



Te Ope Whakāora

**SOCIAL POLICY AND  
PARLIAMENTARY UNIT**

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# THE MANGERE HOUSING SURVEY REPORT

A SNAPSHOT OF OVERCROWDING IN SOUTH AUCKLAND

September 2011



ISBN 978-0-9864633-3-4 (Paperback)

ISBN 978-0-9864633-4-1 (Electronic)

Authorised and approved by Commissioner Donald C. Bell, Territorial Commander, as an official publication of The Salvation Army New Zealand, Fiji and Tonga Territory.

'The Mangere Housing Survey Report' was produced by The Salvation Army Social Policy and Parliamentary Unit, 16B Bakerfield Place, Manukau 2104, New Zealand.

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This report is available for viewing or download from: [www.salvationarmy.org.nz/socialpolicy](http://www.salvationarmy.org.nz/socialpolicy)

The Salvation Army would like to thank the group of students who undertook the door-to-door survey work with professionalism and patience, the staff at Strive for hosting us during the survey and the great people of Mangere for the generous way they participated in the survey.

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September 2011

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## EXECUTIVE SUMMARY

The Mangere Housing Survey was conducted by The Salvation Army Social Policy and Parliamentary Unit in the South Auckland neighbourhood of Harania West in June and July 2011. The survey attempted to contact over 1000 households within the survey area to ask them about their housing and in particular about how big their houses were and how many people lived in them.

The purpose of this survey was to examine the extent of overcrowding in this neighbourhood as a representative neighbourhood in South Auckland. The research interest in having an insight into overcrowding was to gain an understanding of the wider Auckland housing market given recent trends of slowing house building and a growing housing shortage.

The survey involved a short questionnaire of seven questions that were asked of respondents on their doorstep. These questions sought details of the ethnicity of the respondent and his/her household, the tenure and ownership of the house, the number of bedrooms and other sleeping spaces the house had, and the number of people who usually lived there, including the number of children. Of the 1062 dwellings in the Harania West census area unit, the project team managed to contact 953 households and gain the participation of 876 of these households.

The information gained from the survey has been compared with comparable data from the 2006 Census to assess the extent and nature of any change in the local housing conditions in Harania West over the intervening five years.

In particular, analysis of both the Census and Survey data attempted to establish if overcrowding had become more common in the survey area and in the face of a growing housing shortage in Auckland.

This analysis found no evidence that overcrowding had become worse over the period 2006 to 2011. The data, in fact, shows that levels of overcrowding have remained quite static. Depending on how tightly or loosely overcrowding is defined it appears that between 7% and 14% of dwellings in the Harania West census area unit can be said to be overcrowded. This overcrowding affects between 13% and 23% of the local population and between 17% and 29% of local children. While data from the 2006 Census is not as extensive and probably not as reliable as the data obtained through the Survey, it would appear that these rates of overcrowding are similar to what they were in 2006.

The survey identified that overcrowding was more likely to be a problem in owner-occupied housing than it is in privately-rented housing. The survey also identified that occupancy patterns had changed so that there were fewer small households of one or two people and more medium-sized households of five or six people. This rising rate of occupancy appears to have been caused by demographic change in the neighbourhood as older households have to some degree been replaced by younger households with children and especially with children aged under five years old. The survey indicated that 35% of the population of

Harania West is aged under 16 years. This rising occupancy rate does not necessarily translate into overcrowded housing as the housing affected may already be large enough to accommodate more people without becoming overcrowded.

Essentially, the survey has not been able to identify that Auckland's housing shortage has had any impact on levels of overcrowding in Harania West. The extent to which this outcome is representative of the housing circumstances of similar neighbourhoods across South Auckland is not known. It should, however, be noted that Harania West was, in 2006, already relatively overcrowded with an average household size 50% greater than the regional average. This average household size appears to have risen slightly from 4.52 people per dwelling in 2006 to 4.56 in 2011 but this increase is not thought to be significant. It may be that this neighbourhood has reached some capacity limit, which has meant that overcrowding is becoming a feature of other neighbourhoods that previously have been relatively uncrowded.



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# 1. BACKGROUND

The last minute cancellation of the 2011 Census by the Minister of Statistics on account of the Canterbury earthquake of 22 February has quite predictably created a gap in our social understandings. Censuses are essential to our knowledge of the living conditions and perhaps a little of the lives of our fellow citizens. They provide us with a snapshot of how and where people live and who they live with. These snapshots are important for any assessment of our social progress as they give us some understanding of the structure of households, the distribution of ethnic and age groups, and the spread of incomes.

It is unfortunate that the cancellation of the 2011 Census has occurred at a time in New Zealand's history where our housing market is under a number of stresses that suggest that more and more New Zealanders are living in inadequate and over-crowded housing. We have several reasons to believe that this is the case, and the snapshot offered by the Census would not only have confirmed the extent of New Zealand's growing housing shortage but would also have provided us with some insights into who is suffering most from this shortage and where these people live.

There are at least four reasons for believing that New Zealand is facing a housing shortage of a scale that is probably unprecedented over the last half century. These reasons are as follows:

**Canterbury earthquakes:** The Canterbury earthquakes have destroyed at least 6000 houses; that is, those confirmed as being in

the so-called 'red zone'. The fate of thousands of homes listed in the 'orange zone' remains uncertain<sup>1</sup>. While the loss of these houses and the relocation of people living in them is a direct and tragic problem for those concerned, this loss and the replacement of these buildings will have a wider impact on housing markets and on the construction industry. House prices and perhaps rents elsewhere in Christchurch will rise as displaced households look elsewhere for a home. The \$15 billion cost<sup>2</sup> of the Christchurch rebuild will clearly take up capacity in the building industry and probably push up construction costs in an industry that already demonstrates a cost plus mentality<sup>3</sup>. It is likely that the reconstruction of Christchurch will crowd out some other expenditure in the construction industry as firms and workers concentrate on the rebuild and hence are not able to ply their trades elsewhere in New Zealand.

**Leaky buildings:** Leaky buildings are a legacy of the era when building regulation and the control of construction practice were liberalised in the mistaken belief that the building industry could be self-regulating. The result of such thinking has been an unmitigated disaster that may affect as many as 110,000 houses and may cost the economy as much \$11 billion to overcome<sup>4</sup>. This cost will be both public and private. The arrangements agreed between Government and local councils will see ratepayers and taxpayers each pick up one-quarter of the repair costs of around 42,000 leaky homes that may have a



total repair cost of around \$4 billion. There are also a number of other legacy problems and consequential issues around this 'solution' to the leaky homes debacle, which have yet to be discussed publicly but will begin to have their impacts in housing markets over the next ten years.<sup>5</sup>

**Rural housing:** While there is no comprehensive estimate of the extent of rural housing that is in poor condition, a recent broad estimate of the problem suggests that there could be around 9600 dwellings which are poorly maintained and/or substandard.<sup>6</sup> Three-quarters of these substandard houses are likely to be in Northland and most will be occupied by poor Māori families. A forthcoming report by the Office of the Auditor General into the performance of Housing New Zealand's rural Māori housing programmes will indicate the progress which has been made in addressing this problem. While this report may indicate some progress, the reality has been that very few, if any, of the numerous and consistently under-funded rural Māori programmes over the past thirty years have managed to produce more than a few dozen houses at a time.

**Auckland housing shortage:** The Salvation Army's Social Policy and Parliamentary Unit estimates that Auckland is short at least 13,000 dwellings over the past five years and that most of this shortage has emerged since 2008 and the onset of the global financial crisis (see [Appendix 1](#)). On average, Auckland's population grows by over 21,000 people

per year, and between 7000 and 8000 new dwellings are required to be built each year to cater for this growth. Over the three years to 30 June 2011 an annual average of just 3400 new dwellings have been built; in other words, half the necessary number of new builds required to maintain housing conditions. What is concerning about this outcome is that it is in line with a forecasts undertaken for the Department of Building and Housing which suggest that Auckland will be short 90,000 houses over the 20 years to 2031.<sup>7</sup>

It is Auckland's burgeoning housing shortage and the cancellation of the 2011 Census that has motivated The Salvation Army to undertake the Mangere Housing Survey. In effect, The Salvation Army has decided to fill the information gap created by the Census cancellation by holding its own census, although on a much smaller scale.

The Mangere Housing Survey is this response. The survey was undertaken in one census area unit or neighbourhood in the Auckland suburb of Mangere during June and July 2011. The survey involved knocking on just over 1000 doors and asking residents a few questions about themselves and their housing.

The Salvation Army has a proud history of using social surveys as part of its advocacy for social justice and improved social conditions. One of the Army's founders, William Booth, used the pioneering social survey work of Charles Booth (no relation) in 1880s London<sup>8</sup> to write his treatise *In Darkest England and the Way Out*.<sup>9</sup> This work was used by William Booth to

advocate for the housing and other needs of what he called the ‘submerged one tenth’ of England’s population. The Salvation Army in New Zealand is proud to continue this tradition and, by doing so, to highlight the declining economic position of New Zealand’s most marginalised people.

The information collected from the Mangere Housing Survey forms part of a programme of work being undertaken by The Salvation Army’s Social Policy and Parliamentary Unit to highlight both Auckland’s emergent housing crises and the absence of any credible response by both the Auckland Council and the New Zealand Government to this crisis. Forthcoming pieces of work in this programme include a review of options for the provision of housing assistance and an example of what a plan for affordable housing in Auckland might look like.

## 2. RESEARCH OBJECTIVE & METHODOLOGY

The Mangere Housing Survey was undertaken in the Mangere neighbourhood of Harania West in June and July 2011 by The Salvation Army Social Policy and Parliamentary Unit.

Mangere is a suburb of South Auckland with a population of around 60,000 people of whom about two-thirds are of Pacific Island ethnicity. The Harania West neighbourhood is, in fact, a census area *unit* rather than a clearly defined *neighbourhood* and is really just part of the Mangere East community. Like many of the neighbourhoods of Mangere, Harania West is relatively poor, with high rates of unemployment and welfare dependency and large households with the majority of housing being rented. A map showing the extent of the Harania West census area unit is attached as **Appendix 2**.

The original research objective from the project brief stated that: *The overall objective of this research project is to provide a credible base of evidence to inform a discussion on Auckland's housing shortage. While the outcome of any social research project cannot be predicted it is anticipated that the research will indicate the extent of overcrowding in one or perhaps two neighbourhoods in South Auckland. This overcrowding will be indicated by the numbers of people living in a dwelling compared with the number of bedrooms in their dwelling. The research is also expected to identify the numbers of children and especially of pre-school children living in overcrowded houses and may also identify the ethnicity of people living in such houses.*

The research project was completely funded by The Salvation Army and was supervised by the Army's Social Policy and Parliamentary Unit. Staff of the Unit as well as a small team of university students who were employed on contract undertook the door-to-door survey work of the project. This survey work involved knocking on every door within the Harania West census area unit up to four times in an attempt to find them home and encourage them to participate in the survey.

The Harania West census area unit was chosen for the survey area partly because of its diverse tenure where around 40% of the local housing was owner-occupied with around 30% private rental and 30% in public rental. This diversity of tenure was seen as a worthwhile local feature to test if there were any differences in levels of overcrowding by tenure and to hedge against any bias in the results if some tenures were more likely to be overcrowded. The Harania West neighbourhood was also chosen because it was known to have high average household size (4.5 people per dwelling vs. 3.0 people per dwelling across Auckland), although not the highest in Auckland.

The survey involved a short questionnaire of seven questions (see **Appendix 3**). These questions sought details of the ethnicity of the respondent and his/her household, the tenure and ownership of the house, the number of bedrooms and other sleeping spaces the house had, and the number of people who usually lived there, including the number of children. Space was left on each questionnaire form

for some narrative to be recorded about the respondent's housing experience or history, although this was not prompted. Matters of definition around ethnicity and bedrooms were left to the respondent to determine.

At the beginning of each interview, interviewers were required to firstly identify that they were working for The Salvation Army, to then briefly explain the purpose of the survey, and to indicate clearly that participation was voluntary. If prompted by the respondent, interviewers gave a guarantee that the identity of each respondent would

be kept private and not shared with any other agency. Interviewers were required to confirm on each questionnaire that they believed that respondents had gained a sufficient understanding of the project and that they had given their informed consent freely.

The actual survey was pre-empted by a preliminary test survey that involved running the questionnaire with approximately 40 households within the survey district. This exercise was undertaken to test the questionnaire and the engagement format proposed for the survey and to assist with



providing researchers with a consistent approach to conducting the survey. This test showed no major defects or shortcomings in the questionnaire or survey technique

The survey was promoted locally through a pamphlet dropped into every letter box within the survey area a week or so before the survey commenced. As well, the pamphlet and posters were distributed through local churches, early childhood centres and community networks.

One of the intentions of this preliminary publicity was to explain the project to residents in advance of any engagement so that they were aware of its intention and purpose and therefore would perhaps more willingly participate.

The publicity for the survey was all written in English and the survey itself was generally conducted in English. If a respondent had difficulty in understanding English, an effort was made to get a speaker of the respondent's language from among the survey team to undertake the interview in that language. From time to time this was not possible and the interviewer may have called back at a later time in the hope of finding a fluent English speaker at home. Interviewers were advised not to conduct the interview if language was a barrier as there was some concern about the legitimacy of any informed consent being offered in such circumstances.

Outputs from the survey are listed in [Table 1](#).

**Table 1: Summary of outputs from the Mangere Housing Survey**

Dwellings in survey area	1062 dwellings
Households contacted in survey	953 households
Vacant properties	6 dwellings
Declined to participate	77 households
Households participating	876 households
Response rate	92% of households contacted
Survey coverage	82% of dwellings in survey area
Contact rate	90% of dwellings in survey area

### 3. RESULTS

#### A comparison of the 2006 Census and 2011 Housing Survey

As reported in the previous chapter, the 2011 Mangere Housing Survey did not manage to reach all households within the Harania West census area unit. Without further work we have no reliable way of knowing whether or not the households included in the survey are completely representative of all the households within the census area unit. This uncertainty aside, the coverage of the survey does provide us with an extensive, although not complete, view of how the neighbourhood of Harania West has changed in several important ways. Specifically, by comparison with data from the 2006 Census, we can identify changes in the ethnic makeup of the neighbourhood, the age mix of the population, household size and in-housing tenure.

**Table 2** compares the ethnic make up of Harania West population from the 2006 Census and the 2011 Mangere Housing Survey. This data shows the dominance of Pacific Island people in the local population as well as the likely increase in their dominance over the past five years. This increase in the share and numbers of Pacific people has been offset by a relative and absolute decline in the European/Pakeha population, which now probably only makes up 6% of the local population. In 2001, the European population was just under 15% of the Harania West population, so the recent trends are a continuation of a longer-term trend. Between 2006 and 2011, the proportion and number of Māori and Asian people in Harania West have remained fairly constant.<sup>10</sup>

**Table 2: Changes in ethnicity of the Harania West population (2006-2011)**

	2006 Census		2011 Survey	
	number	% of all ethnicities	number	% of all ethnicities
Pacific Island	2862	69%	2953	74%
Māori	729	18%	751	19%
Asian	417	10%	400	10%
European	531	13%	246	6%
Total number ethnicities reported	4611		4385	
Total number of people reporting ethnicities	4161		3996	

**Table 3: Proportion of children in the population of Harania West**

	2006 Census		2011 Survey	
	number	% of local population	number	% of local population
Under 5 years	447	9.7%	539	13.5%
Over 5 and under 16 years	1071	23.3%	883	22.1%
Total resident population	4593		3996	

**Table 3** reports the proportion of the Harania West population that are children. In 2006, 33% of the local population was aged under 16 years, compared with just 23% as the share for that age group across the national population.

**Table 3** also reports that the proportion of children making up the population in Harania West has probably increased since 2006 to over 35%. All of this increase has been due to an apparent increase in the population of pre-schoolers. Statistics New Zealand's national population estimates suggest that over the same period the proportion of New Zealand's population aged under 16 has declined to less than 22% as the country's population declines.<sup>11</sup> The proportion of children in the Harania West neighbourhood's population is therefore over one-and-a-half times that of the national average. This concentration of children is not uncommon across most of the neighbourhoods of South Auckland.



Tables 4A and 4B summarise data from the Mangere Housing Survey on tenure and compares this with broadly comparable data from the 2006 Census. These comparisons are not exact because of the high level of non-reporting of tenure in the Census and because some of these reported tenures do not appear very accurate.<sup>32</sup> Some adjustment for this non-reporting has been made in Tables 4A and 4B

by only calculating percentage shares across the numbers where tenure or ownership has been reported. This has been done on the assumption that there has been no systematic non-reporting behaviour across the various tenure types. These shortcomings aside, three trends are noticeable from the comparisons made in Tables 4A and 4B:

**Table 4A: Overall tenure of housing in Harania West**

	2006 Census		2011 Survey	
	number	% of identified tenure	number	% of identified tenure
Houses not owned by residents	504	58%	527	61%
Houses owned by residents (including family trusts)	360	42%	335	39%
Tenure not stated	153		14	
Total number of houses	1017		876	

**Table 4B: Ownership of rental housing in Harania West**

	2006 Census		2011 Survey	
	number	% of identified tenure	number	% of identified tenure
Privately owned	162	40.3%	252	47.8%
Housing New Zealand	204	50.7%	250	47.4%
Local authority	33	8.2%	25	4.7%
Ownership not stated	36			
Total number of houses <sup>33</sup>	438		527	



1. There has been no identifiable overall shift in tenure between owner-occupation and rental tenure between 2006 and 2011. Around four in ten houses in Harania West are owner occupied and six in ten are rented ([Table 4A](#)).
2. There may have been an increase in the proportion of rented houses that are privately owned ([Table 4B](#)) given that the share of private rented housing has increased from 42% of rented housing in 2006 to nearly 48% in 2011. This conclusion is tentative because of the high level of non-reporting in 2006 of tenure by all households and of ownership by tenant households.
3. The Harania West neighbourhood has two council-owned seniors housing villages, which means that locally there is a higher concentration of such housing than in most neighbourhoods in Auckland or in New Zealand. For example, the 2011 survey indicates that 4.7% of the housing in Harania West was owned by Auckland Council, while across the region as a whole this proportion is 2.8%. This relative concentration of seniors housing means there is a concentration of one-bedroom apartment-style housing, which is not typical of South Auckland neighbourhoods, and that would tend to reduce the average household size a little. This trend is picked up in [Table 5](#).

**Table 5: Occupancy distribution in Harania West houses**

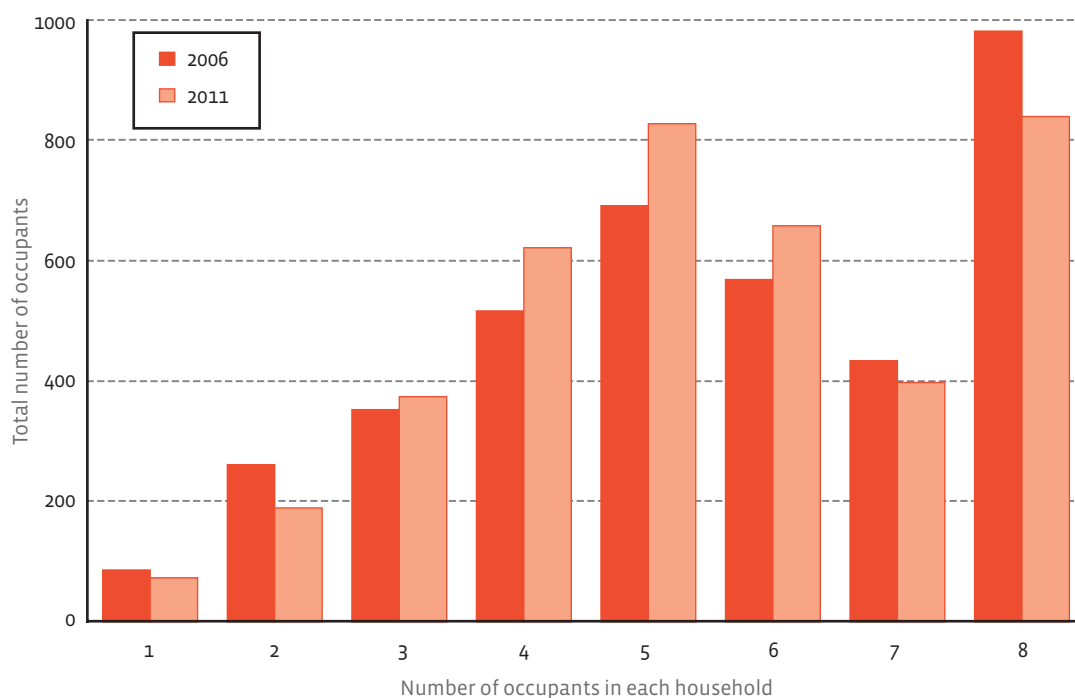
Size of household	2006 Census		2011 Survey	
	number	% of identified tenure	number	% of identified tenure
One resident	118	11.6%	74	8.4%
Two residents	163	16.0%	95	10.8%
Three residents	136	13.4%	125	14.3%
Four residents	151	14.8%	156	17.8%
Five residents	152	14.9%	167	19.1%
Six residents	121	11.9%	110	12.6%
Seven residents	61	6.0%	57	6.5%
Eight or more residents	117	11.5%	90	10.3%
Total number of dwellings	1017		876	
Usually resident population	4593		3996	
Average household size	4.52		4.56	

**Table 5** records occupancy data from the 2006 Census and the 2011 housing survey. This table shows two trends:

1. A reduction in the number of small households of one or two people. One- and two-person households appear to have declined from just under 28% of all households in 2006 to just over 19% in 2011.
2. There appears to have been an offset in this decline with a significant increase in the number of middle-sized households, with the share of households with four or five people rising from just under 30% in 2006 to nearly 37% in 2011.

**Table 5** indicates that the average household size has increased slightly from 4.52 people per house in 2006 to 4.56 people per house in 2011. These sizes should be seen against an Auckland-wide average household size in 2006 of 2.98 people per household. **Figure 1** represents data from **Table 5** in terms of the total number of occupants in each size of household. It shows the extent to which people living in Harania West are now more likely to live in a household with four or five other people than they are in a small or very large household.

**Figure 1: Comparison of occupancy by size of household (2006-2011)**



## Tenure and ethnicity

Tenure by the ethnicity of households surveyed in the Mangere Housing Report is contained in **Table 6**. Comparisons with similar data from the 2006 Census is not possible because tenure data is taken from the household questionnaire of the Census while ethnicity data is taken from the personal survey forms filled in by or on behalf of every resident.

The problem both with the Census and this survey is attributing of ethnicity to households

in cases where respondents report mixed ethnicities. In the survey, 71 respondents (8% of the households surveyed) reported two or more ethnicities. This complication is addressed in **Table 6** by counting households reporting several ethnicities as being of both or all of these ethnicities. The result of such an approach is, of course, that there are more households reported in **Table 6** than actually responded to the survey.

**Table 6: Ethnicity and tenure of households in Harania West**

Total numbers	Owned	Public rental	Private rental	Not stated
Pacific Island	218	205	176	11
Māori	49	66	48	4
Indian	28	1	23	1
Asian	22	2	9	0
European	44	22	20	0
Other	1	3	3	0
As percentage of ethnicity	Owned	Public rental	Private rental	Not stated
Pacific	36%	34%	29%	2%
Māori	29%	40%	29%	2%
Indian	53%	2%	43%	2%
Asian	67%	6%	27%	0%
European	51%	26%	23%	0%
Other	14%	43%	43%	0%

Three features of the data reported on **Table 6** stand out:

1. The tenure of Pacific Island households appears more or less equally divided between ownership, rental in the private sector and rental in the public sector.
2. Māori households have a slightly higher likelihood to rent in the public sector than other ethnic groups.
3. Rates of home ownership are relatively high amongst European Indian and Asian households, although the numbers of these households is quite low, making up just 16% of all the households in the survey.

### **Dwelling size vs. dwelling occupancy**

Measurements of overcrowding are typically based on a comparison of the size of a household and the number of bedrooms in the dwellings occupied by each household. This measurement is discussed in the following chapter. **Table 7** and **Table 8** report this comparison from the Mangere Housing Survey. The shaded parts of these tables indicate those households that might be considered overcrowded. These results are discussed in the following chapter.



**Table 7: Dwelling size and occupancy for houses in Harania West—total number of dwellings**

Number of Bedrooms	Household Size (number of people living in dwelling)																	Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21	NS	
1	28	5	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	34
2	24	34	33	18	21	9	3	4	0	0	0	0	0	0	0	0	0	146
3	19	47	71	113	104	72	31	18	9	7	0	1	1	1	0	0	0	494
4	3	7	18	18	30	17	16	10	3	0	3	3	0	0	0	0	0	128
5	0	2	3	5	8	3	5	8	4	2	1	0	0	0	0	0	1	42
6	0	0	0	2	2	8	2	4	0	3	0	0	2	0	1	0	1	25
7	0	0	0	0	1	1	0	0	0	1	1	1	0	0	0	0	0	5
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Not stated	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Totals	74	95	125	156	167	110	57	44	16	14	5	5	3	1	1	1	2	876

**Table 8: Dwelling size and occupancy for houses in Harania West—total number of occupants**

Number of Bedrooms	Household Size (number of people living in dwelling)																	Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21	NS	
1	28	10	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	48
2	24	68	99	72	105	54	21	32	0	0	0	0	0	0	0	0	0	475
3	19	94	213	452	520	432	217	144	81	70	0	12	13	14	0	0	0	2281
4	3	14	54	72	150	102	112	80	27	0	33	36	0	0	0	0	0	683
5	0	4	9	20	40	18	35	64	36	20	11	0	0	0	0	0	0	257
6	0	0	0	8	10	48	14	32	0	30	0	0	26	0	15	0	0	183
7	0	0	0	0	5	6	0	0	0	10	11	12	0	0	0	0	0	44
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	0	21
NS	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
Totals	74	190	375	624	835	660	399	352	144	140	55	60	39	14	15	21	0	3997

## 4. ANALYSIS

### Indicators of overcrowding

In some ways, overcrowding is a subjective matter, whereby judgement of what is or is not overcrowding is very much based on what people regard as acceptable standards of living. At some level, however, and as the levels of occupancy rise, overcrowding becomes an issue of more objective judgement based on such measures as the health status of occupants and the sustainability of housing solutions. Where occupants of an overcrowded house begin to contract respiratory or gastroenteric illnesses or skin infections, or where households are not stable and people move in and out continuously because of the lack of space, then there is some objective argument that a house is too crowded to provide its occupants with a healthy living environment.

The Mangere Housing Survey did not investigate questions of the health status of people living in Harania West, or the permanence or otherwise of their living arrangements. It is therefore not possible, from the data collected in the survey, to say anything absolute about levels of overcrowding and their impacts on people's living conditions. This, however, was not the objective of the research, as the survey was always intended to replicate the data collection of the Census to compare 2011 data with 2006 data.

Despite this, it is a matter of fact that people living in neighbourhoods and communities

where overcrowding is common are more likely to be hospitalised for infectious diseases.<sup>14</sup> It would therefore be reasonable to suggest that where there is an increase in *any* overcrowding indicator, at some point there will be additional adverse health impacts on those affected—*regardless of what this indicator is*.

The subjective nature of some measures or indicators of overcrowding is, as mentioned above, based on what we believe are acceptable standards of living. If, in attempting to judge these standards, we use crude indicators such as household size, and attempt to relate such indicators across long time horizons, we ignore changing living arrangements and demographics and rising material living standards across the whole society. A household of two parents and six children in a three-bedroom house in the 1960s was more tolerable when all the children were siblings and in the context of material standards achieved in the 1960s. A similar number of people living in a similar-sized house today might involve a blended or extended family and should be seen against the standard of what most New Zealanders today see as an acceptable standard of living.

A widely accepted indicator of overcrowding is the Canadian National Occupancy Standard. This Standard is based on a number of criteria applied against a household's living arrangements to determine if it is overcrowded or not. These criteria are as follows:

1. there should be no more than two people per bedroom
2. parents or couples share a room
3. children under five years, either of same or opposite sex, may reasonably share a bedroom
4. children under eighteen years of the same sex may reasonably share a bedroom
5. a child aged five to seventeen years should not share a bedroom with one under-five of the opposite sex
6. single adults eighteen years and over and any unpaired children require a separate bedroom<sup>35</sup>

To apply these criteria to large numbers of households requires a close understanding of the relationships between the individuals living in each household. Gaining such information would be difficult given the intrusive nature of the questions that would need to be asked. Such questions were beyond the scope of the Mangere Housing Survey, mainly because the tactic adopted

for the survey was to ask just a few quite straightforward questions as a way of gaining a high response rate and truthful answers.

To overcome the problem of lack of detailed information about each household's living arrangements, only the first criteria of one bedroom for two people is applied in this analysis. This criterion has been applied in what are termed here as 'tight' and 'loose' definitions of overcrowding. Both definitions are applied against the Canadian National Occupancy Standard as set out in [Table 9](#). The 'tight' definition is where a dwelling is said to be overcrowded if it requires at least one additional bedroom to meet the Occupancy Standards, while the 'loose' definition defines overcrowding as where occupancy exceeds the Occupancy Standard by at least one person.

The 'tight' definition of overcrowding is shown as the dark shaded area on [Table 7 and 8](#) and in [Appendix 4](#) while the 'loose' definition is the dark and lightly shaded areas in these tables. Data from [Table 7](#) are summarised in [Table 10](#).

**Table 9: Definitions of overcrowding based on the Canadian National Occupancy Standards**

Size of Dwelling	Tight Definition	Loose Definition
	overcrowded if dwelling has	overcrowded if dwelling has
One-bedroom dwelling	4 or more occupants	3 or more occupants
Two-bedroom dwelling	6 or more occupants	5 or more occupants
Three-bedroom dwelling	8 or more occupants	7 or more occupants
Four-bedroom dwelling	10 or more occupants	9 or more occupants
Five-bedroom dwelling	12 or more occupants, etc.	10 or more occupants, etc.

**Table 10: Estimates of overcrowding from the Mangere Housing Survey**

	<b>Tight Definition</b>	<b>Loose Definition</b>
	requires at least 1 more bedroom	exceeds Occupancy Standard by at least 1 person
Number of overcrowded dwellings	61	119
Percentage of dwellings overcrowded	7.0%	13.6%
Number of people living in overcrowded dwellings	535	921
Percentage of local population living in overcrowded dwellings	13.4%	23.0%
Number of children living in overcrowded dwellings	240	413
Percentage of local children living in overcrowded dwellings	17.1%	29.4%

### Overcrowding by tenure

**Table 11** summarises data provided in the tables in **Appendix 4**, which cross tabulates occupancy patterns with housing tenure. The overall pattern to emerge from this analysis is:

1. Privately-rented housing has lower rates of overcrowding than does owner-occupied and public rental housing.
2. Using the 'tight' definition of overcrowding, owner-occupied housing is clearly more overcrowded than public-rental housing, both in terms of the number of households and the number of occupants. If a 'loose' definition of overcrowding is applied, public-rental housing appears slightly more overcrowded than owner-occupied housing. Clearly from this data, the more acute examples of overcrowding are likely to be found in owner-occupied housing.

### Comparisons of overcrowding between 2006 and 2011

A partial comparison of rates of overcrowding in Harania West from the 2006 Census and those reported in **Table 10** is possible. This comparison is not complete, in part because Census data is only reported for up-to-seven-person households and beyond this for households with eight or more persons. This is unfortunate, partly because there is no way of knowing which of the eight person-plus households in the 2006 data set is overcrowded. For example, a ten-person household in a four-bedroom dwelling would be overcrowded (under both the tight and loose definitions), but an eight-person household in the same dwelling would not be defined as being overcrowded. Both households would appear in the same data cell in the 2006 Census data set.



**Table 11: Estimates of overcrowding against housing tenure from the Mangere Housing Survey**

	<b>Tight Definition</b>	<b>Loose Definition</b>
	requires at least 1 more bedroom	exceeds Occupancy Standard by at least 1 person
<b>Owner-occupied</b>		
Number of overcrowded dwellings	29	47
Percentage of dwellings overcrowded	8.7%	14.0%
Number of people living in overcrowded dwellings	260	386
Percentage of 'tenure' population living in overcrowded dwellings	15.8%	23.5%
<b>Rented in the public sector</b>		
Number of overcrowded dwellings	18	41
Percentage of dwellings overcrowded	6.5%	14.9%
Number of people living in overcrowded dwellings	146	305
Percentage of 'tenure' population living in overcrowded dwellings	12.6%	26.4%
<b>Rented in the private sector</b>		
Number of overcrowded dwellings	14	31
Percentage of dwellings overcrowded	5.6%	12.3%
Number of people living in overcrowded dwellings	122	223
Percentage of 'tenure' population living in overcrowded dwellings	10.7%	19.7%

This limitation means we are really only able to record overcrowding in the 2006 data set in one-bedroom, two-bedroom and three-bedroom dwellings, as overcrowding in dwellings of four or more bedrooms will be lost in the aggregation of eight and more occupants. However, it is still possible to compare this partial picture from the 2006 Census with a similar range of data from the

2011 Survey to see if rates of overcrowding have changed over the five years between 2006 and 2011. This comparison is provided in **Tables 12A and 12B**.

**Table 13** provides a summary and some analysis of the data provided in **Tables 12A and 12B** under the headings once again of a 'tight' and 'loose' definition of overcrowding.

**Table 12A: Dwelling size and occupancy for houses in Harania West (2006)—total number of occupants<sup>16</sup>**

Number of Bedrooms	Number of occupants in dwelling							
	1	2	3	4	5	6	7	8+
1	33	21	0	6	3	3	0	6
2	24	69	51	96	72	51	0	24
3	24	141	267	303	411	357	234	333
4	3	27	27	87	153	99	96	261
5	0	0	6	21	33	36	72	210
6	0	3	3	6	15	18	21	105
7	0	0	0	0	0	6	6	33
8	3	0	0	0	6	0	6	12
Totals	87	261	354	519	693	570	435	984

**Table 12B: Dwelling size and occupancy for houses in Harania West (2011)—total number of occupants**

Number of Bedrooms	Number of occupants in dwelling							
	1	2	3	4	5	6	7	8+
1	28	10	0	0	0	0	0	10
2	24	68	99	72	105	54	21	32
3	19	94	213	452	520	432	217	334
4	3	14	54	72	150	102	112	176
5	0	4	9	20	40	18	35	131
6	0	0	0	8	10	48	14	103
7	0	0	0	0	5	6	0	33
8	0	0	0	0	0	0	0	21
Totals	74	190	375	624	835	660	399	840

## 5. CONCLUSIONS

**Table 13** provides no evidence that overcrowding has worsened or even changed much at all in Harania West between 2006 and 2011. This stability is contrary to what may have been anticipated given the recent and significant decline in new house building in Auckland. This decline has, over the past three years, meant that perhaps more than 30,000 Aucklanders are crowding into homes that they perhaps would not otherwise have lived in had the economy and building industry been more buoyant. There are no signs from the data provided in the survey that many—if any—of these 30,000 people have settled in Harania West. It should, however, be remembered that the average household size of Harania West is 50% higher than the regional average, and that this average size appears to have increased slightly since 2006.

The 2011 Mangere Housing Survey provides far more in-depth data on overcrowding than that provided in the most recent Census, and is of value for this reason. The survey probably suffered from the same problems as the Census around reliability of the information provided, and without more obtrusive ways of gaining information we have little choice but to take the information provided by respondents at face value.

Overall, the survey was well received by the people of Mangere and we have been able to gain valuable insights into their housing fortunes. These insights are probably not available from a Census, given that it relies on more self-directed responses and suffers from aggregation problems in trying to relate household level data with the circumstances of individuals within each household.

**Table 13: Comparison of overcrowding in Harania West (2006 and 2011)**

	2006 Census	2011 Survey
<b>Tight Definition Of Overcrowding <i>ie. requires at least 1 more bedroom</i></b>		
Number of residents covered in data or survey	3903	3992
Number of people living in overcrowded dwellings with 1, 2 or 3 bedrooms	425	451
Percentage of local population living in overcrowded dwellings with 1, 2 or 3 bedrooms	10.9%	11.3%
<b>Loose Definition Of Overcrowding <i>ie. exceeds Occupancy Standard by at least 1 person</i></b>		
Number of residents covered in data or survey	3903	3992
Number of people living in overcrowded dwellings with 1, 2 or 3 bedrooms	732	773
Percentage of local population living in overcrowded dwellings with 1, 2 or 3 bedrooms	18.8%	19.4%

In summary, the survey has identified some tangible changes in the ethnic and demographic makeup of the Harania West neighbourhood and in the ownership of its housing. These changes probably confirm what was expected about the neighbourhood: that it has become more Pacific Island, that it is slightly more dominated by private rental housing, and that it is the centre of a baby boom. This concentration of children is of some concern, as the results identify the heavy extent to which children are the most affected by overcrowding. A closer assessment

of the data provided in **Table 10** shows that children in Harania West are 50% more likely than adults to live in an overcrowded house. In addition, data contained in **Table 3** shows that more of the children living in overcrowded houses are aged under five years.

The housing fortunes of the people of Harania West appear to have changed little over the past five years—they still live in one of the most crowded neighbourhoods in Auckland but, as yet, they do not appear to be under pressure from Auckland's growing housing shortage.

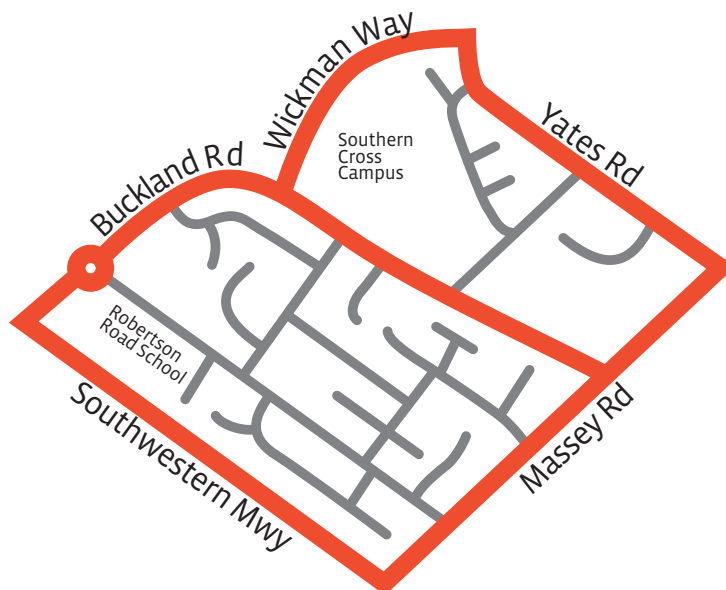


## 6. APPENDICES

### APPENDIX 1: Estimates of Auckland's housing shortage

June years	2006	2007	2008	2009	2010	2011
Auckland's usually resident population	1,371,000	1,394,00	1,414,700	1,436,500	1,459,700	1,478,000 SPPU estimate
Consents for new dwellings		6781	5752	3312	3656	3394
Population growth		23,000	20,700	21,800	23,200	18,300
Average household size	2.98 people per dwelling					
New dwellings required to meet population growth (at 2006 average household size)		7718	6946	7315	7786	6141
Surplus/Deficit		-937	-1194	-4103	-4129	-2747

### APPENDIX 2: Map of the Harania West census area unit



**APPENDIX 3: Mangere Housing Survey Form**

DATE  FORM NUMBER

INTERVIEWER

Is the respondent over 18 years old? **YES / NO**

Did you adequately explain the project to the respondent, explain the Army's privacy commitments and that participation was entirely voluntary? **YES / NO**

Do you believe that the respondent provided informed consent to participate? **YES / NO**

ETHNICITY OF RESPONDENT (tick any number)

Māori    Pasifika    Pakeha    Indian    Asian  
 African    Other    Not sure

Is the house owned or rented?

Owned    Rented from private landlord    HNZC  
 Rented from family    Rented NFI    Declined to answer

How many people are living in this house at the moment?

How many bedrooms does this house have?

One    Two    Three    Four    Five    Six

How many other rooms or spaces do people sleep in?

One    Two    Three    Four    Five    Six

How many people living here are aged under five years old?

How many people living here are aged between five and sixteen years old?

COMMENTS or NARRATIVE

#### APPENDIX 4: Cross-tabulations of occupancy patterns with tenure

**Table Appendix 4.1: Dwelling size and occupancy for owner-occupied dwellings in Harania West—total number of dwellings**

Number of Bedrooms	Household Size (number of people living in dwelling)																	Total	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21	NS		
1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
2	0	1	0	2	1	1	0	2	0	0	0	0	0	0	0	0	0	0	7
3	17	34	23	40	41	29	16	9	5	5	0	0	1	1	0	0	0	0	221
4	2	4	9	9	18	7	8	5	1	0	2	1	0	0	0	0	0	0	66
5	0	2	2	1	7	2	4	4	1	0	0	0	0	0	0	0	0	0	23
6	0	0	0	2	2	6	1	2	0	0	0	0	0	0	0	0	0	0	13
7	0	0	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	3
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Not stated	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	19	41	34	54	70	46	29	22	7	6	2	2	1	1	0	1	0	0	335

**Table Appendix 4.2: Dwelling size and occupancy for owner-occupied dwellings in Harania West—total number of occupants**

Number of Bedrooms	Household Size (number of people living in dwelling)																	Total	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21	NS		
1	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	10
2	0	2	0	8	5	6	0	16	0	0	0	0	0	0	0	0	0	0	37
3	17	68	69	160	205	174	112	72	45	50	0	0	13	14	0	0	0	0	999
4	2	8	27	36	90	42	56	40	9	0	22	12	0	0	0	0	0	0	344
5	0	4	6	4	35	12	28	32	9	0	0	0	0	0	0	0	0	0	130
6	0	0	0	8	10	36	7	16	0	0	0	0	0	0	0	0	0	0	77
7	0	0	0	0	5	6	0	0	0	0	0	12	0	0	0	0	0	0	23
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	21
NS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	19	82	102	216	350	276	203	176	63	60	22	24	13	14	0	21	0	0	1641

**Table Appendix 4.3: Dwelling size and occupancy for public rental housing in Harania West—total number of dwellings**

Number of Bedrooms	Household Size (number of people living in dwelling)																	Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21	NS	
1	25	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28
2	18	21	19	7	10	6	2	1	0	0	0	0	0	0	0	0	0	84
3	1	7	22	27	22	19	9	5	0	1	0	0	0	0	0	0	0	113
4	1	0	1	4	5	5	5	3	1	0	1	1	0	0	0	0	0	27
5	0	0	0	3	0	1	0	2	2	2	1	0	0	0	0	0	1	12
6	0	0	0	0	0	2	1	2	0	2	0	0	2	0	1	0	1	11
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not stated	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	45	31	42	41	37	33	17	13	3	5	2	1	2	0	1	0	2	275

**Table Appendix 4.4: Dwelling size and occupancy for public rental housing in Harania West—total number of occupants**

Number of Bedrooms	Household Size (number of people living in dwelling)																	Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21	NS	
1	25	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31
2	18	42	57	28	50	36	14	8	0	0	0	0	0	0	0	0	0	253
3	1	14	66	108	110	114	63	40	0	10	0	0	0	0	0	0	0	526
4	1	0	3	16	25	30	35	24	9	0	11	12	0	0	0	0	0	166
5	0	0	0	12	0	6	0	16	18	20	11	0	0	0	0	0	0	83
6	0	0	0	0	0	12	7	16	0	20	0	0	26	0	15	0	0	96
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	45	62	126	164	185	198	119	104	27	50	22	12	26	0	15	0	0	1155



**Table Appendix 4.5: Dwelling size and occupancy for private rental housing in Harania West—total number of dwellings**

Number of Bedrooms	Household Size (number of people living in dwelling)																	Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21	NS	
1	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
2	4	12	14	9	10	2	0	1	0	0	0	0	0	0	0	0	0	52
3	1	6	25	45	40	19	6	4	4	1	0	1	0	0	0	0	0	152
4	0	3	7	5	7	5	3	2	1	0	0	1	0	0	0	0	0	34
5	0	0	1	1	1	0	1	2	1	0	0	0	0	0	0	0	0	7
6	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
7	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Not stated	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Totals	7	23	47	60	59	26	10	9	6	3	0	2	0	0	0	0	0	252

**Table Appendix 4.6: Dwelling size and occupancy for private rental housing in Harania West—total number of occupants**

Number of Bedrooms	Household Size (number of people living in dwelling)																	Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	21	NS	
1	2	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
2	4	24	42	36	50	12	0	8	0	0	0	0	0	0	0	0	0	176
3	1	12	75	180	200	114	42	32	36	10	0	12	0	0	0	0	0	714
4	0	6	21	20	35	30	21	16	9	0	0	12	0	0	0	0	0	170
5	0	0	3	4	5	0	7	16	9	0	0	0	0	0	0	0	0	44
6	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	10
7	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	10
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NS	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
Totals	7	46	141	240	295	156	70	72	54	30	0	24	0	0	0	0	0	1135

## END NOTES

- 1 On 22 June the Earthquake Recovery Minister announced that there were approximately 5000 homes in the red zone in eastern Christchurch, and on 18 August an announcement was made of a further 940 condemned properties in Kaiapoi and Waimakariri. See [www.cera.govt.nz/news](http://www.cera.govt.nz/news)
- 2 The 2011 Budget suggested a total recovery cost of around \$15 billion; however, a recent announcement has increased the estimate of the Earthquake Commission's liability for damage from the earthquake from \$4 billion to \$7.1 billion, suggesting that the costs of the recovery may be approaching \$20 billion. See National Business Review report at [www.nbr.co.nz/article/govt-increases-canterbury-quake-provision-71-billion-ne-99757](http://www.nbr.co.nz/article/govt-increases-canterbury-quake-provision-71-billion-ne-99757)
- 3 Information on the pricing behaviour of the building industry and the building materials industry is difficult to find. Current cost and price trends where there is excess capacity in the building industry in most parts of the country may not represent the industry's pricing behaviours in more buoyant times. Over an extended period of time there is some evidence that house construction costs often run a long way ahead of cost trends in other industries. eg, see Department of Building and Housing (2010) *New Zealand Housing Report 2009/10: Structure Pressure and Issues*, Figure 3.4, p53.
- 4 See Price Waterhouse Cooper (2009) *Watertightness—Estimating the Cost*, Department of Building and Housing, pp2-3.
- 5 Four most obvious problems not addressed by the Government's response to leaky buildings are:
  - the liability for costs for buildings found to be leaking outside the ten-year timeframe imposed by Government
  - the liability for costs for buildings that have been repaired and show further signs of failure after repair
  - the use that will be made of leaky homes which are not repaired: will they be abandoned or will they be rented out? And if they are rented out, who will they be rented to and what will the living conditions of tenants be?
  - how will the repairs and/or abandonment process work, especially in buildings with multiple ownership with body corporate-type private governance structures, where the responses of individual owners may be quite different, especially if their properties have minimal residual value?
- 6 This figure has been cited in some preliminary work undertaken for the Department of Building on its response to the Housing Shareholders' Advisory Group proposals for the reform of social housing delivery. The source of this figure is unknown beyond that.
- 7 See Department of Building and Housing (2010) *New Zealand Housing Report 2009/10: Structure Pressure and Issues*, Table 4.2, pp66-67.
- 8 Charles Booth's classic work *Inquiry into the Life and Labour of the People of London* which was published progressively between 1886 and 1903 is available online at <http://booth.lse.ac.uk/static/a/index.html>
- 9 *In Darkest England and the Way Out* is available online at <http://www.fullbooks.com/In-Darkest-England-and-The-Way-Out-1.html>
- 10 There may be some differences in the way ethnicity has been defined in the Census and by respondents to the Mangere Housing Survey, so an exact comparison of these ethnicity figures may be unwise. The overall trends, however, are probably reliable given their size.
- 11 Statistics New Zealand's population estimates are available at [http://www.stats.govt.nz/browse\\_for\\_stats/population/estimates\\_and\\_projections.aspx](http://www.stats.govt.nz/browse_for_stats/population/estimates_and_projections.aspx)
- 12 For example, the 2006 Census identified 49,000 households as having Housing New Zealand as their landlord, while at that time Housing New Zealand reported that it had in excess of 64,000 dwellings.
- 13 This figure of 438 is obviously less than the total number of reported rented dwellings appearing in Table 4A. These figures are as reported in standard tables of the 2006 Census published by Statistics New Zealand. The difference is probably due to the data for the two figures coming from different questions in the Census form and to the fact that fewer people choose to answer the question about ownership of their rented home. These poor response rates and the proportion of non responses makes this tenure data less reliable and reduces our ability to make confident judgments around tenure changes between 2006 and 2011.
- 14 For example, see Maani, S. Vaithianathan, R. and Wolfe, B. (2006) *Inequality and Health: Is Housing Crowding the Link?*, Motu Economic and Public Research.
- 15 Taken from Statistics New Zealand's website at [http://www2.stats.govt.nz/domino/external/web/prod\\_serv.nsf/0/5fc1e29f9dda2bc0cc256dd5006e47d3/\\$FILE/Ind%20202b%20Canadian%20NOS.xls](http://www2.stats.govt.nz/domino/external/web/prod_serv.nsf/0/5fc1e29f9dda2bc0cc256dd5006e47d3/$FILE/Ind%20202b%20Canadian%20NOS.xls)
- 16 Data in this table is from customised data supplied by Statistics New Zealand.