

# Chapter Eleven

## Built environment

### What's in this chapter?

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Look and feel of the city

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Traffic and transport

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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?

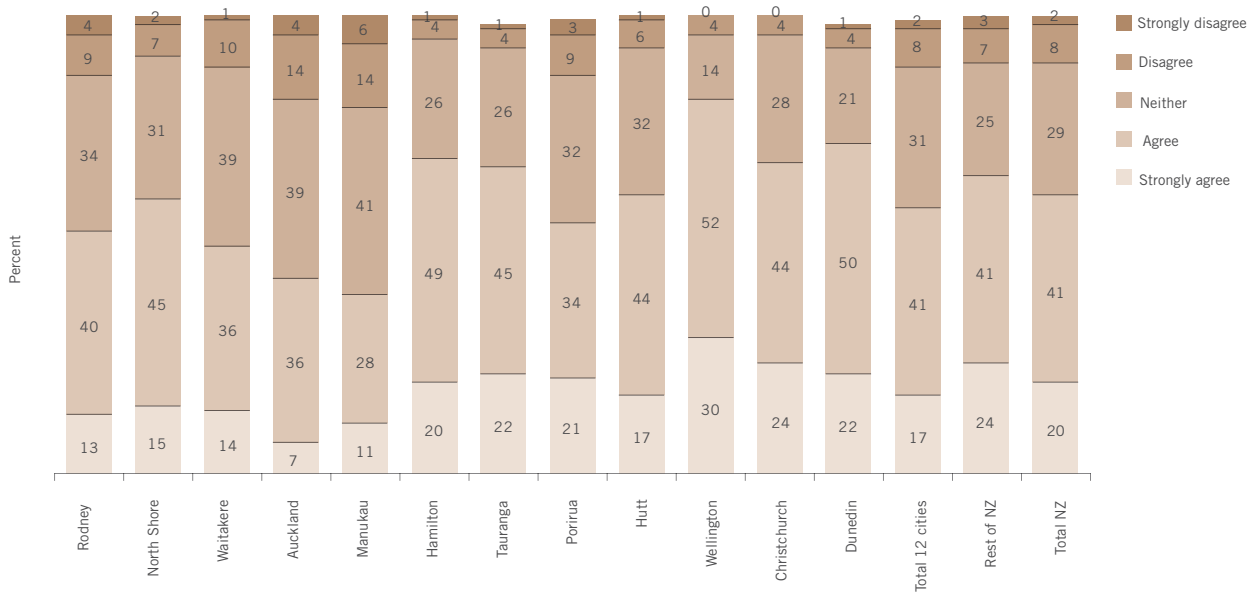
#### Sense of pride

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)



Data source: Quality of Life Survey 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.



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### 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>

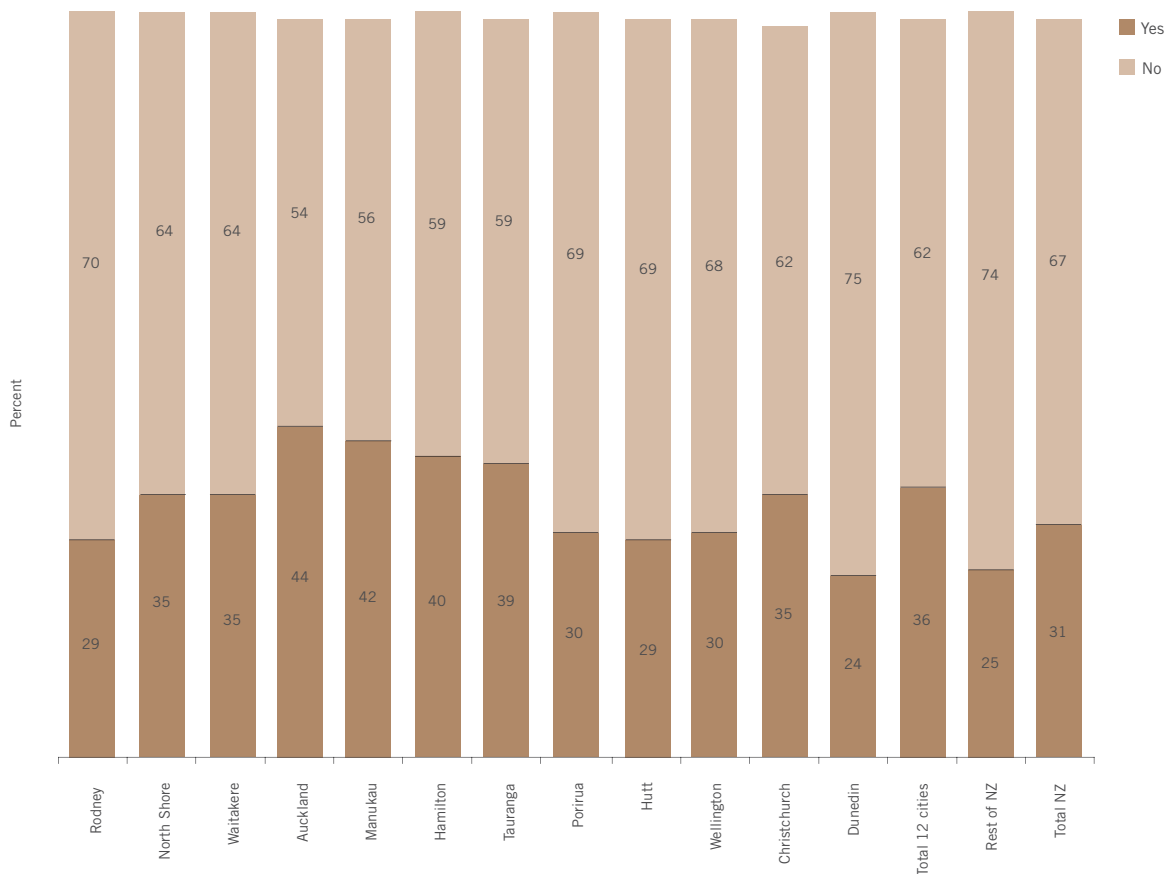
This measure looks at whether or not residents perceived noise pollution as a problem in their city in the last 12 months, using 2006

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>



5 Chepesiuk, R. (2005). *Decibel Hell: The Effects of Living in a Noisy World*. Environmental Health Perspectives Volume 113 (1).

6 Noise Pollution Clearinghouse [www.nonoise.org](http://www.nonoise.org)

7 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



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### 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'.

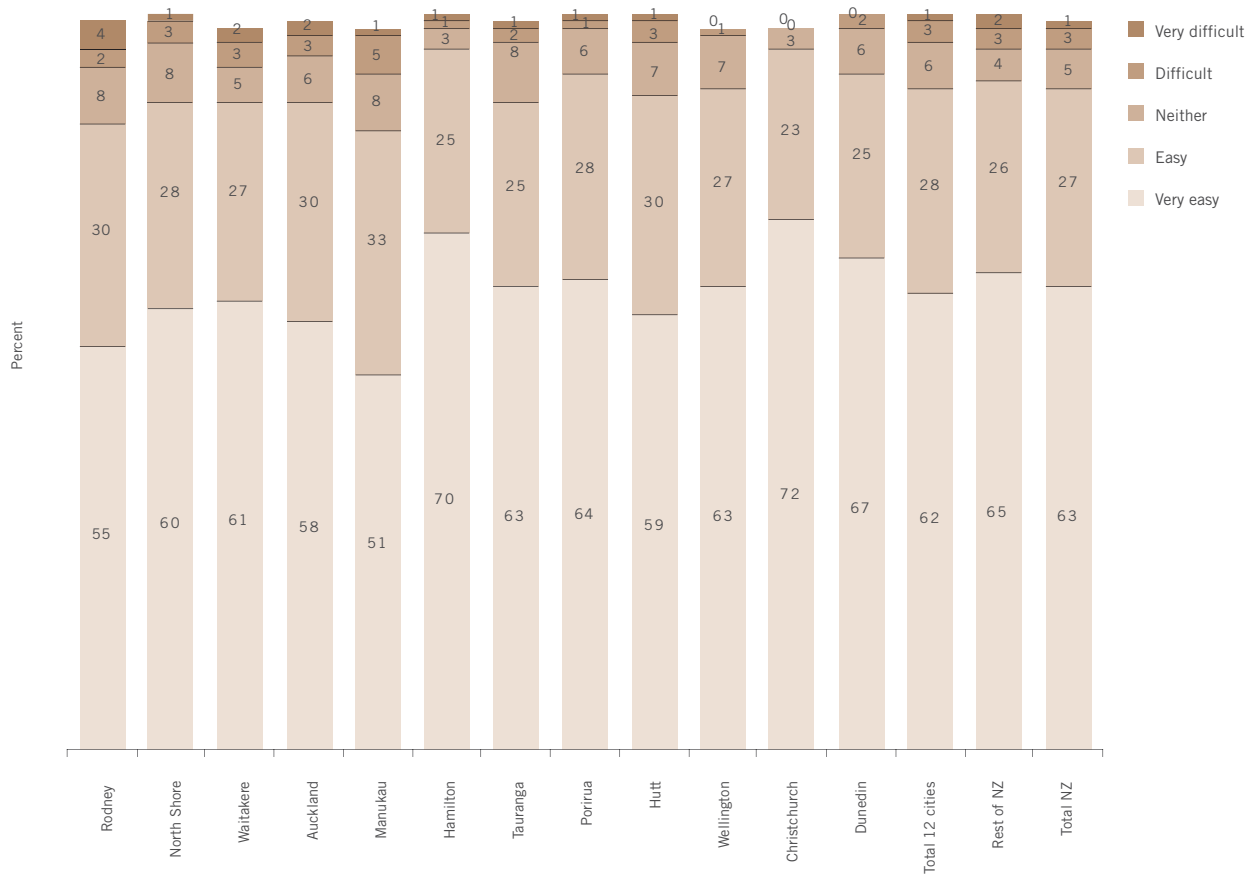
The majority of residents surveyed in each city said it was easy to access a local park or other green space, with those in Christchurch (95.0%) more likely to rate it as easy than those in Manukau (84.0%).

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.

Residents' rating of ease of access to their local park or other green open space (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.

## 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)

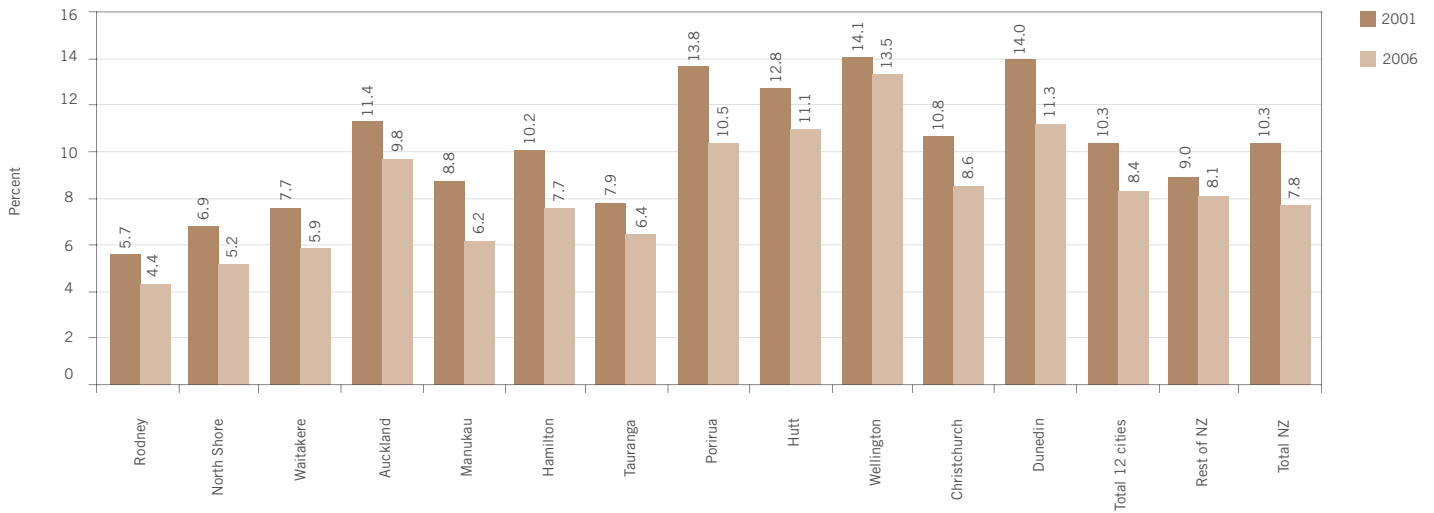
	No motor vehicle %	One motor vehicle %	Two motor vehicles %	Three or more motor vehicles %	Not elsewhere included <sup>10</sup> %	Average number per household %
Rodney	4.4	31.8	40.8	19.0	3.9	1.7
North Shore	5.2	32.7	41.3	18.1	2.7	1.7
Waitakere	5.9	33.5	37.5	17.0	6.2	1.6
Auckland	9.8	36.3	34.5	13.4	5.9	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



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Percentage of households with no motor vehicle (2001, 2006)



Data source: Statistics New Zealand, Census 2001, 2006

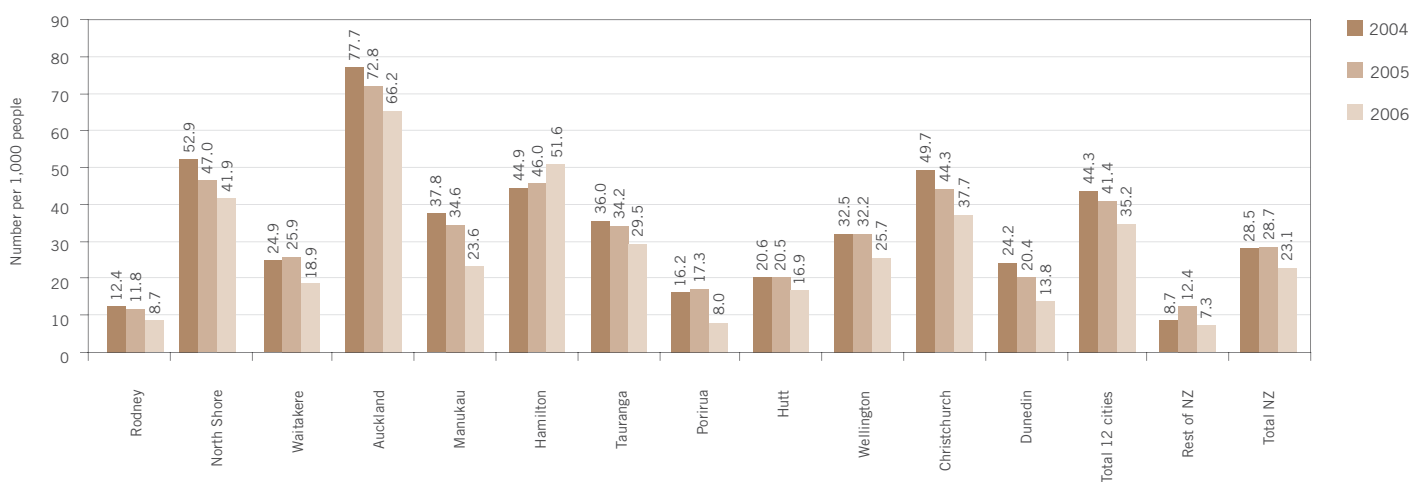
### Motor vehicle registration

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.

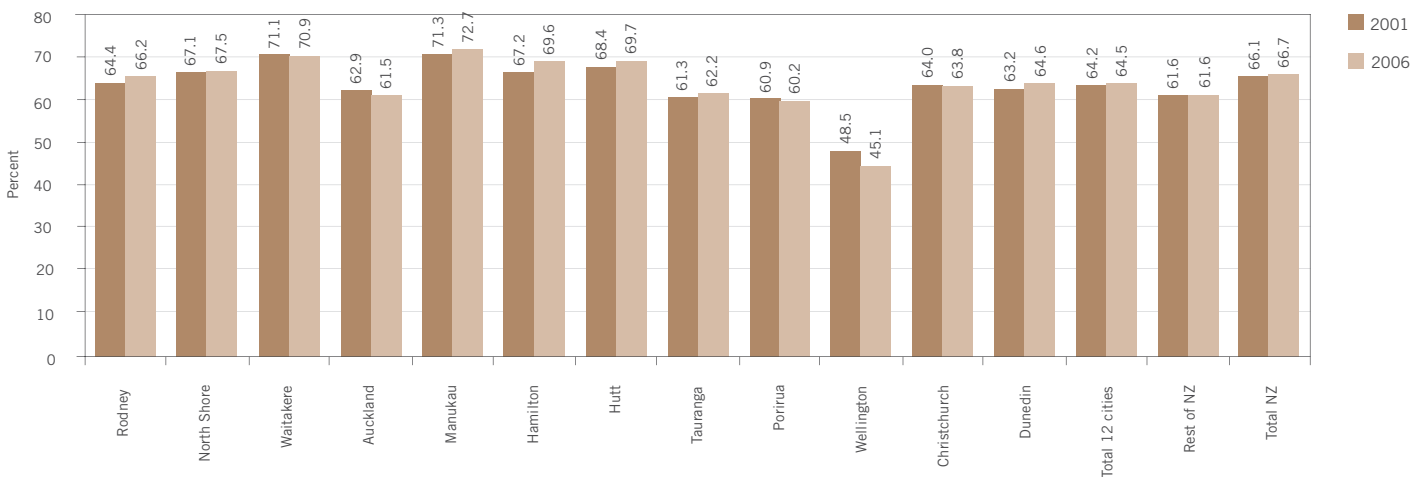
The majority of employed residents across the 12 cities used a motor vehicle to travel to work, ranging from 72.7% in Manukau to 45.1% in Wellington. Wellington had the highest percentage of residents (14.0%) using a public bus to get to work, while Tauranga had the smallest (0.8%). The highest proportion 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>



Data source: Statistics New Zealand, Census 2001, 2006

12 Data includes those aged 15 years and over and in full-time employment.



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### 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
<b>Total</b>	<b>108,482</b>	<b>1,639</b>	<b>52,066</b>	<b>6,409</b>

Data source: Ministry of Transport, Household Travel Survey 2003 to 2006



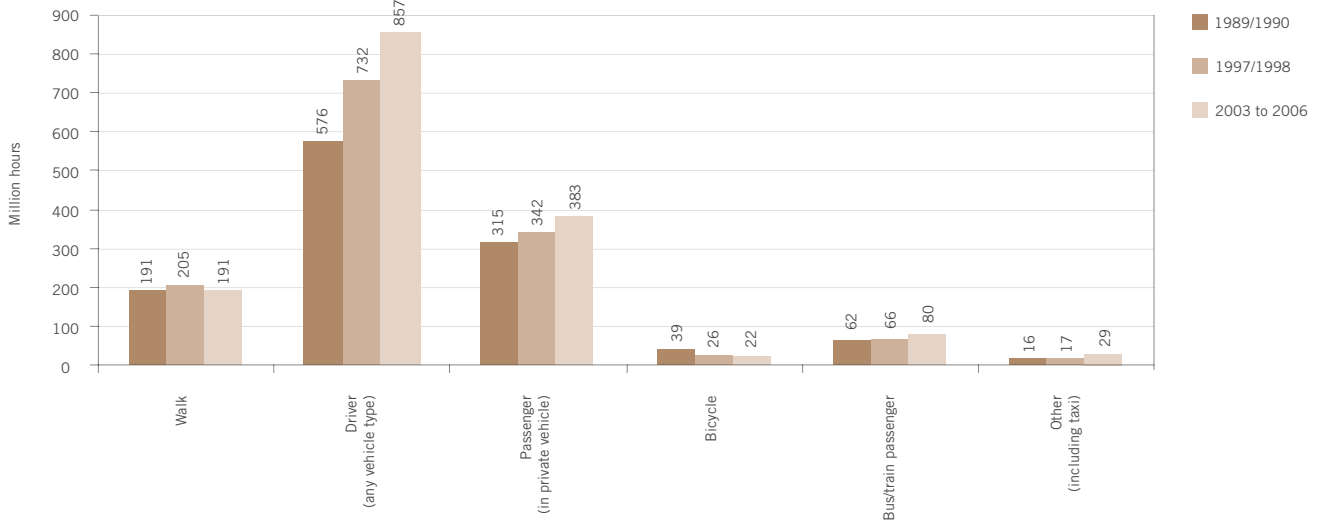
<sup>13</sup> Trip leg refers to a single leg of a journey, between any two stops. For example, walking to a bus stop, catching a bus to town and walking from a bus stop to work is three trip legs.

<sup>14</sup> Distance estimates are available for road-based modes only.

<sup>15</sup> '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).

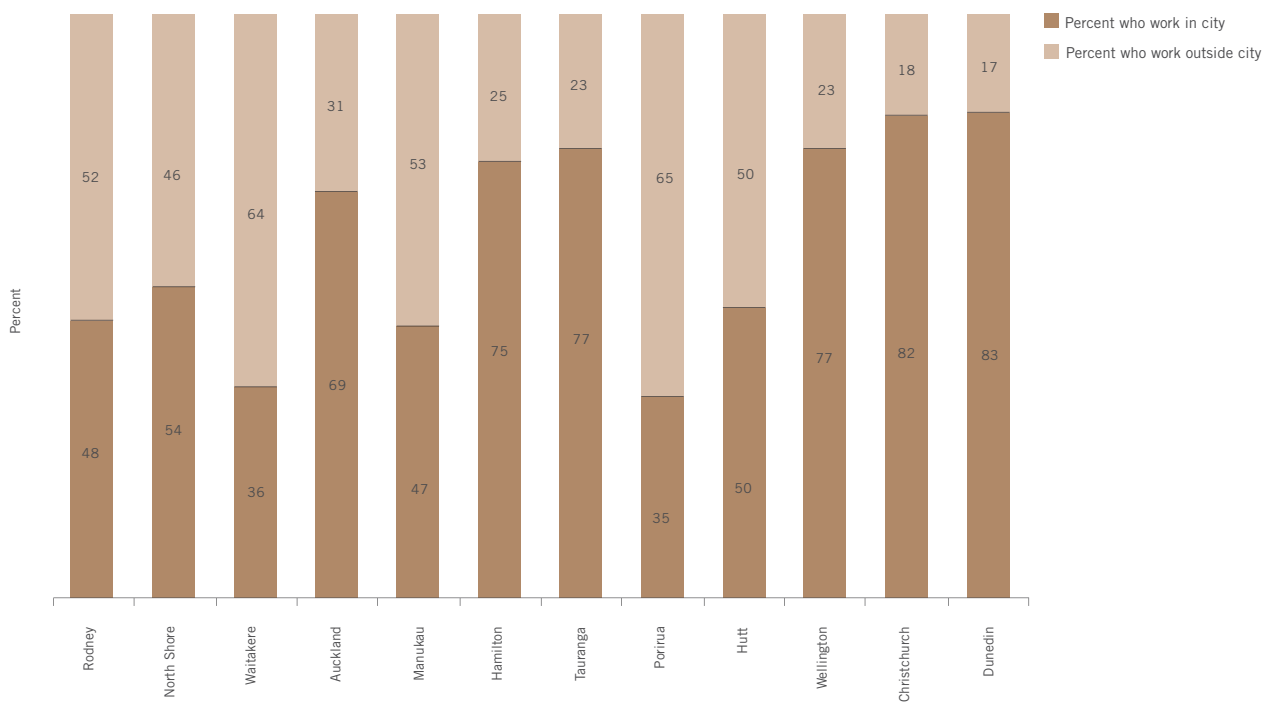
Time spent driving increased by 17.0% between 1997/1998 and 2003 to 2006. This compares with a 7.0% increase between 1989/1990 and 1997/1998.<sup>16</sup>

### 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'.

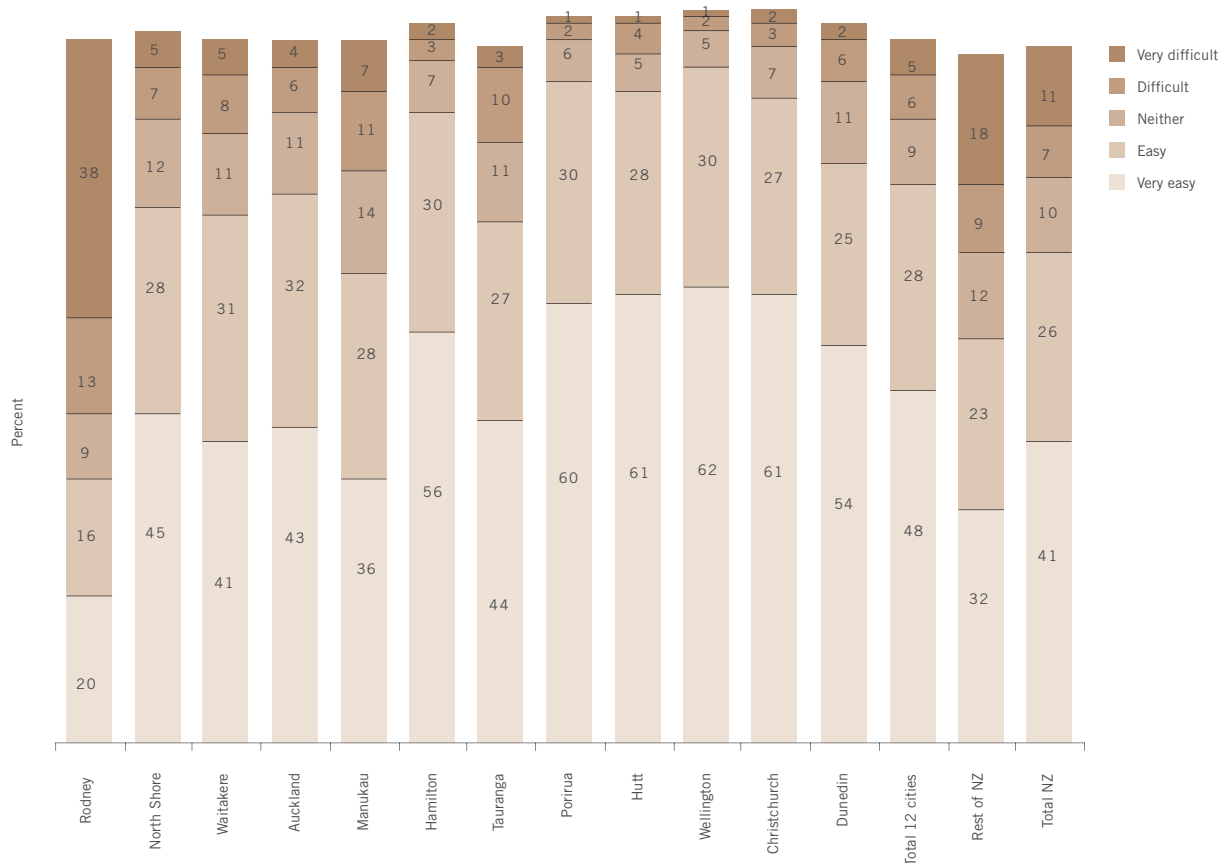
The majority of residents surveyed in each city said it was easy to access a public transport facility, with 76.0% of the residents from the total 12 cities responding with a rating of either 'very easy' or 'easy'.

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

20 Figures might not add to 100% as 'don't know' responses are not shown.

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.

