2011/12 Annual Monitoring Report on the Regional Land Transport Strategy

September 2012

Quality for Life

greater WELLINGTON
REGIONAL COUNCIL
Te Pane Matua Taiao

2011/12 Annual Monitoring Report on the Regional Land Transport Strategy

Contents

Executive Summary

This report has been prepared in accordance with Section 83 of the Land Transport Management Act 2003 and reports progress in implementing the Wellington Regional Land Transport Strategy (RLTS) 2010–40.

A wide range of performance indicators are used to measure progress against the key outcomes and associated 2020 stretch targets identified in the Wellington RLTS. Further monitoring, investigation and development of new performance indicators is required to be able to measure progress against all RLTS key outcomes to 2020. These are identified in this report.

2011/12 Regional land transport report card

The report card below sets out the Wellington RLTS key outcomes, associated 2020 stretch targets and the 2011/12 results for those indicators which measure progress in achieving them. An assessment of the trend in progressing towards the 2020 targets from the last available result is also provided where possible.

Report card: 2011/12 progress against Wellington RLTS 2020 targets for each key outcome

Key outcome	2020 Stretch target	2011/12 result	Previous result	Trend
Increased peak period public transport mode share	Public transport accounts for at least 23 million peak period trips per annum	19.1 million in 2011/12 financial year	18.8 million in 2010/11 financial year	✓
	Public transport accounts for at least 21% of all region wide journey to work trips	Next update due 2013/14 financial year	16.9% in 2006 census 16.1% in 2001 census	?
Increased mode share for pedestrians and cyclists	Increase active mode use to at least 30% of all trips in urban areas	27% of all trips were made by active modes in 2007-11	26% of all trips were made by active modes in 2006-10	✓
	Active modes account for at least 15% of region wide journey to work trips	Next update due 2013/14 financial year	13.2% in 2006 census 12.5% in 2001 census	?
Reduced greenhouse gas emissions	Transport generated CO_2 emissions will be maintained below year 2001 levels (1,065 kilotonnes in 2001)	1,076 kilotonnes in 2011/12 financial year	1,086 kilotonnes in 2010/11 financial year	✓
Reduced severe road congestion	Average congestion on selected roads will remain below year 2003 levels despite traffic growth	22.2 seconds in March 2012	21.6 seconds in March 2011	–
Improved regional road safety	There are no road crash fatalities attributable to roading network deficiencies	0 fatalities attributable to road factors in 2011 calendar year	0 fatalities attributable to road factors in 2010 calendar year	✓
	Continuous reduction in the number of killed and seriously injured on the region's roads	173 killed and seriously injured in 2011 calendar year	187 killed and seriously injured in 2010 calendar year	✓
Improved land use and transport integration	All new subdivisions and developments include provision for walking, cycling and public transport, as appropriate	No data available	No data available	?
Improved regional freight efficiency	Improved road journey times for freight traffic between key destinations	24.8 minutes in March 2012	24.3 minutes in March 2011	–

✓ positive – neutral ✖ negative ? insufficient information

Summary of progress

The report also includes an overall summary of progress in implementing projects, activities and actions identified within the various RLTS implementation documents. A number of milestones were recorded for the 2011/12 year including:

Strategy

- adoption of the updated Hutt Corridor Plan (October 2011)
- adoption of the Regional Public Transport plan 2011-2021 (November 2011)
- adoption of the 2012-2015 Regional Land Transport Programme (June 2012)

Public transport

- introduction of Matangi trains to the Kapiti and Johnsonville lines (August 2011; March 2012)
- provision of Rugby World Cup public transport special services (September 2011)
- completion of the Otaki public transport service review and implementation of service changes (June 2012)
- completion of consultation for the Wairarapa public transport service review (March 2012)

Travel demand management, walking and cycling

- running of a folding bike promotion with discount voucher (July 2011)
- completion of the road safety video *A Two-way Street* in collaboration with Police (October 2011)
- expansion of the Let's Carpool programme nationally (June 2012)

The report also sets out major programmes and projects which are scheduled to be commenced or completed in the 2012/13 financial year and identifies known and potential obstacles to implementing the RLTS.

1. Introduction

1.1 Statutory context

Land Transport Management Act 2003

The Land Transport Management Act 2003[1] requires every regional council to establish a Regional Transport Committee (RTC). The primary responsibility of the RTC is to prepare a Regional Land Transport Strategy (RLTS) to set the strategic direction for a region's land transport network. Every RLTS must contribute to the overall aim of achieving an affordable, integrated, safe, responsive and sustainable land transport system.

Section 83 of the amended Land Transport Management Act 2003 requires the preparation of a monitoring report which documents progress in implementing the RLTS. The report must be published at least every three years.

1.2 Wellington Regional Land Transport Strategy

The Wellington RLTS 2010–40 was adopted in September 2010 following an extensive review and consultation process. It includes a new strategic framework for planning the region's transport network over the next 30 years.

The Wellington RLTS includes a long term vision, six objectives, and a comprehensive list of policies, desired outcomes and associated targets. The strategy outcomes have been given a hierarchical structure of 'key outcomes' and 'related outcomes' to clearly signal priorities for the Strategy. The key outcomes in the Wellington RLTS are:

- Increased peak period passenger transport mode share
- Increased mode share for pedestrians and cyclists
- Reduced greenhouse gas emissions
- Reduced severe road congestion
- Improved regional road safety
- Improved land use and transport integration
- Improved regional freight efficiency.

The Strategy targets were developed to signal the magnitude of the changes sought in relation to each Strategy outcome. These targets provide a benchmark against which to measure progress. More ambitious 'stretch' targets have been set in relation to the Strategy's 'key outcomes' to signal the need for greater emphasis and progress in relation to these areas.

[1] As amended by the Land Transport Management Amendment Act 2008.

1.3 Content and structure

This report presents information on a range of indicators both within the region and across its boundaries. If data is available, the report tracks the current condition (for the 2011/12 year) and monitors trends over time. This information is used to provide a picture of regional performance from a transport perspective.

Where possible, we benchmark ourselves against New Zealand's other two largest regions with significant transport issues: Auckland and Canterbury. This gives some indication of broader New Zealand transport issues, and allows us to see how well we are doing at a national level.

Structure of the 2011/12 Annual Monitoring Report (AMR)

This AMR reports our progress on the key and related outcomes identified in the Wellington RLTS 2010–40. Progress against each outcome area and associated target(s) is measured with a series of indicators. The data represented by the indicator is analysed and some commentary is also provided.

An overall summary of progress in implementing the actions and projects which sit alongside the RLTS in various corridor plans, implementation plans and the Regional Land Transport Programme 2009–12 are described in the RLTS implementation section.

Targets

The targets identified in the Wellington RLTS have been included on the various indicator graphs in this AMR to demonstrate where we are at now compared to the RLTS 2020 target.

Information availability

Agencies continue to supply information for the monitoring programme and Greater Wellington Regional Council (GWRC) gratefully acknowledges this.

Each AMR stands alone as information availability improves or data is replaced retrospectively. Therefore data presented in previous reports may not be entirely comparable to this report.

All reported data relates to the financial year ending at 30 June and is for the Wellington region unless otherwise stated.

1.4 The Regional Transport Network

The Wellington RLTS provides a development framework for the region's transport network and the AMR monitors a number of indicators to gauge the performance of the network. Wellington's regional transport network is shown in Figure 1.1.

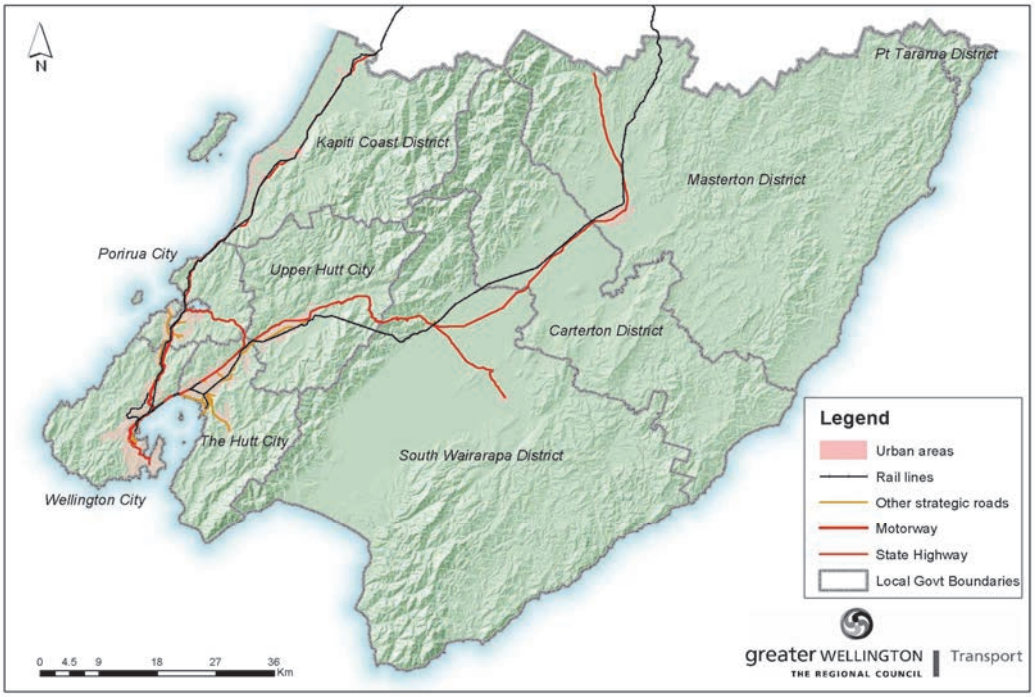

Figure 1.1: Wellington's regional transport network

State Highway 1 and the North Island Main Trunk rail line enter the region near Otaki on the Kapiti Coast and extend southwards through Porirua and the Northern Wellington suburbs to the Wellington City CBD. State Highway 1 then continues on to Wellington International Airport.

State Highway 2 and the Wairarapa rail line enter the region north of Masterton and extend south-west through Wairarapa, the Hutt Valley and on to merge with State Highway 1 at Ngauranga and the main trunk rail line at Kaiwharawhara.

State Highway 58 is a vital east-west link between State Highways 1 and 2. State Highway 53 connects Martinborough to the regional network at Featherston.

The regional transport network provides vital access for freight and passengers to key regional destinations including the Wellington City CBD and other regional centres, CentrePort (Wellington's sea port), Wellington International Airport, and Wellington's regional hospital in Newtown. It also provides important access for local trips within communities.

2. Passenger Transport Outcomes

Introduction

This section discusses progress towards the RLTS passenger transport outcomes.

The following key outcome for passenger transport is sought for the region's land transport network:

- **Increased peak period public transport mode share**

The performance indicators associated with this key outcome are:

  – Peak trips by public transport

  – Mode of journey to work: public transport

The related outcomes and associated performance indicators for passenger transport are:

- **Increased off-peak period public transport mode share**

  – Off-peak trips by public transport

- **Increased public transport accessibility for all, including the transport disadvantaged**

  – Wheelchair accessible public transport services

  – Population proximity to public transport

- **Reduced public transport journey times compared to travel by private car**

  – Journey time comparison

- **Increased public transport reliability**

  – Reliability of public transport services

The terms 'passenger transport' and 'public transport' are often used interchangeably. However, when defined, they do have slightly different meanings. Passenger transport has a wider meaning and covers both scheduled public transport services and other passenger services (e.g. taxis and the Total Mobility Scheme).

The term 'passenger transport' is consistently used throughout the RLTS and Passenger Transport Plan, however as some indicators within the AMR rely on data obtained in relation to scheduled public transport services only, the term 'public transport' is used where appropriate.

Key outcome

2.1 Increased peak period public transport mode share

Target: Public transport accounts for at least 23 million peak period trips per annum

Peak trips by public transport

Figure 2.1 presents the annual number of public transport trips taken by train, bus and ferry during the AM and PM peak periods. It also illustrates the RLTS target of 23 million trips per annum by 2020. During 2012, 19.1 million peak period trips were made by public transport, with bus trips accounting for 61.7% of peak trips. Rail accounts for 37.9% of peak trips, and ferry trips make up 0.4%. The total number of peak period public transport trips is above the scheduled RLTS target for 2012, which is based on uniform growth between 2010 and 2020.

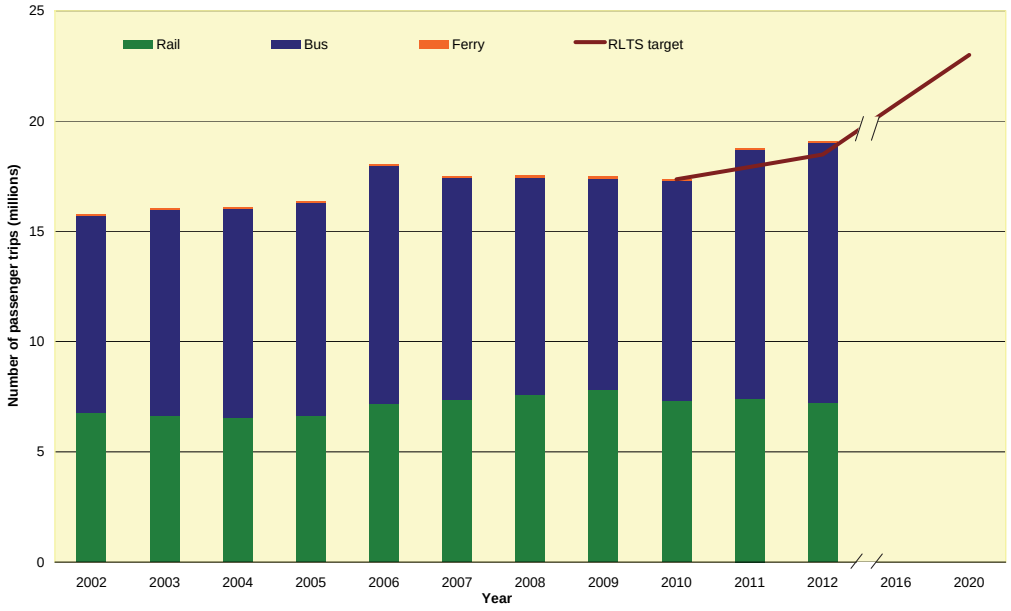

Figure 2.1: Public transport patronage: number of passenger trips by mode, combined peak periods. Source: GWRC

Since monitoring began in 2002, bus trips have accounted for the highest proportion of peak period public transport trips. Peak bus patronage has been increasing over the last few years and has continued to increase over the last year, with 0.5 million (4%) more peak period passenger trips in 2012 compared to 2011.

The number of peak period public transport trips by train has decreased by 2.2% (0.2 million) over the last year. It is hoped that the continuing roll out of the new Matangi trains and rail infrastructure improvements will grow rail patronage and contribute towards achieving the RLTS target.

Ferry passenger trips, while small in number compared to peak period bus and train trips, have decreased by 8.2% over the last year. This follows a 2.8% decrease the previous year.

Target: Public transport accounts for at least 21% of all region wide journey to work trips

Mode of journey to work: public transport

Data from the 2006 New Zealand census showed that 17% of journey to work trips across the region used public transport[2] as the 'main means of travel to work' (Figure 2.2). In 2006, rail mode share of journey to work trips was found to be 7%, and bus 10%.

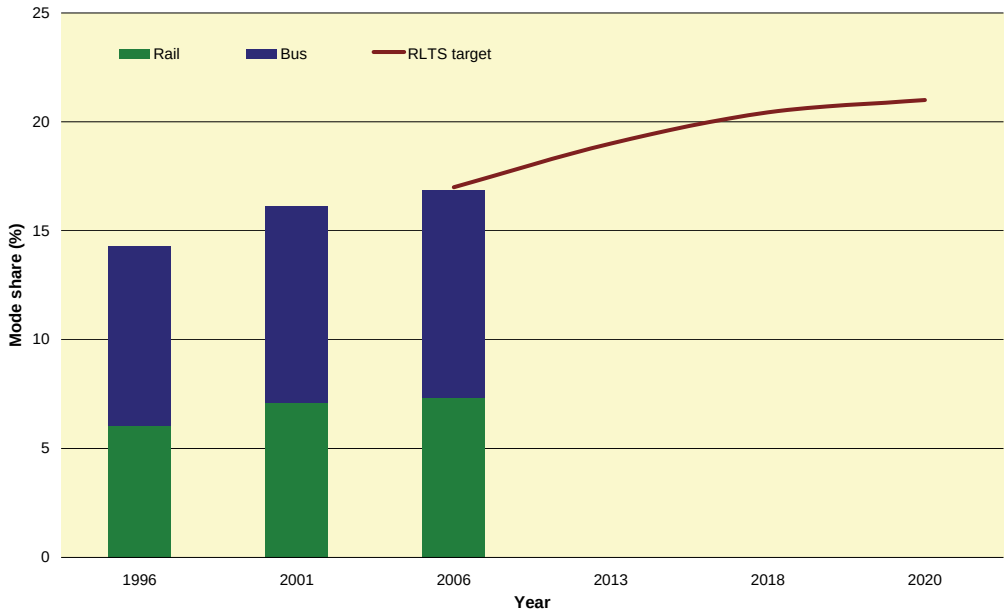

Figure 2.2: Public transport mode share of journey to work trips (%). Source: Statistics New Zealand

Journey to work trips made by public transport increased by about 4,400 trips between the 2001 to 2006 census periods. This followed an increase of around 3,800 trips over the prior census period. The increase in trips from 1996 to 2006 has resulted in the mode share of journey to work trips by public transport increasing from 14% to 17%. Further increases are required to achieve the RLTS target of 21% by 2020.

Public transport mode share of journey to work trips has increased in all territorial authority areas except Porirua over the last two census periods (Figure 2.3). Public transport mode share is greatest in Wellington City and lowest in Wairarapa, but Kapiti has seen the largest growth in public transport mode share across the last three census periods.

[2] Public transport was defined as: travel by public bus or train. Travel by ferry is not included.

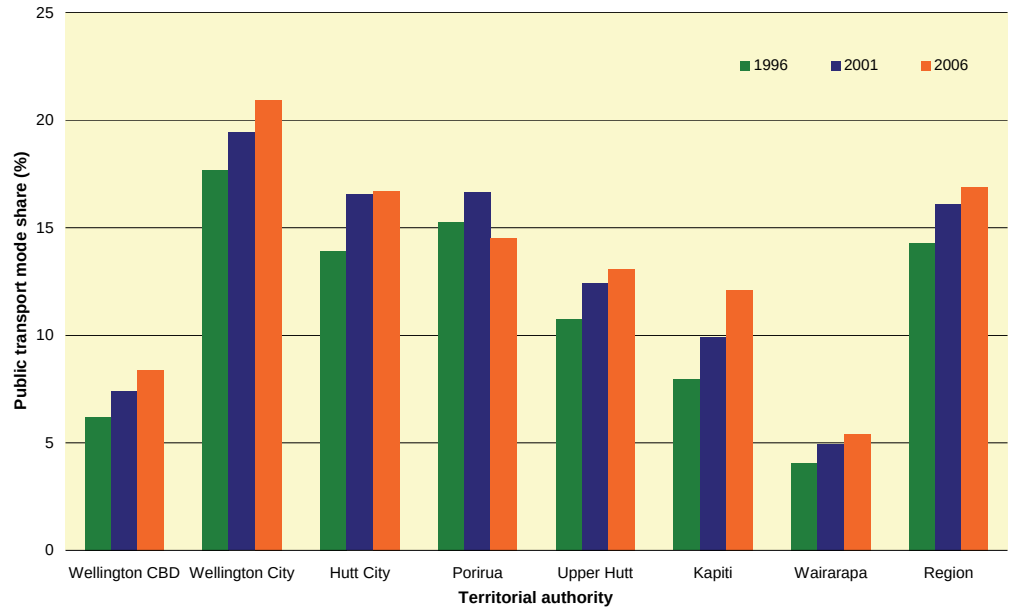

Figure 2.3: Public transport mode share of journey to work trips by territorial authority and Wellington CBD (%). Source: Statistics New Zealand

Key outcome summary

The performance indicators for this key outcome show that, as a region, public transport use and mode share are higher than they were towards the beginning of the decade. Public transport trips decreased during peak periods from 2006 to 2010, but over the last couple of years this trend has reversed.

Over the last year there has been a 1.7% increase in peak period public transport trips, which follows an increase of 8.2% the previous year. Regionally, public transport trips by bus are more prevalent than other public transport modes during the peak periods; and it is the increase in bus trips over the last year that accounts for the observed increase in peak period public transport trips. The number of train and ferry trips during the peak periods has decreased over the last year.

The overall increase in peak period public transport trips means that progress has been made towards the RLTS target of 23 million peak period trips per annum. However, achieving the 2020 stretch target will be a significant challenge as a further 21% increase on current patronage levels is required.

Until the next census it is not possible to see whether the region is on track to achieve its other target of public transport accounting for at least 21% of all region wide journey to work trips. The next census update is not due until the 2013/14 financial year.

The Ministry of Transport uses results from its Household Travel Survey to work out mode share of journeys to work (for full-time workers aged 16+, journeys starting between 6am and 9.30am). Although it uses a different methodology, the 2007-11 survey found that 22% of journeys to work in the

Wellington region used public transport.[3] An increase from 20% observed in the 2006-10 and 2003-07 surveys.

If a two percentage point increase in mode share of journeys to work using public transport is also assumed for the indicator in Figure 2.2 this would mean that public transport mode share would be around the scheduled RLTS target for 2012, meaning attaining the 2020 stretch target is on track.

Over the last year there were 19.1 million trips by public transport during the peak periods. This illustrates the importance of public transport to the region, and shows that public transport plays a significant role in transporting the region's commuters during the peak periods.

Public transport mode share has increased since the beginning of the decade but there are indications that there has been little or no change over recent years. Despite this, progress has been made towards this RLTS key outcome. However, achieving the 2020 stretch targets for this outcome pose real challenges to the region.

Related outcomes

2.2 Increased off-peak period public transport mode share

Target: Public transport accounts for at least 23 million off-peak period trips per annum

Off-peak trips by public transport

Figure 2.4 presents the annual number of public transport trips taken by train, bus and ferry during the off-peak period; and the RLTS target of 23 millions trips per annum by 2020. In 2012, 16.6 million off-peak trips were made by public transport. Bus trips account for 74.9% of off-peak trips, with rail trips accounting for 24.5%, and ferry trips accounting for less than 1%. The total number of off-peak public transport trips is below the scheduled RLTS target for 2012.

Over the last year, total public transport trips during the off-peak period have decreased by around 158,500 trips (1%). Although bus trips continue to account for the largest proportion of off-peak public transport trips, off-peak trips by bus have decreased over the last year, whereas off-peak trips by train and ferry have increased. This is the reverse trend of that observed during peak periods (see Figure 2.1).

The decline in off-peak public transport trips over the last few years has resulted in off-peak trips falling further behind the scheduled progress for 2012, and an increase of 40% from 2012 levels will be required if the target is to be achieved by 2020.

[3] Public transport trips are counted as those in the categories: Public transport or Public transport/walk; and Public transport/car or Public transport/car/walk.

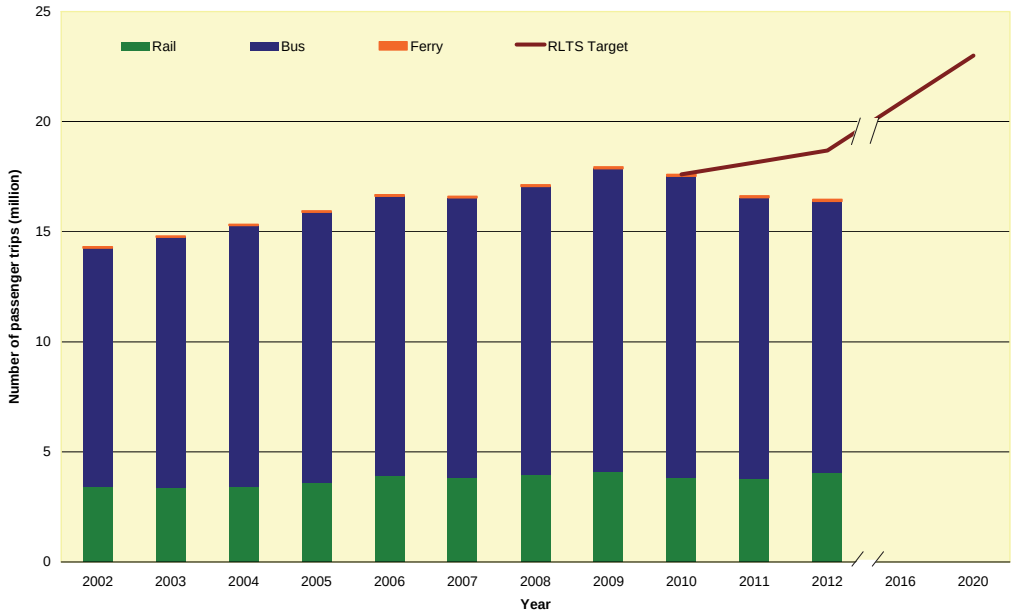

Figure 2.4: Public transport patronage: number of passenger trips by mode, off-peak peiod. Source: GWRC

Related outcome summary

The performance indicator for this related outcome shows that progress has not been made toward the 2020 RLTS target of public transport accounting for at least 23 million off-peak period trips per annum. If the RLTS target is to be achieved an increase of 40% in off-peak public transport trips is required compared to 2012 levels.

Off-peak travel in the region is most likely to be by bus, accounting for around 75% of off-peak trips. However, the number of off-peak bus trips has decreased each year for the last few years. Public transport trips by train have increased over the last year, but are still less likely to be used for trips during the off-peak than peak.

2.3 Improved public transport accessibility for all, including the transport disadvantaged

Target: 90% of public transport services are guaranteed to be wheelchair accessible

Wheelchair accessible public transport services

The term 'wheelchair accessible' is defined as 'vehicle accessible by wheelchair'. A vehicle in this indicator includes: cable car, bus, ferry and train unit.[4] Figure 2.5 shows the total percentage of public transport vehicles accessible by wheelchair across the region and the 2020 target of 90% of public transport vehicles being accessible by wheelchair.

[4] A 'train unit' means a two car unit (composed of two cars). If one of the two cars is accessible by wheelchair, then this two-car unit is classified as vehicle accessible by wheelchair.

In 2012, 69% of public transport services were wheelchair accessible which is above the scheduled RLTS target for the year. The percentage of wheelchair accessible public transport services has increased over time, with an eight percentage point increase observed over the last year. The increase over the last year is due to increases in the percentage of both wheelchair accessible bus and train services. The percentage of wheelchair accessible bus services increased from 59% to 65%. Wheelchair accessible train services however increased from 77% to 100% due to the continued roll out of the new Matangi trains and the decommissioning of the old Electric Multiple Units.

Figure 2.5: Accessibility of public transport vehicles by wheelchair (%). Source: GWRC

Target: 75% of people in the region live or work within 400 metres and 90% within 800 metres of a public transport stop with service throughout the day

Population proximity to public transport services

A reliable indicator to measure our progress towards the RLTS target for this related outcome remains under development. Available data cannot currently provide a reliable picture of where people live and work. However, we are able to measure whether people live within 400m or 800m of a public transport stop.

Figure 2.6 shows the percentage of the population that live within 400m and 800m of a public transport stop: all stops and stops with an average frequency of 30 minutes or better. Distance is measured along the roading network.

In 2012, 89% of the region's population lived within 400m of a public transport stop and 96% lived within 800m. Whereas, 72% and 85% live within 400m and 800m of a public transport stop with an average service frequency of 30 minutes or better respectively.

There has been little change in the percentage of the population living within 800m of a public transport stop (all stops and stops with a service frequency of 30 minutes or better). However, the percentage of the population living within 400m of a public transport stop (all stops and stops with a service frequency of 30 minutes or better) has increased since 2006, with a large increase observed over the last year. The observed increase over the last year is mainly due to new stops in Porirua. These results suggest that it is likely that progress has been made towards the RLTS target for this related outcome.

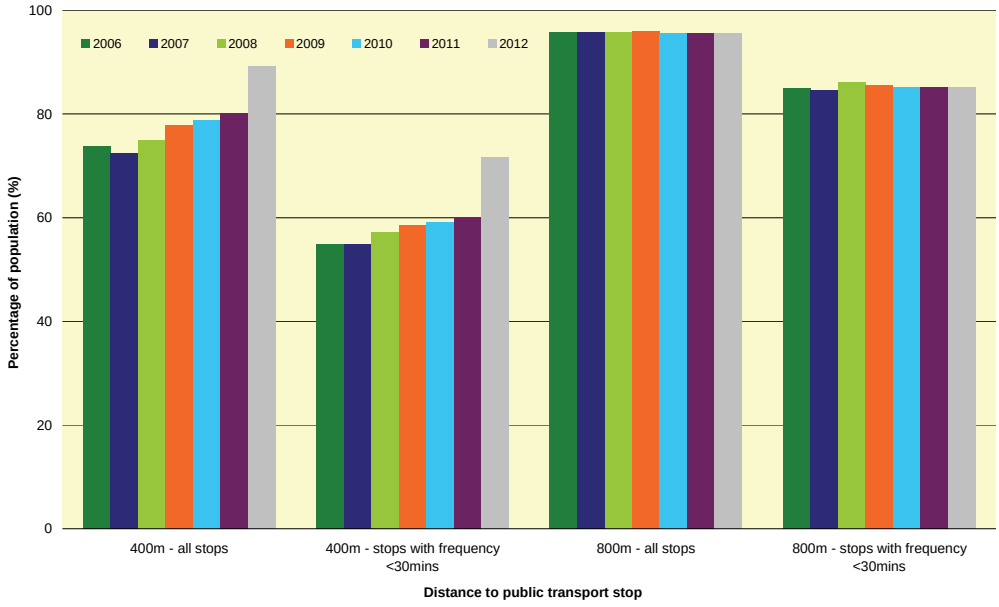

Figure 2.6: Percentage of the population living within 400m and 800m of a public transport stop: all stops; and stops with an average frequency of 30 minutes or better. Source: GWRC; Statistics New Zealand.

Related outcome summary

The performance indicators for this outcome suggest that over the last couple of years, progress has been made against this related outcome of improved public transport accessibility for all, including the transport disadvantaged. The increasing trend in wheelchair accessible public transport services and the proportion of the population living within 400m of a public transport stop indicate improved public transport accessibility.

Progress has been made towards the RLTS target of 90% of public transport services are guaranteed to be wheelchair accessible. Currently 69% of public transport services are wheelchair accessible, which is above the scheduled RLTS target for 2012. If these gains can be maintained this target is on track to be achieved by 2020.

It is currently not possible to directly measure progress against the RLTS target of 75% of people in the region live or work within 400m and 90% within 800m of a public transport stop with service throughout the day. Information we have shows that the percentage of the population living within 800m of a public transport stop with service frequency of 30 minutes or better has remained relatively unchanged at around 85%, but the percentage of the population living within 400m has steadily increased up to 72%. From this

information alone it suggests that progress has been made towards the 2020 RLTS target.

2.4 Reduced public transport journey times compared to travel by private car

Target: Continual reduction of peak period public transport journey times relative to a similar journey undertaken by a private car for key selected corridors

Journey time comparison

This indicator is a comparison of the car travel times from the NZTA travel time surveys (March) and public transport journey times from timetables. The two key regional routes that are compared are described below:

- Route 1 southbound (SB): Paraparaumu – Wellington Airport
- Route 1 northbound (NB): Wellington Airport – Paraparaumu
- Route 2 southbound (SB): Upper Hutt – Wellington Airport
- Route 2 northbound (NB): Wellington Airport – Upper Hutt

The values given are the difference in minutes between using public transport and travelling by private car. A positive value means the journey takes longer by public transport than by private car, and the larger the value the greater the difference in travel time by public transport in comparison to private car. Figure 2.7 shows the difference in average travel time for both routes across three periods of the day.

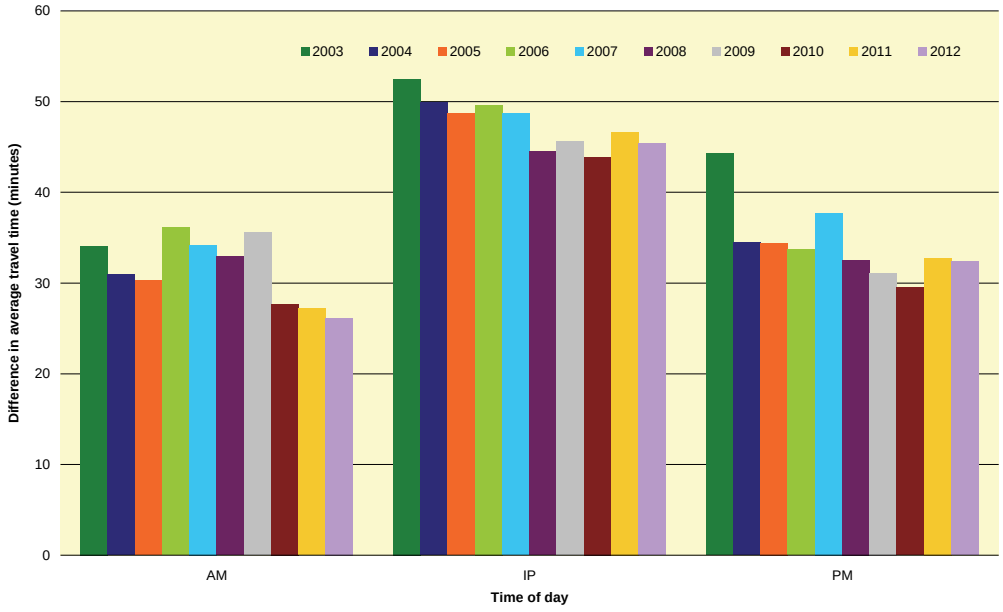

Figure 2.7: Comparison of average travel times (minutes) by public transport and by car on key routes. Sources: NZTA; GWRC

In the AM peak, the comparative travel time in the northbound direction, on both routes, is greater than the southbound direction due to the direction of travel of AM peak passengers (towards Wellington City). This is reversed during the PM peak.

Over time, public transport travel time has become more competitive compared to travel by car across all periods of the day. Although there has been little change during the interpeak and PM peak since around 2008, the difference in travel time between public transport and private car has decreased steadily over the last few years during the AM peak.

In 2012, it took 26 minutes longer to travel by public transport than by private car during the AM peak, 45 minutes longer during the interpeak and 32 minutes longer during the PM peak. Over the last year the difference in travel time between public transport and private car has decreased at all three periods of the day, with a decrease of one minute during both the AM and PM peak, and two minutes during the interpeak. These decreases are a result of increased average car travel time at each period of the day.

Related outcome summary

Over the last year progress has been made towards this related outcome, but continued progress is required to achieve the RLTS target of a continual reduction of peak period public transport journey times relative to a similar journey undertaken by a private car.

Since measurements began, the difference in travel time between public transport and private car on selected routes has decreased, but average public transport travel times on these routes are 26 and 32 minutes slower than by private car during the AM and PM peak periods respectively. Over the last year it is an increase in travel time by private car, rather than a decrease in public transport travel time that has resulted in the observed decreases.

Based on overall journey time, public transport remains relatively uncompetitive compared to the private car. Making public transport travel times comparable to travel times by private car remains a significant challenge for the region.

2.5 Increased public transport reliability

Target: Continual improvement to bus and train services running to time

Reliability of public transport services

Figure 2.8 shows the percentage of bus and passenger rail services in the region which run to time.

A bus service is defined as being ‘on time’ when it runs within 10 minutes of scheduled time at departure, and its destination. A train which departs from or arrives at Wellington Railway Station within 5 minutes of scheduled time is

defined as ‘on time’. This data is currently self-reported by public transport operators.

Averaged across the 2011/12 financial year, 99.8% of bus services operated within 10 minutes of scheduled time, and 91.6% of rail services arrived or departed Wellington Railway Station within 5 minutes of scheduled time. In general, since July 2010 there has been a gradual increase in the percentage of rail services running within 5 minutes of scheduled time.

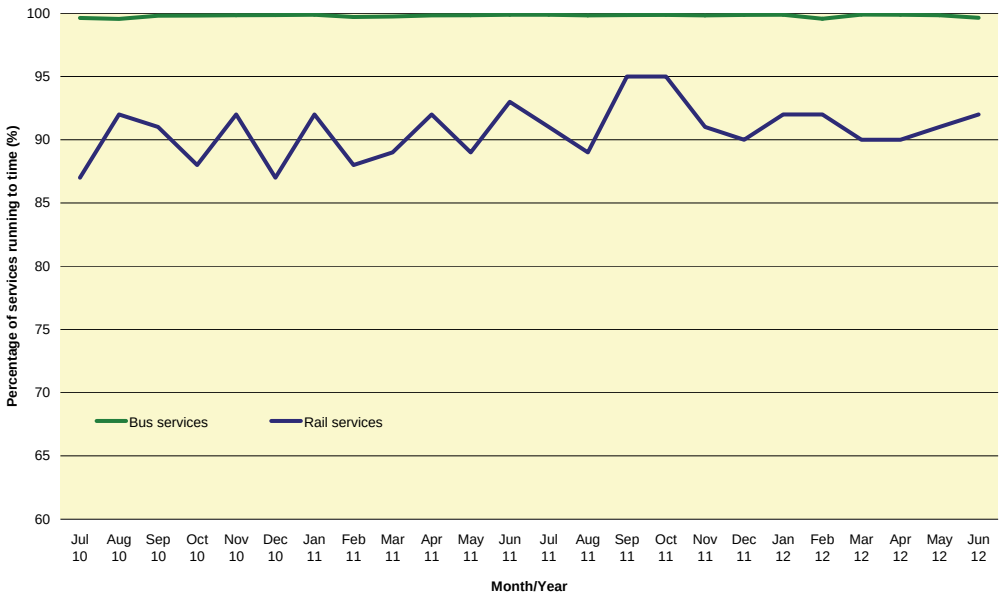

Figure 2.8: Bus and rail services running to time (%). Source: Public transport operators; GWRC

Related outcome summary

This performance indicator shows that the vast majority of bus services operate within 10 minutes of their scheduled time. Train service reliability has been increasing, and the average reliability across the year is higher than the previous year. Although there is still room for improvement, progress has been made towards the RLTS target of a continual increase in bus and rail services running to time.

3. Active Mode Outcomes

Introduction

This section discusses progress towards the RLTS active mode outcomes.

The following key outcome for active modes is sought for the region's land transport network:

- **Increased mode share for pedestrians and cyclists**

The performance indicators associated with this key outcome are:

  – Overall active mode share

  – Mode of journey to work: active modes

There are also two related outcomes for active modes. These are shown below, along with the associated performance indicators:

- **Improved level of service for pedestrians and cyclists**
  – Perceptions of the level of service for pedestrians
  – Perceptions of the level of service for cyclists
- **Increased safety for pedestrians and cyclists**
  – Pedestrian casualties
  – Cyclist casualties

Key outcome

3.1 Increased mode share for pedestrians and cyclists

Target: Increase active mode use to at least 30% of all trips in urban areas

Overall active mode share

The Ministry of Transport's Household Travel Survey began in 2003 and collects household and personal travel information to help monitor the travel patterns of New Zealanders.[5] The information is presented as five year averages in order to build statistically significant sample sizes for comparison.

The active mode[6] share of total trip legs[7] by residents (ages 5 and over) of main urban areas[8] in the Wellington region from the Household Travel Survey is shown in Figure 3.1. Active mode share of all trips within urban areas in the Wellington region was 27% in the 2007-11 survey period. Active mode share in the Wellington region has gradually increased from 23% since the first survey period in 2003-07.

[5] For more information on the survey see *www.transport.govt.nz/research/travelsurvey/*
[6] Walking and cycling combined are considered active modes of transport.
[7] A "trip leg" is a surveying unit of non-stop travel by a single mode for a single purpose.
[8] A main urban area is a population centre of at least 30,000 people as defined by Statistics New Zealand.

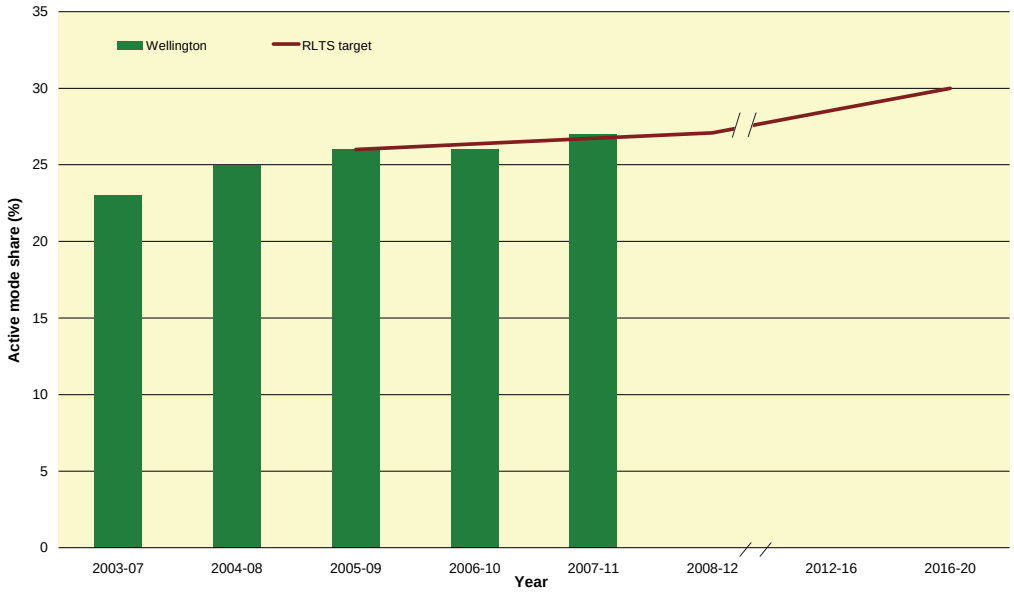

Figure 3.1: Active mode share of total trip legs (%) by residents of Wellington urban areas (ages 5 and over). Source: Ministry of Transport TMIF TP005

Figure 3.2 compares the active mode share of total trip legs by residents of main urban areas in the Wellington region against New Zealand's two other largest regions as well as New Zealand overall. Active mode share in the Wellington region has consistently been above Auckland and the New Zealand average in all surveys. The active mode share in Wellington and Christchurch was equivalent over all previous survey periods. However, an increase in active mode share in Wellington and a decrease in Christchurch for 2007-11 has meant that Wellington now has a slightly higher active mode share than Christchurch.

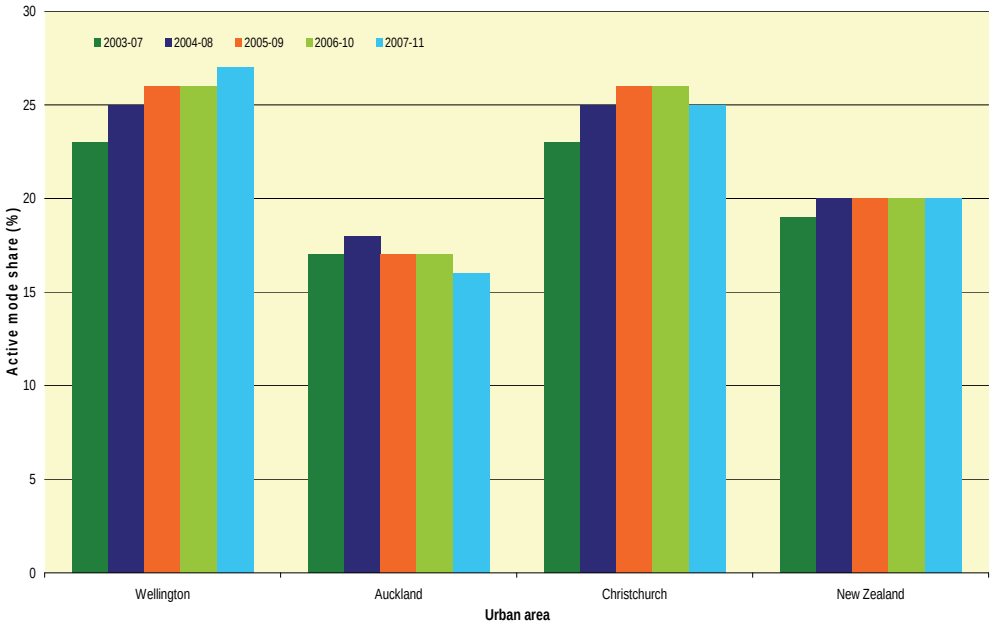

Figure 3.2: Active mode share of total trip legs (%) by residents of selected main urban areas (ages 5 and over). Source: Ministry of Transport TMIF TP005

Target: Active modes account for at least 16% of region wide journey to work trips

Mode of journey to work: active modes

Data from the New Zealand census, in 2006, shows that 13% of journey to work trips across the region used active modes[9] as the 'main means of travel to work' (Figure 3.3). Walking mode share of journey to work trips was found to be 11%, with cycling at 2%.

The total number of active mode journey to work trips increased by just over 3,500 from 2001 to 2006, which equates to a 17% increase in active mode trips to work. This involved a 5% decrease in the number of cycle trips to work but a 22% increase in the number of walking trips.

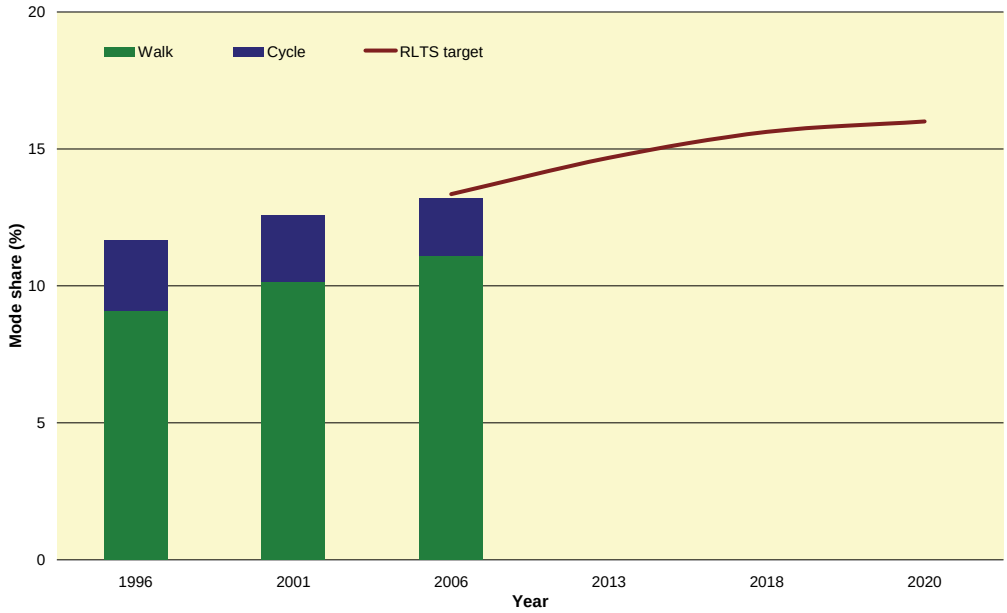

Figure 3.3: Walking and cycling mode share of journey to work trips (%). Source: Statistics New Zealand

Active mode share of journey to work trips differs greatly across the region (Figure 3.4). There are nearly 70% and 20% of journey to work trips using active modes in Wellington CBD and Wellington City respectively, but less than 10% in all other territorial authority areas. The active mode share in Wellington CBD and Wellington City also shows an increasing trend over time, whereas a decreasing trend is observed for the other territorial authority areas.

[9] Active mode was defined as: 'walked or jogged, bicycle'.

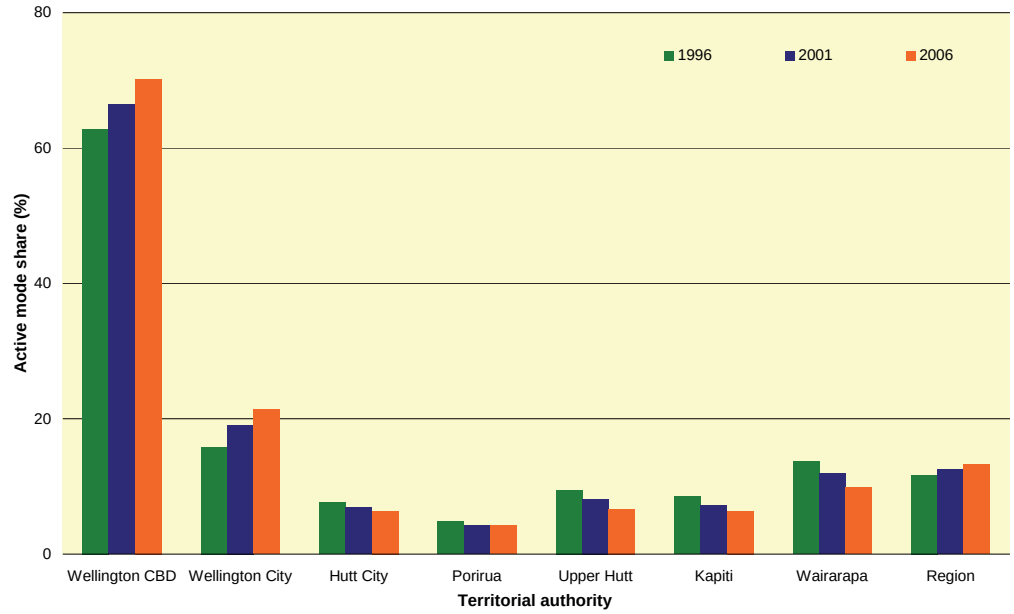

Figure 3.4: Active mode share of journey to work trips by territorial authority and Wellington CBD (%). Source: Statistics New Zealand

Key outcome summary

The performance indicators for this key outcome show that, as a region, the pedestrian and cycle mode share has increased over time. The majority of active mode trips in the region are walking trips. From the 2007-11 Household Travel Survey, walking trips accounted for 26% of total trips and cycling trips accounted for 1%. From the 2006 census walking mode share made up 11% of journey to work trips with cycling accounting for 2% of journey to work trips.

The increase in active mode use over the last year, alongside the observed longer-term trend increase indicates that progress has been made towards the RLTS target of increasing active mode use to at least 30% of total trips in main urban areas. Compared to Auckland and New Zealand overall, Wellington has relatively high active mode use, but continued growth is required if the 2020 RLTS target is to be achieved.

Census data has shown that active mode share of journey to work trips has been increasing and in 2006 the active mode share of journey to work trips was only three percentage points short of the 2020 RLTS target. As the next census data release will not be until the 2013/14 financial year it is not possible to tell whether the region has made any further progress at achieving this target since 2006.

Although a different methodology, the Ministry of Transport uses results from its Household Travel Survey to work out mode share of journeys to work (for full-time workers aged 16+, journeys starting between 6am and 9.30am). The 2007-11 survey found that 11% of journeys to work in the Wellington region used active modes.[10] This has increased from 9% in the 2006-10 survey and 6% in the 2003-07 survey. If a similar percentage point increase is assumed with the census data in Figure 3.3 it would mean that active mode share of

[10] Active mode trips are counted as those in the categories: walk only and cycle.

journey to work would be around 18%, which is above the 2020 stretch target for this outcome.

Related outcomes

3.2 Improved level of service for pedestrians and cyclists

Target: 95% of people report a 'good' or 'neither good nor bad' level of service for the strategic pedestrian network

Perceptions of the level of service for pedestrians

Findings from the 2012 GWRC Transport Perceptions Survey showed that 71% of respondents rated the level of service for pedestrians in the Wellington region as good, 9% rated the level of service as poor, 19% rated the level of service as neither good nor bad and 1% had no impression (Figure 3.5).

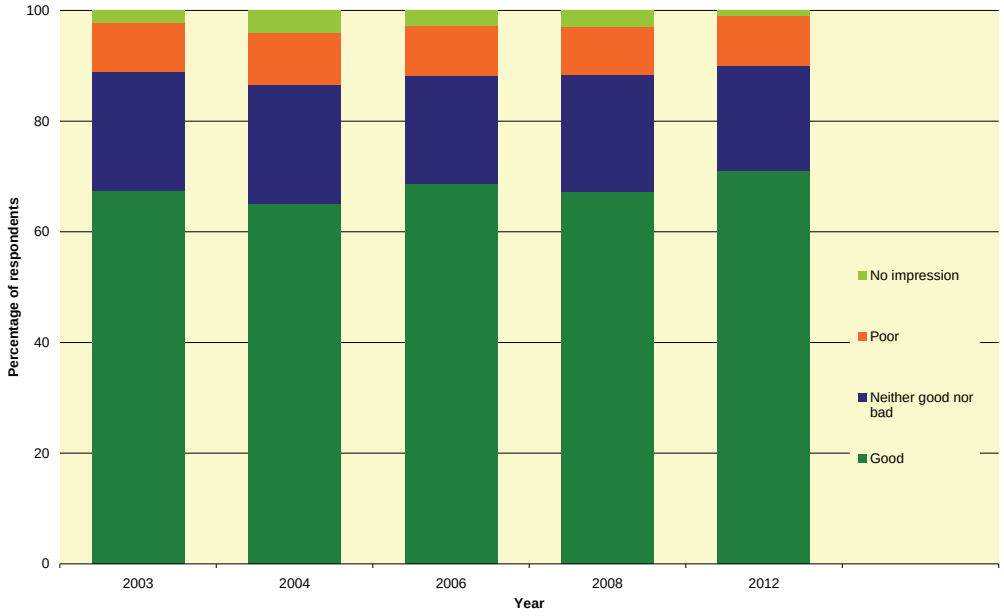

Figure 3.5: Perceptions of level of service for pedestrians (%). Source: GWRC transport perceptions surveys

In 2012, 90% of respondents rated the level of service for pedestrians as either 'good' or 'neither good nor bad'. This has increased slightly from 88% in the previous survey and an increasing percentage of respondents are rating the level of service for pedestrians as 'good'. While these results are encouraging, the RLTS target has not yet been achieved.

Target: 70% of people report a 'good' or 'neither good nor bad' level of service for the strategic cycle network

Perceptions of the level of service for cyclists

In 2012, 50% of respondents to the GWRC Transport Perceptions Survey rated the level of service for cyclists as 'good' or 'neither good nor bad' (Figure 3.6). This is significantly below the RLTS target of 70% for this related outcome. Although the combined percentage of respondents rating the level of service

for cyclists as 'good' or 'neither good nor bad' is similar to the result from the previous survey in 2008, in 2012 respondents were less likely to rate the level of service for cyclists as 'good'.

There were also 38% of respondents that rated the level of service for cyclists as 'poor'. This has increased from 36% in the previous survey and has also been gradually increasing since the survey began in 2003.

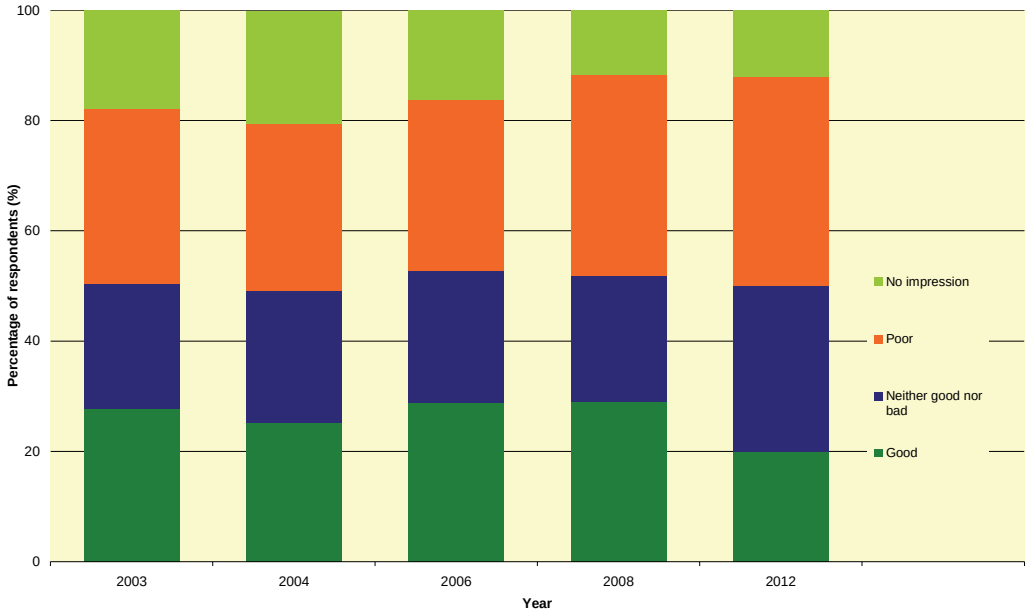

Figure 3.6: Perceptions of level of service for cyclists (%). Source: GWRC transport perceptions surveys

Related outcome summary

Wellington residents perceive the level of service of pedestrians to be much greater then the level of service for cyclists in the region. This disparity has also increased over time.

The performance indicators for this outcome show that the RLTS targets have not been met. While there is still the need for improvement in the level of service for pedestrians if the target is to be met, some progress has been made. No progress has been made toward the level of service RLTS target for cyclists. Work focused on improving the level of service for cyclists across the region is required to make greatest progress on this outcome.

3.3 Increased safety for pedestrians and cyclists

Target: A reduction in the number of pedestrian casualties to no more than 125

Pedestrian casualties

The number of pedestrian casualties in the region, as reported in NZTA's Crash Analysis System (CAS),[11] is shown in Figure 3.7. It must be noted here that there has been a problem with the processing of minor crash data, and we

[11] CAS is a tool that manages, analyses and maps traffic crash and related data.

are unsure whether all minor injury crash data has been processed and reported in CAS. With this issue in mind it seems appropriate to focus our analysis on only serious and fatal injury casualties.

Fatal and serious injury pedestrian casualties have fluctuated over the measurement period, but show an 18% decrease over the last year, from 39 to 32. Although not all minor injury casualties may be accounted for at this time, the region is still above the RLTS target of fewer than 125 pedestrian casualties per annum, so the RLTS target has not been achieved.

It is important to note that the relative risk of pedestrians being injured remains low nationally and within the region, compared to other transport modes.

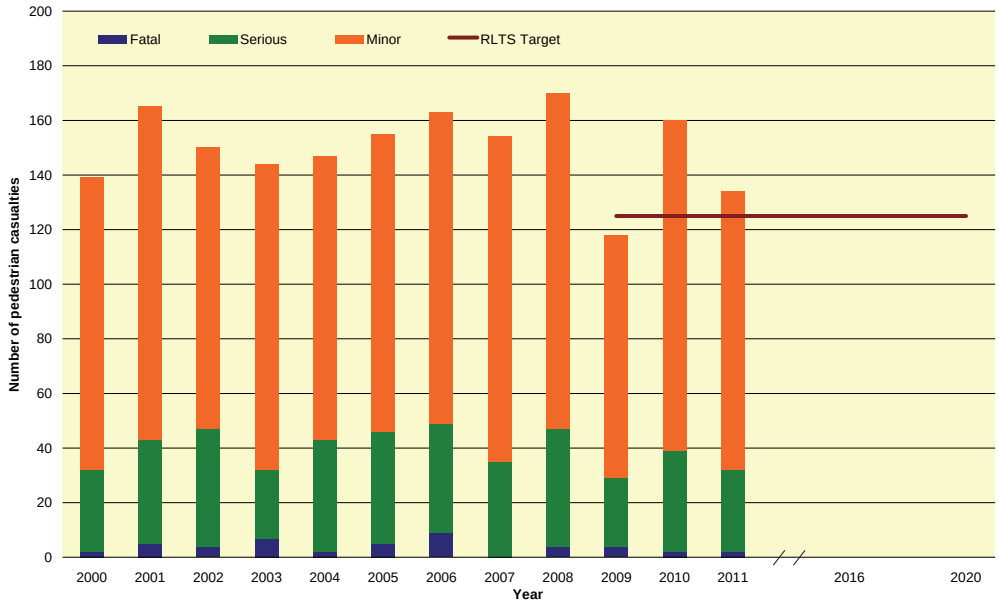

Figure 3.7: Pedestrian casualties by injury severity. Calendar year. Source: CAS

Although progress has been made over the last year, the region remains above the RLTS target of no more than 125 pedestrian casualties per annum.

Target: A reduction in the number of cyclist casualties to no more than 110

Cyclist casualties

The number of cyclist casualties in the region is shown in Figure 3.8. It must be noted here that there has been a problem with the processing of minor crash data, and we are unsure whether all minor injury crash data has been processed and reported in CAS. With this issue in mind it seems appropriate to focus our analysis on only serious and fatal injury casualties.

Fatal and serious injury cyclist casualties gradually increased from 2002 to 2008, then decreased each year from 2008 to 2010. This decreasing trend has not been observed over the last year, with a concerning increase in fatal and serous injury casualties being observed. Over the last year, fatal and serious injury cyclist casualties in the region nearly doubled, going from 16 to 31.

Cyclist safety remains a challenge for the region. Further work to support and promote cyclist safety is required to reduce fatal and serious cyclist casualties in the region.

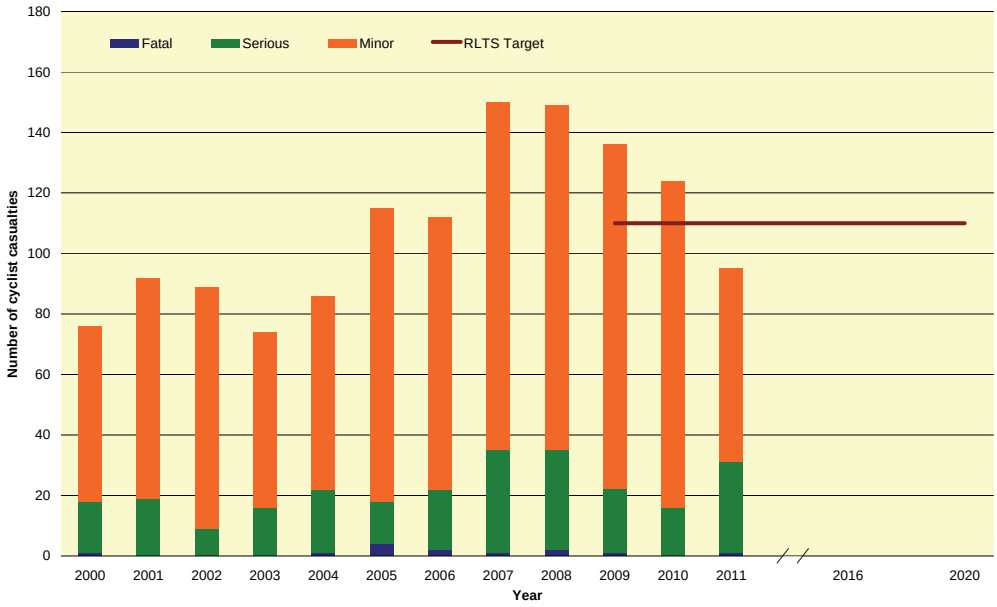

Figure 3.8: Cyclist casualties by injury severity. Calendar year. Source: CAS

It is important to note that cyclist casualties are disproportionately high given the low number of cycle trips in the region (see section 3.1). Also the relative risk of cyclists being injured is high compared to other transport modes.

Related outcome summary

The information currently available for this performance indicator is not sufficiently complete to be able to measure our progress against this related outcome. It is known that the RLTS target relating to pedestrian safety has not been achieved but insufficient data is available to measure our progress against the RLTS target for cycling safety. Even if the large reduction in minor injury cyclist casualties has occurred (as shown in Figure 3.8), the fact that the number of fatal and serous injury cyclist casualties has doubled over the last year must be cause for concern.

Over the last few years there has been a concerted effort by a number of parties, including GWRC, to support and promote pedestrian and cyclist safety. There is still much room for improvement across the region, and a continued focus on pedestrian and cyclist safety will be needed to achieve the RLTS targets for this related outcome.

4. Environmental Outcomes

Introduction

This section discusses progress towards the RLTS outcomes with an environmental focus.

The following key outcome is sought for the region's land transport network:

- **Reduced greenhouse gas emissions**

The performance indicator associated with this key outcome is:

  – Carbon dioxide emissions

The related outcomes and associated performance indicators are:

- **Reduced private car mode share**
  – Mode of journey to work: motor vehicle
- **Reduced fuel consumption**
  – Fuel consumption
- **Increased private vehicle occupancy**
  – Vehicle occupancy

Key outcome

4.1 Reduced greenhouse gas emissions

Target: Transport generated CO_2 emissions will be maintained below year 2001 levels

Carbon dioxide emissions

Carbon dioxide is the most abundant greenhouse gas formed from the combustion of fossil fuels.[12] Figure 4.1 shows the transport generated CO_2 emissions for the region, which have been calculated from fuel consumption information.[13]

In 2012 land transport fuel combustion produced 1,076 kilotonnes of CO_2 in the Wellington region. This is a decrease from 1,086 kilotonnes in 2011.

Carbon dioxide emissions remain slightly above the RLTS target of 1,065 kilotonnes per annum. Since 2008, there has been a general decrease in the emission levels despite a growing population, indicating a reduction in CO_2 emissions per capita. While this is positive, more needs to be done if the RLTS target is to be achieved.

[12] Ministry of Transport (2008). *The New Zealand Transport Strategy 2008*. Ministry of Transport, Wellington, p. 95.
[13] Carbon dioxide emission levels for the region have been calculated from fuel consumption data using production rates from the Ministry of Economic Development greenhouse gas emissions report (2010). The factors are: 2.31 kg/L of CO_2 per litre of petrol and 2.64 kg/L for diesel.

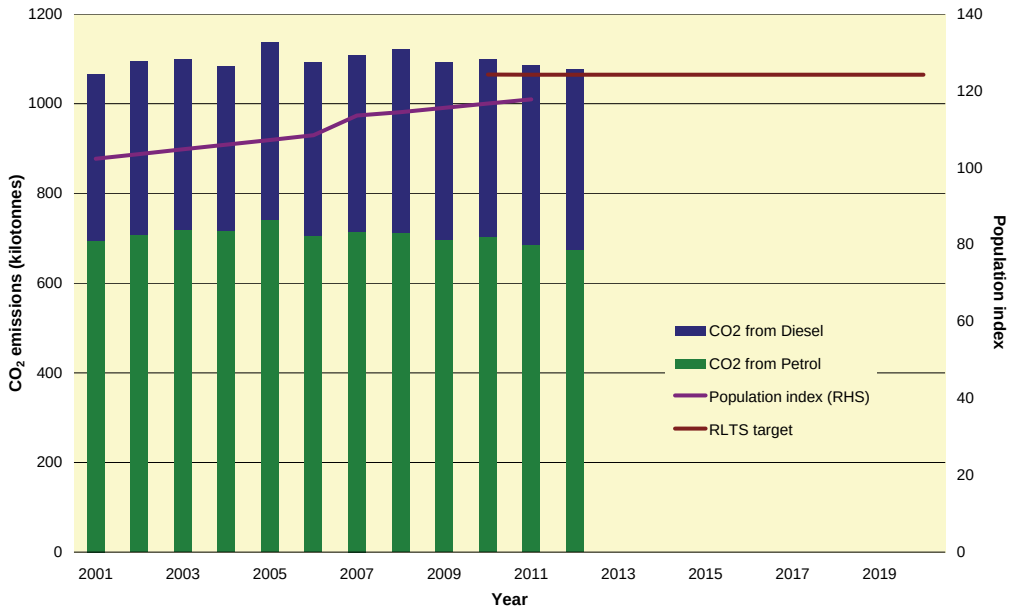

Figure 4.1: Transport generated CO_2 (kilotonnes). Sources: local authorities; Ministry of Economic Development

Key outcome summary

Carbon dioxide comprises the bulk of greenhouse gas emissions from transport, and 18% of New Zealand's total greenhouse gas emissions are from the transport sector.[14] Without intervention, these emissions are predicted to grow by 35% over the next quarter century.[15] A reduction in transport sector emissions will therefore significantly impact overall greenhouse gas levels.[16]

The performance indicator for this key outcome shows that, as a region, our transport-generated CO_2 emissions have decreased slightly over the last few years. It is likely that increased fuel prices, together with increased vehicle fleet efficiency, and the economic recession have assisted in curbing fuel sales, and hence transport-generated CO_2 emissions.

The regions transport generated CO_2 emissions do remain slightly above the RLTS target for this outcome, but it is encouraging that our emissions have decreased slightly despite an increasing population. Although work to reduce transport-generated CO_2 emissions is having an impact, more effort is needed if the RLTS target is to be achieved. As a region, this could include reducing the need to travel, improving the efficiency of the transport network, and promoting the use of active modes and public transport.

Related outcomes

4.2 Reduced private vehicle mode share

Target: Private vehicles account for no more than 61% of region wide journey to work trips

[14] Ministry of Transport (2008). *The New Zealand Transport Strategy 2008*. Ministry of Transport, Wellington, pp. 23.
[15] Ministry for the Environment (2007). *Understanding Climate Change. Get a Grasp of the facts*. Ministry for the Environment, Wellington, p. 7.
[16] Ministry of Economic Development (2007). *New Zealand Energy Strategy to 2050*. Ministry of Economic Development, Wellington, p. 34.

Mode of journey to work: motor vehicle

Data from the 2006 New Zealand census shows that 69% of journey to work trips in the region were by motor vehicle[17] (Figure 4.2). This needs to be reduced if the RLTS target of 61% is to be achieved by 2020.

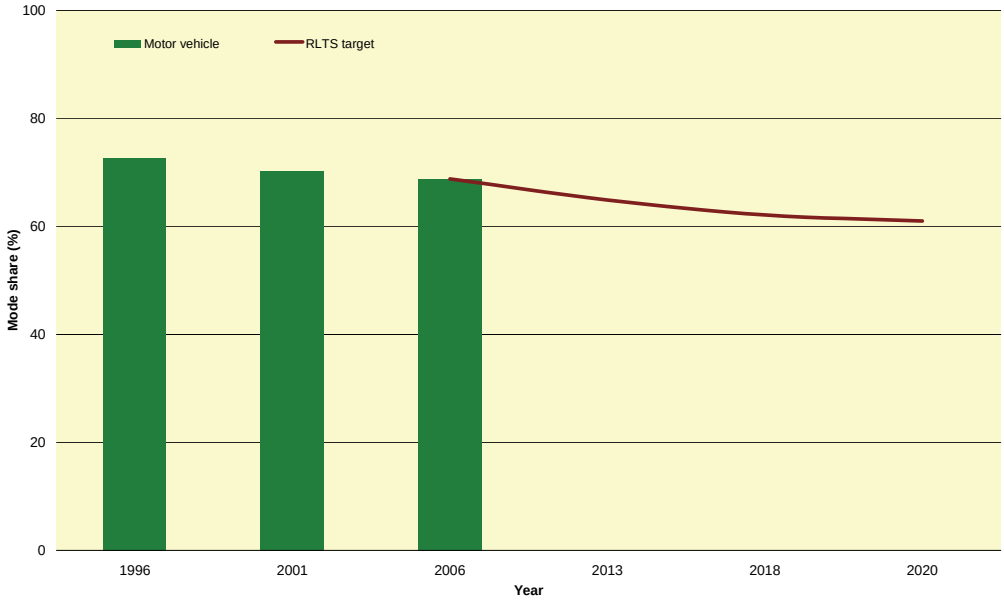

Figure 4.2: Motor vehicle mode share of journey to work trips (%). Source: Statistics New Zealand

Although the motor vehicle mode share of journey to work trips has decreased slightly since the 2001 census, the total number of motor vehicle journey to work trips increased by just over 10,311. This equates to a 9% increase in motor vehicle trips to work.

Mode share of journey to work trips by motor vehicle differs across the region (Figure 4.3). Wellington CBD and Wellington City have the lowest motor vehicle mode share at 20% and 56% respectively, and both areas have seen a steady decline in motor vehicle mode share since the 1996 census. The decline in motor vehicle mode share in Wellington City, including Wellington CBD, accounts for the observed decrease in motor vehicle mode share across the region, as all other territorial authority areas have seen little change in motor vehicle mode share across the three census cycles. To reduce motor vehicle use for journey to work trips in these territorial authority areas improved provision and encouragement to use other forms of transport must continue.

[17] Motor vehicle includes: drove a private car, truck or van; drove a company car, truck or van; passenger in a car, truck or van; and motorcycle or powercycle.

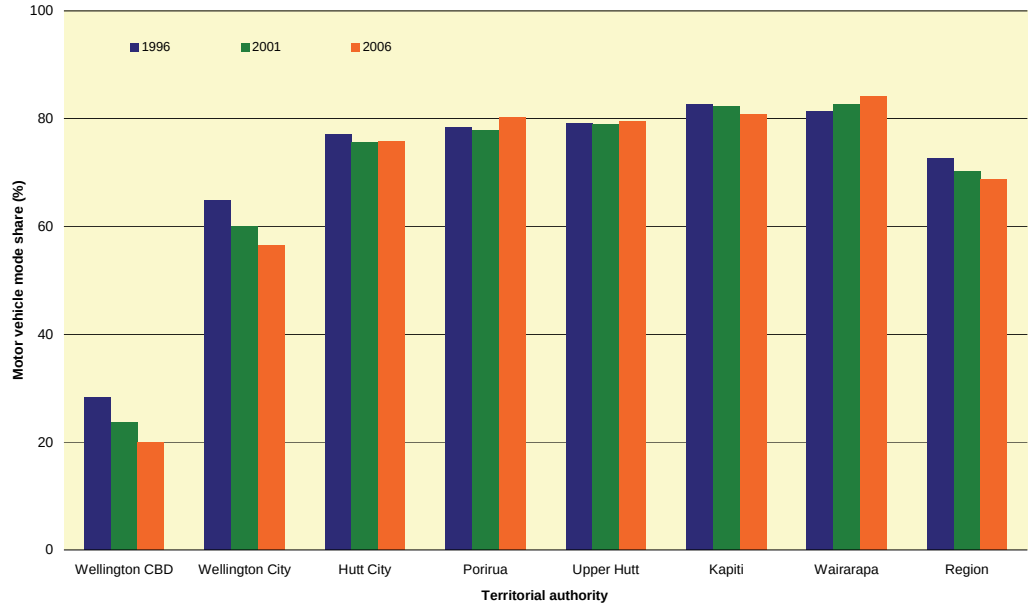

Figure 4.3: Motor vehicle mode share of journey to work trips by territorial authority and Wellington CBD (%). Source: Statistics New Zealand

Related outcome summary

Census data has shown that motor vehicle mode share of journey to work trips has decreased over the last three census periods, although the total number of motor vehicle journey to work trips has increased over this time. As of 2006, the motor vehicle mode share was 69%, eight percentage points above the 2020 RLTS target.

The next census data release will not be until the 2013/14 financial year so it is not possible to tell whether the region has made any further progress towards the RLTS target since 2006. Although a different methodology, the Ministry of Transport uses results from its Household Travel Survey to work out mode share of journeys to work (for full-time workers aged 16+, journeys starting between 6am and 9.30am). The 2007-11 survey found that 66% of journeys to work in the Wellington region used motor vehicles.[18] This has decreased from 72% in the 2003-07 survey. If a similar percentage point decrease is assumed with the census data in Figure 4.2 it would mean that motor vehicle mode share of journey to work would be around 63%, which suggests progress has been made towards the 2020 RLTS target for this related outcome.

4.3 Reduced fuel consumption

Target: Petrol and diesel used for transport purposes per annum will remain below year 2001 levels

Fuel consumption

The quantity of petrol and diesel sold in the Wellington region provides a measure of fuel use in the region. Although some non-retail sales occur, and

[18] Motor vehicle trips are counted as those in the categories: drive; drive + walk; passenger; and passenger +walk.

some fuel is purchased outside the region but used in it (and vice versa), this is the best measure of total regional fuel consumption currently available.

In 2012, total regional fuel sales decreased to 444 mega litres, down from 448 mega litres in 2011 (Figure 4.4). Over the last year diesel sales have increased by 1%, however petrol sales decreased by 2% resulting in the observed overall decrease in fuel sales. Despite a gradual reduction in petrol sales over the last few years, petrol sales continue to account for the majority of fuel sales in the Wellington region, comprising 66% of all fuel sales in 2011/12.

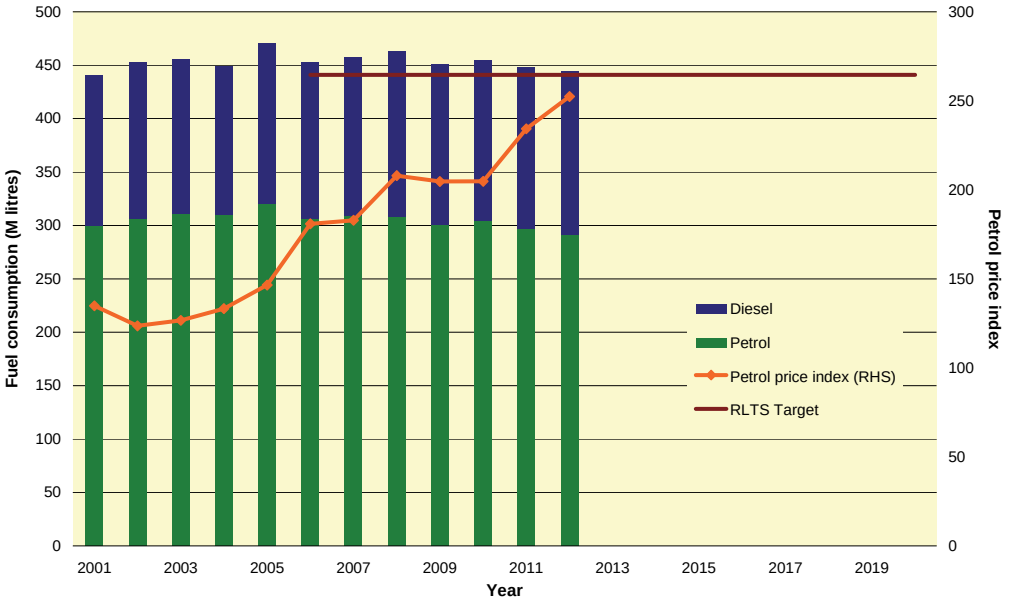

Figure 4.4: Fuel (diesel and petrol) consumption (Mega litres). Source: local authorities

Since 2001, the Wellington region's population has increased by around 15%, but fuel sales are currently less than one percent higher than they were in 2001, indicating that fuel use per capita has decreased. The increase in fuel price over this time is likely to be one of the reasons why fuel sales growth is lower than population growth.

There are a number of measures that are outlined in the Regional Travel Demand Management Plan (2009) to reduce fuel use that may have also contributed to the lower growth in fuel sales. To bring about long lasting behaviour change and to achieve the RLTS target continued effort is needed.

Related outcome summary

The performance indicator shows that fuel sales are slightly above the RLTS target for this related outcome, but progress has been made over the last few years. However, it is encouraging that fuel sales remain just under one percent higher than they were in 2001, despite an increase in the region's population of around 15% since this time.

It is likely that increased fuel prices have assisted in curbing fuel sales together with increased vehicle fleet fuel efficiency, and the current economic recession. If the RLTS target is to be achieved, continued effort is needed. The key tools for influencing this target at a regional level include promotion of good public

transport, walking and cycling networks, efficient land use and transport network and travel behaviour change programmes that reduce dependency on vehicle use and thus impact fuel use.

4.4 Increased private vehicle occupancy

Target: Vehicles entering the Wellington CBD during the 2 hour AM peak contain on average at least 1.5 people per vehicle

Vehicle occupancy

Figure 4.5 shows the average occupancy of vehicles entering the Wellington CBD. Only traffic heading into the city is counted during the two-hour morning commuter peak, and buses are not included.

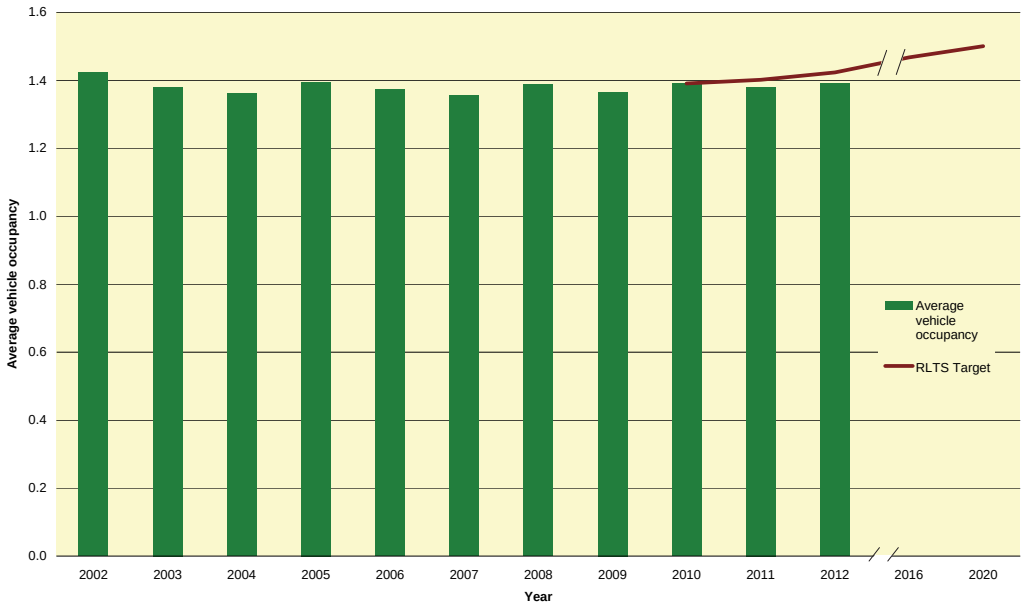

Figure 4.5: Wellington CBD cordon inbound vehicle occupancy, weekday AM two-hour peak, March. Source: Wellington City Council

In 2012, the average vehicle occupancy of vehicles entering the Wellington CBD was 1.39 persons. There has been little change in average vehicle occupancy over the last few years. A decade ago it appeared that there was a gradual decrease in vehicle occupancy but vehicle occupancy has plateaued since this time. To achieve the RLTS target by 2020, more progress towards increasing vehicle occupancy is needed by encouraging carpooling or ridesharing.

Related outcome summary

Data available on the average vehicle occupancy entering the Wellington CBD during the AM peak shows that much more effort is needed to increase vehicle occupancy if the RLTS target is to be achieved by 2020.

Vehicle occupancy is currently at 1.39 people per vehicle and has seen little change over recent years. Work in the region to encourage carpooling[19] has shown some encouraging results over the last couple of years, however to get the larger shifts required to meet the RLTS target by 2020, it is likely that deterrents for driving a single occupancy vehicle may also be required.

[19] See www.letscarpool.govt.nz

5. Road Network Efficiency Outcomes

Introduction

This section discusses progress towards the RLTS road network efficiency outcomes.

The following key outcome for road network efficiency is sought for the region's land transport network:

- **Reduced severe road congestion**

The performance indicator associated with this key outcome is:

  – Carbon dioxide emissions

Related outcomes and associated performance indicators for road network efficiency are:

- **Maintained vehicle travel times between communities and regional destinations**

  – Key route travel speed by road

- **Improved reliability of the strategic roading network**

  – Total incident hours

Key outcome

5.1 Reduced severe road congestion

Target: Average congestion on selected roads will remain below year 2003 levels despite traffic growth

Average road congestion

Travel time performance is monitored by the NZTA in March and November of each year on the following Wellington region strategic routes:

- Route 1: Waikanae – Wellington airport
- Route 2: Upper Hutt – Wellington Railway Station
- Route 3: Porirua – Seaview (via SH58)
- Route 4: Karori – Island Bay.

These routes can be seen on the map in Figure 5.1. This information yields a measure of congestion (time delay per kilometre travelled) for the morning peak period (AM), interpeak period (IP) and afternoon peak period (PM). These are then used to calculate an all day average. Data is susceptible to day-to-day variations in network performance caused by incidents such as crashes, breakdowns and road works.

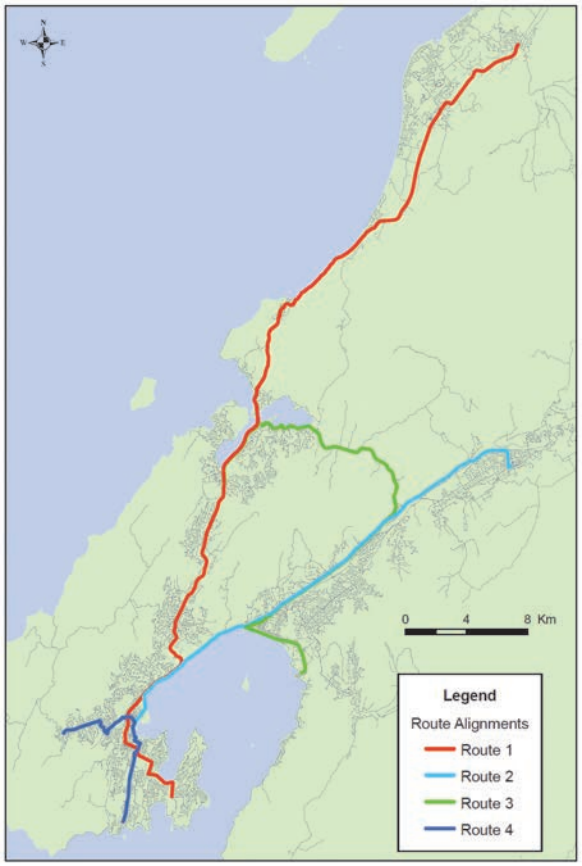

Figure 5.1: Greater Wellington region travel time performance monitoring network. Source: NZTA

Information from NZTA's March travel time surveys are used to determine the all day average congestion on a selection of the region's strategic road network (Figure 5.2). In 2012, the all day average congestion was 22.2 seconds delay per km travelled. This is relatively unchanged from 2011, where the all day average congestion was 21.6 seconds delay per km travelled.

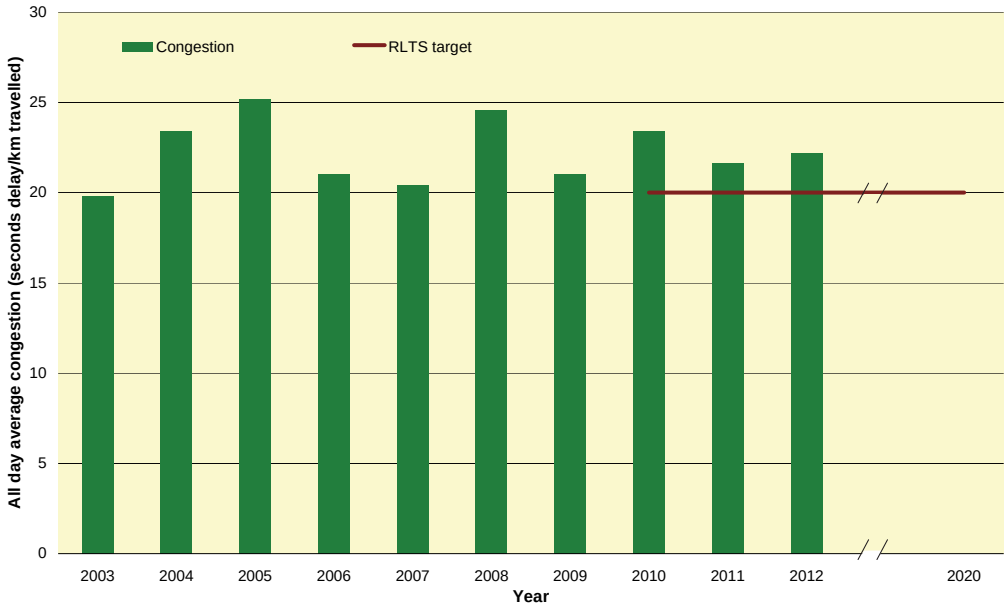

Figure 5.2: All day average congestion (seconds delay/km travelled), March. Source: NZTA

Figure 5.3 shows the average congestion results for three different periods of the day. In general, over the last few years congestion has decreased during the AM and PM peak periods, with little change during the interpeak.

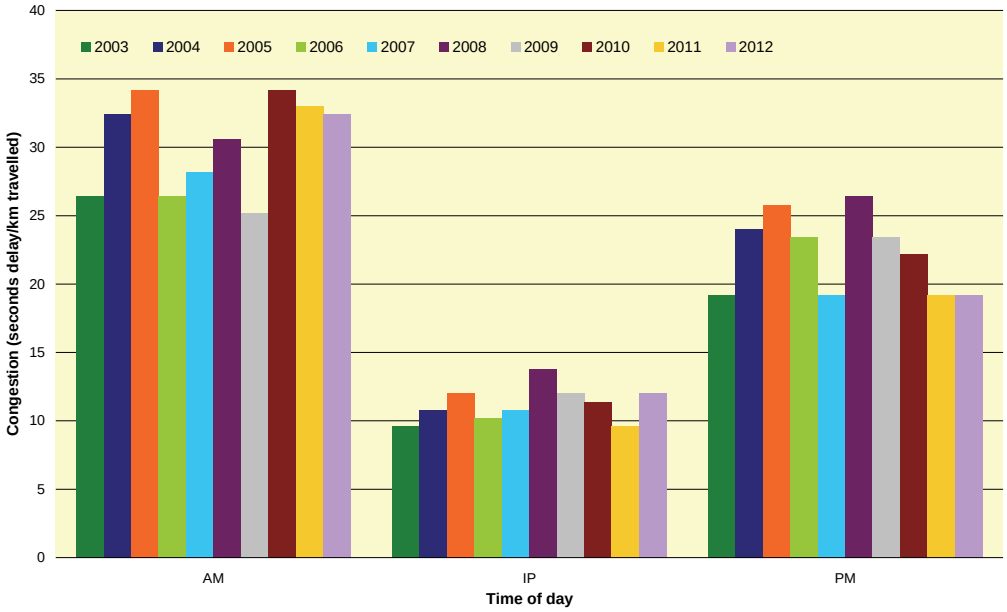

Figure 5.3: Average congestion (seconds delay/km travelled) by the time of day, March. Source: NZTA

Over the last year, morning peak period congestion decreased from 33.0 to 32.4 seconds delay per km travelled. Afternoon peak congestion remained unchanged at 19.2 seconds delay per km travelled and interpeak congestion increased from 9.6 to 12.0 seconds delay per km travelled.

The all day average congestion level remains above the RLTS target. Although the AM peak congestion rate has gradually decreased over the last few years, it still remains 10 seconds higher than it was in 2003. The high congestion rate during the AM peak means that the congestion rate currently exceeds the RLTS target by 2.0 seconds.

Key outcome summary

In the Wellington region, congestion is higher in the morning peak than the afternoon peak, which in turn is higher than the interpeak period. Road congestion during the afternoon peak has not worsened since 2008, with 2012 congestion levels at the same level as observed in 2003. Although the interpeak congestion rate increased over the last year, it has fluctuated around 10 seconds delay per km travelled since measurements began. While it is encouraging that the morning peak congestion rate has decreased gradually over the last few years it remains over 10 seconds higher than the 2003 congestion level.

Over the last year there has been little change in the all day average congestion rate, meaning congestion rates continue to remain above the RLTS target of 20.0 seconds delay per km travelled. If the target is to be achieved, the level of demand on the transport network and day-to-day variations in network performance need to reduce, especially during the morning peak.

Related outcomes

5.2 Maintained vehicle travel times between communities and regional destinations

Target: Average vehicle journey 'speeds' shown in travel time surveys for selected key routes will remain at or above year 2003 levels

Key route travel speed by road

Information from the NZTA's March travel time surveys are used to calculate the average vehicle speed for the road network. This is calculated by dividing the surveyed actual travel time by the length of the road network. Figure 5.4 shows the all day average vehicle speed on a selection of the region's strategic road network. In 2012, the all day average vehicle speed on the region's roads was 53km/h. This is unchanged from 2011 and below the RLTS target of 55km/h.

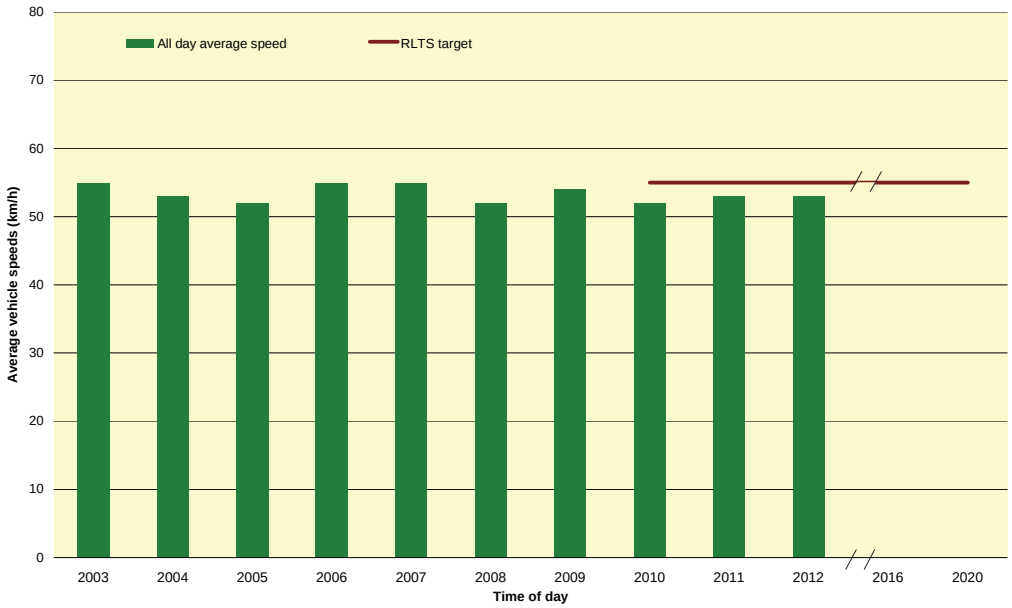

Figure 5.4: Road network all day average vehicle speeds (km/h), March. Source: NZTA

Figure 5.5 shows the all day average vehicle travel speed across three different periods of the day. Travel speeds are consistently slowest during the AM peak and fastest during the interpeak. Although travel speeds are slowest during the AM peak they have remained unchanged over the last few years whereas travel speeds during the interpeak period have declined over the last year. In 2012, the average PM peak travel speed was 54km/h and has shown a very gradual increasing trend since 2008.

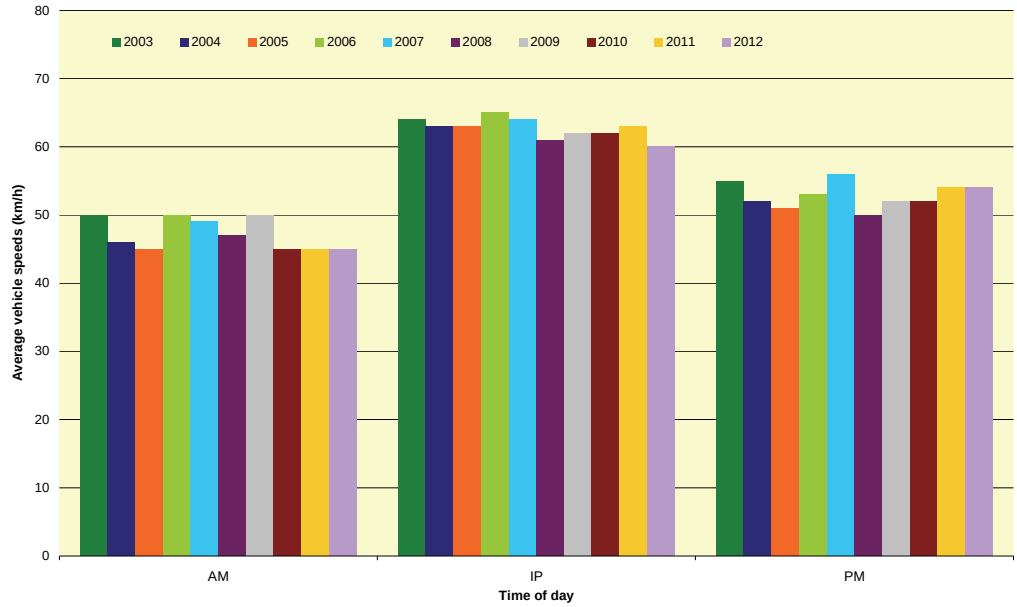

Figure 5.5: Road network average vehicle speeds (km/h) by the time of day, March. Source: NZTA

Related outcome summary

Assuming traffic volumes remain unchanged, increases in travel speed should lead to a general reduction in travel time on the region's roads and reflect an improved overall level of service on the road network. The all day average travel speed has remained unchanged over the last year at 53km/h. This is below the RLTS target of at or above 2003 levels (55km/h).

Average travel times at each period of the day also sit below the RLTS target of at or above 2003 levels. Morning peak travel speeds have been maintained over the last few years but they remain 5km/h lower than 2003 levels. It is encouraging to see a very gradual increase in afternoon peak travel speeds since 2008 and travel speeds are now just 1km/h below 2003 levels. Travel speeds are consistently fastest during the interpeak, but over the last year travel speeds have decreased and have fallen 4km/h below 2003 levels.

5.3 Improved reliability of the strategic roading network

Target: Continual reduction in total incident hours

Total incident hours

Data from the Communications and Resource Deployment (CARD) system showed that, in 2011, Police were in attendance at road traffic incidents[20] in the Wellington Police District for 3,127 hours (Figure 5.6). This is a reduction of 296 hours over the previous year.

Police attendance hours at road traffic incidents have decreased each year since our first measurement in 2006. This continual reduction in Police incident hours means that the RLTS target is currently being met.

[20] Road traffic incidents include: breakdowns, blockages and vehicle collisions.

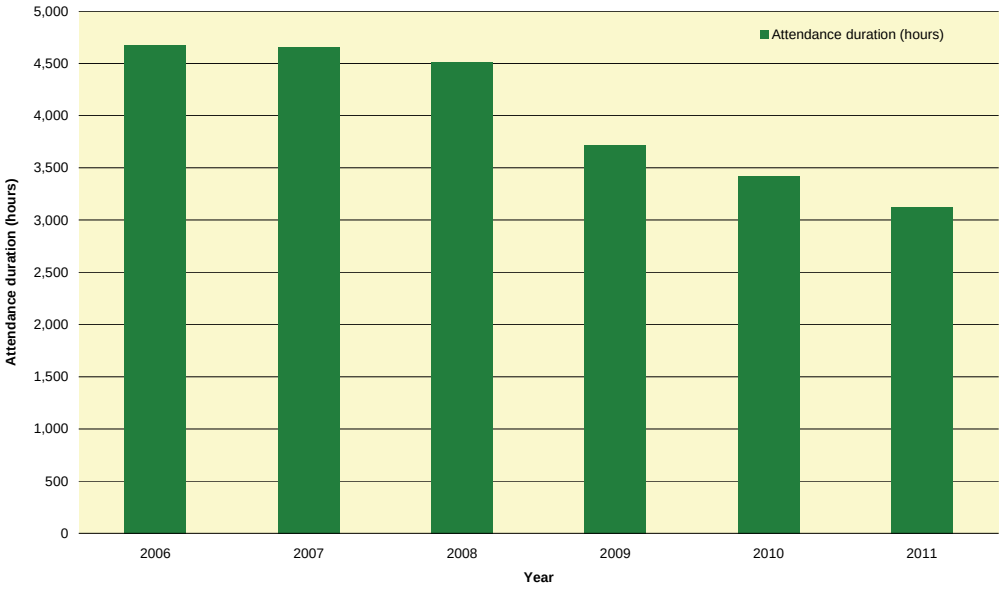

Figure 5.6: Police attendance time at road traffic incidents across the region. Calendar year. Source: Police

Related outcome summary

Police attendance time at traffic incidents has decreased each year since 2006. Attendance time in 2011 was 3,127 hours which is a 33% reduction from 4,680 hours in 2006. This continual reduction in Police incident hours is encouraging and means the RLTS target is currently being met. However, this downward trend needs to be maintained to achieve the RLTS target by 2020.

6. Road Safety Outcomes

Introduction

This section discusses progress towards the RLTS road safety outcomes.

The following key outcome for road safety is sought for the region's land transport network:

- **Improved regional road safety**

The performance indicators associated with this key outcome are:

  – Road crash fatalities

  – Killed and seriously injured

There are no related outcomes for road safety.

Key outcome

6.1 Improved regional road safety

Target: There are no road crash fatalities attributable to roading network deficiencies

Road crash fatalities

The total number of regional road crash fatalities[21] and the number of fatalities attributable to road factors[22] as reported by the Police to NZTA via the Crash Analysis System (CAS)[23] is shown in Table 6.1. In 2011, no road crash fatalities were attributable to road factors. The last time that a road crash fatality in the region was attributable to road factors was in 2004.

Year	Total fatalities	Fatalities attributable to road factors
2002	23	1
2003	34	0
2004	32	1
2005	20	0
2006	32	0
2007	15	0
2008	22	0
2009	20	0
2010	10	0
2011	13	0

Table 6.1: Total fatalities and fatalities attributable to road factors. Calendar year. Source: CAS

[21] Injuries that result in death within 30 days of a crash.

[22] To be able to monitor our performance against the RLTS target, we have taken the road factor category reported in the Crash Analysis System to be a proxy measure for road network deficiencies. Road factors include the categories: slippery, surface, obstructed, visibility limited, signs and signals, markings, street lighting and raised islands and roundabouts.

[23] The severity of a crash is determined as the most severely injured casualty in the crash.

Target: Continuous reduction in the number of killed and seriously injured on the region's roads

Killed and seriously injured

Figure 6.1 shows the number of fatal[24] and serious[25] injury casualties for all vehicle types in the Wellington region as reported by the Police to NZTA via CAS.

In 2011 there were 13 fatal and 173 reported serious injury casualties. From 2000 to 2011, the number of fatal casualties has decreased by 59%, from 32 to 13. Over the same period the number of reported serious injury casualties has increased slightly from 150 in 2000 to 173 in 2011. However, just looking at the difference between 2000 and 2011 hides the changes observed over this period. From 2000 to 2007 the number of killed and seriously injured steadily increased but since this time they have decreased to the level observed in 2011.

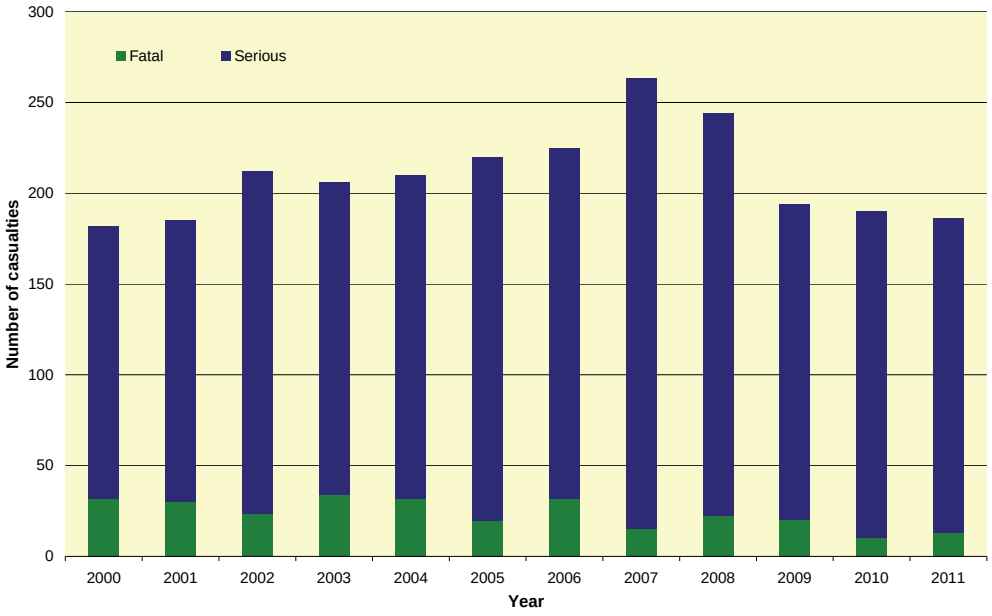

Figure 6.1: Total fatal and serious injury casualties, Calendar year. Sources: CAS; NZTA

While the results over the last few years appear encouraging it has to be kept in mind that not all crashes causing serious injuries are reported by the Police and thus will not be recorded in CAS. Hospital data can also provide a picture of the number of fatal and serious injury casualties.[26] Figure 6.2 shows all fatalities in the region and hospitalisations that required more than one days stay, where the reason for the fatality or hospital admission was recorded as 'motor vehicle accident'.

According to hospital data, in 2011 there were 13 fatalities and 172 hospitalisations >1day across the region, resulting from motor vehicle

[24] Fatal = injuries that result in death within 30 days of a crash.
[25] Serious = 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.
[26] To account for the possible under-reporting of serious injury casualties, previous years analyses adjusted the serious injury casualties by a crash reporting rate. This analysis has now been replaced by hospitalisation data.

accidents. These figures are in very close agreement with the information obtained through CAS for 2011.

Over the last year there has been a slight increase in the combined fatalities and hospitalisations >1 day from motor vehicle accidents, but they are 11% lower than observed in 2000. However, once again comparing 2011 to 2000 alone hides the changes observed over this time. With fatalities and hospitalisations >1day remaining relatively unchanged from 2000 to 2003, then steadily increasing from 2004 to 2008. A decrease was observed from 2008 to 2009 and fatalities and hospitalisations >1day have remained relatively unchanged since this time.

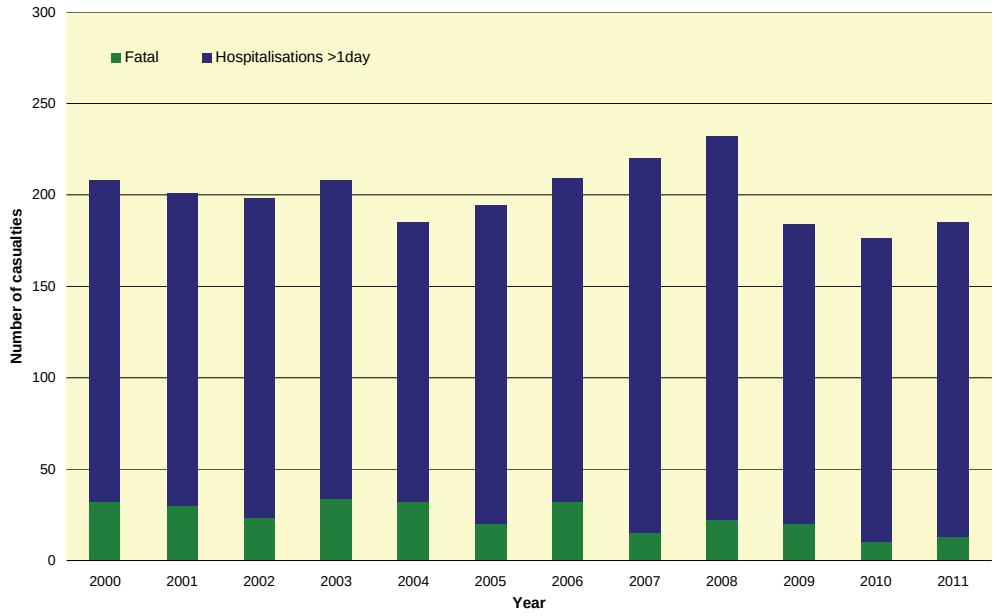

Figure 6.2: Deaths plus hospitalisations of more than one day resulting from motor vehicle accidents. Calendar year. Source: NZTA

The observed trend for fatalities and hospitalisations >1day (Figure 6.2) is similar to that seen for fatalities and serious injury casualties recorded by the police in CAS (Figure 6.1). Although hospitalisation data shows a slight increase in casualty numbers over the last year, whereas CAS data shows a slight decrease.

Reducing road crash fatalities and injuries is a priority for the region. Fatalities and serious injury casualties (or hospitalisations >1day) have decreased slightly over the last few years. This is all the more encouraging as both car ownership and car usage within the region have increased over this time. A continued focus in this area will be needed to maintain and continue the current downward trend.

Key outcome summary

The performance indicators for this key outcome show that the regions road crash fatalities, which are rarely attributable to road network deficiencies, have decreased since 2000. Serious injury casualties which increased steadily earlier in the decade are now also seeing some encouraging results.

The RLTS target of no road crash fatalities attributable to roading network deficiencies has been met over the last year. Police data shows that the other RLTS target of a continual reduction in the number of killed and seriously injured on the regions roads has also been met over the last year. While progress has been made towards the key outcome of improving regional road safety, fatalities and casualties are still occurring on the regions roads and therefore remain an issue for the region. If road safety is to be significantly improved, more intervention, as outlined in the governments Safer Journeys Road Safety Strategy,[27] and cross-agency effort is required.

[27] Ministry of Transport (2010). *Safer Journeys: New Zealand's Road Safety Strategy 2010-2020*. Ministry of Transport, Wellington.

7. Land Use and Transport Integration Outcomes

Introduction

This section discusses progress towards the RLTS land use and transport integration outcomes.

The following key outcome for land use and transport integration is sought for the region's land transport network:

- **Improved land use and transport integration (in line with the WRS and local authority urban development strategies)**

Currently there are no specific performance indicators that provide adequate information to measure progress towards this key outcome and its related target.

There are two related outcomes for land use and transport integration. These are shown below, along with the associated performance indicators:

- **Improved integration between transport modes**
  - Public transport services with integrated ticketing
  - Cycle storage and park 'n' ride facilities
- **Sustainable economic development supported (in line with the WRS)**
  - State highway vehicle kilometres travelled per GDP

Key outcome

7.1 Improved land use and transport integration (in line with the WRS and local authority urban development strategies)

Target: All new subdivisions and developments include provision for walking, cycling and public transport, as appropriate

There are no specific performance indicators that provide adequate information to measure progress towards this key outcome and its related target. However, a review[28] of territorial authority procedures identified that there was some consideration of active modes and public transport in all district plan policies.

Related outcomes

7.2 Improved integration between transport modes

Target: The majority of public transport services are covered by integrated ticketing

[28] Greater Wellington Regional Council. (2008). *Land use & Transport integration: Assessment report*, p16.

Public transport services with integrated ticketing

An integrated, electronic ticketing system across public transport modes and operators is increasingly regarded as a fundamental component of a modern and flexible public transport network, and therefore continues to be sought by the RLTS.

Currently, no overall system of fares or ticketing integration is operational in the Wellington region. Some manually based integrated ticketing arrangements exist with the region, for example the 'Hutt Plus' bus/rail transfer tickets. Two major bus operators provide proprietary contactless payment card solutions, which are not interoperable, and rail ticketing is entirely manually-based.

The region is actively contributing to the development of national standards for integrated ticketing (NITIS – National Integrated Ticketing Interoperability Standard). These underpin the National Ticketing Approach, which is initially being applied in Auckland.

The national standards and progress in Auckland will strongly influence funding conditions and development options for integrated electronic ticketing in Wellington.

Target: Continued improvement in walking, cycle and park 'n' ride facilities at and around public transport interchanges

Cycle storage and park 'n' ride facilities

In 2012 there were a total of 5,201 park 'n' ride carparks and 286 cycle storage spaces available to commuters at railway stations across the region.[29] Park 'n' ride carparks and cycle storage spaces at railway stations have increased steadily over the last few years. Since 2009, park 'n' ride carparks have increased by around 10% and cycle spaces have more than doubled going from 132 to 286 spaces.

The increase in park 'n' ride facilities was mainly due to extensions at Waikanae, Paramata and Petone stations, whereas cycle facilities have increased at most stations across the region.

Related outcome summary

As many journeys are multi-modal, a good level of integration between different transport modes is sought by the RLTS. The current indicators show that some progress has been made toward the RLTS outcome of improved integration between transport modes. There are increasing numbers of park 'n' ride carparks and cycle storage spaces available at railway stations. However, no data is currently available relating to walking facilities or facilities around other public transport interchanges.

There has been little progress made toward the RLTS target of the majority of public transport services are covered by integrated ticketing. The main reason

[29] Note that no data is currently available relating to walking facilities or facilities at bus interchanges.

for this is that national standards for integrated ticketing and its operation are still being developed.

7.3 Sustainable economic development supported (in line with the WRS)

Target: Continual reduction in vehicle kilometres travelled per GDP

State highway vehicle kilometres travelled per GDP

Figure 7.1 shows the ratio of vehicle kilometres travelled (VKT) on the state highway network per GDP (Gross Domestic Product) for the region. State highway VKT per GDP decreased each year from 2005 to 2007, increased from 2007 to 2008, and has remained relatively unchanged since this time. This result means that the RLTS target has not been met.

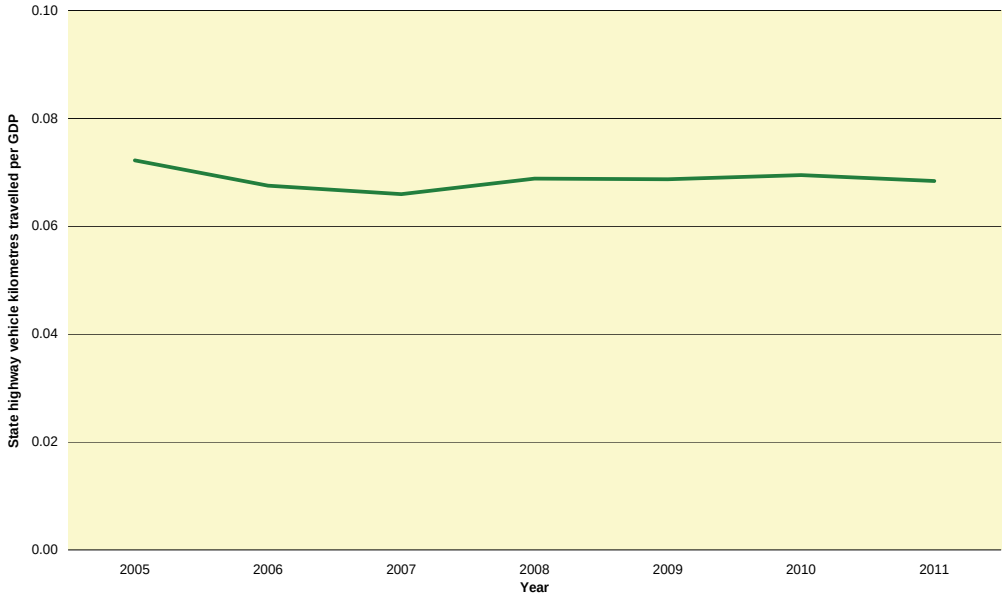

Figure 7.1: State highway VKT per GDP. Source: NZTA and BERL

Gross Domestic Product is an indicator of economic growth; therefore the relationship between economic growth and transport activity can be studied by comparing trends in both the regions real GDP and VKT. Both state highway VKT and GDP have fluctuated over the measurement period, but state highway VKT is similar to 2005 levels, and GDP is currently 6% higher.

Related outcome summary

The performance indictor for this related outcome shows that up until this year progress had been made toward the RLTS target. Over the last year an increase in state highway VKT per GDP has been observed due to both an increase in state highway VKT and a decrease in GDP. This means there is more traffic on the region's state highway network for each unit of GDP.

8. Freight Outcomes

Introduction

This section discusses progress towards the RLTS freight outcomes.

The following key outcome for freight is sought for the region's land transport network:

- **Improved regional freight efficiency**

The performance indicator associated with this key outcome is:

  – Journey times for road freight between key destinations

The related outcome and associated performance indicator for freight is:

- **Improved inter-regional freight efficiency**

  – Removal of rail freight infrastructure constraints

Key outcome

8.1 Improved regional freight efficiency

Target: Improved road journey times for freight traffic between key destinations

Journey times for road freight between key destinations

NZTA travel time survey data was used to create route travel times by combining sections of the regional routes described in Chapter 5 (Reduced severe road congestion). Representative routes for heavy goods movement are shown in Figure 8.1 and include:

- Route 1: Seaview - Porirua via SH58
- Route 2: Seaview - Porirua via SH1 and SH2
- Route 3: Seaview – CentrePort

These routes represent typical road freight movements across the region.

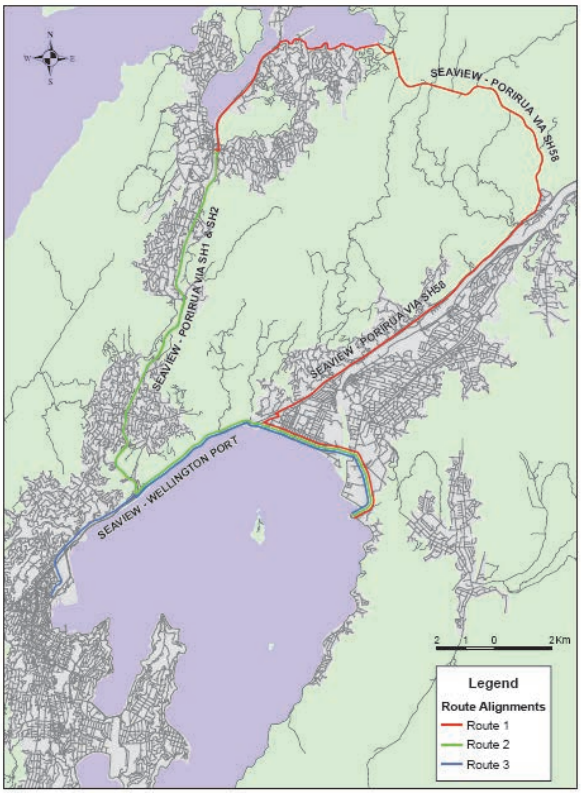

Figure 8.1: Representative regional road freight routes. Sources: NZTA; GWRC

Figures 8.2 to 8.4 show the all day average travel time in minutes for routes 1 to 3 respectively. In 2012 the all day average time taken to travel between Porirua and Seaview (eastbound) via State Highway 58 was 35.54 minutes. In general the all day average time for this route has decreased over time, although the travel time has increased slightly over the last year. Travel time is still highest during the AM peak, but a slight decrease in travel time has been observed over the last year, whereas an increase in travel time was observed during the interpeak and PM peak. It is the increase in travel time during the PM peak that accounts for the majority of the increase observed in all day average travel time.

All day average travel time on the westbound route, between Porirua and Seaview via State Highway 58, gradually increased until 2010. The all day average travel time then decreased from 35.34 minutes in 2010 to 32.59 minutes in 2011, and there has been little change over the last year (32.85 minutes in 2012). Even though there has been little change in the all day average travel time on the westbound route over the last year, the travel time during the interpeak and PM peak decreased slightly, but the travel time during the AM peak increased.

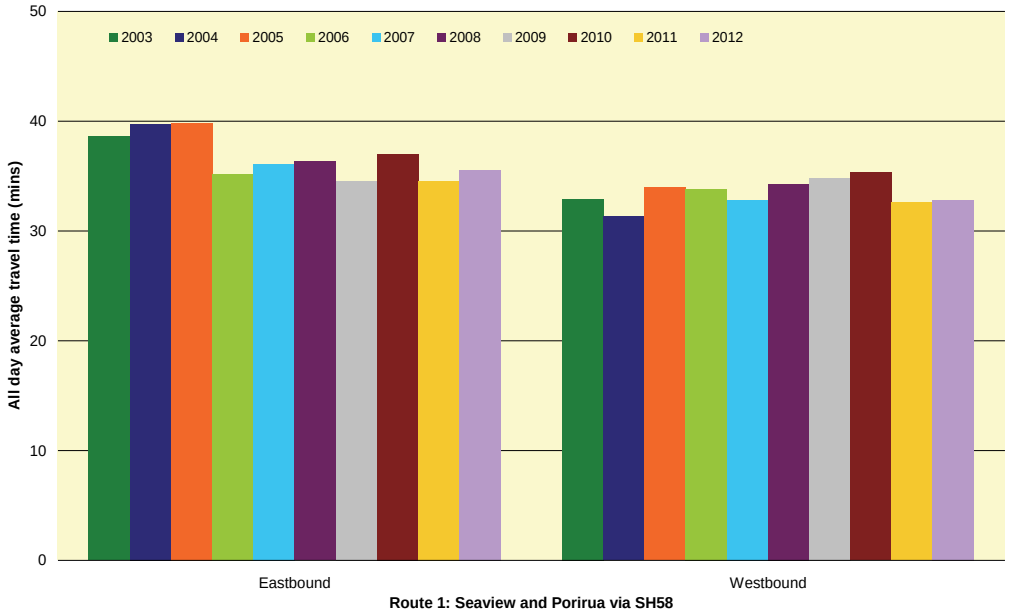

Figure 8.2: All day average travel time (mins) on road freight route 1, March. Sources: NZTA; GWRC

Travel between the same locations (Seaview and Porirua) via State Highways 1 and 2 have consistently had a lower all day average travel time than travel via State Highway 58, which is not surprising considering the shorter distance. However, over time there has been a gradual increase in all day travel time in the eastbound and westbound directions for this route. In general, it is the increase in travel time during the AM peak that has bought about the increase in all day average travel time.

The difference in eastbound and westbound travel time between route 1 and route 2 has decreased over time. For example, eastbound travel via State Highway 58 was around 17 minutes slower than travel via State Highways 1 and 2 in 2003, but in 2012 this had decreased to around 11 minutes. In comparison, the decrease in the westbound direction is much smaller from just over 14 minutes in 2003 to just under 13 minutes in 2012.

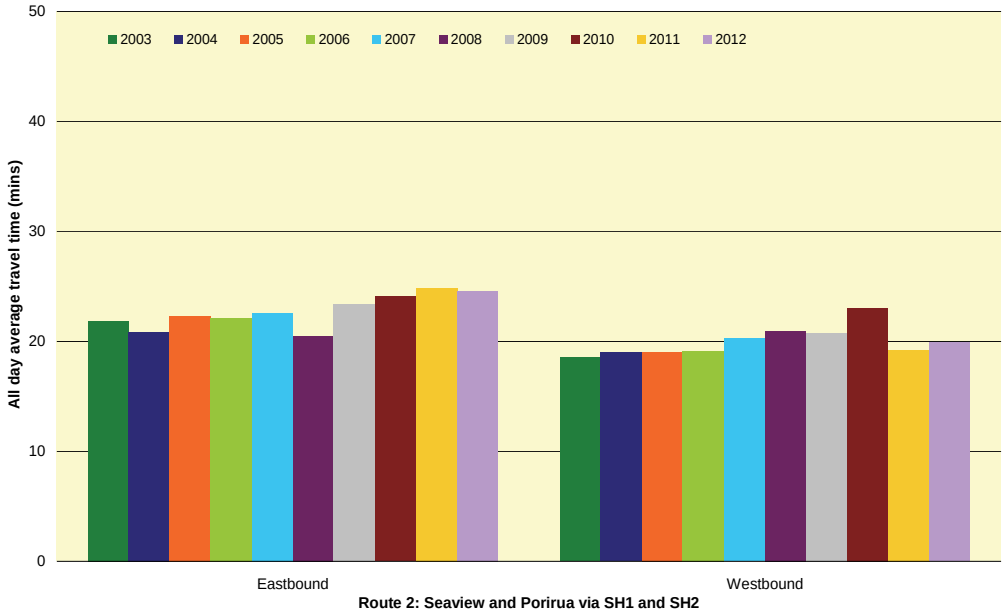

Figure 8.3: All day average travel time (mins) on road freight route 2, March. Sources: NZTA; GWRC

The all day average travel time between Seaview and CentrePort was just under 18 minutes in the eastbound direction and just under 19 minutes in the westbound direction in 2012. There has been a gradual increase in all day travel time both eastbound and westbound since the surveys began in 2003, but travel times have remained relatively static over the last few years (other than a spike in the westbound direction in 2010).

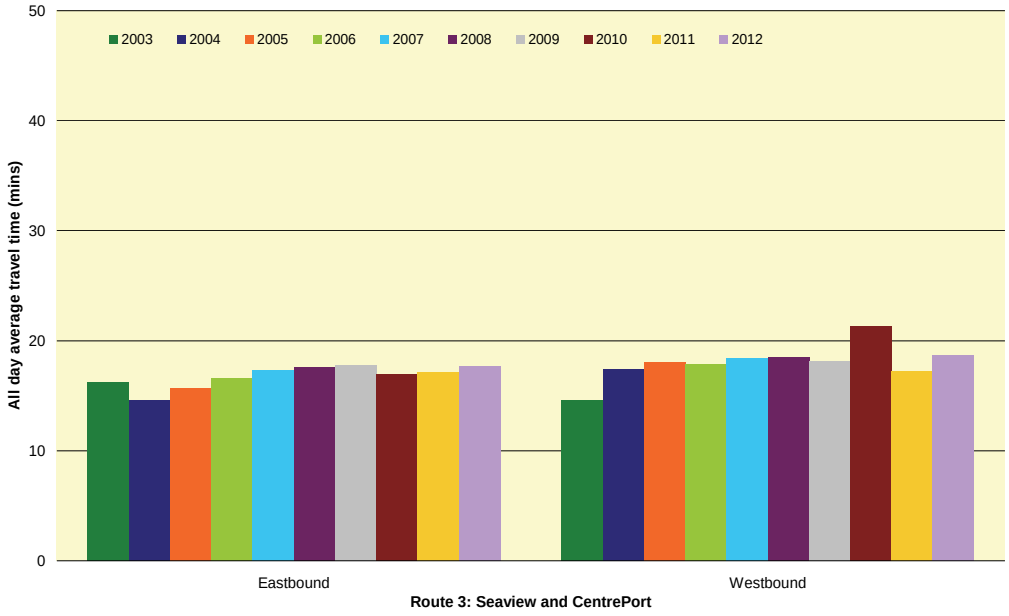

Figure 8.4: All day average travel time (mins) on road freight route 3, March. Sources:NZTA; GWRC

Key outcome summary

As heavy vehicle traffic is closely related to economic activity, it is important that freight can be efficiently moved between key destinations in the region. In general the all day average travel time in the eastbound direction on the Seaview and Porirua via SH58 freight route has decreased over time, although

it increased slightly over the last year. In the westbound direction the all day average travel times are similar now to what they were when measurements begun in 2003.

In general the all day average travel times on the other two freight routes have increased over time. These increases tend to be due to large increases in travel times during the AM peak, whereas the PM peak and interpeak travel times have either decreased or remained relatively unchanged.

The overall increases in travel times on two of the three key freight routes across the region suggests that the all day average efficiency of freight movement across the region has decreased over time. This means that little progress has been made towards the RLTS key outcome and stretch target.

A limitation of the current indicators is that they do not show what time of day freight traffic tends to move around the region. If freight traffic is increasingly avoiding travel during the AM peak, then it is possible that more progress towards this RLTS outcome would have been achieved.

Related outcome

8.2 Improved inter-regional freight efficiency

Target: Infrastructure constraints to rail freight movements are removed

Removal of rail freight infrastructure constraints

KiwiRail highlighted three key areas where infrastructure constraints limited the movement of rail freight through the region. These areas were:

- Kaiwharawhara throat
- North-South junction[30]
- Paekakariki to Waikanae

All three areas of infrastructure constraint have now been addressed by KiwiRail. The work at Kaiwharawhara throat has addressed merging and capacity issues, and the work carried out at North-South junction[31] and between Paekakariki to Waikanae has been to reduce delays and the conflicts experienced between commuter and freight services.

Related outcome summary

Three areas of rail freight infrastructure constraints has previously been identified by KiwiRail. Over the last few years KiwiRail have removed most of the identified infrastructure constraints. This means that the RLTS target for this related outcome has been largely achieved.

[30] The section of railway between Pukerua Bay and Paekakariki.
[31] There is still some constraint at North-South junction due to single tracking in the tunnels. Addressing this issue will involve significant cost.

9. RLTS Implementation

9.1 Overall progress achieved in 2011/12

Highlights of the 2011/12 year include:

- approximately 35.6 million passenger trips by public transport
- introduced Matangi trains to the Kapiti line (August 2011)
- introduced Matangi trains to the Johnsonville line (March 2012)
- retired the last of the English Electric rail cars (June 2012)
- signed the Wellington Regional Rail Package with KiwiRail (July 2011)
- completed Kenepuru rail station upgrade (January 2012)
- provided Rugby World Cup public transport special services (September 2011)
- consulted on Wellington city bus review – received about 6,200 submissions (March 2012)
- 15 new bus shelters installed across the region
- completed Rimutaka Hill (Muldoon's Corner) easing project (May 2012)
- completed Terrace Tunnel safety upgrades (March 2012)
- 16 schools enrolled in the school travel plan programme with 59 now participating
- completed the annual workplace active commute programme *Active a2b* (May 2012)
- expanded *Let's Carpool* nationally with Auckland, Waikato, Taranaki, Horizons, and Nelson joining (June 2012)
- completed road safety video *A Two-way Street* in collaboration with Police (October 2011)
- ran a folding bike promotion with discount voucher (July 2011)
- completed re-design of the Regional Cycling Map and tests of new bike lights
- adopted the updated Hutt Corridor Plan (October 2011)
- adopted the Regional Public Transport Plan 2011 – 2021 (November 2011)
- adopted the 2012 – 2015 Regional Land Transport Programme (June 2012)
- completed the Otaki public transport service review and implemented service changes (June 2012)
- completed consultation for the Wairarapa public transport service review (March 2012)

9.2 Major 2012/13 actions programmed

Major programmes and projects anticipated to **be completed** in 2012/13 include:

- complete delivery of all 96 new Matangi rail rolling stock vehicles (80 arrived by end of 2011/12)
- complete rollout of Real Time Information on all bus services

- completion of public transport service review for Wellington City
- completion of Naenae rail station upgrade
- completion of implementation reviews of public transport service changes in Porirua and Kapiti
- completion of the Wellington Public Transport Spine Study
- completion of negotiations on trolley bus contract renewal
- completion of public transport fare structure review
- completion of the Wellington Transport Strategic Model upgrade and the Wellington Public Transport Model
- adoption of the updated Western Corridor Plan
- completion of the Asset Management Plan for Greater Wellington and GW Rail Ltd.

Major programmes anticipated to **commence or continue** in 2012/13 include:

- commence rollout of Real Time Information on rail services
- continue support for bus priority measures in Wellington CBD
- continue investigation of electronic ticketing for passenger rail in the Wellington region
- continue Total Mobility Scheme
- commence the Hutt Valley public service review
- continue Transmission Gully preparation activities
- continue the development of the Mackays to Peka Peka Expressway project
- continue the development of the Basin Reserve, Mount Victoria Tunnel duplication and Ruahine Street project
- continue the development of the Ngauranga to Aotea Quay project
- continue the development of the Peka Peka to Otaki project
- continue the *Last Choice* and *Mind the Gap* road safety campaigns
- commence a pilot programme for scooter safety
- commence trial of carpooling software for school commutes
- continue *School Travel Plan Programme* and *Movin'March* in partnership with TAs
- continue *Be Safe – Be Seen* road safety campaign
- continue *Active a2b* programme
- continue motorcycle safety initiatives in partnership with Police, Sport Wellington, Cycle Aware Network
- continue quarterly Regional Road Safety Coordinator Forums
- continue cyclist skills training programmes in partnership with Police, Sport Wellington and Cycle Aware Network
- continue bus drivers/cyclists workshops with Cycling Advocates' Network and bus operators
- continuing implementing the Wellington Regional Travel Demand Management Plan

- continuing the Cycling and Walking Journey Planner and Let's Carpool website
- coordinate *Spring to the Street* commute challenge

Glossary

AM	Morning
AMR	Annual Monitoring Report
BERL	Business and Economic Research limited
CARD	Communications and Resource Deployment system
CAS	Crash Analysis System
CBD	Central Business District
CO_2	Carbon dioxide
FAR	Funding Assistance Rates
GPS	Government Policy Statement
GWRC	Greater Wellington Regional Council
IP	Interpeak
km	Kilometres
km/h	Kilometre per hour
mins	Minutes
NITIS	National Integrated Ticketing Interoperability Standard
NLTP	National Land Transport Programme
NZTA	New Zealand Transport Agency
PM	Afternoon
Police	New Zealand Police
RHS	Right hand side
RLTS	Regional Land Transport Strategy
RTC	Regional Transport Committee
SH	State highway
TMIF	Transport Monitoring Indicator Framework
VKT	Vehicle Kilometres Travelled
WRS	Wellington Regional Strategy

Water, air, earth and energy – elements in Greater Wellington's logo combine to create and sustain life. Greater Wellington promotes **Quality for Life** by ensuring our environment is protected while meeting the economic, cultural and social needs of the community

For more information, contact:

Nicola Durling
Greater Wellington
142 Wakefield Street
PO Box 11646
Manners Street
Wellington 6142

nicola.durling@gw.govt.nz
T 04 384 5708
F 04 385 6960

info@gw.govt.nz
www.gw.govt.nz

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