submission.

It is understood that the submitter is concerned that the burning of wood, being a 'sustainable' fuel, should be allowed, and that motor vehicles should be identified as the primary source of Christchurch's air pollution problem. As noted immediately above in relation to submission 465, Chapter 3 targets those sources of PM<sub>10</sub> emissions which have been identified as being the main contributors to the winter PM<sub>10</sub> problem. Research indicates that motor vehicles do not contribute significantly to the PM<sub>10</sub> problem. This notwithstanding, the principal sources of PM<sub>10</sub> emissions are addressed in Chapter 3 including industry, motor vehicles and outdoor burning.

No change is required and it is recommended that the submission is rejected.

#### Submission 894

This submitter also seeks that Plan should be revisited. Again, no specific changes were identified in the submission, but a series of questions were posed in relation to electricity

supply and cost, and the availability of financial assistance to change domestic heating sources.

The issue of electricity availability has been evaluated elsewhere - see, eg in relation to submissions 6, 59, and 88, all at ## 03-000-00-00. That consideration is relevant and it is adopted. Environment Canterbury has a financial assistance programme to help households change their primary heating source in accordance with Policy AQL18 - namely the Clean Heat Project. That has also been commented on elsewhere.

No change is recommended to Chapter 3, and it is recommended that the submission is rejected.

### **Scope of Chapter 3**

#### **Submissions 391 (point 1) and 433**

Submitter 391 seeks that Chapter 3 adopt an effects based approach. Submitter 433 opposes Chapter 3 for similar reasons. No specific changes were sought.

Chapter 3 has been prepared to assist Environment Canterbury in carrying out its functions in relation to the discharge of contaminants into air and in order to achieve the purpose of the RMA. Insofar as the Commissioners are aware there is no legal or jurisdictional bar in relation to the manner in which Chapter 3 has been prepared. Significant research and investigation was undertaken in regard to the plan, and Environment Canterbury was satisfied that it was appropriate. The plan is “effects based” and it is difficult to see how a more “effects based” plan would be preferable. No change is recommended in response to these submissions, and it is recommended that they are rejected.

#### **Submissions 427 and 428**

Submitters 427 and 428 seek that all references to land and water discharges should be deleted from Chapter 3.

There are a number of references to discharges to, or the contamination of, water in Chapter 3, including:

- (a) 3.1.2, Localised air quality issues, in relation to agrichemical sprays (p 3-2);
- (b) Objective AQL1, Objective for localised air quality (g) (p 3-7);
- (c) Policy AQL7: Avoid agrichemical spray drift, and the associated explanation and principal reasons (pp 3-21 to 3-22);
- (d) Rule AQL51, Water blasting – permitted activity, conditions 1 and 3 (p 1-103);
- (e) Rule AQL64, Application of pig effluent to land on the same property from where the pig effluent originates, conditions 1, 1(a)(iv), b(iv), and c(iv) (p 3-114);

- (f) Rule AQL65, Application of effluent to land other than provided for in Rules AQL63 or AQL64 – permitted activity, condition 2, and the associated explanation and principal reasons (pp 3-115 and 3-172);
- (g) Rule AQL70, Ground-based application of agrichemicals using hand-held application techniques – permitted activity, activity and conditions 7, 8 and 9 (pp 3-119 to 3-120);
- (h) Rule AQL71, Ground-based application of agrichemicals using techniques other than hand-held application – permitted activity, activity and conditions 7, 8, 9 and 10, and the associated explanation and principal reasons (pp 3-121, 3-123, and 3-175 and 176);
- (i) Rule AQL72, Aerial application of agrichemicals – permitted activity, activity and conditions 6, 7 and 8, and the associated explanation and principal reasons (p 3-126, 3-127 and 3-177 and 178);
- (j) Rule AQL73, Application of agrichemicals not identified in Rules AQL70 to AQL72 - discretionary activity;
- (k) 3.5, Explanation and principal reasons for methods, 3.5.9.6 Regional rules for discharges of contaminants into air from waste management processes (p 3-170);
- (l) 3.5, Explanation and principal reasons for methods', 3.5.9.7 Regional rules for the discharge of agrichemicals; paragraph 8 (p 3-174), paragraph 1 referring to Rule AQL71, and paragraph 1 referring to Rule AQL72; and
- (m) 3.6, Environmental results anticipated, 'Environmental results anticipated AQL11 (p 3-181).

There are a number of references to discharges to land in Chapter 3, including:

- (a) Policy AQL7, Avoid agrichemical spray drift, explanation and principal reasons (pp 3-21 to 3-22);
- (b) Rule AQL64, Application of pig effluent to land on the same property from where the pig effluent originate (pp 3-113 to 3-114);
- (c) Rule AQL65, Application of effluent to land other than provided for in Rules AQL63 or AQL64 – permitted activity (p 3-115);
- (d) Rule AQL70, Ground-based application of agrichemicals using hand-held application techniques – permitted activity, activity and permitted activity condition 7 (pp 3-119 to 3-120);
- (e) Rule AQL71, Ground-based application of agrichemicals using techniques other than hand-held application – permitted activity, activity and conditions 7 and 8, and the associated explanation and principal reasons (pp 3-121, 3-123 and 3-175 and 176);
- (f) Rule AQL72, Aerial application of agrichemicals – permitted activity, activity and permitted activity conditions 6 and 7, and the associated explanation and principal reasons (pp 3-126 to 3-127 and 3-177 and 178);
- (g) Rule AQL73, Application of agrichemicals not identified in Rules AQL70 to AQL72;
- (h) 3.5 Explanation and principal reasons for methods, 3.5.9.7 Regional rules for the discharge of agrichemicals; paragraph 8 (p 3-174);
- (i) 3.6 Environmental results anticipated, Environmental result anticipated, AQL11 (p 3-181).

Chapter 3 deals with air quality. The purpose of Chapter 3 is to assist Environment Canterbury to carry out its functions contained in section 30(1)(f) of the RMA (the control of discharges of contaminants into air). Its principal concern is the discharge of

contaminants into air. This is reflected in ‘3.1 Introduction’, and the wording of Issue AQL1 (“...*caused by discharges of contaminants to air...*”), Objective AQL1 (“...*Localised contaminant discharges into air ...*”), Issue AQL2, Objective AQL2 and Objective AQL3 (“...*ambient air quality...*”). There are separate chapters dealing with water quality and quantity and with discharges to land.

The Commissioners accept that Chapter 3 should not in general deal with discharges into water or onto land. It does not follow however that the provisions of Chapter 3 should avoid all reference to land or water. Discharges to air may also contaminate land or water. Adverse effects on natural resources such as water and land can be caused by the settling of particles discharged to air. Environment Canterbury can in Chapter 3 properly seek to control the adverse effects of discharges into air. The Commissioners however accept that a number of amendments are necessary to reflect what in their view should be the proper focus of Chapter 3.

With respect to the identified provisions various recommendations are made:

- (a) 3.1.2, Localised air quality issues in relation to agrichemical sprays – no change;
- (b) Objective AQL1, Objective for localised air quality (g) – no change;
- (c) Policy AQL7, Avoid agrichemical spray drift and the associated explanation and principal reasons – amend the wording of Policy AQL7(a);
- (d) Rule AQL51, Water blasting – permitted activity, conditions 1 and 3 – amend permitted activity conditions 1 and 3;
- (e) Rule AQL64, Application of pig effluent to land on the same property from where the pig effluent originates, conditions 1, 1(a)(iv), b(iv), and c(iv) – the Commissioners are recommending elsewhere that this rule be deleted so no change is recommended;
- (f) Rule AQL65, Application of effluent to land other than provided for in Rules AQL63 or AQL64 – permitted activity, condition 2, and the associated explanation and principal reasons – no change;
- (g) Rule AQL70, Ground-based application of agrichemicals using hand-held application techniques – permitted activity, activity and conditions 7, 8 and 9 – amend activity and delete permitted activity conditions 7, 8 and 9;
- (h) Rule AQL71, Ground-based application of agrichemicals using techniques other than hand-held application – permitted activity, activity and conditions 7, 8, 9 and 10, and the associated explanation and principal reasons - amend activity and delete permitted activity conditions 7, 8, 9 and 10;
- (i) Rule AQL72, Aerial application of agrichemicals – permitted activity, activity and conditions 6, 7 and 8, and the associated explanation and principal reasons - amend activity and delete permitted activity conditions 6, 7 and 8;
- (j) Rule AQL73, Application of agrichemicals not identified in Rules AQL70 to AQL72 - discretionary activity - amend the wording;
- (k) 3.5, Explanation and principal reasons for methods, 3.5.9.6, Regional rules for discharges of contaminants into air from waste management processes – no change;
- (l) 3.5, Explanation and principal reasons for methods, 3.5.9.7, Regional rules for the discharge of agrichemicals; paragraph 8 and paragraph 1 referring to Rule AQL71 and paragraph 1 referring to Rule AQL72 - delete; and
- (m) 3.6, Environmental results anticipated, Environmental result anticipated AQL11 – no change.

It is recommended that the submissions are accepted in part.

### **Consideration of Chapter 3 provisions**

#### **Submission 405(point 3)**

Submitter 405 sought a more detailed analysis of the costs and benefits associated with Chapter 3. The submitter did however not identify any deficiencies in the analysis undertaken and set out in the Section 32 Report. Further, any changes sought to Chapter 3 were not identified.

An evaluation of the costs and benefits of Chapter 3 was undertaken. It is set out in part 35 of the section 32 report especially at pp 269 and following. In the absence of detailed criticisms, it is difficult to take this submission any further. No change is recommended to Chapter 3 in response to this submission, and it is recommended that it is rejected.

#### **Submissions 49, 71 (point 2), 81(points 1 and 2), 134, 136(point 2), 162, 164, 190, 231, 423(points 1 and 2), and 981**

These submitters, either individually or in combination, query or challenge the science that underpins Chapter 3. The Commissioners heard from a number of the submitters in person.

The Commissioners have briefly summarised above in the Overview of Chapter 3 the research undertaken and relied upon to support Chapter 3: It is a comprehensive body of material - focusing in large part on PM<sub>10</sub> emissions. The national Ambient Quality Guidelines refer to the same health effects arising from exposure to PM<sub>10</sub>. Further the Resource Management (National Environmental Standards Relating to Certain Air Pollutants, Dioxins and other Toxins) Regulations 2004 proceed on the same basis.

The Commissioners accept that there is room for debate in relation to many of the issues, but the reality is that the public authorities responsible for the major instruments under the Resource Management Act are heading in the same direction, and for substantially the same reasons. The passing of the NES leaves Environment Canterbury with little or no room to manoeuvre. No change is required and it is recommended that the submissions are rejected.

#### **Submission 347**

Submitter 347 seeks that all issues, objectives, policies and methods should relate to specific situations and be scientifically measurable and justifiable, otherwise they should be deleted. No specific changes to Chapter 3 were sought.

As noted in the overview of Chapter 3 Environment Canterbury has commissioned and undertaken significant research. It has undertaken a detailed section 32 analysis. If the

submitter has a different view in relation to individual provisions, it should have specifically identified those provisions and the changes sought. Without this detail it is impossible to take this submission any further. No change is recommended in response to this submission, and it is recommended that it is rejected.

#### Submission 445

Submitter 445 sought that further community-based work should be done instead of commissioning research. No change to Chapter 3 was sought.

The issue, if understood correctly, is that families on low and average incomes will not be able to afford to transfer to alternative heating systems. Chapter 3 contains a mix of measures intended to phase out of appliances discharging high rates of particulates. It is supported by Environment Canterbury's 'Clean Heat' Project developed in accordance with Policy AQL18. Research was necessary before preparing Chapter 3, and the Commissioners doubt that community based work of itself can solve PM<sub>10</sub> problem. No change is required, and it is recommended that the submission is rejected.

#### Submission 420

Submitter 420 sought that the submissions on Chapter 3 should be impartially analysed.

The task of hearing the submissions and making recommendations to Environment Canterbury is that of the Commissioners. They are independent of Ecan. No change is required to Chapter 3, and it is recommended that the submission is rejected.

#### Submission 436

Submitter 436 supports Environment Canterbury's inventory and analysis as conclusive evidence that most of Christchurch's air pollution problem is caused by household solid fuel burned with high particulate emissions. No specific relief was sought. No change is required, and it is recommended that the submission be accepted.

#### Submission 893(point 1)

Submitter 893 sought that information should be provided on the demolition of domestic homes over the last five years and on the number of open fires in use compared with five years ago.

As part of the development of Environment Canterbury's 2002 Christchurch inventory of emissions to air (Report No. R04/03) home heating activity data was gathered by household survey. Tables 3.20 and 3.25 (pg. 54 and 55 and 69-70 of the Report) provided an analysis of changes in the use of various domestic home heating types in

Christchurch for the period 1996 to 2002. In inner Christchurch, the use of open fires decreased by 43% during this period, with an associated decrease in emissions from that source. In Christchurch, there has been a gradual increase in the number of households. It is probable that some older homes have been demolished. It can be expected that replacement homes will have cleaner home heating systems. There does not seem to be up to date detail of how many homes have been demolished, but the Commissioners do not consider that this is necessary. No change is required and it is recommended that the submission is rejected.

#### Submission 893(point 2)

Submitter 893 sought information on the number of complaints about wet wood versus the number of prosecutions. No change was sought to Chapter 3.

Sections 15.2.2 (pages 63 to 66) and 33.10.1 (pgs 225 to 227) of the Section 32 Report set out information on dry and wet wood. Between 1 July 2001 and 30 June 2002, 39 wet-wood incidents were registered with Environment Canterbury's pollution hotline (see Environment Canterbury Annual environmental incidents and enforcement report: for the period 1 July 2001 – 30 June 2002 Environment Canterbury R03/10, pg. 10). A further 38 wet-wood incidents were registered with the pollution hotline between 1 July 2002 and 30 June 2003, (see Environment Canterbury Annual environmental incidents and enforcement report: for the period 1 July 2003 – 30 June 2004 Environment Canterbury R03/37, pg. 8). It is not clear how many prosecutions were undertaken, but the Commissioners doubt if this information would assist. No change is required and it is recommended that the submission is rejected.

#### Submission 893(point 3)

Submitter 893 sought figures on the contribution to Christchurch's air pollution problem made by domestic fires versus commercial operations and vehicle emissions, and posed the question whether some parts of Christchurch have worse pollution than others.

This information is set out in Section 33 of Section 32 Report on Chapter 3 (see pages 203 to 220). Some of this information has been updated through Environment Canterbury's 2002 Christchurch inventory of emissions to air (Report R04/03). With respect to PM<sub>10</sub>, domestic home heating emissions contribute approximately 82%, motor vehicles 9% and industrial and commercial activities 9% (pg. 3). When concentrations of PM<sub>10</sub> are measured in ambient air, domestic home heating is found to contribute approximately 90% of PM<sub>10</sub> (pg. 219 of Section 32 Report). This topic is also covered above in Part F - Chapter 3 Overview above. No change is required, and it is recommended that the submission is rejected.

### Submission 895

Submitter 895 sought that information should be provided on air testing procedures. No change was sought to Chapter 3.

Environment Canterbury's 2002 Section 32 Report, and the reports referenced within it, provide information on air testing. This topic is also covered in Part F - Chapter 3 Overview above. No change is required, and it is recommended that the submission is rejected.

### Submission 120

This submitter asserted that there is an unnecessarily harsh impact on the domestic sector as compared with the commercial and industrial sectors.

As noted above - Chapter 3 Overview - research suggests that the domestic sector is the most significant contributor to PM<sub>10</sub> levels - certainly in Christchurch. As a consequence, it is that sector which must be subject to controls if air pollution is to be minimised.

The submitter did not seek any particular changes to Chapter 3, and in the commissioners' view, none are required. It is recommended that the submission be rejected.

## **Alternative Fuel Sources**

### Submission 106

Submitter 106 promotes sorting out and regulating the electricity supply authorities before phasing out and banning solid fuel heaters. The concern expressed relates to both the price of electricity and the reliability of supply.

The control of the electricity industry is with Central Government and the various line and operating companies. Environment Canterbury should be concerned that home heating alternatives are available. It has considered that issue in some detail. Chapter 3 of the NRRP does not preclude wood burners from being used for home heating in existing homes. It places controls on the fuel burnt and emissions from appliances. This effectively reduces the range of makes and models of solid fuel burners that can be installed into existing homes. The only homes that are excluded from burning solid fuel in any device are those that were built subject to a building consent issued after 31 December 2002, or those that did not have a solid fuel burning device installed as at 31 December 2002. There are home heating choices available other than electricity. Further, while the electricity industry is subject to considerable comment at present, Central Government is moving to ensure that both continuity of supply and price are managed from a national perspective. The Commissioners also received various

assurances from Orion in this regard. No change to Chapter 3 is required and it is recommended that the submission is rejected.

#### Submission 468

Submitter 468 seeks that Environment Canterbury consider the prospect of power shortages and declining Maui gas reserves.

These matters were considered in the development of Chapter 3. A report was obtained from Orion New Zealand Limited in November 2001 (The effect of Air Pollution Measures on Orion Infrastructure). Transpower did not consider that any increase in load will advance the constraints or issues that must in any event be faced by Christchurch in the future. Investment in sub-transmission, 11kv and low voltage assets will be required as the electrical load grows. The authorities are aware of that and the Commissioners understand from Orion that planning is underway.

With respect to gas, advice received was that LPG will be available into the immediate future. The source of that gas may be different, with consequent price implications. That however remains to be seen. No change is required and it is recommended that the submission is rejected.

#### Submission 425

Submitter 425 seeks that Environment Canterbury should assist 'bioSAFE'.

'BioSAFE' is understood to refer to fuel derived from biomass. Chapter 3 focuses on the adverse effects of the discharge of contaminants to air, not the production of energy. Whether the Council should assist BioSAFE is outside the scope of Chapter 3. No change is required and it is recommended that the submission is rejected.

#### Submission 405(point 1), 71 (point 1)

Submitter 405 seeks that emphasis should be placed on achieving renewable non-polluting energy. No specific changes were sought. Submitter 71 seeks that Ecan should "do its homework" on all areas of fuel supply.

Chapter 3 focuses on Environment Canterbury's function of controlling the discharge of contaminants to air, not the production of energy. While the aim is laudable, it of itself does not overcome the immediate air pollution problems facing Timaru, Christchurch and other areas in Canterbury. Ecan has looked at all practical fuel types. No change is required and it is recommended that the submissions are rejected.

### Submission 405(point 2), F365

Submitter 405, supported in part by submitter F365, seeks that emphasis should be placed on 'no polluting energy', and suggests an inconsistency with the Draft chapter 5: Water Quality. No specific change to Chapter 3 was sought.

Again, the aim is laudable, but again it will not assist with current air pollution problems. Any issue the submitter has with Chapter 5 can be addressed through submissions on that chapter. No change is required and it is recommended that the submissions are rejected.

### **Presentation of Chapter 3**

#### Submission 64

Submitter 64 seeks that Chapter 3 should be prepared again in a more lucid manner and that another period for public submissions should be provided. The submitter is also concerned with the numbering system used in Chapter 3 and in particular with the fact that objectives, policies, methods and rules may have the same number.

The Commissioners consider that the chapter is tolerably lucid and they doubt that its lucidity is affected by the numbering system used. The numbering system allows for identification of each provision by specifying the provision type in front of the number – e.g. Objective AQL1, Policy AQL1, Method AQL1 and Rule AQL1. Re-notification of Chapter 3 is not considered necessary. No change to Chapter 3 is required and it is recommended that the submission is rejected.

#### Submission 287 (point 1)

Submitter 287 seeks that the “verbage” (sic) in Chapter 3 should be reduced and that submissions should be encouraged. No detailed changes were sought.

Chapter 3 seeks to fulfil Environment Canterbury's obligations under the RMA. Necessarily the topic is complicated and a strict grammarian may well take issue with some of the wording used. Nevertheless without detail being provided, it is difficult to identify the complaint. Further, to make wording changes which have not been specified in the submission, so that further submitters could not consider what is proposed, is not appropriate. No change is required and it is recommended that the submission is rejected.

### Submission 112

Submitter 112 seeks that Chapter 3 should be reordered to place the rules immediately after the policy, method and explanation to which they relate.

The issue raised is that of style of presentation – there is no right or wrong answer. The ‘regional rules’ method under each policy specifies the rules that implement the policy. Rules can relate to more than one policy. No change is required and it is recommended that the submission is rejected.

### Submission 52

Submitter 52 sought that objectives and policies should be cross-referenced to the relevant rules and visa versa.

The links between issues, objectives and policies are set out in “Figure 3-1: The structure of air quality issue resolution in Canterbury” (p 3-5). Individual rules are linked to each policy through the method section and they are set out in each policy, under the heading ‘Regional rules’. While this linkage could be more explicit, in the Commissioners’ view there is sufficient information in Chapter 3 to trace the link between issues, objectives, policies and rules. Further cross-referencing while desirable is not required. The Commissioners have already noted that Environment Canterbury may consider a User’s Guide in the future. See submission 378 (point 2), 401 (point 1) ## 00-000-00-00. No change is required and it is recommended that the submission is rejected.

### Submission 379

Submitter 379 seeks that definitions should either be included in footnotes or listed separately in each chapter.

The Commissioners can see no compelling reason to include footnotes containing definitions within each Chapter. Indeed they consider that this would be cumbersome. They have recommended that the definitions of terms in Chapter 1 apply only to Chapters 1, 2 and 3 see above ## 00-000-00-00. No change is recommended in response to this submission, and it is recommended that it is rejected.

### Submission 386(point 1)

Submitter 386 seeks that macrons should be added to Maori words found in Chapter 3 (including the maps). The Commissioners have dealt with this above - they do not repeat their views - ## 00-000-00-00 - but rather adopt the same. It is recommended that the submission is accepted.

### Submission 386(point 2)

Submitter 386 seeks that cross references to Chapter 2 should be added to Chapter 3.

Cross-referencing is not used between chapters in the Proposed NRRP. In part, this is no doubt because of the way in which the different chapters have evolved. The Commissioners have already considered this issue - see submission 378 (point 2) at 401 (point 1) above - ## 00-000-00-00. They adopt their reasoning given in that context. No change is recommended, and it is recommended that the submission is rejected.

### **New provisions**

### Submissions 391(point 2) F341, F342, F401(point 4), F435(point 2)

Submitter 391, supported by the further submitters, sought that an additional issue and objective, with policies, rules and alternative methods should be included in Chapter 3 to ensure that adverse effects associated with reverse sensitivity are adequately managed. The wording sought was not specified.

'Reverse sensitivity' effects can occur when a sensitive land use locates in the vicinity of an existing activity potentially constraining that existing activity. In the context of air quality, reverse sensitivity effects will generally relate to local air quality, and as such they will fall under Issue AQL1 and Objective AQL1. Reverse sensitivity' effects are specifically addressed in Policies AQL5 (odour), AQL6 (dust) and AQL7 (agricultural). Each of the policies noted above has a related method providing for direction from territorial authorities. This is because reverse sensitivity effects arise primarily in the context of land use controls. It is not clear if the submitters consider that matters other than dust, odour and agricultural should be subject to a reverse sensitivity policy. If so the Commissioners doubt whether it is possible for Environment Canterbury to put in place land use controls in that regard. No change is recommended and it is recommended that the submissions are rejected.

### Submissions 429(point 2), F217, F347(point 2)

Submitter 429, supported by the further submitters, sought a new issue, objective, policy and rules to address the effect of the discharge of aerosols from the spraying of effluent and treated sewage. No specific changes to Chapter 3 were identified in the submission.

Policy AQL8 (Control of all other discharges) and Rules AQL63 to AQL69 are relevant. The adverse effects of particles that cross property boundaries are controlled. It is not clear whether the submitters appreciated this. Moreover, the submitters failed to identify the specific changes sought by them. The Commissioners are reluctant to add further provisions to the NRRP which have not been taken through the further submission

process. No change is recommended at this time, and it is recommended that the submissions are rejected.

Submission 153, F401(point 1)

Submitter 153, opposed by submitter F401, seeks a new objective (Reduce Heat Waste) and a new policy requiring that the windows of new buildings should be double glazed.

Chapter 3 relates to Environment Canterbury's function of controlling discharges of contaminants into air (s30(1)(f) of the RMA). A requirement to double-glazing does not fit within this function. Rather it is a matter for the Building Act, and perhaps for territorial authorities. The Commissioners have dealt with this above - submissions 167 (point 2) 287, 408 and 424 ## 03-000-00-00. They adopt that reasoning.

The issue of energy efficiency is dealt with in the Canterbury Regional Policy Statement and in Environment Canterbury's Regional Energy Strategy. The link with the Regional Energy Strategy is identified in Method AQL 16(c) of Proposed Chapter 3. Through the Clean Heat Project Environment Canterbury is encouraging the installation of insulation. No change is recommended to Chapter 3, and it is recommended that submission 153 is rejected. Further submission F401 (point 1) can be accepted.

Submission 388(point 1), F401 (point 3)

Submitter 388, opposed by submitter F401, sought that the issue of pollen drift of genetically altered organisms should be included in Chapter 3. The specific issue and working sought was not stated. It is assumed that the issue the submitter is concerned with is the environmental effects of genetic materials.

This matter is dealt with under the Hazardous Substance and New Organism Act 1996 (HSNO). Chapter 3 addresses Environment Canterbury's function in relation to the discharge of contaminants into air (section 30(1)(f) of the RMA). This raises the question of whether pollen drift of genetically modified material is either a contaminant and/or a discharge in terms of the RMA. This is unclear but in any event it is not decisive. If it is either or both, before inserting plan provisions to address the issue, the controls in place under HSNO would need to be recognised, and consideration given to the merits of inserting additional provisions into Chapter 3. This exercise has not been undertaken. Further, given the lack of specificity in the submission, the Commissioners are reluctant to add detailed provisions which have not been exposed to the further submission process. No change is recommended, and it is recommended that the submission is rejected. Further submission F401 (point 3) can be accepted.

Submission 27

Submitter 27 considers that Christchurch's pollution issue comes from motor vehicles.

The Section 32 Report records the technical reports upon which Chapter 3 is based. Those reports compel the conclusion that cars are not significant emitters of PM<sub>10</sub>. Since that time, the 2002 Christchurch inventory of emission to air (Scott A and Gunatilaka M January 2004 Report R904.03) has been published updating some of the earlier work. Its findings were generally consistent with the earlier work. The ambient air issue for Christchurch is PM<sub>10</sub> concentration. The Commissioners accept that while motor vehicles do discharge contaminants to air, the contribution made by motor vehicles to PM<sub>10</sub> concentration is small. No change is recommended, and it is recommended that the submission is rejected.

#### Submission 171

Submitter 171 is concerned that one effect of Chapter 3, as proposed, is to create a ban on the use of natural resources (firewood), at a time when the electricity system cannot cope. No specific changes were sought.

The consideration given to submission 106 above is relevant and it is adopted. Chapter 3 of the NRRP focuses on the effects of discharges to air from the combustion of different fuel sources. It has been prepared in a manner that results in alternative domestic heating options being available, when that will limit the discharge of contaminants to air. Alternate options include the burning of wood in certain circumstances. No change is recommended, and it is recommended that the submission is rejected.

#### Submission 70

Submitter 70 poses the question: should household cleaners, perfume, herbicides, pesticides, hairspray and aftershave be banned? The submitter outlined the effect these items have on her health.

Chapter 3 of the NRRP does include controls on agricultural spray (see Rules AQL70, AQL71, AQL72 and AQL73). The remaining items are household domestic items that do not contribute to local or ambient air quality problems. They are beyond the scope of Chapter 3. No change is recommended, and it is recommended that the submission is rejected.

#### Submission 47

Submitter 47 sought that hedges, trees and other vegetation that shades neighbouring properties should be subject to the same recession plane requirements as buildings.

Recession plane requirements are found in district plans, developed and administered by territorial authorities. This is consistent with the territorial authority's function of controlling the actual and potential effects of the use, development and protection of land (s31(1)(b) of the RMA). Regardless of the merits of the submission, Environment

Canterbury is not able to control shading through Chapter 3. No change is required and it is recommended that the submission is rejected.

#### Submission 75

Submitter 75 sought that Environment Canterbury should support extensive tree planting along the banks of the Styx River to create carbon sinks and to restore natural flora.

The NRRP expressly does not address global air quality (see '3.1.4 Global air quality issues) or natural flora issues. The changes sought are inappropriate in the context of Chapter 3. No change is required to Chapter 3, and it is recommended that the submission is rejected.

### **Spatial application of Chapter 3**

#### Submission 424

Submitter 424 sought that those areas in Christchurch where pollution is greatest should be the initial focus of Chapter 3. The submitter asserts that some residents do not agree that outlying areas contribute sufficiently to Christchurch's air pollution. No specific change to Chapter 3 was sought.

The submitters are concerned specifically with the Kennedy's Bush Road area. That area is in Christchurch Clean Air Zone 1. The implication of the submitter's argument is either that the Kennedy's Bush Road area or indeed other specific areas should be outside the airshed boundary, or that the airshed can be subdivided into different control areas. This matter is specifically addressed in the Section 32 Report (see sections 33.3 and 33.4). Research shows that there is a single airshed for Christchurch (pg. 195). Kennedy's Bush Road and other areas form part of that airshed (pg. 199). The report suggests that there is no proper basis for subdividing the airshed and that even if there was, such division would be impractical for resource management purposes (pg. 195). Further, the report records that studies in Christchurch have shown that emissions from one location can contribute to elevated pollution concentrations in suburbs several kilometres away (pg. 196). The Commissioners accept this research. No change is recommended, and it is recommended that the submission is rejected.

#### Submission 155

Submitter 155 was summarised as seeking that the policies in Chapter 3 should apply only to urban areas. However, upon examination of the submission, the changes sought are narrower than this. The submission states: "[c]learly our intention is that many of the subsequent policies should take account of the density effect and be prefixed by some wording like 'For urban areas....' so..." (emphasis added). To achieve this, it

sought that a new definition of the word ‘urban’ should be inserted into chapter 1: Overview, ‘1.2.2 Definition of terms’ and that Policies ‘AQL1 Prohibit combustion of specified materials’, ‘AQL4 Restriction of outdoor burning’ and ‘AQL5 Avoid odour nuisance’ should be reworded to apply to urban areas as defined.

At present Chapter 3 applies to all of Canterbury. Issue 1 relates to localised air quality issues. The submitter has not sought changes to either Issue AQL1 or Objective AQL1. The issue statement and the policy are not specific to urban areas – numerous activities referred to in Issue AQL1 can occur in rural areas, eg domestic (small-scale burning devices), outdoor burning, waste treatment and disposal, agricultural activities, trade processes and premises, abrasive quarrying, construction, land disturbance, bulk material storage, and agrichemical spray drift.

The adverse effects of the combustion of the materials detailed in Policy AQL1, from outdoor burning covered in Policy AQL4, and from odour nuisance referred to in Policy AQL5, can all create localised adverse effects in a rural environment as well as an urban environment. This is documented in the Section 32 Report - combustion of material (pgs 59-61 and 61 – 68), outdoor burning (pgs 59-61 and 89 – 99), odour (pgs 59-61 and 99-111).

The Commissioners doubt that it is appropriate to distinguish between urban and rural areas as sought by the submitter.

No change is recommended, and it is recommended that the submission is rejected.

#### Submission 429 (point 1), F347 (point 1)

Submitter 429, supported by the further submitter, sought that the ambient air quality provisions in Chapter 3 should be applied to urban areas only. The relevant Chapter 3 provisions were not identified in the submission.

Issue AQL 1 is not relevant as it applies to localised air quality issues only. Issue AQL2 addresses ambient air quality and relates to urban and settled areas of Canterbury. Objective AQL2 is not location-specific, but it follows on from Issue AQL2 and it would seem that it also relates to urban and settled areas of Canterbury. Objective AQL3 relates to Christchurch Clean Air zones 1 and 2, which include both urban land and non-urban land.

From reading the submission, it seems that the submitter’s concern relates to Policy AQL11: Set emission standards for enclosed burners, and the resulting, Rule AQL1: Enclosed burners or open fires anywhere in Canterbury installed before 1 January 2004 – permitted activity. The control of open fires and enclosed burners to achieve ambient air quality outcomes in the rural areas of Canterbury is evaluated as part of the consideration given to Policy AQL11, ## 03-032 16 00). Further consideration is given to the submission in that context. In the present context it is recommended that the submissions are rejected.

### **Existing provisions in Chapter 3**

#### **Submission 909**

Submitter 909 sought that any change in regulations should be consistent with sustainable development. It is understood that the concern relates to renewable resources. No specific changes to Chapter 3 were identified in this part of the submission.

Different fuel sources have different effects on local and ambient air quality. It is the effect on air quality that is the focus of Chapter 3. PM<sub>10</sub> discharges from domestic home heating have been identified as the significant ambient air quality issue to be addressed within Christchurch and in other urban centres. Given this, and the consequent need to reduce the burning of certain fuels, an effect on the use of at least some renewable sources, eg wood, is inevitable. The submitter suggests that efforts to reduce air pollution need to be balanced against other matters. The Commissioners agree but they are significant constraints - not least the NES. If air pollution cannot be reduced the consequences for industry and commerce in particular are serious. No change is recommended, and it is recommended that the submission is rejected.

#### **Submission 201, F401 (point 2)**

Submitter 201, supported by submitter F401, sought that references to the National Ambient Air Quality Guidelines (NAAQG) 1994 should be amended to NAAQG 2002.

Chapter 3 refers to and takes material from different versions of the NAAQG. It also refers to the 'Proposed NAAQG', which the Commissioners were told is a reference to an earlier draft version of the NAAQG 2002. This illustrates the difficulty which can arise when a plan makes reference to an outside document which can be amended or revoked. The problem is further compounded by the Resource Management (National Environmental Standards Relating to Certain Air Pollutant Dioxins and other Toxins) Regulations 2004. The Commissioners have already recommended that the Regional Council needs to consider a variation to Chapter 3 to deal with that document. They make the same recommendation in the present context. Ideally in their view the plan should avoid reference to external documents. No change to Chapter 3 is recommended at present, and it is recommended that the submission be accepted in part.

#### **Submission 388(points 2 and 3), F435 (point 1)**

Submitter 388 supports the use of the terms 'noxious' and 'dangerous', but opposes the use of the terms 'offensive' and 'objectionable' (opposed by further submitter F435).

The concern expressed in the submission relates to the subjectivity of the terms 'offensive' and 'objectionable'. The Commissioners understand the concern but note

that in many respects a determination of what is 'objectionable' and 'offensive' is no less objective than a determination of what is or is not 'noxious' and 'dangerous'. Both sets of terms are subjective. The terms are found in section 17 of the RMA and have the benefit of having been considered in a number of Court decisions. The Commissioners cannot think of better or objectively more certain language that could be used. No change is recommended in response to these submissions; it is recommended that submission 388 (points 2 and 3) is rejected and that further submission F435 (point 1) is accepted.

### Submission 338

Submitter 338 sought that greater use should be made of restricted discretionary activities throughout Chapter 3. In this part of the submission, no specific changes to Chapter 3 are sought, but the submission identifies that any restriction of a discretion should focus on the area of non-compliance with the permitted activity rules.

Consideration must be given to whether discretionary or restricted discretionary status best achieves the purpose of the RMA and implements the objectives and policies of Chapter 3. In the Commissioners' view this judgement cannot be made on a global basis but must be made in the context of the specific rules. The submitter has identified rules in other parts of its submission where it is of the view that restricted discretionary activity status is more appropriate than discretion activity status. These submissions are considered in the context of those specific rules. The Commissioners note that in the context of load shedding, they have recommended that Environment Canterbury should notify a variation to allow load shedding as a restricted discretionary activity - see ## 03-074 02 00. No overall change is recommended in response to this submission point, but it is recommended that this submission should be accepted in part.

### Submission 216

Submitter 216 sought that the technical conditions contained in many of the rules should be reworded, or examples provided, so that they can be more easily understood. No specific changes were sought.

Rules have the legal status of a statutory regulation. Consequently, they tend to be worded in a legalistic way. The Commissioners accept that this does not mean that they should not be clearly worded. However, to make changes when the submitter has not identified specific changes sought in its submission is dangerous. Further submitters may consider that the changes are not appropriate. They have been denied the opportunity to comment. No change is appropriate, and it is recommended that this submission be rejected.

### Submission 146

Submitter 146 sought amendments to the rules and assessment matters to enable consideration to be given to activities that occur close to sensitive living zones. The submitter referred to the rules that are in the Christchurch City Plan.

It is assumed that the submitter is referring to Volume 3: Part 11, 'Section 4 of the City Plan. It dealt with the location of processes which can discharge airborne contaminants. It was deleted by decision of the City Council, decision number 22. The reasons for the decision indicate that the City Council was mindful of the difficulties with the proposed rules and the potential duplication with Chapter 3 of the NRRP. However, the decision also records that the City Council considered that the co-location of activities which discharge contaminants and sensitive activities, should be considered and that a variation to the City Plan should be considered (para 3.5). This approach accords with a number of methods in the Chapter 3, and it reflects the different functions of the two authorities.

Many of the permitted activity rules in Chapter 3 of the NRRP include conditions that seek to protect neighbouring properties from the effects of discharges to air through controls at the property boundary (e.g. the rules relating to small scale fuel burning devices, outdoor burning, industrial and trade premises and processes, intensive farming, waste management processes and agricultural sprays) and/or which specify buffer distances from sensitive activities, including residential areas (e.g. rules for outdoor burning, metal work processes, seed cleaning, pig farming, application of pig effluent and other effluent to land, small scale human sewage treatment and disposal, ofal pits and composting). Non-compliance with these rules typically requires that resource consent be obtained as a discretionary activity.

No change is recommended in response to this submission, and it is recommended that it be rejected.

### Submission 403

Submitter 403 sought that discharges to air from aircraft, whether or not located on industrial or trade premises, should be a permitted activity, with associated changes to Chapter 3.

The submission raises two distinct issues. The first relates to aircraft operating outside industrial or trade premises. The second relates to aircraft situated on or within industrial or trade premises – for example when they are being tested or repaired.

Turning to the first issue, under section 15(2) of the Act, no person may discharge any contaminant into the air from any source, whether moveable or not, in a manner that contravenes a rule in a regional plan or proposed regional plan, unless the discharge is expressly allowed by a resource consent, or regulations, or allowed by section 20A which deals with certain existing lawful activities. It follows that unless there is a rule requiring that resource consent be obtained for discharges from air sources such as aircraft, then the discharge is permitted.

Aircraft are propelled by internal combustion equipment (as the words are defined in Chapter 1). However they will almost invariably be a large scale fuel burning device - again as those words are defined. There is a specific exclusion in the definition for aircraft. Individually, Rules AQL12 to AQL27 deal with the relevant fuel type (kerosene) and internal combustion equipment. The heading '3.3.2 Discharges to air from large scale fuel burning devices', subsequent sub headings, and some of the rule titles, indicate that Rules AQL12 to AQL27 are not intended to apply to aircraft by virtue of the definition of 'large scale fuel burning device'.

The Commissioners agree with the reporting officers that aircraft should be treated consistently with other forms of transport. When aircraft are being used for transportation, the resulting discharge of contaminants to air should be treated as being from a moveable source and there should be no rule requiring that a consent be obtained for the discharge. This is the only practical option. It is unclear whether some of the rules as notified apply to aircraft, or not. In particular, Rules AQL15, AQL16, AQL25 and AQL26 are uncertain. They contain different terms, and contain exclusions, which are worded in different ways. In the Commissioners' view the easiest way to avoid any difficulty is to introduce a new rule into the Rules section of the plan - 3.3.2 - discharges to air from large scale fuel burning devices - to the effect that the discharge of contaminants into air from moveable sources such as aircraft is a permitted activity.

The Commissioners now turn to the second issue – the discharge of contaminants into air from aircraft engines while they are on trade and industrial premises. When aircraft engines are being maintained and repaired, they will be on industrial or trade premises. Any testing of the engines, etc will contribute to the discharge of contaminants into air from those premises. It is the discharges from the industrial premises that are controlled by section 15(1) of the RMA, not the discharge from the aircraft, or their engine. Any discharge of contaminants will require a resource consent by virtue of Rule AQL57 unless Rules AQL41 (metal work processes) or AQL48 (heat, steam or water vapour) or AQL56 (workplace ventilation) apply.

The issue is not the discharge of contaminants from aircraft while they are on industrial or trade premises, but rather the discharge from the premises. Given section 15(1) of the RMA, without a detailed evaluation of the different types of industrial or trade premises or where aircraft maybe maintained or repaired, the Commissioners consider that the rules in Chapter 3 should be retained.

It is recommended that the submission is accepted in part.

#### Submission 147, F429

Submitter 147, supported by submitter F429, sought that rules should be deleted that do not identify an activity with specific and identified adverse effects on the locality on which they are being imposed. Apart from open fires and approved wood burners in rural areas, no specific changes to Chapter 3 were sought.

Environment Canterbury's Section 32 Report evaluated the appropriateness of the rules found in Chapter 3. It also considered the outcome on the airshed, at least in Christchurch. The Commissioners do not think that it is possible to specifically tie effects

to location. No change is recommended in response to this submission point, and it is recommended that the submissions are rejected.

### Submission 30

Submitter 30 sought that highly polluting and non-renewable resources should be phased out first.

No specific changes to Chapter 3 were identified in the submission.

With respect to domestic home heating, Proposed Chapter 3 does phase out high-polluting burning devices – open fires and high emission wood burners. Further, Rule AQL5 prohibits high polluting fuel being burned in small scale fuel burning devices. No change is recommended, and it is recommended that the submission is rejected.

### Submission 1101

Submitter 1101 sought an immediate start on cleaning up Christchurch's air problem.

Chapter 3 must pass through the process required by the RMA. Environment Canterbury's Clean Heat Project is already underway. No change is recommended in response to this submission, and it is recommended that it be rejected.

## **Information and advocacy**

### Submission 13, F13

Submitter 13 sought that air pollution levels should be advertised on the front page in the 'Press'. No change to Chapter 3 was identified in the submission.

The Commissioners were told Environment Canterbury presently provides information to the Press on PM<sub>10</sub> levels during the winter. This is recorded in the weather section in the form of a bar graph. The Commissioners cannot require the Press to put this information on the front page and in any event they doubt that this is necessary. No change is recommended to Chapter 3, and it is recommended that the submission is rejected.

### Submission 92

Submitter 92 sought that there should be more public awareness of UN (*sic*) clean air levels, and that on bad days wood burners be banned.

Environment Canterbury is constantly running (or supporting) media campaigns on air quality. It is promoting air quality importance within Chapter 3. Banning wood burners on bad days was specifically considered in the development of Chapter 3 (see the Section 32 Report pgs. 240 to 241). The view was taken that this was not practical. PM<sub>10</sub> exceedence days are related to weather and emission sources. Predicting weather conditions in advance so as to notify and enforce a ban was simply not practical. Further, requiring people to change modes of home heating with little notice was not considered reasonable.

The submitter did not seek any particular changes to Chapter 3, and in the Commissioners' view, none are required. It is recommended that the submission should be rejected.

#### Submission 136 (point 1)

This submitter sought that Ecan should put in place an effective public relations exercise.

The Commissioners were told that Ecan has had a public relations policy in place for many years, and they were given examples of information disseminated by, and advocacy undertaken. The Commissioners agree with the submitter that an effective public relations exercise will be necessary to "sell" the NRRP and its various provisions. The process is already well underway. No specific changes are required to Chapter 3 as a consequence, but it is recommended that the submission can be accepted in part.

#### Submission 356

Submitter 356 sought that 'smog alerts' should be broadcast to enable people to make decisions on whether to go outdoors or not.

Environment Canterbury ran a trial broadcasting 'high, medium and low smog alerts' on the radio in 2004 (Christchurch: Lite FM, More FM and Classic FM Timaru: Port FM). The effectiveness of this campaign was later assessed as part of the Environment Canterbury General Public Awareness Survey in 2005. No change is required to Chapter 3 to enable this form of information dissemination to occur. No change to Chapter 3 is required and it is recommended that the submission is rejected.

#### Submission 893(point 4)

Submitter 893 sought that subsidised advertising should occur on still dry nights reminding people not to burn.

Voluntary 'free fire days' were subject to trial in Christchurch in 1987 with limited success (see Section 35.3.1.7 of Section 32 Report on Chapter 3 (page 240)). Further, the evaluation above (submissions 92 and 356) is relevant. No change to Chapter 3 is required and it is recommended that the submission is rejected.

## **Monitoring and enforcement**

### **Submission 60**

Submitter 60 sought 'hefty' fines for those in breach of Chapter 3, once it is implemented.

The maximum penalty for offences is set in the RMA. The Court deals with any prosecution brought and the actual amount of any penalty will be determined by the Court if a prosecution succeeds. The changes sought are beyond the reach of Chapter 3. No change is required and it is recommended that the submission is rejected.

### **Submission 94**

Submitter 94 promoted visual monitoring.

As matters in Chapter 3 of the NRRP become more certain, the monitoring of activities will be required. A monitoring strategy for this will be developed. Ultimately that will require the Council to determine how to proceed in this regard. No change is required to Chapter 3, and it is recommended that the submission is rejected.

### **Submission 287(point 2)**

Submitter 287 sought that Environment Canterbury should work more closely with Christchurch City Council.

The implementation of Chapter 3 will require action from both Environment Canterbury and Christchurch City Council. The Commissioners accept that a co-operative working relationship will be required. However, specific changes to Chapter 3 in response to this submission will not affect that relationship. No change is required and it is recommended that the submission is rejected.

## **Support for Chapter 3**

### **Submission 51(point 1), 54**

Submitter 51 supports Chapter 3, but considers that less tolerance be shown to domestic heating appliances that emit polluting particles. Both submitters 51 and 54 seek that the phasing in of the emission control package should be sped up.

As a matter of law, the NRRP has to go through the process set out in the Resource Management Act. It is undoubtedly true that the process has taken a very long time.

Nevertheless, there is little that can now be done in that regard. Certainly the public has had ample opportunity to participate in the process, and individual members of the public effected by the changes proposed have had time to order their affairs to accommodate any changes that will be required to their home heating systems. No specific changes are sought on either of these matters by either submitter. No change is required and it is recommended that the submissions are rejected.

#### Submissions 24, 105, 271, 351, 404, 2059

All these submissions generally supported Chapter 3.

The support is noted. Some changes are being recommended by the Commissioners. It is recommended they be accepted in part, although no changes are necessary to Chapter 3.

#### Submission 413

Submitter 413 supports the submission made by Federated Farmers. That support is noted. No change is necessary or is recommended to Chapter 3 in response to this submission. It can be accepted insofar as it goes.

### **Recommendations**

#### **Reject**

Submissions 8, 13, 27, 30, 47, 49, 51(points 1 and 2), 52, 54, 60, 64, 70, 71 (points 1 and 2), 75, 81 (points 1 and 2), 92, 94, 106, 112, 120, 134, 136 (point 2), 146, 147, 153, 155, 162, 164, 171, 190, 216, 231, 287 (points 1 and 2), 338, 347, 356, 365, 379, 386 (point 2), 388 (points 1, 2 and 3), 391 (points 1 and 2), 405 (points 1, 2 and 3), 411, 416, 420, 423 (points 1 and 2), 424, 425, 429 (points 1 and 2), 433, 434 (points 1 and 2), 435 (points 1 and 2), 445, 465, 468, 886, 893 (points 1, 2, 3 and 4), 894, 895, 909, 981, 1101; Further submissions F13, F217, F341, F342, F347 (points 1 and 2), F365, F401 (point 4), F429, F435 (points 1 and 2).

#### **Accept**

Submissions 201, 386 (point 1), 413, 436; Further submissions F216, F401(points 1 and 3), F435(point 1).

## Accept in part

Submissions 24, 105, 136 (point 1), 201, 271, 403, 404, 427, 428, 2059; Further submission F401(point 2).

## Amendments

1. Make amendments to the text and maps contained in Chapters 1, 2 and 3 of the Proposed NRRP so that they use macrons where required, and in a manner which is consistent with their use in Chapter 2 of the NRRP.
2. (a) Add a new rule to section 3.3.2 - Discharge to air from large scale fuel burning devices - p. 3-71 as follows:

“Rule 12B - Discharge to air from mobile sources - permitted activity.”

“The discharge of contaminants into air from a mobile source such as an aircraft, except when it is on an industrial or trade premise for testing, repair, or maintenance, is a permitted activity.”
- (b) Amendment is also required to table 3.1 p. 3-57, to refer to the new rule.
- (c) This rule requires an addition to the plan in section 3.5 - Explanations and principle reasons for methods, at p. 3-149 as follows:

“Rule 12B - Discharge to air from mobile sources - permitted activity.”

“Rule 12B applies throughout Canterbury. The discharge of contaminants into air from mobile sources such as aircraft is a permitted activity, except when the mobile source is on an industrial or trade premise for testing, repair or maintenance. Moveable sources will include aircraft, cars, and other forms of transport. When such items are being used for transportation, the resulting discharge of contaminants into air should be treated as being from a moveable source, and there should be no requirement that they obtain a resource consent.

When moveable sources are on industrial or trade premises for maintenance, repair or testing, any discharges to air from their engines/turbines will contribute to the discharge of contaminants to air from the premises on which they are located. Such discharges are controlled by section 15(1) of the Resource Management Act. Any such discharge will require a resource consent by virtue of Rule AQL57, unless it is excluded by Rules AQL38 to AQL57.”
3. (i) Amend Policy AQL7 Avoid agricultural spray drift (a) as follows:

- (a) ~~Avoid the discharge into air of agrichemical sprays in a manner that results or is likely to result in spray drifting beyond boundaries of targeted properties or targeted species and onto non-targeted properties or species, and avoid contamination of or contaminating water, by...~~
- (ii) Amend Rule AQL51 Water blasting – permitted activity, Permitted activity conditions 1 and 3 as follows:
- “1. There shall be no ~~discharge of~~ blast water containing contaminants entering into surface waterways through discharge into air.
- ...
3. At the completion of blasting each day all blast debris shall be collected or covered, so far as is practicable, such that there is no discharge of wind-blown debris into air ~~or water.~~”
- (iii) Amend Rule AQL70 Ground-based application of agrichemicals using hand-held application techniques – permitted activity, Activity, and delete permitted activity conditions 7, 8 and 9, as follows:
- “Discharge of agrichemicals ~~into or onto land, or into water, or into air~~ from ground-based application using hand-held application techniques, is a permitted activity”.
- ~~7. Except as provided for in condition 9, there shall be no discharge into or onto land which may result in that contaminant entering water via surface runoff.~~
- ~~8. Except as provided for in condition 9, there shall be no discharge into or onto water.~~
- ~~9. Where the agrichemical is being used for aquatic weed control, there shall be no adverse effects to other aquatic organisms that are not the target species and no adverse effect on mahinga kai.”~~
- (iv) Amend Rule AQL71 Ground-based application of agrichemicals using other than hand-held application – permitted activity, Activity, and delete permitted activity conditions 7, 8, 9 and 10, as follows:
- “Discharge of agrichemicals ~~into or onto land, or into water, or into air,~~ from ground-based application using techniques other than hand-held application, is a permitted activity”.
- ~~7. No mixing or diluting of agrichemicals shall take place within 10 metres of a surface water body, a bore, spring, tile drain, stormwater drain or the coastal marine area, unless the mixing or diluting takes place over a drip tray or within an impervious bunded area to contain spillages.~~

- ~~8. Except as provided for in condition 10, there shall be no discharge into or onto land which may result in that contaminant entering water via surface runoff.~~
- ~~9. Except as provided for in condition 10, there shall be no direct discharge into or onto water.~~
- ~~10. Where the agrichemical is being used for aquatic weed control, there shall be no adverse effects to other aquatic organisms that are not the target species and no adverse effect on mahinga kai.”~~

- (v) Amend Rule AQL72 Aerial application of agrichemicals – permitted activity, Activity, and delete permitted activity conditions 6, 7 and 8, as follows:

“Discharge of agrichemicals into or onto land, or into water, or into air by aerial application, is a permitted activity”.

~~“6. No mixing or diluting of agrichemicals shall take place within 10 metres of a surface water body, a bore, spring, tile drain, stormwater drain or the coastal marine area, unless the mixing or diluting takes place over a drip tray or within an impervious bunded area to contain spillages.~~

~~7. There shall be no discharge into or onto land which may result in that contaminant entering water via surface water runoff.~~

~~8. There shall be no direct discharge into or onto water.”~~

- (vi) Amend Rule AQL73 Application of agrichemicals not identified in rules AQL70 to AQL72 – discretionary activity, Activity as follows:

“Discharge of agrichemicals into or onto land, into water, or into air that does not comply with the conditions of Rules AQL70 to AQL72 is a discretionary activity.”

- (vii) Delete 3.5 Explanation and principal reasons for methods, 3.5.9.7 Regional rules for discharge of agrichemicals, paragraph 8 as follows:

~~“Under section 15 of the RMA, no person may discharge contaminants into water or into or onto land in circumstances that may result in that contaminant entering water unless expressly allowed by a rule in a regional plan or relevant proposed regional plan, resource consent or regulations. Thus it is appropriate to provide for the discharge of agrichemicals used for aquatic weed control into water in the conditions of the rules as long as there are no adverse effects on aquatic organisms other than the target species and that there are no adverse effects on mahinga kai.”~~

- (viii) Delete 3.5 Explanation and principal reasons for methods, 3.5.9.7 Regional rules for discharge of agrichemicals, ‘Rule AQL71 Ground based

application of agrichemicals other than using hand held application techniques – permitted activity’, paragraph 1 as follows:

~~“Water bodies are vulnerable to contamination as a result of the accidental spillage of agrichemicals during mixing, diluting or other preparation. Measures to reduce adverse effects must be undertaken. If preparation occurs within 10 metres of a surface water body, a bore, spring, tile drain, stormwater drain or the coastal marine area, an impervious bunded area will provide a mechanism to contain any spillages and thus reduce the likelihood of adverse effects. If an impervious bunded area is not available within 10 metres from a surface water body, a bore, spring, tile drain, stormwater drain or the coastal marine area, then the mixing or diluting of agrichemicals shall not be permitted under Rule AQL71. However, the mixing or diluting of agrichemicals 10 metres or more from a surface water body, a bore, spring, tile drain, stormwater drain or the coastal marine area, is permitted under Rule AQL71 as there is a sufficient margin of safety present to enable action to be undertaken in the event of a spillage to prevent any contamination of water.”~~

- (ix) Delete 3.5 Explanation and principal reasons for methods, 3.5.9.7 Regional rules for discharge of agrichemicals, ‘Rule AQL72 Aerial application of agrichemicals – permitted activity’, paragraph 1 as follows:

~~“Water bodies are vulnerable to contamination as a result of the accidental spillage of agrichemicals during mixing, diluting or other preparation. Measures to reduce adverse effects must be undertaken. If preparation occurs within 10 metres of a surface water body, a bore, spring, tile drain, stormwater drain or the coastal marine area, an impervious bunded area will provide a mechanism to contain any spillages and thus reduce the likelihood of spillages entering the environment with possible adverse effects. If an impervious bunded area is not available within 10 metres from a surface water body, a bore, spring, tile drain, stormwater drain or the coastal marine area, then the mixing or diluting of agrichemicals shall not be permitted under Rule AQL72. However, the mixing or diluting of agrichemicals 10 metres or more from a surface water body, a bore, spring, tile drain, stormwater drain or the coastal marine area, is permitted under Rule AQL72 as there is a sufficient margin of safety present to enable action to be undertaken in the event of a spillage, to prevent any contamination of water.”~~

**3.1 Introduction ## 03-001 01 00**

<b>112</b>	Solid Energy New Zealand Ltd	Include a section in the introduction acknowledging the importance of coal as a significant source of energy for commercial and industry uses in Canterbury, and that when burnt efficiently it has a significant role to play in the provision of energy for the region. Make any consequential amendments to the Plan.
<b>215 (point 1)</b>	Canterbury Aoraki Conservation Board	Include a more detailed subsection on the acute and chronic health effects of high PM 10 levels, and give attention to the international medical research that suggests that the chemical composition of particulates in smog is a serious toxic factor.
<b>215 (point 2)</b>	Canterbury Aoraki Conservation Board	Include a subsection detailing Christchurch's pollution and smog levels compared to other cities in the world. E.g. Warsaw.
<b>378</b>	Canterbury Growers Society Ltd	No specific policies and mechanisms be introduced in the NRRP to address Climate Change.
<b>401</b>	NZ Vegetable & Potato Growers Fed. Inc. and NZ Fruitgrowers' Fed Inc.	No specific policies and mechanisms be introduced in the NRRP to address Climate Change.
<b>F347</b>	Federated Farmers of New Zealand	Support submission 401.
<b>F401</b>	NZ Vegetable & Potato Growers Fed. Inc. and NZ Fruitgrowers' Fed Inc.	Support submission 112.

**Consideration**Submissions 112, F401

Submitter 112, supported by submitter F401, seeks that a statement should be inserted into section 3.1 Introduction acknowledging that coal is a significant resource in the South Island and a significant source of energy for commercial and industry activity in Canterbury, and that when burnt efficiently, it has a significant role to play in the provision of energy for the region.

The Environment Canterbury 2003 Canterbury Regional Energy Survey 1998-2002 (Report R03/16) indicates:

- (a) that in 2002 less than 10% of the energy used in Canterbury was derived from coal (pg. 15) but that the large majority of coal used in Canterbury is used by the commercial and industrial sectors (pg. 33);
- (b) in 2002, the commercial and industrial sectors accounted for less than one third of the total energy use in Canterbury (pg. 16);
- (c) that of the energy used in the commercial and industrial sectors, approximately one fifth was sourced from coal (pg. 26).

Assuming that these conclusions are correct (and the Commissioners have no reason to doubt them) the statement sought to be added by the submitters would not seem to be particularly accurate. Further, section 3.1 describes air quality issues in Canterbury. It does not seek to endorse different fuel types or their relative importance. This is consistent with the purpose of Chapter 3, which is to assist Environment Canterbury to carry out its function detailed in section 30(1)(f) of the RMA. In the Commissioners' view the statement sought to be added does not fit within section 3.1 Introduction. No change is recommended, and it is recommended that the submissions are rejected.

#### Submission 215(points 1 and 2)

This submitter sought that more detail should be provided in section 3.1 Introduction on the health effects of PM<sub>10</sub> and that an intercity comparison of smog levels should be provided. The wording sought was not set out in the submission.

The health effects of PM<sub>10</sub> are one of the justifications for Chapter 3. A summary of the research into the health effects of PM<sub>10</sub> undertaken by Environment Canterbury has been set out above - see Chapter 3, Overview. It is also detailed in Environment Canterbury's Section 32 Report (pages 173-182). An overview of the section 32 conclusions is set out in section 3.1.3, Ambient air quality, in Chapter 3. In the Commissioners' view further detail is not required. Further, there is nothing to suggest that providing an intercity smog comparison would have any material benefit. Chapter 3 is concerned with air pollution in Canterbury - not elsewhere. No change is required and it is recommended that the submissions are rejected.

#### Submissions 378, 401, Further submission F347

These submitters support the approach in Chapter 3 with respect to climate change and seek that no specific policy and mechanisms in this regard be introduced. Further submitter F347 supports submitter 401.

The Commissioners are not recommending a change to 3.1.4 Global air quality issues. Therefore, it is recommended that these submissions be accepted.

## Recommendations

### Reject

Submissions 112, 215(points 1 and 2); Further submission F401.

### Accept

Submissions 378, 401; Further submission F347.

### Amendment Required

None Required.

### 3.1 Introduction - Paragraph 1 ## 03-001 04 00

<b>115</b>	L. Wilkinson	Adopt the same rules for the control and phasing out of enclosed burners as apply to Christchurch in areas/individual cases where problems are apparent or exist, especially in high-density housing areas outside of Christchurch.
<b>136</b>	Association For Independent Research (AIR)	Amend second sentence to read: "However, around <u>indoor lifestyles and</u> air pollution sources..."
<b>F136</b>	Association For Independent Research (AIR)	Support submission 136.

## Consideration

### Submission 115

Submitter 115 seeks that the proposed rules in Chapter 3 relating to small scale fuel burning devices should be applied in other areas in the region where there are existing problems.

Objective AQL2 is the relevant objective. It is also noted that Rules AQL1, AQL2, AQL3, AQL4, AQL5 and AQL6 apply to all of Canterbury. In combination these require that open fires should cease to be installed after 1 January 2004, and that new enclosed burners meet the 1 gram of total suspended particulate per kilogram of fuel burnt and the 65% thermal efficiency tests (unless a resource consent is obtained). Method AQL9(a) sets out a work programme for investigating wintertime ambient air quality pollution in

townships outside Christchurch. Until the necessary investigations and evaluations are completed, it is not possible to say what is required outside Christchurch or to introduce the necessary changes to Chapter 3 in a manner that fulfils the requirements contained in the RMA. No change is recommended at the present time, and it is recommended that the submission is rejected.

#### Submission 136 and Further submission F136

Submitter 136 seeks that greater focus should be given to 'indoor' air pollution by amending the first paragraph of 3.1 Introduction. In the submitter's view indoor air pollutants may have a greater effect on human health than outdoor pollutants.

Chapter 3 seeks to manage the discharge to air of contaminants that pollute air outside buildings and structures – see the definition of 'ambient air quality' in chapter 1 of the NRRP. This is consistent with the approach taken in the National Ambient Air Quality Guidelines 2002 (Ministry for the Environment) and in the NES. Indoor pollution is internalised to individual households. In the Commissioners' view, the RMA is not the appropriate mechanism to address such internalised and essentially private effects. The change sought is not recommended, and it is recommended that the submissions are rejected.

### **Recommendations**

#### **Reject**

Submissions 115, 136, Further Submission F136.

#### **Amendment Required**

None Required.

#### **3.1.2 Localised air quality issues ## 03-001 21 00 - 03-001 26 00**

<b>44</b>	Spreydon Heathcote Community Board	Requires further investigation into PM10; Chapter 3 should include other pollutants.
<b>76</b>	P. Daigneault	Provide reference material to support comments.
<b>347</b>	Federated Farmers Of New Zealand Inc, North Canterbury Branch	Delete all references in objectives, Policies and Methods, which deal with nuisance effects of odour, particles, smoke and dust.
<b>F435</b>	Tegal Foods Ltd	Support submission 347.

## **Consideration**

### Submission 44

Submitter 44 sought that further investigation should be undertaken and “that the document should include other known pollutants not just PM<sub>10</sub>”.

Section 3.1.2, Localised air quality issues describes the localised resource management issues in Canterbury. The description does not include PM<sub>10</sub> – it is an ambient air quality issue discussed in section 3.1.3, Ambient air quality issues. In section 3.1.2, a variety of issues are identified and addressed which lead through Objective AQL1 and its associated policies, methods and rules. The Commissioners do not consider that it is appropriate to refer to PM<sub>10</sub> in this context.

Environment Canterbury’s research into local and ambient air quality issues is summarised in the 2002 Section 32 Report. It has also been commented on briefly above - see Chapter 3, Overview. The submitter does not identify how Environment Canterbury’s investigations are said to be deficient. The Commissioners are satisfied that this issue has been extensively examined. No change is recommended, and it is recommended that the submission be rejected.

### Submission 76

Submitter 76 seeks that reference material be quoted to support the “comments” in Chapter 3.

The reference material is set out in Environment Canterbury’s 2002 Section 32 Report. In the Commissioners’ view a regional plan should generally be self-contained. It cannot include everything and it is not required by law to do so. No change is required and it is recommended that the submission is rejected.

### Submission 347, Further submission F435

Submitter 347, supported by submitter F435, sought the deletion of all objectives, policies and methods which deal with the nuisance effects of odour, particles, smoke and dust. The submitter considers that such nuisance effects which arise from land use are not a core function of a regional council and that Environment Canterbury has not fulfilled its section 32 requirements.

In this part of the submission, specific objectives, policies, methods and rules were not identified. This creates difficulty both in terms of procedure and in evaluating the substance of that which is sought. It is assumed that the objective, policies and methods in question are those in Objective AQL1, Policies AQL1 to 8 and the associated methods, including rules. These all stem from Issue AQL1 and address one or more of the identified issues.

Issue AQL1 defines the local air quality issues to be addressed in the plan, including combustion processes, odour, dust, agricultural spray and other discharges. The issue

and the associated objective, policies, methods and other provisions, are intended to assist Environment Canterbury to carry out its function detailed in section 30(1)(f) of the RMA. In the Commissioners' view Environment Canterbury can control such discharges notwithstanding the fact that they are a result of the use of land. Indeed they note that discharges are invariably associated with the use of land. If a district plan permits a land use, this does not mean that any resulting discharge should not be controlled if the potential adverse effects warrant control. The Commissioners were not presented with any more appropriate or alternative ways in which such discharges could be controlled. As noted above, Environment Canterbury has extensively investigated local and ambient air quality issues in its section 32 report and in a large number of associated reports and research papers. The Commissioners consider that the section 32 duties have been fulfilled. They also consider that the proposed controls are in a general sense appropriate. No change is recommended, and it is recommended that the submissions are rejected.

## Recommendations

### Reject

Submissions 44, 76, 347; Further submission F435.

### Amendment Required

None Required.

#### 3.1.2 Localised air quality issues - Paragraph 4 ## 03-001 34 00

136	Association For Independent Research (AIR)	Delete last sentence of paragraph 4, and amend paragraph to read: "Motor vehicles unquestionably are a major source of recognised urban air pollution. This is evident in most cities of the world particularly as traffic densities continue to increase. Most of the pollution effect is related to the emission of by products of combustion or incomplete combustion of the fuel employed. These contribute significantly to observed levels of particles, SO <sub>2</sub> , O <sub>3</sub> NO <sub>x</sub> , CO, volatile organics, etc and also to the liberation of so-called greenhouse gases. (cf.CO <sub>2</sub> )."
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## Consideration

### Submission 136

The submitter seeks that reference should be made to “Fisher G, Rolfe K, Kjellstrom T et al (20 January 2002), Health effects due to Motor Vehicle Pollution in New Zealand: Report to the Ministry of Transport”. The submission indicates that the submitter also considers the language in the paragraph to have a patronising tone.

In the Commissioners’ view, the effect of the replacement words sought by the submitter would change the emphasis of paragraph 4 of section 3.1.2. The change in emphasis would be to recognise motor vehicle emissions as “unquestionably being a major source of recognised urban pollution”. The reporting officers took the view that motor vehicles are a source of local pollution problems within defined geographical areas where cars are frequently used and in large numbers, eg Christchurch.

Chapter 3 distinguishes between ‘local air quality issues’ (e.g. Section 3.1.2 and Objective AQL 1) and ‘ambient air quality issues’ (e.g. Section 3.1.3 and Objectives AQL 2 and 3). The change sought is to that part of Chapter 3 which is addressing ‘local air quality issues’. The Commissioners accept that motor vehicles do contribute to local air quality issues within Christchurch - albeit that research suggests they are not significant emitters of PM<sub>10</sub>. The question is whether the emphasis the submitter is seeking is appropriate.

The report referred to by the submitter addresses matters at a national level. It focuses on PM<sub>10</sub> and it is a good indicator of combined exposure to the range of pollutants from motor vehicles (pg. 5). To quote its findings relevant at a sub-national level in New Zealand:

*“The largest fraction of pre-mature mortality occurs in the Auckland region, affecting 253 people per year. In Christchurch vehicle emissions affect 41 people. In Wellington, 56 people, and in Dunedin, 6 people. For the rest of the North Island, and the rest of the South Island the effects are 21 people, and 19 people respectively.*

*There is also a strong regional difference in the fraction of total mortality to vehicle related mortality. In Auckland and Wellington, the fraction due to vehicles is 60-70% of the total, whereas in Christchurch and Dunedin it is only 10-20%. This is because the effects of wintertime air pollution from burning wood and coal for home heating are much greater in the South Island, and remain the dominant source of particulates affecting public health.” (pg. 40)*

Scott A and Gunatlilaka M (2004) in 2002 Christchurch Inventory of Emissions to Air (Report No. 04/03 Environment Canterbury) found that motor vehicles contributed 9% respectively of PM<sub>10</sub>. and PM<sub>25</sub>. Motor vehicle contributions for CO, CO<sub>2</sub>, NO<sub>x</sub> and SO<sub>x</sub> contaminants are significantly greater, being 51%, 43%, 81% and 15% respectively.

The existing statement in Chapter 3 recognises that motor vehicles do contribute to local air quality issues within Christchurch but that outside of Christchurch they are unlikely to

give rise to localised air pollution problems. There are simply not enough cars to cause significant problems. The Commissioners do not consider that the change of emphasis proposed is necessary or even appropriate. It would fail to distinguish between Christchurch with its relatively heavy traffic, and other areas in the region where motor vehicles are less prevalent. The focus is and should be localised air quality.

However, the Commissioners agree with the submitter that the first sentence in the paragraph does not add to an understanding of local air quality issues. A change to this extent is recommended.

## Recommendation

### Accept in part

Submission 136.

### Amendment Required

1. Amend the fourth paragraph of 3.1.2 Local air quality issues p. 3-1, as follows:

~~“Many people see motor vehicle emissions as a major source of pollution, in particular smoky vehicles. Motor vehicles are sources of pollutants such as carbon monoxide, nitrogen dioxide and benzene, and are a significant source of greenhouse gas emissions. However, in the Canterbury region, relatively low vehicle numbers and concentrations are unlikely to give rise to localised air pollution problems outside of Christchurch.”~~

### 3.1.2 Localised air quality issues - Paragraph 11 ## 03-002 21 00

44	Spreydon Heathcote Community Board	Requires further investigation and the Plan should include other known pollutants, not just PM10.
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## Consideration

### Submission 44

The substance of this submission has been evaluated above (see 3.1.2 Localised air quality issues ## 03-001 21 00 - 03-001 26 00, 44). The evaluation there made is relevant and the Commissioners adopt the same reasoning. No change is required and it is recommended that the submission is rejected.

**Recommendation****Reject**

Submission 44.

**Amendment Required**

None required.

**3.1.3 Ambient air quality issues ## 03-002 26 00**

<b>44</b>	Spreydon Heathcote Community Board	Include statistical data noting the impact on lower socio-economic groups within the community.
<b>76</b>	P. Daigneault	Provide reference material to support comments.
<b>248</b>	J. G. Hodgson	Ecan needs to prove that PM <sub>10</sub> problem is not caused by absorption of vehicle exhaust emissions.
<b>280 (point 1)</b>	J. B. Stott	State clearly that autopsies carried out on long time Christchurch residents show no sign of lung damage that can be attributed to PM <sub>10</sub> .
<b>280 (point 2)</b>	J. B. Stott	Emphasize through official statements that Ecan has no unequivocal evidence that there is a causal link between the levels of PM <sub>10</sub> measured and mortality rates in Christchurch.
<b>347</b>	Federated Farmers Of New Zealand Inc, North Canterbury Branch	Delete the conditions on rules for the rural environment (areas outside of the Christchurch City urban zone), which places restrictions on rural houses' open fires, wood burners and diesel stoves.
<b>436</b>	Coal Association Of New Zealand	Conduct a more accurate analysis for future projections, regarding PM <sub>10</sub> emissions.
<b>907</b>	P L Tilley	Provide copies of death certificates of people who supposedly died from air pollution in the last five years.

## **Consideration**

### Submission 44

Submitter 44 sought the inclusion of statistical data noting the impact of the measures proposed in Chapter 3 on lower socio-economic groups within the community.

Research into this issue has been done by Environment Canterbury (see for example Taylor Baines and Associates, (2001), Assessment of the Likely Social Impacts resulting from the Proposed Domestic Heating Rules contained in the Air quality chapter of the Natural Resources Regional Plan Environment Canterbury (Report U01/83)). The Commissioners refer to the Chapter 3 - Overview set out above. There is no need to replicate that material in the NRRP. Further, Environment Canterbury has implemented a financial assistance programme to assist low income households – the Clean Heat Project. In the Commissioners' view it is not necessary to include the statistical data in Chapter 3. It would not assist in understanding the proposed provisions.

No change is required and it is recommended that the submission is rejected.

### Submission 76

The substance of this submission is evaluated above (see 3.1.2 Localised air quality issues ## 03-001 21 00 - 03-001 26 00, 76). The consideration given to the submission in that context is adopted. The recommendation is the same – that no change be made, and that the submission is rejected.

### Submissions 248, 280(points 1 and 2), 436, 907

These submitters query the justification for the provisions in Chapter 3. Submitters 248, 436 and 907 sought no specific changes to Chapter 3, and submitter 280 sought wording changes to acknowledge the existence of information (but no changes to the issues, objectives, policies or methods (including the rules)).

The substance of these submissions is evaluated above (see Chapter 3 - General Submissions ## 03-000 00 00, submissions 49, 71, 81(points 1 and 2), 134, 136(point 2), 162, 164, 190, 231, 423(points 1 and 2)) and 981. The considerations there expressed are adopted. No change is required and it is recommended that the submissions are rejected.

### Submission 347

Submitter 347 sought the deletion of the conditions on rules for the rural environment (areas outside of the Christchurch City urban zone), which place restrictions on rural houses' open fires, wood burners and diesel stoves.

The substance of this submission is evaluated above (see Chapter 3 - General Submissions ## 03-000 00 00, submission 429(point 1), and further submission F347(point 1)). The analysis there undertaken is adopted. Further the submission is dealt with below - see discussion on Policy AQL11: Set emission standards for enclosed burners ## 03-032 16 00). No change is required and it is recommended that the submission is rejected.

**Recommendations**

**Reject**

Submissions 44, 76, 248, 280(points 1 and 2), 436, 907.

**Amendment Required**

None required.

**3.1.3 Ambient air quality issues - Paragraph 1 ## 03-002 27 00**

<b>115</b>	L. Wilkinson	Adopt the same rules for control and phase out of enclosed burners applying to Christchurch to areas/individual cases where problems are apparent or existing, especially in high-density housing areas outside of Christchurch.
<b>136</b>	Association For Independent Research (AIR)	Amend the first paragraph to read: 'A number of towns and cities in Canterbury exhibit aspects of inferior air quality, particularly during the winter. Monitoring of outdoor air quality has highlighted air pollution concerns in Christchurch, Timaru, Ashburton, Rangiora, and Kaiapoi. It is expected that other centres of population in the region may be similarly affected.'

**Consideration**

Submission 115

The substance of this submission was evaluated above (see 3.1 Introduction - Paragraph 1 ## 03-001 04 00, 115). The Commissioners adopt the same reasoning and make the same recommendation - namely that no change is required to Chapter 3, and that the submission is rejected.

Submission 136

Submitter 136 sought amendment to the wording in paragraph 1 of '3.1.3 Ambient air quality issues'. The effect of the amendment would be to soften the statement on

existing air quality and move away from the term ambient. The submitter does not consider the problem to be ‘serious’ and it questions the justification for Chapter 3.

The Commissioners do not accept the submitter’s argument. In their view on the materials available it is clear that Christchurch and other significant towns in the region do have a serious air pollution problem. This was considered above (see Chapter 3 - General Submissions ## 03-000 00 00, submissions 49, 71, 81(points 1 and 2), 134, 136(point 2), 162, 164, 190, 231, 423(points 1 and 2) and 981). That evaluation is adopted.

With respect to the suggested move away from ‘ambient air quality’ to ‘outdoor air quality’, the Commissioners note that the word ‘ambient’ is a term used extensively in air quality management. ‘Ambient air quality’ is defined in chapter 1 of the NRRP. It is a central concept in the National Ambient Air Quality Guidelines 2002 (Ministry for the Environment) and in the NES. Substituting ‘outdoor’ for ‘ambient’ is not considered to be necessary or even desirable. The evaluation of ‘indoor’ and ‘outdoor’ air quality undertaken above (see 3.1 Introduction - Paragraph 1 ## 03-001 04 00, 136 and F136) is relevant and the analysis there undertaken is adopted.

No change is required and it is recommended that the submission is rejected.

## Recommendations

### Reject

Submissions 115,136.

### Amendment Required

None required.

### 3.1.3 Ambient air quality issues - Paragraph 2 ## 03-002 32 00

136	Association For Independent Research (AIR)	Amend to read: ‘...ensuring outdoor ambient air quality...’
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### Consideration

#### Submission 136

The substance of this submission has been evaluated above (see 3.1.3 Ambient air quality issues - Paragraph 1 ## 03-002 27 00, 136). The reasoning is adopted. Further the paragraph is simply repeating what is in the Regional Policy Statement. To make the amendment sought would be inappropriate. No change is required and it is recommended that the submission is rejected.

**Recommendation**

**Reject**

Submission 136.

**Amendment Required**

None required.

**3.1.3 Ambient air quality issues - Paragraph 3 ## 03-002 33 00**

<p><b>136</b></p>	<p>Association For Independent Research (AIR)</p>	<p>Amend paragraphs 3 and 4 with: "Air pollution takes a variety of forms and is derived from many different sources. Traditionally, the scenario inducing both acute and chronic endemic unhealthiness, [observed clinically], affected people with specific occupations, lifestyles etc. Such people were typically exposed to comparatively high levels of undifferentiated, suspended, particulate matter (e.g. soot, silica dust, etc) often in the presence of acidic gases (e.g. SO<sub>2</sub> NO<sub>2</sub>) and, sometimes, water particles (i.e. fog). Nowadays, much lower levels of air pollution are of interest. Also, the exposures are widespread and potentially affect very large numbers of people. Usually, though, the health effects are non-specific and subject to confounding by factors not necessarily related to recognised air pollution. Consequently, the emphasis has shifted to complex epidemiological analyses of categorised types of health mortality and morbidity associated statistically with concentrations of inhalable (i.e. fine) particulate matter and various copollutant gases and a limited number of volatile, semi-volatile and non volatile organic and inorganic substances."</p>
<p><b>181</b></p>	<p>M. Gunn</p>	<p>Amend to read: 'Pollution comes from different sources, one such source being PM<sub>10</sub>. These are..'</p>

**Consideration**

Submission 136

Submitter 136 sought changes to paragraphs 3, 4 and 5 of '3.1.3 Ambient air quality issues'. The effect of the change sought would be to qualify the ambient air quality issue of PM<sub>10</sub> concentrations in Christchurch, including the associated health effects. At the request of Environment Canterbury staff, the submitter provided yet a further version of

the paragraph it suggested should be substituted. The proposed paragraphs are consistent with the submitter’s view that PM<sub>10</sub> health issues are overstated by Environment Canterbury and consequently that many of the provisions in Proposed Chapter 3 are misdirected.

The health effects of PM<sub>10</sub> are identified in the section 32 report, paragraph 27 ‘Suspended particulate’. Further, the health effects are recognised in the National Ambient Air Quality Guidelines 2002 (Ministry for the Environment, 2002) and much the same values are set through Objective AQL3 in Chapter 3. They are also similar to those in the NES. In the Commissioners’ view the health issues are clear and they have been recognised by all major public agencies. They consider that paragraphs 3, 4 and 5 as worded should stay in place and that they are appropriate. No change is required and it is recommended that the submission is rejected.

Submission 181

Submitter 181 sought a change to paragraph 3 of ‘3.1.3 Ambient air quality issues’. The effect of the change sought is to reduce the emphasis on PM<sub>10</sub> concentrations as the main pollutant of concern.

The submission asserts that there is no peer reviewed scientific evidence supporting the statement made in relation to PM<sub>10</sub>. The Commissioners have noted in their overview of Chapter 3 the work undertaken by Environment Canterbury. They have also referred to the section 32 Report. Concern has been expressed about the scientific rigor of Environment Canterbury’s evaluation. This concern was evaluated above (see Chapter 3 - General Submissions ## 03-000 00 00, submission 49, 71, 81(points 1 and 2), 134, 136(point 2), 162, 164, 190, 231, 423(points 1 and 2) and 981). In the Commissioners’ view the paragraph is appropriately worded. No change is recommended, and it is recommended that the submission is rejected.

**Recommendations**

**Reject**

Submissions 136, 181.

**Amendment Required**

None required.

**3.1.3 Ambient air quality issues - Paragraph 6 ## 03-002 42 00 - 03-002 44 00**

82	P. Wardle	Query whether a variable is missing - i.e. how many hours or days per year does a specific PM <sub>10</sub> level have to be maintained to affect the stated mortalities?
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<b>116</b>	G. Halstead	There is no proof 40 people die prematurely each year. No decision requested.
<b>136</b>	Association For Independent Research (AIR)	Delete the paragraph beginning 'In Christchurch, PM <sub>10</sub> is ... days each year.'
<b>181</b>	M. Gunn	Delete the figures in paragraph 6 until there is reliable medical and scientific evidence.
<b>388</b>	K. Allen Adams	Distinguish between quality of PM <sub>10</sub> from different sources. Identify cause of noted health problems.

## Consideration

### Submission 82

Submitter 82 sought clarifications of paragraph 6 of section 3.1.3, Ambient Air quality.

The threshold in Objective AQL3 is 50g/m<sup>3</sup> (24 hour average). Environment Canterbury's Section 32 Report, paragraph 27.5 'Risk assessment for Canterbury' (pgs 178-180) sets out the basis for paragraph 6. The clarification sought to paragraph 6 is unnecessary. A plan cannot reproduce all of the technical data on which it is based. No change is recommended, and it is recommended that the submission be rejected. In any event the Commissioners are recommending the deletion of paragraph 6 and that will solve the issue raised by the submitter.

### Submissions 116, 136, 181, 388

These submissions challenge or query the science supporting Chapter 3 and in particular the health effects of PM<sub>10</sub> concentrations.

The substance of this issue was evaluated above - see Chapter 3 - General Submissions ## 03-000 00 00, submissions 49, 71, 81(points 1 and 2), 134, 136(point 2), 162, 164, 190, 231, 423(points 1 and 2) and 981, and 3.1.3 Ambient air quality issues - Paragraph 3 ## 03-002 33 00, 136. Those evaluations are relevant and they are adopted. The research undertaken by Environment Canterbury was also summarised above in the introduction to Chapter 3. The Commissioners also refer to the NES. In a sense the reliability of the science used by Environment Canterbury has become irrelevant. An air quality target has been mandated by regulation. That is not to say that the science is not robust. Indeed the Commissioners are confident that generally it is sound. There are often differing views on such matters - but it is noteworthy that all responsible public health and environment agencies are heading in the same direction.

The Commissioners recommend that submission 388 be rejected.

The Commissioners do have a concern that in some cases the wording used in the NRRP does rather overstate the scientific investigations on which it is supposed to be based. Submitters 136 and 181 referred specifically to paragraph 6 in this regard. The Commissioners agree with this criticism. They are not sure that the research that has been undertaken justifies the very precise wording and percentages used in that paragraph. The Commissioners would prefer that the paragraph should be reworded and put in rather less dogmatic and precise terms. Unfortunately that option is not available to them because no submitter sought amendments in this regard. On balance they think it best to delete the paragraph.

### Recommendations

#### Reject

Submissions 82, 388.

#### Accept

Submissions 116, 136 and 181.

#### Amendment Required

Delete paragraph 6.

### 3.1.3 Ambient air quality issues - Paragraph 7 ## 03-003 01 00 - 03-003 02 00 - 03-003 03 00

<b>96</b>	C. & H. Parry-Jennings	Would like to see evidence that "90% of winter air pollution is caused by solid fuel home heating" compared with traffic emissions.
<b>136</b>	Association For Independent Research (AIR)	Delete the paragraph beginning '90% of Christchurch's ...1999 emissions)'.
<b>181</b>	M. Gunn	Include all sources of possible pollution.
<b>247</b>	C. Treleaven	End the insistence that poor air quality is due to open fires and wood burners.
<b>332</b>	H. C. Evison	Rewrite this section to show precisely what samples and tests the figures were derived from, or delete the percentage figures and replace them with qualifying expressions e.g. 'much of Christchurch's particulate pollution comes from domestic open fires and other fuel burners'.
<b>356</b>	R. Robins	Clarify the age of the data asserting that 3% of air pollution comes from cars, and allow for the increase in the number of cars since the survey.

## Consideration

### Submissions 96, 136, 181, 247, 332, 356

All the submitters question the basis for the figures presented in paragraph 7 of '3.1.3 Ambient air quality issues'.

These figures identify the sources of PM<sub>10</sub>. They are derived from Environment Canterbury's 1999 emission inventory (Wilton 2001 Christchurch Inventory of Air Emissions – 1999, Environment Canterbury Report R01/28) following analysis of the contributions of different sources to measured PM<sub>10</sub> concentrations – see Environment Canterbury's 2002 Section 32 Report paragraph 33.7. The relationship between PM<sub>10</sub> emissions and concentrations' (pgs 219-220). The 1999 emission survey was repeated in 2002 (Scott and Gunatilaka (2004) 2002 Christchurch inventory of emissions to air Environment Canterbury Report R04/03). The update was broadly consistent with the findings in the 1999 survey. However, the concentration analysis has not been repeated. The Commissioners acknowledge the analysis that has been carried out - but they nevertheless think that paragraph 7 overstates the position. They recommend that the paragraph should refer in broad terms to the source of the assertions and make it clear that the figures given are appropriate. They recommend that the submissions are accepted in part.

## Recommendations

### Accept in part

Submissions 96, 136, 181, 247, 332, 356.

### Amendment Required

1. Rewrite paragraph 7 of paragraph 3.1.3, p. 3-3 to read as follows.

"Analyses of emission inventories undertaken by Environment Canterbury suggest that approximately 90% . . .".

### **3.1.3 Ambient air quality issues - Paragraph 8 ## 03-003 04 00 - 03-003 06 00, 03-003 08 00 - 03-003 10 00**

<b>136</b>	Association For Independent Research (AIR)	Delete the paragraph beginning 'On a typical ...residents must breathe.'
<b>181</b>	M. Gunn	Provide more reliable and accurate figures.

## Consideration

Submissions 136, 181

Both submitters question the basis for the figures presented in paragraph 8 of '3.1.3 Ambient air quality issues'.

The substance of these submissions is evaluated immediately above see paragraph 7, ## 03-003 01 00 - 03-003 02 00 - 03-003 03 00. The Commissioners note that the paragraph does qualify the data by use of the word "about". They also recommend that the word "approximately" should be added at the start of each subparagraph. They do not consider that paragraph 8 should be deleted in its entirety. They recommend that the submissions be rejected, but that submission 181 be accepted in part.

**Recommendation**

**Reject**

Submissions 136, 181.

**Accept in part**

Submission 181.

**Amendment Required**

1. Insert the word "approximately" at the start of subparagraphs (a), (b) and (c) in paragraph 8 of section 3.1.3 - Ambient air quality issues, on page 3-3 of Chapter 3.

**3.1.3 Ambient air quality issues - Paragraph 9 ## 03-003 14 00**

<b>136</b>	Association For Independent Research (AIR)	Delete the paragraph beginning 'Geography and meteorology ... and blowing away.'
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**Consideration**

Submission 136

Submitter 136 sought that paragraph 9 of '3.1.3 Ambient air quality issues' be deleted.

Paragraph 9 describes the geographic and meteorological factors that influence Christchurch's winter ambient air pollution problems. This information assists the reader to understand in broad terms Christchurch's situation. With respect to the scientific rigor of Environment Canterbury's evaluation, this has been evaluated above (see Chapter 3 - General Submissions ## 03-000 00 00, submission 49, 71, 81(points 1 and 2), 134, 136(point 2), 162, 164, 190, 231, 423(points 1 and 2) and 981). The evaluation is

adopted. The paragraph does not seem to be inappropriate and the assertions made in it are insofar as the Commissioners are aware, relatively non-contentious. No change is recommended, and it is recommended that the submission be rejected.

**Recommendation**

**Reject**

Submission 136.

**Amendment Required**

None required.

**3.1.3 Ambient air quality issues - Paragraph 10 ## 03-003 18 00**

<b>136</b>	Association For Independent Research (AIR)	Delete the paragraph beginning 'These inversions happen ... likely to occur.'
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**Consideration**

Submission 136

Submitter 136 sought that paragraph 10 of '3.1.3 Ambient air quality issues' be deleted.

Paragraph 10 describes the relationship between temperature inversion and Christchurch's winter ambient air pollution issue. This information assists the reader to understand Christchurch's ambient air pollution problems. The analysis undertaken in relation to paragraph 9 immediately above is adopted. No change is recommended, and it is recommended that the submission be rejected.

**Recommendation**

**Reject**

Submission 136.

**Amendment Required**

None required.

**3.1.3 Ambient air quality issues - Paragraph 11 ## 03-003 23 00**

<b>115</b>	L. Wilkinson	Adopt the same rules for control and phase out of enclosed burners as apply to Christchurch to other areas/individual cases where problems are apparent/existing especially in high-density housing areas outside of Christchurch.
<b>136</b>	Association For Independent Research (AIR)	Delete the paragraph beginning 'At a future date ... are still progressing.'

**Consideration**

Submission 115

The substance of this submission is evaluated above (see 3.1 Introduction - Paragraph 1 ## 03-001 04 00, 115). The evaluation is adopted. The recommendation is the same – namely that no change be made, and that the submission be rejected.

Submission 136

Submitter 136 sought that paragraph 11 of '3.1.3 Ambient air quality issues' be deleted.

Paragraph 11 records Environment Canterbury's intention to address in the future ambient winter air pollution problems in other towns within the region. In the Commissioners' view this information assists the reader in understanding Environment Canterbury's approach to ambient air pollution issues outside of Christchurch. They do not think that the paragraph is inappropriate. No change is recommended, and it is recommended that the submission be rejected.

**Recommendation**

**Reject**

Submissions 115, 136.

**Amendment Required**

None required.

**3.1.3 Ambient air quality issues - Paragraph 12 ## 03-003 27 00 - 03-003 29 00**

<b>125</b>	Waimakariri District Council	Add a new paragraph: "It should be noted from the outset, however, that what is being proposed for Christchurch is not seen as a blueprint for addressing wintertime air pollution problems in other urban areas in the region."
<b>136</b>	Association For Independent Research (AIR)	Delete the paragraph beginning 'Investigations and monitoring ... areas from 2004.'
<b>238</b>	Director General Of Conservation	Retain provision to undertake investigations and monitoring in Kaikoura as planned in 2002.

**Consideration**Submission 125

Submitter 125 sought that an additional paragraph be added after paragraph 12 to the effect that the provisions in Proposed Chapter 3 are not a blue print for addressing winter time ambient air pollution problems in other urban areas of the region.

The Commissioners do not consider that what is sought is appropriate. Any future resource management response for urban areas outside Christchurch will require a variation or change to Chapter 3. The degree to which the resource management response for Christchurch is relevant to other urban areas will depend on both the similarities and differences between the various locations, the respective resource management issues they present, and on how successful the response turns out to be in Christchurch. There may well be specific considerations particular to any given urban area. A section 32 analysis will be required to determine the extent to which any particular objective is the most appropriate way of achieving the purpose of the RMA, and whether any particular policies, rules, or other methods are the most appropriate way of achieving that objective once it is defined. At present Proposed Chapter 3 does not state the Christchurch will be used as a 'blueprint'. In the Commissioners' view the process should not be pre-empted. The new paragraph sought is inappropriate. No change is recommended, and it is recommended that the submission is rejected.

Submission 136

Submitter 136 sought that paragraph 12 of '3.1.3 Ambient air quality issues' should be deleted.

Paragraph 12 describes the future (and now past or existing) intentions of Environment Canterbury to undertake monitoring and investigations in other towns within the region. This information assists the reader in understanding Environment Canterbury's approach to ambient air pollution issues outside of Christchurch. It is not inappropriate. The

information needs to be updated (as a minor amendment), but not in response to this submission. No change is recommended, and it is recommended that the submission be rejected.

**Submission 238**

Submitter 238 supported Environment Canterbury undertaking investigations in Kaikoura in 2002.

Monitoring began in Kaikoura (PM<sub>10</sub>) in 2002. The submission can be accepted. No change is required to Chapter 3.

**Recommendations**

**Reject**

Submissions 125, 136.

**Accept**

Submission 238.

**Amendment Required**

None required.

**3.1.3 Ambient air quality issues - Paragraph 13 ## 03-003 30 00**

<b>136</b>	Association For Independent Research (AIR)	Delete the paragraph beginning 'Other contaminants which are ... hydrocarbons (PAHs).'
<b>909</b>	P. W. Moller	Carry out further research on the effects of particulates of coal and wood.

**Consideration**

**Submission 136**

Submitter 136 sought that paragraph 11 should be deleted as it considers that it is covered in sufficient detail already.

It is assumed that this statement is based on the amendments the submitter sought to the remainder of '3.1.3 Ambient air quality issues'. Given the recommendations made on other of the submitter's proposed alteration to section 3.1.3, no change is recommended. In the Commissioners' view paragraph 11 is not repetitive and it is

appropriately included in the plan. It assists in understanding Environment Canterbury's approach. It is recommended that the submission be rejected.

Submission 909

Submitter 909 raises the issue of the science supporting the evaluation of Chapter 3.

The substance of this issue was evaluated above (see Chapter 3 - General Submissions ## 03-000 00 00, submission 49, 71, 81(points 1 and 2), 134, 136(point 2), 162, 164, 190, 231, 423(points 1 and 2) and 981). That evaluation is adopted. Environment Canterbury has undertaken considerable research. At some point the research must result in action. Chapter 3 is the result. No change is required, and it is recommended that the submission is rejected.

**Recommendations**

**Reject**

Submissions 136, 909.

**Amendment Required**

None required.

**3.1.3 Ambient air quality issues - Paragraph 14 ## 03-003 33 00**

<b>82</b>	P. Wardle	Draw attention to relevant known allergens, and advise people to remove or avoid them (e.g. cats, birch pollen).
<b>136</b>	Association For Independent Research (AIR)	If asthma is related to indoor lifestyles, some sort of regulatory action by Ecan or similar body may be called for.
<b>325</b>	I. M. E. Bailey	Be sure of the causes of allergies.

**Consideration**

Submissions 82, 325

Both submissions relate to allergens.

Environment Canterbury can only consider allergens if they come within its functions as defined in section 30 of the RMA – in this case section 30(1)(f), the control of discharges of contaminants into air. For naturally occurring allergy sources such as pollen and animals there must be doubt as to whether these are 'discharges' in terms of the RMA.

In any event, insofar as the Commissioners are aware there is no practical response Environment Canterbury could formulate under the RMA. No change is appropriate and it is recommended that the submissions are rejected.

Submission 136

Submitter 136 makes an observation, but it has not sought any change to Chapter 3, Section '3.1.3, Ambient air quality'.

The section focuses on ambient air quality outside buildings or structures. The Commissioners refer to the definition of 'ambient air quality' in Chapter 1 of the NRRP. No change is recommended in response to this submission, and it is recommended that it be rejected.

**Recommendations**

**Reject**

Submissions 82, 136, 325.

**Amendment Required**

None required.

**3.1.3 Ambient air quality issues - Paragraph 15 ## 03-003 36 00**

<b>82</b>	P. Wardle	Re paragraph 15 - evidence for the effects of PM10 on health are debatable, whereas reduced visibility and smell associated with smog are objectionable, and provide adequate reasons for ameliorating the problem. No decision requested.
<b>136</b>	Association For Independent Research (AIR)	Delete the paragraph beginning 'Finally, there are ... in visibility' and replace with 'Finally, there are issues associated with atmospheric clarity, especially in the vicinity of Christchurch. Good visibility is important aesthetically [ cf tourism] and can also be crucial to safe navigation [cf aviation]. Natural factors influencing visibility locally include water droplets [ cf rain, fog], dispersed sea salt, dust, pollen, etc. Smoke and other "man-made" combustion by-products contribute significantly to hazes in summer and also to reduced visibility observed on other occasions."

## **Consideration**

### Submission 82

Submitter 82 raises the issue of the science supporting the evaluation of Chapter 3 and in particular the health effects of PM<sub>10</sub> concentration.

This issue is evaluated above (see Chapter 3 - General Submissions ## 03-000 00 00, submissions 49, 71, 81(points 1 and 2), 134, 136(point 2), 162, 164, 190, 231, 423(points 1 and 2) and 981, and 3.1.3 Ambient air quality issues - Paragraph 3 ## 03-002 33 00, 136). These evaluations are adopted. No specific decision is sought and the Commissioners do not recommend any change. It is recommended that the submission is rejected.

### Submission 136

Submitter 136 sought the deletion of paragraph 15 (final paragraph) of '3.1.3, Ambient air quality issues' and its replacement by the paragraph set out in its submission. The effect of the change would be to emphasize natural conditions causing reduced visibility, the importance of visibility to navigation, and man-made contributions to summer time reduced visibility.

The Commissioners do not accept that the proposed emphasis on summer time reduced visibility is also significant during winter time. They also consider that haze is a more complex matter than straight mass and concentrations of PM<sub>10</sub>. Proposed Chapter 3 does not attempt to directly manage 'haze'. In the Commissioners' view the proposed substitute paragraph does not add to the existing paragraph 15. No change is recommended, and it is recommended that the submission is rejected.

## **Recommendations**

### **Reject**

Submissions 82, 136.

### **Amendment Required**

None required.

**3.1.4 Global air quality issues ## 03-003 42 00 - 03-007 00 00**

<b>44 (point 1)</b>	Spreydon Heathcote Community Board	Reopen discussions on the Clean Air Document.
<b>44 (point 2)</b>	Spreydon Heathcote Community Board	Seek alternatives for power supply, rather than using more electricity.
<b>112</b>	Solid Energy New Zealand Ltd	Retain section 3.1.4, and do not consider global air quality issues in the NRRP. Ecan should give consideration to initiating a variation to the Regional Policy Statement to remove references to climate change and greenhouse gases. Make any consequential amendments to the Plan.
<b>136</b>	Association For Independent Research (AIR)	Support, but only if the relevant decision-making involves due consideration of local health and economic issues.

**Consideration**Submission 44 (point 1)

Submitter 44 sought that discussion on the Clean Air document be reopened.

This submission does not seem to be relevant to the NRRP. It refers insofar as the Commissioners are aware to an earlier document. No change is recommended.

Submission 44 (point 2)

Submitter 44 asked that alternatives for power supply be sought, rather than using electricity. No specific change to Chapter 3 was identified in the submission. It is assumed that alternative 'energy' sources are the subject of the submission.

That topic has been canvassed elsewhere in these recommendations and on more than one occasion. The analyses there undertaken are adopted. The purpose of Chapter 3 is to assist Environment Canterbury to carry out any of its function as defined in section 30(1)(f) of the RMA (the control of discharges of contaminants into air) in order to achieve the purpose of the RMA. Chapter 3 is limited to the control of the discharge of contaminants to air. No change is recommended, and it is recommended that it be rejected.

Submissions 112, 136

The substance of these submissions is noted briefly above (see Introduction ## 03-001 01 00, 378, 401, F347). In the Commissioners' view the direction taken in the NRRP is appropriate. Clearly air quality issues require a response at a national level, and that at the present point of time, that response is far from clear. It may be that ultimately Environment Canterbury will be required to implement regional policies or rules, but at this stage that would be premature. The Commissioners recommend that there should be no change made at this time, and that the submissions be accepted either in whole or in part.

**Recommendation**

**Reject**

Submission 44 (points 1 and 2).

**Accept**

Submission 112.

**Accept in part**

Submission 136.

**Amendment Required**

None required.