

# *quality of life*<sup>'07</sup>

IN TWELVE OF NEW ZEALAND'S CITIES



[www.qualityoflifeproject.govt.nz](http://www.qualityoflifeproject.govt.nz)

## The twelve cities

Almost 56% of the total population of New Zealand resides in the cities of Rodney, North Shore, Waitakere, Auckland, Manukau, Hamilton, Tauranga, Porirua, Hutt, Wellington, Christchurch, Dunedin. This report uses 68 indicators to identify points for action aimed at ensuring sustainable development and quality of life in those cities.



**Rodney**  
Population: 89,562



**North Shore**  
Population: 205,614



**Waitakere**  
Population: 186,444



**Auckland**  
Population: 404,655



**Manukau**  
Population: 328,980



**Hamilton**  
Population: 129,255



**Tauranga**  
Population: 103,629



**Porirua**  
Population: 48,537



**Hutt**  
Population: 97,710



**Wellington**  
Population: 179,466



**Christchurch**  
Population: 348,435



**Dunedin**  
Population: 118,686



## A word from the mayors

Quality of life has a major influence on where people choose to live and what gives them a sense of pride in their city.

City life is appealing because of its diversity. Great cities offer access to a wide range of cultural experiences, job opportunities and things to see and do. An increasing challenge for us all is to sustain and develop the cities we have created, in order to provide people the quality of life they desire. Ensuring that the qualities that make our cities unique are protected and enhanced – now and in the future – is a very important part of this.

It is essential that infrastructure and services support the continued population growth that our cities are experiencing. As more people arrive from around the world and from other New Zealand cities, there will be increasing social and cultural diversity. It is important that we not only help communities respond to this change, but also help migrants to overcome barriers so they have more opportunities to fully participate in community life.

Results across the domains in this report show that urban New Zealand is essentially a great place to live, work and play. However, we also need to acknowledge that not everyone experiences all of the positive aspects of our cities and the gap between those with a better or poorer quality of life is widening in some instances.

The 2007 Quality of Life report presents a picture of life in metropolitan New Zealand and allows us to identify what is

going well and where improvements are required. This enables us to evaluate our own planning, policies and decision making and to advocate, where appropriate, to central government, non-governmental agencies and the private sector to address the identified needs. A better quality of life for all city residents will come about only if we work toward common outcomes in partnership with each other, central government and our communities.

This is the third Quality of Life report which follows the five yearly census. It is clear from the increased number of cities participating in this report that quality of life is a priority commitment for metropolitan councils. To assist local authorities with monitoring their community outcomes the indicators in the report have been structured around the social/cultural, economic and environmental wellbeing areas identified in the Local Government Act (2002).

The Metropolitan Mayors would like to thank the Project Sponsor (Jim Harland), Project Manager (Kath Jamieson) and the Quality of Life research team for their hard work in bringing this third report together. The Quality of Project continues to fill a pivotal gap in our knowledge and understanding of how life is experienced in our 12 cities. The information gathered as part of this project better enables decision makers to identify and address issues in their communities and this in turn helps us to continually improve our residents' quality of life.



Andrew Williams  
Mayor of North Shore



Bob Harvey  
Mayor of Waitakere



John Banks  
Mayor of Auckland



Len Brown  
Mayor of Manukau



Bob Simcock  
Mayor of Hamilton



Kerry Prendergast  
Mayor of Wellington



Bob Parker  
Mayor of Christchurch



Peter Chin  
Mayor of Dunedin



Stuart Crosby  
Mayor of Tauranga



Jenny Brash  
Mayor of Porirua



Penny Webster  
Mayor of Rodney



David Ogden  
Mayor of Hutt

## Acknowledgements

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The Quality of Life Project has achieved success over the last decade because of the commitment of many people in the 12 participating councils to a belief in the benefits of collaboration to achieve better wellbeing outcomes for their cities. The project is only ever as strong as these working relationships.

The Quality of Life Project research team deserves special mention. Team members have over the last year put a huge effort into the preparation of the 2007 report. I especially want to thank the dedicated team of writers who prepared the chapters. The people mentioned below have spent many hours making sense of large volumes of data and have worked to very tight deadlines:

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contractors working on behalf of Auckland City Council

Pippa Berry-Cope, Hamilton City Council

Gavin Armstrong, Wellington City Council

David Hay and Tu Van Nguyen, Manukau City Council

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Regan Solomon, Waitakere City Council

Alex Woodley, Point Research

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I also want to thank staff in the three councils of Rodney, Porirua and Hutt for their continued support in the development of the 2007 report and their ongoing commitment to the objectives of the Quality of Life Project.

Alex Woodley, our data coordinator, has once again done a superb job to collect and organise data from a wide variety of sources. Alex and her team at Point Research Ltd have helped to edit the report and pull it together. They have also checked our data for accuracy and have worked tirelessly behind the scenes to ensure we have access to the best available information.

Thanks also to the wide range of data providers who have contributed information for the report, including government departments, councils and other agencies. We recognise our information demands have at times been huge and your willingness to help where you can is genuinely appreciated.

We are also grateful to the input of many people who gave feedback on and peer reviewed chapter drafts. Your expert advice has improved significantly the quality of the final report. A list of people and organisations consulted is included at the end of this report.

Finally, I want to thank the Metropolitan Sector Group Chief Executives Forum for their continued support. I especially want to thank Jim Harland, our Project Sponsor, for his unwavering commitment to the work and outcomes of the Quality of Life Project and his belief in the research team. Jim and his colleagues have always appreciated the value of collaboration and are committed to making resources available to the project. This support is critical to ensuring the success of a project of this nature.

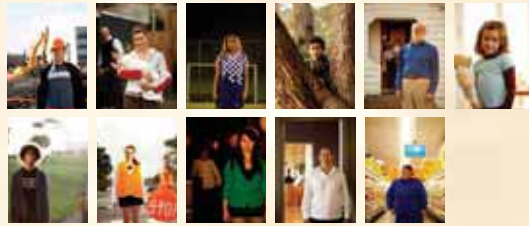


Kath Jamieson, Principal Research Adviser,  
Christchurch City Council  
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## Executive summary

### Overview

The Quality of Life report provides a comprehensive assessment of quality of life in 12 New Zealand cities.

The purpose of the report is to provide information that contributes to the understanding of social, economic and environmental conditions which can be used to describe and quantify the quality of life of those living in New Zealand's major urban areas.

The 12 territorial local authorities covered in this report are:

- Rodney
- North Shore
- Waitakere
- Auckland
- Manukau
- Christchurch
- Tauranga
- Hamilton
- Porirua
- Hutt
- Wellington
- Dunedin

These local authorities are either urban in nature or are facing high growth on the fringe of urban areas.



### Background

This is the third report on the quality of life in our cities. These reports are part of the Quality of Life Project, a multi-council initiative that emerged in response to the growing pressure on urban communities, concern about the impact of urbanisation and the effects on the wellbeing of urban residents. It started with six councils in 1999 and has since expanded to include 12 territorial local authorities.

The key purpose of the Project is to:

- Provide information to decision-makers to improve the quality of life in major New Zealand urban areas.

Objectives of the Project include:

- Consistency of indicator use and monitoring methods among participating cities
- Provision of data to support advocacy on urban issues
- Raising the profile of urban issues within central government
- Collaborative working of bigger cities to monitor and address quality of life issues.

Monitoring across the cities enables participating councils to develop a consistent set of indicators, identify urban issues and trends, and provide a platform to develop comprehensive responses to these.

The indicators and measures selected for monitoring are related to outcomes that are identified as being essential to maintaining and improving quality of life in our cities. These indicators and measures have been structured around the social/cultural, economic, environmental wellbeing areas identified in the Local Government Act and organised under 11 'domains' or areas of people's lives. These are: people; knowledge and skills; health; safety; housing; social connectedness; civil and political rights; economic standard of living; economic development; the natural environment; and the built environment.

Under the Local Government Act (2002), local authorities are required to work with their communities to identify their desired outcomes. Councils then develop plans or initiatives to achieve the outcomes and monitor progress towards meeting them. Many of the councils' community outcomes match the domains used in this report.

## Indicators and measures

The report includes 68 key quality of life indicators (encompassing 186 individual measures) across 11 domain areas.

The data for these indicators and measures has been drawn from two main sources:

- Quality of Life surveys: these biennial surveys are conducted in partnership with the Ministry of Social Development and measure resident perceptions of health and wellbeing, their community, crime and safety, education and work, the environment, culture and identity
- Secondary data sources (e.g. from government agencies and non-governmental organisations).

While considerable data exists, there are still gaps, particularly in the areas of cultural wellbeing and the natural environment. In addition, data is not always available at city or regional level or in key wellbeing areas.



## Summary of key results

Most residents in the 12 cities enjoy a high standard of living and rate their quality of life positively. The quality of life is improving with increases in life expectancy, median and household income and improvements in safety.

Notable findings include:

- The vast majority of residents in New Zealand and in the 12 cities say they have a positive overall quality of life
- Life expectancy has increased across all 12 cities
- Our cities are growing in population. Over the next 20 years, the majority of New Zealand's total population growth is projected to take place in the 12 cities. At present, our cities account for more than half of New Zealand's population and have grown at a faster rate than the national average
- The pace of growth in our cities is placing considerable pressure on the environment, infrastructure and social fabric of our cities
- Some cities are facing environmental issues such as traffic congestion, poor air quality, poor beach and stream quality, the management of waste and protecting the cities' biodiversity
- Residents in our cities are more likely to rate issues associated with urban life, such as graffiti, vandalism, litter and noise, as concerns than those residing in the rest of New Zealand
- Our cities are not just growing in population, they are becoming increasingly culturally diverse
- Most of our residents have a sense of connection with others, although some city residents experience social isolation
- There are continuing and, in some cases, increasing disparities between groups of people in our cities
- The burden of socioeconomic disadvantage is borne largely by Maori and Pacific Islands people, teenage mothers and sole parent families
- Home ownership in our cities has been declining, but is still the dominant form of tenure. Maori and Pacific Islands people are least likely to own their own homes
- During the past five years, all 12 cities have experienced growing levels of estimated Gross Domestic Product, low unemployment levels and an overall increase in inflation adjusted earnings. During the same period the total mortgage debt across the country has grown by \$59.8 billion
- Over half of the nation's wealth is owned by just 10.0% of the population. Conversely, more than half the population owns only 5.0% of the nation's total net worth
- There has been a decline in the rate of total recorded crime and recorded burglary, car and drugs and anti-social offences over the period 2002/2003 to 2005/2006



## Executive summary continued

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- Attendance in early childhood education is increasing, and those in our cities are comparatively well qualified. However, there has been an increase in the truancy rate and numbers of students receiving early leaving exemptions
- All residents in the 12 cities have access to kerbside recycling, and energy efficiency projects are underway in most of the cities. Air and water pollution was perceived as a concern in some cities
- More than half of the residents in most of the 12 cities consider their public transport as affordable, safe and convenient. However, the majority of residents use a motor vehicle to get to work
- Only one third of residents in our cities believe that they have an understanding of how their council makes decisions, although more than half believe the public has some influence on those decisions
- The pace at which changes in our cities have occurred since the last Quality of Life report in 2003 highlights the importance of regular and ongoing monitoring.

### Points for action

To maintain and improve quality of life in our cities, coordinated and focused action is required to:

- Plan for long-term growth in our cities
- Work with central government to facilitate affordable housing options
- Promote economic sustainability and plan for an inclusive, innovative economy that reduces poverty, deprivation, disparities and the effects of these on city residents
- Work to minimise the social and physical issues associated with living in urban environments such as noise, graffiti, air quality and beach and stream water quality
- Improve access to key services, in particular General Practitioners, in the 12 cities and the rest of New Zealand
- Focus on making sure people feel safe in their city centres, particularly at night
- Promote actions that enhance and sustain the environment, such as increasing the use of alternatives to private motor vehicles
- Improve the wellbeing and safety of our cities' children
- Address the significant over-representation of Maori and Pacific Islands students in school suspensions, stand-downs and exclusions
- Work to raise public awareness of how councils make decisions and how people can be involved in decision-making
- Continue to monitor progress towards achieving the quality of life outcomes for our 12 cities.



# Introduction

## Overview

The Quality of Life report monitors the wellbeing of urban residents. It aims to provide a comprehensive picture of the quality of life in New Zealand cities.

Although New Zealand has a small population, it is one of the most highly urbanised countries in the world.<sup>1</sup> The number of people living in our cities is increasing and is projected to grow even more. There are both benefits and challenges associated with this growth.

The purpose of the report is to provide information that contributes to our understanding of the social, economic and environmental conditions in New Zealand's major urban areas. This information can then be used to advocate for the protection and promotion of quality of life and to help manage the pressures of growth.

The 12 territorial local authorities covered in this report are:

- Rodney
- Waitakere
- Manukau
- Tauranga
- Hutt
- Christchurch
- North Shore
- Auckland
- Hamilton
- Porirua
- Wellington
- Dunedin

These local authorities are either urban in nature or are facing high growth on the fringe of urban areas.

## Background

The Quality of Life reports are sponsored by the Chief Executives of councils in the Metropolitan Sector Group, which advocates for local government interests on urban issues of national significance.<sup>2</sup>

The first report on quality of life in large cities of New Zealand was published in March 2001 (see [www.qualityoflifeproject.govt.nz](http://www.qualityoflifeproject.govt.nz)). A second report was released in 2003, following the release of the results from the 2001 Census. This is the third report in the series following the 2006 Census.

### The Quality of Life Project

The Quality of Life Project, a multi-council initiative, emerged in response to the growing pressures on urban communities, concern about the impact of urbanisation and the effects of this on the wellbeing of urban residents.

The project started with six city councils in 1999 and expanded to eight councils in 2003. There are now 12 local authorities involved and this project is ongoing as quality of life remains a key urban issue. This report has been prepared to assess the current situation and to identify future issues.

The Quality of Life Project comprises three key phases:

#### 1. Monitoring conditions

The indicators and measures that are selected for monitoring are related to outcomes that can maintain and improve quality of life in our cities and that our cities are trying to achieve. These indicators are designed to:

- Quantify and monitor changing social, economic and environmental conditions
- Measure progress in domain areas.

These indicators and measures are organised under 11 'domains' or areas of people's lives: people; knowledge and skills; health; safety; housing; social connectedness; civil and political rights; economic standard of living; economic development; the natural environment; and the built environment.

#### 2. Reporting on findings

The data is analysed to identify issues, highlight any emerging trends and show how different groups within our cities are faring. The aim of the report is to identify issues common to the 12 cities and between the 12 cities and the rest of New Zealand.

#### 3. Advocating for improvement

This stage includes identifying policy responses (for central and local government) to address issues identified in the report and advocating for change where necessary.

#### The Quality of Life Project components

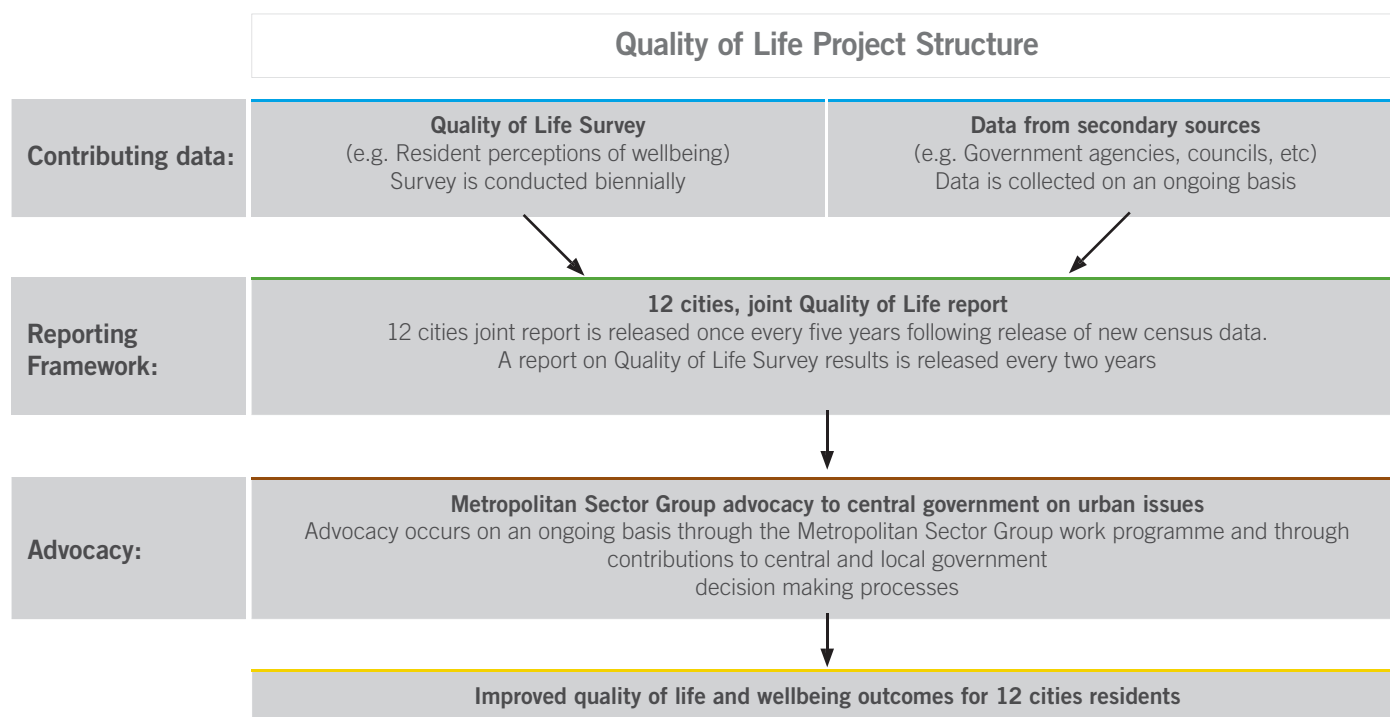
The Quality of Life Project's main output is a 12 cities, joint Quality of Life report which is released once every five years following the release of new census data. Two main information sources contribute to the Quality of Life Project and to the production of the joint report: the biennial Quality of Life Survey (resident perceptions of wellbeing) and the ongoing collection of data from secondary sources (e.g. government agencies).

The information contained in the Quality of Life report, along with the ongoing data collection between reporting periods, feeds into the Metropolitan Sector Group's advocacy on urban issues to central government. The Quality of Life Project is aligned to outcome monitoring work carried out by central government and to community outcomes progress monitoring by local councils.

<sup>1</sup> Ministry for the Environment. (2007). *Urban issues: Our urban environment*. [www.mfe.govt.nz/issues/urban/](http://www.mfe.govt.nz/issues/urban/) Retrieved 6 August 2007.

<sup>2</sup> The only city in the Metropolitan Sector Group that is not part of the Quality of Life Project is Upper Hutt.

## Introduction continued



### Monitoring reports

In recent years the range of monitoring reports has increased, providing a reasonably comprehensive view of social/cultural, economic and environmental conditions in New Zealand. Councils now report local level data relating to community outcomes. The ministries of Social Development, Economic Development, Environment, Te Puni Kokiri (Maori Development) and Pacific Island Affairs publish an in-depth view of specific conditions, often at a sub-national level.

New Zealand does not have a national urban strategy or a government department responsible for urban issues. The Quality of Life Project and the report, in part, contribute to filling that gap.

### Since the 2003 report

Some significant events have taken place since the Quality of Life report in 2003. These include work on issues raised in prior reports, availability of data and another census.

#### Progress on issues

Following issues raised in the 2003 Quality of Life report, the Metropolitan Sector Group identified five priority areas to focus on. These were transport, economic development, safer communities and community wellbeing, waste management and settlement support. Specific projects to emerge from these priority areas included the establishment of a web-based resource for economic development practitioners, the Auckland Mayoral Transport Funding Project and advocacy around safety indicators and increased frontline police.

As time has progressed and each council tackles community issues through their Long Term Council Community Plans (LTCCPs), the Metropolitan Sector Group has turned its attention to topical issues that are common across their organisations. This has included affordable housing, urban development, the 2011 Rugby World Cup, local government funding, recruitment and retention of staff, leaky buildings and a continuing focus on safer communities.

#### 2006 Census

The census is the official count of population and dwellings in New Zealand. It provides a snapshot of our society at a point in time. The New Zealand census is taken every five years. New Zealand's 2006 Census of Population and Dwellings was held on 7 March 2006. The data from the 2006 Census is one of the core datasets used in this report.

### Centralisation and standardisation of indicators

Since the last report the availability of some datasets has improved.

Under the Local Government Act (2002) local authorities are required to work with their communities to identify the outcomes that communities have deemed important. The Act requires local authorities to monitor, measure and report progress against these community outcomes every three years. Councils need to obtain a wide range of data from many different sources for monitoring purposes.

Statistics New Zealand has undertaken an audit of subnational information held by government agencies and worked with local authorities, government departments and groups, including the Quality of Life research team, to develop a nucleus of measures and indicators that local authorities can access. Many of these align with those selected by the Quality of Life Project.

## Quality of life report 2007

### Structure of the report

The report is divided into three sections.

#### 1. People

The first section, People, provides information about the size and composition of the cities' populations. It provides the context for the rest of the report.

2. The second section comprises the core of the report and is organised into the ten remaining domains and structured around the social/cultural, economic and environmental wellbeing areas identified in the Local Government Act (2002).

#### • Social/Cultural Wellbeing

The chapter on Knowledge and Skills focuses on participation and attainment in education, access to training and educational disparities. The far-reaching impact of urban issues on residents' physical and mental health and sense of wellbeing is then addressed in the Health chapter.

Social/Cultural Wellbeing						
People	Knowledge and skills	Health	Safety	Housing	Social connectedness	Civil and political rights
Population growth	Participation in early childhood education	Life expectancy	Perceptions of safety	Housing tenure	Overall quality of life	Te Tiriti o Waitangi/ Treaty of Waitangi
Ethnicity	School participation	Low birth weight babies	Child safety	Housing costs and affordability	Diversity and identity	Community involvement in council decision making
Age	Qualification levels	Infant mortality	Injuries	Household crowding	Community strength and spirit	Voter turnout
Families and households	Skill and job match	Teenage parents	Road safety	Urban housing intensification	Access to telecommunications	Representation on local decision making bodies
Disability	Career training	Communicable Diseases	Workplace safety	Government housing provision	Arts and culture	
Maori wellbeing		Access to GPs	Crime levels	Housing accessibility		
		Mental health and emotional wellbeing				
		Self-reported health status				
		Modifiable risk factors				
		Recreation and leisure				

# Introduction continued

Feeling safe and secure in our homes, communities and urban areas is a basic human right. Safety and perceptions of safety feature highly in people's view of their living environment, their sense of wellbeing and quality of life as illustrated in the Safety chapter.

Housing issues can have flow-on effects for health, education and community wellbeing. The changing nature of housing patterns, affected by population growth, can put pressure on an urban area's natural and social environment and on the provision of infrastructure and services. These issues are discussed in the Housing chapter.

Connecting with other people and networks is important in the development and maintenance of strong communities and feelings of security and this is explored in the Social Connectedness chapter.

The Civil and Political Rights chapter looks at the understanding, participation and engagement of residents in the governance and decision making of their cities.

• Economic Wellbeing

The Economic Standard of Living chapter looks at how levels of income and socio-economic position affect people's ability to purchase goods and services, obtain adequate food and housing and participate in the wider community. Economic Development, described in the next chapter, helps to underpin quality of life and enhances prosperity in urban communities.

Economic wellbeing

Economic standard of living	Economic development
Income	Economic growth
Work/life balance	Employment
Cost of living	Research and development
Social deprivation	Local businesses
Net worth	Retail sales
	Non-residential building consents
	Tourism
	Skilled migrants

• Environmental Wellbeing

Population growth and economic development put pressure on the sustainability of the environment. While the built environment is an important contributor to the way people feel about where they live, it also has a major impact on the sustainability of the natural environment. The Natural and Built Environments are reported in the last two chapters.

Environmental wellbeing

Natural environment	Built environment
Local natural environmental issues	Look and feel of the city
Waste management and recycling	Land use
Biodiversity	Traffic and transport
Energy use	Public transport
Air quality	
Beach and stream/lake water quality	
Drinking water quality	
Water consumption	
Ecological footprint	

3. The final section, Conclusions, summarises the findings.

Quality of life indicators

The report includes 68 key quality of life indicators (encompassing 186 individual measures).

Data breakdowns are provided in the following order where possible and/or appropriate: Total New Zealand trends; differences between the total 12 cities (combined total for the 12 cities) and the rest of New Zealand (total New Zealand minus the 12 cities); and individual 12 cities trends. Indicators are broken down by ethnicity, age and sex where applicable.

Consultation

The report has been prepared in consultation with people who work across a wide range of areas and/or who work with indicators and data. These people have a solid understanding of the issues and available data. Feedback from consultation and peer review was critical to ensuring a report that fulfils its role as a tool for advocacy and change toward a sustainable quality of life for residents of New Zealand's cities.

Audience for the report

In addition to the Metropolitan Sector Group and participating councils, this report will be useful to government agencies, non-governmental organisations and community groups with a policy, planning or advocacy focus and an interest in addressing urban issues and promoting quality of life.



## Key results

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This section contains key results arising from analysis of the 68 indicators and 186 measures in this report. It provides a summary of quality of life in the 12 cities.

### People

- The 12 cities account for 55.6% of New Zealand's population.
- The cities have grown at an average of 10.3% from 2001 to 2006, faster than the national average.
- 86.1% of New Zealand's total population growth in the next 20 years is projected to take place in the 12 cities.
- City populations are very mobile with 43.6% of residents shifting address in the five years to 2006.
- The ethnic mix in our cities is continuing to change, with Asian, Pacific Islands and the newly created New Zealander ethnic groups growing the fastest.
- Our cities have higher proportions of Asian (13.9%) and Pacific Islands (9.9%) people compared to the rest of New Zealand (2.4% for both ethnic groups).
- Despite the national trend of an ageing population, eight of the 12 cities have a median age younger than the national median of 35.9 years.
- Rodney, Tauranga, North Shore and Christchurch respectively have a median age higher than the national median and this trend is expected to continue in these four cities.
- Manukau and Porirua have the youngest populations, with just over a quarter of their population under 15 years of age.
- One-family households are the dominant form of households in our cities, with around two-thirds this type.

### Knowledge and skills

- Participation levels in early childhood education (ECE) have increased in the 12 cities over the last five years.
- The majority of ECE participation takes place in a kindergarten, playcentre, education and care service or home-based locations.
- 15.8% of Pacific Islands children do not attend an ECE centre.
- Maori and Pacific Islands students continue to be over-represented in school stand-down, suspension and exclusion figures.
- There has been an increase in the truancy rate and students receiving early leaving exemptions in most of the 12 cities.
- There has been a notable increase throughout New Zealand of people holding a vocational or degree qualification.
- Nationally there has been a decline in the percentage of school leavers with low qualification attainment, from 15.3% in 2003 to 11.1% in 2006.

- Nationally, 22.6% of school leavers in New Zealand do not have National Certificate of Educational Achievement (NCEA) level 1 credits in literacy and numeracy.
- The majority of New Zealand residents say they are using their work skills, training and experience in their current jobs.
- There has been an increase, both nationally and in the 12 cities, in the number of active trainees in industrial training and modern apprenticeships from 2004 to 2006.

### Health

- The majority of residents in our cities are satisfied with their life in general.
- Life expectancy has increased nationally and in the 12 cities. Males still have a lower life expectancy than females.
- Life expectancy for Maori is lower than that for non-Maori.
- The rate of mortality for Maori and Pacific Islands infants is higher than the rate for the 'Other' ethnic category (which includes New Zealand European infants).
- There has been an increase in the rate of teen pregnancy in the 12 cities since 2001, with a rate of 8.3 per 1,000 live births to mothers between the ages of 13 and 17 years in 2006. However, the rate is lower in our cities than across the rest of New Zealand (11.4 per 1,000 live births in 2006).
- The overall number of cases of meningococcal disease in children in New Zealand has declined between 2004 and 2006.
- Nationally there has been a small increase in the rate of notified cases of tuberculosis per 100,000 people from 2004 to 2006. The cities' rate is higher than that found in the rest of New Zealand.
- Nationally, there has been a decline in the rate of GPs per 100,000 population from 2001 to 2005. Nearly all of the decline in total numbers of GPs has been outside of the 12 cities.
- The rate of death by suicide is lower in the 12 cities than the rest of New Zealand, while rates of hospitalisation for attempted suicide are higher in the cities.
- More residents living outside the 12 cities undertake physical activity on five or more days a week (61.0%) than those in the cities (56.0%).
- Residents in the 12 cities are less likely to belong to a sports club than those in the rest of New Zealand and nationally.
- The most prevalent type of diabetes is type 2 which affects approximately 220,000 people in New Zealand and accounts for 80.0 to 90.0% of all diabetes cases.
- In New Zealand in 2003, 21.0% of adults over the age of 15 were obese. This was an increase from the 17.0% recorded in 1997.

## Key results continued

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- A larger percentage of people in the rest of New Zealand smoke (21.3%) compared to those in the 12 cities (17.0%).
- There has been a decline in the overall number of calls to the New Zealand gambling hotline between 2002 and 2005.
- Sport or other physical activity is the most frequently mentioned free time activity by residents both nationally (39.0%) and in the 12 cities (32.0%).
- A larger percentage of residents living outside the 12 cities (74.0%) rate their leisure time positively than those living in the 12 cities (72.0%).

### Safety

- Perceptions of safety vary considerably by location, age, sex and ethnicity. City centres are perceived as the most unsafe location for most residents, particularly at night.
- Fewer residents in the 12 cities thought their neighbourhood was safe for children compared to those living in the rest of New Zealand. Presence of strangers was the main reason identified for a perceived lack of safety.
- There has been an increase in the rate of substantiated cases of child abuse and neglect nationally since 2004.
- Between 2003 and 2005 the rate of intentional injuries to people aged 14 years and over increased from 50.1 per 100,000 to 58.5 per 100,000 in the 12 cities.
- The number of falls requiring hospitalisation for those aged over 65 years is increasing nationally.
- Nationally, the rate of serious and fatal road crash injuries has dropped from 7.5 per 10,000 in 2000 to 7.0 per 10,000 in 2006. Most rates of serious and fatal injuries in the 12 cities are less than the national rate.
- The usage of safety belts in motor vehicles remains high across the 12 cities.
- The 12 cities had a lower rate of workplace injuries than the rest of New Zealand.
- The rate of total recorded crime declined in New Zealand over the period 2002/2003 to 2005/2006.
- Recorded burglary, car and drugs and anti-social offence rates declined in the 12 cities over the period 2002/2003 to 2005/2006.
- Recorded rates of sexual offending have remained stable (8.4 per 10,000 in 2002/2003 to 8.3 per 10,000 in 2005/2006) in the 12 cities. However, they were lower than the national rate (8.4 per 10,000) in 2005/2006.
- The overall rate of recorded violence offences in the 12 cities increased from 116.2 per 10,000 in 2002/2003 to 122.2 per 10,000 in 2005/2006.

### Housing

- Levels of home ownership continue to decline, after reaching a post-war peak in 1991.
- Home ownership tends to be lower among Maori and Pacific Islands people, who tend to have larger and younger families as well as lower incomes.
- The cost of purchasing a home is increasing as house prices and mortgage costs have increased relative to incomes.
- Rental accommodation is becoming more affordable due to household incomes increasing at a higher rate, on average, than increases in rental costs.
- Despite higher house prices, those who own a home pay a lower proportion of income than those who rent, on average.
- The housing market has shown considerable growth over the period 2001 to 2006, with only a relatively small increase in household crowding.
- Rapid urban intensification has occurred in some cities over the four years from 2002 to 2006, peaking in 2004 then slowing in 2005 and 2006.
- The greatest increases in apartments as a proportion of residential building consents were in Auckland and Wellington, followed by North Shore and Manukau.
- The construction of new apartments appears to be closely related to changes in household tenure. There was a substantial increase in the proportion of tenancy bonds lodged for apartments as a proportion of all tenancy bonds over the same period.
- Central government continues to be the dominant provider of subsidised rental housing.
- The cities with the highest proportion of social housing provided by local government were Wellington, Dunedin and Christchurch.
- Of the 12 local authorities only Rodney and Auckland provide no social housing.

### Social connectedness

- The vast majority (90.0%) of residents in New Zealand and in the 12 cities say they have a positive overall quality of life.
- Nationally, the most common social networks that people belong to are a family network (64.0%) or a network from school or work (52.0%).
- Compared to the rest of New Zealand, residents of the 12 cities are less likely to have their main social networks in the same area they live in and more likely for the network to be based on shared interests or beliefs.

- There is a higher sense of local community (65.0%) in the rest of New Zealand than in the 12 cities (55.0%).
- People with lower household incomes are more likely to feel isolated or lonely.
- Seventy six percent of households in our cities have access to a mobile phone and 64.7% of households had internet access in 2006, up from 42.7% in 2001.
- India is the most common source country for new citizens, followed by China, South Africa, England, Fiji and Korea.
- Of the new citizens who attended citizenship ceremonies in 2006, 23,497 (82.9%) did so in the 12 cities.
- More than half (58.0%) of residents in the 12 cities combined feel positive about the impact of increasing diversity on their city.
- After English, Maori is the most commonly spoken language in four of the 12 cities and Samoan in five cities.
- One in five Maori people living in the 12 cities speaks Maori.
- Three quarters of city residents say their area has a culturally rich and diverse arts scene.
- There has been a sharp decline in the unemployment rate.
- The wage gap between men and women appears to be narrowing although, typically, men still earn more than women.
- The majority of New Zealanders feel positively about their work-life balance particularly those living outside the 12 cities. Residents of North Shore, Waitakere and Manukau were less satisfied with their work-life balance compared to others.
- The number of means tested benefits paid to families without children has decreased sharply while benefit payments to families with children have increased in some cities.
- Home ownership and household energy costs have had a major inflationary impact between 2002 to 2007.
- The top 10.0% of wealthy individuals own over half of the nation's total net worth, while the bottom 50.0% of the population own just 5.2% of total net worth.
- Wealth accumulation is closely related to age, increasing, typically, from 25 to 49 years of age and peaking between ages 55 and 69 years.
- The most valuable asset people have is residential property, including homes, rental property and holiday homes.
- Between 2002 and 2007 New Zealanders increased their total mortgage debt by \$59.8 billion.

## Civil and political rights

- All the councils of the 12 cities report active work in strengthening their relationship and engagement with tangata whenua to incorporate Maori perspectives into policy, planning and operations.
- Slightly more than one third of residents (35.0%) in the 12 cities believe that they have an understanding of how their council makes decisions.
- About half of people nationally and in the 12 cities would like to have more of a say in what their council does.
- Just over half (55.0%) of residents in the 12 cities say the public has some, or a large, influence on the decisions their council makes.
- Voter turnout is higher for elections at the national than local level, with around 80.0% turnout in the 2005 general election, compared to an average of 42.5% for city councils (i.e. district councils excluded) in the 2004 local council elections. Preliminary results show that average voter turnout across city and district councils in the 2007 local council elections was 43.2%.
- There are gender and ethnicity disparities in representation on the local governance bodies of local councils and school boards.

## Economic standard of living

- Median personal and household incomes have increased in all cities over the past five years, although real (inflation adjusted) ordinary time earnings have decreased in some cities.

## Economic development

- The 12 cities account for nearly two thirds of all economic activity in New Zealand and the share gradually increased between 2001 and 2006.
- Estimated Gross Domestic Product (GDP) in the 12 cities grew by 4.3% per year on average over the five years to March 2006.
- Estimated GDP per capita in the 12 cities has grown by 3.5% per year.
- Labour productivity increased in eight of the 12 cities but declined at the total New Zealand level.
- Over the three years to December 2006, the number of filled jobs increased in the 12 cities by 11.7%.
- The Personal and Social Services industries account for the most jobs among the 12 cities, followed by the Distribution and Hospitality industries.
- Half of the 12 cities have a lower labour force participation rate on average than the rest of New Zealand.
- Unemployment has decreased to the point that most unemployment in the economy is likely to be short term, due to seasonal fluctuation and turnover.
- Employment in research and development has just kept pace with growth in the overall job market.

## Key results continued

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- The overall growth rate of businesses among the 12 cities, from 2002 to 2006, was lower than the rest of New Zealand with the exception of Tauranga and Rodney.
- Auckland, Manukau and Christchurch have consistently recorded the highest numbers of residential building consents. The rest of the 12 cities have recorded a sharp decline in the number of new residential buildings from 2003 to 2006.
- The value of non-residential building consents also grew between 2003 and 2004 in the 12 cities then tailed off, except in Christchurch where the value of consents increased by 76.9% from 2005 to 2006.
- The 12 cities account for over 39.0% of total guest nights purchased at commercial accommodation in New Zealand.
- For the period March 2004 to March 2007 the number of guest nights purchased in the 12 cities grew by 7.6%, which was similar to the growth for New Zealand as a whole.
- Of the 33,773 skilled migrants to New Zealand from 2004 to 2007, 25.0% elected to settle in the Auckland region while a further 26.5% of skilled migrants settled in the other regions where the 12 cities are situated. Nearly half elected to settle in regions elsewhere in New Zealand.

### Natural environment

- Key environmental issues facing the 12 cities are the effects of growth and development, protecting biodiversity, transportation, air quality and water supply/quality.
- Almost all (97.0%) of New Zealanders living in the 12 cities have access to kerbside recycling.
- The volume of solid waste sent to landfill has slightly increased in the years 2002 to 2006.
- All of the 12 cities are addressing biodiversity through their Long Term Council Community Plans (LTCCP) and District Plans.
- Energy efficiency projects are underway at most of the 12 cities.
- Air pollution is more likely to be perceived as a problem by residents in Christchurch (63.0%) and Auckland (44.0%) than in other cities.
- In general, the rate of public health risk at coastal beaches is relatively low. Risk is higher at freshwater bathing sites.
- North Shore, Auckland and Hutt residents rate water pollution as more of a problem than residents of other cities.
- North Shore, Auckland, Waitakere, Manukau, Hamilton and Tauranga have excellent grades for drinking water quality.
- Nearly all of the populations in the 12 cities are served by water supplies that comply with E. coli standards.
- Water consumption in the 12 cities (both domestic and commercial/industrial) has increased slightly in recent years.

- Wellington, Bay of Plenty and Auckland regions recorded lower ecological footprints per capita than the national average.

### Built environment

- The majority of residents in most of the 12 cities feel a sense of pride in their city.
- Graffiti is significantly more likely to be rated as a problem in the 12 cities than in the rest of New Zealand (70.0% and 45.0% respectively).
- Nearly all of the 12 cities have more than five hectares of council-managed green space for every 1,000 people (Auckland is just under, with 4.9 hectares per 1,000 people).
- Across all 12 cities, at least 85.0% of residents consider it is easy to access a local park or green space.
- The majority of residents from the 12 cities use a motor vehicle to get to work, ranging from 72.7% in Manukau to 45.1% in Wellington.
- Nationally, road-based travel distance has increased by 14.0% between 1997/1998 and 2003 to 2006, with an average increase of 1.8% per year.
- Residents of Wellington (43.0%) and Hutt (32.0%) are the highest users of public transport.
- In most of the 12 cities, more than half of the residents consider their public transport to be affordable, safe and convenient.
- The majority of residents in the 12 cities say it is easy to access public transport facilities.



# Chapter One

## People

### What's in this chapter?

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Population growth

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Ethnicity

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Age

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Families and households

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Disabilities

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Maori wellbeing

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## Introduction

**This chapter describes the differences and similarities between population groups within and between the 12 cities and the rest of New Zealand. The pace of change within the cities and the diversity of their people impacts on outcomes in all chapters of this report.**

### Why this is important

Information about the people in New Zealand's 12 cities helps us to understand the nature of urban communities and how they are changing. It can help decision makers anticipate potential pressures on the wider social, economic and physical environments. Factors such as population growth, age, ethnicity, migration and household makeup are often key determinants of conditions across a whole range of issues affecting quality of life.

### Key points

The 12 cities collectively make up more than half of New Zealand's population (55.6%). It is projected that 86.1% of New Zealand's total population growth over the period 2006 to 2026 will take place in the 12 cities, with two thirds (65.9%) of total growth occurring in the five cities in the Auckland region. In absolute numbers, Auckland and Manukau will make the greatest contribution to New Zealand's total population growth.

Internal migration is a significant contributor to population change. Half of our cities experienced population growth through net internal migration.

There are considerable differences in the socio-demographic makeup of the 12 cities. The cities are changing in their ethnic diversity, with Asian and Pacific Islands populations growing the fastest. The cities have higher proportions of both these ethnic groups compared with the rest of New Zealand.

The median age in most of our 12 cities remains slightly younger than the national median, in part due to the younger Maori and Pacific Islands populations, but also because cities have a higher proportion of people in the tertiary trained and working age groups of 15 to 44 years.

One-family households dominate in our cities, accounting for around two thirds of all households. City populations are very mobile with 43.6% of residents shifting address between 2001 and 2006.

### Links to other indicators

Population growth impacts on the adequacy and availability of community services, social infrastructure and public open space. It also impacts on the physical infrastructure (sewerage, water and roading systems) as older systems reach capacity and room for expansion and redevelopment becomes difficult to find. Population growth affects economic development through the increasing demand for goods and services, housing and infrastructure development. Our expanding communities can also place increased pressure on the natural environment through diminishing natural biodiversity, increased pollution and climate change.

Ethnic diversity can have implications for the way in which facilities and services are provided. For example, European health practices may not be acceptable to or appropriate for some members of the population and traditional house designs may not meet the needs of some communities. It can also have implications for social connectedness and community development. Ethnic diversity helps shape how communities in New Zealand perceive themselves and relate to the wider world.

The age structure within cities is a key determinant of the future supply of the workforce which, when linked to qualification rates and industry structures, gives an insight into future training needs and the match between employment needs and the likely local labour force. It is also linked to the economic wealth of cities, with younger populations being in more debt and older populations having greater wealth. Changing patterns of families and household composition (e.g. more than two families living in a household) have implications for health outcomes and housing needs.

# Population growth

## 1. People

- The 12 cities account for just over half of New Zealand's population.
- Since 2001, the 12 cities have grown, on average, faster than the national average.
- Half of our cities have experienced population growth from net internal migration in the last five years.

### What this is about

Population growth or decline can have major implications for a city's infrastructure, economy, natural resources and ecosystems and social cohesion. Tracking population growth in our cities ensures that funding, services and facilities are provided to meet the needs of fast growing communities. Population growth patterns also provide background information for other demographic trends.

This indicator covers the population growth in cities using census data. Measures for this indicator include:

- Population growth
- Net internal migration
- Net external migration.

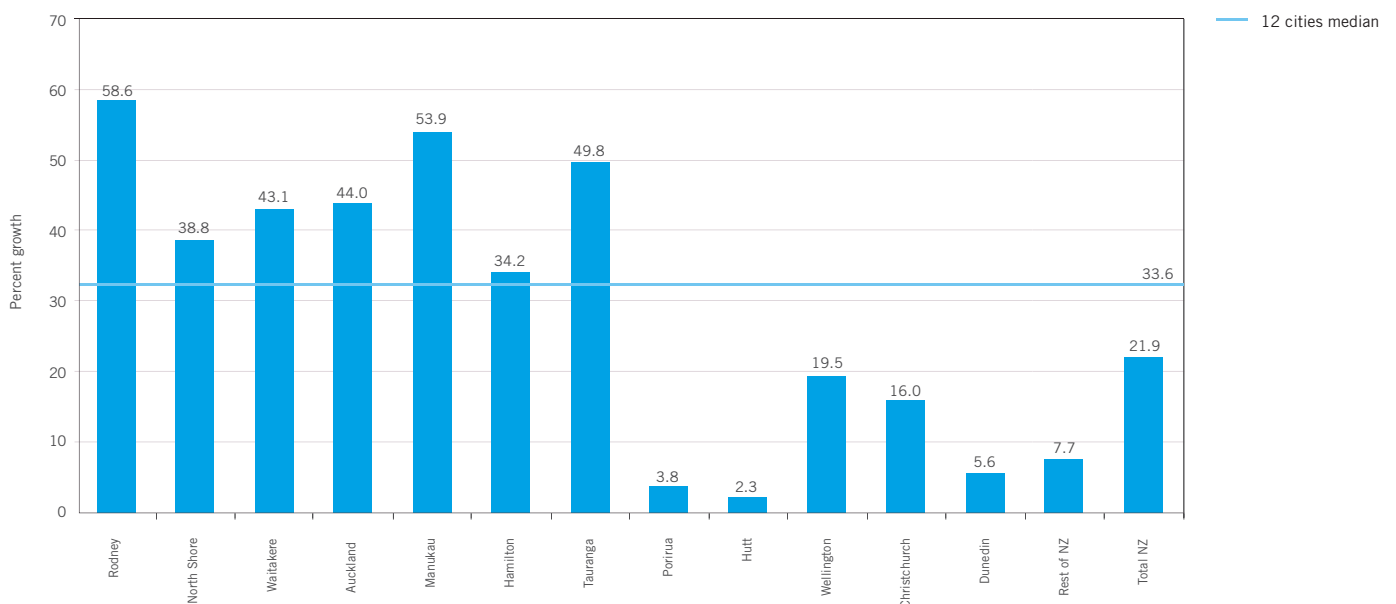
### What did we find?

#### Population growth

Between 2001 and 2006, New Zealand's population grew by 7.8%. Growth in the 12 cities was higher, averaging 10.3% over this period.<sup>1</sup> One of the likely contributions to the higher growth rate in our cities was the inward migration of people seeking employment and other economic and social opportunities that cities provide.

Of the 12 cities, the fastest growing between 2001 and 2006 was Rodney (17.6%). Manukau and Tauranga were the next fastest growing cities (16.2% and 14.0% respectively). The cities that had the slowest population growth, below the national average, were Hutt (2.3%), Porirua (2.5%), Dunedin (3.8%) and Christchurch (7.5%).

#### Projected population growth, medium series<sup>2</sup> (2006 to 2026)



Data source: Statistics New Zealand, Census 2001 base

<sup>1</sup> Based on usually resident Census night population.

<sup>2</sup> Medium scenario. These projections have as a base the estimated resident population of each area at 30 June 2001. Note that figures are rounded and therefore totals might not agree.

## Population growth continued

It is projected that 86.1% of New Zealand's total population growth over the period 2006 to 2026 will take place in the 12 cities, with the five cities in the Auckland region accounting for two thirds (65.9%) of that growth. In absolute numbers, Auckland and Manukau will make the greatest contribution to New Zealand's total population growth.

Manukau is projected to become New Zealand's second largest city by around 2010 (currently Christchurch). This is in part due to higher rates of natural increase, particularly among the Pacific Islands and Maori populations, which form a larger proportion of Manukau's population than in the other cities.

### Census population, estimated population<sup>3</sup> and projected population<sup>4</sup> (2001 to 2026)

	2001 (March Census)	2001 (June est.)	2006 (March Census)	2006 (projection)	2011 (projection)	2016 (projection)	2021 (projection)	2026 (projection)
Rodney	76,182	78,500	89,562	89,800	99,900	108,800	116,700	124,500
North Shore	184,821	194,200	205,614	213,700	226,900	241,300	255,500	269,500
Waitakere	168,753	176,200	186,444	195,400	210,300	224,400	238,300	252,100
Auckland	367,734	388,800	404,655	430,900	460,200	493,800	526,900	559,700
Manukau	283,200	298,200	328,980	337,200	367,000	397,500	427,900	459,000
Hamilton	114,921	120,900	129,255	131,900	139,200	146,900	154,500	162,200
Tauranga	90,906	93,300	103,629	104,700	113,900	122,700	131,300	139,800
Porirua	47,370	49,500	48,537	51,000	51,700	51,800	51,700	51,400
Hutt	95,475	99,100	97,710	101,400	102,100	102,300	102,000	101,400
Wellington	163,824	171,100	179,466	184,900	192,500	197,200	201,100	204,500
Christchurch	324,057	335,200	348,435	355,900	365,100	374,000	381,800	388,800
Dunedin	114,342	119,300	118,686	122,700	124,000	124,900	125,600	126,000
<b>Rest of NZ</b>	<b>1,705,692</b>	<b>1,756,200</b>	<b>1,787,016</b>	<b>1,807,100</b>	<b>1,839,100</b>	<b>1,862,900</b>	<b>1,880,700</b>	<b>1,891,100</b>
<b>Total NZ</b>	<b>3,737,277</b>	<b>3,880,500</b>	<b>4,027,989</b>	<b>4,126,600</b>	<b>4,291,900</b>	<b>4,448,500</b>	<b>4,594,000</b>	<b>4,730,000</b>

Data source: Statistics New Zealand Census 2001 base – figures rounded.

### Net internal migration

Internal migration is the movement of population within the national boundaries of a country, resulting from changes of usual residence. It is a significant contributor to population growth and decline in the cities. Net internal migration is categorised as people usually resident in New Zealand aged 15 years or more in the 2006 Census, who were not living in that city in 2001.

Auckland, Christchurch and Manukau experienced the greatest increases in internal migration between 2001 and 2006. Most cities experienced inflows of people that represented 40.0% to 50.0% of the total population of their city. Net internal migration reflects the numbers of people arriving and leaving a city. Tauranga and Rodney gained the most population between 2001 and 2006 through net internal migration. Half of our cities experienced population growth through net internal migration. Auckland experienced the largest population loss between 2001 and 2006 with fewer people moving to Auckland than leaving Auckland to live in other parts of New Zealand.



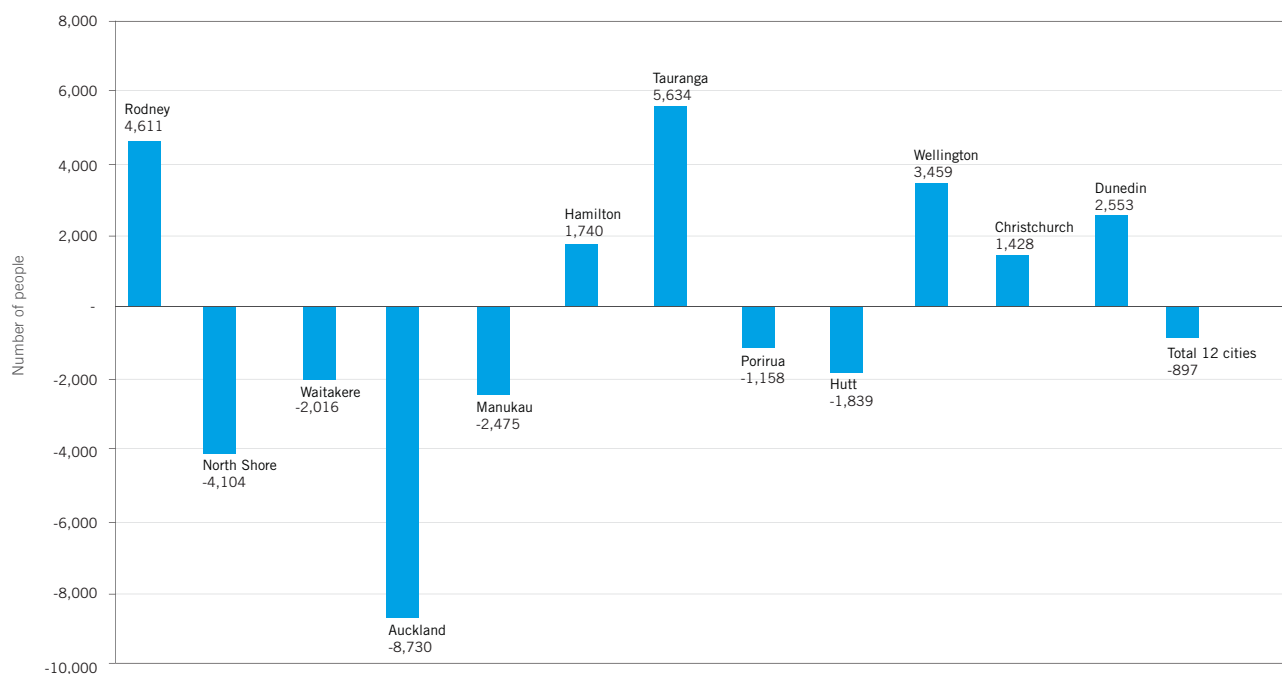
<sup>3</sup> The resident population estimates were obtained by updating Census usually resident population counts at 6 March 2001, for births, deaths and net migration of residents during the period 7 March 2001 to 30 June 2001. The base population has also been adjusted for the number of residents undercounted by the Census, as measured by the 2001 post-enumeration survey and for the estimated number of residents temporarily overseas.

<sup>4</sup> Medium scenario.



## 1. People

Net internal migration (2001 to 2006)



Data source: Statistics New Zealand, Census 2001, 2006

## Net external migration

Net external migration is the number of overseas arrivals into each city, minus the number of people who have lived in New Zealand and subsequently departed to reside overseas. This measure highlights the number of New Zealand nationals and migrants arriving and leaving our cities. Net external migration is a key component of population growth and is one of the main drivers of variations in the rate of growth of New Zealand cities. While external migration data is useful in determining the number of arrivals from overseas, it should be considered alongside ethnicity data, which is, perhaps, a better reflection of where external migrants choose to settle.<sup>5</sup>

Following a peak in 2002, there was a decline in external migration between 2003 and 2005, both nationally and in our cities, with the exception of Wellington, which saw an increase in external migration in 2005. Since 2005 there has been an increase in external migration for all cities, except Rodney and Dunedin.

The cities accounted for 82.5% of the growth in external migration over the 2003 to 2006 period, with Auckland, Christchurch and Wellington recording the highest numbers of external migrants.

## Net external migration (2003 to 2006)

	Number of people			
	2003	2004	2005	2006
Rodney	225	146	59	-3
North Shore	2,050	1,073	9	1,267
Waitakere	910	337	-335	241
Auckland	12,148	7,147	6,183	7,552
Manukau	2,367	1,002	650	855
Hamilton	1,001	368	174	373
Tauranga	258	10	-269	-134
Porirua	87	-39	-495	-207
Hutt	-64	-171	-393	-137
Wellington	1,531	945	1,118	1,450
Christchurch	3,397	1,724	1,248	1,785
Dunedin	654	495	229	216
<b>Total 12 cities</b>	<b>24,564</b>	<b>13,037</b>	<b>8,178</b>	<b>13,258</b>
<b>Rest of NZ</b>	<b>10,342</b>	<b>2,071</b>	<b>-1,207</b>	<b>1,351</b>
<b>Total NZ</b>	<b>34,906</b>	<b>15,108</b>	<b>6,971</b>	<b>14,609</b>

Data source: Statistics New Zealand, External Migration 2003 to 2006

<sup>5</sup> External migration data should be treated with some caution. While Auckland appears to have higher net migration than the other cities, this may be partly due to the fact that when filling out the Immigration arrival card, people often do not differentiate between Auckland city and other cities in the Auckland region. Auckland, as New Zealand's main international gateway, may also be the first stop for many migrants who are unsure where they intend to live on a more permanent basis.

## Ethnicity

- The ethnic mix in our cities is continuing to change, with Asian, Pacific Islands and the newly created 'New Zealander' ethnic groups growing the fastest.
- Our cities have higher proportions of Asian and Pacific Islands people compared with the rest of New Zealand.

### What this is about

Changes in the proportion of residents who identify with a particular ethnic group provide an indication of ethnic diversity in cities. Ethnic diversity has an impact on the social and cultural infrastructure of our cities, including the range of services that need to be provided and the way they are provided.<sup>6</sup>

Ethnicity is 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.<sup>7</sup>

This indicator describes the proportions of the main ethnic groupings within each city and the rest of New Zealand. Within each of these broad ethnic groups there are many smaller ethnic populations, each with its own age structure, customs and settlement history in New Zealand. At the 2006 Census there were 238 ethnic identities recorded nationally.

Measures for this indicator include:

- Ethnic composition
- Ethnic growth rates
- Ethnic projections.<sup>8</sup>

In the 2006 Census, Statistics New Zealand made a number of ethnicity classification changes that affect the comparability of the 2006 Census with earlier censuses, particularly for the New Zealand European and 'Other' ethnic groups. The 'Other' category has been split into two groups: Middle Eastern/Latin American/African (MELAA); and Other Ethnicity. The Other Ethnicity category includes groups previously classified as 'Other', as well as a separate category for New Zealander. Previously, 'New Zealander' responses were included in the New Zealand European category.



<sup>6</sup> Social infrastructure refers to a system of social services, networks and facilities that support people and communities. It includes concerns such as shelter, health, cultural expression, religion, education, income, recreation and leisure. It also includes formal and informal networks of people, social services and facilities and community facilities. Cultural infrastructure refers to the facilities that support cultural leaning such as art galleries, theatres, libraries, etc.

<sup>7</sup> Ethnicity is self-perceived and people can belong to more than one ethnic group. An ethnic group is made up of people who have some or all of the following characteristics: a common proper name, one or more elements of common culture which need not be specified, but may include religion, customs, or language, unique community of interests, feelings and actions, a shared sense of common origins or ancestry and a common geographic origin. The definition of ethnicity used in this report is from Statistics New Zealand Statistical Standard for Ethnicity 2005.

<sup>8</sup> Note that commentary, not detail, is provided in this report as the data was not available from Statistics New Zealand at the time of writing.

## 1. People



## Ethnic composition (2006)

	NZ European %	Maori %	Pacific Islands people %	Asian %	MELAA %	New Zealander %	Other %	Not elsewhere included %
Rodney	78.4	8.3	2.0	2.9	0.2	12.3	0.1	4.1
North Shore	65.7	6.1	3.2	18.1	1.7	9.5	0.1	2.7
Waitakere	55.5	12.3	14.4	15.2	1.5	7.8	0.0	6.0
Auckland	51.4	7.4	12.4	23.1	1.7	7.1	0.0	5.5
Manukau	38.2	14.4	26.3	20.3	1.4	5.1	0.1	5.7
Hamilton	62.4	19.0	4.0	10.1	1.4	10.1	0.1	4.5
Tauranga	72.3	16.0	1.8	3.3	0.4	13.3	0.0	3.0
Porirua	54.0	19.9	25.3	4.3	0.5	8.4	0.0	5.0
Hutt	63.4	16.7	10.3	8.6	1.1	9.8	0.0	2.3
Wellington	67.6	7.4	5.0	12.7	2.0	10.2	0.0	3.6
Christchurch	73.3	7.4	2.7	7.6	0.8	12.5	0.0	2.8
Dunedin	76.2	6.2	2.1	5.2	0.2	13.1	0.0	3.2
<b>Total 12 cities</b>	<b>60.4</b>	<b>10.4</b>	<b>9.9</b>	<b>13.9</b>	<b>1.3</b>	<b>9.3</b>	<b>0.0</b>	<b>4.2</b>
<b>Rest of NZ</b>	<b>70.3</b>	<b>18.6</b>	<b>2.4</b>	<b>2.4</b>	<b>0.3</b>	<b>12.3</b>	<b>0.0</b>	<b>4.1</b>
<b>Total NZ</b>	<b>64.8</b>	<b>14.0</b>	<b>6.6</b>	<b>8.8</b>	<b>0.9</b>	<b>10.7</b>	<b>0.0</b>	<b>4.2</b>

Data source: Statistics New Zealand, Census 2006<sup>9</sup>

## What did we find?

## Ethnic composition

New Zealand's ethnic mix is continuing to change. Over the period from 2001 to 2006, the Asian ethnic group grew the fastest (an increase of almost 50.0%). It should be noted that the Asian ethnic group comprises a number of diverse nationalities (e.g. Japanese, Korean and Chinese). These nationalities have differing languages, cultures and religions. The Pacific Islands ethnic group had the second largest increase (14.7%) and the newly classified New Zealander ethnic group experienced the third largest increase with 10.7%.

The ethnic composition of our cities varied considerably. For example the New Zealand European proportion of total population ranged from 38.2% in Manukau to 78.4% in Rodney, while the Asian share ranged from 2.9% in Rodney to 23.1% in Auckland. Manukau, Auckland, Waitakere and Porirua were the most ethnically diverse of the 12 cities.

New Zealand European remained the largest of the major ethnic groups for all our cities. The cities with the largest proportions of New Zealand European residents were Rodney, Dunedin, Christchurch and Tauranga respectively. These cities all had a higher New Zealand European proportion than the rest of New Zealand. It is important to note that the New Zealand European ethnic group is in itself diverse, including people who may have migrated from countries such as England, Australia and South Africa.

Unlike the other ethnic groups, where more than half of the total population resided in the 12 cities, less than half (41.3%) of the Maori population lived in our cities. Porirua (19.9%) and Hamilton (19.0%) had the highest proportion of Maori residents. While Hutt (16.7%) and Tauranga (16.0%) also had relatively high proportions of Maori residents, they are below that of the rest of New Zealand (18.6%). Manukau had the largest Maori population (47,346), followed by Auckland (29,847). North Shore had the lowest proportion of Maori residents, whilst Dunedin had the lowest number of Maori residents of the 12 cities.

The cities with the greatest proportion of Pacific Islands people were Manukau (26.3%) and Porirua (25.3%), although Porirua had a much smaller Pacific Islands population than Manukau. The largest populations were in Manukau, Auckland and Waitakere and together these three cities accounted for almost three quarters (73.6%) of the Pacific Islands population in the 12 cities. Rodney and Tauranga had the lowest proportion and number of Pacific Islands residents.

The Asian population was concentrated in the Auckland region with Auckland (23.1%) and Manukau (20.3%) having the highest proportion of Asian people. Together with North Shore and Waitakere, these four cities had the highest Asian populations. Although it had a low proportion of Asian people, Christchurch had the fifth highest number of Asian residents. Rodney and Tauranga had the lowest share and number of Asian residents.

<sup>9</sup> Note these figures differ from Statistics New Zealand website's QuickStats on Ethnicity. Statistics New Zealand do not include the 'Not Elsewhere Included' category when calculating ethnic group percentages.

## Ethnicity continued

### Growth in ethnic groups (1996 to 2006)

	NZ European		Maori		Pacific Islands		Asian		Other	
	Number	%	Number	%	Number	%	Number	%	Number	%
Rodney	9,735	16.1	1,773	31.1	696	61.4	1,419	117.4	11,163	6,528
North Shore	-9,030	-6.3	372	3.1	1,398	27.2	22,338	150.3	21,816	1,460
Waitakere	-12,537	-10.8	2,706	13.4	8,409	45.7	17,208	154.8	16,467	1,830
Auckland	-20,934	-9.1	-1,785	-5.6	4,620	10.1	48,165	106.2	32,550	984
Manukau	-17,922	-12.5	4,584	10.7	28,749	49.7	40,125	150.9	19,965	1,197
Hamilton	-7,338	-8.3	4,788	24.2	1,920	59.7	7,326	128.1	14,247	2,065
Tauranga	7,320	10.8	4,326	35.3	663	56.4	2,106	157.0	13,974	8,318
Porirua	-2,829	-9.7	732	8.2	1,740	16.5	537	34.6	4,251	4,723
Hutt	-12,228	-16.5	2,307	16.5	2,436	31.8	2,907	53.3	10,269	2,517
Wellington	-4,899	-3.9	1,254	10.4	696	8.5	8,709	61.6	19,995	995
Christchurch	-32,583	-11.3	3,090	13.7	2,553	36.9	13,314	100.0	45,168	3,054
Dunedin	-16,314	-15.3	666	9.9	315	14.2	1,713	38.8	15,966	3,168
<b>Total 12 Cities</b>	<b>-119,559</b>	<b>-8.1</b>	<b>24,813</b>	<b>11.9</b>	<b>54,195</b>	<b>32.3</b>	<b>165,867</b>	<b>114.3</b>	<b>225,831</b>	<b>1,752</b>
<b>Rest of NZ</b>	<b>-156,909</b>	<b>-11.1</b>	<b>16,560</b>	<b>5.3</b>	<b>9,480</b>	<b>27.7</b>	<b>15,081</b>	<b>52.9</b>	<b>223,401</b>	<b>6,305</b>
<b>Total NZ</b>	<b>-269,493</b>	<b>-9.4</b>	<b>41,958</b>	<b>8.0</b>	<b>63,741</b>	<b>31.5</b>	<b>181,050</b>	<b>104.4</b>	<b>449,244</b>	<b>2,736</b>

Data source: Statistics New Zealand, Census 1996, 2006

### Ethnic growth rates

The inclusion of 'New Zealander' as a new ethnic category in 2006 has impacted on the comparability of ethnic categories over time. In particular the change resulted in an apparent decline in New Zealand European ethnicity in all cities, except for Rodney and Tauranga and a substantial increase in growth of the 'Other' ethnic category (which now includes New Zealander).

These two categories aside, the largest growth was in the Asian population, which more than doubled between 1996 and 2006 in all but four of the cities. This growth in absolute numbers was strongest in the Auckland region and Christchurch. Together the 12 cities accounted for 87.7% of growth of the Asian population over this period.

The largest increase in the population of Pacific Islands people was in Manukau (28,749). The strongest growth in Pacific Islands population was in the northern half of the North Island, particularly in Rodney (61.4%), Hamilton (59.7%) and Tauranga (56.4%).

Hamilton, Manukau and Tauranga experienced the greatest increase in Maori population, while Auckland was the only city to experience a decline in the Maori population.

### Ethnic projections

Ethnic projections for the cities indicate that there will be lower proportions of the population identifying with European ethnicities.<sup>10</sup> In contrast, the Maori, Asian and Pacific Islands share of the population is generally projected to increase in the cities.

Porirua is projected to have the highest Pacific Islands share in 2016, with Auckland having the highest Asian share. Rodney is projected to have the largest numerical increase in New Zealand European population during 2001 to 2016 and Manukau is projected to have the largest numerical increase in Maori and Pacific populations.

<sup>10</sup> Statistics New Zealand ethnic population projections 2001 base.



# Age

## 1. People

- Manukau and Porirua have the youngest populations with just over a quarter of their population under 15 years of age.
- Despite the national trend of an ageing population, eight of the 12 cities have a median age younger than the national median of 35.9 years.

### What this is about

The age structure of a community is one of its fundamental characteristics. It impacts on the range of services, facilities and opportunities that need to be planned for and provided at a local level.

This indicator uses Census data to show the proportion of the population in certain age bands in each city. Measures for this indicator include:

- Age structure
- Current and projected age.

### What did we find?

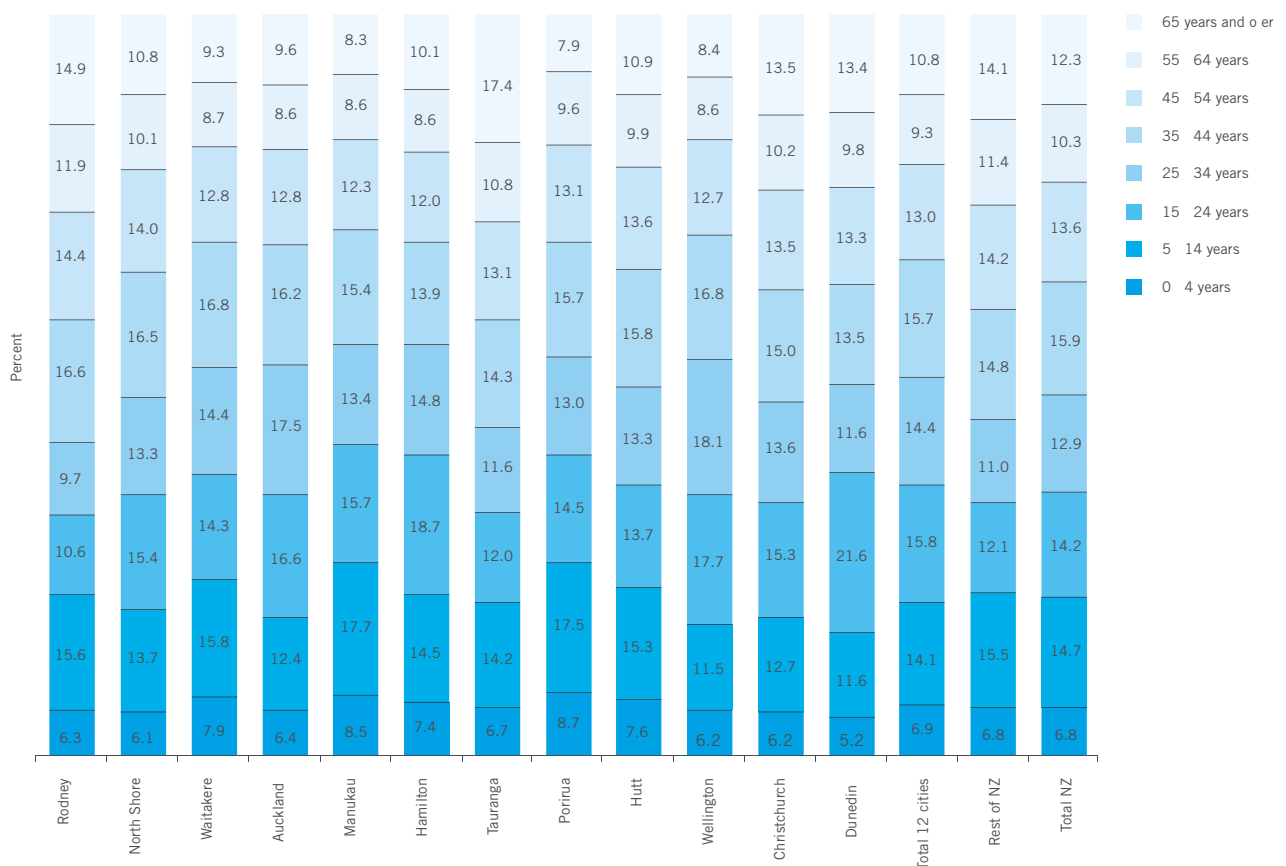
#### Age structure

Manukau and Porirua had the youngest populations, with more than one in four (26.2%) being 15 years and under, compared to the rest of New Zealand where 22.3% of the population is under 15 years of age.

Cities offer wide-ranging work and tertiary educational opportunities, which tend to attract a higher proportion of people aged between 15 to 44 years. The proportion of population in the 12 cities in this age band was 45.8% compared to 37.9% in the rest of New Zealand. Wellington and Auckland, in particular, had an especially high proportion of their populations in the 15 to 44 age group (52.6% and 50.3% of their population respectively).

Tauranga and Rodney had the highest proportion of older people (65 years and over) with 17.4% and 14.9% respectively. They also had the greatest proportion of people in the 55 to 64 years age group.

Age structure (2006)



Data source: Statistics New Zealand, Census 2006

## Age continued

The New Zealand European population of the 12 cities continued to have significantly larger proportions in the older age cohorts (14.0% aged 65 years and over) than Maori (3.1%), Pacific Islands (4.0%) and Asian populations (4.9%).

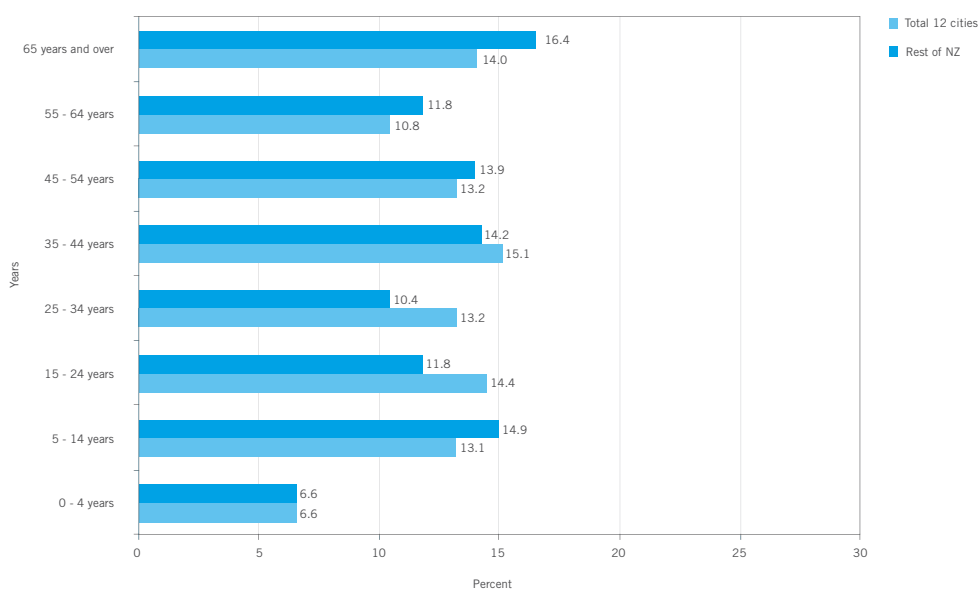
The Pacific Islands and Maori populations had the youngest age structures within the main ethnic groups.

The Asian population structure in cities was similar to that in the rest of New Zealand. The exception to this is the 15 to 24 years age group, which had a much higher representation in the cities

(22.5%) compared with the rest of New Zealand (18.0%). This is likely to be due to attendance at tertiary education facilities located in the larger cities.

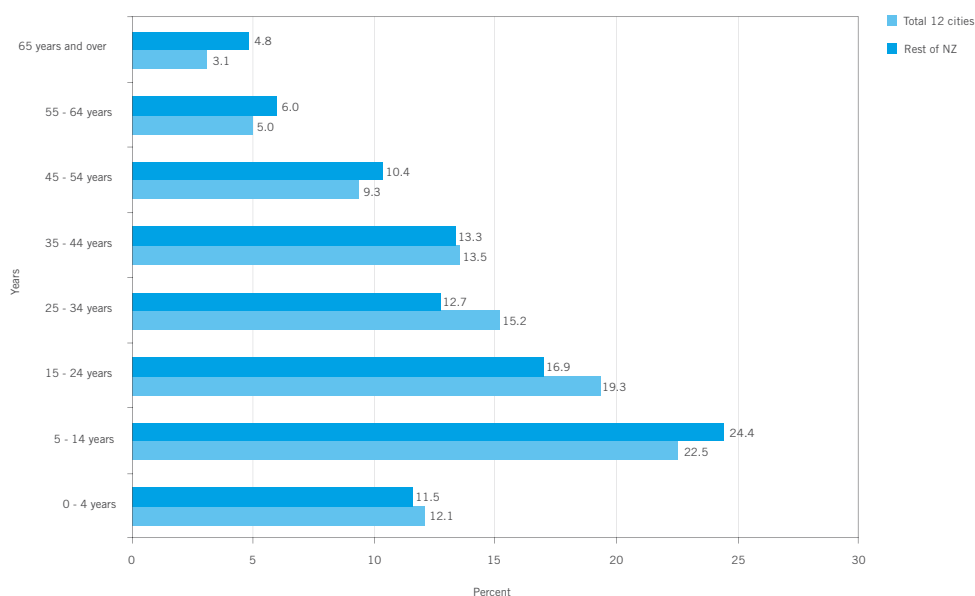
Comparing the age structures of the 12 cities with the rest of New Zealand, the proportion of those aged 45 years and over was lower in the 12 cities across all ethnic groups, with the exception of the Pacific Islands population.

**New Zealand European age structure (2006)**



Data source: Statistics New Zealand, Census 2006

**Maori age structure (2006)**

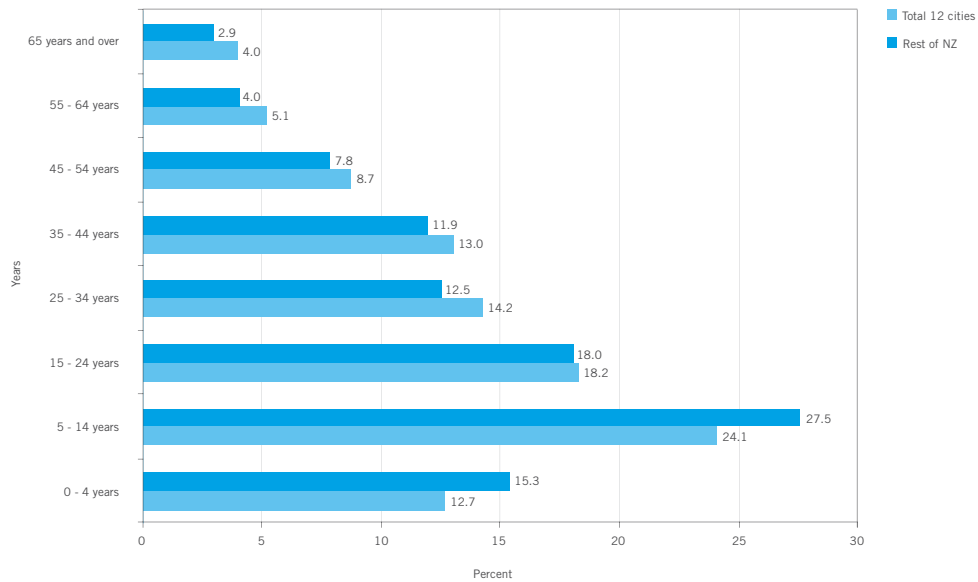


Data source: Statistics New Zealand, Census 2006

## 1. People

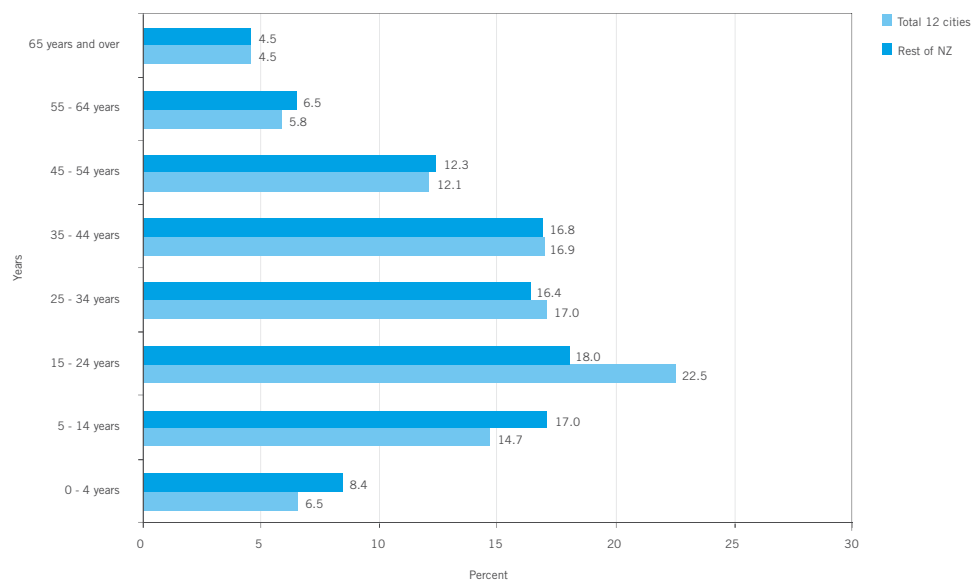


Pacific Islands age structure (2006)



Data source: Statistics New Zealand, Census 2006

Asian age structure (2006)



Data source: Statistics New Zealand, Census 2006

# Age continued

## Current and projected age

New Zealand, like most westernised countries, is experiencing an ageing of the population, particularly in working age cohorts. Nationally, the median age has increased from 34.0 years in 2001 to 35.9 in 2006. This trend of population ageing is expected to continue, with the median age for New Zealand reaching 41.4 by 2026.

The median ages in our cities, in part, reflects their ethnic make up. The median age in 2006 was higher in Rodney, Christchurch, Tauranga and North Shore than the national median. This is projected to continue to be the case until 2026. Of the 12 cities, Rodney is forecast to have the highest median age by 2026 at 44.0 years. Hamilton is forecast to have the lowest median age at 35.3.

## Current and projected median age in years (2001 to 2026)

	2001	2006	2011	2016	2021	2026
Rodney	38.5	39.7	41.0	42.2	43.2	44.0
North Shore	35.4	36.1	37.4	38.5	39.5	40.3
Waitakere	32.3	33.1	34.3	35.5	36.5	37.5
Auckland	33.3	34.0	35.3	36.6	38.0	39.2
Manukau	30.7	31.2	32.6	33.7	34.7	35.7
Hamilton	30.6	31.2	32.3	33.2	34.2	35.3
Tauranga	37.8	38.8	40.3	41.6	42.6	43.5
Porirua	30.6	32.0	33.8	35.5	37.1	38.7
Hutt	33.7	35.3	36.9	38.5	39.8	40.9
Wellington	32.9	33.3	34.5	35.8	37.1	38.3
Christchurch <sup>11</sup>	35.3	36.3	38.2	39.9	41.1	42.3
Banks Peninsula	40.9	43.3	45.8	48.0	50.0	51.3
Dunedin	33.9	34.4	35.3	36.2	37.6	39.2
<b>Total NZ</b>	<b>34.0</b>	<b>35.9</b>	<b>37.7</b>	<b>39.1</b>	<b>40.3</b>	<b>41.4</b>

Data source: Statistics New Zealand – totals rounded



11 Banks Peninsula is reported separately to Christchurch figures due to data availability.

## Families and households

### 1. People

- The number of households in Rodney is increasing at more than double the national growth rate for households.
- One-family households are the dominant form of households in the 12 cities, reflecting the national composition of households.
- Manukau has the highest proportion of households with two or more families.

### What this is about

Household composition can reflect the impact of changing social trends (e.g. later marriages, lower fertility rates and independent living), economic pressures (such as housing costs, tertiary education fees and incomes) and cultural preferences (e.g. extended family and intergenerational living). Changes in the number of households and people's living arrangements can have major implications for urban communities and their environments. These issues can directly impact on the appropriateness of existing housing stock, the types of dwellings people choose to live in, the amount of residential land used and the location of housing and growth in associated social and physical infrastructure. Changing household composition can also have an impact on the demand for housing.

This indicator includes a number of census derived measures that reflect the living arrangements within the 12 cities. Measures for this indicator include:

- Number of households
- Household composition
- Average household size (occupancy rate)
- Family type.

### What did we find?

#### Number of households

Since 2001, the number of households has increased in all of the 12 cities. In total, the 12 cities accounted for 53.3% of household growth in New Zealand.

With the exception of Porirua, Hutt and Dunedin, all of the cities grew at a greater rate than total New Zealand (8.2%). Rodney (16.8%), Tauranga (14.4%) and Manukau (13.6%) experienced the greatest percentage growth, while Auckland and Manukau experienced the greatest growth in absolute numbers (12,477 and 11,262 respectively).

#### Total households in private occupied dwellings (2001, 2006)

	2001	2006	Change 2001 – 2006	
	Number	Number	Number	%
Rodney	28,185	32,910	4,725	16.8
North Shore	66,012	72,114	6,102	9.2
Waitakere	55,656	61,836	6,180	11.1
Auckland	130,530	143,007	12,477	9.6
Manukau	83,019	94,281	11,262	13.6
Hamilton	40,962	45,723	4,761	11.6
Tauranga	34,911	39,951	5,040	14.4
Porirua	14,748	15,396	648	4.4
Hutt	34,332	35,361	1,029	3.0
Wellington	61,812	67,713	5,901	9.5
Christchurch	125,034	133,746	8,712	7.0
Dunedin	43,287	44,391	1,104	2.6
<b>Total 12 Cities</b>	<b>718,488</b>	<b>786,429</b>	<b>67,941</b>	<b>9.5</b>
<b>Rest of NZ</b>	<b>625,779</b>	<b>667,746</b>	<b>41,967</b>	<b>6.7</b>
<b>Total NZ</b>	<b>1,344,267</b>	<b>1,454,175</b>	<b>109,908</b>	<b>8.2</b>

Data source: Statistics New Zealand Census, 2001, 2006 – totals rounded



## Families and households continued

### Household composition

This measure examines the different combinations of family and non-family households living in our cities.<sup>12</sup> While household living arrangements in the 12 cities were similar to the rest of New Zealand, there were marked differences between the cities.

The most common household structure in New Zealand and in the 12 cities, was one-family households. Rodney, North Shore, Porirua, Manukau and Waitakere all had higher shares of one-family households than the rest of New Zealand.

Auckland, Wellington and Dunedin had lower proportions of one-family households. These three cities all have tertiary

institutions and had correspondingly higher proportions of other multi-person households. In Auckland and Wellington this could be attributed, at least in part, to people moving to these cities for employment and living in non-family households.

Manukau had the highest proportion of two-family households (7.5%) and three or more family households (0.9%). This was in part due to the high concentration of Pacific Islands families with extended family structures.

Dunedin, Christchurch and Wellington respectively had the highest proportion of one-person households, while Manukau had the smallest proportion of one-person households (13.7%).

### Household composition (2006)

	One - family %	Two - family %	Three - or more family %	Other multi - person %	One - person %	Unidentifiable %
Rodney	73.2	1.3	0.0	2.6	20.2	2.1
North Shore	72.3	2.9	0.2	4.7	18.8	1.2
Waitakere	70.1	4.4	0.3	3.9	17.8	3.5
Auckland	62.1	3.3	0.3	8.2	23.2	2.9
Manukau	71.3	7.5	0.9	3.5	13.7	3.1
Hamilton	65.6	2.6	0.2	7.4	21.8	2.4
Tauranga	68.7	1.7	0.1	4.5	23.6	1.3
Porirua	72.1	4.5	0.4	3.6	16.8	2.7
Hutt	68.4	2.8	0.2	4.1	23.7	0.9
Wellington	62.0	1.7	0.1	9.8	24.6	1.7
Christchurch	65.5	1.7	0.0	6.7	25.1	1.0
Dunedin	62.9	1.1	0.0	8.7	26.1	1.1
<b>Total 12 cities</b>	<b>66.9</b>	<b>3.1</b>	<b>0.2</b>	<b>6.1</b>	<b>21.5</b>	<b>2.1</b>
<b>Rest of NZ</b>	<b>68.8</b>	<b>1.8</b>	<b>0.1</b>	<b>3.7</b>	<b>23.8</b>	<b>1.8</b>
<b>Total NZ</b>	<b>67.8</b>	<b>2.6</b>	<b>0.2</b>	<b>5.0</b>	<b>22.6</b>	<b>1.9</b>

Data source: Statistics New Zealand, Census 2006

The percentage of households with two or more families resident increased nationally from 2.1% in 2001 to 2.7% in 2006. This trend was also evident in all of the 12 cities. Manukau (8.4%)

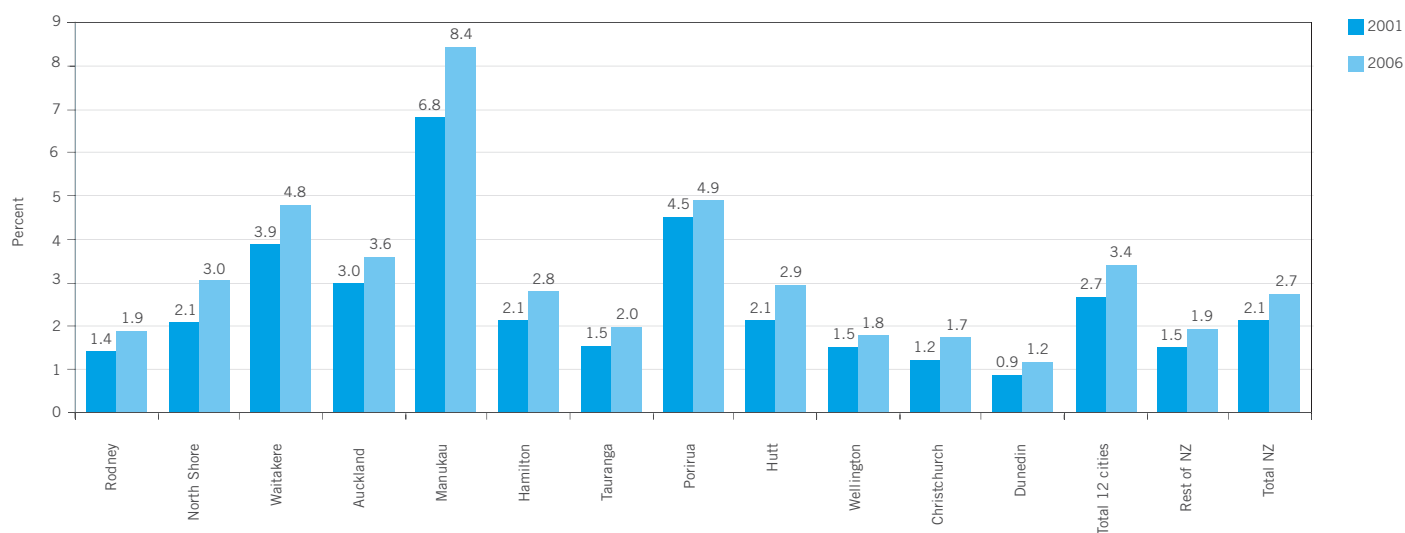
had more than three times the national rate (2.7%) of households with two or more families resident.

<sup>12</sup> The concept of 'family' explored in the Census is fairly Eurocentric and is still based around predominantly European definitions of nuclear family structures. As our cities are becoming more ethnically and socially diverse it may be beneficial to broaden definitions of family in order to explore the more complex notions of households.

## 1. People



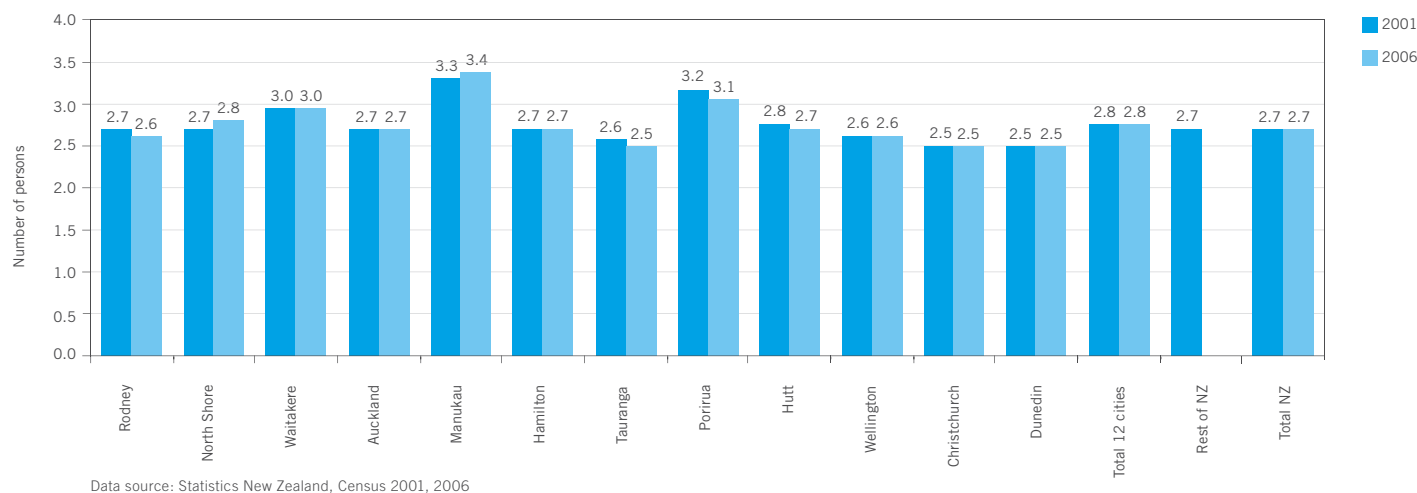
Percentage of households with two or more families resident (2001, 2006)



## Average household size (occupancy rate)

Average household size declined in New Zealand from 2.8 persons in 1996 to 2.7 in 2006. Average household size was notably higher in Manukau, Porirua and Waitakere than the rest of New Zealand and the other cities.

Household size also decreased in most of the 12 cities. It is expected that this trend will continue due to population ageing, delayed relationship formation and delayed parenting by young people.

Average household size<sup>13</sup> (2001, 2006)

13 Data for the Rest of New Zealand for 2006 was not available.

## Families and households continued

### Family type

Family type classifies family units according to the presence or absence of couples, parents and children usually residing in the same dwelling. It is an important measure as family living arrangements become more complex in our cities.

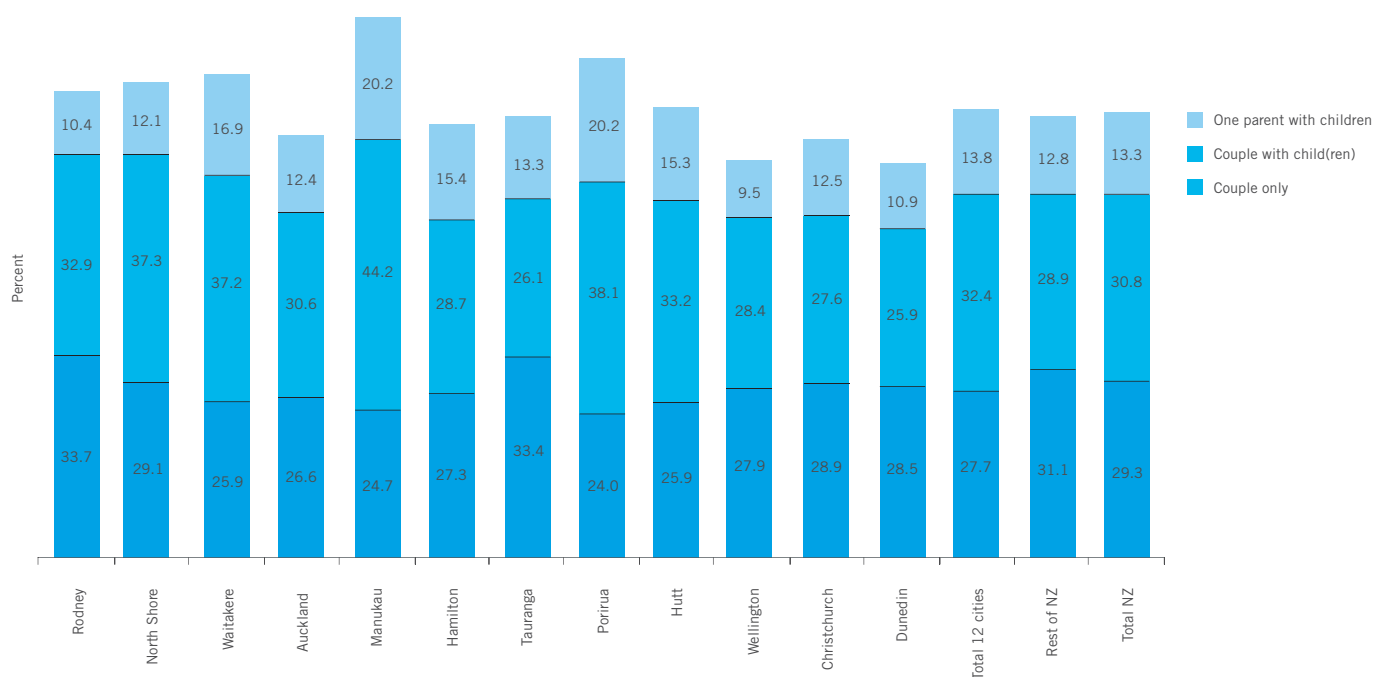
The one-parent family is an important category to monitor as it is often reflected in other indicators of disadvantage. One-parent families are more likely to be dependent on government assistance or have lower household incomes than other family types. Lower household incomes impact on families' ability to meet basic needs and to participate in the community.

The proportion of one-parent families continued to increase across the 12 cities, with the exception of Dunedin. Manukau and Porirua had the highest proportion of one-parent with child(ren) families, with two out of ten families comprising of this type. Wellington, Rodney and Dunedin had the lowest proportions of one-parent families.

Couples with child(ren) were a more common family type in the Auckland region and Porirua. The lowest proportion of families comprising couples with child(ren) were in Dunedin and Tauranga. The high number of students residing in Dunedin and the older population of Tauranga is likely to have influenced this pattern.

Couple-only families comprise two distinct family groups. First, couples whose children have become independent adults and left home and second, those who have no children by choice, infertility or who have not yet started a family. Rodney, Tauranga and the rest of New Zealand all had higher proportions of couple-only families than nationally. These two cities had higher proportions of people aged over 65 years, which contributed to this pattern.

Family type as a percentage of total households in private occupied dwellings (2006)



Data source: Statistics New Zealand, Census 2006

Nationally, one-parent with child(ren) (5.9%) and couple with child(ren) (9.8%) categories grew at a slower rate than other family types (10.3%) between 2001 and 2006. Conversely, the couple without child(ren) category grew at a faster rate than other family types.

Rodney experienced the strongest growth in the number of households containing families (20.0%), followed by Manukau

at 18.4%. In Rodney, growth was strongest in the families comprising couples with child(ren) (23.5%).

The cities that experienced the slowest growth in households comprising families were Porirua, Dunedin and Hutt. These cities had more in common with growth patterns found in the rest of New Zealand than those found in the other nine cities.

## 1. People



## Percentage change in family type (2001 to 2006)

	Couple without child(ren) %	Couple with child(ren) %	One parent with child(ren) %	Total %
Rodney	18.6	23.5	14.1	20.0
North Shore	13.2	15.4	8.7	13.5
Waitakere	15.4	12.7	11.6	13.3
Auckland	15.7	15.7	7.3	14.1
Manukau	15.0	20.4	18.4	18.4
Hamilton	16.6	14.6	8.1	13.9
Tauranga	18.0	17.5	9.3	16.1
Porirua	6.1	2.5	1.7	3.4
Hutt	5.8	3.1	6.8	4.8
Wellington	15.0	10.0	7.2	11.7
Christchurch <sup>14</sup>	16.9	13.5	5.8	13.4
Dunedin	8.5	2.9	-5.6	3.7
<b>Rest of NZ</b>	<b>11.9</b>	<b>5.2</b>	<b>2.6</b>	<b>7.5</b>
<b>Total NZ</b>	<b>13.0</b>	<b>9.8</b>	<b>5.9</b>	<b>10.3</b>

Data source: Statistics New Zealand, Census 2001, 2006

## Disabilities

The most recent statistics on disabilities were gathered in the 2001 Disability Survey, which included separate surveys of those in households and those in residential facilities.<sup>15</sup> Information on disabilities is currently being collected by Statistics New Zealand and final counts were not available in time for this report.

The key results from the 2001 survey show that one in five New Zealanders had a disability and that disability increased with age. The majority of disabled people had more than one disability, with physical disabilities being the most common type of disability. The number of people with mild disabilities decreased with age and the number with moderate disabilities increased.<sup>16</sup>

With an increasing and proportionately older population, different health and disability issues are likely to increase over the next ten to 20 years. Many developed countries have recognised that the post World War II baby boomers will retire from work during this period and that this could have a significant impact on the delivery of health and disability services.

If available, the rates of disability by age and sex and per 100,000 of population living in urban and rural households are indicators that will be included in future reports.

## Maori wellbeing

While no single measure of wellbeing exists, measures such as personal income, education levels and health are often used to build up an overall picture. There is widespread concern, however, that these statistics do not reflect Maori wellbeing.

Both Maori and non-Maori recognise that good quality statistical information is required to inform debate, decision making and research and to assist in monitoring the effects of government policies and programmes relating to Maori.<sup>17</sup>

More recently, a Maori statistics framework has been developed by Statistics New Zealand that focuses on Maori development and wellbeing. The specific focus of the framework is Maori development, which is seen as the process for improving Maori wellbeing. The framework views Maori wellbeing as a function of the capability of Maori individuals and collectives to live the kind of life that they want to live.

The framework is structured around areas of interest and dimensions of Maori wellbeing. The information required to measure the dimensions of wellbeing includes:

- Sustainability of Te Ao Maori (e.g. use of the language, spoken proficiency)
- Social capability ('capital' is a word that Maori do not use in relation to people and social relations)
- Human resource potential
- Economic self-determination
- Environmental sustainability
- Empowerment and enablement.

There is still a great deal of work to be done in this key area.

<sup>14</sup> Christchurch figures exclude Banks Peninsula due to data availability.

<sup>15</sup> See [www.stats.govt.nz](http://www.stats.govt.nz)

<sup>16</sup> The severity of the disability is a measure of the respondent's intensity and extent of the disability. Respondents were assigned a rating of either 'mild', 'moderate' or 'severe' based on their need for assistance and/or special equipment relating to their disability. Those with 'moderate' disabilities use, or have an unmet need for, some type of assistive device, aid or equipment. Those with 'severe' disabilities receive daily assistance with tasks such as bathing, preparing meals etc.

<sup>17</sup> Statistics New Zealand. (2002). *Towards a Maori statistics framework: A discussion document*.

## Chapter Two

# Knowledge and skills

### What's in this chapter?

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Participation in  
early childhood education

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School participation

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Qualification levels

---

Skill and job match

---

Career training







## Introduction

## 2. Knowledge and skills

**This chapter provides an overview of the state of educational participation and achievement in our cities. Understanding the state of education provides an insight into the knowledge and skills of residents and how they can apply these to improve their quality of life.**

### Why this is important

Educational achievement is essential for effective participation in society. Increasingly, urban societies are becoming knowledge-based and urban economies require innovative solutions to meet market demands. People's ability to up-skill and re-skill during their working lives is important if they are to keep pace with rapidly changing work environments. Access to life-long learning opportunities is also related to people's need for self-fulfilment and self-determination.

### Key points

Participation in early childhood education has increased overall in the 12 cities. However, levels of attendance still remain low in Manukau and for Maori and Pacific Islands children.

Maori and Pacific Islands students are over-represented in school stand-down, suspension, exclusion and truancy figures.

Nationally, 22.6% of school leavers do not have National Certificate of Educational Achievement (NCEA) level one credits in literacy and numeracy.

Across the 12 cities there has been growth in the percentage of people who have an educational qualification. In the cities, people are less likely to have no qualifications compared with those in the rest of New Zealand.

There has also been an increase in the number of active trainees in industrial training and modern apprenticeships from 2004 to 2006.

### Links to other indicators

There are strong links between socio-economic status and levels of educational participation and achievement. Over the long term, poor educational performance at school makes it harder for individuals to achieve good levels of income, with consequent implications for health, housing quality, participation in community life and eventually the educational achievement of their own children.



## Participation in early childhood education

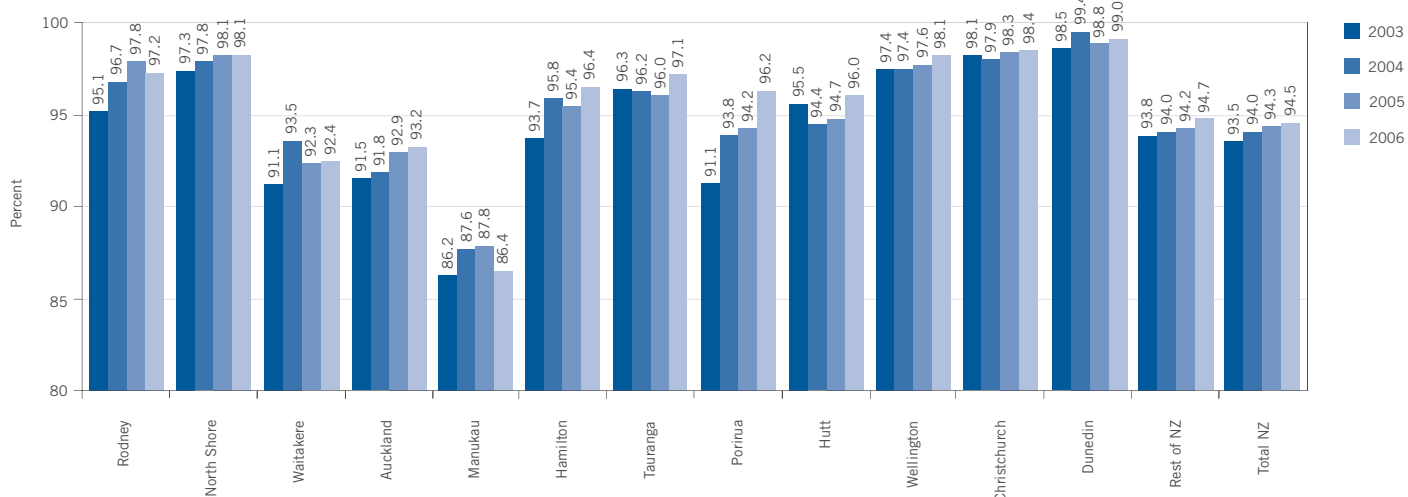
- Participation levels in early childhood education have increased in the 12 cities over the last five years.
- Manukau has the lowest attendance level of the 12 cities.
- The majority of early childhood education participation takes place in a kindergarten, playcentre, education and care service or home-based locations.
- Almost one in five Pacific Islands children do not attend an early childhood education centre.

### What this is about

Early childhood education (ECE) is a critical first step in building the foundation for a child's ongoing learning and development.<sup>1</sup> The stimulation of learning at an early age has an important bearing on future educational achievement. Social interaction with other children at pre-schools is beneficial and is likely to make the transition to formal schooling easier.

This indicator shows early childhood education participation rates from 2003 to 2006. It reflects the number of children aged five years and under enrolled in early childhood education centres or home-based education programmes as a proportion of all children aged five years and under.<sup>2</sup>

Percentage of year one students who had attended an early childhood education centre (2003 to 2006)



Data source: Ministry of Education

### What did we find?

Participation levels in early childhood education have increased in the 12 cities over the last five years.

Participation levels increased nationally from 2003 to 2006, with the largest increase in attendance of the 12 cities occurring in Porirua (5.1%).

Differences were apparent between cities in 2006. Dunedin had the highest attendance level with 99.0% of children attending an ECE centre, while Manukau had the lowest attendance level with 86.4% of children attending an ECE centre. This was still higher than the rest of New Zealand figure of 83.5%.

1 Ministry of Education. (2002). *Pathways to the Future: Nga Huarahi Arataki: A 10-year strategic plan for early childhood education 2002-2012*.

2 Type of Service is shown as a percentage of the total of students who identified whether they attended ECE or not. Students who did not identify whether or not they attended ECE have been removed from student count.

## 2. Knowledge and skills



Percentage of early childhood education attendance by provider (2006)

	Kindergarten, Playcentre, Education & Care services or Home-based %	Kohanga Reo %	Playgroup or Pacific ECE %	Attended ECE but type unknown %	Did not attend %
Rodney	92.7	0.8	0.2	3.5	2.8
North Shore	93.9	1.5	0.6	2.1	1.9
Waitakere	84.0	3.1	4.7	0.6	7.6
Auckland	83.5	2.5	4.3	2.9	6.8
Manukau	74.1	4.8	6.2	1.3	13.6
Hamilton	88.1	6.1	1.1	1.2	3.6
Tauranga	90.2	4.0	1.6	1.4	2.9
Porirua	79.1	9.0	6.8	1.4	3.8
Hutt	85.2	6.7	2.5	1.5	4.0
Wellington	92.3	1.4	2.1	2.2	1.9
Christchurch	94.9	1.2	1.4	0.9	1.6
Dunedin	96.6	0.9	1.3	0.2	1.0
<b>Rest of NZ</b>	<b>83.5</b>	<b>8.4</b>	<b>1.8</b>	<b>1.0</b>	<b>5.3</b>
<b>Total NZ</b>	<b>85.1</b>	<b>5.5</b>	<b>2.5</b>	<b>1.4</b>	<b>5.5</b>

Data source: Ministry of Education

The majority of ECE participation takes place in a kindergarten, playcentre, education and care service or home-based location.

Nationally, differences can be seen in attendance across ethnic groups, with a larger percentage of Pacific Islands preschoolers (15.8%) not attending ECE providers. This pattern was also seen

in the 12 cities, with the Pacific Islands group consistently having the highest percentage of children not attending ECE centres. This is seen especially in the Auckland region with non-attendance rates as high as 20.4% in Manukau.

Percentage of non-attendance at early childhood education by ethnicity (2006)

	NZ European %	Maori %	Pacific Islands %	Asian %	Other %	Total %
Rodney	1.7	10.6	4.2	0.0	0.0	2.8
North Shore	1.0	4.7	14.3	0.5	0.9	1.9
Waitakere	2.7	8.9	15.8	7.8	14.7	7.6
Auckland	0.6	12.6	16.8	4.7	13.3	6.8
Manukau	2.9	20.7	20.4	4.6	6.5	13.6
Hamilton	1.1	6.6	8.7	2.7	6.7	3.6
Tauranga	1.0	8.2	3.4	0.0	0.0	2.9
Porirua	0.3	4.2	8.2	0.0	9.1	3.8
Hutt	1.6	6.5	10.4	2.6	6.7	4.0
Wellington	0.6	4.8	4.4	2.2	10.0	1.9
Christchurch	1.2	2.1	5.3	2.2	8.4	1.6
Dunedin	0.7	1.6	2.0	0.0	12.0	1.0
<b>Rest of NZ</b>	<b>2.6</b>	<b>10.0</b>	<b>12.7</b>	<b>5.2</b>	<b>7.7</b>	<b>5.3</b>
<b>Total NZ</b>	<b>2.0</b>	<b>10.1</b>	<b>15.8</b>	<b>4.0</b>	<b>8.6</b>	<b>5.5</b>

Data source: Ministry of Education

## School participation

- Maori and Pacific Islands students continue to be over-represented in stand-down, suspension and exclusion figures.
- There has been an increase in the truancy rate recorded in many of the 12 cities.
- There has been an increase across the 12 cities in students receiving early leaving exemptions.

### What this is about

Participation in school and education is an important foundation block for an individual's development. Lack of participation may be symptomatic of behavioural problems and other social factors that exist, such as the perceived value placed on education by parents.

School suspension, stand-downs and exclusions tend to highlight serious behavioural problems experienced by students at school.<sup>3</sup> The cause of such behavioural problems is complex and, in many cases, is likely to be related to other problems within a student's personal life. These problems will have an impact on the student's capacity to learn.

Over time, patterns of non-attendance can place students at risk of poor achievement and early drop-out, thus compromising their later outcomes in life across a range of social and economic measures.<sup>4</sup>

Students who truant not only miss out on class work, but also run an increased risk of alienation from the education system. Truancy students are at a greater risk of dropping out of school entirely.<sup>5</sup>

Measures used to explore school participation are:

- Percentage of students stood-down, suspended and excluded
- Percentage of students truant
- Percentage of students under 16 years who have an early leaving exemption.

### What did we find?

#### Percentage of students stood-down, suspended and excluded

This measure illustrates the stand-down, suspension and exclusion rates (age-standardised per 1,000 students) for 2004, 2005 and 2006.<sup>6</sup>

Nationally there was an increase in the rate of students being stood-down and excluded from 2004 to 2006. Within the 12 cities, notable increases in the rate of stand-downs were in Rodney, Hutt and Manukau.

Differences can be seen between the 12 cities, with North Shore and Wellington consistently having low rates of stand-downs, suspensions and exclusions compared to the other cities. Within

the 12 cities, a decline was seen in the rate of suspensions for Waitakere, Tauranga, Wellington, Christchurch and Dunedin.

Nationally, Maori students had the highest rates of stand-downs and suspensions. In 2006, the age-standardised suspension rate for Maori students was 15.6 students per 1,000 students. This was higher than the rates for Pacific Islands students (10.6 students per 1,000), students in the 'Other' ethnicity category (6.5 per 1,000) and New Zealand European students (4.1 per 1,000). This trend was also apparent for the 12 cities.

Nationally, the main reasons for student stand-downs in 2006 were physical assaults on other students or staff (27.0%), continual disobedience (26.3%) and verbal assaults (17.2%).<sup>7</sup>



3 It should be noted that there may be substantial differences between the application of stand-down, suspension and exclusion practices between schools. Both are subject to guidelines issued by the Ministry of Education but are strongly influenced by the policies set by a board of trustees e.g. 'zero tolerance' to issues such as bullying or drugs.

4 Ministry of Education. (2006). *Attendance, Absence, and Truancy in New Zealand Schools in 2006*.

5 Ministry of Education. (2007). *Truancy from School*.

6 **Stand-down** is the formal removal of a student from school for a specified period. **Stand-downs** of a student can total no more than five school days in any term, or ten days in a school year. Following stand-downs, students return automatically to school. **Suspension** is the formal removal of a student from school until the board of trustees decides the outcome at a suspension meeting. Following a suspension the board may decide to lift the suspension with or without conditions, to extend the suspension, or in the most serious cases, to either exclude or expel the student. **Exclusion** means the formal removal of a student aged under 16 years from the school and the requirement that the student enrol elsewhere. **Expulsion** means the formal removal of a student aged 16 years or over from school. He or she may enrol in another school.

7 Ministry of Education. (2007). *Stand-downs and Suspensions from School*.

## 2. Knowledge and skills

Age-standardised rates per 1,000 students for stand-downs, suspensions and exclusions (2004 to 2006)<sup>8</sup>

	Stand-downs			Suspensions			Exclusions		
	2004	2005	2006	2004	2005	2006	2004	2005	2006
Rodney	28.5	31.4	36.2	10.5	12.4	11.9	2.2	3.1	2.5
North Shore	16.5	17.0	15.0	2.9	4.0	3.8	1.1	1.7	1.3
Waitakere	37.8	36.8	41.8	8.0	6.9	7.3	2.7	3	2.8
Auckland	19.8	22.7	24.1	5.8	6.4	6.0	2.9	3.1	2.8
Manukau	24.3	27.4	30.9	5.2	6.1	6.1	2.1	2.3	2.8
Hamilton	22.8	23.8	25.8	3.6	4.7	4.0	1.4	1.7	1.8
Tauranga	25.1	22.7	19.6	6.4	7.2	6.0	2.4	2.6	2.0
Porirua	37.2	37.1	36.8	9.8	8.5	9.9	3.4	4.4	2.4
Hutt	32.2	34.9	42.4	6.9	7.5	8.5	2.6	3.3	3.2
Wellington	16.4	13.4	14.2	4.2	4.0	3.7	1.1	1.0	0.6
Christchurch	30.7	35.3	32.7	5.4	6.5	5.2	1.8	2.4	1.8
Dunedin	21.0	27.7	24.0	4.6	4.6	4.4	2.1	2.0	1.8
<b>Total NZ</b>	<b>28.8</b>	<b>30.6</b>	<b>31.4</b>	<b>6.7</b>	<b>7.2</b>	<b>7.0</b>	<b>2.3</b>	<b>2.6</b>	<b>2.5</b>

Data source: Ministry of Education

Percentage of students truant<sup>9</sup>

This measure shows the percentage of students truant from school during a particular reference week.<sup>10</sup>

There was an increase nationally in the rate of truancy recorded from 2004 to 2006.

Manukau had the highest truancy rate of the 12 cities with 5.6% of students absent from school, while Dunedin had the lowest truancy with 2.8% of students absent from school.

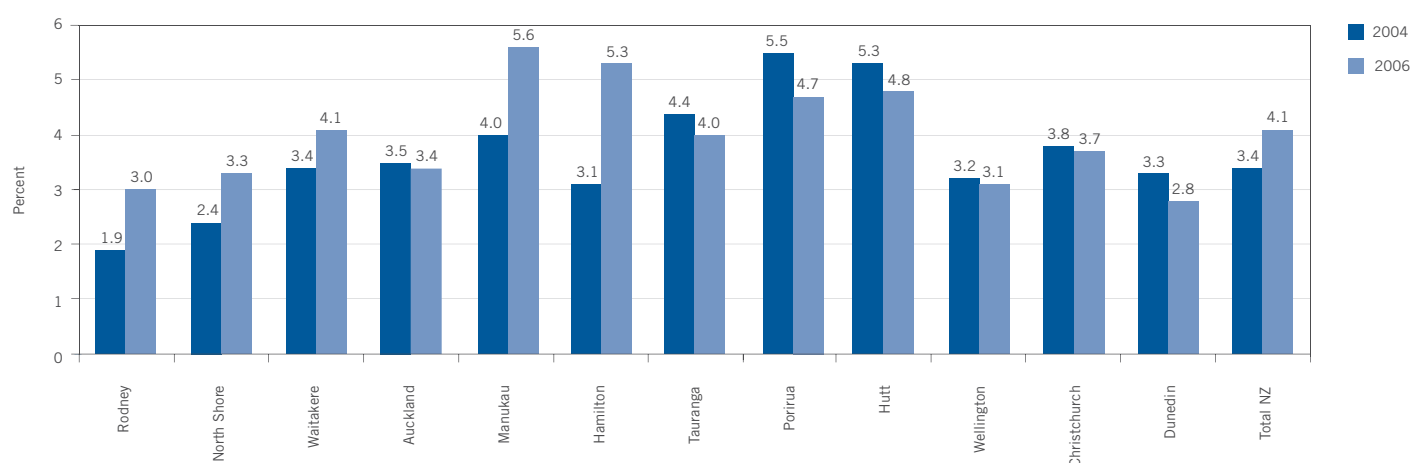
A number of cities saw a drop in the truancy rate between 2004 and 2006, with Porirua having the largest fall of 0.8%. Hamilton

however, showed the largest increase of the 12 cities with a 2.2% increase.

In 2006, Maori and Pacific Islands students had double the truancy rate when compared with New Zealand European and Asian students.<sup>11</sup>

There may be a relationship between increased risk of juvenile offending, truancy, school exclusions and non-engagement in education. Many young offenders do not participate in education and are likely to have low levels of educational attainment.<sup>12</sup>

Percentage of students truant (2004, 2006)



Data source: Ministry of Education, Truancy Survey

8 The age-standardised stand-down/suspension/exclusion rate is one where all subgroups, for all years being compared are artificially given the same age distribution. In this indicator, the age distributions of students in each subgroup and year have been standardised to (or weighted by) the set of 2005 age-specific stand-down/suspension/exclusion rates for all New Zealand. As stand-downs, suspensions and exclusions are highest for students aged 13 to 15 years, standardising for age will remove any differences due to one group having a younger or older population than other groups, or if the overall age distribution has changed from year to year. As such, the standardised rate is an artificial measure, but it does provide an estimate of how groups, or overall rates by year, might more fairly compare if they had the same age distribution.

9 Caution must be taken when examining the absence and truancy rates for each of the territorial local authority districts. The differences between local authorities make robust comparisons between them difficult. Some have small numbers of responding schools and would be sensitive to changes in absence rates in response to what was happening during the survey week for the schools in the territorial local authority.

10 The reference week for 2006 was 21 to 25 August 2006.

11 Ministry of Education. (2006). *Attendance, Absence, and Truancy in New Zealand Schools in 2006*.

12 Ministry of Justice. (2002). *Youth Offending Strategy: Report of the Ministerial Taskforce on Youth Offending*. Wellington.



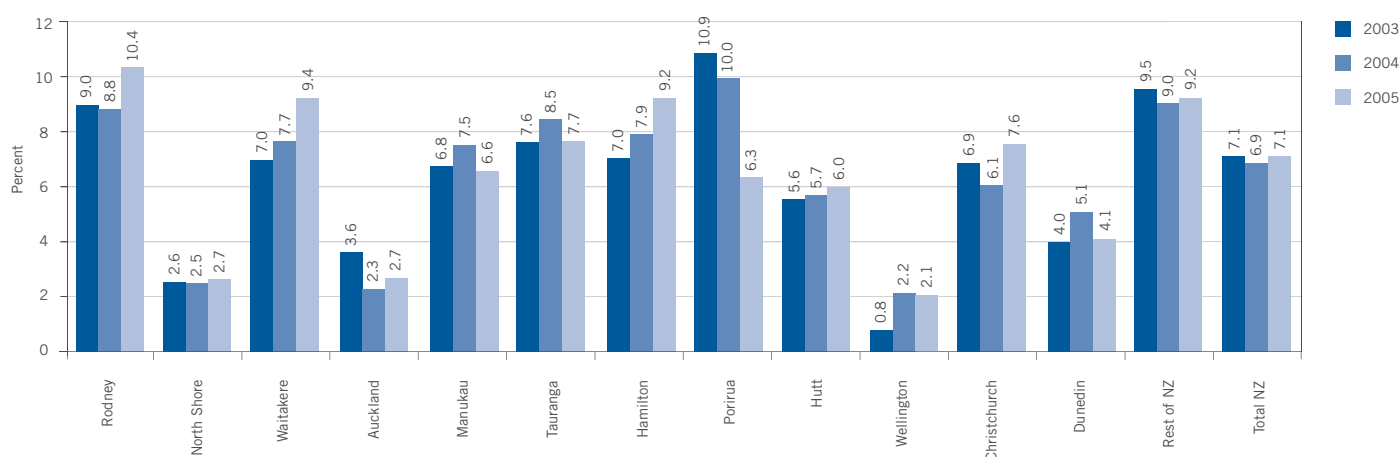
## School participation continued

### Percentage of students under 16 years who have an early leaving exemption

This measure shows the percentage of students under the age of 16 years who have received an early leaving certificate. School is compulsory for all students aged between six and 16 years.

However, parents of students aged 15 years may apply for an exemption from schooling on the basis of educational problems, conduct or the unlikelihood of the student gaining benefit from attending available schools.<sup>13</sup>

#### Percentage of students receiving an early leaving exemption (2003 to 2005)



Data source: Ministry of Education

Nationally, the percentage of students receiving an early leaving exemption remained stable from 2003 to 2005.

Looking at the 12 cities, there was an increase in the percentage of students under 16 years of age who received early leaving certificates in Rodney, Waitakere and Hamilton. Declines were seen in North Shore and Auckland.

There were low percentages of students receiving early leaving certificates in North Shore, Auckland and Wellington.

Nationally, a higher percentage (15.8% in 2005) of Maori students received early leaving certificates than other ethnicities.

There is a clear correlation between socio-economic factors and early leaving exemption rates. Lower decile schools (that draw students from communities with the highest levels of socio-economic disadvantage) have a higher rate of early leaving exemptions than higher decile schools.<sup>14</sup>

There is also a strong correlation between early school leavers and unemployment and/or lower incomes, which in turn are generally related to poverty and dependence on welfare.<sup>15</sup>



## Qualification levels

## 2. Knowledge and skills

- There has been a notable increase throughout New Zealand of people with a vocational or degree qualification.
- Nationally, there has been a decline in the percentage of school leavers with low attainment.
- In New Zealand, almost a quarter of school leavers do not have National Certificate of Educational Achievement (NCEA) level one credits in literacy and numeracy.

### What this is about

Individual and community levels of education have a strong positive association with a range of economic and social benefits. Measuring the qualification levels of a city's population aged 15 years and over helps to identify the job readiness of the future labour force. An educated population adds to the vibrancy and creativity of a city and is needed for a city to remain competitive in the global economy. Measures used to assess this indicator are:

- Highest level of qualification gained
- School leavers with low attainment
- Percentage of students who leave school without core literacy and numeracy credits, NCEA level one.

### What did we find?

#### Highest level of qualification gained

This measure shows the highest level of qualification gained within the population aged 15 years and over. Highest qualification refers to school qualifications, post-school qualifications (degree and vocational) and no qualification (including still at school).

Percentage of population aged 15 years and over within highest qualification categories (2001, 2006)

	No qualification %		School %		Vocational %		Degree %		Not elsewhere included %	
	2001	2006	2001	2006	2001	2006	2001	2006	2001	2006
Rodney	22.9	20.9	37.1	33.5	18.9	25	7.1	11.1	14.0	9.5
North Shore	14.7	12.9	41.6	36.4	19.3	22.7	14.6	21.3	9.9	6.7
Waitakere	22.8	21.1	37.9	33.4	16.5	20.6	8.1	13.0	14.9	11.9
Auckland	14.7	13.4	35.7	31.4	15.8	18.2	19.5	26.1	14.3	10.9
Manukau	24.4	23.2	36.6	33.4	15.1	18.9	7.4	11.2	16.5	13.2
Hamilton	21.8	20.0	35.5	31.7	18.7	21.8	12.5	16.8	11.4	9.8
Tauranga	25.6	23.9	33.9	30.4	19.6	25.6	6.4	10.2	14.6	9.8
Porirua	24.7	22.8	35.0	31.0	32.6	21.3	17.4	12.9	9.2	12.0
Hutt	23.4	22.7	34.8	31.8	18.4	22.3	11.1	14.8	12.3	8.5
Wellington	11.6	10.5	34.8	31.0	17.4	18.8	26.7	32.9	9.6	6.9
Christchurch	22.8	21.4	36.0	33.0	17.8	21.7	11.2	15.3	12.1	8.6
Dunedin	21.5	19.5	36.1	34.2	17.5	20.5	13.2	17.1	11.8	8.8
<b>Total 12 cities</b>	<b>19.9</b>	<b>19.3</b>	<b>36.4</b>	<b>33.0</b>	<b>17.6</b>	<b>20.8</b>	<b>13.6</b>	<b>16.6</b>	<b>12.9</b>	<b>10.3</b>
<b>Rest of NZ</b>	<b>28.5</b>	<b>26.3</b>	<b>32</b>	<b>29.4</b>	<b>17.6</b>	<b>22.6</b>	<b>5.9</b>	<b>11.0</b>	<b>15.5</b>	<b>10.5</b>
<b>Total NZ</b>	<b>23.7</b>	<b>22.4</b>	<b>34.5</b>	<b>31.4</b>	<b>17.6</b>	<b>21.6</b>	<b>10.1</b>	<b>14.2</b>	<b>14.1</b>	<b>10.4</b>

Data source: Statistics New Zealand, Census 2001, 2006

## Qualification levels continued

Throughout New Zealand there was a notable increase in people with a vocational or degree qualification. Part of this increase may be accounted for by the decrease in the percentage of people in 'not elsewhere included' categorisations.

Nationally, there was a small decline in the percentage of the population with no qualifications.

The decline in the percentage of the population with school qualifications was offset by the increase in those with vocational qualifications.

The percentage of people with qualifications in the 12 cities was higher than for the rest of New Zealand. Differences occurred across the 12 cities with Tauranga, Manukau, Porirua and Hutt respectively having high percentages of people without qualifications.

Larger differences in the percentage of people with degree qualifications were apparent between cities, ranging from 32.9% for Wellington to 10.2% for Tauranga. The cities with the largest percentage change from 2001 to 2006 were North Shore, Auckland and Wellington.

Educational qualifications are linked to labour force status and an individual's income level. According to a 2005 Organisation for Economic Co-operation and Development (OECD) report, New Zealand salary and wage earners with a bachelor's degree or higher earn 95.0% more per hour on average than those with no qualification.<sup>16</sup>

### School leavers with low attainment

This measure shows the percentage of school leavers with low educational attainment from 2003 to 2006.<sup>17</sup>

Nationally, there was a decline in the percentage of school leavers with low attainment, from 15.3% in 2003 to 11.1% in 2006.

Cities that saw consistent declines in low attaining school leavers were Manukau, Tauranga, Hutt and Dunedin.

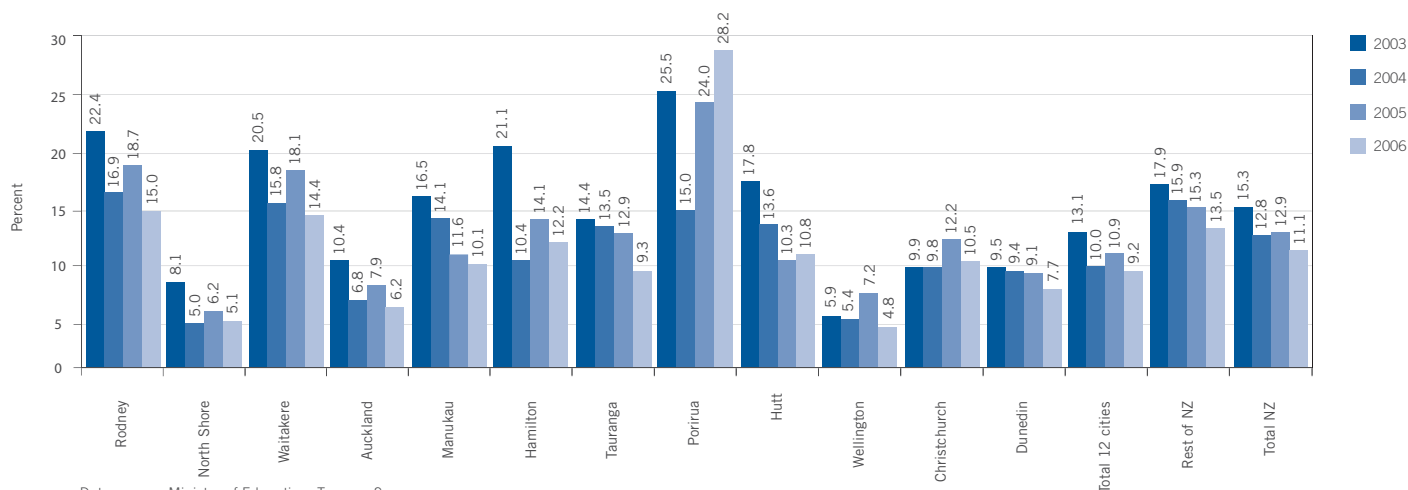
The highest percentage of school leavers with low attainment in 2006 was seen in Porirua (28.2%) and the lowest percentage in Wellington (4.8%). However, it should be noted that Porirua had a low number of school leavers compared to the other cities and this may have had an impact on figures.

Male students were more likely to leave school with little or no formal attainment than female students.

Maori students had the largest proportion of school leavers with little or no formal attainment.

There is a link between low educational attainment or lack of qualifications and unemployment. In New Zealand in 2005, people with no qualifications had an unemployment rate more than 50.0% higher than those whose highest qualification was a school qualification.<sup>18</sup>

Percentage of school leavers with low attainment (2003 to 2006)



16 OECD. (2005). *Education at a Glance: OECD Indicators 2005*. Paris: OECD. Cited in Ministry of Education. (2007). *School Leavers with No Qualifications*.

17 Low attainment in the period 2002 to 2004 was defined as those school leavers with no qualifications or one to 13 credits at any NCEA level.

18 Ministry of Education. (2007). *School Leavers with No Qualifications*.

## 2. Knowledge and skills

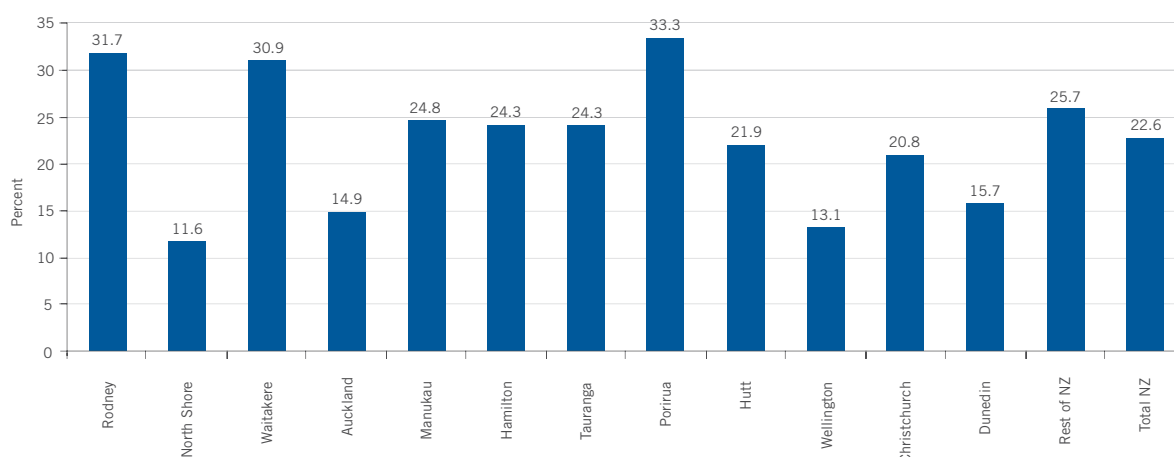
### Percentage of students who leave school without core literacy and numeracy credits, NCEA level one

This measure shows the percentage of students who leave school without core literacy and numeracy credits for 2005.<sup>19</sup>

Nationally, 22.6% of school leavers in New Zealand left school without having NCEA level one credits in literacy and numeracy. This was lower than the rest of New Zealand (25.7%).

Of the 12 cities, Porirua had the highest rate of school leavers without basic literacy and numeracy skills (33.3%). North Shore had the lowest rate (11.6%).

Percentage of school leavers without literacy and numeracy credits for NCEA level one (2005)



Data source: Ministry of Education, Truancy Survey



<sup>19</sup> Comparison with previous years is not possible due to methodological issues with the way the data was collected.

## Skill and job match

- The majority of New Zealand residents say they use their work skills, training and experience in their current jobs.
- Nationally, those in professional occupations have the highest percentage of masters and doctorate degrees.

### What this is about

Those with higher education levels are more likely to participate in the labour market, face lower risks of unemployment, have greater access to further training and receive higher earnings, on average.<sup>20</sup>

Movements in the relative measures of unemployment can reflect changes in the relative labour market value of particular skills and levels of education and changes in the skill requirements of the overall economy. The matching of individuals' skills and education level to the labour market will also reflect this.

Measures used to assess this indicator are:

- Perceptions of current job using work skills, training and experience
- Highest qualification by occupational grouping.

### What did we find?

#### Perceptions of current job using work skills, training and experience

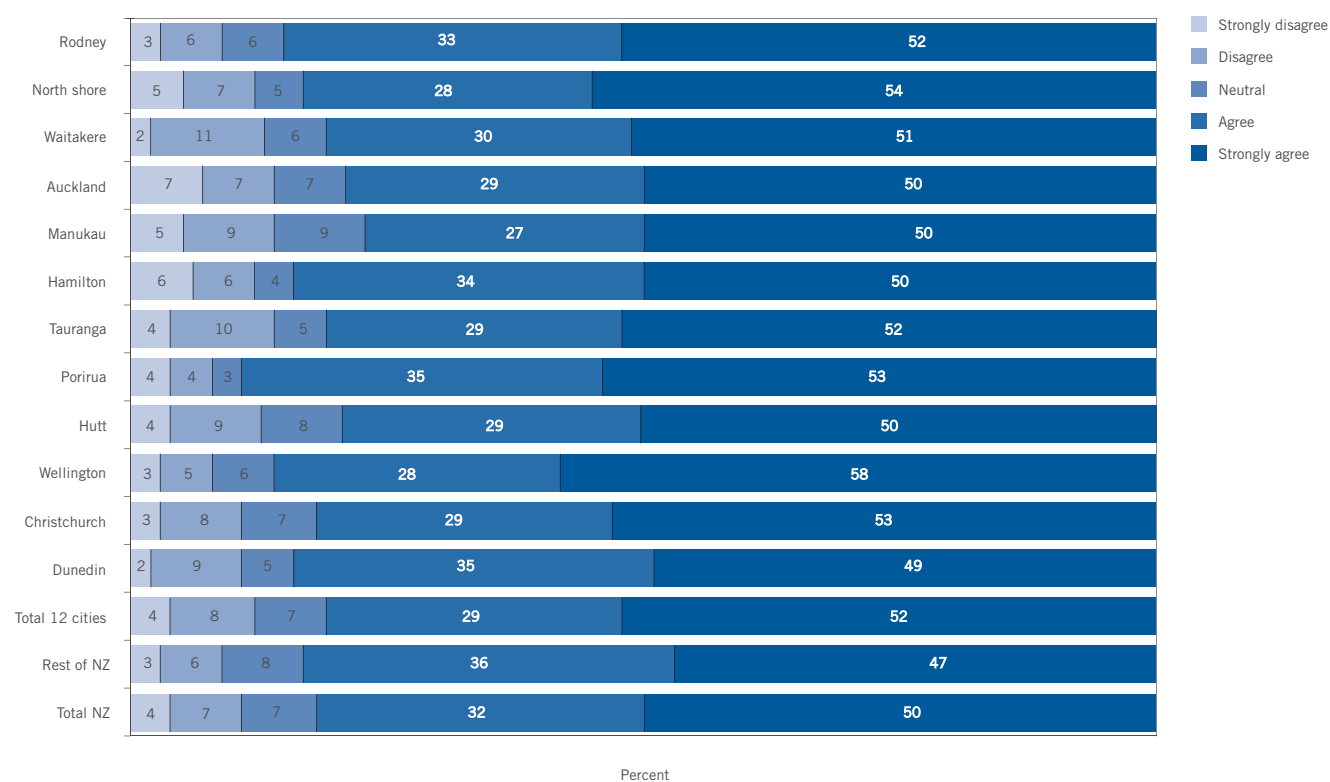
The majority of New Zealand residents felt they were using their work skills, training and experience in their current jobs. A small percentage (11.0%) felt that they were not.

Those living in the 12 cities were more likely to feel they were using their work skills, training and experience than those living in the rest of New Zealand.

Differences were apparent between cities, with Porirua residents most likely to agree (88.0%) and Manukau residents least likely (77.0%).

Nationally, those of Asian/Indian descent were more likely to feel they were not using their work skills in their current job.

Perceptions of current job using work skills, training and experience (2004)



Data source: Quality of Life Survey 2004



## 2. Knowledge and skills



### Highest qualification by occupational grouping

This measure shows the percentage of the New Zealand population over 15 years within highest qualification categories by occupational grouping.

Percentage of New Zealand population aged 15 years and over within highest qualification categories, by occupation (2001, 2006)

	No qualification %		School %		Vocational %		Degree %		Not elsewhere included %	
	2001	2006	2001	2006	2001	2006	2001	2006	2001	2006
Legislators, Administrators and Managers	14.3	11.8	41.0	36.3	22.8	26.7	17.9	23.3	4.1	2.0
Professionals	2.5	2.3	15.3	12.4	32.1	27.3	48.7	57.3	1.4	0.7
Technicians and Associate Professionals	9.7	9.2	38.5	33.5	31.3	32.5	17.3	22.8	3.3	2.0
Clerks	16.6	15.3	53.9	49.1	17.0	20.3	8.3	12.8	4.2	2.5
Service and Sales Workers	21.6	20.5	48.2	44.9	19.0	23.6	4.5	7.1	6.5	4.0
Agriculture and Fishery Workers	30.6	29.5	38.6	36.3	18.4	23.1	4.4	6.7	8.0	4.4
Trades Workers	21.2	19.3	31.3	26.7	38.2	47.9	1.4	2.2	7.9	3.8
Plant and Machine Operators and Assemblers	40.7	40.0	34.1	31.4	12.8	19.1	1.9	3.0	10.4	6.6
Labourers and Related Elementary Service Workers	40.5	39.3	37.3	35.4	10.3	15.2	2.1	3.8	9.8	6.4
Not Elsewhere Included	20.8	22.4	26.5	26.3	9.4	14.8	5.5	9.5	37.8	27.1
<b>Total</b>	<b>19.4</b>	<b>17.9</b>	<b>37.2</b>	<b>33.2</b>	<b>22.4</b>	<b>26.0</b>	<b>13.6</b>	<b>18.5</b>	<b>7.3</b>	<b>4.5</b>

Data source: Statistics New Zealand, Census 2001, 2006

Nationally, those in professional occupations had the highest percentage of degree and higher qualifications.

A higher percentage of professionals had no qualification in the rest of New Zealand compared to the 12 cities. There was a smaller percentage of plant and machine operators without a qualification in the 12 cities compared to the rest of New Zealand. Some differences were apparent in qualifications by occupation across the 12 cities. In 2006 Wellington had the highest percentage of professionals with a bachelor degree or higher. Porirua had the highest proportion of professionals without a qualification.

There has been an increase in the percentage of people in the Plant and Machine Operators and Assemblers category from 2001 to 2006. While there was a percentage of people with degrees within this category, overall the category had the highest percentage of those without a qualification.

Across the 12 cities, Hutt had the highest percentage of Plant and Machine Operators and Assemblers (41.7%) without a qualification and North Shore had the lowest (25.7%).

## Skill and job match continued

**Percentage of people by selected grouped highest qualification for those in professional and plant and machine operators and assemblers occupational categories (2001, 2006)**

	Professionals				Plant and Machine Operators and Assemblers			
	No qualification		Bachelor degree or higher		No qualification		Bachelor degree or higher	
	2001	2006	2001	2006	2001	2006	2001	2006
Rodney	3.2	2.2	38.1	47.7	37.9	37.6	1.9	1.8
North Shore	1.7	1.6	49.6	58.9	29.0	25.7	5.7	9.6
Waitakere	3.3	2.9	40.8	51.3	38.8	37.6	2.0	4.2
Auckland	1.2	1.0	62.1	70.4	31.0	30.2	5.5	9.8
Manukau	3.2	2.9	40.1	50.3	40.3	38.8	1.8	3.8
Hamilton	2.6	2.8	42.1	51.3	42.5	41.0	1.1	4.0
Tauranga	2.1	1.8	57.7	61.4	39.4	37.8	2.7	1.8
Porirua	2.9	3.0	41.9	51.0	43.8	41.3	1.5	1.5
Hutt	2.8	2.5	47.1	54.3	43.2	41.7	1.5	2.3
Wellington	0.9	0.8	65.9	72.7	30.8	27.6	5.4	8.0
Christchurch	2.2	1.7	49.9	58.1	40.0	38.3	2.5	3.7
Dunedin	2.0	1.7	58.8	65.4	40.0	39.3	2.0	2.9
<b>Total 12 cities</b>	<b>1.9</b>	<b>1.7</b>	<b>53.4</b>	<b>61.5</b>	<b>37.9</b>	<b>36.5</b>	<b>2.9</b>	<b>4.8</b>
<b>Rest of NZ</b>	<b>3.6</b>	<b>3.3</b>	<b>40.1</b>	<b>49.2</b>	<b>43.1</b>	<b>42.8</b>	<b>1.1</b>	<b>1.5</b>
<b>Total NZ</b>	<b>2.5</b>	<b>2.3</b>	<b>48.7</b>	<b>57.3</b>	<b>40.7</b>	<b>40.0</b>	<b>1.9</b>	<b>3.0</b>

Data source: Statistics New Zealand, Census 2001, 2006

The percentage of all New Zealanders without a qualification declined from 2001 to 2006. There was a corresponding increase over the same period of people in the Plant and Machine Operators and Assemblers category (which has the highest percentage of people without qualifications) having a bachelor degree or higher. This increase was marked in Auckland and North Shore.



## Career training

### 2. Knowledge and skills

- There has been an increase both nationally and in the 12 cities, in the number of active trainees in industrial training and modern apprenticeships.

#### What this is about

Industry training and modern apprenticeships have an important role to play in both the education sector and the economy. The presence of this training provides an opportunity for individuals to learn skills in areas where a demand exists. The benefits of this training are both to the individual and to the industry. There is also benefit to the economy as a whole.<sup>21</sup> Industry training concentrates on workplace learning that raises skills and boosts competitive advantage for businesses.<sup>22</sup>

Workplace training can be on-job, off-job by a registered training provider, or a combination of both. There are 40 Industry Training Organisations throughout the country, established by particular industries or groups of industries.<sup>23</sup>

Industry training is also delivered through the Modern Apprenticeship scheme, which is designed to complement and build on existing work based industry training. Modern apprenticeships are targeted at young people aged 16 to 21 years on entry, although a provision may be made for older people seeking a change in career.<sup>24</sup> Measures used to assess career training are:

- Number and rate of people undertaking industry based training
- Number and rate of people undertaking modern apprenticeships.

#### What did we find?

##### Number and rate of people undertaking industry based training

This measure shows the number and rate of active trainees in industry training in 2004 and 2006.<sup>25</sup>

#### Number and rate per 1,000 population 15 years and over, of active trainees in industry training (2004, 2006)<sup>26</sup>

	2004		2006	
	Number	Rate	Number	Rate
Rodney	1,006	17.1	788	11.3
North Shore	1,798	12.3	2,363	14.3
Waitakere	1,506	11.9	1,678	11.8
Auckland	14,977	50.7	18,207	55.4
Manukau	3,408	16.5	3,508	14.5
Hamilton	3,733	41.5	4,915	48.7
Tauranga	1,980	27.8	8,731	33.3
Porirua	645	18.9	788	22.0
Hutt	1,956	27.0	2,250	29.9
Wellington	4,399	33.0	6,157	41.7
Christchurch	8,748	33.5	11,377	40.2
Dunedin	2,612	28.0	3,420	34.6
<b>Total 12 cities</b>	<b>46,768</b>	<b>29.4</b>	<b>58,663</b>	<b>33.1</b>
<b>Rest of NZ</b>	<b>55,502</b>	<b>42.7</b>	<b>64,586</b>	<b>46.5</b>
<b>Total NZ</b>	<b>102,270</b>	<b>35.4</b>	<b>123,249</b>	<b>39.0</b>

Data source: Tertiary Education Commission

21 New Zealand Institute of Economic Research. (2004). *Industry Training and Productivity*.

22,23 Tertiary Education Commission. [www.tec.govt.nz](http://www.tec.govt.nz)

24 Ministry of Education. (2007). *Participation in Industry Training*.

25 A trainee is counted as **active** if they had not completed their programme before or on 31 December of the relevant year. A trainee is counted as **enrolled** if they began a programme in the relevant year, regardless of whether or not they continued, or how long they remained enrolled in the programme. The number of trainees is a count of people and includes modern apprentices. A distinct trainee may be counted more than once if they have changed region or territorial local authority during the duration of their programme (i.e. they will be counted in each).

26 Industry Trainee data includes Modern Apprenticeship data.

## Career training continued

Nationally, there was a 20,979 increase in the number of active trainees from 2004 to 2006. The majority of this increase was within the 12 cities.

Large increases were seen in Auckland and Christchurch, with Auckland trainee numbers increasing by 3,230 and Christchurch numbers increasing by 2,629.

Nationally, large increases were seen in the following industry training organisations: Hospitality and Standards, Community Support Services, Building and Construction, New Zealand Industry Training Organisation (NZITO) and Seafood. Declines were present in the areas of Forestry, Flooring and Furniture.

COMPETENZ<sup>27</sup> remains the largest industry training organisation in the 12 cities, with 8,985 active trainees across the cities in 2006. Across the cities large numbers of trainees are also seen in Hospitality standards, Electrotechnology and Building and Construction.

Proportionally, Wellington had the largest increase in industry trainees between 2004 and 2006. Manukau had the smallest increase.

Industries with the largest increases nationally and in the 12 cities were Fire and Rescue and Building Services Contractors.

There were increases across all ethnic groups with the largest percentage increase in the 'Other' ethnicity category.

**Number and rate per 1,000 population 15 years and over, of active modern apprenticeships (2004, 2006)**

	2004		2006	
	Number	Rate	Number	Rate
Rodney	117	2.0	116	1.7
North Shore	208	1.4	297	1.8
Waitakere	198	1.6	236	1.7
Auckland	721	2.4	1,145	3.5
Manukau	255	1.2	301	1.2
Hamilton	318	3.5	420	4.2
Tauranga	264	3.7	319	3.9
Porirua	42	1.2	48	1.3
Hutt	83	1.1	104	1.4
Wellington	146	1.1	278	1.9
Christchurch	547	2.1	706	2.5
Dunedin	195	2.1	268	2.7
<b>Total 12 cities</b>	<b>3,094</b>	<b>1.9</b>	<b>4,238</b>	<b>2.4</b>
<b>Rest of NZ</b>	<b>4,175</b>	<b>3.2</b>	<b>5,228</b>	<b>3.8</b>
<b>Total NZ</b>	<b>7,269</b>	<b>2.5</b>	<b>9,466</b>	<b>3.0</b>

Data source: Tertiary Education Commission

Nationally, as well as in the 12 cities and the rest of New Zealand, there was an increase in the number of modern apprenticeships. In 2006, the highest participation nationally was for Building and Construction apprenticeships (1,435), followed by Engineering (1,403).

The rate of modern apprenticeships has increased since 2004 across New Zealand. The rest of New Zealand had a higher rate (3.8 per 1,000 population) than the 12 cities (2.4 per 1,000 population) in 2006.

Hamilton had the highest modern apprenticeship rate of the 12 cities with 4.2 per 1,000 population 15 years and over. Manukau had the lowest with 1.2 modern apprenticeships per 1,000.

Across the 12 cities, the Building and Construction, Engineering and Motor Engineering fields had the highest number of trainees. The largest growth, both nationally and for the 12 cities, was in Road Transport and Plumbing and Extractives.<sup>28</sup>

There were increases in apprenticeship participation across all ethnic groups, both nationally and in the 12 cities, with the largest percentage increase in the 'Other' ethnicity category.

<sup>27</sup> COMPETENZ includes training in the following industries: Food and Beverage Processing, Engineering, Refrigeration, Heating, Air Conditioning, Locksmithing, Fire Alarms and Protection Systems.

<sup>28</sup> Caution needs to be taken when looking at these increases however as many of these apprenticeships have small numbers of trainees.

# Chapter Three

## Health

### What's in this chapter?

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Life expectancy

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Low birth weight babies

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Infant mortality

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Teenage parents

---

Communicable diseases

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Access to general practitioners

---

Mental health

---

and emotional wellbeing

---

Self-reported health status

---

Modifiable risk factors

---

Recreation and leisure

---





## Introduction

**This chapter presents a selection of indicators focusing on the physical and mental health of people in the 12 cities.**

### Why this is important

The overall physical and mental health of populations is associated with factors such as age, ethnicity, socio-economic status, employment, education and housing, as well as external factors such as living conditions and the environment. Living in a large urban area can impact on our health and sense of wellbeing through access to health services and recreational opportunities. These are key components to quality of life.

### Key points

Several indicators and measures show an overall improvement in recent years: higher life expectancy and declines in the rates of infant mortality and low birth weight babies. The majority of residents in the 12 cities identify as being happy, rate their overall health as good and undertake physical activity at least two to four times a week.

There are differences between the cities. For example, North Shore residents have relatively higher life expectancy than residents in other cities. The rate of meningococcal disease among children is declining across the country. Across the 12 cities between 2001 and 2005, Rodney and Waitakere consistently had the lowest rate of general practitioners (GPs) per 100,000 of population.

Significant disparities in health and wellbeing do exist between different groups in the cities and nationally. For example, life expectancy declines markedly as the deprivation of the area of residence increases. There is a nine year difference in life expectancy for males at birth between the least deprived and the most deprived areas of New Zealand society. For women this difference is smaller, but is still more than six and a half years. Given the deprivation index levels in some of our cities, this is a concern.

While death rates for Maori from almost all major causes are continuing to decrease, Maori men and women experience an excess burden of mortality and morbidity throughout life, including higher rates of infant mortality and low birth weight babies. Maori are more likely to

smoke than non-Maori and the rate of live births among females aged 13 to 17 years is considerably higher among Maori and Pacific Islands females than other groups. The health of Pacific Islands people has improved over recent decades but they still experience a heavy burden of avoidable mortality and morbidity. For example, Pacific Islands people have higher rates of meningococcal disease.

### Links to other indicators

In New Zealand, research and epidemiological studies consistently highlight the correlation between low socio-economic status (poverty) and poor health. In turn, low socio-economic status in New Zealand is connected to ethnicity. For example, the health status of Maori and Pacific Islands people is demonstrably poorer than for other New Zealanders.

Other elements that affect our health include individual lifestyle factors (smoking, exercise, alcohol consumption), social and community influences (whether we feel empowered to participate in decisions that affect our health and wellbeing) and the quality of our living and working conditions. Government and local authorities can make a positive impact on these factors through good provision of health, leisure and recreation services and programmes.





# Life expectancy

## 3. Health

- Life expectancy has increased overall. Males still have a lower life expectancy than females.
- Life expectancy for Maori is lower than that for non-Maori.

### What this is about

Life expectancy is a key indicator of the general health of the population. Improvements in overall life expectancy reflect improvements in social and economic conditions, lifestyle, access to health services and medical advances. This indicator uses estimated life expectancy at birth.

### What did we find?

Between 1995 to 1997 and 2000 to 2002, estimated life expectancy at birth increased for both males and females

(79.7 years and 81.1 years respectively). Male life expectancy was lower than female life expectancy across New Zealand and all 12 cities.

There are some differences evident between the cities. Porirua had the lowest life expectancy for both males and females of the 12 cities for both time periods. Those living in the North Shore had the highest life expectancy of the cities at 83.6 years for females and 79.1 years for males. All cities saw an increase in life expectancy between the periods.

Estimated life expectancy at birth (1995 to 1997, 2000 to 2002)

	1995 to 1997		2000 to 2002	
	Male years	Female years	Male years	Female years
Rodney	76.0	80.7	78.5	82.5
North Shore	76.9	81.6	79.1	83.6
Waitakere	74.6	80.1	77.7	81.7
Auckland	74.8	80.1	77.7	82.4
Manukau	75.0	79.6	76.2	81.5
Hamilton	74.7	80.2	76.7	81.9
Tauranga	75.0	80.4	76.7	82.5
Porirua	72.2	77.2	73.2	79.7
Hutt	74.5	78.9	76.3	80.9
Wellington	75.4	81.2	78.0	82.5
Christchurch	74.8	80.2	77.1	82.0
Dunedin	74.3	79.9	76.6	81.3
Total NZ	74.4	76.3	79.7	81.1

Data source: Statistics New Zealand

A 2001 study by the Ministry of Health found a strong association between life expectancy and the level of deprivation in the area where people lived.<sup>1</sup> Life expectancy declined markedly as the deprivation of the area of residence increased.

Life expectancy for Maori was lower than that for non-Maori, with Maori males having a life expectancy of 69.0 years (compared

with 77.2 years for non-Maori) and Maori females 73.2 years (compared with 81.9 years for non-Maori).

While gaps still exist, recent research suggests that the death rates in New Zealand related to ethnic and socio-economic disparities may be diminishing in the periods 1996 to 1999 to 2001 to 2004.<sup>2</sup>

1 Ministry of Health. (2001). *Life expectancy and small area deprivation in New Zealand*. Wellington.  
2 Blakely, T., Tobias, M., Atkinson, J., Yeh, L-C. & Huang, K. (2007). *Tracking Disparity: Trends in ethnic and socioeconomic inequalities in mortality, 1981-2004*. Ministry of Health. Wellington.

## Low birth weight babies

- Between 2000 and 2003, the rate of low birth weight babies born in the 12 cities was lower than the rest of New Zealand.
- Maori have a higher rate of low birth weight babies than other ethnicities.

### What this is about

Babies with a low birth weight (less than 2,500 grams) are at a greater risk of death within the first month of life. They also have an increased risk of illness, disability and general health problems later in life.

A baby's birth weight is affected by the overall health of the mother, as well as her environment and level of access to prenatal care. Prematurity, multiple pregnancy and restricted foetal growth are possible contributors to a baby's low weight at birth. Low birth weight is associated with foetal and neonatal mortality and morbidity, inhibited growth and cognitive development.<sup>3</sup>

This indicator measures the average annual number of low birth weight babies per 1,000 live births for the period 2000 to 2003.

### What did we find?

There were 9,720 low birth weight babies born in the 12 cities in the period 2000 to 2003, or a rate of 63.5 per 1,000 live births, which was lower than for the rest of New Zealand at 64.2 per 1,000 live births.

Dunedin, Hutt and Porirua had the highest rates of low birth weight babies of the 12 cities, although they had some of the lowest actual numbers of low birth weight babies.

The rate of low birth weight babies is higher among Maori than other ethnicities and high rates were seen among Maori in Dunedin, Porirua and Manukau.

**Rate of low birth weight babies per 1,000 live births, by ethnicity (2000 to 2003 combined)<sup>4</sup>**

	Maori		Pacific Islands		Other (including NZ European)		Total	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Rodney	41	52.1	10	52.4	245	68.1	296	63.3
North Shore	101	67.8	57	65.1	559	59.7	717	61.2
Waitakere	180	61.8	160	48.1	566	61.6	906	58.7
Auckland	263	76.9	294	46.9	1,201	65.2	1,758	62.6
Manukau	502	82.1	555	52.3	794	65.3	1,851	64.1
Hamilton	166	64.6	24	40.4	325	54.8	515	56.6
Tauranga	123	69.0	16	66.7	242	55.6	381	59.7
Porirua	97	83.1	91	62.2	151	69.5	339	70.6
Hutt	145	77.4	62	56.5	349	73.3	556	71.9
Wellington	80	58.7	47	47.1	568	63.9	695	61.8
Christchurch	187	69.4	66	66.9	1,034	66.5	1,287	66.9
Dunedin	57	90.0	22	79.4	340	70.1	419	72.7
<b>Total 12 cities</b>	<b>1,942</b>	<b>72.4</b>	<b>1,404</b>	<b>52.1</b>	<b>6,374</b>	<b>64.2</b>	<b>9,720</b>	<b>63.5</b>
<b>Rest of NZ</b>	<b>2,586</b>	<b>73.0</b>	<b>323</b>	<b>51.3</b>	<b>4,679</b>	<b>61.1</b>	<b>7,588</b>	<b>64.2</b>
<b>Total NZ</b>	<b>4,528</b>	<b>72.8</b>	<b>1,727</b>	<b>52.0</b>	<b>11,053</b>	<b>62.8</b>	<b>17,308</b>	<b>63.8</b>

Data source: New Zealand Health Information Service

Smoking is one of the most important preventable determinants of low birth weight babies.<sup>5</sup> In all categories of low birth weight (including very and extremely low) Maori have a higher rate than non-Maori, but non-Maori have recorded the greatest rate increase over time.<sup>6</sup> The rate of low birth weight babies among Maori may also be linked to socio-economic status, income levels and accessibility to affordable health care, education and housing.

The incidence of low birth weight babies has adverse social and economic consequences. It is estimated that the burden of heart disease and adult diabetes would be reduced by 44.0% and 66.0% respectively if both foetal and infant growth were optimised.<sup>7</sup>

3 World Health Organization and United Nations Children's Fund. (2004). *Low birth weight: Country, regional and global estimates*. UNICEF, New York.

4 As the data presented here for non-Maori and non-Pacific Islands babies is combined it is not possible to ascertain the proportion in the 'Other' category of low birth weight babies that were Asian.

5,6 Ministry of Health. *Food and Nutrition Guidelines for Healthy Pregnant Women - A Background Paper*. [www.healthpac.govt.nz/moh.nsf/UnidPrint/MH2728?OpenDocument#Low%20birth%20weight](http://www.healthpac.govt.nz/moh.nsf/UnidPrint/MH2728?OpenDocument#Low%20birth%20weight) Retrieved July 10, 2007.

7 National Research Centre for Growth and Development. [www.growthcentre.ac.nz/](http://www.growthcentre.ac.nz/) Retrieved July 11, 2007.



## Infant mortality

### 3. Health

- The rate of mortality for Maori and Pacific Islands infants is considerably higher than the rate for the 'Other' ethnic category (which includes New Zealand European infants).

#### What this is about

Death in infancy is recognised internationally as a sensitive indicator of social and economic conditions and the adequacy of health services. An infant death is defined as a live-born infant dying before the first year of life is completed.<sup>8</sup>

The leading causes of infant mortality are congenital abnormalities and sudden infant death syndrome (SIDS).<sup>9</sup>

In 2001, New Zealand had one of the highest rates of infant mortality in the OECD.<sup>10</sup>

#### What did we find?

In the period 2000 to 2003 there was a total of 802 infant mortalities in the 12 cities, a rate of 5.2 per 1,000 live births. The rate for the rest of New Zealand was 5.9 per 1,000 live births. Manukau and Porirua had higher rates than the other cities at 6.8 and 6.2 per 1,000 live births respectively.

The rate of mortality for Maori and Pacific Islands infants was considerably higher than the rate for the 'Other' ethnic category (which includes New Zealand European infants).

Rate of infant mortality per 1,000 live births, by ethnicity (2000 to 2003 combined)

	Maori		Pacific Islands		Other (including NZ European)		Total	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Rodney	1	1.3	1	5.2	14	3.8	16	3.4
North Shore	16	10.7	8	9.1	34	3.6	58	4.9
Waitakere	16	5.5	21	6.3	40	4.4	77	5.0
Auckland	22	6.4	53	8.4	79	4.3	154	5.5
Manukau	63	10.3	92	8.7	42	3.5	197	6.8
Hamilton	20	7.8	2	3.4	19	3.2	41	4.5
Tauranga	16	9.0	0	0.0	18	4.1	34	5.3
Porirua	9	7.7	10	6.8	11	5.1	30	6.2
Hutt	20	10.7	9	8.2	13	2.7	42	5.4
Wellington	4	2.9	3	3.0	29	3.3	36	3.2
Christchurch	19	7.0	3	3.0	71	4.6	93	4.8
Dunedin	2	3.2	0	0.0	22	4.5	24	4.2
<b>Total 12 cities</b>	<b>208</b>	<b>7.8</b>	<b>202</b>	<b>7.5</b>	<b>392</b>	<b>3.9</b>	<b>802</b>	<b>5.2</b>
<b>Rest of NZ</b>	<b>312</b>	<b>8.8</b>	<b>37</b>	<b>5.9</b>	<b>352</b>	<b>4.6</b>	<b>701</b>	<b>5.9</b>
<b>Total NZ</b>	<b>521</b>	<b>8.4</b>	<b>239</b>	<b>7.2</b>	<b>744</b>	<b>1.3</b>	<b>1,504</b>	<b>5.5</b>

Data source: New Zealand Health Information Service

8,9 New Zealand Health Information Service. (2006). *Fetal and infant deaths 2002*. Wellington.

10 New Zealand rated 21st of 24 OECD countries. See UNICEF. (2007). *Child poverty in perspective: An overview of child well-being in rich countries*, Innocenti Report Card 7. UNICEF Innocenti Research Centre. Florence.

## Teenage parents

- There has been a steady increase in the rate of teen pregnancy in the 12 cities since 2003.
- The rate is lower in our cities than across the rest of New Zealand.

### What this is about

Teenage parenthood is regarded as a significant disadvantage in a country that increasingly demands an extended education and in which delayed childbearing, smaller families, two-income households and careers for women are increasingly becoming the norm.<sup>11</sup> Women who become mothers at a young age are likely to have reduced educational attainment, limited opportunity to complete tertiary education and reduced participation in paid work.<sup>12</sup>

There are also several physical and mental health risks associated with teenage pregnancy. Some overseas research indicates that pregnant teens are at greater risk of health problems, including anaemia, hypertension, renal disease and depressive disorders.<sup>13</sup> There are risks of serious health consequences for babies born to mothers still in their teens. Children of teenagers are more likely to have low birth weights and to suffer from associated health problems.<sup>14</sup> Two measures are used to assess this indicator:

- Births to teenage mothers
- Teenage sole parents earning less than \$20,000 per year.

### What did we find?

#### Births to teenage mothers

This measure looks at the rate of live births to females aged between 13 and 17 years, as a rate per 1,000 of all females aged between 13 and 17 years.

The rate of births to mothers aged between 13 and 17 years in New Zealand was 9.7 per 1,000 live births in 2006. This is an increase from the 8.8 per 1,000 live births in 2001.

There has been an increase in the rate seen in the 12 cities since 2001, with 8.3 per 1,000 live births to mothers between the ages of 13 and 17 years in 2006. This rate was lower than that seen in the rest of New Zealand (11.4 per 1,000 live births in 2006). Within the 12 cities, the rate of live births to teenage mothers was highest in Porirua (18.4 per 1,000 births in 2006) and lowest in North Shore (2.4 per 1,000 births).

#### Number and rate of live births per 1,000 to females aged 13 to 17 years (2001, 2006)

	2001		2006	
	Number	Rate	Number	Rate
Rodney	15	5.7	22	6.4
North Shore	31	4.6	18	2.4
Waitakere	60	10.2	60	8.1
Auckland	62	5.7	74	5.6
Manukau	136	12.1	187	13.0
Hamilton	28	6.4	65	13.4
Tauranga	52	16.4	50	12.9
Porirua	39	21.3	39	18.4
Hutt	31	9.3	27	7.0
Wellington	19	4.0	19	3.5
Christchurch	62	5.8	99	8.5
Dunedin	15	3.8	21	5.3
<b>Total 12 cities</b>	<b>550</b>	<b>7.9</b>	<b>681</b>	<b>8.3</b>
<b>Rest of NZ</b>	<b>619</b>	<b>9.7</b>	<b>804</b>	<b>11.4</b>
<b>Total NZ</b>	<b>1,169</b>	<b>8.8</b>	<b>1,485</b>	<b>9.7</b>

Data source: Statistics New Zealand

11 UNICEF. (2001). *Innocenti report card. Issue No 3. July 2001*. Innocenti Research Centre: Florence.

12 Dilworth, K. (2000). *Literature Review (Teenage Pregnancy)*. Canadian Institute of Child Health. [www.phac-aspc.gc.ca/dca-dea/publications/reduce\\_teen\\_pregnancy\\_section\\_2\\_e.html](http://www.phac-aspc.gc.ca/dca-dea/publications/reduce_teen_pregnancy_section_2_e.html) Retrieved 20 July 2007.

13 Combes-Orme, T. (1993). Health effects of adolescent pregnancy: Implications for social workers. Families in Society. *The Journal of Contemporary Human Services*. 74 (6).

14 Federal/Provincial/Territorial Advisory Committee on Population Health. (1999). *Statistical report on the health of Canadians*. Health Canada. Ottawa.

## 3. Health

This measure shows the percentage of births to females aged 13 to 17 years from 2001 to 2006.

The percentage of births to mothers aged between 13 and 17 years in New Zealand was 2.5% 2006. This is an increase from the 2.1% seen in 2001.

There has been an increase in the percentage in the 12 cities since 2001, with 2.0% in 2006. This was lower than that seen in the rest of New Zealand (3.2% in 2006). Within the 12 cities, the percentage of live births to teenage mothers was highest in Hamilton (3.4% in 2006) and lowest in North Shore and Wellington (both 0.7%).

#### Percentage of live births to females under 18 years (2001 to 2006)

	2001	2002	2003	2004	2005	2006
Rodney	1.5	1.0	1.3	2.5	1.5	2.0
North Shore	1.3	0.7	0.4	0.8	0.7	0.7
Waitakere	2.0	2.3	2.2	1.7	1.9	1.8
Auckland	1.0	1.1	1.0	1.4	1.1	1.2
Manukau	2.4	2.3	2.5	2.4	2.7	2.9
Hamilton	2.1	2.7	1.7	2.8	3.2	3.4
Tauranga	2.7	3.4	2.2	3.4	3.0	3.1
Porirua	2.4	2.6	2.3	2.3	2.2	2.6
Hutt	3.3	2.7	3.3	1.8	3.0	3.0
Wellington	0.8	0.8	0.4	0.6	0.9	0.7
Christchurch	1.5	1.8	1.9	1.8	2.0	2.2
Dunedin	1.2	2.3	2.3	1.8	1.9	2.0
<b>Total 12 cities</b>	<b>1.7</b>	<b>1.8</b>	<b>1.7</b>	<b>1.8</b>	<b>1.9</b>	<b>2.0</b>
<b>Rest of NZ</b>	<b>2.6</b>	<b>2.5</b>	<b>3.1</b>	<b>2.9</b>	<b>2.8</b>	<b>3.2</b>
<b>Total NZ</b>	<b>2.1</b>	<b>2.1</b>	<b>2.3</b>	<b>2.3</b>	<b>2.3</b>	<b>2.5</b>

Data source: Statistics New Zealand



## Teenage parents continued

### Teenage sole parents earning less than \$20,000 per year

Socio-economic status is a key determinant of people's ability to access health care services for themselves and their children. This measure investigates the links between income and young parents. It shows the number of sole parents aged 15 to 19 years who earned less than \$20,000 per year as recorded in the 2006 Census. The table also shows this group as a percentage of all sole parents earning under \$20,000 per year.

There were 1,854 sole parents aged between 15 and 19 years earning under \$20,000 per year in New Zealand in 2006. This represented 3.8% of all sole parents earning under \$20,000 per year. The 12 cities (3.9%) had a higher percentage of teenage sole parents earning under \$20,000 per year than the rest of New Zealand (3.7%).

Of the 12 cities, Auckland (2.7%) had the lowest percentage of sole parents earning under \$20,000, while Porirua had the highest percentage with 6.5%.

### Number and percentage of sole parents, aged 15 to 19 years, with personal income less than \$20,000 per year (2006)

	2006	
	Number	%
Rodney	27	4.0
North Shore	63	3.8
Waitakere	96	4.2
Auckland	111	2.7
Manukau	216	4.6
Hamilton	81	3.2
Tauranga	45	4.5
Porirua	48	6.5
Hutt	57	4.7
Wellington	48	4.5
Christchurch	144	3.6
Dunedin	36	3.1
<b>Total 12 cities</b>	<b>972</b>	<b>3.9</b>
<b>Rest of NZ</b>	<b>861</b>	<b>3.7</b>
<b>Total NZ</b>	<b>1,854</b>	<b>3.8</b>

Data source: Statistics New Zealand, Census 2006

## Communicable diseases

### 3. Health

- The overall number of cases of meningococcal disease in New Zealand children has declined.
- Nationally there has been a small increase in the rate of notified cases of tuberculosis. The rate is higher for the rest of New Zealand than for the 12 cities.

### What this is about

Meningococcal disease and tuberculosis are diseases that can be transmitted through poor and crowded living conditions and are preventable through education and increased awareness of the diseases and how they are transmitted. The severity of the diseases effects can be diminished through timely access to health services.

Notifiable diseases present a threat to public health. This is especially the case in large urban areas where people live in close proximity to each other. There are several notifiable diseases in New Zealand that general health practitioners must report to their local Medical Officer of Health and/or local authority. Two measures of notifiable disease are covered:

- Meningococcal disease in children
- Tuberculosis.

### What did we find?

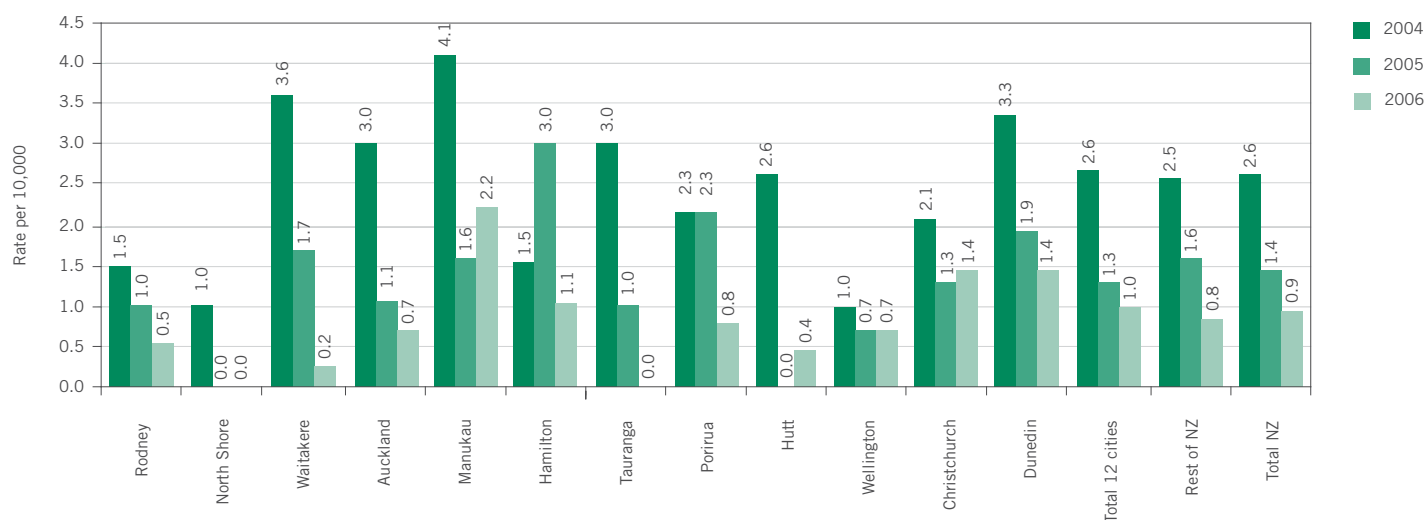
#### Meningococcal disease in children

Meningococcal disease can cause meningitis (inflammation of the brain lining) and septicaemia (blood poisoning). It is a notifiable disease and can result in severe disability or death.<sup>15</sup> Cases of meningococcal disease in New Zealand since 1991 have been largely caused by the epidemic-strain of serogroup B meningococcal disease. In 2006, there were 160 cases of all serogroups, a rate of 4.3 per 100,000 population. Since the epidemic began in mid-1991 the total number of notified cases (all serogroups) was 6,023. The highest rates of disease occurred in children aged under five years and particularly those younger than one year.

The rate of meningococcal disease among children under the age of 15 declined consistently across the 12 cities and the rest of New Zealand between 2004 and 2006.

In 2006, Manukau had the highest rate of disease of the 12 cities, with 2.2 cases per 10,000 children. However, this is considerably lower than the rates recorded for Manukau in 2002 (7.5 per 10,000) and 2003 (9.3 per 10,000).

Rate of notified cases of meningococcal disease per 10,000 children aged 15 years and under (2004 to 2006)



Data source: Institute for Environmental Sciences and Research

15 Martin, D, Lopez, L, Sexton K. (2007). *The Epidemiology of meningococcal disease in New Zealand in 2006*. Report prepared for the Ministry of Health by the Institute of Environmental Science and Research Limited, Ministry of Health, Wellington.

## Communicable diseases continued

Rates of childhood meningococcal disease were highest amongst Pacific Islands children. The combined data for 2002 to 2004 shows the rate amongst Pacific Islands children was 26.3 per 10,000 children compared with rates of 17.8 per 10,000 for Maori and 4.1 per 10,000 for New Zealand European children.

In 2004, the Meningococcal B Immunisation Programme started. This was a nationwide vaccination campaign with a serogroup B meningococcal vaccine against the epidemic strain of the disease. Since the introduction of the vaccine (MeNZB™) the percentage of confirmed cases with the epidemic strain type has fallen significantly.<sup>16</sup>

Rate of meningococcal disease per 10,000 children aged 15 years and under, by ethnicity (2004 to 2006 combined)

	NZ European		Maori		Pacific Islands		Other	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Rodney	4	2.6	0	0.0	1	18.8	1	8.7
North Shore	2	0.7	1	2.5	0	0.0	1	1.4
Waitakere	7	2.6	6	7.3	9	10.1	1	1.5
Auckland	8	2.0	5	5.5	21	12.4	1	0.5
Manukau	5	1.6	23	13.2	30	10.4	0	0.0
Hamilton	3	1.6	11	13.5	1	5.9	1	3.3
Tauranga	2	1.3	5	9.2	1	15.8	0	0.0
Porirua	1	1.3	4	10.7	2	4.2	0	0.0
Hutt	1	0.6	1	1.8	3	9.0	2	8.3
Wellington	3	1.3	3	8.7	0	0.0	1	1.8
Christchurch	17	3.2	6	7.4	7	24.4	0	0.0
Dunedin	7	3.7	6	71.7	1	11.9	0	0.0
<b>Total 12 cities</b>	<b>60</b>	<b>2.0</b>	<b>71</b>	<b>9.3</b>	<b>76</b>	<b>10.2</b>	<b>8</b>	<b>1.2</b>
<b>Rest of NZ</b>	<b>72</b>	<b>2.3</b>	<b>115</b>	<b>9.7</b>	<b>12</b>	<b>7.6</b>	<b>1</b>	<b>0.4</b>
<b>Total NZ</b>	<b>132</b>	<b>2.1</b>	<b>186</b>	<b>9.5</b>	<b>88</b>	<b>9.8</b>	<b>9</b>	<b>1.0</b>

Data source: Institute for Environmental Sciences and Research



16 Martin, D., Lopez, L., Sexton K. (2007). *The Epidemiology of meningococcal disease in New Zealand in 2006*. Report prepared for the Ministry of Health by the Institute of Environmental Science and Research Limited. Ministry of Health. Wellington.

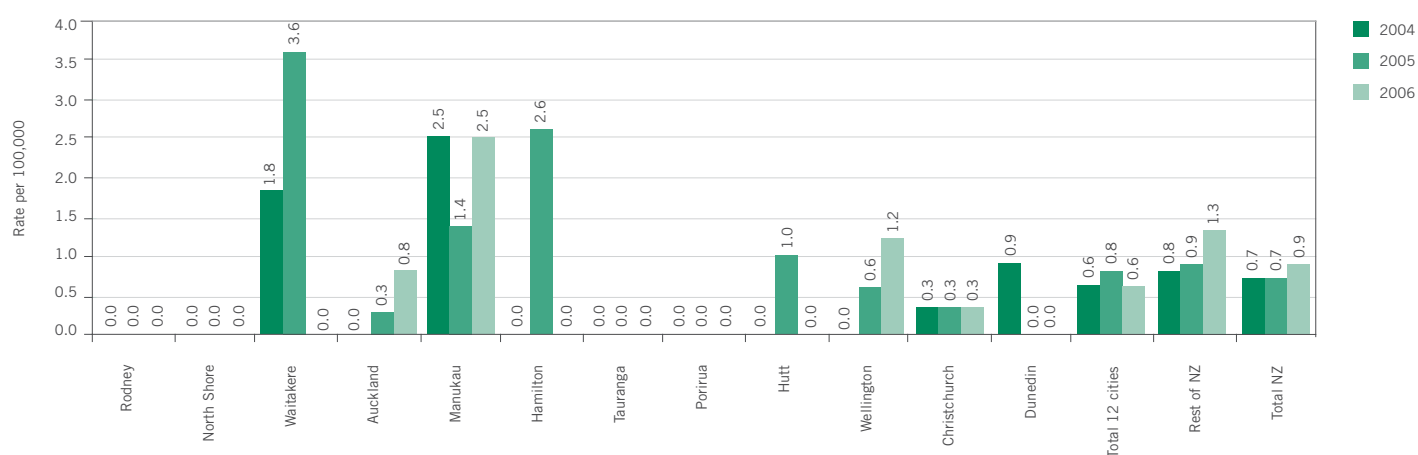
## 3. Health

**Tuberculosis**

This measure shows the rate of tuberculosis (TB) per 100,000 of population for the period 2004 to 2006.

Nationally, there was a small increase in the rate of notified cases per 100,000 people from 2004 to 2006. The rate over this

period was higher for the rest of New Zealand than for the 12 cities. While many cities had no recorded cases of TB over this period, Manukau had 18 cases.

**Rate of notified cases of tuberculosis per 100,000 population (2004 to 2006)**

Data source: Institute for Environmental Sciences and Research

Nationally, Maori and Pacific Islands people had the majority of cases of TB. Maori living in the 12 cities had a lower incidence of TB than Maori living in the rest of New Zealand.

**Number of notified cases of tuberculosis, by ethnicity (2004 to 2006 combined)**

	NZ European	Maori	Pacific Islands	Other	Total
Rodney	0	0	0	0	0
North Shore	0	0	0	0	0
Waitakere	0	0	9	0	3
Auckland	0	0	1	3	4
Manukau	0	3	11	4	18
Hamilton	1	0	0	2	3
Tauranga	0	0	0	0	0
Porirua	0	0	0	0	0
Hutt	0	1	0	0	1
Wellington	0	0	0	3	3
Christchurch	0	0	0	3	3
Dunedin	0	1	0	0	1
<b>Total 12 cities</b>	<b>1</b>	<b>5</b>	<b>21</b>	<b>15</b>	<b>42</b>
<b>Rest of NZ</b>	<b>3</b>	<b>26</b>	<b>11</b>	<b>7</b>	<b>47</b>
<b>Total NZ</b>	<b>4</b>	<b>31</b>	<b>32</b>	<b>22</b>	<b>89</b>

Data source: Institute for Environmental Sciences and Research

## Access to general practitioners

- Nationally, there has been a decline in the rate of general practitioners per 100,000 population.
- Auckland has the highest rate of general practitioners, while Rodney has the lowest.
- Most residents in the 12 cities do not experience any barriers when accessing general practitioners.

### What this is about

General practitioners (GPs) are part of the front line of primary health care provision. Accessibility to a GP is an important issue in both treatment and prevention of poor health. The number of GPs per city may reflect accessibility to health services. A lower rate of GPs per head of population may result in difficulty accessing primary health care and is associated with higher rates of hospitalisation. Two measures are used to examine access to general practitioners:

- Rate of general practitioners per 100,000 population
- Barriers to accessing a general practitioner.

### What did we find?

#### Rate of general practitioners per 100,000 population

Nationally, there was a decline in the rate of GPs per 100,000 population from 2001 to 2005.<sup>17</sup>

The rates of GPs were consistently higher in the 12 cities than in the rest of New Zealand. In 2005 there were 76.8 GPs per 100,000 population in the 12 cities, compared with 64.3 per 100,000 in the rest of New Zealand.

Differences were apparent between the cities. Auckland had the highest rate (90.7 per 100,000) in 2005, while Rodney had the lowest rate (48.2 per 100,000).

There was a decline in the total number of GPs in New Zealand from 3,037 in 2001 to 2,924 in 2005. Nearly all of this decline (-113 GPs) was outside of the 12 cities. Manukau and North Shore had the largest increase in GP numbers (18 GPs each), while Dunedin (-13 GPs) and Porirua (-10 GPs) had the largest decrease.

#### Rate of GPs per 100,000 population (2001 to 2005)

	2001	2002	2003	2004	2005
Rodney	66.2	65.4	63.0	55.4	48.2
North Shore	71.6	76.9	73.2	72.1	74.0
Waitakere	57.3	54.8	59.3	56.0	51.6
Auckland	100.8	88.4	96.4	96.0	90.7
Manukau	60.0	63.5	60.8	61.9	59.2
Hamilton	79.5	88.5	91.7	85.8	76.1
Tauranga	91.1	83.7	88.3	82.8	89.5
Porirua	74.7	80.2	83.5	85.0	53.5
Hutt	63.6	65.3	65.1	62.7	56.7
Wellington	98.8	81.3	87.2	82.7	92.4
Christchurch	104.2	98.8	95.9	93.6	94.9
Dunedin	94.7	84.8	97.4	97.6	81.7
<b>Total 12 cities</b>	<b>83.5</b>	<b>79.5</b>	<b>81.7</b>	<b>79.7</b>	<b>76.8</b>
<b>Rest of NZ</b>	<b>72.0</b>	<b>67.4</b>	<b>66.6</b>	<b>67.2</b>	<b>64.3</b>
<b>Total NZ</b>	<b>78.3</b>	<b>74.1</b>	<b>75.0</b>	<b>74.2</b>	<b>71.3</b>

Data source: Medical Council of New Zealand, New Zealand Health Information Service

<sup>17</sup> Rates calculated using sub-national population estimates as at years ending 30 June.

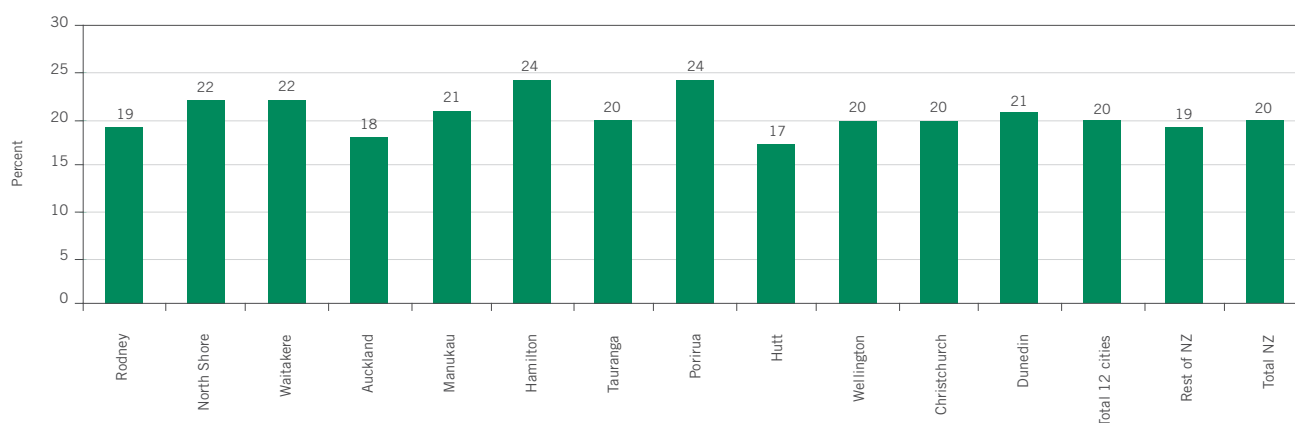
## 3. Health

**Barriers to accessing a general practitioner**

This measure is based on 2006 Quality of Life Survey data. The majority (80.0%) of New Zealand residents experienced no barriers when going to visit their GP. Within the 12 cities, the residents more likely to state that they had wanted to go

to a GP but had not included those living in Hamilton and Porirua, those aged between 15 and 49 years, Maori or Pacific Islands people and females. Barriers were also present for those on an income between \$20,000 and \$40,000 per year.

**Percentage of residents who stated that there had been a time in the previous 12 months when they wanted to go to a GP but did not (2006)**



The most frequently mentioned barrier for New Zealand residents (48.0%) was the cost of visiting a GP. Another frequently mentioned barrier (21.0%) was that the residents were too busy or could not take time off work. Similar barriers existed in the 12 cities. Those outside the 12 cities were less likely to have mentioned

cost or work issues as barriers when compared with the 12 cities combined and New Zealand overall.

A higher percentage of residents living in Waitakere (63.0%) and North Shore (62.0%) mentioned cost as a barrier compared with residents in the other cities.



## Mental health and emotional wellbeing

- The rate of death by suicide is lower in the 12 cities than the rest of New Zealand, while rates of hospitalisation for attempted suicide are higher in the 12 cities.
- The majority of residents in our cities are satisfied with their life in general.
- One in ten residents in our cities have experienced some form of stress in the previous 12 months either most or all of the time.

### What this is about

The term 'mental health' has long been considered to mean more than the absence of mental illness. It is a broad term and has been described in the New Zealand context as that which nurtures spirituality, family, psychological/mental and emotional wellbeing, religion, physiology, environment, social responsibility and self.<sup>18</sup>

Mental health problems are psychological and emotional reactions and behaviours that are outside the usual range experienced by people in their daily lives. These reactions and behaviours cause distress to those experiencing them and to others (such as bereavement reactions, anxiety, anxiety over life events and problems associated with substance abuse).<sup>19</sup> This can be distinct from 'mental illness' and 'mental disorders', which cover a broad range of clinically diagnosed problems and include mood disorders, schizophrenia and other psychotic disorders, anxiety disorders, substance abuse disorders, conduct disorders, dementias and personality disorders.

Mental disorders are common in New Zealand with 46.6% of the population predicted to have a disorder at some time in their lives. According to the New Zealand Mental Health Survey (2006), 39.5% of New Zealanders have already experienced a mental disorder, with 20.7% having a disorder in the past 12 months.<sup>20</sup>

Mental health and emotional wellbeing is difficult to measure. The measures used to assess this indicator are:

- Rate of death by suicide
- Rate of hospitalisations for intentional self-harm
- Residents' rating of how happy they are
- Residents' satisfaction with their own lives in general
- Residents' rating of experiencing negative stress over the past 12 months
- Number and rate per 10,000 of gambler and significant other clients to the national Gambling Hotline
- Alcohol
- Other drugs.

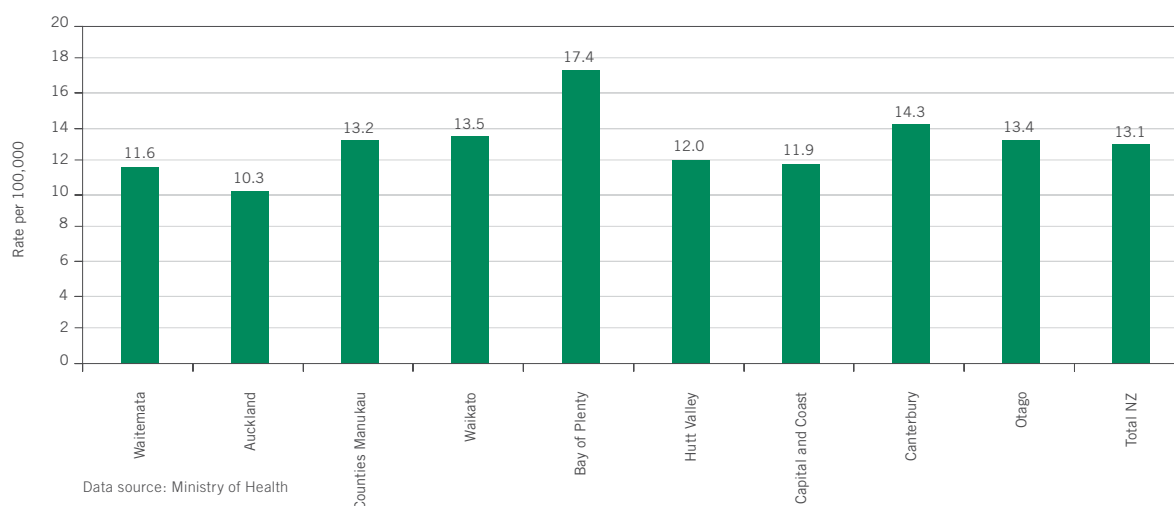
### What did we find?

#### Rate of death by suicide

This measure shows the number of deaths from suicide as a rate per 100,000 of the total population from 2002 to 2004.<sup>21</sup> Because suicide is, in statistical terms, an uncommon event and rates can vary immensely from year to year, it is useful to look at the total pattern of suicide rates over several years.

Nationally, the rate of death by suicide was 13.1 per 100,000.<sup>22</sup> There was a wide range in the numbers of suicides across the District Health Boards (DHBs), with Bay of Plenty DHB having the highest rate (17.4 per 100,000) and Auckland DHB having the lowest rate (10.3 per 100,000).

Age-standardised suicide death rates per 100,000 population, by district health board (2002 to 2004 combined)



18,19 Ellis, P. & Collings, S. (Eds.). (1997). *Ministry of Health. Mental health in New Zealand from a public health perspective*. [www.moh.govt.nz/moh.nsf/pagesmh/1058?Open](http://www.moh.govt.nz/moh.nsf/pagesmh/1058?Open) Retrieved 15 June 2007.

20 Oakley Browne, M.A., Wells, J.E. & Scott, K.M (Eds.). (2006). *Te Rau Hinengaro: The New Zealand mental health survey*. Ministry of Health. Wellington.

21 Deaths from the years 2002 to 2004 were summed to provide sufficient numbers to calculate robust results and to protect confidentiality.

22 Note that the rates per 100,000 are age-standardised to the World Health Organisation standard population.

## 3. Health

Nationally, males accounted for 75.2% of all suicides between 2002 and 2004. This pattern is also seen in the DHBs containing the 12 cities.

#### Suicide deaths and age-standardised rates per 100,000, by district health board and sex (2002 to 2004 combined)

	Male		Female	
	Number	Rate	Number	Rate
Waitemata	117	18.6	33	5.2
Auckland	80	13.5	46	7.4
Counties Manukau	95	18.4	46	8.3
Waikato	98	22.6	21	4.7
Bay of Plenty	69	28.0	20	7.6
Hutt Valley	33	17.9	11	6.5
Capital and Coast	72	19.7	19	4.9
Canterbury	145	22.3	45	6.7
Otago	47	18.7	21	8.5
<b>Total NZ</b>	<b>1,103</b>	<b>20.1</b>	<b>363</b>	<b>6.6</b>

Data source: Ministry of Health

Nationally, the average rate of suicide for Maori was higher than that for non-Maori with the Maori male and female rates 26.9 and 7.9 per 100,000 respectively compared to 18.4 and 5.9 deaths per 100,000 for non-Maori males and females respectively.<sup>23</sup>

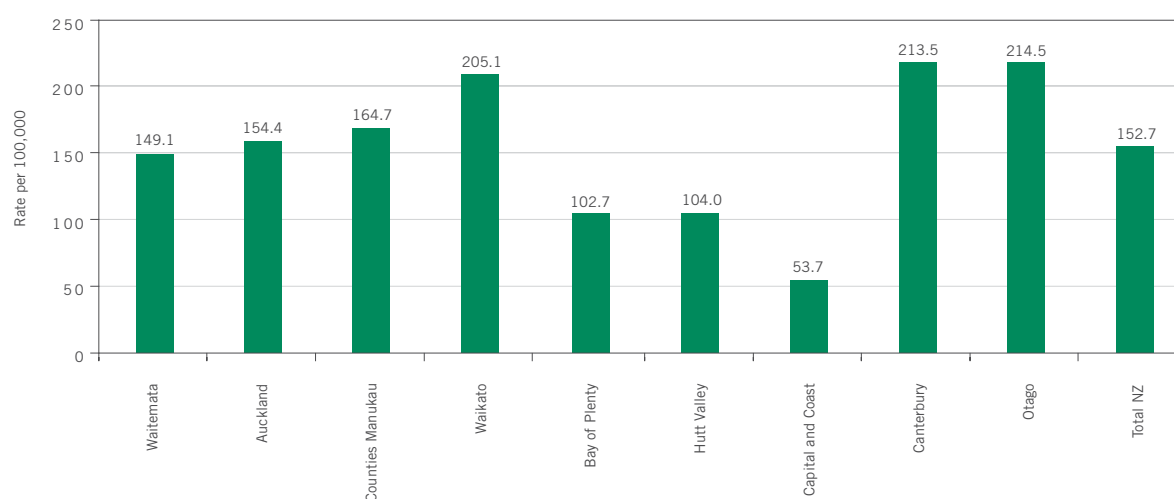
Nationally in 2004, those females aged 15 to 19 years had the highest suicide rates among females and males over 85 years had the highest rate among all males.

#### Rate of hospitalisations for intentional self-harm

This measure shows the number of hospitalisations for attempted suicide as a rate per 100,000 of the total population from 2002 to 2004. The rate of hospitalisations for attempted suicide was higher in the 12 cities (242.4 per 100,000) compared with total New Zealand (210.2 per 100,000) and the rest of New Zealand (170.1 per 100,000).

Nationally, the rate of hospitalisations for intentional self-harm was 152.7 per 100,000.<sup>24</sup> There was a wide range in the numbers of hospitalisations across the DHBs, with Otago DHB having the highest rate (214.5 per 100,000) and Capital and Coast DHB having the lowest rate (53.7 per 100,000).

#### Age-standardised intentional self-harm hospitalisations per 100,000 population, by district health board (2005)



Data source: Ministry of Health

23 Ministry of Health. (2006). Public Health Intelligence Monitoring Report No.11 – Suicide Facts 2004-2005 data. Wellington.

24 Note that the rates per 100,000 are age-standardised to the World Health Organisation standard population.

## Mental health and emotional wellbeing continued

In 2005, there were more females hospitalised for intentional self-harm nationally (3,358) than males (1,575). This pattern is also seen in the DHBs containing the 12 cities.

Nationally, the hospitalisation rate for Maori was nearly one and a half times the non-Maori rate (206.4 per 100,000 compared with 142.5 per 100,000).

In 2005, females aged 15 to 19 years had the highest hospitalisation rates across New Zealand among all females and males aged between 20 and 24 years had the highest rate among all males.

### Intentional self-harm hospitalisations and age-standardised rates per 100,000, by district health board and sex (2005)

	Male		Female	
	Number	Rate	Number	Rate
Waitemata	187	98.3	409	198.6
Auckland	200	109.9	363	197.6
Counties Manukau	200	120.1	365	207.9
Waikato	163	131.0	368	276.3
Bay of Plenty	58	80.9	91	123.3
Hutt Valley	33	65.3	81	141.9
Capital and Coast	27	23.8	97	81.6
Canterbury	217	119.7	584	304.8
Otago	95	137.9	198	285.9
<b>Total NZ</b>	<b>1,575</b>	<b>100.5</b>	<b>3,358</b>	<b>203.1</b>

Data source: Ministry of Health

### Residents' rating of how happy they are

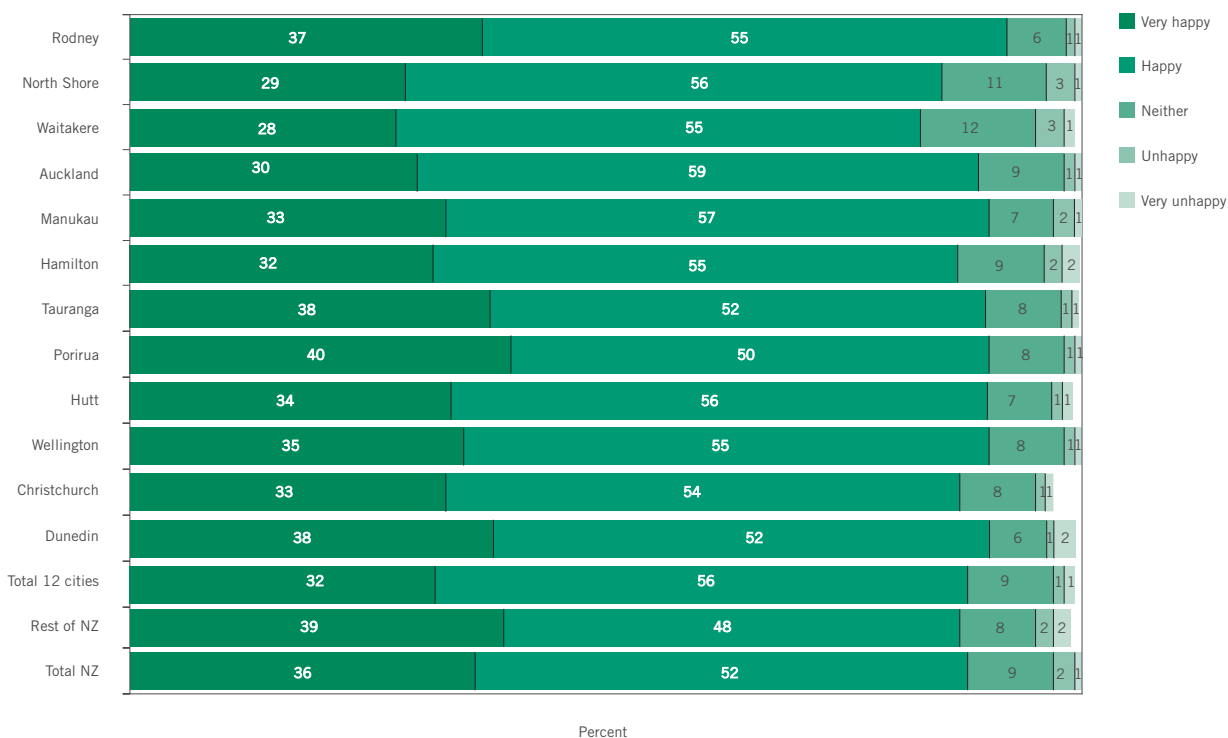
This measure is based on 2006 Quality of Life Survey data. Nationally, 88.0% of New Zealand residents felt they had a positive emotional wellbeing, responding with a rating of either 'very happy' (36.0%) or 'happy' (52.0%). No differences were seen between the 12 cities ratings and those in the rest of New Zealand.

However, differences were apparent across the 12 cities, with those living in Rodney having the highest rating of happiness (92.0%), while Waitakere (83.0%) and North Shore (85.0%) residents had the lowest ratings of happiness.

Across age groups at the national level, the majority (between 87.0% and 89.0%) rated their happiness positively. For the 12 cities, those aged 25 to 49 years were less likely to have rated their happiness positively (87.0%) than other age groups. There were no noticeable differences in ratings of happiness between ethnicities.

## 3. Health

Residents' rating of their happiness (2006)



Data source: Quality of Life Survey 2006

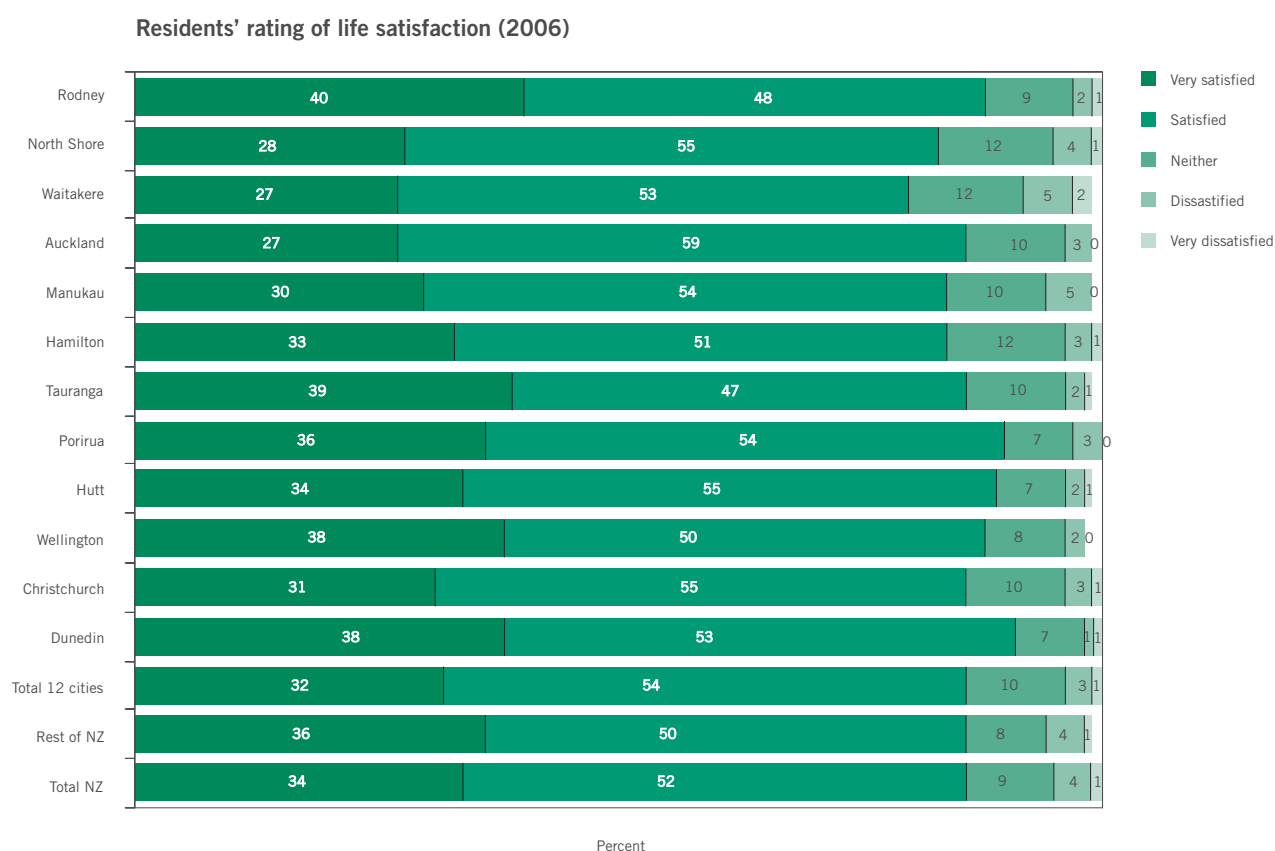
Recent research suggests that the characteristics of cities themselves may also have an influence on wellbeing. That is, in addition to there being characteristics of individuals that influence ratings of happiness and wellbeing, differences have also been found between cities themselves.<sup>25</sup>

**Residents' satisfaction with their own lives in general**

This measure is based on 2006 Quality of Life Survey data. The majority (86.0%) of New Zealand residents felt they were satisfied with their life in general. Of the 12 cities, Dunedin had the highest percentage of residents who rated their satisfaction with life positively, while Waitakere and North Shore residents had the lowest percentage of life satisfaction.

25 Morrison, P.S. (2006). *Subjective wellbeing and the city*. School of Geography, Environment and Earth Sciences, Victoria University of Wellington.

## Mental health and emotional wellbeing continued



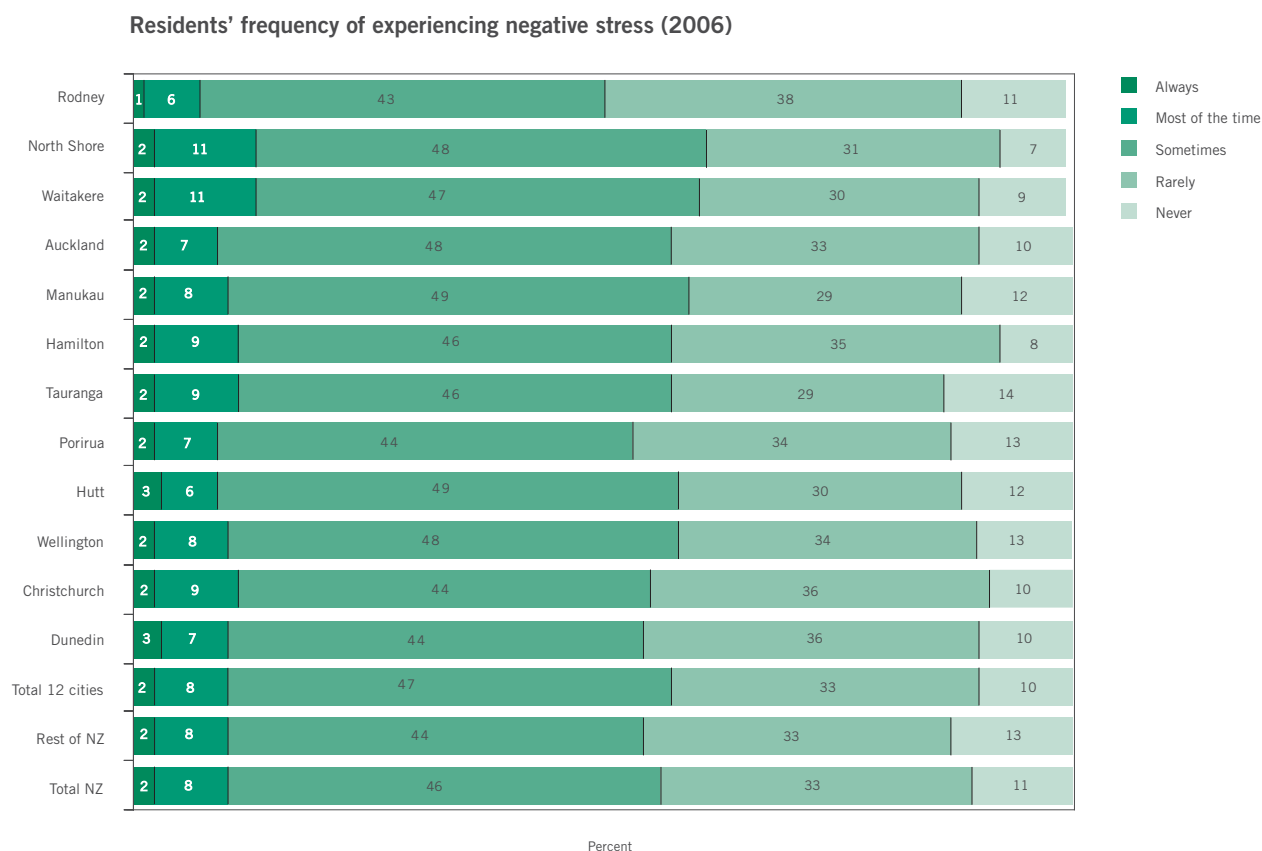
Data source: Quality of Life Survey 2006

### Residents' rating of experiencing negative stress over the last 12 months

This measure is based on 2006 Quality of Life Survey data. Ten percent of New Zealand residents indicated they had experienced stress in the previous 12 months which had had a negative effect on them most or all of the time. The same percentages were found in the 12 cities and the rest of New Zealand.

Residents of North Shore (13.0%) and Waitakere (13.0%) were more likely to have reported experiencing negative stress. Rodney and Porirua residents had the lowest reported experience of negative stress (8.0%).

## 3. Health



Data source: Quality of Life Survey 2006

### Number and rate per 10,000 of gambler and significant other clients to the national Gambling Hotline

Addictions are an important mental health issue that have flow-on effects on all aspects of an individual's life, from their relationships with family and friends to their ability to find or maintain work.

There was a decline in the overall number of gambler and significant other new clients received by the Gambling Hotline between 2004 and 2006.

The rate of new clients per 10,000 population was higher for the 12 cities (8.4 in 2006) than the rest of New Zealand (5.9 in 2006). Geographically, Auckland was the source of the highest rate of new clients in 2006. Of the 12 cities, Rodney had the lowest rate (3.4 per 10,000) in 2006.



## Mental health and emotional wellbeing continued

Number and rate per 10,000 of new client calls to the gambling hotline, by origin of contact (2004 to 2006)

	2004		2005		2006	
	Number of clients	Rate	Number of clients	Rate	Number of clients	Rate
Rodney	42	4.8	23	2.6	31	3.4
North Shore	151	7.2	96	4.5	101	4.7
Waitakere	157	8.3	98	5.1	71	3.6
Auckland	624	14.8	401	9.4	388	9.0
Manukau	253	7.8	188	5.6	205	6.0
Hamilton	118	9.1	97	7.4	83	6.2
Tauranga	129	12.7	76	7.3	80	7.5
Porirua	39	7.7	36	7.1	20	3.9
Hutt	81	8.1	76	7.6	52	5.2
Wellington	286	15.7	158	7.5	140	7.8
Christchurch	501	14.6	85	6.9	65	5.3
Dunedin	112	9.2	85	6.9	65	5.3
<b>Total 12 cities</b>	<b>2,493</b>	<b>13.9</b>	<b>1,600</b>	<b>8.9</b>	<b>1,517</b>	<b>8.4</b>
<b>Rest of NZ</b>	<b>1,448</b>	<b>6.4</b>	<b>961</b>	<b>4.2</b>	<b>912</b>	<b>3.9</b>
<b>Total NZ</b>	<b>3,941</b>	<b>9.7</b>	<b>2,561</b>	<b>6.2</b>	<b>2,429</b>	<b>5.9</b>

Data source: Ministry of Health

### Alcohol

Abuse and misuse of alcohol can cause long term damage to the body and in some cases death. Alcohol is also a significant risk factor for some types of cancer, high blood pressure, haemorrhagic strokes and cardiac conditions such as cardiomyopathy.<sup>26</sup> Alcohol also has effects beyond the direct medical consequences. It contributes to death and injury on the roads, drowning, suicide, violent offending, some mental health disorders and sexual health problems.<sup>27</sup> Information on alcohol addiction and misuse was not available for the 12 cities.

Figures from the Ministry of Health indicate that from 1988 to 1996 between 130 to 150 deaths each year were associated with alcohol-related conditions.<sup>28</sup> In addition, alcohol-related hospitalisations are estimated to cost New Zealand more than \$74 million each year.

A 2007 report from the Ministry of Health showed different drinking patterns across different age groups. People aged 18 to 24 years did not consume alcohol as frequently as people aged 55 to 66 years but the former were more likely to consume large amounts of alcohol during a typical drinking occasion.<sup>29</sup> Males were more likely to drink alcohol four or more times a week on average and to consume larger amounts of alcohol than females.<sup>30</sup> Non-Maori were more likely to consume alcohol more frequently than Maori. However, Maori were more likely to consume a larger amount of alcohol during a typical drinking occasion.<sup>31</sup>

### Other drugs

Other drugs present in society that can have a negative health effect include cannabis and drugs administered through injection. Long term sustained and heavy cannabis use puts users at risk of developing respiratory diseases including the possibility of cancers, subtle cognitive impairment, psychotic symptoms among vulnerable individuals and drug dependency.<sup>32</sup> Drug users who administer through injection are at risk of overdose and of contracting blood-borne diseases and of participating in crime to support their drug dependence. Nationally, about 45.0% of all identified injecting drug users are infected with hepatitis C.<sup>33</sup>

There has been recent media and public attention around the increased production and availability of methamphetamine (commonly known as 'P') in New Zealand. Methamphetamine is often smoked and is a highly addictive substance. Users quickly develop a tolerance to the drug and in the long term increased doses are required to achieve the same high. This increases the risks of over-dose. Some long term effects of methamphetamine include anxiety, tension and depression, a violent or aggressive personality, psychosis, memory loss, susceptibility to infection and disease and malnutrition.<sup>34</sup>

Information on drug addiction and misuse was not available for the 12 cities.

26,27,28 Ministry of Health. (2007). *Alcohol in New Zealand*.

29,30,31 Ministry of Health. (2007). *Alcohol Use in New Zealand: Analysis of the 2004 New Zealand Health Behaviours Survey – Alcohol Use*.

32,33 Ministry of Health. (2001). *DHB Toolkit: Minimising Alcohol and Other Drug Related Harm*.

34 New Zealand Drug Foundation. (2007). *Methamphetamine/Amphetamines*.



### 3. Health

## Self-reported health status

- Tauranga residents rate their health most positively.
- Those living in Auckland and Waitakere rate their health the least positively.

### What this is about

Self-reported health is a global measure of health. It is subjective and complements the findings from more objective and direct health outcome measures.

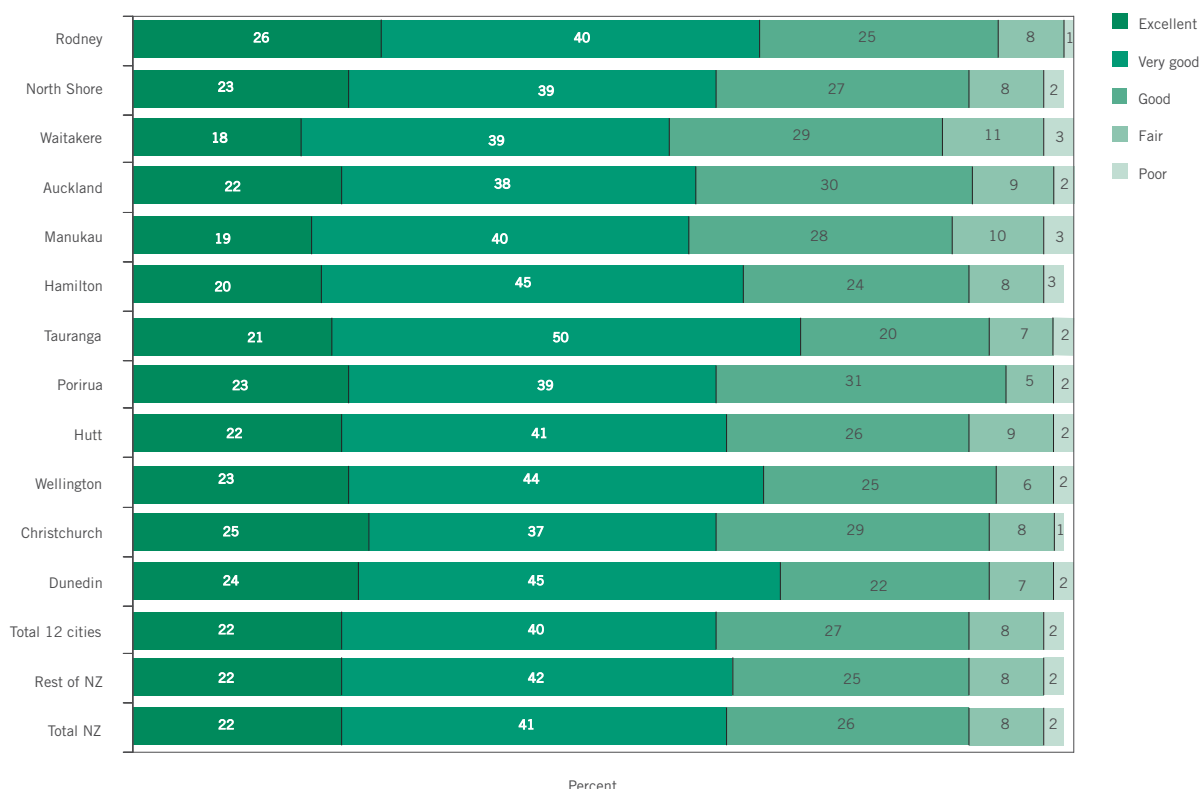
### What did we find?

This indicator is based on 2006 Quality of Life Survey data. The majority (90.0%) of New Zealand residents viewed their health positively and similar rates were found in the 12 cities combined and the rest of New Zealand.

There were differences between our cities, with Tauranga residents (71.0%) rating their health most positively, while Auckland (60.0%) and Waitakere (57.0%) residents rated their health the least positively.

Nationally, those aged between 15 to 24 years were more likely to rate their overall health positively (66.0%) compared with other age groups. New Zealand Europeans rated their overall health more positively (65.0%) than other ethnic groups at both the national and 12 cities level. Pacific Islands and Asian/Indian residents rated their overall health lower than other ethnic groups both nationally (55.0% and 49.0% respectively) and at the 12 cities level (57.0% and 47.0% respectively).

Residents' rating of own health (2006)



Data source: Quality of Life Survey 2006

## Modifiable risk factors

- More residents living outside the 12 cities undertake physical activity on five or more days a week than those in the 12 cities.
- The most prevalent type of diabetes is Type Two, which affects approximately 220,000 people in New Zealand and accounts for the majority of all diabetes cases.
- A fifth of adults over the age of 15 are obese and the level is increasing.

### What this is about

The World Health Organisation (WHO) has identified the lack of physical activity as one of the biggest contributors to the global burden of disease. Physical inactivity has been labelled second only to smoking as a modifiable risk factor for poor health.<sup>35</sup> Poor dental health is also a modifiable risk factor that can have negative health impacts. Measures used to assess this indicator are:

- Frequency of physical activity
- Participation in sports clubs
- Percentage of population who smoke cigarettes
- Type Two diabetes
- Obesity
- Percentage of year eight children without dental caries.

### What did we find?

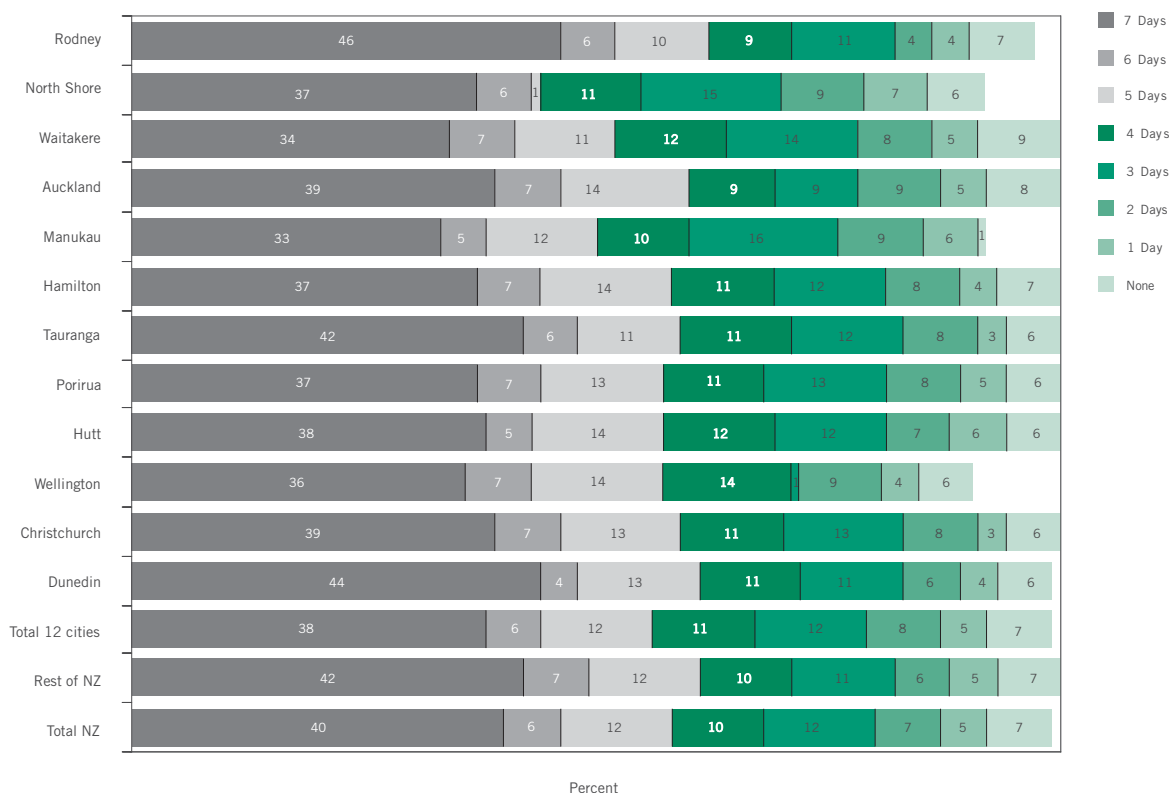
#### Physical activity

This measure is from the Quality of Life Survey 2006 and shows the frequency of physical activity by residents aged 15 years and over.<sup>36</sup>

Nationally, 40.0% of New Zealand residents were physically active every day. More residents living outside the 12 cities undertook physical activity on five or more days a week (61.0%) than those in the 12 cities combined (56.0%).

Rodney had the highest percentage of residents (63.0%) undertaking physical activity five or more times a week, while Manukau had the lowest (50.0%). Manukau also had the highest percentage of residents who did no physical activity during a week (10.0%).

Residents' frequency of doing physical activity (2006)



Data source: Quality of Life Survey 2006

<sup>35</sup> Ministry of Health. (2003). *DHB toolkit: physical activity*.

<sup>36</sup> Residents were asked about all their physical activities (including any physical tasks they might do at work, doing housework or playing sports) and on how many of the last seven days they were active. Active was defined as doing 15 minutes or more of vigorous activity (i.e. activity that makes people breathe a lot harder than normal e.g. running), or 30 minutes or more of moderate exercise (e.g. brisk walking).

### 3. Health

Nationally and at the 12 cities level, Maori and New Zealand Europeans were more likely to have undertaken physical activity on five or more days a week. Asian/Indian and Pacific Islands residents were less likely to do so. In the 12 cities, those aged 65 years and older were more likely to have undertaken physical activity on five or more days a week than other age groups.

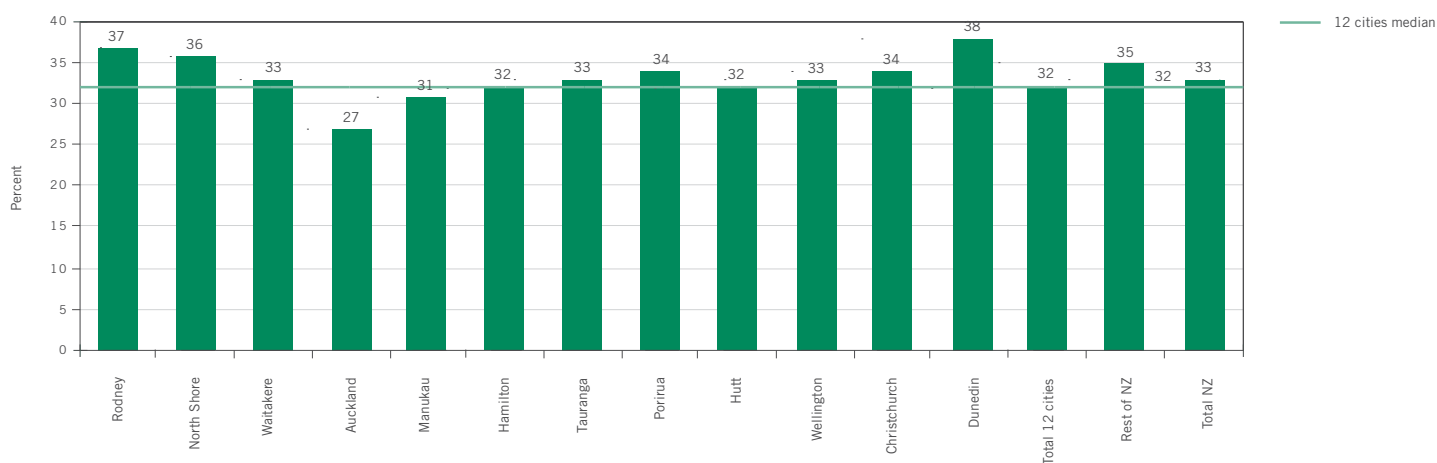
#### Participation in sports clubs

This measure is based on 2006 Quality of Life Survey data. Nationally, 33.0% of residents belonged to a sports club.

Residents in our cities were less likely to belong to a sports club than those in the rest of New Zealand and nationally. Dunedin had the highest sports club participation (38.0%) while Auckland had the lowest rate (27.0%).

Across New Zealand and in the 12 cities, those most likely to belong to a sports club were residents aged between 15 to 24 years, Maori, males and those with a household income over \$100,000.

Percentage of residents belonging to a sports club (2006)



Data source: Quality of Life Survey 2006

## Modifiable risk factors continued

### Percentage of population who smoke cigarettes

This measure shows the number and percentage of the population aged over 15 years who currently smoke or who are ex-smokers of cigarettes.

Nationally, 18.9% of the population over 15 years smoke cigarettes.<sup>37</sup> A larger percentage of people in the rest of New Zealand smoke (21.3%) compared to those in the 12 cities (17.0%). Differences are apparent between the 12 cities with North Shore having the lowest percentage of smokers (13.5%), while Porirua had the highest percentage (23.2%).

There is a large percentage of New Zealand's population that are ex-smokers (20.2%). This is higher than the 12 cities total of 18.7% but lower than the rest of New Zealand at 22.1%. Of the 12 cities, Rodney had the highest percentage of ex-smokers (24.3%).

Smoking has numerous negative health effects and is one of the major causes of preventable death in New Zealand. The World Health Organisation states that tobacco is a known or probable cause of some 25 different diseases. For some diseases, such as lung cancer, bronchitis and emphysema, smoking is the major cause. Not only does smoking impact on the health of the individual who chooses to smoke but it can also negatively affect the health of others through passive or second hand smoke. It also has a significant financial impact on the country's health system, diverting health dollars from the treatment of other conditions.

While the prevalence of smoking has decreased since the 1970's there is still a significant number of New Zealanders who smoke.<sup>38</sup> Maori (46.0%) and Pacific Islands people (36.0%) had high rates of prevalence compared to Asian people (12.0%) and New Zealand European/Other ethnic groups (20.0%).<sup>39</sup>

### Number and percentage of population who smoke cigarettes for population over 15 years (2006)

	Number of smokers	Smokers %	Number of ex-smokers	Ex-smokers %	Total population over 15 years <sup>40</sup>
Rodney	11,052	15.8	17,016	24.3	69,939
North Shore	22,266	13.5	32,883	19.9	164,838
Waitakere	26,886	18.9	25,437	17.9	142,281
Auckland	48,705	14.8	54,294	16.5	328,563
Manukau	46,917	19.3	33,882	14.0	242,637
Hamilton	15,189	18.5	19,455	23.7	82,050
Tauranga	18,876	18.7	18,099	17.9	100,998
Porirua	8,298	23.2	6,585	18.4	35,811
Hutt	16,233	21.5	15,192	20.2	75,354
Wellington	21,144	14.3	28,737	19.5	147,690
Christchurch	49,515	17.5	58,716	20.8	282,765
Dunedin	16,752	17.0	20,274	20.5	98,709
<b>Total 12 cities</b>	<b>301,833</b>	<b>17.0</b>	<b>330,570</b>	<b>18.7</b>	<b>1,771,635</b>
<b>Rest of NZ</b>	<b>295,959</b>	<b>21.3</b>	<b>306,723</b>	<b>22.1</b>	<b>1,388,736</b>
<b>Total NZ</b>	<b>597,792</b>	<b>18.9</b>	<b>637,293</b>	<b>20.2</b>	<b>3,160,371</b>

Data source: Statistics New Zealand, Census 2006

<sup>37</sup> Cigarette smoking refers to the active smoking of one or more manufactured or hand-rolled tobacco cigarettes, from purchased or home-grown tobacco, per day, by people aged 15 years and over. The term 'smoking' refers to active smoking behaviour, i.e. the intentional inhalation of tobacco smoke. Smoking does not refer to or include passive smoking (the unintentional inhalation of tobacco smoke). Cigarette smoking does not include the smoking of tobacco in cigars, pipes and cigarillos, the smoking of any other substances, herbal cigarettes or marijuana, e.g. or the consumption of tobacco products by other means, such as chewing.

<sup>38,39</sup> Ministry of Health. (2006). *Tobacco Trends 2006: Monitoring tobacco use in New Zealand*.

<sup>40</sup> Total includes counts for 'never smoked regularly' and 'not elsewhere included' categories not shown here.

### 3. Health

#### Type Two diabetes

Type Two diabetes is a condition associated with lifestyle and in many cases can be prevented through appropriate levels of physical exercise and healthy diets. It is a significant cause of ill health and premature death in New Zealand. The negative health effects of Type Two diabetes can include blindness, kidney failure, heart disease, neuropathy, lower limb amputations and impotence in men.

Diabetes is a chronic condition that arises when the pancreas does not make enough insulin, or when the body cannot effectively use the insulin that is produced. Insulin enables the cells to take in glucose from the blood and use it for energy.<sup>41</sup> There are three types of diabetes: Type One, Type Two and gestational. The most prevalent type of diabetes is Type Two, which affects approximately 220,000 people in New Zealand and accounts for 80.0 to 90.0% of all diabetes cases.<sup>42</sup> Type Two diabetes occurs when the body is unable to use the insulin the pancreas produces. Information on Type Two diabetes was not available for the 12 cities.

Those with a higher risk of developing Type Two diabetes are likely to be those with a family history of the condition, people over 40 years and those who are overweight or inactive. There is a higher prevalence amongst Maori, Pacific Islands and Asian residents.

There is evidence that the principal driver of the Type Two diabetes epidemic seen in New Zealand is the current high levels of obesity, although other factors such as declining levels of physical activity also have an effect.<sup>43</sup>

#### Obesity

Obesity can be defined as abnormal or excessive fat accumulation that may impair health.<sup>44</sup> It is caused by an energy imbalance between calories consumed and energy expended.<sup>45</sup> Obesity is defined as an individual having a Body Mass Index (BMI) greater than 30 for New Zealand European and 'Other' ethnicities, or greater than 32 for Maori and Pacific Islands people.

The World Health Organisation's (WHO) latest projections indicate that in 2005 at least 400 million adults were obese worldwide and this number is continuing to grow. It is projected that by 2015 more than 700 million adults will be obese.<sup>46</sup>

Where obesity and overweight were once considered a problem only in high-income countries, they are now dramatically on the rise in low and middle-income countries, particularly in urban settings.<sup>47</sup>

Obesity can lead to serious health consequences and is an increased risk factor for chronic diseases such as heart disease and stroke, diabetes, osteoarthritis and some forms of cancer. Obesity-related health complications also place a significant financial burden on the public health system.<sup>48</sup>

In New Zealand in 2003, 21.0% of adults over the age of 15 were obese. This was an increase from the 17.0% recorded in 1997.<sup>49</sup> Obesity is more prevalent among the Pacific Islands and Maori ethnic groups. Age-standardised prevalence was highest among Pacific Islands females (48.0%) and males (38.0%) compared with Maori (28.0% for females, 29.0% for males) and New Zealand European and 'Other' ethnicities (20.0% for females, 18.0% for males).<sup>50</sup> Information on obesity was not available for the 12 cities.

#### Percentage of year eight children without dental caries

A dental carie, also described as tooth decay, is an infectious disease which damages the structures of the teeth. Diseases of the teeth and gums are among the most common of all health problems and are experienced by most New Zealanders at some stage of their life.<sup>51</sup> These problems can cause pain and discomfort and tooth loss.<sup>52</sup> While access to dental services is free to all people under the age of 18, there can be ongoing financial cost to the individual and the community associated with treating tooth decay.

The percentage of year eight children without dental caries remained stable across New Zealand between 2003 and 2005.

Differences were apparent between the DHB areas that encompass the 12 cities.<sup>53</sup> Many DHBs had a decrease in the percentage of children without dental caries from 2003 to 2005. Hutt Valley DHB and Capital and Coast DHB had the highest percentage of children without dental caries while Bay of Plenty DHB consistently had among the lowest percentage of year eight children without dental caries.

41 Diabetes New Zealand Incorporated. (2006). *Diabetes fact sheet 2006*.

42 Diabetes New Zealand Incorporated. (2006). *Diabetes fact sheet 2006*. This figure includes estimates for diagnosed (105,000) and undiagnosed (115,000) people.

43 Hu, F.B., Manson, J.E., Stampfer, M.J., et al. (2001). Diet, lifestyle and the risk of type 2 diabetes in women. *New England Journal of Medicine* 345:790-797.

44,45,46,47 World Health Organisation. (2006). *Obesity and overweight fact sheet*.

48 Swinburn, B., Ashton, T., Gillespie, J., Cox, B., Menon, A., Simmons, D. & Birkbeck, J. (1997). Health care costs of obesity in New Zealand *International Journal of Obesity and Related Metabolic Disorders*; 21(10): 891-6.

49 Ministry of Health. (2004). *Tracking the obesity epidemic: New Zealand 1977-2003*.

50 Ministry of Social Development. (2006). *The social report*.

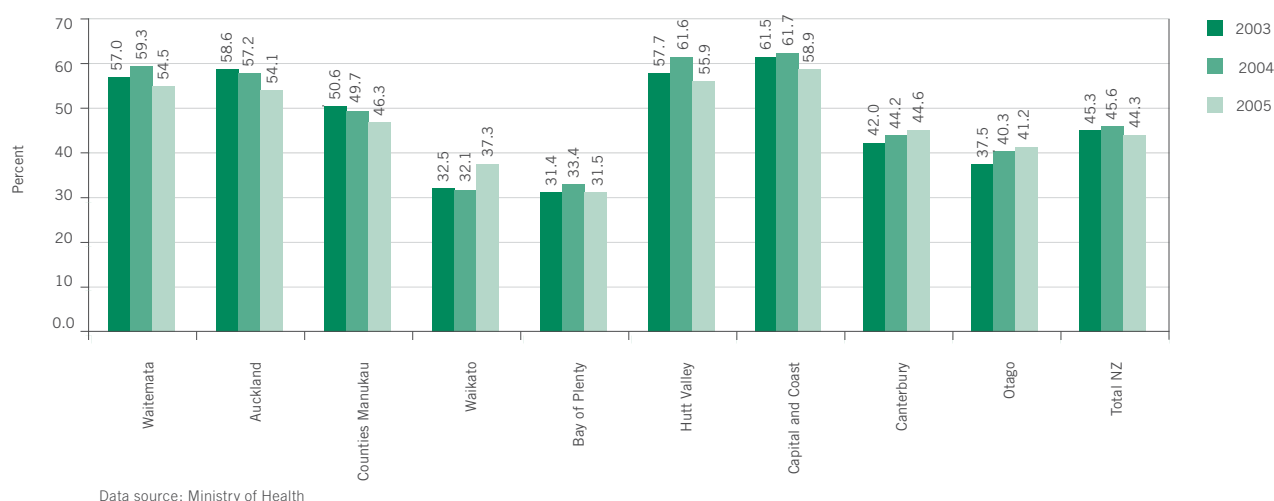
51,52 Ministry of Health. (2004). *DHB toolkit: Improve oral health*.

53 Data was not available at the individual 12 city level.



## Modifiable risk factors continued

Percentage of year eight children without dental caries, by district health board (2003 to 2005)



One possible explanation for the differences between the DHBs may relate to the proportion of the population with access to a fluoridated water supply. In 2005 there was a difference between year eight students with access to fluoridated and non-fluoridated water supplies. Nationally, those in fluoridated areas were more likely to be caries free (47.9%) than those living in non-fluoridated areas (40.4%).

Although the patterns were similar for some DHBs (e.g. Hutt Valley DHB, Otago DHB) for other DHBs (e.g. Canterbury DHB, Waikato DHB and Waitemata DHB) the opposite was the case, with higher percentages of children without caries living in areas without fluoridation.

Number and percentage of dental caries for year eight children, by fluoridated and non-fluoridated water source for district health boards (2005)

District Health Board	Total		Fluoridated		Non-fluoridated	
	Number	caries free %	Number	caries free %	Number	caries free %
Waitemata	5,149	54.5	4,495	54.1	654	56.9
Auckland	4,143	54.1	3,954	54.5	189	45.5
Counties Manukau	5,831	46.3	4,907	45.9	924	48.8
Waikato	4,809	37.3	2,308	35.9	2,501	38.6
Bay of Plenty	3,010	31.5	296	32.8	2,714	31.3
Hutt Valley	1,053	55.9	1,016	56.5	37	40.5
Capital and Coast	1,872	58.9	1,861	58.9	11	54.5
Canterbury	4,436	44.6	17	29.4	4,419	44.7
Otago	2,273	41.2	1,180	44.9	1,093	37.1
<b>Total NZ</b>	<b>48,711</b>	<b>44.3</b>	<b>25,217</b>	<b>47.9</b>	<b>23,494</b>	<b>40.4</b>

Data source: Ministry of Health

Inequalities exist in the oral health of New Zealand children, especially among Maori and Pacific Islands children and those from low socio-economic status families.<sup>54</sup> These inequalities may stem from groups not accessing services for reasons such

as the perceived cost or need, a lack of knowledge about service availability and the acceptability and accessibility of dental services.<sup>55</sup>



## Recreation and leisure

### 3. Health

- Sport or other physical activity is the most frequently mentioned free time activity across New Zealand.
- A larger percentage of residents living outside the 12 cities rate their leisure time positively than those living in the 12 cities.
- On the whole residents in our cities are not experiencing barriers to leisure activities.

#### What this is about

Recreation and leisure have an important impact on quality of life as they provide the opportunity to gain respite from everyday stresses. The health benefits that can be gained through recreation and leisure activities can be both physical and mental. The nature of activities individuals undertake in their leisure time can vary greatly depending on their personal circumstances and the opportunities available to them in the area they live. Measures for this indicator include:

- Residents' three most frequently mentioned free time activities
- Residents' satisfaction with leisure time
- Residents' experience of barriers to leisure activities.

#### What did we find?

##### Residents' three most frequently mentioned free time activities

In the 2004 Quality of Life Survey, residents were asked to describe the three main things they did in their free time. Nationally, taking part in sports or other physical activity with friends or on their own (39.0%) were the most commonly reported activities. The next most commonly reported activities were socialising with friends in cafes and bars, visiting friends and/or eating out (27.0%) and gardening and lawn mowing (24.0%).

Taking part in sports or other physical activity with friends or on one's own was also the most commonly reported free time activity for residents in our cities, however a much smaller percentage of people (32.0%) mentioned this.

Although there were differences between our cities, activities involving physical activity were consistently in the top three most frequently reported activities. Over half (53.0%) of Christchurch residents mentioned this compared with 27.0% in Manukau.



## Recreation and leisure continued

### Three most frequently mentioned free time activities and percentage response (2004)

	<b>Most frequent activity</b>	<b>Second most frequent activity</b>	<b>Third most frequent activity</b>
Rodney	Taking part in sports or other physical activity (not specified with whom) (34.0%)	Taking part in sports or other physical activity with friends or on own (26.0%)	Gardening/lawn mowing (26.0%)
North Shore	Taking part in sports or other physical activity with friends or on own (33.0%)	Socialising with friends in cafes, bars etc/visiting friends/eating out (28.0%)	Taking part in sports or other physical activity (not specified with whom) (25.0%)
Waitakere	Socialising with friends in cafes, bars etc/visiting friends/eating out (27.0%)	Taking part in sports or other physical activity (not specified with whom) (26.0%)	Taking part in sports or other physical activity with friends or on own (24.0%)
Auckland	Socialising with friends in cafes, bars etc/visiting friends/eating out (34.0%)	Taking part in sports or other physical activity with friends or on own (28.0%)	Watching TV/Videos/DVDs (24.0%)
Manukau	Taking part in sports or other physical activity (not specified with whom) (27.0%)	Socialising with friends in cafes, bars etc/visiting friends/eating out (26.0%)	Taking part in sports or other physical activity with friends or on own (24.0%) Watching TV/Videos/DVDs (24.0%)
Hamilton	Taking part in sports or other physical activity (not specified with whom) (35.0%)	Socialising with friends in cafes, bars etc/visiting friends/eating out (35.0%)	Reading (25.0%)
Tauranga	Taking part in sports or other physical activity (not specified with whom) (37.0%)	Socialising with friends in cafes, bars etc/visiting friends/eating out (27.0%)	Gardening/lawn mowing (25.0%)
Porirua	Taking part in sports or other physical activity (not specified with whom) (28.0%)	Socialising with friends in cafes, bars etc/visiting friends/eating out (25.0%)	Family or child focused activities (23.0%)
Hutt	Taking part in sports or other physical activity with friends or on own (33.0%)	Reading (27.0%)	Socialising with friends in cafes, bars etc/visiting friends/eating out (23.0%)
Wellington	Socialising with friends in cafes, bars etc/visiting friends/eating out (32.0%)	Reading (32.0%)	Taking part in sports or other physical activity (not specified with whom) (29.0%)
Christchurch	Taking part in sports or other physical activity with friends or on own (53.0%)	Gardening/lawn mowing (27.0%)	Taking part in sports or other physical activity with a organised club (25.0%)
Dunedin	Taking part in sports or other physical activity with friends or on own (49.0%)	Taking part in sports or other physical activity with a organised club (28.0%)	Socialising with friends in cafes, bars etc/visiting friends/eating out (27.0%)
<b>Total 12 cities</b>	<b>Taking part in sports or other physical activity with friends or on own (32.0%)</b>	<b>Socialising with friends in cafes, bars etc/visiting friends/eating out (28.0%)</b>	<b>Reading (24.0%)</b>
<b>Rest of NZ</b>	<b>Taking part in sports or other physical activity with friends or on own (46.0%)</b>	<b>Gardening/lawn mowing (29.0%)</b>	<b>Socialising with friends in cafes, bars etc/visiting friends/eating out (25.0%)</b>
<b>Total NZ</b>	<b>Taking part in sports or other physical activity with friends or on own (39.0%)</b>	<b>Socialising with friends in cafes, bars etc/visiting friends/eating out (27.0%)</b>	<b>Gardening/lawn mowing (24.0%)</b>

Data source: Quality of Life Survey 2004

## 3. Health

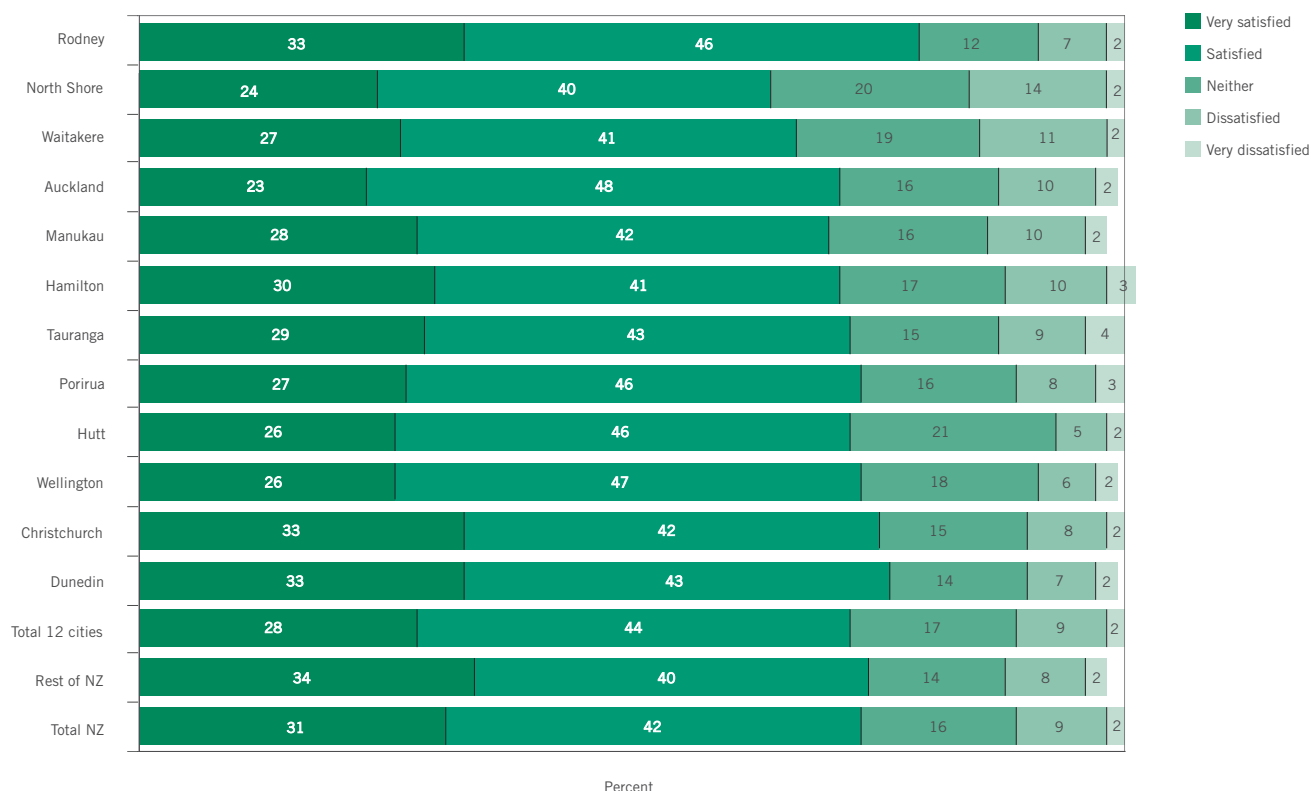
**Satisfaction with leisure time**

This measure looks at residents' satisfaction with their leisure time as reported in the 2006 Quality of Life Survey.

Nationally, 73.0% of New Zealand residents felt positive about their leisure time, stating that they were either 'very satisfied' (31.0%) or 'satisfied' (42.0%). Residents living outside the 12

cities were more likely to rate their leisure as satisfying (74.0%) than those living in the 12 cities (72.0%).

There were also differences between our cities. Rodney residents were more likely to express satisfaction (79.0%) with their leisure time than North Shore residents (64.0%).

**Residents' satisfaction with leisure time (2006)**

Data source: Quality of Life Survey 2006

## Recreation and leisure continued

### Barriers to leisure activities

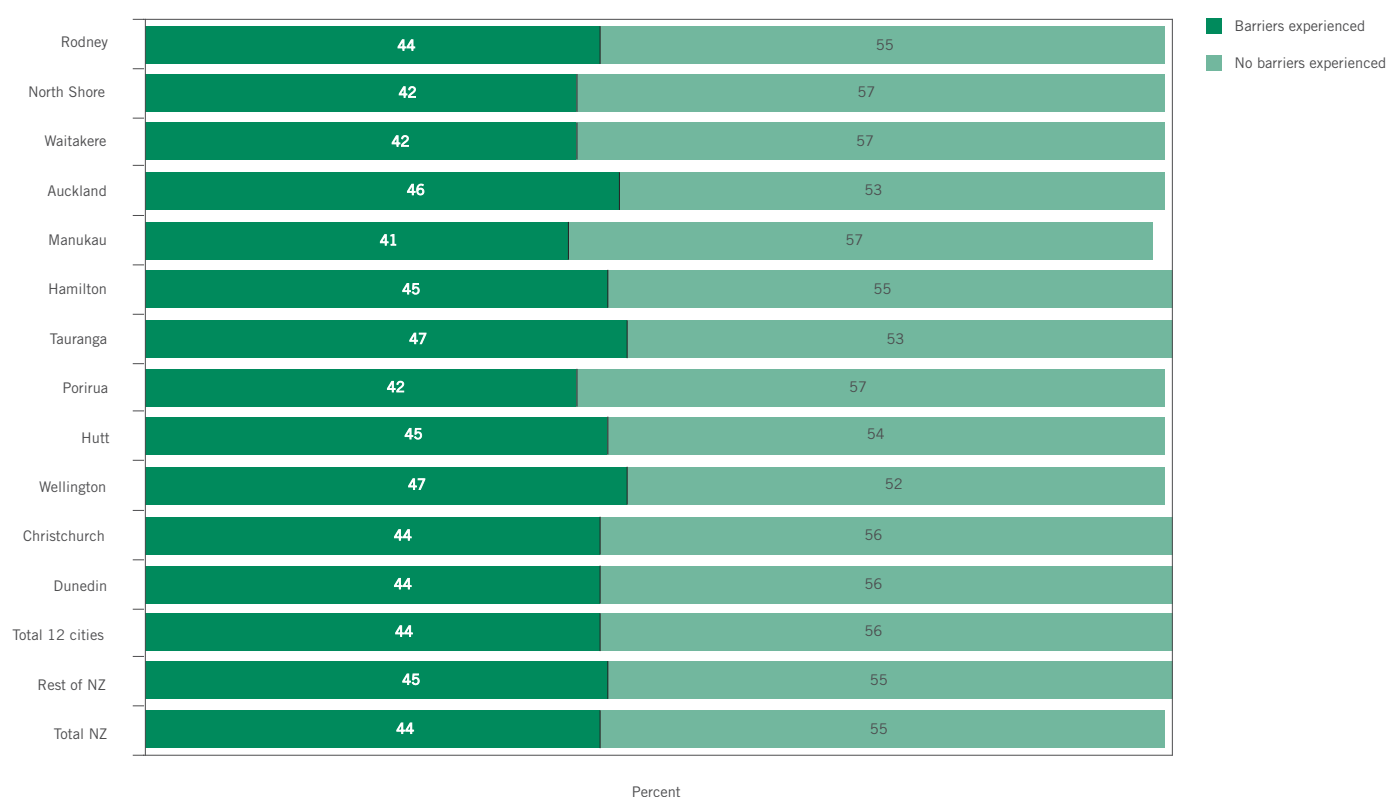
This measure looks at whether or not residents experienced barriers to participating in leisure activities in their city in the previous 12 months, using 2004 Quality of Life Survey data.

Nationally, 55.0% of New Zealand residents said that they had not experienced barriers that made it difficult for them to take part in the free time activities. There were no notable differences

between residents of the 12 cities (44.0%) and those living in the rest of the New Zealand (45.0%).

Those living in Tauranga and Wellington were more likely to have experienced barriers to leisure activities (both 47.0%), than those from Manukau (41.0%).

Residents' experience of barriers to leisure activities (2004)



Data source: Quality of Life Survey 2004

## Chapter Four

# Safety

### What's in this chapter?

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Perceptions of safety

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Child safety

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Injuries

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Road safety

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Workplace safety

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Crime levels

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## Introduction

**This chapter presents an overview of safety and law and order in the 12 cities and offers insights on how residents perceive their safety.**

### Why this is important

Feeling safe and secure in our homes, communities and urban areas is a basic human right. Feeling and being safe is a key to overall health in the community. Safety and perceptions of safety feature highly in people's view of their living environment, their sense of well being and quality of life. As urban areas grow, the need for safe social and physical environments, where people are able to participate fully in their communities, becomes an increasing challenge.

### Key points

Many of the recorded offences rates presented are declining. The total number of offences has fallen and residents' perceptions of safety in their city are generally high. The road safety message appears to be working in the 12 cities with a decline in the rate of serious and fatal road crash injuries and the high usage of safety belts. The 12 cities have a lower rate of workplace injuries than the rest of New Zealand.

There are, however, areas of concern. The rate of violent crime has increased in the 12 cities and fewer residents think that their neighbourhoods are safe for children to play in compared with the rest of New Zealand. The rate of substantiated cases of child abuse and neglect has increased nationally. The rate of hospitalisations for unintentional accidents has also increased.

Particular groups in the population are over-represented in offending and victim statistics. Maori are over-represented in youth offending statistics, making up over half of those young people apprehended. Males account for the majority of convictions and are more likely than females to be injured or killed in motor vehicle crashes.

### Links to other indicators

Research has linked social and economic disadvantage to adverse safety outcomes. Factors believed to contribute to an increase in the likelihood of offending include unemployment, low incomes, low educational attainment and family instability.<sup>1</sup> These factors are more prevalent in some cities than others and will, therefore, have an impact on both the recorded level of crime and the perceptions of safety of those who live in those cities.



<sup>1</sup> Triggs, S. (1997). *Interpreting Trends in Recorded Crime in New Zealand*. Wellington.





## Perceptions of safety

### 4. Safety

- Perceptions of safety differ depending on the location and time of day. Wellington residents are more likely to feel safer.
- Dangerous driving is more likely to be perceived as a problem in the 12 cities than in the rest of New Zealand.

### What this is about

Perceptions of safety impact on the health and wellbeing of the individual, family and the wider community. If people feel unsafe they are less likely to talk to their neighbours, use public transport, go out in the evening, use public amenities and generally participate in their communities. Four measures, all taken from the Quality of Life Survey 2006, are used to illustrate perceptions of personal safety:

- Perceptions of personal safety
- Car theft, damage to cars or theft from cars
- Dangerous driving including drink driving and speeding
- People perceived of as unsafe to be around because of their behaviour, attitude or appearance.

### What did we find?

#### Perceptions of personal safety

Residents were asked how safe they felt in different settings at different times. The majority of New Zealand residents felt safe in their home, both during the day and at night. Wellington had the highest percentage of residents who felt safe at home during the day (99.0%) and after dark (96.0%). Manukau had the lowest

percentage of residents who felt safe during the day (92.0%) and after dark (83.0%).

Perceptions of safety were noticeably lower in relation to residents walking in their neighbourhood after dark (compared with during the day). Residents in our cities were less likely to say that they felt safe in these circumstances (61.0%) than either those living in the rest of New Zealand (66.0%) or New Zealand as a whole (63.0%). There were substantial differences between our cities, with 78.0% of Dunedin residents feeling it was safe compared with 48.0% of Manukau residents.

However, there was no difference between our 12 cities and nationally for sense of safety in city centres during the day or after dark. Wellington had the highest rating of safety during the day (98.0%) and after dark (67.0%) of the 12 cities. Christchurch (38.0%) had the lowest percentage of residents who felt safe in their city centre after dark.

#### Percentage of residents who felt 'fairly safe' or 'very safe' (2006)

	At home		In neighbourhood		In city centre	
	Day %	Dark %	Dark <sup>2</sup> %	Walking after dark %	Day %	Dark %
Rodney	97	94	87	71	86 <sup>3</sup>	56
North Shore	97	93	82	66	95	62
Waitakere	96	89	69	53	90	40
Auckland	95	88	70	56	90	48
Manukau	92	83	68	48	88	40
Hamilton	96	92	73	58	95	51
Tauranga	98	91	75	59	96	49
Porirua	97	94	83	66	95	50
Hutt	98	93	76	61	95	61
Wellington	99	96	86	76	98	67
Christchurch	98	94	78	61	93	38
Dunedin	98	95	87	78	96	66
<b>Total 12 cities</b>	<b>96</b>	<b>91</b>	<b>76</b>	<b>61</b>	<b>92</b>	<b>50</b>
<b>Rest of NZ</b>	<b>96</b>	<b>92</b>	<b>80</b>	<b>66</b>	<b>n/a</b>	<b>n/a</b>
<b>Total NZ</b>	<b>96</b>	<b>91</b>	<b>78</b>	<b>63</b>	<b>92</b>	<b>50</b>

Data source: Quality of Life Survey 2006

2 Survey respondents were asked about their perceptions of safety in their neighbourhood after dark and walking alone in their neighbourhood after dark.

3 It should be noted that Rodney had a large percentage of residents who, when asked about safety in their city centre, responded that they 'didn't know'. This could be because Rodney does not have a city centre.

## Perceptions of safety continued

Nationally, Asian/Indians felt less safe than those from other ethnic groups. Female residents felt less safe than males in most situations particularly in the city centre after dark. Those aged between 15 to 24 years were more likely to feel safe in their city centre than other age groups.

### Car theft, damage to cars or theft from cars

This measure looks at whether residents perceived car theft, damage to cars or theft from cars was a problem as a problem in their city in the last 12 months, using Quality of Life Survey 2006 data.

A higher percentage of residents in the 12 cities saw car theft, damage to cars or theft from cars as a problem in their city in the last 12 months (63.0%) compared with the rest of New Zealand (44.0%) and New Zealand as a whole (54.0%). Differences between the cities were evident, with 74.0% of Auckland residents feeling car theft was a problem compared with 46.0% of Rodney residents.

Nationally and in the 12 cities, females, those aged between 25 and 49 years, Pacific Islands people and Asian/Indian residents were more likely to have stated that car theft was a problem.

### Percentage of residents identifying city problems being present (2006)

	Car theft, damage to cars or theft from cars %	Dangerous driving including drink driving and speeding %	People perceived as unsafe to be around because of their behaviour, attitude or appearance %
Rodney	46	75	31
North Shore	49	70	40
Waitakere	60	75	53
Auckland	74	78	54
Manukau	71	80	59
Hamilton	64	74	48
Tauranga	60	79	47
Porirua	63	65	49
Hutt	59	70	45
Wellington	54	62	40
Christchurch	64	76	52
Dunedin	54	75	36
<b>Total 12 cities</b>	<b>63</b>	<b>74</b>	<b>49</b>
<b>Rest of NZ</b>	<b>44</b>	<b>65</b>	<b>35</b>
<b>Total NZ</b>	<b>54</b>	<b>70</b>	<b>42</b>

Data source: Quality of Life Survey 2006

### Dangerous driving including drink driving and speeding

This measure looks at whether residents perceived dangerous driving, including drink driving and speeding, as a problem in their city in the last 12 months, using 2006 Quality of Life Survey data.

Nationally, 70.0% of residents felt that there had been a problem with dangerous driving (including drink driving and speeding) in their area over the last 12 months. Residents in our cities were more likely to consider this to be a problem (74.0%).

There were differences between our cities, with Manukau residents most likely to identify this as a problem (80.0%) and Wellington residents least likely to feel that way (62.0%).

Nationally and in the 12 cities those aged between 25 and 49 years, Pacific Islands residents and females were more likely to see dangerous driving as a problem compared with others. Those aged between 50 and 64 years nationally and those aged between 15 and 24 years in the 12 cities were less likely to see dangerous driving as a problem.

### People perceived of as unsafe to be around because of their behaviour, attitude or appearance

This measure looks at whether residents perceived people thought of as unsafe to be around because of their behaviour, attitude or appearance, as a problem in their city in the last 12 months, using 2006 Quality of Life Survey data.

Across New Zealand, 42.0% of residents felt unsafe around people in their area because of their behaviour, attitude or appearance, compared with 49.0% in the 12 cities.

The presence of unsafe people was most likely to be considered a problem in Manukau (59.0%) and least likely in Rodney (31.0%).

Pacific Islands, Asian/Indian residents and females (both nationally and in the 12 cities) were more likely to see unsafe people as a problem than others.

## Child safety

### 4. Safety

- Since 2004 there has been a national increase in the rate of substantiated cases of child abuse and neglect.
- Fewer residents in the 12 cities think of their neighbourhood as safe for children compared with those living in the rest of New Zealand, mainly because of the presence of strangers.

### What this is about

Protecting the physical and psychological health of our children is a critical component of improving social wellbeing in New Zealand. Children have the right to be protected from harm and abuse and to be safe at home and at school. New Zealand families, communities and government must work together to make sure children's rights are protected.<sup>4</sup> This indicator uses four measures to illustrate levels and perceptions of child safety:

- Rate of substantiated child abuse and neglect per 1,000 children under 17 years by age group
- Residents' rating of safety of local neighbourhoods for children to play in while unsupervised
- Residents' perceptions of reasons why neighbourhoods are unsafe for children to play in unsupervised
- Rate of hospitalisations for unintentional injury per 100,000 children aged 14 years and under.

### What did we find?

#### Rate of substantiated child abuse and neglect per 1,000 children under 17 years by age group

There has been an increase in the rate of substantiated cases of child abuse and neglect nationally since 2004.<sup>5</sup> In the years 2004 to 2006, the 12 cities have shown a higher rate of substantiated cases than the rest of New Zealand. This gap has been widening. In 2006, the rate per 1,000 children under 17 years was 17.3 in the 12 cities and 13.4 in the rest of New Zealand.

There were differences between the cities. Waitakere had the highest rate of the 12 cities in 2006 with 28.4 per 1,000, while Wellington had the lowest rate at 2.9.<sup>6</sup>

#### Rate of substantiated cases of child abuse and neglect per 1,000 children aged 17 years and under (2004 to 2006)

	2004	2005	2006
Rodney	n/a	n/a	n/a
North Shore	8.7	17.0	18.9
Waitakere	13.7	23.6	28.4
Auckland	11.7	15.8	17.5
Manukau	10.6	15.4	18.8
Hamilton	30.6	45.8	28.0
Tauranga	10.9	16.4	20.6
Porirua	20.8	23.9	16.6
Hutt	23.7	17.2	15.4
Wellington	4.5	4.9	2.9
Christchurch	11.2	12.3	11.1
Dunedin	8.4	8.4	10.5
<b>Total 12 cities</b>	<b>12.2</b>	<b>16.5</b>	<b>17.3</b>
<b>Rest of NZ</b>	<b>11.4</b>	<b>12.1</b>	<b>13.4</b>
<b>Total NZ</b>	<b>11.8</b>	<b>14.4</b>	<b>15.1</b>

Data source: Ministry of Social Development

4 Office of the Children's Commissioner. (2007). [www.occ.org.nz](http://www.occ.org.nz) Retrieved 9 July 2007.

5 Data is not collected on the number of assessments per client. The figures reported are for assessments, not clients. A client may have more than one assessment in a year and more than one finding in an assessment.

6 The data reported here is from the 12 regional Child, Youth and Family service centres. Therefore some areas may not directly match the areas of the 12 cities. Cases for Rodney have been included in the North Shore figures, Hamilton is an addition of the Waikato West and Waikato East service centres, the Otahuhu data has been evenly split between Auckland and Manukau as this centre serves both areas, Hutt includes both Hutt City and Upper Hutt City data and Dunedin reflects data from the Dunedin urban service centre.

## Child safety continued

The number of substantiated cases for New Zealand, the 12 cities and the rest of New Zealand declined as the age of the children increased, from 1,183 for under one year olds in the 12 cities to 51 for 17 year olds in 2006.

A possible reason for the increase in the rate of cases could be the increased awareness of family violence and abuse.

Injury and maltreatment rates of our children are high by international standards with New Zealand currently at the bottom of the table of 24 OECD countries when it comes to child deaths from accidents, murder, suicide and violence.<sup>7</sup>

### Residents' rating of safety of local neighbourhoods for children to play in while unsupervised

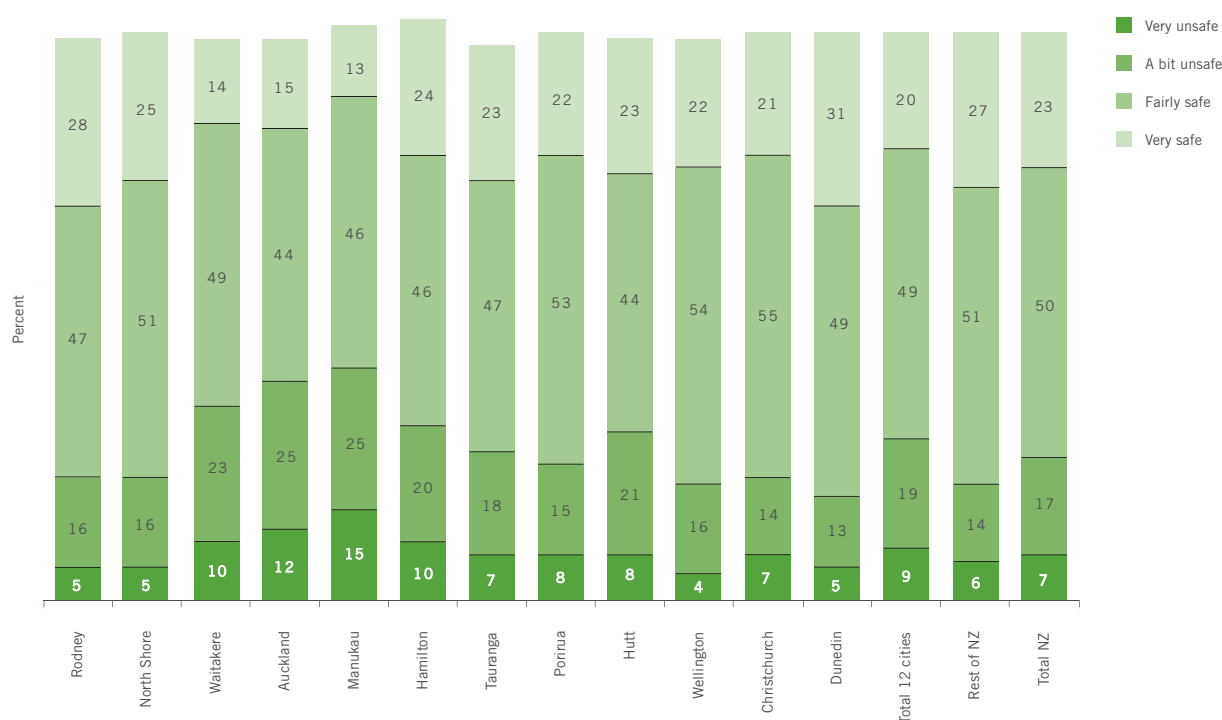
This measure illustrates residents' perceptions of how safe their neighbourhood is for children to play in unsupervised. Nationally, 73.0% of residents felt that children were safe to play

unsupervised in their neighbourhood. Residents in our cities were less likely to say that their neighbourhoods were safe (69.0%) than those living in the rest of New Zealand (78.0%).

Of the 12 cities, Dunedin had the highest percentage of residents that rated their neighbourhood as safe (80.0%), while Manukau had the lowest (58.0%).

Both nationally and in the 12 cities residents aged between 50 and 64 years, males and New Zealand Europeans were more likely to have indicated that children were safe to play in their neighbourhood. Residents aged 25 to 49 years (the main child rearing age groups) were less likely to say their neighbourhood was safe for children.

Residents' rating of safety of local neighbourhood for children to play in unsupervised (2006)



Data source: Quality of Life Survey 2006

### Residents' perceptions of reasons why neighbourhoods are unsafe for children to play in unsupervised

Both nationally and in our cities, the presence of strangers was the most commonly cited reason for why neighbourhoods were seen as unsafe for unsupervised children (both 47.0%). Auckland residents (59.0%) were most likely to be concerned

about the presence of strangers whereas residents in North Shore were least likely to be concerned about this issue (31.0%).

Porirua residents (40.0%) were more likely to believe that their children should always be supervised than residents of the other 12 cities.

## 4. Safety

Residents' reasons for why their neighbourhood is unsafe for children to play in unsupervised (2006)<sup>8</sup>

	Traffic %	Environmental %	Strangers %	Bullying %	Crime %	Other %	Children should always be supervised %
Rodney	28	18	37	14	2	5	35
North Shore	24	11	31	17	8	2	31
Waitakere	24	9	49	21	7	4	29
Auckland	27	7	59	18	5	3	29
Manukau	23	10	47	20	7	2	30
Hamilton	37	12	54	9	2	2	32
Tauranga	26	14	52	13	5	0	31
Porirua	17	11	45	26	5	1	40
Hutt	28	10	44	19	5	6	39
Wellington	34	8	45	11	4	6	32
Christchurch	22	8	50	16	10	4	36
Dunedin	39	14	37	18	2	1	24
<b>Total 12 cities</b>	<b>27</b>	<b>10</b>	<b>49</b>	<b>17</b>	<b>6</b>	<b>3</b>	<b>31</b>
<b>Rest of NZ</b>	<b>26</b>	<b>11</b>	<b>44</b>	<b>21</b>	<b>8</b>	<b>4</b>	<b>26</b>
<b>Total NZ</b>	<b>26</b>	<b>10</b>	<b>47</b>	<b>19</b>	<b>7</b>	<b>3</b>	<b>29</b>

Data source: Quality of Life Survey 2006

## Rate of hospitalisations for unintentional injury per 100,000 children aged 14 years and under

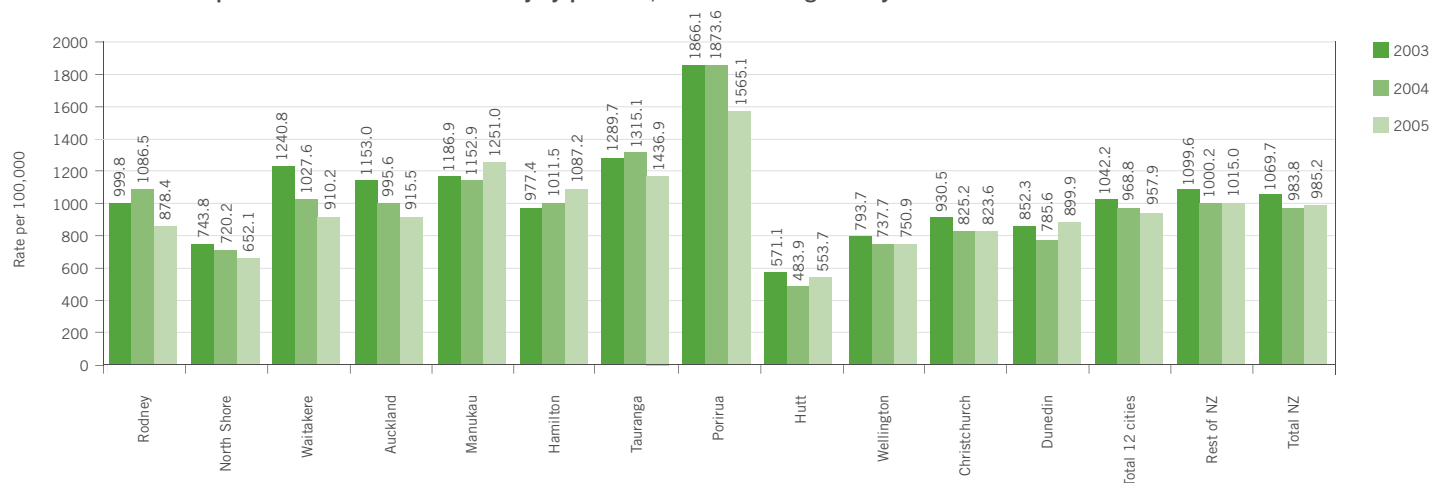
The rate of child hospitalisations for unintentional injury fell nationally from 1,069.7 per 100,000 children in 2003 to 985.2 per 100,000 in 2005. Similar declines were seen in our cities.

Hutt consistently had the lowest rate of child hospitalisations and Porirua the highest. The rate increased between 2003 and 2005 in Manukau, Hamilton and Tauranga.

Male children were more likely to be hospitalised than female children, both nationally and in our cities.

While New Zealand Europeans made up the highest number of hospitalisation cases, the rates of hospitalisation by ethnicity showed that Maori and Pacific Islands children were disproportionately represented with Maori having a rate of 634.8 per 100,000 in the 12 cities (compared with 729.9 per 100,000 in the rest of New Zealand) and Pacific Islands children had a rate of 642.8 per 100,000 in the 12 cities (compared with 486.6 per 100,000 in the rest of New Zealand).

## Rate of hospitalisation for unintentional injury per 100,000 children aged 14 years and under (2003 to 2005)



Data Source: Injury Prevention Research Unit (IPRU) Dunedin School of Medicine University of Otago

<sup>8</sup> Note that responses included here are from those who rated their neighbourhood unsafe for children to play in unsupervised.

## Injuries

- The rate of hospitalisations due to unintentional accidents has increased.
- The number of falls requiring hospitalisation of those over 65 years is increasing.

### What this is about

Injuries are a serious public health problem that take a toll on the health of the population and incur social and economic costs on society. The measures used to examine injuries are:

- Rate of hospitalisations for intentional injuries per 100,000 population aged 14 years and over
- Number and rate of hospitalisations for unintentional injuries per 100,000 people aged 14 years and over
- Number and rate of unintentional fatalities per 100,000 population for those aged 14 years and over
- Number and rate of falls by adults aged 65 years and over per 10,000 population.

### What did we find?

#### Rate of hospitalisations for intentional injuries per 100,000 population aged 14 years and over

This measure shows the hospitalisation rate for intentional injuries per 100,000 children aged 14 years and over between 2003 and 2005.<sup>9</sup>

Nationally, the rate of hospitalisations for intentional injuries increased from 51.3 per 100,000 in 2003 to 56.7 per 100,000 in 2005. The rate seen in the 12 cities increased between 2003 and 2005 from 50.1 per 100,000 to 58.5 per 100,000. The rate in the rest of New Zealand dropped over the same period from 52.8 to 54.4 per 100,000.

In 2005, Wellington had the lowest rate in the 12 cities with 21.7 per 100,000, while Manukau had the highest at 115.6 per 100,000.

#### Number and rate of intentional injuries per 100,000 population for those aged 14 years and over (2003 to 2005)

	2003		2004		2005	
	Number	Rate	Number	Rate	Number	Rate
Rodney	15	25.5	11	18.7	14	23.8
North Shore	59	40.2	40	27.3	53	36.1
Waitakere	46	36.2	75	59.1	84	66.1
Auckland	200	67.7	260	88.0	216	73.1
Manukau	198	95.8	212	102.5	239	115.6
Hamilton	54	60.1	45	50.1	55	61.2
Tauranga	30	42.1	34	47.7	44	61.8
Porirua	9	26.4	12	35.2	9	26.4
Hutt	28	38.6	31	42.7	39	53.8
Wellington	31	23.2	35	26.2	29	21.7
Christchurch	97	37.1	121	46.3	110	42.1
Dunedin	30	32.1	40	42.9	38	40.7
<b>Total 12 cities</b>	<b>797</b>	<b>50.1</b>	<b>916</b>	<b>57.6</b>	<b>930</b>	<b>58.5</b>
<b>Rest of NZ</b>	<b>686</b>	<b>52.8</b>	<b>671</b>	<b>51.7</b>	<b>707</b>	<b>54.4</b>
<b>Total NZ</b>	<b>1,483</b>	<b>51.3</b>	<b>1,587</b>	<b>54.9</b>	<b>1,637</b>	<b>56.7</b>

Data Source: Injury Prevention Research Unit (IPRU) Dunedin School of Medicine University of Otago

Across New Zealand and in the 12 cities, males and those aged between 20 and 24 years of age were more likely to be hospitalised for intentional injuries than other groups.

New Zealand Europeans were most frequently hospitalised of all ethnic groups, slightly ahead of Maori.

#### Number and rate of hospitalisations for unintentional injuries and per 100,000 people aged 14 years and over

Nationally, the rate of hospitalisations for unintentional injuries<sup>10</sup>

(i.e. accidents) increased from 998.5 per 100,000 in 2003 to 1,037.1 per 100,000 in 2005. There was a similar increase in both the number and rate of hospitalisations in our cities.

The rest of New Zealand had a higher rate of hospitalisations than the 12 cities from 2003 to 2005.

Of our cities, Tauranga had the highest rate of hospitalisations in 2005 with 1,279.1 per 100,000. Wellington had the lowest rate with 608.4 per 100,000.

<sup>9</sup> Intentional injuries are defined as assault and self-inflicted injuries.

<sup>10</sup> Unintentional injuries encompass motor vehicle accidents, falls, burns, near drowning and choking.

## 4. Safety



Number and rate of hospitalisations for unintentional injuries per 100,000 population for those aged 14 years and over (2003 to 2005)

	2003		2004		2005	
	Number	Rate	Number	Rate	Number	Rate
Rodney	618	1,049.7	659	1,119.3	753	1,279.0
North Shore	1,236	842.9	1,339	913.1	1,510	1,029.7
Waitakere	1,039	818.1	1,104	869.3	1,207	950.4
Auckland	2,769	937.6	2,802	948.8	2,961	1,002.6
Manukau	1,937	936.7	2,055	993.8	2,130	1,030.1
Hamilton	810	901.4	850	946.0	851	947.1
Tauranga	839	1,178.0	941	1,321.2	911	1,279.1
Porirua	267	783.4	220	645.5	240	704.2
Hutt	579	798.1	623	858.7	634	873.9
Wellington	834	624.9	761	570.2	812	608.4
Christchurch	2,533	969.0	2,473	946.0	2,560	979.3
Dunedin	874	936.4	973	1,042.4	908	972.8
<b>Total 12 cities</b>	<b>14,335</b>	<b>901.3</b>	<b>14,800</b>	<b>930.5</b>	<b>15,477</b>	<b>973.1</b>
<b>Rest of NZ</b>	<b>14,517</b>	<b>1,117.5</b>	<b>14,382</b>	<b>1,107.2</b>	<b>14,489</b>	<b>1,115.4</b>
<b>Total NZ</b>	<b>28,852</b>	<b>998.5</b>	<b>29,182</b>	<b>1,009.9</b>	<b>29,966</b>	<b>1,037.1</b>

Data Source: Injury Prevention Research Unit (IPRU) Dunedin School of Medicine University of Otago

#### Number and rate of unintentional fatalities per 100,000 population for those aged 14 years and over

This measure shows the hospitalisation rate for intentional injuries per 100,000 children aged 14 years and older between 2001 and 2003.<sup>11</sup>

There was an increase nationally in unintentional fatalities from 2001 to 2003. The rate of unintentional fatalities was

considerably lower in our cities than in the rest of New Zealand. However, where the rate for the rest of New Zealand has remained stable, the rate of fatalities in our cities has been increasing.

Of our cities, Tauranga had the highest fatality rate with 49.1 per 100,000. The lowest was in Waitakere with 16.5 per 100,000.

Number and rate of unintentional fatalities per 100,000 population for those aged 14 years and over (2001 to 2003)

	2001		2002		2003	
	Number	Rate	Number	Rate	Number	Rate
Rodney	14	23.8	21	35.7	19	32.3
North Shore	31	21.1	37	25.2	42	28.6
Waitakere	27	21.3	28	22.0	21	16.5
Auckland	62	21.0	83	28.1	79	26.8
Manukau	38	18.4	52	25.1	56	27.1
Hamilton	14	15.6	22	24.5	24	26.7
Tauranga	32	44.9	16	22.5	35	49.1
Porirua	11	32.3	16	46.9	11	32.3
Hutt	14	19.3	12	16.5	21	28.9
Wellington	21	15.7	28	21.0	33	24.7
Christchurch	76	29.1	76	29.1	83	31.8
Dunedin	23	24.6	24	25.7	32	34.3
<b>Total 12 cities</b>	<b>363</b>	<b>22.8</b>	<b>415</b>	<b>26.1</b>	<b>456</b>	<b>28.7</b>
<b>Rest of NZ</b>	<b>605</b>	<b>46.6</b>	<b>605</b>	<b>46.6</b>	<b>604</b>	<b>46.5</b>
<b>Total NZ</b>	<b>968</b>	<b>33.5</b>	<b>1,020</b>	<b>35.3</b>	<b>1,060</b>	<b>36.7</b>

Data Source: Injury Prevention Research Unit (IPRU) Dunedin School of Medicine University of Otago

<sup>11</sup> Unintentional fatalities include those as a result of motor vehicle accidents, falls, burns, drowning and choking.



## Injuries continued

### Number and rate of falls by adults aged 65 years and over per 10,000 population

This measure shows the hospitalisation rate for intentional injuries per 100,000 adults aged 65 years and over between 2002/2003 and 2004/2005.

Falls are a common source of injury for those aged 65 years and over and can have serious health implications.

Nationally, the number of falls by adults aged 65 years and over increased from 7,204 in 2002/2003 to 7,545 in 2004/2005.

The rate of falls also increased nationally from 159.9 per 10,000 to 167.5 per 10,000.

The rate of falls in the 12 cities was consistently higher than that seen in the rest of New Zealand (184.9 per 10,000 in 2004/2005 compared with 150.6 per 10,000 respectively). The gap between the 12 cities and the rest of New Zealand has increased from 24.6 per 10,000 in 2002/2003 to 34.3 per 10,000 in 2004/2005.

There were differences between the 12 cities in the rate of falls, with Waitakere having the lowest rate (155.1 per 10,000) in 2004/2005 and North Shore having the highest (223.6 per 10,000). Nationally and in the 12 cities, older New Zealand Europeans had a higher rate of falls than those from other ethnic groups with 170.6 per 10,000 nationally and 187.9 for the 12 cities combined.

### Number and rate of falls of adults aged 65 years and over per 10,000 population aged 65 years and over (2002/2003 to 2004/2005)

	2002/2003		2003/2004		2004/2005	
	Number	Rate	Number	Rate	Number	Rate
Rodney	118	104.0	146	128.6	192	169.2
North Shore	314	155.7	382	189.4	451	223.6
Waitakere	215	145.0	204	137.6	230	155.1
Auckland	712	187.7	695	183.2	771	203.2
Manukau	403	170.8	368	155.9	392	166.1
Hamilton	192	165.1	189	162.5	206	177.2
Tauranga	255	162.8	269	171.7	295	188.3
Porirua	49	151.1	41	126.4	55	169.6
Hutt	166	165.3	151	150.4	162	161.3
Wellington	242	171.7	211	149.7	246	174.5
Christchurch	908	204.4	824	185.5	829	186.6
Dunedin	258	169.4	295	193.7	280	183.8
<b>Total 12 cities</b>	<b>3,832</b>	<b>172.4</b>	<b>3,775</b>	<b>169.9</b>	<b>4,109</b>	<b>184.9</b>
<b>Rest of NZ</b>	<b>3,372</b>	<b>147.8</b>	<b>3,486</b>	<b>152.8</b>	<b>3,346</b>	<b>150.6</b>
<b>Total NZ</b>	<b>7,204</b>	<b>159.9</b>	<b>7,261</b>	<b>161.2</b>	<b>7,545</b>	<b>167.5</b>

Data Source: Injury Prevention Research Unit (IPRU) Dunedin School of Medicine University of Otago



## Road safety

### 4. Safety

- Nationally and in the 12 cities, the rate of serious and fatal road crash injuries has dropped.
- The usage of safety belts remains high across the 12 cities.

#### What this is about

The increasing number of cars on city roads brings greater risk of injury and fatality from motor vehicle accidents. Often this means that pedestrians and cyclists are put at potential risk. Examining the number of fatalities and serious injuries helps assess this risk and the success of interventions that may be in place.

Research indicates that approximately half of such injury causing accidents are not reported. Under-reporting is evident amongst single vehicle accidents, motorcycle accidents and accidents involving alcohol.<sup>12</sup> Measures used to assess road safety are:

- Rate of serious and fatal road injuries per 10,000 population
- Length of stay in hospital due to road crash injuries
- Social cost of accidents (includes loss of life estimates)
- Seat belt and child restraint usage.

#### What did we find?

##### Rate of serious and fatal road injuries per 10,000 population

This measure shows the rate of serious and fatal injuries per 10,000 population between 2002 and 2006.

Nationally, the rate of serious and fatal road crash injuries per 10,000 people dropped from 7.5 per 10,000 in 2002 to 7.0 per 10,000 in 2006.<sup>13</sup> There were differences between the rate in our cities and the rest of New Zealand (4.6 per 10,000 and 10.0 per 10,000 respectively). Rates may be higher in the rest of New Zealand due to the higher incidence of serious and fatal road crashes on open roads. In 2005, 72.4% of fatal crashes were on rural roads.<sup>14</sup>

There were also differences between our cities with Rodney (10.5 per 10,000) and Dunedin (9.8 per 10,000) having the highest rates of serious and fatal road crash injuries and Wellington (3.1 per 10,000) and Hamilton (3.1 per 10,000) having the lowest rates.

##### Rate of serious and fatal road injuries per 10,000 population (2002 to 2006)

	2002	2003	2004	2005	2006
Rodney	12.1	8.6	10.7	11	10.5
North Shore	3.3	3.8	3.3	3.0	3.3
Waitakere	5.1	6.0	4.8	3.0	4.3
Auckland	4.9	5.3	3.7	3.9	4.2
Manukau	4.4	4.4	3.6	3.7	3.6
Hamilton	2.8	4.3	3.7	3.9	3.1
Tauranga	4.1	6.6	4.5	4.2	4.4
Porirua	4.0	4.8	5.7	7.3	4.1
Hutt	3.4	4.7	4.5	3.6	5.2
Wellington	3.8	4.0	2.8	3.1	3.1
Christchurch	5.5	4.8	4.7	4.8	5.2
Dunedin	12.6	13.5	9.4	13.4	9.8
<b>Total 12 cities</b>	<b>5.2</b>	<b>5.4</b>	<b>4.5</b>	<b>4.6</b>	<b>4.6</b>
<b>Rest of NZ</b>	<b>10.3</b>	<b>10.8</b>	<b>10.7</b>	<b>11.1</b>	<b>10.0</b>
<b>Total NZ</b>	<b>7.5</b>	<b>7.8</b>	<b>7.2</b>	<b>7.5</b>	<b>7.0</b>

Data source: Ministry of Transport

12 Land Transport Safety Authority. (2001). *Annual Statistics*. Wellington.

13 The severity of a crash is determined as the most severely injured casualty in the crash. Fatal injuries are injuries that result in death within 30 days of a crash. Serious injuries are injuries that involve fractures, concussion, internal injuries, crushing, severe cuts and lacerations, severe general shock necessitating medical treatment and any injury involving removal to and detention in hospital.

14 Ministry of Transport. (2006). *Annual Statistics*. Wellington.

## Road safety continued

### Average length of stay in hospital due to road crash injuries

This measure shows the average length of stay in hospital for an individual due to road crash injuries between 2003 and 2006.

The average length of stay in hospital due to serious or fatal road crash injuries fell in New Zealand from 7.2 nights in 2005 to 6.4 nights in 2006.

The Auckland region had the lowest average length of stay in 2006 with 4.0 nights while Otago region had the highest with 9.0 nights. This may be the result of the type of crash involved (i.e. more serious accidents occurring on rural roads).

### Average length of stay (nights) in hospital due to serious or fatal road crash injuries, by region (2003 to 2006)

	2003	2004	2005	2006
Northland	8.8	11.0	8.5	7.4
Auckland	5.4	4.3	4.3	4.0
Waikato	6.5	9.0	9.5	7.5
Wellington	8.2	11.1	10.4	7.9
Canterbury	5.0	4.1	4.6	4.7
Otago	13.4	14.5	13.6	9.0
<b>Total NZ</b>	<b>7.2</b>	<b>7.1</b>	<b>7.2</b>	<b>6.4</b>

Data source: Ministry of Transport

### Social cost of accidents (includes loss of life estimates)

The social cost of a road crash and the associated injuries include loss of life and life quality, loss of output due to temporary incapacitation, medical costs, legal costs and property damage costs. The average value of a loss of life due to a road crash is estimated as the amount of money the New Zealand population would be willing to pay for a safety improvement that would result in the expected avoidance of one premature death.<sup>15</sup>

The overall social cost for New Zealand dropped from \$3,264.0 million in 2002 to \$3,246.0 million in 2006. The overall social cost for the 12 cities was lower than that of the rest of New Zealand over this period (\$1,178.0 million and \$2,069.0 million in 2006 respectively).

Differences between the cities (e.g. Rodney with \$114.6 million and Porirua \$32.9 million) were likely to be a result of both a lower rate of crashes but also the higher costs associated with crashes in rural areas.

### Social cost of accidents (\$ millions) (2002 to 2006)

	2002 (\$ millions)	2003 (\$ millions)	2004 (\$ millions)	2005 (\$ millions)	2006 (\$ millions)
Rodney	79.9	73.7	95.7	113.5	114.6
North Shore	102.5	84.7	82.0	74.6	74.8
Waitakere	75.3	73.5	66.3	69.4	73.9
Auckland	191.8	217.1	207.4	184.0	197.4
Manukau	137.0	146.8	113.2	151.7	139.0
Hamilton	37.5	71.7	54.5	63.9	57.3
Tauranga	49.5	77.4	68.6	60.3	59.3
Porirua	21.7	24.6	34.0	30.4	32.9
Hutt	37.8	56.8	51.0	42.6	52.8
Wellington	65.4	80.2	63.3	66.0	66.3
Christchurch	210.7	184.4	187.9	184.2	217.0
Dunedin	100.6	129.2	96.0	110.5	92.7
<b>Total 12 cities</b>	<b>1,109.7</b>	<b>1,220.1</b>	<b>1,120.0</b>	<b>1,151.2</b>	<b>1,178.0</b>
<b>Rest of NZ</b>	<b>2,154.3</b>	<b>2,135.3</b>	<b>2,235.1</b>	<b>2,298.6</b>	<b>2,069.0</b>
<b>Total NZ</b>	<b>3,264.0</b>	<b>3,355.3</b>	<b>3,355.1</b>	<b>3,449.7</b>	<b>3,246.0</b>

Data source: Ministry of Transport

15 This is the willingness to pay based on the value of statistical life (VOSL). Refer to Land Transport New Zealand for details on how this is calculated.

## 4. Safety

**Seat belt and child restraint usage**

This measure looks at the percentage of adult front seat passengers who were observed using safety belts in the years 2004 to 2006.<sup>16</sup>

The percentage of passengers wearing their seat belts remained consistently high in each of the years with 95.0% of passengers observed wearing belts in 2006. While usage is high across all cities, some differences were apparent. Auckland had the highest rate, with 100.0% observed use in 2006 compared with 93.0% observed use in Manukau.

**Percentage of observed front seat adult safety belt wearers (2004 to 2006)**

	2004 %	2005 %	2006 %
Rodney	100.0	99.0	100.0
North Shore	97.0	98.0	96.0
Waitakere	98.0	98.0	97.0
Auckland	96.0	98.0	100.0
Manukau	93.0	97.0	93.0
Hamilton	96.0	99.0	98.0
Tauranga	97.0	97.0	98.0
Porirua	96.0	95.0	99.0
Hutt	96.0	96.0	98.0
Wellington	97.0	98.0	98.0
Christchurch	97.0	97.0	97.0
Dunedin	92.0	97.0	94.0
<b>Total NZ</b>	<b>94.0</b>	<b>95.0</b>	<b>95.0</b>

Data source: Ministry of Transport

The Ministry of Transport Safety Belt Survey also examines the number of children under the age of five years who are in a child restraint while in a vehicle.

Nationally there was an increase in the percentage of children placed in restraints, from 87.0% in 2004 to 91.0% in 2006.

As with adult front seat passengers, there were differences in child restraint usage across the cities. In 2006, Tauranga had

the highest percentage usage with 97.0% of children restrained, compared with Auckland which had the lowest usage rate of 84.0%. Although the use of child restraints in most of our cities increased between 2004 and 2006, there was a decrease in Christchurch over this period (from 91.0% in 2004 to 85.0% in 2006).

**Percentage of child restraint use by children under five years (2004 to 2006)**

	2004 %	2005 %	2006 %
Rodney	84.0	96.0	Sample too small
North Shore	80.0	94.0	93.0
Waitakere	95.0	91.0	90.0
Auckland	88.0	86.0	84.0
Manukau	66.0	76.0	96.0
Hamilton	80.0	94.0	87.0
Tauranga	81.0	87.0	97.0
Porirua	85.0	85.0	94.0
Hutt	93.0	95.0	94.0
Wellington	86.0	87.0	87.0
Christchurch	91.0	77.0	85.0
Dunedin	96.0	91.0	Sample too small
<b>Total NZ</b>	<b>87.0</b>	<b>89.0</b>	<b>91.0</b>

Data source: Ministry of Transport

16 Ministry of Transport. *Safety Belt Use Survey 2004 to 2006*. It should be noted that at local authority level, sample sizes are relatively small and results should be treated with caution.

## Workplace safety

- The 12 cities have a lower rate of workplace injuries than the rest of New Zealand.

### What this is about

Safety at work is an important contributor to wellbeing. Workplace injuries can have serious personal and economic consequences for the individual and their family. This indicator looks at the number and rate of workplace injuries per 1,000 employees.

### What did we find?

There were 242,615 workplace injuries across New Zealand in 2005, a decrease of 1.4% from the 246,163 recorded in 2004. The rate of workplace injuries was higher in the rest of New Zealand in 2005 compared with the 12 cities combined (187.3 per 1,000 employees and 113.0 per 1,000 respectively).

Of the 12 cities, Tauranga consistently had the highest rate of workplace injuries per 1,000 employees (211.3 in 2005). North Shore had the lowest rate (50.5 in 2005).

Males make up the majority of workplace injury claims, both nationally and in the 12 cities (73.9% and 72.9% respectively for 2005).

Nationally, the occupational category that made up the largest proportion of workplace injury claims was the Plant and Machine Operators and Assemblers (18.2%). For the 12 cities the category with the largest proportion of workplace injuries was Trade Workers (19.2%).

### Number and rate of workplace injuries per 1,000 employees (2003 to 2005)

	2003		2004		2005	
	Number	Rate	Number	Rate	Number	Rate
Rodney	2,573	151.2	2,640	141.8	3,083	155.9
North Shore	3,900	54.4	4,134	54.8	3,994	50.5
Waitakere	3,011	74.4	3,554	83.7	3,072	69.3
Auckland	45,182	163.6	45,299	159.5	45,466	153.3
Manukau	5,211	50.0	6,338	57.9	6,110	52.6
Hamilton	9,272	150.2	9,722	151.1	9,078	131.2
Tauranga	9,400	235.9	9,487	229.8	9,419	211.3
Porirua	1,223	96.8	1,319	102.8	1,468	111.6
Hutt	2,822	71.8	2,699	67.6	2,881	68.5
Wellington	8,306	70.0	8,048	66.7	7,571	58.6
Christchurch	25,525	158.6	25,179	149.4	24,486	137.1
Dunedin	5,844	116.1	6,152	119.7	6,142	114.6
<b>Total 12 cities</b>	<b>122,269</b>	<b>123.1</b>	<b>124,571</b>	<b>121.1</b>	<b>122,770</b>	<b>113.0</b>
<b>Rest of NZ</b>	<b>120,940</b>	<b>203.5</b>	<b>121,592</b>	<b>198.6</b>	<b>119,845</b>	<b>187.3</b>
<b>Total NZ</b>	<b>243,209</b>	<b>153.2</b>	<b>246,163</b>	<b>150.0</b>	<b>242,615</b>	<b>140.6</b>

Data Source: Accident Compensation Corporation

## Crime levels

### 4. Safety

- The overall rate of crime in the 12 cities and New Zealand overall has declined.
- The rate of recorded burglaries in our cities is higher than the rest of New Zealand.
- There has been an increase in the rate of recorded violence offences, both nationally and in the 12 cities.

### What this is about

Crime is a topic of general public debate. For some the concern stems from the perception that rising crime levels constitutes an increasing threat to their safety, their property and their sense of wellbeing.

Care needs to be taken in the interpretation of crime statistics as changes or fluctuations in crime rates may be affected by changes in reporting by the public and recording practices by the police, as well as by actual changes in the level of offending.

This indicator uses seven measures to examine the level of crime in the 12 cities<sup>17</sup>:

- Number of youth apprehensions for 14 to 16 year olds
- Total offence rate per 10,000 population
- Number and rate of recorded burglary offences per 10,000 population

- Number and rate of recorded violence offences per 10,000 population
- Number and rate of recorded sexual offences per 10,000 population
- Number and rate of total car offences per 10,000 population
- Total drug and anti-social offences per 10,000 population.

### What did we find?

#### Number of youth apprehensions for 14 to 16 year olds<sup>18</sup>

This measure shows the total number of youth apprehensions for 14 to 16 year olds, within each city in 2005/2006.<sup>19</sup> More youth apprehensions were recorded outside the 12 cities than in the 12 cities combined (17,776 and 15,304 respectively in 2005/2006).

Christchurch had the largest number of youth apprehensions across the 12 cities, with 2,981 in 2005/2006. Porirua had the smallest number in 2005/2006 with 447.

#### Number of youth apprehensions for 14 to 16 year olds (2005/2006)

	2005/2006
Rodney	577
North Shore	1,028
Waitakere	1,625
Auckland	1,889
Manukau	1,765
Hamilton	1,545
Tauranga	945
Porirua	447
Hutt	761
Wellington	723
Christchurch	2,990
Dunedin	1,001
<b>Total 12 cities</b>	<b>15,304</b>
<b>Rest of NZ</b>	<b>17,776</b>
<b>Total NZ</b>	<b>33,063</b>

Data Source: New Zealand Police

<sup>17</sup> The figures shown in this section are offences statistics by Police Station grouped to territorial local authority (TLA) boundaries. TLA boundaries do not necessarily reflect Police Districts. Therefore the figures shown here may differ from those reported elsewhere.

<sup>18</sup> It is important to note that these figures do not equate to the numbers of youths apprehended as, for example, one offender may be apprehended for multiple offences or several offenders may be apprehended for a single offence. The police say that variations in administration make comparing data between years inadvisable. Section 21 of the Crimes Act 1961 states that "no person shall be convicted of an offence by reason of any act done or omitted by him when under the age of 10 years." Similarly Section 22 of the Crimes Act 1961 states that "no person shall be convicted of an offence by reason of any act done or omitted by him when of the age of 10 years but under the age of 14 unless he knew either that the act or omission was wrong or that it was contrary to the law." Therefore police will often take appropriate action other than apprehension.

<sup>19</sup> While police apprehension statistics do provide an indication of trends in youth offending, reporting and recording practices, along with policy and legislative changes, can significantly influence apprehension statistics and thereby distort offending trends. From Soboleva, N., Kazakova, N. & Chong, J. (2006). *Conviction and Sentencing of Offenders in New Zealand: 1996 to 2005*. Wellington. For this reason, the figures for 2005/2006 only are presented.

## Crime levels continued

In 2005/2006 the majority of juvenile offences in New Zealand were committed by 14 to 16 year olds (15.9% of all apprehensions for New Zealand overall). This was also the case in our cities with this age group accounting for 13.9% of all apprehensions.

However, research conducted on behalf of the Ministry of Social Development, showed that the ferocity of offences committed by young people is rising and that more remand and custodial sentences are likely. Analysis of custody placements showed that while there had been growth in the youth population, overall offending rates had remained static over the 1998 to 2006 period. In fact, when considered on a per 10,000 of population basis, the ratio of apprehensions to population, for 10 to 16 year olds, had decreased by 11.5% nationally.<sup>20</sup> When the recorded violence offences for 14 to 16 year olds are examined, an increase of 29.8% was seen between 2000 and 2005.<sup>21</sup>

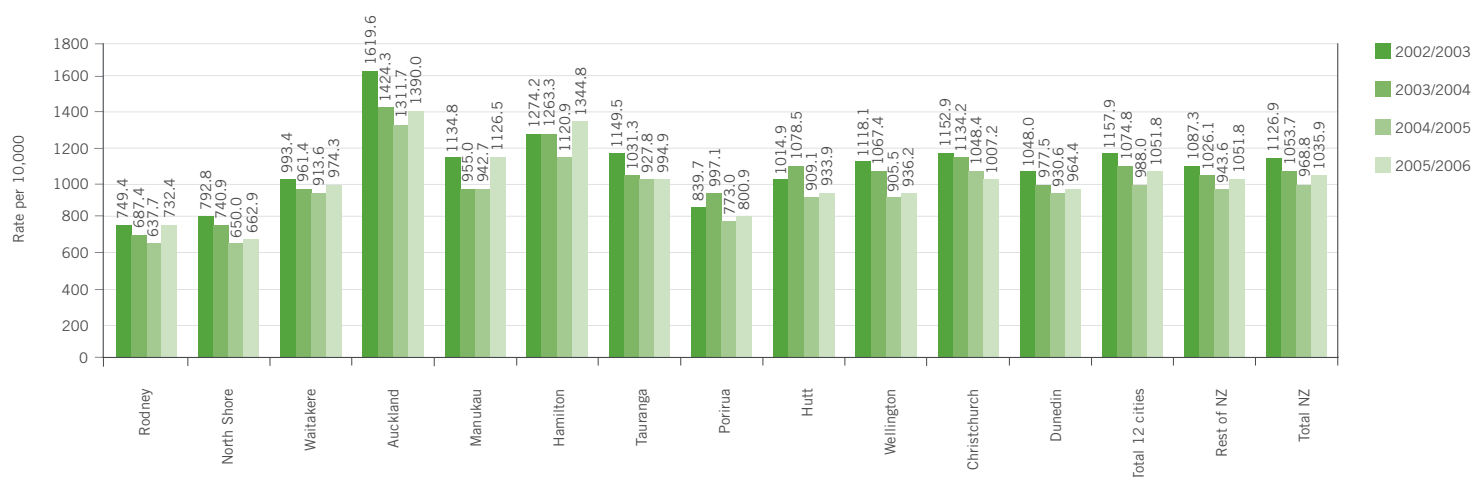
There may be a relationship between increased risk of juvenile offending, truancy, school exclusions and non-engagement in education. Many young offenders do not participate in education and are likely to have low levels of educational attainment.<sup>22</sup>

### Total offences per 10,000 population

This measure shows the total number and rate of all recorded offences within each city between 2002/2003 and 2005/2006.<sup>23</sup> The overall rate of crime in New Zealand declined from 1126.9 per 10,000 in 2002/2003 to 1035.9 in 2005/2006. Declines were also seen in the 12 cities and the rest of New Zealand over this period. The 12 cities had a higher rate of total offences than the rest of New Zealand (1051.8 per 10,000 in 2005/2006 and 1014.7 per 10,000 respectively).

Auckland had the highest rate of the 12 cities in 2005/2006 with 1390.0 per 10,000 population compared to North Shore which had the lowest rate of 732.4 per 10,000.

Rate of total offences per 10,000 population (2002/2003 to 2005/2006)



Data source: New Zealand Police

20 Saxon, T. (2006). *Review and Analysis of Youth Justice Custody Placements of Children and Young People under the Child, Youth and Family Act 1989. Phase One. Final Report.* [www.cyf.govt.nz/documents/yj\\_research\\_report.pdf](http://www.cyf.govt.nz/documents/yj_research_report.pdf) Retrieved 10 July 2007.

21 The more serious violence class offences are considered here – Homicide, Kidnapping, Robbery, Grievous Assaults and Serious Assaults.

22 Ministry of Justice. (2002). *Report of the Ministerial Taskforce on Youth Offending*, Wellington.

23 It should be noted that the offence figures presented here are for police areas whose boundaries may not match the TLA boundaries. The population bases used to calculate the offence rates is also based on police areas and may not match the population estimates for the TLAs.



## 4. Safety



Number and rate of recorded total offences per 10,000 population (2002/2003 to 2005/2006)

	2002/2003		2003/2004		2004/2005		2005/2006	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Rodney	6,283	749.4	5,997	687.4	5,718	637.7	6,760	732.4
North Shore	15,969	792.8	15,429	740.9	13,762	650.0	14,175	662.9
Waitakere	18,184	993.4	18,089	961.4	17,458	913.6	18,839	974.3
Auckland	66,093	1,619.6	60,110	1,424.3	55,576	1,311.7	59,462	1,390.0
Manukau	34,974	1,134.8	30,497	955.0	30,839	942.7	37,488	1,126.5
Hamilton	17,756	1,274.2	18,084	1,263.3	16,387	1,120.9	19,889	1,344.8
Tauranga	12,745	1,149.5	11,803	1,031.3	11,726	997.1	11,974	994.9
Porirua	5,378	839.7	6,010	927.8	5,040	773.0	5,202	800.9
Hutt	10,395	1,041.9	10,810	1,078.5	9,146	909.1	9,389	933.9
Wellington	18,237	1,118.1	17,922	1,067.4	15,457	905.5	16,178	936.2
Christchurch	39,524	1,152.9	39,800	1,134.2	37,222	1,048.4	36,066	1,007.2
Dunedin	12,676	1,048.0	11,914	977.5	11,404	930.6	11,862	964.4
<b>Total 12 cities</b>	<b>258,214</b>	<b>1,160.6</b>	<b>246,465</b>	<b>1,077.1</b>	<b>229,735</b>	<b>989.7</b>	<b>247,284</b>	<b>1,053.3</b>
<b>Rest of NZ</b>	<b>188,932</b>	<b>1,083.8</b>	<b>179,684</b>	<b>1,023.2</b>	<b>166,283</b>	<b>941.3</b>	<b>179,185</b>	<b>1,012.7</b>
<b>Total NZ</b>	<b>447,146</b>	<b>1,126.9</b>	<b>426,146</b>	<b>1,053.7</b>	<b>396,018</b>	<b>968.8</b>	<b>426,469</b>	<b>1,035.9</b>

Data Source: New Zealand Police

The results of the New Zealand Crime and Safety Survey 2006 (NZCASS) suggest that the official recorded offence figures underestimate the actual number of offences committed, as not all offences come to police attention. Some types of offences measured by the NZCASS are comparable with the equivalent number recorded by police. The results of the survey showed that there were eight times more offences estimated by the survey than in Police figures. However, this figure should be considered suggestive rather than precise.<sup>24</sup>

#### Number and rate of recorded burglary offences per 10,000 population

This measure shows the total number and rate of recorded burglary offences within each city between 2002/2003 and 2005/2006. The overall rate of burglaries in New Zealand declined from 153.3 per 10,000 in 2002/2003 to 147.9 in 2005/2006. A similar decrease was also seen in our cities with the rate of burglary offences falling from 168.7 to 154.8 per 10,000 people over this period. The rate of burglaries was consistently higher in the 12 cities than in the rest of New Zealand.

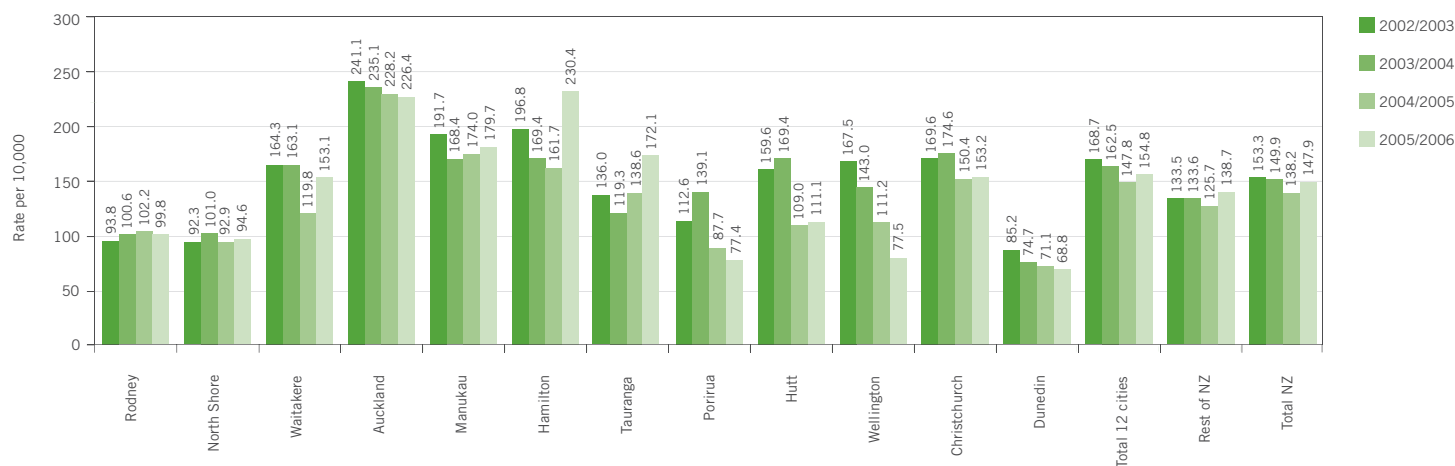
Hamilton had the highest burglary rate of the 12 cities in 2005/2006 with 230.4 per 10,000 population. Porirua had the lowest rate of 77.4.



24 Mayhew, P. & Reilly, J. (2007). *New Zealand Crime and Safety Survey 2006*. Wellington.

## Crime levels continued

Rate of burglary offences per 10,000 population (2002/2003 to 2005/2006)



Data source: New Zealand Police

Number and rate of recorded burglary offences per 10,000 population (2002/2003 to 2005/2006)

	2002/2003		2003/2004		2004/2005		2005/2006	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Rodney	786	93.8	878	100.6	916	102.2	921	99.8
North Shore	1,860	92.3	2,103	101.0	1,967	92.9	2,022	94.6
Waitakere	3,008	164.3	3,068	163.1	2,289	119.8	2,961	153.1
Auckland	9,838	241.1	9,924	235.1	9,669	228.2	9,687	226.4
Manukau	5,907	191.7	5,378	168.4	5,691	174.0	5,979	179.7
Hamilton	2,742	196.8	2,425	169.4	2,364	161.7	3,407	230.4
Tauranga	1,508	136.0	1,365	119.3	1,630	138.6	2,071	172.1
Porirua	721	112.6	901	139.1	572	87.7	503	77.4
Hutt	1,592	159.6	1,698	169.4	1,097	109.0	1,117	111.1
Wellington	2,732	168.3	2,401	143.0	1,898	111.2	1,339	77.5
Christchurch	5,816	169.6	6,125	174.6	5,340	150.4	5,487	153.2
Dunedin	1,031	85.2	911	74.7	871	71.1	846	68.8
<b>Total 12 cities</b>	<b>37,541</b>	<b>168.7</b>	<b>37,177</b>	<b>162.5</b>	<b>34,304</b>	<b>147.8</b>	<b>36,340</b>	<b>154.8</b>
<b>Rest of NZ</b>	<b>23,275</b>	<b>133.5</b>	<b>23,453</b>	<b>133.6</b>	<b>22,209</b>	<b>125.7</b>	<b>24,542</b>	<b>138.7</b>
<b>Total NZ</b>	<b>60,816</b>	<b>153.3</b>	<b>60,630</b>	<b>149.9</b>	<b>56,513</b>	<b>138.2</b>	<b>60,882</b>	<b>147.9</b>

Data source: New Zealand Police

### Number and rate of recorded violence offences per 10,000 population

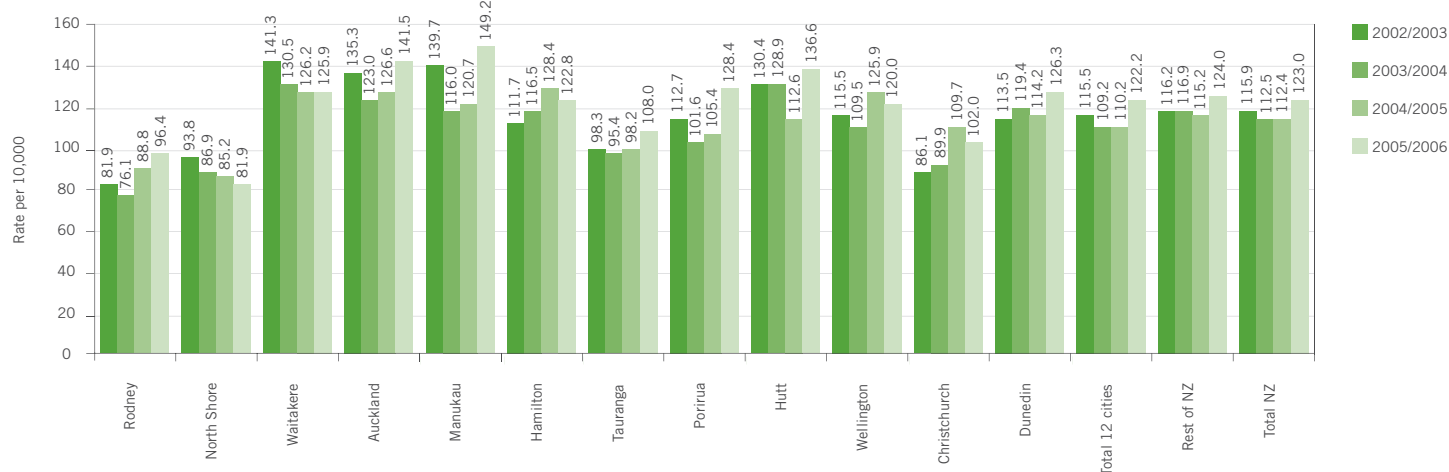
This measure shows the total number and rate of recorded violence offences within each city between 2002/2003 and 2005/2006. The overall rate of violence offences in New Zealand increased from 115.9 per 10,000 in 2002/2003 to 123.0 in 2005/2006. An increase was also seen in the 12 cities over this

period, from 116.2 per 10,000 to 122.2. Despite this increase, the rate of violence offences has been consistently lower in our cities than the rest of New Zealand.

Manukau had the highest rate of the 12 cities in 2005/2006 with 149.2 per 10,000 population, while North Shore had the lowest at 81.9.

## 4. Safety

Rate of violence offences per 10,000 population (2002/2003 to 2005/2006)



Data source: New Zealand Police

Number and rate of recorded violence offences per 10,000 population (2002/2003 to 2005/2006)

	2002/2003		2003/2004		2004/2005		2005/2006	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Rodney	687	81.9	664	76.1	796	88.8	890	96.4
North Shore	1,889	93.8	1,809	86.9	1,803	85.2	1,752	81.9
Waitakere	2,586	141.3	2,456	130.5	2,419	126.6	2,435	125.9
Auckland	5,522	135.3	5,190	123.0	5,113	120.7	6,051	141.5
Manukau	4,306	139.7	3,704	116.0	4,202	128.4	4,965	149.2
Hamilton	1,557	111.7	1,667	116.5	1,437	98.3	1,816	122.8
Tauranga	1,089	98.2	1,092	95.4	1,240	105.4	1,300	108.0
Porirua	722	112.7	658	101.6	734	112.6	834	128.4
Hutt	1,301	130.4	1,292	128.9	1,267	125.9	1,373	136.6
Wellington	1,883	115.5	1,838	109.5	1,872	109.7	2,074	120.0
Christchurch	2,951	86.1	3,153	89.9	3,305	93.1	3,653	102.0
Dunedin	1,373	113.5	1,455	119.4	1,399	114.2	1,554	97.7
<b>Total 12 cities</b>	<b>25,866</b>	<b>116.2</b>	<b>24,978</b>	<b>110.2</b>	<b>25,587</b>	<b>110.2</b>	<b>28,697</b>	<b>126.3</b>
<b>Rest of NZ</b>	<b>20,114</b>	<b>115.4</b>	<b>20,534</b>	<b>115.2</b>	<b>20,354</b>	<b>115.2</b>	<b>21,947</b>	<b>124.0</b>
<b>Total NZ</b>	<b>45,988</b>	<b>115.9</b>	<b>45,512</b>	<b>112.5</b>	<b>45,941</b>	<b>112.4</b>	<b>50,644</b>	<b>123.0</b>

Data source: New Zealand Police

Although violent crime made up 11.9% of all recorded crime in New Zealand in 2005/2006, it is the most common type of crime referred to in the media and results in the most public concern and comment.

#### Number and rate of recorded sexual offences per 10,000 population

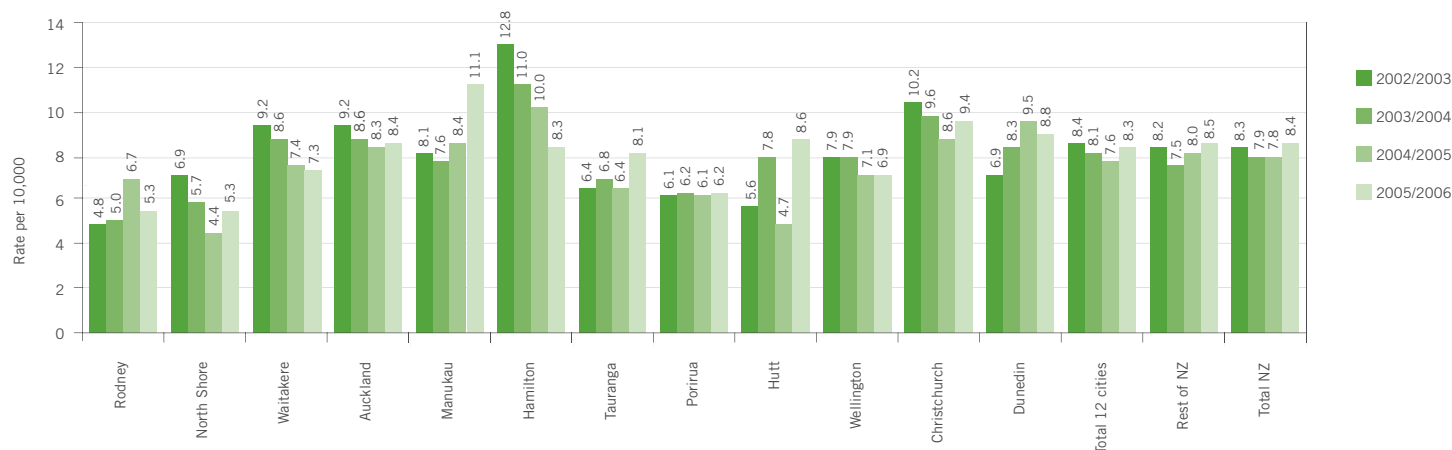
This measure shows the total number and rate of recorded sexual offences within each city between 2002/2003 and 2005/2006. The overall rate of sexual crime in New Zealand remained stable

at 8.3 per 10,000 from 2002/2003 to 2005/2006. The rate seen in the 12 cities for 2005/2006 (8.3 per 10,000) was lower than that seen in the rest of New Zealand (8.5 per 10,000).

Manukau had the highest rate of the 12 cities in 2005/2006 with 11.1 per 10,000 population, while Rodney and North Shore had the lowest at 5.3 per 10,000.

## Crime levels continued

Rate of recorded sexual offences per 10,000 population (2002/2003 to 2005/2006)



Data source: New Zealand Police

Number and rate of recorded sexual offences per 10,000 population (2002/2003 to 2005/2006)

	2002/2003		2003/2004		2004/2005		2005/2006	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Rodney	40	4.8	44	5.0	60	6.7	49	5.3
North Shore	139	6.9	119	5.7	93	4.4	113	5.3
Waitakere	168	9.2	161	8.6	141	7.4	141	7.3
Auckland	377	9.2	363	8.6	350	8.3	360	8.4
Manukau	249	8.1	244	7.6	275	8.4	369	11.1
Hamilton	179	12.8	157	11.0	146	10.0	123	8.3
Tauranga	71	6.4	78	6.8	75	6.4	98	8.1
Porirua	39	6.1	40	6.2	40	6.1	40	6.2
Hutt	56	5.6	78	7.8	47	4.7	86	8.6
Wellington	128	7.9	132	7.9	121	7.1	120	6.9
Christchurch	349	10.2	337	9.6	305	8.6	338	9.4
Dunedin	83	6.9	101	8.3	116	9.5	108	8.8
<b>Total 12 cities</b>	<b>1,878</b>	<b>8.4</b>	<b>1,853</b>	<b>8.1</b>	<b>1,769</b>	<b>7.6</b>	<b>1,945</b>	<b>8.3</b>
<b>Rest of NZ</b>	<b>1,428</b>	<b>8.2</b>	<b>1,325</b>	<b>7.5</b>	<b>1,418</b>	<b>8.0</b>	<b>1,503</b>	<b>8.5</b>
<b>Total NZ</b>	<b>3,312</b>	<b>8.3</b>	<b>3,179</b>	<b>7.9</b>	<b>3,187</b>	<b>7.8</b>	<b>3,448</b>	<b>8.4</b>

Data source: New Zealand Police

### Number and rate of total car offences per 10,000 population

This measure shows the number and rate of recorded total car offences within each city between 2002/2003 and 2005/2006.<sup>25</sup>

The overall rate of car offences in New Zealand decreased from 222.5 per 10,000 in 2002/2003 to 213.0 in 2005/2006. A decrease was also seen in the 12 cities over this period from

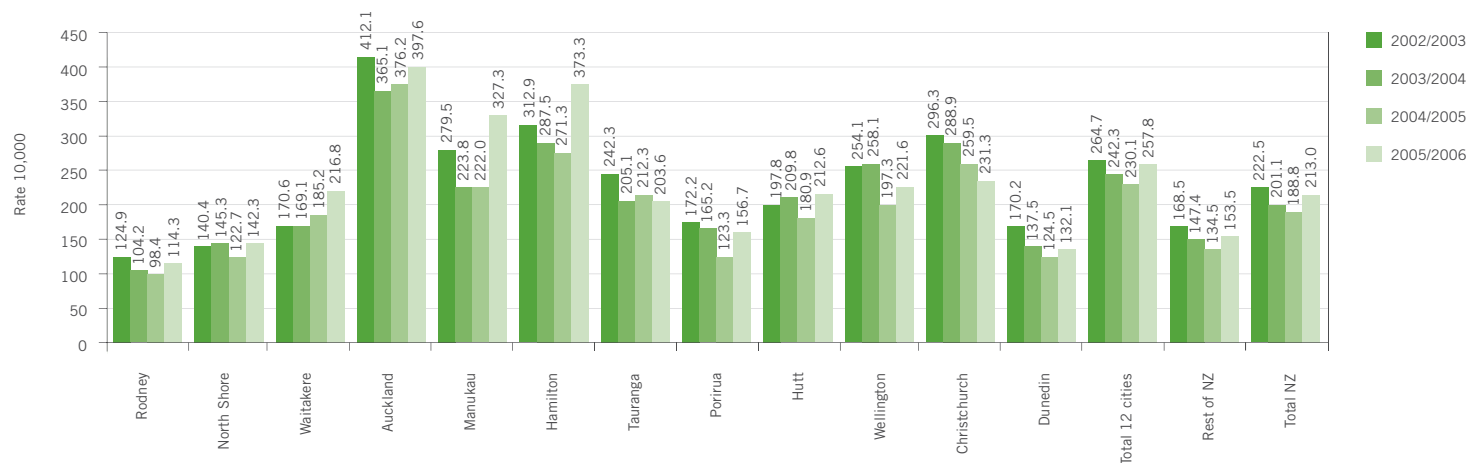
264.7 per 10,000 to 257.8 per 10,000. In 2005/2006, there was a large difference between the rate in our cities (248.9) and the rest of New Zealand rate (165.4).

Of our cities, Auckland had the highest rate of car offences in 2005/2006 with 397.6 per 10,000 population, while Rodney had the lowest at 114.3.

<sup>25</sup> Car offences include miscellaneous car conversion etc, theft, theft ex car, unlawful interfering or getting into motor vehicle and unlawful taking or conversion of motor vehicles.

## 4. Safety

Rate of total car offences per 10,000 population (2002/2003 to 2005/2006)



Data source: New Zealand Police

Number and rate of recorded total car offences per 10,000 population (2002/2003 to 2005/2006)

	2002/2003		2003/2004		2004/2005		2005/2006	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Rodney	1,047	124.9	909	104.2	882	98.4	1,055	114.3
North Shore	2,827	140.4	3,025	145.3	2,598	122.7	3,042	142.3
Waitakere	3,123	170.6	3,181	169.1	3,540	185.2	4,192	216.8
Auckland	16,816	412.1	16,834	398.9	17,824	420.7	19,541	456.8
Manukau	8,613	279.5	4,870	152.5	4,251	129.9	6,248	187.8
Hamilton	4,360	312.9	4,119	287.5	3,793	259.4	4,989	373.3
Tauranga	2,687	242.3	2,347	205.1	2,496	212.3	2,450	203.6
Porirua	1,103	172.2	1,070	165.2	804	123.3	1,018	156.7
Hutt	1,973	197.8	2,103	209.8	1,820	180.9	2,137	212.6
Wellington	4,145	254.1	4,333	257.4	3,368	197.3	3,829	221.6
Christchurch	10,157	296.3	10,090	287.5	9,188	258.8	8,249	230.4
Dunedin	2,058	170.2	1,677	137.5	1,526	124.5	1,625	132.1
<b>Total 12 cities</b>	<b>58,890</b>	<b>264.7</b>	<b>54,558</b>	<b>238.4</b>	<b>52,090</b>	<b>224.4</b>	<b>58,375</b>	<b>248.7</b>
<b>Rest of NZ</b>	<b>29,393</b>	<b>168.6</b>	<b>26,781</b>	<b>152.5</b>	<b>25,076</b>	<b>142.0</b>	<b>29,308</b>	<b>165.6</b>
<b>Total NZ</b>	<b>88,283</b>	<b>222.5</b>	<b>81,339</b>	<b>201.1</b>	<b>77,166</b>	<b>188.8</b>	<b>87,683</b>	<b>213.0</b>

Data source: New Zealand Police

The most common car offence in the 12 cities was theft from a vehicle, accounting for 60.0% of the total car offences in 2005/2006. This pattern was also seen nationally and in the rest of New Zealand.

**Total drug and anti-social offences per 10,000 population**

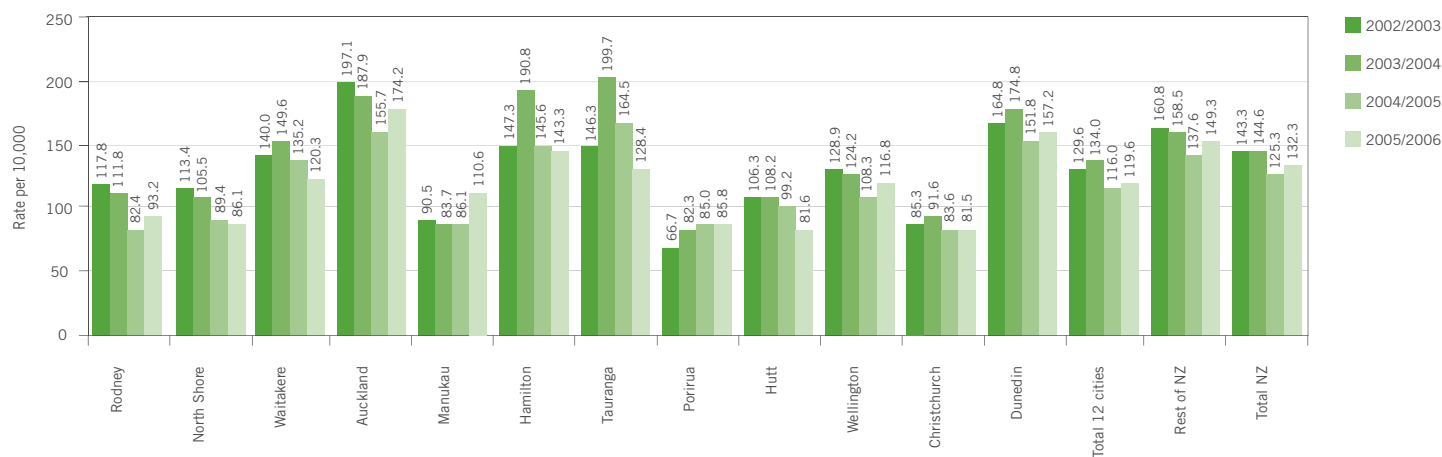
This measure shows the total number and rate of recorded drug and anti-social offences within each city between 2002/2003 and 2005/2006. The overall rate of drug and anti-social offences

in New Zealand decreased from 143.3 per 10,000 in 2002/2003 to 132.3 in 2005/2006. A decrease was also seen in the 12 cities over this period from 129.6 per 10,000 to 119.6. In 2005/2006, the rate of drug and anti-social offences in our cities was lower (119.6) than the rate across the rest of New Zealand (149.3).

In 2005/2006 Auckland had the highest rate with 174.2 per 10,000 population, while Christchurch had the lowest at 81.5.

## Crime levels continued

Rate of drug and anti-social offences per 10,000 population (2002/2003 to 2005/2006)



Data source: New Zealand Police

Number and rate of recorded drug and anti-social offences per 10,000 population (2002/2003 to 2005/2006)

	2002/2003		2003/2004		2004/2005		2005/2006	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
Rodney	988	117.8	974	111.6	739	82.4	860	93.2
North Shore	2,284	113.4	2,198	105.5	1,892	89.4	1,841	86.1
Waitakere	2,562	140.0	2,815	149.6	2,583	135.2	2,326	120.3
Auckland	8,044	197.1	7,932	187.9	6,595	155.7	7,453	174.2
Manukau	2,790	90.5	2,672	83.7	2,818	86.1	3,680	110.6
Hamilton	2,053	147.3	2,732	190.8	2,129	145.6	2,119	143.3
Tauranga	1,622	146.3	2,285	199.7	1,934	164.5	1,545	128.4
Porirua	427	66.7	533	82.3	554	85.0	557	85.8
Hutt	1,061	106.3	1,084	108.2	998	99.2	820	81.6
Wellington	2,093	128.3	2,086	124.2	1,848	108.3	2,018	116.8
Christchurch	2,924	85.3	3,213	91.6	2,969	83.6	2,919	81.5
Dunedin	1,993	164.8	2,130	174.8	1,860	151.8	1,933	157.2
<b>Total 12 cities</b>	<b>28,841</b>	<b>129.6</b>	<b>30,654</b>	<b>134.0</b>	<b>26,919</b>	<b>116.0</b>	<b>28,071</b>	<b>119.6</b>
<b>Rest of NZ</b>	<b>28,025</b>	<b>160.8</b>	<b>28,842</b>	<b>158.5</b>	<b>24,311</b>	<b>137.6</b>	<b>26,411</b>	<b>149.3</b>
<b>Total NZ</b>	<b>56,866</b>	<b>143.3</b>	<b>58,496</b>	<b>144.6</b>	<b>51,230</b>	<b>125.3</b>	<b>54,482</b>	<b>132.3</b>

Data source: New Zealand Police

## Chapter Five

# Housing

### What's in this chapter?

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Housing tenure

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Housing costs and affordability

---

Household crowding

---

Urban housing intensification

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Government housing provision

---

Housing accessibility

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## Introduction

**This chapter presents a range of indicators that focus on housing. Housing is a basic need and has one of the biggest impacts on people's wellbeing and quality of life. Home ownership is an aspiration for many New Zealanders and the single biggest investment that most will make.**

### Why this is important

Housing is a fundamental component of quality of life. Without appropriate shelter, people cannot meet their basic needs and participate adequately in society. Housing issues can have flow-on effects for health, education and community wellbeing. The changing demand for housing and supply constraints can put pressure on an urban area's natural and social environment and affect a city's ability to provide suitable infrastructure and services.

### Key points

Home ownership rates are decreasing. This decline may be attributed to a number of factors, including higher costs of home ownership and changing population demographics. Also, changes in the number of homes owned through family trusts may have distorted the home ownership statistics.<sup>1</sup>

The cost of home ownership has increased, throughout New Zealand and in all of the 12 cities. Cost increases can be attributed to a combination of factors at international, national and local level.

Housing has become more affordable, on average, for people who rent as household incomes have increased at a faster rate than rents.

There are a substantial number of people suffering forms of housing stress,<sup>2</sup> such as living in crowded housing or paying a disproportionate part of their income on housing costs, although this has decreased in recent years.

### Links to other indicators

Changes in the population such as immigration, ageing population and the composition and formation of family units all affect household size, the overall demand for housing and the type of accommodation people seek.

Access to employment increases the likelihood that people can obtain accommodation that is appropriate to their family size and lifestyle. Buying a house is the biggest single investment that most New Zealanders will make.

Changes in the political environment impact on government provision of housing. The government's economic policies, including those that affect interest rates, savings and taxation can all influence the supply of and demand for housing and the affordability of home ownership.

People on lower household incomes are more likely to face housing difficulties such as household crowding and affordability. Poor quality and inappropriate housing can expose people to health problems.

The pattern of housing development, whether intensification in urban areas or extended suburban development, will change the look and feel of a city and impact on the provision of infrastructure, libraries and other amenities, parks and access to green spaces.



<sup>1</sup> The 2006 Census was the first time in which a question about family trusts was explicitly asked, so there is no robust trend comparison with previous census periods to allow us to determine if the rates of home ownership through private trusts has been increasing.

<sup>2</sup> The term is used in DTZ Research. (March 2007). *The Future of Home Ownership and the Role of the Private Rental Market in the Auckland Region*. Centre for Housing Research Aotearoa New Zealand and Auckland Regional Council. This report defines households experiencing stress as those paying more than 30.0% of net income on housing.



## Housing tenure

### 5. Housing

- Levels of home ownership continue to decline, after reaching a post-war peak in 1991.
- Home ownership tends to be lower among Maori and Pacific Islands people, who tend to have larger and younger families as well as lower incomes.

#### What this is about

Levels of household tenure (ownership or renting) are a guide to population stability, the relative wealth of the community and changes in lifestyle and household composition. Many people consider home ownership to be a goal, providing personal independence as well as stability and security for their families and a form of savings for retirement. While renting is often seen as less attractive, it may also be associated with a more mobile lifestyle and less traditional approaches to saving and investment. Measures for this indicator are:

- Percentage of private dwellings owned and rented
- Percentage of population within each ethnic group who own their own home
- Number of people living in temporary private dwellings.

#### What did we find?

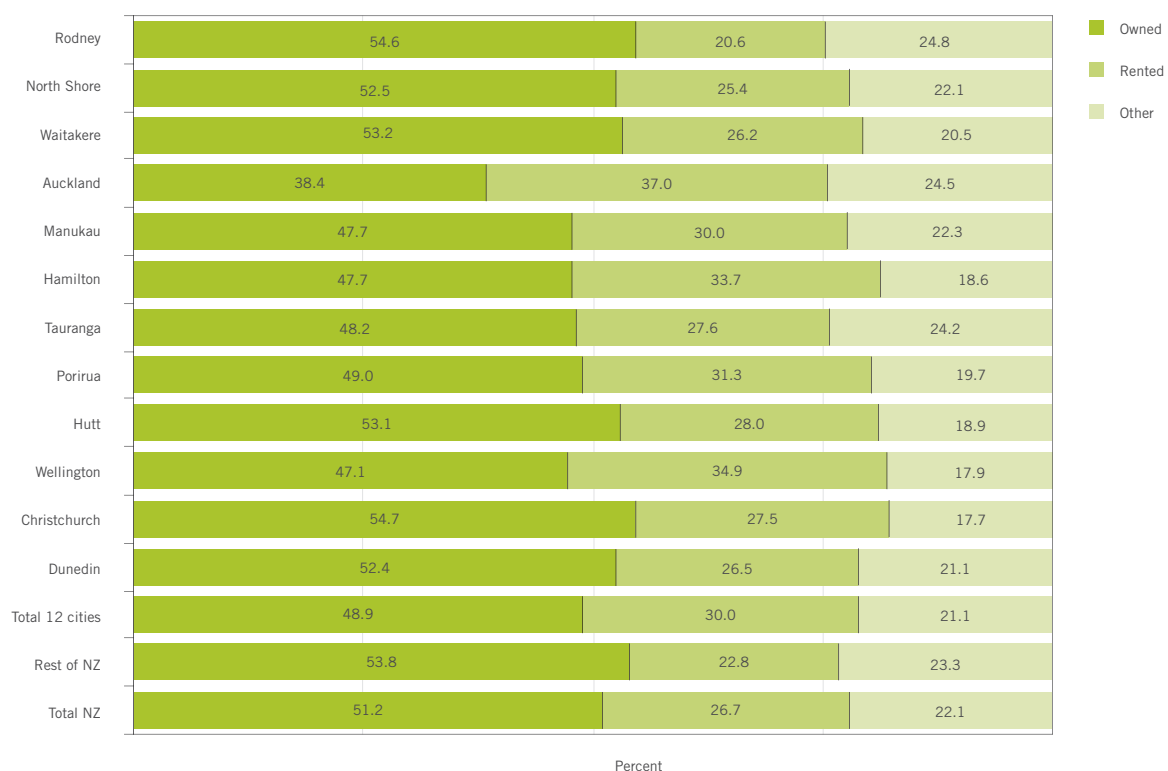
##### Percentage of private dwellings owned and rented

This measure uses data from the 2006 Census, which has four categories for housing tenure.<sup>3</sup> The 'other' category in the census includes homes that are owned by a private trust, where the residents are effectively the owners. This means that the home ownership rate may be understated.<sup>4</sup> At time of writing a detailed analysis of ownership data from the 2006 Census was not available.

Excluding trusts, personal home ownership is still the dominant form of tenure in our 12 cities. Across New Zealand, 51.2% of homes are owned by their occupants, compared with 48.9% in the 12 cities.

The cities with the highest rates of home ownership were Christchurch (54.7%) and Rodney (54.6%). These were also the only cities to have higher levels of home ownership than the rest of New Zealand (53.8%). The cities with the lowest rates of home ownership were Auckland (38.4%), Wellington (47.1%), Manukau and Hamilton (both 47.7%).

Percentage of private dwellings owned and rented (2006)<sup>5</sup>



Data source: Statistics New Zealand, Census 2006

<sup>3</sup> The categories are: (1) Dwellings owned or partly owned by usual resident(s), (2) dwellings that are not owned by usual resident(s), who make rent payments, (3) other (the residents may be living rent-free) and (4) not elsewhere included (the response was unidentifiable or not stated). In this measure the two categories 'other' and 'not elsewhere stated' have been combined into the 'other' category.

<sup>4</sup> Briggs, P. (July 2006). *Family trusts: ownership, size, and their impact on measures of wealth and home ownership*. Reserve Bank of New Zealand Discussion Paper 2006/06.

<sup>5</sup> The 'other' category includes private dwellings owned by a family trust.

## Housing tenure continued

Patterns of household tenure were fairly stable over the decade 1986 to 1996.<sup>6</sup> Rates of home ownership have declined markedly since 1991, even when the effects of trusts on home ownership are taken into account.<sup>7</sup> The cause of decreasing rates of home ownership is the increasing cost.

Corresponding to declining rates of home ownership, there has been an increase in the proportion of rented dwellings.

The decline in home ownership has also been attributed to a number of other factors such as a more flexible and therefore less stable labour market, as well as demographic shifts and changes in patterns of household formation (e.g. a decline in the marriage rate, increases in solo parenthood, increases in the divorce rate and delayed childbearing).<sup>8</sup>

### Percentage of private dwellings owned (1991, 2006)

	1991 %	1996 %	2001 %	2006 %
Rodney	79.9	74.8	70.2	54.6
North Shore	78.9	72.8	66.6	52.5
Waitakere	80.0	72.0	65.1	53.2
Auckland	61.2	56.4	52.5	38.4
Manukau	74.4	67.6	61.2	47.7
Hamilton	69.9	63.4	58.9	47.7
Tauranga	78.2	70.6	64.5	48.2
Porirua	65.3	61.8	60.0	49.0
Hutt	71.7	67.5	64.6	53.1
Wellington	65.7	62.7	58.9	47.1
Christchurch	74.2	69.9	65.7	54.7
Dunedin	73.4	69.0	65.8	52.4
<b>Total 12 cities</b>	<b>71.7</b>	<b>66.5</b>	<b>61.9</b>	<b>48.9</b>
<b>Rest of NZ</b>	<b>73.9</b>	<b>69.4</b>	<b>67.7</b>	<b>53.8</b>
<b>Total NZ</b>	<b>72.8</b>	<b>67.9</b>	<b>64.6</b>	<b>51.2</b>

Data Source: Statistics New Zealand, Census 1991, 1996, 2001, 2006

The percentage change in the number of dwellings owned and rented shows changes in both types of tenure without adjusting for growth in the total housing stock (i.e. the change over time includes the net increase in both homes and rental properties during the period).

The number of rented homes grew by 21,108 in the 12 cities, an increase of 9.8%. The largest increases were in Manukau, which grew by 4,173 (17.3%) and in Auckland, which grew by 3,918 (8.0%).

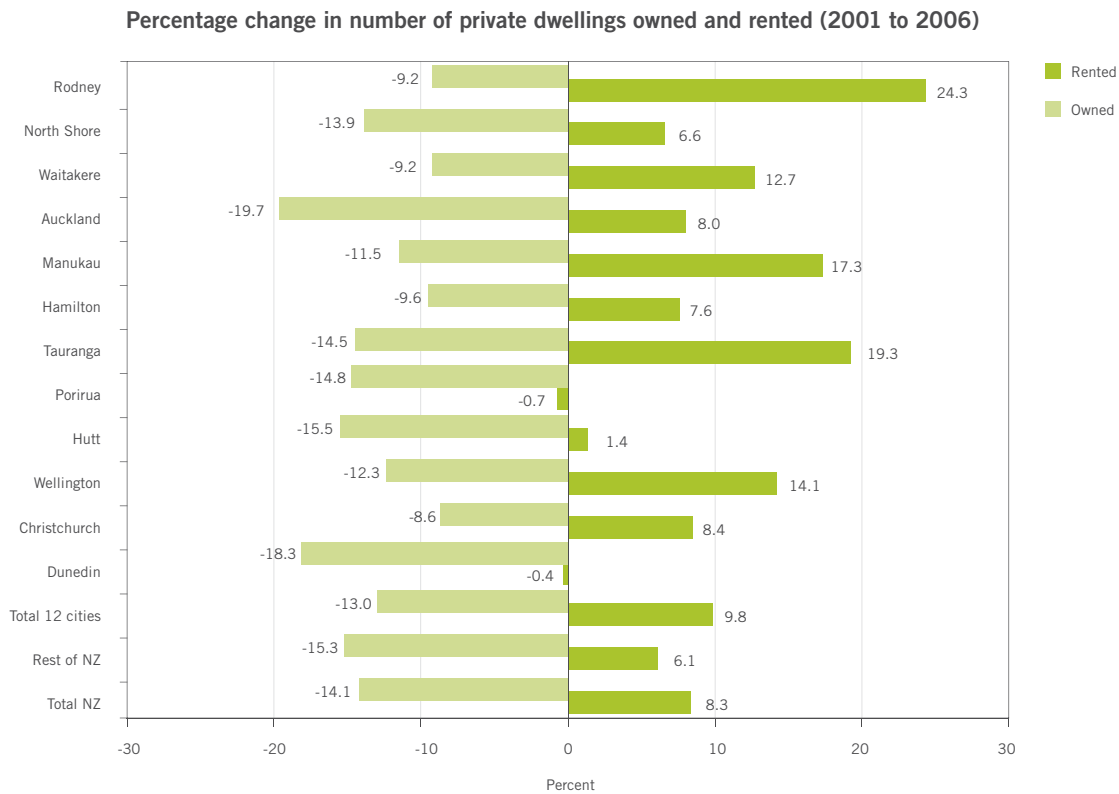
The greatest proportional increase was in Rodney (24.3%), although this represented only 1,326 homes. The number of rented homes declined by 36 in Porirua (-0.7%) and by 42 in Dunedin (-0.4%).

6 Cook, L. (2000). *Looking Past the 20th Century*. Statistics New Zealand. [www.stats.govt.nz](http://www.stats.govt.nz). Retrieved 24 June 2007.

7 Briggs, P. (July 2006). *Family trusts: ownership, size, and their impact on measures of wealth and home ownership*. Reserve Bank of New Zealand Discussion Paper 2006/06. Pg 24.

8 DTZ Research. (March 2007). *The Future of Home Ownership and the Role of the Private Rental Market in the Auckland Region*. Centre for Housing Research. Aotearoa New Zealand and Auckland Regional Council. Pg 10-13.

5. Housing



Data source: Statistics New Zealand, Census 2006



## Housing tenure continued

### Percentage of population within each ethnic group who own their own home

The decline in home ownership is partly a reflection of changing population demographics. This measure shows the change in proportions of each ethnic group that owned their homes between 2001 and 2006.<sup>9</sup>

In the 12 cities more than half of New Zealand Europeans (60.8%) lived in a home that was owned or partly owned by the residents. This was considerably higher than the home ownership rate among Maori (31.1%) and Pacific Islands people (25.0%). The rate of home ownership increased slightly among all ethnic groups in the 12 cities, with the exception of Pacific Islands people, for whom the rate of home ownership declined by -0.4% between 2001 and 2006.

Rates of home ownership declined markedly for all ethnic groups in the rest of New Zealand. The reason why home ownership is reducing in the population as a whole, but not a lot in any of the ethnic groups is because ethnic groups with typically lower rates of home ownership are becoming a greater proportion of the population in the 12 cities, leading to a lower rate of home ownership on average over across all groups.

### Percentage of population aged 15 years and over within each ethnic group who own their own home (2001, 2006)

	NZ European		Maori		Pacific Islands		Asian		Other	
	2001 %	2006 %	2001 %	2006 %	2001 %	2006 %	2001 %	2006 %	2001 %	2006 %
Rodney	65.3	62.9	36.5	30.4	41.0	29.2	44.3	39.5	42.6	38.3
North Shore	58.5	63.7	29.8	36.4	26.5	23.9	38.7	38.9	23.2	50.0
Waitakere	59.9	64.1	31.0	36.4	30.1	33.1	44.5	44.5	28.2	40.3
Auckland	49.9	58.7	21.7	30.7	19.8	24.5	31.7	36.8	19.1	30.1
Manukau	60.5	58.6	27.6	28.8	28.1	26.1	44.0	43.7	20.7	25.6
Hamilton	53.7	60.1	21.9	30.7	20.3	26.6	35.5	48.8	16.0	41.4
Tauranga	61.6	58.9	31.8	31.8	26.8	22.4	38.8	35.5	40.9	29.4
Porirua	60.1	64.8	29.4	37.1	25.1	21.1	44.4	55.1	38.9	43.8
Hutt	60.8	58.9	28.8	27.4	26.3	21.3	48.6	41.0	32.8	33.3
Wellington	51.6	62.9	25.0	31.6	23.6	28.0	43.2	45.5	21.7	37.0
Christchurch	58.1	65.3	28.9	37.4	24.3	22.2	38.2	27.8	23.3	42.9
Dunedin	55.9	66.1	30.4	36.0	24.4	29.4	26.2	40.0	25.6	7.1
<b>Total 12 cities</b>	<b>56.9</b>	<b>60.8</b>	<b>27.3</b>	<b>31.1</b>	<b>25.4</b>	<b>25.0</b>	<b>38.6</b>	<b>40.2</b>	<b>22.3</b>	<b>29.9</b>
<b>Rest of NZ</b>	<b>62.8</b>	<b>58.9</b>	<b>34.9</b>	<b>29.9</b>	<b>29.2</b>	<b>21.0</b>	<b>42.4</b>	<b>35.5</b>	<b>35.4</b>	<b>22.6</b>
<b>Total NZ</b>	<b>59.7</b>	<b>59.2</b>	<b>31.7</b>	<b>30.1</b>	<b>26.0</b>	<b>21.8</b>	<b>38.8</b>	<b>36.5</b>	<b>24.2</b>	<b>24.2</b>

Data source: Statistics New Zealand, Census 2001, 2006

<sup>9</sup> Again, this data does not include homes that may be owned by a family trust.

## 5. Housing

**Number of people living in temporary private dwellings**

This measure illustrates the number of people who live in private temporary dwellings. Temporary dwellings include tents, caravans, yachts and barges, mobile homes and rented campervans. Typically, temporary dwellings are less habitable than permanent dwellings and may not adequately meet the basic housing needs of the inhabitants. Occupation of temporary or improvised dwellings attached to permanent housing is associated with health and safety risks such as respiratory problems, infectious diseases, infestations of pests and physical hazards.<sup>10</sup>

The cities with the highest number of people living in temporary dwellings were Christchurch (501), Rodney (492) and Tauranga (345). Rodney and Tauranga also had very high proportions of people in temporary dwellings on a per capita basis. In Rodney they represented 54.9 people per 10,000 of the city's population and in Tauranga 33.3 people per 10,000.

The measure includes some people who may have adopted a mobile lifestyle by choice and therefore are not necessarily impoverished (i.e. those living in a campervan or yacht on census night). Their ability to relocate means that they might not be usually resident in one of the 12 cities. Excluding this category shows that, on a per capita basis, the greatest proportion of people living in a motor camp or improvised dwelling resided in Rodney (40.5 per 10,000 population), Tauranga (28.9 per 10,000), Christchurch (11.0 per 10,000) and Porirua (9.9 per 10,000).

**Number of people living in temporary private dwellings (2006)**

	Motor camp	Mobile dwelling	Improvised shelter	Total	Per 10,000 population	Per 10,000 (excluding mobile)
Rodney	108	255	129	492	54.9	40.5
North Shore	18	36	21	75	3.6	2.6
Waitakere	21	108	63	192	10.3	6.9
Auckland	45	138	114	297	7.3	4.5
Manukau	24	159	105	288	8.8	5.6
Hamilton	12	42	30	84	6.5	4.2
Tauranga	27	273	45	345	33.3	28.9
Porirua	3	45	15	63	13.0	9.9
Hutt	12	36	21	69	7.1	4.9
Wellington	18	54	18	90	5.0	4.0
Christchurch	108	276	117	501	14.4	11.0
Dunedin	15	69	30	114	9.6	7.1
<b>Total 12 cities</b>	<b>411</b>	<b>1,491</b>	<b>708</b>	<b>2,610</b>	<b>11.6</b>	<b>8.5</b>
<b>Rest of NZ</b>	<b>804</b>	<b>4,974</b>	<b>1,689</b>	<b>7,470</b>	<b>41.8</b>	<b>32.3</b>
<b>Total NZ</b>	<b>1,215</b>	<b>6,465</b>	<b>2,397</b>	<b>10,080</b>	<b>25.0</b>	<b>19.1</b>

Data Source: Statistics New Zealand, Census 2006

10 National Health Committee. (1998). *The Social, Cultural and Economic Determinants of Health in New Zealand: Action to Improve Health*. National Advisory Committee on Health and Disability, National Health Committee. Wellington. Pg 30-32; Public Health Commission. (1993). *Our Health Our Future Hauora Pakari, Koiora Ora*. Public Health Commission. Wellington. Pg 44-47.

## Housing costs and affordability

- The cost of purchasing a home is increasing as house prices and mortgage costs have increased relative to incomes.
- Rental accommodation is becoming more affordable due to household incomes increasing at a higher rate, on average, than increases in rental costs.
- Despite higher house prices, those who own a home pay a lower proportion of income than those who rent, on average.

### What this is about

Housing is the largest single component of many households' expenditure and is central to the ability to meet basic needs. When housing costs are too high relative to income, people have less to spend on other essentials such as food, power, healthcare and education. People facing substantial housing cost burdens may be forced to live in unsafe, unhealthy or inappropriate accommodation. The housing cost and affordability measures presented here outline the relative costs of buying and renting a home and indicate how affordable accommodation is for people living in the 12 cities. They are presented in three groups:

The first group of measures covers the cost of buying and owning a house:

- Median residential dwelling sale price
- Home mortgage affordability as a percentage of the national average
- Percentage of households that are couple only or single persons aged 65 years and over who own their home with a mortgage.

The second group of measures covers the cost and affordability of renting:

- Median weekly rents
- Rent to income ratio.

The third group of measures covers housing costs as a proportion of household income and expenditure:

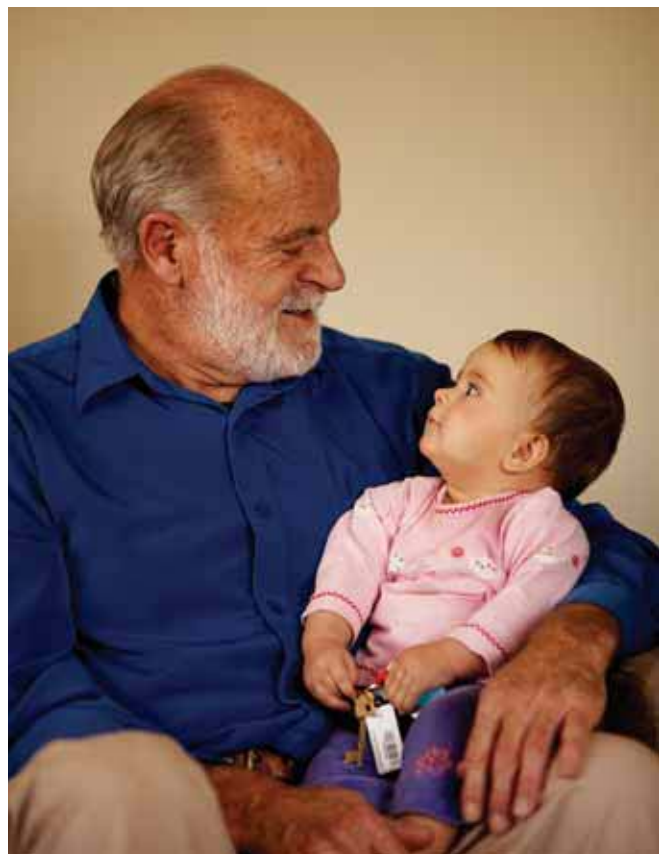
- Percentage of households owning their dwelling by income bracket
- Percentage of net household income spent on housing costs
- Proportion of population receiving an Accommodation Supplement.

### What did we find?

#### Median residential dwelling sale price

Quarterly and annual data has been supplied by Quotable Value Ltd (QV Ltd), in place of data provided in previous reports by the Real Estate Institute of New Zealand (REINZ).<sup>11</sup>

For New Zealand as a whole the median residential dwelling sale price increased by 72.3% over the five years 2001 to 2006, from \$177,000 to \$305,000. The average increase for house prices in the 12 cities (67.4%) was less than that for the rest of New Zealand (88.5%).



<sup>11</sup> The data supplied by QV Ltd is more complete because it includes all property sales, required to be reported to each local authority under the Local Government (Rating) Act (2002). The data provided by REINZ includes only sales conducted by real estate agents, excluding private or direct sales by developers.



## 5. Housing



Median sale price, flats and houses combined (2001 to 2006)

	2001 \$	2002 \$	2003 \$	2004 \$	2005 \$	2006 \$	Percentage change 2001-2006
Rodney	232,000	255,000	296,000	357,000	395,000	425,000	83.2
North Shore	261,750	283,000	330,000	379,000	420,000	460,000	75.7
Waitakere	195,000	211,000	240,000	274,000	318,000	340,500	74.6
Auckland	270,000	293,000	330,000	370,000	390,000	420,000	55.6
Manukau	234,000	255,000	275,000	293,250	329,000	360,000	53.8
Hamilton	165,000	170,500	185,000	222,000	267,000	304,500	84.5
Tauranga	198,000	208,000	242,000	299,000	340,000	362,750	83.2
Porirua	192,000	195,000	220,000	250,000	270,000	316,000	64.6
Hutt	170,000	170,000	192,000	220,000	247,500	285,000	67.6
Wellington	250,000	260,000	299,000	330,000	365,000	410,001	64.0
Christchurch	157,000	161,000	187,000	230,000	267,000	292,500	86.3
Dunedin	101,500	104,000	127,000	182,000	215,000	231,600	128.2
<b>Total 12 cities</b>	<b>212,000</b>	<b>225,000</b>	<b>250,000</b>	<b>286,000</b>	<b>324,000</b>	<b>354,917</b>	<b>67.4</b>
<b>Rest of NZ</b>	<b>130,000</b>	<b>137,000</b>	<b>150,000</b>	<b>175,000</b>	<b>217,750</b>	<b>245,000</b>	<b>88.5</b>
<b>Total NZ</b>	<b>177,000</b>	<b>186,000</b>	<b>210,000</b>	<b>240,000</b>	<b>276,000</b>	<b>305,000</b>	<b>72.3</b>

Data source: Quotable Value Ltd

The highest percentage increase for the five year period was Dunedin (128.2%), although the median sale price is still the lowest among the 12 cities. This was followed by Christchurch (86.3%), Hamilton (84.5%), then Rodney and Tauranga (both 83.2%). The lowest increases among the 12 cities were in Manukau (53.8%) and Auckland (55.6%).

The trend in increasing house prices in all 12 cities and for New Zealand as a whole can be attributed to international and national factors, while housing prices within each city have been influenced differently by regional and local issues. New Zealand is not unique in experiencing a trend of increasing house prices accompanied by lower rates of home ownership.

Demand for housing has been stimulated by factors such as income and population growth, greater access to mortgages, lower relative returns of alternative assets and the perception of high returns by international housing investors.

Supply constraints have also influenced housing market prices through, for example, increased demand for land, growth in the cost of labour and construction materials and the relatively slow improvement in transportation infrastructure.

## Housing costs and affordability continued

### Ratio of annual median rent to median dwelling sale price (2002 to 2006)

	2002 %	2003 %	2004 %	2005 %	2006 %
Rodney	5.1	4.7	4.3	3.9	3.9
North Shore	5.4	5.2	4.7	4.2	4.0
Waitakere	6.2	6.1	5.6	4.8	4.6
Auckland	5.3	5.0	4.5	4.3	4.0
Manukau	5.3	5.3	5.1	4.7	4.5
Hamilton	5.9	6.0	5.4	4.9	4.4
Tauranga	5.0	4.7	4.3	4.0	3.9
Porirua	5.6	5.2	4.6	4.4	4.1
Hutt	6.1	5.7	5.2	4.8	4.6
Wellington	5.4	4.9	4.6	4.3	4.0
Christchurch	6.3	6.1	5.4	4.9	4.6
Dunedin	8.3	7.4	6.0	5.3	4.9
<b>Total NZ</b>	<b>5.6</b>	<b>5.6</b>	<b>5.2</b>	<b>4.7</b>	<b>4.5</b>

Data sources: Tenancy Services and Quotable Value Ltd

This ratio shows that the gross yield on new property sales for the whole of New Zealand declined, on average, from 5.6% to 4.5% over the years 2002 to 2006. Among the 12 cities the greatest declines were in Dunedin (-3.3%), Christchurch (-1.7%), Waitakere and Hutt (both -1.6%). The smallest decline was in Manukau (-0.8%).

### Home mortgage affordability as a percentage of the national average

This measure is an index comprised of the median house sale price, multiplied by the mortgage interest rate, divided by the average ordinary time wage. The index number increases when interest rates and/or house prices go up, relative to wages and salaries.<sup>12</sup>

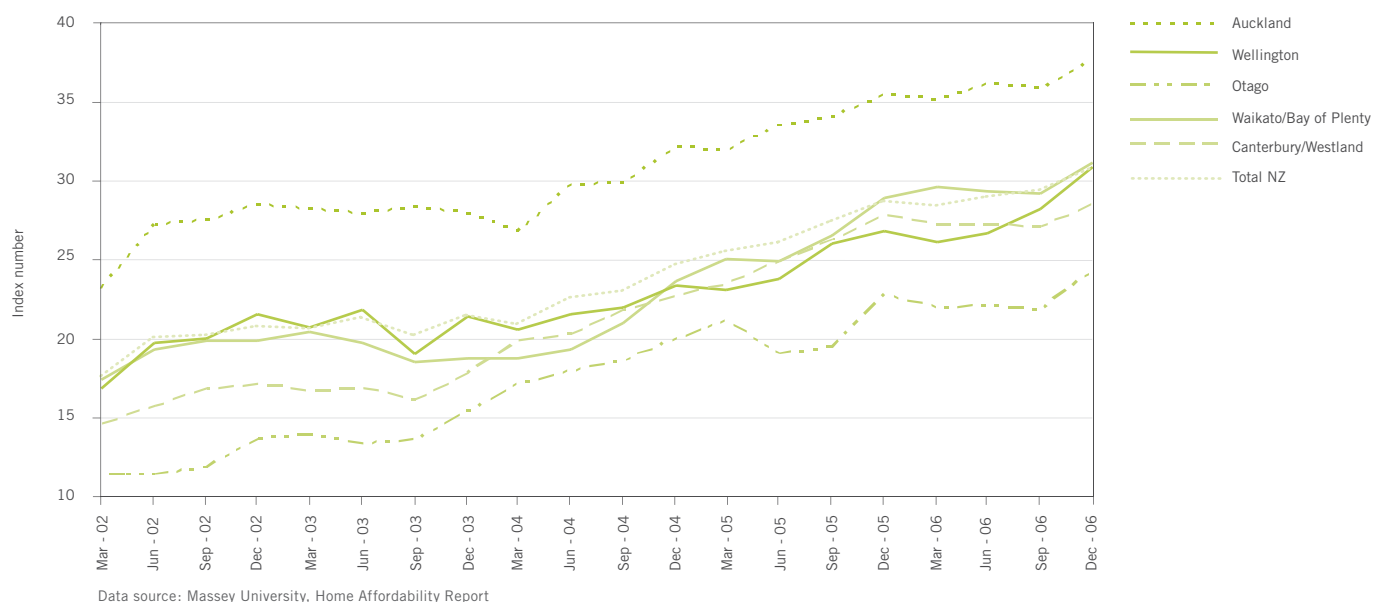
The index shows that mortgages became less affordable between March 2002 and December 2006. During this time, the median house sale price increased in all regions and for New Zealand as a whole. However the trend in decreasing affordability might not have been as strong as the index appears to show. Median personal incomes rose at a higher rate than the average weekly wage and if personal income was used the index would not have risen quite so much.



<sup>12</sup> The median house price data is supplied by the REINZ; the interest rate is the weighted average of fixed and floating mortgage interest rates at the end of each month, supplied by the Reserve Bank of New Zealand; the average weekly earnings data is supplied by Statistics New Zealand.

## 5. Housing

Home mortgage affordability index (March 2002 to December 2006)

**Median weekly rents**

Rental affordability is a significant issue in cities, particularly for low income earners. This measure shows the median weekly rent level for each city for private landlords only (i.e. omitting Housing New Zealand and local authorities), as produced by the Department of Building and Housing's Tenancy Bond Database.<sup>13</sup> Median rents increased by 12.5% for New Zealand as a whole in 2002 to 2003, then grew at a lower rate through to 2006, amounting to an increase over five years of 32.5%.

Between 2002 and 2006 median rents increased in all 12 cities. However by the end of this period they remained in the same groups as at the beginning. The highest group ranged between \$300 and \$350, the lower group between \$250 and \$270. Dunedin continued to stand alone with the lowest median rents at \$220.

The cities with the highest median rent increases over 2002 to 2006 were Tauranga (35.0%), then Hamilton, Christchurch and Dunedin (all 33.3%). Auckland experienced the lowest rental increases overall, growing by 6.7% between 2002 and 2003 then having zero growth in the following two years and a slight uplift (1.6%) between 2005 and 2006.

**Rent to income ratio**

This measure shows the median rent paid per year as a percentage of median household income, for each of the past four censuses.

For New Zealand as a whole, the rent to income ratio rose from 22.4% in 1991 to 28.4% in 1996, remained at approximately the same level in 2001 and then dropped to pre-1991 levels (20.2%) in 2006.

This pattern was repeated with some variation in all 12 cities except Auckland and Wellington, where the rent to income ratio rose only slightly from 1991 to 1996 (from 30.5% to 30.9% in Auckland and from 22.6% to 22.9% in Wellington), dropped in 2001 (in Auckland to 29.0% and in Wellington to 24.8%), then dropped again in 2006 (in Auckland to 22.0% and in Wellington to 18.9%).

<sup>13</sup> The data used in this report only included private landlords from 2002 to 2005, providing a more accurate picture of market rents than if central and local government rental properties had been included. Note that the data only includes properties for which a rental bond has been lodged with the Tenancy Services division of the Department of Building and Housing.

## Housing costs and affordability continued

### Rent to income ratio (1991, 1996, 2001, 2006)

	1991 %	1996 %	2001 %	2006 %
Rodney	28.5	30.6	33.1	24.7
North Shore	27.8	29.9	30.5	23.3
Waitakere	31.1	32.4	34.2	24.0
Auckland	30.5	30.9	29.0	22.0
Manukau	25.8	32.7	31.8	21.7
Hamilton	24.7	30.2	33.0	21.7
Tauranga	28.6	31.1	32.7	26.5
Porirua	19.6	30.8	24.4	14.2
Hutt	22.1	30.0	28.3	17.4
Wellington	22.6	22.9	24.8	18.9
Christchurch	25.7	30.4	30.7	23.2
Dunedin	25.6	31.2	30.9	22.8
<b>Total NZ</b>	<b>22.4</b>	<b>28.4</b>	<b>28.1</b>	<b>20.2</b>

Data source: Statistics New Zealand, Census 1991, 1996, 2001, 2006

In March 2006 the cities with the highest rent to income ratios were Tauranga (26.5%), Rodney (24.7%) and Waitakere (24.0%). The cities with the lowest rent to income ratios were Porirua (14.2%), Hutt (17.4%) and Wellington (18.9%). These were also the only cities with lower ratios than the average for the whole of New Zealand (20.2%).

### Percentage of households owning their dwelling by income bracket

This measure uses household tenure data from the 2006 Census, to show the proportions of households, within three household income brackets, that own or partly own the house in which they live.<sup>14</sup>

The low income bracket includes households with incomes of less than \$30,000 per year.<sup>15</sup> For New Zealand as a whole the rate of home ownership for these households was 24.5%. The rate was higher than the national average in Tauranga (31.3%), Dunedin (26.6%) and Christchurch (25.4%). The cities with the lowest rates of home ownership in this bracket were Manukau (17.4%), Porirua (14.0%) and Wellington (13.5%).

In the middle income bracket (i.e. households with incomes from \$30,001 to \$70,000 per year), the rate of home ownership in the 12 cities was 32.9%. The cities with the highest ownership rates in this bracket were Dunedin (40.4%), Tauranga (38.4%) and Christchurch (37.9%).

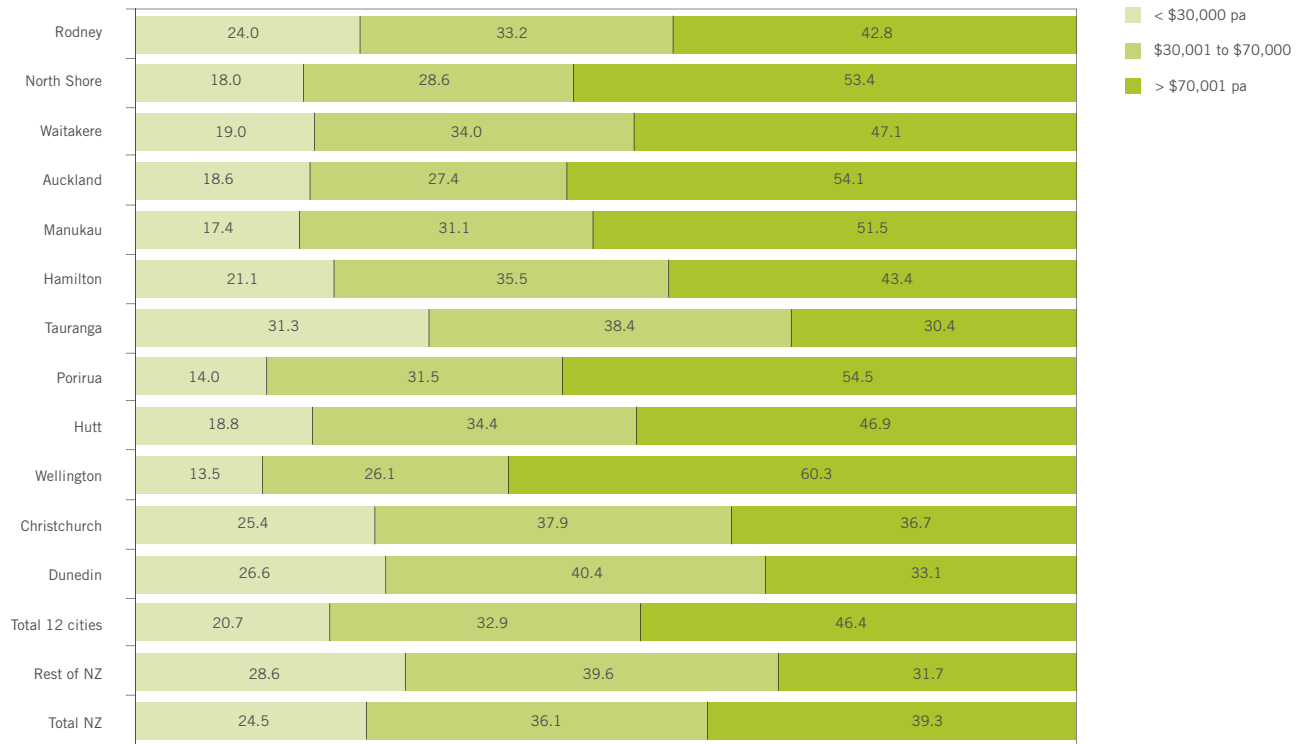
In the highest income bracket, the cities with the lowest rates of home ownership were Tauranga (30.4%), Dunedin (33.1%) and Christchurch (36.7%).

<sup>14</sup> This measure omits households where income was not stated in the census responses. The percentage of households omitted ranges between 8.2% of households (Wellington) to 14.1% (Manukau). The data also only includes households where the "Dwelling Owned or Partly Owned by Usual Resident(s)". Therefore omitting residences that might be owned through a trust.

<sup>15</sup> The reason for choosing this income level as the "low" bracket is explained in the Economic Standard of Living chapter.

5. Housing

Percentage of households owning their dwelling by income bracket (2006)



Data source: Statistics New Zealand, Census 2006

**Percentage of net household income spent on housing costs**  
The percentage of household income spent on housing costs indicates the degree of 'housing stress' that people experience.

Net household income is gross income less tax (such as PAYE). Housing costs include all rent and mortgage expenses, rates and other mandatory expenses, but exclude other costs of ownership (e.g. insurance, utilities and maintenance).<sup>16</sup>



16 Statistics New Zealand notes that these regional estimates are below the design level of the survey and should be treated with some caution.

## Housing costs and affordability continued

Percentage of net household income spent on housing, by region (years ending June 2001, 2004)

Proportion of household net income	2001				2004			
	0-25%	26-29%	30-39%	40%+	0-25%	26-29%	30-39%	40%+
Percentage of households	%	%	%	%	%	%	%	%
Auckland	5.6	40.9	31.3	22.2	13.7	38.9	29.1	18.3
Waikato	36.7	31.3	21.8	10.3	40.1	28.7	20.4	10.8
Bay of Plenty	48.3	23.7	18.8	9.2	43.5	26.8	18.9	10.8
Wellington	33.2	30.8	23.5	12.6	38.4	29.7	19.0	12.8
Canterbury	32.0	31.5	23.7	12.8	49.7	24.9	16.3	9.0
Otago	44.2	25.2	20.9	9.8	38.1	28.2	23.0	10.8
<b>Rest of NZ</b>	<b>45.7</b>	<b>26.6</b>	<b>19.2</b>	<b>8.6</b>	<b>47.4</b>	<b>24.6</b>	<b>18.4</b>	<b>9.6</b>
<b>Total NZ</b>	<b>30.0</b>	<b>32.1</b>	<b>24.1</b>	<b>13.8</b>	<b>35.7</b>	<b>30.0</b>	<b>21.7</b>	<b>12.6</b>

Data source: Statistics New Zealand, Household Economic Survey

Between 2001 and 2004 there was a decrease in the percentage of households spending more than 40.0% of income on housing, for New Zealand as a whole. However there were distinct differences regionally. The percentage of households spending 40.0% or more of net income on housing increased in the Waikato, Bay of Plenty, Wellington and Otago regions, while it decreased in Auckland and Canterbury. The proportion of households paying less than 25.0% of income on housing increased for the whole of New Zealand, from 30.0% to 35.7%. The biggest regional increases in this category were seen in Auckland, Canterbury and Wellington.

These trends can also be examined in terms of the differing proportions of household income spent by people who own or rent their accommodation. For New Zealand as a whole, the proportion of household income spent on housing was 14.7% in 2001, falling slightly to 14.4% by 2004.

The proportion spent by owners was 13.1% in 2001, falling to 11.7% in 2004. The average cost of ownership increased in the Auckland, Waikato, Wellington and Otago regions, while it declined in other regions as well as the rest of New Zealand.

Average proportion of net household income spent on housing, by type of tenure, by region (years ending June 2001, 2004)

	Owned		Rented		All tenures	
	2001 %	2004 %	2001 %	2004 %	2001 %	2004 %
Auckland	18.1	19.6	30.9	26.4	21.1	21.0
Waikato	15.0	16.3	22.0	24.3	16.1	18.1
Bay of Plenty	13.8	8.3	28.8	22.9	15.5	12.3
Wellington	14.4	17.2	26.0	26.4	16.9	19.4
Canterbury	14.1	13.7	27.5	26.8	16.4	16.3
Otago	13.1	15.4	20.9	22.3	14.4	16.8
<b>Rest of NZ</b>	<b>13.1</b>	<b>11.7</b>	<b>21.0</b>	<b>25.7</b>	<b>14.7</b>	<b>14.4</b>
<b>Total NZ</b>	<b>15.4</b>	<b>15.6</b>	<b>26.1</b>	<b>25.7</b>	<b>17.5</b>	<b>17.8</b>

Data source: Statistics New Zealand, Household Economic Survey

## 5. Housing

The average proportion of income spent on housing by renters was 21.0% in 2001, rising to 25.7% in 2004. The proportion of household income spent by renters decreased in Auckland, Bay of Plenty and Canterbury while it increased in other regions and in the rest of New Zealand.

Despite the increasing cost of buying a home, those who own a home tend to spend a lower percentage of their income on housing. In New Zealand as a whole renting is becoming more affordable, although this trend is not consistent at the regional level.

#### Proportion of population receiving an accommodation supplement

The accommodation supplement is a means-tested benefit, paid by the Ministry of Social Development to welfare beneficiaries and low income earners who are spending a high percentage of their income on rent or mortgage payments. The amount of supplement received is determined by factors such as the individual's income and assets. Recipients can use it to offset the cost of their board, rent or mortgage payments. This measure looks at the number of people who are receiving the accommodation supplement as a percentage of the total population in each city.

Accommodation supplement recipients as a proportion of city population (years ended March 2003 to 2007)

	2003		2004		2005		2006		2007	
	Number	%	Number	%	Number	%	Number	%	Number	%
Rodney	4,069	5.0	3,925	4.7	4,067	4.7	4,366	4.9	4,590	5.0
North Shore	8,205	4.2	7,621	3.9	7,884	3.9	8,527	4.1	8,768	4.2
Waitakere	16,295	9.3	15,237	8.5	15,286	8.4	16,004	8.6	16,527	8.7
Auckland	23,401	6.1	21,127	5.4	20,131	5.1	21,268	5.3	21,247	5.2
Manukau	25,196	8.4	24,074	7.7	23,399	7.3	24,464	7.4	24,287	7.2
Hamilton	10,817	8.9	10,078	8.1	10,152	8.0	10,423	8.1	10,456	7.9
Tauranga	8,168	8.5	7,536	7.6	7,306	7.2	7,994	7.7	8,313	7.8
Porirua	4,009	8.4	3,891	8.1	3,674	7.6	3,743	7.7	3,617	7.4
Hutt	6,406	6.6	5,985	6.2	5,635	5.8	5,649	5.8	5,485	5.6
Wellington	8,630	5.1	8,279	4.8	7,937	4.5	7,936	4.4	7,608	4.2
Christchurch	22,282	6.7	20,665	6.1	21,325	6.2	22,183	6.4	22,121	6.3
Dunedin	6,135	5.3	5,582	4.8	5,906	5.0	6,065	5.1	6,109	5.1
<b>Total 12 cities</b>	<b>143,613</b>	<b>6.8</b>	<b>134,000</b>	<b>6.2</b>	<b>132,702</b>	<b>6.0</b>	<b>138,622</b>	<b>6.2</b>	<b>139,128</b>	<b>6.1</b>
<b>Rest of NZ</b>	<b>107,498</b>	<b>6.2</b>	<b>103,693</b>	<b>5.9</b>	<b>103,769</b>	<b>5.9</b>	<b>106,951</b>	<b>6.0</b>	<b>106,243</b>	<b>5.9</b>
<b>Total NZ</b>	<b>251,111</b>	<b>6.5</b>	<b>237,693</b>	<b>6.1</b>	<b>236,471</b>	<b>6.0</b>	<b>245,573</b>	<b>6.1</b>	<b>245,371</b>	<b>6.0</b>

Data sources: Ministry of Social Development



## Housing costs and affordability continued

For the period 2003 to 2007, the proportion of the population receiving the accommodation supplement decreased for New Zealand as a whole, falling from approximately 6.5% of the population to 6.1% from 2003 to 2004 then stabilising at around 6.0% to 6.1% from 2005 to 2007. The 12 cities followed a similar pattern, initially falling from 6.8% to 6.2% then stabilising between 6.0% and 6.2%.

At the end of the March 2007 year the proportion of the New Zealand population receiving the accommodation supplement was 6.0%. The cities with the lowest proportion of population receiving the supplement were Dunedin (5.1%), Auckland (5.2%) and Hutt (5.6%). The cities with the highest proportions were Waitakere (8.7%), Hamilton (7.9%) and Tauranga (7.8%).

### Percentage of households that are couple only or single persons aged 65 years and over who own their home with a mortgage

As house prices and interest rates increase, home ownership is becoming less affordable for those on lower incomes, which may include some older people. While people over 65 years old are likely to have lower cash incomes, they are also more likely to possess accumulated wealth, usually in the form of equity in a home.<sup>17</sup> Some people over the age of 65 may have taken on a mortgage to release equity for reasons of necessity (e.g. to cover living expenses or to fund an operation) or choice (e.g. for a holiday or to transfer wealth to family members).

In 2006 there were 16,194 households comprising either an individual or a couple over the age of 65 with a mortgage. Less than half of the total (7,089 households or 43.8%) lived in the 12 cities. The largest number lived in Christchurch (1,584), which also had the largest proportion (9.8%). Other cities with a high share of such households were Auckland (5.1%) and Manukau (4.2%). The cities with the lowest shares of the national total were Porirua (0.7%), Hutt (1.8%) and Wellington (2.6%).

### Number and percentage of households where houses are owned with a mortgage, couple or single persons aged 65 years and over (2006)

	Couple only Number	Single person Number	Total Number	Share of NZ %
Rodney	447	102	549	3.4
North Shore	492	174	666	4.1
Waitakere	387	168	555	3.4
Auckland	537	282	819	5.1
Manukau	519	165	684	4.2
Hamilton	291	108	399	2.5
Tauranga	390	135	525	3.2
Porirua	78	39	117	0.7
Hutt	216	81	297	1.8
Wellington	294	126	420	2.6
Christchurch	1,122	462	1,584	9.8
Dunedin	321	153	474	2.9
<b>Total 12 cities</b>	<b>5,094</b>	<b>1,995</b>	<b>7,089</b>	<b>43.8</b>
<b>Rest of NZ</b>	<b>6,960</b>	<b>2,145</b>	<b>9,105</b>	<b>56.2</b>
<b>Total NZ</b>	<b>12,054</b>	<b>4,140</b>	<b>16,194</b>	<b>100.0</b>

Data source: Statistics New Zealand, Census 2006

<sup>17</sup> Bollard, A., Hodgetts, B., Briggs, P. & Smith, M. (2006). *Household savings and wealth in New Zealand*. Reserve Bank of New Zealand. Wellington.



## Household crowding

### 5. Housing

- The housing market has been able to accommodate considerable growth over the period 2001 to 2006, with a relatively small increase in household crowding.

#### What this is about

Crowding is an indicator of housing affordability, because people on lower incomes may share their living environments with others as a way to reduce overall housing costs. It is also an indicator of housing need, providing information on the suitability of a dwelling for the people occupying it. Living in crowded situations is associated with poor health outcomes such as respiratory and infectious diseases (particularly meningococcal disease).<sup>18</sup>

This indicator measures the proportion of the population in private dwellings that are living in crowded households. In this analysis, crowded households are defined as those in which two or more additional bedrooms are required. This indicator uses the Canadian National Occupancy Standard. Initially developed by the Canada Mortgage and Housing Corporation in the 1980s, the standard allocates one bedroom to each couple, each pair of children under five years, each pair of adolescents of the same sex aged ten to 18 years and to any person aged 18 years and over.

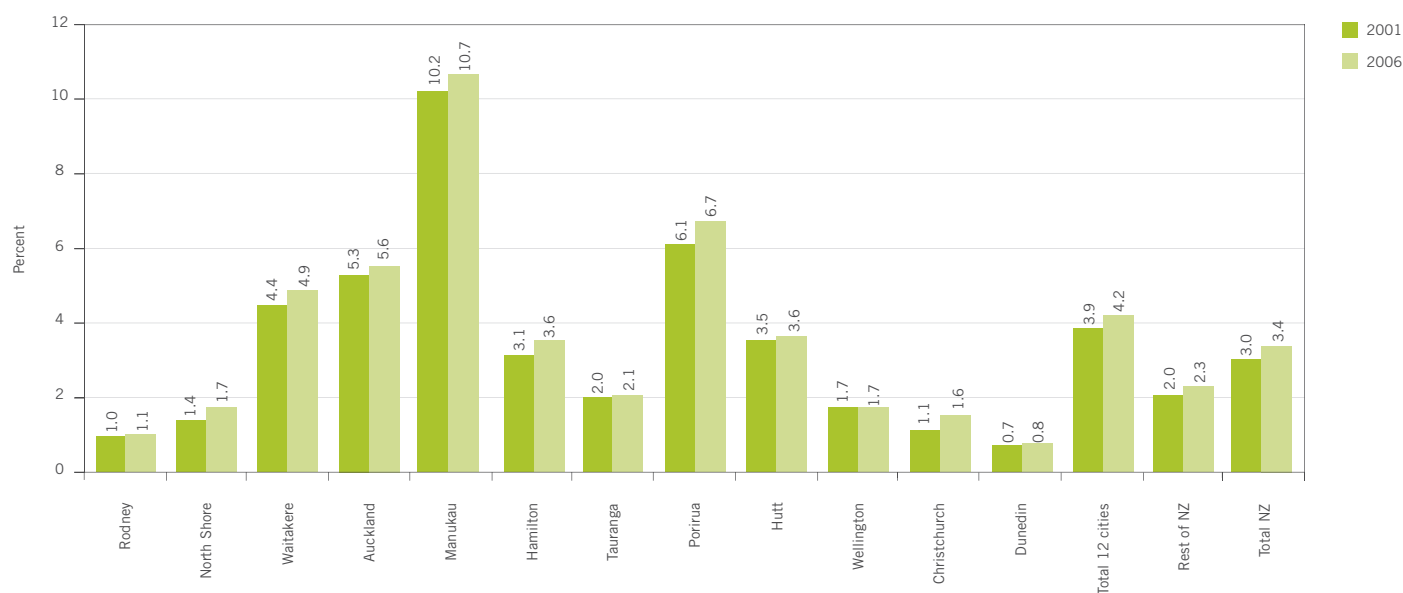
The measure in this report differs from the Statistics New Zealand website, because it reports on the percentage of people living in crowded households rather than the percentage of households where people live in crowded conditions.

#### What did we find?

The proportion of people living in crowded households increased across the whole of New Zealand and in the 12 cities. In 2006 the incidence of crowding was highest in Manukau (10.7%), Porirua (6.7%) and Auckland (5.6%). The lowest incidences of crowding were in Dunedin (0.8%), Rodney (1.1%) and Christchurch (1.6%).

The greatest increases between the 2001 and 2006 censuses were in Porirua (0.6%) and Manukau (0.5%).

Percentage of people in private dwellings living in crowded households (2001 to 2006)



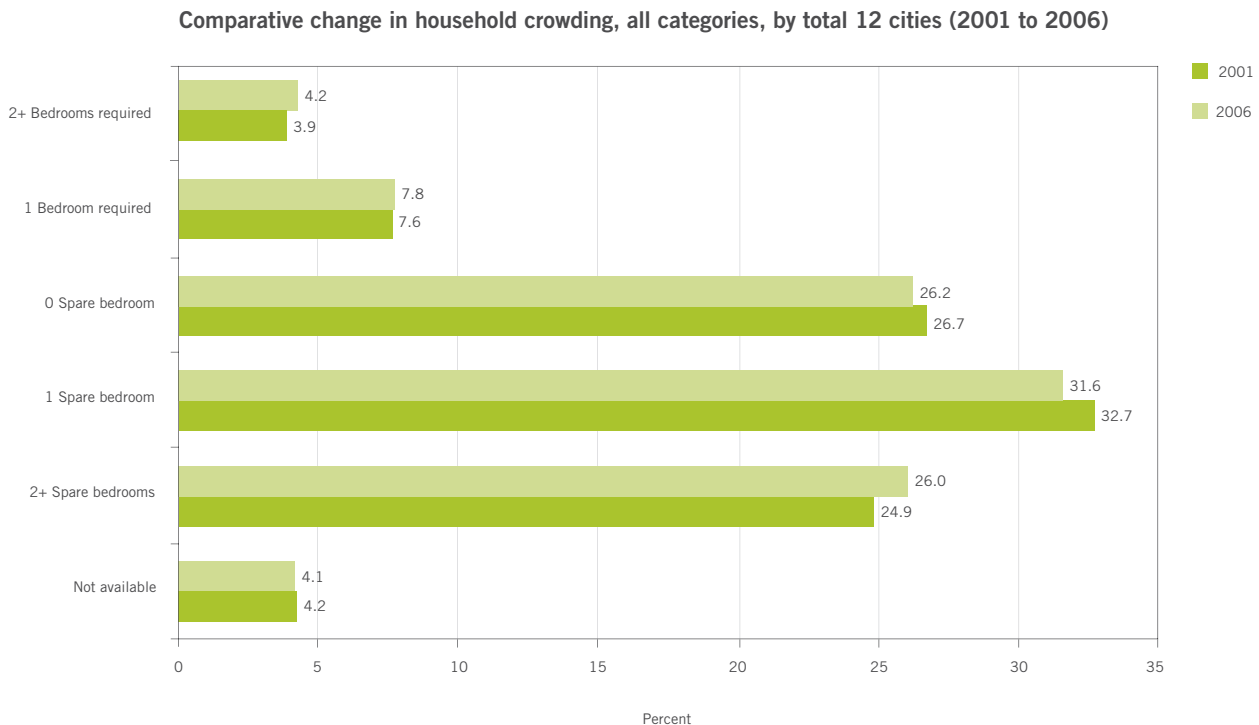
Data source: Statistics New Zealand, Census 2001, 2006

It is useful to compare the crowded households to the other categories in the household crowding data. This comparison shows that fewer households in the 12 cities had one spare bedroom: falling from 32.7% to 31.6% between 2001 to 2006,

while a greater percentage of households had two or more surplus bedrooms: increasing from 24.9% to 26.0% over the same period.

<sup>18</sup> Baker, M., McNicholas, A., Garrett N., et al. (2000). Household crowding a major risk factor for meningococcal disease in Auckland children. *Paediatric Infectious Diseases Journal*. 19, Pg 83–90.

## Household crowding continued



Data source: Statistics New Zealand, Census 2001, 2006

The three categories that make up the uncrowded households (those with either no spare bedrooms or one or more spare bedrooms) account for the living conditions of 83.8% of the

12 cities population, so small changes in the proportions among these categories can mask large changes in actual numbers, when the total population changes.

### Changes in household crowding by number of households in each category, by total 12 cities (2001, 2006)

	2+ spare bedrooms	1 spare bedroom	0 spare bedrooms	1 bedroom required	2+ bedrooms required
2001	486,873	639,924	523,037	149,384	75,693
2006	566,571	689,160	571,143	168,849	91,863
<b>Difference</b>	<b>79,698</b>	<b>49,236</b>	<b>48,106</b>	<b>19,465</b>	<b>16,170</b>

Data source: Statistics New Zealand, Census 2001, 2006

When looking at the data in terms of numbers, rather than percentages, the total number of people living in uncrowded households increased by 177,040 between 2001 and 2006, whereas the total number of people living in households with

one or more extra bedrooms required increased by 35,635. This may show that the housing market has been able to accommodate considerable growth over the period, with a relatively small increase in household crowding.



## Urban housing intensification

### 5. Housing

- Rapid urban intensification has occurred in some cities over the four years from 2002 to 2006, peaking in 2004 then slowing in 2005 and 2006.
- The greatest increases in apartments as a proportion of residential building consents were in Auckland and Wellington, followed by North Shore and Manukau.
- The construction of new apartments appears to be closely related to changes in household tenure, with a substantial increase in the proportion of tenancy bonds lodged for apartments as a proportion of all tenancy bonds over the same period.

### What this is about

Urban housing intensification is about the changing patterns of land use in our cities. Intensification can be a consequence of population growth within a city. It is also seen as a policy objective, linked to the development of compact cities that make more efficient use of transport systems and other infrastructure, compared to extensive suburban development. Urban intensification may be seen as a more sustainable form of development.

Intensification is an important issue for cities because it requires new investment in appropriate infrastructure (e.g. transport, water, sewerage and communications) and amenities (e.g. parks,

libraries, schools and shopping facilities), designed to serve the needs of urban residents. This indicator examines the number of new apartments (i.e. units, flats and apartments) as a proportion of all new private dwellings.

### What did we find?

In 2003 the 12 cities accounted for over 91.6% of the total number of consents for new apartments issued in New Zealand. This proportion decreased to 75.8% by 2006, the main reason for this being a steep decline in new apartment consents in Auckland between 2004 and 2005, falling from 4,529 to 1,417.

**Number of new apartments and apartments as a percentage of all new residential buildings (2003 to 2006)**

	2003		2004		2005		2006	
	Number	%	Number	%	Number	%	Number	%
Rodney	186	13.3	42	3.6	44	4.5	141	17.2
North Shore	259	19.7	247	18.9	246	24.2	356	28.6
Waitakere	224	14.5	51	5.0	58	7.5	171	20.3
Auckland	2,383	67.4	4,529	80.6	1,417	62.1	949	53.9
Manukau	125	4.6	348	16.2	359	20.4	220	13.0
Hamilton	83	6.5	94	8.0	125	11.8	135	13.2
Tauranga	17	1.2	31	2.1	174	13.9	85	7.7
Porirua	0	0	0	0	0	0	0	0
Hutt	0	0	21	11.7	37	24.7	34	17.3
Wellington	623	47.1	428	40.9	430	48.0	95	15.4
Christchurch	113	4.4	211	8.5	102	4.9	220	10.0
Dunedin	23	6.1	22	5.8	0	0	42	9.2
<b>Total 12 cities</b>	<b>4,036</b>	<b>22.7</b>	<b>6,024</b>	<b>33.2</b>	<b>2,992</b>	<b>23.3</b>	<b>2,448</b>	<b>20.0</b>
<b>Rest of NZ</b>	<b>372</b>	<b>3.1</b>	<b>562</b>	<b>4.2</b>	<b>810</b>	<b>6.2</b>	<b>782</b>	<b>5.7</b>
<b>Total NZ</b>	<b>4,408</b>	<b>61.0</b>	<b>6,586</b>	<b>79.5</b>	<b>3,802</b>	<b>46.9</b>	<b>3,230</b>	<b>39.9</b>
<b>12 city share NZ (%)</b>	<b>91.6</b>		<b>91.5</b>		<b>78.7</b>		<b>75.8</b>	

Data source: Statistics New Zealand, Building Consent Information

## Urban housing intensification continued

Apart from Auckland, the pattern of development for new apartments varied, with strong growth evident in North Shore, Manukau, Wellington and Christchurch.

The actual number of apartments constructed in each city might vary considerably, depending on how many apartments are included per consent on average. Also the pattern of development has not been uniform within each city. In Auckland, for instance, the main growth in apartments has occurred largely within a few relatively small zones adjacent to the central business district.<sup>19</sup>

The trend toward greater intensification appears to be closely related to the trend in tenure away from ownership and toward rental, so the number of rental bonds gives another indication of how much intensification is occurring.

Data from the Department of Building and Housing shows that for New Zealand as a whole, the number of tenancy bonds lodged for apartments each year increased from 1,212 or 1.3% of all rental bonds lodged in 2002, to 15,249 or 15.3% of all rental bonds lodged in 2006.

Despite the fact that these data may reflect the rate of turnover in the apartment market as well as the number of rental dwellings, they are consistent with the increase in apartments built over the same period, in that sharp growth was experienced between 2002 and 2003 and growth has occurred primarily in Auckland and Wellington, with Christchurch, North Shore and Hamilton also growing strongly.

**Number of apartment bonds lodged and proportion of all tenancy bonds lodged per year (2002 to 2006)**

	2002		2003		2004		2005		2006	
	Number	%	Number	%	Number	%	Number	%	Number	%
Rodney	25	1.0	109	3.8	124	4.2	166	5.4	200	6.6
North Shore	71	1.0	369	4.5	565	6.9	725	8.6	786	10.0
Waitakere	44	0.8	143	2.5	229	3.8	310	5.1	292	5.1
Auckland	669	3.3	3,174	14.5	5,430	24.3	6,883	28.9	8,690	35.9
Manukau	53	0.7	371	4.1	419	4.5	634	6.7	732	8.1
Hamilton	50	0.7	214	2.7	350	4.4	447	5.6	515	6.5
Tauranga	16	0.4	169	3.2	212	4.2	213	4.3	263	5.5
Porirua	0	0	10	0.7	9	0.7	16	1.4	19	1.8
Hutt	8	0.2	42	1.2	46	1.5	56	1.9	75	2.7
Wellington	200	2.0	1,041	9.1	1,713	14.8	2,055	17.9	2,505	22.2
Christchurch	68	0.4	511	3.0	691	4.3	859	5.2	964	6.0
Dunedin	8	0.2	91	1.6	178	3.1	166	3.0	208	3.5
<b>Total 12 cities</b>	<b>1,212</b>	<b>1.3</b>	<b>6,244</b>	<b>6.2</b>	<b>9,966</b>	<b>10.0</b>	<b>12,530</b>	<b>12.3</b>	<b>15,249</b>	<b>15.3</b>
<b>Rest of NZ</b>	<b>75</b>	<b>0.2</b>	<b>511</b>	<b>0.9</b>	<b>836</b>	<b>1.5</b>	<b>1,104</b>	<b>2.0</b>	<b>1,429</b>	<b>2.7</b>
<b>Total NZ</b>	<b>1,287</b>	<b>0.9</b>	<b>6,755</b>	<b>4.3</b>	<b>10,802</b>	<b>7.0</b>	<b>13,634</b>	<b>8.7</b>	<b>16,678</b>	<b>10.9</b>

Data source: Department of Building and Housing, Tenancy Services Market Rent Reports

19 Grimes, A., Aitken, A., Mitchell, I., & Smith, V. (2006). *Housing Supply in the Auckland Region 2000-2005*. Motu Economic and Policy Research Trust. Wellington.

## Government housing provision

### 5. Housing

- Central government continues to be the dominant provider of subsidised rental housing.
- The cities with the highest proportion of social housing provided by local authorities were Wellington, Dunedin and Christchurch.
- Rodney and Auckland provide no local authority owned social housing.

### What this is about

The level of government owned housing indicates the ability of the central and local government to provide for people who might not otherwise be able to afford adequate and appropriate accommodation. The measure for this indicator is the percentage of local and central government provided housing as a proportion of all rented private dwellings.

### What did we find?

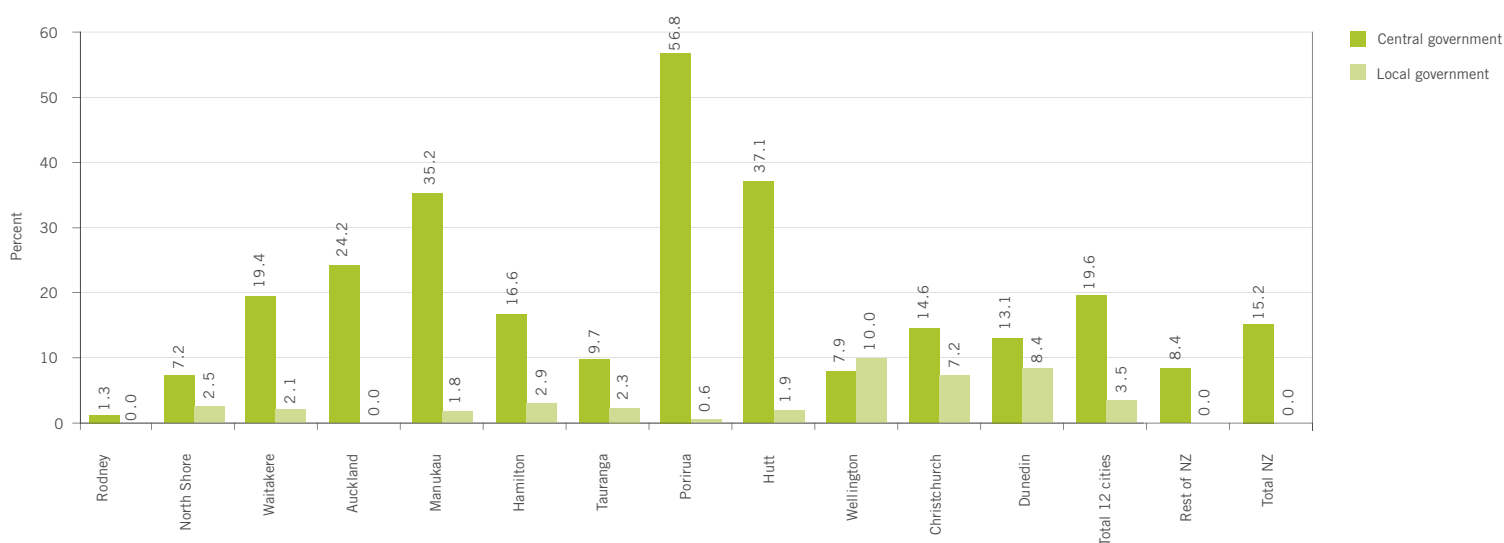
The government assists low income families with affordable housing through two mechanisms, the Accommodation Supplement and Income-Related Rents.

Housing New Zealand Corporation uses the Income-Related Rent subsidy to subsidise the rent of tenants on low incomes. A tenant in a Housing New Zealand home should pay no more than 25% of their income in rent. The Housing New Zealand Corporation owns a stock of housing and also rents properties from private landlords. In either case the subsidy reflects the difference between market rents and what the tenant can afford. As of March 2007, there were 58,989 properties managed by the Housing New Zealand Corporation.

Each local authority provides housing support according to its own policy. Of the 12 cities, only Rodney and Auckland do not provide any local authority owned social housing. Rodney sold its stock of pensioner units in 1993 and now 1.3% of the rental housing stock in Rodney is under Housing New Zealand Corporation management. In 2003 Auckland sold its entire social housing stock to the Housing New Zealand Corporation, which now manages 24.2% of the rental properties in that city.

The number of social housing units owned by the other cities varies. Porirua owns 26 pensioner units and one four-bedroom unit, but also has 2,736 properties under Housing New Zealand Corporation management, representing 56.8% of its rental properties. Christchurch has the most council owned properties (2,655) followed by Wellington (2,354). Dunedin owns 991, which represents a large share of the rental properties (8.4%), compared to the other cities (3.5% on average).

Percentage of local and central government provided social housing as a proportion of all rented private dwellings (2006)



## Housing accessibility

- The waiting lists for Housing New Zealand accommodation have decreased by nearly 10.0% from 2002 to 2006.

### What this is about

If housing costs increase and affordability declines, the need for emergency housing and provision of housing for people with special needs will tend to increase. This indicator is about the need for emergency housing and the ability to provide for that need. The measure looks at the annual average size of the waiting list for Housing New Zealand Corporation housing.

### What did we find?

The Housing New Zealand Corporation is a Crown agency that provides affordable rental homes for people on low incomes or with special housing needs.

**Number of households waiting for a Housing New Zealand house (annual average) (2002 to 2006)<sup>20</sup>**

	2002	2003	2004	2005	2006	Percentage change 2002-2006
Rodney	0	0	0	0	0	0
North Shore	330	330	326	269	219	-33.6
Waitakere	1,554	1,681	1,537	1,583	1,401	-9.9
Auckland	2,630	2,800	2,738	2,523	2,404	-8.6
Manukau	1,918	2,019	1,939	1,713	1,520	-20.7
Hamilton	688	597	495	495	552	-19.7
Tauranga	150	162	191	187	232	55.0
Porirua/Hutt	118	63	196	251	265	123.9
Wellington	611	722	667	399	364	-40.4
Christchurch	422	463	503	611	614	45.5
Dunedin	155	197	261	215	194	24.8
<b>Total 12 cities</b>	<b>8,576</b>	<b>9,032</b>	<b>8,852</b>	<b>8,244</b>	<b>7,765</b>	<b>-9.5</b>

Data source: Housing New Zealand Corporation, quarterly waiting list by neighbourhood unit

Auckland, Waitakere and Manukau make up approximately 70.0% of the Housing New Zealand Corporation waiting list each year. From 2002 to 2003 the combined waiting list for these three cities grew by 397 applicants or 6.5% on average for the year. Waiting lists increased again in 2004, compared to 2002, by a further 112 applicants or 1.8%. In the subsequent two years the waiting lists fell sharply. The number of applicants reduced by 283 (4.6%) in 2005, compared to 2002 and reduced by a further 776 (12.7%) in 2006.

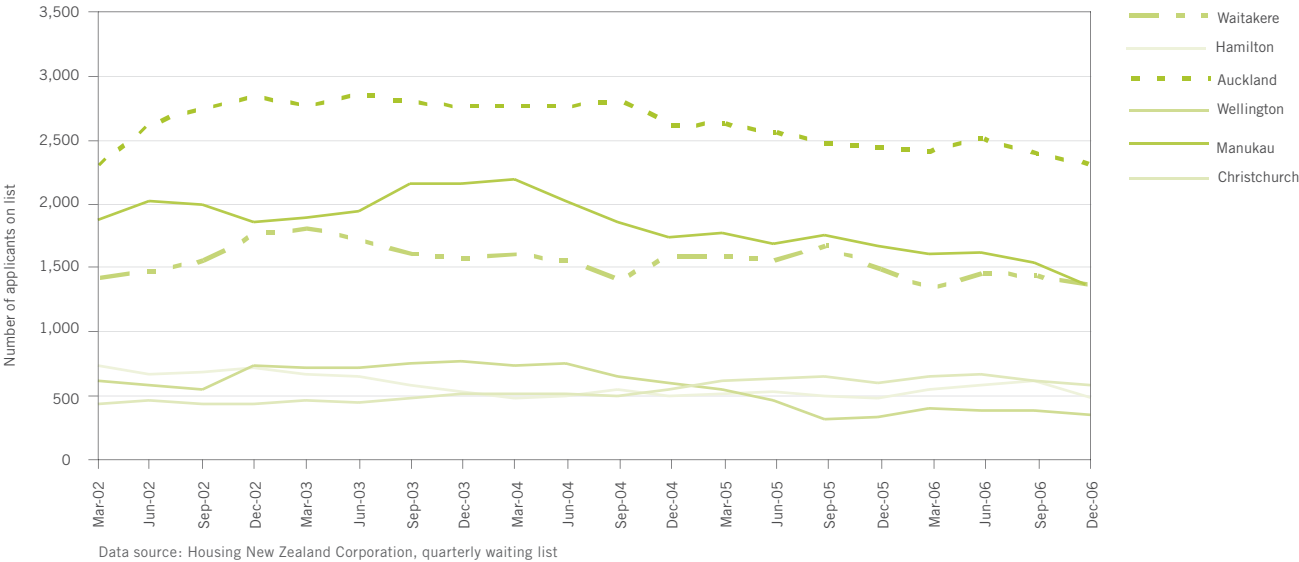
Among the other 12 cities, there was a considerable reduction in the size of the waiting lists in Wellington (247 units, -40.4%) and Hamilton (136 units, -19.7%). The biggest increases in waiting lists occurred in Christchurch (192 units, 45.5%), followed by Porirua and Hutt (147 units, 123.9%).

<sup>20</sup> The Porirua and Hutt neighbourhood unit boundaries were combined in 2004, which required these figures to be added together.



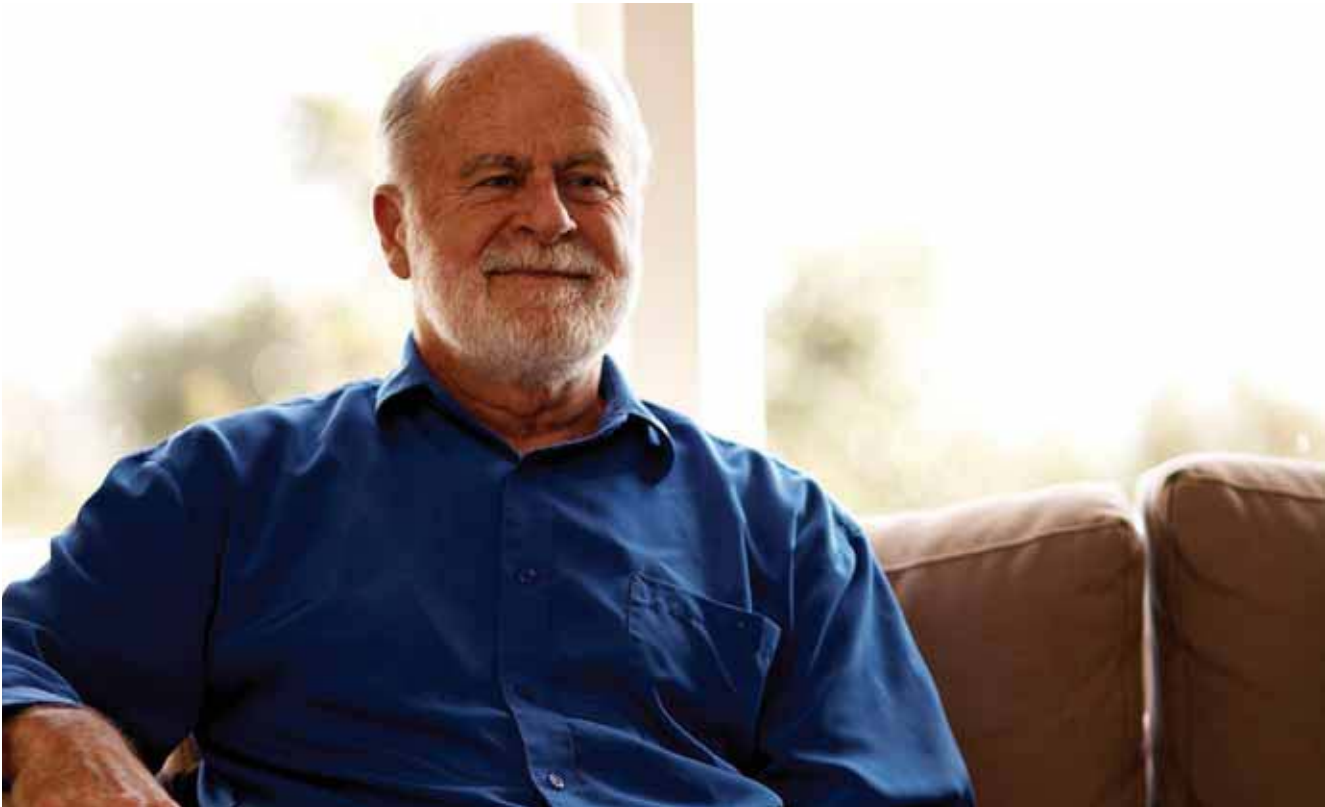
5. Housing

Housing New Zealand Corporation waiting list size, cities with more than 500 on list (March 2002 to December 2006)



The overall reduction in the size of waiting lists is possibly due in part to rental accommodation becoming more affordable since 2003. Real (inflation-adjusted) wages and incomes have increased, on average, largely because unemployment has

reduced while rental accommodation costs, on the other hand, have increased more slowly over the same period.



# Chapter Six

# Social

# Connectedness

## What's in this chapter?

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Overall quality of life

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Diversity and identity

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Community strength and spirit

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Access to telecommunications

---

Arts and culture

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# Introduction

## 6. Social connectedness

**This chapter looks at how people come together, interact and network. Social connectedness provides an indication of community strength.**

### Why this is important

The concept of community is fundamental to people's overall quality of life and sense of belonging. Informal networks and how people connect with others are important for strong communities and social cohesion.<sup>1</sup> Confident and connected communities support social and economic development in our cities. Strong communities have fewer social problems, are more adaptable in the face of change and when they do experience difficulty they have internal resources to draw upon.

Population growth and change in our cities impact on the relationships people have with others and their sense of belonging to an area.

### Key points

Overall, there are relatively high levels of social connectedness in the 12 cities. The vast majority of residents in the cities felt they had a positive overall quality of life. Rodney, Wellington and Dunedin residents were slightly more likely to feel that they had a positive overall quality of life and Waitakere residents less likely.

In 2006, 28,346 people became New Zealand citizens, with 82.9% attending citizenship ceremonies in our cities. The cities in the Auckland region had the highest proportion of new citizens from Asia. Rodney, Hamilton and North Shore had higher proportions of new citizens from South Africa. Manukau, Porirua, Hutt and Waitakere had the highest proportion of new citizens from Oceania, primarily from Fiji and Samoa.

More than half of all residents (58.0%) felt positive about the impact of increasing lifestyle and cultural diversity on their city. Residents in Wellington, Dunedin, Porirua, Christchurch and Auckland felt most positively about increasing diversity. Across the cities, people aged 25 to 49 years and Asian/Indian residents felt most positively about increasing diversity.

Increasing diversity in cities was mirrored in the languages spoken. After English, Maori was the most commonly spoken language in four of our cities and Samoan in five cities.

Nationally, the most common social networks people belong to are family networks and networks through school or work.

School and work play a larger role in social networks in our cities than in the rest of New Zealand. The busy lives of city residents could be a reason for their lower involvement in community or voluntary groups than people living in other parts of New Zealand.

Compared with the rest of New Zealand, people in the 12 cities had slightly higher rates of affiliation with social networks based on shared interests or beliefs and lower rates of affiliation to the area in which they lived. Perhaps as a result, city residents had a lower sense of community within their local area compared to residents living outside our cities.<sup>2</sup>

Around three quarters of people had very positive interactions with their neighbours and considered that other people can usually or almost always be trusted and that they had access to support when they felt stressed.

City households have higher levels of access to telecommunications than households in the rest of New Zealand. Seventy six percent of households in our cities had access to a mobile phone and 64.7% of households had internet access in 2006, up from 42.7% in 2001.

Nearly three quarters (72.0%) of residents in the 12 cities thought their city had a culturally rich and diverse arts scene. Residents in Wellington, Dunedin and Porirua rated their city's arts scene as culturally rich and diverse.

Increasing diversity in cities was mirrored in the languages spoken. After English, Maori was the most commonly spoken language in four of our cities and Samoan in five cities.

### Links to other indicators

Households move frequently in cities and this may have an impact on people's ability to make connections and participate in community life. People living in households with lower income tend to have lower rates of social connectedness, which suggests that there may be financial barriers to participation.

The quality of the built environment has an important role in creating public spaces that are safe and welcoming and that provide focal points for people to experience community interaction.

Social connection and interaction between cultures are associated with people having better understanding of their neighbours and others and feeling safer. The ability to connect with people of similar interests through the internet means that more people are sustaining social networks outside their local area through online communities.

1 Putnam, R. (2000). *Bowling alone: The collapse and revival of American community*. New York: Simon and Schuster, defines strong communities as where there are high levels of coordination and cooperation for reciprocal and mutual benefit.

2 A community is often defined spatially through a shared geographic area such as a neighbourhood. Communities can also be the product of shared interest, such as online communities, religious or cultural groups, sports clubs, business or voluntary groups.

# Overall quality of life

- The vast majority of residents in New Zealand and in the 12 cities feel they have a positive overall quality of life.

## What this is about

This indicator provides a summary of the overall perception of quality of life of residents. It uses data from the 2006 Quality of Life Survey and is based on residents' perception of overall quality of life on a five point scale from 'extremely poor' to 'extremely good'.

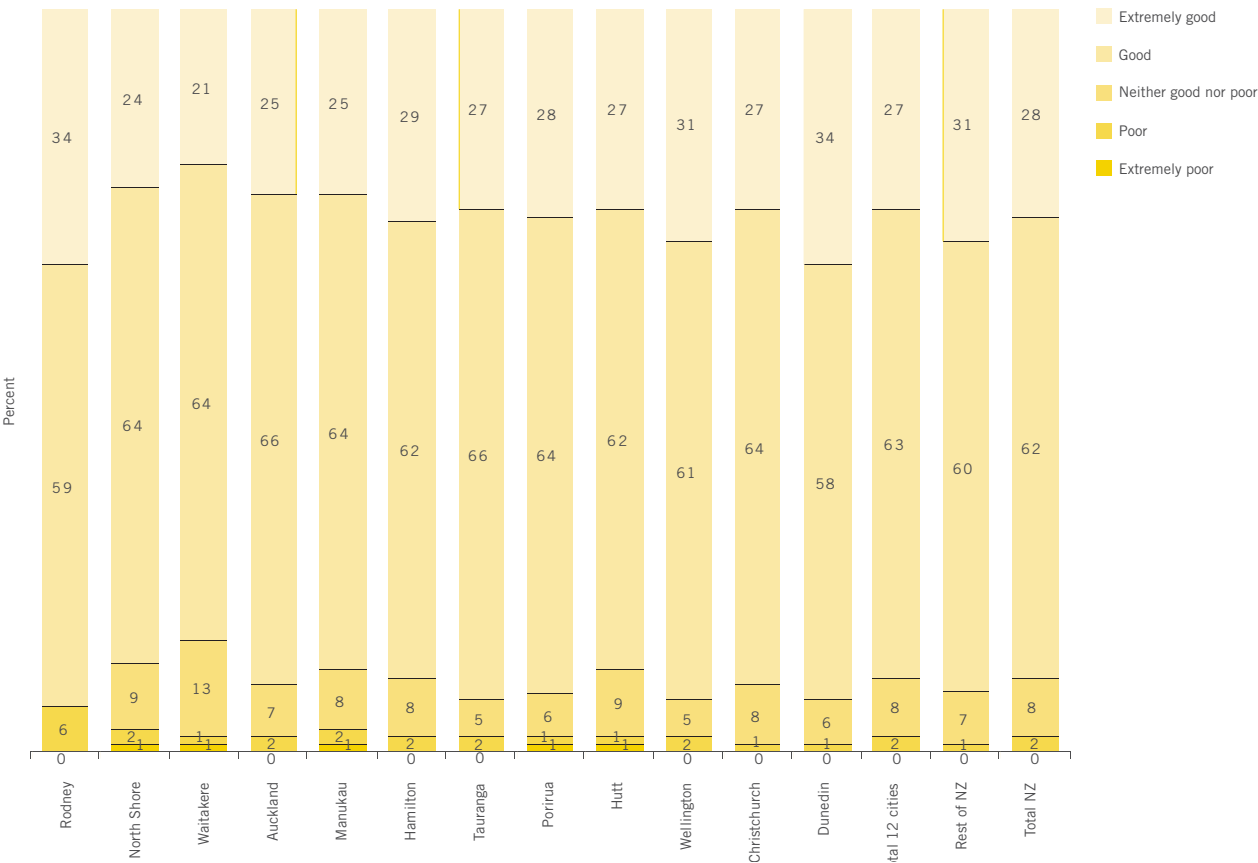
## What did we find?

The vast majority (90.0%) of residents in New Zealand felt they had a positive overall quality of life, rating it as good or extremely good. This was also the case in the 12 cities, where 90.0% of residents felt they had a positive overall quality of life and only 2.0% rated it as poor.

There was little difference in perceptions of quality of life between the cities. Residents in Rodney (93.0%), Wellington and Dunedin (both 92.0%) were most likely to report a positive overall quality of life. Waitakere residents were less likely to rate their quality of life positively (85.0%).

Nationally and in the 12 cities combined, a higher percentage of residents aged 65 years and over rated their quality of life positively. Residents with a higher household income were more likely to rate their quality of life positively as were New Zealand European residents, while Asian/Indian residents were less likely to rate it positively.

Residents' perceptions of overall quality of life (2006)<sup>3</sup>



Data source: Quality of Life Survey 2006

3 Figures might not add to 100% as 'don't know' responses are not shown.



## Diversity and identity

### 6. Social connectedness

- India is the most common source country for new citizens, followed by China, South Africa, England, Fiji and Korea.
- Almost two thirds of city residents feel positive about the impact of increasing diversity.
- A fifth of Maori people living in cities speak Maori.

#### What this is about

Cities are home to people from diverse cultures and lifestyles. Diversity impacts on how we communicate across cultures and on our sense of connectedness and belonging.

Understanding the changing population in cities ensures that facilities, services and the future development of our cities meet the needs of these diverse communities. The measures for diversity and identity are:

- Number of residents gaining citizenship
- Residents gaining citizenship by country
- Perceptions of diversity
- Languages spoken
- Maori speakers in the Maori population
- Languages spoken by New Zealand-born Pacific Islands and Asian residents.

#### What did we find?

##### Number of residents gaining citizenship

This measure is about immigrants making New Zealand their home. In 2006, 28,346 people became New Zealand citizens, with 82.9% attending citizenship ceremonies in our cities. There has been a steady increase (except in 2003) in the number of residents gaining citizenship, up from 19,274 in 2002.

Auckland (22.7%) had the highest share of citizenship ceremony attendees in 2006, followed by Manukau (17.0%) and North Shore (11.9%). New immigrants are likely to have been attracted to cities in the Auckland region by the wide employment opportunities and strong existing migrant community networks.

#### Numbers gaining citizenship (2004 to 2006)<sup>4</sup>

	2004	2005	2006
Rodney	310	360	401
North Shore	2,771	3,323	3,385
Waitakere	1,719	1,896	2,397
Auckland	5,446	5,541	6,441
Manukau	3,816	4,547	4,815
Hamilton	763	790	934
Tauranga	247	239	411
Porirua	215	147	165
Hutt	335	440	525
Wellington	1,206	1,253	1,488
Christchurch	1,305	1,709	2,208
Dunedin	302	289	327
<b>Total 12 cities</b>	<b>18,435</b>	<b>20,534</b>	<b>23,497</b>
<b>Rest of NZ</b>	<b>2,726</b>	<b>3,107</b>	<b>3,956</b>
<b>Total NZ</b>	<b>21,846</b>	<b>24,189</b>	<b>28,346</b>

Data source: Department of Internal Affairs

<sup>4</sup> Total New Zealand figure includes people attending ceremonies run by the Auckland, Wellington and Christchurch citizenship offices and overseas. People who attend these ceremonies are not classified by city.

## Diversity and identity continued

### Residents gaining citizenship by country

This measure looks at the source countries of people who have gained New Zealand citizenship.

The range of source countries for new citizens in New Zealand has steadily increased, with people coming from 183 countries in 2006, up from 156 in 2001 and 127 in 1996. In 2006, India (4,242) was the most common birth country for new citizens, followed by China, South Africa, England, Fiji and Korea.

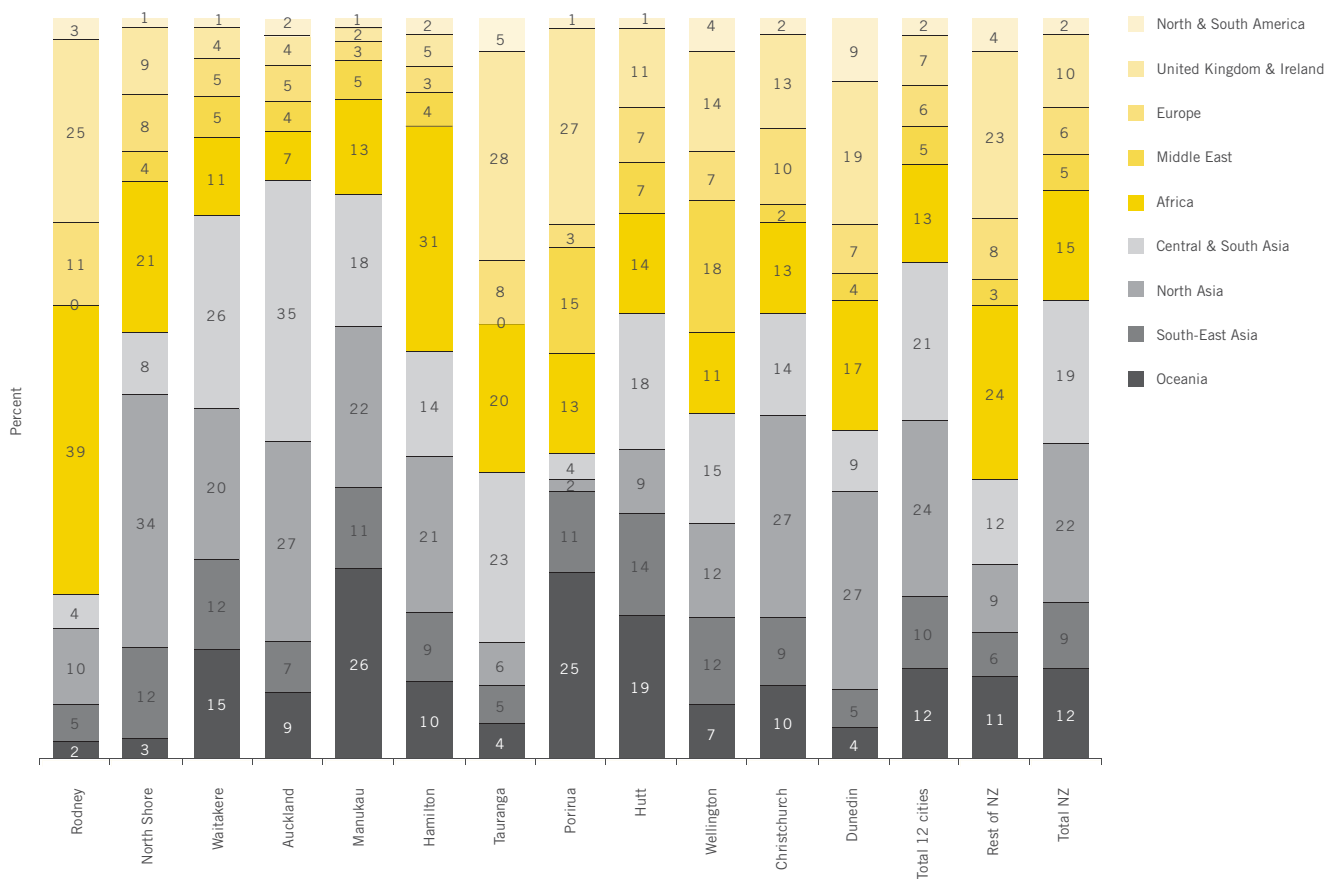
The growth of immigration from Asia is reflected in citizenships, with half of new citizens originating from Asian countries.

The main country of birth of new citizens differs across the 12 cities. Of our cities, Rodney, Hamilton and North Shore had higher proportions of new citizens from South Africa, which was similar to the rest of New Zealand. The cities in the Auckland

region had the highest proportion of new citizens from Asia: Auckland (69.4%), Waitakere (58.6%), North Shore (54.9%) and Manukau (50.6%). Asian residents comprised 50.2% of new citizens in Christchurch. There were differences in the make up of new Asian citizens, with a higher proportion in Auckland and Waitakere from countries in Central and South Asia and in North Shore, Manukau and Christchurch from North Asia (mainly China and Korea).

Tauranga (28.0%), Porirua (26.7%) and Rodney (24.9%) had the highest proportion of new citizens from the United Kingdom and Ireland. Manukau (25.6%), Porirua (24.8%), Hutt (19.2%) and Waitakere (14.7%) had the highest proportion of new citizens from Oceania, primarily from Fiji and Samoa.

Region of birth of residents gaining citizenship (2002 to 2006)



Data source: Department of Internal Affairs

## 6. Social connectedness

**Perceptions of diversity**

Diversity is a particularly relevant issue in New Zealand's cities, as immigration and increasing cultural diversity have had a significant impact in cities.

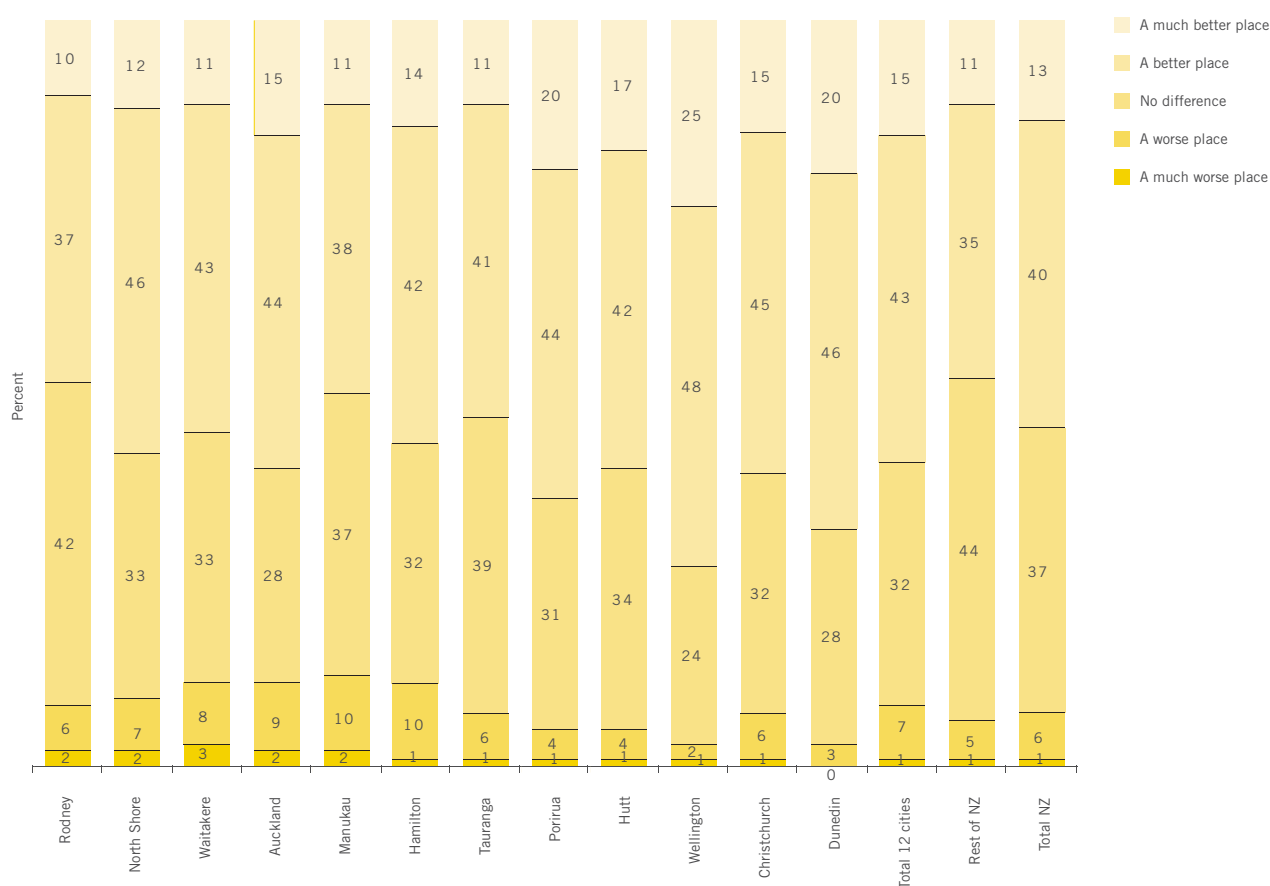
Residents were asked in the 2006 Quality of Life Survey whether they thought increasing lifestyle and cultural diversity made their area a better or worse place to live and asked the reasons for this view. Just over half of residents nationally (53.0%) felt positive about increasing diversity and said it made their area a better or much better place to live. Fifty-eight percent of residents in the 12 cities combined felt positive about the impact of increasing diversity. Reasons provided for the positive view were the introduction of new ideas and a broader perspective and greater cultural understanding and tolerance.

Residents in Wellington (73.0%), Dunedin (66.0%), Porirua (64.0%), Christchurch (60.0%) and Auckland (59.0%) felt most positively about increasing diversity. Residents in Rodney (47.0%) and those in the rest of New Zealand (46.0%) were less likely to consider that diversity made their area a better place to live.

Over the 12 cities, people aged from 25 to 49 years felt most positively about increasing diversity, as did Asian/Indian people, while Maori were less positive.

Nationally and in the 12 cities combined, a small percentage of residents felt that increasing diversity had a negative impact (7.0% and 8.0% respectively). This viewpoint was held by people who felt there was a lack of mixing and integration by people of other cultures into New Zealand society and that there were too many foreigners and different cultures.

**Residents' perception of the impact of increased cultural diversity (2006)<sup>5</sup>**



<sup>5</sup> Figures might not add to 100% as 'don't know' responses are not shown.



## Diversity and identity continued

### Languages spoken

This measure looks at the languages in which people could have a conversation about everyday things. It is based on 2006 Census data.

Nationally, most people aged five years and over could hold a conversation in English (93.1%). The proportion was slightly lower (under 90.0%) in Waitakere, Auckland and Manukau, which have received relatively high numbers of migrants from non-English speaking countries.

Languages spoken reflect the ethnic make up of the cities. After English, Maori was the most common language spoken by residents of Rodney, Hamilton, Tauranga and Christchurch. Samoan was the most common language spoken after English in Waitakere, Auckland, Manukau, Hutt and Porirua. In North Shore, after English, Korean was the most commonly spoken language, while in Wellington and Dunedin it was French.

Maori was in the top four languages spoken in all cities except for North Shore and Auckland. New Zealand's third official language, Sign Language, was in the top 15 in all cities except North Shore, Manukau and Wellington.



### 15 most common languages spoken (other than English) (2006)

	Rodney	North Shore	Waitakere	Auckland	Manukau	Hamilton	Tauranga	Hutt	Porirua	Wellington	Christchurch	Dunedin	Rest of NZ	Total NZ
1st	Maori 1,425	Korean 7,902	Samoan 9,441	Samoan 13,896	Samoan 31,605	Maori 7,053	Maori 4,614	Samoan 4,770	Samoan 4,914	French 6,063	Maori 6,450	French 2,274	Maori 96,228	Maori 157,113
2nd	French 1,260	Northern Chinese 5,412	Maori 5,211	Hindi 13,629	Hindi 13,446	Sinitic not further defined 1,989	French 1,083	Maori 4,695	Maori 2,697	Maori 3,939	French 5,385	Maori 2,127	French 17,868	Samoan 85,428
3rd	German 1,119	Sinitic not further defined 5,085	Hindi 4,668	Northern Chinese 13,428	Maori 11,853	Hindi 1,578	Dutch 807	French 1,359	Tokelauan 942	Samoan 3,891	Sinitic not further defined 4,251	German 1,680	German 13,782	French 53,754
4th	Dutch 918	Yue <sup>6</sup> 4,227	Yue 2,928	Yue 12,135	Tongan 11,556	Northern Chinese 1,437	German 795	Yue 1,179	French 561	German 3,453	Samoan 4,212	Northern Chinese 966	Dutch 12,918	Hindi 44,589
5th	Afrikaans 831	Afrikaans 4,167	Northern Chinese 2,898	Sinitic not further defined 12,114	Yue 10,236	French 1,401	New Zealand Sign Language 714	Hindi 1,023	Cook Islands Maori 504	Yue 3,144	Korean 4,011	Yue 909	New Zealand Sign Language 11,571	Yue 44,154

Data source: Statistics New Zealand, Census 2006

<sup>6</sup> The Yue language is also known as Cantonese.

6. Social connectedness

Maori speakers in the Maori population

This measure is of the number of people within the Maori population who can have a conversation about everyday things in the Maori language. It is based on Census data. Maori language proficiency is an important dimension of Te Ao Maori (Maori cultural inheritance).<sup>7</sup>

Nationally, the percentage of Maori who speak Maori was 23.9% in 2006, down from 25.6% in 2001. This was lower in our cities with 21.1% of Maori speaking Maori.

Hamilton (26.1%) and Hutt (25.6%) had higher percentages of Maori speakers amongst Maori residents, while Rodney (14.5%), Dunedin (17.2%), North Shore (17.9%) and Christchurch (18.3%) had the lowest proportions.

Number and percentage of Maori speakers in the Maori population (2006)

	Number of Maori residents	Percentage speaking Maori %
Rodney	7,470	14.5
North Shore	12,519	17.9
Waitakere	22,890	19.6
Auckland	29,850	20.6
Manukau	47,346	22.0
Hamilton	24,576	26.1
Tauranga	16,569	23.6
Porirua	9,642	23.7
Hutt	16,281	25.6
Wellington	13,335	21.3
Christchurch	25,725	18.3
Dunedin	7,362	17.2
<b>Total 12 cities</b>	<b>233,565</b>	<b>21.4</b>
<b>Rest of NZ</b>	<b>331,764</b>	<b>25.7</b>
<b>Total NZ</b>	<b>565,329</b>	<b>23.9</b>

Data source: Statistics New Zealand, Census 2006



7 Statistics New Zealand. (2002). *Towards a Maori statistics framework: A discussion document.*

### Languages spoken by New Zealand-born Pacific Islands and Asian residents

This measure is of the proportion of Pacific Islands and Asian people born in New Zealand who can have a conversation about everyday things in a language of their ethnic group.

Nationally, just over a quarter of people in the Pacific Islands and Asian ethnic groups who were born in New Zealand could speak a language of their ethnic group. This was higher in the 12 cities than in the rest of New Zealand. More than a third of New Zealand-born Pacific Islands residents in Manukau and Hutt could speak a Pacific Islands language. The proportion of the New Zealand-born Asian population that could speak an Asian language was highest in North Shore.

#### New Zealand-born Pacific Islands and Asian residents speaking the language of their ethnnc group (2006)<sup>8</sup>

	Pacific Islands residents speaking Pacific languages	Asian residents speaking Asian languages
	%	%
Rodney	5.2	21.6
North Shore	21.6	34.8
Waitakere	28.2	25.1
Auckland	32.1	29.2
Manukau	34.6	30.8
Hamilton	15.3	20.5
Tauranga	12.4	13.4
Porirua	25.9	12.6
Hutt	34.7	21.4
Wellington	30.9	22.2
Christchurch	27.7	30.3
Dunedin	16.4	27.8
<b>Total 12 cities</b>	<b>30.6</b>	<b>27.1</b>
<b>Rest of NZ</b>	<b>11.3</b>	<b>15.8</b>
<b>Total NZ</b>	<b>26.8</b>	<b>25.4</b>

Data source: Statistics New Zealand, Census 2006

<sup>8</sup> The Pacific Islands and Asian languages that are included in this measure are not comprehensive. The Pacific Islands languages are Samoan and Tongan. The Asian languages included are Yue, Northern Chinese, Sinitic, Hindi, Japanese and Korean. As ethnicities are grouped, the language spoken may not necessarily be the language of a person's specific reported ethnic group.

## Community strength and spirit

### 6. Social connectedness

- The most common social networks are family, school or work networks.
- There is a higher sense of local community in the rest of New Zealand than in the 12 cities.

#### What this is about

The presence of formal and informal relationships between people, either living in the same local area or not, facilitates participation in society, encourages a sense of belonging and supports social cohesion.

Data for the measures is largely based on the 2006 Quality of Life Survey. The measures for this indicator are:

- Types of social networks
- Location of social networks
- Sense of community
- Community resilience
- Contact with neighbours
- Unpaid work
- Trust
- Social isolation
- Personal support.

#### What did we find?

##### Types of social networks

Residents were asked in the 2006 Quality of Life Survey about the range of their social networks and groups.

Nationally, the most common social networks people belonged to were a family network (64.0%) and a network through work or school (52.0%). People also commonly belonged to a hobby or interest group (35.0%), a sports club (33.0%), or a church or spiritual group (30.0%). The growing impact of the internet on how people form and sustain networks is shown by the 17.0% of people who belonged to an online community or interest group.

Patterns of social networks in the 12 cities combined followed a similar trend to national patterns. Residents in Manukau (70.0%) and Auckland (69.0%) were most likely to belong to a family network, while residents in Wellington (62.0%), Auckland and Hamilton (both 58.0%) were more likely to belong to a work or school network.

School and work played a larger role in the social networks in urban areas. People living in the rest of New Zealand (49.0%) were less likely to belong to a work or school network than residents in the 12 cities (54.0%). The busy lives of urban residents could be a contributing factor for those in our cities (22.0%) being less likely to belong to a community or voluntary group than people living in the rest of New Zealand (29.0%).

#### Types of social networks to which residents belong (2006)

	Rodney %	North Shore %	Waitakere %	Auckland %	Manukau %	Hamilton %	Tauranga %	Porirua %	Hutt %	Wellington %	Christchurch %	Dunedin %	Rest of NZ %	Total NZ %
A sports club	37	36	33	27	31	32	33	34	32	33	34	38	35	33
A church or spiritual group	26	27	34	35	36	34	26	36	31	32	31	25	28	30
A hobby or interest group	37	30	27	33	34	32	32	29	33	37	36	39	36	35
A community or voluntary group	31	21	23	21	22	19	22	25	22	22	23	27	29	25
Family	64	67	64	69	70	62	66	63	63	66	63	65	62	64
Online community or interest group	18	16	15	17	16	20	15	17	16	20	18	19	16	17
A network of people from work or school	48	55	50	58	52	58	48	56	53	62	51	57	49	52
Age specific group	1	1	1	2	1	2	1	3	2	2	2	0	1	1
Ethnic group	0	0	0	1	1	1	0	1	1	1	1	1	1	1
Friends/social group	2	4	3	2	2	1	4	3	3	4	3	2	3	3
Other social network or group	1	1	1	0	0	1	1	1	1	0	1	0	1	1

Data source: Quality of Life Survey 2006

## Community strength and spirit continued

### Location of social networks

Residents were asked in the 2006 Quality of Life Survey about where their main social networks were based.

Nationally, 25.0% of people said their main social networks were in the same area that they lived. This proportion was lower in the 12 cities combined (21.0%), while in the rest of New Zealand it was 29.0%.

In our cities, 22.0% of people said their main social networks were based on shared interests or beliefs, but not necessarily located in the same area where they lived. Nationally, 18.0% of people said this was the case.

Just over half of people nationally (51.0%) and in the 12 cities (52.0%) said their main social networks were a mix of those based locally and on shared interest and beliefs.

Residents in Rodney (29.0%), Waitakere and Manukau (both 27.0%) were more likely to have their main social networks in the same area that they lived. Residents in Christchurch (15.0%), Wellington (17.0%), Auckland and Hamilton (both 18.0%) were less likely to have networks locally.

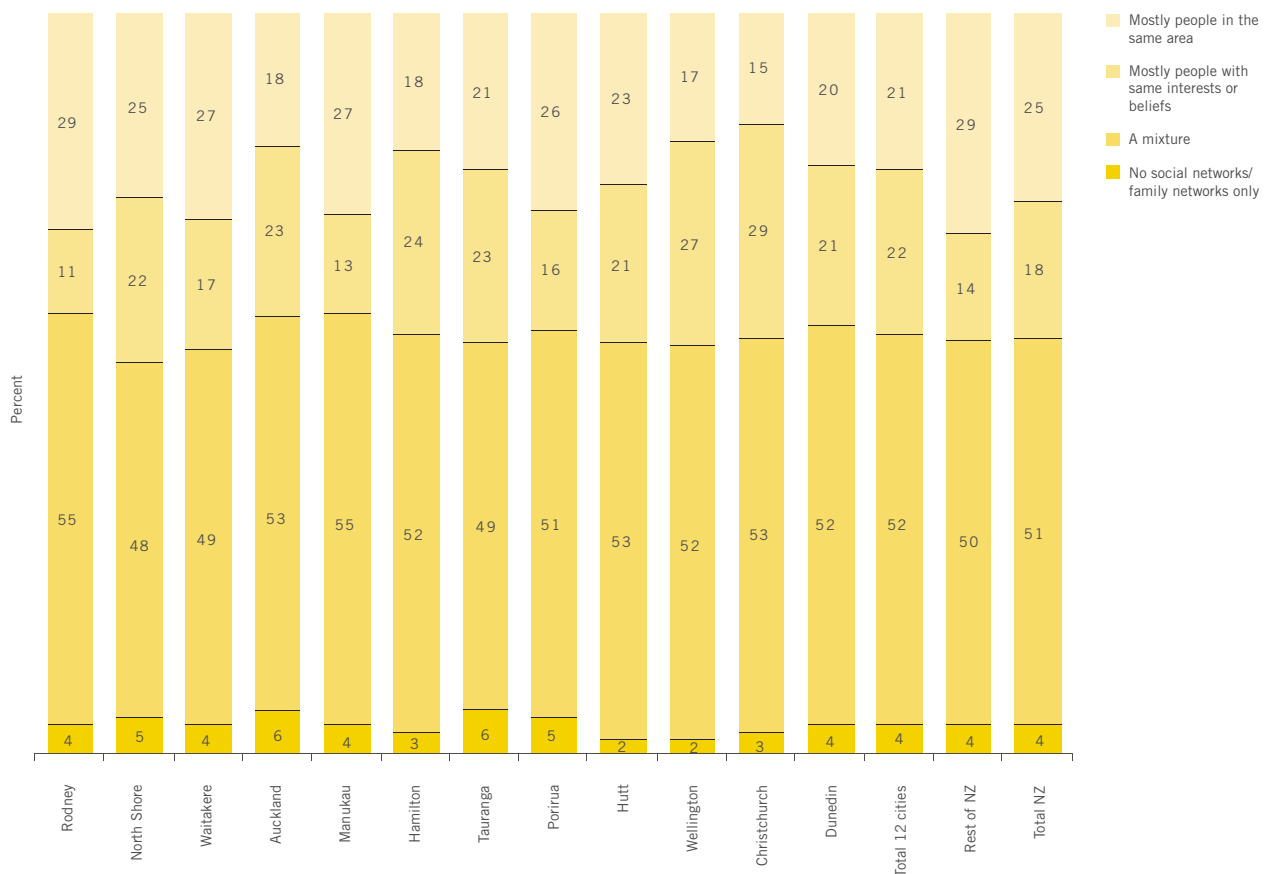
Residents in Christchurch (29.0%) and Wellington (27.0%) were more likely to have their main social networks based on shared interests or beliefs, while residents in Rodney (11.0%), Manukau (13.0%), Porirua (16.0%) and Waitakere (17.0%) were less likely to have mainly interest or belief networks.

Across the 12 cities and nationally, the location of social networks was linked to age. Compared to other residents, people aged 15 to 24 years were more likely to have a mix of both local area and shared interests, while those aged 25 to 49 years were more likely to have networks based mostly on shared interests or beliefs.

A small proportion of residents in our cities said they had no social networks or groups to which they belonged (3.0%).

The location of social networks can be influenced by mobility and access to information and communications technology.

Location of social networks to which residents belong (2006)



Data source: Quality of Life Survey 2006

## 6. Social connectedness

**Sense of community**

Residents were asked in the 2006 Quality of Life Survey if they thought a local sense of community was important and whether they felt a sense of community in their local neighbourhood.

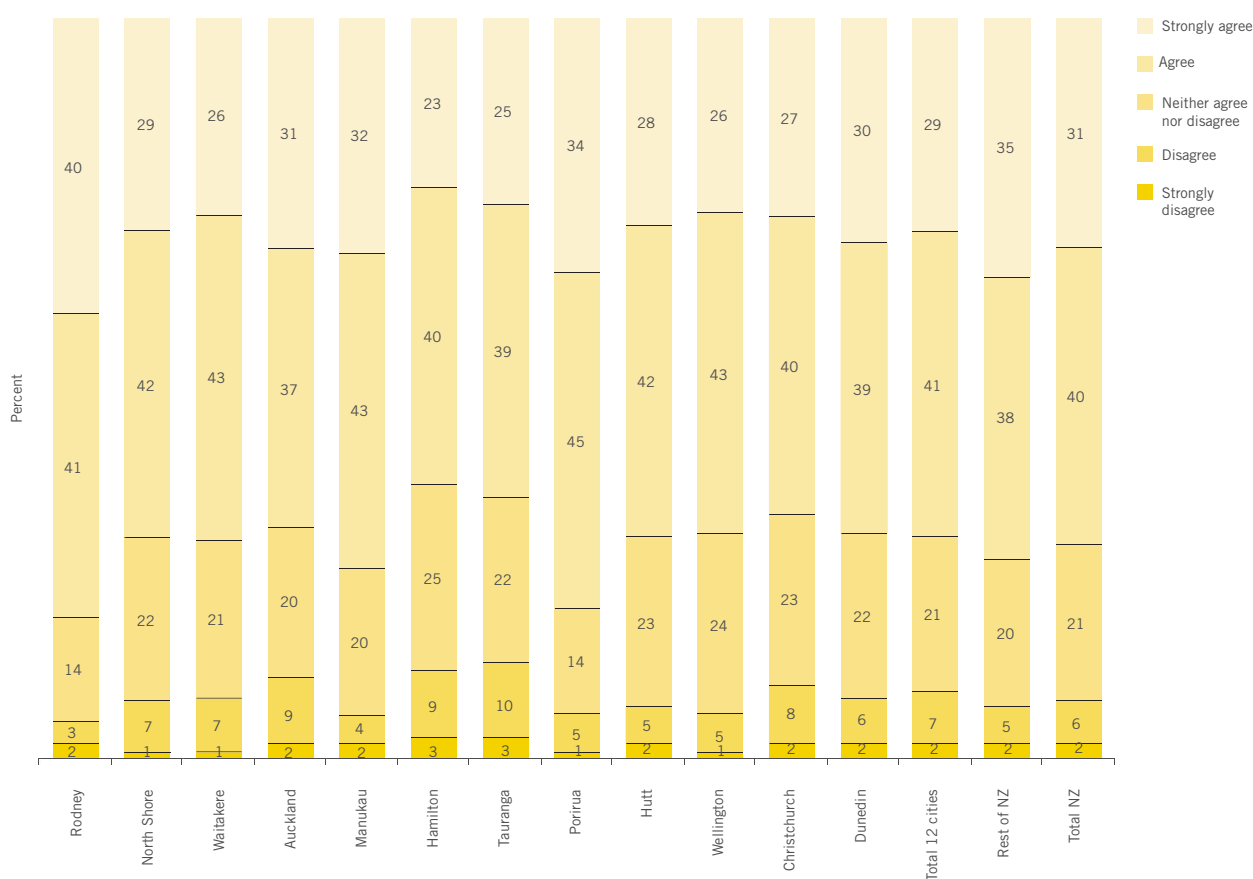
Nationally, 71.0% of people said a local sense of community was important, which was similar to the total 12 cities (70.0%) figure. In the rest of New Zealand, 73.0% said a sense of community was important.

Residents in Rodney (81.0%) were more likely to think that a local sense of community was important, while those in Hamilton (63.0%), Tauranga (64.0%) and Christchurch (67.0%) were less likely to see it as important.

Nationally, 59.0% of people said they felt a sense of community in their local neighbourhood. There was a higher sense of local community (65.0%) in the rest of New Zealand than in the 12 cities (55.0%).

Residents in Rodney (73.0%) were more likely to feel a sense of local community, while those in Waitakere, Hamilton (both 50.0%), Auckland (52.0%), North Shore (53.0%) and Christchurch (54.0%) were less likely to feel it. Reasons provided for not feeling a sense of local community were people's busy lives, lack of communication and events in the neighbourhood and unfriendly or unwelcoming neighbours.

**Residents' importance of sense of community in local neighbourhood (2006)<sup>9</sup>**

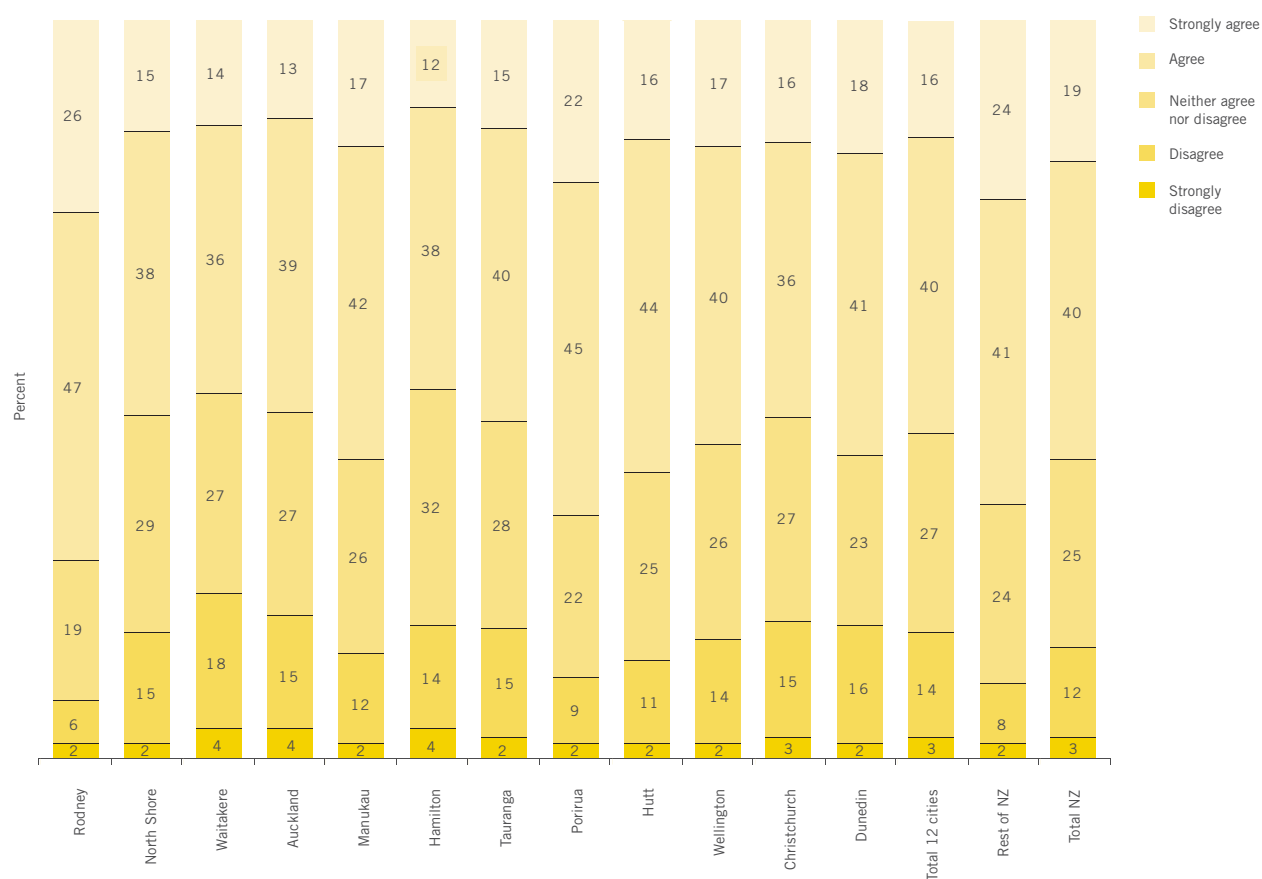


Data source: Quality of Life Survey 2006

<sup>9</sup> Figures might not add to 100% as 'don't know' responses are not shown.

## Community strength and spirit continued

Residents' sense of community in local neighbourhood (2006)<sup>10</sup>



Data source: Quality of Life Survey 2006

### Community resilience

This measure uses a community resilience index.<sup>11</sup> The index combines six factors using 2006 Census data and estimates an overall score of community resilience on a scale of one (high community/low community need) to nine (low community/high community need). The community resilience score reflects the extent to which communities seem likely to suffer increased demands on them and the extent to which they are able to deal with these demands.

This measure shows the number of wards in each city that are in each decile of the index.

There were differences in the overall community resilience of our cities. Half of Dunedin wards were decile two or three demonstrating a high degree of community resilience. By comparison, all of the wards in North Shore, Waitakere and Manukau were in the lower community resilience deciles, eight or nine, indicating lower levels of community connectedness and higher levels of need.

<sup>10</sup> Figures might not add to 100% as 'don't know' responses are not shown.



## 6. Social connectedness



## Number of wards in community resilience deciles (2006)

	High community/low community need						Low community/high community need			
	1	2	3	4	5	6	7	8	9	10
Rodney	0	0	0	0	1	1	0	1	0	0
North Shore	0	0	0	0	0	0	0	0	3	0
Waitakere	0	0	0	0	0	0	0	1	3	0
Auckland	0	0	0	0	0	1	0	0	6	0
Manukau	0	0	0	0	0	0	0	0	7	0
Hamilton	0	0	0	0	0	1	0	1	1	0
Tauranga	0	0	0	0	1	1	1	0	0	0
Porirua	0	0	0	1	1	0	1	0	0	0
Hutt	0	0	0	0	3	3	0	0	0	0
Wellington	0	0	0	0	0	3	1	1	0	0
Christchurch	0	0	0	1	2	2	1	1	0	0
Dunedin	0	2	1	2	0	0	0	0	1	0
<b>Total 12 cities</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>4</b>	<b>8</b>	<b>12</b>	<b>4</b>	<b>5</b>	<b>21</b>	<b>0</b>

Data source: AUT University 2007

## Contact with neighbours

Residents were asked in the 2006 Quality of Life Survey about the type of contact they have with people in their neighbourhood.

Nationally, nearly all (95.0%) had experienced some form of positive contact with their neighbours, such as a nod or saying 'hello' and 77.0% had experienced a strong positive contact, such as having visited or asked a small favour. Similar proportions of residents in our cities had positive contact with their neighbours.

Residents in Rodney (87.0%) were more likely to report strong positive contact with neighbours. This may reflect the older age structure of the Rodney population. Older adults generally have their main social networks near to where they live, possibly due to mobility issues.

A small proportion of people across New Zealand, (11.0%) had experienced tensions or disagreements with neighbours.

Over the 12 cities, people aged 50 to 64 years or 65 years and over (both 82.0%), were much more likely to have had strong positive contact with neighbours, while those aged 15 to 24 years were much less likely to have had strong positive contact (61.0%) and more likely to have had negative contact with neighbours (15.0%).

Asian/Indian people were much less likely to have strong positive contact (62.0%) and also less likely than other ethnic groups to have negative contact with neighbours (6.0%).

## Community strength and spirit continued

### Residents' contact with neighbours (2006)

	Negative contact with out-right tension or disagreement	Some negative contact such as not getting on with them	Some positive contact such as a nod or saying hello	Positive contact such as a visit, or small favours
	%	%	%	%
Rodney	10	12	98	87
North Shore	12	12	96	76
Waitakere	14	14	93	72
Auckland	14	14	94	74
Manukau	11	12	94	73
Hamilton	11	13	97	73
Tauranga	13	13	96	77
Porirua	13	12	97	80
Hutt	11	11	95	71
Wellington	7	9	95	74
Christchurch	12	13	97	73
Dunedin	10	12	97	79
<b>Total 12 cities</b>	<b>12</b>	<b>12</b>	<b>95</b>	<b>75</b>
<b>Rest of NZ</b>	<b>10</b>	<b>11</b>	<b>96</b>	<b>80</b>
<b>Total NZ</b>	<b>11</b>	<b>12</b>	<b>95</b>	<b>77</b>

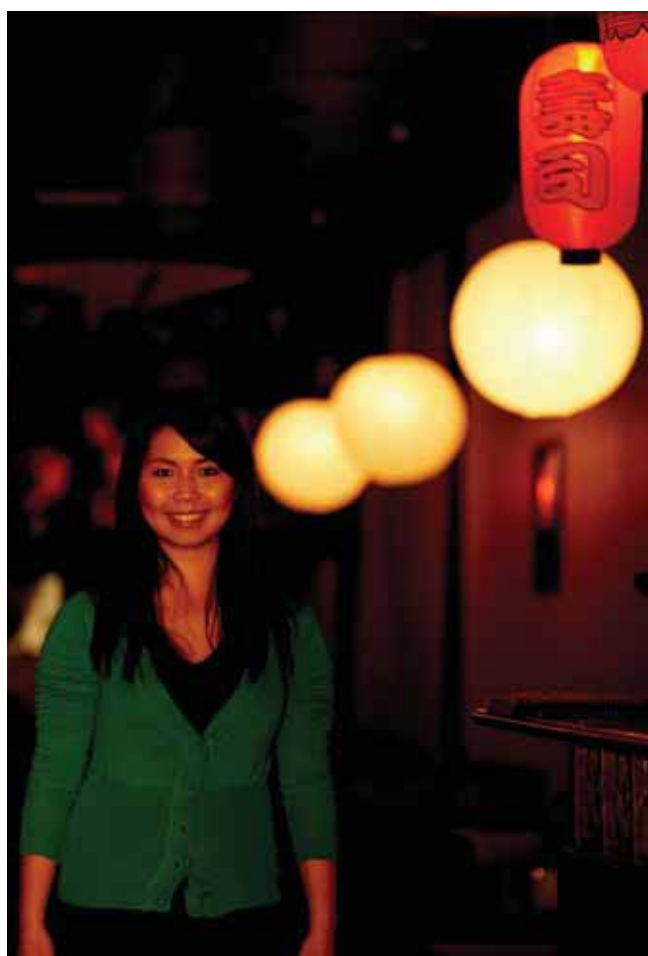
Data source: Quality of Life Survey 2006

### Unpaid work

Doing things for other people is an indication of social ties and support. This measure is of the unpaid activities performed by people for others within or outside their household in the four weeks prior to the 2006 Census.

Nationally, the most common unpaid activity that people undertook was general chores within their own household (77.4%). Around 28.4% of people looked after children in their household and 14.6% looked after children who lived outside their household. Seven percent of people looked after a household member who was ill or had a disability.

Unpaid work followed similar patterns for residents in the 12 cities as in the rest of New Zealand. The exception was voluntary work through an organisation, group or marae, which was undertaken by only 12.3% of city residents compared with 15.7% of those residing in other parts of New Zealand.



## 6. Social connectedness

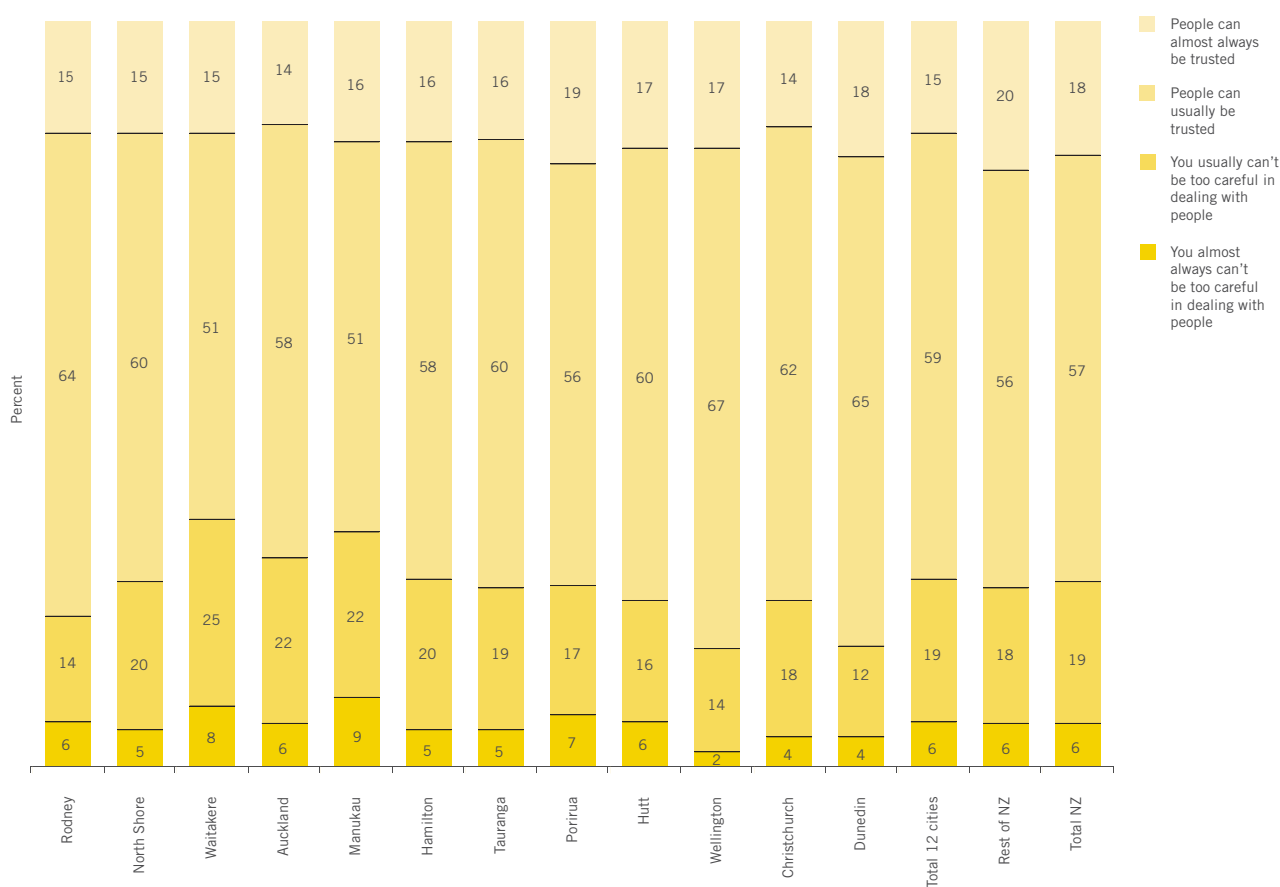
**Trust**

Residents were asked in the 2006 Quality of Life Survey about their trust in other people.

Nationally, three quarters (75.0%) of people considered that they could trust other people, either feeling that people can always (18.0%) or usually (57.0%) be trusted. There were no notable

differences in levels of trust between residents in our cities and those living in other parts of New Zealand. Residents in Wellington (84.0%), Dunedin (83.0%) and Rodney (79.0%) were more likely to trust other people, than those in Waitakere (66.0%) and Manukau (67.0%).

**Residents' feeling of trust (2006)<sup>13</sup>**



Data source: Quality of Life Survey 2006

13 Figures might not add to 100% as 'don't know' responses are not shown.

## Community strength and spirit continued

### Social isolation

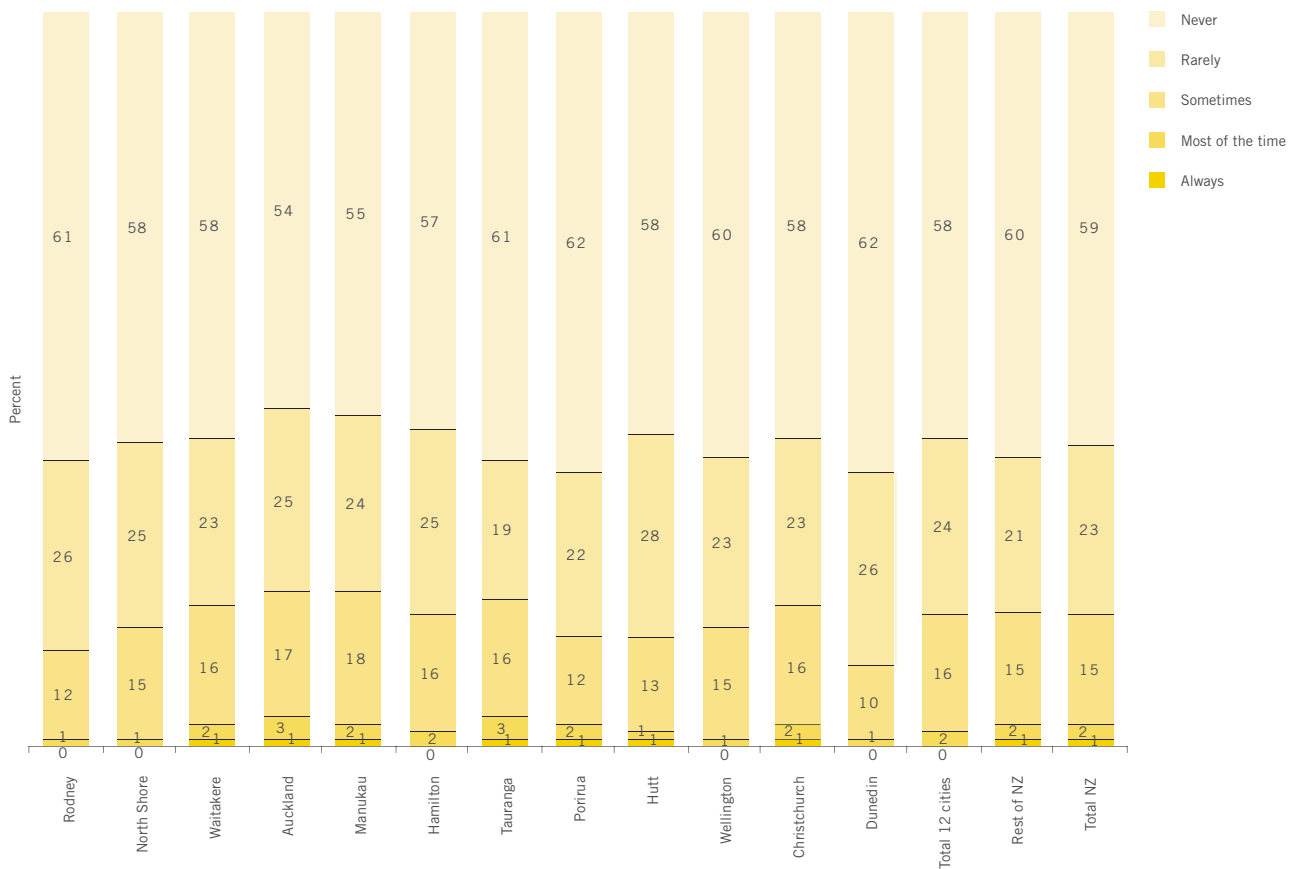
Residents were asked in the 2006 Quality of Life Survey how often they had felt lonely or isolated over the last 12 months.

Nationally, 82.0% of people rarely or never felt isolated or lonely. Fifteen percent sometimes felt isolated or lonely. There was no notable difference between residents in our cities combined and the rest of New Zealand. Residents in Dunedin (88.0%) and Rodney (87.0%), however, were less likely to have felt isolated or lonely.

Nationally and across the 12 cities, there were links between feelings of social isolation and household income. People with household incomes under \$20,000 or between \$20,001 and \$40,000 were more likely to feel isolated or lonely. Residents with household incomes between \$70,001 and \$100,000 or over \$100,000 were less likely to experience these feelings.

Of the different ethnic groups, Pacific Islands and Asian/Indian residents were most likely to feel isolated or lonely. Young people aged 15 to 24 years were also more likely to feel this way.

Residents' frequency of feeling lonely or isolated in the past 12 months (2006)<sup>14</sup>



Data source: Quality of Life Survey 2006

<sup>14</sup> Figures might not add to 100% as 'don't know' responses are not shown.

## 6. Social connectedness

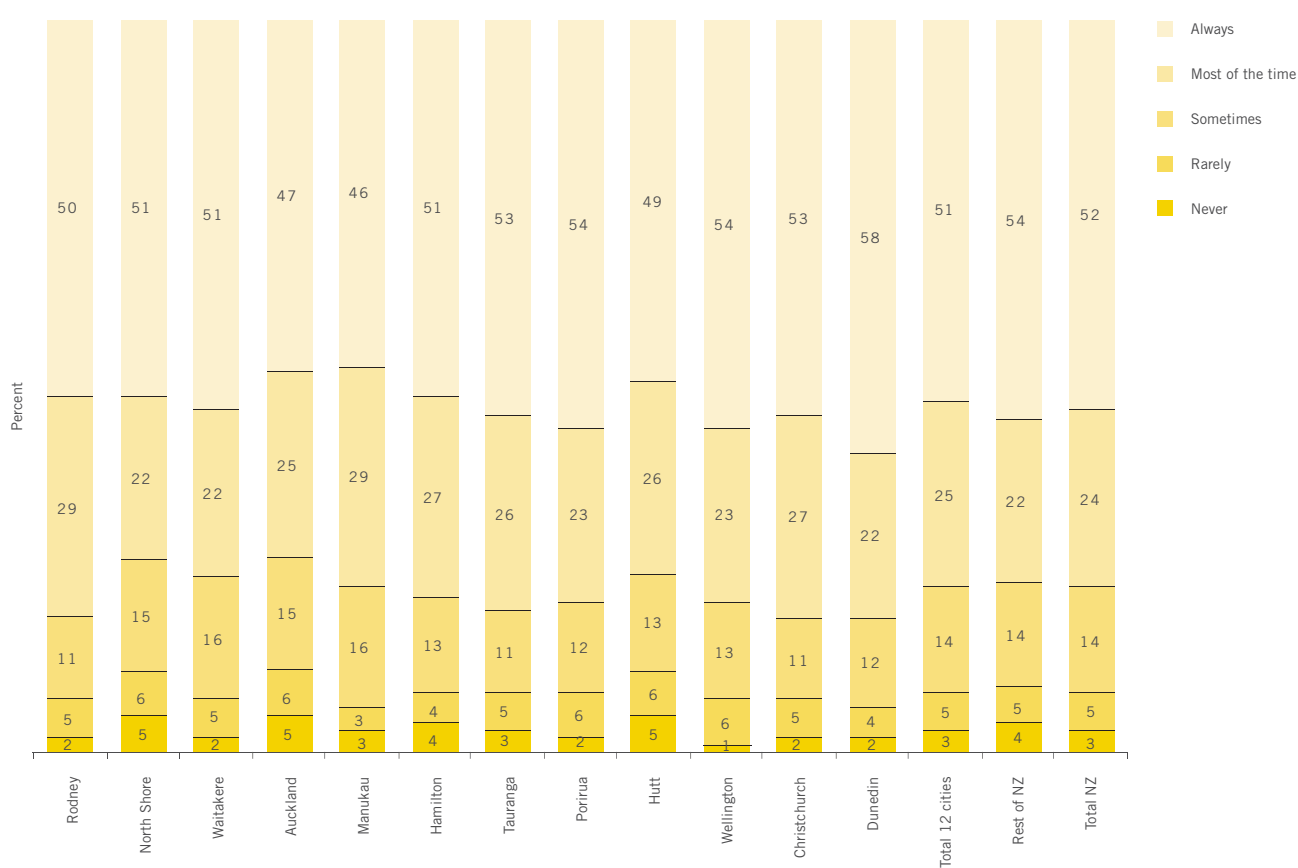
**Personal support**

In the 2006 Quality of Life Survey, residents were asked if there was someone they could turn to for help or support if they felt under stress.

Three quarters (76.0%) of people nationally felt they had someone to turn to most or all of the time for support when dealing with stress. There was no notable difference in support between residents in the 12 cities combined and the rest of New Zealand.

Residents in Christchurch and Dunedin (both 80.0%) and Rodney and Tauranga (both 79.0%) were more likely to feel that they had support most or all of the time, while those in Auckland (72.0%), North Shore and Waitakere (both 73.0%), were less likely to feel that they had those levels of support.

Pacific Islands and Asian/Indian people were less likely to feel they had someone to turn to for support.

**Residents' availability of support (2006)<sup>15</sup>**

Data source: Quality of Life Survey 2006

15 Figures might not add to 100% as 'don't know' and 'not applicable' responses are not shown.

## Access to telecommunications

- Three quarters of city households have access to a mobile phone.
- Two thirds of city households have internet access, up on 2001 figures.

### What this is about

Communicating with others is fundamental to a strong and healthy society. Electronic communication can facilitate social interaction and lifelong learning and overcome mobility barriers to participation.

### What did we find?

This indicator looks at the level of access to telecommunications based on Census data.

Access to a wide range of telecommunications is increasing nationally, with the percentage of households with no telecommunications access declining from 3.6% in 2001 to 2.0% in 2006. Nearly three quarters (74.2%) of households nationally have access to a mobile phone. Sixty percent of households have internet access and this has risen substantially, up from 37.4% in 2001.

Mobile phone access was higher amongst households in the 12 cities than in the rest of New Zealand. Access was highest for North Shore households (79.2%) and lowest in Christchurch households (72.9%). Christchurch's figures were similar to those found in the rest of New Zealand (72.4%).

The percentage of 12 city households (64.7%) with internet access was higher than in the rest of New Zealand (55.7%). Internet access ranged from 74.5% of North Shore households to 59.0% of households in Manukau.

#### Percentage of households with access to telecommunications (2006)

	No access %	Cell/Mobile phone %	Telephone %	Internet %
Rodney	1.3	78.2	92.5	66.4
North Shore	0.7	79.2	96.1	74.5
Waitakere	1.6	75.9	93.5	63.6
Auckland	2.0	75.8	92.2	67.1
Manukau	2.6	74.9	90.9	59.0
Hamilton	2.0	76.8	89.9	61.5
Tauranga	1.6	75.3	91.8	59.5
Porirua	2.3	77.6	90.8	61.2
Hutt	2.1	75.2	92.3	61.2
Wellington	1.3	78.9	94.1	72.1
Christchurch	1.4	72.9	94.5	62.2
Dunedin	1.3	73.3	94.2	60.6
<b>Total 12 cities</b>	<b>1.7</b>	<b>75.8</b>	<b>93.0</b>	<b>64.7</b>
<b>Rest of NZ</b>	<b>2.5</b>	<b>72.4</b>	<b>90.0</b>	<b>55.7</b>
<b>Total NZ</b>	<b>2.0</b>	<b>74.2</b>	<b>91.6</b>	<b>60.5</b>

Data source: Statistics New Zealand, Census 2006



## Arts and culture

### 6. Social connectedness

- Three quarters of city residents say their area has a culturally rich and diverse arts scene.
- More people work in creative occupations in the 12 cities than the rest of New Zealand.

### What this is about

The arts make a strong contribution to community strength and identity and are increasingly recognised for facilitating communication across social, economic, cultural and ethnic groups. The measures for arts and culture are:

- Perceptions of arts scene
- Residents in creative occupations.

### What did we find?

#### Perceptions of arts scene

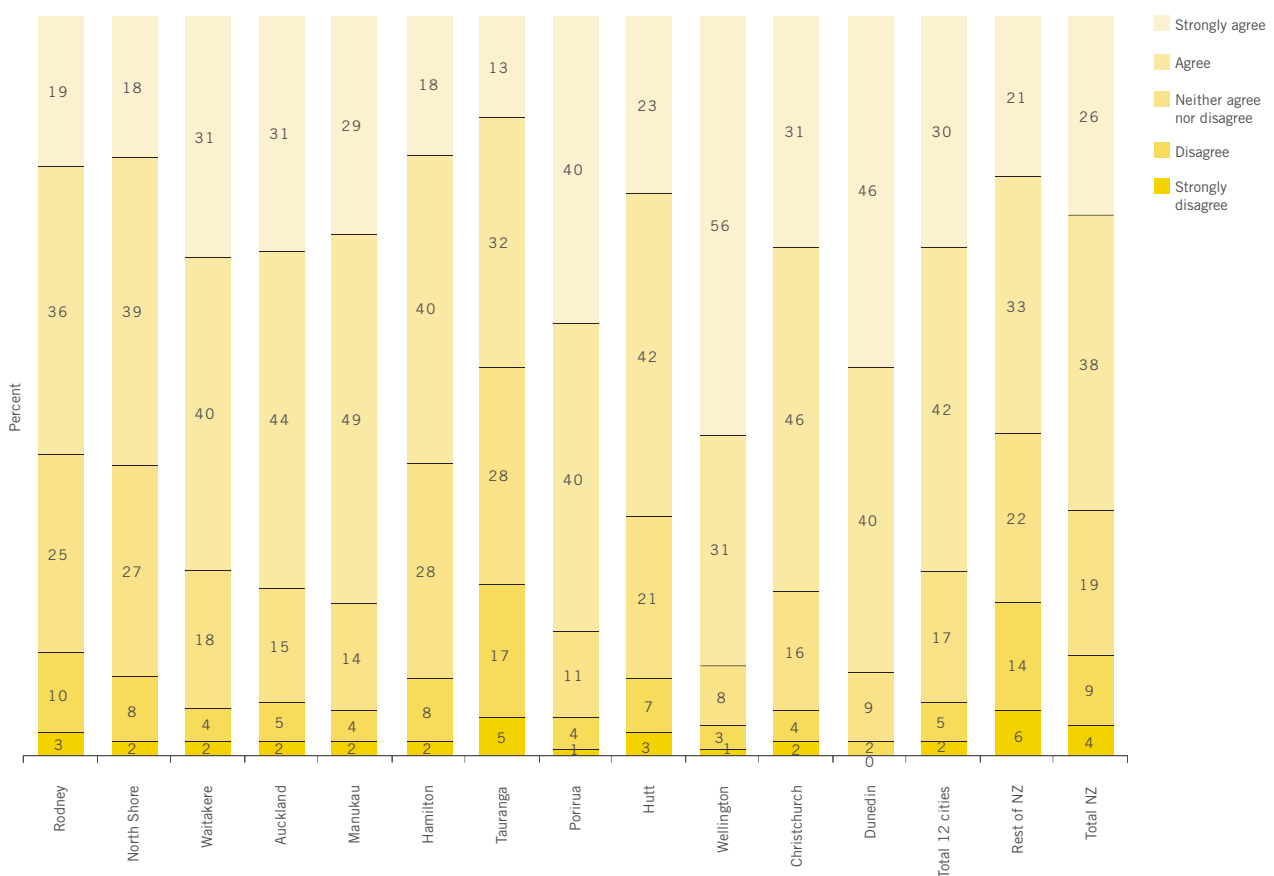
Residents were asked in the 2006 Quality of Life Survey if they thought the area where they lived had a 'culturally rich and diverse arts scene'.

Nationally, 64.0% of people agreed that their area had a culturally rich and diverse arts scene. This was much higher amongst residents in the 12 cities combined (72.0%) than in the rest of New Zealand (54.0%).

Residents in Wellington (87.0%), Dunedin (86.0%) and Porirua (80.0%) were more likely to have rated their city's arts scene as culturally rich and diverse, while those living in Tauranga (45.0%), Rodney (55.0%), North Shore (57.0%) and Hamilton (58.0%) were less likely to have agreed.

Across the 12 cities, Pacific Islands people were more likely to think their city had a culturally rich and diverse arts scene, with New Zealand European people less likely to feel this way.

Residents' rating of culturally rich and diverse arts scene (2006)<sup>16</sup>



Data source: Quality of Life Survey 2006

<sup>16</sup> Figures might not add to 100% as 'don't know' and 'not applicable' responses are not shown.



## Arts and culture continued

### Residents in creative occupations

This measure looks at the proportion of residents working in creative occupations, using data from the census.

Nationally, around 2.0% of employed residents worked in creative occupations. This proportion was higher in our cities (2.6%) than the rest of New Zealand (1.2%). Wellington and Auckland had the highest proportions of residents working in creative occupations.

#### Percentage of people in creative occupations (2006)<sup>17</sup>

	Percentage employed in creative occupations
Rodney	2.2
North Shore	2.8
Waitakere	2.2
Auckland	4.2
Manukau	1.2
Hamilton	1.4
Tauranga	1.5
Porirua	1.6
Hutt	1.7
Wellington	4.3
Christchurch	2.1
Dunedin	2.2
<b>Total 12 cities</b>	<b>2.6</b>
<b>Rest of NZ</b>	<b>1.2</b>
<b>Total NZ</b>	<b>2.0</b>

Data source: Statistics New Zealand, Census 2006

17 Creative occupations as defined in Appendix A of Statistics New Zealand and Ministry for Culture and Heritage. (2006). *Cultural indicators for New Zealand*.

# Chapter Seven

## Civil and political rights

### What's in this chapter?

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Te Tiriti o Waitangi/  
Treaty of Waitangi

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Community involvement

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in council decision making

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Voter turnout

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Representation on local decision  
making bodies

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## Introduction

**This chapter looks at the participation of residents in representative governance and decision making processes at local and national levels. Civil and political rights are a fundamental aspect of human rights, protecting the ability of people to participate in politics and decision making by expressing views, protesting, having input and voting.**

### Why this is important

Enabling democratic local decision making is one of the key purposes of local government and is also important in promoting the social, economic, environmental and cultural wellbeing of communities. Effective civil and political systems allow our communities to be governed in a way that promotes justice and fairness and supports people's quality of life.

The population in our cities is becoming increasingly diverse, with more people from different ethnic groups and cultural backgrounds. It is important that we understand how our institutions and processes can continue to support people's civil and political involvement. This understanding can also help us work to remove barriers that limit people's ability to exercise their civic rights and to participate in decision making.

Te Tiriti o Waitangi / the Treaty of Waitangi establishes the rights of Maori in Aotearoa/New Zealand. Local councils have a role in facilitating the involvement of tangata whenua<sup>1</sup> in the governance of their area.

### Key points

About one third of residents (35.0%) in our cities believe that they have an understanding of how their council makes decisions. This does not appear to be based on lack of interest in council affairs, as about half of people would like to have more of a say in what their council does. Pacific Islands and Asian/Indian residents in particular seek more say in council decision making.

Just over half of residents in our cities (55.0%) believe that the public has some or a large influence on the decisions that their council makes.

Residents of the cities in the Auckland region generally have more concerns about their level of understanding and input to their local council's decision making. They also have lower levels of confidence that their council makes decisions that are in the best interest of their city.

Voter turnout is higher for elections at the national than local level, with 80.9% turnout nationally in the 2005 general election compared with an average of 42.5% in the 2004 local city council elections. Across the 12 cities combined, voter turnout declined slightly between the 2001 and 2004 local elections. Some details around the 2007 local council elections were not available in time for inclusion in this report. Based on preliminary results, average voter turnout across city and district councils in the 2007 elections was 43.2%.

There are gender and ethnicity disparities in representation on the local governance bodies of local councils and school boards.

The councils of all our 12 cities report an active work programme in strengthening their relationship and engagement with tangata whenua to incorporate Maori perspectives into policy, planning and operations.

### Links to other indicators

Local councils have an obvious role in influencing how residents view their decision making processes. Making processes transparent and culturally appropriate as well as clearly communicating information will encourage understanding and input by residents.

Overall quality of life is related to how people view local governance arrangements. People who rated their quality of life highly were more likely to believe that councils make decisions in the best interest of the area and that the public can influence decision making.

There are ethnic differences in the confidence of residents in their local council's decision making and desire to have greater levels of input. Councils face a challenge to adapt their practices to meet the needs of the increasingly ethnically diverse population in our cities.

Younger people report lower levels of understanding of council's decision making and this has implications for civic education programmes within schools.

<sup>1</sup> Tangata whenua refers to Maori people as "people of the land". In relation to a given area, tangata whenua are the iwi (tribe), hapu (band, subtribe) or whanau (family grouping) that holds mana whenua or customary and ancestral ties over that area.



# Treaty of Waitangi

## 7. Civil and political rights

- All the councils of the 12 cities report active work in strengthening their relationship and engagement with tangata whenua to incorporate Maori perspectives into policy, planning and operations.

### What this is about

Te Tiriti o Waitangi/the Treaty of Waitangi is the foundation of relationships between government and tangata whenua. The Local Government Act (2002) acknowledges this by requiring local government to foster the capacity of and provide opportunities for Maori to contribute to decision making processes. The Resource Management Act (1991) establishes the promotion and protection of Maori interests in natural and physical resources.

This indicator explores how the councils of the 12 cities engage with Maori and meet their responsibilities under the Treaty of Waitangi and legislation. It uses information provided by the councils.

### What did we find?

#### Rodney District Council

The jurisdictional boundaries of Rodney District Council fall within the enduring rohe<sup>2</sup> of Ngati Whatua, Kawerau a Maki, Ngati Wai and Ngati Paoa. The council seeks to build and consolidate relationships with these groups and recognises their exercise of kaitiakitanga (guardianship) and manakitanga (caring for others) within their respective rohe.

The council actively works with tangata whenua in the spirit of mutual benefit, trust, good faith and partnership and has Memoranda of Understanding with Ngati Whatua Nga Rima o Kaipara and Te Uri o Hau Settlement Trust.

#### North Shore City Council

North Shore City Council's current practice is to involve Maori in decision making on strategic planning matters, resource consent issues, major projects and some operational matters.

The council seeks to build on the relationships that have been established with Maori, particularly through the identification of community outcomes and the issues highlighted through this process.

#### Auckland City Council

Auckland City Council recognises three iwi groups who exercise ahi kaa<sup>3</sup> within Auckland City boundaries, Ngati Whatua o Orakei, Ngati Paoa and Ngati Rehua of Aotea-Great Barrier. The council has worked steadily to foster positive relationships with local iwi and the wider Maori community. A dedicated council team works to provide policy advice and support to the council, facilitate consultation and engagement with tangata whenua, foster positive relationships with Maori communities and provide bicultural and educational support for council staff.

The council consults with eight tangata whenua groups on pre-resource consent applications through a monthly Tangata Whenua Consultative Committee.

The council and tangata whenua have worked together successfully on a number of Treaty-based projects.

#### Waitakere City Council

Waitakere City Council's vision is that people in the city are proud to uphold the Treaty of Waitangi. This priority requires that the treaty is sustained in all the council's activities and planning.

Te Taumata Runanga is a standing committee of the council that provides Maori perspective and input into council strategy, plans, policies and operations. It consists of representatives from council, iwi claiming mana whenua<sup>4</sup> status and a number of urban Maori and pan-tribal organisations in the city. A representative of Te Taumata Runanga also sits on the council's strategy and policy committee.

The council works directly with Te Kawerau A Maki and Ngati Whatua as mana whenua in Waitakere. The council has developed relationships with these iwi groups that are represented through a range of mechanisms including Memoranda of Understanding, contracts for professional services and formal consultation processes.

#### Manukau City Council

At a governance level, Manukau City Council has Treaty-based relationship agreements with the five mana whenua groups in Manukau.

The council has established a Te Tiriti o Waitangi Committee consisting of elected members from all city wards and mana whenua and taura here<sup>5</sup> appointed members. The committee recommends responses to Treaty of Waitangi issues and a strategy and work programme for developing relationships with tangata whenua in Manukau.

At an organisational level the council has established and supports a Mana Whenua Forum that provides early input into the development of policies and service delivery programmes.

A Treaty of Waitangi unit delivers strategic leadership and direction to support more comprehensive engagement with tangata whenua in Manukau. Treaty of Waitangi competency and training is part of staff performance requirements.

2 Rohe means a territory or boundary which defines the area within which a tangata whenua group claims traditional association and mana whenua.

3 Ahi kaa refers to tangata whenua who reside within the mana whenua of their rohe - they "keep the home fires burning".

4 Mana whenua are iwi with customary and ancestral ties to the area.

5 Taura here are iwi who affiliate to tribes outside the area.

## Treaty of Waitangi continued

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### Hamilton City Council

Hamilton City Council recognises the Treaty of Waitangi, the importance of kingitanga (kingship) in the Waikato and values its relationships with both mana whenua and mata waka (Maori from other areas).

The council works closely with a range of Maori organisations. Te Runanga o Kirikiriroa is an urban iwi authority and represents the views of mata waka on social issues and Maori contribution to decision making. A partnership with Nga Mana Toopu o Kirikiriroa (an iwi group representing the views of local mana whenua) provides support to the council on issues relating to the management of Hamilton's natural and physical resources.

The council also recognises the influence of Tainui (the local iwi authority) on Kirikiriroa (Hamilton) and surrounding districts. The council's engagement with Tainui covers a wide range of matters that influence the spectrum of community wellbeing.

### Tauranga City Council

Tauranga City Council recognises three iwi within the Tauranga City rohe, Ngati Ranginui, Ngaiterangi and Ngati Pukenga. The Kaumatua Forum provides an opportunity for kuia and koroua of Tauranga Moana to raise their issues directly with the Mayor and council Chief Executive. The Tangata Whenua/Tauranga City Council Committee provides strategic leadership and advice to Council in respect of environmental, social, economic and cultural outcomes relating to tangata whenua. The Tauranga Moana Tangata Whenua Collective provides initial feedback on issues to the council.

The council has protocol agreements with 11 of the 15 iwi/hapu in the Tauranga rohe. The focus is on facilitating tangata whenua engagement at all levels of the council's activities.

The Takawaenga Maori unit within the council provides relationship management, training and education and advice on projects, policy and strategy.

### Porirua City Council

Porirua City Council has an established relationship with Ngati Toa, the tangata whenua of Porirua, both at a governance and management level.

The council accepts that as tangata whenua, the world view of Ngati Toa is the Maori world view for Porirua. The council has a Charter of Understanding with the Runanga o Toa Rangatira which sets out the mechanisms that support its relationship with Ngati Toa. These include the Treaty Partnership Group made up of councillors and members of the Runanga, regular joint Chief Executives' meetings, the provision to the council by Ngati Toa of an advisory Kaumatua and processes for seeking advice. The council also works with Ngati Toa to ensure the participation of other Maori in council decision making processes and has working relationships with other marae, including Maraeroa Marae.

### Hutt City Council

Hutt City Council is committed to the principles of the Treaty of Waitangi and to maintaining and improving opportunities for Maori to contribute to local government decision making processes. The council also recognises and provides for the special relationship that Maori have with their culture, traditions, land and taonga.

The council consults with Maori who have mana whenua status in the city. These are represented by Nga Tekau o Poneke – the Wellington Tenth Trust. The council also recognises Te Rūnanganui o Taranaki Whanui ki te Upoko o te Ika a Maui as mana whenua. Both these groups represent Te Atiawa and the Taranaki tribes within the Wellington region.

The council also consults with urban Maori now resident in Hutt city, including, but not limited to, Te Taurahere o Te Awakairangi, Koraunui Marae, Te Mangungu Marae, Wainuiomata Marae, Te Kakano o te Aroha Marae, Waiwhetu Marae, Kokiri Marae and Te Tatau o te Po Marae.

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## 7. Civil and political rights

### Wellington City Council

Wellington City Council recognises the rights of Maori under the Treaty of Waitangi and is committed to developing opportunities for Maori to contribute to decision making processes. The council fosters partnerships with mana whenua and builds relationships with the wider Maori community through effective consultation.

These relationships are supported by a dedicated unit within the council that provides advice and administrative support on Treaty-based relationships.

Memoranda of Understanding with mana whenua organisations, Ngati Toa Rangatira and the Wellington Tenth Trust, outline how they participate in decisions on policy, protocol and regulatory and service delivery issues. These organisations also have ex-officio membership on the council's strategy and policy committee.

The council maintains networks with Maori in Wellington and holds hui to discuss matters of mutual concern. Staff recruitment and training procedures aim to improve the council's capacity to respond to Maori issues appropriately.

### Christchurch City Council

Christchurch City Council enjoys a strong working relationship with local Maori. The council continues to work at developing processes to provide for opportunities for Maori to contribute to the decision making of the council.

The council is working towards putting in place mechanisms for consulting with Ngai Tahu on operational matters, including an agreed protocol with local runaka relating to consultation under the Resource Management Act.

Treaty of Waitangi training is highly recommended for all new staff.

### Dunedin City Council

Dunedin City Council continues to maintain an effective Treaty relationship with Ngai Tahu. The relationship has been formalised via a Memorandum of Understanding which confirms the commitment to work together to achieve a greater understanding of Maori needs and increased Maori involvement in strategic decision making. The council also works with taurahere, via the Araiteuru marae council. To guide the development of the Treaty relationship the council has established a Maori Participation Working Party which includes councillors, senior officers and representatives from both mana whenua and taurahere.

The council has various mechanisms for consulting with Ngai Tahu on operational matters, including an agreed protocol with Kai Tahu ki Otago Ltd relating to consultation under the Resource Management Act.

Data source: Participating councils, 2007



## Community involvement in council decision making

- One third of city residents believe that they have an understanding of how their council makes decisions.
- About half of people would like to have more of a say in what their council does.
- Just over half of city residents believed that the public has influence on the decisions that their council makes.

### What this is about

The purpose of local government, as established by the Local Government Act (2002), is to:

- Enable democratic local decision making and action by, and on behalf of, communities
- Promote the social, economic, environmental and cultural wellbeing of communities in the present and for the future.<sup>6</sup>

Community involvement in decision making is critical for local government. The measures for this indicator are taken from the 2006 Quality of Life Survey:

- Understanding how councils make decisions
- Having a say in what the council does
- Confidence that council decisions are in the best interests of the city
- Public influence on council decision making.

### What did we find?

#### Understanding how councils make decisions

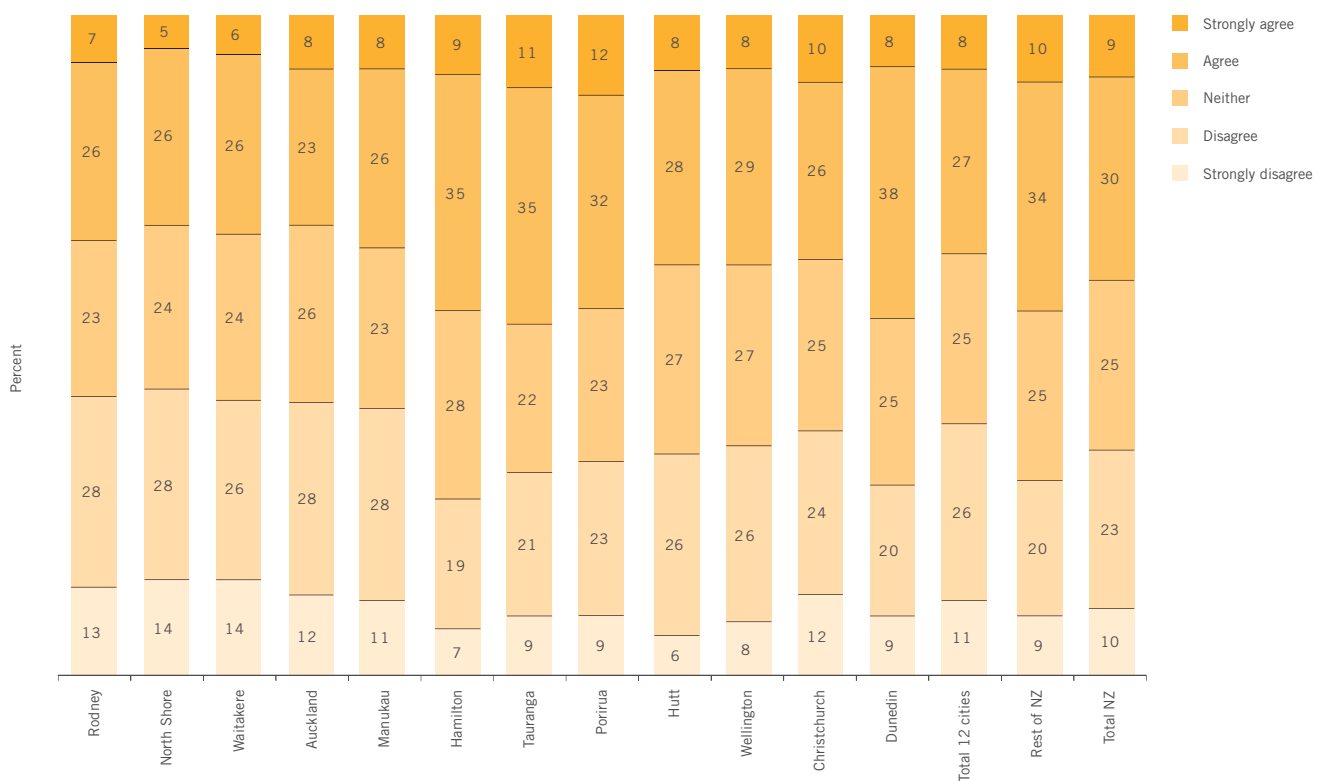
Residents were asked about their local city or district council decision making in the 2006 Quality of Life Survey using a five point scale from 'strongly agree' to 'strongly disagree'.

Across New Zealand, nearly two fifths (39.0%) of people either agreed or strongly agreed they had an understanding of how their council makes decisions. Residents in the 12 cities were less likely to understand decisions (35.0%), compared with people in the rest of New Zealand (44.0%).

There were differences between the cities. Tauranga and Dunedin residents were most likely to understand how their council makes decisions (46.0% agreed or strongly agreed). Residents of the cities in the Auckland region were less likely to understand this process.

Nationally and in our cities, people aged 50 years and over were more likely to say they understood how councils make decisions than younger people.

Residents' understanding how their council makes decisions (2006)<sup>7</sup>



<sup>6</sup> Local Government Act (2002) Part 2, section 10, Purpose of Local Government.

<sup>7</sup> Figures might not add to 100% as 'don't know' responses are not shown.



## 7. Civil and political rights

### Having a say in what the council does

Residents were asked in the 2006 Quality of Life Survey if they wanted more say in what their council does.

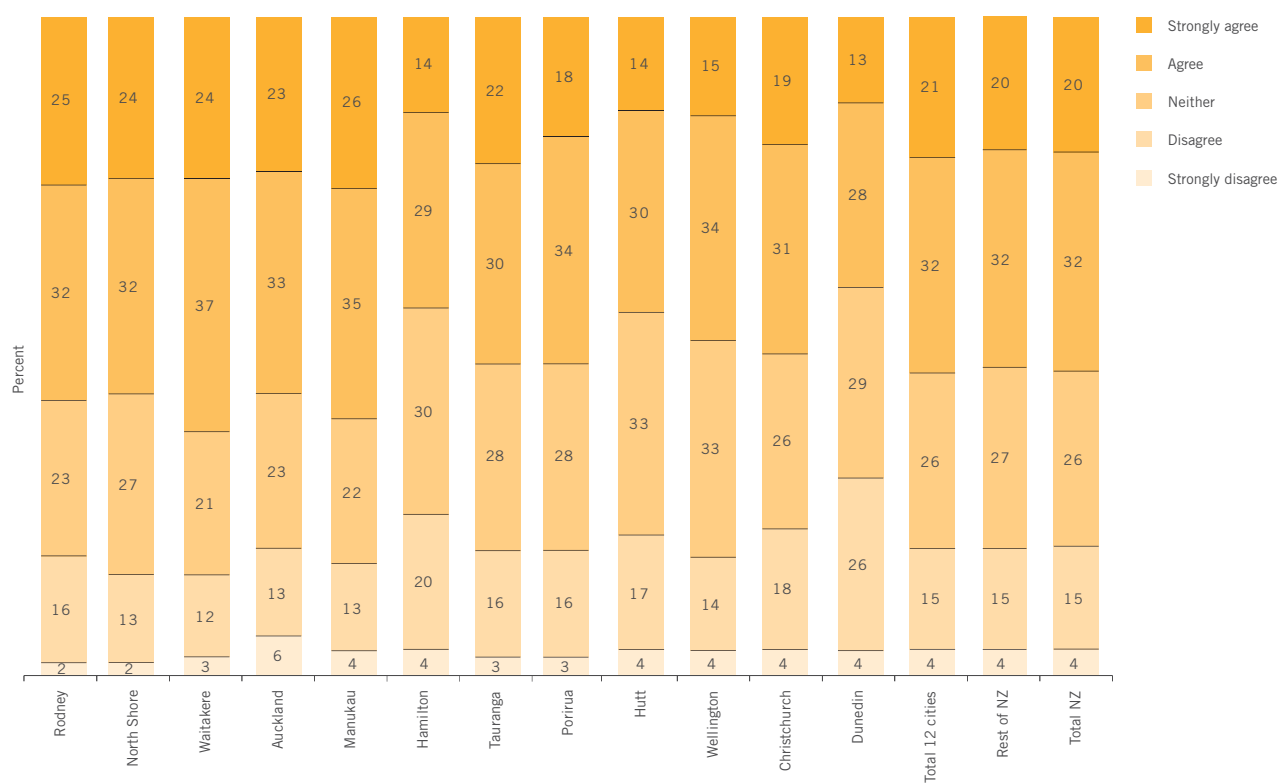
Nationally, over half (53.0%) of residents agreed or strongly agreed that they would like to have more say in what the council does.

Although there were no notable differences between residents in the 12 cities and those living in the rest of New Zealand, there was considerable variation between the cities. Residents of cities in the Auckland region were most likely to want a greater say in

what their council does: Waitakere and Manukau (both 61.0%), followed by Rodney, North Shore and Auckland (both 56.0%). Residents in Dunedin (41.0%), Hamilton (43.0%) and Hutt (44.0%) were less likely to agree that they wanted more say.

Responses varied between people of different ethnic groups. Pacific Islands and Asian/Indian people in our cities (65.0% and 60.0% respectively) were more likely to agree that they wanted a greater say in what their council does than New Zealand Europeans (50.0%).

Residents' seeking more of a say in what their council does (2006)<sup>8</sup>



Data source: Quality of Life Survey 2006

<sup>8</sup> Figures might not add to 100% as 'don't know' responses are not shown.

## Community involvement in council decision making continued

### Confidence that council decisions are in the best interests of the city

Residents were asked in the 2006 Quality of Life Survey if they had confidence that their council makes decisions in the best interests of the city.

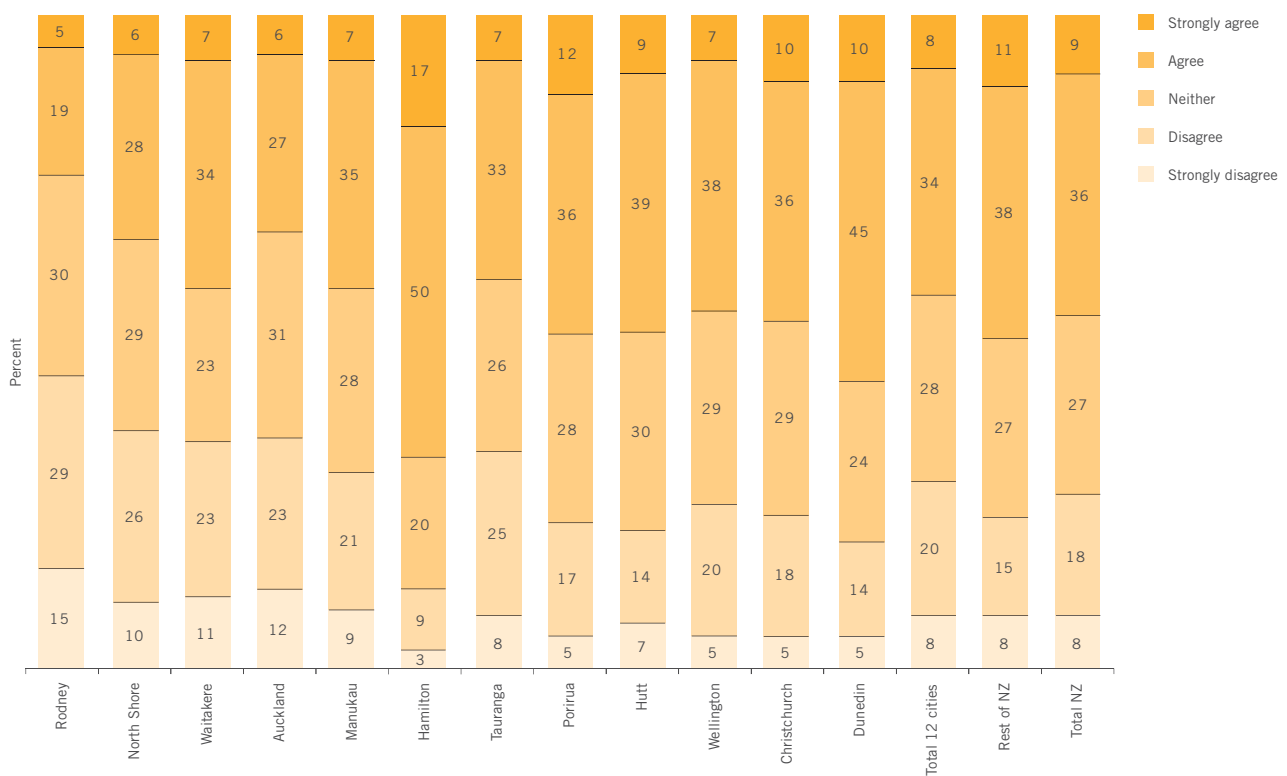
Fewer than half (45.0%) of New Zealand residents agreed that their council makes decisions that are in the best interests of the city or area where they live.

Those living outside the 12 cities were more likely to have confidence that their council makes decisions in the best interests of their area (49.0%) than residents in the 12 cities combined (42.0%).

Hamilton (67%) and Dunedin (55%) residents were most likely to agree that their council makes decisions in the best interests of their city. Those living in Rodney (24.0%), Auckland (33.0%) and North Shore (34.0%) were less likely to express confidence that this was the case.

Across the 12 cities, younger people aged 15 to 24 years were more likely to be confident about their council's decision making than those in other age groups. There were also differences between ethnic groups, with Pacific Islands and Asian/Indian residents more likely to have confidence that their council makes decisions in the best interests of the city or area than New Zealand European residents.

Residents' confidence in council decision making (2006)<sup>9</sup>



<sup>9</sup> Figures might not add to 100% as 'don't know' responses are not shown.

## 7. Civil and political rights

### Public influence on council decision making

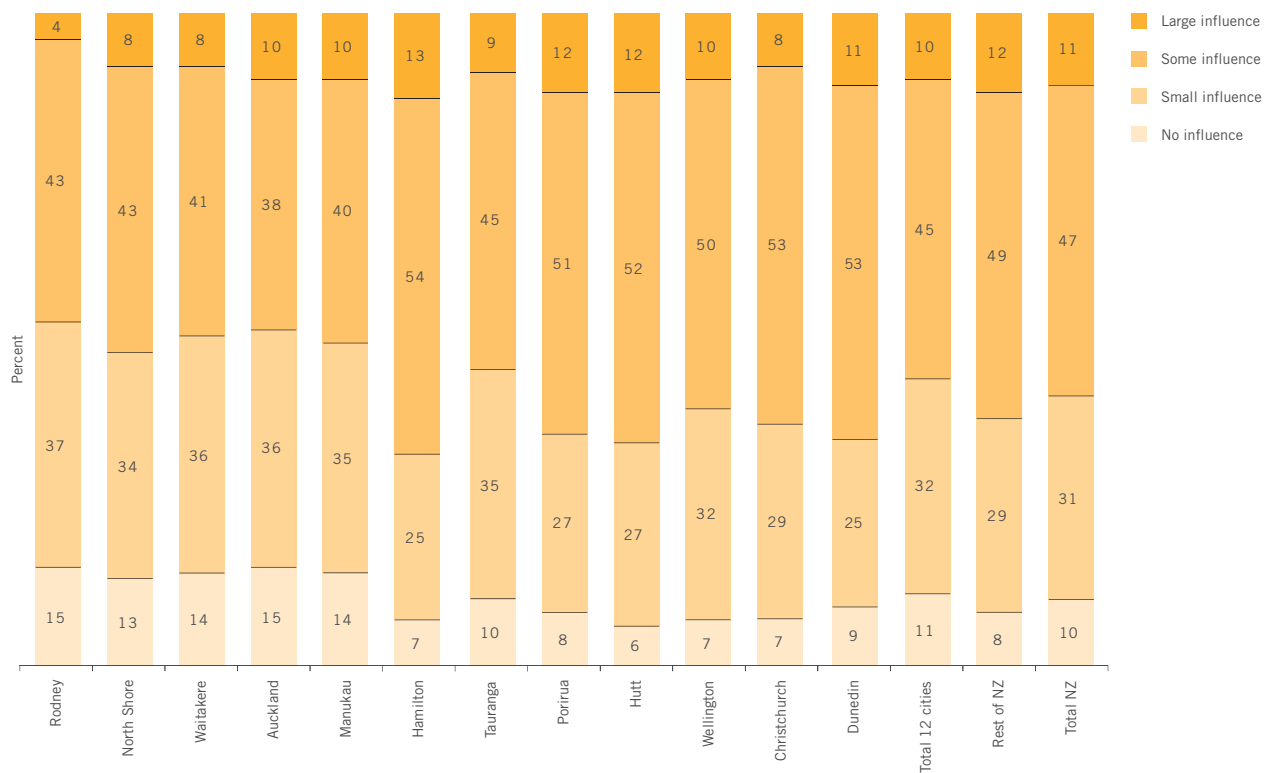
Residents were asked in the 2006 Quality of Life Survey to rate the influence that the public has on the decisions that their local council makes using a four point scale from 'large influence' to 'no influence'.

Almost three fifths (58.0%) of people nationally believed that the public has some or a large influence on the decisions that their council makes. Those living in the 12 cities were less likely to think that the public had influence on the council's decision making (55.0%) than those residing in other parts of New Zealand (61.0%).

Hamilton, Hutt, Dunedin and Porirua residents were more likely to think that the public has influence on council decisions. Residents in Rodney, Auckland and Waitakere were less likely to feel this way.

Younger people aged 15 to 24 years in our cities were more likely to think that the public had influence on council decisions than those from other age groups. Those aged 65 years and over thought the public had lower levels of influence. Asian/Indian and Pacific Islands residents were more likely to think the public had influence over decisions than New Zealand Europeans.

Residents' rating of public influence on council decisions (2006)<sup>10</sup>



Data source: Quality of Life Survey 2006

10 Figures might not add to 100% as 'don't know' responses are not shown.

## Voter turnout

- Voter turnout for national elections is nearly double that of local level elections.

### What this is about

Exercising a vote in a democratic process is a fundamental way that people can express their political will. It is an important responsibility and key to effective governance. The level of voter participation at the various levels of government indicates people's engagement with the representative democratic process.

Voter turnout in an election is the proportion of electors who exercise their vote. New Zealand's national system of government is decided through the general election. The local authority electoral system is the process used to elect local and regional councils and district health boards. The local authority elections are conducted by post and electors had three weeks within which to return their votes.

The measures for voter turnout are:

- Voter turnout at local council elections
- Voter turnout at district health board elections
- Voter turnout at regional council elections
- Voter turnout at the general election.

### What did we find?

#### Voter turnout at local council elections

By voting in local council elections residents and ratepayers seek to influence the overall direction in their area and the delivery of services in their local communities. Voter turnout can reflect the level of engagement of voters in local matters.<sup>11</sup>

Nine of the 12 councils used the First Past the Post electoral system in 2007,<sup>12</sup> where voters tick the names of their preferred candidates and the candidate who gets the most votes win the seat. The councils in Porirua, Wellington and Dunedin used the Single Transferable Vote (STV) electoral system, where candidates have to cross a vote threshold based on the number of seats to be filled and the number of votes cast. In STV systems voters rank the list of candidates with their vote transferring down this list until it helps a candidate cross the threshold.

The level of voter turnout in the 2007 local council election in the 12 cities ranged from 47.1% in Dunedin to 35.1% in Hamilton.

Final average voter turnout results across all councils in 2007 were not available for inclusion in this report. Based on preliminary results, average voter turnout across city and district councils in the 2007 local elections was 43.2%. Average voter turnout across city councils nationally in 2004 was 42.5% compared to 50.8% for district councils.

For the first time since 1989, turnout in 2004 dropped below 50.0%. The level of voter turnout in local council elections remains substantially lower than at the general election which could suggest that information, communication and levels of interest are lower in local politics. Analysis undertaken by the Department of Internal Affairs after the 2001 local council elections found that voter turnout was generally lower in urban areas and when there was a relatively high number of candidates standing and a low ratio of councillors to electors.<sup>13</sup>

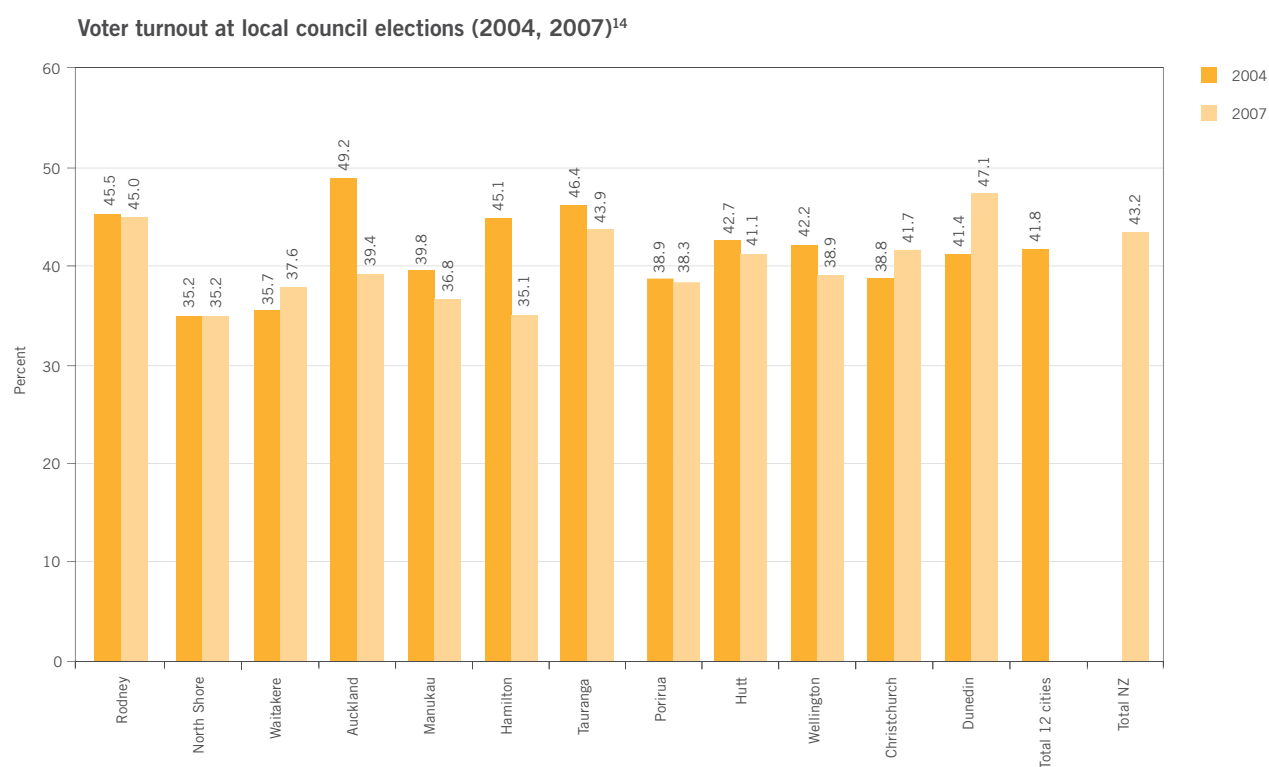


<sup>11</sup> Local councils are responsible for a broad range of functions, such as roads, water supply, sewage disposal and rubbish collection. They also provide community facilities, including parks, libraries and swimming pools and undertake planning and regulatory functions.

<sup>12</sup> Some details around voter turnout at the 2007 local council election were not available in time for inclusion in this report.

<sup>13</sup> Department of Internal Affairs. (2003). *Local Authority Election Statistics 2001*.

## 7. Civil and political rights

**Voter turnout at district health board elections<sup>15</sup>**

District Health Boards (DHBs) are responsible for providing or buying Government-funded health care services for the population of a specific geographical area. All DHBs use the STV electoral system.

This measure is the percentage of voters that turnout in the nine DHB areas that cover the 12 cities. The geographic area covered by DHBs is not usually the same as local council boundaries.<sup>16</sup>

The Waitemata DHB, covering Waitakere, had the lowest level of voter turnout at the 2004 elections and the Otago DHB, which included Dunedin, had the highest. The 2004 elections were only the second set of elections for the DHBs. Between the 2001 and 2004 elections voter turnout declined in seven of the DHBs. Only the Auckland and Counties-Manukau DHBs saw an increase in turnout.

**Voter turnout in DHB elections, by DHB region (2001, 2004)**

DHB region	2004	Change 2001-2004
	%	%
Waitemata	36.4	-1.0
Auckland	48.6	1.0
Counties-Manukau	40.7	2.0
Waikato	44.6	-5.0
Bay of Plenty	44.9	-8.0
Hutt	40.7	-8.0
Capital and Coast	43.5	-4.0
Canterbury	40.4	-11.0
Otago	55.7	-4.0
<b>Total NZ DHBs</b>	<b>45.6</b>	<b>-4.0</b>

Data source: Department of Internal Affairs, 2001, 2004

<sup>14</sup> 2007 local council election results are preliminary. Voter turnout data was not available for the 12 cities combined in 2007 and for Total NZ in 2004.

<sup>15</sup> Voter turnout results at the 2007 DHB election were not available in time for inclusion in this report.

<sup>16</sup> The Waitemata DHB area includes Rodney, North Shore and Waitakere. Auckland DHB includes Auckland city. Counties-Manukau DHB includes Manukau city. Waikato DHB includes Hamilton. Bay of Plenty DHB includes Tauranga. Hutt DHB includes Hutt city. Capital and Coast DHB includes Porirua and Wellington city. Canterbury DHB includes Christchurch. Otago DHB includes Dunedin.

## Voter turnout continued

### Voter turnout at regional council elections<sup>17</sup>

Regional councils are responsible for a range of functions, including resource management, environmental planning and urban transport. All regional councils used the First Past the Post electoral system in 2004.

This measure looks at the level of voter turnout in the six regional council areas in which the 12 cities are located.<sup>18</sup> Overall the level of voter turnout decreased between the 2001 and 2004 elections. Otago Regional Council (56.0%) had the highest level of voter turnout and the Auckland Regional Council (42.0%) the lowest.

#### Voter turnout in regional council elections (2001, 2004)

Regional council	2004 %	Change 2001-2004 %
Auckland	42.0	-1.0
Waikato	45.0	-4.0
Bay of Plenty	45.0	-7.0
Wellington	43.0	-6.0
Canterbury	43.0	-9.0
Otago	56.0	-4.0
<b>Total NZ</b>	<b>45.0</b>	<b>-4.0</b>

Data source: Department of Internal Affairs, 2001, 2004

### Voter turnout at the general election

This measure is of the level of voter turnout by electorate at the 2005 general election for New Zealand's Parliament. The electorate boundaries do not match exactly with those of a local council. New Zealand uses the Mixed Member Proportional (MMP) electoral system to elect members of Parliament. Voters

have two votes under the MMP electoral system – one for a party and one for an electorate member of Parliament.

The five electorates with the lowest level of voter turnout in 2005 were all located in the Auckland region, with three of the lowest in Manukau.

#### Five electorates with highest and lowest voter turnout in general election (2005)<sup>19</sup>

Electoralates (within city) with highest voter turnout	%	Electoralates (within city) with lowest voter turnout	%
Wellington Central (Wellington)	86.6	Te Atatu (Waitakere)	79.0
Banks Peninsula (Christchurch)	86.1	Maungakiekie (Auckland)	77.5
Ohariu-Belmont (Wellington/ Porirua)	85.8	Manurewa (Manukau)	75.8
Rongotai (Wellington)	85.7	Manukau East (Manukau)	73.3
Dunedin South (Dunedin)	84.8	Mangere (Manukau)	72.9

Data source: Department of Internal Affairs, 2005

The factors underpinning voter turnout are complex. Low turnout does not seem to be an issue in all cities, as the five electorates nationally with the highest voter turnout were also in cities, with three in Wellington, the seat of government. Younger and less well-off people generally have lower levels of electoral engagement.<sup>20</sup>

Another potential impact on the level of voter turnout is the numbers of new migrants in areas. This may help explain the low turnout in some Auckland region electorates that have high numbers of new migrants. Recent immigrants could have less understanding or engagement with the political process.

<sup>17</sup> Voter turnout results for the 2007 regional council election were not available in time for inclusion in this report.

<sup>18</sup> Auckland region includes Rodney, North Shore, Waitakere, Auckland city and Manukau. Waikato region includes Hamilton. Bay of Plenty region includes Tauranga. Wellington region includes Wellington city, Hutt and Porirua. Canterbury region includes Christchurch. Otago region includes Dunedin.

<sup>19</sup> Excludes Maori electorates as these electorate areas are geographically large and include more than one city.

<sup>20</sup> Catt, H. (July 2005). Now or Never: *Children and young people as citizens: Participation, provision and protection*. Paper delivered in the 2005 symposium Citizenship: learning by doing, 6th child and family policy conference, Dunedin. [www.elections.org.nz/now-or-never-lit-review.html](http://www.elections.org.nz/now-or-never-lit-review.html). Retrieved 10 July 2007.



## Representation on local decision making bodies

### 7. Civil and political rights

- Women are underrepresented on the local councils of the 12 cities.
- The ethnic composition of school boards does not reflect the ethnic diversity of city populations.

#### What this is about

Societies have stronger governance and institutional frameworks when elected representation reflects the community that it governs. This indicator assesses whether our local governance bodies are operating in a way that encourages the formal involvement of all groups in society. The measures show the level of formal representation by different groups:

- Representation by women on local councils
- Composition of school boards of trustees.

#### What did we find?

##### Representation by women on local councils

This measure illustrates the differences in gender representation on the councils of the 12 cities.

Women are underrepresented as candidates standing for election and also underrepresented on the councils of the 12 cities overall. However, in Wellington, North Shore, Christchurch and Hamilton, female councillors represent over half of the councillors on the council. Across our 12 city councils, the proportion of women councillors increased from 34.1% in 2004 to 38.8% in the 2007 election.

In 2007, over two fifths of councillors in Waitakere and Hutt are women, compared with less than one fifth in Tauranga and Dunedin.

#### Women candidates and councillors in the local authority elections (2007)

	2007 Women candidates		2007 Elected women councillors	
	Number	Percentage of total candidates %	Number	Percentage of elected councillors %
Rodney	10	21.3	4	33.3
North Shore	14	24.1	9	56.3
Waitakere	19	30.2	6	42.9
Auckland	26	37.1	6	31.6
Manukau	22	32.8	5	31.3
Hamilton	9	37.5	6	50.0
Tauranga	9	22.0	1	10.0
Porirua	7	30.4	4	30.8
Hutt	13	35.1	5	41.7
Wellington	14	36.8	8	57.1
Christchurch	17	34.0	7	53.8
Dunedin	12	27.3	3	21.4
<b>Total 12 cities</b>	<b>172</b>	<b>30.6</b>	<b>64</b>	<b>38.8</b>

Data source: Participating Councils, 2007



## Representation on local decision making bodies continued

### Composition of school boards of trustees

School Boards of Trustees are locally elected boards that govern state and state-integrated schools. This measure uses Ministry of Education data on the ethnicity and gender of school board trustees.

The majority of school trustees were of New Zealand European ethnicity in 2006. Compared with the rest of the country, there was a lower proportion of Maori trustees in the 12 cities combined and a higher proportion of trustees from the Pacific Islands, Asian and Other ethnic groups. Whereas this may reflect the higher levels of ethnic diversity in our cities, it does not reflect the ethnic diversity of city populations. While Asian people comprised 13.9% of the population in the 12 cities, Asian trustees comprised only 1.6% of trustees. Pacific Islands people are similarly underrepresented on school boards. The situation is

changing, with the composition of school boards becoming more representative of the ethnically diverse population in our cities. The proportion of trustees that were New Zealand European declined over the period 2001 to 2006 in all our cities except North Shore and Tauranga.

Porirua and Manukau had the highest number of school trustees from ethnicities other than New Zealand European, with one in five trustees belonging to the Maori and Pacific Islands ethnic groups.

There was an equal number of males and females serving on school boards across our cities, with the exception of Porirua and Manukau schools which had slightly more female trustees than male.

### Ethnicity of school board trustees (2006)

	NZ European	Maori	Pacific Islands	Asian	Other
Rodney	87.7	8.4	0.7	0.4	2.8
North Shore	88.9	6.3	1.8	1.1	1.8
Waitakere	76.8	12.1	7.4	1.0	2.7
Auckland	70.1	9.3	14.0	3.4	3.3
Manukau	57.2	18.1	18.7	2.3	3.6
Hamilton	73.8	21.3	1.6	1.4	1.9
Tauranga	83.3	14.6	1.0	1.0	0.0
Porirua	54.3	21.1	21.5	1.5	1.5
Hutt	75.5	12.7	8.8	1.5	1.5
Wellington	81.9	8.6	3.4	2.3	3.8
Christchurch	88.3	7.6	1.7	0.7	1.7
Dunedin	90.8	6.1	1.0	0.7	1.5
<b>Total 12 cities</b>	<b>77.2</b>	<b>11.3</b>	<b>7.4</b>	<b>1.6</b>	<b>2.4</b>
<b>Rest of NZ</b>	<b>78.3</b>	<b>19.0</b>	<b>0.9</b>	<b>0.4</b>	<b>1.5</b>
<b>Total NZ</b>	<b>77.9</b>	<b>16.0</b>	<b>3.4</b>	<b>0.9</b>	<b>1.9</b>

Data source: Ministry of Education 2006

# Chapter Eight Economic standard of living

## What's in this chapter?

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Income

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Work/life balance

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Cost of living

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Social deprivation

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Net worth

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## Introduction

**The indicators and measures in this chapter look at aspects of the economy that impact at the personal and household level, such as income and expenditure.**

### Why this is important

Levels of income and wealth are key determinates of individual or family wellbeing. Economic standard of living involves a complex combination of factors such as income, living costs, and household size and composition. The more prosperous an economy, the better off the residents of that economy are in terms of opportunities to gain a higher income, buy material possessions and access quality health care. In general, this leads to greater social connectedness, educational advancement, wider employment options and increased life expectancy.

### Key points

Incomes have increased markedly over the past five years, accompanying a sharp decline in the unemployment rate. The gender income gap is also narrowing.

People in the 12 cities are generally satisfied with their work/life balance, although less so than other New Zealanders.

The rising costs of house ownership and energy over the past five years have driven increases in the overall cost of living.

The number of benefits paid to families without children has decreased sharply. Benefit payments to families with children have increased in some cities, but overall the number of domestic purposes benefit payments have decreased while sickness benefits and accommodation supplement payments have increased.

The majority of cities have lower levels of deprivation than the rest of New Zealand. The highest levels of deprivation are found in Hutt and Manukau.

Net worth increases with age, peaking in the early 60s.

New Zealanders have borrowed tens of billions of dollars to fund mortgages in the past five years.

### Links to other indicators

There is a correlation between household income and wellbeing, as has been found in the results of the 2006 Quality of Life Survey and previous surveys.

Levels of income are associated with health outcomes. People on lower incomes are more exposed to health risk factors such as poor diet and lack of access to health services, which can lead to poor health outcomes. There is a consistent and pervasive correlation between increasing deprivation and worsening health. This includes shorter life expectancy, higher mortality rates and higher hospitalisation rates. Socio-economic factors, in particular unemployment levels, poor housing standards and low income are also associated with poor mental health outcomes.<sup>1</sup>

Income inequality is associated with people's ability and willingness to participate in the community and is therefore closely related to community cohesion.

Inequalities in incomes may contribute to higher levels of crime and poor perceptions of personal safety. Low incomes can be both a cause and an effect of low educational attainment in families. Qualifications and skills, as well as economic conditions, are central to securing paid employment and a liveable income.

Changes in the Consumers Price Index not only indicate the categories of household costs that affect our standard of living, but the index also has an impact on interest rates and thus the affordability of home ownership. Interest rates, in turn, affect the value of the New Zealand dollar and the value of our products and services in international markets.

Retirement savings can improve quality of life and health status in older people and the ability to pass on wealth can provide educational and housing opportunities for future generations. The patterns of household saving, investment and borrowing have an important influence on New Zealand's ability to invest for economic development and compete in the global economy.

1 Crampton, P., Salmond, C. & Sutton, F. (November 1997). NZDep91: A New Index of Deprivation *Social Policy Journal of New Zealand*. Issue 9. Ministry of Social Development. Wellington.



## Income

### 8. Economic standard of living

- Real (inflation-adjusted) ordinary-time earnings have decreased in some cities.
- There has been a sharp drop in the number of unemployment benefits received per week between 2003 and 2007.
- The number of benefits paid to families without children has decreased while benefit payments to families with children have increased in some cities.
- The gender wage gap appears to be narrowing, although males still typically earn more than females.

#### What this is about

Income is one of the single most important factors influencing quality of life in general. It is a key indicator of wellbeing and health for individuals, households and communities. Income levels indicate the ability of people to purchase essential and non-essential goods and services including food, housing, health services and transport.

This indicator illustrates changes in income over time, the distribution of income among households and sources of income, particularly whether from paid work or welfare benefits. Measures for this indicator fall into two groups: those relating to individuals and those for households:

- Average ordinary time weekly earnings
- Median personal income
- Median household income
- Percentage of households in the top and bottom national household income brackets
- Percentage of people in low and high personal income brackets by ethnicity
- Total number of means-tested benefits given out
- Percentage of families receiving means-tested benefits by type of family and type of benefit.

#### What did we find?

##### Average ordinary time weekly earnings

This measure shows average weekly ordinary time earnings before tax. Increases in weekly earnings greater than the rate of inflation are a sign of economic vitality and activity.<sup>2</sup>

Nationally, average weekly earnings in December 2006 were \$833. This was an increase of \$96 or 13.1% over nominal earnings in December 2003.

Of the 12 cities over this period, average nominal earnings in Dunedin increased the most, by \$120 or 17.1%, followed by Manukau (15.1%), Christchurch (15.0%) and Tauranga (14.1%). Average earnings in Hamilton increased the least, by \$41 or 5.4%.

Taking into account inflation over the period, the national increase in average real (inflation-adjusted) earnings was 4.0%. Real earnings increased in nine of the 12 cities. In Rodney they remained almost static, while in Hamilton they fell by 3.1% and in Hutt by 0.5%.

#### Average ordinary time weekly earnings (December quarters 2003 to 2006)

	2003 \$	2004 \$	2005 \$	2006 \$	Change 2003 to 2006	
					Nominal %	Real %
Rodney	693	735	708	756	9.0	0.2
North Shore	734	744	802	836	13.9	4.7
Waitakere	667	673	703	732	9.6	0.8
Auckland	829	857	878	936	12.8	3.7
Manukau	741	771	794	853	15.1	5.9
Hamilton	763	808	762	804	5.4	-3.1
Tauranga	640	657	671	730	14.1	4.9
Porirua	702	745	764	776	10.5	1.5
Hutt	708	734	713	766	8.2	-0.5
Wellington	952	960	981	1058	11.2	2.2
Christchurch	698	721	751	803	15.0	5.7
Dunedin	701	728	753	821	17.1	7.6
<b>Rest of NZ</b>	<b>668</b>	<b>684</b>	<b>718</b>	<b>756</b>	<b>13.1</b>	<b>4.0</b>
<b>Total NZ</b>	<b>736</b>	<b>758</b>	<b>784</b>	<b>833</b>	<b>13.1</b>	<b>4.0</b>

Data Source: Statistics New Zealand, Quarterly Employment Survey and Consumers Price Index (All Groups)

<sup>2</sup> Note that Statistics New Zealand's Quarterly Employment Survey is a survey of enterprises with a turnover of \$30,000 or more per year. Overtime payments are excluded, as are bonuses and other one-off payments to employees. As this is a survey of business locations within each city, the average weekly earnings are of those who work in the city rather than those who live in that city.

## Income continued

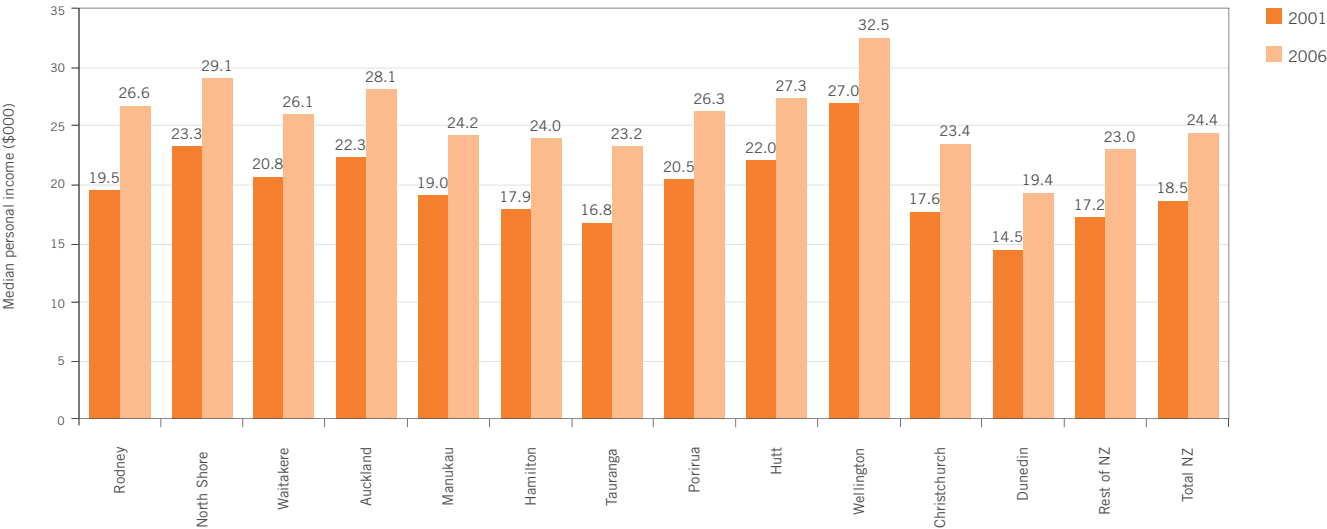
### Median personal income

This measure shows changes in median personal income from all sources, not just wages and salaries. The census data allow us to compare changes in personal income separately for males and females, indicating the extent to which the gap in earnings between men and women is changing. However, this data does not take inflation into consideration.

In 2006, the cities with the highest median personal incomes were Wellington (\$32,500), North Shore (\$29,100) and Auckland (\$28,100). Those with the lowest median incomes were Christchurch (\$23,400), Tauranga (\$23,200) and Dunedin (\$19,400). The median income for the rest of New Zealand was \$23,000.

Between 2001 and 2006, nominal median incomes increased by \$5,900 or 31.9% for the whole of New Zealand. Among the 12 cities the greatest increases were in Tauranga (38.1%), Rodney (36.4%) and Hamilton (34.1%), while the lowest increases were in North Shore (24.9%), Hutt (24.1%) and Wellington (20.4%). For the rest of New Zealand, median incomes increased by \$5,800 or 33.7%.

Change in median personal income (2001 to 2006)



Data source: Statistics New Zealand, Census 2001, 2006

When looking at real median incomes for New Zealand as a whole, the real increase (16.4%) is slightly more than half of the nominal increase of 31.9%. This pattern is identical for all cities, as the price index used does not reflect local or regional variations.

Nationally there were clear differences in the median incomes for men and women. The median income of females remained lower than the median male income and increased less in dollar terms between 2001 and 2006. It did, however, increase by a greater

percentage during this time. Male median incomes increased by 11.6% whereas female median incomes increased by 16.2% (inflation adjusted).

The female median income rose at a faster rate than the male median income in Auckland, Manukau and Hutt, but at a slower rate in Rodney, Tauranga and Dunedin.



## 8. Economic standard of living



Nominal and real changes in median personal income by gender (2001 to 2006)

	Male			Female			Total		
	Increase in income \$	Nominal change %	Real change %	Increase in income \$	Nominal change %	Real change %	Increase in income \$	Nominal change %	Real change %
Rodney	9,000	33.8	18.1	5,000	33.6	17.8	7,100	36.4	20.3
North Shore	6,300	20.5	6.3	5,100	29.5	14.2	5,800	24.9	10.2
Waitakere	6,100	22.8	8.4	4,500	28.0	12.9	5,300	25.5	10.7
Auckland	6,500	23.7	9.2	4,900	26.9	12.0	5,800	26.0	11.2
Manukau	5,400	21.6	7.3	4,400	29.9	14.6	5,200	27.4	12.4
Hamilton	6,700	27.7	12.6	4,700	32.6	17.0	6,100	34.1	18.3
Tauranga	7,700	33.3	17.6	4,600	33.1	17.4	6,400	38.1	21.8
Porirua	6,100	23.5	8.9	5,000	30.5	15.1	5,800	28.3	13.2
Hutt	5,900	21.3	7.0	4,700	27.3	12.3	5,300	24.1	9.5
Wellington	5,800	17.6	3.8	4,900	22.3	7.9	5,500	20.4	6.2
Christchurch	6,800	28.6	13.4	4,500	31.9	16.4	5,800	33.0	17.3
Dunedin	6,400	32.7	17.0	3,300	25.8	11.0	4,900	33.8	18.0
<b>Rest of NZ</b>	<b>6,800</b>	<b>28.9</b>	<b>13.8</b>	<b>4,300</b>	<b>31.4</b>	<b>15.9</b>	<b>5,800</b>	<b>33.7</b>	<b>18.0</b>
<b>Total NZ</b>	<b>6,600</b>	<b>26.5</b>	<b>11.6</b>	<b>4,600</b>	<b>31.7</b>	<b>16.2</b>	<b>5,900</b>	<b>31.9</b>	<b>16.4</b>

Data Source: Statistics New Zealand, Census 2001, 2006

**Median household income**

Median household income levels varied between our cities. This reflected the different employment levels and variations in types of employment available. However, according to the 2006 Census, households in the 12 cities tended to have higher median household incomes than the rest of New Zealand.

Median incomes increased in all cities between the 2001 and 2006 censuses, both in nominal and real terms. The average nominal increase was 29.8% for New Zealand as a whole, while the average real increase was 14.5%. The greatest real increases were in Rodney (21.9%), Tauranga (20.5%) and Dunedin (17.7%) while the smallest were in Hutt (9.5%), Wellington (10.2%) and Waitakere (11.4%).

The increase in median household income was greater in both nominal and real terms than the increase in average ordinary time wages. The strong growth in new business enterprises is one reason as a greater number of households will be earning proportionally more income from business profits rather than, or as well as, wages and salaries. This rise may also be due to an increase in overtime payments due to the tightening labour market and a strong economy.



## Income continued

### Change in median household income (March quarters 1991 to 2006)

	1991 \$	1996 \$	2001 \$	2006 \$	Increase, 2001 to 2006	
					Nominal %	Real %
Rodney	28,878	33,822	41,095	56,800	38.2	21.9
North Shore	41,719	46,865	53,355	69,100	29.5	14.3
Waitakere	36,335	41,497	46,426	58,600	26.2	11.4
Auckland	34,189	42,031	51,094	66,100	29.4	14.1
Manukau	37,078	42,658	48,441	62,300	28.6	13.5
Hamilton	32,839	36,235	40,254	52,800	31.2	15.7
Tauranga	26,847	29,865	33,302	45,500	36.6	20.5
Porirua	39,688	43,864	49,363	62,400	26.4	11.5
Hutt	37,831	39,952	45,667	56,700	24.2	9.5
Wellington	46,039	50,916	59,410	74,200	24.9	10.2
Christchurch	29,336	32,913	36,502	48,200	32.0	16.5
Dunedin	27,958	30,490	32,526	43,400	33.4	17.7
<b>Rest of NZ</b>	<b>26,934</b>	<b>29,722</b>	<b>32,685</b>	<b>42,500</b>	<b>30.0</b>	<b>14.7</b>
<b>Total NZ</b>	<b>30,910</b>	<b>34,707</b>	<b>39,588</b>	<b>51,400</b>	<b>29.8</b>	<b>14.5</b>

Data Source: Statistics New Zealand, Census 1991, 1996, 2001, 2006 and Consumers Price Index – All Groups

### Percentage of households in the top and bottom national household income brackets

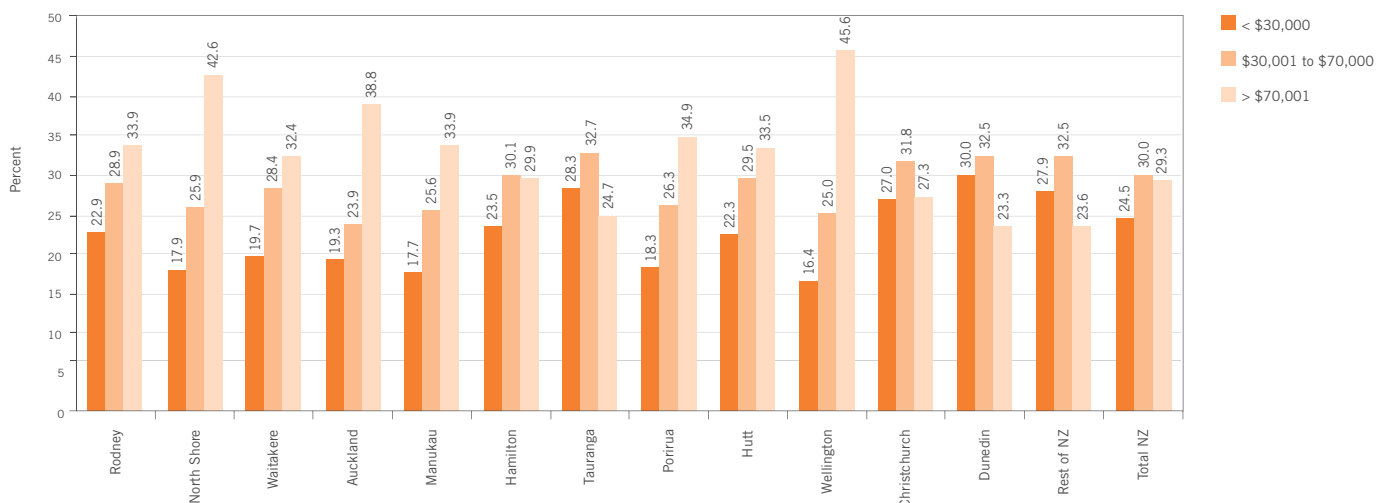
The distribution of income varies between cities, depending on how many people are in work, retired, studying or raising children. The strength of the local economy, the type of work available and the level of income derived from those different types of work also influences income distribution.

In this measure, household incomes have been aggregated into three groups: low incomes (less than \$30,000 per year), middle incomes (\$30,001 to \$70,000 per year) and higher incomes (more than \$70,000 per year).

The cities with the greatest proportion of high income households were Wellington (45.6%), North Shore (42.6%) and Auckland (38.8%). These cities also had the lowest percentages of households in the low income bracket.

Of the 12 cities, only Tauranga and Dunedin had fewer households in the high income bracket than other categories, a pattern shared with the rest of New Zealand. This reflects the high proportion of elderly residents living in Tauranga and the large number of students residing in Dunedin.

### Percentage of households in low, medium and high household income brackets (2006)



Data source: Statistics New Zealand, Census 2001, 2006



## 8. Economic standard of living

### Percentage of people in low and high personal income brackets by ethnicity<sup>3</sup>

Maori, Pacific Islands and Asian populations generally earned less than their New Zealand European counterparts. This is partly influenced by the younger age structures within these populations, but it also may reflect factors such as ethnic differences in educational attainment and employment levels and types of employment.

The number and the percentage of people in high income brackets increased for all ethnic groups. The greatest increases were for New Zealand European (7.3% to 11.9%) and Maori (2.3% to 4.7%). The percentage of people within each ethnic group in the low income bracket also decreased for all groups. The greatest reductions were for Pacific Islands people (81.4%

to 67.7%) and Maori (74.5% to 61.4%). The proportion of New Zealand Europeans in the low income group was less than the average for all ethnicities. The proportion represented in the high income group was greater than the average for all ethnicities.

One of the conclusions from the data is that the phenomenon of 'bracket creep' will have affected all taxpayers, but at the higher end of the tax scale may predominantly affect the New Zealand European ethnic group. As incomes rise an increasing number of people must pay tax at the top marginal tax rate of 39 cents in the dollar, which applies to incomes over \$60,001 per year (i.e. if the threshold for the higher tax bracket does not also change).

### Number and percentage of people in low and high income brackets by ethnicity (2001, 2006)

Total 12 cities	2001				2006			
	Under \$30,000		Over \$70,000		Under \$30,000		Over \$70,000	
	Number	%	Number	%	Number	%	Number	%
NZ European	691,101	62.3	80,520	7.3	615,516	51.4	142,746	11.9
Maori	90,222	74.5	2,766	2.3	84,312	61.4	6,435	4.7
Pacific Islands	79,602	81.4	942	1.0	78,858	67.7	2,340	2.0
Asian	109,698	80.0	4,050	3.0	159,636	71.2	9,282	4.1
Other	10,182	78.8	570	4.4	13,398	69.6	1,065	5.5
<b>Total</b>	<b>980,805</b>	<b>66.3</b>	<b>88,848</b>	<b>6.0</b>	<b>951,720</b>	<b>56.1</b>	<b>161,868</b>	<b>9.5</b>

Data Source: Statistics New Zealand, Census 2001, 2006

### Total number of means-tested benefits received per week

Government benefit statistics show how many means-tested benefits are received by people aged between 15 and 65 years. This data includes all means-tested benefits (e.g. unemployment, invalids, sickness and domestic purposes), as well as payments to non-beneficiaries (e.g. the accommodation supplement and disability allowance).<sup>4</sup>

Nationally, the largest category was the sickness benefit, paid to people who cannot work due to sickness, injury, disability or pregnancy (5.5%). This was followed by the domestic purposes benefit, paid to a parent caring for children without the support of a partner, to a person caring for someone at home who needs

constant care and in some cases to an older woman living alone (4.6%). The third largest group was the unemployment benefit, paid to people who are looking or training for work (2.2%).

When considered as a percentage of the population of each city (i.e. benefits per capita), the most benefits paid were in Porirua (12.9%), followed by Hamilton (11.0%), Waitakere (10.4%) and Manukau (10.3%). The fewest were paid in North Shore (5.2%), Rodney (5.5%) and Wellington (5.6%). The difference between the 12 cities combined (8.4%) and the rest of New Zealand (8.5%) was negligible.

<sup>3</sup> In previous reports, the low income bracket included only households on incomes of less than \$20,000 per year. Given the increase in median household incomes over the past few years, this bracket is no longer relevant, with \$30,000 and below per year the basis of the new definition.

<sup>4</sup> These statistics are a snapshot of the number of benefits being paid in the last week of March 2006. They do not show how long people have been receiving benefits. There are a number of different benefit types in each category, which have been aggregated to provide a clearer overall picture. The 'other' category includes emergency benefits (11,178), widows benefits (7,920), youth benefits (1,616) and payments to non-beneficiaries (45,357), which include those paid an accommodation supplement.

## Income continued

### Number of benefits distributed and benefits per capita (%), by type of benefit (2006)

	Sickness		Domestic Purposes		Unemployment		Other		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%
Rodney	1,834	2.0	1,659	1.9	321	0.4	1,122	1.3	4,936	5.5
North Shore	6,402	3.1	6,089	3.0	1,708	0.8	5,267	2.6	19,466	9.5
Waitakere	3,108	1.7	2,705	1.5	955	0.5	3,906	2.1	10,674	5.7
Auckland	11,381	2.8	7,099	1.8	4,927	1.2	8,054	2.0	31,461	7.8
Manukau	9,140	2.8	11,733	3.6	5,597	1.7	7,447	2.3	33,917	10.3
Hamilton	4,633	3.6	4,444	3.4	2,685	2.1	2,442	1.9	14,204	11.0
Tauranga	3,557	3.4	3,389	3.3	532	0.5	2,441	2.4	9,919	9.6
Hutt	2,880	2.9	2,692	2.8	1,643	1.7	1,565	1.6	8,780	9.0
Porirua	1,684	3.5	2,088	4.3	1,551	3.2	930	1.9	6,253	12.9
Wellington	3,302	1.8	1,911	1.1	2,817	1.6	2,020	1.1	10,050	5.6
Christchurch	13,505	3.9	7,623	2.2	3,058	0.9	5,447	1.6	29,633	8.5
Dunedin	4,301	3.6	2,007	1.7	1,358	1.1	1,269	1.1	8,935	7.5
<b>Total 12 cities</b>	<b>65,727</b>	<b>2.9</b>	<b>53,439</b>	<b>2.4</b>	<b>27,152</b>	<b>1.2</b>	<b>41,910</b>	<b>1.9</b>	<b>188,228</b>	<b>8.4</b>
<b>Rest of NZ</b>	<b>56,920</b>	<b>3.2</b>	<b>48,814</b>	<b>2.7</b>	<b>22,336</b>	<b>1.2</b>	<b>23,531</b>	<b>1.3</b>	<b>151,601</b>	<b>8.5</b>
<b>Total NZ</b>	<b>122,647</b>	<b>5.5</b>	<b>102,253</b>	<b>4.6</b>	<b>49,488</b>	<b>2.2</b>	<b>65,441</b>	<b>2.9</b>	<b>339,829</b>	<b>15.2</b>
<b>Proportion of all benefits (%)</b>	<b>36.1</b>		<b>30.1</b>		<b>14.6</b>		<b>19.3</b>		<b>100.0</b>	

Data sources: Ministry of Social Development – Benefits current at March 2006

### Percentage of families receiving means-tested benefits by type of family and type of benefit

The greatest overall reduction in benefit payments has been among people without children, whether single or in a relationship.

### Families receiving means-tested benefits, by type of family (2001, 2006)

	March 2001				March 2006				Change 2001 to 2006 %			
	No children		With child(ren)		No children		With child(ren)		No children		With child(ren)	
	Couple	Single	Couple	Single	Couple	Single	Couple	Single	Couple	Single	Couple	Single
Rodney	469	2,456	518	1,774	256	2,208	493	1,979	-45.4	-10.1	-4.8	11.6
North Shore	928	5,740	1,236	3,750	925	4,745	1,461	3,543	-0.3	-17.3	18.2	-5.5
Waitakere	1,570	10,020	2,357	7,342	1,373	8,122	2,392	7,579	-12.5	-18.9	1.5	3.2
Auckland	2,859	20,976	3,939	9,766	2,490	16,741	3,284	8,946	-12.9	-20.2	-16.6	-8.4
Manukau	2,558	15,814	4,415	13,526	2,360	13,506	3,799	14,252	-7.7	-14.6	-14.0	5.4
Hamilton	874	8,364	1,169	5,238	681	6,954	1,095	5,474	-22.1	-16.9	-6.3	4.5
Tauranga	1,085	5,819	1,183	4,231	516	4,194	981	4,228	-52.4	-27.9	-17.1	-0.1
Hutt	612	5,407	819	3,351	490	4,355	714	3,221	-19.9	-19.5	-12.8	-3.9
Porirua	356	3,605	694	2,614	263	3,037	490	2,463	-26.1	-15.8	-29.4	-5.8
Wellington	654	7,824	794	2,524	534	6,375	798	2,343	-18.3	-18.5	0.5	-7.2
Christchurch	2,564	20,684	2,959	9,945	1,570	16,077	2,450	9,536	-38.8	-22.3	-17.2	-4.1
Dunedin	1,017	6,925	716	2,890	531	5,380	573	2,451	-47.8	-22.3	-20.0	-15.2
<b>Total 12 cities</b>	<b>15,546</b>	<b>113,634</b>	<b>20,799</b>	<b>66,951</b>	<b>11,989</b>	<b>91,694</b>	<b>18,530</b>	<b>66,015</b>	<b>-22.9</b>	<b>-19.3</b>	<b>-10.9</b>	<b>-1.4</b>
<b>Rest of NZ</b>	<b>14,637</b>	<b>88,575</b>	<b>14,282</b>	<b>60,293</b>	<b>8,674</b>	<b>74,226</b>	<b>10,895</b>	<b>57,806</b>	<b>-40.7</b>	<b>-16.2</b>	<b>-23.7</b>	<b>-4.1</b>
<b>Total NZ</b>	<b>30,183</b>	<b>202,209</b>	<b>35,081</b>	<b>127,244</b>	<b>20,663</b>	<b>165,920</b>	<b>29,425</b>	<b>123,821</b>	<b>-31.5</b>	<b>-17.9</b>	<b>-16.1</b>	<b>-2.7</b>

Data source: Ministry of Social Development - Benefits current at March 2001 and 2006

## 8. Economic standard of living

For the whole of New Zealand, between 2001 and 2006 the number of benefits paid to couples without children reduced by 9,520 or -31.5%, while the number paid to single people without children reduced by 36,289 or -17.9%. The number of benefits paid to couples with children reduced by 5,656 or -16.1% and to single parents by 3,423 or -2.7%.

For the 12 cities the percentage decreases were lower than the decrease nationally for childless couples (22.9%), but higher for childless singles (19.3%). The percentage decreases were lower for families with children, whether a couple (-10.9%) or a single parent (-1.4%).

The types of benefits paid to families with children changed quite markedly between 2001 and 2006. For New Zealand as a whole, the percentage of domestic purposes benefits payments to single people with children decreased by -6.6%. The number of unemployment benefits paid to parents also decreased, by -72.3% for couples and by 64.1% for single parents. There were increases in the number of sickness benefit payments to couples (6.5%) and single parents (61.0%), as well as increases among the numbers of 'other' types of benefits in total (by 44.5% for couples and by 34.3% for single parents).

**Families with children receiving means-tested benefits, by type of benefit (number in 2006 and percentage change from 2001 to 2006)**

	2006 (number)								Change from 2001 %							
	Sickness		Domestic Purposes		Unemployment		Other		Sickness		Domestic Purposes		Unemployment		Other	
	Couple	Single	Couple	Single	Couple	Single	Couple	Single	Couple	Single	Couple	Single	Couple	Single	Couple	Single
Rodney	134	113	0.0	1,558	15	5	344	303	0.0	109.3	0.0	5.8	-89.2	-84.4	40.4	40.9
North Shore	185	142	0.0	2,521	89	27	1,187	853	15.6	67.1	0.0	-12.1	-76.1	-65.8	68.8	18.6
Waitakere	536	398	0.0	5,782	172	59	1,684	1,340	50.1	75.3	0.0	-2.4	-80.8	-78.8	52.7	46.9
Auckland	761	640	0.0	6,605	459	186	2,064	1,515	19.7	52.4	0.0	-6.6	-74.2	-70.8	35.2	-7.3
Manukau	1,035	795	0.0	11,148	704	452	2,060	1,857	21.6	48.0	0.0	9.2	-62.5	-51.7	22.0	0.5
Hamilton	247	306	0.0	4,226	231	163	617	779	14.4	66.3	0.0	-0.7	-57.6	-40.1	51.2	48.1
Tauranga	233	239	0.0	3,197	35	16	713	776	9.4	92.7	0.0	-9.2	-93.6	-90.7	69.4	86.5
Porirua	103	107	0.0	1,971	135	88	252	297	0.0	118.4	0.0	-7.5	-63.9	-42.9	16.1	5.7
Hutt	172	157	0.0	2,538	126	62	416	464	-3.4	48.1	0.0	-8.6	-65.3	-55.7	49.6	41.0
Wellington	138	102	0.0	1,782	179	42	481	417	-2.1	34.2	0.0	-11.0	-53.5	-57.1	79.5	20.2
Christchurch	675	809	0.0	7,149	203	55	1,572	1,523	6.1	79.0	0.0	-11.9	-80.5	-70.9	22.7	27.8
Dunedin	170	174	0.0	1,874	78	14	325	389	-12.8	29.9	0.0	-23.6	-76.0	-78.8	65.8	64.1
<b>Total 12 cities</b>	<b>4,389</b>	<b>3,982</b>	<b>0.0</b>	<b>50,351</b>	<b>2,426</b>	<b>1,169</b>	<b>11,715</b>	<b>10,513</b>	<b>14.9</b>	<b>62.7</b>	<b>0.0</b>	<b>-4.6</b>	<b>-71.9</b>	<b>-61.7</b>	<b>40.6</b>	<b>21.4</b>
<b>Rest of NZ</b>	<b>3,684</b>	<b>3,818</b>	<b>0.0</b>	<b>45,818</b>	<b>1,936</b>	<b>1,026</b>	<b>5,275</b>	<b>7,144</b>	<b>-2.0</b>	<b>59.3</b>	<b>0.0</b>	<b>-8.8</b>	<b>-72.8</b>	<b>-67.7</b>	<b>54.3</b>	<b>58.9</b>
<b>Total NZ</b>	<b>8,073</b>	<b>7,800</b>	<b>0.0</b>	<b>96,169</b>	<b>4,362</b>	<b>2,195</b>	<b>16,990</b>	<b>17,657</b>	<b>6.5</b>	<b>61.0</b>	<b>0.0</b>	<b>-6.6</b>	<b>-72.3</b>	<b>-64.7</b>	<b>44.5</b>	<b>34.3</b>

Data source: Ministry of Social Development - Benefits current at March 2001 and 2006

## Work/life balance

- The majority of New Zealanders feel positively about their work/life balance, more so outside the 12 cities. Residents of North Shore, Waitakere and Manukau are the least satisfied with their work/life balance.

### What this is about

Work/life balance is about people having the right combination of participation in paid work and other aspects of their lives. People's perceptions of their work/life balance have an impact on their perception of personal wellbeing. The 2006 Quality of Life Survey showed that when comparing work/life with the overall quality of life, those who rated their quality of life extremely good were significantly more likely to have rated their work/life balance positively. This indicator looks at resident satisfaction with the balance between work and other aspects of their lives.

### What did we find?

Work/life balance is the interaction between time devoted to paid work and time devoted to other activities, including family, community activities, leisure and personal fulfilment. It is a subjective indicator, because each person may evaluate their satisfaction in different ways. It encompasses not only the amount of time devoted to work and other activities, but also the quality of their experience in each sphere of activity.

In the 2006 Quality of Life Survey, residents were asked how satisfied they were with the balance between their work and other aspects of their life, such as time with their family or leisure. The majority (77.0%) of New Zealanders felt positively

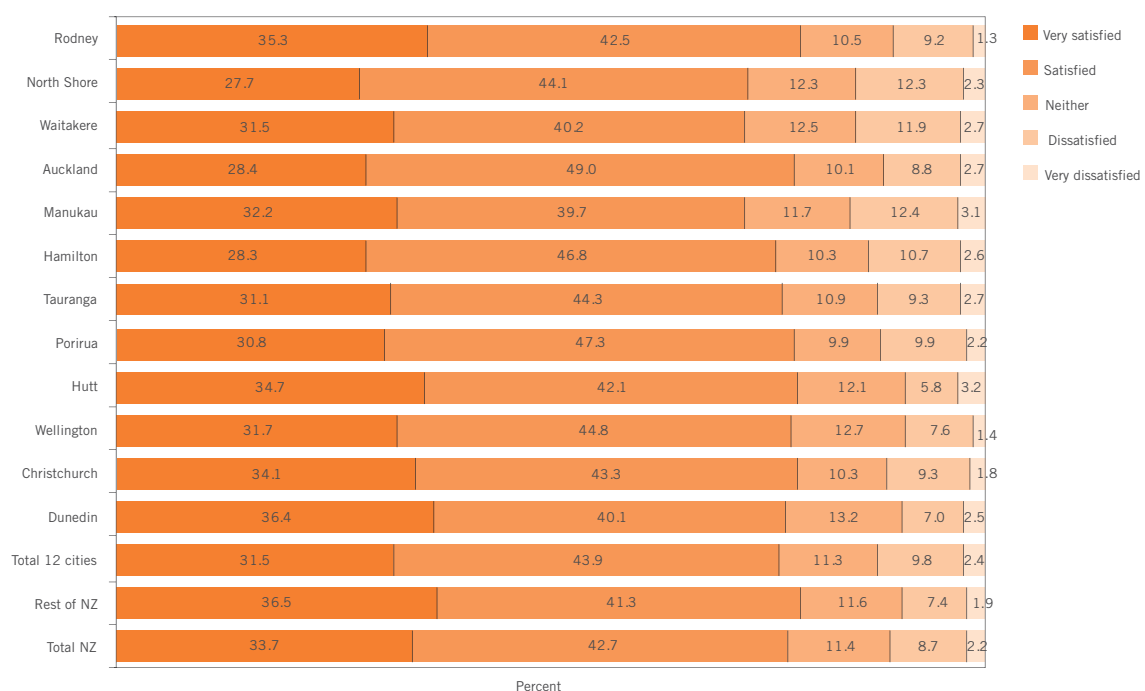
toward their work/life balance, with (34.0%) responding with a rating of 'very satisfied' and 43.0% with 'satisfied'.

Those who were more likely to have rated their work/life balance positively lived outside the 12 cities, while in the 12 cities, those who were less likely to do so lived in North Shore, Waitakere and Manukau. The residents of Auckland were more likely than the residents of the other 12 cities to indicate that they were 'satisfied' but less likely to be 'very satisfied'. Otherwise there were few differences among the residents of the 12 cities.

Nationally and in the 12 cities, residents in low income households were more likely to be satisfied with their work/life balance than those in higher income households. Of residents on lower household incomes (\$20,001 to \$40,000), 79.0% rated their work/life balance positively, while 74.0% of those on higher household incomes (\$70,001 to \$100,000, or over \$100,000) did so.

The survey also showed a strong correlation between satisfaction with work/life balance and overall quality of life, nationally and in the 12 cities. Residents who were 'very satisfied' with their work/life balance were much more likely to report that they had an 'extremely good' quality of life, while those who were 'very dissatisfied' with work/life balance were much more likely to have a 'poor' quality of life.

Percentage of residents satisfied with work/life balance (2006)



## Cost of living

### 8. Economic standard of living

- Home ownership, energy, health care and education costs have risen faster than the overall rate of inflation.
- The cost of food has increased, but at a lower rate than inflation.
- Rental housing costs and clothing costs have risen only slightly.

### What this is about

Assessing the cost of goods and services provides an indication of living costs in the 12 cities. While the consumer might face a large price increase in particular types of items, this might in turn be offset by lower increases, or even decreases, in other items. Households on lower incomes are particularly vulnerable to changes in price. Measures for this indicator include:

- Consumers Price Index
- Food Price Index
- Household contents and services.

### What did we find?

#### Consumers Price Index

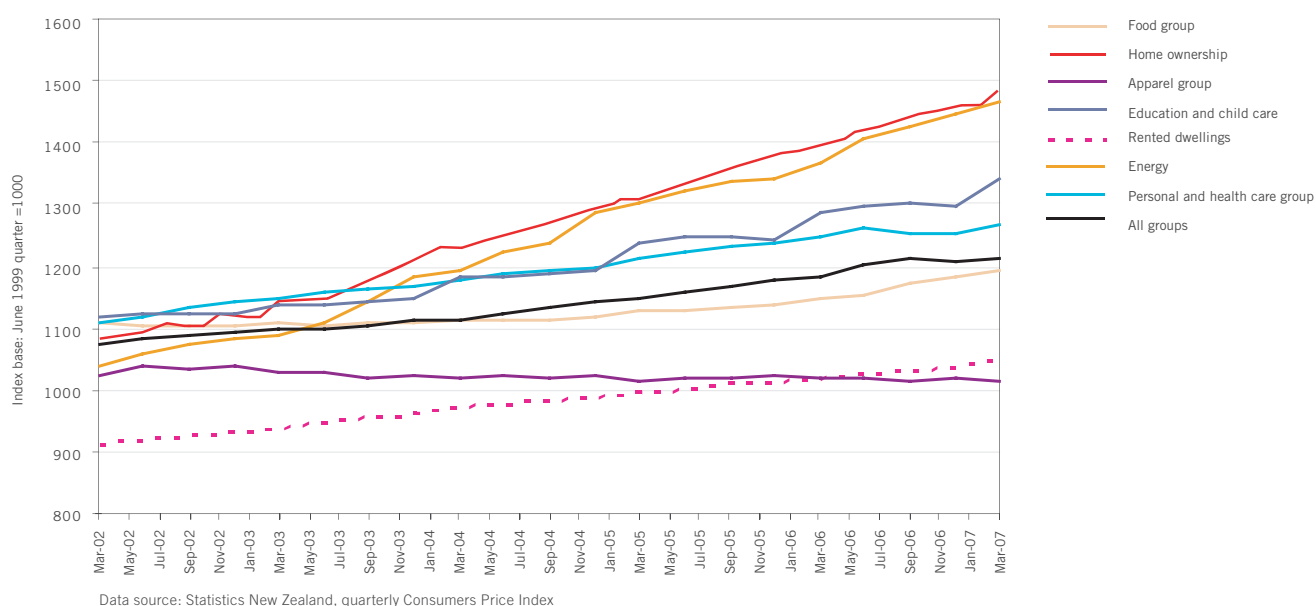
The Consumers Price Index (CPI) is a measure of the change in the price of goods and services purchased by private New Zealand households, which represents the average expenditure pattern. It can be used as an indicator of the effect of price change on the purchasing power of household income.

The Consumers Price Index is comprised of a range of household expenditure items, which each contribute to the overall index (All Groups).<sup>5</sup>

Some groups have had a major effect on the index for New Zealand as a whole. Home ownership and energy have risen in costs over the past five years. Health care and education costs have grown higher than the overall rate of inflation, while food prices have tracked slightly below the inflation rate. The cost of rental housing has risen very little since 1999 and the cost of apparel (shoes and clothing) has remained relatively constant.

In general, the items and groups that have risen faster in price are non-tradable (i.e. they are produced in New Zealand and do not face competition from foreign suppliers), these include fresh food, electricity, housing, health care and education. The items and groups that have risen more slowly tend to consist predominantly of tradable goods (e.g. they may be produced in New Zealand and do face competition from foreign suppliers). These include tinned and packaged foods, petrol, clothing and footwear.<sup>6</sup>

New Zealand quarterly consumers price index for selected items and groups (March 2002 to 2007)

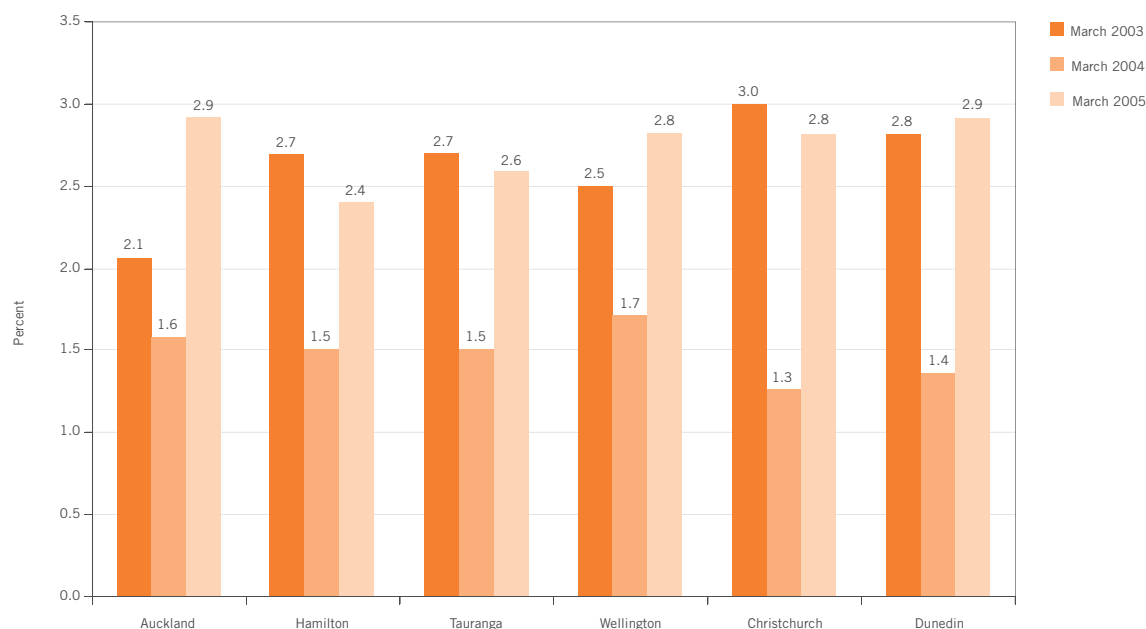


<sup>5</sup> The CPI has undergone a major review, implemented in the September 2006 quarter, requiring an estimation to extrapolate trends from the previous base. Trends shown from March 2006 to March 2007 may not precisely match official statistics.

<sup>6</sup> New Zealand Treasury. (2007). *New Zealand Economic and Financial Overview 2007*.

## Cost of living

Consumers price index all groups, change from previous year, by CPI region (March quarters 2003 to 2005)



Data source: Statistics New Zealand, regional Consumers Price Index

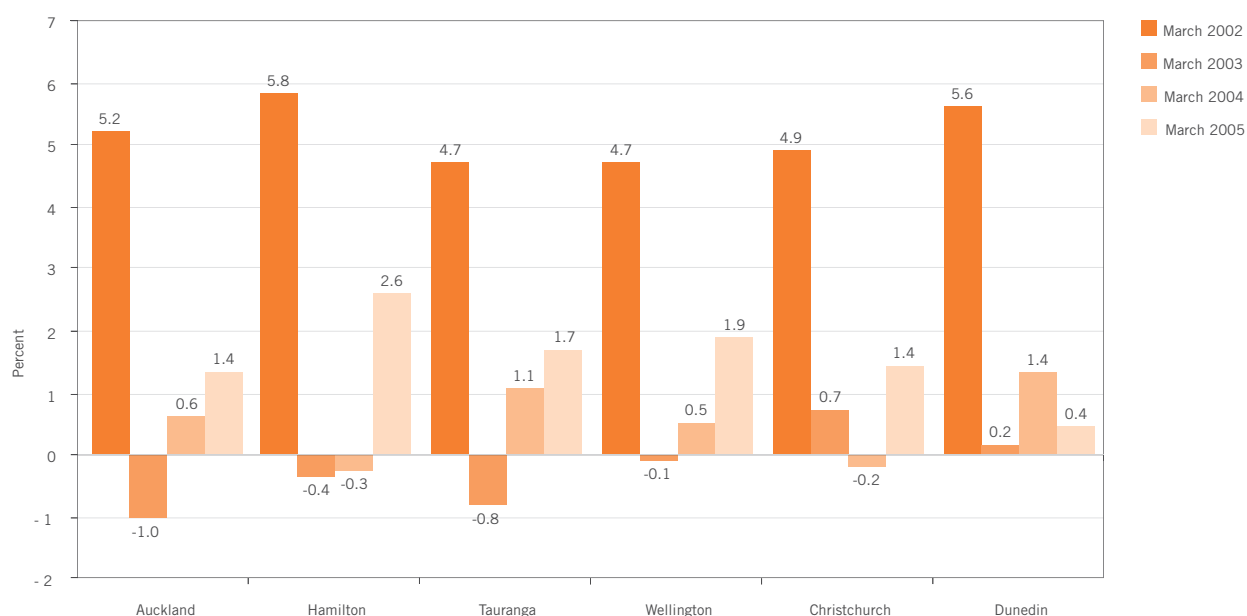
The regional Consumers Price Index shows that inflation dropped markedly in March 2004 compared with the previous March and more so in Christchurch and Dunedin than in the other CPI regions.

### Food Price Index

The Food Price Index is one of the nine groups that make up the Consumers Price Index. Food is a basic item of household

expenditure. Affordable food is important for nutrition and general health and is particularly important to help meet children's development needs. Seasonal factors, changes in the broader national economy and the international environment all impact on food prices. Households on lower incomes have limited ability to adjust to increases in the price of food, as it tends to make up a significant proportion of household expenditure.<sup>7</sup>

Consumers price index, food group only, change from previous year, by CPI region (March quarters 2003 to 2005)



Data source: Statistics New Zealand, regional Consumers Price Index

<sup>7</sup> Talbut, K. (2003). *Consumer Expenditure (1990-2001)*. Statistics New Zealand. Wellington.

## 8. Economic standard of living

Food prices increased somewhat over the four years to March 2005, falling from a high in March 2002 to a slight decrease in 2003 and/or 2004 in most regions and then rising again in 2005.

### Household contents and services

The household contents and services category of the Consumers Price Index covers the costs of living not including the cost of housing (rent and mortgage payments) or food. It incorporates

the costs of energy, communications, appliances, furniture and furnishings, cleaning products, insurance and other services.

Unlike the Food Price Index, the cost of household contents and services has risen steadily over years 2002 to 2006, although markedly less in the Auckland region than in other CPI areas.

### Consumers price index, household operations group (March quarters, 2002 to 2006)

CPI regions	2002	2003	2004	2005	2006	Change 2002 to 2006 %
Auckland	1,013	1,019	1,023	1,042	1,048	3.5
Hamilton	1,020	1,047	1,054	1,060	1,082	6.1
Tauranga	1,010	1,038	1,062	1,083	1,090	7.9
Wellington	1,037	1,055	1,089	1,111	1,139	9.8
Christchurch	1,016	1,052	1,082	1,107	1,117	9.9
Dunedin	985	1,020	1,032	1,058	1,075	9.1
<b>Total NZ</b>	<b>1,020</b>	<b>1,039</b>	<b>1,054</b>	<b>1,074</b>	<b>1,087</b>	<b>6.6</b>

Data source: Statistics New Zealand, regional Consumers Price Index





## Social deprivation

- The cities with the highest proportion of people living in the two least deprived deciles are North Shore and Wellington.
- The cities with the highest percentage of people living in the two most deprived deciles are Porirua and Manukau.

### What this is about

The economic and social circumstances that city residents find themselves in will have a significant impact on their ability to provide for their individual and family needs. The deprivation index is a combination of a key range of socio-economic variables and provides an overall score of deprivation in a particular meshblock.

The aim of the New Zealand Deprivation research programme is to develop small area indexes of socio-economic deprivation for New Zealand. The scores are on a scale of one (least deprived) to ten (most deprived).<sup>8</sup>

### What did we find?

This indicator shows the percentage of city residents living in each decile. Overall there is significant variation in the distribution of deprivation between the cities. North Shore (35.0%) and Wellington (34.0%) have the highest proportions of residents living in the least deprived areas (deciles one and two).

Porirua (42.0%) and Manukau (38.0%) have the largest proportions of residents living in areas with the highest levels of deprivation (nine and ten). Porirua and Hutt have a large proportion of residents living in both the most deprived and least deprived deciles.

Other cities, such as Auckland, Christchurch and Dunedin, have a more even distribution of the population across each of the deciles.

These deciles give an indication of wealth and to a lesser extent perceptions of relative poverty. Relative wealth is important because people tend to compare their material wellbeing to that of others as a measure of social status, which has an effect on perceived quality of life. A recent study links large disparities in relative wealth to the absence of trust in society, which also has an impact on economic performance.<sup>9</sup>

Percentage of population living in deprivation index deciles (2006)

Decile	Rodney %	North Shore %	Waitakere %	Auckland %	Manukau %	Hamilton %	Tauranga %	Porirua %	Hutt %	Wellington %	Christchurch %	Dunedin %
1	13	17	10	7	8	10	7	20	15	22	12	12
2	15	18	10	8	8	8	8	10	10	12	10	9
3	16	16	11	9	8	6	10	4	7	12	11	11
4	12	17	10	6	7	8	9	6	8	12	11	9
5	15	11	9	9	7	7	12	4	8	10	11	11
6	11	10	10	12	6	11	13	3	8	9	11	10
7	9	7	11	14	6	12	11	3	8	8	9	9
8	5	2	9	17	12	11	13	7	10	6	10	10
9	2	1	8	13	15	16	11	12	12	4	10	13
10	1	1	12	4	23	10	5	30	13	5	6	6

**1 = Least Deprived 10 = Most Deprived**

Data source: University of Otago, Wellington School of Medicine and Health Sciences

<sup>8</sup> Income- People aged 18 to 64 years receiving a means tested benefit. Income- People living in equivalised households with income below an income threshold. Owned home- People not living in own home. Support- People aged < 65 years living in a single parent family. Employment- People aged 18 to 64 years unemployed. Qualifications- People aged 18 to 64 years without any qualifications. Living space- People living in equivalised households below a bedroom occupancy threshold. Communications- People with no access to a telephone. Transport- People with no access to a car.

<sup>9</sup> Labonne, J., Biller, D. & Chase, R. (2007). *Inequality and relative Wealth: do they matter for Trust? Evidence from poor communities in the Philippines*. World Bank Social Development Department. Working Paper Series.



## Net worth

### 8. Economic standard of living

- The top 10.0% of wealthy individuals own more than half of the nation's total net worth, while the bottom 50.0% of the population owns just 5.2% of total net worth.
- Wealth accumulation is closely related to age. Nearly half of people with negative net worth are likely to be students accruing student loan debts.
- The most valuable asset people have is residential property, including homes, rental property and holiday homes.

#### What this is about

Disparity of incomes has implications for health outcomes, economic and social wellbeing and opportunities for social participation. Net worth has implications for people's ability to withstand life-shocks and to raise finance when needed. Net worth contributes to people's sense of security and their ability to enjoy health, wellbeing and social participation into the future. Finally, it enables people to provide security for other members of their family including future generations. Measures for this indicator include:

- Debt and savings
- Total household claims.

#### What did we find?

##### Debt and savings

The data for this measure comes from Statistics New Zealand's Survey of Family, Income and Employment (SoFIE). The survey looks at changes in income and labour force participation in association with changes in individual, family and household circumstances. The same people are re-interviewed once every 12 months, over eight cycles, in order to build up a picture of how their circumstances have changed over time.

Number of people, total and median values of assets, liabilities and net worth by region (2003 to 2004)

Region	Population	Asset value		Liability value		Net worth value	
		Total (\$ million)	Median (\$)	Total (\$ million)	Median (\$)	Total (\$ million)	Median (\$)
Auckland	871,400	166,907	101,300	33,454	3,000	133,453	52,400
Waikato	301,700	70,793	107,500	11,281	2,500	59,512	77,000
Wellington	334,300	61,107	115,000	11,298	4,300	49,809	69,500
Canterbury	398,200	79,511	111,300	11,427	2,500	68,085	73,500
Rest of North Island	671,100	114,245	102,000	15,682	1,500	98,563	73,300
Rest South Island	352,800	66,851	104,800	8,585	1,600	58,266	79,600

Data Source: Statistics New Zealand, Survey of Family, Income and Employment (SoFIE)

## Net worth continued

Nationally, the key results were as follows.<sup>10</sup>

- The top 10.0% of wealthy individuals own more than half (51.8%) of total net worth. The top 1.0% of wealthy individuals own 16.4% of total net worth. The bottom 50.0% of the population collectively owns just 5.2% of the nation's total net worth, taking into account 6.5% of the population that has negative net worth (more debts than assets).
- Property accounted for approximately 43.0% of the total value of assets. The most valuable asset was residential property, including homes, rental property and holiday homes. The largest type of debt was mortgage debt, making up approximately 80.0% of the total value of debts.
- The level of net worth held is strongly related to age: younger people tend to have very low net worth. Wealth accumulation accelerates through the working ages, from ages 25 to 49 years and peaks between ages 55 and 69 years. The level of median net worth remains relatively stable at post-retirement ages.
- There are significant disparities between ethnic groups. Differences in age structure among the groups partly accounts for this.
- People in one-parent families have significantly lower net worth than any other group. Non-partnered individuals (people living alone) tend to have lower net worth over their entire lifecycle than those in couple relationships. People who are in couple relationships without children have a median net worth nearly double that of individuals without children.

- Individuals with negative net worth (more debts than assets) make up 6.5% of the sample (191,700 individuals). Nearly half are between the ages of 15 and 24 years and a third (2.4% of the sample) are members of a family group that has positive net worth. They are likely to be students accruing student loan debts. The number of individuals with indebtedness is minimal at post-retirement ages.

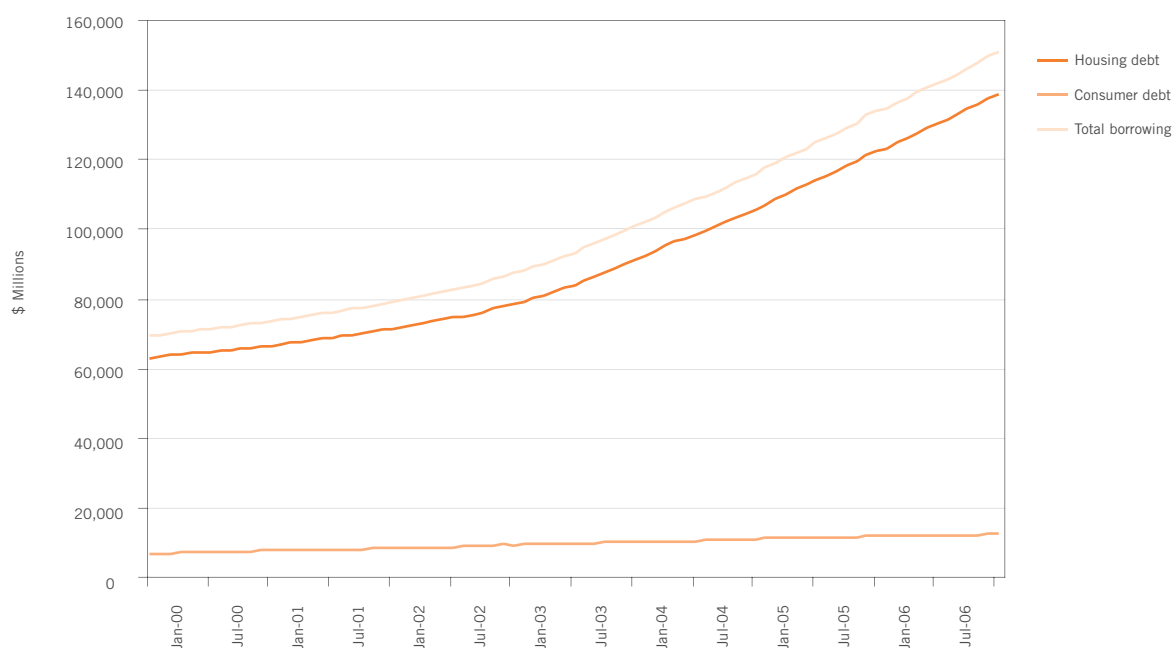
These national results will have different effects in each city. From the results provided by SoFIE to date, the main factor behind the differences in net wealth among cities is likely to be the age profile of the population, with ethnic composition also playing a part.

### Total household claims

The Reserve Bank of New Zealand collects information on loans to households for housing and consumer purposes. The data is collected for all registered banks and Non-Bank Financial Institutions. It includes all residential mortgage loans to personal customers, as well as loans, whether or not secured by mortgage, which have been separately identified as being for personal customers but not for housing (e.g. boat or car purchase, travel and all credit card lending).

Household claims (debt) across New Zealand have increased by 73.6% during the period December 2002 to December 2006 (from \$85,806 million to \$148,920 million). Of this increase, the majority was mortgage debt, which increased by \$59,836 million, while consumer debt grew by \$3,384 million. However, these figures do not take into account changes in home affordability and additional assets that may be owned by borrowers.

**New Zealand's mortgage and consumer debt (monthly, January 2000 to January 2007)**



Data source: Reserve Bank of New Zealand, Household Claims

10 Cheung, J. (April 2007) *Wealth Disparities in New Zealand*. Paper presented at the Social Policy, Research and Evaluation Conference 2007.

# Chapter Nine

# Economic development

## What's in this chapter?

Economic growth
Employment
Research and development
Local businesses
Retail sales
Non-residential building consents
Tourism
Skilled migrants



## Introduction

**This is the second of two chapters that investigate economic wellbeing in the 12 cities. The previous chapter looked at changes to the standard of living for people and households, while this chapter looks at measures of the business sector and the broader economy.**

### Why this is important

New Zealand has a mixed economy which operates on free market principles. It has sizable manufacturing and service sectors complementing a highly efficient agricultural sector, with exports of goods and services accounting for around one third of the country's Gross Domestic Product. Indicators of economic development provide important information on whether or not there has been a sustainable increase in living standards. Such a rise implies increased per capita income, better education and health of local residents. This in turn helps stimulate further opportunities for economic growth and development within a community or nation.

### Key points

The 12 cities account for nearly two thirds of all economic activity in New Zealand, a share which has gradually increased between 2001 and 2006. The economies of the 12 cities have grown, on average, by 4.3% per year over the five years to March 2006. The average growth rate of the rest of New Zealand was 3.5% per year over the same period.

There has been a growth in the number of businesses nationally. Although the number of economically viable business enterprises in the 12 cities grew by 23.6% between 2002 and 2006, this was lower than the growth rate in the rest of New Zealand.

Along with business growth, the total number of jobs has also increased and rates of unemployment have fallen. In the past five years there have been over 290,000 additional jobs created in New Zealand. Nearly two thirds of these jobs were created in the 12 cities.

These new jobs have contributed to raising the standard of living for many. The challenge of increasing productivity must be addressed, however, if New Zealand is to achieve sustainable economic development in the longer term.

Growth in retail expenditure reflects the health of the local economy. In the year ended March 2006, the 12 cities accounted for \$36.8 billion (60.0%) of New Zealand's total of \$61.3 billion in retail expenditure.

Low unemployment and a growing economy have increased the demand for skilled workers, some of which is met by encouraging immigration. A quarter of skilled migrants coming to New Zealand intend to settle in the Auckland region and a further quarter intend to settle in other urban regions.

### Links to other indicators

Levels of employment and economic growth, along with personal and household income and expenditure, are closely linked with people's ability to secure a good quality of life for themselves and their families. This includes their ability to purchase adequate housing, health care and education.

As economic activity fluctuates, some groups are more likely to be vulnerable to unemployment, particularly the unskilled, those without qualifications and those living in areas of declining employment.

An increasing rate of productivity is associated with sustainable economic development, including international competitiveness, better employment opportunities and wellbeing for future generations and the more efficient use of natural resources.





## Economic growth

### 9. Economic development

- The 12 cities account for nearly two thirds of all economic activity in New Zealand, a share which has gradually increased between 2001 and 2006.
- Estimated Gross Domestic Product in the 12 cities grew by 4.3% per year and Gross Domestic Product per capita by 3.5% per year from 2001 to 2006.
- Labour productivity increased in eight of the 12 cities and for the 12 cities as a whole, but declined at the total New Zealand level over the same period.

#### What this is about

Economic growth is a widely accepted indicator of how well an economy is performing. Faster economic growth generally translates into improved economic welfare with people having more purchasing power. Gross Domestic Product is defined as the market value of all final goods and services produced within a specific area (usually a country) in a given period of time.

The amount of Gross Domestic Product generated for each person (Gross Domestic Product per capita) is an indicator of the total real wealth of the society, while the amount of Gross Domestic Product generated per worker (productivity) is an indicator of current and future economic sustainability. Measures for this indicator include:

- Annual average percentage change in Gross Domestic Product
- Productivity gains.

#### What did we find?

##### Annual average percentage change in Gross Domestic Product

Over the five years from 2001 to 2006 the 12 cities accounted for between 62.8% and 65.3% of national Gross Domestic Product, a share that increased gradually over that period.

Over the five years ended March 2006, the 12 cities grew by an average of 4.3% per year, measured by estimated Gross Domestic Product for each city. This was 2.3% faster than the growth rate of the rest of New Zealand and 0.8% faster than the total New Zealand growth rate.

Manukau had the highest economic growth, with an average growth rate of 6.6% per year, followed by Rodney (5.8%) and North Shore (5.7%). The cities in the Auckland region experienced an upturn in economic growth from 2002 to 2003, with Auckland's economy growing by 6.4%, while the other four cities in the region grew by 10.4%. This was followed by more moderate growth rates from 2004 to 2007. The cities that had the lowest growth rates were Wellington (2.9%), Dunedin (2.8%) and Hutt (2.5%).

Two cities temporarily experienced negative growth (i.e. recession) during this period: Hamilton in 2003 (by -3.7%) and Dunedin in 2004 (by -2.3%). In both cases the downturn has affected their overall growth rate for these five years.

Changes in Gross Domestic Product per capita provide a clearer picture of real economic development because they indicate whether a better standard of living is being achieved. The greatest improvements were in Porirua (6.0%), followed by Manukau (5.1%) and North Shore (4.4%). The slowest rates of growth were in Wellington (2.2%), followed by Hamilton (2.3%) and Hutt (2.4%).

##### Productivity gains

Labour productivity is the value of economic output created per person employed. Increases in productivity are a key to long term economic sustainability and improvement in standards of living. In the short term, productivity can be affected by changes in the exchange rate, low unemployment and what New Zealand earns from its exports. Over the long term, productivity increases as a result of capital investment and investment in research and innovation as well as improvements in workers' skills and education.

Economic growth over the five years from 2001 to 2006 has been supported mainly by increased employment. Labour productivity for New Zealand as a whole declined at a rate of -0.2% per year over this period, while average labour productivity in the 12 cities increased by 0.4% per year.

Productivity increased in eight of the 12 cities, with Manukau leading the gain at 1.5% per year followed by Waitakere (1.1%) and Christchurch (1.2%). This is most likely to be explained by the establishment in these cities of new enterprises, which typically invest in new technology and equipment.

Productivity declined in Hamilton (-2.2%), Tauranga (-2.0%) and Dunedin (-0.4%). Hamilton's decline in labour productivity was mainly due to sharp drops in world dairy product prices during the period. However, productivity is also affected by very strong employment growth as it often declines as skilled labour becomes more scarce.



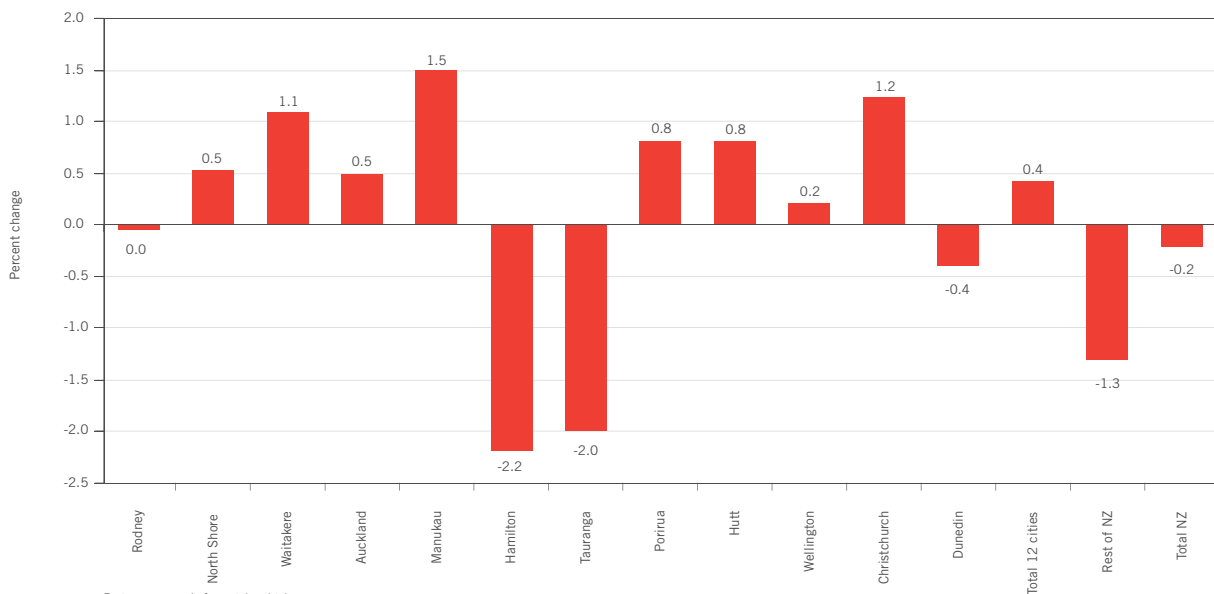
## Economic growth continued

Average gross domestic product growth (March years, 2001 to 2006)

	Annual change from previous year						2001 to 2006	
	2001	2002	2003	2004	2005	2006	Average growth	Per capita growth
	%	%	%	%	%	%	%	%
Rodney	0.1	2.3	10.9	8.0	5.5	2.5	5.8	4.0
North Shore	1.1	5.7	9.8	6.2	2.0	4.9	5.7	4.4
Waitakere	- 1.0	2.1	9.9	5.0	4.0	0.4	4.2	3.5
Auckland	0.1	3.8	6.7	3.3	2.1	4.4	4.1	4.0
Manukau	0.1	5.1	10.8	6.8	5.3	4.8	6.6	5.1
Hamilton	4.8	7.2	- 3.7	4.5	7.0	2.3	3.4	2.3
Tauranga	2.7	5.8	7.6	5.7	2.4	0.8	4.4	2.8
Hutt	- 0.2	2.0	2.8	0.7	4.3	2.6	2.5	2.4
Porirua	3.5	11.8	2.6	0.5	1.9	11.9	5.6	6.0
Wellington	- 0.5	4.6	3.3	- 0.0	6.4	0.2	2.9	2.2
Christchurch	2.7	2.2	5.4	4.8	7.6	2.0	4.4	3.6
Dunedin	3.2	6.2	6.0	- 2.3	0.8	3.6	2.8	3.3
<b>Total 12 cities</b>	<b>0.8</b>	<b>4.2</b>	<b>6.1</b>	<b>3.6</b>	<b>4.2</b>	<b>3.1</b>	<b>4.3</b>	<b>3.5</b>
<b>Rest of New Zealand</b>	<b>4.4</b>	<b>2.6</b>	<b>1.9</b>	<b>3.1</b>	<b>2.7</b>	<b>- 0.1</b>	<b>2.0</b>	<b>1.1</b>
<b>New Zealand</b>	<b>2.1</b>	<b>3.6</b>	<b>4.6</b>	<b>3.4</b>	<b>3.7</b>	<b>2.0</b>	<b>3.5</b>	<b>2.1</b>
<b>GDP share of 12 cities (%)</b>	<b>62.8</b>	<b>63.2</b>	<b>64.1</b>	<b>64.2</b>	<b>64.6</b>	<b>65.3</b>		

Data sources: Infometrics Ltd

Average annual growth of labour productivity (2001 to 2006)







# Employment

## 9. Economic development

- The number of jobs in the 12 cities increased by more than 190,000 over the five years to February 2006.
- Unemployment has decreased to the point that much of it is likely to be due to seasonal fluctuation and turnover of the remaining unemployed.

### What this is about

Paid employment is a major factor determining personal income, which in turn determines the ability of households to purchase goods and services. It also affects health, housing, education and crime outcomes. Employment is also related to an individual's ability to participate in social activities and enjoy a sense of belonging in their community.

Trends in employment and unemployment reflect the level of economic activity, demographic trends, skill levels and social policies. They can also show pressures within the labour market. Measures for this indicator include:

- Number of filled jobs
- Percentage of people in the labour force
- Filled jobs by industry
- Unemployment rate
- Labour force status of parents with children.

### What did we find?

#### Number of filled jobs

This measure shows the number of filled jobs, which indicates the overall growth or decline in employment. The data show how many people are employed: it counts part-time workers as one filled job and may include working proprietors who pay themselves a taxable salary or wage.<sup>1</sup>

#### Number of total filled jobs (2001 to 2006)

	2001	2002	2003	2004	2005	2006
Rodney	15,340	15,650	17,020	18,620	19,790	20,390
North Shore	64,210	66,590	71,700	75,380	79,070	82,490
Waitakere	38,140	38,310	40,460	42,480	44,340	44,410
Auckland	257,710	261,920	276,230	283,940	296,560	306,850
Manukau	94,670	97,640	104,160	109,470	116,190	120,540
Hamilton	54,740	57,910	61,750	64,330	69,190	72,150
Tauranga	33,560	36,320	39,850	41,280	44,580	46,030
Porirua	11,560	12,540	12,640	12,830	13,160	14,620
Hutt	39,730	39,300	39,280	39,950	42,020	43,230
Wellington	116,750	117,080	118,660	120,570	129,300	132,720
Christchurch	154,900	152,910	160,970	168,600	178,640	180,770
Dunedin	46,500	47,740	50,330	51,410	53,600	54,500
<b>Total 12 cities</b>	<b>927,810</b>	<b>943,910</b>	<b>993,050</b>	<b>1,028,860</b>	<b>1,086,440</b>	<b>1,118,700</b>
<b>Rest of NZ</b>	<b>545,180</b>	<b>564,080</b>	<b>594,310</b>	<b>612,120</b>	<b>639,700</b>	<b>644,460</b>
<b>Total NZ</b>	<b>1,472,990</b>	<b>1,507,990</b>	<b>1,587,360</b>	<b>1,640,980</b>	<b>1,726,140</b>	<b>1,763,160</b>

Data source: Statistics New Zealand, Business Demographic Statistics

<sup>1</sup> The data comes from Statistics New Zealand's Business Demographic Statistics series, which provides an annual snapshot, taken in February each year, of the structure and characteristics of New Zealand businesses.

## Employment continued

The 12 cities combined followed the same pattern as the rest of New Zealand, with growth in every year from 2001 to 2006 and especially strong growth in 2002 and 2004.

The pattern of growth differed among cities: Porirua had strong growth in 2001 (8.5%) followed by three years of slow growth, then a resurgence in 2005 (11.1%). Christchurch experienced negative growth in 2001 to 2002 (-1.3%), but then rebounded strongly in the three subsequent years. Hutt had the lowest rate

of growth (8.8%) experiencing two consecutive years of negative or nil growth, in 2001 to 2002 (-1.1%) and 2002 to 2003 (-0.1%), followed by expansion in the following three years.

The cities that created the highest number of new jobs over this period were Auckland (49,140), Christchurch and Manukau (both 25,870). The cities with the greatest rate of growth were Tauranga (37.2%), Rodney (32.9%) and Hamilton (31.8%).

### Total filled jobs: changes over period (2001 to 2006)

	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006	Total Change 2001 to 2006	
	%	%	%	%	%	%	Number
Rodney	2.0	8.8	9.4	6.3	3.0	32.9	5,050
North Shore	3.7	7.7	5.1	4.9	4.3	28.5	18,280
Waitakere	0.4	5.6	5.0	4.4	0.2	16.4	6,270
Auckland	1.6	5.5	2.8	4.4	3.5	19.1	49,140
Manukau	3.1	6.7	5.1	6.1	3.7	27.3	25,870
Hamilton	5.8	6.6	4.2	7.6	4.3	31.8	17,410
Tauranga	8.2	9.7	3.6	8.0	3.3	37.2	12,470
Porirua	8.5	0.8	1.5	2.6	11.1	26.5	3,060
Hutt	-1.1	-0.1	1.7	5.2	2.9	8.8	3,500
Wellington	0.3	1.3	1.6	7.2	2.6	13.7	15,970
Christchurch	-1.3	5.3	4.7	6.0	1.2	16.7	25,870
Dunedin	2.7	5.4	2.1	4.3	1.7	17.2	8,000
<b>Total 12 cities</b>	<b>1.7</b>	<b>5.2</b>	<b>3.6</b>	<b>5.6</b>	<b>3.0</b>	<b>20.6</b>	<b>190,890</b>
<b>Rest of NZ</b>	<b>3.5</b>	<b>5.4</b>	<b>3.0</b>	<b>4.5</b>	<b>0.7</b>	<b>18.2</b>	<b>99,280</b>
<b>Total NZ</b>	<b>2.4</b>	<b>5.3</b>	<b>3.4</b>	<b>5.2</b>	<b>2.1</b>	<b>19.7</b>	<b>290,170</b>

Data source: Statistics New Zealand, Business Demographic Statistics

### Filled jobs by industry

This measure shows the number of jobs in different industries, grouped by Australian and New Zealand Standard Industrial Classification codes (ANZIC) (New Zealand version 1996).

The Manufacturing industry comprised only 13.0% of jobs in the 12 cities and 14.4% of the jobs in New Zealand as a whole, indicating the relative weakness of manufacturing as a contributor to the New Zealand economy. Of the 12 cities only Manukau (20.8%) and Waitakere (19.7%) had a greater proportion of manufacturing jobs than the rest of New Zealand (16.7%).

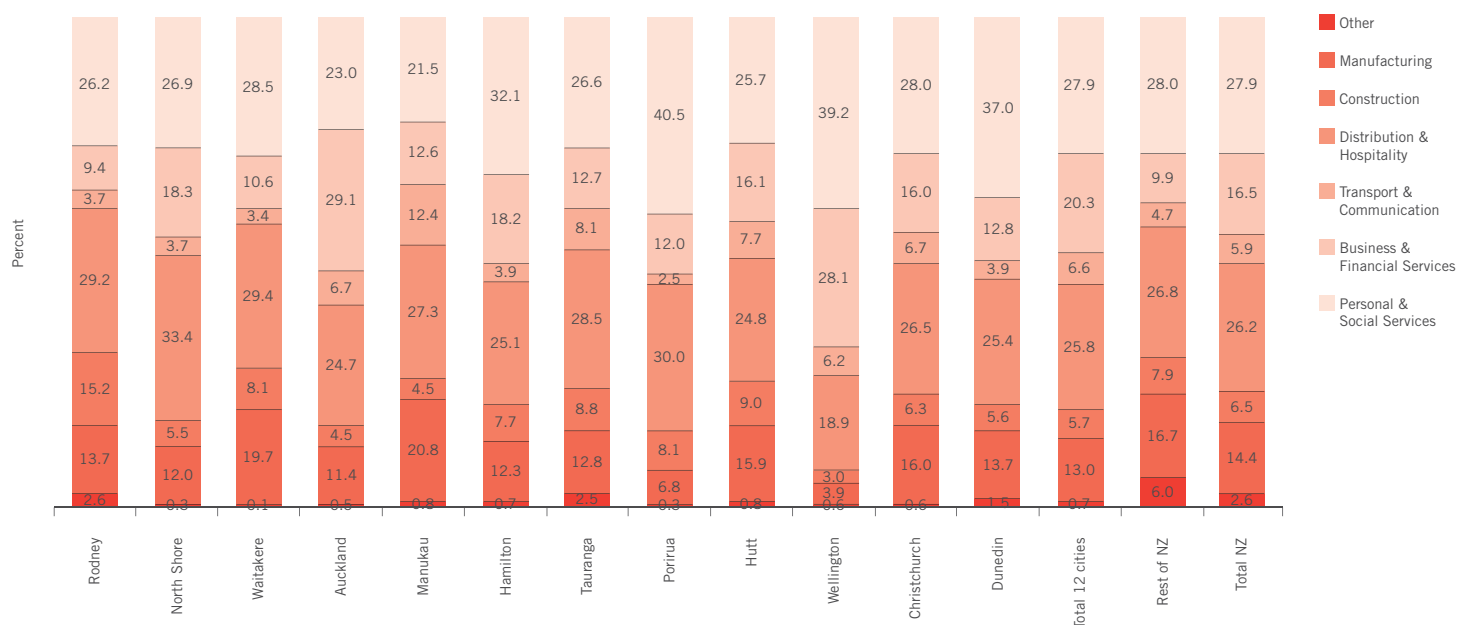
The Personal and Social Services industries accounted for the most jobs among the 12 cities (27.9%). The majority of these jobs were in the sub-categories of Health and Community Services (10.1%) and Education (7.0%). The cities with the highest proportion of workforce employed in the Personal and Social Services industries were Porirua (40.5%), Wellington (39.2%), Dunedin (37.0%) and Hamilton (32.1%).

The Distribution and Hospitality industries were the second largest employers, accounting for 25.8% of jobs. The largest sub-category was Retail Trade (12.4%). The cities with the highest proportion of workforce employed in the Distribution and Hospitality industries were North Shore (33.4%), Porirua (30.0%), Rodney (29.2%) and Waitakere (29.4%). For New Zealand as a whole the proportion was 23.0%.

The Business and Financial services industry comprised a large proportion of filled jobs in Auckland (29.1%) and Wellington (28.1%) reflecting the concentration of banks, insurance and technology head offices in those two cities.

## 9. Economic development

## Filled jobs by industry (February 2006)



Data source: Statistics New Zealand, Business Demographic Statistics

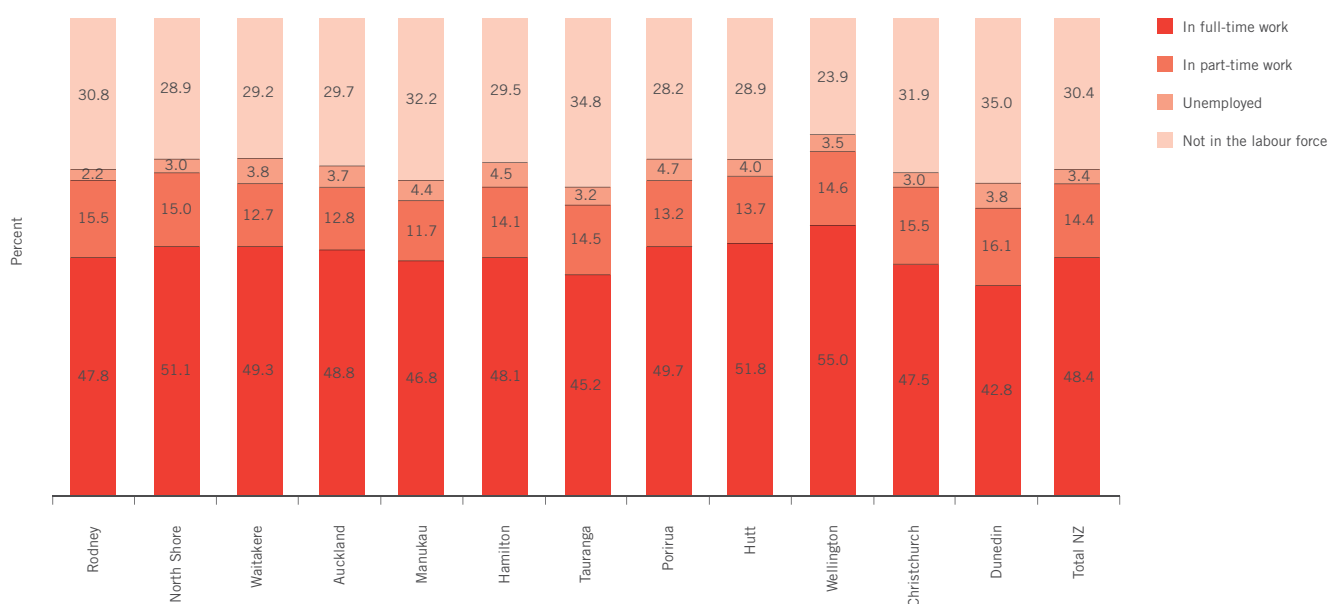
## Percentage of people in the labour force

The labour force participation rate is the proportion of a population aged 15 years and over who identify themselves as either employed or unemployed and actively seeking work as a percentage of the total number of working age people. This measure shows the work status of the residents in the 12 cities, as recorded by the 2006 Census.<sup>2</sup>

Half of the 12 cities had labour force participation rates higher than the national average of 62.8%. Wellington had the highest rate (69.5%) followed by North Shore (66.1%) and Hutt (65.6%). The cities with the lowest rates were Manukau and Dunedin (both 58.8%), Waitakere (62%) and Auckland (61.5%).

The main factors behind the lower rates of labour force participation include younger populations where more people are at school or in training, as in Manukau, or the presence of large numbers of tertiary students, as in Auckland and Dunedin.

## Employment status (2006)



Data source: Statistics New Zealand, Census 2006

<sup>2</sup> The category 'status unidentifiable' has been omitted, so the percentages shown may not exactly match other reports.

## Employment continued

### Unemployment rate

The unemployment rate is the number of unemployed people expressed as a percentage of the labour force. The labour force is defined as the total number of people who are either employed or not employed but available to work.

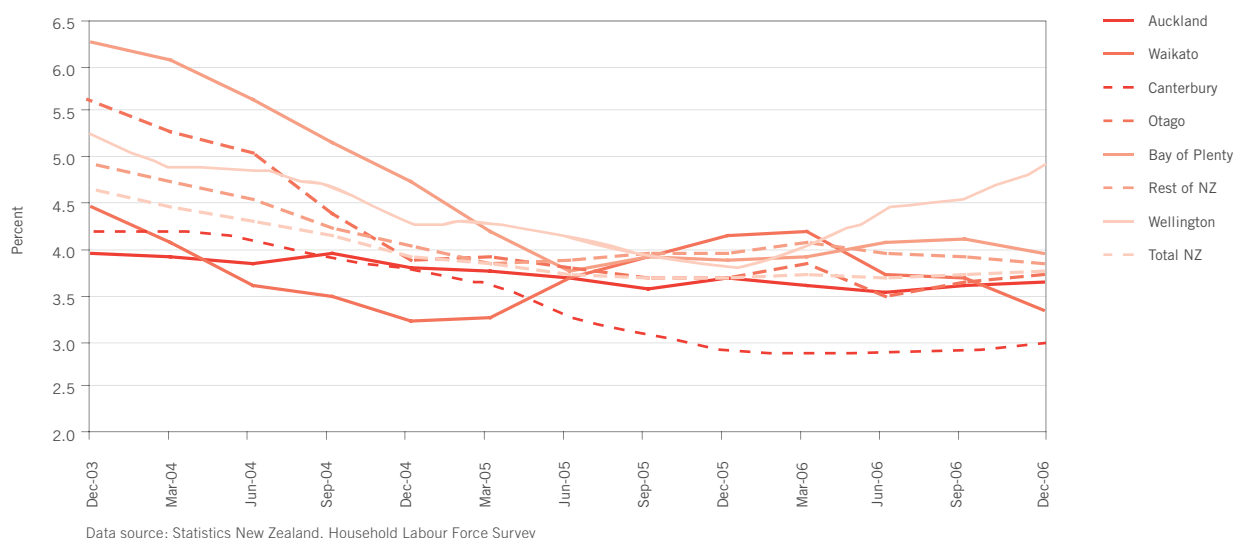
This measure uses the data from the quarterly Household Labour Force Survey and shows a rolling average of the previous four quarters, by region. This shows the overall trend more clearly than the raw data, which fluctuates due to seasonal changes in job opportunities.

The national average rate of unemployment decreased from 2003 to 2006, from 4.7% to a low of 3.7%, which persisted from June 2005 to September 2006.<sup>3</sup>

By December 2006, most regions were tightly clustered in a range between 3.3% (Waikato) and 4.0% (Bay of Plenty). This clustering may indicate that the unemployment in the economy is largely 'frictional' (including temporary unemployment as people change jobs and seasonal variations in the job market). The notable exceptions were Wellington (5.0%) and Canterbury (3.0%).

The greatest regional decline in the unemployment rate occurred in the Bay of Plenty, falling from 6.3% to 4.0% over this three year period. The smallest decline occurred in the Wellington region, where unemployment fell from 5.3% at the beginning of the period to a low of 3.8% in December 2005, then rising to 5.0% by December 2006.

Regional unemployment rate rolling four quarter average, (December quarter 2003 to December quarter 2006)

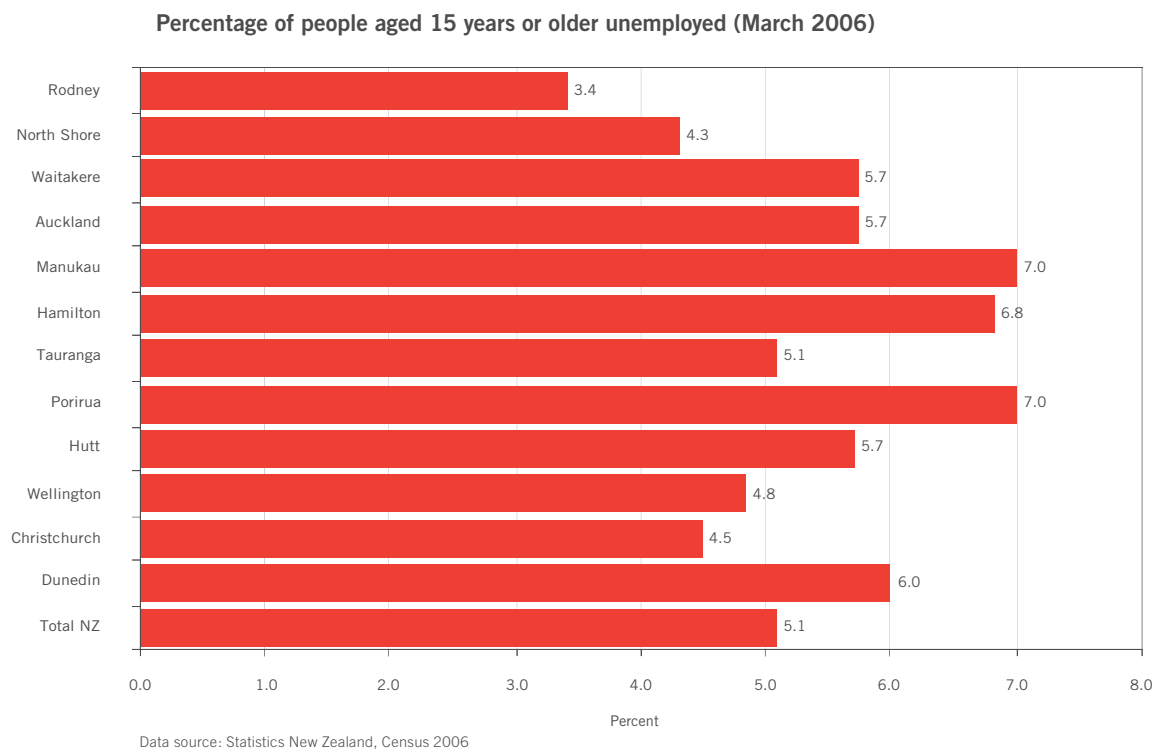


In March 2006, the Household Labour Force Survey estimated that unemployment was 4.3% of the labour force. The 2006 Census, also taken in March, showed that 5.1% of the working age population was unemployed. Census figures show that unemployment was higher than the national figure in seven of the 12 cities, especially in Manukau and Porirua (both 7.0%) and Hamilton (6.8%). The cities with the lowest rates of unemployment were Rodney (3.4%), North Shore (4.3%) and Christchurch (4.5%).

The variation between the Household Labour Force Survey and the census may be explained by two key factors. Both surveys count people as employed if they had worked for one hour or more in the previous week, but there has been a systematic difference in the way this is interpreted by surveyors who fill in the Household Labour Force Survey form and by residents who fill in the census form. The Household Labour Force Survey is also not designed to provide statistically robust results at city level, so there will be a wider margin of error.

<sup>3</sup> The graph shows a slight rise to 3.8% in December 2006, which was due to a quarterly peak of 4.3% in March that year. The June, September and December quarters were all 3.5% or 3.6%.

## 9. Economic development

**Labour force status of parents with children**

The hours per week that parents are employed can have a profound effect on their family's health and wellbeing, as well as the parents' work/life balance.

Households where both parents work less than 30 hours may also be likely to earn a low hourly wage and have difficulty in providing for their families. This can be associated with poorer health, lower educational achievement and an ongoing cycle of deprivation. These statistics do not include the total family size, so family circumstances will be more difficult when more than one child is present.

The 2006 Census identified 28,041 households in New Zealand where the combined employment of both parents (including households with only one parent) were less than 30 hours per week. This represented 1.9% of all households.

For the 12 cities in total, 2.2% of households had parents working less than 30 hours per week. The cities with the lowest percentages within their area were Dunedin and Wellington (both 1.3%), followed by Rodney, Tauranga and Christchurch (all 1.6%).

Manukau had the greatest number (4,077), the greatest proportion of households (4.3%) and the highest share of the national total (14.5%). The other cities with large shares of the national total were Auckland (12.3%), Christchurch (7.5%), Waitakere (6.0%) and North Shore (5.3%).

There tends to be a higher number of households with children in the age range one to four years old. This pattern is reasonably consistent in all 12 cities and for New Zealand as a whole. In approximately 32.0% of these households the youngest child is in this age bracket, indicating that one or both parents are at home caring for the child during these early years. The largest numbers of such households are in Auckland (1,098) and Manukau (1,260), although in both cases the proportion is lower than the national average (Auckland 31.8%, Manukau 30.9%).

There are a number of explanatory factors that will account for the overall proportion of households in which parents work less than 30 hours per week. The age structure and ethnicity of the population may be an important factor, as will the average age of the parents and whether the household has one parent or two.

## Employment continued

### Households with combined employment of parents less than 30 hours per week (2006)

Age of youngest child:	Less than 1 Year Number	1 to 4 Years Number	5 to 9 Years Number	10 to 14 Years Number	15 to 17 Years Number	Total all ages Number	NZ total %	Households in area %
Rodney	57	150	144	129	42	522	1.9	1.6
North Shore	171	390	351	387	192	1,488	5.3	2.1
Waitakere	255	549	399	321	147	1,674	6.0	2.7
Auckland	474	1,098	813	675	387	3,453	12.3	2.4
Manukau	594	1,260	951	849	420	4,077	14.5	4.3
Hamilton	132	327	183	174	90	906	3.2	2.0
Tauranga	90	198	156	132	48	621	2.2	1.6
Porirua	69	156	108	66	33	435	1.6	2.8
Hutt	90	210	156	114	54	624	2.2	1.8
Wellington	144	294	195	168	81	882	3.1	1.3
Christchurch	339	615	456	453	234	2,097	7.5	1.6
Dunedin	81	198	123	114	57	570	2.0	1.3
<b>Total 12 cities</b>	<b>2,496</b>	<b>5,445</b>	<b>4,035</b>	<b>3,582</b>	<b>1,785</b>	<b>17,349</b>	<b>61.9</b>	<b>2.2</b>
<b>Rest of NZ</b>	<b>1,548</b>	<b>3,450</b>	<b>2,628</b>	<b>2,289</b>	<b>783</b>	<b>10,692</b>	<b>38.1</b>	<b>1.6</b>
<b>Total NZ</b>	<b>4,044</b>	<b>8,895</b>	<b>6,663</b>	<b>5,871</b>	<b>2,568</b>	<b>28,041</b>	<b>100.0</b>	<b>1.9</b>
<b>All NZ by age (%)</b>	<b>14.4</b>	<b>31.7</b>	<b>23.8</b>	<b>20.9</b>	<b>9.2</b>	<b>100.0</b>		

Data source: Statistics New Zealand, Census 2006





## Research and development

### 9. Economic development

- Employment in research and development has only just kept pace with growth in the overall job market.

#### What this is about

Research and development is an important factor in promoting sustainable economic development. Innovation and the use of new technology can increase labour productivity and result in better use of scarce natural resources, as well as producing higher value goods and services that are more competitive in global markets.

Statistics New Zealand's definition of research and development is: '...creative work undertaken on a systematic basis in order to increase the stock of knowledge. Any activity classified as [Research and Development] is characterised by originality. Investigation is a primary objective.'<sup>4</sup>

This indicator shows the number of people employed in research and development (scientific research and higher education) by ANZSIC codes.<sup>5</sup>

#### What did we find?

The cities with the greatest number of people employed in research and development are those that are home to a Crown Research Institute: Porirua (5.1%) and Hutt (3.4%), or a university: Dunedin (8.9%), Hamilton (4.0%), Auckland (2.9%), Wellington (2.8%) and Christchurch (2.5%).

Although the total number of filled jobs in research and development had increased by nearly 5,500 over the five years to 2006, the proportion of people in these jobs remained at 2.3% of the workforce for New Zealand as a whole. In the 12 cities they increased from 2.6% in 2001 to 2.9% in 2004 and then dropped back to 2.7% in 2006.

**Number and percentage of workforce employed in scientific research and higher education (2001 to 2006)**

	2001		2002		2003		2004		2005		2006	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Rodney	-	-	-	-	-	-	-	-	25	0.1	9	0.0
North Shore	533	0.8	763	1.1	870	1.2	933	1.2	966	1.2	1,053	1.3
Waitakere	3	0.0	-	-	3	0.0	3	0.0	9	0.0	-	-
Auckland	7,470	2.9	7,870	3.0	8,590	3.1	9,220	3.2	9,020	3.0	9,050	2.9
Manukau	865	0.9	970	1.0	1,030	1.0	1,195	1.1	1,185	1.0	1,120	0.9
Hamilton	2,810	5.1	2,860	4.9	3,120	5.1	3,010	4.7	3,000	4.3	2,900	4.0
Tauranga	373	1.1	413	1.1	556	1.4	483	1.2	469	1.1	475	1.0
Porirua	500	4.3	540	4.3	680	5.4	660	5.1	730	5.5	740	5.1
Hutt	1,310	3.3	1,530	3.9	1,630	4.1	1,640	4.1	1,540	3.7	1,490	3.4
Wellington	2,990	2.6	3,120	2.7	3,410	2.9	3,540	2.9	3,720	2.9	3,660	2.8
Christchurch	3,040	2.0	3,000	2.0	3,380	2.1	4,580	2.7	4,650	2.6	4,550	2.5
Dunedin	4,550	9.8	4,200	8.8	4,280	8.5	4,270	8.3	4,430	8.3	4,860	8.9
<b>Total 12 cities</b>	<b>24,444</b>	<b>2.6</b>	<b>25,266</b>	<b>2.7</b>	<b>27,549</b>	<b>2.8</b>	<b>29,534</b>	<b>2.9</b>	<b>29,744</b>	<b>2.7</b>	<b>29,907</b>	<b>2.7</b>
<b>Rest of NZ</b>	<b>9,706</b>	<b>1.8</b>	<b>10,544</b>	<b>1.9</b>	<b>10,831</b>	<b>1.8</b>	<b>11,746</b>	<b>1.9</b>	<b>12,166</b>	<b>1.9</b>	<b>11,523</b>	<b>1.8</b>
<b>Total NZ</b>	<b>34,150</b>	<b>2.3</b>	<b>35,810</b>	<b>2.4</b>	<b>38,380</b>	<b>2.4</b>	<b>41,280</b>	<b>2.5</b>	<b>41,910</b>	<b>2.4</b>	<b>41,430</b>	<b>2.3</b>

Data source: Statistics New Zealand, Business Demographic Statistics

<sup>4</sup> Statistics New Zealand and Ministry of Research, Science and Technology. (2004). *Research and Development in New Zealand 2004*, pg 1.

<sup>5</sup> Australian and New Zealand standard industrial classification - New Zealand version 1996: codes L781 Scientific Research and N8431 Higher Education were selected.



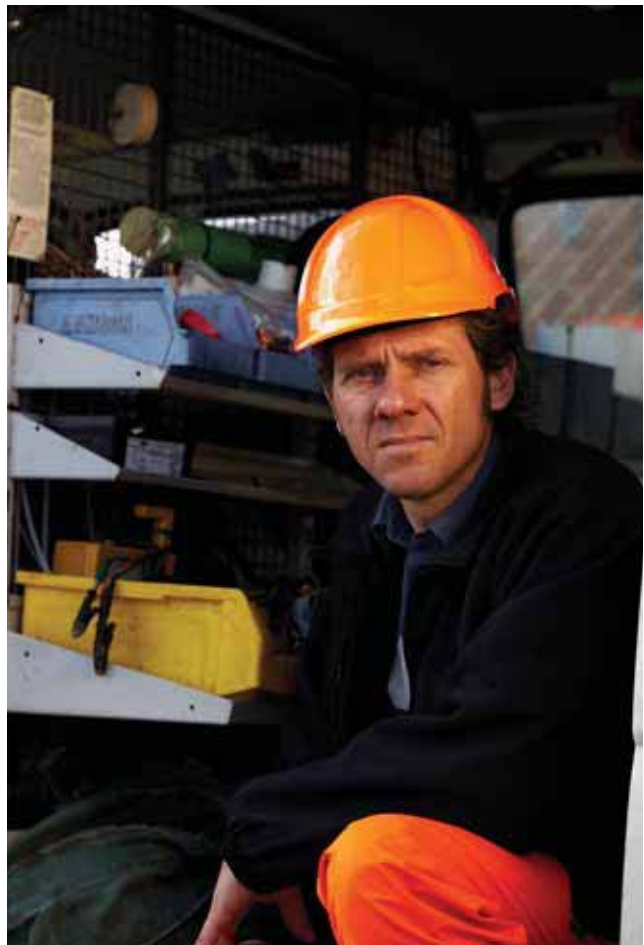
## Research and development continued

**Number and percentage of workforce employed in scientific research alone (2001 to 2006)**

	2001		2002		2003		2004		2005		2006	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Rodney	-	-	-	-	-	-	-	-	-	-	9	0.0
North Shore	3	0.0	3	0.0	-	-	3	0.0	6	0.0	3	0.0
Waitakere	3	0.0	-	-	3	0.0	3	0.0	3	0.0	-	-
Auckland	800	0.3	960	0.4	1,010	0.4	1,110	0.4	810	0.3	930	0.3
Manukau	25	0.0	20	0.0	30	0.0	75	0.1	65	0.1	80	0.1
Hamilton	410	0.7	320	0.6	340	0.6	350	0.5	420	0.6	440	0.6
Tauranga	3	0.0	3	0.0	6	0.0	3	0.0	9	0.0	15	0.0
Porirua	160	1.4	160	1.3	170	1.3	190	1.5	190	1.4	210	1.4
Hutt	590	1.5	620	1.6	650	1.7	660	1.7	620	1.5	600	1.4
Wellington	410	0.4	410	0.4	470	0.4	460	0.4	440	0.3	440	0.3
Christchurch	270	0.2	350	0.2	320	0.2	380	0.2	440	0.2	410	0.2
Dunedin	210	0.5	200	0.4	200	0.4	190	0.4	250	0.5	360	0.7
<b>Total 12 cities</b>	<b>2,884</b>	<b>0.3</b>	<b>3,046</b>	<b>0.3</b>	<b>3,199</b>	<b>0.3</b>	<b>3,424</b>	<b>0.3</b>	<b>3,253</b>	<b>0.3</b>	<b>3,497</b>	<b>0.3</b>
<b>Rest of NZ</b>	<b>3,416</b>	<b>0.6</b>	<b>3,564</b>	<b>0.6</b>	<b>3,391</b>	<b>0.6</b>	<b>3,436</b>	<b>0.6</b>	<b>3,367</b>	<b>0.5</b>	<b>3,543</b>	<b>0.5</b>
<b>Total NZ</b>	<b>6,300</b>	<b>0.4</b>	<b>6,610</b>	<b>0.4</b>	<b>6,590</b>	<b>0.4</b>	<b>6,860</b>	<b>0.4</b>	<b>6,620</b>	<b>0.4</b>	<b>7,040</b>	<b>0.4</b>

Data source: Statistics New Zealand, Business Demographic Statistics

When higher education is excluded from the data, the total number of people employed in scientific research has increased by only 613 in the 12 cities and 740 for New Zealand as a whole over this period. The proportion of the total workforce has remained constant at 0.3% for the 12 cities and 0.4% for New Zealand as a whole.





## Local businesses

## 9. Economic development

- The overall growth rate of businesses among the 12 cities, from 2002 to 2006, was lower than the rest of New Zealand with the exception of Tauranga and Rodney.

### What this is about

Growth in the number of businesses is a leading indicator of current and future employment and economic activity. Vigorous business growth is a sign of a healthy local economy. This indicator shows the percentage growth in the number of economically viable business enterprises (i.e. business 'births' minus business 'deaths').

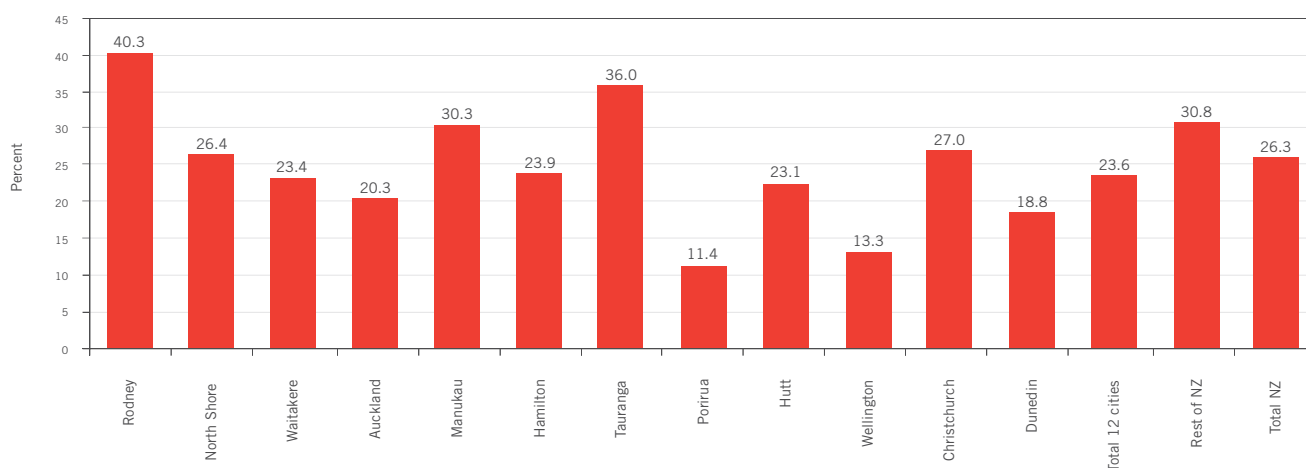
### What did we find?

This indicator looks at the number of 'economically significant enterprises' that were in existence in February of each year.<sup>6</sup> The data shows net growth in the number of businesses.

From 2002 to 2006, the overall growth rate of businesses for New Zealand was 26.3%. Among the 12 cities it was 23.6%, which was lower than the rest of New Zealand (30.8%).

Among the 12 cities, the overall growth rate in the number of business enterprises was highest in Rodney (40.3%). The highest increase in terms of numbers was Auckland with an increase of 9,145 businesses over the four year period. Other cities that had higher business growth rates than the New Zealand average (26.3%), were Tauranga (36.0%), Manukau (30.3%), Christchurch (27.0%) and North Shore (26.4%). The cities with the lowest rates of growth were Wellington (13.3%) and Porirua (11.4%).

**Growth in number of economically viable business enterprises (2002 to 2006)**



Data source: Statistics New Zealand, Business Demographic Statistics

<sup>6</sup> The Business Demography Statistics are derived from Statistics New Zealand's Business Frame Survey, which defines an 'economically significant enterprise' as GST registered with a turnover of \$30,000 per year or more.

## Retail sales

- Retail spending has increased in all 12 cities over the period 2003 to 2006.
- The highest amount and greatest proportion of national retail spending occurs in Auckland.

### What this is about

Change in retail expenditure reflects the health of a local economy. Locally spent dollars potentially contribute to more jobs for local residents and higher profits for local businesses. Increases in retail sales may also indicate increased disposable income and higher levels of employment.

### What did we find?

This indicator shows the estimated total value of retail expenditure from 2004 to 2006, as well as each city's share of the national total. These results are indicative only and should be treated with caution.<sup>7</sup> The data is taken from Statistics New Zealand's Retail Trade Survey, which is not designed to provide robust results at this level of analysis. Also, because this data is collected from businesses located in each city, the sales figures will include tourist spending as well as spending by people who reside in adjacent cities and districts.

In the year ended December 2006, total estimated retail sales in New Zealand were \$61.3 billion. The 12 cities accounted for \$36.8 billion (60.1%) of those sales.

For New Zealand as a whole, sales increased substantially in the year ended 2005 and then slowed in the year ended December 2006, a trend that has been linked with the slowdown in economic activity across New Zealand. A similar pattern was observed in all regions and across the rest of New Zealand.

The highest amount and proportion of sales were in Auckland, totalling \$8.56 billion. Although retail sales grew in all 12 cities, Auckland's share decreased from 14.6% of the national total to 14.0% over the period 2004 to 2006.<sup>8</sup>

On a per capita basis, retail sales in 2006 were strongest in Tauranga (\$21,418 per person), followed by Auckland (\$21,165) and North Shore (\$18,313). The lowest sales per capita were in Porirua (\$12,364), Manukau (\$12,205), Waitakere (\$11,411) and Rodney (\$10,758). As noted above, some of these results may indicate that people do not necessarily shop in the city where they live, especially where two cities are directly adjacent.

### Actual retail sales, all retail industry groups (2004 to 2006)

	2004		2005		2006		Change 2004 to 2006 (%)	Per capita spending (2006, \$)
	Total sales (\$m)	Share (%)	Total sales (\$m)	Share (%)	Total sales (\$m)	Share (%)		
Rodney	693	1.3	839	1.4	964	1.6	39.1	10,758
North Shore	3,541	6.4	3,649	6.2	3,765	6.1	6.3	18,313
Waitakere	1,892	3.4	2,022	3.4	2,128	3.5	12.5	11,411
Auckland	8,050	14.6	8,326	14.2	8,564	14.0	6.4	21,165
Manukau	3,731	6.7	3,948	6.7	4,015	6.6	7.6	12,205
Hamilton	2,220	4.0	2,250	3.8	2,350	3.8	5.9	18,182
Tauranga	1,886	3.4	2,171	3.7	2,220	3.6	17.7	21,418
Porirua	531	1.0	543	0.9	600	1.0	13.0	12,364
Hutt	1,191	2.2	1,348	2.3	1,540	2.5	29.2	15,757
Wellington	2,950	5.3	3,103	5.3	3,102	5.1	5.1	17,285
Christchurch	5,085	9.2	5,504	9.4	5,668	9.3	11.5	16,268
Dunedin	1,622	2.9	1,839	3.1	1,884	3.1	16.2	15,876
<b>12 cities</b>	<b>33,393</b>	<b>60.4</b>	<b>35,541</b>	<b>60.5</b>	<b>36,800</b>	<b>60.1</b>	<b>10.2</b>	<b>16,421</b>
<b>Rest of NZ</b>	<b>21,894</b>	<b>39.6</b>	<b>23,251</b>	<b>39.5</b>	<b>24,472</b>	<b>39.9</b>	<b>11.8</b>	<b>13,694</b>
<b>Total NZ</b>	<b>55,287</b>	<b>100.0</b>	<b>58,792</b>	<b>100.0</b>	<b>61,272</b>	<b>100.0</b>	<b>10.8</b>	<b>15,212</b>

Data sources: Statistics New Zealand, Retail Trade Survey 2004 to 2006 and Census 2006

7 The survey has a sample of 4,000 enterprises with a turnover of \$30,000 or more and is stratified according to retail store type and size at the national level.

8 Note: These are actual sales not adjusted for inflation. The CPI can be used to adjust these sales to compensate for inflation.



## Non-residential building consents

### 9. Economic development

- The 12 cities account for nearly 60.0% of the value of all non-residential consents.

#### What this is about

Building and construction activity is a significant leading indicator of overall economic activity. Non-residential building relates to business investment and government spending.

This indicator provides information on the number of new non-residential building work proposed, as well as the total value (cost) of the work.

#### What did we find?

The 12 cities account for nearly 60.0% of the value of all non-residential consents. Much of the growth in non-residential building activity has been in factories, warehouses, hospitals and educational institutions.

Between 2003 and 2004 the value of non-residential consents in the 12 cities grew by 67.0%, compared to 22.0% in the rest of New Zealand.

The four cities in the Auckland region account for 33.0% of the total value of non-residential building consents issued in New Zealand. There has been limited growth in investment in non-residential buildings since 2004, except in Christchurch where the value of consents increased from \$165.7 million to \$293.1 million (an increase of 76.9%) from 2005 to 2006.

Number and value (\$ million) of consents for new non-residential buildings (2003 to 2006)

	2003		2004		2005		2006	
	Number	Value (\$m)	Number	Value (\$m)	Number	Value (\$m)	Number	Value (\$m)
Rodney	205	42.1	268	59.6	228	43.2	213	45.7
North Shore	93	84.4	133	120.8	109	144.2	75	156.3
Waitakere	84	53.8	106	110.8	70	33.1	81	67.2
Auckland	179	266.7	244	337.1	210	417.2	217	376.2
Manukau	208	182.1	228	313.9	210	327.0	200	296.7
Hamilton	135	66.4	156	106.5	149	139.5	109	114.4
Tauranga	107	29.4	117	90.3	112	104.8	152	140.9
Hutt	36	14.9	54	68.6	63	72.1	41	35.5
Porirua	30	13.9	32	26.9	31	6.6	36	14.6
Wellington	99	36.0	99	165.0	107	210.8	73	61.6
Christchurch	281	118.9	314	181.9	304	165.7	234	293.1
Dunedin	99	54.7	117	27.1	105	46.5	117	18.8
<b>Total 12 cities</b>	<b>1,556</b>	<b>963.4</b>	<b>1,868</b>	<b>1,608.5</b>	<b>1,698</b>	<b>1,710.6</b>	<b>1,548</b>	<b>1,621.1</b>
<b>Rest of NZ</b>	<b>5,672</b>	<b>760.3</b>	<b>6,414</b>	<b>929.5</b>	<b>6,409</b>	<b>1,197.1</b>	<b>6,551</b>	<b>1,090.3</b>
<b>Total NZ</b>	<b>7,228</b>	<b>1,723.7</b>	<b>8,282</b>	<b>2,537.9</b>	<b>8,107</b>	<b>2,907.8</b>	<b>8,099</b>	<b>2,711.3</b>
<b>12 city share NZ (%)</b>	<b>21.5</b>	<b>55.9</b>	<b>22.6</b>	<b>63.4</b>	<b>20.9</b>	<b>58.8</b>	<b>19.1</b>	<b>59.8</b>

Data source: Statistics New Zealand, Building Consent Information

## Tourism

- The 12 cities account for almost two fifths of total guest nights purchased at commercial accommodation in New Zealand.
- The number of guest nights purchased grew in the 12 cities in the period 2004 to 2007 and at a similar rate of growth for New Zealand as a whole.

### What this is about

Tourism plays a significant role in the New Zealand economy in terms of the production of goods and services and the creation of employment opportunities. Tourism includes both international and local (domestic) visitors travelling in New Zealand for non-business or recreational purposes. In 2005, the Gross Domestic Product of the tourism industry represented 4.8% of New Zealand's economy. Tourism also comprised 18.7% of New Zealand's total export earnings and 5.8% of total employment.<sup>9</sup>

Expenditure of tourists generates foreign currency income and creates demand for goods and services which in turn supports production and employment. This indicator shows the number of guest nights purchased at commercial accommodation.

### What did we find?

The 12 cities accounted for over 39.0% of total guest nights purchased at commercial accommodation in New Zealand. In the year to March 2007, Auckland recorded the largest number of guest nights purchased, accounting for 11.7% of the New Zealand total, followed by Christchurch (9.5%) and Wellington (5.7%).

For the period March 2004 to March 2007, the number of guest nights purchased by tourists/visitors in the 12 cities increased by 7.6%. A similar growth rate was recorded for the rest of New Zealand (7.5%).

Of the 12 cities, those with the highest growth over the last three years were Waitakere (25.0%), Wellington (22.0%), Tauranga (15.0%) and Hamilton (10.0%).

**Number and percentage of guest nights purchased (years ended March, 2004 to 2007)**

	2004		2005		2006		2007	
	Number	%	Number	%	Number	%	Number	%
Rodney	323,877	1.1	364,097	1.2	331,015	1.1	311,716	1.0
North Shore	363,724	1.2	354,627	1.1	336,771	1.1	353,374	1.1
Waitakere	61,327	0.2	60,169	0.2	71,934	0.2	76,826	0.2
Auckland	3,589,670	12.0	3,765,337	11.9	3,618,886	11.6	3,782,409	11.7
Manukau	700,301	2.3	667,595	2.1	720,473	2.3	713,985	2.2
Hamilton	516,585	1.7	527,541	1.7	557,268	1.8	569,060	1.8
Tauranga	669,618	2.2	722,037	2.3	731,537	2.3	775,819	2.4
Hutt	227,868	0.8	218,410	0.7	232,305	0.7	217,892	0.7
Porirua	62,502	0.2	64,581	0.2	60,000	0.2	60,453	0.2
Wellington	1,510,162	5.0	1,599,147	5.1	1,703,656	5.4	1,842,132	5.7
Christchurch	2,925,388	9.8	3,241,147	10.3	3,138,014	10.0	3,072,120	9.5
Dunedin	828,253	2.8	864,297	2.7	902,916	2.9	900,294	2.8
<b>Total 12 cities</b>	<b>11,779,275</b>	<b>39.3</b>	<b>12,448,985</b>	<b>39.5</b>	<b>12,404,775</b>	<b>39.6</b>	<b>12,676,080</b>	<b>39.3</b>
<b>Rest of NZ</b>	<b>18,206,523</b>	<b>60.7</b>	<b>19,069,837</b>	<b>60.5</b>	<b>18,883,523</b>	<b>60.4</b>	<b>19,567,800</b>	<b>60.7</b>
<b>Total NZ</b>	<b>29,985,799</b>	<b>100.0</b>	<b>31,518,822</b>	<b>100.0</b>	<b>31,288,293</b>	<b>100.0</b>	<b>32,243,880</b>	<b>100.0</b>

Data source: Statistics New Zealand, Accommodation Survey



## Skilled migrants

### 9. Economic development

- A quarter of the skilled migrants to New Zealand elect to settle in the Auckland region.
- A further quarter settled in the other regions where the 12 cities are situated.

#### What this is about

To sustain growth and improve productivity, New Zealand needs a well-educated, skilled and adaptable workforce. Skill shortages are often cited as a key impediment to business growth.<sup>10</sup>

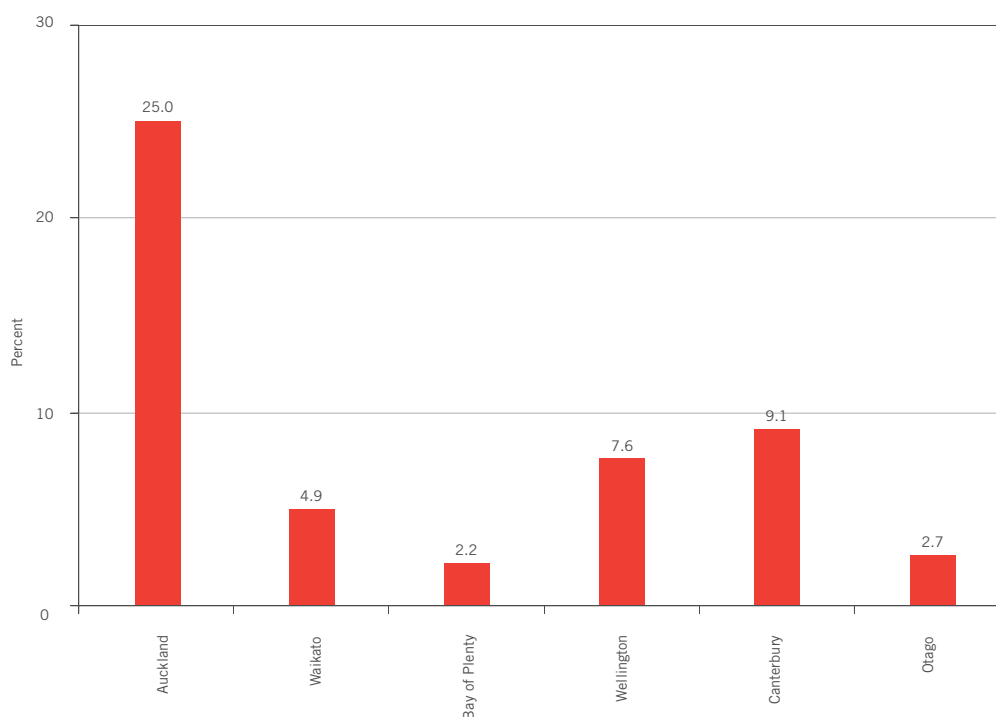
The number of skilled migrants arriving in any region may reflect the region's attractiveness in terms of quality of life and opportunities. It may also reflect the growth potential of the region or the size of the current migrant community within these cities. This indicator looks at the percentage of skilled migrant applicants that are approved by region of employment. It shows the region in which successful applicants in the Skilled Migrants Category intend to settle.

#### What did we find?

Over the years 2004 to 2007 there were 33,773 skilled migrants (principal applicants) to New Zealand. Of these 8,457, or 25.0% of the total, intended to settle in the Auckland region.

Large numbers of skilled migrants were also recruited by businesses in Canterbury (3,073 or 9.1%), Wellington (2,551 or 7.6%), Waikato (1,669 or 4.9%), Otago (909 or 2.7%) and Bay of Plenty (734 or 2.2%). The remaining 48.5% nominated a region elsewhere in New Zealand as their destination.

Percentage of skilled migrants approved, by region (2004 to 2007)



Data source: Department of Labour

10 Department of Labour. (2007). *Skills in the Labour Market - May 2007*. [www.dol.govt.nz](http://www.dol.govt.nz). Retrieved 11 July 2007.



# Chapter Ten

## Natural environment

### What's in this chapter?

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Local natural environmental issues

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Waste management and recycling

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Biodiversity

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Energy use

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Air quality

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Beach and stream/lake water quality

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Drinking water quality

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Water consumption

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Ecological footprints

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# Introduction

## 10. Natural environment

**This chapter looks at the physical aspects of the natural environment that have a substantial impact on life in cities, such as air, soil, water, drinking water and waste disposal.**

### Why this is important

The quality of the natural environment is directly related to people's quality of life. Population growth and economic development put pressure on the sustainability of the natural environment. Pressure for expansion of the urban area into peripheral areas will have effects on the natural ecosystems of both the land and sea. Issues such as environmental pollution, waste generation and management, heritage protection and preservation of indigenous wildlife in built-up areas are all important issues to be considered as urban areas grow and develop.

### Key points

Almost all (97.0%) of the New Zealand population living in metropolitan areas has access to kerbside recycling, offering opportunities to divert waste materials from landfills.<sup>1</sup>

All of the 12 cities are addressing biodiversity through their Long Term Council Community Plans (LTCCP) and District Plans, with many adopting policies and programmes to prevent loss of biodiversity.

Many of the city councils are changing their energy usage behaviour through sustainable energy use projects, such as trialling solar-powered lighting on bus shelters and generating electricity for the national grid through landfill gas extraction.

Air pollution is an issue in Christchurch, which had the highest rates of PM<sub>10</sub> (suspended particle) exceedances between 2001 and 2005. Auckland had higher levels of nitrogen dioxide and ozone concentration compared with other cities.

Residents of Christchurch and Auckland were more likely to state that air pollution was a problem in their city than residents of the other cities.

The public health risk at coastal beaches is relatively low in all five regions in which our cities are located. In comparison, the rate of public health risk at inland

freshwater beaches is relatively high. Of those regions with a comparatively high number of monitored sites, Canterbury has the highest number of samples exceeding guidelines.

North Shore, Auckland, Waitakere, Manukau, Hamilton and Tauranga have excellent grades for drinking water quality. In all our cities at least 99.8% of the population received water from suppliers that complied with *E. coli* standards.

### Links to other indicators

A healthy natural environment contributes to public health. Air pollutants, for example, can reduce the capacity to resist infection, which can increase the number of hospital admissions and emergency department visits, school absences, lost work days and restricted activity days.<sup>2</sup>

Emissions from motor vehicles and other sources of air pollution, such as industry and fires for home heating, have been linked to almost 1,100 premature deaths per year in New Zealand.<sup>3</sup> Polluted recreational water is also strongly related to human health problems, such as stomach and intestinal illness, colds and flu and skin, eye and ear infections.<sup>4</sup>

Ineffective waste disposal can create air, water and soil pollution and loss of biodiversity. Increasing water usage, resulting in depletion of water supplies, is a key factor in loss of biodiversity and water pollution and also impacts on recreational opportunities. Stress is placed on waterways through point and non-point pollution sources. These factors can compromise the source of a city's drinking water supply. The quality of drinking water supplied to residents has a direct impact on people's health and wellbeing.<sup>5</sup>

Biodiversity provides the critical ecosystem processes necessary to maintain life, such as the quality of the atmosphere, the climate, water and soil quality and waste disposal. Apart from the ethical, aesthetic and cultural reasons behind the need to preserve biological diversity, there are also economic motives to do so. The range of biodiversity impacts on control of plant and animal pests and diseases, provision of food, clothing, building materials and medicines and is a key component of tourism.

<sup>1</sup> It is difficult to assess accurately the level of waste generated by domestic, commercial and industrial sources, as waste management activities for most cities are carried out by commercial contractors. The data is considered to be commercially sensitive information, rather than data that could be used by councils to address the growing issue of waste disposal.

<sup>2</sup> Ministry for the Environment. (2007). [www.mfe.govt.nz/issues/air/breathe/particles](http://www.mfe.govt.nz/issues/air/breathe/particles) Retrieved 16 July 2007.

<sup>3</sup> Fisher, G., Kjellstrom, T., Kingham, S., Hales, S. & Shrestha, R. (2007). *Health and Air Pollution in New Zealand*. A research project funded by Health Research Council of New Zealand, Ministry for the Environment and Ministry of Transport.

<sup>4</sup> Ministry for the Environment. (2003). *Microbiological Water Quality Guidelines for Marine and Freshwater Recreational Areas* (ME number 474).

<sup>5</sup> Ministry for the Environment. (2004). *Freshwater for a sustainable future: issues and options*. Prepared for the Minister for the Environment by the Water Programme of Action inter-departmental working group.

## Local natural environmental issues

- Key environmental issues facing the 12 cities are the effects of growth and development, protecting biodiversity, transportation, air quality and water supply/quality.

### What this is about

New Zealand's natural environment supports its people, economy and culture. As the population grows and economic activity increases, more demands are placed on the natural environment. Environmental issues impact on economic and public health issues.

This indicator considers the key environmental issues that the 12 cities have identified. While the Ministry for the Environment has a mandate to provide national level guidance on environmental issues, local government has ongoing responsibility for day to day environmental management.

### What did we find?

Key environmental issues vary across the 12 cities due to natural geography and level of urban growth. Issues mentioned frequently were the effects of city development/growth, protecting and restoring biodiversity, transport, air quality and water issues (e.g. continuity of supply and contamination of water sources).

Some issues, such as climate change, depletion of the ozone layer and disposal of waste and hazardous substances, are relevant to New Zealand as a whole.

### Local natural environmental issues, by city (2007)

	Key local natural environmental issues
Rodney	<ul style="list-style-type: none"> <li>• Accommodating growth and development whilst maintaining beautiful coastlines and rural landscapes.</li> <li>• Developing the economic viability of rural and aquatic industries and protecting native biodiversity, biosecurity and pest management.</li> </ul>
North Shore	<ul style="list-style-type: none"> <li>• Management of the volume and quality of stormwater.</li> <li>• Maintenance of a rural character edge to the city.</li> </ul>
Auckland	<ul style="list-style-type: none"> <li>• Contamination of storm water by heavy metals.</li> <li>• Air quality (with transportation as the primary contributor).</li> </ul>
Waitakere	<ul style="list-style-type: none"> <li>• Town centre revitalisation incorporating biodiversity.</li> <li>• Management of environmental pests to protect native bush areas.</li> </ul>
Manukau	<ul style="list-style-type: none"> <li>• Accommodating sustainable growth within the metropolitan urban limits.</li> <li>• Providing sufficient land for business and commercial development.</li> </ul>
Hamilton	<ul style="list-style-type: none"> <li>• Allocation of water in a sustainable and equitable way.</li> <li>• Degradation of the Waikato river bed.</li> </ul>
Tauranga	<ul style="list-style-type: none"> <li>• Management of urban growth in a sustainable way.</li> <li>• Maintenance of close linkages between land development and transportation.</li> </ul>
Hutt	<ul style="list-style-type: none"> <li>• Flooding concerns from Hutt River and Awamutu and Waiwhetu Streams (the latter heavily contaminated by pollutants and requiring remediation).</li> <li>• Growing population putting pressure on the water supply.</li> </ul>
Porirua	<ul style="list-style-type: none"> <li>• Restoration of Porirua harbour inlet and waterways.</li> <li>• Support for Transmission Gully Motorway to ease traffic congestion and increase road safety.</li> </ul>
Wellington	<ul style="list-style-type: none"> <li>• Conservation of biodiversity by protection from negative effects of land use, particularly development in urban areas.</li> <li>• Management of pests and weeds to enhance biodiversity.</li> </ul>
Christchurch	<ul style="list-style-type: none"> <li>• Winter air quality (with open fires as the main contributor).</li> <li>• Ensuring a safe, secure potable water supply for future generations.</li> </ul>
Dunedin	<ul style="list-style-type: none"> <li>• Protection of the diversity of landscapes particularly those of outstanding quality.</li> <li>• Pressure for rural residential development particularly at coastal locations.</li> </ul>

Data source: Participating councils, 2007



## Waste management and recycling

### 10. Natural environment

- Almost all of New Zealanders living in the major metropolitan areas have access to kerbside recycling.
- The volume of solid waste sent to landfill has slightly increased in the years 2002 to 2006.

#### What this is about

Waste is material that is perceived to have no further use and which is released into the environment as a means of disposal. If it is not effectively managed it can create a range of adverse environmental and human health effects, undermining our ability to live more sustainably.

Waste includes solid, liquid or gaseous materials. While this indicator focuses on solid waste, it should be noted that other major categories of waste produced in cities include liquid trade wastes, sewage, contaminated stormwater, greenhouse gas emissions and various health-damaging air emissions from vehicles and industrial sources.

This indicator includes three measures:

- Position of the 12 cities in recycling and the amount of waste generated
- Volume per resident of recyclable waste (kgs)
- Volume per resident of solid waste disposal to landfill (kgs).

#### What did we find?

There are considerable gaps in the data available for volume of waste generated in cities, particularly for commercial and industrial waste. As waste is usually managed by the private sector (e.g. waste management contractors), the volume handled in each city is often measured and reported on using different methodologies. Due to this, there were difficulties ascertaining an accurate assessment of the level of waste generated by people and businesses in New Zealand.

It is often difficult for territorial authorities to accurately record household waste as volume of waste often includes both domestic and commercial waste. Although most cities were

able to report on the volume of rubbish bags/wheelie bins and recycling collected, waste that is taken to landfills or drop-off stations was not always recorded. Also, user-pays waste disposal, which is operated by commercial companies and deposited at council-run landfills and drop-off stations, was often included in the commercial, rather than domestic, tally. In these situations, the household volume can be estimated by the contractor (e.g. commercial waste management contractors in Christchurch estimate domestic waste to be approximately 45.0% of the total waste they collect per year).

It is hard to measure the progress of individual cities in their efforts to provide more sustainable waste management practices. However the 2006 Review of Progress of the Targets in the New Zealand Waste Strategy<sup>6</sup> does give a national picture of the process toward more sustainable waste management activities.

#### Position of each city in recycling

All of the 12 cities provided a service to collect recyclable materials (paper and card, plastic one and two, glass, steel and aluminium cans) from households at the kerbside, as well as providing facilities for residents to dispose of these same types of recyclable materials at drop-off stations.

The Ministry for the Environment reported in 2006 that 97.0% of all New Zealanders had access to domestic recycling facilities (either kerbside or drop-off), with 73.0% at the kerbside. In general, the major metropolitan cities (classified as Auckland, Hamilton, Wellington, Christchurch and Dunedin in the Ministry for the Environment's report) were performing better on waste recycling services than other urban and rural areas. The exception to this is in the provision of green waste facilities, where the other urban areas were often better serviced for this type of recycling.<sup>7</sup>

6,7 Ministry for the Environment. (2006). *Targets in the New Zealand Waste Strategy, 2006 Review of Progress*. [www.mfe.govt.nz](http://www.mfe.govt.nz)

## Waste management and recycling continued

### Recycling in metropolitan, urban and rural areas (2006)

	% of New Zealand population in area	% of area population with access to kerbside recycling	% of area population with access to recycling facilities	% of territorial authorities providing green waste facilities
Metropolitan	52.0	97.0	99.7	70.0
Urban	24.0	53.0	97.0	84.0
Rural	24.0	45.0	92.0	64.0

Data source: Ministry for the Environment - Targets in the New Zealand Waste Strategy, 2006 Review of Progress

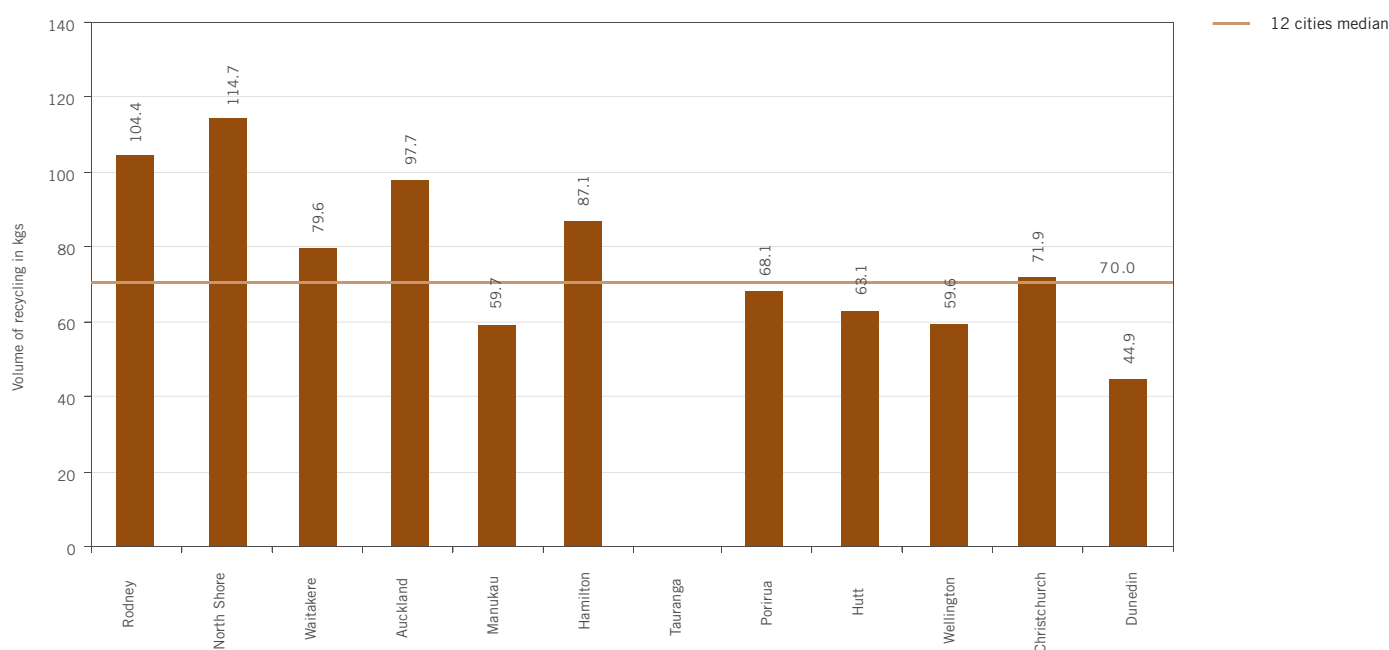
### Volume per resident of recyclable waste (kgs)<sup>8</sup>

There was variation across the cities, with the highest volume of total recycling collected<sup>9</sup> in North Shore (114.7 kgs per person per year). Dunedin (44.9kgs) and Wellington (59.6kgs) had the lowest volume of recycling per person per year.

The Ministry for the Environment noted in its 2006 progress review of Targets in the New Zealand Waste Strategy that space

allocation for recycling facilities in multi-unit residential and commercial buildings is not effectively achieved through councils' district plans. As a result, the Department of Building and Housing is examining options to make it mandatory for building designers to include space for recycling facilities in residential and commercial developments.<sup>10</sup>

### Volume of recyclable materials collected per resident per year, by city (2007)<sup>11</sup>



Data source: Participating councils, 2007

8 Recycling volumes may not be comparable across the 12 cities, as a mix of private contractors and councils manage recycling services in most areas and there is no agreed standard approach to assessing and reporting on recycling collected. The figures reported here are a per capita average and may not be an accurate reflection of total volumes collected.

9 This includes residential recycling collected at drop-off stations and kerbside. However, it excludes green waste recycled. It should be noted that some councils collect more types of plastic than just grade one and two. However, for the purposes of this report, they were requested to report on these grades only, to enable some degree of comparison.

10 Ministry for the Environment. (2006). *Targets in the New Zealand Waste Strategy, 2006 Review of Progress*. [www.mfe.govt.nz](http://www.mfe.govt.nz)

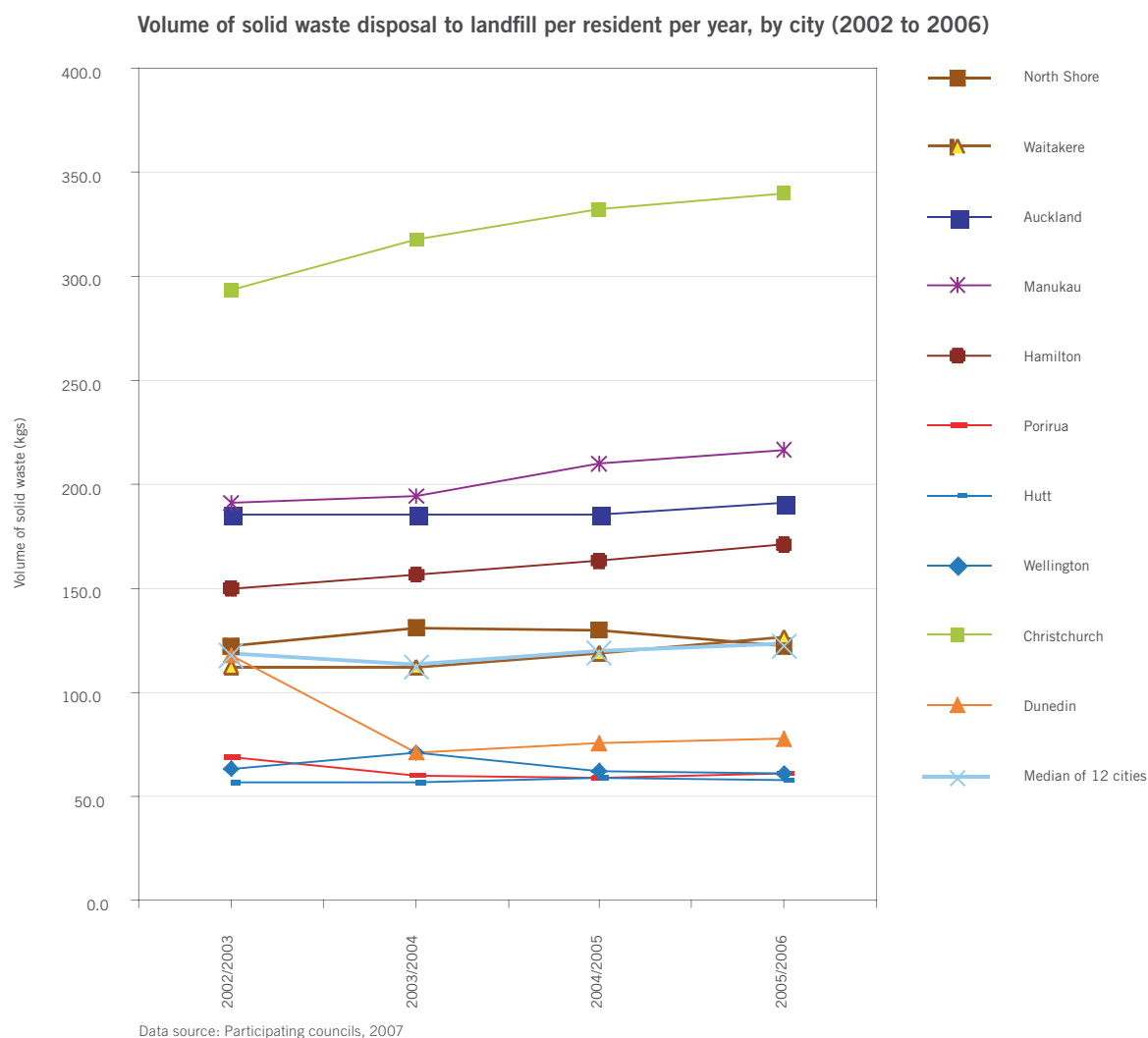
11 Data not available for Tauranga.

## 10. Natural environment

**Volume per resident of solid waste disposal to landfill (kgs)<sup>12</sup>**

Across the 12 cities, the amount of solid waste sent to landfill increased in the years 2002 to 2006. The amount generated by

each city varied widely, from Christchurch reporting 339.7kgs per person in 2005/2006, to Hutt with 57.7kgs. No data was available for Rodney and Tauranga.



12 Solid waste volumes may not be comparable across the 12 cities, as a mix of private contractors and councils provide waste management services in most areas and there is no agreed standard approach to assessing and reporting on waste volumes collected. The figures reported here are a per capita average and may not be an accurate reflection of total volumes collected.

## Biodiversity

- All the 12 cities are addressing biodiversity through their LTCCPs and District Plans.

### What this is about

Biodiversity is the number and variety of organisms found within a specified geographic region and the variability among living organisms on the earth (both within and between species and within and between ecosystems).

New Zealand's native biodiversity is unique, due to our geographic isolation. The high percentage of endemic species (those found nowhere else in the world) makes New Zealand's native biodiversity both special and highly vulnerable. This indicator focuses primarily on New Zealand's indigenous biodiversity.

Measures for this indicator include:

- Position of each city in conservation and sustainable management of biodiversity

- Hectares of privately owned open space covered by QEII Trust registered covenants
- Number of ecological heritage sites.

### What did we find?

#### Position of each city in conservation and sustainable management of biodiversity

In 2000, the Government released *The New Zealand Biodiversity Strategy*, which focused on the conservation, sustainable use and management of New Zealand's biodiversity. The first goal was to enhance community and individual understanding about biodiversity and to support community action to conserve biodiversity. The Local Government Act (2002) also requires that councils promote the environmental wellbeing of a community.

This measure explores how the 12 cities have addressed biodiversity through their LTCCPs and District Plans.

#### Council biodiversity issues

Rodney District Council	<ul style="list-style-type: none"> <li>• Natural and coastal environment is coming under increasing development and population pressure. District Plan zoning a key in conserving and enhancing the environment.</li> <li>• Key projects to protect biodiversity include establishing ecological corridors and reviewing incentives for protection of natural heritage on private land.</li> </ul>
North Shore City Council	<ul style="list-style-type: none"> <li>• Priorities include a study of protected natural areas and a review of development in greenfield areas.</li> <li>• Zoning controls include protection of native bush within the residential and rural zones and a tree protection bylaw for trees over certain sizes.</li> </ul>
Auckland City Council	<ul style="list-style-type: none"> <li>• Hauraki Gulf Islands District Plan identifies sites of ecological significance that contribute to the natural heritage and character of the islands. Development activity is controlled in these areas.</li> <li>• 'Greening the City', released in 2004, provides direction for the management of the natural environment.</li> </ul>
Waitakere City Council	<ul style="list-style-type: none"> <li>• Key priority is sustainable development including supporting ecosystem capacity and respecting environmental limits.</li> <li>• Biodiversity Strategy adopted in 2006 with one of the goals being the re-establishment of species lost from the city.</li> </ul>
Manukau City Council	<ul style="list-style-type: none"> <li>• Sustainable Environment and Heritage a theme in LTCCP. Actions include recognising and protecting natural and cultural sites and protecting and enhancing the natural qualities of lakes, streams and coastlines.</li> <li>• District Plan specifies protection of stream systems and native bush areas and zoning of residential areas to protect floral heritage.</li> </ul>
Hamilton City Council	<ul style="list-style-type: none"> <li>• Raising awareness about creating a sustainable urban environment is a priority through environmental education programmes such as Gully Restoration and the Enviroschools schemes.</li> <li>• Zoning and environmental protection overlays to manage the natural values and significant natural features of the city under the District Plan.</li> </ul>
Tauranga City Council	<ul style="list-style-type: none"> <li>• District Plan allows for zoning areas as 'Conservation', 'Rural' or 'Greenbelt' to protect and enhance ecological sites and habitats.</li> <li>• Sub-regional growth strategy 'Smart Growth' released in 2003 to address protection of ecological corridors during the growth phase. Protection of the water quality, ecological and landscape values of Tauranga Harbour a priority.</li> </ul>
Hutt City Council	<ul style="list-style-type: none"> <li>• District Plan includes a list of significant natural resources. Provisions for protecting these areas appropriately are under review at time of writing.</li> <li>• All subdivisions are required to be designed in a way which considers the natural and physical characteristics of the land, with adverse effects avoided, remedied or mitigated. Subdivisions within the coastal environment and areas of ecological value are subject to ecological evaluation.</li> </ul>
Porirua City Council	<ul style="list-style-type: none"> <li>• Key project is Porirua Harbour and Catchment Management supported by a comprehensive monitoring, research and action programme.</li> <li>• District Plan includes inventory of ecological sites including areas of native vegetation.</li> </ul>
Wellington City Council	<ul style="list-style-type: none"> <li>• Range of projects to protect and enhance biodiversity, including natural habitats such as Otari-Wilton's Bush and Karori Wildlife Sanctuary, the Native Vegetation planting programme and restoration of areas to their original natural state.</li> <li>• District Plan has a schedule of Conservation sites requiring protection.</li> </ul>
Christchurch City Council	<ul style="list-style-type: none"> <li>• 'State of the environment' monitoring programme in place.</li> <li>• Under District Plan threatened land environments rating highest for criteria such as Biodiversity, Unusualness (or rarity) and Naturalness are given higher priority for protection.</li> </ul>
Dunedin City Council	<ul style="list-style-type: none"> <li>• Priority outcome of 'we value the natural environment, biodiversity and landscapes'.</li> <li>• District Plan notes that indigenous vegetation and habitats of indigenous fauna are under threat from land use practices such as vegetation clearing. Areas of natural character are recognised and protected from further modification.</li> </ul>

Data source: Participating councils, 2007

## 10. Natural environment

### Hectares of privately owned open space covered by QEII Trust registered covenants

The QEII Trust is a non-government organisation that enables landowners to protect special natural and cultural features on their land through open space covenants. A QEII covenant is a legally binding protection agreement registered on the title of the land. It is voluntary but once in place binds current and all subsequent landowners. Each covenant is unique and can apply to the whole property or part of the property.

Open space covenants are generally made in perpetuity, although there can be a case for a variable term covenant. These include:

- **Kawenata** on Maori land, which recognises tino rangatiratanga (independence)
- **Life of the trees** where individual trees occur in a situation where they may not be self-regenerating
- **Landscape protection agreements** where the land does not have a certificate of title (e.g. roadside areas).

As at 1 October 2006, there were 2,412 registered QEII open space covenants covering 78,266 hectares in New Zealand. A further 616 approved covenants (covering 19,951 hectares) were awaiting registration.

Within the 12 cities regions, the Waikato region had the largest area of land with registered and approved QEII covenants (15,524 hectares), while the Otago region had the largest average covenant size (75.8 hectares).

### QEII trust covenants by land area and number (October 2006)

Regional council	Total land in the region (hectares)	Number of registered covenants	Number of approved covenants	Total area registered and approved (hectares)	Largest registered covenant in region (hectares)	Average covenant size (hectares)
Auckland	500,000.0	176	33	3,561.0	841.0	17.0
Waikato	2,500,000.0	369	101	15,524.0	645.0	33.0
Bay of Plenty	1,223,100.0	130	21	10,398.0	6,564.0	68.9
Wellington	813,000.0	217	52	5,770.0	824.0	21.4
Canterbury	4,220,000.0	171	25	11,701.0	1,679.0	59.7
Otago	3,200,000.0	104	30	10,163.0	2,735.0	75.8
<b>Total NZ</b>	<b>26,303,400.0</b>	<b>2,412</b>	<b>616</b>	<b>98,217.0</b>	<b>6,564.0</b>	<b>36.1</b>

Data source: QEII Trust, 2006



## Biodiversity continued

### Number of ecological heritage sites

Ecological heritage sites are areas of remnant indigenous vegetation, which contribute to the ecological quality and diversity of the city. They are an important part of New Zealand's natural heritage and provide environmental functions such as reducing flooding, stabilising land (e.g. cliffs and riverbanks), filtering pollution and providing wildlife habitats for native birds, insects and plants.<sup>13</sup>

They are also valuable in providing educational and scientific resources of benefit to schools and tertiary institutions. Many sites are important to Maori. For example they may be places for

food gathering and storage and sources of weaving material. The protection of ecological heritage sites fulfils councils' obligations under the Resource Management Act (1991) (RMA) for the maintenance of indigenous biodiversity.

Threats to ecological heritage sites include agricultural or residential development and the subsequent displacement of native vegetation, balancing public access and recreational use with the need to protect the site, weed invasion and pests and predators causing damage to plants and animals.<sup>14</sup>

This measure identifies the number of ecological heritage sites that each Council has listed in their District Plan.<sup>15</sup>

### Ecological heritage sites (2007)

	Number of sites <sup>16</sup>	Comments
Rodney	296	97 as outstanding significance 199 as high significance
North Shore	326	153 as outstanding (over and above requirements of section 6c RMA) 108 as significant (meets requirements of section 6c RMA) 65 as linkage or wildlife corridors
Waitakere	219	29 outstanding and significant fauna habitats 180 outstanding vegetation sites 10 coastal protection areas  94 heritage trees and stands of trees In addition, the Waitakere Ranges Heritage Area covers two thirds of the city area
Auckland	85	85 sites of ecological significance
Manukau	1	1 wetland area  194 notable, exotic or native trees or stands of trees 21 conservation areas not in District Plan 2 wildlife refuge areas not in District Plan Auckland Regional Council Coastal Plan includes numerous coastal protection areas
Hamilton	7	7 areas of significant indigenous vegetation 82 significant trees or stands of trees
Tauranga	36	36 areas of significant vegetation value and significant flora and fauna
Porirua	171	13 large areas of mature forest 94 sites of small forest remnants in rural and built-up areas 22 inland or coastal wetlands 10 coastal scarps or dune 15 largely riparian sites 17 sites of reverting bush or diverse nature reserve
Hutt	63	63 significant natural resources areas
Wellington	28	28 conservation sites (for the protection of ecosystems and natural heritage)
Christchurch	48	8 dryland savannah sites 8 wetlands sites 5 forest sites 1 sand dunes site 26 short tussock grassland/shrubland sites
Dunedin	118	118 of significant vegetation value and/or areas of significant flora and fauna
<b>Total 12 cities</b>	<b>1398</b>	

Data source: Participating councils, 2007

13 Auckland City Council. (2007). [www.aucklandcity.govt.nz/council/services/heritage/ecological.asp](http://www.aucklandcity.govt.nz/council/services/heritage/ecological.asp) Retrieved 16 July 2007.

14 Christchurch City Council. (2007). *Ecological Heritage Sites Fact Sheet*. [www.ccc.govt.nz/Education/FactSheets/EcologicalHeritageSites/#1Weeds](http://www.ccc.govt.nz/Education/FactSheets/EcologicalHeritageSites/#1Weeds) Retrieved 16 July 2007.

15 Each city records ecological heritage sites in different ways, so the number of sites listed varied considerably across the cities. North Shore reported 326 sites listed in their city, while Manukau listed 21 designated sites.

16 Ecological heritage sites figure does not include heritage/notable trees. However, these have been listed in the comments column as a reference.



## Energy use

### 10. Natural environment

- Energy efficiency projects are underway in all of the 12 cities.
- Electricity demand has slightly increased in most areas, with the largest increase in demand in the greater Auckland region.

#### What this is about

The supply and use of energy has environmental consequences. In New Zealand effects from energy production include:

- Poor air quality and localised smog from wood and coal fires and motor vehicles
- Flooding land for hydro-electricity generation
- Geothermal power generation affecting nearby geysers
- Waste heat from thermal power generation plants.

Recently, the threat of climate change has raised questions around energy needed, the long term effects of energy use and ways to change to more sustainable forms of energy use. Sustainable development in energy terms means moving away from the fossil fuels currently used to lower carbon fuels, more efficient technologies and renewable energy.<sup>17</sup> Improving energy efficiency, that is, using less energy for the same amount of production, heating, light and transport, is a cost-effective way of achieving sustainable development.<sup>18</sup>

This indicator uses two measures:

- Electricity usage
- Sustainable energy use projects.

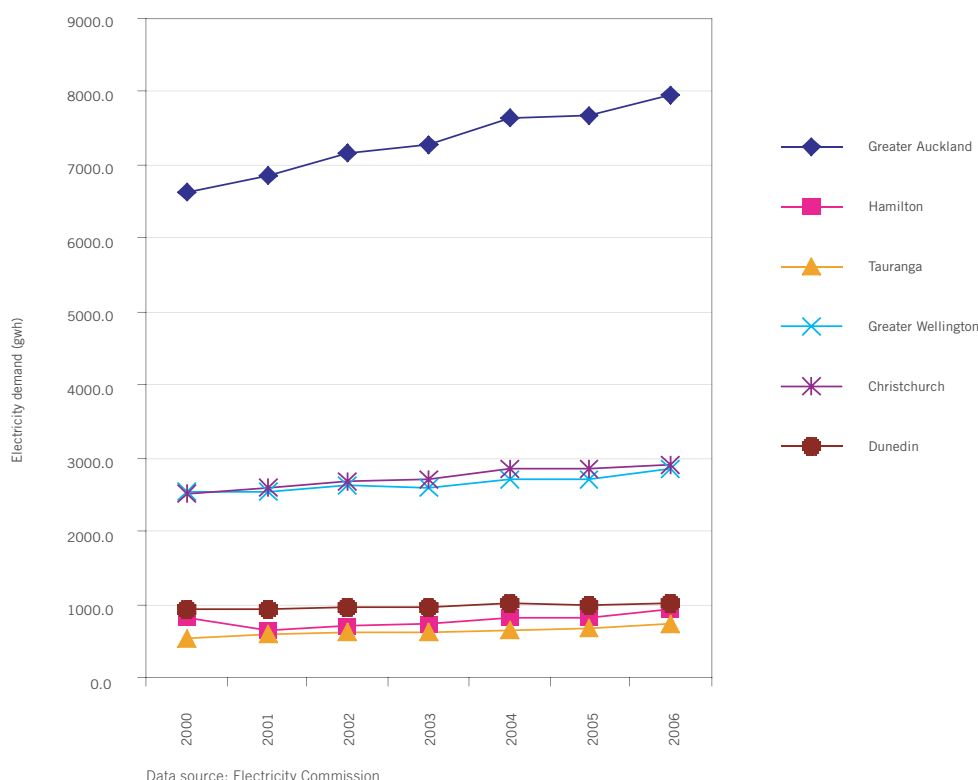
#### What did we find?

##### Electricity usage

Although electricity in New Zealand is increasingly generated from renewable sources, the level of electricity use increases every year. This results in a need to produce more energy to keep up with consumer demands and the subsequent impacts this may have on the environment.

This measure explores the demand for electricity in the 12 cities.<sup>19</sup> Demand for electricity has slightly increased in most areas, with the greater Auckland region showing a more marked increase in demand from 2000 to 2006.

**Electricity demand in gigawatts (gwh, at gxp net of embedded generation) per year, by city or region (2007)<sup>20</sup>**



17 Ministry for the Environment. (2007). [www.mfe.govt.nz/issues/energy](http://www.mfe.govt.nz/issues/energy) Retrieved 16 July 2007.

18 Department of Prime Minister and Cabinet. (2003). *Sustainable development for New Zealand - Programme of Action*.

19 Electricity arrangements in the Auckland and Wellington regions are not aligned to local territorial authorities, therefore the cities are reported as greater regions.

20 One gigawatt hour (GWh) is equal to one million kilowatt hours. New Zealand's annual demand is approximately 38,000 GWh. Grid exit point (GXP) is a point of connection where electricity flows out of the national grid to local networks or direct consumers. 'Net of embedded generation' means that the output of any power generators connected to a local lines network has been subtracted from the totals. Electricity Commission. (2007). [www.electricitycommission.govt.nz](http://www.electricitycommission.govt.nz) Retrieved 18 July 2007.

## Energy use continued

### Sustainable energy use projects

In the year ending March 2007, total energy generation in New Zealand increased 1.6% compared with the year to March 2006.<sup>21</sup> Increases in total electricity generation have occurred every year since 2000.

All councils across the 12 cities had a range of projects underway to increase their energy efficiency. Rodney, North Shore, Auckland, Waitakere and Manukau (alongside central government agencies) are part of a greater Auckland regional sustainable development framework project.

Common areas of investment mentioned by a number of councils included:

- Monitoring of energy use at council sites and facilities
- Establishing an energy management team, with functions such as energy auditing, creating energy strategies and policies and promoting energy efficiency
- Monitoring petrol/diesel use by council fleet vehicles
- Replacing lighting in council facilities with more energy efficient bulbs
- Installing co-generation engines at wastewater treatment plants
- Introducing a 'Walking and cycling for sustainable transport' plan
- Solar powered lighting on bus shelters
- Eco-design adviser service available to promote energy saving practices to builders, developers and residents
- Generating electricity for the national grid from landfill gas extraction.

Around a third of the total energy in New Zealand comes from renewable sources. About 70.0% of New Zealand's electricity is currently generated from renewable sources, such as hydro-electric stations, which have environmental impacts on river flows and lake levels. Compromises are often necessary to protect the ecological and recreational features of the rivers that remain.<sup>22</sup>



21 Statistics New Zealand. (2007). New Zealand Energy Statistics: March 2007 quarter. [www.stats.govt.nz](http://www.stats.govt.nz) Retrieved 10 July 2007.

22 Ministry for the Environment. (2007). [www.mfe.govt.nz/issues/energy/production.html](http://www.mfe.govt.nz/issues/energy/production.html) Retrieved 10 July 2007.



## Air quality

### 10. Natural environment

- Air pollution is perceived as a problem by residents in Christchurch and Auckland.
- Christchurch has the highest average annual levels of PM<sub>10</sub> and highest carbon monoxide levels in relation to the other cities.
- Auckland has the highest nitrogen dioxide levels in relation to the other cities that monitored such levels and the highest ozone concentrations (compared with the limited monitoring carried out in other cities).

### What this is about

Good air quality is essential for human health and the health of the natural environment. Factors that impact on air quality include domestic home heating, motor vehicle emissions, industrial emissions, outdoor burning (including agricultural burning and rubbish fires), plant pollens, dust and sea spray.

Air quality is directly impacted by increases in population, industry and motor vehicles in New Zealand's cities.

A report released in 2007 indicated that almost 1,100 premature deaths occur each year as result of exposure to air pollution from all sources in New Zealand.<sup>23</sup>

Six measures were used to assess air quality:<sup>24</sup>

- Levels of PM<sub>10</sub> (exceedances of 12 month maximums and annual average levels)
- Annual average levels of carbon monoxide (CO) (exceedances of maximums over 12 months)
- Annual average levels of nitrogen dioxide (NO<sub>2</sub>) (maximum one hour average over 12 months)
- Annual average levels of sulphur dioxide (SO<sub>2</sub>) (maximum one hour average over 12 months)
- Annual average levels of ozone (O<sub>3</sub>) (maximum one hour average over 12 months)
- Residents' perception of air pollution as a city problem.

### What did we find?

New Zealand has relatively good air quality due to a low population density, close proximity to the sea and remoteness from other sources of pollution. However, there are some urban areas where concentrations of air pollution were, at times, quite high, especially where there was high traffic density or where home heating was mainly by open fires or wood burners.

The Ministry for the Environment provides national guidance for regional councils and local authorities to manage the air in their region. This national guidance includes air quality guidelines, good practice guidance, research and reporting.<sup>25</sup>

Monitoring results released in a report by the Ministry for the Environment in 2004 indicated that the existing guideline value for fine particles in the air had been exceeded at 36 locations measured throughout New Zealand. The report estimated that implementation of air quality standards would save 625 lives over the analysis period (2004 to 2020) and would cost \$177,000 per life saved.

#### Levels of PM<sub>10</sub> (exceedances of 12 month maximums and annual average levels)

Suspended particles (PM<sub>10</sub>) refer to particles suspended in the air that have a diameter of less than 10 microns. Larger particles are not generally a problem for human health since they fall rapidly out of the atmosphere. High concentrations of smaller particles (less than 10 microns in size or PM<sub>10</sub>) can penetrate the lungs and damage the respiratory tissues.<sup>26</sup>

The main source of particulate matter in most areas of New Zealand is solid fuel burning for domestic home heating. Levels of particulate matter are generally higher in winter than in summer due to wood fires being used to heat homes and because wintertime weather conditions are more conducive to elevated pollution.

This measure looks at the number of days per year that the National Environmental Standard (NES) for PM<sub>10</sub> was exceeded. The NES allows for one exceedance of 50 µgm<sup>-3</sup> per year.<sup>27</sup>

23 Fisher, G., Kjellstrom, T., Kingham, S., Hales, S. & Shrestha, R. (2007). *Health and Air Pollution in New Zealand*. A research project funded by Health Research Council of New Zealand, Ministry for the Environment and Ministry of Transport.

24 The maximums reported were based on the averaging period specified in the National Environmental Standards (NES), with hourly averages for NO<sub>2</sub>, SO<sub>2</sub> and Ozone and eight hour average for CO. It should be noted that where a city has more than one monitoring point, data from the worst-case monitored site in each city was used (North Shore, Rodney Waitakere, Tauranga, Hamilton and Dunedin each had one air monitoring site). In some areas this may be a 'residential neighbourhood' site or it may be a 'peak' site. Site classifications are described in Ministry for the Environment. (1999). *Good Practice Guide for Air Quality Monitoring and Data Management*.

25 Ministry for the Environment. (2007). [www.mfe.govt.nz/issues/air](http://www.mfe.govt.nz/issues/air). Retrieved 29 August 2007.

26 Ministry for the Environment. (2007). [www.mfe.govt.nz/issues/air/breathe/particles.html](http://www.mfe.govt.nz/issues/air/breathe/particles.html) Retrieved 10 July 2007.

27 The amount of exposure to pollutants is often measured in units of micrograms of a substance per cubic metre of air (µg/m<sup>3</sup>). 50 µgm<sup>-3</sup> refers to particles with a diameter of less than 10 microns (50 µm or 50 micrometres). Ministry for the Environment. (2007). [www.mfe.govt.nz/issues/air/breathe/particles.html](http://www.mfe.govt.nz/issues/air/breathe/particles.html) Retrieved 10 July 2007.

## Air quality continued

### Number of exceedances of the national environmental standard for PM<sub>10</sub> (days per year) (2001 to 2005)

	NES exceedances (Days per year) <sup>28</sup>				
	2001	2002	2003	2004	2005
Rodney	n/a	n/a	n/a	n/a	n/a
North Shore – Takapuna site	2	0	0	0	1
Waitakere – Henderson site	0	0	0	0	0
Auckland <sup>29</sup>	1	3	0	0	1
Manukau	n/a	n/a	n/a	n/a	2
Hamilton	3	0	4	1	0
Tauranga	0	0	0	0	0
Porirua	n/a	n/a	n/a	n/a	n/a
Hutt	0	0	0	0	0
Wellington	n/a	n/a	n/a	0	0
Christchurch – Coles Place site	52	28	41	36	32
Dunedin	2	0	0	1	1

Data source: Environet Ltd

Fires for home heating are a key factor in the high rates of air pollution. In Christchurch, geography and weather conditions trap air pollution near the ground in winter. Vehicle emissions played a key role in air pollution in Auckland.

When viewed over the period of a year, Christchurch's PM<sub>10</sub> levels were still higher than the other cities' readings. Concentrations in Auckland were also above the annual average guideline of 20 µgm<sup>-3</sup> each year. There was little variation in annual levels of PM<sub>10</sub> in Hamilton or Wellington.

### Annual levels of PM<sub>10</sub> per year (2001 to 2005)

	Annual average PM <sub>10</sub> (µgm <sup>-3</sup> ) <sup>30</sup>				
	2001	2002	2003	2004	2005
Rodney	n/a	n/a	n/a	n/a	n/a
North Shore – Takapuna site	14	17	17	19	17
Waitakere – Henderson site	19	16	15	16	15
Auckland	23	22	20	22	20
Manukau	n/a	n/a	n/a	n/a	18
Hamilton	15	15	15	17	15
Tauranga	12	13	12	13	12
Porirua	n/a	n/a	n/a	n/a	n/a
Hutt	14	15	14	15	14
Wellington	n/a	n/a	n/a	17	16
Christchurch	29	24	25	24	20
Dunedin – Albany St site	24	21	22	20	21

Data source: Environet Ltd

<sup>28</sup> Data has been extrapolated for missing values and adjusted to high volume sample equivalent concentrations. This includes adjusting the number of guideline exceedances statistically based on the number of days that monitoring was carried out.

<sup>29</sup> Data for Auckland is from the worst site (Khyber Pass).

<sup>30</sup> µgm<sup>-3</sup> = micrograms per cubic metre of air.

## 10. Natural environment

**Annual average levels of carbon monoxide (CO) (exceedances of maximums over 12 months)**

Carbon monoxide (CO) is a gas that is produced as a product of incomplete combustion. Sources of ambient air carbon monoxide concentrations typically include motor vehicle emissions, domestic home heating, outdoor burning and industry.<sup>31</sup> Health effects associated with exposure to CO include headaches, dizziness and nausea and can result in problems with visual

perception, dexterity, learning ability and the ability to perform sensorimotor tasks.<sup>32</sup>

The NES for CO has been set by the Ministry for the Environment at 10  $\mu\text{gm}^{-3}$  for an eight hour average.

The highest eight hour average CO concentrations were measured in Christchurch, with the peak concentration of 14  $\mu\text{gm}^{-3}$  occurring in 2002. A single high concentration in excess of the NES was measured in Dunedin during 2002.

**Maximum carbon monoxide (CO) level ( $\mu\text{gm}^{-3}$ ) per year, by city (2001 to 2005)**

	Eight hour average CO ( $\mu\text{gm}^{-3}$ )				
	2001	2002	2003	2004	2005
Rodney	n/a	n/a	n/a	n/a	n/a
North Shore	4	7	7	6	6
Waitakere	5	3	3	4	4
Auckland	9	9	9	9	7
Manukau	9	7	7	6	5
Hamilton	7	5	7	7	4
Tauranga	2	1	2	2	1
Porirua	n/a	n/a	n/a	n/a	n/a
Hutt	n/a	3	3	3	2
Wellington	n/a	n/a	n/a	4	3
Christchurch	12	14	10	10	8
Dunedin	n/a	12	n/a	n/a	n/a

Data source: Environet Ltd

**Annual average levels of nitrogen dioxide (NO<sub>2</sub>) (maximum one hour average over 12 months)**

Nitrogen dioxide (NO<sub>2</sub>) is a respiratory irritant that affects lung function, can lower resistance to respiratory infections and may also increase reactivity to natural allergens. The main source of NO<sub>2</sub> in most urban environments is motor vehicle emissions, although burning of other fossil fuels (e.g. coal, gas and oil) will also produce NO<sub>2</sub>.<sup>33</sup>

The NES for NO<sub>2</sub> have been set at a maximum of 200  $\mu\text{gm}^{-3}$  for a one hour average concentration (nine allowable exceedances).

Of the 12 cities, Auckland, Wellington and Christchurch are the only cities that have consistently measured NO<sub>2</sub>, by monitoring the hourly average. The levels of NO<sub>2</sub> in Auckland far exceeded those measured in other cities. However it should be noted that the Auckland monitoring site is a roadside site and is likely to be affected by vehicle emissions more than other sites. In all other areas monitored, NO<sub>2</sub> concentrations were within the NES.

**Maximum nitrogen dioxide (NO<sub>2</sub>) level ( $\mu\text{gm}^{-3}$ ) per year (2001 to 2005)**

	One hour average NO <sub>2</sub> ( $\mu\text{gm}^{-3}$ )				
	2001	2002	2003	2004	2005
Rodney	n/a	n/a	n/a	n/a	n/a
North Shore	101	128	97	124	122
Waitakere	n/a	n/a	93	83	98
Auckland Khyber Pass site	227	250	239	271	264
Manukau	76	72	97	70	66
Hamilton	n/a	n/a	102	n/a	n/a
Tauranga	n/a	n/a	n/a	n/a	n/a
Porirua	n/a	n/a	n/a	n/a	n/a
Hutt <sup>34</sup>	n/a	69	83	89	55
Wellington <sup>35</sup>	n/a	n/a	n/a	n/a	138
Christchurch	110	118	120	154	77
Dunedin	n/a	n/a	n/a	n/a	n/a

Data source: Environet Ltd

31,32 Ministry for the Environment. (2007). [www.mfe.govt.nz/issues/air/breathe/carbon-monoxide.html](http://www.mfe.govt.nz/issues/air/breathe/carbon-monoxide.html) Retrieved 10 July 2007.

33 Ministry for the Environment. (2007). [www.mfe.govt.nz/issues/air/breathe/nitrogen-dioxide.html](http://www.mfe.govt.nz/issues/air/breathe/nitrogen-dioxide.html) Retrieved 10 July 2007.

34,35 Provisional data only as the method of data processing has changed.

## Air quality continued

### Annual average levels of SO<sub>2</sub> (maximum one hour average over 12 months)

Sulphur dioxide (SO<sub>2</sub>) has health impacts that include coughing and irritation of the nose, throat and lungs. Concentrations of SO<sub>2</sub> in ambient air typically occur as a result of combustion processes, in particular the burning of high sulphur fuels, although specific industries such as fertiliser manufacturing also discharge SO<sub>2</sub>. The main source of SO<sub>2</sub> is typically motor vehicles or industry, although domestic heating can be a main contributor in areas where domestic coal burning is prevalent.<sup>36</sup>

The NES for SO<sub>2</sub> has been set by the Ministry for the Environment at a maximum of 350 µgm<sup>-3</sup> for a one hour average concentration (nine allowable exceedances per year). With the exception of 2001 in Auckland, concentrations of SO<sub>2</sub> were similar in both Christchurch and Auckland at between 40 to 60 µgm<sup>-3</sup> with no exceedences of the NES at any of the locations monitored.

### Maximum sulphur dioxide (SO<sub>2</sub>) level (µgm<sup>-3</sup>) per year (2001 to 2005)

	One hour average SO <sub>2</sub> (µgm <sup>-3</sup> )				
	2001	2002	2003	2004	2005
Rodney	n/a	n/a	n/a	n/a	n/a
North Shore – Takapuna site	n/a	n/a	n/a	n/a	n/a
Waitakere – Henderson site	n/a	n/a	n/a	n/a	n/a
Auckland – Penrose site	165	48	48	40	54
Manukau	n/a	n/a	n/a	n/a	n/a
Hamilton	n/a	n/a	n/a	n/a	n/a
Tauranga	n/a	n/a	n/a	n/a	n/a
Porirua	n/a	n/a	n/a	n/a	n/a
Hutt	n/a	n/a	n/a	n/a	n/a
Wellington	n/a	n/a	n/a	n/a	n/a
Christchurch	65	52	54	46	37
Dunedin	n/a	n/a	n/a	n/a	n/a

Data source: Environet Ltd



36 Ministry for the Environment. (2007). [www.mfe.govt.nz/issues/air/breathe/sulphur-dioxide.html](http://www.mfe.govt.nz/issues/air/breathe/sulphur-dioxide.html) Retrieved 10 July 2007.



## 10. Natural environment

**Annual average levels of ozone (O<sub>3</sub>) (maximum one hour average over 12 months)**

Ozone is formed through atmospheric reactions between NO<sub>2</sub> and volatile organic compounds (VOCs). Ozone has a greater tendency to form in warmer areas. Health impacts from ozone include respiratory illness such as coughing, phlegm and wheezing. The main sources of ozone-forming contaminants are motor vehicles, domestic heating and industry.<sup>37</sup>

The NES for Ozone has been set by the Ministry for the Environment at a maximum of 150 µgm<sup>-3</sup> for a one hour average concentration (no allowable exceedances per year).

Monitoring of ozone has been carried out in the Auckland region from 2001 to 2006 and intermittently in Christchurch and Hamilton. Of these cities, concentrations of ozone are highest in Auckland at the Manukau site. However, there were no exceedances of the NES at any of the locations monitored.

**Maximum ozone (O<sub>3</sub>) level (µgm<sup>-3</sup>) per year (2001 to 2005)**

	One hour average O <sub>3</sub> (µgm <sup>-3</sup> )				
	2001	2002	2003	2004	2005
Rodney	93	103	88	101	95
North Shore	n/a	n/a	n/a	n/a	n/a
Waitakere	n/a	n/a	n/a	n/a	n/a
Auckland – Sky Tower site	91	114	94	112	n/a
Manukau	90	135	134	111	100
Hamilton	n/a	n/a	n/a	80	n/a
Tauranga	n/a	n/a	n/a	n/a	n/a
Porirua	n/a	n/a	n/a	n/a	n/a
Hutt	n/a	n/a	n/a	n/a	n/a
Wellington	n/a	n/a	n/a	n/a	n/a
Christchurch – Lincoln site	n/a	n/a	97	n/a	n/a
Dunedin	n/a	n/a	n/a	n/a	n/a

Data source: Environet Ltd

37 Ministry for the Environment. (2007). [www.mfe.govt.nz/issues/air/breathe/ozone.html](http://www.mfe.govt.nz/issues/air/breathe/ozone.html) Retrieved 10 July 2007.

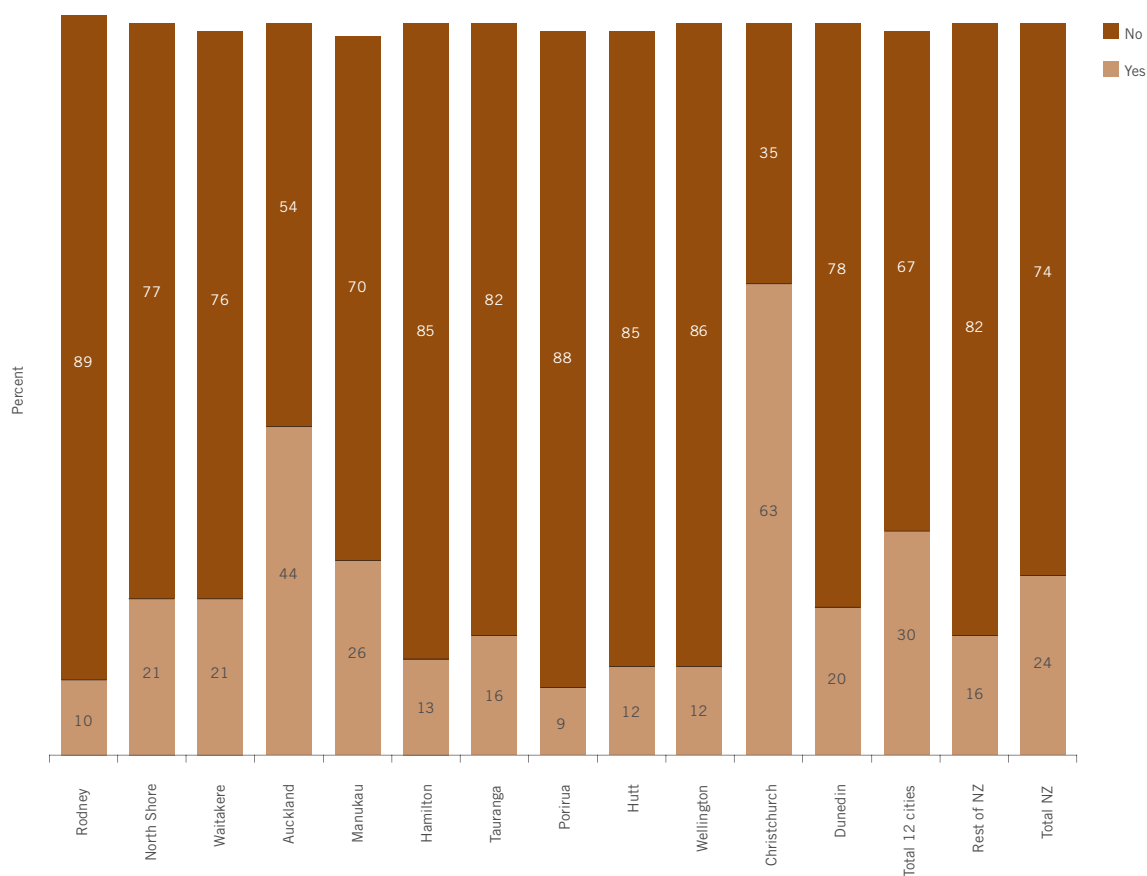
## Air quality continued

### Residents' perception of air pollution as a city problem

This measure looks at whether residents perceived air pollution as a problem in their city in the past 12 months, using 2006 Quality of Life Survey data. There was a degree of variation across the cities, with the highest rates of perception of air pollution as a problem in Christchurch (63.0%) and Auckland (44.0%).

Across the 12 cities, Maori were significantly more likely to have perceived air pollution as a problem (36.0%), compared with Pacific Islands residents (30.0%), New Zealand Europeans (24.0%) and Asian/Indian people (20.0%).

Residents' rating of air pollution as a city problem (2006)<sup>38</sup>



Data source: Quality of Life Survey 2006

38 Figures might not add to 100% as 'don't know' responses are not shown.



## Beach and stream/lake water quality

### 10. Natural environment

- In general, the rate of public health risk at coastal beaches is relatively low in all five regions. Risk is higher at freshwater bathing sites.
- North Shore, Auckland and Hutt residents are more likely to rate water pollution as a problem than residents of other cities.

### What this is about

Beach and stream/lake water quality is measured to ensure that the water is safe for human recreational use and to show the impact of human activity on beaches and natural waterways. High levels of bacteria can directly impact on the health and wellbeing of residents as they indicate the presence of pathogens (illness-causing bugs). A key factor in the quality of beach and stream/lake water is the quality of a city's stormwater and sewerage systems.

Two measures are used for this indicator:

- Beach and stream/lake water quality
- Residents' perception of water pollution as a city problem.

Water quality data is analysed using the national Microbiological Water Quality Guidelines for Marine and Freshwater recreational areas (Ministry for the Environment and Ministry of Health, 2003). These guidelines state that warning signs should be erected at a beach if indicator bacteria concentrations exceed 550 *E. coli*<sup>39</sup> per 100mls in a single sample for freshwaters and 280 enterococci per 100mls in two consecutive samples for coastal waters.

### What did we find?

#### Beach and stream/lake water quality

Monitoring of coastal and freshwater beaches happens in all five of our regions. The Auckland, Wellington and Canterbury regions have the most coastal monitoring sites, which reflects the relatively large populations and proximity of the cities in these regions to the coast. The Bay of Plenty and Canterbury regions have the most inland freshwater monitoring sites, probably due to the relatively high number of lakes and rivers that are accessible for recreation in these regions.

The table shows the average numbers of beaches monitored and samples taken that exceed guideline levels in the five regions of New Zealand occupied by the 12 cities (for the period 2003 to 2007).<sup>40</sup>

The bacterial quality of water for each region is also tested to determine percentage of samples taken that exceed national guideline thresholds.<sup>41</sup> It is important to note that not all single sample exceedences result in public health warning signs being erected.

The rate of public health risk at coastal beaches is relatively low in all five regions occupied by the 12 cities. The average percentage of samples exceeding guidelines at coastal sites over the period 2003 to 2007 ranged from 2.0% in the Bay of Plenty to 5.0% in the Auckland region. The higher indicated risk in the Auckland region probably reflects the fact that most monitored beaches are located on the margins of the city and are therefore subject to higher volumes of urban stormwater runoff. Many of the Auckland beaches are also in harbour settings where wave energy is low and contaminants may not be dispersed very quickly. By contrast, many of the monitored beaches in the Bay of Plenty are at small settlements on the open coast where there is likely to be less contaminated runoff and greater dispersal by waves and currents.

The rate of public health risk at inland freshwater beaches is relatively high compared with coastal sites. The highest rates of sample exceedance occurred in the Auckland (15.0%) and Otago (14.0%) regions. Only a small number of sites are monitored in these regions so results should not be considered representative of the region's freshwater quality. Of those regions with a relatively high number of monitored sites, Canterbury had the highest number of samples exceeding guidelines (12.0%). This may be related to the amount of intensive farming in the Canterbury region and faecal pollution from stock runoff from pasture.

Bathing water quality is generally poorer at inland freshwater sites than coastal sites because there is less dilution and dispersal of contaminants.

<sup>39</sup> *E. coli* and enterococci are different species of bacteria that indicate the presence of faecal matter in fresh and coastal waters, respectively.

<sup>40</sup> In some regions, the majority of monitoring sites are in or very close to, the main cities (e.g. harbour cities like Auckland and Wellington). In other regions, there are no monitoring sites in the main city (e.g. Hamilton is an inland city and most coastal monitoring sites in the Waikato region are around the Coromandel Peninsula). However sites are generally within easy reach of city dwellers.

<sup>41</sup> The Microbiological Water Quality Guidelines for Marine and Freshwater Recreational Areas (Ministry for the Environment and Ministry of Health, 2003) are voluntary guidelines and can be adapted or interpreted in different ways by each council for public health management. This has resulted in some inconsistencies between methodologies being implemented around the country. For example, Waitakere City Council erects public warning signs after recording a single sample greater than 280 enterococci/100ml in coastal waters rather than two consecutive samples as the guidelines recommend. Due to the differences in methodologies used by the individual councils, the data shown here indicates the bacterial quality of the water rather than a complete assessment of the public health risk (i.e. a bacterial exceedance does not necessarily lead to sign erection and beach closure in all cases). The figures can be used as only a conservative estimate of actual public health risk.

## Beach and stream/lake water quality continued

### Monitoring of coastal and freshwater sites (2003 to 2007)

Region/City	Averages for 2003 to 2007			
	Coastal beaches		Freshwater beaches (rivers and lakes)	
	Number of beaches monitored	Percentage of samples exceeding guidelines <sup>42</sup> %	Number of beaches monitored	Percentage of samples exceeding guidelines <sup>43</sup> %
Auckland	88	5.0	7	15.0
Waikato	13	3.0	17	2.0
Bay of Plenty	33	2.0	41	5.0
Wellington	76	4.0	23	8.0
Canterbury	45	3.0	52	12.0
Otago	5	4.0	10	14.0

Data source: Ministry for the Environment

### Residents' perception of water pollution as a city problem

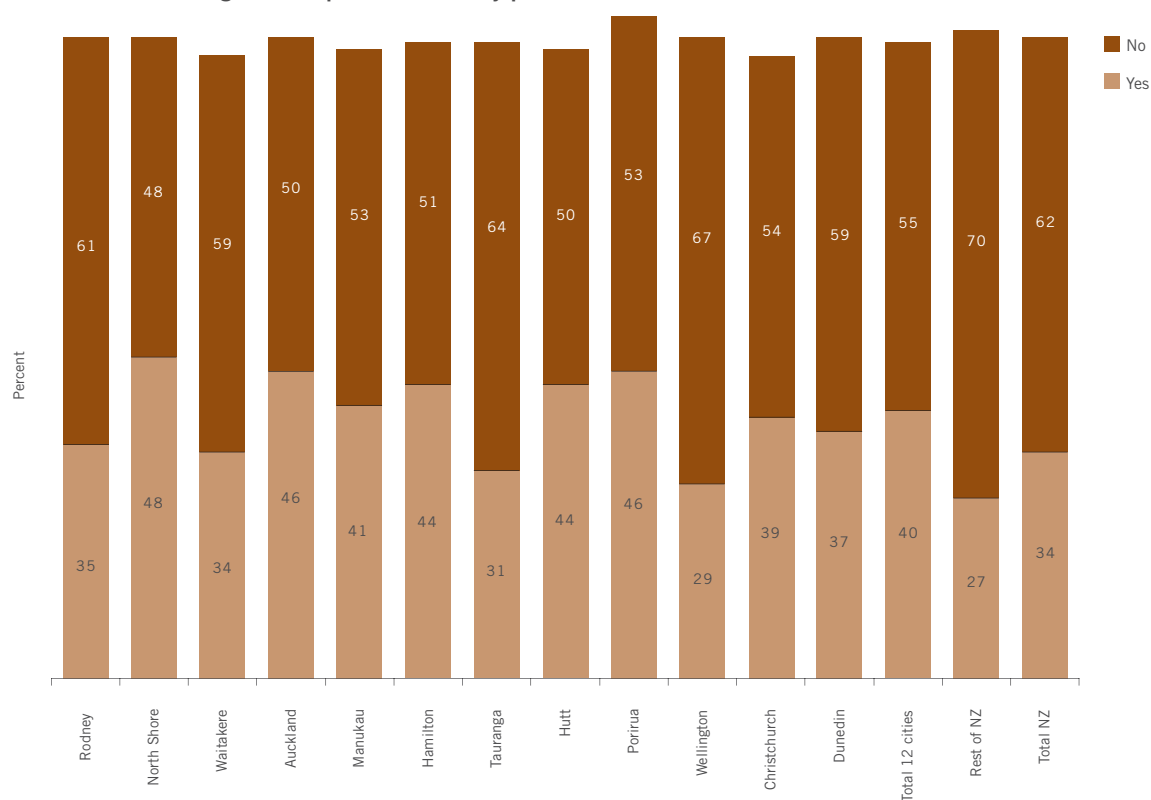
This measure looks at whether residents perceived water pollution as a problem in their city in the past 12 months, using 2006 Quality of Life Survey data.

Wellington residents were least likely to perceive water pollution as a problem (29.0%), as were residents in Tauranga (31.0%) and Waitakere (34.0%). Residents living in North Shore (48.0%),

Auckland and Hutt (both 46.0%) were more likely to consider water pollution as a problem.

Across the 12 cities, Maori (47.0%) and New Zealand European (43.0%) residents were significantly more likely than other ethnic groups to have indicated that water pollution had been a problem (Pacific Islands people 36.0%; Asian/Indian people 19.0%).

### Residents' rating of water pollution as a city problem (2006)<sup>44</sup>



Data source: Quality of Life Survey 2006

<sup>42</sup> For the purpose of this report, the exceedance level for coastal waters is a single sample greater than 280 enterococci per 100mls. This is different from the approach advocated by the national guidelines for coastal waters (two consecutive samples) but is necessary because some councils do not take a second sample.

<sup>43</sup> Exceedance level for freshwater is a single sample greater than 550 *E.coli* per 100mls.

<sup>44</sup> Figures might not add to 100% as 'don't know' responses are not shown.



## Drinking water quality

### 10. Natural environment

- North Shore, Auckland, Waitakere, Manukau, Hamilton and Tauranga have excellent grades for drinking water quality.
- Nearly all residents in the 12 cities were served by water supplies that comply with *E. coli* standards.

#### What this is about

Clean drinking water is essential to all life and is fundamental in order for cities to operate effectively. In New Zealand about half of the drinking water supply is pumped from groundwater aquifers with the remainder coming mainly from rivers and lakes.

Access to a continuous and high quality supply of water is often taken for granted. However our activities on the land can compromise the quality of supply.

Pollution of drinking water sources from point (e.g. stormwater discharge and treated wastewater effluent) and non-point (e.g. agricultural run-off, particularly from dairy farms) pollution sources is of particular concern.<sup>45</sup> Other factors that may impact on the quality of our drinking water are the methods of water treatment used and the condition of the water reticulation network. Two measures are used for this indicator:

- Public health water quality grading
- *E. coli* compliance of water distribution zones.

#### What did we find?

##### Public Health Water Quality Grading

Water Information New Zealand (WINZ) states that a drinking water supply for 500 or more people should have a public health grading.<sup>46</sup> This consists of a single grading for each treatment plant/source combination, with gradings also given for distribution zones. Gradings are shown in the table.

##### Water treatment plant gradings

A1	Completely satisfactory, negligible level of risk, demonstrably high quality
A	Completely satisfactory, extremely low level of risk
B	Satisfactory, very low level of risk when the water leaves the treatment plant
C	Marginally satisfactory, low level of microbiological risk when the water leaves the treatment plant, but may not be satisfactory chemically
D	Unsatisfactory level of risk
E	Unacceptable level of risk
U	Ungraded

##### Distribution zone gradings of water reticulation networks

a1	Completely satisfactory, negligible level of risk, demonstrably high quality
a	Completely satisfactory, extremely low level of risk
b	Satisfactory, very low level of risk
c	Marginally satisfactory, moderate level of risk
d	Unsatisfactory level of risk
e	Unacceptable level of risk
u	Not yet graded (Not yet required if less than 500 people)

Data source: [www.drinkingwater.co.nz](http://www.drinkingwater.co.nz)

<sup>45</sup> Report to the Minister of Health from the Public Health Advisory Committee. (October 2002). *The Health of People and Communities: The effect of environmental factors on the health of New Zealanders*.

<sup>46</sup> It should be noted that currently this grading system is voluntary. Until December 2004, all grades were calculated using the 1993 Public Health Grading specification. A new specification was released in 2003 and from January 2006, only grades from the 2003 specification were valid. However, most of the treatment plant and distribution zone gradings have not been updated with the new specification and have been reset as ungraded. Therefore, the results for this measure need to be looked at in conjunction with the other drinking water quality measure of *E. coli* compliance of water distribution zones.

## Drinking water quality continued

Treatment plant and source grading is based on the likely health risks to the community. The distribution zone refers to all or part of a city, district or community that receives similar quality water from its taps.

North Shore, Auckland, Waitakere, Manukau, Hamilton and Tauranga supplies had excellent grades for drinking water quality

(Aa). Although Porirua had the top grade achievable of A1 for its water treatment plant, its distribution zones were ungraded.

Christchurch, Dunedin and most of Wellington supplies were ungraded under the new water grading specifications.

### Public health water quality grading (May 2007)<sup>47</sup>

Water quality grading											
Rodney	North Shore	Auckland	Waitakere	Manukau	Hamilton	Tauranga	Hutt	Porirua	Wellington	Christchurch	Dunedin
Au	Aa	Aa	Aa	Aa	Aa	Aa	Bu	A1u	Uu	Uu	Uu

Data source: [www.drinkingwater.co.nz](http://www.drinkingwater.co.nz)

### *E. coli* compliance of water distribution zones

Standards for drinking water were introduced in 2000 and were last revised in 2005.<sup>48</sup> Under the Drinking Water Standards local authorities are required to test regularly drinking water to demonstrate its quality and safety.<sup>49</sup>

*E. coli* compliance can be achieved by regular monitoring of the distribution zone (i.e. at the tap) to demonstrate that *E. coli* is not present in water.

Drinking water in six of the 12 cities achieved 100.0%

*E. coli* compliance. However, it should be noted that the water supplies that did not comply were those that supplied very small communities (i.e. a number of supplies served populations of between one to ten residents). Nearly 100.0% of the population in the 12 cities was covered by water supplies that comply with *E. coli* standards.

### *E. coli* compliance of water distribution zones (2005)<sup>50</sup>

	Number of council tested water supplies	Number of council tested water supplies that complied	Water supplies that complied %	Population covered by water supplies that complied %
Rodney	17	12	71.0	99.8
North Shore	4	4	100.0	100.0
Waitakere	10	9	90.0	99.9
Auckland	9	8	89.0	99.9
Manukau	4	3	75.0	99.9
Hamilton	2	2	100.0	100.0
Tauranga	2	2	100.0	100.0
Porirua	6	6	100.0	100.0
Hutt	7	7	100.0	100.0
Wellington	11	11	100.0	100.0
Christchurch	8	7	88.0	99.9
Dunedin	14	13	93.0	99.9

Data source: Water Information New Zealand

47 The default method of summarising multiple drinking water zones to arrive at a single grading for a whole city is to use the grading from the worst zone in that city.

48 Ministry of Health. (2005). *Drinking Water Standards for New Zealand 2005*. Note: these standards are not legally enforceable.

49 Under this standard, drinking water is defined as 'water intended to be used for human consumption, food preparation, utensil washing, oral hygiene or personal hygiene'.

50 The supplies used in the calculation of compliance for the cities were those run by the local authority. This is given in terms of the number of distribution zones and the percentage of the population served by the supplies (as per populations in Water Information New Zealand database).



## Water consumption

### 10. Natural environment

- Water consumption in the 12 cities, both domestic and commercial/industrial, has increased slightly over recent years.

#### What this is about

High levels of water use can cause both environmental and economic problems. Environmentally, high water consumption places stress on rivers, lakes and groundwater aquifers and may require dams, which have ecological impacts. Increased consumption levels may lead to increased volumes of discharged water and if this water is polluted it can damage aquatic ecosystems. Economically, high levels of water use require increasing and expensive investments in water system infrastructure needed to gather, deliver and dispose of water (dams, reservoirs, water treatment facilities, distribution networks and sewage treatment). Measures used to assess this indicator include:

- Domestic water consumption per person
- Commercial and industrial water consumption.

#### What did we find?

##### Domestic water consumption per person

Increases in domestic water consumption were reported across most of the 12 cities. In general, the increases were relatively small, with some councils reporting fluctuating levels of water consumption. Tauranga and Wellington reported a slight decrease in daily water consumption by residents.

Water consumption is not measured the same way in each city. Some have domestic water meters for each household, whereas others have proportions of households using tank water, which means water use can only be estimated. In addition, some cities, such as Porirua, Dunedin and Hamilton, do not have universal water metering, so total population and bulk supply calculations were used in these cases.<sup>51</sup>

#### Domestic water consumption in litres per person per day (2001 to 2006)

	Year ending June				
	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006
Rodney	n/a	n/a	n/a	n/a	175.0
North Shore	196.2	198.7	198.9	205.3	202.0
Waitakere	163.0	167.0	167.0	169.0	165.0
Auckland	164.7	166.2	163.3	165.5	166.0
Manukau	178.0	179.0	188.0	191.0	190.0
Hamilton	237.9	225.5	218.6	241.4	230.2
Tauranga	n/a	265.1	247.0	256.2	250.7
Wellington	168.1	168.1	171.1	167.9	165.4
Porirua	n/a	334.0	322.0	327.0	352.0
Hutt	248.0	220.0	275.0	279.0	242.0
Christchurch	238.0	249.0	252.0	245.0	247.0
Dunedin	204.0	234.0	207.0	201.0	207.0

Data source: Participating councils, 2007

<sup>51</sup> Bulk supply refers to the total volume of water supplied by a water treatment plant. This volume includes water used for domestic consumption, as well as water losses through leakages in the water pipe network.



## Water consumption continued

### Commercial and industrial water consumption

The majority of the 12 cities reported increased water consumption in the commercial and industrial sectors. The amount of water used in commercial and industrial applications varied between the 12 cities, from the highest

use in 2005 to 2006 in Auckland (18,951,040 cubic litres) to the lowest for the same year in Rodney (311,700 cubic litres). This reflected the differing number of businesses and manufacturers in different cities across the country.

### Commercial and industrial water consumption in cubic litres per year (2001 to 2006)

	Year ending June				
	2001 to 2002	2002 to 2003	2003 to 2004	2004 to 2005	2005 to 2006
Rodney	n/a	n/a	n/a	n/a	311,700
North Shore	2,976,000	3,133,000	2,253,000	2,146,000	2,556,000
Waitakere	2,235,700	2,308,900	2,006,100	2,135,300	2,847,000
Auckland	17,091,154	17,672,277	17,786,747	18,457,491	18,951,040
Manukau	9,793,000	9,952,000	9,811,000	9,796,000	10,276,000
Hamilton	5,191,244	5,346,982	5,507,391	5,602,258	5,813,989
Tauranga	n/a	2,652,000	2,912,350	2,802,600	2,920,500
Wellington	6,269,182	7,036,200	6,336,576	7,117,810	7,307,019
Porirua <sup>52</sup>	n/a	n/a	1,073,000	919,000	946,000
Hutt	2,365,000	2,330,000	2,157,000	2,252,000	2,298,000
Christchurch	11,369,982	12,621,100	12,953,144	12,800,983	13,097,828
Dunedin	5,532,942	5,784,976	5,846,049	5,779,836	5,686,204

Data source: Participating councils, 2007



52
Commercial and industrial consumption does not take into account other users of the bulk supply.



# Ecological Footprints

## 10. Natural environment

- Wellington, Bay of Plenty and Auckland regions recorded lower ecological footprints per capita than the national average.

### What this is about

An ecological footprint is a measure of how much biologically productive land and water an individual, population or activity requires to produce all the resources it consumes and to absorb the waste it generates, using current technology and resource management practices.<sup>53</sup> Ecological footprints are usually measured in global hectares (gha)<sup>54</sup> as trade is global, an individual or country's footprint includes land or sea from all over in the world. A larger footprint means that more resources are being used to support people's lifestyles.

Ecological footprints are calculated using 'direct' land (e.g. land used for agricultural production or for roads and buildings) and 'indirect' land (e.g. land used for processing and packaging agricultural products), as well as the amount of 'embodied' land used (e.g. land overseas used for the production of goods that are imported into New Zealand for consumption in this country).

Regional, city or district councils are responsible for sustainably managing the natural resources in their area, so they need to know the level of consumption of these resources, the amount of waste produced and how that waste is dealt with, so they can measure the effect these activities have on the regions' environment. It also helps councils predict how the current action of residents will affect the regions' environment and economy in the future and the impact this may have on residents' quality of life. This indicator uses two measures:

- New Zealand's ecological footprint
- Regional ecological footprints.

### What did we find?

#### New Zealand's ecological footprint

The New Zealand ecological footprint has been calculated at 22.9 million gha for 2003/2004. This represents the total amount of land needed to sustain the New Zealand population in 2003/2004 according to estimated levels of consumption. In comparison, New Zealand's 1997/1998 ecological footprint was calculated at 19.9 million gha, which represents an annual average growth of 2.4 percent between 1997/1998 to 2003/2004.<sup>55</sup>

The biocapacity<sup>56</sup> of New Zealand has been estimated to be 58.2 million gha (this excludes national parks, forest parks and other non-productive land). On this basis, the ecological footprint of the New Zealand population occupies 39.4% of its biocapacity. For instance, if the per capita footprint remains unchanged, New Zealand could increase its population by 1.53 times before it 'overshoots' its carrying capacity.<sup>57</sup>

The per capita footprint for New Zealand has been calculated at 5.65 global hectares per person.<sup>58</sup> The United States, Canada and Australia all had higher per capita ecological footprints than New Zealand. These differences can be explained by factors such as higher incomes and higher levels of material affluence and consumption in these countries. There are a number of countries (the United Kingdom, the Netherlands and Japan) that have higher per capita income than New Zealand, but have lower ecological footprints per capita. There seems to be a greater level of separation between economic growth and ecological footprint in these countries, which may be due to factors such as higher population densities, diet, lifestyle factors and use of eco-efficient technologies, all of which reduce the use of embodied land.

53 Global Footprint Network. (2007). [www.footprintnetwork.org](http://www.footprintnetwork.org) Retrieved 6 July 2007.

54 A global hectare is a measure used to report both the biocapacity of the earth and the demand on biocapacity. A global hectare is normalised to the area-weighted average productivity of biologically productive land and water in a given year. Because different land types have different productivity, a global hectare of, for example, cropland, would occupy a smaller physical area than the much less biologically productive pasture land, as more pasture would be needed to provide the same biocapacity as one hectare of cropland. Global Footprint Network. (2007). [www.footprintnetwork.org](http://www.footprintnetwork.org) Retrieved 6 July 2007.

55 Ministry for the Environment. (2007). *Ecological Footprints of New Zealand and its Regions 2003-04*.

56 Biocapacity is a measure of the biological productivity in an area. It is the capacity of ecosystems to produce useful biological materials and to absorb waste materials generated by humans, using current management schemes and extraction technologies. Global Footprint Network. (2007). [www.footprintnetwork.org](http://www.footprintnetwork.org) Retrieved 6 July 2007.

57,58 Ministry for the Environment. (2007). *Ecological Footprints of New Zealand and its Regions 2003-04*.

## Ecological Footprints continued

### Regional ecological footprints<sup>59</sup>

Of the regions in this report, the Otago region recorded the highest ecological footprint per capita in 2003/2004 (3.3 local hectares (lha) per resident). This is due to the relatively low productivity of other types of agricultural land in this region as the land is predominantly used for extensive sheep and beef farming. This region ranks 15th in land productivity terms.

The Canterbury (2.66 lha) and Waikato (2.07 lha) regions recorded ecological footprints per capita near the national average of 1.9 lha, although the Waikato region had the second highest land productivity of any region.

The Wellington (1.7 lha), Bay of Plenty (1.6 lha) and Auckland (1.5 lha) regions all showed lower ecological footprints per capita than the national average. The lower footprints for the Wellington and Auckland regions is probably due to these regions being amongst the most urbanised in New Zealand - urban settlements and consumption patterns are more efficient in terms of land use, as they have low land requirements for housing, transport networks provisions, retail trade and infrastructure. In addition, these regions all exhibit very high land productivities and in the case of the Auckland and the Bay of Plenty regions, draw upon the highly productive Waikato region.<sup>60</sup>

### Ecological footprints and land productivity per resident (2003 to 2004)

Region	Ecological footprint (local hectares per resident)	Land productivity ranking
Auckland	1.5	3
Waikato	2.1	2
Bay of Plenty	1.6	1
Wellington	1.7	10
Canterbury	2.7	13
Otago	3.3	15
New Zealand average	1.9 <sup>61</sup>	-

Data source: Ministry for the Environment 2007

<sup>59</sup> Ecological footprints are often calculated on a per capita basis to allow comparison between nations, regions and cities. This requires land of different quality or productivity to be 'added up', which assumes that all land is equally 'valuable' or productive when measured on a local hectares basis. To make comparisons more rigorous, adjustments are made to take account of productivity differences. However, a lack of New Zealand specific data makes any productivity adjustment unfeasible. For this reason, the regional footprints are presented in local, rather than global, hectares. Apparent differences in the per capita footprint between regions can often be explained by land productivity, rather than any significant difference in levels of material consumption and resource use. Ministry for the Environment. (2007). Ecological Footprints of New Zealand and its Regions 2003-04.

<sup>60</sup> Ministry for the Environment. (2007). Ecological Footprints of New Zealand and its Regions 2003-04.

<sup>61</sup> Ministry for the Environment. (2007). Ecological Footprints of New Zealand and its Regions 2003-04.

# Chapter Eleven

## Built environment

### What's in this chapter?

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Look and feel of the city

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Land use

---

Traffic and transport

---

Public transport



## Introduction

**This chapter looks at the many aspects of the built environment that make up a city and can help foster a good quality of life for the city's residents.**

### Why this is important

The built urban environment contributes to the way people feel about where they live and impacts strongly on the sustainability of the natural environment. The way urban land is used to accommodate growth in households and industry also impacts on the costs and accessibility of housing, transport and employment. Poor access to these can impact on a resident's health, their financial wellbeing, their sense of safety and general community wellbeing.

### Key points

More Wellington residents have a sense of pride in their city than residents in any of the other 12 cities. Dunedin, Hamilton and Christchurch also rate highly on city pride.

All but one city have more than five hectares of council managed green space for every 1,000 people (Auckland was just slightly under at 4.9 hectares per 1,000 residents). Dunedin, Christchurch and Tauranga all recorded very high rates at 26.6, 19.3 and 18.4 respectively.

Residents' perceptions of the affordability, safety and convenience of their public transport systems vary widely across the 12 cities. The highest level of public transport use is in Wellington, which also has the lowest proportion of motor vehicle ownership. Four of the Auckland region cities (North Shore, Rodney, Manukau and Waitakere) have the highest levels of motor vehicle ownership. Overall, the motor vehicle is still the dominant mode of transport to workplaces across New Zealand.

Auckland and Manukau residents are more likely to find noise pollution a problem in their city, while Dunedin residents do not perceive this as a problem. Graffiti is identified as a problem by residents in most cities, although perceptions vary as to the extent of the problem.

### Links to other indicators

The way a city is built has an impact on how residents feel about where they live. Urban design, the safety of roads, access to services and facilities and relationships with neighbours all impact on the liveability of a city.

Characteristics of the built environment can impact on people's health, sense of community and the sustainability of the natural environment. Retaining natural attributes whilst developing a city can contribute to residents' sense of place and identity with their city. Green spaces such as parks and reserves also contribute to improving a city's air quality.

Provision of an affordable, safe and convenient public transport system can contribute to a city's wellbeing, as the high dependence on private motor vehicles may further intensify traffic congestion, safety issues, dangerous driving and other issues (e.g. air pollution).

Increasing population and housing densities both affect the wellbeing of a community. The challenge faced by central and local governments is how to maintain the delicate balance between the natural environment, population growth and continued economic development.





## Look and feel of the city

### 11. Built environment

- The majority of residents in most of the 12 cities feel a sense of pride in their city.
- Graffiti is significantly more likely to be rated as a problem in the 12 cities than in the rest of New Zealand.

#### What this is about

Ideally, residents of a city should feel a sense of pride and enjoyment about the area in which they live. This indicator provides some insight into how residents in the 12 cities feel about the various aspects that comprise the built environment and their city's liveability. The majority of the data for this indicator is drawn from the 2006 Quality of Life Survey.

Measures for this indicator include:

- Sense of pride
- Graffiti
- Vandalism
- Litter
- Noise pollution.

#### What did we find?

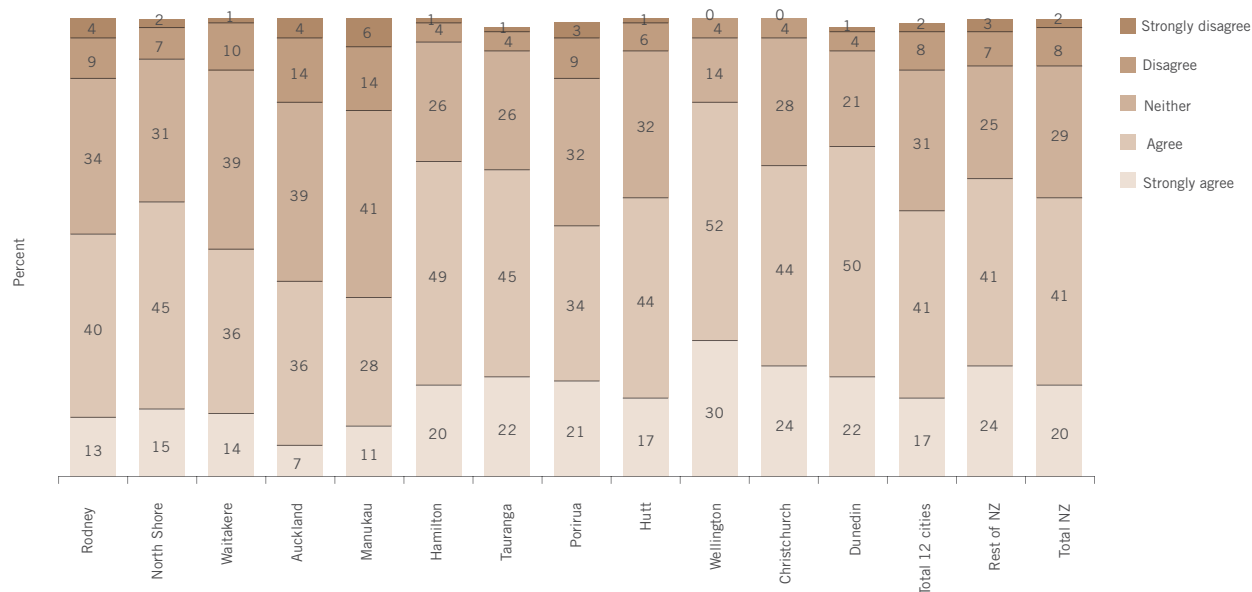
##### Sense of pride

This measure is drawn from the 2006 Quality of Life Survey. Residents were asked whether they agreed or disagreed with the statement "I feel a sense of pride in the way my city looks and feels", on a five point scale from 'strongly agree' to 'strongly disagree'.

Overall, the majority of residents surveyed in each city agreed that they felt a sense of pride in the way their city looks and feels, with 58.0% of the 12 cities residents responding with a rating of either 'strongly agree' or 'agree'.

City ratings of pride ranged from 82.0% agreement in Wellington to 39.0% in Manukau. Dunedin and Hamilton recorded high ratings of 72.0% and 69.0% respectively.

Residents' rating of sense of pride in the way their city looks and feels (2006)



Residents aged 50 to 64 years, females and those who rated their quality of life 'extremely good', were more likely than others to agree that they felt a sense of pride in their city.<sup>2</sup> There was little difference across ethnic groups and household income brackets.

City residents who felt a sense of pride noted the presence of:

- Green open spaces and parks (particularly Christchurch)
- Good facilities and services (particularly Hutt and Manukau)

- Clean environments (particularly North Shore)
- Welcoming and friendly people (particularly Dunedin).

Those who disagreed mentioned:

- Presence of rubbish
- A need for better city maintenance
- Graffiti or vandalism.

1 Figures might not add to 100% as 'don't know' responses are not shown.

2 Perception of overall quality of life is reported in the Social connectedness chapter of this report.



## Look and feel of the city continued

### Graffiti

Graffiti has an impact on the way people feel about where they live. It is often regarded as an act of vandalism, can contribute to people feeling unsafe in their community and can negatively affect residents' perception of quality of life.

This measure looks at whether residents perceived graffiti as a problem in their city in the last 12 months, using 2006 Quality of Life Survey data. There was variation across the cities, with the highest rates of perception of graffiti as a problem in Manukau, Auckland (both 82.0%), Porirua (77.0%), Waitakere (74.0%) and Christchurch (72.0%).

Pacific Islands people were significantly more likely to have perceived graffiti as a problem (77.0% in the total 12 cities), compared with New Zealand Europeans (71.0% in the 12 cities), Maori (74.0%) and Asian/Indian people (53.0%).

The level of graffiti in a city can affect residents' satisfaction with their city environment. The presence of graffiti may attract more vandalism and other types of crime. Graffiti, as a primarily youth subculture, enables participants to assert identity, visibility and power in a social context in which they were previously ignored.<sup>3</sup> As such it is a social issue that requires consideration of a range of solutions, such as planning, management and design strategies, as well as provision of alternative ways for people to express themselves.

### Vandalism

Vandalism is an illegal, anti-social activity that creates a negative impression of an area and impacts on people's perception of safety and quality of life. The wilful or malicious defacement or destruction of private and/or public property suggests a lack of respect and empathy for others.

This measure looks at whether residents perceived vandalism as a problem in their city in the last 12 months, using 2006 Quality of Life Survey data.

There was variation across the cities, with residents in Hamilton (40.0%) and Wellington (41.0%) less likely to see vandalism as a problem than those living in Auckland (64.0%) Manukau (62.0%) or Christchurch (58.0%).

When committed extensively, violently or as an expression of hatred and intimidation, vandalism can become a serious social problem.<sup>4</sup> This leaves people feeling less safe, which in turn impacts on levels of community participation and sense of belonging.

### Litter

Litter or rubbish is a social and environmental problem that can affect perceptions of quality of life of residents, the experience of tourists and visitors and the overall image of a city. The presence of litter indicates a lack of respect for communal places, which reduces the perceived value of these areas and makes them less attractive for use by the public. Litter degrades the environment and can be harmful to people, domestic animals and wildlife.

The 2006 Quality of Life Survey asked residents whether or not they perceived litter as a problem in their city in the past 12 months. Residents living in Manukau (60.0%), Auckland (59.0%) and Waitakere (54.0%) were more likely than those in other cities to consider litter a problem.

At the total 12 cities level, Pacific Islands people (56.0%) were significantly more likely than other ethnic groups to have seen litter as a problem (New Zealand European 50.0%; Maori 50.0%; Asian/Indian 48.0%).

Littering as a social problem indicates that people do not feel a sense of ownership or responsibility for public places.

### Residents' rating of graffiti, vandalism and litter as a problem (2006)

	Graffiti %	Vandalism %	Litter %
Rodney	60	51	32
North Shore	56	49	42
Waitakere	74	51	54
Auckland	82	64	59
Manukau	82	62	60
Hamilton	66	40	40
Tauranga	62	45	37
Porirua	77	52	53
Hutt	56	45	37
Wellington	58	41	50
Christchurch	72	58	50
Dunedin	59	46	53
<b>Total 12 cities</b>	<b>70</b>	<b>54</b>	<b>51</b>
<b>Rest of NZ</b>	<b>45</b>	<b>43</b>	<b>33</b>
<b>Total NZ</b>	<b>59</b>	<b>49</b>	<b>43</b>

Data source: Quality of Life Survey 2006

3 O'Boyle, K. (2002-2003). *Christchurch – dark spaces and alternative environmental faces: graffiti in the local context*. Social Science Research Centre. University of Canterbury. [www.ssrc.canterbury.ac.nz/research/2002-3/darkspaces.shtml](http://www.ssrc.canterbury.ac.nz/research/2002-3/darkspaces.shtml) Retrieved 15 July 2007.

4 Human Rights First. 2007 *Hate Crime Survey*. [www.humanrightsfirst.org](http://www.humanrightsfirst.org) Retrieved 15 July 2007.



## 11. Built environment

**Noise pollution**

Noise is an intrinsic part of everyday life within cities. Although some degree of noise is inevitable, it can affect the way people feel about the area they live in and can have a negative impact on their wellbeing.

As the population grows and our technological age produces more vehicles, electronic gadgets and other sound sources, noise is becoming a more pressing issue.<sup>5</sup> Problems related to noise include hearing loss, stress, high blood pressure, sleep loss and a general reduction in quality of life and opportunities for tranquillity.<sup>6</sup>

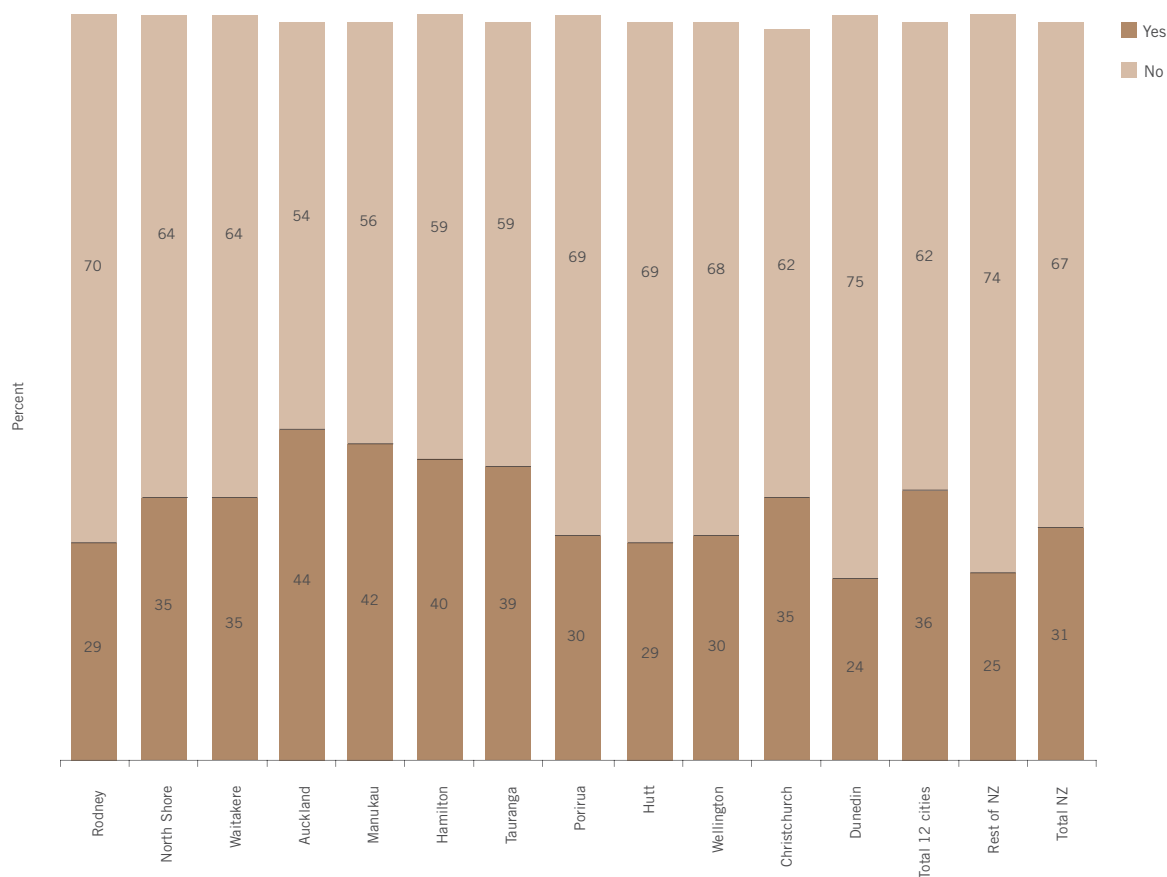
This measure looks at whether or not residents perceived noise pollution as a problem in their city in the last 12 months, using 2006

Quality of Life Survey data. The majority of residents in seven of the 12 cities said that noise pollution was not a problem in their city. These perceptions ranged from 75.0% in Dunedin to 64.0% in both North Shore and Waitakere.

Residents in Auckland (44.0%), Manukau (42.0%) and Hamilton (40.0%) were significantly more likely to indicate that noise pollution was a problem in their city.

Just over two-fifths (42.0%) of all Pacific Islands people considered noise pollution a problem in the 12 cities combined, compared with Maori (38.0%), New Zealand European (36.0%) and Asian/Indian people (34.0%).

**Residents' rating of noise pollution as a problem (2006)<sup>7</sup>**



<sup>5</sup> Chepesiuk, R. (2005). *Decibel Hell: The Effects of Living in a Noisy World*. Environmental Health Perspectives Volume 113 (1).

<sup>6</sup> Noise Pollution Clearinghouse [www.nonoise.org](http://www.nonoise.org)

<sup>7</sup> Figures might not add to 100% as 'don't know' responses are not shown.

# Land use

- All but one of the 12 cities have more than five hectares of council managed green space for every 1,000 people.
- Across all 12 cities, the majority of residents surveyed considered it was easy to access a local park or green space.

## What this is about

Green space areas in a city, such as parks and gardens, help to protect and enhance urban ecology, help mitigate the effects of urbanisation and provide residents with a choice of recreational opportunities, which contributes positively to health and general wellbeing. Provision of city green space can also help foster a sense of community, as well as a sense of pride (e.g. city beautification areas). Measures for this indicator include:

- Green space
- Access to green open spaces.

## What did we find?

### Green space

This measure looks at the hectares of public green space per 1,000 residents for each city. Green space is defined as 'open space' under the management and control of, or leased by, councils and includes sports areas, parks and gardens

(including passive recreational spaces, historic reserves and scenic reserves), riverside/lakeside/beachside walks and other similar areas. Data has been sourced from the Yardstick Project.<sup>8</sup>

In 2006, almost all of the cities had more than five hectares of green space per 1,000 residents, except Auckland (4.9). Dunedin, Christchurch and Tauranga all recorded very high rates at 26.6, 19.3 and 18.4 respectively.

Over the three year period from 2004 to 2006, seven of the 12 cities had increased their green space (North Shore, Waitakere, Manukau, Hamilton, Tauranga, Christchurch and Dunedin) as had the Wellington region. Rodney and Auckland's rates had declined.

Green space provides opportunities for recreation, which brings health benefits to residents. Some areas of green space, such as botanical gardens, also provide economic benefits to cities through tourism opportunities.

Total hectares of green space per 1,000 residents (2004 to 2006)

	2004 Hectares	2005 Hectares	2006 Hectares
Rodney	21.5	18.1	7.1
North Shore	8.9	8.9	9.3
Waitakere	6.9	8.2	7.6
Auckland	6.2	6.2	4.9
Manukau	7.0	7.2	8.7
Hamilton	8.1	8.1	12.4
Tauranga	11.6	13.4	18.4
Wellington Region	80.7	85.0	116.3
Christchurch	17.6	17.0	19.3
Dunedin	20.6	20.6	26.6

Data source: Prophet IAM Ltd 2006

<sup>8</sup> Prophet IAM Ltd 2006 and Yardsticks Parks Technical Group (for the New Zealand Recreation Association and the Institute of Public Works Engineering Australia). Yardstick Report November 2006. The Yardstick Project aims to standardise information throughout New Zealand and Australia. All of the 12 cities, except Hutt, Wellington and Porirua, are in the Project.

## 11. Built environment

### Ease of access to green open spaces

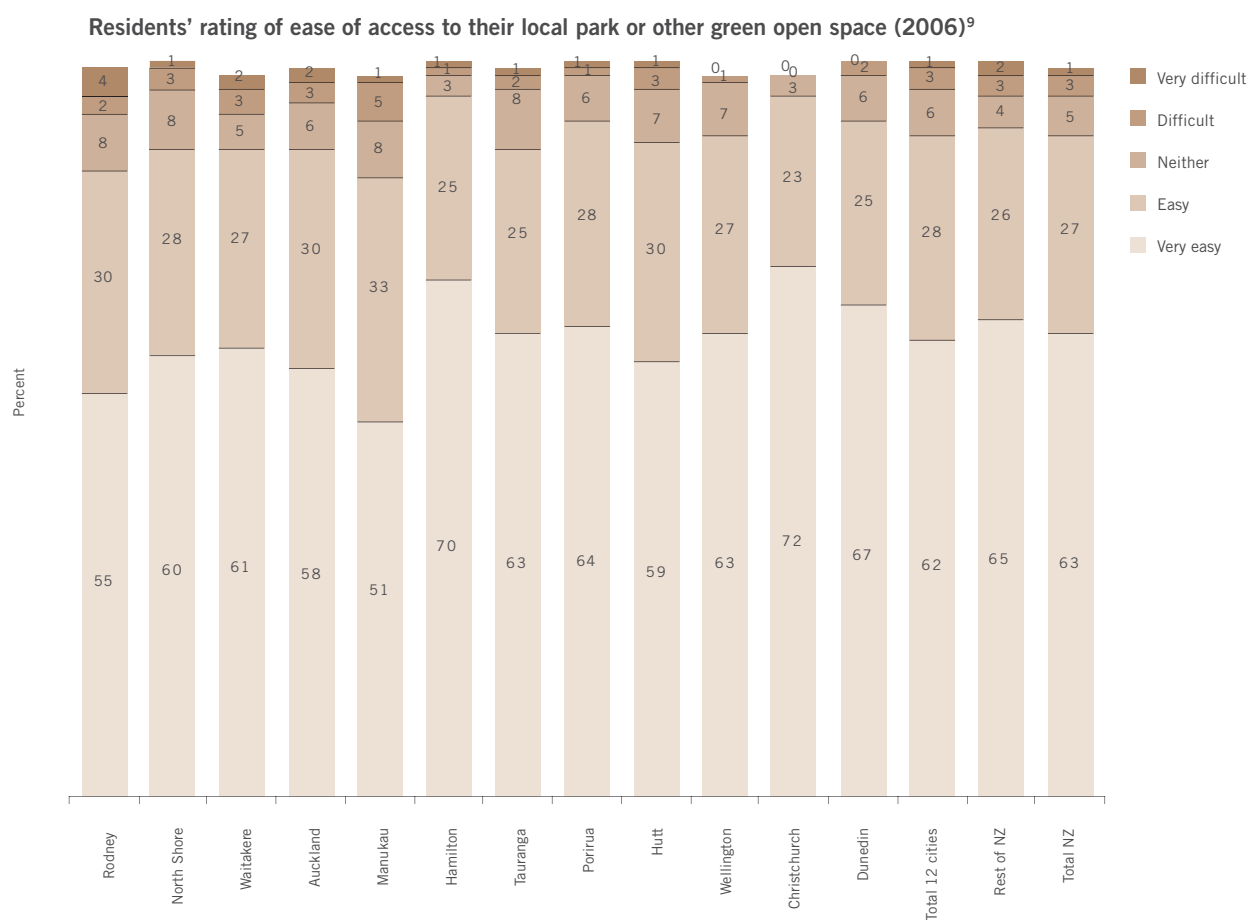
Residents were asked to rate the ease of access to their local park or other green space, on a five point scale from 'very easy' to 'very difficult'.

The majority of residents surveyed in each city said it was easy to access a local park or other green space, with those in Christchurch (95.0%) more likely to rate it as easy than those in Manukau (84.0%).

At the total 12 city level, New Zealand Europeans were significantly more likely to feel it was easy to access a local park

or green space (92.0%), than Pacific Islands and Asian/Indian residents (85.0% and 80.0% respectively). The same pattern was found nationally.

Ideally, everyone should have access to public transport and outdoor environments. Lack of access can reduce individual and community participation in activities and reduce people's ability to take advantage of social, economic and healthy lifestyle opportunities.



<sup>9</sup> Figures might not add to 100% as 'don't know' responses are not shown.

## Traffic and transport

- The majority of residents from the 12 cities use a motor vehicle to get to work, except in Wellington.
- In most cities, more than half of the residents consider their public transport to be affordable, safe and convenient.

The continued high dependence on motor vehicles has a negative impact on cities. Issues include congestion pressures (and associated delays in travel time and individual stress), a high human cost through crashes and fatalities and poor air quality due to vehicle emissions (particularly at busy intersections at peak travel times). Increasing traffic volumes also place demand on existing road networks. New road development to meet traffic demand can potentially divide communities and use valuable land that could be utilised for other purposes. Measures for this indicator include:

- Motor vehicle ownership
- Motor vehicle registration
- Means of travel to work
- Distances travelled by mode of transport
- Population travelling outside their city to work.

### What did we find?

#### Motor vehicle ownership

This measure presents data on the number of motor vehicles per household over the last two census periods (2001 to 2006). It gives us insight into traffic congestion, fossil fuel consumption and air pollution.

There were high levels of motor vehicle ownership nationally and across all 12 cities. Two of the Auckland region cities (Rodney and North Shore) reported the highest proportion of vehicle ownership, each with an average of 1.7 vehicles per household. Wellington had the lowest average rate of 1.3.

Around a third of households in the 12 cities had one motor vehicle, whilst a further third owned two motor vehicles. Wellington had the highest percentage of single motor vehicle ownership (44.7%) and the lowest of two vehicle ownership (29.3%). Manukau recorded the highest proportion of ownership of three or more vehicles (19.4%), closely followed by Rodney (19.0%). The percentage of households with no motor vehicles has decreased across all of the 12 cities in the last decade, with a similar pattern shown in the rest of New Zealand.

#### Motor vehicle ownership per household (2006)

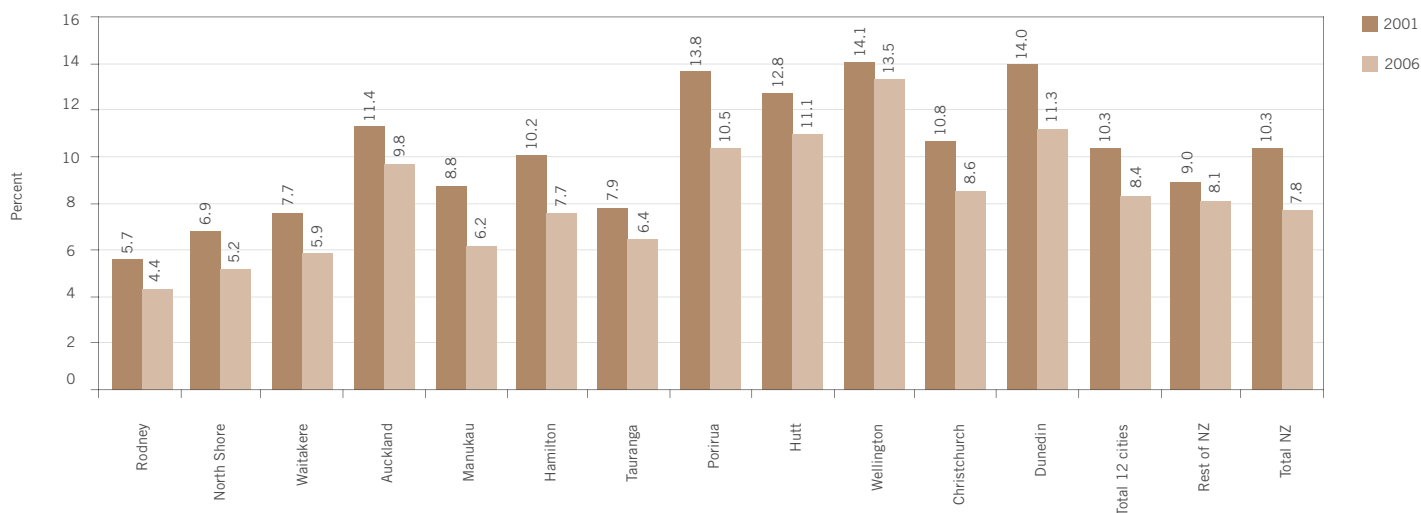
	No motor vehicle %	One motor vehicle %	Two motor vehicles %	Three or more motor vehicles %	Not elsewhere included <sup>10</sup> %	Average number per household %
Rodney	4.4	31.8	40.8	19.0	3.9	1.7
North Shore	5.2	32.7	41.3	18.1	2.7	1.7
Waitakere	5.9	33.5	37.5	17.0	6.2	1.6
Auckland	9.8	36.3	34.5	13.4	5.9	1.5
Manukau	6.2	30.2	38.3	19.4	5.9	1.6
Hamilton	7.7	37.0	35.5	15.1	4.7	1.5
Tauranga	6.4	39.3	37.9	13.4	3.1	1.6
Porirua	10.5	35.4	35.6	13.5	5.1	1.5
Hutt	11.1	40.9	33.5	11.7	2.6	1.4
Wellington	13.5	44.7	29.3	8.6	3.8	1.3
Christchurch	8.6	37.8	36.1	14.6	2.8	1.5
Dunedin	11.3	38.5	32.6	14.7	2.9	1.5
<b>Total 12 cities</b>	<b>8.4</b>	<b>36.3</b>	<b>36.0</b>	<b>15.0</b>	<b>4.3</b>	<b>1.6</b>
<b>Rest of NZ</b>	<b>7.0</b>	<b>36.3</b>	<b>37.2</b>	<b>15.7</b>	<b>3.9</b>	<b>1.6</b>
<b>Total NZ</b>	<b>7.8</b>	<b>36.3</b>	<b>36.6</b>	<b>15.3</b>	<b>4.1</b>	<b>1.6</b>

Data source: Statistics New Zealand, Census 2006

<sup>10</sup> Includes unidentifiable and not stated.

## 11. Built environment

Percentage of households with no motor vehicle (2001, 2006)



Data source: Statistics New Zealand, Census 2001, 2006

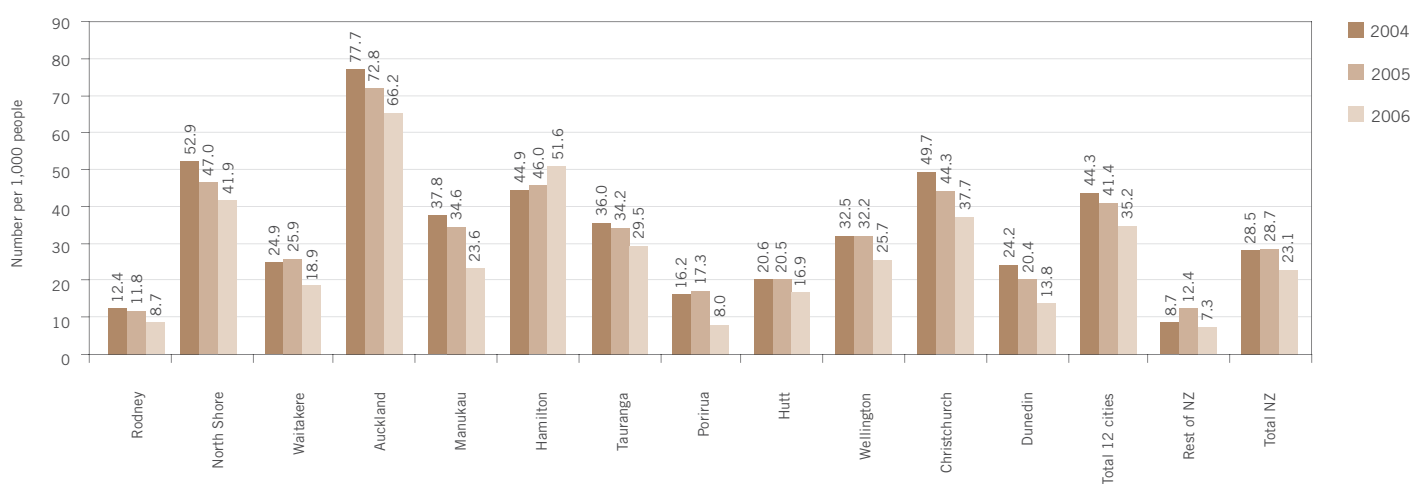
## Motor vehicle registration

Registration is the initial recording of motor vehicles on the New Zealand Motor Vehicle Register and the issuing of registration plates. This ensures vehicles meet New Zealand's safety standards and records information for enforcement and anti-theft purposes, which contributes to improving the safety of vehicle usage on roads. This measure covers the net registration of motor vehicles (calculated from total registrations minus deregistration).<sup>11</sup>

Auckland had the highest rate for vehicle registration of the 12 cities, as the majority of imported new and used cars are shipped to the Port of Auckland. Christchurch had the second highest rate of vehicle registrations, again associated with port locations.

The number of vehicle registrations decreased in most of the 12 cities between 2004 and 2006, although Hamilton reported an increase. Although the number of registrations decreased in most cities, this did not result in a decrease in the overall number of vehicles on roads.

Net number of vehicles registered per 1,000 people (June 2004 to June 2006)



Data source: Land Transport New Zealand 2006

11 A vehicle is considered deregistered when it has been permanently removed from use on New Zealand roads and the registration has been cancelled.

## Traffic and transport continued

### Means of travel to work

This measure presents data on how residents aged 15 years and over and in full-time employment travelled to work on census day in March 2006.

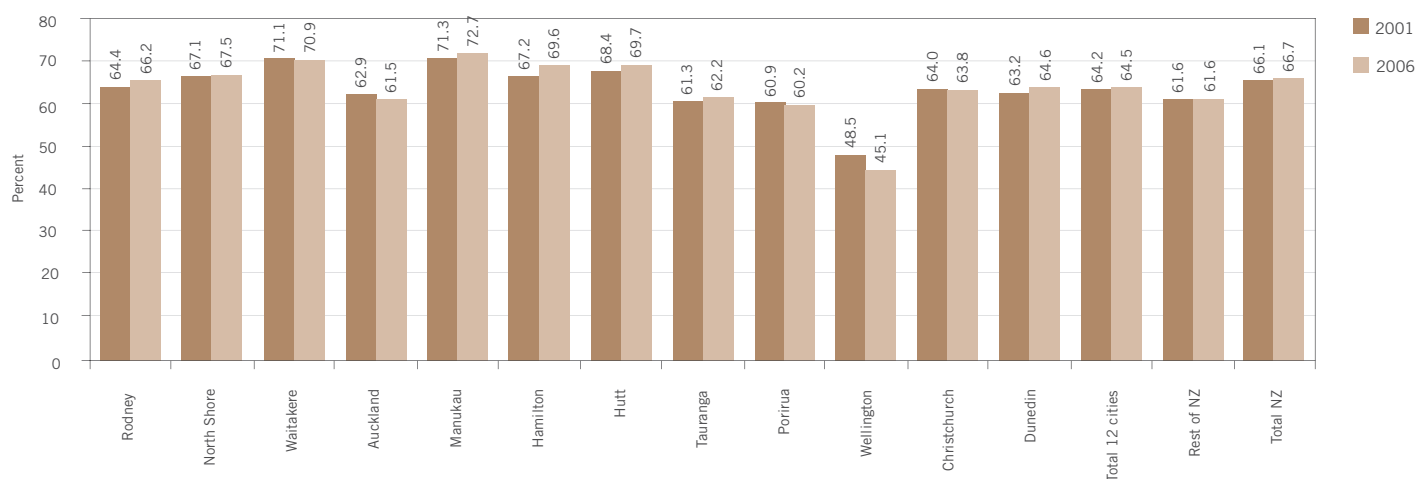
The majority of employed residents across the 12 cities used a motor vehicle to travel to work, ranging from 72.7% in Manukau to 45.1% in Wellington. Wellington had the highest percentage of residents (14.0%) using a public bus to get to work, while Tauranga had the smallest (0.8%). The highest proportion of employed residents using a bicycle for the journey to work was in Christchurch (5.1%), followed by Hamilton with 2.7%.

Between 2001 and 2006, seven of the 12 cities showed an increase in the proportion of residents who used a public bus to

get to work (North Shore, Hamilton, Tauranga, Hutt, Wellington, Christchurch and Dunedin). Porirua and three of the cities in the Auckland region (Waitakere, Auckland and Manukau) showed a decrease.

Seven of the 12 cities (Rodney, North Shore, Manukau, Hamilton, Tauranga, Porirua and Dunedin) showed an increase in employed people using a motor vehicle to get to work (ranging from a 2.4% increase in Hamilton to 0.4% in North Shore). Five cities (Waitakere, Auckland, Hutt, Wellington and Christchurch) recorded a decrease, with the largest decline in Wellington (45.1% in 2006, compared with 48.5% in 2001).

Percentage of employed people aged 15 years and over who used a motor vehicle to get to work on census day (2001, 2006)<sup>12</sup>



12 Data includes those aged 15 years and over and in full-time employment.



11. Built environment

Distances travelled by mode of transport

This measure shows the distance travelled (millions of kilometres) by various transport modes in New Zealand, using the Household Travel Survey. Conducted by the Ministry of Transport each year, respondents in over 2,000 households throughout New Zealand are asked to record all their travel over a two day period. The motor vehicle was the dominant form of transport.

Nationally, the distance that each household travelled by road increased by 14.0% between 1997/1998 and 2003 to 2006, an average increase of 1.8% per year. The New Zealand population increased by 7.0% over this period.

Distance travelled by modes of transport (March 2003 to June 2006)

Travel mode	Trips in sample	Million hours per year	Million km per year	Million trip legs per year <sup>13</sup>
Driver (any vehicle type)	58,239	857	31,592	3,467
Passenger (in private vehicle)	28,384	452	18,253	1,633
Walk	16,588	199	n/a <sup>14</sup>	996
Bus passenger	2,200	70	1,791	153
Bicycle	1,901	22	247	89
Taxi passenger	442	7	184	25
Train	279	10	n/a	17
Other modes <sup>15</sup>	449	23	n/a	31
Total	108,482	1,639	52,066	6,409

Data source: Ministry of Transport, Household Travel Survey 2003 to 2006

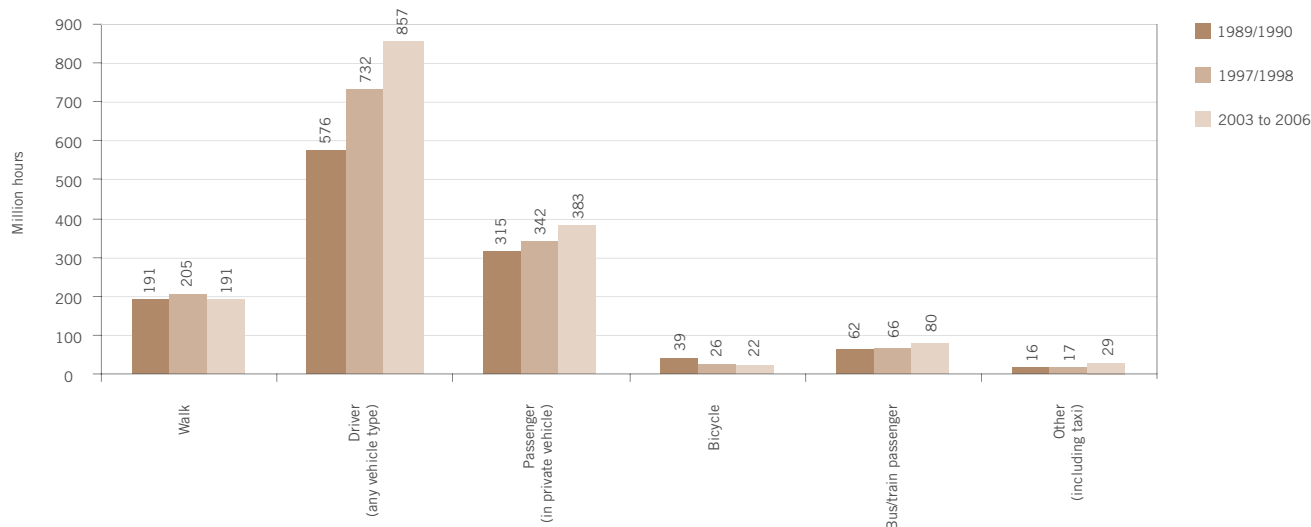


13 Trip leg refers to a single leg of a journey, between any two stops. For example, walking to a bus stop, catching a bus to town and walking from a bus stop to work is three trip legs.  
14 Distance estimates are available for road-based modes only.  
15 'Other' includes travel by air and sea as well as uncommon land modes (e.g. horse-riding).



## Traffic and transport continued

Travelling time by modes of transport (1989/1990, 1997/1998, 2003 to 2006)



Data source: Statistics New Zealand, Census 2001, 2006

The total travel time for all modes of transport increased by 13.0% between 1997/1998 and 2003 to 2006 (from 1,199 to 1,561 million hours per year). Driver and passenger travel together accounted for 80.0% of all time spent travelling, 12.0% of time was spent walking, 5.0% on public transport and 3.0% by other modes (cycling, air and sea travel).

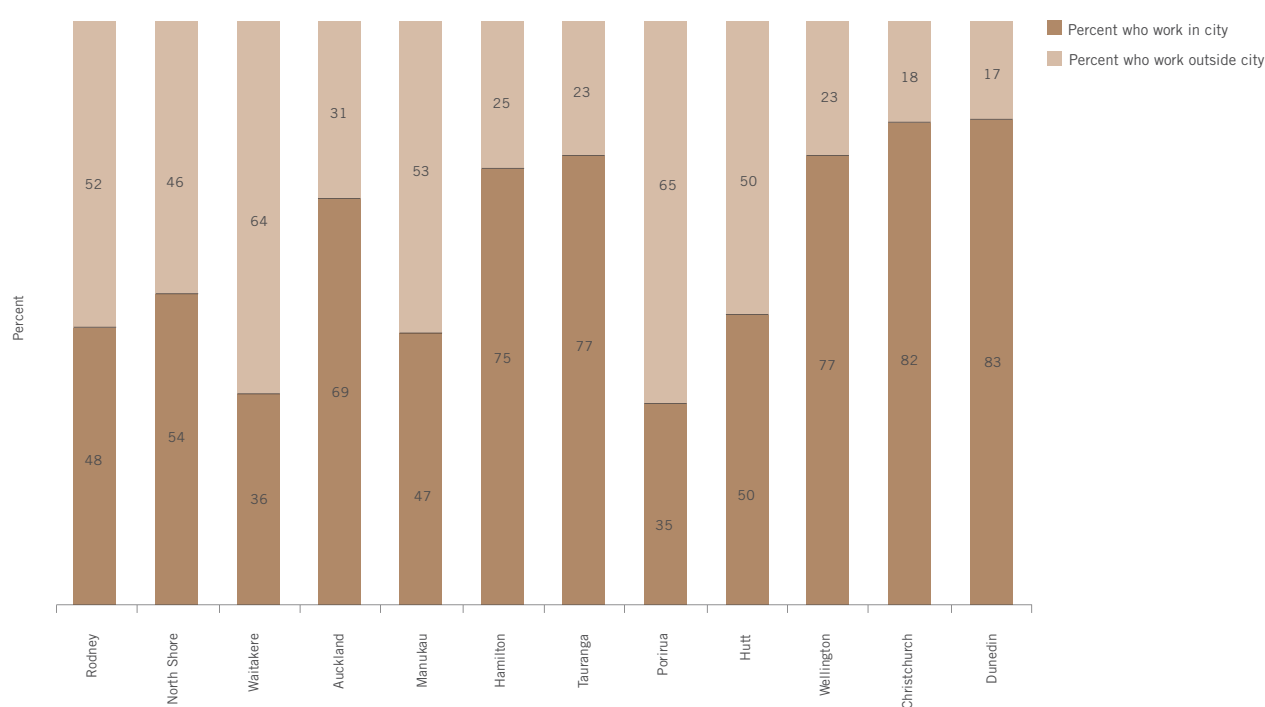
Time spent driving increased by 17.0% between 1997/1998 and 2003 to 2006. This compares with a 7.0% increase between 1989/1990 and 1997/1998.<sup>16</sup>

### Population travelling outside their city to work

This measure presents data on residents aged 15 years and over and in full-time employment, who travelled to a workplace either inside or outside their city boundary on census day in March 2006.<sup>17</sup>

The city with the highest percentage of residents travelling outside their city boundary to work was Porirua (65.5%), whilst Dunedin had the smallest (16.9%).

Percentage of employed people aged 15 years and over who travelled outside their city to work on census day (2006)



Data source: Statistics New Zealand, Census 2001, 2006

16 The Household Travel Survey is an ongoing survey. At the time of writing, only national estimates were available. However with a further years data, the Ministry of Transport will be able to produce estimates for local government regions and large cities.

17 A proportion of non-responses to the question on travel to work in the Census means that there is a degree of uncertainty involved when estimating the percentage of the workforce employed outside the city.



## Public transport

### 11. Built environment

- Residents of Wellington and Hutt are the highest users of public transport.
- In most cities, more than half of the residents consider public transport to be affordable, safe and convenient.
- The majority of residents in the 12 cities (except those in Rodney) say it is easy to access a public transport facility (e.g. bus stop).

### What this is about

Public transportation systems provide links between different parts of the built environment, connecting the city's residents with the services they need and want to access. An affordable, reliable, safe and attractive public transport system can increase city accessibility and can encourage a reduction in the use of private motor vehicles. This in turn reduces congestion, traffic noise and the stress involved in commuting. Public transport that does not rely on fossil fuels can help reduce the impact of fuel pollution on the environment.

Provision of access to public transport facilities can increase access to employment, education and medical services and reduce isolation for some residents. These factors are associated with the ability to access services and opportunities locally and to interact with and move within and between communities.

This indicator shows patterns in transport use by residents of the 12 cities using results from the 2006 Quality of Life Survey. Measures for this indicator include:

- Use of public transport
- Affordability of public transport

- Safety of public transport
- Convenience of public transport
- Ease of access to public transport facilities.

### What did we find?

#### Use of public transport

Residents were asked how often they had used public transport in the previous 12 months, on a given frequency scale.

Wellington had the highest percentage of residents using public transport two or more times a week (43.0%), followed by Hutt (32.0%) and Porirua (31.0%). Tauranga had the lowest percentage (5.0%).

Nationally and in the 12 cities combined, Pacific Islands people and Asian/Indian people, those aged 15 to 24 years and people with a household income under \$20,000 were much more likely than others to use public transport.

#### Residents' frequency of use of public transport in previous 12 months (2006)<sup>18</sup>

	5 or more times a week %	2-4 times a week %	Once a week %	2-3 times a month %	At least once a month %	Less than once a month %	Did not use %	No public transport available in local area %
Rodney	5	3	1	1	1	14	52	21
North Shore	11	10	4	6	6	19	33	11
Waitakere	12	6	3	5	6	21	35	11
Auckland	17	7	5	5	5	21	31	9
Manukau	13	5	4	4	7	19	37	10
Hamilton	7	4	3	4	6	17	50	8
Tauranga	3	2	3	3	4	17	57	11
Porirua	21	10	4	5	10	22	24	4
Hutt	22	10	5	7	10	18	23	5
Wellington	30	13	8	8	9	16	13	3
Christchurch	12	10	4	5	9	20	33	6
Dunedin	11	6	5	5	8	17	39	9
<b>Total 12 Cities</b>	<b>14</b>	<b>7</b>	<b>4</b>	<b>5</b>	<b>7</b>	<b>19</b>	<b>34</b>	<b>9</b>
<b>Rest of NZ</b>	<b>3</b>	<b>3</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>13</b>	<b>50</b>	<b>21</b>
<b>Total NZ</b>	<b>9</b>	<b>6</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>16</b>	<b>41</b>	<b>14</b>

Data source: Quality of Life Survey 2006

<sup>18</sup> Figures might not add to 100% as 'don't know' responses are not shown.

## Public transport continued

### Affordability of public transport

Residents were asked to rate the affordability of public transport on a five point scale of ‘strongly agree’ to ‘strongly disagree’. They were also asked about their perceptions of the safety and convenience of public transport.<sup>19</sup>

Of the 12 cities, Christchurch (71.0%), Hamilton (69.0%) and Wellington (68.0%) residents were considerably more likely to consider that public transport was affordable, than those living

in the Auckland region. Residents in Rodney (36.0%), Waitakere (46.0%), North Shore (47.0%), Auckland (48.0%) and Manukau (49.0%) were less likely to consider public transport affordable.

Distances travelled may be a factor in these perceptions (e.g. Waitakere and Rodney residents generally have a greater distance to travel if they are travelling to the Auckland central business district).

Percentage of residents rating ‘strongly agree’ and ‘agree’ with factors relating to public transport (2006)

	Affordability %	Safety %	Convenience %
Rodney	36	68	30
North shore	47	79	47
Waitakere	46	66	49
Auckland	48	70	44
Manukau	49	61	47
Hamilton	69	82	72
Tauranga	64	85	57
Porirua	66	82	75
Hutt	65	80	72
Wellington	68	84	79
Christchurch	71	69	78
Dunedin	63	84	53
<b>Total 12 cities</b>	<b>57</b>	<b>73</b>	<b>59</b>
<b>Rest of NZ</b>	<b>51</b>	<b>72</b>	<b>49</b>
<b>Total NZ</b>	<b>55</b>	<b>73</b>	<b>55</b>

Data source: Quality of Life Survey 2006



19
Of those with public transport available in their city or area.

## 11. Built environment

**Safety of public transport**

Most of the residents of our cities felt their public transport was safe, with at least 60.0% in each city agreeing. Those more likely to agree that public transport was safe lived in Tauranga (85.0%), Wellington and Dunedin (both 84.0%) and Hamilton and Porirua (both 82.0%).

At the national and total 12 cities level, those aged 15 to 24 years, Asian/Indian people and males were much more likely to rate public transport as safe.

**Convenience of public transport**

Residents more likely to consider that public transport was convenient were those living in Wellington, Christchurch and Porirua, people aged 15 to 24 years, those aged 65 years and over, Maori and Pacific Islands people and females. Residents living in the Auckland cities were much less likely to see public transport as convenient.

**Ease of access to public transport facilities**

Residents were asked to rate the ease of access to public transport facilities (such as a bus stop or train station) on a five point scale from 'very easy' to 'very difficult'.

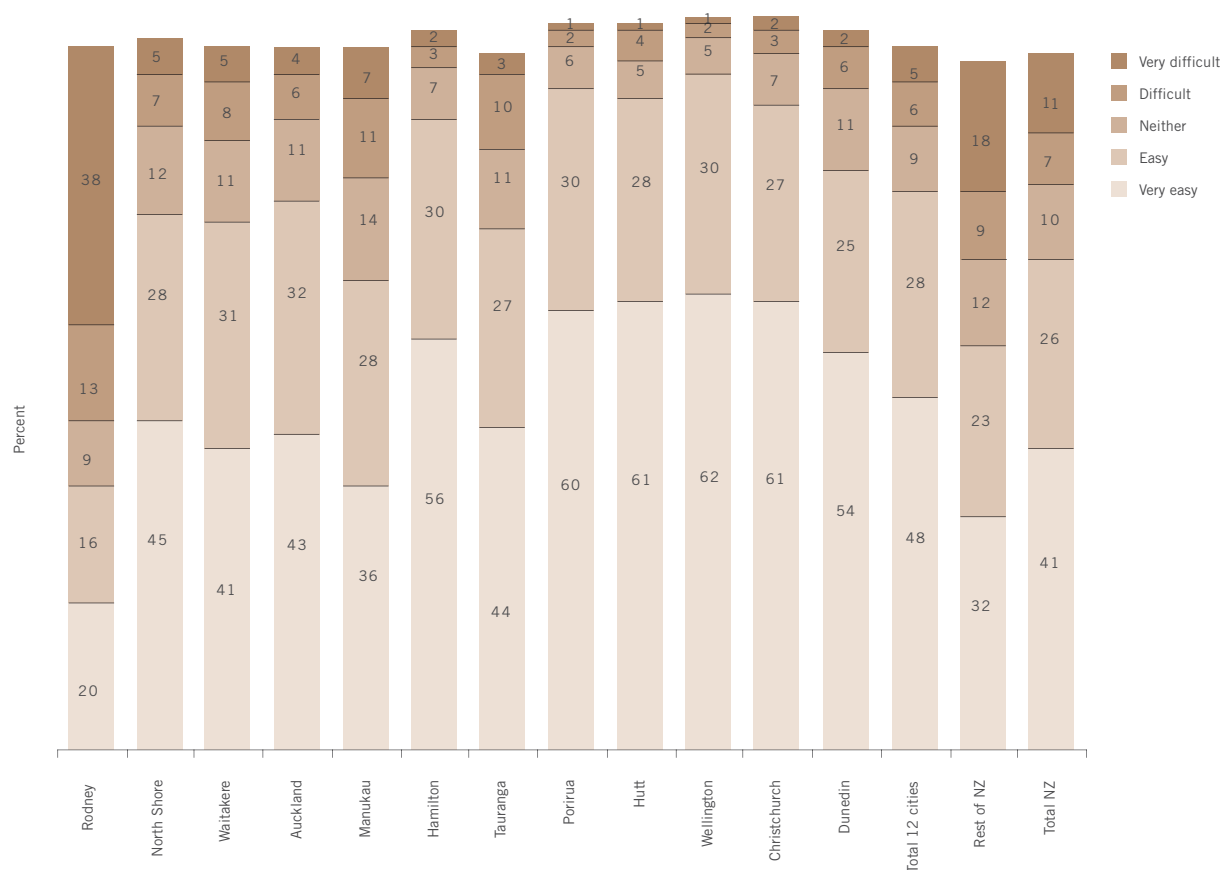
The majority of residents surveyed in each city said it was easy to access a public transport facility, with 76.0% of the residents from the total 12 cities responding with a rating of either 'very easy' or 'easy'.

Residents in Wellington (92.0%), Porirua (90.0%), Hutt (89.0%) and Christchurch (88.0%) and Hamilton (86.0%) were more likely to rate access to a public transport facility as easy. Those living in Rodney were considerably less likely to consider it easy to access a public transport facility, with only 36.0% rating it 'very easy' or 'easy'.

Nationally, residents who considered it difficult to access a public transport facility were asked why. The most common reasons were:

- No service in the area/too far away (71.0%)
- Lack of full-time services (16.0%)
- Transport does not go to desired destination (15.0%)
- Preference for private transport (6.0%).

**Residents' rating of ease of access to public transport facilities (2006)<sup>20</sup>**



Data source: Quality of Life Survey 2006

<sup>20</sup> Figures might not add to 100% as 'don't know' responses are not shown.

## Conclusions

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Most residents in the 12 cities enjoy a high level of quality of life. They are generally satisfied with their lives, enjoy clean air and water and have ready access to employment, housing and services such as health and education. However, the report also highlights a number of key issues and challenges our cities are facing.

### Residents' perceptions of quality of life

Overall, most residents rate the quality of life in our 12 cities positively. They feel that they enjoy a good quality of life, are happy and satisfied with their lives and report that they are in good health. On the whole, they have a sense of pride in their city and consider that their cities offer them a culturally rich and diverse arts scene.

In general, residents in our cities are also satisfied with their work-life balance and leisure time, although slightly less so than other New Zealanders. Most residents feel that it is easy to access a local park or local area of green space.

### Quality of life in the cities is improving

The quality of life for many people in our cities is improving.

Median personal and household incomes increased in our cities between the 2001 and 2006 censuses, both in nominal and real terms. Taking into account inflation over the period, average real (inflation-adjusted) earnings increased in nine of the 12 cities. The economy is strong and there has been an increase in jobs and a decrease in the percentage of people receiving income tested benefits.

Aspects of safety in our cities are also showing an improvement. Despite an increase in traffic and a concern by our residents that dangerous driving is a problem, the rate of serious and fatal road crashes is falling both in our cities and nationally. Similarly there has been a decline in the rate of workplace accidents.

### Sustainability

Our cities currently comprise more than half of New Zealand's population (55.6%) and are continuing to grow rapidly. Most (86.1%) of New Zealand's total population growth in the next 20 years is projected to take place in the 12 cities. The cities in the Auckland region will account for 65.9% of that growth.

This pace of growth is placing considerable pressure on the environment, infrastructure and social fabric of our cities.

The way urban land is used to accommodate growth in population and industry has an impact on the city's infrastructure, environment and the quality of life of its residents.

Alongside the perceptions of a positive quality of life, residents are reporting problems associated with urban living. Those in our cities are more likely to rate graffiti, vandalism, litter and noise as problems than those residing in the rest of New Zealand.

The key issue facing our cities is how to accommodate growth in a sustainable way.

There is traffic congestion in the Auckland region. There are regular breaches of air quality in Christchurch and the Auckland region and of beach and stream water quality in Auckland, Waikato, Bay of Plenty, Wellington, Canterbury and Otago. Some of our cities are already facing challenges such as how to manage traffic, maintain coastlines and rural landscapes, secure a water supply to meet the population demands, deal with increasingly polluted storm and floodwater and conserve biodiversity.

### Diversity

Our cities are not just growing in population, they are becoming increasingly ethnically diverse. Maori comprise 10.4% of people in our cities compared with 18.6% over the rest of New Zealand. Our cities have higher proportions of Pacific Islands and Asian people compared with the rest of New Zealand. The ethnic composition of our cities varies considerably.

Auckland now has more overseas-born residents than any other Australasian city. Our new citizens are originating from an increasingly wide range of countries. In 2006, half of those gaining citizenship originated from Asian countries. Most of those gaining citizenship were from India, China, South Africa, England, Fiji and Korea.

The number of immigrants making New Zealand their home is projected to increase. Ethnic projections for the cities indicate that there will be lower proportions of the population identifying with European ethnicities. Conversely the Maori, Asian and Pacific Islands share of the population is expected to increase.

Most of the residents in our cities are positive about the impact of increasing diversity, largely as they feel it brings about new ideas and greater cultural awareness.

Residents (8.0%) who feel that increasing diversity make their area a worse place to live tend to be concerned that there was little cultural integration.

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## Community connectedness and social isolation

Diversity can affect the social cohesion of cities and communities.

Overall, most of our residents have a sense of connection with others. Residents tend to base their social networks around families, work and school. They are less likely than those residing throughout the rest of New Zealand to base social networks around where they live, possibly because city populations are highly mobile with almost half of our residents having shifted address in the past five years.

Although our cities' residents tend to be 'neighbourly', in that most have had positive contact with their neighbours, they are less likely to feel a sense of community with their neighbourhood than those residing outside our cities.

There is a small proportion of our population, however, who appear to be socially isolated and do not feel that they have access to support. Pacific Islands and Asian/Indian residents, along with young people, are most likely to experience this.

## Economic sustainability

The 12 cities are vital to the health of our national economy and account for nearly two thirds of all economic activity in New Zealand, a share which increased between 2001 and 2006. The economies of the 12 cities have grown, on average, by 4.3% per year over the five years to March 2006.

Residents in our cities require access to a good level of income and the skills and knowledge that will help them maximise their financial resources if they are to sustain a reasonable standard of living and provide for the future of their families and whanau.

Incomes in our cities have been increasing, both in nominal and real terms. Taking into account inflation over the period, the national increase in average real (inflation-adjusted) earnings was 4.0%.<sup>1</sup> Real earnings increased in nine of the 12 cities. However, this growth in incomes is not universally shared. The percentage of people in low income brackets (including those whose income was zero or less), has not reduced for Pacific Islands and Asian people.

Although there has been an increase of more than 190,000 jobs in the past five years, accompanied by a reduction in unemployment, 8.4% of those in our cities receive an income tested benefit.

## Socio-economic disadvantage and quality of life

There are continuing and in some cases, increasing disparities between groups of people in our cities. There are wide geographical variations in disadvantage with clusters of deprivation in some areas.

This is an important issue for our cities, as there is a consistent and pervasive correlation between increasing deprivation and poorer health, education and employment outcomes. Life expectancy declines markedly as the deprivation of the area of residence increases.

Porirua and Manukau have higher percentages of people living in areas of higher deprivation than our other cities.

Those who bear the burden of socio-economic disadvantage include Maori and Pacific Islands people, teenage mothers and sole parents.

While outcomes for Maori and Pacific Islands people are improving on some measures and some of the gaps are narrowing, overall life expectancy is lower, the rates of infant mortality and low birth weight babies are higher and educational participation and attainment rates are lower than for those from other ethnic groups.

## Housing

Housing tenure in the 12 cities is changing. Home ownership in our cities has been declining but is still the main form of tenure. Home ownership rates are lower among Maori and Pacific Islands populations. Those living in areas characterised by deprivation also have lower rates of home ownership.

For lower income households, high housing costs relative to income can leave households with insufficient income to meet other basic needs such as food, clothing, transport and medical care.

Rent in our cities is becoming more affordable. Although the rent to income ratio in 2006 was higher in our cities than the rest of New Zealand, over the past 10 years it has been falling.

Crowding however, remains an issues with the proportion of people living in crowded households increasing across the whole of New Zealand and in the 12 cities.

Accommodating our increasing populations is another key challenge facing our cities. Intensification puts pressure on infrastructure (e.g. transport, water, sewerage and communications) and amenities (e.g. parks, libraries, schools and shopping facilities) and the pattern of housing development can change the look and feel of a city. Rapid urban intensification occurred in some cities over the four years from 2002 to 2006. Although intensification does appear to be slowing, accommodating population growth remains a long term issue.

<sup>1</sup> Average ordinary time weekly earnings.

## Conclusions continued

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### Crime and safety

The rate of recorded crime in our cities is falling. However, it is still high compared with the rest of New Zealand. There are considerable variations between cities in both recorded rates and types of offences. In general, the rate of reported violent offences is increasing both in our cities and nationally. It is unclear whether this is due to an increase in the rate of reporting or in the actual crime rate.

Overall, residents consider our cities safe places in which to live. However, although they believe their homes and neighbourhoods are safe both at night and during the day, many do not consider their city centres to be safe at night.

There is also concern about the safety of our cities' children. Residents in the 12 cities are less likely than other New Zealand residents to see their neighbourhood as safe for children. The presence of strangers and traffic are the main concerns.

### Our cities' children and young people

The wellbeing and safety of our children remains a critical national and urban issue.

Injury and maltreatment rates of our children are high by international standards with New Zealand currently at the bottom of the table of 24 OECD countries when it comes to child deaths from accidents, murder, suicide and violence.<sup>2</sup>

In the years 2004 to 2006, the 12 cities had a higher rate of substantiated cases of child abuse and neglect than the rate for the rest of New Zealand and the gap between our cities and the rest of New Zealand is widening. The rate of child hospitalisations from unintentional injuries (such as accidents) is also increasing in our cities.

Children in our cities also rate poorly on a number of health measures by international standards. In 2001, New Zealand had one of the highest rates of infant mortality in the OECD.<sup>3</sup> While the infant mortality rate remains high, it is slightly lower in our cities than across the rest of New Zealand. Similarly, the rate of low birth weight babies is lower in our cities.

The rate of meningococcal disease in children has fallen markedly. The decline coincides with the Ministry of Health's vaccination programme.

### Education

Early learning is critical to children achieving their potential and enjoying a better quality of life as a result. Participation rates in early education are increasing in our cities.

The 2006 Census shows that residents in the 12 cities are less likely to leave school without qualifications and are more likely to have a degree than other New Zealand residents.

The report highlights issues relating to participation and attainment. Although there has been a national decline in the percentage of young people granted early leaving exemptions, one in every five students leave school without basic literacy or numeracy credits. Truancy rates are increasing and in some cities suspension, stand-down and expulsion rates are high.

These are not just urban issues. In some cases low school participation and attainment rates are higher outside of our cities. However, there are groups within our cities that are over-represented on these measures. Nationally, Maori students are more likely to leave school with little or no formal attainment. Maori and Pacific Islands students are more likely to be truant and stood-down or suspended from school. Similarly, students from lower decile schools are more likely to be granted an early leaving exemption.

This disparity is a critical quality of life issue, as the benefits of education attainment can extend throughout adulthood. There is considerable evidence that those with higher levels of education are more likely to participate in the labour market, face lower risks of unemployment, have greater access to further training, receive higher earnings on average and achieve a higher standard of living over their lifetime.

### Civic engagement

Voter turnout at local authority elections is recognised as both a measure of public participation and the strength of a democracy. Yet, overall civic engagement in our cities appears to be low.

Voter turnout at our local body elections is below 50% of eligible voters.

Residents in the 12 cities are also less likely than those residing elsewhere in New Zealand to understand how council decisions are made, feel that the public have an influence on council decision making or express confidence that the council decisions made are in the best interests of their city.

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<sup>2</sup> UNICEF. (2007). Child poverty in perspective: *An overview of child well-being in rich countries*. Innocenti Report Card 7. UNICEF Innocenti Research Centre. Florence.

<sup>3</sup> New Zealand rated 21st of 24 OECD countries. See UNICEF. (2007) *Child poverty in perspective: An overview of child well-being in rich countries*. Innocenti Report Card 7. UNICEF Innocenti Research Centre. Florence.



## Consulting and engaging Maori in council decision making processes

The Local Government Act requires local authorities to have processes in place for consulting Maori, fostering Maori capacity, providing information to Maori and providing opportunities for Maori to contribute to council decision making processes.

Most councils report that they are strengthening their relationship with tangata whenua and incorporating Maori perspectives into policy, planning and operations. There is, however, considerable variation between councils in the way this is done with some recognising the Treaty of Waitangi and iwi groups and others still developing processes to provide opportunities for Maori to contribute to decision making.

## Ongoing monitoring

Monitoring the indicators in this report enables us to examine the impact of growth and urbanisation on the wellbeing of residents in the 12 cities. The report provides a reasonably comprehensive view of social/cultural, economic and environmental conditions in our cities. In addition to presenting a picture of the quality of life, it enables us to see how levels of wellbeing are changing over time and how different groups within our cities are faring. We can also identify issues as they emerge.

The pace at which changes in our cities has occurred since the last *Quality of Life Report* in 2003 highlights the importance of regular and ongoing monitoring.

## Next steps

The agenda in preparing the report was to use this information to advocate for improved quality of life and sustainable development in our cities. Although the report helps to identify issues and trends it does not provide solutions. The issues facing our cities are complex, multi faceted and unlikely to be solved by a single agency intervention. Local government, central government, the community, iwi/Maori and private sector organisations can use this information work together on actions to improve quality of life for residents in our cities. The 12 cities will, through existing forums, such as the Metropolitan Sector of Local Government New Zealand and individually, work through the implications of this report to improve quality of life by:

- Identifying the priority issues that need to be addressed
- Identifying which agencies (including the private sector) need to address them and by when and how
- Specify issues that need to be addressed at the central and local government levels.



## Data Collection

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### Overview

The Quality of Life Project uses a combined framework that draws from a number of different approaches to looking at quality of life and wellbeing in large urban areas. The framework uses quality of life domains and identifies issues of key relevance to those domains. The indicators and measures selected for the project are outcome-focused and relate to broad statements of conditions or desired states that urban areas are trying to achieve across the social, environmental and economic dimensions of wellbeing.

The indicators are organised under domain (or theme) headings and the domains are closely related to the community outcome statements most cities have incorporated in their Long Term Council Community Plans (LTCCPs). The domains are also aligned to the vision and outcomes used in central government's strategic coordinating frameworks, *Opportunity for All New Zealanders* (sustainable social development), the *Economic Transformation Agenda* (lifting incomes and quality of life through innovation and raising economic productivity), *Sustainable Development for New Zealand* (overarching strategy for a sustainable future) and in the Ministry of Social Development's Social Report.

This chapter summarises some of the issues concerning the collection of data for this report. The report includes 68 key quality of life indicators (encompassing 186 individual measures) across 11 domain areas.

### Indicator selection criteria

The following ten selection criteria were used to assess the applicability of indicators for inclusion in this report:

1. Relevant (to social, environmental and economic outcomes in New Zealand's cities)
2. Measurable (quantifiable, with data existing to measure it)
3. Cost effective (obtainable at a reasonable cost in terms of time and financial resourcing)
4. Valid (providing a true reflection or measure of the issue; scientifically credible or otherwise defensible)
5. Comparable (able to be standardised or compared accurately with similar indicators)
6. Understandable (able to be presented in a simple and appealing way to target audiences)
7. Responsive (responsive to changing conditions)
8. Time related (repeatable, showing trends over time)
9. Disaggregation (able to be disaggregated or broken down by demographic and other characteristics)
10. Leading/lagging (providing leading indicators to give early warning or predictors of change; providing lagging indicators to show effects or outcomes).

### Data issues and challenges

Data inconsistency, availability and comparability provided constraints to the monitoring and analysis in this report. This has impacted on the range of indicators used in the report, resulting in the omission of some indicators, the use of proxy measures and the need for caution in interpretation and analysis. Key areas to consider are:

#### Comparability

Where possible, comparisons have been made between the total 12 cities combined, the rest of New Zealand and total New Zealand. However, data on these three groupings was not always available to report on.

In the 2006 Census, Statistics New Zealand made a number of ethnicity classification changes that affect the comparability of the 2006 Census with earlier censuses, particularly for the New Zealand European and 'Other' ethnic groups. The 'Other' category has been split into two groups: Middle Eastern/Latin American/African (MELAA); and Other Ethnicity. The Other Ethnicity category includes groups previously classified as 'Other' as well as a separate category for 'New Zealander'. Previously, 'New Zealander' responses were included in the New Zealand European category.

On 6 March 2006, the Banks Peninsula District Council and Christchurch City Council amalgamated. Where possible, Banks Peninsula data has been incorporated into the Christchurch dataset. However, this has not always been possible due to the variety of datasets and providers. It has been footnoted where this inclusion has not occurred.

#### Data Availability

While considerable amounts of information and data exist across many areas and issues, there are still significant challenges around the availability, and therefore usefulness, of some data sets. The main problem is data gaps, with relevant information on some issues being unavailable at sub-national levels (and particularly at regional or city level) and at times not available at a national level. Examples include debt and savings, access to broadband and diabetes and obesity.

In some cases a commentary has been provided where it was not possible to include a concrete measure. However, this compromise impedes the monitoring of trends over time and thus the ability to determine whether some things are getting better or worse. Examples in this report include Maori wellbeing and physical disabilities. Statistics New Zealand has recently undertaken a national Disability Survey but has not indicated when the results will be available.

Due to the absence of any nationally collected statistics, a number of measures have been derived from data supplied

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by the 12 participating Councils. As such, caution should be applied, as the methodology to collect data may not be consistent across the 12 cities. Examples include biodiversity, recycling, energy usage and sustainable practices.

Availability of data has also been constrained by timelines. Some of the more complicated measures derived from census data were not available before printing deadlines.

## General data cautions

There are a number of important general data cautions to keep in mind when reading the analytical interpretation in this report.

1. A Census Post-enumeration Survey was undertaken to gauge the level of national coverage (under-count and over-count) in the 2006 Census. The Survey showed that coverage in 2006 was high, with 98.0% of New Zealand residents in the country on census night being enumerated. However, this represents a net undercount of 2.0% or 81,000 people. The 2006 Census missed more men than women. The undercount rate was estimated at 2.1% for males and 1.8% for females. People aged 15 to 29 years (the most mobile segment of the population) had the highest undercount (4.1%), while those aged 30 to 44 years had the lowest (1.3%). Ethnic differentials were marked. Net undercount was higher for the Asian (5.2%) and Maori (3.1%) populations than for Pacific Islands people (2.3%) and the New Zealand European population (1.4%).
2. In some cases interpreting and comparing percentages across the cities requires caution as the base numbers may be too small to allow for meaningful or detailed interpretations of results.
3. In general, percentages are calculated as a proportion of the population in the city rather than as a percentage of all cities. More specifically, all datasets that do not include 2006 Census data will use the 2001 Census data as a base, while all ethnicity projections also utilise 2001 Census baseline figures. For information provided between censuses, year-on-year sub-national population estimates were used. The 2006 Census base has been used for any measure that only incorporates 2006 Census data.
4. Statistics New Zealand utilises a confidentiality assurance technique of randomly rounding census statistics to base three. This may result in a total disagreeing slightly with the total of the individual items shown in tables.
5. Indicator data presented in this report is, where possible, disaggregated by ethnicity, age, sex and geographic location to help identify important sub-groups for analysis. However, the report does not identify variations within these sub-groups.
6. Ethnicity is a self-perceived status and people can belong to more than one ethnic category. The current report uses non-prioritised census ethnicity data where people are coded to all ethnic groups that they say they belong to. Proportions may therefore total to greater than 100.0% in any given category.
7. Most of the indicators presented in this report come from official data sources. Generally, they include only reported incidences of a phenomenon, rather than the actual number of cases, which may in fact be higher. This is especially relevant to sensitive issues such as levels of crime, child abuse and neglect, where under-reporting is a recognised issue.
8. Aside from the Quality of Life Survey, the data presented in this report has not been subjected to any form of significance testing. This could be a limitation if comparing results across cities. For example, comparisons between cities and over different time periods may, or may not, be statistically significant, even where large differences are found.
9. The Quality of Life Survey focuses on subjective measures of wellbeing and reflects people's perceptions of their own situation, which may differ from their objective status. The 2006 Survey had a low response rate (21.0%) which means care should be taken in interpreting the data. Interviews were conducted to meet gender, ethnicity, age, and ward/region quotas to ensure the sample was representative of the New Zealand population as a whole. In some cases the survey responses do not add up to 100.0% due to the exclusion of the 'don't know' responses.
10. Caution should be applied when comparing the 2004 Quality of Life Survey results with those of 2006 as a number of questions were reviewed in 2006 to align with national and international survey standards.



## Consultations and Contributions

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The following organisations (and individuals within them) were consulted or involved in the preparation of this report:

Accident Compensation Corporation

Auckland Regional Council

Environmental Science and Research (ESR)

Auckland City Council

Charles Crothers, AUT University

Christchurch City Council

Department of Internal Affairs

Department of Building and Housing

Department of Labour

Dunedin City Council

Electricity Commission

Environet

Environment Canterbury

Environment Bay of Plenty

Environment Waikato

Greater Wellington Regional Council

Hamilton City Council

Housing New Zealand Corporation

Hutt City Council

Infometrics

Land Transport New Zealand

Manukau City Council

Ministry of Economic Development

Ministry of Education

Ministry for the Environment

Ministry of Health

Ministry of Social Development

Ministry of Transport

New Zealand Gambling Foundation

New Zealand Health Information Service

New Zealand Police

North Shore City Council

Point Research Ltd

Porirua City Council

Prophet IAM Ltd and Yardsticks Parks Technical Group

QEII Trust

Quotable Value New Zealand

Real Estate Institute of New Zealand

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Rodney District Council

Statistics New Zealand

Southland District Health Board

Tauranga City Council

Tertiary Education Commission

TNS

University of Otago, Department of Economics

University of Otago, Injury Prevention Research Unit

Waitakere City Council

Wellington City Council

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## Definitions

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**Community:** often defined spatially through a shared geographic area such as a neighbourhood. Communities can also be the product of shared interest, such as online communities, religious or cultural groups, sports clubs, business or voluntary groups. Communities are how people relate to one another, come together, interact and network.

**Deprivation:** the inability to meet basic needs, usually associated with a state of poverty.

**Ecosystem:** a system formed by the interaction of a community of organisms with their physical environment.

**Ethnicity:** the ethnic group or groups that people identify with or feel they belong to based on some or all of the following characteristics:

- A common proper name
- One or more elements of common culture which need not be specified, but may include religion, customs, or language
- Unique community of interests, feelings and actions
- A shared sense of common origins or ancestry and
- A common geographic origin.

Ethnicity is self perceived and people can belong to more than one ethnic group. This is taken from Statistics New Zealand's standard definition. Ethnicity is not the same as birthplace.

**Family:** a couple, with or without child(ren), or one parent and their child(ren) usually resident in the same dwelling. A familial relationship is defined as one in which a person is related to another person by blood, registered marriage, civil union, consensual union, fostering or adoption. This is Statistics New Zealand's standard definition.

**Governance:** to make and administer public policy and affairs; to exercise a deciding or determining influence.

**Household:** either one person who usually resides alone or two or more people who usually reside together and share facilities (such as eating facilities, cooking facilities, bathroom and toilet facilities, a living area), in a private dwelling. This is a standard Statistics New Zealand definition.

**Indicators:** are flags or signals. They are summary data that represent an issue of concern or measure change or progress toward achieving a desired outcome or objective. They often signal areas needing further investigation or attention. Indicators can be quantitative data or qualitative/subjective information. Usually a number of indicators are needed to evaluate whether a desired outcome has been achieved.

**Measures:** are the actual pieces of information or data that are used to gauge an indicator.

**Over-represented:** to imply or suggest a higher amount or percentage of a population group in a variable than is actually present in the total population.

**Physical infrastructure:** the basic facilities, services and installations needed for the functioning of a community or society, such as transportation and communication systems, water and power lines and public institutions such as schools etc.

**Resident:** used in a broad sense to describe any person who lives (resides) within a city or local area. In the Quality of Life survey, resident refers to a person living in a household within the city's or local area's boundaries. Respondents in the survey met a quota of age, ethnicity, gender and ward.

**Socio-economic status:** the status of a population group that involves social as well as economic factors.

**Under-represented:** to imply or suggest a lower amount or percentage of a population group in a variable than is actually present in the total population.

**Urbanisation:** the process of a geographical area changing from a rural to an urban (i.e. city) condition.

**Usual residence:** describes the respondent's usual place of residence rather than their address on census night.

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