

Christchurch public
perception survey:
**air and visual pollution and
conversion incentives and
assistance**

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A report prepared for Environment
Canterbury by

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CHRISTCHURCH PUBLIC PERCEPTION SURVEY:

AIR AND VISUAL POLLUTION AND CONVERSION INCENTIVES AND ASSISTANCE

Charles G. Lamb

24th June 2004

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CONTENTS

	<u>PAGE</u>
LIST OF TABLES	iii
LIST OF FIGURES	iv
EXECUTIVE SUMMARY	v
 CHAPTER ONE: RESEARCH METHODOLOGY	
1.1 Introduction	1
1.2 Objectives	1
1.3 Research Programme	2
1.3.1 Sample size	2
1.4 Sample Representation	2
1.5 The Analysis	3
 CHAPTER TWO: THE AIR POLLUTION PROBLEM	
2.1 Introduction	4
2.2 Acceptability of Air Pollution Problem	5
2.3 Causes of Air Pollution	6
2.4 Effects of Air Pollution	7
2.5 Affects on Family and Friends	7
 CHAPTER THREE: SOLID FUEL HEATING REGULATIONS	
3.1 Introduction	8
3.2 Open Fires	8
3.3 Older Burners	9
 CHAPTER FOUR: ASSISTANCE AND INCENTIVE PROGRAMMES	
4.1 Introduction	10
4.2 The Clean Heat Programme	10
4.3 Warm Home Energy Check	11
4.4 The Clean Heat Advice Programme	11
4.5 Agency Operating Advice and Assistance Programmes	12

	<u><i>PAGE</i></u>
CHAPTER FIVE: VISUAL AIR POLLUTION	
5.1 Introduction	13
5.2 Main Causes of Visual Air Pollution	14
APPENDIX ONE QUESTIONNAIRE	15
APPENDIX TWO MARGINAL FREQUENCY ANALYSIS OF ALL QUESTIONS	16

LIST OF TABLES

<i>Table</i>	<u><i>PAGE</i></u>
1.1 Age and Gender Distribution of The Achieved Sample	3
2.1 Acceptability of Air Quality and Respondent Characteristics ..	6
2.2 Cause of Air Pollution	6
2.3 Effects of Air Pollution	7
3.1 Perception of Open Fire Regulations	8
3.2 Perception of Older Burner Regulations	9
4.1 The Clean Heat Programme	10
4.2 Warm Home Energy Check	11
4.3 The Clean Heat Advice Programme	11
4.4 Agencies Operating Advice and Assistance Programmes	12

LIST OF FIGURES

<i>Figure</i>	<u><i>PAGE</i></u>
2.1 Percentage of Respondents Believing Christchurch Has Air Pollution Problem - by Gender	4
2.2 Percentage of Respondents Believing Christchurch Has Air Pollution Problem - by Age	5
2.3 Residents' Opinions of Christchurch's Air Quality	5
5.1 Appearance of Air Above Christchurch in Winter	13

EXECUTIVE SUMMARY

Introduction

This report describes the results of a telephone survey undertaken in Christchurch in June 2004. The purpose of the survey was to obtain information from individuals aged 18+ about their perceptions of the air pollution and visual air pollution problem in Christchurch, and also measure their knowledge about the incentive and assistance programmes aimed at improving the city's air quality. A total of 625 individuals provided usable information which was analysed for this report.

The Air Pollution Problem

The greater majority of the population (89 percent) perceive that Christchurch does have a serious pollution problem, with more females, and people aged between 25 and 60 being more aware of the issue. Overall, there is a general feeling that the air quality of Christchurch is not all that acceptable. People perceive the main contributors to the air pollution problem being burning of wood and coal and vehicles – however it was also often noted that Christchurch's topography and weather conditions are a major reason for the problem. There was a very high awareness of the health effects of air pollution with 73 percent of those surveyed recognizing it as a problem, and 32 percent having family or friends affected by it.

Solid Fuel Heating Regulations

Respondents were asked to explain what they understood were the regulations governing open fires and the replacement of older burners. Overall, there was a relatively low level of knowledge, of regulations governing both open fires and older burners in the general population. However, as perhaps expected, it is noticeable that those people being more aware of the regulations are home owners.

Assistance and Incentive Programmes

There was a low level of awareness of the various assistance and incentive programmes in the general population, with the most recognized being the *Warm Home Energy Check*, with about 41 percent of the sample being able to describe it as an insulation check, perhaps not surprising given its title.

Of greater significance, was the fact that respondents were not well informed about ECan's role in managing these programmes. It appears that almost the same amount of people believe that the City Council manage the programmes, as believe that ECan does.

Visual Air Pollution

A significant percentage of the population (approximately 58 percent), believe that the visual air pollution in Christchurch is not at all acceptable. There is a high percentage of the population (64 percent) that believe that burning of wood and coal cause this pollution, with about 51 percent believing that vehicles cause it.

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

CHAPTER ONE METHODOLOGY

1.1 Introduction

To measure the perceptions of Christchurch residents about the air pollution problem, its visual effects and the incentives and assistance programme, a two stage research programme was developed.

The first qualitative stage consisted of two focus groups, which were run in late February 2004 and reported separately. The second stage was a telephone survey of 625 individuals aged 18+ throughout metropolitan Christchurch. The objectives for the survey are outlined below.

1.2 Objectives

The specific objectives for the study were to:

1. To describes the public perception of the severity, causes, and effects of the air pollution problem in Christchurch.
2. To measure the level of awareness and knowledge about the incentives and assistance programme offered by Environment Canterbury (ECan).
3. To measure the public perception of the severity and causes of the visual problem of air pollution in Christchurch.

1.3 Research Programme

Part one of the research programme consisted of two focus groups run with Christchurch residents. The groups consisted of individuals who had registered for the Clean Heat assistance programme – but were not shown on the ECan data base as having continued with the programme. The purpose of the focus groups was to provide information, in greater depth, about the incentives and assistance programme, and the general pollution problem.

The telephone survey was considered the most appropriate method for collecting the data, given the nature of information to be collected and time constraints. Six hundred and twenty five individuals were randomly interviewed over the period 8th – 10th June 2004. The respondents were qualified on the basis of being aged 18+.

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 (625).
$Z_{\alpha/2}$	=	confidence interval estimate (expressed in standard normal variable form, set at 95%).
N	=	population number of households (248487) ¹ .
p.q	=	component of sample proportion variance estimate (maximised at 0.25).
e	=	tolerable error level (3.9%).

1.4 Sample Representation

Table 1.1 that follows provides an indication of the achieved age and gender distribution of the sample compared to the distribution of the population. The population distribution is in bold italics in the shaded cells. The achieved sample distribution is in the top line of each age group range. As can be seen, there is some variation in the sample from the population distribution – as a consequence the data was weighted by age and gender to account for these minor discrepancies.

¹ The number of individuals in Christchurch aged 18+ - Census 2001 – Statistics New Zealand.

Table 1.1
Age and Gender Distribution of The Achieved Sample

Age	Female (%)	Male (%)	Total (%)
18-19	1.3	3.4	4.6
	2.3	2.2	4.5
20-24	1.9	2.4	4.3
	5.8	5.9	11.7
25-29	3.5	3.0	6.6
	5.4	5.3	10.6
30-34	3.8	3.7	7.5
	5.3	5.1	10.4
35-39	5.1	5.0	10.1
	5.1	4.9	10.0
40-44	6.1	3.0	9.1
	4.7	4.5	9.2
45-49	7.8	6.1	13.9
	4.5	4.3	8.8
50-54	3.5	3.5	7.0
	3.3	3.3	6.7
55-59	5.6	3.2	8.8
	2.9	2.7	5.6
60-64	3.7	1.6	5.3
	2.6	2.4	5.0
65+	13.9	8.8	22.7
	10.4	7.3	17.7

1.5 The Analysis

The questionnaires were coded and entered into a data base. 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.

CHAPTER TWO THE AIR POLLUTION PROBLEM

2.1 Introduction

The greater majority of the sample, 89 percent (representing some 221,935 individuals in the population) indicated that they thought Christchurch had an air pollution problem in winter. When those who believe that Christchurch has a pollution problem were analysed by demographic characteristics – it appears that more females feel that this is the case – as do more people aged between 25 and 60 years of age. Figures 1.1 and 1.2 refer.

Figure 2.1
Percentage of Respondents Believing Christchurch Has Air Pollution Problem
- by Gender

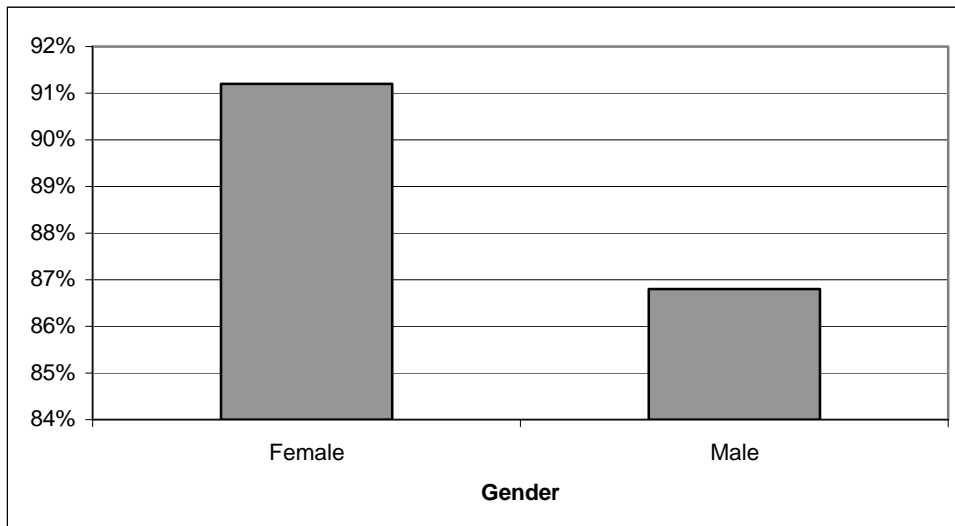
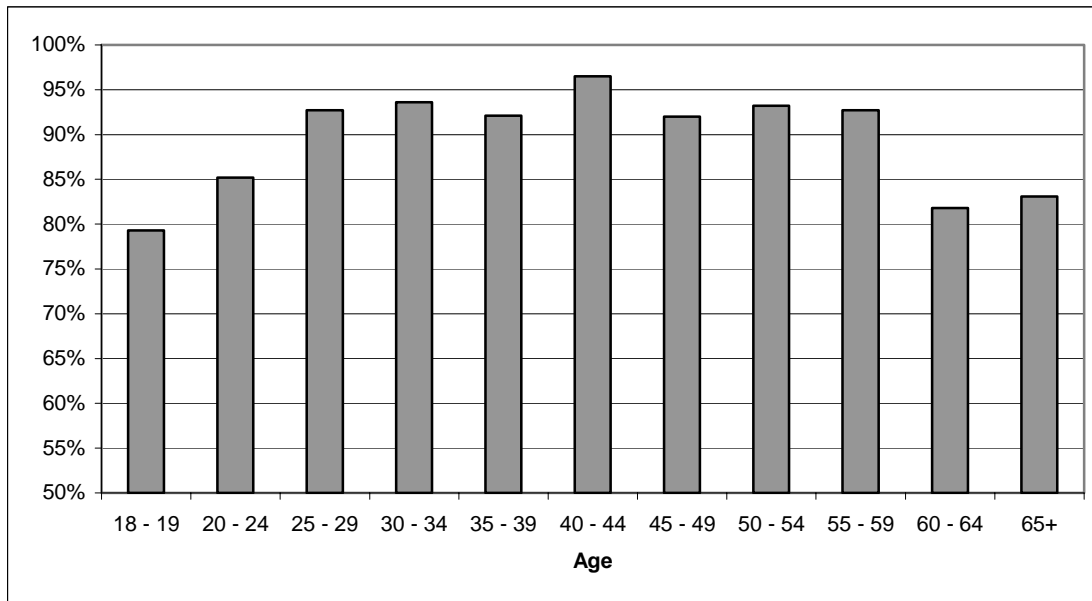


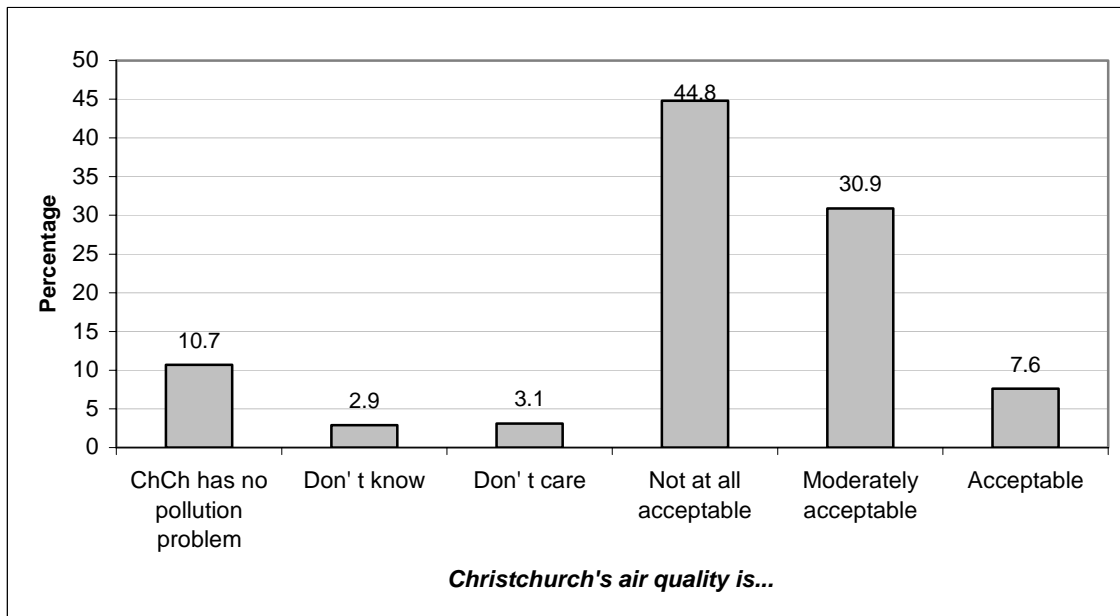
Figure 2.2
 Percentage of Respondents Believing Christchurch Has Air Pollution Problem - by Age



2.2 Acceptability of Air Pollution Problem

Singularly – the largest group in the sample, approximately 45% (111,370 individuals in the population), felt that the air pollution in Christchurch was not at all acceptable. Figure 1.3 refers.

Figure 2.3
Residents' Opinions of Christchurch's Air Quality



When acceptability of the air quality was analysed by personal characteristics the following patterns were noticed:

Table 2.1
Acceptability of Air Quality and Respondent Characteristics

<u>Opinion of Air Quality</u>	<u>Characteristics</u>
<i>Air quality not at all acceptable</i>	These people were more likely to own their own home and be aged 25 – 29 or 45 – 60.
<i>Air Quality moderately acceptable</i>	More likely to board or live in rental accommodation and be aged between 30 and 40.
<i>Don't know – or – ChCh has no pollution problem</i>	These people are either boarders aged 18 to 25, or people aged 60 plus.

2.3 Causes of Air Pollution

In describing the causes of air pollution, singularly the largest group of individuals, 66 percent, (164,281 individuals within the population) believed it was wood and coal – this was followed by vehicles, 55 percent (137,447 individuals).

Table 2.2
Cause of Air Pollution

<u>Air Pollution Cause</u>	<u>Percentage of sample</u>	<u>Potential Population</u>
<i>Burning of Wood & Coal</i>	66.1	164,281
<i>Vehicles</i>	55.3	137,447
<i>Industry</i>	15.8	39,207
<i>Other²</i>	23.5	58,373

Assessing the cause of pollution by respondent characteristics provided the following patterns: Disproportionately more individuals without a community services card, believed that burning coal and wood caused pollution, than the sample as a whole. Disproportionately more respondents aged 18 to 40, and 45 to 60, believed that burning coal and wood caused pollution, than the sample as a whole. Disproportionately more females believed that vehicles were the cause of pollution, than either males or the sample overall. Those respondents aged 20 – 24 were less likely to believe that vehicles caused air pollution.

² The most commonly mentioned *Other* cause was the geography of Christchurch City, ie “..built on a swamp...” in conjunction with climatic conditions ie ..repeated inversion conditions occurring...”

2.4 Effects of Air Pollution

As is shown in Table 2.3 below, the *Health* effect, is the effect considered by the largest group of the population. Table 2.3 refers.

Table 2.3

<u>Effects of Air Pollution</u>		
<u>Effect</u>	<u>Percentage of sample</u>	<u>Potential Population</u>
<i>Health</i>	73.1	181,633
<i>Affects quality of life</i>	14.7	36,577
<i>Affects environment</i>	11.3	28,037
<i>Smell effect</i>	9.7	24,032
<i>Visual effect</i>	7.0	17,376
<i>Other effects</i>	5.7	14,169
<i>Affects buildings</i>	4.3	10,605

2.5 Affects on Family and Friends

Thirty two percent of the sample, representing 79,678 individuals in the population, claimed that air pollution in Christchurch affected them, their family or friends. Of those stating they, their friends or family were affected, disproportionately more were females aged under 35 years of age.

CHAPTER THREE SOLID FUEL HEATING REGULATIONS

3.1 Introduction

Respondents were asked about the regulations governing open fires and the replacement of older burners. This chapter describes the public awareness and perception of the regulations.

3.2 Open Fires

Singularly, the largest group, 48 percent (119,303 individuals in the population), knew nothing about the regulations governing open fires. Table 3.1 below refers.

Table 3.1
Perception of Open Fire Regulations

<u>Regulations Regarding Open Fires</u>	<u>Percentage of sample</u>	<u>Potential Population</u>
<i>All banned now</i>	15.2	37,721
<i>To be banned in the future (don't know the date)</i>	15.6	38,776
<i>Banned now in new homes</i>	13.1	32,621
<i>Banned from 2006</i>	15.3	38,132
<i>Have no idea about the regulations</i>	48.0	119,303

Only 3.7 percent of the sample (9194 population individuals), knew that open fires are both banned now in new homes and banned from use in 2006. Similarly, 3.5 percent (8697), knew that open fires were to be banned at some stage in the future, and were currently banned in new homes.

When respondents knowledge about open fires regulations, was analysed by their demographics, the following patterns appeared:

1. Those respondents who knew nothing about the open fire regulations were more likely to board or rent their accommodation, and were more likely to be under the age of 30.
2. Those who thought all open fires were banned now were more likely to be female.
3. Those who knew that open fires were banned in the future but were uncertain about when, were more likely to own their own homes and be aged between 30 and 65.
4. Those who knew that open fires were currently banned in new homes were more likely to be male aged between 35 and 60.
5. Respondents who knew that open fires were banned from use from 2006 were more likely to own their own home and be aged between 35 and 65.

3.3 Older Burners

The majority of the population, approximately 59 percent (145,462 individuals) do not know what the regulations which pertain to management of older burners. Table 3.2 below refers.

Table 3.2
Perception of Older Burner Regulations

<u>Regulations Regarding Older Burners</u>	<u>Percentage of sample</u>	<u>Potential Population</u>
<i>Are to be replaced</i>	20.9	51,952
<i>Replaced if they are older than 15 years</i>	7.3	18,170
<i>Replaced if they are older than 15 years from 2008</i>	7.8	19,318
<i>Have something happen to them in 2008</i>	5.3	13,266
<i>Don't know about regulations relating to older burners</i>	58.5	145,462

When respondents knowledge about older burner regulations, was analysed by their demographics, the following patterns appeared:

1. Those knowing nothing about the older burner regulations were more likely to rent or board and be aged under 30 years of age.
2. Those who knew older burners have to be replaced were more likely to be community services card holders, own their own homes and be aged between 35 and 55.
3. Respondents who knew burners had to be replaced after 15 years were more likely to be aged 30 to 35 or 50 to 60.
4. Those who knew burners older than 15 years need to be replaced from 2008, were likely to own their own homes and be aged 25 to 50, or 55 to 60.
5. Respondents who knew that there was something happening in 2008 related to older burner regulations were more likely to own their own homes and be aged 45 plus.

CHAPTER FOUR ASSISTANCE AND INCENTIVE PROGRAMMES

4.1 Introduction

Respondents were asked about the incentives and assistance programmes to help Christchurch residents with their heating and insulation programmes. They were also asked to identify what organization ran these programmes.

4.2 The Clean Heat Programme

There is a reasonably high level of ignorance about the clean heat project with the majority of the sample (population), 70 percent (174,938), not being able to describe what it is. Table 4.1 refers.

Table 4.1
The Clean Heat Programme

<u>Clean Heat Programme is...</u>	<u>Percentage of sample</u>	<u>Potential Population</u>
<i>Incentives and subsidies</i>	9.1	22,664
<i>A conversion programme replacing open fires and older burners</i>	21.7	53,900
<i>Insulation Assistance</i>	5.4	13,392
<i>Don't know</i>	70.4	174,938

A smaller number, 3.8 percent (9442 individuals) knew that the clean heat programme was both incentives and subsidies, and replacing older burners and open fires. Similarly, 2.1 percent (5218 individuals) knew the clean heat project was both incentives and subsidies, and insulation assistance.

The most common characteristic of those respondents who could articulate details about the clean project was the fact that they owned their own homes and they tended to be aged between 30 and 50.

4.3 Warm Home Energy Check

The warm home energy check had a higher level of recognition with approximately 41 percent (100,861 individuals) being able to describe it as an energy check. Table 4.2 below refers.

Table 4.2
Warm Home Energy Check

<u>Warm Home Energy Check is...</u>	<u>Percentage of sample</u>	<u>Potential Population</u>
<i>Insulation Check</i>	40.6	100,861
<i>Don't know</i>	59.4	147,629

Those who could describe the warm home energy check were more likely to own their own home and be aged between 30 and 65, conversely, those who did not know about it, were more likely to rent or board and be aged under 30 and either rent their properties or board.

4.4 The Clean Heat Advice Programme

There was a relatively low level of recognition of the clean heat advice programme, as is evident in Table 4.3 below. Those people who were more likely to know that it was *advice on operating burners efficiently*, were home owners, and a higher percentage of those knowing nothing about the clean heat project were more likely to be people renting or boarding.

Table 4.3
The Clean Heat Advice Programme

<u>Clean Heat Advice Programme is...</u>	<u>Percentage of sample</u>	<u>Potential Population</u>
<i>Advice on wood storage and wood sheds</i>	2.3	5,630
<i>Advice on operating burners efficiently</i>	13.4	33,368
<i>Don't know</i>	85.9	213,330

4.5 Agency Operating Advice and Assistance Programmes

As is shown in Table 4.4 below, there is a confused perception held by the public about who runs the advice and assistance programmes. Those respondents who named either The City Council or ECan, were more likely to be home owners, community service card holders and aged between 30 and 55. Conversely those respondents having no idea were more likely to rent or board and be aged under 25 or over 60.

Table 4.4
Agencies Operating Advice and Assistance Programmes

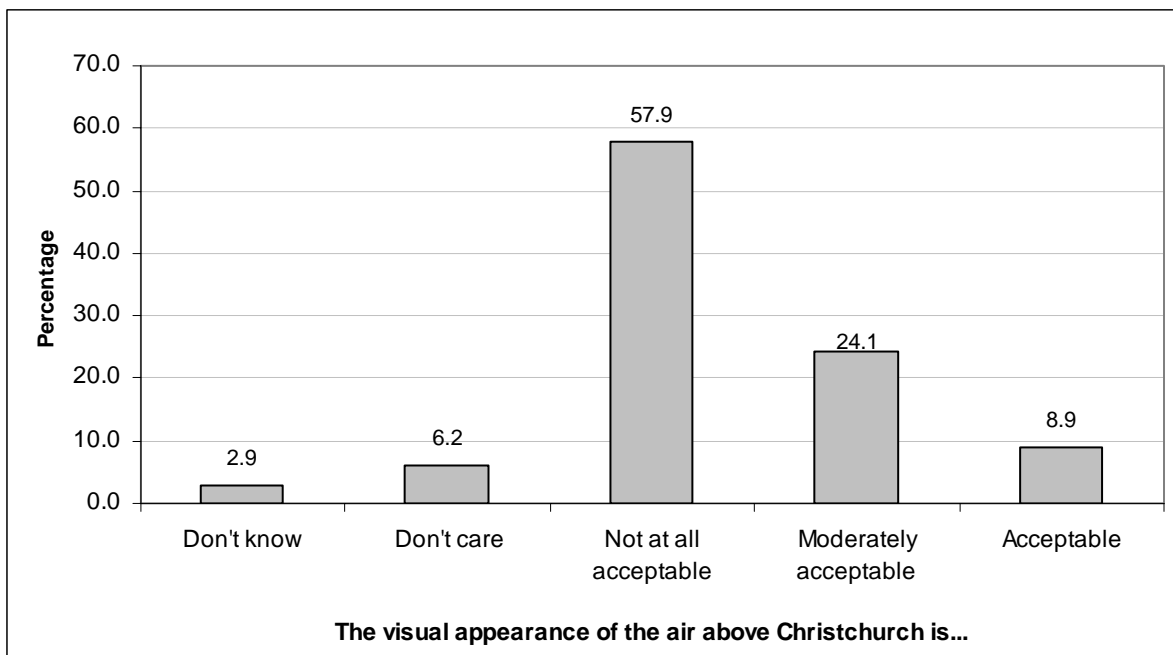
<u>Advice and Assistance Programmes are run by...</u>	<u>Percentage of sample</u>	<u>Potential Population</u>
<i>Christchurch City Council</i>	25.1	62,413
<i>Environment Canterbury</i>	27.0	66,993
<i>EECA</i>	2.8	6,889
<i>Both Christchurch City Council and Environment Canterbury</i>	1.7	4,224
<i>Christchurch City Council and EECA</i>	0.6	1,491
<i>Don't know</i>	47.5	117,994

CHAPTER FIVE VISUAL AIR POLLUTION

5.1 Introduction

Respondents were asked about the visual aspects about the air pollution problem. Figure 5.1 below provides a distribution of the responses of the entire sample. Singularly, the largest group, representing approximately 58 percent (or 143,773 individuals in the population), considered that the appearance of the air above Christchurch during winter was not at all acceptable.

Figure 5.1
Appearance of Air Above Christchurch in Winter



Note: The difference in distribution between Figures 5.1 and Figure 2.3 in Chapter Two, is due to those respondents who didn't consider Christchurch had an air pollution problem, not providing an indication of the acceptability of Christchurch's air quality (Figure 2.3).

The only significant characteristic about those who didn't think the visual aspects of the air was not all acceptable, was that they were home owners.

5.2 Main Causes of Visual Air Pollution

As is shown in Table 5.1, the causes of visual pollution recognized by the largest numbers of respondents were burning of wood and coal and vehicles.

Table 5.1
Causes of Visual Air Pollution

<u>Cause</u>	<u>Percentage of sample</u>	<u>Potential Population</u>
<i>Burning of wood and coal</i>	63.7	158,235
<i>Vehicles</i>	50.5	125,408
<i>Natural sources – dust, salt spray, fog etc</i>	23.5	58,477
<i>Industry</i>	18.0	44,637
<i>Don't know</i>	11.6	28,842

Those respondents who thought burning wood and coal was a cause, were more likely to own their own home, be aged between 20 and 55 and were not community services card holders. Vehicles, was more likely to be seen as a visual air pollution cause by those aged under 20 or home owners over the age of 45. The respondents who had no idea were likely to be aged between 20 and 35 and either rent their accommodation or board.

APPENDIX ONE

Good afternoon/evening my name is ----- and I am calling on behalf of Environment Canterbury. We are doing a survey on air quality and would appreciate your opinion on the issue. I have just a few quick questions. *Ask to speak to the next person in the house over the age of 18 to have a birthday.*

Do you think that Christchurch has an air pollution problem in Winter? Yes No IF NO GO TO Q6.

How acceptable to you is the air quality in Christchurch over the winter months?
 Don't know Don't care NOT AT ALL ACCEPTABLE Moderately ACCEPTABLE ACCEPTABLE

What do you think the effects are from this pollution? *Dot in as many as the respondent provides*

Health Visual Smell Quality of life Affects environment Affects buildings Other None

What do you think causes the pollution? *Dot in as many as the respondents provides*
 Burning wood & coal Industry Vehicles Other Don't Know

Does air pollution affect your health or the health of any of your family or friends? Yes No

Could you describe for me the rules concerning open fires and the replacement of older burners?

- a. Open fires are... All banned NOW Banned in future Banned now in new homes Banned from 2006 Don't know
- b. Older burners are... Replace older burners Replace burners > 15yrs Replace burners: 15yrs from 2008 Something in 2008 Don't know

Could you please describe to me what the following programmes are about

- a. THE CLEAN HEAT PROJECT
 Incentives & subsidies Conversion programme replacing open fires & older burners Insulation assistance Don't know
- b. THE WARM HOME ENERGY CHECK Insulation check Don't know
- c. THE CLEAN HEAT ADVICE PROGRAMME Advice on wood storage & wood sheds Advice on operating burner efficiently Don't know
- d. WHO RUNS THESE THREE SERVICES
 ChCh City Council Environ Canterbury EECA Don't know

These air quality measures are aimed at reducing the level of very small suspended particles in the air, which are the main cause of health problems resulting from air pollution. However, they may not reduce visual pollution. **Turning from health effects to visual effects, how acceptable is the appearance of the air above Christchurch in winter?**

Don't know Don't Care Not at all acceptable Moderately Acceptable Acceptable

What do you think are the main causes of visual pollution in Christchurch?

Burning wood & coal Vehicles Industry Natural sources - dust, salt spray fog etc Don't know

10. Do you have a community services card? Yes No
11. Do you rent or own your own home? Rent Own Board
12. Gender? Female Male
13. Age? 0 1 2 3 4 5 6 7 8 9

THANK YOU FOR PARTICIPATING

APPENDIX TWO
MARGINAL FREQUENCY ANALYSIS OF ALL RESULTS

Does ChCh have pollution problem?				
	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	221935	89.3	89.3	89.3
No	26555	10.7	10.7	100.0
Total	248490	100.0	100.0	

ChCh air quality is..				
	Frequency	Percent	Valid Percent	Cumulative Percent
ChCh has no pollution problem	26555	10.7	10.7	10.7
Don't know	7231	2.9	2.9	13.6
Don't care	7618	3.1	3.1	16.7
Not at all acceptable	111370	44.8	44.8	61.5
Moderately acceptable	76810	30.9	30.9	92.4
Acceptable	18905	7.6	7.6	100.0
Total	248490	100.0	100.0	

Health effect				
	Frequency	Percent	Valid Percent	Cumulative Percent
	66857	26.9	26.9	26.9
This is an effect	181633	73.1	73.1	100.0
Total	248490	100.0	100.0	

Visual effect				
	Frequency	Percent	Valid Percent	Cumulative Percent
	231114	93.0	93.0	93.0
This is an effect	17376	7.0	7.0	100.0
Total	248490	100.0	100.0	

Smell effect				
	Frequency	Percent	Valid Percent	Cumulative Percent
	224458	90.3	90.3	90.3
This is an	24032	9.7	9.7	100.0

effect				
Total	248490	100.0	100.0	

Affects quality of life				
	Frequency	Percent	Valid Percent	Cumulative Percent
	211913	85.3	85.3	85.3
This is an effect	36577	14.7	14.7	100.0
Total	248490	100.0	100.0	

Affects environment				
	Frequency	Percent	Valid Percent	Cumulative Percent
	220453	88.7	88.7	88.7
This is an effect	28037	11.3	11.3	100.0
Total	248490	100.0	100.0	

Affects buildings				
	Frequency	Percent	Valid Percent	Cumulative Percent
	237884	95.7	95.7	95.7
This is an effect	10605	4.3	4.3	100.0
Total	248490	100.0	100.0	

Other effects				
	Frequency	Percent	Valid Percent	Cumulative Percent
	234320	94.3	94.3	94.3
This is an effect	14169	5.7	5.7	100.0
Total	248490	100.0	100.0	

No effect				
	Frequency	Percent	Valid Percent	Cumulative Percent
	228063	91.8	91.8	91.8
There is no effect	20427	8.2	8.2	100.0
Total	248490	100.0	100.0	

Burning of wood & coal cause				
	Frequency	Percent	Valid Percent	Cumulative Percent

Christchurch Public Perception Survey

	84209	33.9	33.9	33.9
This is a cause	164281	66.1	66.1	100.0
Total	248490	100.0	100.0	

Industry cause				
	Frequency	Percent	Valid Percent	Cumulative Percent
	209283	84.2	84.2	84.2
This is a cause	39207	15.8	15.8	100.0
Total	248490	100.0	100.0	

Vehicle cause				
	Frequency	Percent	Valid Percent	Cumulative Percent
	111043	44.7	44.7	44.7
This is a cause	137447	55.3	55.3	100.0
Total	248490	100.0	100.0	

Other cause				
	Frequency	Percent	Valid Percent	Cumulative Percent
	190117	76.5	76.5	76.5
This is a cause	58373	23.5	23.5	100.0
Total	248490	100.0	100.0	

Don't know				
	Frequency	Percent	Valid Percent	Cumulative Percent
	246130	99.1	99.1	99.1
Don't know what causes it	2360	.9	.9	100.0
Total	248490	100.0	100.0	

Does air pollution affect you/family/friends health?				
	Frequency	Percent	Valid Percent	Cumulative Percent
ChCh has no pollution problem	26555	10.7	10.7	10.7
Yes	79678	32.1	32.1	42.8
No	142257	57.2	57.2	100.0
Total	248490	100.0	100.0	

Open fires...				
	Frequency	Percent	Valid Percent	Cumulative Percent
	210769	84.8	84.8	84.8
..are banned now	37721	15.2	15.2	100.0
Total	248490	100.0	100.0	

Open fires...				
	Frequency	Percent	Valid Percent	Cumulative Percent
	209714	84.4	84.4	84.4
..are banned in the future	38776	15.6	15.6	100.0
Total	248490	100.0	100.0	

Open fires...				
	Frequency	Percent	Valid Percent	Cumulative Percent
	215869	86.9	86.9	86.9
..are banned now in new homes	32621	13.1	13.1	100.0
Total	248490	100.0	100.0	

Open fires...				
	Frequency	Percent	Valid Percent	Cumulative Percent
	210358	84.7	84.7	84.7
..are banned from 2006	38132	15.3	15.3	100.0
Total	248490	100.0	100.0	

Open fire regulations...				
	Frequency	Percent	Valid Percent	Cumulative Percent
	129187	52.0	52.0	52.0
..I know nothing about	119303	48.0	48.0	100.0
Total	248490	100.0	100.0	

Older burners are ...				
	Frequency	Percent	Valid Percent	Cumulative Percent
	196538	79.1	79.1	79.1
..to be replaced	51952	20.9	20.9	100.0

Christchurch Public Perception Survey

Total	248490	100.0	100.0	
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Older burners are...				
	Frequency	Percent	Valid Percent	Cumulative Percent
	230320	92.7	92.7	92.7
..to be replaced if they are older than 15 years	18170	7.3	7.3	100.0
Total	248490	100.0	100.0	

Older burners are...				
	Frequency	Percent	Valid Percent	Cumulative Percent
	229172	92.2	92.2	92.2
..to be replaced if they are >15 years - old from 2008	19318	7.8	7.8	100.0
Total	248490	100.0	100.0	

Older burners are...				
	Frequency	Percent	Valid Percent	Cumulative Percent
	235224	94.7	94.7	94.7
..to have something happen to them in 2008	13266	5.3	5.3	100.0
Total	248490	100.0	100.0	

Don't know about older burners				
	Frequency	Percent	Valid Percent	Cumulative Percent
	103028	41.5	41.5	41.5
..or what is to happen to them	145462	58.5	58.5	100.0
Total	248490	100.0	100.0	

The Clean Heat Project is..				
	Frequency	Percent	Valid Percent	Cumulative Percent
	225826	90.9	90.9	90.9
..incentives & subsidies	22664	9.1	9.1	100.0
Total	248490	100.0	100.0	

The Clean Heat Project is..				
	Frequency	Percent	Valid Percent	Cumulative Percent
	194590	78.3	78.3	78.3
..replacing open fires and older burners	53900	21.7	21.7	100.0
Total	248490	100.0	100.0	

The Clean Heat Project is..				
	Frequency	Percent	Valid Percent	Cumulative Percent
	235098	94.6	94.6	94.6
..insulation assistance	13392	5.4	5.4	100.0
Total	248490	100.0	100.0	

The Clean Heat Project is..				
	Frequency	Percent	Valid Percent	Cumulative Percent
	73552	29.6	29.6	29.6
..something I know nothing about	174938	70.4	70.4	100.0
Total	248490	100.0	100.0	

The Warm Home Energy Check is..				
	Frequency	Percent	Valid Percent	Cumulative Percent
	147629	59.4	59.4	59.4
..an insulation check	100861	40.6	40.6	100.0
Total	248490	100.0	100.0	

The Warm Home Energy Check..				
	Frequency	Percent	Valid Percent	Cumulative Percent
	100861	40.6	40.6	40.6
..I know nothing about	147629	59.4	59.4	100.0
Total	248490	100.0	100.0	

Christchurch Public Perception Survey

Clean Heat Advice is..				
	Frequency	Percent	Valid Percent	Cumulative Percent
	242860	97.7	97.7	97.7
..advice on wood storage & wood sheds	5630	2.3	2.3	100.0
Total	248490	100.0	100.0	

Clean Heat Advice is..				
	Frequency	Percent	Valid Percent	Cumulative Percent
	215122	86.6	86.6	86.6
..advice on operating burners efficiently	33368	13.4	13.4	100.0
Total	248490	100.0	100.0	

Clean Heat Advice..				
	Frequency	Percent	Valid Percent	Cumulative Percent
	35160	14.1	14.1	14.1
..I know nothing about	213330	85.9	85.9	100.0
Total	248490	100.0	100.0	

These services are run by...				
	Frequency	Percent	Valid Percent	Cumulative Percent
	185742	74.7	74.7	74.7
Christchurch City Council	62748	25.3	25.3	100.0
Total	248490	100.0	100.0	

These services are run by...				
	Frequency	Percent	Valid Percent	Cumulative Percent
	181497	73.0	73.0	73.0
Environment Canterbury	66993	27.0	27.0	100.0
Total	248490	100.0	100.0	

These services are run by...				
	Frequency	Percent	Valid Percent	Cumulative Percent
	241205	97.1	97.1	97.1
EECA	7285	2.9	2.9	100.0
Total	248490	100.0	100.0	

These services are run by...				
	Frequency	Percent	Valid Percent	Cumulative Percent
	128957	51.9	51.9	51.9
..I have no idea	119533	48.1	48.1	100.0
Total	248490	100.0	100.0	

Acceptability of the appearance of air above ChCh city				
	Frequency	Percent	Valid Percent	Cumulative Percent
Don't know	7142	2.9	2.9	2.9
Don't care	15388	6.2	6.2	9.1
Not at all acceptable	143773	57.9	57.9	66.9
Moderately acceptable	60000	24.1	24.1	91.1
Acceptable	22186	8.9	8.9	100.0
Total	248490	100.0	100.0	

The main cause of visual pollution in Christchurch is...				
	Frequency	Percent	Valid Percent	Cumulative Percent
	90255	36.3	36.3	36.3
Burning of wood and coal	158235	63.7	63.7	100.0
Total	248490	100.0	100.0	

The main cause of visual pollution in Christchurch is...				
	Frequency	Percent	Valid Percent	Cumulative Percent
	123082	49.5	49.5	49.5
Vehicles	125408	50.5	50.5	100.0
Total	248490	100.0	100.0	

The main cause of visual pollution in Christchurch is...				
	Frequency	Percent	Valid Percent	Cumulative Percent
	203853	82.0	82.0	82.0
Industry	44637	18.0	18.0	100.0
Total	248490	100.0	100.0	

The main cause of visual pollution in Christchurch is...				
	Frequency	Percent	Valid Percent	Cumulative Percent
	190013	76.5	76.5	76.5
Natural sources - dust, salt spray, fog etc	58477	23.5	23.5	100.0
Total	248490	100.0	100.0	

The main cause of visual pollution in Christchurch is...				
	Frequency	Percent	Valid Percent	Cumulative Percent
	219648	88.4	88.4	88.4
..I have no idea	28842	11.6	11.6	100.0
Total	248490	100.0	100.0	

Have a community services card?				
	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	78722	31.7	31.7	31.7
No	169768	68.3	68.3	100.0
Total	248490	100.0	100.0	

Home ownership				
	Frequency	Percent	Valid Percent	Cumulative Percent
Rent	52749	21.2	21.2	21.2
Own	177712	71.5	71.5	92.7
Board	18029	7.3	7.3	100.0
Total	248490	100.0	100.0	

Gender				
	Frequency	Percent	Valid Percent	Cumulative Percent
Female	129835	52.2	52.2	52.2
Male	118655	47.8	47.8	100.0
Total	248490	100.0	100.0	

Age				
	Frequency	Percent	Valid Percent	Cumulative Percent
18 - 19	10986	4.4	4.4	4.4
20 - 24	29108	11.7	11.7	16.1
25 - 29	26733	10.8	10.8	26.9
30 - 34	25809	10.4	10.4	37.3
35 - 39	24702	9.9	9.9	47.2
40 - 44	22880	9.2	9.2	56.4
45 - 49	21802	8.8	8.8	65.2
50 - 54	16428	6.6	6.6	71.8
55 - 59	13860	5.6	5.6	77.4
60 - 64	12340	5.0	5.0	82.4
65+	43843	17.6	17.6	100.0
Total	248490	100.0	100.0	