



# Regional summary - Wellington

This is a summary of data relevant to transportation in this region, viewed from a Land Transport NZ perspective. It's purpose is to inform the Land Transport New Zealand Board about the current transport system and about regional issues, plans and initiatives that will have an impact on regional transport into the future.

The data have been grouped in a way that aligns with the objectives of the NZ Transport Strategy, as follows:

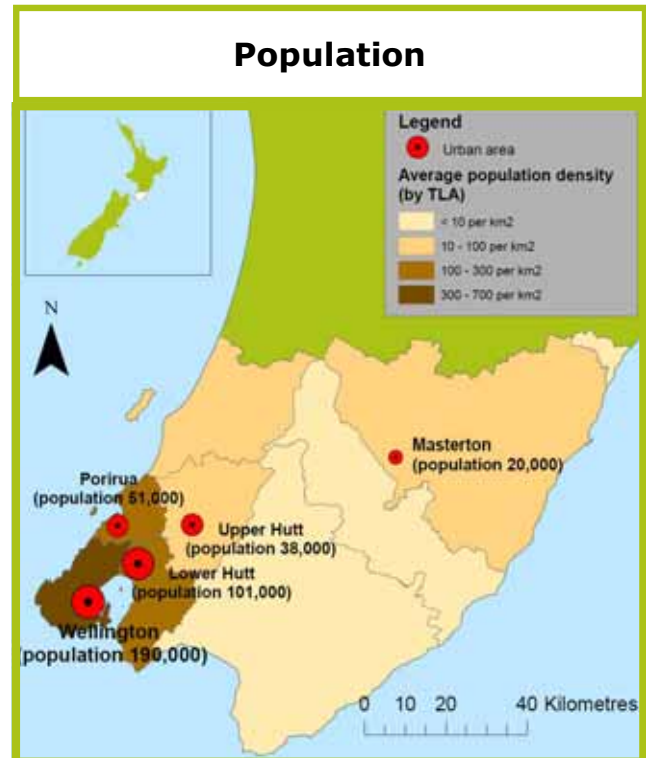
1. Overview
2. Economy and Land Use
3. Assets
4. Access and Mobility
5. Safety
6. Health and Environment

Regional indicators are generally presented with a comparison to national data. Where possible a differentiation has also been made between the four Cities (Wellington, Lower Hutt, Upper Hutt and Porirua) and the remainder of the region— to highlight the difference in the characteristics of transport in the rural and urban areas.

## Summary

Key Regional Indicators			
	Current	Average annual change (2003-2007)	Annual change (2006 / 2007)
<b>Population</b>	470,300	1.0%	4.8%
<b>VKT</b>	3447m km	-0.3%	-2.7%
<b>GDP</b>	\$23,714m <small>(in current prices)</small>	7.6% <small>(95/96 prices, estimated)</small>	17.5% <small>(95/96 prices, estimated)</small>
<b>Public transport boardings</b>	34m	2.6%	-2.5%
<b>Structural maintenance costs</b>	\$35.2m	7.5%	4.1%
<b>Light vehicle registrations</b>	271,000 <small>(2006)</small>	2.6% <small>(2003-2006)</small>	No data
<b>Heavy vehicle registrations</b>	8,770 <small>(2006)</small>	4.4% <small>(2003-2006)</small>	No data
<b>Fatal and serious crashes</b>	196 <small>(2006)</small>	2.0% <small>(2003-2006)</small>	No data
<b>Vehicle CO<sub>2</sub> emissions</b>	No data	No data	No data

## 1. Overview



### General statistics for 2007

	Four Cities	Wellington Region	National	Wellington Region as % of Nation
<b>Estimates population</b> <i>(provisional, year ending June)</i>	Wellington: 190,500 Lower Hutt: 101,500 Upper Hutt: 40,000 Porirua: 50,700	470,300	4,228,000	11.1%
<b>Population growth 2003-2007</b> <i>(year ending December)</i>	Wellington: 6.4% Lower Hutt: 1.6% Upper Hutt: 5.8% Porirua: 0.8%	4.1%	5.6%	-
<b>Land area</b>	Wellington: 289 km <sup>2</sup> Lower Hutt: 377 km <sup>2</sup> Upper Hutt: 542 km <sup>2</sup> Porirua: 182 km <sup>2</sup>	8,124 km <sup>2</sup>	275,450 km <sup>2</sup>	2.9%
<b>Total TA expenditure on land transport</b> <i>(year ending June. Includes Local and national contributions to territorial authority expenditure. Regional Council and Transit costs are excluded.)</i>	Wellington: \$27.1m Lower Hutt: \$14.2m Upper Hutt: \$3.9m Porirua: \$3.9m	\$156m	\$1,312m	11.8%

## General statistics for 2007 - continued

	Four Cities	Wellington Region	National	Wellington Region as % of Nation
<b>VKT</b> (year ending June)	Wellington: 681m km Lower Hutt: 498m km Upper Hutt: 129m km Porirua: 200m km	3,447m km	39,831m km	8.7%
<b>Total road length</b> (year ending June)	Wellington: 682 km Lower Hutt: 476 km Upper Hutt: 234 km Porirua: 237 km	4,130 km	93,576 km	4.4%
<b>GDP (2007 prices)</b> (year ending March)	-	\$23,700m	\$163,390m	14.5%
<b>GDP per capita (2007 prices)</b>	-	\$50,400	\$38,600	-

## 2. Economy and land use

## Land use

Due to the region's topography and geographic constraints urban development has concentrated along the main transport corridors. The compact form of the urban development supports an efficient public transport system. However, parts of the region are largely rural.

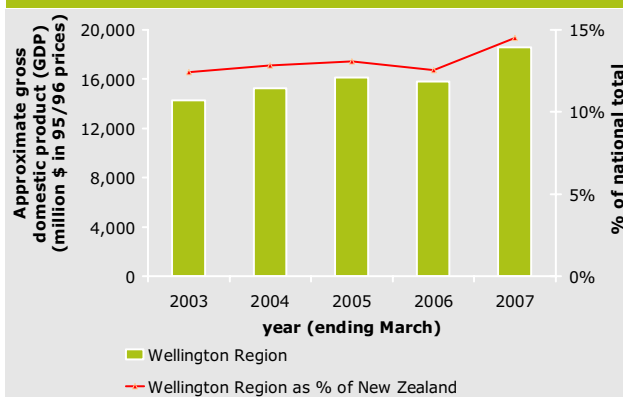
(Source: Wellington Regional Transport Strategy 2007-2016)

## Industry Profile 2003

Main industry sector	Contribution to regional GDP	Contribution to national GDP
Business services & Finance and insurance	23.8%	24.6%
Transport, storage and communication services	9.6%	10.2%
Wholesale trade	9.2%	8.2%
Central and local govt administration	9.1%	3.9%

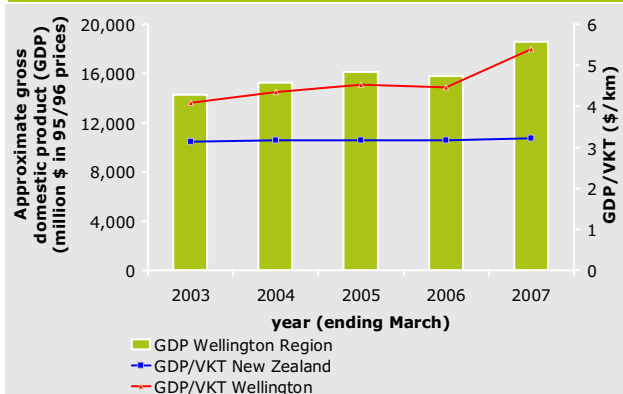
(Source: Statistics New Zealand)

## GDP in 95/96 prices



(Source: calculated from NZIER and Statistics NZ)

## GDP in relation to VKT



(Source: calculated from NZIER and Statistics NZ, Transit NZ local authorities)

## Economy and land use —continued

### International imports / exports (Wellington)



(Source: Statistics NZ )

### Freight volume transported on roads

(Source: MoT, ECan quoting Land Transport NZ)

### Comments

- Wellington City provides national and regional services such as CBD, Centre Port (Wellington's sea port), Wellington International Airport, regional and central government services and the regional hospital in Newtown.
- In 2007 the estimated gross domestic product (GDP) for the Wellington region was \$23.7 billion contributing 14.5% to the national GDP.
- Over the period 2003-2007 the GDP for the Wellington region increased annually in average by about 7.6% and nationally by about 2.9%. However, temporary a drop in GDP was recorded in 2006.

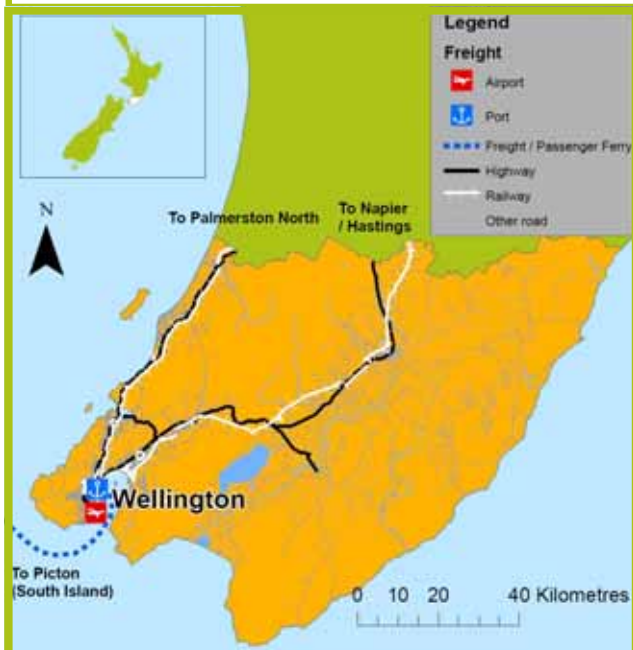
- In 2007 Wellington had one of the highest GDP per capita (\$50,400) in New Zealand exceeding the national average by 30%.
- There is a direct relationship between economic growth and freight growth (Wellington Regional Land Transport Strategy 2007-2016).
- International imports and exports have been increasing between 2003 and 2005 and dropping in 2006. In 2007 international exports are exceeding the 2005 level while international imports are still below 2005 levels.
- The business services and finance and insurance sectors have been the main contributor to the regional GDP in 2003.
- The regional GDP has been generally increasing while VKTs have been slightly decreasing since 2005. This is a desired trend and indicates an improvement in overall roading efficiency. This trend has not been observed on a national level (yet).
- A good example of integrated land use and transport planning is the Wellington City Council's Transport and Urban Development Strategy. (Wellington Regional Land Transport Strategy 2007-2016).

### Emerging Issues

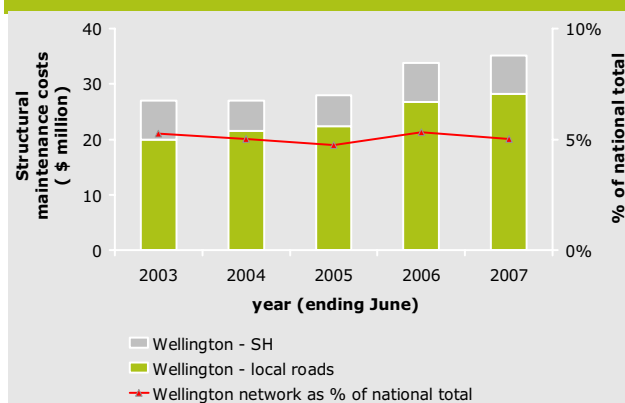
- The need for the integration of transportation and land use planning has been identified in the Wellington Regional Strategy (WRS).
- The strategic road network needs to be protected from inappropriate land use through district plans and resource consent processes (Wellington Regional Land Transport Strategy 2007-2016).
- The economy growth is expected to continue at a modest rate initiating increased travel and freight movement demand (Wellington Regional Land Transport Strategy 2007-2016).
- The projected moderate population growth is likely to vary widely between districts. Wellington City and Kapiti Coast are expected to experience the most population growth (RLTS 2007-2016).

## 2. Assets

### Transport Network



### Structural maintenance costs (Land Transport and approved organisation share for programmes funded through Land Transport NZ only)



(Source: Land Transport NZ)

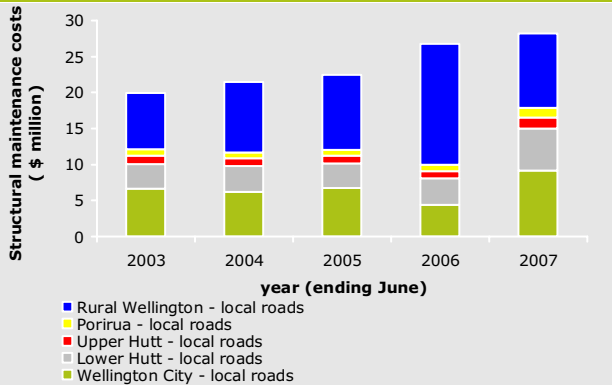
### Road length 2007

		Four cities	Wellington Region	National	Wellington as % of Nation
Local roads	Urban	Wellington: 625.9 km Lower Hutt: 445.9 km Upper Hutt: 152.0 km Porirua: 194.1 km	1,840.6 km	17,251 km	10.6%
	Rural	Wellington: 56.5 km Lower Hutt: 30.2 km Upper Hutt: 82.0 km Porirua: 43.0 km	2,017.6 km	64,925 km	3.1%
	Special Purpose	Wellington: 0 km Lower Hutt: 0 km Upper Hutt: 0 km Porirua: 0 km	37.7 km	507 km	7.4%
Local roads - total		Wellington: 682.4 km Lower Hutt: 476.1 km Upper Hutt: 234.0 km Porirua: 237.1 km	3,895.9 km	82,683 km	4.7%
State Highways		No data	233.9 km	10,893 km	2.1%
<b>All roads</b>		-	<b>4,130 km</b>	<b>93,576 km</b>	<b>4.4%</b>

## Assets – continued

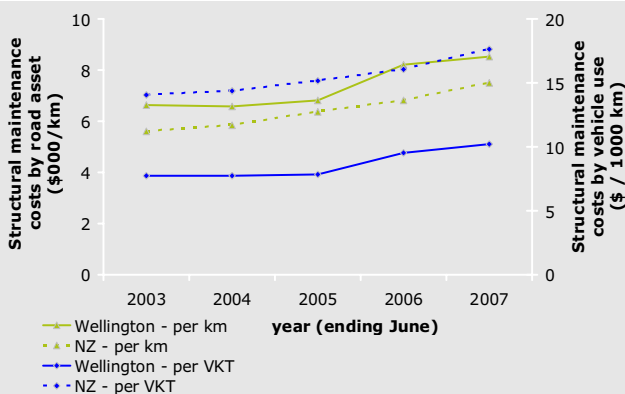
### Structural maintenance costs – local roads

(Land Transport and approved organisation share for programmes funded through Land Transport NZ only)



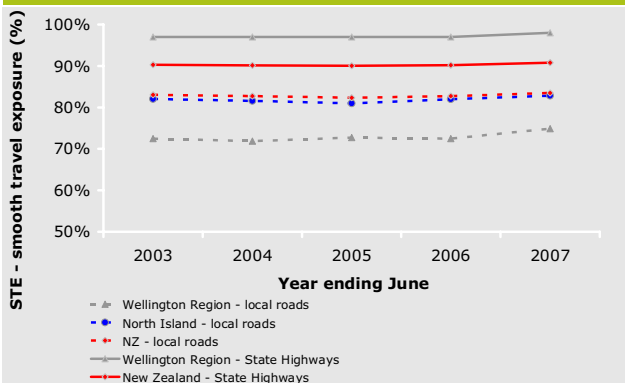
(Source: Land Transport NZ)

### Structural maintenance costs by road assets and vehicle use



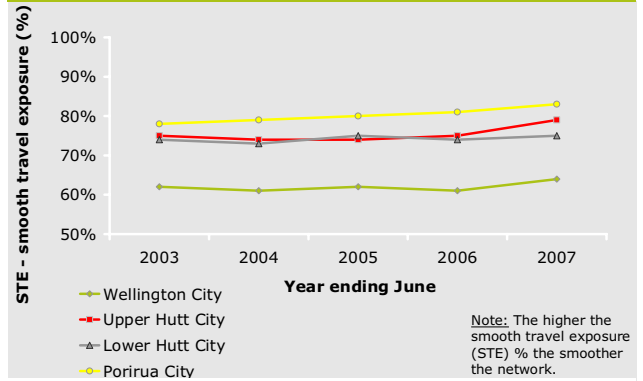
(Source: Land Transport NZ)

### Smooth travel exposure (STE) - region



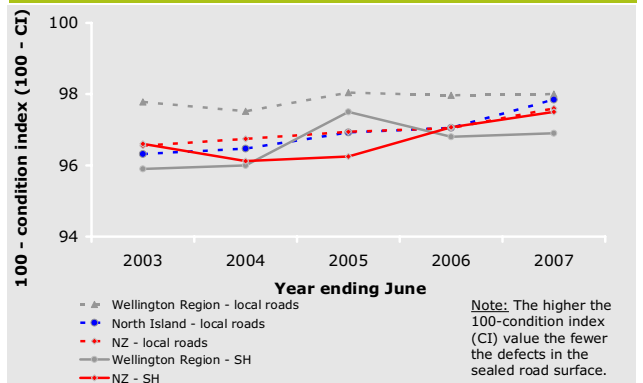
(Source: Local Authorities, Transit)

### Smooth travel exposure (STE) local roads - four cities



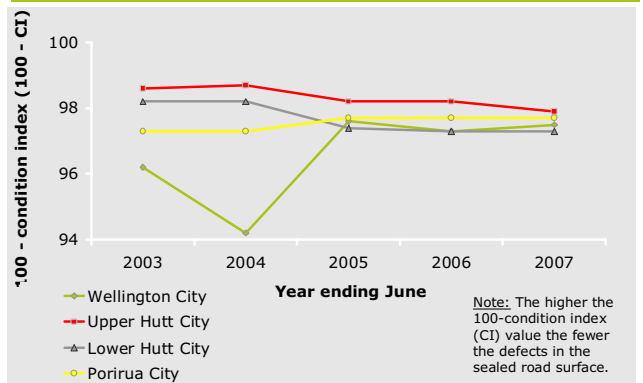
(Source: Local Authorities)

### 100 – Condition index – region



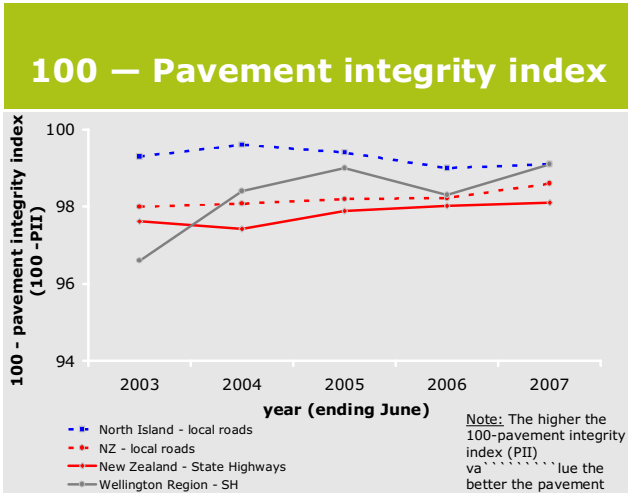
(Source: Local Authorities, Transit)

### 100 – Condition index local roads – four cities

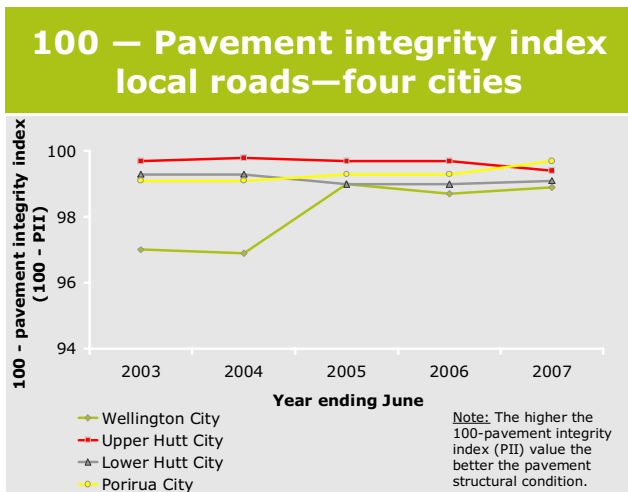


(Source: Local Authorities)

## Assets — continued



(Source: Local Authorities, Transit)



(Source: Local Authorities)

## Comments

- The strategic transport network forms a y shape and consists of four railway lines, four State Highways and a number of local roads. State Highway 58 provides a vital east-west link between State Highways 1 and 2 (RLTS 2007-2016).
- State Highway 1 and the main trunk railway line is of national importance and is known as the Western Corridor. This route is the primary access route into the region and to the Wellington CBD and Centre Port from the North. Centre Port is the main connector to the South Island and overseas for the lower North Island (RLTS 2007-2016).

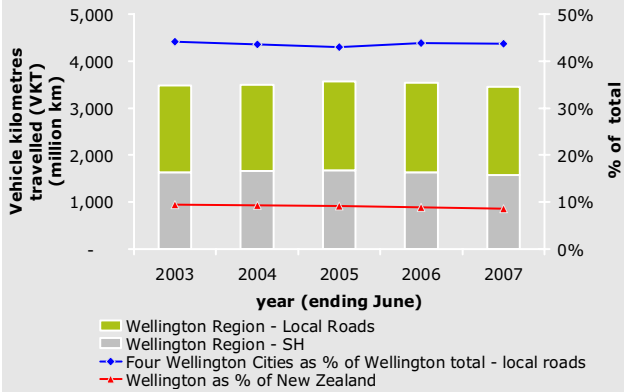
- 4.4% of the national road network is located within the Wellington region while it receives 5.0% of the funding for structural maintenance costs. The road network accommodates 8.7% of the national VKTs. This results in significantly lower than national average structural maintenance costs per VKT.
- The smoothness of the regional local road network is significantly below the national average. This figure is dominated by the low smooth travel exposure in Wellington City.
- In 2006 funding for structural maintenance costs has been boosted for local roads in rural Wellington while it decreased or remained stagnant in the four cities.

## Emerging Issues

- Several potential hazards that can affect the strategic road and rail network. They include land slips, flooding and earthquakes. More work is required to measure the network's reliability (RLTS 2007-2016).
- Safety and reliability issues in the Western Corridor have been identified (e.g. limited access for emergency vehicles and vulnerability to natural hazards such as landslips and flooding, lack of alternative routes) (RLTS 2007-2016).
- In the RLTS bottlenecks in the rail system have been identified causing delays with regional and national consequences. There is an urgent need for stakeholders (Greater Wellington and ONTRACK) to examine rail track issues and to prioritise responses (RLTS 2007-2016).
- Road connections between Hutt Valley, Wellington and Porirua are limited. A need for better east-west connections has been identified which would improve access, efficiency and reliability in this area and benefit also passenger transport and freight movement. An additional link south of Melling is proposed (RLTS 2007-2016).

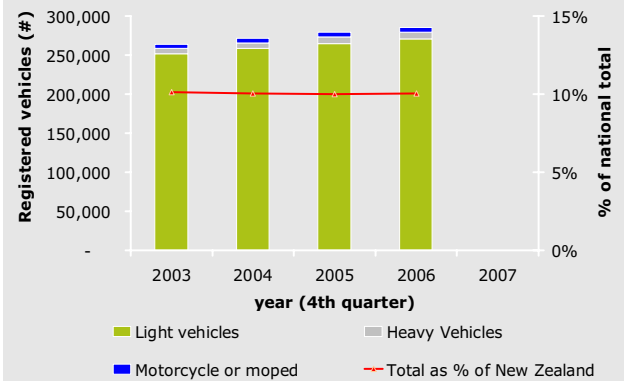
## 4. Access and mobility

### Vehicle use (VKT)



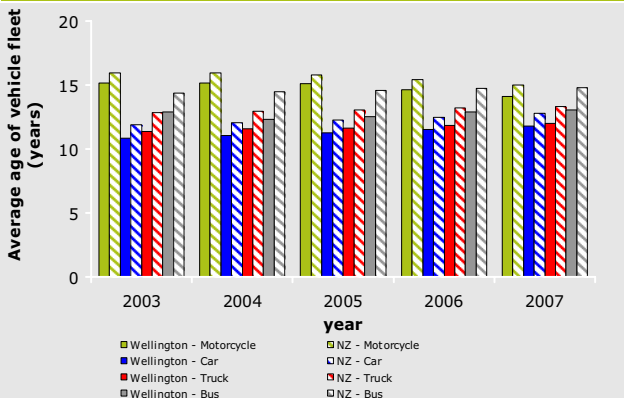
(Source: Local Authorities, Transit NZ)

### Vehicle fleet - numbers



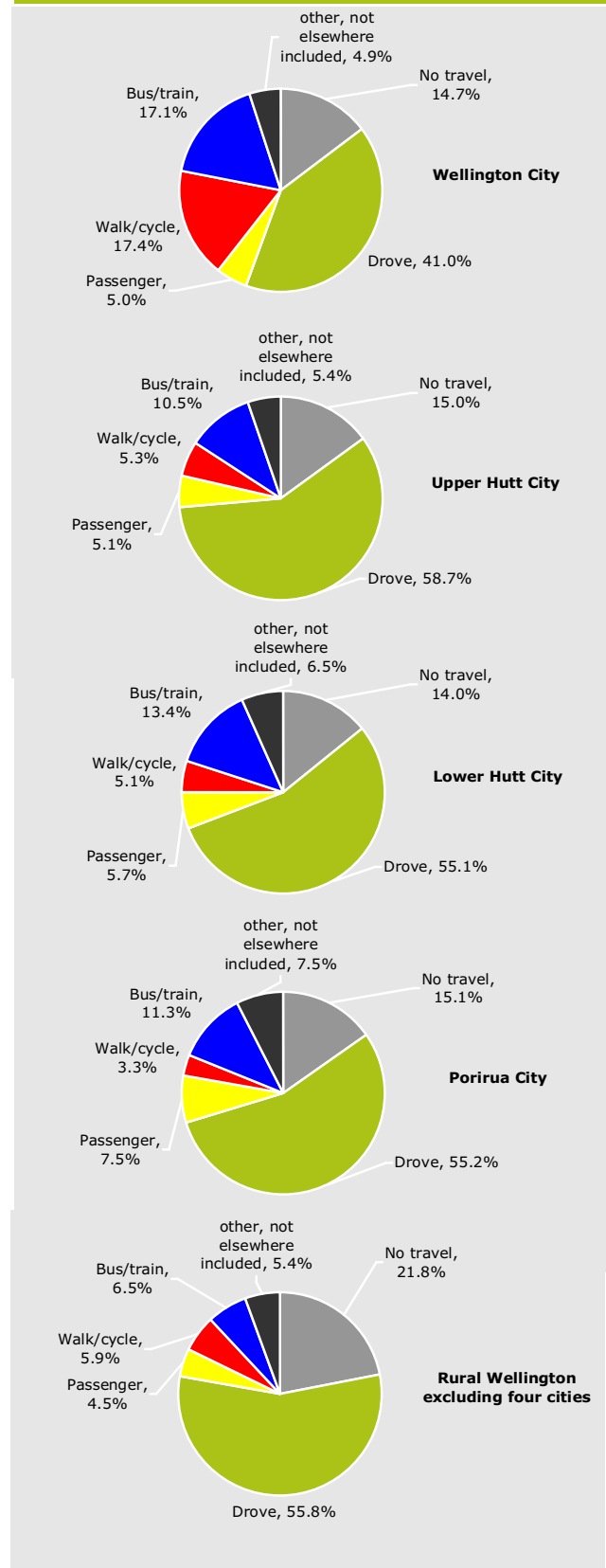
(Source: Motor Vehicle Register)

### Vehicle fleet - age



(Source: Motor Vehicle Register)

### Travel mode share 2006 (travel to work)

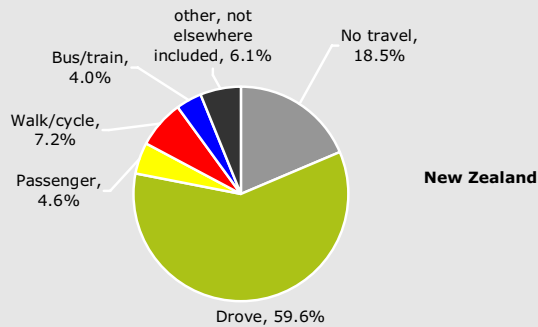


(Source: Statistics NZ, 2006 Census)



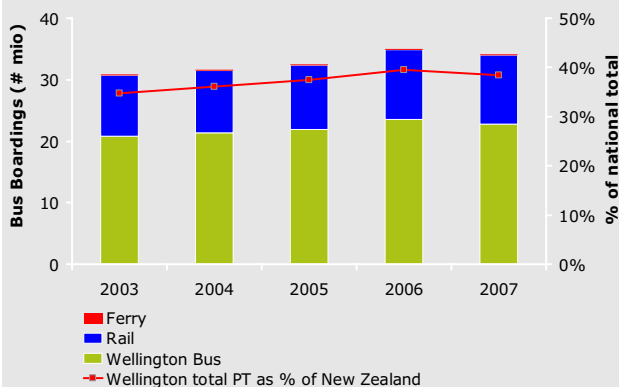
## Access and mobility —continued

### Travel mode share 2006 (travel to work) —continued



(Source: Statistics NZ, 2006 Census)

### Public transport boarding numbers

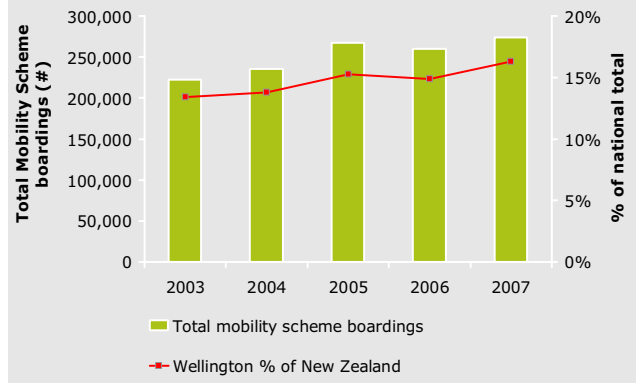


(Source: ???)

### Distance to bus routes

(Source: LTP Online—Annual Achievement Return for Wellington 06/07)

### Total mobility scheme boarding numbers



(Source: Greater Wellington)

### Comments

- Vehicle use (VKT) on State Highways has been declining at an increasing rate since 2005. VKT on local roads have declined 2006/2007 by 2.7%.
- Driving is the main means of travel to work in the Wellington Region. However, in most of the region the share of people driving to work is slightly lower than the national average with the exception of Wellington where only 41% drive to work compared to a national average of 59.6%.
- In the four Wellington cities the uptake of passenger transport is twice to three times as high as New Zealand average with a steady increase in the public transport boardings between 2003 and 2006 and a drop in passenger numbers of 2.5% in 2007.
- With the exception of Wellington City where 17.4% of people walk or cycle to work the rate for walking and cycling is below the New Zealand average of 7.2%.
- Light vehicle registrations have shown an average annual increase of 2.6% between 2003 and 2006 while heavy vehicle registrations increased by an average of 4.4% per year.
- The vehicle fleet registered in the Wellington region is in average about one year younger national average. The average age of cars and trucks has been slightly increasing and is now about 12 years.
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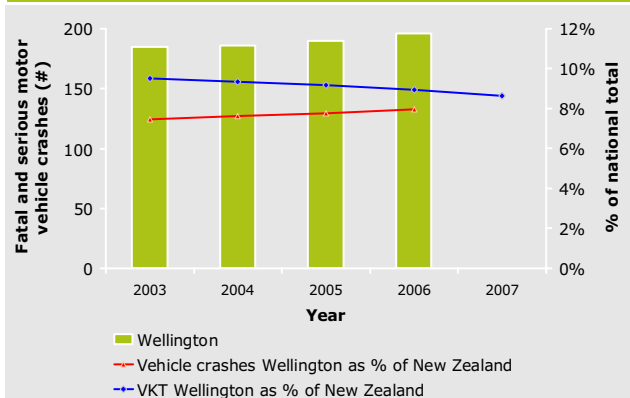
## Access and mobility —continued

### Emerging Issues

- As a result of the projected population growth on the Kapiti Coast an increase in commuters numbers between Kapiti Coast and Wellington is expected (RLTS 2007-2016).
- A 11% growth in VKT is forecasted over the 10 years while the economic growth is expected to be 30%. Care needs to be taken when designing interventions to reduce VKT ensuring a high level of access and interaction is maintained (RLTS 2007-2016).
- Rail movements during commuter peak hours contribute to traffic congestions in several areas (RLTS 2007-2016).
- There is sever congestion on the main routes in an dout of Wellington City CBD particularly at peak times. Network modelling forecasts that peak period congestion will continue to increase on several roads within the region.

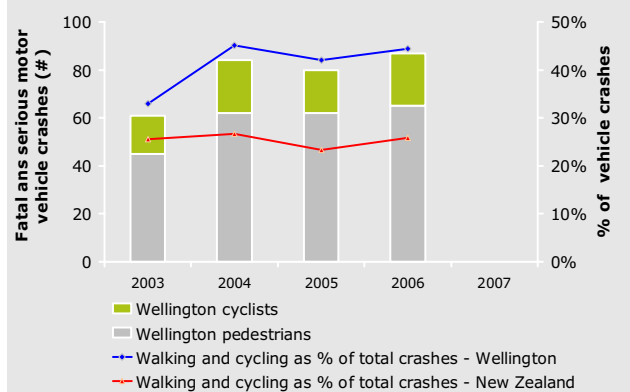
## 5. Safety

### Fatal and serious vehicle crashes



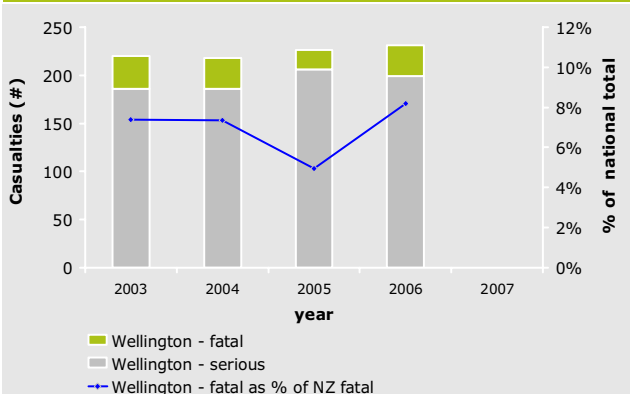
(Source: Land Transport NZ, CAS database)

### Fatal and serious vehicle crashes involving cyclists and pedestrians



(Source: Land Transport NZ, CAS database)

### Road Casualties



(Source: Land Transport NZ )

## Safety —continued

### Comments

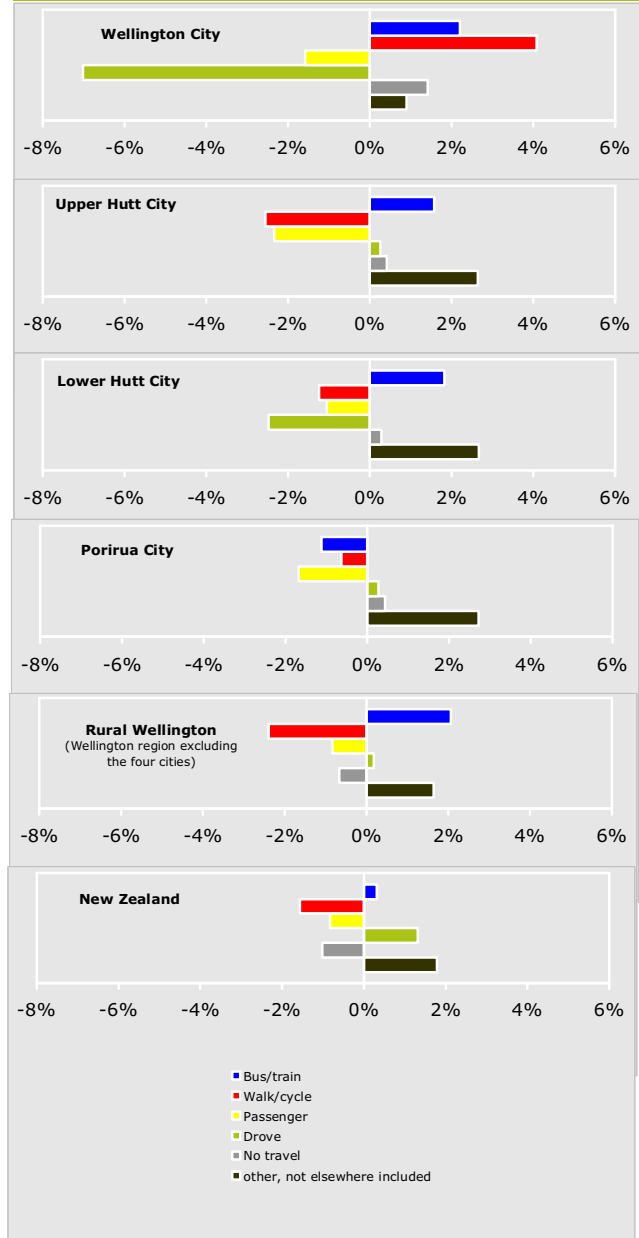
- From 2003 to 2006 the number of fatal and serious vehicle crashes raised from 185 to 196 per year and contributed about 8% to all fatal and serious vehicle crashes in New Zealand.
- The share of crashes involving cyclists and pedestrians (44%) is significantly higher in Wellington than the national average (26%).
- The number of road casualties has been increasing since 2003. In 2006 32 fatal and 199 serious casualties were recorded.
- The annual social costs of crashes was \$258 million in 2005 (Land Transport NZ, Wellington Regional Road Safety Report, 2006).

### Emerging Issues

- The number of casualties in 2006 has been the highest in the previous five years (3.5% above the five year average) (Land Transport NZ, Wellington Regional Road Safety Report, 2006).
- The main road safety issue in the region is vulnerable road users followed by rear end/obstruction, loss of control at bends and failing to give way/stop (Land Transport NZ, Wellington Regional Road Safety Report, 2006).
- 30% of at fault drivers in injury crashes were never licensed or held learner or restricted driver licenses in the year 2006 (Land Transport NZ, Wellington Regional Road Safety Report, 2006).

## 6. Health and Environment

### Changes in travel mode share 1996 –2006 (travel to work)

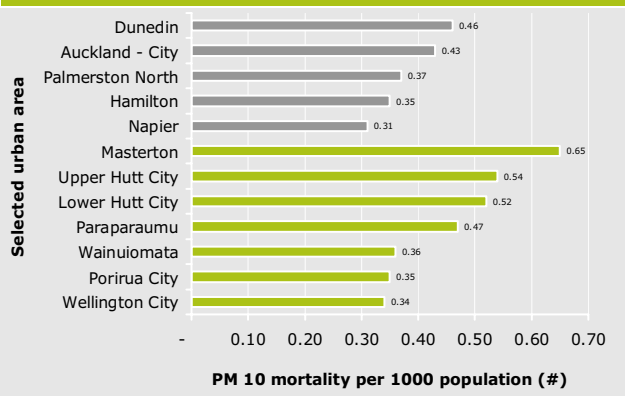


(Source: Statistics NZ)

## Health and Environment—continued

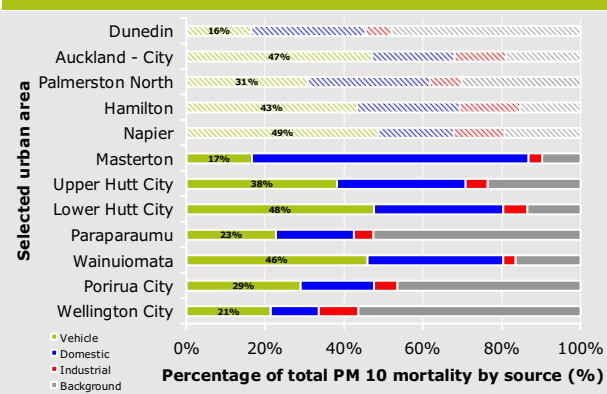
**Note:** Land Transport New Zealand has serious doubts about data contained in the report titled *Health and air pollution in New Zealand*. However, for the purpose of this document the data in the graphs below have been sourced from this report.

### PM10 air pollution – mortality per 1000 population



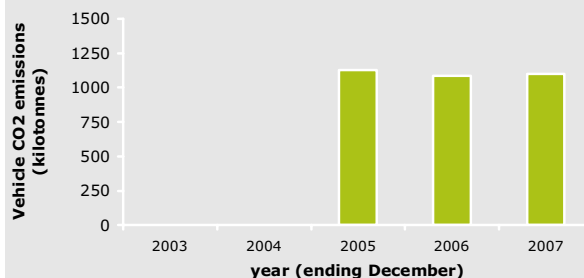
(Source: Health and air pollution in NZ, 2007 - research funded by Health Research Council of NZ, MfE, MoT)

### Sources of PM10 mortality



(Source: Health and air pollution in NZ, 2007 - research funded by Health Research Council of NZ, MfE, MoT)

### Land transport CO2 emissions



(Source: Calculated by Greater Wellington from information sourced from local authorities and Ministry of Transport, published in RLTS 2007-2016)

### Comments

- Although numbers dropped in 2007, passenger transport has been on a rising trend during the previous four years.
- The share of people walking and cycling to work has been declining in the region with the exception of Wellington City where it increased by over 4.1% between the census years 1996 and 2006.
- The share of people driving to work in Wellington City has decreased by 7% between 1996 and 2006. In Lower Hutt the share of people driving has decreased by 2.5%. An increasing share of people are driving in the remaining areas of the district.
- CO2 emissions generated by the combustion of petrol and diesel dropped by 3.7% in 2006, but increased again in 2007 by 1.2%.
- The level of transport-generated air contaminants are relatively low in the Wellington Region (RLTS 2007-2016).

### Emerging Issues

- Resilience and adaptability of transport network to the effects of climate change is required.
- Investigations are underway to assess the effects of stormwater runoff on heavy metal concentrations in Wellington Harbour (RLTS 2006-2016).

