

## 2 METHODOLOGY, SAMPLE AND REPORTING

### 2.1 OVERALL METHODOLOGY

This survey was undertaken using Computer Assisted Telephone Interviewing (CATI) by Versus Research. A total of 1005 interviews were completed with residents of the Waikato region during the period January 29 to March 28, 2013. The sample was provided by KMS Data. Interviews were quota'd<sup>1</sup> by gender, age, ethnicity and location (territorial authority and rural/urban), with data re-weighted at the completion of surveying to ensure representative results.

### 2.2 QUESTIONNAIRE DESIGN

The questionnaire was designed by Waikato Regional Council and care was taken to retain the wording of previously used questions so as not to compromise the ability of the survey to monitor responses over time.

A pilot of n=34 interviews was undertaken prior to live interviewing commencing. The aim of the pilot was to check questionnaire flow and wording clarification. A copy of the questionnaire is contained in Appendix One.

### 2.3 SAMPLING

The sample was provided by KMS Data who provided a random telephone number generation service with a spatial distribution of numbers across the region based on geo-codes to enable analysis by specific locations such as catchments or proximity to the coast.

### 2.4 SURVEY METHOD

Surveying was undertaken using Computer Assisted Telephone Interviewing (CATI) from Versus Research based in Hamilton. The average interview length was 17.5 minutes.

Interviewing hours were 5:00 pm to 5:30 pm and 6:30 pm to 9:00 pm<sup>2</sup> Monday to Friday.

Where requested by the respondent, a small number of interviews were conducted during the day and between 5.30 pm and 6.30 pm. A summary of the contact outcomes are listed below.

**Table 2-1: Contact outcomes**

	<b>Number of Occurrences</b>	<b>% of Total contacts</b>
<b>Agree to participate</b>	1005	34
<b>Refuse</b>	1684	57
<b>Did not qualify<sup>3</sup></b>	115	4
<b>Not in service</b>	136	5
<b>Business</b>	13	<1
<b>Total contacts</b>	<b>2953</b>	<b>100</b>

<sup>1</sup> Quota sampling is the practice of specifying the number of interviews that need to be achieved for different demographic groups across the sample. This is completed to ensure that the final sample is representative of the target population proportions.

<sup>2</sup> Interviewing was not undertaken from 5:30 pm to 6:30 pm on weekdays at the request of Waikato Regional Council as a means of reducing resident inconvenience over this frequently busy household time.

<sup>3</sup> Over quota allowance, under age, works for or contracts to Waikato Regional Council.

## 2.5 SAMPLE STRUCTURE

A total of 1005 interviews were completed. The final sample size provides a maximum margin of error of +/- 3.09 per cent at the 95 per cent confidence interval.

The sample was quota'd to over-sample smaller territorial authorities and rural areas and under-sample larger territorial authorities. This was done to ensure robust sample sizes within each territorial authority to confidently report results within at least +/- 12.25 per cent at the 95 per cent confidence level. Please note that since previous surveys, Franklin District has become part of Waikato and Hauraki districts (plus Auckland Council).

The tables below show the sample structure by key demographics. The sample was quota'd by gender, age and ethnicity to ensure it was representative of the distribution of the Waikato region population on these characteristics. The sample was then weighted by age and gender to adjust for minor differences between quotas and actual population shares. The tables below show the unweighted data of the sample. Please note that not all percentages shown add up to 100 per cent due to rounding and/or questions that allow multiple responses (rather than a single response).

**Table 2-2: Sample Structure by Territorial Authority**

	Number of Interviews (n)	% of Sample
Thames-Coromandel	78	8
Hauraki	70	7
Waikato	81	8
Hamilton	225	22
Matamata-Piako	75	7
Waipā	83	8
South Waikato	82	8
Otorohanga	83	8
Waitomo	83	8
Rotorua <sup>4</sup>	64	6
Taupo	81	8
<b>Total</b>	<b>1005</b>	<b>100</b>

**Table 2-3: Sample Structure by Rural/Urban**

	Number of Interviews (n)	% of Sample
Rural	358	35
Urban	647	65
<b>Total</b>	<b>1005</b>	<b>100</b>

**Table 2-4: Sample Structure by Gender**

	Number of Interviews (n)	% of Sample
Male	458	46
Female	547	54
<b>Total</b>	<b>1005</b>	<b>100</b>

<sup>4</sup> Interviews from Rotorua district have only been conducted amongst those who lived within the Waikato Regional Council boundaries.

**Table 2-5: Sample Structure by Ethnicity**

	<b>Number of Interviews (n)</b>	<b>% of Sample</b>
European	454	45
New Zealander	400	40
Māori	113	11
Asian/Indian	10	1
Pacific Island	6	1
Refused	6	1
Don't know	1	0
Other	15	1
<b>Total</b>	<b>1005</b>	<b>100</b>

**Table 2-6: Sample Structure by Māori Ancestry**

	<b>Number of Interviews (n)</b>	<b>% of Sample</b>
I have no Māori ancestry	743	83
Yes, I have some Māori ancestry	133	15
Refused	16	2
<b>Total</b>	<b>892</b>	<b>100</b>

**Table 2-7: Sample Structure by Age**

	<b>Number of Interviews (n)</b>	<b>% of Sample</b>
18-19	30	3
20-29	86	9
30-39	168	17
40-49	214	21
50-59	195	19
60-65	91	9
65+	215	21
Refused	6	1
<b>Total</b>	<b>1005</b>	<b>100</b>

**Table 2-8: Sample Structure by Highest Qualification**

	<b>Number of Interviews (n)</b>	<b>% of Sample</b>
Primary school	26	3
Secondary school qualification	220	22
Secondary school	283	28
Trade certificate	115	11
Tertiary qualification	361	36
<b>Total</b>	<b>1005</b>	<b>100</b>

**Table 2-9: Sample Structure by Household Situation**

	<b>Number of Interviews (n)</b>	<b>% of Sample</b>
Young, single, living alone	19	2
Group flatting together	17	1
Young couple, no children	23	2
Family, mainly preschool children	83	8
Family, mainly school aged children	258	26
Family, adult children	189	19
Older couple/single person	298	30
Middle aged single/couple	88	9
Boarding or similar	27	3
Refused	3	0
<b>Total</b>	<b>1005</b>	<b>100</b>

**Table 2-10: Sample Structure by Household Income**

	<b>Number of Interviews (n)</b>	<b>% of Sample</b>
Less than \$30,000	171	17
\$30,001 - 60,000	244	24
\$60,001 - 90,000	250	25
\$90,001 - 150,000	197	20
\$150,001 - 200,000	47	5
\$200,001 - 300,000	11	1
\$300,001+	8	1
Refused	39	4
Don't know	38	4
<b>Total</b>	<b>1005</b>	<b>100</b>

**Table 2-11: Sample Structure by Employment Status**

	<b>Number of Interviews (n)</b>	<b>% of Sample</b>
Working full time	457	45
Working part time	186	19
Retired	201	20
Home responsibilities	57	6
Student	37	4
Unemployed/ beneficiary	57	6
Refused/don't know	10	1
<b>Total</b>	<b>1005</b>	<b>100</b>

**Table 2-12: Sample Structure by Occupation<sup>5</sup>**

	Number of Interviews (n)	% of Sample
Education/Health	122	12
Clerical/Sales	113	11
Professional/Managerial	81	8
Farmer/Forestry worker	78	8
Trade/Technical	72	7
Skilled	57	6
Semi-skilled	50	5
Unskilled	4	<1
Self-employed	36	4
Government	13	1
Not in paid employment <sup>6</sup>	157	16
Retired	201	20
Other/Don't know/Refused	21	2
<b>Total</b>	<b>1005</b>	<b>100</b>

## 2.6 WEIGHTING

The sample was weighted by age and gender to adjust for minor differences between quotas and actual population shares.

**Table 2-13: Weighting by Age and Gender 2013**

Weight variable	Observed	Expected	Weight
Male 18-29	69	106	1.5347
Male 30-39	70	89	1.2702
Male 40-49	84	96	1.1417
Male 50-59	83	82	0.9870
Male 60-64	41	31	0.7553
Male 65+	109	79	0.7241
Female 18-29	47	105	2.2318
Female 30-39	98	98	0.9990
Female 40-49	130	105	0.8069
Female 50-59	112	84	0.7493
Female 60-64	50	32	0.6394
Female 65+	106	93	0.8774

The tables below show the weighted data of the sample for area.

**Table 2-14: Weighted Sample by Rural/Urban**

	Number of Interviews (n)	% of Sample
Rural	355	35
Urban	650	65
<b>Total</b>	<b>1005</b>	<b>100</b>

<sup>5</sup> A definition of some classification codes is contained in Appendix Two.

<sup>6</sup> Note: this includes students (4%), unemployed/beneficiary (6%) and those undertaking home responsibilities (6%).

**Table 2-15: Weighted Sample by Territorial Authority**

	Rural	Urban	Total	% of Sample
Thames-Coromandel	30	41	71	7
Hauraki	32	36	68	7
Waikato	47	33	80	8
Hamilton	9	221	230	23
Matamata-Piako	18	59	77	8
Waipā	20	61	81	8
South Waikato	26	57	83	8
Otorohanga	47	38	85	8
Waitomo	31	53	84	8
Rotorua	69	3	72	7
Taupo	26	48	74	7
<b>Total</b>	<b>355</b>	<b>650</b>	<b>1005</b>	<b>100</b>

## 2.7 REPORTING

This report presents results at four levels:

- Overall results
- Comparisons with previous years
- Demographic variations in results
- Geographic variations in results.

Overall results are reported on weighted results for a sample 1005 interviews. Comparisons of results with previous years are shown where possible. Any results stated to be significantly different from previous years have been tested and found to be statistically significantly different at the 95 per cent confidence level. Results at the regional level are displayed through the use of tables, pie charts and line charts. Tables include comparisons with previous years where appropriate.

All results have also been analysed to highlight differences in responses by different demographic groups. Any significant differences are commented on within the text under the demographic variation sections of the report. Specific demographics of interest are:

- Gender
- Age
- Ethnic group
- Māori ethnicity
- Māori ancestry
- Annual household income
- Highest academic qualification
- Employment situation
- Occupation (including farming).

Results have also been analysed by territorial authority and by the rural/urban split. Specific significant differences between different territorial authorities and rural/urban split are included in the text under the Geographic Differences section of the report. Additionally, all results for territorial authority and the rural/urban split are displayed as a stacked bar. The table below shows confidence levels (at the 95% level) for a range of subgroups commonly referred to in the analysis.

**Table 2-16: Main Sub-Sample Sizes and Associated Confidence Levels**

<b>Sub sample description</b>	<b>Sub sample size</b>	<b>Confidence Level at 95% (± %)</b>
<b>Total sample</b>	1005	3.09
<b>Rural</b>	358	5.18
<b>Urban</b>	647	3.85
<b>Thames-Coromandel</b>	78	11.10
<b>Hauraki</b>	70	11.71
<b>Waikato</b>	81	10.89
<b>Hamilton</b>	225	6.53
<b>Matamata-Piako</b>	75	11.31
<b>Waipā</b>	83	10.76
<b>South Waikato</b>	82	10.82
<b>Otorohanga</b>	83	10.76
<b>Waitomo</b>	83	10.76
<b>Rotorua</b>	64	12.25
<b>Taupo</b>	81	10.89

### **2.7.1 SIGNIFICANCE TESTING**

Significance testing is used to determine whether the difference between two results is statistically significant or not, i.e., to determine the probability that an observed difference occurred as a result of chance. Significance testing has been applied to those groups with more than n=30 people.

Significance testing was conducted in this report between the various subgroups, including the different demographic<sup>7</sup> and geographic<sup>8</sup> groups. As mentioned above, statistically significant results for the different demographic and geographic groups are detailed in bullet point format under the Demographic Variation and Geographic Variation sections respectively in each component of the report.

<sup>7</sup> Gender, age, ethnic group, Māori ancestry, annual household income, highest academic qualification, employment situation, occupation and farming or other rural.

<sup>8</sup> Territorial authority and rural/urban split.