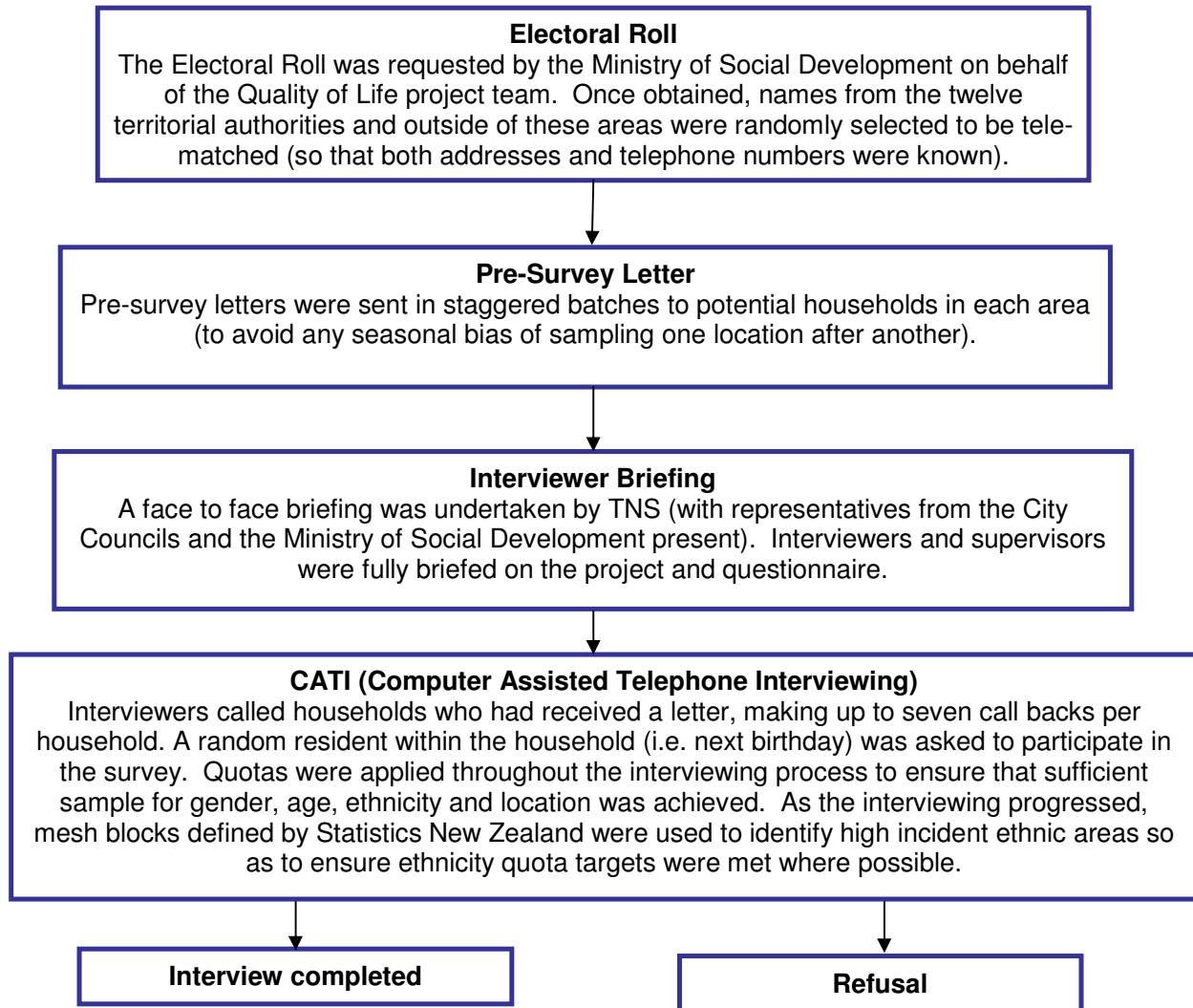


2.0 Research Design

An overview of the research process for the Quality of Life Survey 2006 is shown below:



Pre-Survey Letter²

The pre-survey letters were addressed to the household and were placed into envelopes that had the Quality of Life logo printed on them. Letters were posted to allow one to two weeks delivery time before households were contacted.

The pre-survey letter briefly explained the purpose of the research and that a TNS interviewer would call sometime soon. Further, it mentioned that the interview would be approximately 20 minutes in length and that all participation was voluntary. It also stressed that all information given would be kept in the strictest confidence, and an 0800 number and email was offered for any additional information required by the household. The letter also mentioned residents could enter into a prize draw for travel vouchers (provided by TNS) as a token of appreciation. The prizes were one \$2,000 travel voucher, and two travel vouchers worth \$1,000.

CATI Interviews

Similar to previous surveys, Computer Assisted Telephone Interviewing (CATI) was the quantitative methodological approach undertaken for the survey.

Interviewing was conducted between July 17 and November 17, 2006. The average length of interviewing was 19.9 minutes (not including the time taken to find the respondent in the household).

Questionnaire

The majority of questions in the questionnaire were kept consistent with previous years. However, in order to further enhance the data collection and the ease of use for both interviewers and residents, the questionnaire was refined (refer to Appendix Three).

Interview Pilot

TNS undertook two pilots of the survey (both in June 2006). For each pilot, a sample size of n=50 was achieved. Residents were selected using random digit dialling and were from a mix of urban and rural areas.

Post the pilots, minor changes were made to wording so as to reduce the overall time. All changes were signed off by the Quality of Life project team before the interviewing for the 2006 survey went live.

Electoral Roll and Tele-matching

The Electoral Roll records the addresses of the majority of New Zealand households. Using tele-matching services, telephone numbers were identified for households within the twelve territorial authorities and the rest of New Zealand.

² Due to the need for addresses in sending out pre-survey letters, the Electoral Roll was used as a sample base.

Mesh blocks provided by Statistics New Zealand were used to identify areas where there were high incidences of ethnicities such as where Pacific peoples resided. These mesh blocks were then included in the random sample selection.

Once tele-matching was complete, letters were sent to households (rather than individuals) to ensure all members of the household (regardless of their Electoral Roll status) were eligible to participate. When contacting the household a random selection method (i.e. next birthday) was used to select the respondent within the household.

Sample

The sample was a probabilistic sample of the population of New Zealand residents aged 15 years or older. The total sample was n=7,720 New Zealanders aged 18 years and over. The sample included a minimum of n=500 residents from the 12 main New Zealand cities and n=1,500 residents from the rest of New Zealand (referred to as "Rest of New Zealand"), allowing for sub-analysis of these groups. A summary of the sample and associated maximum margins of error follows.

Location	Sample Target (n=)	Sample Achieved (n=)	Maximum margin of error (95% level of confidence)
Rodney District	500	501	+/- 4.4%
North Shore City	500	503	+/- 4.4%
Waitakere	500	520	+/- 4.3%
Auckland	500	509	+/- 4.3%
Manukau	500	587	+/- 4.0%
Hamilton	500	507	+/- 4.3%
Tauranga	500	508	+/- 4.3%
Porirua	500	546	+/- 4.2%
Lower Hutt	500	526	+/- 4.3%
Wellington	500	503	+/- 4.4%
Christchurch City (including Banks Peninsula)	500	503	+/- 4.4%
Dunedin City	500	502	+/- 4.4%
Rest of New Zealand	1,500	1,505	+/- 2.5%
TOTAL	7,500	7,720	+/- 1.1%

Quotas

In order to ensure a good representation of the New Zealand population, quotas were implemented. Quotas were broken down by age (15-24 years, 25-49 years, 50-64 years and 65 years or more), ethnicity (Māori, Pacific and Asian) and gender to ensure an acceptable standard of error both at the national and city level³.

The quotas set were soft quotas as opposed to hard quotas i.e. a range of +/- n=10 (2%) rather than a definite target. The following minimum quotas were targeted.

Quota	2001 Census % of population	Minimum quota	Achieved interviews	Maximum margin of error (95% level of confidence)
Male	49%	n=2,750	n=3,149	+/- 1.7%
Female	51%	n=2,870	n=4,571	+/- 1.4%
15-24 year olds	17%	n=950	n=958 ⁴	+/- 3.2%
25-49 year olds	47%	n=2,640	n=3,494	+/- 1.7%
50-64 year olds	20%	n=1,125	n=2,144	+/- 2.1%
65 plus year olds	16%	n=900	n=949	+/- 3.2%

Quotas were also set for Māori, Pacific and Asian/Indian ethnicities to ensure that the population data for each of these groups was meaningful (i.e. not subject to a high level of error). The minimum quotas achieved are outlined in the table following.

Quota	2001 Census % of population	Minimum quota	Achieved interviews	Maximum margin of error (95% level of confidence)
Māori	14%	n=1,000	n=1,057	+/- 3.0%
Pacific Peoples	6%	n=500	n=478	+/- 4.5%
Asian/Indian	6%	n=500	n=510	+/- 4.3%

³ As well as total quotas for national level, there were also city level quotas (e.g. proportional ethnicity quotas to each city).

⁴ Note: 175 residents refused their age.

Response Rate

The overall response rate for the Quality of Life Survey 2006 was 22.03 percent. For a breakdown of response rates per area refer to Appendix Four.

To calculate the response rate we used the following formula:

$$D / (D + C)$$

- A = ineligible pre-contact (disconnected numbers, fax number etc)
- B = ineligible post-contact (those who are deaf, have language difficulties, are away or the quota has been filled for the category in which they fall)
- C = eligible non-responding (refusals)
- D = eligible responding (interview)
- E = unknown eligibility (non-contacts).

Weighting

The data was weighted to reflect variations in probabilities of selection as well as differential non-response and other factors which cause the sample and population distributions to differ. While quotas were used to ensure that all groups are represented, the actual number of interviews achieved did not exactly match the population, therefore weighting was required.

The following weightings were applied to each data set. The most up to date Census figures (2001) available were used for these calculations.

- **City and Rest of New Zealand Level** - Each city and the Rest of New Zealand data set was weighted so that the distribution of the sample by gender, age and ethnicity exactly matches that of the city/rest of New Zealand's population aged 15 years or over.
- **Twelve Cities Level** - The Twelve Cities total data set was weighted so that the distribution of the sample by gender, age and ethnicity exactly matches that of the combined population of the twelve cities/districts.
- **Total New Zealand/National Level** - The Total New Zealand data set combines the Twelve Cities data set with the data set for the Rest of New Zealand. The two are weighted to reflect their relative proportion of the total New Zealand population aged 15 years or over.

For ethnicity, when looking at the census data, this question is a multiple response question so the population counts are higher than for age or gender. However, from the population data we do not know that combination of ethnicities. Therefore, for weighting purposes the population proportions were based on the sum across the ethnicity counts rather than the total city population.

In the survey, similar to the census data, a multiple response ethnicity question was asked also. However, weighting for this question requires a single response. Consequently, responses were prioritized.

The priority for coding a single response ethnicity variable was Pacific, Asian, Māori, New Zealand European/"Other"⁵. "Other" along with "Refused"/"Don't know" were combined with New Zealand European as the group were too small to weight as a group and it was felt that by combining with New Zealand European would have the smallest affect on the weights (as this was the major ethnic group in the data set).

Within the survey there were 175 residents who did not give their date of birth. These people were excluded from the weighted data set as age weights were unable to be applied due to not being able to identify which weight group the residents would fall into. The total number of residents within the weighted sample was n=7,545 (excluding the n=175 people who refused to state their age).

Table 2.1: Exact Number of Interviews Completed By City/District/Rest of

	Total Number of Interviews Completed
Rodney District	494
North Shore City	486
Waitakere City	502
Auckland City	501
Manukau City	570
Hamilton City	498
Tauranga City	497
Porirua City	531
Lower Hutt City	511
Wellington City	489
Christchurch City	496
Dunedin City	490
Total Twelve Cities	6065
Rest of New Zealand	1480
Total	7545

⁵ Normally, the priority for ethnicity would be Māori, Pacific, Asian then New Zealand European. However, in order to maximise the achieved interviews for Pacific and Asian within the Quality of Life Survey 2006, these were placed ahead of Māori (due to over achieving the target number of interviews for Māori overall).

Table 2.2: Weighted Survey Sample Sizes (n)

Sample Size		
Rodney District	153	
North Shore City	383	
Waitakere City	336	
Auckland City	770	
Manukau City	547	
Hamilton City	233	
Tauranga City	183	
Porirua City	91	
Lower Hutt City	190	
Wellington City	353	
Christchurch City	677	
Dunedin City	242	
Rest of New Zealand	3388	
	National (n=7546)	Twelve Cities (n=4158)
Age		
15-24 years	1371	823
25-49 years	3695	2089
50-64 years	1556	798
65 years +	925	449
Ethnicity		
New Zealand European	5803	3047
Māori	875	362
Pacific Peoples	385	329
Asian/Indian	484	420
Gender		
Male	3668	2001
Female	3879	2157