

Auckland Regional Public Health Service

Working with the people of Auckland, Counties Manukau and Waitemata

Demographic Profile

Report 1: Census 2013 Auckland Usual Residents Snapshot



Te ora O Tamaki Makaurau
Health for all People of Auckland

July 2014

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Executive Summary

Auckland Regional Public Health Service (ARPHS) provides public health services to people residing in the geographical region determined by Auckland Council boundaries (see Appendix 1). The Auckland region population accounts for a third (33.4%) of the New Zealand population.

While the Auckland regional population presents similar trends to those of the national population, e.g. growth, aging and reducing smoking prevalence, its population size, degree of urbanisation and ethnic diversity sets the region apart from the rest of the country.

Please note that the information presented in this report includes only usually resident population counts as at census night, Tuesday 5 March 2013. At the time of writing, census data have not been adjusted for any undercount identified by the post-census enumeration survey. For more information regarding census and data definitions used in this report see Appendix 2.

Auckland Region Usual Residents Key Facts, Census 2013

Auckland Snapshot 2013

- Auckland residents comprised one third of New Zealand's total population with a usually resident population of 1,415,550 people.
- The most populated local boards were Howick, Henderson-Massey and Albert Eden.
- Over half of ethnicity responses in the Auckland region were European/Other, just over a fifth were Asian, followed by Pacific, Māori, and MELAA (at 2 %) as the minority ethnic grouping. In New Zealand, the largest ethnic groups were European and Māori.
- Over half of the Pacific, Asian and MELAA populations in New Zealand reside in Auckland.
- Auckland had a significantly higher proportion of residents of Asian, Pacific and MELAA ethnicities than the rest of New Zealand while having a considerably lower proportion of European/Other and Māori.
- The proportion of the Auckland population born overseas is 39% and of the total resident population 8% have been living in New Zealand for less than 5 years
- Auckland has the most ethnically diverse communities in New Zealand. Only three out of the 50 most diverse neighbourhoods in New Zealand are outside of the Auckland region.
- The most predominant Pacific ethnicities responses were Samoan, Tongan and Cook Island Māori.
- The most predominant Asian ethnicities responses were Chinese, Indian, Korean and Filipino.
- The Pacific and Māori populations had a higher proportion of children (aged 0-14 years), and lower proportion of elderly (aged 65 years plus) while the Asian and MELAA ethnic groups had a higher proportion of young adults (20 – 34 years old) and also a lower proportion of elderly.

A Changing Auckland - 2006 to 2013

- Between 2006 and 2013, the Auckland region population grew by 8.5%. This was greater than the population growth for the rest of New Zealand outside of the Auckland region which grew by 3.8% over the same time. New Zealand as a whole grew by 5.3%
- From 2006 to 2013, Auckland was the fastest-growing region in the country and accounted for half of New Zealand's total population growth.
- All local boards in the region experienced population growth with the highest proportional increase occurring in the Upper Harbour (25.2%), Waitemata (22.6%) and Howick (12.0%) local boards.
- Albert-Eden and Mangere-Otahuhu local boards showed the least population growth between 2006 and 2013.
- Auckland continues to have very high levels of residential mobility with over 700,000 or 53.8% of the population living in their stated usual residence for less than five years
- The Asian group continued strong growth in proportional and absolute terms. MELAA experienced significant proportional growth.
- Between 2006 and 2013, children in Auckland experienced a positive growth of 3% while in New Zealand, this group declined by 2%.

Determinants of Health among the People of Auckland

- Auckland has a higher proportion of the population living in both the least and most deprived neighbourhoods than the rest of New Zealand, 39% of those living in decile 10 areas are in Auckland.
- The proportion of Auckland households (5.9%) comprising of more than one family is more than twice the rest of New Zealand (2.3%).
- Auckland has more residents aged >15 years with higher qualifications (25%) than the rest of New Zealand (18%) and has fewer residents with no qualifications (17% and 23% respectively).
- In 2013, Auckland had 33% fewer smokers than in 2006 while New Zealand had 22% fewer smokers.

Māori People and People of Māori Descent in Auckland

- One in ten identified Māori as one of their ethnic groups in 2013.
- Almost a quarter of all Māori in New Zealand lived in Auckland in 2013.
- In New Zealand, the proportion of people who identified as Māori increased by 5.9% from 2006 to 2013, but in Auckland, Māori represented a slightly lower proportion of residents 2013 in comparison to 2006
- In Auckland, the rate of growth for the Māori group aged >65 years was higher than the total Auckland population.
- The Māori population had a higher proportion of tamariki in comparison with the total Auckland population. However, the proportion of tamariki living in Auckland in 2013 decreased compared to 2006.
- Ngāpuhi was by far the largest iwi with its people living the Auckland region in 2013,

followed by Ngāti Porou.

- Just over half of Māori descendants living in the Auckland region affiliate to an iwi outside Te Tai Tokerau/Tāmaki-Makaurau (Northland/Auckland).

Section 1: Introduction

This is the first of a series of demography & public health reports. This report provides an initial picture of the population of the Auckland region (Auckland Council boundaries) based on publicly-available data from the 2013 Census. Figures here are generally presented at regional and Local Board level, though future reports will also describe the region at a neighbourhood (Census Area Unit) level.

Auckland Regional Public Health Service (ARPHS) provides public health services to people residing in the geographical region enclosed by the Auckland Council boundary as defined by the Health Act (1956). ARPHS serves the largest population of any of the twelve public health units in New Zealand. While the Auckland regional population presents similar trends to those of the national population, e.g. growth, aging and reducing smoking prevalence, its absolute size, degree of urbanisation and ethnic diversity sets the region apart from the rest of the country.

While about a third of the New Zealand population at the 2013 Census lived in Auckland, the proportion of ethnic groups living in the region varied widely. Auckland had a significantly higher proportion of residents of Asian, Pacific and Middle Eastern, Latin American and African (MELAA) ethnicities than the rest of New Zealand.

When making comparisons between the Auckland and New Zealand, it is important to understand that because of the substantial impact of the Auckland population within the New Zealand population (33.4%), the results can present a skewed picture. In order to minimise this effect, comparisons are commonly made between Auckland and 'New Zealand excluding Auckland'. While Auckland's population as a whole is nationally distinct, Auckland region analyses also tends to average or mask the varied landscape of communities within Auckland. With public health operating in the context of communities it is important to describe these sub-regional differences, therefore data at local board level are provided.

1.1 Why Census Data are Important for Public Health

As a public health unit, it is fundamental for ARPHS to understand the population it serves and how this changes over time. ARPHS uses population information from the Census and elsewhere for a number of purposes including:

- planning and delivering services,
- identifying vulnerable populations,
- reporting on health outcomes,
- advocacy,
- identifying the potential impacts of policy on the Auckland population.

Census and health data analysis contribute to achieving the organisational goals set out in ARPHS' Strategic Planning Framework, and its 2013/15 priorities identified in the accompanying Strategic Action Plan. In particular in the following areas:

Deliver Effective and Efficient Public Health Services

- **Reporting for Outcomes:** Census data provides population denominators for calculating regional notifiable disease notification rates against ARPHS Service Delivery Plan. In turn, disease rates are a reflection of the implementation and effectiveness of public health actions aimed at prevention (e.g. immunisation), early detection of cases and outbreaks (e.g. notification and surveillance systems), and minimisation of further spread of disease (e.g. through contact tracing, restriction of movement, and treatment or prophylaxis). Note: estimated resident population

denominators are used for calculating rates as these are adjusted for the Census undercount. Estimated resident population denominators were not available at the writing of this report, therefore usually resident population counts as at census night are presented. See section 1.2 for more information.

Actively influence the sustainable development of the Auckland Region

- **Stakeholder Engagement and Influencing Policy Processes:** Census data provide a wealth of information that is essential for strategic planning for sustainable development. Information available includes population distribution and change over time, household composition, and travel information. When used in conjunction with other data, this can provide a rich picture of exposure to both risk and protective factors important for sustainable development including access to green space, population density and pressures on infrastructure such as water and sewerage systems, access to health care providers, exposure of children to liquor outlets, access to recreational activities. These data are useful tools for stakeholder engagement, stimulating discussion, identification of common goals and co-benefits, and can be used to inform and influence policy processes both via health impact assessments during policy development and via the policy submission process.

Be Responsive to Emerging Public Health Challenges

- **Monitoring Population Trends:** The Auckland region population continues to grow and change. Census data are critical for understanding and predicting the likely impacts of population growth, aging, increased population density, and increased ethnic diversity on population health. For example, as the aging population trend continues, coupled with a relative reduction in the birth rate, we are likely to see a reduction in the number of notifications for childhood communicable diseases in the future and an increase in the number notification for diseases associated with aging e.g. reactivation of TB, legionellosis. Tracking these changes over time contributes to ARPHS taking a forward focussed approach.

Partnership with Mana Whenua

- **Māori Health Gain:** ARPHS has a clear commitment to support Māori aspirations for health and wellbeing. Understanding, updating, using and sharing information related to the composition of Māori, as an ethnic group, aids in the implementation of such commitment. This commitment is strengthened via investing in Mana Whenua stakeholder relationships which can be facilitated by collaboration, information and skill sharing with respect to analysing and interpreting data available from a variety of sources including the Census.

Health Equity

- **Reducing Inequalities:** Census data also provide population denominator data for identifying and monitoring inequalities in the distribution of notifiable disease rates. This allows the development of strategies for reducing inequalities that are tailored for the Auckland population.

Identifying Vulnerable Populations: Analysis of the distribution of risk factor data available from the Census, including both demographic and social determinants data, can facilitate the targeting of ARPHS services, interventions, and communication to populations who are at greatest risk of poor health outcomes.

1.2 Interpretation Notes

Please note the following important points in reading, interpreting, and using data presented in this report:

- **Usually Resident Population:** Information presented in this report includes only usually resident population counts as at census night, Tuesday 5 March 2013. At the time of writing, census data have not been adjusted for any undercounts identified by the post-census enumeration survey to provide the estimated usually resident population. For more information regarding census and data definitions used in this report see Appendix 2. All data are sourced from Statistics New Zealand.
- **Auckland Region Population:** The Auckland population presented in this report is that defined in the Health Act 1956 as the population residing inside the Auckland Council geographical region. This differs from the Auckland region population defined by those residing in the three regional District Health Boards (DHB), Waitemata DHB, Auckland DHB, and Counties Manukau DHB (see Appendix 1).
- **Ethnicity Data:** All ethnicity data presented here are total response data. This means that an individual reporting more than one ethnic group, e.g. European and Māori will be counted in each of these groups. For this reason the total in each total response ethnic group adds up to more than the total population of New Zealand. Total response population data must not be used as denominators for any analysis in which the numerator ethnicity data are prioritised. Unless specified otherwise, Level 1 ethnicity data are reported. See Appendix 2 for more information.
- **Appendices:** The appendices of this report include additional technical data that may be useful in understanding how populations, or groups of people, have been defined in this report. For example, Appendix 1 provides an overview of geographical unit definitions used in this report and Appendix 2 provides additional detailed information on data definitions and methods used in analysing census data for this report.

1.3 Report Structure

Section one provides an introduction to the report structure and some insights into the importance of census data to public health.

Section two looks across a variety of variables, creating a snapshot picture of the Auckland region's population by size, ethnicity, and age and puts the Auckland region information in the context of national information for comparative purposes.

Section three examines the changes in the Auckland population that occurred between the 2006 and 2013 censuses nationally and in the region by population size, ethnicity, and age.

Section four presents an analysis of census-related data on determinants of health such as; income disparity, employment, academic achievement, smoking and family and household composition.

Finally, Section five provides a snapshot of Māori and regional Mana Whenua.

The Appendices include a number of additional resources including regional maps and technical notes referred to in the body of this report.

Section 2: Auckland Snapshot 2013

At the Census 2013, the New Zealand usually resident population was 4,242,048. Census counts are expected to increase after Statistics New Zealand has adjusted for post-census undercounts and population estimates are released. This section provides a snapshot of the usually resident population of the Auckland region as on census night, Tuesday March 5th 2013.

2.1 Population Size

In 2013:

- The Auckland region made up a third of the New Zealand's population with 1,415,550 usual residents
- The most populous local boards were Howick, Henderson-Massey and Albert-Eden

Auckland continues to be the largest region in New Zealand in terms of resident population. In 2013, the population residing within the Auckland Council's boundaries (the Auckland region) made up one third of the country's population (33.4%) with 1,415,550 usual residents.

Table 1: Local Board Population by Size, 2013 Census

Local Board	Location in Auckland	Resident Population	Percent of Total (%)	Population Density
Howick	South	127,125	9.0	1,824
Henderson-Massey	West	107,685	7.6	2,023
Albert-Eden	Central	94,695	6.7	3,340
Hibiscus and Bays	North	89,832	6.3	816
Kaipatiki	North	82,494	5.8	2,436
Manurewa	South	82,242	5.8	2,215
Orakei	Central	79,536	5.6	2,467
Waitemata	Central	77,136	5.4	3,975
Otara-Papatoetoe	South	75,660	5.3	2,042
Whau	West	72,594	5.1	2,703
Mangere-Otahuhu	South	70,959	5.0	1,353
Maungakiekie-Tamaki	Central	70,005	4.9	1,921
Franklin	South	65,322	4.6	55
Devonport-Takapuna	North	55,470	3.9	2,762
Rodney	North	54,879	3.9	24
Upper Harbour	North	53,670	3.8	768
Puketapapa	Central	52,938	3.7	2,829
Waitakere Ranges	West	48,396	3.4	159
Papakura	South	45,633	3.2	1,122
Waiheke	Central	8,340	0.6	54
Great Barrier	Central	939	0.1	3

Note: A local board map can be found in Appendix 1. Population density is defined as the number of usual residents per square kilometre.

Within the Auckland region, the local boards with the highest number of usual residents were Howick (9.0%), Henderson-Massey (7.6%) and Albert-Eden (6.7), see Table 1. Excluding the island local boards (Waiheke and Great Barrier), Puketapapa (3.7%), Waitakere Ranges (3.4%) and Papakura (3.2%) local boards have the smallest usual resident population.

Population density as described here is a general measure of housing intensity, typically expressed in (usually resident) persons per square kilometre. When population density is calculated by local board it incorporates the entire land area, irrespective of what proportion is zoned for residential use. Consequently, at the local board level population density is more an indication of urbanisation than residential housing intensity.

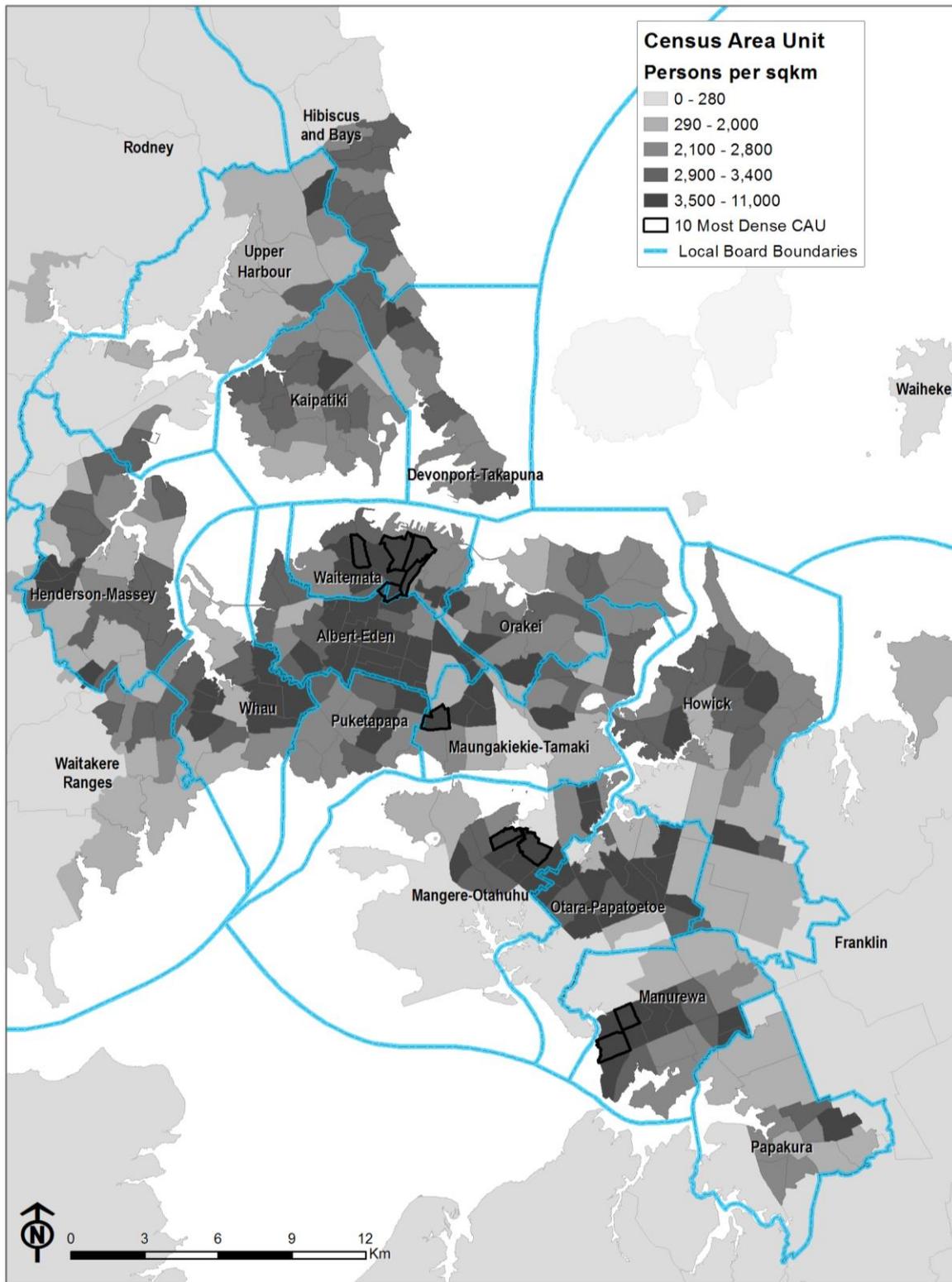
Within the Auckland main urban area census area units generally correspond to neighbourhoods providing a more focused estimate of population density (Figure 1 and Table 2). Though this community level measure of population density characterises housing intensity, it should also be noted that there can be very large variations in density even within urban CAU.

Table 2: Ten Most Densely Populated Census Area Units in Urban Auckland, 2013 Census

Census Area Unit	Local Board*	Population Density (km ²)	Resident Population
Auckland Central West	Waitemata	10,028	11,700
Auckland Central East	Waitemata	10,915	10,104
Grafton West	Waitemata	6,406	3,384
Ponsonby East	Waitemata	4,632	3,318
Eden Terrace*	Waitemata	5,493	2,571
Onehunga North West	Maungakiekie-Tamaki	4,690	3,765
Favona South	Mangere-Otahuhu	5,177	3,291
Harania East	Mangere-Otahuhu	4,758	5,043
Burbank	Manurewa	5,181	3,360
Clendon South	Manurewa	4,688	4,953

Note: Population density is defined as the number of usual residents per square kilometre. *Census Area Units do not fully align to local board boundaries; approximately 22% of the Eden Terrace CAU population is in the Albert-Eden Local Board

Figure 1: Population Density in the Auckland Region, Census 2013



Note: Population density is defined as the number of usual residents per square kilometre. *Census Area Units do not fully align to local board boundaries; approximately 22% of the Eden Terrace CAU population is in the Albert-Eden Local Board

2.2 Ethnic Composition

Ethnicity is a key social factor used to describe the New Zealand population. Statistics New Zealand defines ethnicity as the ethnic group or groups that people identify with or feel they belong to. Ethnicity is a measure of cultural affiliation, as opposed to race, ancestry, nationality or citizenship. Ethnicity is self-determined and people can identify with more than one ethnic group.

The Auckland region in 2013:

- At level 1, had an ethnic makeup of: European/Other (60.5%), Asian (23.1%), Pacific (14.6%) and Māori (10.7%) and MELAA (1.9%)
- Had a significantly higher proportion of residents of Asian, Pacific and MELAA ethnicities than the rest of New Zealand
- Had a considerably lower proportion of European/Other and Māori than the rest of New Zealand
- The top five Asian ethnic groups were Chinese, Indian, Korean, Filipino and Sri Lankan
- The top five Pacific ethnic groups were Samoan, Tongan, Cook Island Māori, Niuean and Fijian
- Had the most ethnically diverse neighbourhoods in the country

In the health sector, ethnicity data are used to inform, plan, and evaluate health services and policies that have potential health impacts. In addition, ethnicity data are used to identify vulnerable populations, target approaches, and to track health inequalities.

Statistical standards have been developed to ensure that ethnicity data are collected, recorded, and reported on consistently over time and between surveys such as the Census and administrative data collections such as the National Health Index (NHI) collection. As part of these standards, a hierarchical classification system was developed which is structured in 4 levels of increasing size to facilitate consistent recording and reporting of ethnicity data. Level 1 of the classification has six categories, level 2 has 21 categories, level 3 has 36 categories and level 4 has 233 categories. Level 4 is a list of individual ethnic groups which are grouped together to make up the other levels. In this report we are reporting ethnicity data at both Level 1 and Levels 3 and 4.

Important Interpretation Note

Total response ethnic group reporting is presented in this report. This means that people who reported more than one ethnic group are counted once in each group reported. Therefore the total number of responses for *all* ethnic groups can be greater than the total number of people who stated *any* ethnic group. See Appendix 2 for a more detailed description.

Level 1 Ethnicity

At level 1, the ethnic makeup of Auckland shows important differences from the make-up of the population of New Zealand outside of Auckland.

In 2013, Auckland's largest group was European/Other (60.5%), then Asian (23.1%) followed by Pacific (14.6%) and Māori responses (10.7%). MELAA represented the smallest proportion (1.9%).

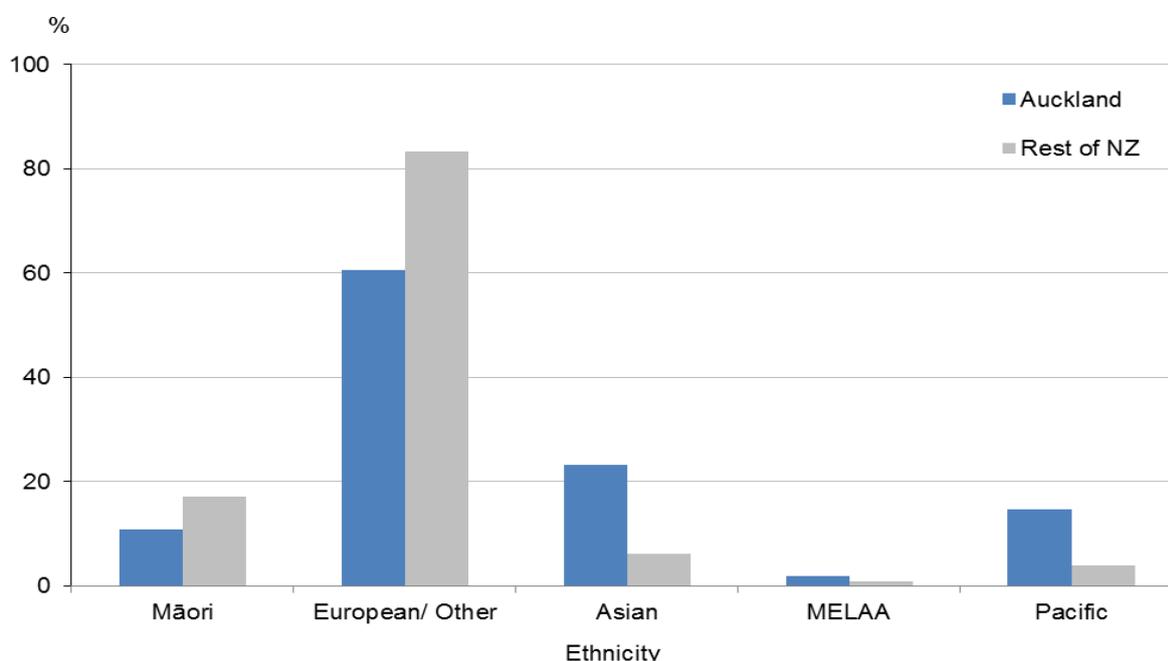
However, the proportion of residents of Asian, Pacific and MELAA ethnicities was significantly higher in Auckland than in the rest of New Zealand while the proportion of European/Other and Māori was considerably lower (see Table 3 and Figure 2)

Table 3 Ethnic Composition of Auckland and the Rest of New Zealand, 2013 Census

Ethnicity	Auckland			NZ Excluding Auckland	
	Number	Percent of Auckland (%)	Percent of Total NZ (%)	Number	Percentage (%)
European/Other	804,945	60.5	26.5	2,232,198	83.3
Asian	307,233	23.1	65.1	164,484	6.1
Pacific	194,958	14.6	65.9	101,007	3.8
Māori	142,770	10.7	23.9	455,817	17.0
MELAA	24,945	1.9	53.1	22,011	0.8

Note: Ethnicity is Level 1 Total Response. See Appendix 2 for more information. MELAA is Middle Eastern, Latin American, African.

Figure 2: Ethnic Composition of Auckland and the Rest of New Zealand, 2013 Census

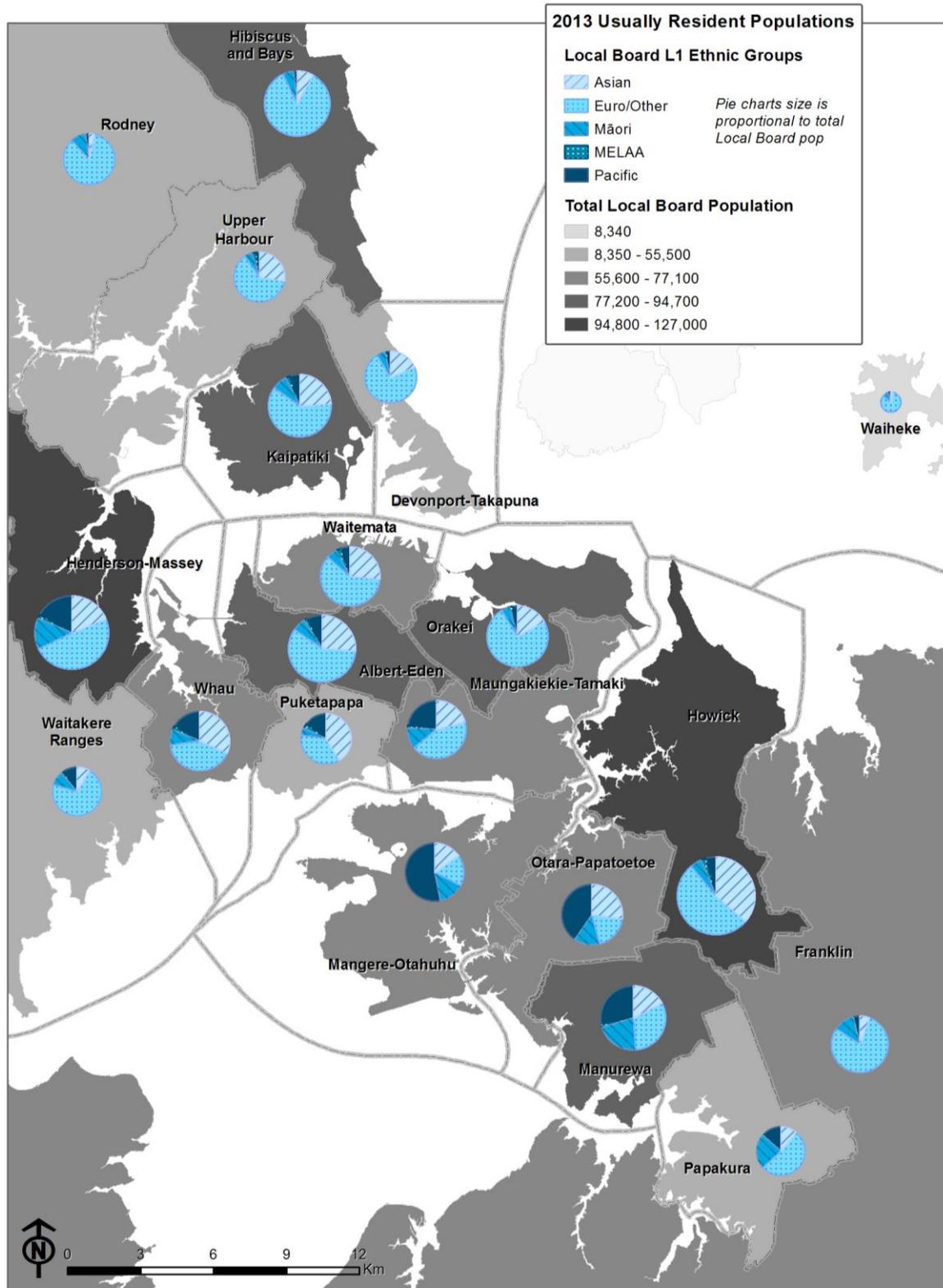


Note: Ethnicity is Level 1 Total Response. See Appendix 2 for more information. MELAA is Middle Eastern, Latin American, African.

While about a third of the total New Zealand population at the 2013 Census lived in Auckland, the proportion by each ethnic group varied widely. Over half of the Pacific (66%), Asian (65%) and MELAA (53%) populations in New Zealand reside in Auckland. In contrast, only 27% of European and almost a quarter (24%) of the Māori populations in New Zealand lived in the Auckland region in 2013.

There is also considerable variation in ethnic distribution at a local board level within Auckland. Howick, the largest local board by population, was the only board containing the largest population for more than one ethnic group (Asian and MELAA), with the largest of the other ethnic populations dispersed around the region (Figure 3 and Table 4).

Figure 3: Ethnic Composition of Auckland by Local Board, 2013 Census



Note: Ethnicity is Level 1 Total Response. See Appendix 2 for more information. MELAA is Middle Eastern, Latin American, African. Note graphs are sized proportionate to the population size of each local board.

Table 4: Ethnic Composition of Auckland by Local Board, 2013 Census

Local Board	Māori		Asian		European/Other		MELAA		Pacific	
	Number	Percent (%)	Number	Percent (%)	Number	Percent (%)	Number	Percent (%)	Number	Percent (%)
Albert-Eden	6,108	6.8	25,275	28.2	57,642	64.4	1,917	2.1	6,960	7.8
Devonport-Takapuna	2,847	5.3	10,572	19.7	41,415	77.3	951	1.8	1,173	2.2
Franklin	8,175	13.2	3,735	6.0	53,661	86.8	249	0.4	2,547	4.1
Great Barrier	150	18.2	12	1.5	771	93.8	6	0.7	24	2.9
Henderson-Massey	16,008	15.9	21,981	21.8	57,447	56.9	2,148	2.1	19,701	19.5
Hibiscus and Bays	5,001	5.8	7,164	8.3	77,232	90.0	804	0.9	1,536	1.8
Howick	6,324	5.2	47,511	38.8	68,760	56.1	2,673	2.2	5,631	4.6
Kaipatiki	6,615	8.5	20,559	26.3	51,810	66.3	1,932	2.5	4,602	5.9
Mangere-Otahuhu	10,335	15.9	11,151	17.2	12,948	19.9	465	0.7	39,045	60.1
Manurewa	19,131	25.3	15,381	20.3	28,416	37.5	1,770	2.3	25,020	33.0
Maungakiekie-Tamaki	8,505	13.2	15,324	23.7	31,554	48.9	1,080	1.7	16,731	25.9
Orakei	3,600	4.7	13,698	18.1	59,769	78.8	1,365	1.8	2,172	2.9
Otara-Papatoetoe	10,794	15.6	21,396	30.9	14,727	21.2	738	1.1	31,671	45.7
Papakura	11,979	28.1	5,448	12.8	26,553	62.2	585	1.4	6,201	14.5
Puketapapa	2,853	5.7	22,284	44.2	19,554	38.8	1,677	3.3	8,001	15.9
Rodney	5,079	9.9	1,749	3.4	47,649	92.9	210	0.4	1,392	2.7
Upper Harbour	2,610	5.1	15,000	29.4	34,158	66.9	1,455	2.9	1,074	2.1
Waiheke	888	11.4	255	3.3	7,200	92.2	117	1.5	228	2.9
Waitakere Ranges	5,001	11.0	4,335	9.5	36,453	80.3	684	1.5	4,968	10.9
Waitemata	4,374	6.1	20,325	28.5	45,990	64.5	2,433	3.4	3,762	5.3
Whau	6,387	9.4	24,078	35.4	31,233	45.9	1,683	2.5	12,522	18.4

Note: A local board map can be found in Appendix 1. Ethnicity is Level 1 Total Response. See Appendix 2 for more information. MELAA is Middle Eastern, Latin American, African.

Pacific, Asian, and MELAA Ethnic Groups

The Pacific and Asian ethnicity categories give a picture of the composition of the broad Level 1 groupings. For the Auckland region, the diversity within the Pacific and Asian ethnicity groupings is of particular importance given their population size. It is also important to present a breakdown for MELAA given its non-geographical or cultural grouping of ethnicities.

Pacific Ethnic Groups

Of Pacific responses in 2013, nearly half were made up of Samoan responses (49.2%) followed by Tongan (24.1%) and Cook Island Māori responses (18.9%).

Table 5: Five Largest Pacific Ethnic Groups in Auckland, 2013 Census

Pacific Ethnic Groups	Resident Population	Percentage (%) of Pacific responses	Percentage (%) of Auckland Population
Samoan	95,910	49.2	7.2
Tongan	46,971	24.1	3.5
Cook Island Māori	36,819	18.9	2.8
Niuean	18,555	9.5	1.4
Fijian	8,487	4.4	0.6

Note: Ethnicity is Level 3 and 4 Total Response. See Appendix 2 for more information

Asian Ethnic Groups

For the Asian population in 2013, Chinese made up 38.5% of the responses, Indian 34.6%, Korean 7.2% and Filipino 7.0%.

Table 6: Five Largest Asian Ethnic Groups in Auckland, 2013 Census

Asian Ethnic Groups	Resident Population	Percentage (%) of Asian responses	Percentage (%) of Auckland Population
Chinese	118,233	38.5	8.9
Indian	106,320	34.6	8.0
Korean	21,987	7.2	1.7
Filipino	20,508	7.0	1.5
Sri Lankan	6,912	6.7	0.5

Note: Ethnicity is Level 3 and 4 Total Response. See Appendix 2 for more information

Middle Eastern, Latin American and African Ethnic Groups

The breakdown of MELAA for 2013 by Middle Eastern, Latin American and African ethnicities is presented in Table 7.

Table 7: Middle Eastern, Latin American and African Ethnic Groups in Auckland, 2013 Census

MELAA Ethnicities	Resident Population	Percentage (%) of MELAA responses	Percentage (%) of Auckland Population
Middle Eastern	12,870	51.5	1.0
Latin American	5,823	23.3	0.4
African	6,306	25.2	0.5

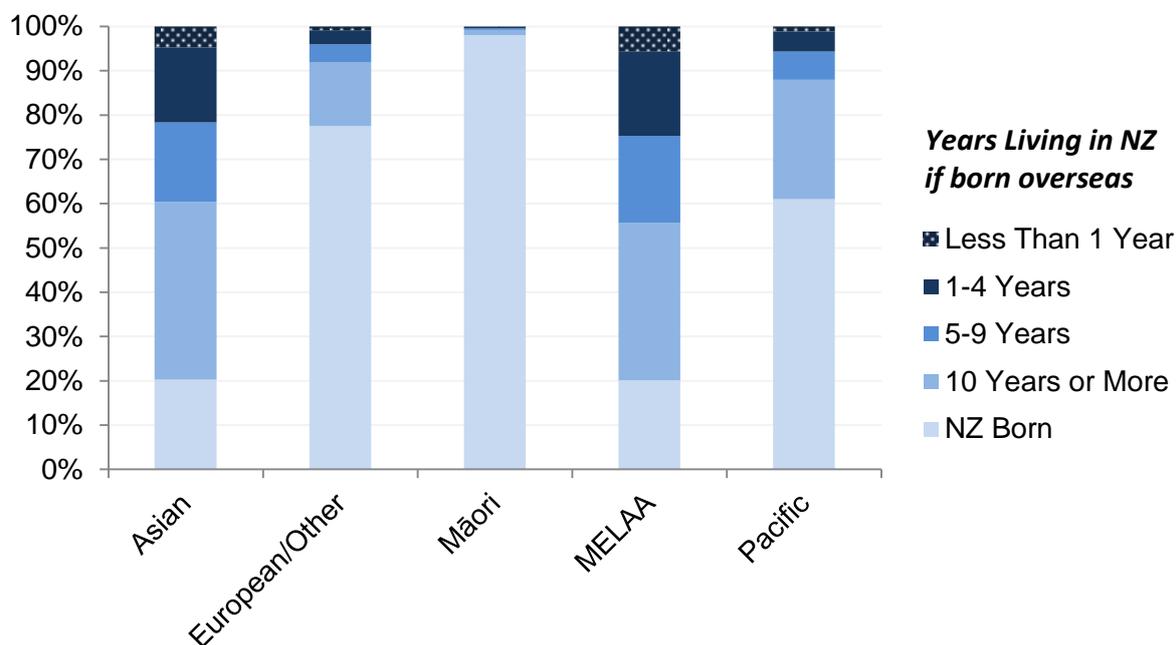
Notes: Ethnicity is Level 2 Total Response. See Appendix 2 for more information. MELAA is Middle Eastern, Latin American and African.

Resident Population Born Overseas

Overall, the proportion of the Auckland resident population born overseas is 39%. Within this figure, however, there is substantial variation by both ethnic group and geography. The Level 1 ethnic groups with the highest proportion born overseas are Asian and MELAA at 78% each (Figure 4).

Accordingly Asian and MELAA have higher proportions of those living in New Zealand less than 5 years at 22% and 25% respectively. In contrast the European/Other and Pacific populations born or living in New Zealand for more than 10 years are both around 90%. While around 4% of the European/Other and 6% of Pacific populations have been living in New Zealand for less than 5 years. Overall, around 8% or 109,900 of the Auckland population were born overseas and have lived in New Zealand for less than 5 years.

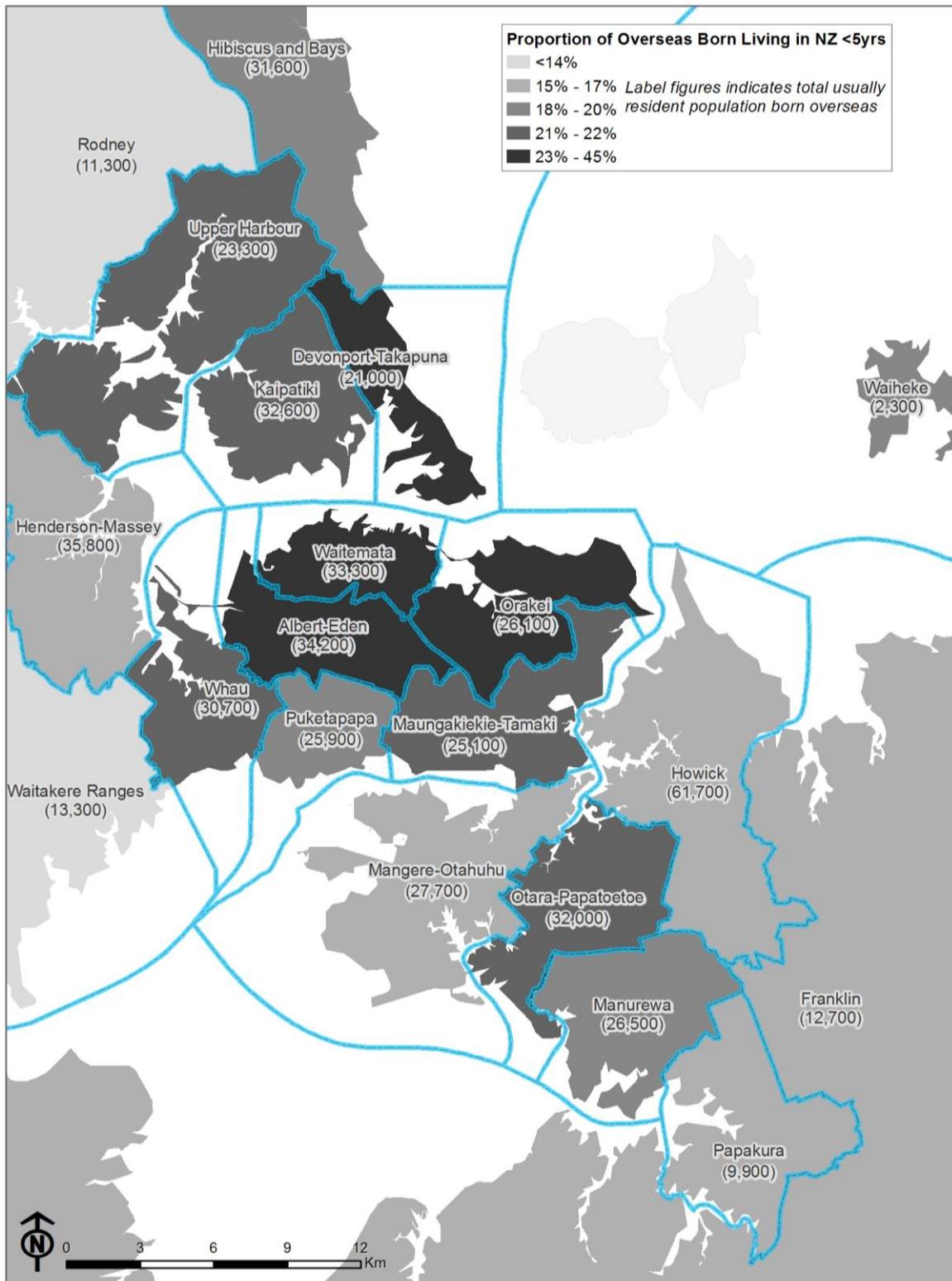
Figure 4: Proportion of Level 1 Ethnic Groups by Years Living in New Zealand (by total stated)



The population born overseas and living in New Zealand for less than five years has the highest concentration in the centre of the Auckland region (Figure 5). The board with the highest proportion is Waitemata at 45%, and the lowest proportions occur in the largely rural boards of Great Barrier, Rodney, and Waitakere Ranges with 14% each.

The boards with the largest populations born overseas are Howick (61,700) and Henderson-Massey (35,800). Both these Boards have well established migrant populations with 59% of those born overseas living in New Zealand 10 years or longer.

Figure 5: Proportion of Resident Population Living in NZ less than 5 years by Local Board (overseas born only)



Note: The numbers given for each board is the total resident population born overseas.

2.3 Neighbourhood Ethnic Diversity

Ethnic diversity at a neighbourhood level (as described by census area units) is a measure of ethnic mixing of the usually resident Level 1 ethnic groups (Māori, Asian, European/Other, MELAA, Pacific). The measure reveals how uniformly each of the ethnic groups contributes to the total population of the neighbourhood. A score of 100 would indicate identically sized populations from each of the groups.

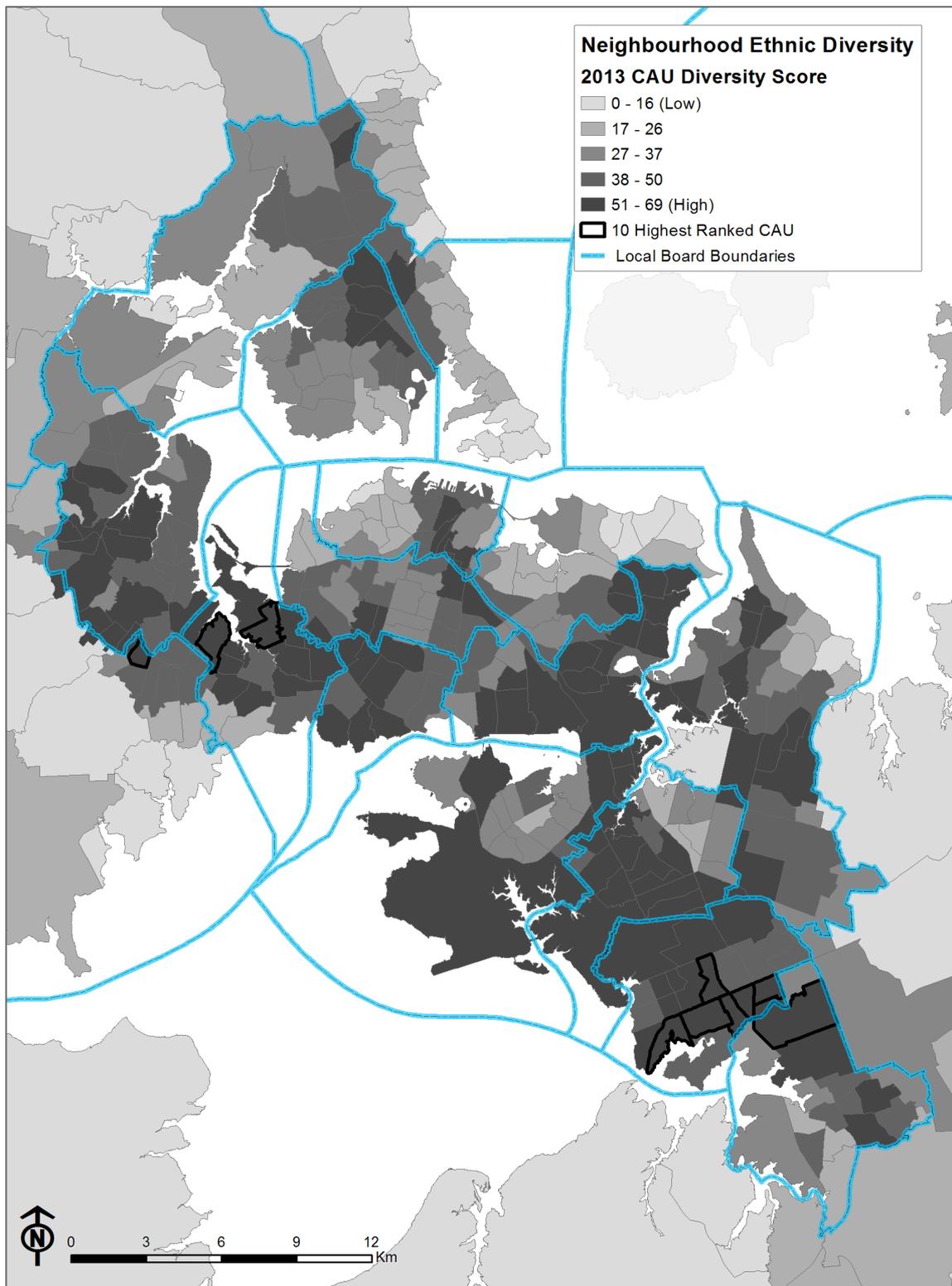
The result of applying this measure to New Zealand's neighbourhoods' shows that Auckland had the most ethnically diverse neighbourhoods in the country in 2013. All of the top 10 ranked ethnically diverse suburbs in New Zealand were located in the Auckland region (Table 8 and Figure 6). Moreover, only three out of the 50 most diverse neighbourhoods in New Zealand were located outside of the Auckland region.

Table 8: Top 10 Most Ethnically Diverse Neighbourhoods in New Zealand, 2013 Census

Neighbourhood	Local Board	Resident Population	NZ Ethnic Diversity Rank	Diversity Score
Beaumont	Manurewa	2,448	1	69.5
Manurewa East	Manurewa	2,505	2	69.3
Manurewa Central	Manurewa	4,452	3	68.7
Kelston Central	Whau	4,452	4	68.2
Avondale West	Whau	4,854	5	67.9
Leabank	Manurewa	5,280	6	67.8
Weymouth East	Manurewa	4,995	7	67.4
Randwick Park	Manurewa	3,537	8	66.7
Parrs Park	Waitakere Ranges	1,362	9	65.9
Takanini North	Papakura	3,678	10	65.5

Note: Ethnic diversity is measured as a ratio of the sum of differences between the level 1 ethnic groups within a neighbourhood (Census Area Unit). See Appendix 2 for more information.

Figure 6: Neighbourhood Ethnic Diversity in Auckland, 2013 Census



Note: Ethnic diversity is measured as a ratio of the sum of differences between the level 1 ethnic groups within a neighbourhood (census area unit). See Appendix 2 for more information.

2.4 Age Structure

Population ageing is a global phenomenon, although countries vary significantly in the degree and pace of these changes.¹ Globally, the number of older persons (aged 60 years or over) is expected to more than double, from 841 million people in 2013 to more than 2 billion in 2050. Older persons are projected to exceed the number of children for the first time in 2047.

Population aging has profound implications on a broad range of economic, political, and social processes.¹ These include implications for the health and wellbeing of older persons, health and social services for the aged, workforce implications with decreases in the proportion of those traditionally in the workforce, in addition to likely pressures on social welfare and pension systems.

In the Auckland region, in 2013:

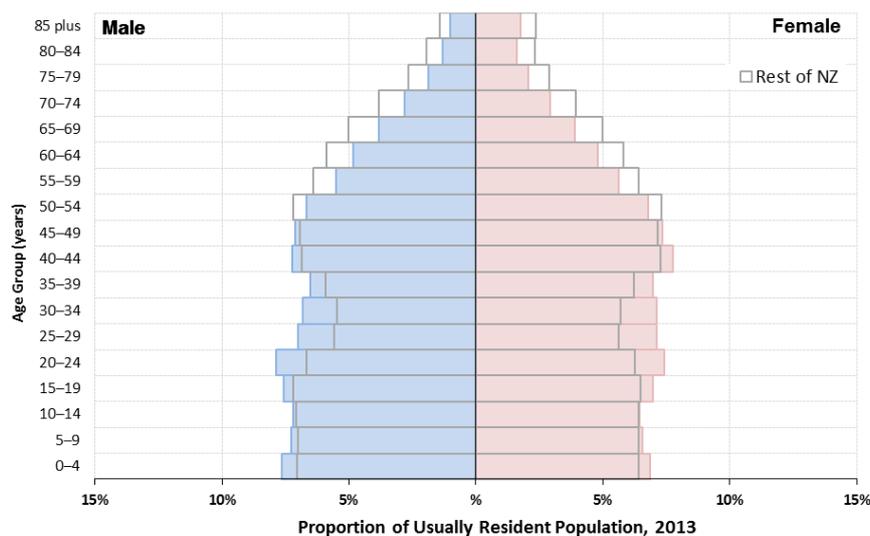
- Compared to the rest of New Zealand, the Auckland region continues to have a relatively younger population
- The Asian, Pacific, Māori and MELAA ethnic groups had a lower proportion of elderly (aged 65 years plus) in comparison to the European/Other group
- The Pacific and Māori populations had a higher proportion of children (aged 0-14 years) in comparison to the MELAA European/Other and Asian groupings
- The age structure of the Asian and MELAA groups shows high proportion of student-aged and young adult migrant sub-groups (20 – 34 years old)

Table 9 and Figure 7 compares the age structure of the Auckland population at the 2013 census with the age structure of the New Zealand population that lives outside of the Auckland region in age bands. Compared to the rest of New Zealand, the Auckland region continued to have a relatively younger population in 2013. Auckland had a slightly higher population aged 0-4 years and a significantly higher young & adult population, aged 15-44 years, than the rest of New Zealand. This difference is likely to be driven by young people moving to Auckland for further education, and the increased ethnic diversity in Auckland compared to the rest of New Zealand.

Table 9: Distribution of Usual Residents by Age Group, 2013 Census

Age Group	Auckland Region		NZ Excluding Auckland	
	Number	Percentage	Number	Percentage
0-4 years	102,357	7.2	189,684	6.7
5-19 years	296,919	21.0	572,427	20.3
20-39 years	402,237	28.4	670,659	23.7
40-64 years	450,879	31.9	949,857	33.6
65+ years	163,152	11.5	443,880	15.7

Figure 7: Total Population Pyramids, 2013 Census



Age structure by Ethnicity

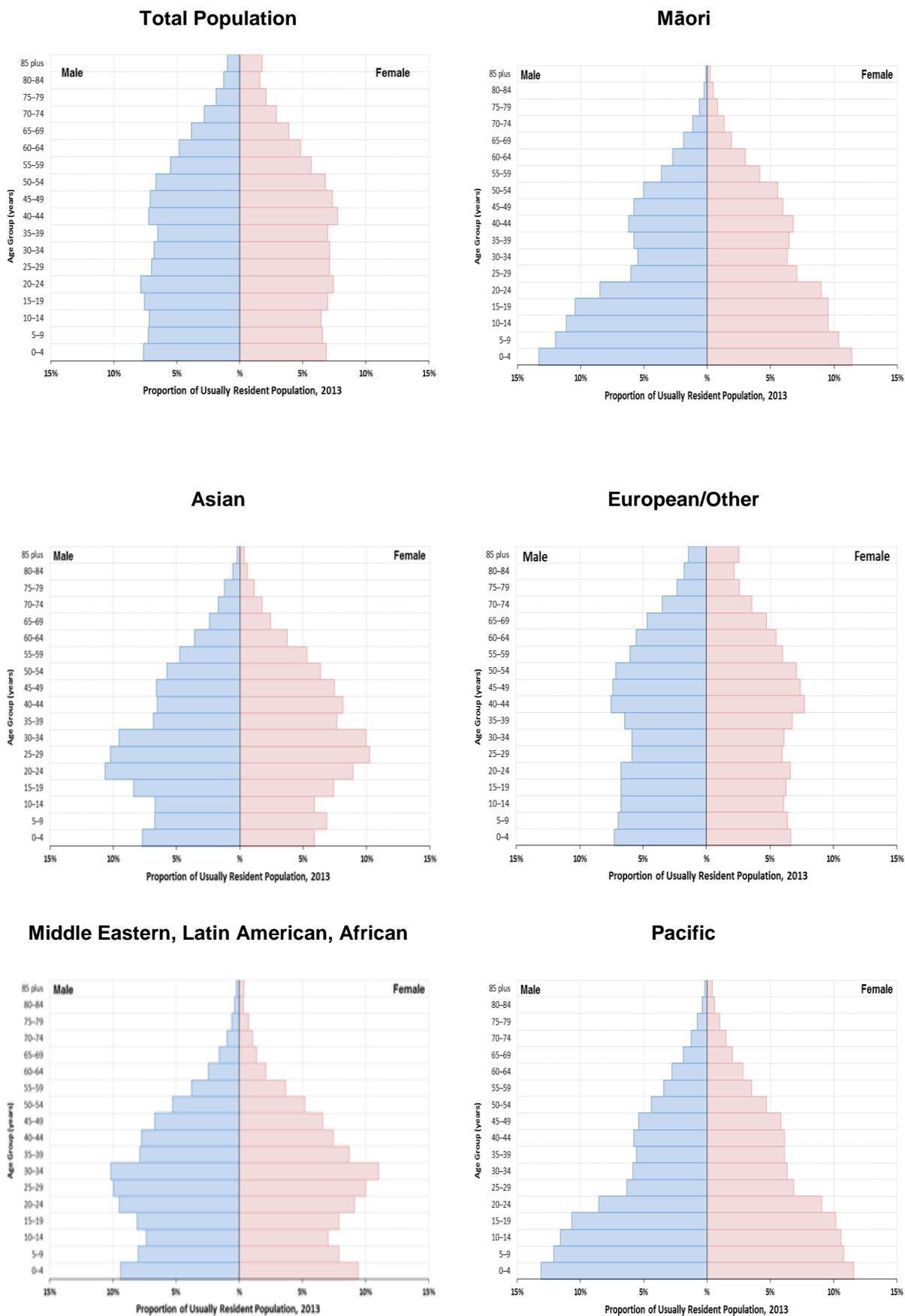
Differences can be observed in the age structure of different ethnic groups within Auckland. The contrast between the triangular (*expanding*) pyramid of the Māori and Pacific groups, the bell-shaped (*stationary*) pyramid of European/Other and the unique pyramid shape of the Asian and MELAA groups provide a clear picture of the differences in the age structure by ethnicity in the region.

The unique shape for MELAA and Asian groups is typical of population groups patterned by employment and educational migration drivers (concentration of student-aged and young adult migrant sub-groups, 20 – 34 years old) rather than by natural population increases.

The Asian (6.2%), Pacific (5.0%), Māori (4.4%) and MELAA (3.8%) groups all had a lower proportion of their population aged 65 years and over in comparison to the European/Other group (14.6%).

However, the MELAA and Asian groups do not share a similar proportion of children (under 15 years old) to Māori and Pacific populations. Pacific (34.8%) and Māori (33.7%) populations had the highest proportion of children in comparison to MELAA (24.5%), European/Other (20.0%) and Asian (19.8%) groups.

Figure 8: Auckland Population Pyramids by Ethnicity, 2013 Census



Note: Ethnicity is Level 1 Total Response. See Appendix 2 for more information.

Section 3: A Changing Auckland

This Section examines changes in the Auckland population between the Census 2006 and Census 2013. Comparisons will be made using the same variables used to describe the population in 2013 (Section 2). In general, the growth between censuses is substantial and outpaces the rest of the county, both proportionally and in absolute numbers, with the exception of the proportional representation of Māori in the Auckland region.

3.1 Total Population Growth

In 2013 in the Auckland region:

- Auckland was the fastest-growing of the main urban centres in New Zealand
- There was an increase of 110,592 people between 2006 and 2013 representing just over half of all growth nationally
- All local board areas in Auckland experienced population growth between 2006 and 2013. The highest increase occurred in the Upper Harbour, Waitemata and Howick local boards.

Auckland was the fastest-growing region in New Zealand. Just over half (51.6%) of New Zealand's population growth between 2006 and 2013 occurred in Auckland. There were 110,592 more people living in Auckland in 2013 than in 2006 while, there were 214,101 more residents in New Zealand as a whole. The regional growth rate of 8.5% between the last two Censuses was above the growth rate of the country as a whole (5.3%).

Comparing the sub-regional populations between 2006 and 2013, all local boards in the region experienced growth with the highest increase in the Upper Harbour (25%) followed by Waitemata (23%), Howick (12%), Franklin (11%) and Rodney (11%). In absolute terms, the local boards with the largest increase of residents were Waitemata, Howick, Upper Harbour, Henderson-Massey and Hibiscus and Bays. It is interesting to note that Howick was the local board with the largest population in the region.

A key contributing factor to the geographic pattern of growth in the region has been the Greenfield housing developments on the fringe of suburban Auckland (Figure 10). Howick, Henderson-Massey, and Upper Harbour are boards with the largest absolute growth in population; though the area with the largest population increase is the inner city board of Waitemata. In addition to an increase in apartment buildings, Statistics New Zealand acknowledges that there was likely under enumeration in past Censuses of high rise accommodation.

Table 10: Local Boards Population Change (2006 – 2013 Censuses)

Local board area	Population		Absolute Population Growth 2006–2013	Percentage Change From 2006–2013
	2006	2013		
Upper Harbour	42,873	53,670	10,797	25.2
Waitemata	62,928	77,136	14,208	22.6
Howick	11,3505	127,125	13,620	12.0
Franklin	58,602	65,322	6,720	11.5
Rodney	49,359	54,879	5,520	11.2
Papakura	41,559	45,633	4,074	9.8
Hibiscus and Bays	81,858	89,832	7,974	9.7
Henderson-Massey	98,787	107,685	8,898	9.0
Waiheke	7,797	8,340	543	7.0
Orakei	74,520	79,536	5,016	6.7
Manurewa	77,190	82,242	5,052	6.5
Waitakere Ranges	45,498	48,396	2,898	6.4
Maungakiekie-Tamaki	66,375	70,005	3,630	5.5
Devonport-Takapuna	52,653	55,470	2,817	5.4
Great Barrier	894	939	45	5.0
Whau	69,171	72,594	3,423	4.9
Otara-Papatoetoe	72,324	75,660	3,336	4.6
Kaipatiki	79,131	82,494	3,363	4.2
Puketapapa	50,805	52,938	2,133	4.2
Albert-Eden	90,978	94,695	3,717	4.1
Mangere-Otahuhu	68,151	70,959	2,808	4.1

Note: A local board map can be found in Appendix 1.

3.2 Residential Mobility

Around 992,706 or 84% of the current Auckland population aged five years and up were living in the Auckland region five years ago (these figures exclude a relatively large number of those who did not state their previous region of residence). Of the 188,265 residents who weren't living in the region five years ago 70% were living overseas. The top three contributing New Zealand regions were Christchurch City (7,461), Wellington City (5,355), and Hamilton City (4,266), while overall only marginally more identified as living in Cities (52%) than Districts at the Territorial Authority level.

Both Auckland and New Zealand have a high level of residential mobility, more than 700,000 or around 54% of the Auckland population have lived in their current residence less than 5 years (Table 11). Residential mobility is slightly higher in Auckland than the rest of the country, though it has dropped nationally since 2006.

Table 11 Years at Usual Residence

Region	2006		2013	
	0 – 4 years	%	0 – 4 years	%
Auckland	721,374	59.8	707,229	53.8
New Zealand excluding Auckland	1,448,490	56.6	1,360,977	51.4

3.3 Changing Ethnic Composition and Distribution

Although population growth is occurring throughout the Auckland region, population growth varies significantly by ethnic group.

In the Auckland region, 2013:

- The Asian group continued strong growth (proportionally and in absolute terms)
- In proportion, MELAA was the fastest growing ethnic group

In Auckland in 2013, the Asian group continued showing strong growth; however, proportionally, the fastest growing ethnic group in the region was MELAA (34%), followed by Asian (31%). In absolute terms, Asian was the group with the highest growth between 2006 and 2013.

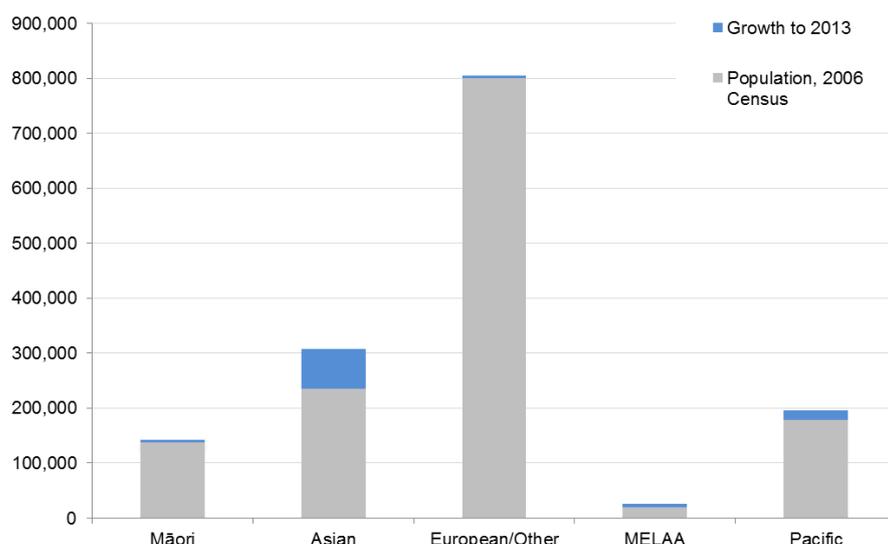
Due to its relatively small population size caution needs to be taken with the interpretation of data for MELAA because small changes in the absolute population counts can significantly affect proportional change. In addition, population growth in this group is not only affected by fertility and mortality rates but it is also influenced by changes in migration policies and internal population mobility (national and regional).

Table 12 Ethnic Composition and Change (2006 – 2013 Censuses)

Ethnic Group	Population 2013	Absolute Population Growth 2006–2013	Percentage Change From 2006–2013
Māori	142,770	5,463	4.0
Asian	307,233	72,954	31.1
European/Other	889,068	4,680	0.6
MELAA	24,945	6,384	34.4
Pacific	194,958	17,010	9.6

Note: Ethnicity is Level 1 Total Response. See Appendix 2 for more information.

Figure 9: Absolute Auckland Population Growth by Ethnic Group, 2006 and 2013 Census

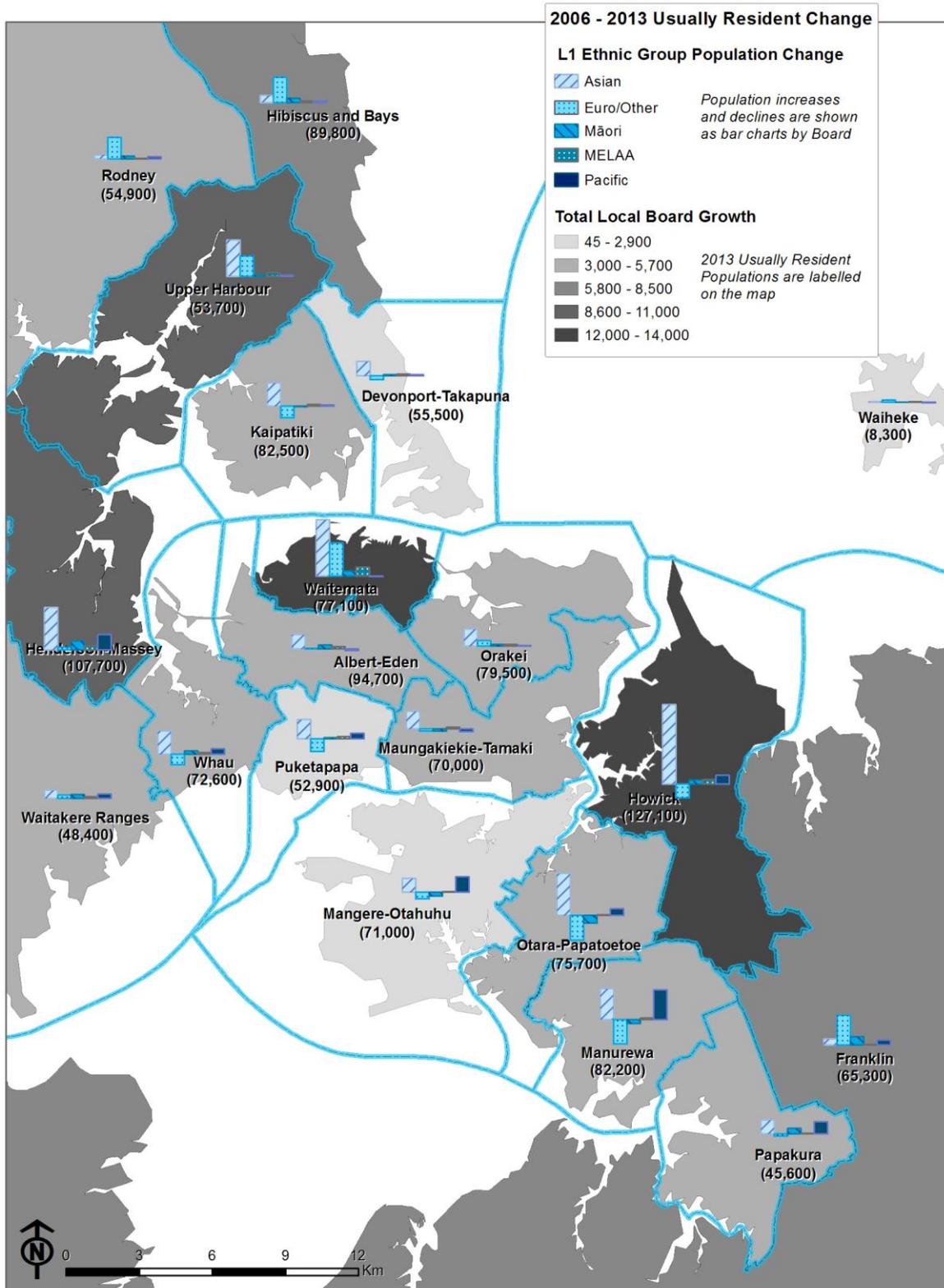


Note: Ethnicity is Level 1 Total Response. See Appendix 2 for more information.

Across the Auckland Region, growth by ethnic groups varied by local board (Figure 10, Table 1). Change by local board is influenced by external (movement between regions in New Zealand) and internal migration (movement between local boards within Auckland), in addition to fertility and mortality rates.

Population change for Māori in Auckland is discussed in more detail in Chapter 5. Although regionally, there was a very modest increase in the size of the European/Other population, the areas of greatest growth were in the Waitemata and Hibiscus and Bays local boards, whilst the Otara-Papatoetoe and Manurewa local boards showed the greatest decline. The Pacific population increased by nearly 10% from 2006 and 2013, with the greatest increases seen in the Manurewa and Mangere-Otahuhu local boards. The Asian population experienced the greatest absolute increase with the Howick, Waitemata, and Henderson-Massey local boards leading this increase.

Figure 10: Absolute Population Change by Ethnic Group and Local Board, 2006 and 2013 Census



Note: Ethnicity is Level 1 Total Response. See Appendix 2 for more information.

Table 13: Population Change by Ethnic Group and Local Board, 2006 and 2013 Census

Local board area	Absolute Population Change from 2006 to 2013				
	Māori	Asian	European/ Other	MELAA	Pacific
Upper Harbour	186	5,628	3,114	540	165
Waitemata	807	8,751	5,133	1,410	-108
Howick	585	12,333	-2,205	666	1,332
Franklin	1,242	918	4,638	99	732
Rodney	399	603	3,324	51	300
Papakura	885	2,175	-348	117	1,878
Hibiscus and Bays	690	1,185	3,954	279	294
Henderson-Massey	1,332	6,561	360	603	2,358
Waiheke	-27	66	306	78	-54
Orakei	282	2,667	807	231	69
Manurewa	-660	4,728	-3,825	237	4,575
Waitakere Ranges	519	1,266	489	249	681
Maungakiekie-Tamaki	-396	2,730	-393	234	-498
Devonport-Takapuna	213	2,265	-540	291	183
Great Barrier	-21	6	36	6	6
Whau	516	3,579	-1,611	270	879
Otara-Papatoetoe	-1,209	6,486	-3,888	21	1,026
Kaipatiki	-123	3,579	-1,812	213	129
Puketapapa	180	3,042	-1,971	378	906
Albert-Eden	606	2,211	120	303	-279
Mangere-Otahuhu	-540	2,181	-1,014	108	2,442

Note: Ethnicity is Level 1 Total Response. See Appendix 2 for more information. A negative number indicates that the population within this local board decreased.

3.4 Changing Age Structure

In the Auckland region, between 2006 and 2013 the population of young children (aged 0 – 4 years) and young adults (aged 15-24 years) grew by 8.8% and 6.4% respectively. In addition there was modest growth in the 25-39 year old population in Auckland (0.8%). In contrast, the rest of New Zealand experienced significantly lower growth in the 0-4 year old population (4.8%), minimal increase in the 15-24 year old population, and a reduction in population size for 5-14 and 25-39 year olds (Table 14). As a consequence, Auckland continues to have a relatively younger population than the rest of New Zealand.

Aging Auckland:

- The median age increased in the region 1.2 years between 2006 and 2013
- The growth in the children population (0–14years) was lower (3%) than the growth in the 65+ group (27%)

As discussed in Section 2.4, the population of Auckland and New Zealand continues to age. Population aging is driven primarily by a reduction in fertility rates, i.e. fewer babies being born, and a reduction in premature mortality, i.e. people are living longer. The latter is evidenced by population growth in those aged 65 years and older which is greater in the Auckland region (26.9%) than is seen in the rest of New Zealand (20.9%) (Table 14). Of particular interest is the growth in the number of people aged 85 years and older, which is similar for Auckland and the rest of New Zealand (28.0% and 29.9% respectively).

The Auckland population remains younger than the national population with a median age of 35.1 years in 2013 compared to 38.0 years nationally. However, as a consequence of the changing age structure, the median age is increasing. Between 2006 and 2013, the median age of people living in Auckland increased by 1.2 years from 33.9 years in 2006 to 35.1 years in 2013 (Table 15). This compares to a 2.1 year increase in the median age for New Zealand as a whole.

Across both Auckland and New Zealand, the median age varies within ethnic group, with Māori and Pacific populations continuing to be relatively younger (Table 15). The ethnic group that experienced the greatest increase in median age between 2006 and 2013, both in the Auckland region and nationally, was European.

Table 14: Changing Age Composition, 2006 and 2013 Census

Age	Auckland				NZ Excluding Auckland
	Population 2006	Population 2013	Growth 2006-2013	Percentage Change	Percentage Change
0-4 years	94,077	102,357	8,280	8.8	4.8
5-14 years	195,036	193,998	-1,038	-0.5	-4.5
15-24 years	198,504	211,140	12,636	6.4	0.7
25-39 years	392,940	402,237	9,297	2.4	-4.0
40-64 years	394,920	450,879	55,959	14.2	8.2
65+ years	128,541	163,158	34,617	26.9	20.9
85+ years	15,288	19,575	4,287	28.0	29.9

Table 15: Median Age, 2006 and 2013 Census

Age	Auckland		New Zealand	
	2003	2013	2003	2013
Māori	22.6	23.5	22.7	23.9
Asian	29.1	31.0	28.3	30.6
European	37.0	39.4	38.1	41.0
MELAA	27.6	29.1	26.5	28.6
Pacific	21.6	22.6	21.1	22.1
Total	33.9	35.1	35.9	38.0

Note: Ethnicity is Level 1 Total Response. See Appendix 2 for more information.

Section 4: Determinants of Health

Scientists have found that the conditions in which we live, learn, work and play have an enormous impact on our health, long before we ever see a doctor.

It's time we expand the way we think about health to include how to keep it, not just how to get it back. Too many people don't have the same opportunities to be as healthy as others.

Robert Wood Johnson Foundation, 2010²

A myriad of different individual, social, economic, environmental and cultural factors influence people's health and wellbeing and are known collectively as the determinants of health. The social determinants of health are the circumstances in which people are born, grow up, live, work and age, and the systems put in place to deal with illness.³ These circumstances are in turn shaped by a wider set of forces: economics, social policies, and politics.

In New Zealand, there is considerable evidence that the unequal distribution of the determinants of health is associated with an unequal distribution of health and wellbeing, resulting in poorer health outcomes and a shorter life expectancy for some people.

This Chapter begins to explore the distribution of a number of social determinants of health available from the 2013 Census among people living in the Auckland region.

4.1 Academic Achievement

Over 80% of both the Auckland and the rest of New Zealand population (15 years and older) hold at least a high-school equivalent qualification. Between 2006 and 2013, there was a modest increase in the proportion of the population with high-school equivalent qualification (National Certificate of Educational Achievement (NCEA) Level 1-3) in the rest of New Zealand (0.47%) and a slight decrease in Auckland (-0.3%).

The proportion of the adult population with no qualifications decreased in both the Auckland region (-3.5%) and across the rest of New Zealand (-4.2%) between 2006 and 2013.

In 2014, a greater proportion of the Auckland adult population had a NCEA level 7 qualification or a university degree (25%) in comparison to the rest of New Zealand (18%).

Education is critical in determining people's social and economic position and thus their health. A low level of education is associated with poor health status.

National Health Committee, 1998⁴

Table 16: Academic Achievement, 2006 and 2013 Census

Qualification	Auckland		Rest of NZ	
	Percent (%) of population	Percentage Change (%)	Percent (%) of population	Percentage Change (%)
None	17	-3.5	23	-4.2
High-school equivalent (NCEA L1-3)	41	-0.3	39	0.47
Higher qualification (NCEA L7 / university degree)	25	4.8	18	3.8

Note: Percentage change is from 2006 to 2013. The 'any high school equivalent' includes qualifications acquired overseas. NCEA: National Certificate of Educational Achievement.

4.2 Employment

The Census provides an indication over time of employment status in the population, and is useful for exploring trends at a population level. However, it must be noted that New Zealand's official employment statistics come from the Household Labour Force Survey.⁵

The main factor determining adequate income is participation in paid employment, particularly full-time employment. Employment also enhances social status and improves self-esteem and provides social contact.

Unemployment is detrimental to both physical and mental health and unemployed people in New Zealand report poorer health status than people who are employed.

National Health Committee, 1998⁴

In 2013, the proportion of population aged 20-64 years that was unemployed in the Auckland region (5.3%) was slightly greater than in New Zealand as a whole (4.8%) (Table 17). Correspondingly, the proportion of people in full employment in Auckland (56.9%) was lower than in New Zealand (58.1).

Table 17 shows that unemployment in the group 20 – 64 years increased in Auckland between 2006 and 2013 while the proportion of people in full employment decreased during this period.

Table 17: Employment Status, 2006 and 2013 Census

Employment	Auckland		New Zealand
	Percentage (%) Population 2006	Percentage (%) Population 2013	Percentage (%) Population 2013
Full time employment	59.6	56.9	58.1
Part-time employment	12.6	12.3	13.7
Unemployment	3.4	5.3	4.8

4.3 Personal Income

Total income is a measure of a person’s income from all sources. It does not take into account employment status e.g. not employed, not in the workforce, part time employment or the source of income e.g. social benefits or pensions. Median income is calculated for all people aged 15 years and older irrespective of employment status or source of income. Whilst providing useful trend information, as these questions are asked in the same way over time, these figures do not tell us about the total or median income of those in the workforce.

Income is the single most important modifiable determinant of health and is strongly related to health and well-being.

The link between poverty and ill health is clear; with few exceptions, the financially worst-off experience the highest rates of illness and premature death.

National Health Committee, 1998⁴

Total personal income from all sources varies by sex (Figure 11). In the Auckland region in 2013, females were overrepresented in the lower income bands (\leq \$40,000 per annum) while males were overrepresented in the higher income bands ($>$ \$70,000 per annum). This income difference is most apparent in the highest income bands ($>$ \$100,000 per annum).

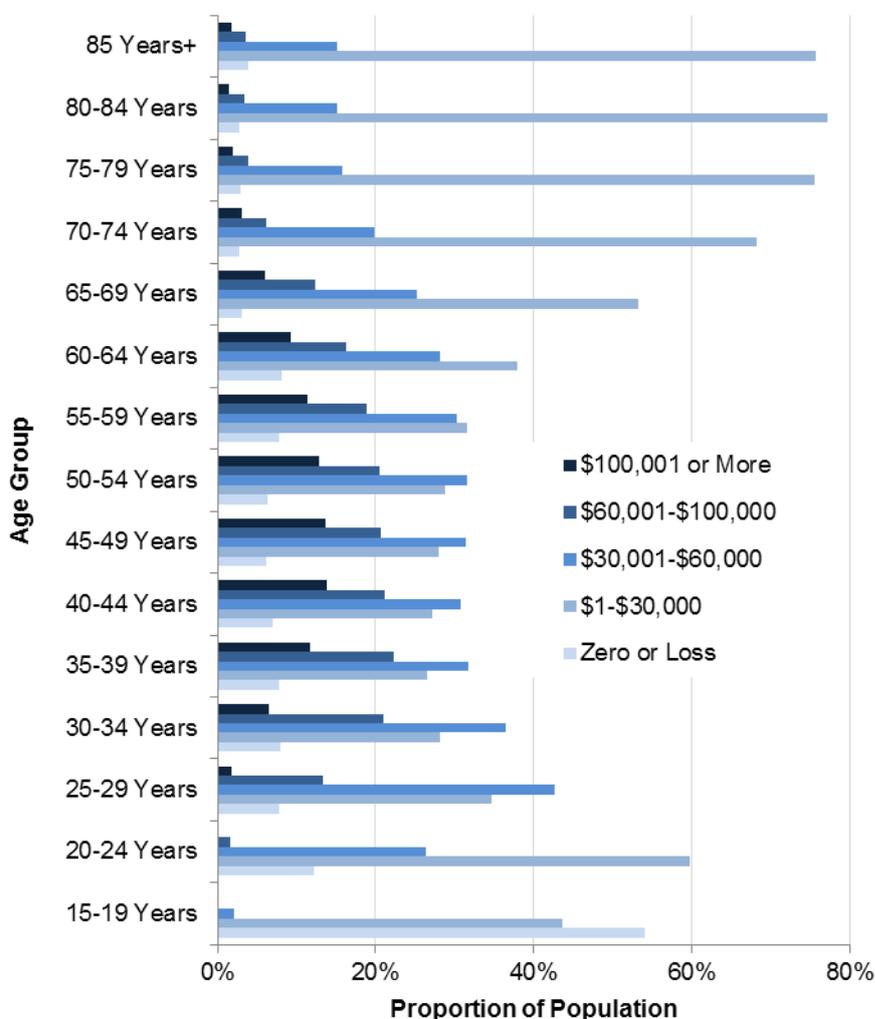
Figure 11: Total Personal Income in Adults by Sex, Auckland Region, Census 2013



Note: Adults include all those aged 15 years and older irrespective of employment status or income source. Income is total personal income from all sources per annum.

In 2013 in the Auckland Region, total income from all sources varied considerably by age (Figure 12). A greater proportion of young people (15-20 year olds) and older people (aged 65 years and older) have a total income in the lower income bands (\leq \$30,000 per annum). A total income in the highest bands ($>$ \$60,000 per annum) occur most frequently for those aged 30 to 64 years old.

Figure 12: Total Personal Income in Adults by Age Group, Auckland Region, Census 2013



Note: Adults include all those aged 15 years and older irrespective of employment status or income source. Income is total personal income from all sources per annum.

In 2013, the median adult income in the Auckland region (\$29,600) was higher than for the rest of New Zealand (\$28,500), though Auckland experienced a smaller increase in median income compared to the rest of New Zealand (Table 18). Note, median income for adults takes into account income from all sources for everyone aged 15 years and over, and includes those with a negative income or no income at all.

In general, the increase in the median income between 2006 and 2013 was greatest in those local boards that already had a higher median income in 2006 (Table 18). In comparison, those local boards with the lowest median income in 2006 had the lowest or no increase in 2013. Local boards that experience a negative median income increase, or where the increase was lower than the average increase across Auckland, were (in ascending order): Mangere-Otahuhu, Manurewa, Waitemata, Upper Harbour, Otara-Papatoetoe, Papakura and Henderson-Massey.

The local boards with lower median incomes compared to the Auckland median are (in ascending order): Great Barrier, Mangere-Otahuhu, Otara-Papatoetoe, Whau, Manurewa, Puketapapa, Henderson-Massey, Waiheke, Papakura and Maungakiekie-Tamaki.

Table 18: Median Income by Local Board, 2006 and 2013 Census

Local Board Area	Median Income 2013 (\$)	Percent Change (%) 2006 to 2013
Waiheke	27,200	16.7
Orakei	42,700	16.7
Great Barrier	19,200	16.4
Puketapapa	25,000	16.3
Devonport-Takapuna	35,300	15.7
Albert-Eden	32,800	15.5
Kaipatiki	31,900	15.2
Franklin	33,500	14.7
Hibiscus and Bays	31,700	12.4
Rodney	30,300	12.2
Waitakere Ranges	33,200	11.0
Whau	24,500	10.9
Howick	30,300	10.2
Maungakiekie-Tamaki	29,000	9.8
Henderson-Massey	26,800	8.1
Papakura	28,000	7.7
Upper Harbour	31,100	5.4
Otara-Papatoetoe	21,100	1.4
Waitemata	34,700	1.2
Manurewa	24,700	0.4
Mangere-Otahuhu	19,700	-1.0
Total Auckland	29,600	10.4
Total New Zealand	28,500	16.8

Inequality matters because most of the important health and social problems of the rich world are more common in unequal societies.

Income inequality is associated with low life expectancy, trust in other people, women's status, and maths and literacy scores at age 15, and with high infant mortality, obesity, teenage pregnancy, homicide and imprisonment.

The Spirit Level, 2009⁶

4.4 Small Area Deprivation (New Zealand Deprivation Index)

Understanding the New Zealand Deprivation Index

The New Zealand Deprivation (NZDep) Index is a national small area measure of deprivation calculated from nine census questions. These questions relate to factors such as income, housing, qualifications, employment, as well as access to transport and communications. These questions are used to assign a deprivation score to small areas (either individual meshblocks or combinations of meshblocks), and these scores are split into 10 approximately even groups called deciles. Those living in decile 1 areas are considered to be living in the least deprived areas of New Zealand, and those living in decile 10 are considered to be living in the most deprived areas of New Zealand.

In understanding and applying NZDep information it is important to note^{7,8}:

NZDep is an area based measure. This means that some people living in a decile 1 (least deprived) area may be living in poverty (e.g. worst house in the best street). This is especially the case for NZDep deciles assigned at a census area unit level, as these are larger areas containing around 3,000-5,000 people in urban areas.

NZDep Index Decile can be reported at meshblock or census area unit level. NZDep deciles are available for both meshblocks and census area units (see Appendix 1 for definitions). The larger the area, the less meaningful the measure may be for an individual person living in the area. While still being an area based measure, meshblock level NZDep is more likely to reflect the deprivation determinants for those living in this area, as it represents an average score for fewer people. Most health data are only available at census area level due to confidentiality concerns.

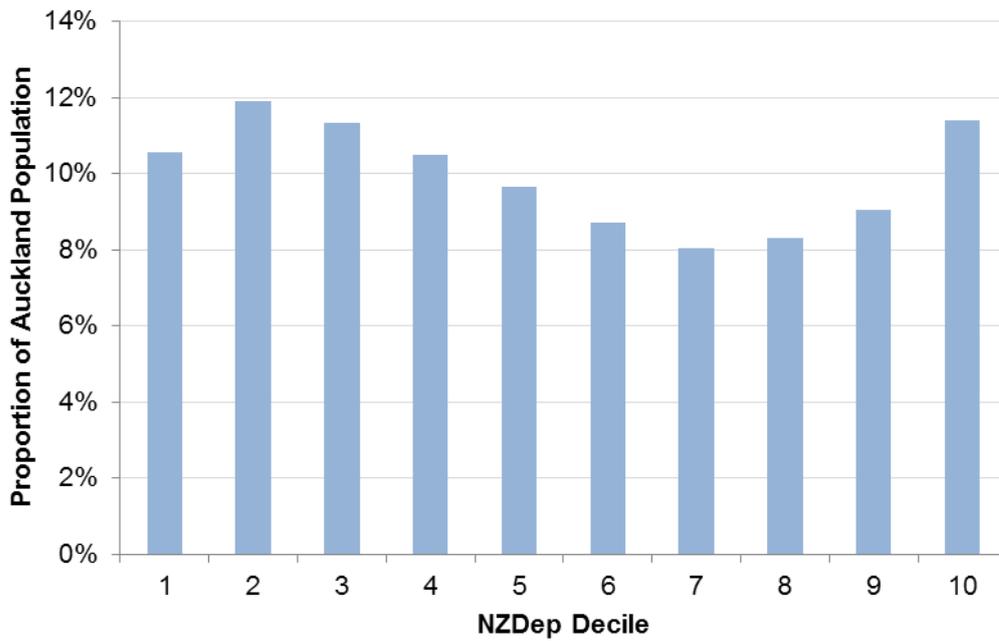
Deciles indicate relative deprivation. By definition, close to 10% of people live in each decile nationally. Any variation from 10% in any NZDep decile for a sub-national population group (e.g. people living in Auckland, children, Māori) represents an unequal distribution of deprivation. However, using a decile system means that 10% will always live in decile 1 and 10% will always live in decile 10 at a national level.

Scores are split into deciles by population size. Small areas are assigned a deprivation score and then ranked from lowest to highest score. These small areas are then split into 10 deciles so that an approximately even number of people live in each decile area. These deprivation scores are not evenly distributed. In reality this means that the difference in absolute area deprivation is much greater between decile 9 and decile 10 areas than between decile 1 and 2 areas.

New Zealand Deprivation Index in the Auckland Region

The Auckland region has a distinctive bimodal NZDep 2013 distribution, with the greatest proportions living in deciles 2 and 10, and the fewest in decile 7 (Figure 13). While 10% of the national population live in decile 10 areas by definition, the regional distribution of the population living in most deprived areas varies. With an increase of nearly 23,000, the Auckland region accounted for 65% of the national growth in the population living in decile 10 areas (the most deprived areas) between 2006 and 2013.

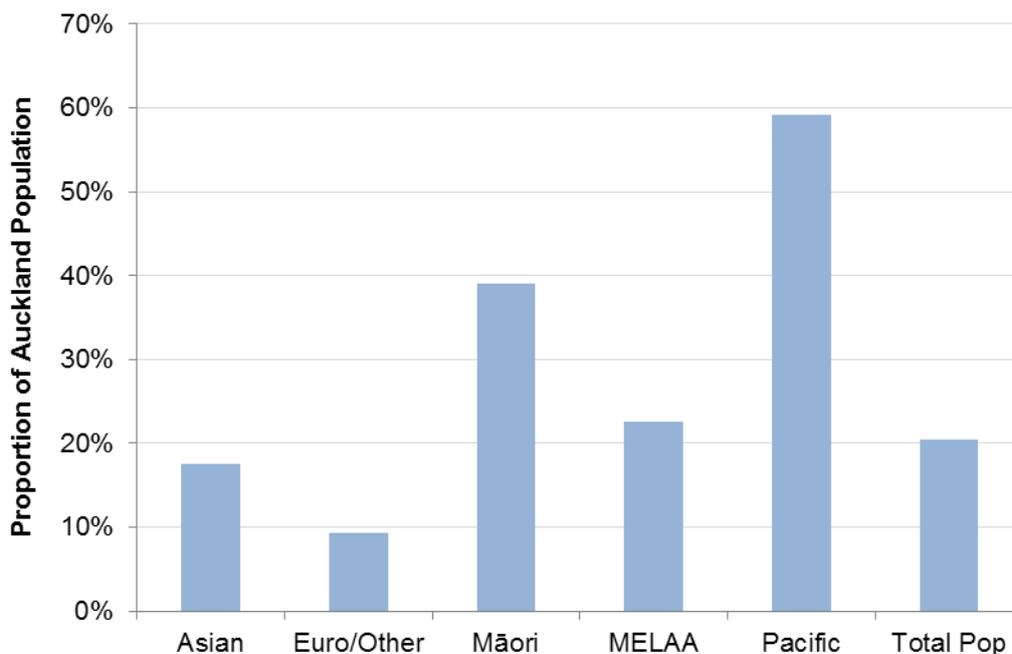
Figure 13 Auckland Region 2013 New Zealand Deprivation Index Distribution (meshblock level)



Note: NZ Deprivation decile reported at meshblock level.

The distribution by ethnic group depicts a markedly uneven distribution (Figure 14). While approximately 20% of the total Auckland population reside in the most deprived areas (deciles 9-10), Māori and people of Pacific ethnicity are overrepresented, indicating an inequitable distribution of the determinants of health. Nearly 60% of Pacific people and 40% of Māori in Auckland live in decile 9 – 10 areas (by meshblock).

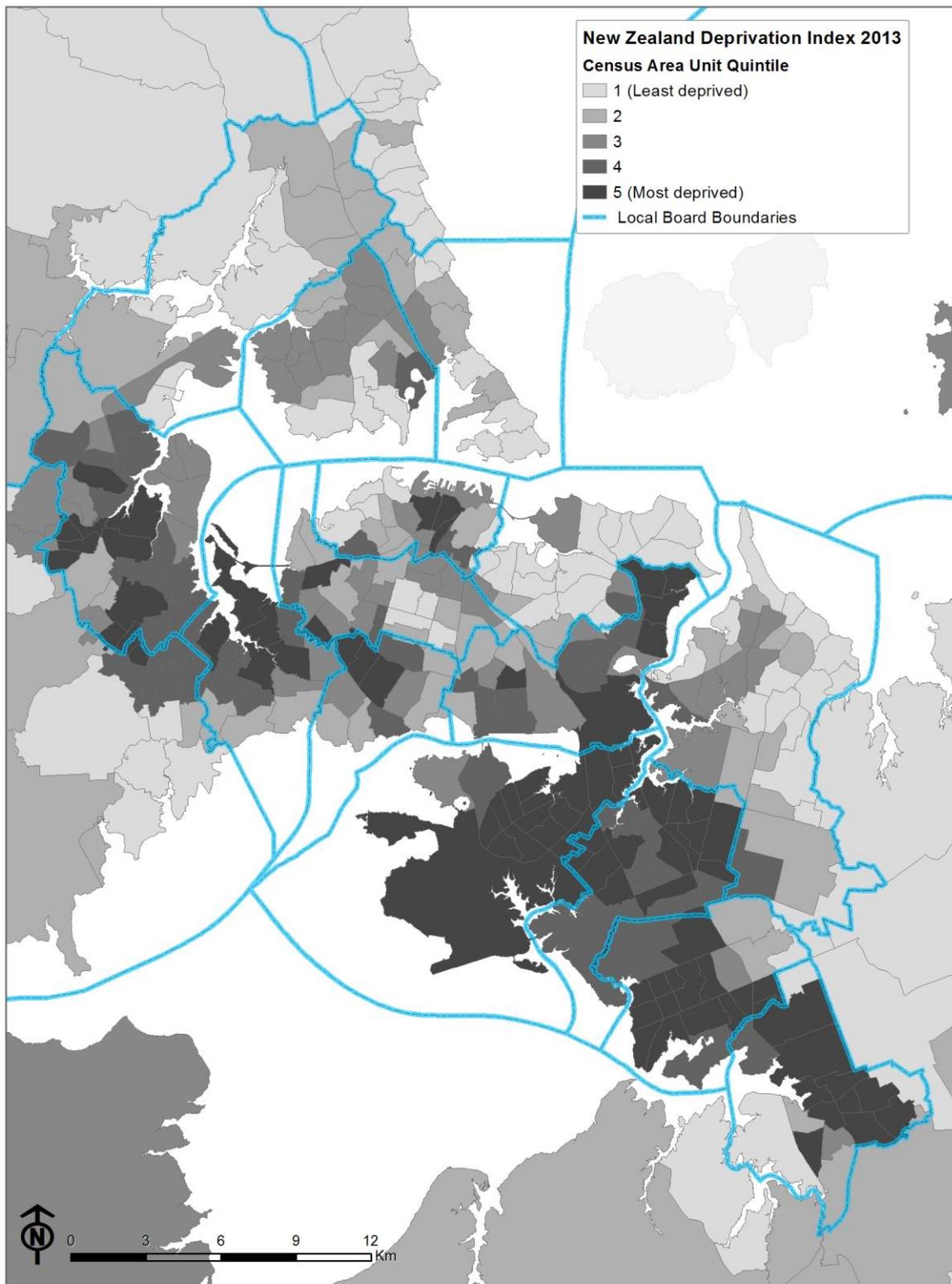
Figure 14: Distribution of New Zealand Deprivation Index 2013 Deciles 9-10 by Ethnic Group Auckland Region, Census 2013



Note: NZ Deprivation decile reported at meshblock level. Ethnicity is Level 1 Total Response. See Appendix 2 for more information.

The distribution of NZ deprivation decile varies across the Auckland Region (Figure 15). When presented as quintiles (deciles split into 5 groups e.g. quintile 1 = decile 1 and 2) at census area unit, there is a north-south and west-east gradient across urban Auckland. With few exceptions, areas of high deprivation are more common in the south and west neighbourhoods of urban Auckland and areas of low deprivation are more common in northern and eastern neighbourhoods.

Figure 15 New Zealand Deprivation Index 2013 Quintiles by Census Area Unit, Auckland, Census 2013



Note: NZ Deprivation decile reported at census area unit level.

4.5 Smoking

The number of regular cigarette smokers continues to decline in New Zealand and the Auckland region. Nationally, there are also 65,000 more people describing themselves as former smokers than in 2006, and there are now 702,000 people who say they have given up smoking.

The human cost of smoking in New Zealanders is extremely high. Smoking killed 171,000 Kiwis in 50 years (between 1950 to 2000).

Today it is estimated that 4,700 people die due to smoking each year.

Cancer Society of New Zealand, 2013⁹

In the Auckland region between 2006 and 2013 there was close to a 25% reduction in the numbers of regular smokers, with a 35% reduction in regular smokers among those aged 15-24 years old (Table 19). In 2013, Auckland had a slightly lower percentage of regular smokers than the New Zealand population as a whole.

Table 19: Regular Cigarette Smokers, 2006 and 2013 Census

Age Group	Auckland		Rest of NZ
	Number	Percent (%) Change 2006 to 2013	Percent (%) Change 2006 to 2013
15-24 years	23,448	-35	-33
Total Population	130,260	-24	-22

4.6 Household and Family Composition

A household is defined as one or more people usually resident in the same dwelling, who share living facilities. A household can contain one or more families, or can contain no families at all.

In 2013, single family households continued to be the most common type of household in Auckland as well as in New Zealand. Approximately 70% of private dwellings both in New Zealand and Auckland were occupied by only one-family in 2013. Since 2006 the number and proportion of multi-family households has increased.

Table 20: Household Composition in the Auckland Region, 2006 and 2013 Census

Household composition	2006		2013	
	Number	Percent (%)	Number	Percent (%)
One-family	297,120	70.3	317,619	69.8
Two-families	18,294	4.3	24,612	5.4
Three or more families	1,683	0.4	2,430	0.5
Other	105,558	25.0	110,121	24.2
Total households stated	434,268	100.0	454,785	100.0

Note: Household composition is with or without other people. All figures are for households in occupied private dwellings and excludes unidentifiable responses.

While Auckland contains approximately one third of the New Zealand population, 52% of two family households, and 68% of three or more family households in New Zealand are located in the Auckland region.

Solo parents are disadvantaged in terms of living standards, poverty, mental and physical health compared to partnered parent.

Ministry of Social Development, 2010

Families in the census are classified into three types, couple without children, couple with child(ren), and one parent with child(ren) within a household. It should be noted that children includes adult children residing within a household.

Between 2006 and 2013 there was little change in the types of families living in Auckland households (Table 21). Nearly one in three families with children in Auckland have only one parent.

Table 21: Family Composition in Auckland, 2006 and 2013 Census

Family type	2006		2013	
	Number	Percent (%)	Number	Percent (%)
Couple without children	117,888	34.8	131,280	35.1
Couple with child(ren)	156,897	46.3	174,081	46.5
One parent with child(ren)	64,146	18.9	68,976	18.4
Total Families	338,928	100.0	374,337	100.0

Note: Family composition is for occupied private dwellings only

Compared to the rest of New Zealand, Auckland has a lower proportion of families comprised of couples without children and a slightly high proportion of one parent with children families (Table 22).

Table 22: Family Composition in Auckland and NZ Excluding Auckland, 2013 Census

Family type	Auckland		NZ Excluding Auckland	
	Number	Percent (%)	Number	Percent (%)
Couple without children	131,280	35.1	334,029	43.8
Couple with child(ren)	174,081	46.5	295,209	38.7
One parent with child(ren)	68,976	18.4	132,828	17.4
Total Families	374,337	100.0	762,060	100.0

Note: Family composition is for occupied private dwellings only

Section 5: Māori People and People of Māori Descent

The census methodology uses two different concepts to count Māori; ethnicity (cultural affiliation) and Māori descent (ancestry). Given that two differing constructs are used, and individuals can consider themselves of Māori descent but not necessarily of Māori ethnicity, the number of responses varies between these groups.

The Māori descent question is used in the census to obtain information related to iwi affiliation. A person had to answer 'Yes' to the question '*Are you descended from a Māori? That is, did you have a Māori birth parent, grandparent or great-grandparent, etc.*' in order for any response to the iwi questions to be included by Statistics New Zealand in iwi counts.

Information for Māori is presented therefore in two sub-sections. The first related to those who identified Māori as one of their ethnic groups – Māori people. A second section provides information on people who indicated on the Census that they are of Māori descent. In New Zealand and Auckland, more people indicated that they were of Māori descent than included Māori as one of their ethnic group responses.

Important Note: The census night usual resident population counts undercounts the number of people in New Zealand. This undercount is not evenly distributed among the population by age and ethnicity. In 2013, the post-census enumeration survey estimates an undercount of 2.4%, or 103,800 people. For Māori the undercount is estimated at 6.1%. In late 2014, Statistics New Zealand will be releasing estimated resident population data that adjust for this undercount.

In the Auckland region (2013):

- One in ten people identified as Māori
- Almost a quarter of all Māori people lived in Auckland
- A lower proportion of people identified as Māori in comparison to the Census 2006
- More people identified as being of Māori descent than of Māori ethnicity
- A slightly lower proportion of people of Māori descent identified with an iwi in comparison to the 2006 Census
- The size of the Māori population aged 65 years and older in Auckland is increasing at a faster rate than seen for older Māori in the rest of New Zealand
- The Māori population had a higher proportion of tamariki in comparison with the total Auckland population
- Ngāpuhi was the largest iwi population within the Auckland region, followed by Ngāti Porou

5.1 Māori People (ethnic group)

Population Size and Change

In the rest of the New Zealand the number of people who identified as Māori increased by 6.1%, whereas in Auckland the population growth for Māori was only 3.8% (Table 23). In addition, the proportion of people living in Auckland who identified Māori as one of their ethnic groups decreased by 0.4%, whereas in the rest of New Zealand there was a 0.4% increase in the proportion of people who identified Māori as one of their ethnic groups.

Only 16.4% of the national growth of people that identified as Māori occurred in Auckland. As a consequence, the proportion of all New Zealand Māori that live in Auckland declined from 2006 to 2013.

Table 23: Māori People in Auckland and New Zealand, 2006 and 2013 Census

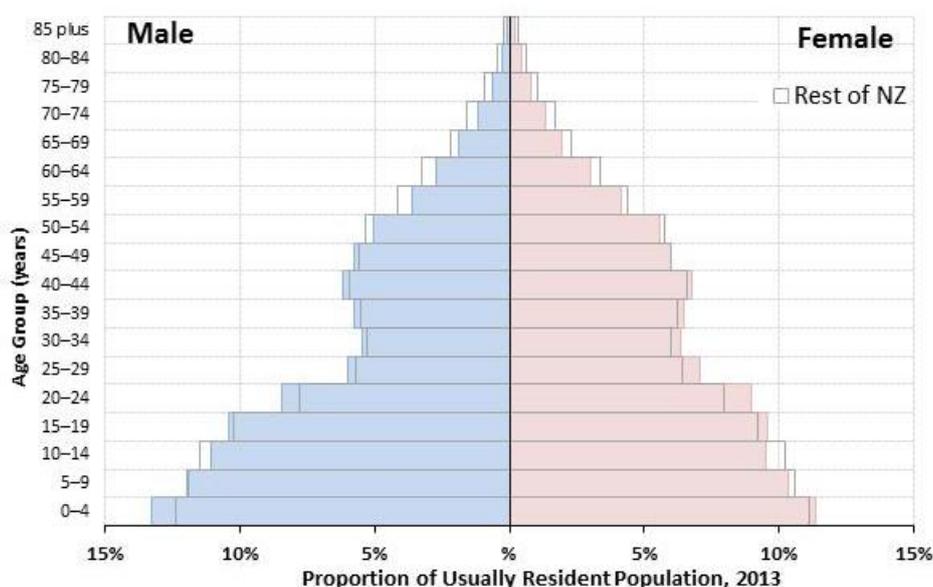
Year	Auckland			NZ Excluding Auckland	
	Number	Percent (%) of Total	Percent (%) of all NZ Māori	Number	Percent (%) of Total
2006	137,304	10.5	24.3	428,025	15.7
2013	142,767	10.1	23.8	455,832	16.1
Change	5,463	3.8	-0.5	27,807	6.1

Note: Ethnicity is Level 1 Total Response. Includes those who identified Māori as one of their ethnic groups.

Population Structure

In comparison to the total regional population (see section 2.4), the Māori population pyramid shows a more triangular age and gender structure. In general, the regional Māori population displays a similar shape to that of Māori in the rest of New Zealand (Figure 16).

Figure 16: Māori Population Pyramids, Auckland and Rest of New Zealand, 2013 Census



Note: Ethnicity is Level 1 Total Response.

In 2013 until the age of 25 years, males made up a greater proportion of the Māori population than females in both Auckland and the rest of New Zealand Māori. This ratio reverses in older Māori. The contraction in the Māori population aged 25 to 39 years in Auckland is likely to be as a result of outward migration e.g. Māori residents temporarily overseas.

In the Auckland Region, the proportion of the Māori population aged 65 years and older is significantly less than that seen for the whole Auckland region population (4.4% vs. 11.5%). However, the size of the Māori population aged 65 years and older in Auckland is increasing at a faster rate (47.2%) than seen for older Māori in the rest of New Zealand (37.3%) between 2006 and 2013.

In the rest of New Zealand, there was modest growth in the Māori population aged less than 15 years (1.8%) however in the Auckland region the size of the Māori tamariki population declined slightly. Nevertheless tamariki Māori (0-14 years) continue to make up around a third of the Māori population.

Table 24: Māori Population Change in Children and Older People, 2006 and 2013 Census

Age Group	Auckland				Rest of NZ
	Population 2013	Population Growth 2006 to 2013	Percent (%) of Population 2013	Percent (%) Change 2006-2013	Percent (%) Change 2006-2013
0-14 years	48,036	-294	33.6	-0.6	1.8
65+ years	6,246	2,004	4.4	47.2	37.3

Distribution of Māori across the Auckland Region

Māori are not evenly distributed across the Auckland region. In 2013, the greatest number of Māori lived in the Manurewa, Henderson-Massey, and Papakura local boards (Table 25). Excluding the island local boards, the fewest Māori lived in Devonport-Takapuna, Puketapapa, and Upper Harbour local boards.

In 2013 the local boards in which the greatest proportion of the population was Māori were Manurewa (25.3%), Papakura (28.1), Great Barrier (18.2%), Henderson-Massey (15.9%) and Mangere-Otahuhu (15.9%). Local boards with the lowest proportion of the population identifying as Māori were Orakei (4.7%), Upper Harbour (5.1%), and Howick (5.2%).

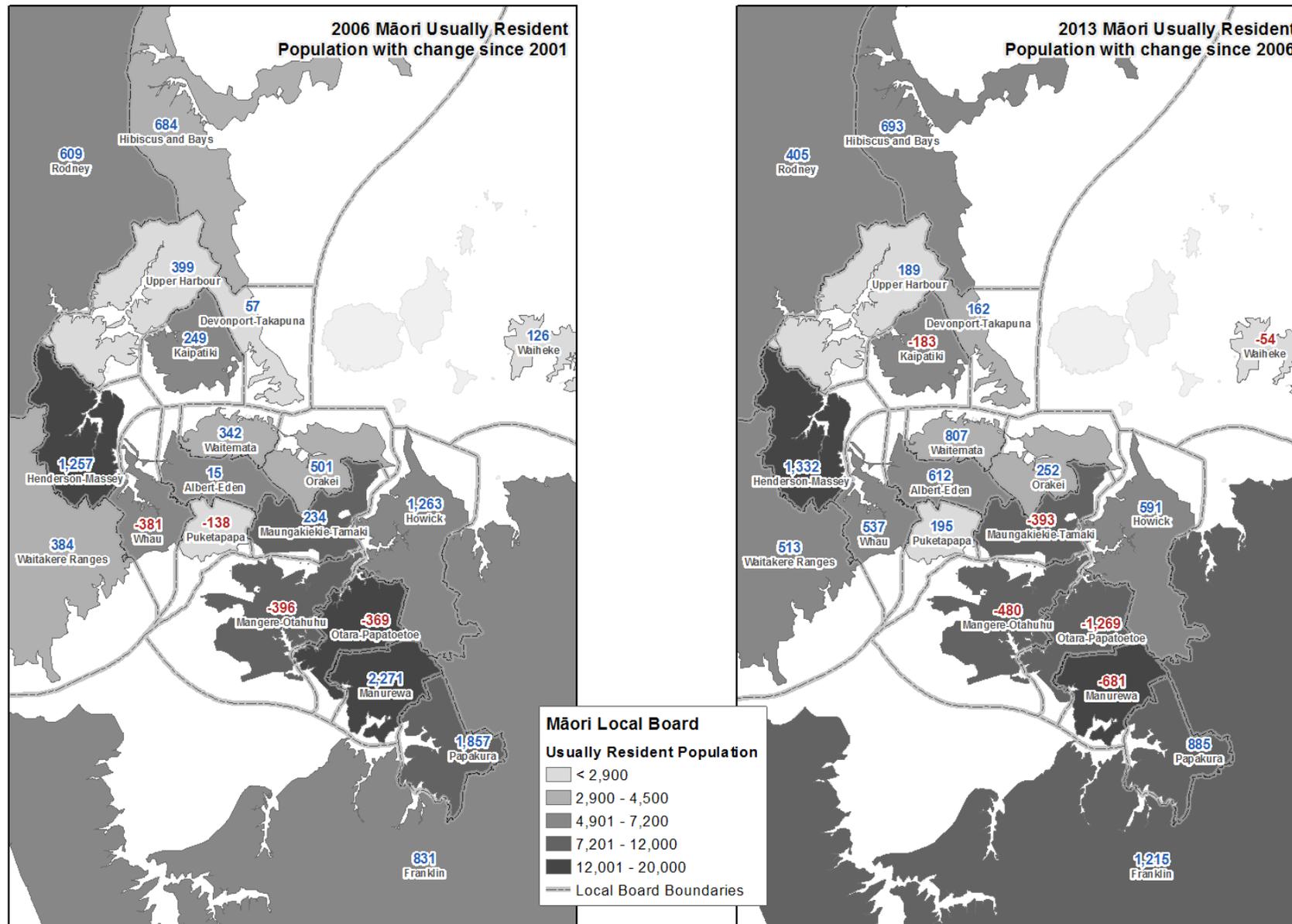
Since 2001, the distribution of Māori across the region has changed. In general there has been a move of Māori in absolute numbers from more central locations to locations further away from central Auckland (Figure 17). In particular the number of Māori of living in Henderson-Massey and Papakura, and Franklin local boards increased at both the 2006 and 2013 censuses, whilst the number of Māori living in Mangere-Otahuhu and Otara Papatoetoe local boards declined at both of the last two censuses. More recently (between 2006 and 2013) the number of Māori living in Kaipatiki, Maungakiekie-Tamaki, and Waiheke local boards declined.

In 2013, the local boards that showed the greatest proportional increase in the number of Māori living in them were Great Barrier (+90%), Waitemata (+18.4%), and Franklin (+14.9%) (Table 25). Whilst in absolute terms, Henderson-Massey and Franklin showed the greatest increase in the number of additional Māori living in the local board in 2013 compared with 2006 (Figure 17).

Table 25: Māori Population by Auckland Local Board, 2006 and 2013 Census

Local Board	Number 2013	Percent (%) of Local Board	Percent (%) of Auckland Māori	Population Growth 2006-2013	Percent (%) Change 2006-2013
Albert-Eden	6,108	6.8	4.3	612	10.0
Devonport-Takapuna	2,847	5.3	2.0	162	5.7
Franklin	8,175	13.2	5.7	1215	14.9
Great Barrier	150	18.2	0.1	135	90.0
Henderson-Massey	16,008	15.9	11.2	1332	8.3
Hibiscus and Bays	5,001	5.8	3.5	693	13.9
Howick	6,324	5.2	4.4	591	9.3
Kaipatiki	6,615	8.5	4.6	-183	-2.8
Mangere-Otahuhu	10,335	15.9	7.2	-480	-4.6
Manurewa	19,131	25.3	13.4	-681	-3.6
Maungakiekie-Tamaki	8,505	13.2	6.0	-393	-4.6
Orakei	3,600	4.7	2.5	252	7.0
Otara-Papatoetoe	10,794	15.6	7.6	-1269	-11.8
Papakura	11,979	28.1	8.4	885	7.4
Puketapapa	2,853	5.7	2.0	195	6.8
Rodney	5,079	9.9	3.6	405	8.0
Upper Harbour	2,610	5.1	1.8	189	7.2
Waiheke	888	11.4	0.6	-54	-6.1
Waitakere Ranges	5,001	11.0	3.5	513	10.3
Waitemata	4,374	6.1	3.1	807	18.4
Whau	6,387	9.4	4.5	537	8.4

Figure 17: Māori Population Change 2001-2013 by Local Board Boundaries Auckland, 2001, 2006 and 2013 Census



5.2 People of Māori Descent

At the 2013 Census, 668,721 people usually resident in New Zealand indicated that they were of Māori descent, 25% of these people (163,920) lived in the Auckland region and comprised 11.6% of the total Auckland region population.

Similarly to the trends seen for people who self-identify as Māori, Auckland had a lower proportion of its population indicating that they were of Māori descent (11.6%) than was reported for the rest of New Zealand (17.9%) in 2013. In addition, growth of the people of Māori descent in the Auckland region between 2006 and 2013 was less than that seen in the rest of New Zealand (Table 26).

Table 26: People of Māori Descent, 2006 and 2013 Census

Region	Number 2013	Percent (%) of Population 2013	Population Growth 2006-2013	Percent (%) Change 2006-2013
Auckland	163,920	11.6	4,092	2.6
NZ Excluding Auckland	504,801	17.9	24,744	3.8

Māori Ethnicity vs. People of Māori Decent

As described in the introduction of this section, census uses two different concepts to count Māori; ethnicity (cultural affiliation) and Māori descent (ancestry). In 2013, there were 21,153 people in the Auckland region who identified themselves as being of Māori descent but did not indicate Māori as one of their ethnic groups.

Table 27: Māori Ethnicity and People of Māori Descent, 2013 Census

Population	Auckland		NZ Excluding Auckland	
	Number	Percent (%) of Population	Number	Percent (%) of Population
Māori Ethnicity	142,767	10.1	455,832	16.1
Māori Descent	163,920	11.6	504,801	17.9
Difference	21,153	1.5	48,969	1.7

Note: Ethnicity is Level 1 Total Response. Māori ethnicity includes those who identified Māori as one of their ethnic groups.

Iwi Affiliation

Statistics New Zealand classifies iwi at two levels. At the highest level iwi rohe are reported in regional groupings (Level 1) whilst Level 2 shows individual iwi responses. People of Māori descent can respond with more than one iwi; as total responses are presented here individual proportions may add up to greater than 100%.

In the Auckland region in 2013, 9.2% of the total population identified an affiliation with at least one iwi compared to 14.4% of the population of the rest of New Zealand (Table 28). For people of Māori descent, around 80% of those residing either in Auckland or the rest of New Zealand identified with at least one iwi in 2013. This proportion remained unchanged from the 2006 Census.

In 2013, there were 34,365 (21.0%) people of Māori descent who either indicated that they did not know their iwi (17.8%) or who declined to respond to the question or provided an

unidentifiable response (3.1%). This remainder of the data presented by iwi rohe and by individual iwi excludes these people.

Table 28: Population of Māori Descent and with an Iwi Affiliation, 2013 Census

Population	Auckland		NZ Excluding Auckland	
	Number	Percent (%) of Population	Number	Percent (%) of Population
Māori Descent	163,920	11.6	504,801	17.9
Identify at least one iwi	129,552	9.2	406,389	14.4

Iwi Rohe (Level 1)

Of the 129,552 people of Māori decent residing in the Auckland region in 2013 who provided at least one iwi response, 62.1% reported affiliation with an iwi from the Te Tai Tokerau/Tāmaki-Makaurau rohe and 19.0% an affiliation with an iwi from the Waikato/Te Rohe Pōtae rohe (15%) (Table 29, Figure 18).

Just over 12,000 people of Māori descent in the Auckland region in 2013 (9.3%) identified an iwi but did not specify their rohe (note some iwi are associated with more than one rohe) or identified a waka or iwi confederation that could not be reliably assigned to a single rohe.

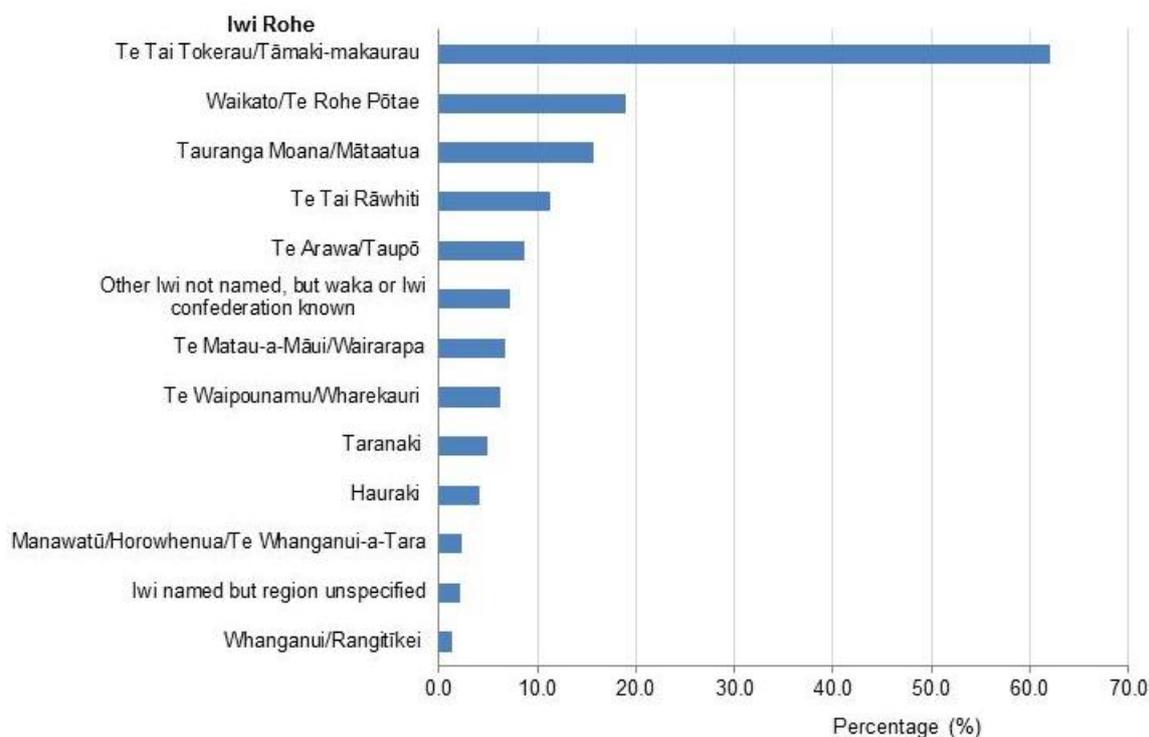
While iwi rohe at level 1 do not represent regional Mana Whenua well, many of the iwi within the Te Tai Tokerau/Tāmaki-Makaurau and Waikato/Te Rohe Pōtae rohe are mana whenua in the Auckland region.

Table 29: Iwi Rohe for Māori Descent with an Iwi Affiliation, Auckland 2013 Census

Iwi Rohe	Region	Number	Percent (%)
Te Tai Tokerau/Tāmaki-makaurau	Northland/Auckland	80,388	62.1
Waikato/Te Rohe Pōtae	Waikato/King Country	24,606	19.0
Tauranga Moana/Mātaatua	Bay of Plenty	20,295	15.7
Te Tai Rāwhiti	East Coast	14,715	11.4
Te Arawa/Taupō	Rotorua/Taupō	11,295	8.7
Te Matau-a-Māui/Wairarapa	Hawke's Bay/Wairarapa	8,781	6.8
Te Waipounamu/Wharekauri	South Island/Chatham Islands	8,172	6.3
Taranaki	Taranaki	6,291	4.9
Hauraki	Coromandel	5,241	4.0
Manawatū/Horowhenua/ Te Whanganui-a-Tara	Manawatū/Horowhenua/ Wellington	3,042	2.3
Whanganui/Rangitīkei	Whanganui/Rangitīkei	1,695	1.3
Other iwi not named, but waka or iwi confederation known	Unknown	9,411	7.3
Iwi named but region unspecified	Unknown	2,700	2.1

Note: Iwi rohe reported as Level 1 Total Response. Excludes 34,365 people of Māori descent who indicated that they did not know their iwi, who did not provide a response, or provided an unidentifiable response.

Figure 18: Iwi Rohe for People of Māori Descent in Auckland, 2013 Census



Note: Iwi rohe reported as Level 1 Total Response. Excludes 34,365 people of Māori descent who indicated that they did not know their iwi, who did not provide a response, or provided an unidentifiable response.

Individual Iwi (Level 2)

For people of Māori descent, 79% of those residing in Auckland identified at least one iwi in 2013. This section describes the individual iwi affiliations for those who did identify an iwi. Note that a person can indicate an affiliation with more than one iwi.

Of the 129,552 people of Māori descent residing in the Auckland region in 2013 who provided at least one iwi response, 39% reported an affiliation to Ngāpuhi, 10.2% to Ngāti Porou, and 10.0% to Waikato (Table 30). This is not surprising, as these are among the largest iwi nationally.

While nearly 25% of people of Māori descent who reported an iwi affiliation at the 2013 census live in the Auckland region, there are some iwi with a greater proportion of their population residing in the Auckland region. Nearly two thirds (62.7%) of those who affiliate to Ngāi Tai (Hauraki), 62% with a Te Kawerau iwi affiliation and 49.7% with a Ngāti Whātua affiliation live in the Auckland region, (Table 31).

Table 30: Twenty Most Common Iwi Affiliations in Auckland, Census 2013

Iwi	Auckland		New Zealand	
	Number	Percent (%) of Auckland	Number	Percent (%) of NZ
Ngāpuhi	50,577	39.0	125,601	23.4
Ngāti Porou	13,161	10.2	71,049	13.3
Waikato	13,011	10.0	40,083	7.5
Ngāti Maniapoto	8,346	6.4	35,358	6.6
Ngāti Whātua	7,353	5.7	14,784	2.8
Te Rarawa	7,224	5.6	16,512	3.1
Ngāi Tahu / Kāi Tahu	6,600	5.1	54,819	10.2
Tūhoe	6,231	4.8	34,887	6.5
Ngāti Tūwharetoa	5,991	4.6	35,874	6.7
Te Arawa	4,677	3.6	19,722	3.7
Tainui	4,431	3.4	11,700	2.2
Te Aupōuri	3,828	3.0	8,697	1.6
Ngāti Awa	3,801	2.9	16,179	3.0
Ngāti Kahu	3,747	2.9	8,580	1.6
Ngāti Kahungunu ki Te Wairoa	2,907	2.2	21,060	3.9
Ngāti Kurī	2,781	2.1	6,492	1.2
Ngaiterangi	2,616	2.0	12,924	2.4
Ngāti Kahungunu, region unspecified	2,499	1.9	18,288	3.4
Whakatōhea	2,382	1.8	12,177	2.3
Te Whānau-a-Apanui	2,370	1.8	12,948	2.4

Note: Iwi rohe reported as Level 1 Total Response. Excludes 34,365 people of Māori descent who indicated that they did not know their iwi, who did not provide a response, or provided an unidentifiable response. New Zealand figures are only provided for the most common iwi for people of Māori descent residing in Auckland.

Table 31: Iwi with a High Proportion of their Population Living in the Auckland Region, 2013 Census

Iwi	Number in Auckland	Number in New Zealand	Percent (%) of total Living in Auckland
Ngāi Tai (Hauraki)	312	498	62.7
Te Kawerau	93	150	62.0
Ngāti Whātua	7353	14784	49.7
Muriwhenua	30	63	47.6
Ngāti Whanaunga	294	624	47.1
Te Aupōuri	3828	8697	44.0
Te Rarawa	7224	16512	43.8
Ngāti Kahu	3747	8580	43.7
Ngāti Kurī	2781	6492	42.8
Ngāti Paoa	1440	3456	41.7
Ngāpuhi	50577	125601	40.3
Tākitimu	18	45	40.0

Note: Iwi rohe reported as Level 1 Total Response.

Appendix 1: Auckland Region Geography

The Auckland Region as relevant to Auckland Regional Public Health Service (ARPHS) is able to be defined in one of two ways. Historically ARPHS was described as covering the three Auckland region District Health Boards (Waitemata, Auckland, and Counties Manukau) which coincided with the extent of the seven Auckland Territorial Authorities.

Since the reforming of the Territorial Authorities and Auckland Regional Council into a Unitary Authority, the southern boundary of the greater Auckland Council has shifted. While ARPHS may still be described as covering the Auckland region DHBs from a historic and contracted services perspective, the legal boundaries coincide with the Auckland Council boundaries as defined in the Health Act 1956. This means that the southernmost part of Counties Manukau is part of the Waikato Public Health Unit (Figure 19), though ARPHS is currently contracted to provide public health services in that area.

Additionally the geographic areas used to describe the Auckland Council region and its sub-regions (Local Boards and Wards) do not always coincide with the basic and common Statistics New Zealand geographic unit, the Area Unit (or Census Area Unit). A consequence of which is the misalignment between the DHBs and Local Boards and Wards. See tables Table 32 -Table 34 for geographic unit breakdown and alignment.

This snapshot report defines the Auckland region as that of the Auckland Council, thereby excluding the southern part of Counties Manukau DHB. This represents a total usually resident population of about 15,670, or around 1% of the region's population. Future reports will have a greater focus on Census Area Units and DHB boundaries and will incorporate this population.

Statistics New Zealand Area Definitions

Meshblock

A meshblock is the smallest geographic unit for which statistical data are collected by Statistics NZ. Meshblocks vary in size from part of a city block to large areas of rural land. Meshblocks aggregate to build larger geographic areas, such as area units, territorial authorities, and regional councils. In 2014, New Zealand had approximately 46,600 meshblocks

Area Unit

Area units are aggregations of meshblocks. They are non-administrative areas that are in between meshblocks and territorial authorities in size. Area units must either define or aggregate to define, regional councils, territorial authorities and urban areas (though not Local Boards or Wards). In 2013, New Zealand had 2,020 area units.

Each area unit must be a single geographic entity with a unique name referring to a geographical feature. Area units of main or secondary urban areas generally coincide with suburbs or parts thereof.

Area units within urban areas normally contain a population of 3,000–5,000, though this can vary due to such things as industrial areas, port areas, and rural areas within the urban area boundaries. In rural areas, the straddling of some territorial authorities over regional boundaries has resulted in a number of area units having only two or three meshblocks and a very low population count.

Urban Area

Urban areas are statistically defined areas with no administrative or legal basis. There is a three-part hierarchical subdivision of urban areas into:

- main urban areas
- secondary urban areas
- minor urban areas.

Together, the populations in main, secondary and minor urban areas comprise the statistically defined 'urban' population of New Zealand. The urban area classification is designed to identify concentrated urban or semi-urban settlements without the distortions of administrative boundaries.

Rural Area

The rural areas of New Zealand are those which are not specifically designated as 'urban'. They include rural centres, and district territories where these are not included in main, secondary or minor urban areas, and inlets, islands, inland waters and oceanic waters that are outside urban areas. While 95% of the Auckland region live in urban areas, over 66,600 people resided in areas classified as rural in 2013.

Geographic Unit Distribution and Alignment

Table 32: Auckland Council region geographies, usually resident population and dwelling counts

Auckland Council	Territorial Authorities	Wards	Local Boards	Meshblocks
Areas	1	13	21	11,541
Average 2013 Population	1,415,550	108,866	67,393	123
Average 2013 Dwellings	506,796	36,406	22,537	41

Table 33: New Zealand (Excluding Auckland) Territorial Authority geographies, usually resident population and dwelling counts

Rest of New Zealand	Territorial Authorities	Wards	Local Boards	Meshblocks
Areas	66	220	116	34,448
Average 2013 Population	42,820	11,646	8,467	82
Average 2013 Dwellings	16,613	4,509	3,320	32

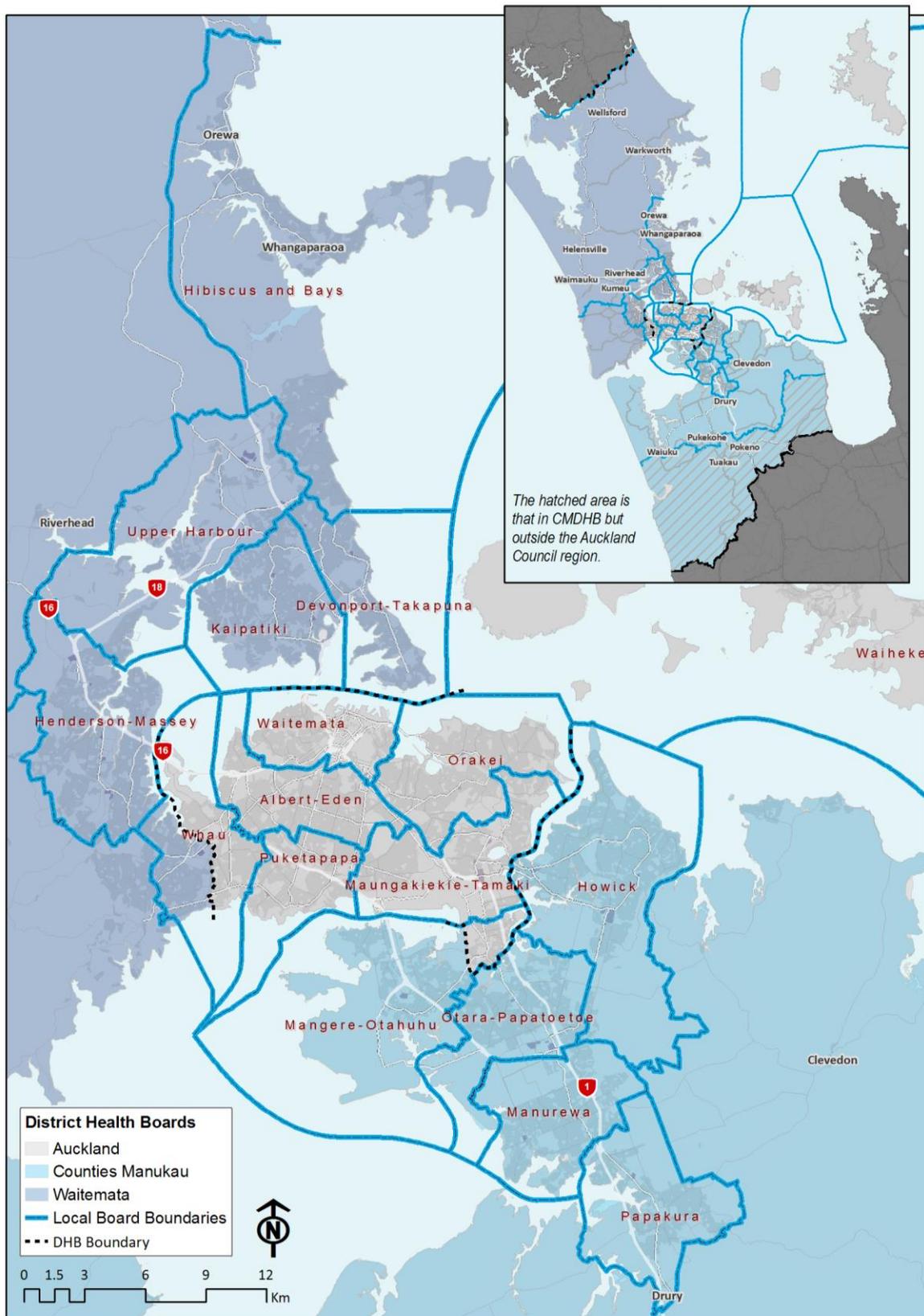
Table 34: Auckland Region District Health Board geographies, usually resident population and dwelling counts

Auckland DHB Region	District Health Boards	Census Area Units	Meshblocks
Areas	3	423	11,722
Average 2013 Population	477,043	3,383	122
Average 2013 Dwellings	159,679	1,132	41

Table 35: New Zealand (Excluding Auckland) District Health Board geographies, usually resident population and dwelling counts

Rest of New Zealand	District Health Boards	Census Area Units	Meshblock
Areas	17	1,474	34,197
Average 2013 Population	156,125	1,907	82
Average 2013 Dwellings	60,594	740	32

Figure 19: Auckland Region by District Health Board and Local Board Boundaries, 2013



Appendix 2: Technical Notes

This section provides a number of definitions and explanations of data presented in this report.

Data Sources

The Census data used in this report have been obtained directly from Statistics New Zealand via three channels (a northern health region custom data request, the [NZ.Stat online table tool](#), and standard tables downloaded from <http://www.stats.govt.nz>). As data provided by Statistics New Zealand is subject to confidentiality suppression rules and base three rounding, figures may vary from other reports.

The 2013 New Zealand Deprivation Index data was obtained from the University of Otago website.

Methodologies

Where possible, data was obtained at the area of interest (e.g. Local Board) rather than reconstructing the data from lower level geographic units. Exceptions to this are the regional distributions by NZDep where meshblocks are used to sum populations.

In calculating proportions within a Census variable the “Total Stated Population” or “Total Population” less “Not Elsewhere Included” has been used as the denominator. This excludes those who refused to answer the question or provided a response not able to be categorised.

As noted in the report ethnicity is given by total response meaning the number of responses exceeds the total population. While this can be problematic when paired with health data, it is appropriate for general public health use (see also Reporting Ethnicity).

Census Populations

Census data are available in a number of formats; those most commonly used are described here. Any census data presented must identify whether it is count or estimated data for appropriate interpretation. This report only presents Census Usually Resident Population Counts as population estimates were not yet available.

Census Usually Resident Population Counts

This is a count of all people who usually live in New Zealand, or in an area of New Zealand, and are present in New Zealand on a given census night. This count:

- *excludes* visitors from overseas
- *excludes* residents who are temporarily overseas on census night.

Residents who are away from their usual address on census night are allocated back to the area where they usually live and form part of the census usually resident population count of that area.

The census night usual resident population counts undercounts the number of people in New Zealand. This undercount is not evenly distributed among the population by age and ethnicity. In 2013, the post-census enumeration survey estimates an undercount of 2.4%, or 103,800 people. For Māori the undercount is estimated at 6.1%. In late 2014, Statistics New Zealand will be releasing estimated resident population data that adjust for this undercount.

Only the fundamental demographic variables of age, sex, and ethnicity are adjusted in this way. All other census variables remain as unadjusted counts (e.g. smoking, household composition, employment).

Estimated resident population

This is an estimate of all people who usually live in New Zealand, or in an area of New Zealand, at a given date. This estimate is based on the census usually resident population count, which excludes visitors from overseas, adjusted to include:

- residents who are temporarily overseas on census night
- residents who are missed or counted more than once by the census (net census undercount)
- births, deaths and net migration (arrivals less departures) of residents during the period between census night and the given date.

The estimated resident population is updated regularly for population changes due to births, deaths and net migration. It gives the best measure of the population that usually lives in an area, for a limited range of variables (age, sex, ethnicity), and limited geographic areas.

Ethnicity

Ethnicity is a key social factor used in describing the New Zealand population. Information collected on ethnicity is used to inform, plan, and evaluate services and policies by a wide range of organisations, local authorities and government agencies.

Ethnicity New Zealand Standard Classification

The Ethnicity New Zealand Standard Classification 2005 classifies ethnicity using a hierarchical classification system with four levels. Level 1 of the classification has six categories and is used solely for output. Level 2 has 21 categories, level 3 has 36 categories and level 4 has 233 categories. Detailed ethnic group information is collected so that responses can be classified to specific ethnic group categories at the most detailed level of the classification, level four. Where this is not possible, information may be classified to less detailed levels, level two or level three. Level one is used solely for reporting purposes and has six categories: European, Māori, Pacific Peoples, Asian, Middle Eastern/Latin American/African (MELAA) and Other Ethnicity.

The statistical standard for ethnicity was developed to ensure that ethnicity is collected consistently for all surveys and administrative collections. Data from a large number of collections is combined with other sources, such as the population census, to produce official measures in a range of areas such as education, health, employment and unemployment, income, housing and crime. Unless consistent ethnicity data is available, valid and reliable measures cannot be produced. Lack of consistency across different collections means data may not be comparable.

From this statistical standard, the Ministry of Health developed Ethnicity Data Protocols for the Health and Disability Sector.¹⁰ These provide clear guidelines for collecting, classifying, and reporting ethnicity data in health settings.

Reporting Ethnicity

There are difference methods for reporting ethnicity data. In this report total response reporting is used.

Total response: People who self-identified with more than one ethnic group are counted once in each group reported. Total response shows the counts of all responses given for each ethnic group. Therefore the total number of responses for all ethnic groups can be greater than the total number of people who stated their ethnicities. Total response is the preferable measure in public health, where being inclusive and allowing self-determination

are key principles (an example would be identifying communities with the highest number of Pacific people for engagement or intervention).

Prioritised Ethnicity: In this method, each respondent is allocated to a single ethnic group using the priority system (in which the priority order is: Māori, Pacific Peoples, Asian, MELAA, other groups except European, and finally European). Each individual appears only once. The aim of this method is to ensure that ethnic groups which are small and important for policy development are not diluted by the NZ European ethnic group. It also allows statistical comparison of groups that are mutually exclusive. Prioritised ethnicity has some important drawbacks which have resulted in it being removed by SNZ as standard measure (it is primarily used by DHBs via custom requests). The key concerns in the use of prioritised ethnicity are that it

- undermines the self-identification construct that is central to defining ethnicity
- undercounts of lower priority ethnic populations where multiple ethnic responses are given (Pacific peoples are particularly effected as 24,000 are lost in the Auckland region alone)
- masks relationships between ethnic groups to achieve the appearance of being mutually exclusive

Single and combination ethnicity: People are counted just once according to the ethnic group or combination of ethnic groups they have reported. A person reporting just one ethnic group is counted once in the relevant 'only' group (e.g. Māori Only). People reporting two or more ethnic groups are counted once in the relevant 'combination' group (e.g. Māori/European). This means that the total number of responses equals the total number of people who stated their ethnicity.

New Zealander Ethnicity

In the 2013 Census 'New Zealander' continued to be manually entered by respondents as the ethnicity. As with the 2006 Census 'New Zealander' is classified under 'Other Ethnicity'¹. However in 2013, 85% fewer people entered this response than at the 2006 Census². This shift largely reversed both the increase in 'New Zealander' and decline in 'European' responses between the 2001 and 2006 censuses.

Based on comparisons of the 2001, 2006, and 2013 censuses by Statistics New Zealand, it is highly likely that large majority of 2006 'New Zealander' respondents identified as 'European' in 2001 and 2013.

In Auckland, 'New Zealander' made up 95% of the total level 1 'Other' grouping (15,639), and nationally 86% of 'New Zealander' respondents only identified one ethnic group. Therefore, in order to maintain time series continuity, European has been grouped with Other in this report. The result of this is a slight overestimate in the combined European/Other grouping population (less than 1%).

Ethnic diversity

Neighbourhood ethnic diversity is a measure of ethnic mixing of the level 1 ethnic groups at the Census Area Unit level. A score is the ratio of the sum of differences between groups over the total Census Area Unit population. A score of 100 would indicate identically sized populations from each of the groups.

¹ Consists of New Zealander and a number of very small ethnic groups and excludes residual categories (don't know, refused to answer, response unidentifiable, response outside scope and not stated)

² The number of respondents identifying as New Zealander in 2006 was due to high profile media campaign prior to the Census. In 2001 the number of respondents identifying as New Zealander was negligible.

New Zealand Deprivation Index

The New Zealand Deprivation (NZDep) Index is a national small area measure of deprivation calculated from nine census questions. These questions relate to factors such as income, housing, qualifications, employment, as well as access to transport and communications. These questions are used to assign a deprivation score to small areas (either individual meshblocks or combinations of meshblocks), and these scores are split in to 10 approximately even groups called deciles. Those living in decile 1 areas are considered to be living in the least deprived areas of New Zealand, and those living in decile 10 are considered to be living in the most deprived areas of New Zealand.

See section 4.4 for important interpretation information.

Census and Official Statistics Resources

Statistics New Zealand have a number of online resources on their website at www.stats.govt.nz.

2013 Census QuickStats about a Place

2013 Census QuickStats about a place give you an overview of New Zealand's communities. Get information on topics such as age and sex, cultural diversity, qualifications, income, and housing.

Data is available for New Zealand, regional council areas, territorial authority areas, Auckland local board areas, and census area units.

<http://www.stats.govt.nz/Census/2013-census/profile-and-summary-reports/quickstats-about-a-place.aspx>

2013 Census Map

Similar information to that available in the *2013 Census QuickStats* is available on an interactive map.

<http://www.stats.govt.nz/StatsMaps/Home/Maps/2013-census-quickstats-about-a-place-map.aspx>

NZ.Stat Get data on demand

NZ.Stat lets you view and download the information you want from large datasets. You can select variables and customise your table layout, then download the table in selected formats including Excel tables.

An instructional video and user guide is available on the website to help get you started. The Statistics NZ information Centre provides assistance by email or free phone 0508 525 525

<http://nzdotstat.stats.govt.nz/wbos/Index.aspx>

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