



**Christchurch
household survey:**

a survey of Christchurch residents' opinions of proposed air pollution control methods and clean air incentives and assistance



**Environment
Canterbury**
Your regional council

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and clean air incentives and
assistance

**Report No. R02/27
ISBN 1-86937-486-X**

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Executive summary

Introduction

This report describes the solid fuel heating methods that are commonly used by Christchurch residents, and also their opinions of the proposed air pollution control methods. The report describes a two-stage research programme that was undertaken during July and August 2002.

The first stage consisted of two focus groups run with Christchurch residents with the purpose of obtaining an understanding of attitudes and opinions towards the proposed pollution control methods. The main reason for this qualitative assessment was to use the information obtained to develop a questionnaire to representatively measure the opinions of Christchurch residents. A summary transcript of the focus groups is contained as Appendix Two (p 25), to this report.

The achieved sample of 1484 households, which represents metropolitan Christchurch households on a proportionately weighted suburban basis, provides the basis for this report. In analysing the data, comparisons are presented with the 2001 public opinion survey, and results are presented by demographic characteristics. The margin of error is 2.5% at the 95% level of confidence

Solid fuel burning households

The survey indicated that approximately 39 percent of the households interviewed had a solid fuel burner of some description with 35 percent using it for heating purposes. Similarly, 17 percent indicated that they had an open fire, with only approximately 8 percent using it for heating. Overall 42 percent of households burned solid fuel of some description. Seventy two percent of those burning wood (approximately 37000 households) purchase 50 percent or more of their annual wood requirement, whereas, 39 percent (approximately 20100 households) obtain 50 percent or more of their wood, free.

Of the 42 percent of all households that burn solid fuels, 74 percent are NOT considering changing to cleaner forms of heating. Those less likely to change were in their 20's and 50's, retired, superannuitants, employed beneficiaries, service workers, self employed, technical/administrative workers or in agricultural vocations. Those with a community services card were less likely to change. Households with multiple income earners, and with 2 or 6 occupants were also less likely to change, with female respondents being more reluctant to change to cleaner forms of heating. Generally, the biggest concerns expressed by those reluctant to change, centred around cost, efficiency and alternative heating systems being as reliable.

Of those considering changing, 47 percent were considering gas alternatives and 36 percent electricity. These respondents were aged between 30 and 50, were tradesmen/labourers and professional managerial vocations, did not hold a community services card, were from single income households of 3 - 4 occupants, were more likely to own their own homes, and were more likely to be female.

Pollution effects and control options

Thirty seven percent of the sample stated that they personally, or friends and family were affected by air pollution, with the main effect being health related. There was a similarly, low, clear understanding of what the controls were, compared to the 2001 survey.

In terms of the individual control options the following patterns emerged:

No burner installations in new homes, or homes that currently do not have them:

It would appear that there was an increase in support for this option from 45 percent in favour in 2001, to 52 percent in the current survey. The level of opposition remained similar – 40 percent (2001), 39 percent (2002). Those opposing this option were older, self-employed, retired, beneficiaries, unemployed, students, or agricultural workers. They were more likely to hold a community services card, come from households with only one income earner, be male, in households of 1-2 or 6+ persons and own their own homes. Again those who were concerned, were mainly worried about cost, efficiency and the restricting of choices.

Replacing Existing Burners With New Low Emission Burners:
This was favoured by 80 percent of the sampled population.

No more use of open fires

Again, there appears to be an increase in the support for this option, with 70 percent being in favour in the current survey, compared with 52 percent in the 2001 survey. Twenty one percent were opposed in the current survey compared to 34 percent in 2001. Those who were opposed were in their 20's or 70+, retired, superannuitants or self-employed, community service card-holders, and from single, 4 or 5 income households. Again these people were concerned about cost and choices being too restricted.

Older burners phased out within 15 years of installation

As with the other control options, the level of support in the current survey (69 percent), was greater than in the 2001 survey (37 percent), in favour. In the current survey, 21 percent were opposed, compared with 47 percent being opposed in 2001. Those opposed in the current survey were aged in their 20's or 50+, retired, superannuitants, tradesmen/labourers, service workers, self-employed, sales and technical/admin workers. They were community service card- holders, from households with 2 and 6 occupants and tended to be male. Concern was generally over cost and the restrictions of options.

Incentives and assistance for changing from solid fuel heating

Forty percent of the total sample were able to provide some indication of incentives and assistance programme offered to change, though there were very few who were aware of all the proposals. After being told of the options approximately fourteen percent believed that some form of the incentives/assistance was relevant to their situation. Seven percent of those surveyed thought they would be likely to take up the incentives or assistance, however only about 4 percent could provide any indication of when that was likely.

The remainder of this report describes these findings in more detail.

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1 Methodology

1.1 Introduction

To establish the opinions of Christchurch residents towards proposed air pollution control methods a two stage research programme was undertaken over the period 9th July to the 7th August 2002.

The first qualitative stage consisted of two focus groups and this was followed by a telephone survey of 1500 households in 88 suburbs¹ throughout metropolitan Christchurch. The objectives for this study are outlined below.

1.2 Objectives

The specific objectives for the study were to:

1. To provide information that will assist in the planning and targeting of communication, education and marketing programmes to support the Air Chapter of the NRRP, and the promotion of incentives and assistance funding to households in Christchurch.
2. To track changes in public opinion and awareness of air quality issues, and of proposed control methods, in the period since the survey of May/June 2001.
3. To assist in predicting likely household (including owner/occupier; landlord; tenant) behaviours for those using solid fuel as main form of heating in respect of:
 - Intention to change main home heating method
 - Timing of likely change
 - If changing, type of home heating likely to be installed
 - Uptake of proposed incentives and assistance funding (including identifying which incentive stream they would fit into)
4. To provide councillors with additional feedback on public attitudes towards the draft incentives and assistance scheme.

1.3 Research Programme

Part one of the research programme consisted of two focus groups run with Christchurch residents. The groups consisted of residents from suburban areas with high relative percentages of solid fuel burning. One group was from the Linwood, Bexley area and the other from Dallington – Shirley suburbs. The purpose of the focus groups was primarily to provide background information for developing a survey questionnaire.

A telephone survey was considered the only method for collecting the data, given the nature of information to be collected and time constraints. One thousand five households were contacted by fifteen trained interviewers over the period 30 July to 7 August 2002.

¹ The suburbs used were identified from Statistics New Zealand statistical suburban units.

1.3.1 Sample Size

The sample size was calculated using the formula for sampling from a finite population without replacement.

$$n = \frac{N Z_{\alpha/2}^2 p \cdot q}{(N - 1) e^2 + Z_{\alpha/2}^2 p q}$$

where	n	=	sample number (1484).
	$Z_{\alpha/2}$	=	confidence interval estimate (expressed in standard normal variable form, set at 95%).
	N	=	population number of households. (123247)
	p.q	=	component of sample proportion variance estimate (maximised at 0.25).
	e	=	tolerable error level (2.5%).

1.3.2 Sampling Procedure

One hundred and five suburbs were selected from the Statistics New Zealand data base and the respective household numbers for each suburban area used to develop a proportionate sample plan. A total of 1500 interviews were completed, and after coding and editing 1484 were usable. Table 1.1 which follows provides an indication of the target and achieved suburb samples.

Table 1.1 Suburb Sample Details

SUBURB	Weighted h/h numbers	Target %	Achieved %
Addington	1234	1.0	1.01
Aranui	1568	1.3	1.48
Avon Loop/City/Square/Hagley Park	3440	2.8	1.42
Avondale	1656	1.3	1.95
Avonhead/Merrin	2963	2.4	3.23
Avonside	1322	1.1	1.21
Barrington	3277	2.7	0.88
Beckenham	898	.7	1.62
Belfast	1391	1.1	1.08
Bexley	1387	1.1	0.88
Bishopdale	3785	3.1	3.1
Bromley	1153	.9	0.67
Broomfield	1980	1.6	0.47
Bryndwr/Jellie Park	1817	1.5	1.21
Burnside/Wairarapa	1477	1.2	1.89
Burwood	1069	.9	1.42
Casebrook	902	.7	.74
Cashmere	2465	2.0	3.64
Dallington	1388	1.1	1.15
Edgeware	1643	1.3	0.61
Fendalton/Holmwood	1897	1.5	2.63
Ferrymead	985	.8	0.27
Halswell/Kennedys Bush	1317	1.1	1.89
Harewood/Sawyers Arms	2142	1.7	1.35
Heathcote Valley	656	.5	0.47
Hillmorton	1560	1.3	1.42
Hoon Hay	1902	1.5	2.22
Hornby	3046	2.5	2.56
Ilam	1236	1.0	1.68
Islington	825	.7	0.27
Linwood	3698	3.0	3.10
Mairehau	1074	.9	0.74
Marshland	1729	1.4	0.74
Merivale	1393	1.1	1.82
Moncks Bay/Redcliffs	1396	1.1	0.74
Mount Pleasant	1566	1.3	1.55
New Brighton	1074	.9	1.75
North Beach/Rawhiti	3703	3.0	1.75
Northcote	910	.7	0.20
Oaklands	1984	1.6	0.67
Opawa /Ensors	2708	2.2	2.16

SUBURB	Weighted h/h numbers	Target %	Achieved %
Phillipstown/Chisnall	2480	2.0	0.67
Redwood	2392	1.9	2.83
Riccarton/Deans Bush/Wharenui	4689	3.8	2.43
Riccarton (Upper)	983	.8	1.15
Richmond	2221	1.8	1.01
Russley	988	.8	0.74
Shirley	2717	2.2	2.96
Sockburn	2466	2.0	1.28
Somerfield	1387	1.1	0.88
South Brighton/Southshore	1477	1.2	1.89
Spreydon	1393	1.1	2.83
St Albans/Rutland	5195	4.2	5.05
St Martins/Rapaki Track/Murray Aynsley	2302	1.9	2.43
Strowan	1488	1.2	0.67
Styx	2319	1.9	0.67
Sumner	1568	1.3	1.48
Sydenham	2457	2.0	1.42
Templeton	660	.5	0.40
Waltham	411	.3	0.40
Westmorland	492	.4	0.54
Wigram	578	.5	0.27
Woolston	2142	1.7	1.89
Yaldhurst	244	.2	0.34
Papanui/Aorangi	3456	2.8	4.51
Parklands/Travis/Queenspark	3126	2.5	1.62
	123247	100.0	100.00

1.4 The Analysis

The questionnaires were coded and entered into a data base. The data was weighted on a proportionate suburban household number basis to account for any small variations between the target and achieved suburban samples.

Univariate analysis was undertaken in the form of marginal frequency distribution of the respondent information. All bivariate results reported in the following sections of the report are statistically significant at the 95% confidence level unless otherwise specified.

Sample Representation

Figure 1.1 that follows provides an indication of the sample distribution of burning compared with the available 2001 census information. A comparison is provided of the sample data in weighted and un-weighted form.

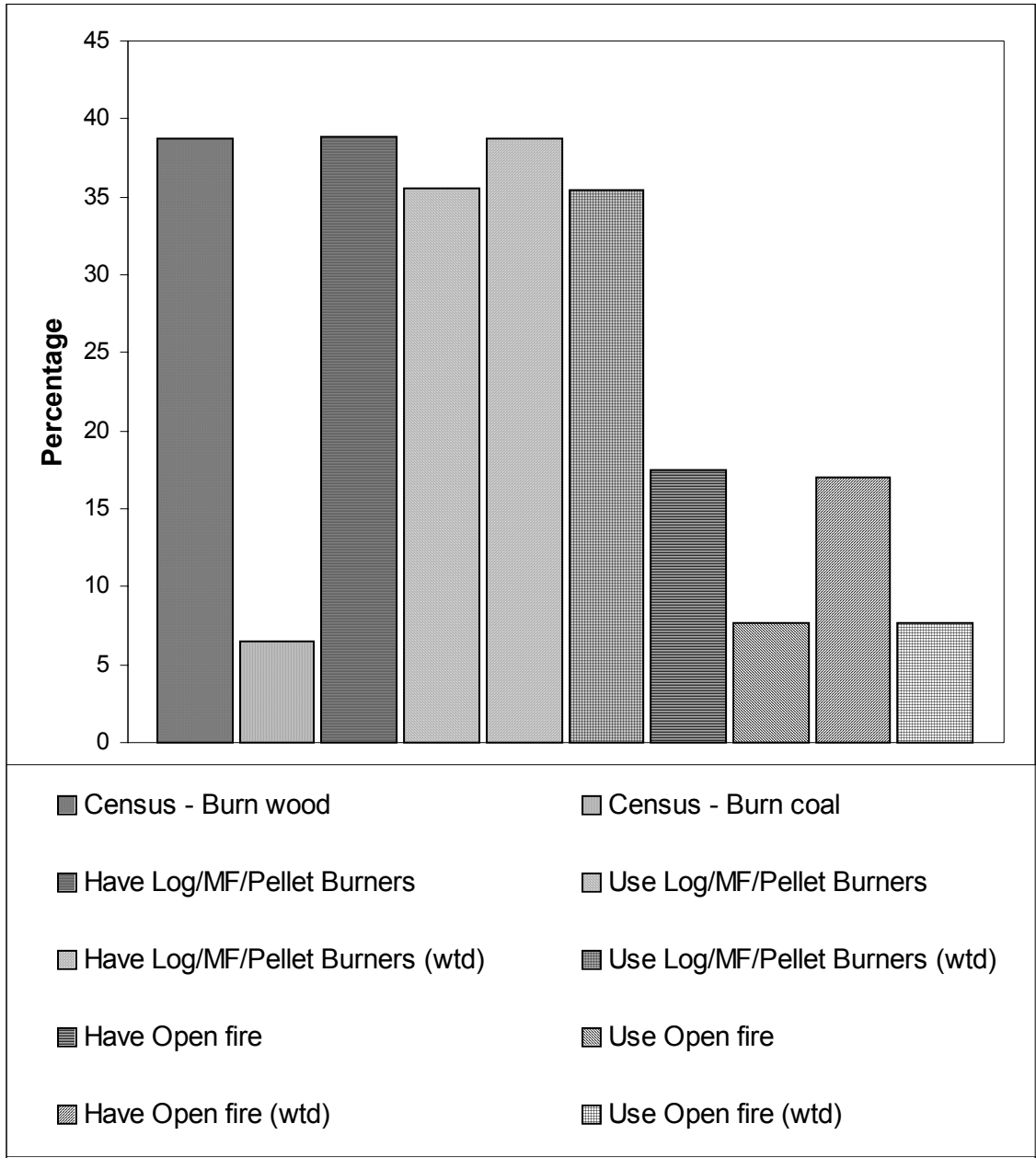


Figure 1.1 Sample Representation

2 Solid fuel burning households

2.1 Introduction

This chapter describes the behaviour of those Christchurch households who have open fires and solid fuel burners. Table 2.1 below provides an indication of the number of households that have open fires and solid fuel burners, and also the number of households that use them as a form of heating.

Table 2.1 Households With Solid Fuel Heating Systems

<i>Heating Method</i>	<i>Have</i>		<i>Use</i>	
	<i>%</i>	<i>Households</i>	<i>%</i>	<i>Households</i>
Open Fire	17.0	20923	7.7	9469
Log, multi-fuel burner, pellet fire	38.7	47674	35.4	43658

2.2 Source of fire wood

Respondents were given the opportunity to indicate where they obtained the wood they burned for heating, in their open fires and of their solid fuel burners.

As can be seen from Table 2.2, 2.3 and 2.4 that follow, approximately 77 percent of households burning solid fuel buy 10 percent or more of their wood, whereas approximately 50 percent of households obtain ten percent or more of their wood free. In Table 2.2 the household numbers are also provided.

In terms of their total wood burnt, 49 percent of burning households buy 100 percent of their wood used, whereas only 22 percent of burning households obtain 100 percent of their wood free of charge. Figure 2.1 which follows shows the distribution of households.

Table 2.2 Source of wood

%	<i>PURCHASED</i>		<i>FREE</i>	
	%	Households	%	Households
<10	22.7	11708	50.5	25949
10 – 19	1.6	845	2.7	1399
20 – 29	3.0	1550	5.3	2751
30 – 39	0.5	276	2.0	1045
40 – 49	0.2	106	0.5	242
50 – 59	11.3	5816	11.3	5816
60 – 69	1.0	466	0.3	168
70 – 79	3.5	1807	1.4	726
80 – 89	3.8	1982	2.0	1038
90 – 99	3.8	1982	1.6	845
100	48.5	24978	22.3	11505

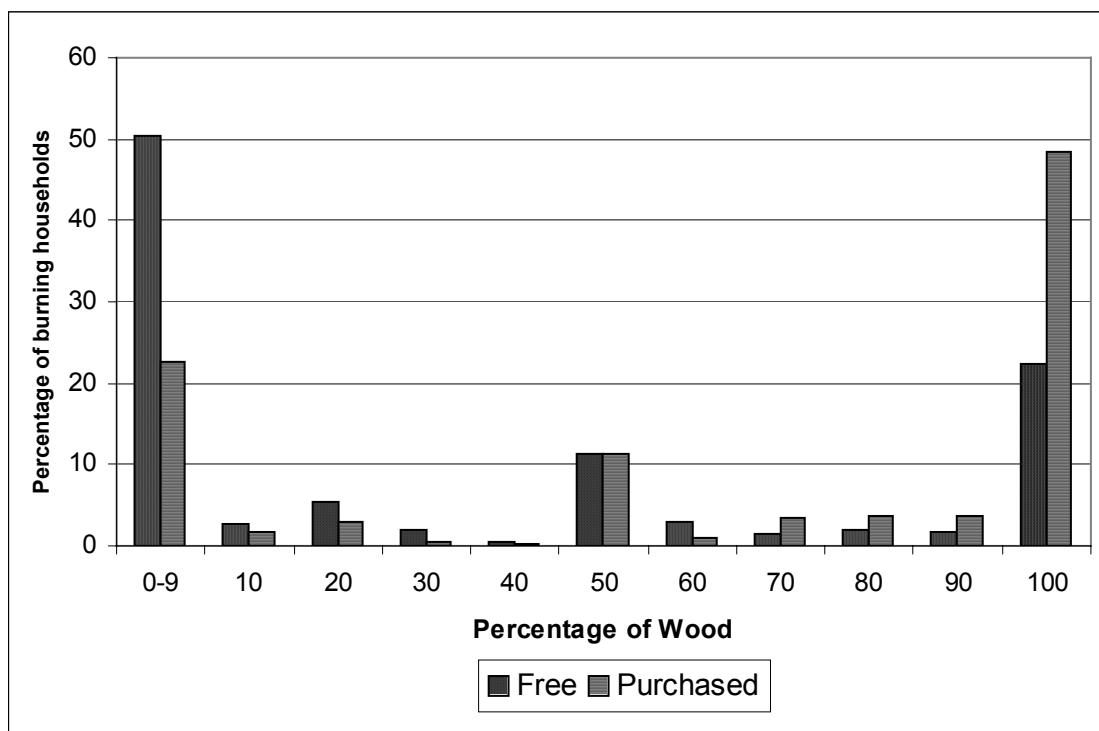


Figure 2.1 Source of wood

Table 2.3 Proportion purchased

	Households	Percent	Valid Percent	Cumulative Percent
Under 50 percent	14485	28.1	28.1	28.1
50 percent and more	36998	71.9	71.9	100.0
Total	51482	100.0	100.0	

Table 2.4 Proportion free

	Households	Percent	Valid Percent	Cumulative Percent
Under 50 percent	31385	61.0	61.0	61.0
50 percent and more	20098	39.0	39.0	100.0
Total	51482	100.0	100.0	

2.3 Considering changing from solid fuel heating

Households were given the opportunity to indicate whether or not they were considering changing from solid fuel to cleaner forms of heating. Approximately 42 percent of those households surveyed indicated that they currently burn solid fuels. This represents approximately 51482 households.

Table 2.3 which follows indicates that of those households who burn solid fuels, 74 percent are not considering changing to other forms of heating, with 5 percent uncertain and 21 percent considering changing.

Table 2.5 Considering Changing From Solid Fuel Heating

	Households	Percent	Valid Percent	Cumulative Percent
Yes	10722	20.8	20.8	20.8
No	38135	74.1	74.1	94.9
Don t know or no answer	2624	5.1	5.1	100.0
Total	51482 ²	100.0	100.0	

2.4 Characteristics of households changing from solid fuel

In this section where reference is made to respondents being *more likely* or *less likely* to change from solid fuel heating, these differences are in comparison with the overall percentages shown in Table 2.3 above. Most of the differences are quite small being less than 5%.

Demographic characteristics of households and their intentions are as follows:

² All households which burn solid fuel.

AGE:	Those households more likely to change from solid fuels are ones where the respondents were aged in their 30's and 40's, or would not disclose their age. Those less likely to change were aged in their 20's and 50 to 69. Those who were more uncertain were aged in their 20's, 50's and 70+.
OCCUPATION:	Those more likely to change were from households where the main income earner worked in trades/labourer, professional managerial, and sales vocations, or would not indicate their occupation. Those less likely to change were retired, superannuitants, unemployed, beneficiaries, service workers, self-employed, technical/admin workers or those working in agricultural/farming vocations.
COMMUNITY SERVICES CARD	Those holding a community services card are less likely to change to an alternative, cleaner form of heating.
NUMBER OF INCOME EARNERS:	Households with one income earner were more likely to change, however, households with multiple income earners were less likely to change from solid fuel burning.
NUMBER IN THE HOUSEHOLD:	Households that would not disclose the number of occupants, and households with 3, 4 and 7 occupants were more likely to change, whilst households with 2 and 6 occupants were less likely to change. Single occupant households tended to be more undecided.
HOME OWNERSHIP:	As perhaps expected, respondents who own their homes were more likely to change to a cleaner form of heating, and those renting less likely, or more undecided.
GENDER:	Females respondents appear less likely to change from solid fuel heating, and male respondents more likely to adopt cleaner forms of heating.
SUBURB:	Of the 105 suburbs surveyed, those less likely to change are the 31 listed below: Aranui, Avonside, Bexley, Burwood, Casebrook, Cashmere, Edgware, Halswell, Ferrymead, Harewood, Heathcote, Linwood, Mairehau, Marshlands, Merivale, New Brighton, North Beach, Northcote, Phillipstown, Upper Riccarton, Russley, Sockburn, Spreydon, Styx, Sumner, Templeton, Westmorland, Woolston, Yaldhurst, Papanui and Parklands.

2.5 Alternative form of heating

The respondents who indicated that they were considering changing to another form of heating were able to indicate one or more preference. Table 2.4 that follows provides an indication of what heating alternatives those people who use solid fuels and currently burn are considering changing to.

Table 2.6 Alternative form of heating

New form of heating	Households	% of responses	% of households
Electricity	2939	20.9	23.4
Gas	6664	47.3	53.1
Diesel/oil	524	3.7	4.2
Hottie	69	0.5	0.6
Low emission burner	944	6.7	7.5
Pellett fire	460	3.3	3.7
Heat pump	2141	15.2	17.1
Anything as efficient	53	0.4	0.4
Don't know	290	2.1	2.3
Total	14083 ³	100.0	112.2

2.6 Not intending to change

Respondents who indicated they do not intend to change from solid fuel burning were able to indicate their main concerns. As Table 2.5 indicates the biggest concerns about change were cost related to operating and installing alternative systems, and an absolute refusal to change. Other concerns related to alternative energy reliability, efficiency and the alternatives not being as cheap for the amount of energy produced.

The views expressed about cost concerns, particularly related to the cost to individuals relative to the level of heat produced with solid fuel burners, was consistent with the general opinions obtained in the focus groups. When this concern is considered with the fact that approximately 39 percent of solid-fuel burning households get 50 percent or more of their wood free, the scale of the householders' level of concern is quite considerable.

Table 2.5 that follows describes the reasons for not considering changing to alternative forms of heating by solid fuel burning households.

³ All solid fuel burning households considering changing to alternative heating systems.

Table 2.7 Reasons for Not Considering Changing From Solid Fuel Burning

REASON	HOUSEHOLDS	% OF RESPONSES	% OF CASES
Cost of installation & or operation	20077	46.5	51.9
Refuse to change	9490	22.0	24.5
Have installed alternative	735	1.7	1.9
Don't believe the research	1052	2.4	2.7
Legal considerations	465	1.1	1.2
Other energy reliability	1929	4.5	5.0
Renting/flatting	2138	5.0	5.5
This is cheaper	2116	4.9	5.5
Wood is renewable	157	0.4	0.4
Other not provide heat	1040	2.4	2.7
Not as efficient	1781	4.1	4.6
Incentives not enough	82	0.2	0.2
Gas not safe	163	0.4	0.4
Health effects – cold unwell	126	0.3	0.3
Shifting	183	0.4	0.5
Inconvenient	212	0.5	0.5
Freedom of choice	468	1.1	1.2
Condensation	130	0.3	0.3
Ill be dead	323	0.7	0.8
Cook/heat hot water if power fails	479	1.1	1.2
Total	43146⁴	100	111.5

⁴ All solid fuel households not considering changing to alternative non solid fuel heating systems.

3 Residents' opinions of pollution effects and control options

3.1 Introduction

This chapter describes the level of effect residents believe that air pollution has, and also indicates their opinions of the proposed control options.

3.2 Affects of air pollution

Respondents were asked whether they personally, or their family, were affected by air pollution. Thirty seven percent of the sampled households stated that they, or family members, were affected in some way by air pollution. This compares to 35 percent in the 2001 survey. The respondents who stated that they were affected in some way gave a number of responses, with the most common affect being *health related*. A description of all the affects mentioned by respondents are listed in Appendix Three, and are summarized in Table 3.1 which also provides a comparison with the survey undertaken in 2001.

Table 3.1 Summary of air pollution affects

Affect	Current (2002) Survey		2001 Survey	
	% Responses	% Cases	% Responses	% Cases
Health related	67.3	83.0	78.9	85.8
Future environmental problems	0.5	0.6	0.5	0.6
Looks/smells tastes horrible	22.1	27.2	10.9	11.8
Spoils quality of life	9.9	12.2	8.4	9.1
Don t know	0.3	0.4	1.4	1.5
Total	100.0	123.3	100	108.8

3.3 Knowledge of the proposed control methods

In order to obtain a measure of the level of public understanding about the proposed control methods, respondents were asked to describe these methods in an unprompted manner. Thirty six percent of the respondents had no idea what the control methods were, this compares to 40 percent in the 2001 survey. In the current survey, 3.7 percent had a clear understanding, which is almost the same as the 4 percent in the 2001 survey who could clearly explain what the proposed methods of control were at that time.

Of the 61 percent of respondents who gave what they thought the control methods were, the suggestions presented by most respondents related to *banning open fires* (34%), and *banning all forms of solid fuel heating* (23%). Table 3.2 summarises the suggestions put forward by respondents and a detailed explanation is available in Appendix Three.

Table 3.2 Respondent suggestions of proposed control methods

Category label	Current (2002) Survey		2001 Survey	
	% Responses	% Cases	% Responses	% Cases
Get rid of fireplaces			4.6	9.2
Ban all forms of solid fuel heating	7.8	23.3	8.7	17.3
Understand most of the proposals	1.2	3.7	2.2	4.4
Yr 2005 no fireplaces			0.7	1.4
Phase out all burning within 20 years	0.9	2.8	2.2	4.4
Fascist control			0.1	0.1
Phase out solid fuels/burners-2010			2.0	3.9
Phase out solid fuels/burners-2015			0.6	1.1
Ban open fires	11.5	34.4	5.6	11.3
Plans keep changing	0.1	0.3	0.6	1.1
Some idea			5.5	11.0
Not interested-don t care			0.3	0.6
Financial assistance programmes	0.2	0.6	0.1	0.3
Have banned open fires already	0.6	1.7		
Have banned coal already	0.4	1.2		
Don t know- no other answers given	77.3	232.0	67.0	133.9
Total	100.0	300.0	100.0	200.0

3.4 Respondents' opinions of proposed control methods

Each of the control methods were explained to the respondents, and then their support for each individual option was measured. As well as assessing respondent support for the control methods, each respondent was asked how they personally, or their household, would be affected by the proposals. Reaction to each of the control methods is reported in the following sections.

3.4.1 No burner installations in new homes or homes that currently don't have them

It was explained that this option would be instituted from 1st January 2003, and would apply to new homes, or homes that currently do not have a solid fuel burner. These results are compared to a similar question asked in the 2001 survey. Approximately 39 percent of those surveyed opposed this option, whilst 52 percent were in favour, with remainder being indifferent. This compares to 40 percent being opposed and 45 percent in favour in the 2001 survey. Figure 3.1 provides a distribution of the degree of support/opposition to this control method, and shows a comparison with the 2001 survey. The only difference between the two surveys was that in the current survey, respondents were informed that this proposed control method would not be effective until 1 January 2003, whereas the 2001 the proposal was to be effective immediately.

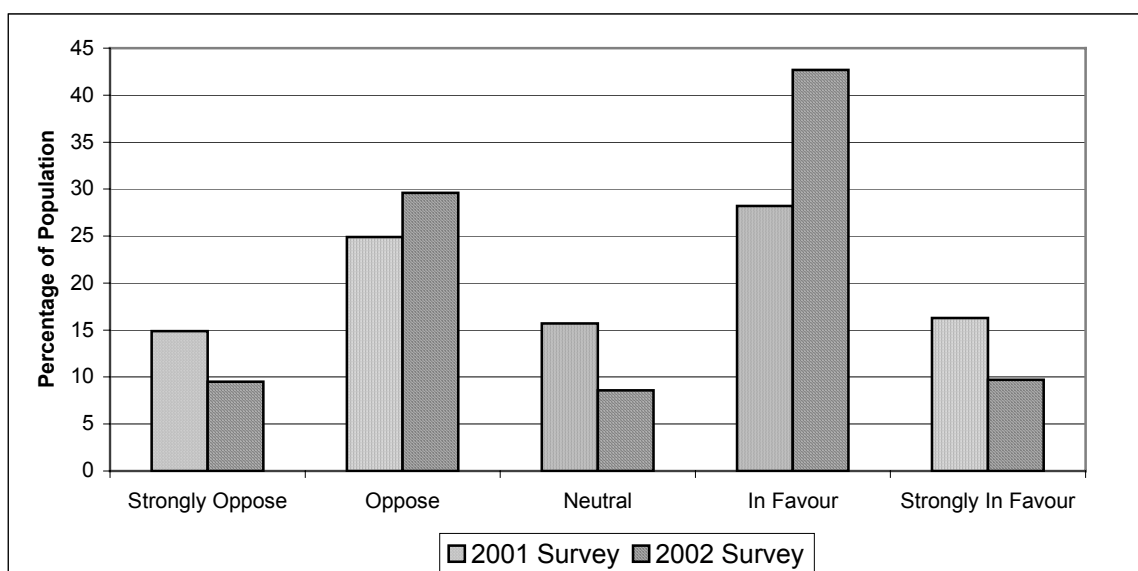


Figure 3.1 Opinion of banning new burner installations

The following demographic and socio-economic patterns were noted.

Those who opposed banning burner installations in new homes were likely to be:

1. Aged 50 plus.
2. Be self-employed, beneficiaries/unemployed, retired/ superannuitants, students or farm/agricultural workers.
3. More likely to hold a community services card.
4. Come from households with only one income earner.
5. Be in households with 1 or 2 occupants, or 6+ occupants.
6. Own their own homes.
7. More likely to be male.

Those households in favour of the prohibiting burner installations in new homes, or homes that currently do not have burners, were more likely to be:

1. Aged between 30 and 50.
2. Be technical/admin workers, sales and service workers, and professional managerial.
3. Not hold a community services card.
4. Come from households with 2+ income earners.
5. Come from households with 3 to 5 occupants.
6. More likely to be female.

Concerns of respondents who are opposed to not installing new burners

Respondents who stated that they were opposed to no burner installations in new homes or homes that currently don't have them, were given the opportunity to indicate why they were concerned. Thirty five percent of all respondents gave one or more concern. As can be seen from Table 3.3 below, the major concerns were *financial, not believing there is a problem or its causes, a belief that there is low emission burners that could be viable for all houses, and concern over electricity reliability.*

Table 3.3 Concerns over not installing burners in new homes or homes that do not have them

CONCERN	% OF RESPONSES	% OF CASES
Affect me financially-money worries	15.9	18.2
Don t believe its a problem	9.0	10.3
Don t believe the causes	8.5	9.7
Worried-electricity reliability	6.1	7.0
Worried-electricity cost	5.4	6.2
Worried about gas supply	0.8	1.0
Worried about gas cost	2.0	2.3
Restricting choices too much	19.0	21.7
Harm the elderly	3.9	4.5
Test burners	0.5	0.6
No burners	0.2	0.2
Educate operators	0.8	1.0
Wet wood-wood quality	0.3	0.4
Loss of jobs	0.3	0.4
Clean burning tech-LEB	8.5	9.7
Loss of psychological warmth	4.4	5.0
No cost effective alternative	4.4	5.0
Heat H2O-cook-heat	0.2	0.2
Wood is renewable	1.2	1.4
Too much trouble	0.5	0.6
15 yr econ life is rubbish	0.2	0.2
Produces more heat	3.9	4.5
All issues not being considered	0.3	0.4
Not convinced	2.4	2.7
Too soon-too harsh	1.2	1.4
Total	100.0	114.3

3.4.2 Replace existing burners with new low emission burners

It was explained to respondents that from 1st January 2004, residents can only replace existing burners with new low emission burners. As can be seen from Figure 3.2, 80 percent of the surveyed population were in favour of this option. Approximately 13 percent of respondents opposed this option.

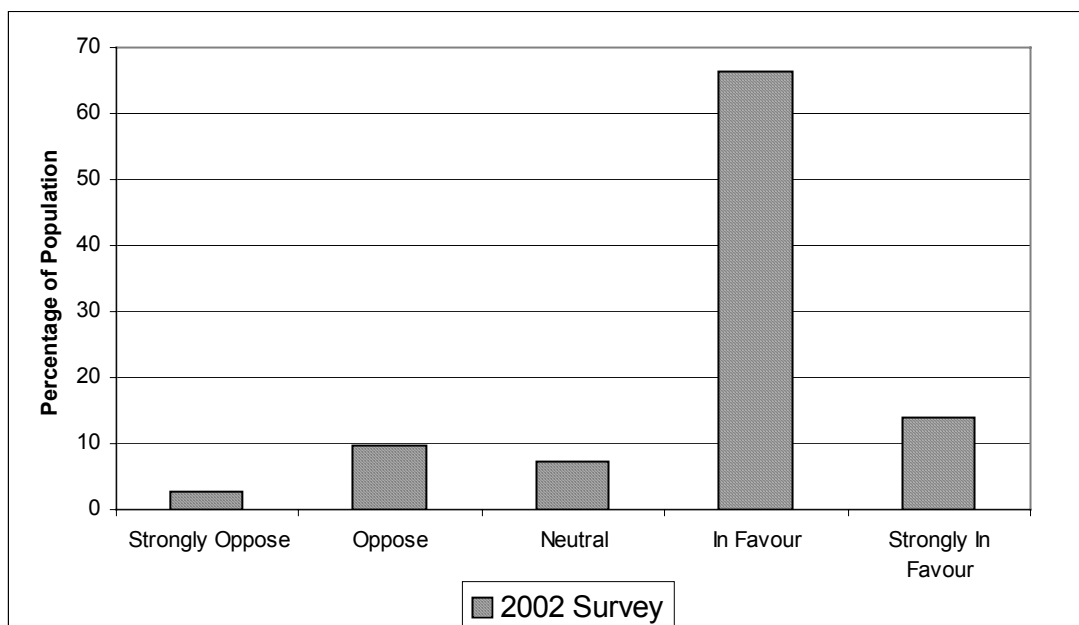


Figure 3.2 Replace Existing Burners with Low Emission Burners

Those who opposed replacing existing burners with low emission burners were.

1. Aged in their 20's or 50+
2. Retired superannuitants, service workers, self-employed or farm/agricultural workers.
3. More likely to hold a community services card.
4. Come from households with only 3 income earners or not disclose the number of income earners.
5. Be in households with 1 or 2 occupants, or 6 occupants.
6. Rent or board.
7. More likely to be male.

Those households in favour of replacing existing burners with low emission burners, were more likely to be:

1. Aged between 30 and 59.
2. Be tradesmen/labourers, students, professional managerial or sales workers.
3. Not hold a community services card.
4. Be in households with 2 and 4 income earners.
5. Come from households with 4,5 and 7+ occupants.
6. More likely to be female.

Concern over replacing existing burners with low emission burners

Nine percent of respondents gave one or more concerns about only allowing low emission burners to replace existing burners. Again, *financial affects* were the most important, followed by concern over *restricting choices too much*. Table 3.4 refers.

Table 3.4 Concerns over replacing burners with low emission burners

CONCERN	% OF RESPONSES	% OF CASES
Affect me financially-money worries	25.0	30.1
Don t believe its a problem	7.9	9.6
Don t believe the causes	6.7	8.1
Worried-electricity reliability	2.4	2.9
Worried-electricity cost	1.8	2.2
Worried about gas supply	0.6	0.7
Worried about gas cost	0.6	0.7
Restricting choices too much	17.7	21.3
Harm the elderly	4.3	5.1
Test burners	0.6	0.7
No burners	6.7	8.1
Educate operators	1.2	1.5
Wet wood-wood quality	1.2	1.5
Loss of jobs	0.6	0.7
Clean burning tech-LEB	3.0	3.7
Loss of psychological warmth	1.2	1.5
No cost effective alternative	6.1	7.4
Too much trouble	2.4	2.9
15 yr econ life is rubbish	0.6	0.7
Produces more heat	1.8	2.2
All issues not being considered	0.6	0.7
Not convinced	3.7	4.4
Who is paying?	0.6	0.7
Too soon-too harsh	2.4	2.9
Total	100.0	120.6

3.4.3 No more use of open fires

It was explained that this option would be instituted from 1st January 2006. These results are compared to a similar question asked in the 2001 survey. In the current survey approximately 21 percent of those surveyed opposed this option, whilst 70 percent were in favour, with remainder being indifferent. This compares to 33 percent being opposed and 52 percent in favour in the 2001 survey. Figure 3.3 provides a distribution of the degree of support/opposition to this control method, and shows a comparison with the 2001 survey. The only difference between the two surveys was that in the current survey, respondents were informed that this proposed control method would not be effective until 1 January 2006, whereas the 2001 the proposal was to be effective from 2005. Figure 3.3 refers.

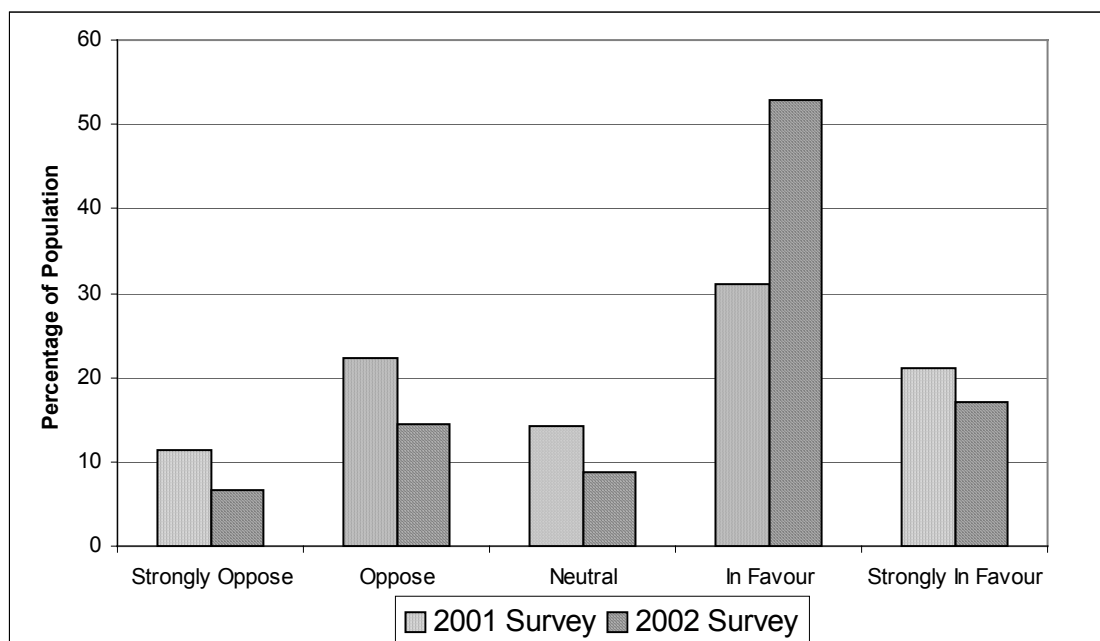


Figure 3.3 No more open fires from 1st January 2006

Those who opposed banning open fires were:

1. Aged in their 20's, 70+, or would not disclose their age.
2. Retired/superannuitants or self employed.
3. Community service card holders.
4. From single, and 4 and 5 income earner households.
5. From households with 1, 4 and 6 occupants.
6. Boarders or would not disclose home ownership details.
7. Male.

Those households in favour of banning open fires, were more likely to be:

1. Aged between 30 and 69.
2. Tradesmen/labourers, professional/managerial, service workers, sales, technical, admin workers, or work in agriculture.
3. Not community service card holders.
4. In households with 2 to 4 income earners.
5. Households with 4,5 or 7 occupants.
6. Respondents who owned their own homes.
7. Female.

Concern over no more open fires

Eighteen percent of respondents indicated one or more concern over the elimination of open fires. Again, the major concerns expressed about restricting open fires were mainly *financial*, and *restricting choices too much*. Table 3.5 refers.

Table 3.5 Concern over no more open fires

CONCERN	% OF RESPONSES	% OF CASES
Affect me financially-money worries	23.9	28.1
Don t believe its a problem	5.6	6.5
Don t believe the causes	6.6	7.7
Worried-electricity reliability	3.9	4.6
Worried-electricity cost	5.9	6.9
Worried about gas supply	0.3	0.4
Worried about gas cost	3.0	3.5
Restricting choices too much	17.4	20.4
Harm the elderly	9.8	11.5
Educate operators	0.7	0.8
Loss of jobs	0.3	0.4
Clean burner tech-LEB	0.7	0.8
Loss of psychological warmth	6.2	7.3
No cost effective alternative	5.9	6.9
Heat H2O-cook-heat	1.3	1.5
Wood is renewable	0.3	0.4
Too much trouble	1.0	1.2
Produces more heat	2.0	2.3
Not convinced	1.3	1.5
Who is paying?	0.7	0.8
Too soon-too harsh	2.6	3.1
Coal first	0.7	0.8
Total	100	117.3

3.4.4 Older burners phased out within 15 years of installation

It was explained that this option would be instituted from 1st January 2008. These results are compared to a question in the 2001 survey, which stated “*From 2010 – No using any form of solid fuel burning 15 years after it has been installed*”. In the current survey approximately 21 percent of those surveyed opposed this option, whilst 69 percent were in favour, with remainder being indifferent. This compares to 47 percent being opposed and 37 percent in favour in the 2001 survey. Figure 3.4 provides a distribution of the degree of support/opposition to this control method, and shows a comparison with the 2001 survey.

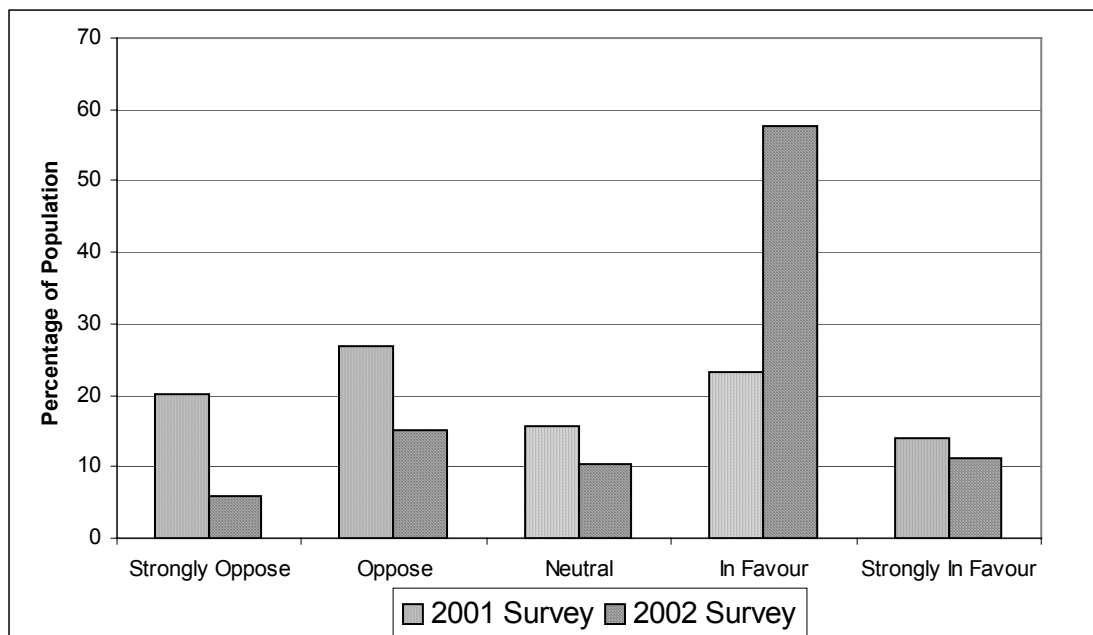


Figure 3.4 Not using any form of solid fuel appliance fifteen years after installation

Those who opposed this option were:

1. Aged in their 20's, and 50+.
2. Retired/superannuitants, tradesmen/labourers, service workers, self employed, sales, and technical/admin workers.
3. Hold a community services card.
4. Two and 6 occupants in the households.
5. Male.

Those households in favour of not using any form of solid fuel appliance fifteen years after installation were:

1. Aged 30 to 50.
2. Unemployed/beneficiaries, tradesmen/labourers, professional workers, sales and technical/admin workers.
3. Not community service card holders.
4. Were households with between 1 and 4 income earners.
5. Households with 3 to 5 occupants.
6. Owned their own homes.
7. Female.

Concern over phasing out burners after 15 years

Eighteen percent of all respondents indicated one or more concern about phasing burners out within 15 years of their installation. As with concerns over the other control methods, *financial* concerns and the fact that respondents believed that their choice of heating options was being *too restricted*, were the most prevalent. Table 3.6 refers.

Table 3.6 Older burners phased out within 15 years of their economic life

CONCERN	% OF RESPONSES	% OF CASES
Affect me financially-money worries	21.9	25.3
Don t believe its a problem	7.2	8.3
Don t believe the causes	6.0	7.0
Worried-electricity reliability	1.9	2.2
Worried-electricity cost	4.5	5.2
Worried about gas supply	0.8	0.9
Worried about gas cost	2.3	2.6
Restricting choices too much	17.4	20.1
Harm the elderly	4.2	4.8
Test burners	1.9	2.2
No burners	0.8	0.9
Educate operators	0.8	0.9
Wet wood-wood quality	0.4	0.4
Loss of jobs	0.4	0.4
Clean burner tech-LEB	4.2	4.8
Loss of psychological warmth	1.5	1.7
No cost effective alternative	5.7	6.6
Too much trouble	1.1	1.3
15 yr econ life is rubbish	4.9	5.7
Produces more heat	1.5	1.7
Not convinced	3.8	4.4
Who is paying?	2.6	3.1
Too soon-too harsh	3.0	3.5
Hard to age burners	1.1	1.3
Gas safety	0.4	0.4
Total	100	115.7

4 Incentives and assistance for changing from solid fuel heating systems

4.1 Introduction

This chapter describes the respondents' awareness of the incentives available to change from solid fuel heating systems.

4.2 Awareness of assistance schemes

Approximately 40 percent of those respondents surveyed were able to provide one or more response regarding what they believed the incentives and assistance programme to be. Of these respondents, 75 percent (or 30% of the total sample), had some idea, although they were confused about either the level of assistance or the eligibility criteria. Twenty percent of those responding (ie 8 percent of the total sample) knew about the \$500 grant for removing an open fireplace, 3 percent (1 percent of the total sample) knew about assistance for insulation and approximately 2 percent (1 percent of the total sample) knew about the assistance of \$4000 to community service card holders.

4.3 Relevance and likely uptake of incentives and assistance programme

Having read the assistance and incentives available to assist householders to change their heating systems, they were then asked whether any were relevant to their situation. Table 4.1 provides an indication of the level of relevance to the surveyed population.

Table 4.1 Relevance of assistance and incentives

Relevant?	Households	Percent	Valid Percent	Cumulative Percent
Yes	16917	13.7	13.7	13.7
No	74280	60.3	60.3	74.0
Don t know	32049	26.0	26.0	100.0
Total	123247	100.0	100.0	

4.4 When residents likely to take up assistance

Seven percent of those surveyed provided an indication of when they would be likely to take up the incentives and assistance available to change from solid fuel heating systems. Almost half (46 percent) of those who responded *didn't know* when they would be likely to use the incentives/assistance programme. Seventeen percent of those who responded would use the incentives and assistance scheme when forced to by law. Table 4.2 refers.

Table 4.2 When take up the incentives/assistance programme

<i>When?</i>	Households	Percent	Valid Percent	Cumulative Percent
Don t know	4066	45.9	45.9	45.9
Before next winter	721	8.1	8.1	54.1
Immediately asap	392	4.4	4.4	58.5
Already have	719	8.1	8.1	66.6
When forced by law	1536	17.3	17.3	83.9
Two years time	881	10.0	10.0	93.9
Within 5 years	542	6.1	6.1	100.0
Total	8857	100.0	100.0	

Appendix One Focus group report

Introduction

Stage one of the public opinion research into the clean air incentives and assistance programme, consisted of qualitative research in the form of two focus groups. The objective of the focus groups was to explore the breadth and depth of understanding and opinion of the incentives and assistance programme which has been developed to assist in reducing the air pollution problem in Christchurch. As a precursor to the discussions on assistance and incentives, a general discussion on the proposed changes to solid fuel burning in Christchurch, and how the changes would affect individuals, was undertaken.

The focus groups were operated in lower socio-economic suburbs where the proportion of households burning wood and coal was higher than the city as a whole. The areas represented were Linwood, Dallington and Richmond. An abbreviated explanation of the proposed controls was given to the participants a few days before meeting so that they would have a complete understanding of what was proposed. The following sections are a summary of the discussions held during the focus groups.

Linwood Focus Group

The seven participants within this group ranged in age from 30's to late 60's, and all used solid fuel for heating, with a couple of the group relying only on open fires for their heating. Initial discussions centred on the proposed control methods. About half the group had some idea about what was proposed with one gentleman remembering the *clean air now! for Christchurch* booklet. Although there was a general understanding of the proposed control methods, it was apparent that there was not a lot of thought about the implementation dates and what that meant for them individually. The fact that there was so much debate between Environment Canterbury (ECan) and the Christchurch City Council (CCC) produced a certain degree of uncertainty amongst these individuals about the likelihood of the proposals going ahead. Interestingly, all of these individuals collected or were given wood, with only one person having bought wood in the last two winters, when, due to illness, they bought 3 cord last year. This person was amazed at its expense. It was pointed out that people who were on low incomes, or older, often had time available to collect or transport wood, implying that the opportunity cost of their time was very little, therefore it was very cheap for them to heat their homes in winter. It was also pointed out by a participant, who had 5 children, that the bi-annual wood collection was a good family activity, which they all enjoyed.

Although these focus group participants lived in mainly older houses they all had insulation in the ceiling, some had plastic under the floor (on the ground), but few had it in the walls. It was noted by one participant that had worked pumping foam insulation into walls, that he believed the chemicals used were toxic and the foam a fire hazard, therefore he never used the foam in his own home.

In terms of costs and efficiency involved in solid fuel heating there were a number of concerns. These are summarized below and represent a consensus view of the group.

1. A household that had installed a new wood burner (with CCC assistance) in 1999, heated their water with a wet back. This family had 7 occupants and never buy wood. They stated that their winter monthly power bill never exceeded \$85, and in fact was higher during summer. It was also stated that the log fire was operated at

near its peak for long periods. This was to heat the entire household, which they believed it did successfully, and to maintain a temperature inside during winter of between 25 and 30 degrees. They did not like the idea of having a more temperate living environment, and preferred to be in tee shirts inside their house during the winter months. They did not believe that they could afford to operate, let alone purchase or install, any alternative heating system that would provide the level of warmth to which they had become accustomed.

2. One gentleman who operated two open fires, purchased 25 bags of coal per year from Ohai. This was a total cost to him of \$275 (this year). This household collected a small amount of wood, but other than the coal cost had no other annual heating costs. This gentleman believed that Ohai coal was better burning, and produced more heat. He also had a method of setting the fire to *maximise the burn*, and *minimize the smoke*. He stated that he (as well as friends who had open fires) nearly always banked the fire over night. This gentleman was considering the heat pump option if he could obtain the \$4000 under the assistance programme. However, that was only on the condition that the heat pump would provide heat at current levels, in the areas of his home that were currently heated, AND also would not cost him any more annually to heat his home. The discussion which followed from this centred around the fact that people did not believe a heat pump could provide the required level of heat, nor that the total annual operating cost would be \$275. There was also some concern expressed that heat pumps would not work in sub zero temperatures.

These two points are used to highlight the fact that participants made it clear they do not want to pay any more to heat their homes than they currently are spending, and they expect to be able to heat their houses to the same level.

The general consensus was participants could not see how if they were forced to gas, diesel, or electric heating, they would be able to operate their heating systems for the same dollar outlay as they do at present. As one gentleman said, "*...when you are low paid, or unemployed like us, you have time to scrounge around and get wood, so there is a low dollar cost to our heating, and what is more our wood burners produce a lot more heat than electricity or gas could do, imagine trying to get 25kw of heat from an electrical system - you could not do it...*"

It was also raised that the cost of electricity, gas and diesel were related because of gas and oil electricity generation. This was of serious concern to people, because they saw a problem with energy dependency on energy sources that were related and not offering a true price difference. It was felt that little thought had really been given to the downstream effects of these control procedures in this regard. Specifically, the fact that energy was a *market driven* commodity, with few, if any controls, made people very reluctant to want to change their current heating behaviours. They felt that the current capability of electricity production was inadequate to deal with any extra demand as emphasized by one participant.

"You say that there are 8000 houses in Christchurch burning coal for heat, if every one of those houses turned to electricity, there is no way the system would cope. Look at last week - two streets in St Albans blacked out when they all simultaneously drew on power around tea time... this whole thing is a farce - no one has thought about these downstream effects - and given our changing weather patterns, the need for hydro replacement and increased electricity generation, they are dreaming if they think you can ban coal, restrict wood burning, and eventually eliminate it, and yet not increase costs to the affected households. To assume that \$38 million will solve the problem is also absurd...look with the increased demand placed on electricity and gas, its not just the converting solid fuel burning households that will be affected... what about those households using only electricity or gas now - they will also be affected. If not in reliability, then in cost because the demand for gas and electricity will increase relative to the supply and the costs will increase. With all these uncertainties you don't honestly believe people are going to change...."

This individual went on to point out that the fact we had a competitive energy market meant that forcing people to use these other energy sources and not protecting them by law regarding price rises, or allowing them to switch away to another energy source, was going to create large problems, for ECan, the CCC as well as householders.

The general feeling was that whilst \$4,000 seemed a good subsidy to get a new heating system, the ongoing costs of operating it was really the problem. Discussion turned to the UK at the time of pollution reduction strategies, and it was thought that things had been handled quite differently. It was thought that in the UK consideration had been given to forward planning, with free insulation and heating advice given to EVERY individual home that was likely to be affected. It was also pointed out that in the UK the programmes were co-ordinated with the bringing on stream of reticulated North Sea gas as an alternative to electricity. One individual thought that in the UK there were subsidies on energy used in areas that were forced away from using solid fuels. Participants generally felt that the approach to dealing with this problem should have come from planning, managing, advising, and if necessary subsidising, the solution to restricting solid fuel burning, rather than the other way around. It was a general opinion that all that had been decided on was what the restrictions would be, but very little thought to what the solutions were for individual households.

The fact that there was so much uncertainty meant that most individuals stated that they will do nothing about changing until they are *forced* to change. Although they thought the \$4000 was a reasonable subsidy, the other amounts were largely unimportant and would only be applied for if they were considered relevant, ie if there was going to be a change and they received the \$4000 as part of the process. Ongoing operating costs were a very important issue. All participants felt that either ECan or the CCC or both should have commenced this whole process by going to homes that will have to change and need advice. At the same time there should have been a move to developing strategies to show that there was a positive reason to move away from solid fuel ie cheaper, warmer etc. (Although people are cognizant of the health issue related to pollution, they see their own health and comfort as more important). The subsidy and assistance programme planning should have started from the energy supply end. There should be free home energy checks & ADVICE given to homeowners. These should describe the best solution for the household in question, taking all considerations into account ie the level of heat required, insulation in their home (or what they could have and for what cost), the area to heat, the capital and operating costs, etc.

Dallington Focus Group

This group consisted of seven participants, three female and four male, ranging in age from late 20's to late 60's. These individuals all resided in the Dallington area and heated their homes with log burners, multi fuel burners and open fires. The group was from a higher socio-economic group than the Linwood group and were either in full time employment or retired. However, it would appear that the participant household incomes were quite low.

Although most of the group had read the *clean air now! for Christchurch* booklet, and the material which was distributed there before the meeting, it was not clear that they understood the proposals clearly. The implications of the dates, and the impact on different heating methods were not well understood. People thought that the pollution control methods were complicated to understand and it was generally the view that they would leave it to the last moment to change and only when required by law.

The biggest concern this group had was the fact that the criteria for be eligible for assistance was too narrow. It was felt that excluding superannuants and restricting the assistance to community service card holders was inequitable. This group described themselves as just

outside the threshold for a community services card, and after explaining their financial situations, it was clear that the financial incentives that they were being offered were inadequate in comparison to expenditure they were expected to have in replacing their heating method. The ongoing costs of heating were considered to exacerbate this problem, as those burning solid fuels in this group only purchased part of what they currently burnt.

An older gentleman in this group began discussing the various methods that had been proposed over the years for controlling the pollution problem. The fact that there was still a problem, did little to instil confidence in the group that these methods would be the ultimate solution and that there would be continually evolving regulations to control the pollution problem. Because of this protracted, piecemeal and erratic approach to solving Christchurch's pollution problem it was thought that to jump in and make a quick decision to switch away from solid fuel heating, may not be a sensible idea. It was considered better to "*wait and see*".

As with the Linwood group, there was a long discussion about what heating alternatives people would be likely to choose when they were forced to make the change to their heating methods. The various merits of gas and electricity were discussed, with the general consensus being that for the cost, the other cleaner alternatives just could not deliver the high levels of energy output required at certain times, and deliverable only with solid fuel burners. One group participant had just returned from living many years in southern England. He explained that his family expected to have homes here as warm in winter as they were in England, and are somewhat disappointed that they are cold even with a 25kw log burner. He also said that the energy costs are much higher here and in England heated a 3 bedroom home with radiators heated by gas. In winter time his gas bill, which included heating hot water was between £25 and £30. He stated that the house was much warmer than he has seen houses in New Zealand.

As with the Linwood group, there were concerns about the reliability of supply and cost of alternatives. There was definite distrust of limiting energy alternatives to those that were largely market driven. It was considered that once everyone was committed to changing to these other energy sources, the prices would increase. Examples of recent power outages in these participant houses were given as reasons why they considered electricity being too unreliable to absorb the extra demand with people changing over.

In terms of subsidy and assistance there was some discussion of central governments role in the Christchurch problem. It was felt that if central government through the resource management act required Christchurch to eliminate solid fuel burning, then central government should partially fund the solution. An analogy was drawn with Auckland's roading problem being subsidised by the rest of the country. It was considered that while the unique geography of Auckland was a factor contributing to the necessity for nationwide assistance, then similarly Christchurch's topography and climatic conditions created a similar need for central government funding.

Summary

There was a great deal of confusion about the respective roles of ECan and the CCC in the incentives and assistance programme, which was seen as including all aspects such as insulation subsidies. It was seen as piecemeal and uncoordinated which added to further confusion about the issue of controls, incentives, assistance, and eligibility. The general confusion this has caused, as well as the public arguing by both councils, and the fact that proposed control methods have changed so much over recent years, was interpreted by both focus groups as indicating that plans were not really finalised and therefore there was no need to rush into making any decisions. Waiting till *the last moment* to change from solid fuel heating, was recognised as potentially creating a number of problems, such as placing excessive demand on alternatives, and potentially exhausting the financial assistance before

everyone who had to change, had done so. However, running out of financial assistance, and creating pressures on gas and electricity were seen as *someone else's problems*, and consequently it was considered prudent to wait and see what eventuates.

There is a perception that residents will be able to burn wood in the future and that burners will be developed and sold to allow that to happen. If it is the intention of using the stepped, phased programme of controls to completely eliminate solid fuel burning in Christchurch, then this was not realised, and when discussed brought a very strong negative response. The bulk of focus group participants currently burning solid fuel, believed that they will be able to continue to do so, by buying *approved* burners at the time replacement is required.

The \$4000 payment for approved heating appliances and insulation was seen as quite adequate by community service card holders, BUT there were serious concerns expressed about the ongoing costs of operating the alternative heating systems. These community service cardholders seemed reluctant to commit themselves to an alternative heating system till they had some guarantee about future operating costs. Those who were not community service cardholders, considered the incentive and assistance amounts totally inadequate.

Overall, the process of reducing pollution in Christchurch was seen as "*...coming from the wrong end...*". If the solution to the problem had been driven from the focus of the householder, ie householders had demonstrated to them a cheap, reliable efficient heating system, that at least equated to what they currently use, then there would be no problem. It was seen as being critical that residents are seen as "*...part of the solution not just part of the problem...and it would be sensible that every potentially affected household has an expert visit them and assess their needs, after all they did that recently with storm water...*". It was believed that it is absolutely necessary to get "buy in" from the householders. However, although all focus group participants believed that something had to be done, they feel the alternatives offered are potentially too unreliable, expensive and not capable of providing similar levels of heat.

Appendix Two Questionnaire

AIR POLLUTION QUESTIONNAIRE

Good afternoon/evening my name is _____ and I am calling on behalf of Environment Canterbury (the Canterbury Regional Council). Could I please speak to an adult in your household who knows about your home heating. As you may be aware there are currently proposals to reduce the air pollution in Christchurch. Before any final decisions are made, Environment Canterbury believe it is very important for YOU to have a say. We would like you to answer a few questions that will show us how YOU feel about the air pollution issue.

1(a) Do you have an open fire in your house?

TICK Yes [] 1 No [] 2 IF YES - Do you use it? Yes [] 1 No [] 2 Sometimes [] 3
PLACE A TICK IN THE BRACKETS AND WRITE THE NUMBER IN THE BOXES TO THE RIGHT

(b) Do you have a log burner, pellet fuel or multi fuel burner (ie coal & wood burner) in your house?

TICK Yes [] 1 No [] 2 IF YES - Do you use it? Yes [] 1 No [] 2 Sometimes [] 3
PLACE A TICK IN THE BRACKETS AND WRITE THE NUMBER IN THE BOXES TO THE RIGHT

IF the respondent uses either an open fire or log burner ask them:

(c) How much of the wood you use over a year would you buy and how much would you get for free?
 % bought _____ % free _____

IF "YES" to either 1(a) or 1(b), ask the respondent if they would like to be in a group where they would be paid \$20.00 to keep a record of how much wood and coal they burned over a 2 week period. If they agree, then take their name, address and phone number, and explain that someone will drop off a booklet to fill out and keep a record of their burning. It will be collected two weeks after its delivery and they will be paid at that time. (Record their name, phone number and address on the sheet provided).

NOTE: IF THE RESPONDENTS HAVE NO SOLID FUEL HEATING GO TO QUESTION 3

IF the respondent uses any form of solid fuel heating – ie open fire, log burner, pellet fire or multi fuel burner continue....

2(a) Are you considering changing to another form of heating, that is one which does not burn wood or coal or pellets?

PLACE A TICK IN THE BRACKETS AND WRITE THE NUMBER IN THE BOX TO THE RIGHT

TICK Yes [] 1 No [] 2 Don't know [] 3

IF YES - What form of heating? _____

(b) **IF NO or DON'T KNOW** - What are your main concerns about changing to a cleaner form of heating?
NOTE: Prompt for all considerations, costs, incentives, legal considerations etc.

3(a) Does air pollution affect you personally or any of your friends or family?

PLACE A TICK IN THE BRACKETS AND WRITE THE NUMBER IN THE BOX TO THE RIGHT

TICK Yes [] 1 No [] 2

IF YES - In what way does it affect you/them? _____

4. Could you describe to me what the current proposals are to reduce pollution in Christchurch? _____

5. As you may be aware there are a proposals being put forward to reduce the amount of air pollution in Christchurch.

THE SPECIFIC PROPOSALS ARE AS FOLLOWS:

- i. From 1st January 2003 - no installations of burners in new homes, or homes that don't currently have them.
- ii. From 1st January 2004 can only replace existing burners with a new low emission burner.
- iii. From 1st January 2006 - No more use of open fires.
- iv. From 1st January 2008 - older burners will be phased out within 15 years of installation.

I WILL READ EACH OF THE PROPOSALS OUT SLOWLY AGAIN AND SEE WHAT YOU THINK ABOUT THEM.

Appendix Three Weighted marginal frequency analysis of all questions

Have an open fire?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Refuse to say	825	.7	.7	.7
	Yes	20923	17.0	17.0	17.6
	No	101499	82.4	82.4	100.0
	Total	123247	100.0	100.0	

Use an open fire?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No answer	102117	82.9	82.9	82.9
	Yes	9469	7.7	7.7	90.5
	No	9903	8.0	8.0	98.6
	Sometimes	1758	1.4	1.4	100.0
	Total	123247	100.0	100.0	

Have log brnr/pellt fir/ mf brnr?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Refuse to say	1565	1.3	1.3	1.3
	Yes	47674	38.7	38.7	40.0
	No	74008	60.0	60.0	100.0
	Total	123247	100.0	100.0	

Use log brnr/pellt fir/mf brnr?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No answer	76827	62.3	62.3	62.3
	Yes	43658	35.4	35.4	97.8
	No	1762	1.4	1.4	99.2
	Sometimes	999	.8	.8	100.0
	Total	123247	100.0	100.0	

% wood bought

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	81240	65.9	65.9	65.9
	5	62	.1	.1	66.0
	10	916	.7	.7	66.7
	20	1038	.8	.8	67.6
	25	512	.4	.4	68.0
	30	214	.2	.2	68.1
	33	62	.1	.1	68.2
	40	106	.1	.1	68.3
	50	6435	5.2	5.2	73.5
	60	242	.2	.2	73.7
	66	82	.1	.1	73.8
	67	142	.1	.1	73.9
	70	897	.7	.7	74.6
	75	986	.8	.8	75.4
	80	1765	1.4	1.4	76.8
	85	217	.2	.2	77.0
	90	1244	1.0	1.0	78.0
	95	780	.6	.6	78.7
	98	62	.1	.1	78.7
	100	26246	21.3	21.3	100.0
	Total	123247	100.0	100.0	

% wood free

		Frequency		Valid Percent	Cumulative Percent
Valid	0	94351		76.6	76.6
	1	130		.1	76.7
	2	62	.1		76.7
	5	780	.6	.6	77.3
	10	1244	1.0	1.0	78.4
	15	217	.2	.2	78.5
	20	1765	1.4	1.4	80.0
	25	986	.8	.8	80.8
	30	897	.7	.7	81.5
	33	224	.2	.2	81.7
	40	242	.2	.2	81.9
	50	6435	5.2	5.2	87.1
	60	106	.1	.1	87.2
	67	62	.1	.1	87.2
	70	214	.2	.2	87.4
	75	512	.4	.4	87.8
	80	1038	.8	.8	88.7
	90	916	.7	.7	89.4
	95	62	.1	.1	89.4
		100	13004	10.6	10.6
	Total	123247	100.0	100.0	

Considering changing?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No answer	59821	48.5	48.5	48.5
	Yes	12547	10.2	10.2	58.7
	No	48496	39.3	39.3	98.1
	Don t know	2382	1.9	1.9	100.0
	Total	123247	100.0	100.0	

1st change

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No answer	110694	89.8	89.8	89.8
	Electricity	2939	2.4	2.4	92.2
	Gas	5707	4.6	4.6	96.8
	Diesel/oil	409	.3	.3	97.2
	Low emission burner	861	.7	.7	97.9
	Pellet fire	330	.3	.3	98.1
	Heat pump	1964	1.6	1.6	99.7
	Anything as efficient	53	.0	.0	99.8
	Don t know	290	.2	.2	100.0
	Total	123247	100.0	100.0	

2nd change

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No answer	121716	98.8	98.8	98.8
	Gas	957	.8	.8	99.5
	Diesel/oil	115	.1	.1	99.6
	Hottie	69	.1	.1	99.7
	Low emission burner	82	.1	.1	99.8
	Pellet fire	130	.1	.1	99.9
	Heat pump	177	.1	.1	100.0
	Total	123247	100.0	100.0	

Main change concern 1					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No answer	84546	68.6	68.6	68.6
	Cost	19364	15.7	15.7	84.3
	Refuse to change	9284	7.5	7.5	91.8
	Have installed alternative	735	.6	.6	92.4
	Don t believe the research	816	.7	.7	93.1
	Legal considertions	253	.2	.2	93.3
	Other energy reliability	801	.6	.6	94.0
	Renting/flating	2138	1.7	1.7	95.7
	This is cheaper	1769	1.4	1.4	97.1
	Wood is renewable	109	.1	.1	97.2
	Other not provide heat	575	.5	.5	97.7
	Not s efficient	1327	1.1	1.1	98.8
	Incentives not enough	82	.1	.1	98.8
	Gas not safe	163	.1	.1	99.0
	Health effects	41	.0	.0	99.0
	Shifting	183	.1	.1	99.1
	Inconvenient	159	.1	.1	99.3
	Freedom of choice	249	.2	.2	99.5
	Condensation	68	.1	.1	99.5
	Ill be dead	323	.3	.3	99.8
	Cook/heat hot water-pwr fails	260	.2	.2	100.0
Total	123247	100.0	100.0		

Main change concern 2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No answer	119671	97.1	97.1	97.1
	Cost	712	.6	.6	97.7
	Refuse to change	205	.2	.2	97.8
	Don t believe the research	142	.1	.1	98.0
	Legal considerations	212	.2	.2	98.1
	Other energy reliability	986	.8	.8	98.9
	This is cheaper	199	.2	.2	99.1
	Other not provide heat	323	.3	.3	99.4
	Not s efficient	247	.2	.2	99.6
	Health effects	85	.1	.1	99.6
	Inconvenient	53	.0	.0	99.7
	Freedom of choice	219	.2	.2	99.8
	Condensation	62	.1	.1	99.9
	Cook/heat hot water-pwr fails	132	.1	.1	100.0
	Total	123247	100.0	100.0	

Main change concern 3

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No answer	122377	99.3	99.3	99.3
	Don t believe the research	94	.1	.1	99.4
	Other energy reliability	142	.1	.1	99.5
	This is cheaper	148	.1	.1	99.6
	Wood is renewable	49	.0	.0	99.6
	Other not provide heat	142	.1	.1	99.8
	Not s efficient	207	.2	.2	99.9
	Cook/heat hot water-pwr fails	87	.1	.1	100.0
	Total	123247	100.0	100.0	

Affect you/friends or family?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	45111	36.6	36.6	36.6
	No	78135	63.4	63.4	100.0
	Total	123247	100.0	100.0	

1st way affected

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No answer	80515	65.3	65.3	65.3
	Health/respiratory	18080	14.7	14.7	80.0
	Ozone-future generations	114	.1	.1	80.1
	Looks horrible	2038	1.7	1.7	81.7
	Spoils quality of life	1825	1.5	1.5	83.2
	Smells terrible	6108	5.0	5.0	88.2
	Chemicals in smog dangerous	248	.2	.2	88.4
	Affects asthma	12810	10.4	10.4	98.8
	Affects allergies	33	.0	.0	98.8
	Reduces visibility	128	.1	.1	98.9
	Cardio vascular problems	130	.1	.1	99.0
	Stay indoors	146	.1	.1	99.1
	Dirty washing	115	.1	.1	99.2
	Bad when exercising	681	.6	.6	99.8
	Tastes terrible	124	.1	.1	99.9
	Don t know	150	.1	.1	100.0
Total	123247	100.0	100.0		

2nd way affected

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No answer	113290	91.9	91.9	91.9
	Health/respiratory	1821	1.5	1.5	93.4
	Ozone-future generations	130	.1	.1	93.5
	Looks horrible	532	.4	.4	93.9
	Spoils quality of life	1332	1.1	1.1	95.0
	Smells terrible	2300	1.9	1.9	96.9
	Affects asthma	2204	1.8	1.8	98.7
	Reduces visibility	489	.4	.4	99.1
	Cardio vascular problems	144	.1	.1	99.2
	Stay indoors	109	.1	.1	99.3
	Dirty washing	303	.2	.2	99.5
	Bad when exercising	69	.1	.1	99.6
	Tastes terrible	522	.4	.4	100.0
	Total	123247	100.0	100.0	

1st ECan control

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Know most of the proposals	4433	3.6	3.6	3.6
	Get rid of open fires	41774	33.9	33.9	37.5
	Ban all forms of solid fuel heating	25993	21.1	21.1	58.6
	Eliminate all burning within 20 years	3087	2.5	2.5	61.1
	Plans keep changing-nothing final	170	.1	.1	61.2
	Have banned coal	1470	1.2	1.2	62.4
	Have banned open fires	2040	1.7	1.7	64.1
	Offer incentives to change	518	.4	.4	64.5
	Don t know	43762	35.5	35.5	100.0
	Total	123247	100.0	100.0	

2nd ECan control

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Know most of the proposals	128	.1	.1	.1
	Get rid of open fires	305	.2	.2	.4
	Ban all forms of solid fuel heating	2390	1.9	1.9	2.3
	Eliminate all burning within 20 years	374	.3	.3	2.6
	Plans keep changing-nothing final	222	.2	.2	2.8
	Have banned coal	57	.0	.0	2.8
	Offer incentives to change	169	.1	.1	3.0
	Don t know	119602	97.0	97.0	100.0
	Total	123247	100.0	100.0	

3rd ECan control

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Get rid of open fires	294	.2	.2	.2
	Ban all forms of solid fuel heating	330	.3	.3	.5
	Don t know	122623	99.5	99.5	100.0
	Total	123247	100.0	100.0	

1 Jan 2003 - no new burners

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No opinion	10561	8.6	8.6	8.6
	Strongly opposed	11740	9.5	9.5	18.1
	Opposed	36465	29.6	29.6	47.7
	In favour	52576	42.7	42.7	90.3
	Strongly in favour	11904	9.7	9.7	100.0
	Total	123247	100.0	100.0	

Opinion 1 no new burners

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No answer given	80036	64.9	64.9	64.9
	Affect me financially-money worries	7505	6.1	6.1	71.0
	Don t believe its a problem	4403	3.6	3.6	74.6
	Don t believe the causes	3688	3.0	3.0	77.6
	Worried-electricity reliability	2530	2.1	2.1	79.6
	Worried-electricity cost	2105	1.7	1.7	81.4
	Worried about gas supply	158	.1	.1	81.5
	Worried about gas cost	117	.1	.1	81.6
	Restricting choices	8410	6.8	6.8	88.4
	Harm the elderly	1868	1.5	1.5	89.9
	Test burners	277	.2	.2	90.1
	No burners	49	.0	.0	90.2
	Educate operators	285	.2	.2	90.4
	Wet wood-wood quality	95	.1	.1	90.5
	Loss of jobs	80	.1	.1	90.6
	Clean brn tech-LEB	3255	2.6	2.6	93.2
	Loss of psychological warmth	2085	1.7	1.7	94.9
	No cost effective alternative	2030	1.6	1.6	96.5
	Heat H2O-cook-heat	69	.1	.1	96.6
	Wood is renewable	329	.3	.3	96.9
	Too much trouble	142	.1	.1	97.0
	15 yr econ life is rubbish	62	.1	.1	97.0
	Produces more heat	1958	1.6	1.6	98.6
	All issues not being considered	224	.2	.2	98.8
	Not convinced	994	.8	.8	99.6
	Too soon-too harsh	491	.4	.4	100.0
Total	123247	100.0	100.0		

Opinion 2 no new brnrs

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No answer given	116863	94.8	94.8	94.8
	Affect me financially-money worries	673	.5	.5	95.4
	Don t believe its a problem	243	.2	.2	95.6
	Don t believe the causes	465	.4	.4	95.9
	Worried-electricity reliability	492	.4	.4	96.3
	Worried-electricity cost	320	.3	.3	96.6
	Worried about gas supply	126	.1	.1	96.7
	Worried about gas cost	760	.6	.6	97.3
	Restricting choices	837	.7	.7	98.0
	Harm the elderly	214	.2	.2	98.2
	Educate operators	130	.1	.1	98.3
	Loss of jobs	198	.2	.2	98.4
	Clean brn tech-LEB	583	.5	.5	98.9
	Loss of psychological warmth	353	.3	.3	99.2
	No cost effective alternative	185	.1	.1	99.3
	Wood is renewable	126	.1	.1	99.4
	Too much trouble	252	.2	.2	99.7
	Produces more heat	95	.1	.1	99.7
	Not convinced	332	.3	.3	100.0
	Total	123247	100.0	100.0	

1 Jan 2004 - replace with low emission

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No opinion	9077	7.4	7.4	7.4
	Strongly opposed	3270	2.7	2.7	10.0
	Opposed	12047	9.8	9.8	19.8
	In favour	81783	66.4	66.4	86.2
	Strongly in favour	17069	13.8	13.8	100.0
	Total	123247	100.0	100.0	

Opinion 1 replace low emission

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No answer given	110809	89.9	89.9	89.9
	Affect me financially-money worries	3496	2.8	2.8	92.7
	Don t believe its a problem	1298	1.1	1.1	93.8
	Don t believe the causes	412	.3	.3	94.1
	Worried-electricity reliability	336	.3	.3	94.4
	Worried-electricity cost	214	.2	.2	94.6
	Restricting choices	1934	1.6	1.6	96.1
	Harm the elderly	388	.3	.3	96.5
	Test burners	107	.1	.1	96.6
	No burners	880	.7	.7	97.3
	Educate operators	204	.2	.2	97.4
	Wet wood-wood quality	140	.1	.1	97.5
	Loss of jobs	41	.0	.0	97.6
	Clean burn tech-LEB	318	.3	.3	97.8
	Loss of psychological warmth	80	.1	.1	97.9
	No cost effective alternative	1008	.8	.8	98.7
	Too much trouble	339	.3	.3	99.0
	15 yr econ life is rubbish	57	.0	.0	99.0
	All issues not being considered	62	.1	.1	99.1
	Not convinced	699	.6	.6	99.7
Who is paying?	33	.0	.0	99.7	
Too soon-too harsh	390	.3	.3	100.0	
Total	123247	100.0	100.0		

Opinion 2 replace low emission

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No answer given	120543	97.8	97.8	97.8
	Affect me financially-money worries	172	.1	.1	97.9
	Don t believe its a problem	295	.2	.2	98.2
	Don t believe the causes	358	.3	.3	98.5
	Worried-electricity reliability	130	.1	.1	98.6
	Worried-electricity cost	303	.2	.2	98.8
	Worried about gas supply	52	.0	.0	98.9
	Worried about gas cost	57	.0	.0	98.9
	Restricting choices	344	.3	.3	99.2
	Harm the elderly	286	.2	.2	99.4
	Loss of psychological warmth	142	.1	.1	99.5
	No cost effective alternative	51	.0	.0	99.6
	Too much trouble	57	.0	.0	99.6
	Produces more heat	388	.3	.3	99.9
	Too soon-too harsh	69	.1	.1	100.0
Total	123247	100.0	100.0		

1 Jan 2006 No open fires

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No opinion	10708	8.7	8.7	8.7
	Strongly opposed	8294	6.7	6.7	15.4
	Opposed	17829	14.5	14.5	29.9
	In favour	65331	53.0	53.0	82.9
	Strongly in favour	21085	17.1	17.1	100.0
	Total	123247	100.0	100.0	

Opinion 1 no open fires

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No answer given	101188	82.1	82.1	82.1
	Affect me financially-money worries	5200	4.2	4.2	86.3
	Don t believe its a problem	1026	.8	.8	87.2
	Don t believe the causes	1511	1.2	1.2	88.4
	Worried-electricity reliability	650	.5	.5	88.9
	Worried-electricity cost	1501	1.2	1.2	90.1
	Worried about gas supply	57	.0	.0	90.2
	Restricting choices	3907	3.2	3.2	93.3
	Harm the elderly	2390	1.9	1.9	95.3
	Educate operators	273	.2	.2	95.5
	Clean burn tech-LEB	249	.2	.2	95.7
	Loss of psychological warmth	1261	1.0	1.0	96.7
	No cost effective alternative	1607	1.3	1.3	98.0
	Heat H2O-cook-heat	274	.2	.2	98.3
	Wood is renewable	76	.1	.1	98.3
	Too much trouble	252	.2	.2	98.5
	Produces more heat	458	.4	.4	98.9
	Not convinced	510	.4	.4	99.3
	Who is paying?	80	.1	.1	99.4
	Too soon-too harsh	622	.5	.5	99.9
Coal first	155	.1	.1	100.0	
Total	123247	100.0	100.0		

Opinion 2 no open fires

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No answer given	119041	96.6	96.6	96.6
	Affect me financially-money worries	309	.3	.3	96.8
	Don t believe its a problem	476	.4	.4	97.2
	Don t believe the causes	213	.2	.2	97.4
	Worried-electricity reliability	76	.1	.1	97.5
	Worried-electricity cost	166	.1	.1	97.6
	Worried about gas cost	820	.7	.7	98.3
	Restricting choices	581	.5	.5	98.7
	Harm the elderly	281	.2	.2	99.0
	Loss of jobs	49	.0	.0	99.0
	Loss of psychological warmth	377	.3	.3	99.3
	No cost effective alternative	102	.1	.1	99.4
	Too much trouble	321	.3	.3	99.7
	Produces more heat	252	.2	.2	99.9
	Who is paying?	130	.1	.1	100.0
	Too soon-too harsh	49	.0	.0	100.0
Total	123247	100.0	100.0		

1 Jan 2008 - 15 yr econ life

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No opinion	12667	10.3	10.3	10.3
	Strongly opposed	7365	6.0	6.0	16.3
	Opposed	18457	15.0	15.0	31.2
	In favour	71010	57.6	57.6	88.8
	Strongly in favour	13748	11.2	11.2	100.0
	Total	123247	100.0	100.0	

Opinion 1 - 15 yr econ life

	Frequency	Percent	Valid Percent	Cumulative Percent
No answer given	103878	84.3	84.3	84.3
Affect me financially-money worries	4221	3.4	3.4	87.7
Don t believe its a problem	1410	1.1	1.1	88.9
Don t believe the causes	997	.8	.8	89.7
Worried-electricity reliability	185	.1	.1	89.8
Worried-electricity cost	636	.5	.5	90.3
Worried about gas supply	123	.1	.1	90.4
Worried about gas cost	74	.1	.1	90.5
Restricting choices	3135	2.5	2.5	93.0
Harm the elderly	567	.5	.5	93.5
Test burners	280	.2	.2	93.7
No burners	134	.1	.1	93.8
Educate operators	109	.1	.1	93.9
Wet wood-wood quality	107	.1	.1	94.0
Loss of jobs	76	.1	.1	94.1
Clean burn tech-LEB	1148	.9	.9	95.0
Loss of psychological warmth	342	.3	.3	95.3
No cost effective alternative	1195	1.0	1.0	96.2
Too much trouble	304	.2	.2	96.5
15 yr econ life is rubbish	1176	1.0	1.0	97.4
Produces more heat	322	.3	.3	97.7
Not convinced	1037	.8	.8	98.5
Who is paying?	618	.5	.5	99.0
Too soon-too harsh	974	.8	.8	
Hard to age burners	120	.1	.1	
Gas safety	80	.1	.1	100.0
	123247	100.0	100.0	

Opinion 2 - 15 yr econ life

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No answer given	120192	97.5	97.5	97.5
	Affect me financially-money worries	614	.5	.5	98.0
	Don t believe its a problem	243	.2	.2	98.2
	Don t believe the causes	134	.1	.1	98.3
	Worried-electricity reliability	187	.2	.2	98.5
	Worried-electricity cost	224	.2	.2	98.7
	Worried about gas cost	325	.3	.3	98.9
	Restricting choices	480	.4	.4	99.3
	Harm the elderly	229	.2	.2	99.5
	Test burners	37	.0	.0	99.5
	No cost effective alternative	102	.1	.1	99.6
	Too much trouble	57	.0	.0	99.7
	15 yr econ life is rubbish	74	.1	.1	99.7
	Not convinced	80	.1	.1	99.8
	Who is paying?	187	.2	.2	99.9
	Hard to age burners	80	.1	.1	100.0
Total	123247	100.0	100.0		

1st way proposals affect you

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No answer given	14679	11.9	11.9	11.9
	Have no effect	75764	61.5	61.5	73.4
	Adverse financial effects	9675	7.8	7.8	81.2
	Emotional-no warm fire	841	.7	.7	81.9
	Have to change to LEB	6065	4.9	4.9	86.8
	Adverse affect on house sale	323	.3	.3	87.1
	Inconvenient- need to replc	7908	6.4	6.4	93.5
	Inconvenient-hse alterns	225	.2	.2	93.7
	Make safer environment	2834	2.3	2.3	96.0
	If I buy a hse	902	.7	.7	96.7
	Restricts choices too much	294	.2	.2	97.0
	Adverse to health-cold	756	.6	.6	97.6
	Don t know	2982	2.4	2.4	100.0
	Total	123247	100.0	100.0	

2nd way proposals affect you

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No answer given	120834	98.0	98.0	98.0
	Have no effect	515	.4	.4	98.5
	Adverse financial effects	484	.4	.4	98.9
	Emotional-no warm fire	546	.4	.4	99.3
	Have to change to LEB	33	.0	.0	99.3
	Adverse affect on house sale	64	.1	.1	99.4
	Inconvenient- need to replc	231	.2	.2	99.6
	Make safer environment	253	.2	.2	99.8
	Restricts choices too much	142	.1	.1	99.9
	Adverse to health-cold	144	.1	.1	100.0
	Total	123247	100.0	100.0	

1st incentives description

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Don t know	75661	61.4	61.4	61.4
	Know CSC-\$4000	930	.8	.8	62.1
	Know insulation assistance	1440	1.2	1.2	63.3
	Know \$500-opn fire grant	9817	8.0	8.0	71.3
	Some idea-not clear	35400	28.7	28.7	100.0
	Total	123247	100.0	100.0	

2nd incentives description

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No answer given	122535	99.4	99.4	99.4
	Don t know	57	.0	.0	99.5
	Know insulation assistance	64	.1	.1	99.5
	Know \$500-opn fire grant	82	.1	.1	99.6
	Some idea-not clear	508	.4	.4	100.0
	Total	123247	100.0	100.0	

Incentives relevant to you?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	16917	13.7	13.7	13.7
	No	74280	60.3	60.3	74.0
	Don t know	32049	26.0	26.0	100.0
	Total	123247	100.0	100.0	

When likely to use incentives?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No answer	114389	92.8	92.8	92.8
	Don t know	4066	3.3	3.3	96.1
	Before next winter	721	.6	.6	96.7
	Immediately asap	392	.3	.3	97.0
	Already have	719	.6	.6	97.6
	When forced by law	1536	1.2	1.2	98.8
	Two years time	881	.7	.7	99.6
	Within 5 years	542	.4	.4	100.0
	Total	123247	100.0	100.0	

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Will not disclose	3689	3.0	3.0	3.0
	20 - 29	11175	9.1	9.1	12.1
	30 - 39	24906	20.2	20.2	32.3
	40 - 49	28772	23.3	23.3	55.6
	50 - 59	22167	18.0	18.0	73.6
	60 - 69	12494	10.1	10.1	83.7
	70+	20043	16.3	16.3	100.0
	Total	123247	100.0	100.0	

Occupation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Will not disclose	9460	7.7	7.7	7.7
	Retired/ superannuation	27536	22.3	22.3	30.0
	Unemployed/ beneficiary	3214	2.6	2.6	32.6
	Student	2438	2.0	2.0	34.6
	Tradesman/labourer	19010	15.4	15.4	50.0
	Professional/ managerial	34411	27.9	27.9	77.9
	Service worker	10963	8.9	8.9	86.8
	Self employed	5100	4.1	4.1	91.0
	Sales	3459	2.8	2.8	93.8
	Technical/admin worker	6306	5.1	5.1	98.9
	Farm/agricultural	1349	1.1	1.1	100.0
	Total	123247	100.0	100.0	

Community services card holders

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Will not disclose	2741	2.2	2.2	2.2
	Hold a CSC	47550	38.6	38.6	40.8
	Not hold CSC	71171	57.7	57.7	98.6
	Uncertain about CSC	1785	1.4	1.4	100.0
	Total	123247	100.0	100.0	

Number of income earners

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Will not disclose	15768	12.8	12.8	12.8
	1	48438	39.3	39.3	52.1
	2	50759	41.2	41.2	93.3
	3	6656	5.4	5.4	98.7
	4	1311	1.1	1.1	99.7
	5	119	.1	.1	99.8
	6	137	.1	.1	100.0
	7	58	.0	.0	100.0
	Total	123247	100.0	100.0	

Number of people in household

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Will not disclose	3182	2.6	2.6	2.6
	1	21291	17.3	17.3	19.9
	2	44184	35.9	35.9	55.7
	3	21787	17.7	17.7	73.4
	4	20598	16.7	16.7	90.1
	5	8172	6.6	6.6	96.7
	6	2929	2.4	2.4	99.1
	7	872	.7	.7	99.8
	8	232	.2	.2	100.0
Total	123247	100.0	100.0		

Home ownership

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		3735	3.0	3.0	3.0
		95940	77.8	77.8	
	Rent	22692	18.4	18.4	99.3
	Board	879	.7	.7	
	Total	123247	100.0		

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Undetermined	2494	2.0	2.0	2.0
	Female	72051	58.5	58.5	60.5
	Male	48702	39.5	39.5	100.0
	Total	123247	100.0	100.0	

Christchurch household survey: a survey of Christchurch residents' opinions of proposed air pollution control methods and clean air incentives and assistance

		Suburb			
			Percent	Valid Percent	Cumulative Percent
Valid	Addington		1.0	1.0	1.0
	Aranui	1568	1.3	1.3	2.3
	Avon Loop/City/Square/ Hagley Park	3440	2.8	2.8	5.1
	Avondale		1.3	1.3	6.4
	Avonhead/Merrin/Westburn		2.4	2.4	8.8
	Avonside	1322	1.1	1.1	9.9
	Barrington	3277	2.7	2.7	12.5
	Beckenham	898	.7	.7	13.3
	Belfast	1391	1.1	1.1	
	Bexley	1387	1.1	1.1	15.5
	Bishopdale/Hawthornden/Kaimahi	3785	3.1	3.1	18.6
		1153	.9	.9	19.5
	Broomfield	1980	1.6	1.6	
	Bryndwr/Jellie Park	1817	1.5	1.5	22.6
	Burnside/Wairarapa	1477	1.2	1.2	
	Burwood	1069		.9	24.7
	Casebrook	902	.7	.7	25.4
	Cashmere	2465	2.0	2.0	27.4
	Dallington		1.1	1.1	28.5
	Edgeware	1643	1.3	1.3	29.9
	Fendalton/Holmwood	1897		1.5	31.4
	Ferrymead	985	.8	.8	32.2
		1317	1.1	1.1	33.3
	Harewood/Sawyers Arms	2142	1.7	1.7	35.0
	Heathcote Valley	656	.5	.5	35.5
	Hillmorton	1560	1.3	1.3	36.8
	Hoon Hay	1902	1.5	1.5	38.4
		3046	2.5	2.5	40.8
	Ilam	1236	1.0	1.0	41.8
	Islington	825	.7	.7	42.5
Linwood	3698	3.0	3.0	45.5	
Mairehau	1074	.9	.9	46.4	
	1729	1.4	1.4	47.8	
Merivale	1393	1.1	1.1	48.9	
Moncks Bay/Redcliffs	1396	1.1	1.1	50.0	
Mount Pleasant	1566	1.3	1.3	51.3	
	1074	.9	.9		
North Beach/Rawhiti	3703	3.0	3.0	55.2	
Northcote	910	.7	.7	55.9	
Oaklands	1984	1.6	1.6	57.5	

		Suburb			
			Percent	Valid Percent	Cumulative Percent
	Opawa /Ensors	2708	2.2	2.2	59.7
		2480	2.0	2.0	
	Redwood	2392	1.9	1.9	63.7
	Riccarton/Deans Bush/Wharenui	4689	3.8	3.8	67.5
		983	.8	.8	68.3
	Richmond	2221	1.8	1.8	70.1
	Russley	988	.8	.8	70.9
		2717	2.2	2.2	
	Sockburn	2466	2.0	2.0	75.1
	Somerfield	1387	1.1	1.1	76.2
		1477	1.2	1.2	
	Spreydon	1393	1.1	1.1	78.5
	St Albans/Rutland	5195	4.2	4.2	82.8
		2302	1.9	1.9	
	Aynsley				
	Strowan	1488	1.2	1.2	85.8
	Styx	2319	1.9	1.9	
	Sumner	1568	1.3		89.0
	Sydenham	2457	2.0		91.0
	Templeton	660	.5	.5	91.5
	Waltham	411	.3	.3	91.9
	Westmorland	492	.4	.4	92.3
	Wigram	578		.5	92.7
	Woolston	2142	1.7	1.7	94.5
	Yaldhurst	244	.2	.2	94.7
	Papanui/Aorangi		2.8	2.8	97.5
	Parklands/Travis/Queenspark	3126		2.5	100.0
		123247	100.0	100.0	



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