Environment Bay of Plenty
REGIONAL COUNCIL

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BAY OF PLENTY REGIONAL LAND TRANSPORT STRATEGY

ANNUAL REPORT 2006-07

ENVIRONMENT BAY OF PLENTY
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Contents

Executive Summary

This is an annual report on progress in implementing the Bay of Plenty Regional Land Transport Strategy (RLTS) for the 2006/07 financial year.

Performance indicators

A set of performance indicators were included in the RLTS as part of the 2006/07 review process. The indicators were developed so that measurable targets can be set and progress towards these targets assessed through the annual reporting process.

Data has been collected on socio-economic indicators, and on performance indicators for the strategic outcomes in the RLTS:

Integration and land use	Economic development
Safety and personal security	Energy efficiency
Responsiveness	Access and mobility
Sustainability	Public health

This is the first Bay of Plenty annual report containing the new performance indicators. The emphasis this year has been on collecting data for each indicator to provide a baseline for setting targets in future annual reports.

Socio-economic indicators

The socio-economic indicators for the most part display trends that promote travel demand and increased use of the region's land transport system.

Integration and land use

A high proportion of residents in the western Bay of Plenty in particular travel outside their district of residence to work. The figures show there is some way to go before Live, Work and Play principles are reflected in more self-contained travel to work patterns.

An initial count of transport interchanges shows a lack of opportunities to transfer between bicycles and other modes. More interchanges are likely to be identified as familiarity with the definition increases.

Safety and personal security

The region's crash rate rose again in 2006 following a recent downward trend. This is reflected in an increase in the number of recorded fatalities, serious injuries and minor injuries.

Responsiveness

Data on perceptions of public transport has been collected for the past two years only. More information is required to identify any trends.

Sustainability

Figures show the increasing dominance of the motor vehicle as a means of travel to work, and negligible gains for public transport in terms of modal split. The proportion of drivers amongst those travelling to work is above 90% and increasing over time, suggesting low and decreasing vehicle occupancy rates.

Modal split for freight to and from the Port of Tauranga is stable, with a significant proportion transported by rail. There is an encouraging trend in the use of rail for the transport of containers.

There have been steady increases in public transport use in the two major urban centres.

Limited information is currently available on the use of active modes.

Economic development

There was evidence of a downward trend in travel delays in Tauranga in 2006, although results from subsequent surveys are required to confirm this trend. Figures show that the Port of Tauranga has the infrastructural capacity to handle significantly larger export volumes.

Energy efficiency

Fuel consumption is generally increasing at the same rate as the size of the region's vehicle fleet, suggesting little improvement in fuel efficiency at the regional scale.

Access and mobility

Significant proportions of the population in the region's two largest urban centres live within walking distance of bus services. A much lower proportion of residents in areas outside these centres live within walking distance of a bus stop. However, services outside the cities do provide broad geographical coverage, albeit at a lower frequency. A very low proportion of the current bus fleet meets the definition of accessible.

The number of registered users and trips taken using the region's total mobility scheme has plateaued, suggesting that service provision is meeting service demand.

Public health

Monitoring shows background carbon monoxide levels as being 'good' to 'excellent' in both Tauranga and Rotorua. There are relatively higher levels of particulate matter, especially in Rotorua. However, there have been signs of slight improvement in the measurements from both cities in the past two years.

The districts with higher volumes of traffic on unsealed roads are actively reducing the amount of dust generated through seal extension programmes and dust suppression measures.

RLTS implementation progress

The first part of the 2006/07 year was largely devoted to reviewing the RLTS. This process was longer and more complex than anticipated due to ongoing uncertainty about the cost of strategic roading projects and the implications for the Bay of Plenty transport funding package. Implementation proceeded more smoothly once the RLTS had been finalised and an implementation plan developed.

Performance assessment

The following table provides a performance assessment of the region's land transport system in 2006/07:

Key							
	significant progress towards outcome		some progress towards outcome		some regression from outcome		significant regression from outcome
—	No change, or there is currently insufficient information to make an assessment						

Strategic Outcome	Assessment
Integration and land use	—
Safety and personal security	
Responsiveness	—
Sustainability	
Economic Development	
Energy Efficiency	—
Access and Mobility	
Public Health	

On current evidence, the region manages a pass mark for 2006/07 when land transport system performance is measured against strategic outcomes in the RLTS. The evidence collected to date shows there are significant challenges ahead, particularly in improving safety and personal security, and sustainability outcomes. There are currently several information gaps that still need to be filled to provide a more complete picture of the region's land transport system.

Chapter 1: Introduction

This is an annual report on progress in implementing the Bay of Plenty Regional Land Transport Strategy for the 2006/07 financial year.

1.1 Statutory context

The Land Transport Act 1998[1] (LTA) requires every regional council to prepare a Regional Land Transport Strategy (RLTS). An RLTS must contribute to the overall aim of achieving an integrated, safe, responsive, and sustainable land transport system. An RLTS generally identifies the region's future transport needs and how they might be met.

The LTA also requires every regional council to establish a Regional Land Transport Committee (RLTC) for its region. The main function of the RLTC is to prepare the RLTS for approval by the regional council.

A third LTA requirement is the preparation of an annual report on progress in implementing the RLTS (this report). Copies of the report must be forwarded to Land Transport New Zealand, Transit New Zealand, the Commissioner of Police and the Secretary for Transport by the 30 September each year. The annual report must also be made available to the public.

1.2 The Bay of Plenty Regional Land Transport Strategy

The Bay of Plenty RLTS was reviewed during the 2006/07 year and the new strategy was adopted in June 2007. The RLTS was developed by the RLTC, made up of representatives from Environment Bay of Plenty, the region's territorial authorities, Transit New Zealand, Land Transport New Zealand, New Zealand Police, Ontrack and special interest groups. The RLTS has a vision of:

an integrated, safe, responsive and sustainable land transport system that meets the needs of the people of a vibrant and growing region.

Underpinning the vision is a set of strategic outcomes or 'desired states' arranged under the following headings:

Integration and land use	Economic development
Safety and personal security	Energy efficiency

[1] *As amended by the Land Transport Management Act (2003).*

Responsiveness	Access and mobility
Sustainability	Public health

These strategic outcomes provide the framework for all policy principles, actions and performance indicators in the RLTS.

1.3 Performance indicators

A set of performance indicators were included in the RLTS as part of the review process. The performance indicators are based around the 8 key strategic outcomes in the strategy. The indicators were developed so that measurable targets can be set and progress towards these targets assessed through the annual reporting process. Performance indicators provide a quantitative measure of performance and useful information on the effectiveness of the strategy.

This is the first Bay of Plenty annual report containing the new performance indicators. The emphasis this year has been on collecting data for each indicator to provide a baseline for setting targets in future annual reports.

1.4 Information in the report

The information in this report was collected from a range of different sources. Environment Bay of Plenty would like to thank the region's territorial authorities (Tauranga City Council, Western Bay of Plenty District Council, Rotorua District Council, Whakatane District Council, Kawerau District Council and Opotiki District Council), Transit, the Port of Tauranga, Land Transport New Zealand and Statistics New Zealand for their assistance in compiling the data.

There are information gaps evident in the report. This is not surprising given that this is the first year in which performance indicator data has been collected. The intention is to fill these information gaps in subsequent years to provide a more complete picture of the region's land transport system. The current set of performance indicators may need to be refined as part of this process.

Data coverage varies in the report. Data has been collected regionally for some indicators, while data is more relevant at the district or city specific level for others. Much of the data has been collated at the territorial authority level. This data covers the six main territorial authorities in the region (Tauranga, Western Bay of Plenty, Rotorua, Whakatane, Kawerau and Opotiki). The territorial authority boundaries do not provide an exact fit with the regional boundary. A small part of Taupo district lies within the Bay of Plenty, and small area of Rotorua district is outside the region. The populations of these two areas are relatively small and their effect on regional figures is considered to be negligible.

In some cases, the data collected does not align with either regional or territorial authority boundaries. In these cases, the statistical boundaries are noted in the performance indicator definition.

1.5 Report structure

Chapter 2 measures trends in a set of socio-economic indicators that influence travel demand. A definition is provided for each indicator. The data is then

presented, interpreted and analysed in terms of its implications for the region's land transport system.

Chapters 3 – 10 cover the performance indicators for each strategic outcome in the RLTS.

Chapter 11 reports on RLTS implementation progress for the 2006/07 year.

Chapter 12 provides an overall assessment of the region's land transport system performance in 2006/07 when measured against the strategic outcomes in the RLTS.

Chapter 2: Socio-economic Indicators

This chapter measures trends in socio-economic indicators that influence travel demand. The following indicators are reported on:

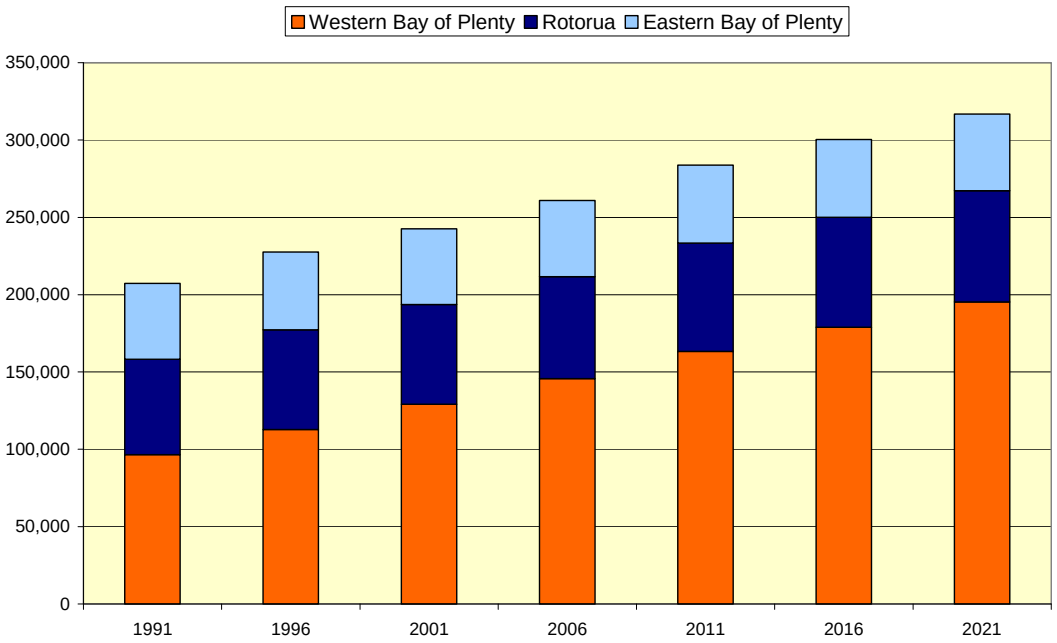
Population:	resident population
Households:	number of households average size of households
Regional economic activity:	new dwellings authorised
Vehicle ownership:	households without vehicle access number of licensed vehicles

2.1 Population

2.1.1 Resident population

Definition: Actual and projected 'usually resident' populations for each subregion and the region. Source: Census 1991-2006; Environment Bay of Plenty Demographic Forecast 2051 'modified medium variant' projections.

Figure 1 Resident population, actual and projected, by subregion



Interpretation: The regional population was 260 811 in 2006. Fifty seven percent of the region's population currently lives in the western Bay of Plenty subregion, with 25% in Rotorua and 19% in the eastern Bay of Plenty subregion. The western Bay of Plenty is experiencing strong population growth. The population has grown by 51% in the last 15 years. This is projected to increase by another 34% in the next 15 years. The population of Rotorua is slowly increasing, while the eastern Bay of Plenty population is static. The steady population increase of 7-10% for the whole region is driven by growth in the western Bay of Plenty.

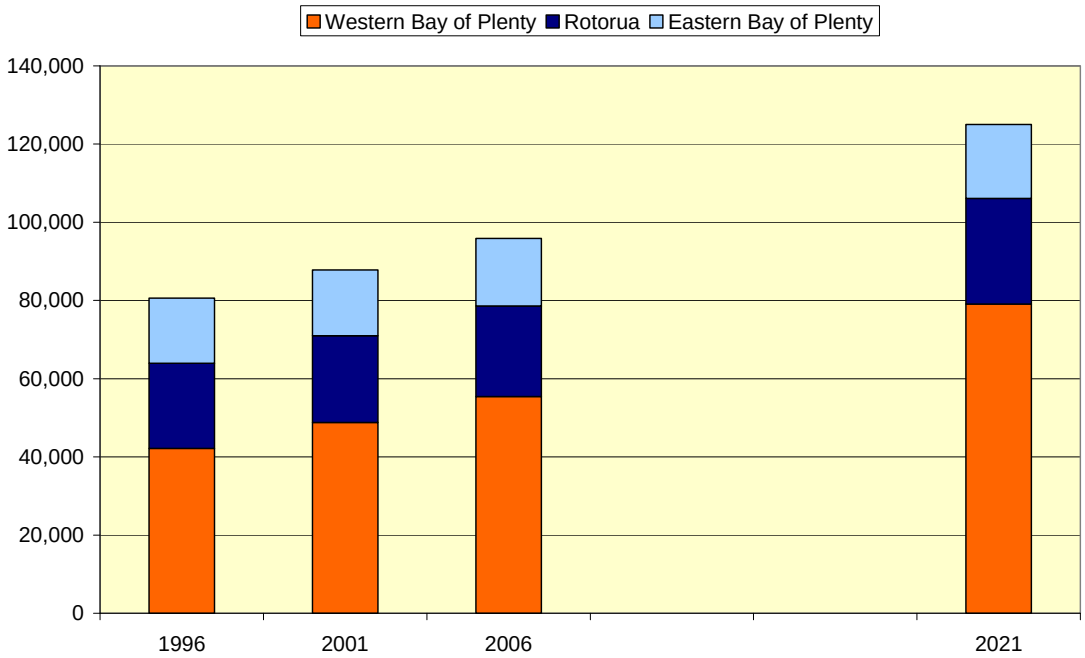
Analysis: Population growth into the foreseeable future will continue to drive increased travel demand in the western Bay of Plenty in particular.

2.2 Households

2.2.1 Number of households

Definition: Number of households by subregion (population living in private dwellings). Source: Census 1996-2006; Environment Bay of Plenty Demographic Forecast 2051 'modified medium variant' projection.

Figure 2 Number of households, actual and projected, by subregion



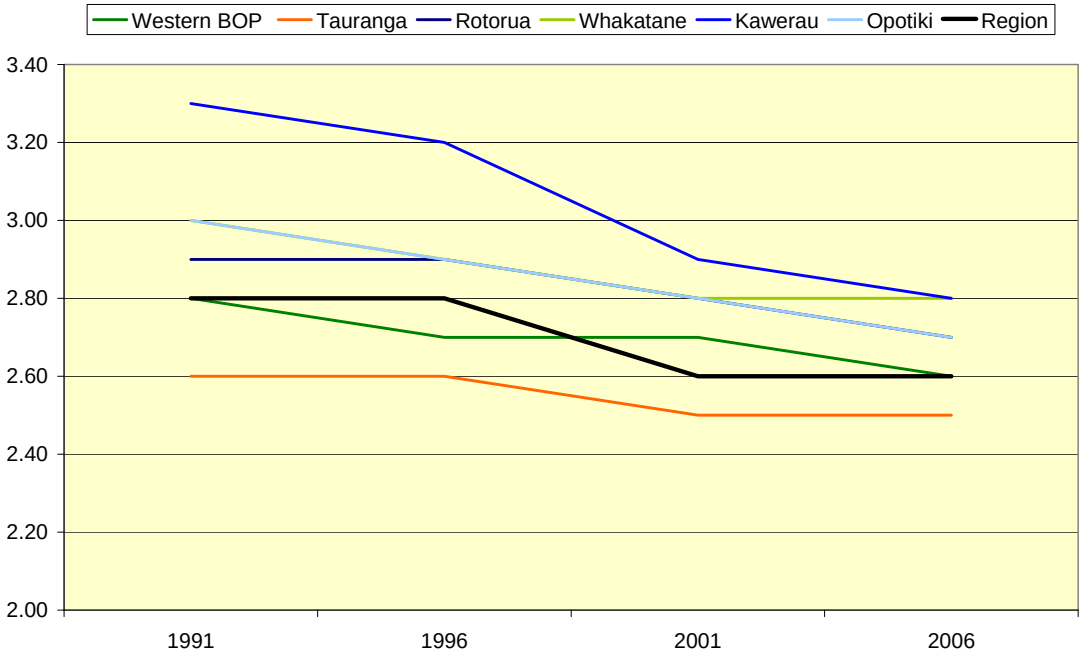
Interpretation: There were 95 907 households in the region in 2006. This is forecast to increase to 125 000 households in 2021. Growth in the number of households is largely driven by population growth in the western Bay of Plenty. The number of households in the western Bay of Plenty subregion is expected to increase by 43% in the next 15 years. This compares with growth of 16% in Rotorua and 9% in the eastern Bay of Plenty.

Analysis: Growth in the number of households is forecast to outstrip population growth in all three subregions. This trend will exacerbate the increased travel demand already driven by strong population growth in the western Bay of Plenty.

2.2.2 Household size

Definition: Average number of people per household. Source: Census 1991-2006, Statistics NZ.

Figure 3 Average household size by district/city



Interpretation: All districts in the region display a trend of decreasing household size over the past 15 years. The regional average has reduced from 2.8 in 1991 to 2.6 in 2006.

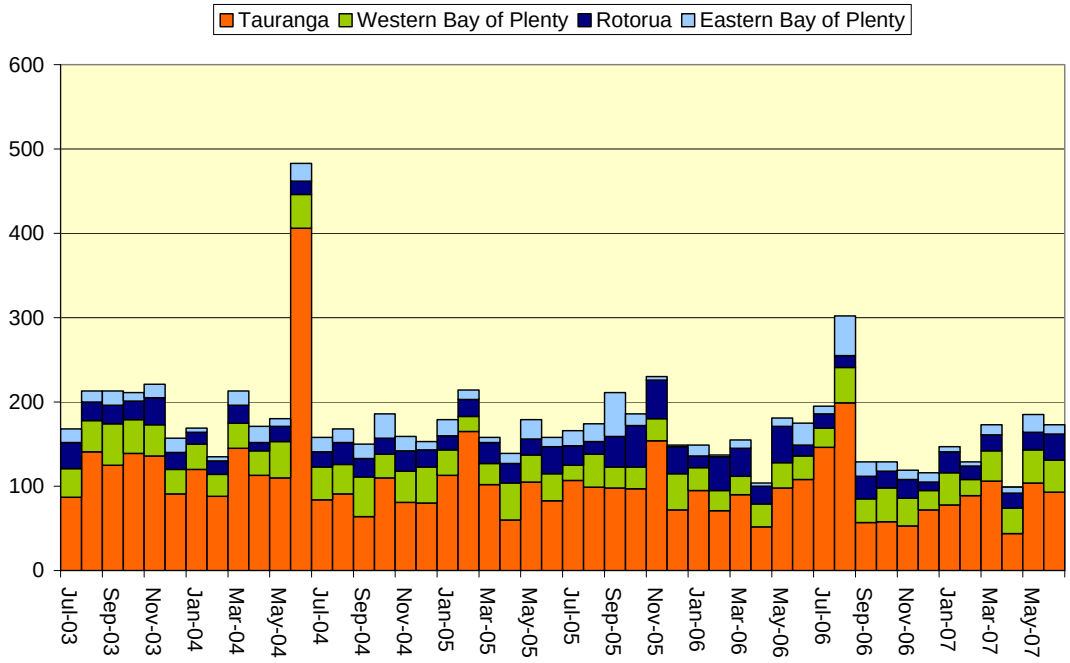
Analysis: Decreasing household size explains the trend of household numbers increasing at a higher rate than population growth in the Bay of Plenty. This trend is likely to increase travel demand as each individual household is likely to require at least one private motor vehicle. This will put downward pressure on vehicle occupancy rates.

2.3 Regional economic activity

2.3.1 New dwelling units

Definition: Number of new dwelling units authorised in the Bay of Plenty (building consents issued). Source: Statistics New Zealand. Baseline measure for regional economic activity. The construction industry also generates demand for transport.

Figure 4 Number of new dwelling units authorised



Interpretation: Data for the period July 2003 – June 2007 shows fluctuations in the number of new dwelling units authorised, with significant outliers in June 2004 and August 2006. The regional average in the four year period was 176 new dwelling units. The data shows a general easing of activity from August 2006, although the number of new units authorised has returned to be close to the average in recent months. The figures show that regional trends are largely driven by activity in Tauranga city.

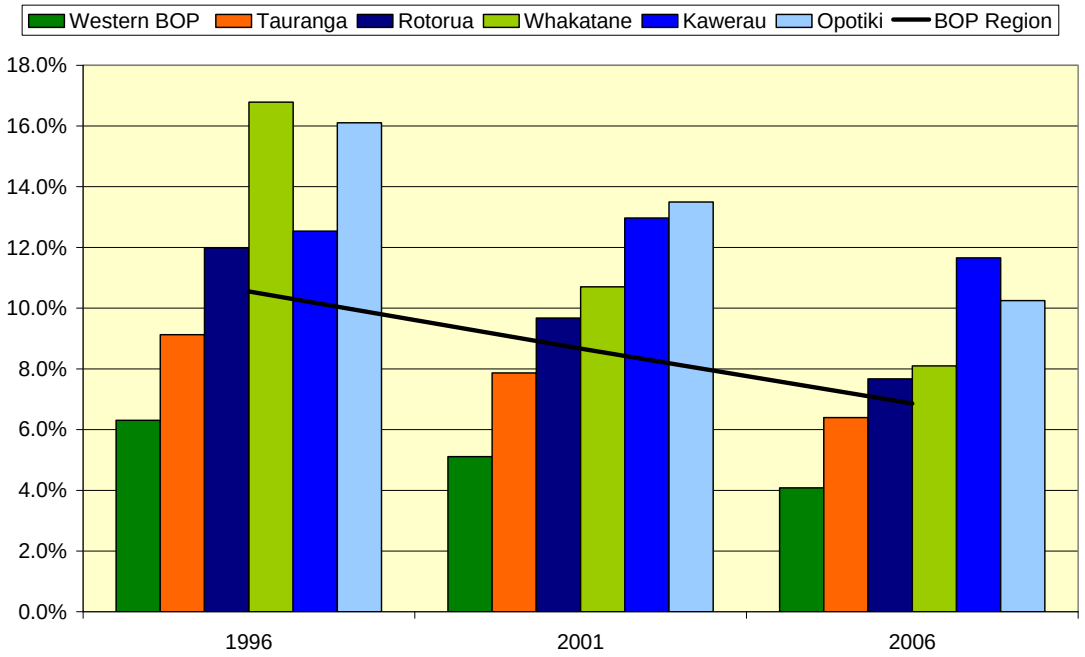
Analysis: While the figures are subject to significant fluctuations, the data shows a gradual decline in the number of new units authorised over the four year period. This trend may have a dampening effect on the rate that travel demand increases, particularly in Tauranga where the majority of new dwelling units are authorised.

2.4 Vehicle ownership

2.4.1 Motor vehicle access

Definition: Percentage of households without access to a motor vehicle by district/city. Source: Census 1996-2006, Statistics NZ. Baseline measure of travel demand (growth in car ownership increases travel demand).

Figure 5 Percentage of households without access to a motor vehicle



Interpretation: There has been a steady decrease in the proportion of households without access to a motor vehicle in the past 10 years. The already low figures for the western Bay of Plenty and Tauranga have decreased further, while the largest decreases have been experienced in Whakatane (-8.7%) and Opotiki (-5.8%) districts. However, over 10% of households in Kawerau and Opotiki still do not have access to a motor vehicle.

Analysis: The figures show that access to motor vehicles is continuing to increase across the region. Increased access is likely to induce greater demand for travel by private car, particularly if the options provided by other modes (e.g. public transport, cycling and walking) are not perceived to be attractive, convenient and safe.

It should be noted that the district/city wide figures do not provide the full picture in terms of household access to motor vehicles. In the past, figures have displayed a significant variation in levels of access within each city or district. More detailed mapping of motor vehicle access will be required to highlight 'pockets' within the region for which lack of access to a motor vehicle remains a significant issue.

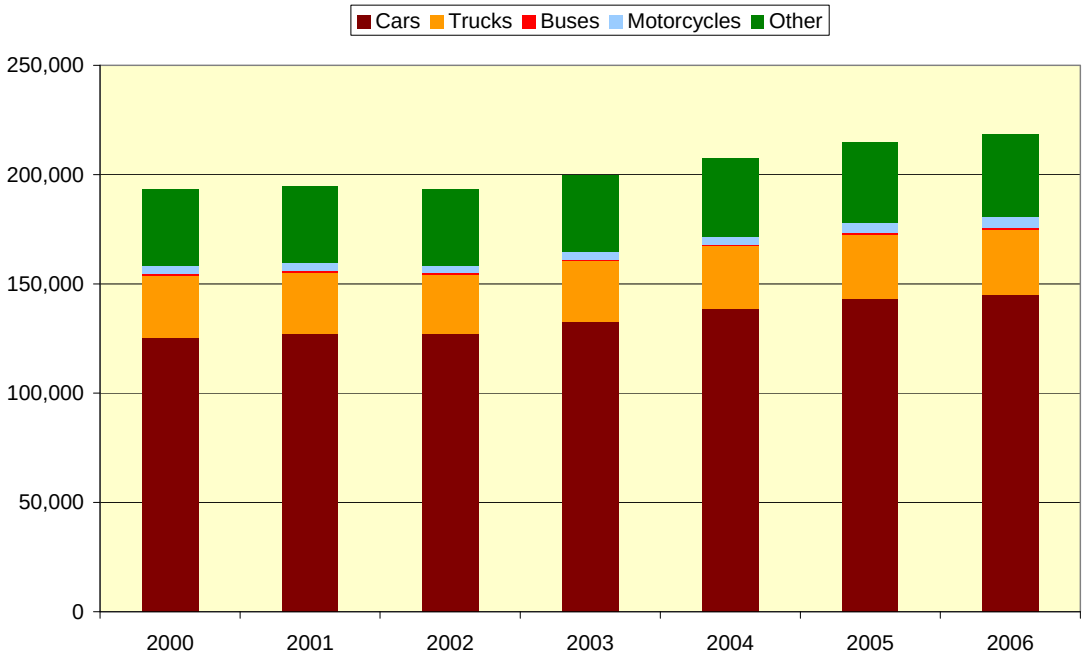
Not having access to a car does not necessarily mean that a household is transport disadvantaged. It may be that they have chosen not to have a car, or do not need one because they are close to local services, or because there is a reliable bus service they can use. However, it is important to recognise that these households may have difficulty accessing certain services, for example, health services.

2.4.2 Number of licensed vehicles

Definition: Number of licensed vehicles in the Bay of Plenty (Tauranga and Rotorua postal districts). The number of licensed vehicles is a baseline measure of travel demand (growth in licensed vehicles means increased travel demand).

Note: Rotorua postal district extends south towards Waiouru and includes Tokoroa, Taupo and Turangi. 'Cars' includes vans, taxis, utilities and rentals; 'motorcycles' includes mopeds; 'other' includes trailers, tractors, exempt vehicles and miscellaneous. Source: Land Transport New Zealand vehicle registration figures.

Figure 6 Number of licensed vehicles in the region



Interpretation: Overall, the figures show steady growth in the size of the region's vehicle fleet, with the strongest growth of approximately 3% per year sustained between 2002 and 2005. Car ownership has increased 15% between 2000 and 2006, and cars numbers now comprise 66% of the vehicle fleet. In comparison, the number of registered trucks has only increased 5% over the recorded period, and the number of trucks in fact decreased between 2000 and 2002.

The largest growth rates have occurred in the smallest categories. There were 973 registered buses in 2006, compared with 766 in 2000. Motorcycles (including mopeds) reduced in number between 2000 and 2003, but have recorded significant growth from 2004 onwards.

Analysis: The steady growth in registered vehicles reflects the increasing accessibility of car ownership in particular. The growth trend in car numbers is showing no signs of tailing off. The increase in registered buses may reflect the increased emphasis on bus based passenger transport in recent years. The recent increase in registered motorcycles and mopeds is indicative of a trend towards more fuel efficient modes.

Chapter 3: Integration and Land Use

This chapter measures trends in integration and land use indicators. The following indicators are reported on:

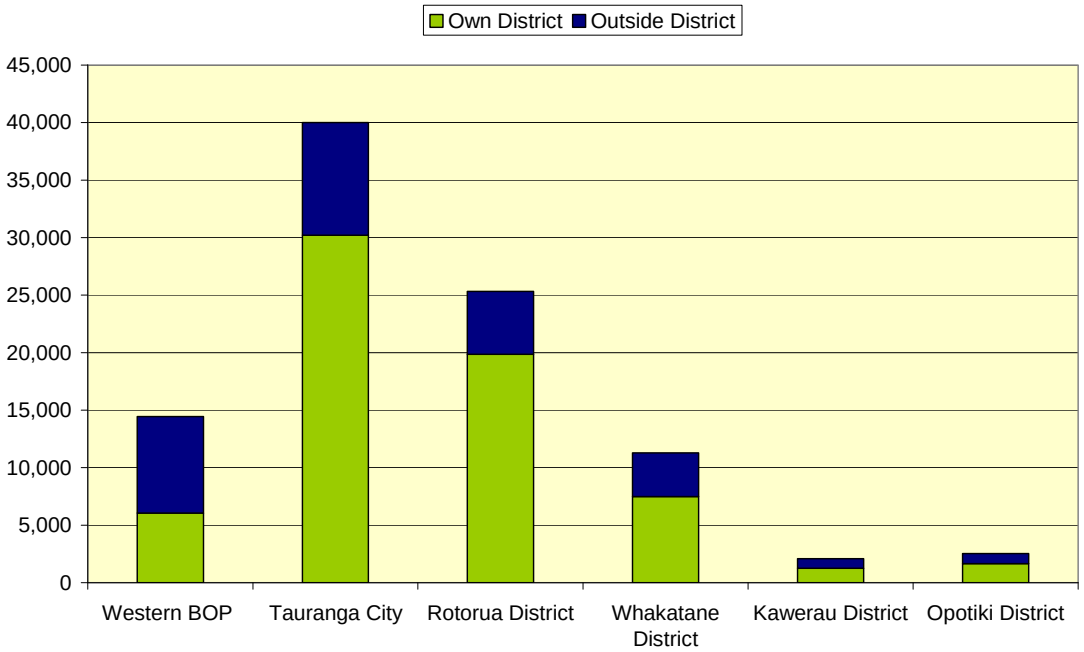
Integration of land use and transport:	travel to work outside district/city
Integration between modes:	number of transport interchanges
Integration of public transport services:	percentage of integrated tickets sold

3.1 Integration of land use and transport

3.1.1 Travel to work outside district/city

Definition: Number of employed people who travelled to work outside the district/city in which they are usually resident on census day 2006. Measures travel to work trends as an indicator of 'Live, Work and Play' and related principles. Source: Census 2006, Statistics New Zealand. Note: figures exclude those who worked at home or did not go to work on census day.

Figure 7 Proportion of work population travelling outside district/city to work



Interpretation: Western Bay of Plenty had the highest proportion of people travelling outside the district to work (58%). Of these, 55% (4593 people) travelled to work in Tauranga City. Tauranga and Rotorua, the two largest urban centres in the region, had the lowest proportion of residents travelling beyond their boundaries to work. The Waikato region attracted the highest proportion of Rotorua residents (25%) who worked outside the district on census day, with fewer Rotorua residents travelling through to Tauranga or the Western Bay of Plenty district.

Analysis: This travel to work data has been collected to provide a baseline measure as concepts such as 'Live, Work and Play' are implemented. Unsurprisingly, Western Bay of Plenty district displays the highest proportion of residents travelling outside the district to work. This figure may change over time as more locally based employment opportunities are provided within the Western Bay of Plenty district.

The Rotorua figures indicate a relatively self-contained workplace-residence relationship, but with stronger workplace ties to the Waikato than the rest of the Bay of Plenty region. Whakatane and Kawerau also display strong interdependencies, with 37% of those working outside Kawerau travelling to Whakatane and 27% in the opposite direction. This demonstrates that despite significant employment opportunities being provided in both districts, a sizeable proportion of the workforce chooses to travel between districts to work.

3.2 Integration between modes

3.2.1 Number of transport interchanges

Definition: To transfer between different transport modes to complete a single journey. Transport interchanges are places where the change between modes of travel is easy. For the purposes of this definition, transport interchanges must be accessible to the general public.

Potential transport interchanges in the Bay of Plenty:

- bus station (a terminus or a significant stop allowing transfer between routes)
- car park (significant continuous area of public parking with some level of restriction; park and ride facility)
- taxi rank (designated area where taxis are parked)
- airport (with connections to other modes)
- bicycle racks (secure parking for significant numbers of cycles)
- ferry terminal.

Table 1 Bay of Plenty transport interchanges (2007)

District/City	Number of interchanges[2]	Interchange	Mode transfer
Western BOP	7	Commerce lane, Te Puke	Bus - pedestrian
		Commerce lane, Te Puke	Car – bus (park & ride)
		Just off SH, Omokoroa	Car - bus
		Talisman Drive, Katikati	Car - bus
		Talisman Drive, Katikati	Bus - pedestrian
		Seaforth Rd, Waihi Beach	Car - bus

[2] *Each example of transfer between modes was counted as an individual interchange. Therefore, one location may have multiple transport interchanges.*

District/City	Number of interchanges[2]	Interchange	Mode transfer
		Seaforth Rd, Waihi Beach	Bus - pedestrian
Tauranga	12	Wharf street bus terminus	Bus - pedestrian
		Wharf street bus terminus	Bus - bus
		Bayfair	Bus - pedestrian
		Wharf street bus terminus	Bus - bus
		Salisbury Wharf	Ferry - Bus
		Spring Street car park	Car - pedestrian
		Elizabeth Street car park	Car - pedestrian
		Harington Street car park	Car - pedestrian
		Strand car park	Car - pedestrian
		Durham Street car park	Car - pedestrian
		Tauranga Airport	Air - taxi
Rotorua	16[3]	Airport	Air - bus
		Airport	Air - shuttle
		Airport	Air - taxi
		Airport	Air - car
		Pukuatua St	Bus - bus
		Pukuatua St	Bus - pedestrian
		Information Centre	Bus - bus
		Information Centre	Bus - pedestrian
		Information Centre	Bus - car
		Carpark building	Car - pedestrian
		Taxi stands (x 6)	Pedestrian - taxi
Whakatane	5	Information centre	Bus - pedestrian
		Information centre	Bus - bus
		Boon St	Bus - taxi
		Boon St	Bus – pedestrian
		Whakatane Airport	Air - taxi
Kawerau	1	Plunket St	Bus - pedestrian
Opotiki	1	Elliot St	Bus – pedestrian
Region	42		

Interpretation: A total of 42 transport interchanges have been identified in the region to date. Together, the two large urban centres of Tauranga and Rotorua account for two-thirds of the interchanges. The bus-pedestrian category recorded the highest count (11), followed by car-pedestrian (6), bus-bus (5) and car-bus transfers (5).

Analysis: The transport interchanges count has been included in the report to provide baseline data on integration between modes in the region. This is by no means a definitive number and it is likely to increase as more transport interchanges are identified or created. The objective is to grow the number of transport interchanges over time to promote the efficient and easy transfer between modes in

[3] Rotorua also has 24 cycle racks. However, these have not been included in the final count as it is unclear which racks provide secure parking for significant numbers of cycles.

line with strategic outcomes in the RLTS. The lack of interchanges allowing transfer between bicycles and other modes is one gap that is evident in the current count (although this may be an identification issue rather than a lack of appropriate facilities).

3.3 Integration of public transport services

3.3.1 Percentage of integrated tickets sold

While this is a performance indicator in the RLTS, there is currently no data available on the proportion of integrated tickets sold. Ticketing systems with varying degrees of integration are currently being implemented.

Chapter 4: Safety and Personal Security

This chapter measures trends in safety and personal security indicators. The following indicators are reported on:

Crashes: crash rates

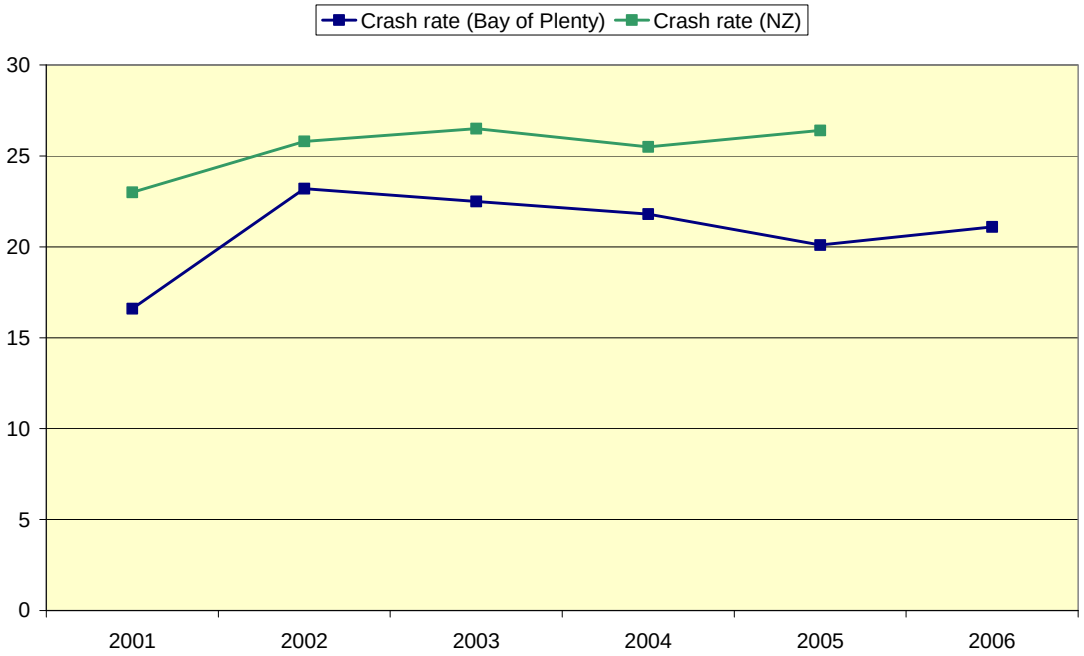
Casualties: number of casualties

4.1 Crashes

4.1.1 Crash rates

Definition: Crash rate per 10000 population for the Bay of Plenty region (compared with New Zealand average). Crash rates are for reported fatal and injury crashes. Crash rates provide an overall measure of the safety of the road network. Source: Motor Vehicle Crashes in New Zealand 2001-2006, Ministry of Transport.

Figure 8 Crashes per 10 000 population in the Bay of Plenty



Interpretation: Bay of Plenty crash rates trended downwards between 2002 and 2005, before increasing by 1 additional crash per 10000 people in 2006. This represented an improvement on the New Zealand crash trend over the 2002-2005 period. No comparison could be made with the national crash rate for 2006 because no New Zealand-wide figures were available at the time this report was compiled.

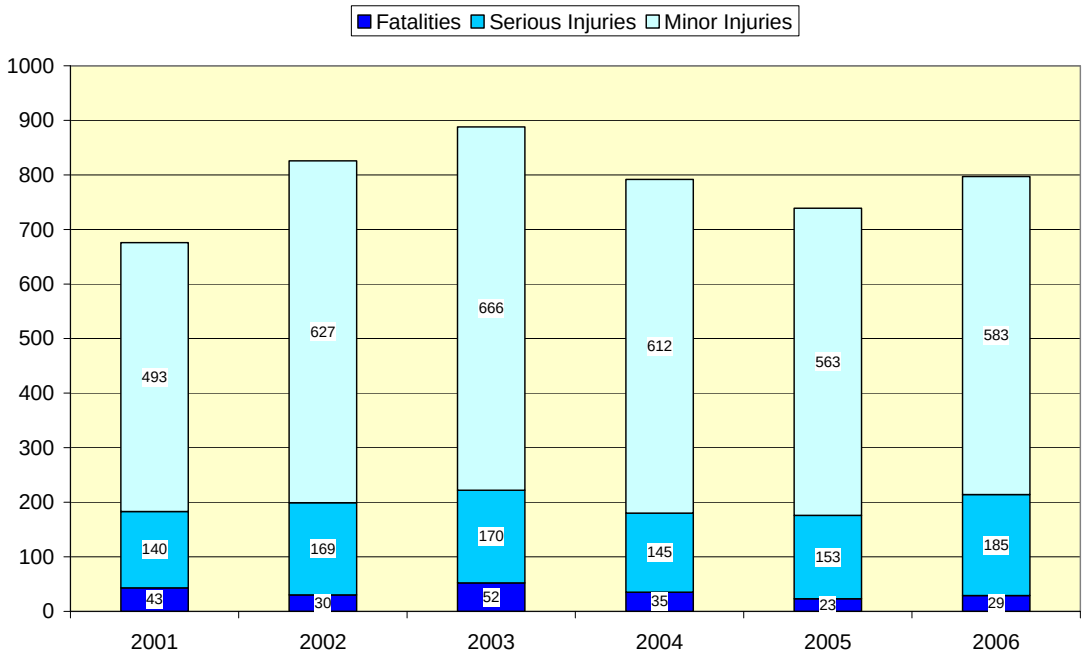
Analysis: There were encouraging signs of a downward trend in Bay of Plenty road crashes between 2002 and 2005. However, an increase of 1 additional crash per 10000 people represents a significant increase in the number of crashes in the region once population growth is factored into the equation. It remains to be seen whether this is a one off occurrence or an indicator of a new regional trend.

4.2 Casualties

4.2.1 Number of casualties

Definition: Number of casualties on Bay of Plenty roads per year. Provides a measure of the overall safety of the road network and the severity of injuries. Source: Motor Vehicle Crashes in New Zealand 2001-2006, Ministry of Transport.

Figure 9 Number of casualties on Bay of Plenty roads



Interpretation: Bay of Plenty casualty figures have fluctuated over the past six years. After peaking in 2003, fatalities, minor injuries and total figures trended downwards for two consecutive years. However in 2006 casualty figures increased across all three categories.

Analysis: The figures show no discernable trend, meaning that no firm conclusions can be drawn on the overall safety of the road network. While the proportions of each injury type generally tend to be similar, there was a marked increase in the number of serious injuries in 2006. It is also interesting to note that the Bay of Plenty crash rate actually decreased between 2002 and 2003, indicating that 2003 was a particularly bad year for multiple fatality/injury crashes.

Chapter 5: Responsiveness

This chapter measures trends in responsiveness indicators. The following indicator is reported on:

Perceptions of public transport: percentage of bus users who rate services as excellent

5.1 Perceptions of public transport

5.1.1 Percentage of bus users who rate services as excellent

Definition: Percentage of usually resident bus users in Tauranga and Rotorua who rate Environment Bay of Plenty contracted bus services as 'excellent' in annual bus satisfaction survey. Source: Environment Bay of Plenty Bus Satisfaction Survey.

Figure 10 Percentage of users who rate bus services as excellent

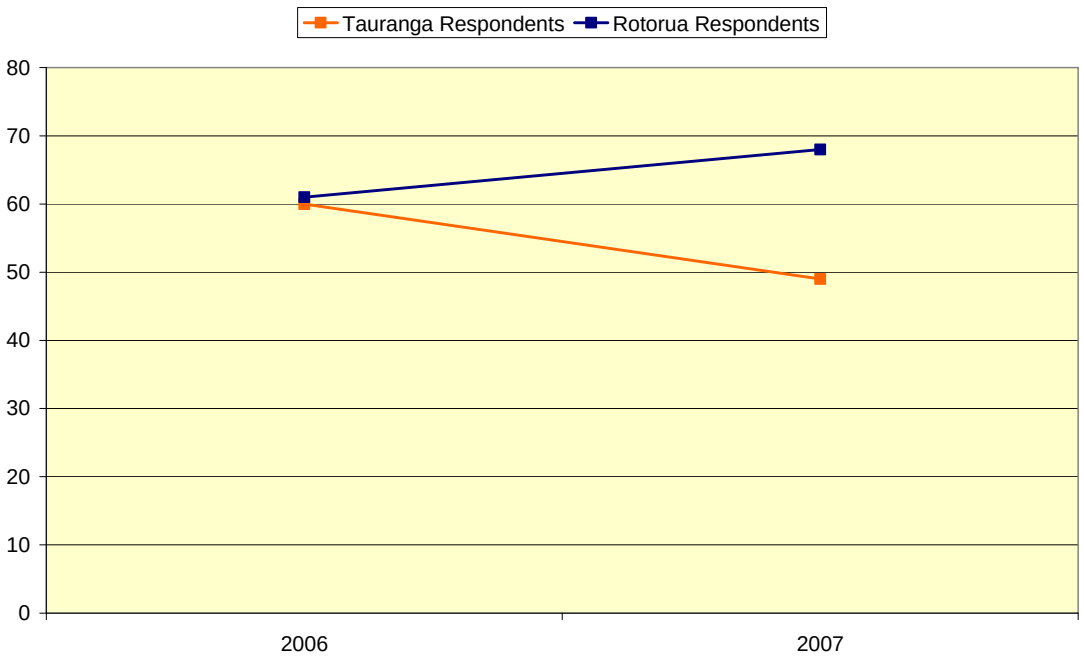


Table 2 Percentage of users who rate bus service attributes as excellent

Attribute	Tauranga respondents		Rotorua respondents	
	2006	2007	2006	2007
Overall bus service	***60%***	***49%***	***61%***	***68%***
Service reliability	45%	32%	55%	45%
Service frequency	41%	34%	64%	66%
Vehicle quality/comfort	53%	37%	56%	61%
Journey time	49%	32%	64%	58%
Service availability	51%	34%	64%	61%
Safety and personal security at the stops	74%	34%	63%	54%
Value for money	69%	55%	66%	68%
Safety and personal security during the trip	78%	39%	72%	61%

Interpretation: Bus users were asked to state their perceptions of bus service performance levels in Tauranga and Rotorua on a scale from 'dreadful' to 'excellent'. In 2006, Tauranga (60%) and Rotorua (61%) generated almost identical figures for 'excellent' ratings. Results for 2007 show some diversion between the two centres, with significantly higher proportions of Rotorua users being inclined to rate their bus service as excellent. Tauranga, on the other hand, recorded a marked decrease in its 'excellent' rating.

Table 2 shows the percentage of users who rated various bus service attributes as 'excellent'. The figures show the most significant decreases in safety and personal security attributes. Tauranga recorded a decline in perceived 'excellence' across all attributes, while the Rotorua service maintained relatively strong perceptions of 'excellence' across most attributes.

Analysis: The figures for both Tauranga and Rotorua show that significant proportions of users perceive their bus services to be excellent. While Tauranga ratings decreased between 2006 and 2007, the bus satisfaction survey has only been held for the past two years. Therefore, it would be prudent not to draw too many conclusions from the initial results. The figures do provide some baseline data from which targets for perceptions of public transport can be drawn in the future. It should also be noted that as bus service levels increase, so do users expectations. Similarly, both services are relatively new in the context of public transport provision and still in a developmental phase. This is likely to be reflected in strong initial ratings as users respond to substantial improvements on previous levels of service.

Chapter 6: Sustainability

This chapter measures trends in sustainability indicators. The following indicators are reported on:

Mode share:	modal split for travel to work modal split for freight
Vehicle occupancy:	proportion of people who drove to work
Public transport use:	annual bus trips per person
Number of cyclists:	cyclist counts on key routes
Number of pedestrians:	pedestrian counts on key routes

6.1 Mode share

6.1.1 Modal split for travel to work

Definition: Main means of travel to work for people aged 15 years and over on Census day (1996, 2001, 2006). Note: figures exclude those who worked at home, did not go to work or did not state their travel mode. Motor vehicle includes drivers and passengers. Source: Census 1996-2006, Statistics New Zealand.

Figure 11 Bay of Plenty mode split for travel to work

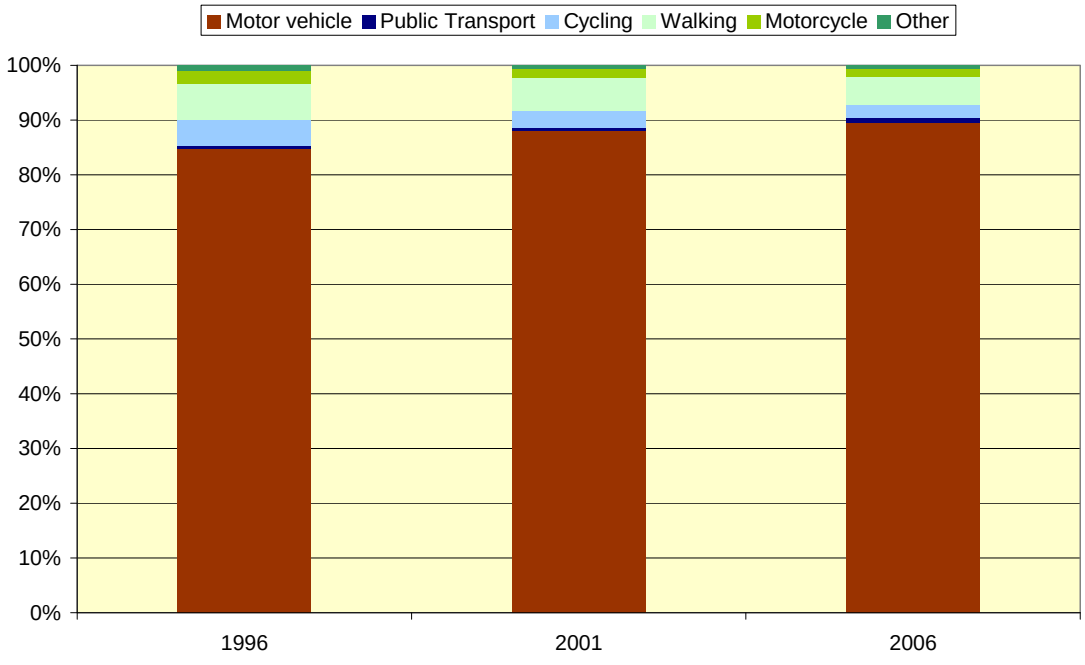


Table 3 Mode split for travel to work in 2006, by district/city

Local authority	Mode					
	Motor vehicle	Public Transport	Cycling	Walking	Motor cycle	Other
Western BOP	91.6%	0.4%	1.0%	4.5%	1.8%	0.7%
Tauranga	90.3%	1.0%	2.6%	4.3%	1.1%	0.6%
Rotorua	89.2%	1.3%	2.3%	5.1%	1.5%	0.6%
Whakatane	86.2%	0.2%	3.2%	7.3%	2.6%	0.6%
Kawerau	84.9%	0.0%	3.8%	9.0%	1.7%	0.6%
Opotiki	86.6%	0.5%	1.9%	7.9%	2.6%	0.5%
Region	***89.5%***	***0.8%***	***2.4%***	***5.1%***	***1.5%***	***0.6%***

Interpretation: Figure 11 shows the increasing predominance of the private motor vehicle as a means of travelling to work over the past ten years. The regional motor vehicle mode share increased from 84.8% in 1996 to 89.5% in 2006. All other modes, with the exception of public transport, experienced a decline in mode share over the same period. Public transport doubled in absolute terms and experienced a slight increase in mode share between 2001 and 2006. However, public transport mode share remains well below that of modes such as walking and cycling, and is negligible when compared with use of the private motor vehicle.

Table 3 indicates that there is some variation within the region in the most recent mode share figures (2006). Travel by motor vehicle was most dominant in the two largest urban centres (Tauranga and Rotorua) and particularly in the Western Bay of Plenty district, which is adjacent to the largest city in the region. Tauranga and Rotorua also recorded the highest proportions of public transport use, although mode share was still only just reaching 1% of total journeys. The table also shows that the 'active modes' (walking and cycling) retained the largest mode share in the eastern Bay of Plenty districts with smaller urban or rural based populations (Whakatane, Kawerau, Opotiki).

Analysis: Census based travel to work figures show an increasingly unsustainable travel profile as the more sustainable modes are being replaced by use of the private motor vehicle. This is not surprising as the socio-economic indicators show motor vehicles are becoming increasingly accessible to a greater proportion of the population, and the regional fleet vehicle fleet is growing on a yearly basis. The figures also show that the Western Bay of Plenty is the most heavily reliant on the private motor vehicle. Again, this is not surprising given the high proportion of workers from this district who travel to Tauranga to work.

While public transport use has increased slightly, there is still some way to go if increased patronage is to be reflected in mode share gains. In fact, the proportion of people using bus services for work trips is decreasing in the two main urban centres (see Table 4). These figures suggest that an increased emphasis on 'push' factors coupled with public transport service improvements for commuters may be required to substitute travel to work trips made by car.

Table 4 Main purpose of travel on Tauranga and Rotorua bus services

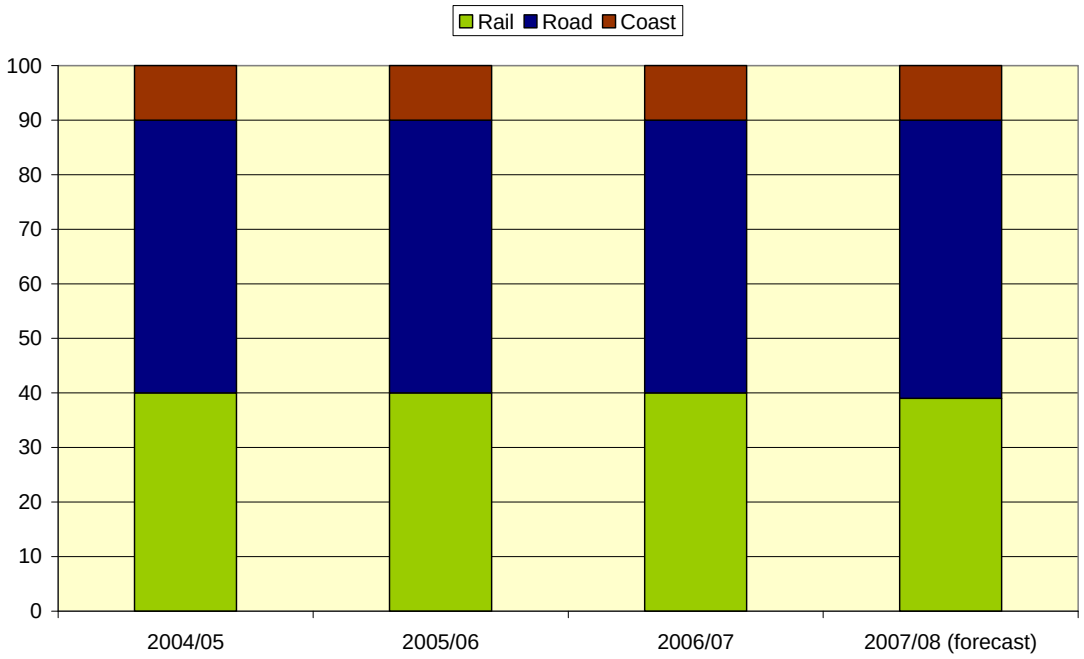
What is the main purpose of your travel on the bus service?	% of Respondents					
	Tauranga Respondents		Rotorua Respondents		Total Respondents	
	2006	2007	2006	2007	2006	2007
Shopping	28	38	38	40	35	39
Work	21	18	29	22	23	20
Recreation	13	17	9	13	11	15
School	6	2	3	3	5	2
Study (non school)	5	2	1	2	2	2
Doctor/Hospital	7	5	1	4	4	5
Visit friends	3	4	3	4	4	4
Sport	-	1	-	-	-	1
Other	16	13	17	12	16	12
Total	100	100	100	100	100	100

Lower mode share for cycling and walking in the main urban centres (and adjacent areas) suggests the barriers to using these modes are greater here than in the smaller urban settings. Another factor may be the higher proportions of households without access to motor vehicles in the districts displaying higher cycling and walking mode shares.

6.1.2 Modal split for freight

Definition: Modal split for freight loaded at Port of Tauranga. Figures are for total throughput. Source: Port of Tauranga

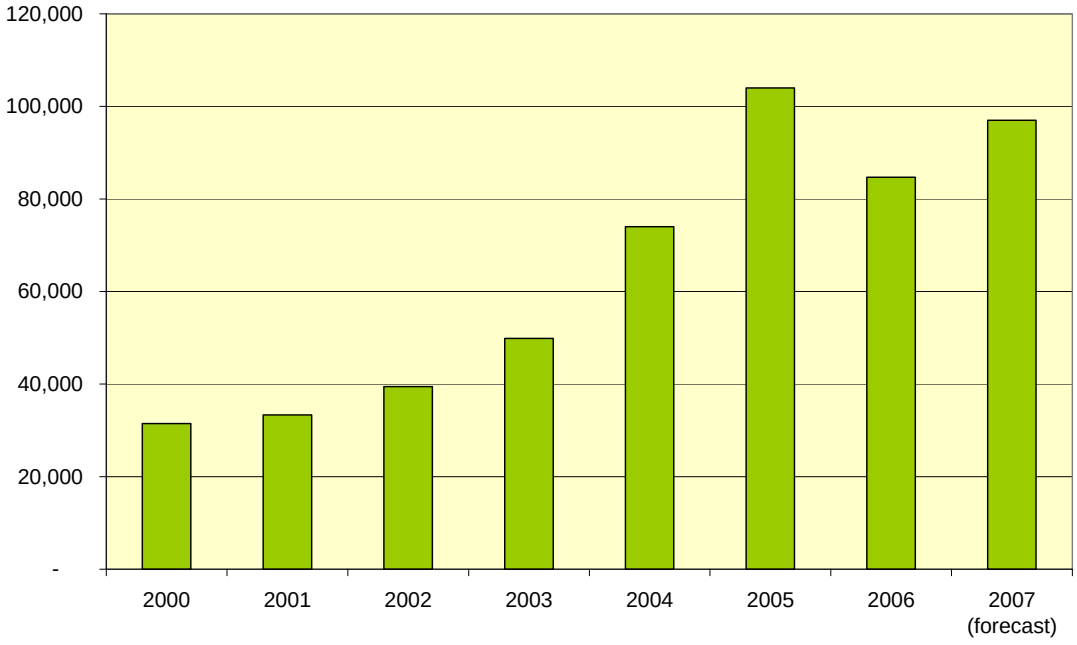
Figure 12 Modal split for freight loaded at Port of Tauranga



Interpretation: Overall modal split figures have remained constant over the past three years with approximately 40% volume transported by rail, 50% by road and the remaining 10% by coast. The proportion transported by rail is forecast to decrease by approximately 1% in the next financial year. This is most likely a reflection of the log volume that is railed, which varies depending on whether the forests being harvested have rail access.

Analysis: The figures show a stable modal split for freight loaded at Port of Tauranga. Volumes of logs being railed are subject to some fluctuations depending on forest locations. In recent times this has been offset by increased volumes of containers being transported between Port of Tauranga and MetroPort in South Auckland (Figure 13). Again, these volumes are subject to some variations (the decline in 2006 was due to a reconfiguration of services following the Maersk takeover of P&O Nedlloyd). However, volumes are forecast to increase again for 2007.

Figure 13 Containers railed between Port of Tauranga and MetroPort (South Auckland)



6.2 Vehicle occupancy

6.2.1 Proportion of people who drove to work

Definition: Proportion of drivers amongst people who travelled to work by car, truck or van on census day. Measures of vehicle occupancy (a high proportion of drivers implies low vehicle occupancy rates). Source: Census 1996-2006, Statistics New Zealand.

Figure 14 Proportion of drivers for people travelling to work by motor vehicle

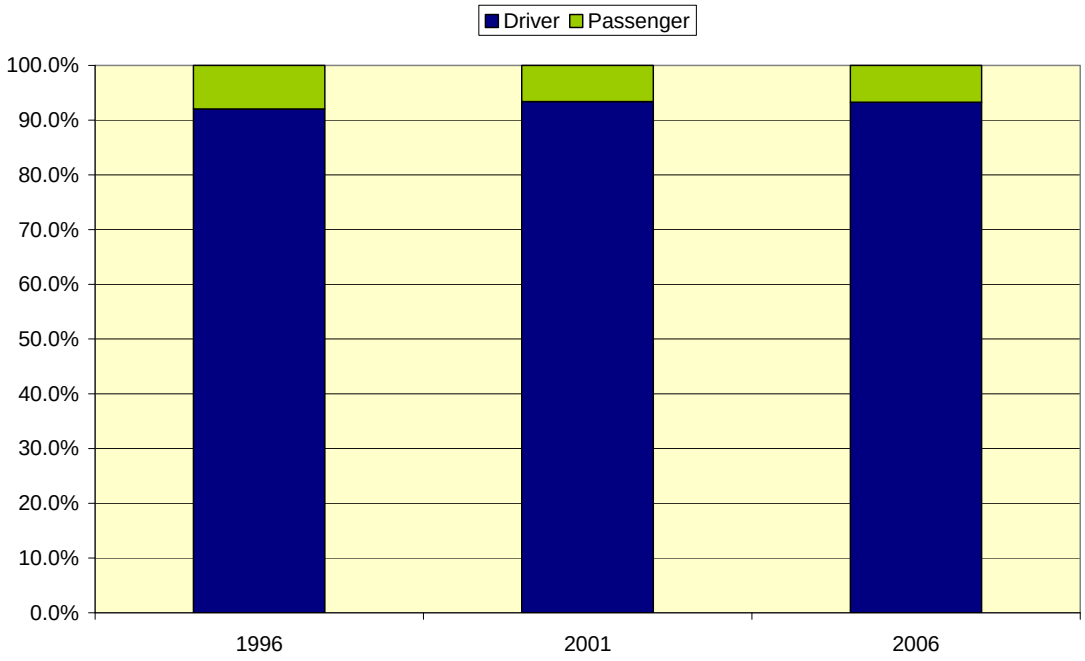


Table 5 Proportion of drivers for people travelling to work by motor vehicle (2006), by district/city

Local authority	Driver	Passenger
Kawerau District	90.7%	9.3%
Opotiki District	91.4%	8.6%
Rotorua District	91.8%	8.2%
Whakatane District	92.3%	7.7%
Tauranga City	94.2%	5.8%
Western Bay of Plenty District	94.4%	5.6%
Region	***93.3%***	***6.7%***

Interpretation: The graph shows that the proportion of drivers amongst people travelling to work by motor vehicle has been consistently above 90% in the past ten years. Table 5 breaks the 2006 figures down to the district level, showing that Kawerau district had the lowest ratio of drivers to passengers (90.7%) while Western Bay of Plenty District had the highest ratio at 94.4%, slightly above that of Tauranga (94.2%).

Analysis: Like the mode share figures, the proportion of drivers to passengers displays a highly unsustainable pattern of travel behaviour. The ratio of drivers to passengers is above 9:1, suggesting a very low vehicle occupancy rate. The figures do not account for non-working members of the population who may be sharing journey to work trips e.g. school age children. Regardless, the figures do show a very low level of car sharing between members of the workforce.

Some variation is apparent within the region. The highest proportions of drivers are found in the western Bay of Plenty subregion. However, there seems to be no differentiation between urban centres and more rural districts, with Rotorua registering the third lowest ratio of drivers to passengers.

6.3 Public transport use

6.3.1 Annual bus trips per person

Definition: Annual bus trips per person by district/city (data is currently not available for Western Bay of Plenty district services). Comparative measure of public transport use. Figures differentiate between services operating within large urban centres (Tauranga, Rotorua) and in districts with smaller urban centres (Whakatane, Opotiki, Kawerau). Source: patronage data supplied to Environment Bay of Plenty by operators. Note: Tauranga and Rotorua figures are withheld for one year for commercial reasons.

Figure 15 Annual bus trips per person, Tauranga and Rotorua

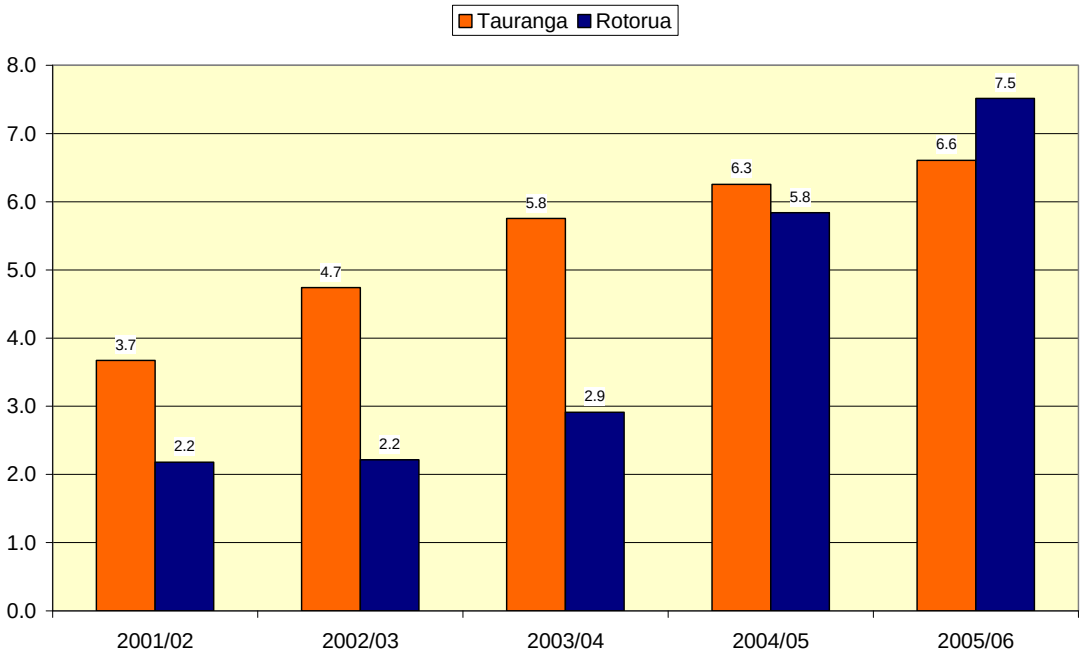
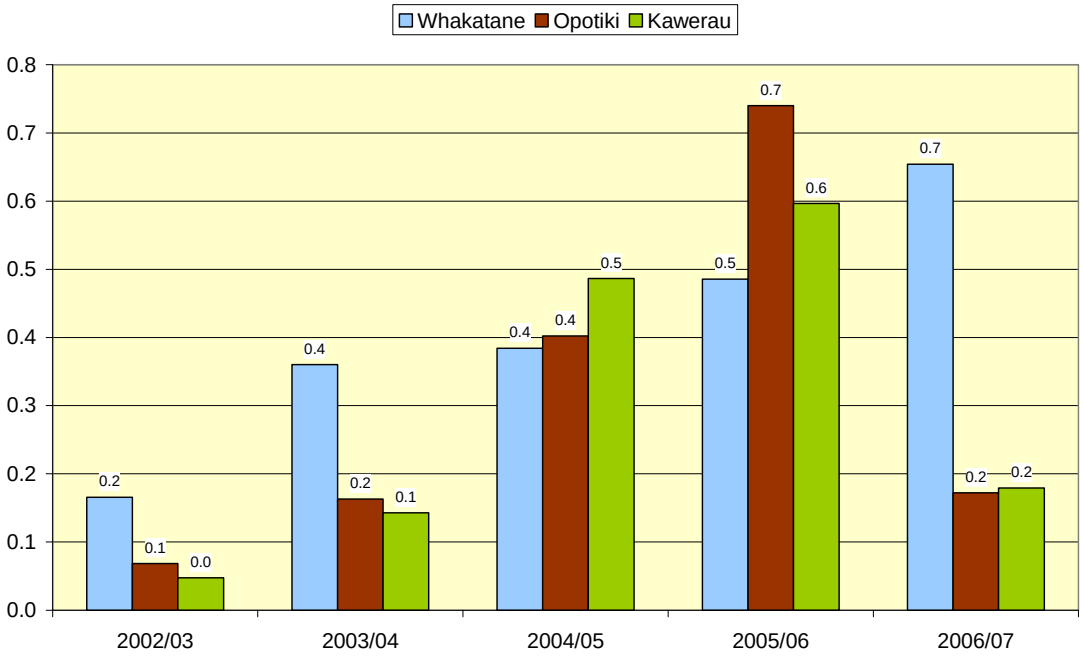


Figure 16 Annual bus trips per person, Whakatane, Opotiki and Kawerau



Interpretation: Trips per capita in Tauranga steadily increased over the recorded period to a high 6.6 trips per person in 2005/06. In comparison, trips per capita in Rotorua were fairly static before experiencing significant growth in the past two recorded years, albeit from a lower base than Tauranga. Annual bus trips per person in Rotorua outstripped those in Tauranga for the first time in 2005/06.

Whakatane has experienced a steady increase in patronage, generating 0.7 trips per capita in 2006/07 from a base of 0.2 in 2002/03. Figures for Opotiki and Kawerau in 2004/05 and 2005/06 are skewed by the recording of Whakatane Tauranga figures in patronage totals. Excluding the aforementioned years, trips per capita for Opotiki and Kawerau have been relatively static over the recorded period.

Analysis: The data shows steady growth in annual bus trips per person in the main urban centres of Tauranga and Rotorua. However, as the mode share data indicates, public transport use is not necessarily replacing private motor vehicle use during periods of peak demand e.g. journeys to and from work.

Whakatane is also experiencing steady growth in trips per capita, although from a much lower base than Rotorua and Tauranga. A realistic short-term target for Whakatane would be achieving more than 1 annual trip per person. Opotiki and Kawerau trips per capita are relatively static and are likely to remain so unless there is an increase in service frequency.

6.4 Number of cyclists

6.4.1 Cyclist counts on key routes

Definition: Cyclist counts on key routes in Tauranga and Rotorua (conducted at the same sites, at the same time, on the same days each year). Measures use of a sustainable mode. Sources: Tauranga City Council and Rotorua District Council.

Figure 17 Cyclists counts on key routes, Tauranga and Rotorua

Date	Location		Cyclists
2006	Tauranga[4]	Cameron Rd	158
		Matapihi Bridge	245
2004	Rotorua[5]	Intersection Fairy Springs/Clayton/ Lake/Old Taupo Rds	93
		Intersection Edmond/Clayton Rds	27

[4] *The Tauranga counts were conducted 7-9am (morning peak) and 2-6pm (evening peak).*
[5] *The Rotorua counts were conducted 7:30-9am and 3-5:30pm.*

Figure 18 Cyclist and pedestrian count locations, central Tauranga

Figure 19 Cyclist and pedestrian count locations, central Rotorua

Interpretation: A limited amount of cycle count data has been collected in both Tauranga and Rotorua. This has been reported to establish a baseline for ongoing data collection.

Analysis: To date, data has only been collected on one year at each location. Cycle count data will need to be collected consistently in subsequent years to measure trends in cycle use. Clearly, there is limited data currently available and this data has been collected in different years using different methodologies. A lack of consistent data on cyclist numbers is an issue that has been identified in scoping the regional cycling and pedestrian strategy.

6.5 Number of pedestrians

6.5.1 Pedestrian counts on key routes

Definition: Pedestrian counts on key routes in Tauranga and Rotorua (conducted at the same sites, at the same time, on the same days each year). Measures use of a sustainable mode. Sources: Tauranga City Council and Rotorua District Council.

Figure 20 Pedestrian counts on key routes, Tauranga and Rotorua

Location		Pedestrians						
		2000	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**
Tauranga[6]	Cameron Rd	-	-	-	-	-	-	115
	Matapihi Bridge	-	-	-	-	-	-	35
Rotorua[7]	Central Mall	-	756	795	988	1015	885	900
	1289 Tutanekai	353	406	373	446	596	504	508
	1183 Hinemoa	514	407	370	368	289	320	270

Interpretation: A limited amount of pedestrian count data has been collected in both Tauranga and Rotorua. Data has only been collected for one year in Tauranga so no trends can be identified. This data has been reported to establish a baseline for ongoing data collection. Data has now been collected for several years in a number of locations in central Rotorua. A sample has been reported for three of the locations. The figures show that pedestrian numbers for the Central Mall and Tutanekai St locations have trended steadily upwards, with some fluctuations. In contrast, pedestrian numbers at the Hinemoa St location have generally trended downwards.

Analysis: The figures show that there is limited data currently available for Tauranga. The pedestrian count data has been collected using different methodologies in Tauranga and Rotorua. A lack of consistent data on pedestrian numbers is an issue that has been identified in scoping the regional cycling and pedestrian strategy.

[6] *The Tauranga counts were conducted 7-9am and 2-6pm.*
[7] *The Rotorua counts were conducted 10:30-11am and 2:30-3pm.*

Chapter 7: Economic Development

This chapter measures trends in economic development indicators. The following indicators are reported on:

Traffic volumes:	morning and evening peak flows on key congested routes
Travel times:	travel delay on key congested routes
Freight movements:	volume of exports loaded at Port of Tauranga

7.1 Traffic volumes

7.1.1 Morning and evening peak flows on key congested routes

Definition: Morning and evening peak traffic flows on key congested routes in Tauranga and Rotorua. Measures vehicle numbers on the region's roads. The traffic volumes are typically calculated from individual counts over one week intervals. Data was not collected on the same day and times varied slightly depending on location; the duration (1 hour) remained constant. Source: Transit New Zealand.

Figure 21 Morning and evening peak traffic flows on key routes, Tauranga (2006)

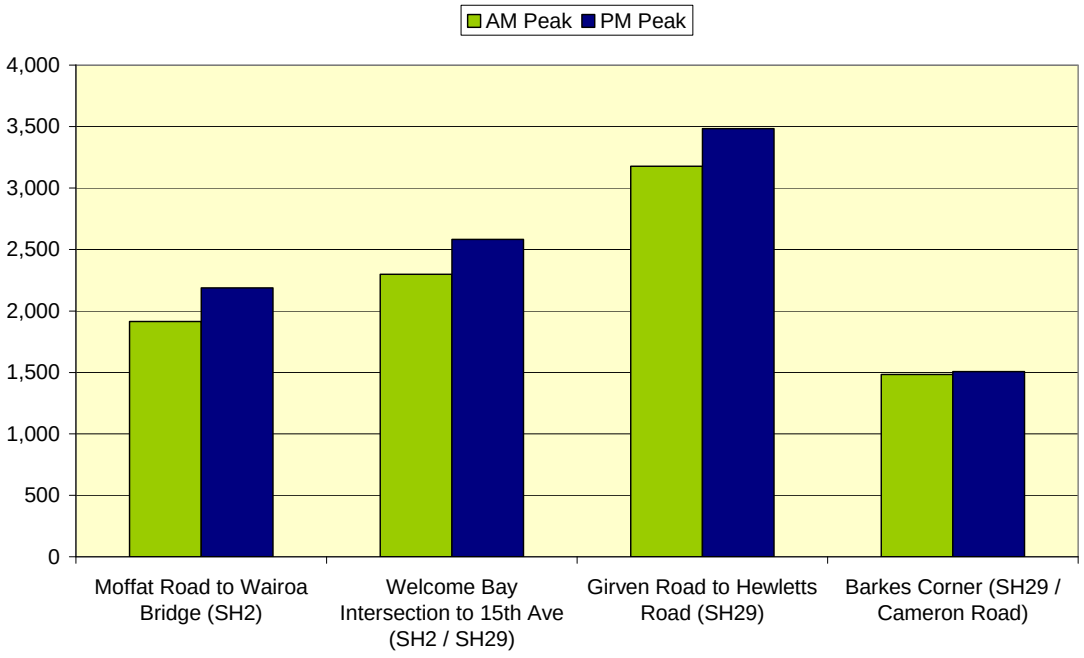


Figure 22 Peak traffic flow locations, Tauranga

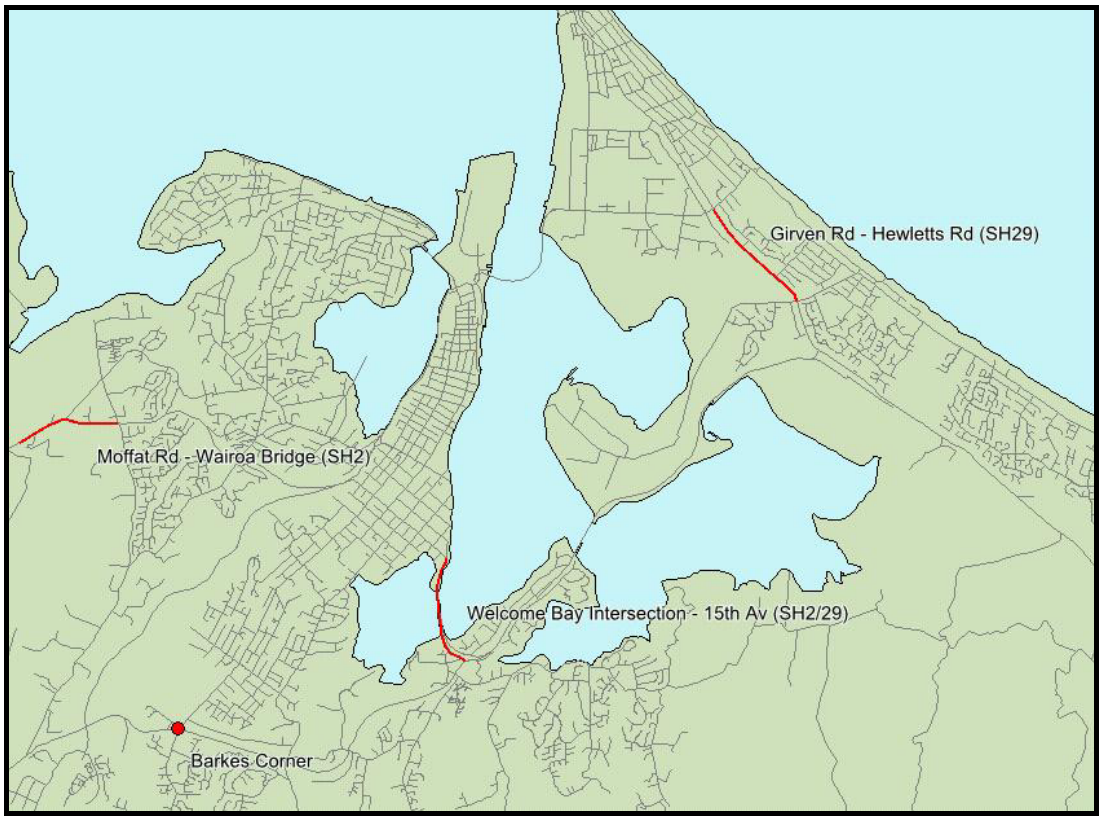


Figure 23 Morning and evening peak traffic flows on key routes, Rotorua (2006)

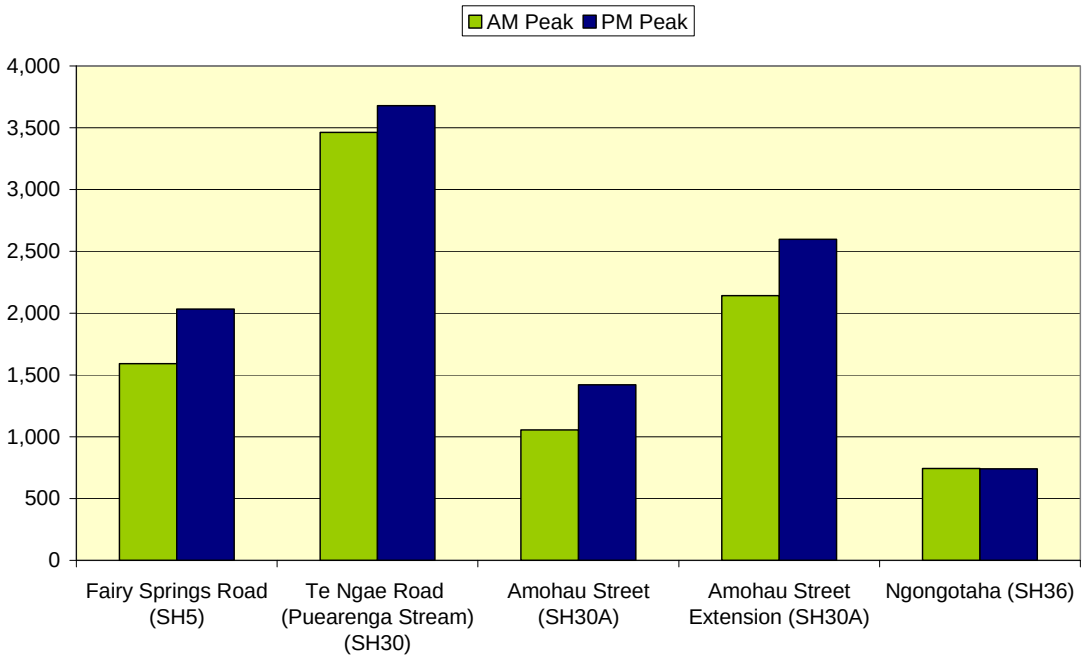


Figure 24 Peak traffic flow locations, Rotorua

Interpretation: The 2006 data has been reported to establish a baseline for this indicator.

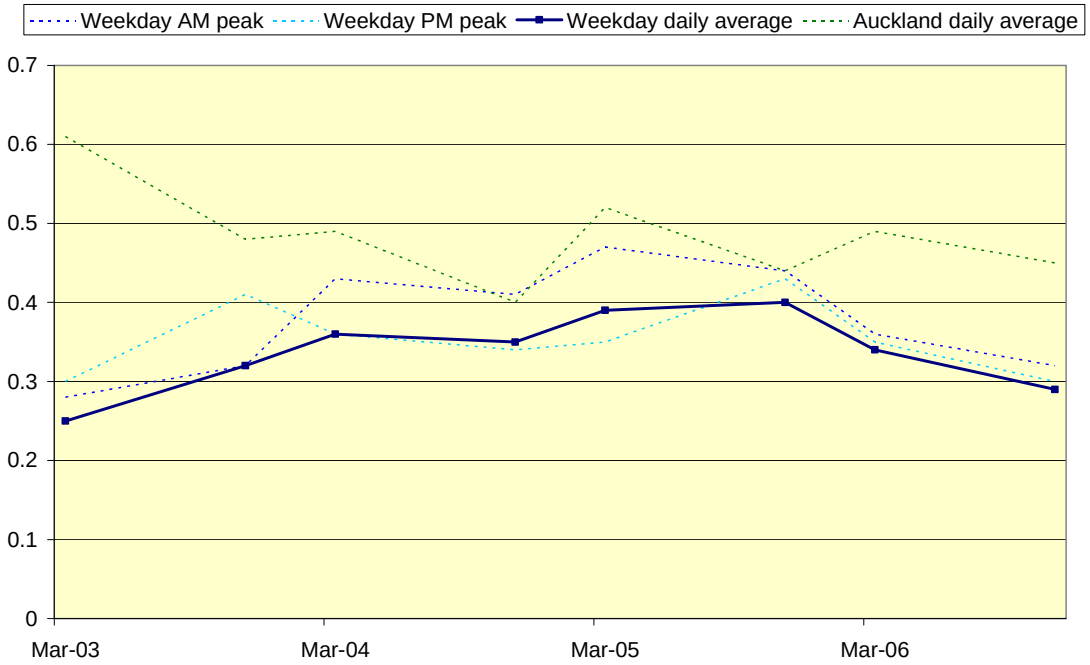
Analysis: The figures do show that evening peaks are uniformly higher than morning peaks. The busiest routes in Tauranga (Girven – Hewletts Rds) and Rotorua (Te Ngae Rd) display similar peak flows.

7.2 Travel times

7.2.1 Travel delay on key congested routes

Definition: Travel delay on key congested routes in Tauranga (minutes delay per km). Provides a measure of congestion using travel time delays as an indicator. ***Start times***: AM Peak 7:30am to 9:30pm, PM Peak 4:00pm to 6:00pm. ***Routes***: Route 1 – State Highway 2 and State Highway 33, Route 2 – State Highway 29 and the Harbour Bridge, Route 3 – Cameron Road and Marsh Street, Route 4 – Cambridge Road, Route 5 – Takitimu Drive, Route 6 - Fraser Street, 11th Avenue, Devonport Road, The Strand, and Dive Crescent, Route 7 - Maunganui Road, Rata Street and Totara Street, Route 8 - Domain Rd, Papamoa Beach Rd, Maranui Street and Girven Rd. Source Transit New Zealand Travel Time Performance Indicators Report.

Figure 25 Minutes delay per km on key congested routes in Tauranga



Interpretation: Travel time delays in Tauranga increased at a steady rate between March 2003 and November 2005, peaking at approximately 0.4 minutes delay per km in March and November 2005. Average time delays have reduced for two consecutive surveys since November 2005. Auckland data has been included for the purposes of comparison. Figures show that average travel time delays in Tauranga are consistently below those of Auckland, although the difference was only 0.04 minutes in November 2005.

Analysis: There was a promising downward trend in travel time delays on the Tauranga network in 2006. However, results from subsequent surveys are required to confirm this trend as the data is subject to some oscillations.

7.3 Freight movements

7.3.1 Volume of exports loaded at Port of Tauranga

Definition: Gross weight of overseas cargo loaded at Port of Tauranga (tonnes). Provides an indicator of infrastructural capacity in terms of the movement of goods. Sources: Overseas Cargo Statistics, Statistics New Zealand.

Figure 26 Volume of exports loaded at Port of Tauranga (tonnes)

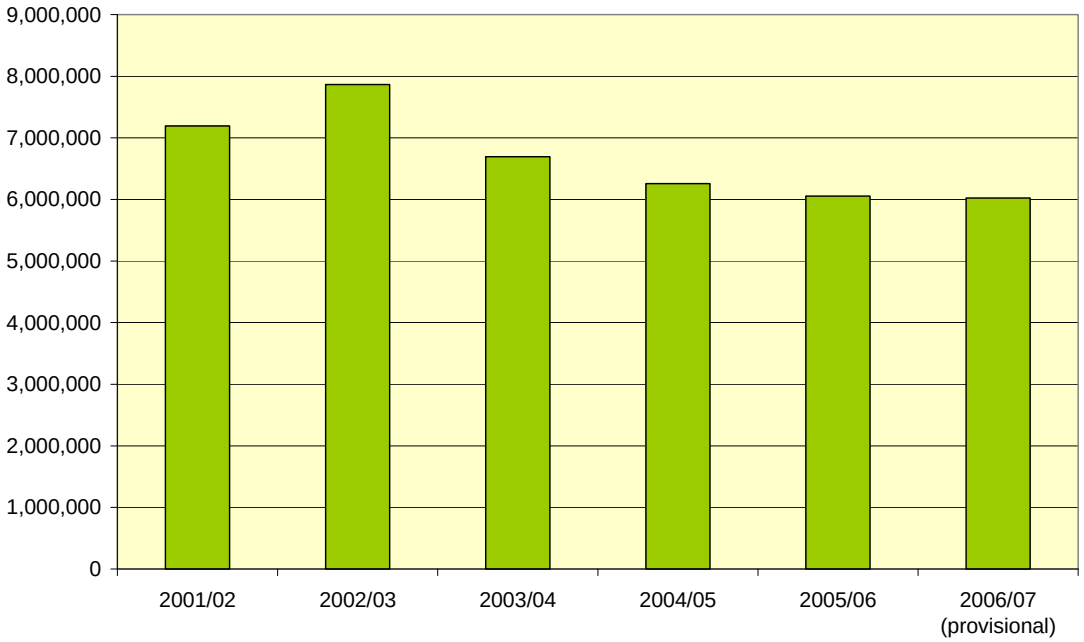
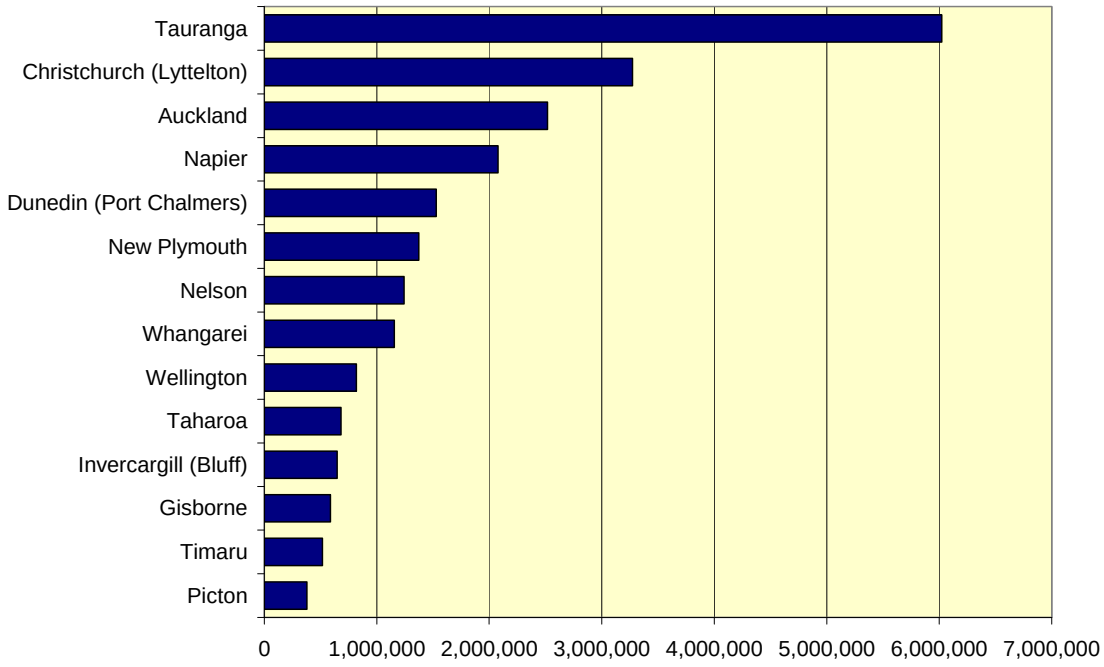


Figure 27 Volume of exports loaded at New Zealand ports 2006/07 (tonnes)



Interpretation: Figure 26 shows that the annual volume of exports loaded at the Port of Tauranga has been consistently above the 6 million tonnes mark over the past few years. Provisional results for 2006/07 show a very similar volume of exports to that of the preceding financial year. Export volumes peaked at 7.87 million tonnes in 2002/03. Tauranga ranks as New Zealand's most significant port by volume exported, accounting for almost twice the volume of the next ranked port (Figure 27).

Analysis: The figures demonstrate that Port of Tauranga is unique in the New Zealand context in terms of the volume of exports that pass through it. Data from

preceding years also indicates that the port has the infrastructural capacity to handle significantly higher volumes of export goods. In 2002/03, almost 2 million more tonnes were exported than in 2006/07 (31% above current levels). The impacts on the region's land transport system of returning to these volumes (or exceeding them) would largely depend on the origins of the freight and the mode used to transport it.

Chapter 8: Energy Efficiency

This chapter measures trends in energy efficiency indicators. The following indicator is reported on:

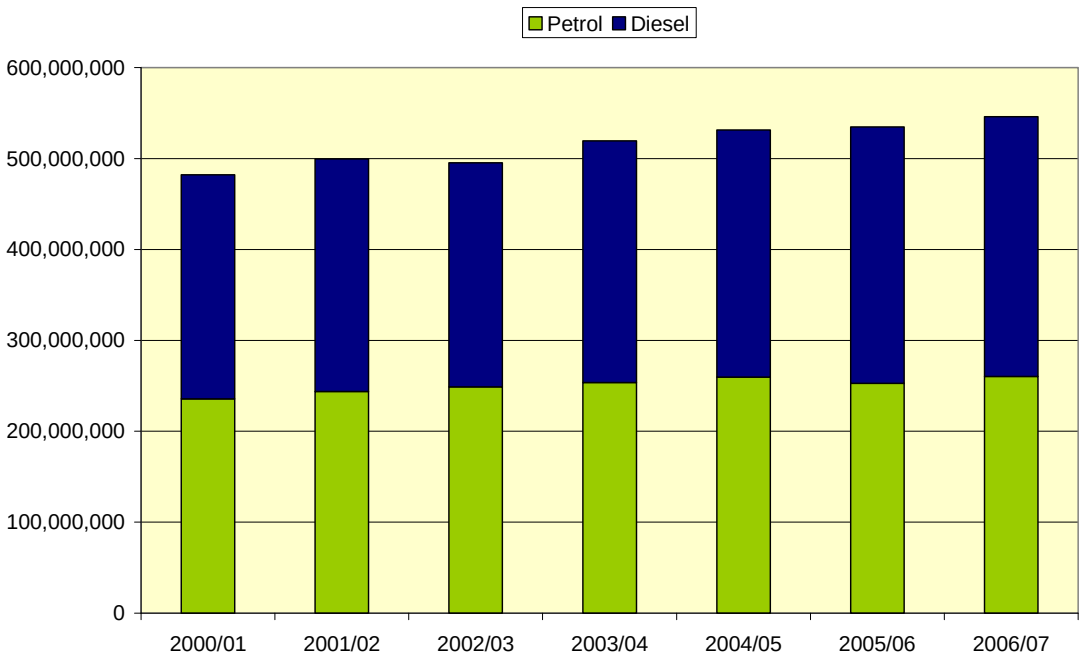
Fuel consumption: quantity of fuel sold

8.1 Fuel consumption

8.1.1 Quantity of fuel sold

Definition: Quantity of petrol and diesel sold in the Bay of Plenty (local authority fuel tax boundaries). Provides a measure of fuel use in the region. Source: sales figures collected for taxation purposes.

Figure 28 Quantity of fuel sold in the Bay of Plenty (litres)



Interpretation: The graph shows a steady upwards trend in overall fuel sales. In general, diesel sales have increased at a faster rate than petrol sales. In the 2006/07 year, diesel accounted for 52% of sales by volume. For the purposes of comparison, the Wellington region recorded overall fuel sales of 464 million litres in 2005, somewhat less than the Bay of Plenty despite having a significantly larger population base. The two regions also display different fuel sales profiles, with diesel

making up less than a third of Wellington fuel sales, compared with over half in the Bay of Plenty.

Analysis: In recent years, fuel sales in the Bay of Plenty have generally kept apace with the changes in the region's vehicle fleet (see Figure 6). For example, a decrease in registered vehicles between 2001 and 2002 was reflected in a dip in fuel sales in the 2001/02 financial year. Fuel sales increased by 2.1% in 2006/07, while the number of registered vehicles grew by 1.7%, suggesting little improvement in fuel efficiency is being achieved at the macro-scale.

Chapter 9: Access and Mobility

This chapter measures trends in access and mobility indicators. The following indicators are reported on:

Public transport coverage:	access to bus services
Accessible buses:	percentage of accessible buses
Total mobility:	registered users and number of trips

9.1 Public transport coverage

9.1.1 Access to bus services

Definition: Percentage of usually resident population living within 500m of a bus stop, Tauranga and eastern Bay of Plenty services (data is currently unavailable for the Rotorua service). Tauranga figure is for population within city boundaries. Eastern Bay of Plenty is for all Eastern Bay of Plenty services including Whakatane – Tauranga and Murupara services. Calculation assumes the population is evenly distributed over a meshblock. Sources: Environment Bay of Plenty, Tauranga City Council and Statistics New Zealand (Census 2006).

Table 6 Percentage of population living within 500m of a bus stop

	2006/07
Tauranga	**85.0%**
Rotorua[8]	**-**
Eastern Bay of Plenty	**15.1%**

Interpretation: Data on public transport coverage has been collected for the first time in the 2006/07 year to provide a baseline figure for future reporting. Levels of public transport accessibility are depicted in the maps on the following pages.

Analysis: Initial data shows that a high proportion of the Tauranga city population lives within 500m of a bus stop, although levels of service will vary. Future mapping could distinguish between levels of service within the 500m radius to provide a more complete picture of accessibility. While just over 15% of the eastern Bay of Plenty population lives within 500m of a bus stop, comparisons should not be made with

[8] *Although current data for the Rotorua service is not available, earlier work based on Census 2001 data found that 91.1% of the Rotorua population lived within 400m of a bus route.*

the Tauranga service given the much smaller and more dispersed population in the eastern Bay of Plenty. The maps show that eastern Bay of Plenty services do achieve a broad geographical coverage, albeit at a lower frequency.

Figure 29 Public Transport Accessibility - Tauranga

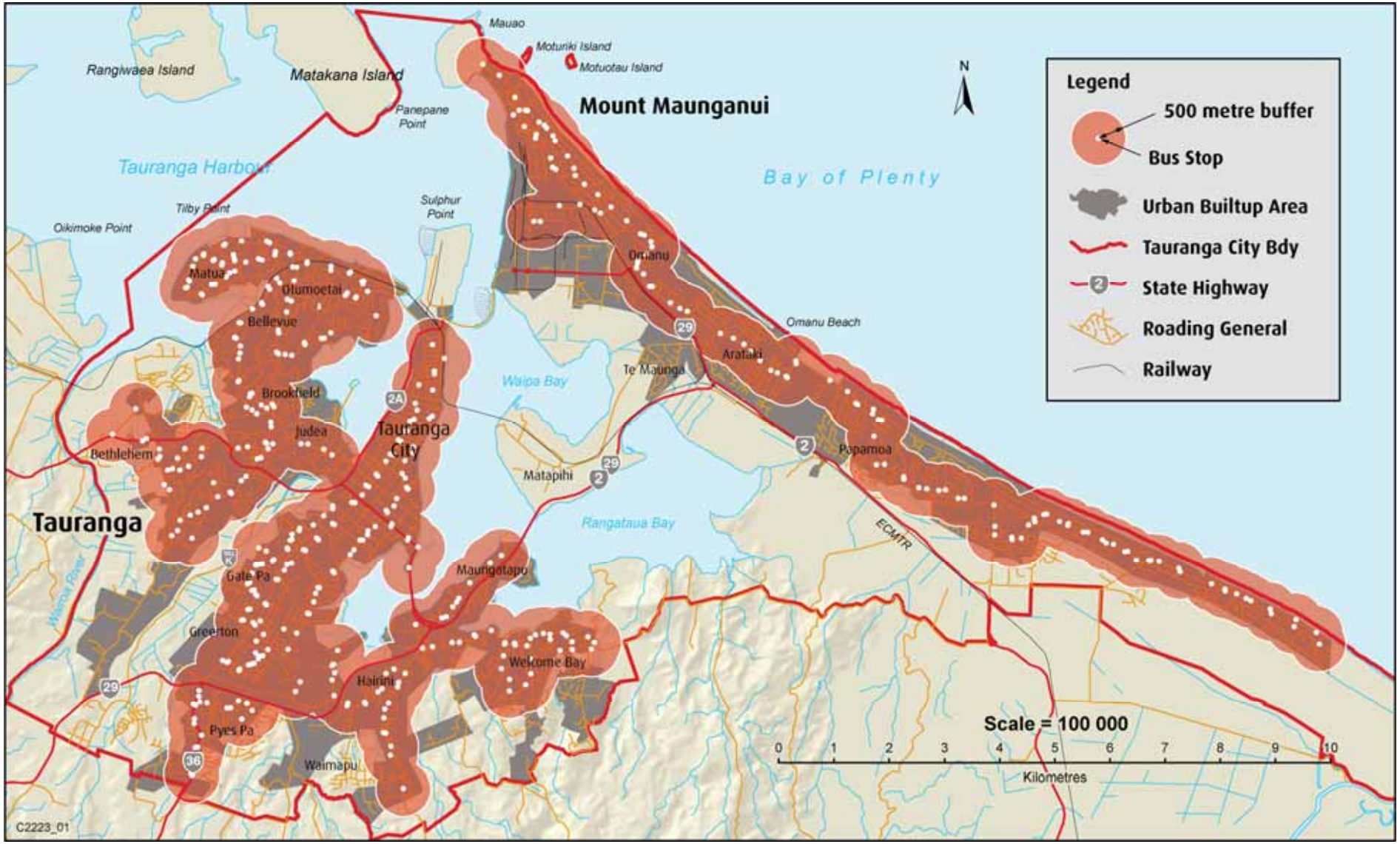


Figure 30 Public Transport Accessibility - Eastern Bay of Plenty

Figure 31 Public Transport Accessibility – Te Puke and Murupara

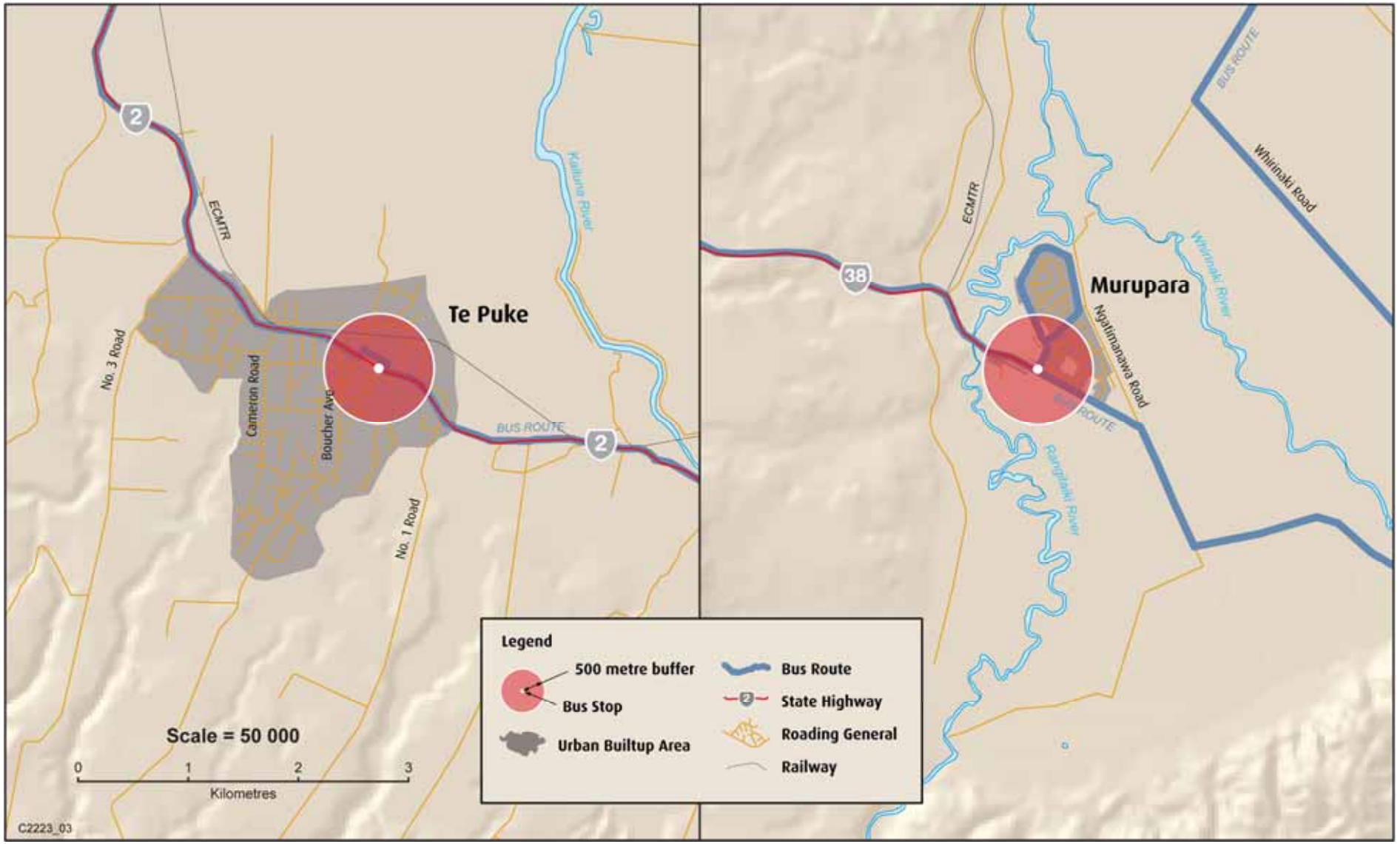


Figure 32 Public Transport Accessibility – Kawerau and Opotiki

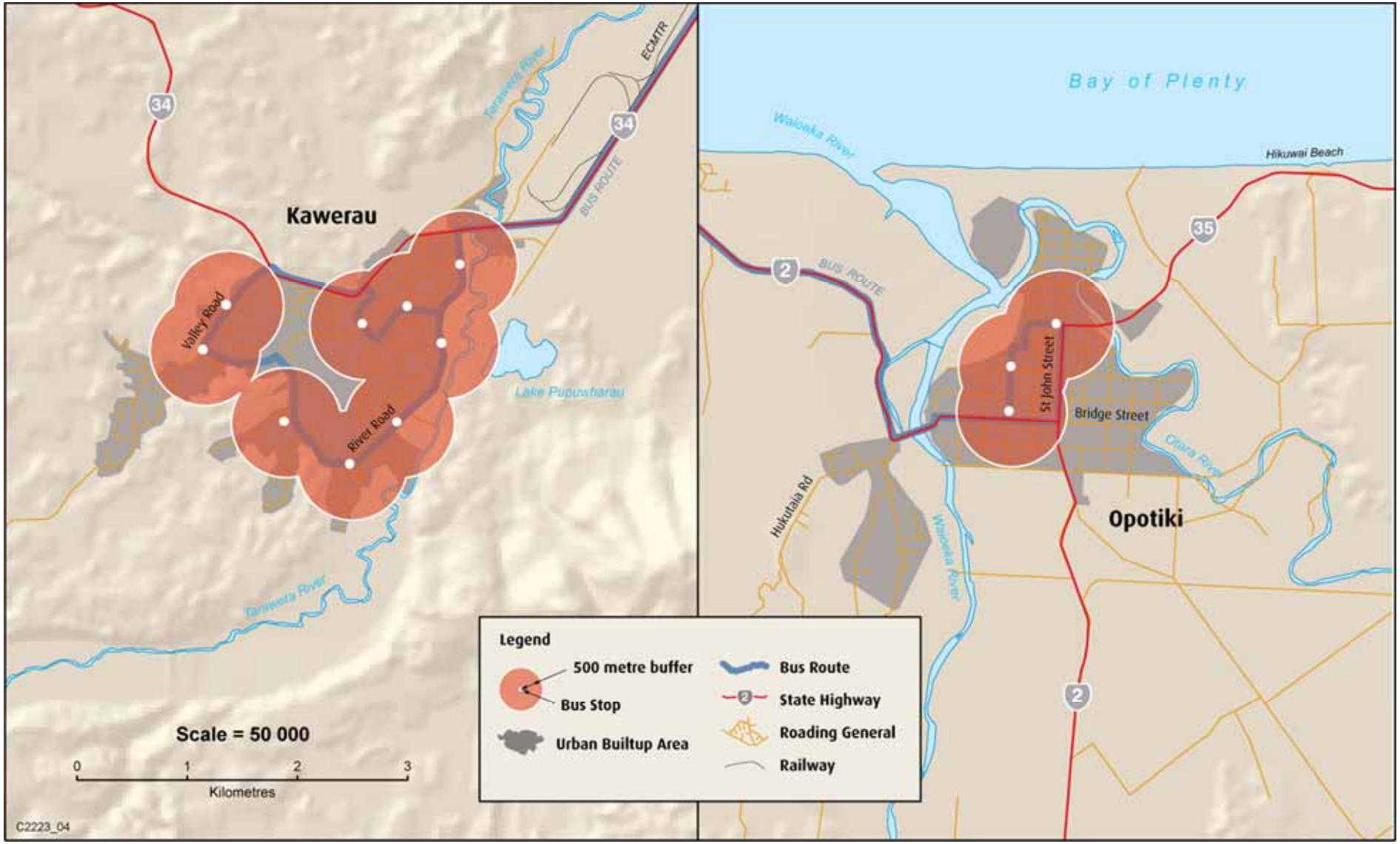
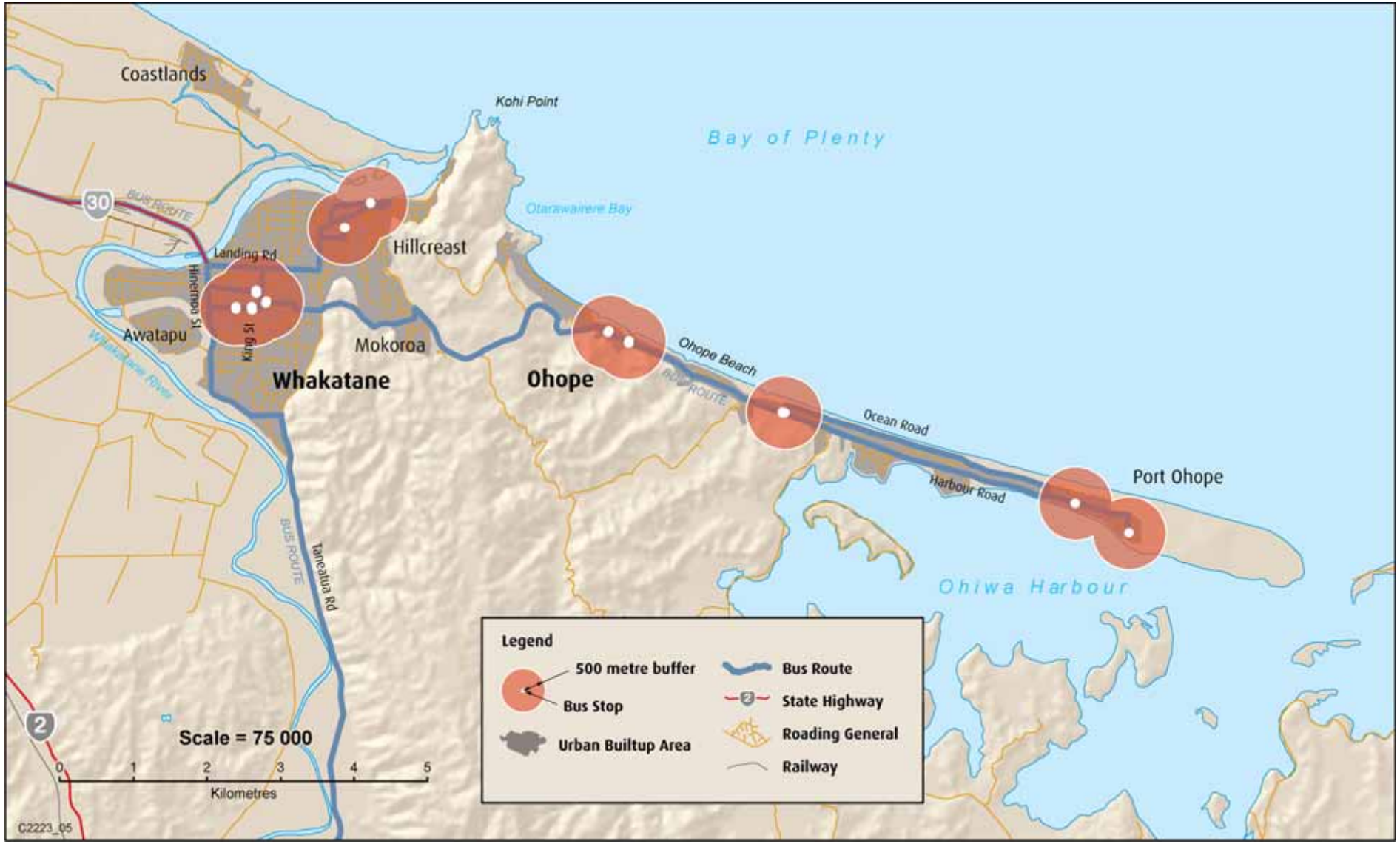


Figure 33 Public Transport Accessibility – Whakatane and Ohope



9.2 Accessible buses

9.2.1 Percentage of accessible buses

Definition: Percentage of accessible buses in the public transport system. The indicator provides a measure of accessibility for people with impairments. Accessible bus is defined as a two-door wheelchair accessible bus with low entry and exit areas without steps and without internal steps between the front and rear doors. Source: Environment Bay of Plenty.

Table 7 Percentage of accessible buses in the Bay of Plenty public transport system

	2006/07
Bay of Plenty	<5%

Interpretation: Data on the percentage of accessible buses has been collected for the first time in 2006/07 to provide a baseline for future reporting.

Analysis: The figure shows that only a very small proportion of the public transport fleet caters for people with impairments.

9.3 Total mobility

9.3.1 Registered users and number of trips

Definition: Number of registered users and number of trips taken using the region's total mobility scheme. The scheme provides subsidised fares and adapted vehicles for the mobility impaired. The performance indicator provides a measure of access to services for people with impairments. Source: Environment Bay of Plenty.

Figure 34 Total mobility scheme – registered users

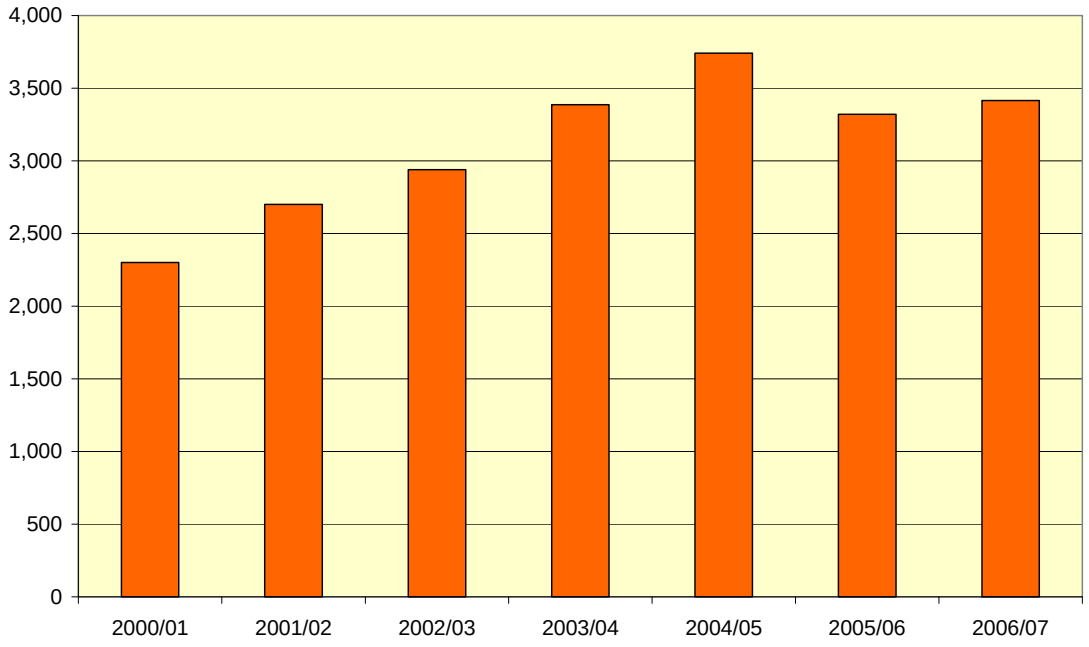
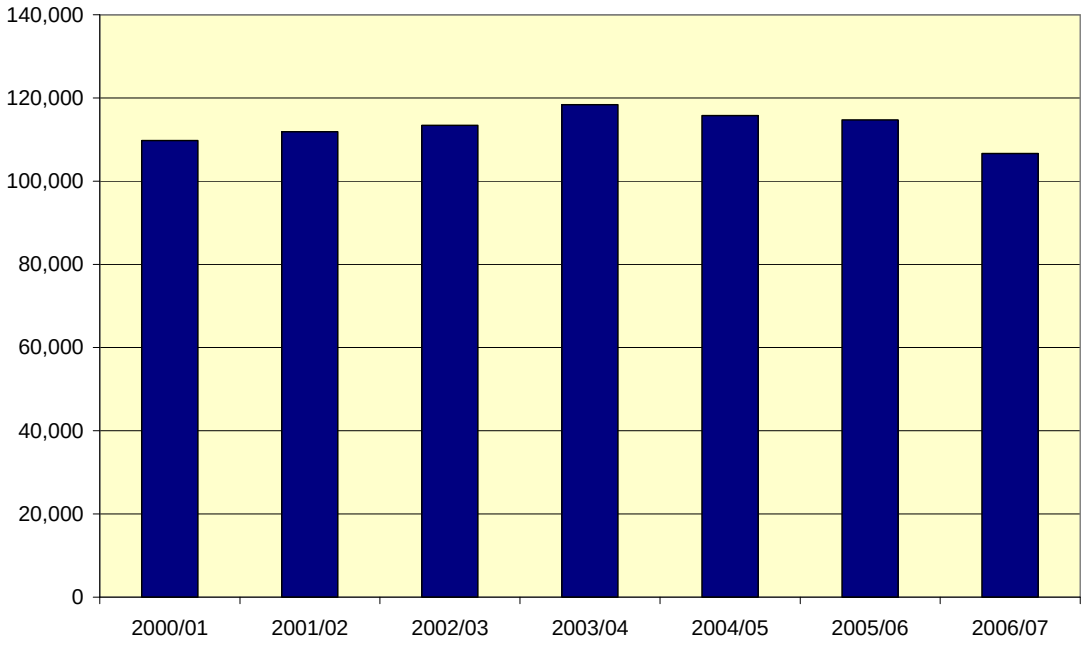


Figure 35 Total mobility scheme – annual number of trips



Interpretation: The number of registered users grew steadily to a peak of 3740 in the 2004/05 financial year. Numbers have levelled out at just under 3500 users in the past two years. The number of trips has remained fairly consistent at around 105 000 – 120 000 over the last seven years. Demand peaked with 118 000 trips taken in 2003/04. There was a slight drop in demand recorded in 2006/07 (106 600 trips).

Analysis: The figures indicate that the total mobility scheme has reached the point where service provision is meeting the levels of demand. In recent years both the number of registered users and the number of trips have plateaued or reduced slightly, rather than continuing to grow at previous rates. Feedback suggests that there is a link between increasing bus patronage and a reduction in total mobility trips. Increased bus frequency in Tauranga and Rotorua has enabled some scheme members to substitute total mobility trips with bus trips. Total mobility is still being used for longer journeys where door to door service is essential e.g. hospital visits or appointments with health specialists.

Chapter 10: Public Health

This chapter measures trends in public health indicators. The following indicators are reported on:

Transport emissions:	levels of carbon monoxide and particulate matter
Unsealed roads:	length and amount of traffic

10.1 Transport emissions

10.1.1 Levels of carbon monoxide and particulate matter

Definition: An 8 hour moving average of carbon monoxide (CO) and particulate matter (PM10) measured against the equivalent national environmental standard. The levels of CO and PM10 are recorded at fixed sites (residential) in Tauranga and Rotorua to provide a background measure of transport related emissions. Source: Environment Bay of Plenty.

Figure 36 Carbon monoxide levels, Otumoetai Rd, Tauranga

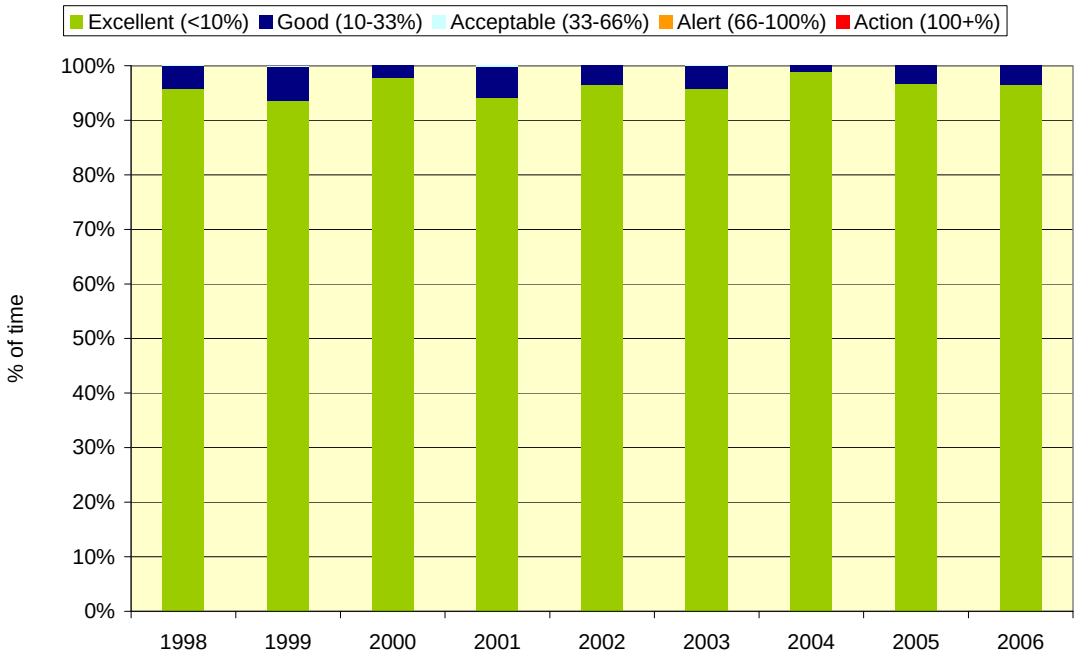


Figure 37 Carbon monoxide levels, Pererika St, Rotorua

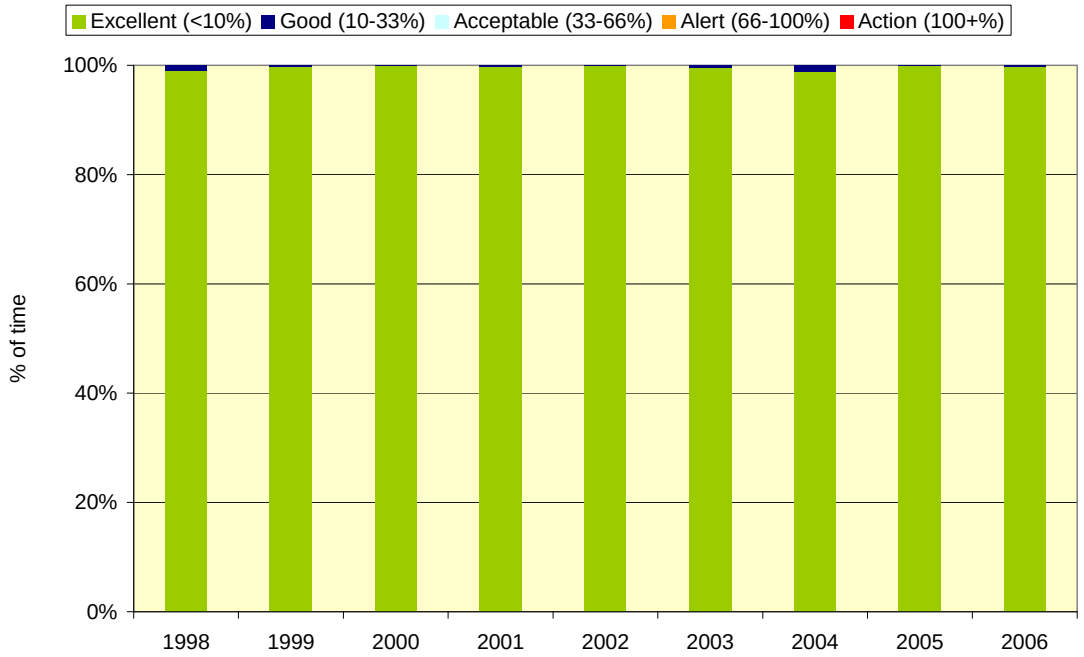


Figure 38 Particulate matter (PM10) levels, Otumoetai Rd, Tauranga

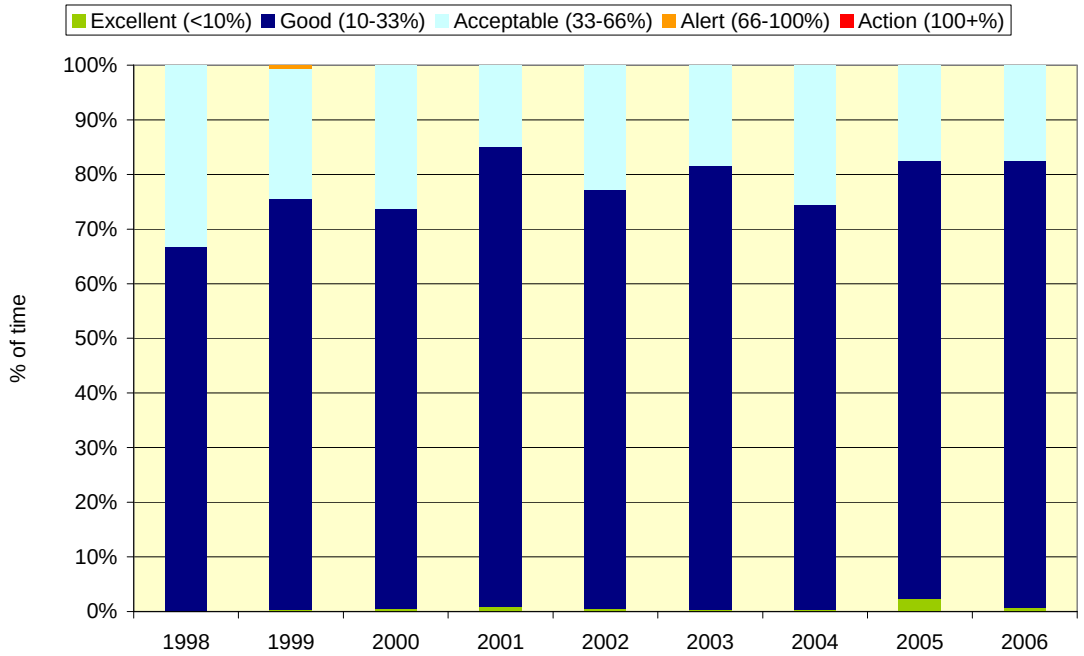
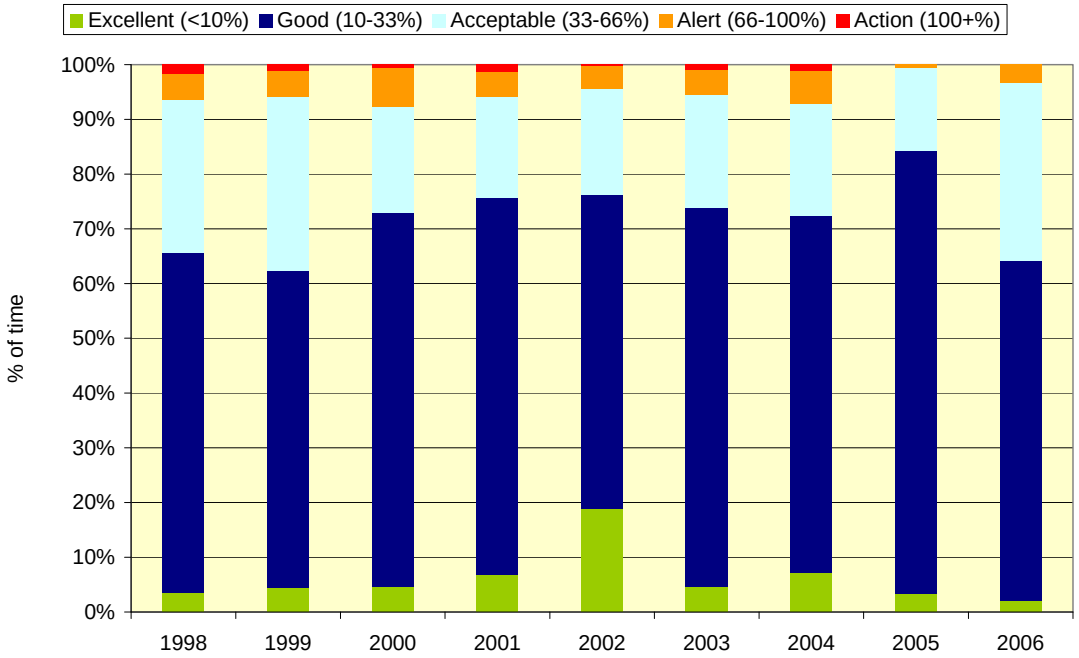


Figure 39 Particulate matter (PM10) levels, Pererika St, Rotorua



Interpretation: The Tauranga and Rotorua sites display similar results for background levels of carbon monoxide. The vast majority of readings show carbon monoxide levels as being 'excellent' (less than 10% of the equivalent national environmental standard). The Rotorua figures show slightly more readings in the 'good' category and 20 readings at 'acceptable' levels in 2001. Background levels of carbon monoxide have generally reduced since 2001.

Both the Tauranga and Rotorua sites show significantly higher levels of particulate matter when measured against the equivalent national environmental standard. The majority of readings in Tauranga register as 'good' or 'acceptable'. 'Alert' levels were reached on two occasions in 1999, but have not been repeated in subsequent years. Readings in Tauranga have shown signs of relative improvement in the past two years.

Figures for the Rotorua site were somewhat poorer than those for Tauranga. Levels of particulate matter were recorded as being above acceptable levels on numerous occasions between 1998 and 2004. The national environmental standard was also exceeded several times during these years. Like Tauranga, some improvement has been evident, with no breaches of the national environmental standard since 2004.

Analysis: Results indicate that background levels of carbon monoxide are not problematic in either of the region's two largest urban centres. Levels of particulate matter associated with diesel combustion appear to be more of an issue, particularly in Rotorua. Levels have exceeded the 'acceptable' threshold numerous times in recent years. While there are some signs of improvement, further evidence is required to establish whether this is a trend reflecting better environmental practices, including the reduction of particulate emissions from heavy vehicles.

10.2 Unsealed roads

10.2.1 Length and amount of traffic

Definition: Percentage annual reduction in the length of unsealed roads, and the average amount of traffic on unsealed roads, by district/city. The indicators provide a measure of the amount of dust generated by traffic on unsealed roads. Source: district and city councils.

Figure 40 Bay of Plenty local authority seal extension programmes (2006/07)

District/City	Total length of unsealed roads at year end (km)	Total length of seal extensions completed in 2006/07 (km)	Percentage reduction in length of unsealed roads	Vehicle kms travelled per km of unsealed road per day
Western Bay of Plenty	288	10.0[9]	3.4%	73.7
Whakatane	216.4	4.0	1.8%	84.8
Rotorua	183	7.0	3.7%	50.4
Opotiki	192.8	2.9	1.5%	15.2
Tauranga	0.4	0.4	50%	n/a
Kawerau	0[10]	n/a	n/a	n/a

Interpretation: Four districts within the region currently have substantial lengths of unsealed roads (Western Bay of Plenty, Whakatane, Rotorua, Opotiki). The figures show that all four are actively undertaking seal extension programmes. Unsealed roads in the Whakatane and Western Bay of Plenty districts carry the most traffic per kilometre.

Analysis: The Whakatane and Western Bay of Plenty stand out as the districts in which unsealed roads are used the most. While population proximity is also a factor in terms of public health impacts, these are parts of the region where dust nuisance may be an issue. The figures demonstrate that both districts are actively reducing the amount of dust generated through seal extension programmes and dust suppression measures.

[9] *Applied an additional 7.5km of fabric seals for dust suppression.*
[10] *No unsealed roads accessible to the public.*

Chapter 11: Implementation Progress

11.1 Activity in 2006/07

This section summarises RLTS implementation progress to 30 June 2007. The primary focus during the reporting period was the RLTS review and related work. On completion of the review, an RLTS implementation plan was developed and work commenced on implementing the priority actions in the reviewed strategy.

The main activities in 2006/07 included:

- RLTS review - approval and release of draft strategy (August 2006)
  - public consultation (August – September 2006)
  - hearings (October 2006)
  - RLTC recommends approval of bulk of strategy and releases decisions (February 2007)
  - RLTC recommends approval of remaining draft provisions (May 2007)
  - Final RLTS released (June 2007).
- Ongoing development of the Bay of Plenty transport funding package.
- RLTS performance indicators developed and data collected.
- RLTS Implementation Plan developed and approved (May 2007).

The RLTS Implementation Plan was developed to guide implementation over the 3 year life of the 2007 RLTS. The 66 actions in the strategy were divided into 26 project-based actions and 40 ongoing or process-orientated actions. The project actions were then prioritised and programmed for implementation in either year 1 (2007/08), year 2 (2008/09) or year 3 (2009/10). Work then commenced on the year 1 priority actions prior to the end of the 2006/07 year. Work also continued on a number of the ongoing actions in the strategy. The attached tables report on implementation progress to up until 30 June 2007.

11.2 Priority project actions

11.2.1 Year 1 actions

Implementation Order	Action	Responsibility	Progress
1	4.4 Establish a joint TCC, Environment BOP and Land Transport NZ working group in order to progress and align public transport in Tauranga	TCC, Environment BOP, Land Transport NZ	The development of a Heads of Agreement to formalise a partnership with Tauranga City Council (TCC) was put on hold pending the outcomes of a review of how the Regional Council delivers its land transport functions. Environment Bay of Plenty and TCC staff continued to meet regularly on matters relating to the Regional Council's Tauranga bus service. One of the priority tasks was to develop proposals for improving the Tauranga bus service in 2007/08. The two organisations also continued developing a Tauranga passenger transport model and a joint marketing and communications plan for Tauranga buses.
2	4.5 Establish a Joint Officials Group to progress the Ministry of Education's proposal in relation to school buses in Tauranga	Environment BOP, MoE, TCC, WBOPDC, Land Transport NZ	A group has been established. A draft Memorandum of Understanding between Environment Bay of Plenty, TCC and the Ministry of Education was in the process of being prepared.
3	9.4 Establish a priority road route between the western Bay of Plenty sub-region and the Waikato, and into Auckland	SmartGrowth Implementation Committee, Environment BOP, in conjunction with Transit, TCC, WBOPDC (also consult with Environment Waikato, Auckland regional authorities)	This action is being addressed in an Inter-regional Transportation Study being led by Environment Waikato. A Project Steering Group including representatives from Environment Waikato, Environment Bay of Plenty, Auckland Regional Council, Taranaki Regional Council, Transit, ONTRACK and Land Transport NZ held an initial meeting and a draft Terms of Reference was developed.

Implementation Order	Action	Responsibility	Progress
4	4.8 Investigate and implement a regional pedestrian and cycling strategy initiative	Environment BOP to lead, all implementing agencies to contribute	Initial scoping commenced on this strategy.
5	9.7 Undertake work to ensure that the existing rail corridor between the Bay of Plenty, Waikato and Auckland has the necessary protection and capacity to allow increased use and movement of freight in the long-term	Environment BOP to lead, input from ONTRACK, Toll, Port of Tauranga, territorial authorities, Environment Waikato	Was yet to commence.
6	1.8 Implement the actions contained in the SmartGrowth / Smart Transport Tauranga Eastern Corridor Study: - RPS Change 2 - Plan Change 44 (Wairakei) - Plan Change 33 (Rangiuru) - Location/design of Wairakei town centre - Funding plan for Eastern Corridor - Transport network layout for Eastern Corridor - Investigate effects of proposed land use changes on transport network - Investigate provision for alternative modes.	Smart Transport, SmartGrowth IMG, TCC, WBOPDC, Transit, Land Transport NZ, Environment BOP, key stakeholders	<u>RPS Change 2</u> Change 2 appeals were being progressed. Meetings were held with many of the appellant parties. Some appeals were to proceed to an Environment Court hearing. Key appeals for the Eastern Arterial were around the development timing of Te Tumu (Tauranga City Council, SmartGrowth, Te Tumu Landowners Group and Ford Land Holdings Pty appeals) and Tara Road future land use (Brunning and Hurst Family Trust appeal). <u>Plan Change 44 (Wairakei)</u> The stormwater parts of the Plan Change hearings were to be reconvened to receive further work that had been undertaken in the past 12 months involving all parties. Stormwater consents and designations have held-up decisions on Plan Change 44 to urbanise Wairakei. Further stormwater consents were to be lodged by Tauranga City Council for the Bell Road catchment. <u>Plan Change 33 (Rangiuru)</u> Appeal by Transit NZ was being progressed by Western

Implementation Order	Action	Responsibility	Progress
			Bay of Plenty District Council. ONTRACK were a section 274 party. <u>Location/design of Wairakei town centre</u> Awaiting decisions on Plan Change 44 (Wairakei). <u>Funding plan for Eastern Corridor</u> Transit was working on a cost estimate for Phase 1 of Tauranga Eastern Motorway. <u>Transport network layout for Eastern Corridor</u> Network layout (i.e. what the motorway may look like and implications for local road network) was considered as part of scoping the potential cost. <u>Investigate effects of proposed land use changes on transport network</u> Updated SmartGrowth land use and growth projections were used for predicting Eastern Corridor road network requirements. <u>Investigate provision for alternative modes</u> No information was available.
7	2.3 Reduce truck volumes in residential, pedestrian and any other inappropriate areas	All (Environment BOP to coordinate; NZ Police, Toll Rail, ONTRACK, Port of Tauranga to contribute)	Was yet to commence.
8	5.7 Establish a regional business-based transportation stakeholder group	Environment BOP	Was yet to commence.

Implementation Order	Action	Responsibility	Progress
9	7.1 Review the Total Mobility Programme as an input to the revised Regional Passenger Transport Plan	Environment BOP, Land Transport NZ	Was yet to commence.

11.2.2 **Year 2 action**

Implementation Order	Action	Responsibility	Progress
13	7.3 Investigate any impediments to major access routes for remote areas	Environment BOP to coordinate, all implementing agencies to contribute	While this is a Year 2 action, the RLTS Implementation Team held initial discussions on the issue to enable funding to be secured for completion next financial year. The project is likely to involve a risk assessment of road and rail routes in the region to establish the priority route security issues and recommend work that needs to be done.

11.3 Ongoing actions

Action	Responsibility	Progress
3.1 Maintain regular contact with central government in order to anticipate and make a contribution to national transport policy	Environment BOP to lead, all agencies to be involved	- Staff regularly attended Passenger Transport Advisory Group and Regional Transport Officer meetings throughout the year. - Regional comments on rail collated and forwarded to Local Government NZ (June). - Staff attended a Ministry of Transport forum for regional councils on the Next Steps Review (June). - Ministry of Transport subsequently invited to present to the RLTC on the Next Steps Review and the Regional Fuel Tax.

Action	Responsibility	Progress
4.7 Continue with stock truck effluent programmes	Environment BOP, territorial authorities, Transit	Waiotahi (eastern Bay of Plenty) dump station was built.
4.9 Implement local pedestrian and cycling strategies	Territorial authorities, Transit	<u>Opotiki District</u> A pedestrian/cycling strategy is programmed. <u>Rotorua District</u> - Rotorua has an existing Bike Rotorua Strategy (2nd year). The network is continually extending with the regular addition of new facilities. Cycling data will be collected in the 2008/09 financial year. - The Ministry of Health completed a study with short, medium and long term recommendations for improvements. The focus being on connections to the CBD. The CBD and modal change are also key components of Rotorua's draft Transport Demand Strategy, which was developed in 2006/07. - A new Rotorua cycling map was created. This is free of charge and includes information on infrastructure and tracks. <u>Tauranga City</u> Implementation of the Integrated Transport Strategy continued in 2006/07. Progress on pedestrian/cycling elements included: - Installation of 6 km of walkways / cycleways and cycle lanes for a city wide total of 50 km. - Installation of a further 4 km of footpaths as per the agreed LOS in the LTCCP. - Installation of 20(ish) cycles stands around the city. - Work on a citywide signage strategy for walking and cycling facilities. - Work was underway with Transit on SH walking/cycling facilities. <u>Western Bay of Plenty District</u> Development of a draft walking and cycling strategy continued. <u>Whakatane District</u> A draft Walking and Cycling Strategy was completed in February 2007. Council adopted the draft Strategy and approved it for public consultation in April.

<table>
<tr><th>Action</th><th>Responsibility</th><th>Progress</th></tr>
<tr><td></td><td></td><td><u>Transit</u>
Feasibility reports were programmed for projects in the following areas:
- Bethlehem
- Route J
- Poike Road
- Welcome Bay link to BOP Polytechnic
- Te Maunga (pedestrian link)
- Mourea Bridge (Okere Falls).</td></tr>
<tr><td>5.4 Implement the Bay of Plenty Rail Strategy 2005</td><td>Environment BOP, Toll Rail, ONTRACK, Land Transport NZ, Port of Tauranga, SmartGrowth Implementation Committee, Environment Waikato</td><td>The Rail Strategy was reviewed and updated. The purpose of the review was to update the 2005 strategy to:
• reflect the outcomes of implementation, particularly the western Bay of Plenty subregion rail workshop;
• include the recommendations from a comparative review of rail policy in the RLTS and SmartGrowth Strategy;
• incorporate information from other initiatives completed since the Rail Strategy was first produced e.g. Rotorua Strategic Rail Assessment; and
• include new information on recent rail trends in the region.</td></tr>
<tr><td>8.1 Understand the existing emissions profile</td><td>Environment BOP</td><td>The contribution made by transport emissions has been assessed as part of the Rotorua emissions inventory.</td></tr>
<tr><td rowspan="4">8.2 Undertake seal extensions to reduce dust</td><td rowspan="4">Territorial authorities</td><td colspan="4">The following seal extensions were completed in the 2006/07 financial year:</td></tr>
<tr><td>District/City</td><td>Total length of unsealed roads at year end (km)</td><td>Total length of seal extensions completed in 2006/07 (km)</td><td>Percentage reduction in length of unsealed roads</td></tr>
<tr><td>Western Bay of Plenty</td><td>288</td><td>10.0[11]</td><td>3.4%</td></tr>
<tr><td>Whakatane</td><td>216.4</td><td>4.0</td><td>1.8%</td></tr>
</table>

[11] Applied an additional 7.5km of fabric seals for dust suppression.

Action	Responsibility	Progress			
		Rotorua	183	7.0	3.7%
		Opotiki	192.8	2.9	1.5%
		Tauranga	0.4	0.4	50%
		Kawerau	0[12]	n/a	n/a
8.5 Actively encourage recreational walking and cycling	Territorial authorities, Environment BOP, Transit	Regional co-ordination of Bay of Plenty Bike Wise Week (February – March 2007).			
9.5 Develop strategic studies for key regional corridors	Transit to lead, with territorial authorities, Environment Waikato contributing	Work commenced on the western Bay of Plenty Northern Corridor and Rotorua strategic studies.			

[12] No unsealed roads available to the public.

11.4 Conclusion

The first part of the 2006/07 year was largely devoted to reviewing the RLTS. This process was longer and more complex than anticipated due to ongoing uncertainty about the cost of strategic roading projects and the implications for the Bay of Plenty transport funding package. Implementation proceeded more smoothly once the RLTS had been finalised and an implementation plan developed. An RLTS Implementation Team was convened and several priority actions were being progressed by the close of the 2006/07 year.

Chapter 12: Conclusions

This RLTS Annual Report 2006/07 is the first time data on regional land transport performance indicators has been collected and reported in the Bay of Plenty. The emphasis this year has been on establishing baselines to allow the setting of targets for subsequent years. The table below provides an initial assessment based on the data collected to date, while acknowledging that further information needs to be collected to provide a more complete picture of the progress against strategic outcomes in the RLTS.

The socio-economic indicators in Chapter 3 of the report provide the context for the assessment. The socio-economic indicators for the most part display trends that promote travel demand and increased use of the region's land transport system. These include population increases in the western Bay of Plenty sub-region, reductions in household size across the region, increasing vehicle access and a growing vehicle fleet. The only indicator suggesting a dampening effect is the slight downward trend in the number of new dwelling units authorised in the western Bay of Plenty subregion (where much of the demand for new housing is centred). The RLTS strategic outcome indicator trends need to be considered within this socio-economic context.

Key							
👍👍	significant progress towards outcome	👍	some progress towards outcome	👎	some regression from outcome	👎👎	significant regression from outcome
—	No change, or there is currently insufficient information to make an assessment						

Strategic Outcome	Assessment	
Integration and land use	A high proportion of residents in the western Bay of Plenty in particular travel outside their district of residence to work. The figures show there is some way to go before Live, Work and Play principles are reflected in more self-contained travel to work patterns. An initial count of transport interchanges shows a lack of opportunities to transfer between bicycles and other modes. More interchanges are likely to	—

Strategic Outcome	Assessment	
	be identified as familiarity with the definition increases.	
Safety and personal security	The region's crash rate rose again in 2006 following a recent downward trend. This is reflected in an increase in the number of recorded fatalities, serious injuries and minor injuries.	
Responsiveness	Figures on perceptions of public transport have been collected for 2 years only. More information is required to identify any trends.	
Sustainability	Figures show the increasing dominance of the motor vehicle as a means of travel to work, and negligible gains for public transport in terms of modal split. The proportion of drivers amongst those travelling to work is above 90% and increasing over time, suggesting low and decreasing vehicle occupancy rates. Modal split for freight transported to and from the Port of Tauranga is stable, with significant proportions transported by rail. There is an encouraging trend in the use of rail for the transport of containers. There have been steady gains in public transport usage in the two major urban centres. Limited information is currently available on the use of active modes.	
Economic Development	There was promising evidence of a downward trend in travel delays in Tauranga in 2006, although results from subsequent surveys are required to confirm this trend. Figures show that the Port of Tauranga has the infrastructural capacity to handle significantly larger export volumes.	
Energy Efficiency	Fuel consumption is generally increasing at the same rate as the size of the region's vehicle fleet, suggesting little improvement in fuel efficiency at the regional scale.	
Access and Mobility	Significant proportions of the population in the region's two largest urban centres live within walking distance of bus services. A much lower proportion of residents in areas outside these centres live within walking distance of a bus stop. However, services outside the cities do provide broad geographical coverage, albeit at a lower frequency. A very low proportion of the current bus fleet meets the definition of accessible. The number of registered users and trips taken using the region's total mobility scheme has plateaued recently, suggesting that service provision is meeting service demand.	

Strategic Outcome	Assessment	
Public Health	Monitoring shows background carbon monoxide levels as being 'good' to 'excellent' in both Tauranga and Rotorua. There are relatively higher levels of particulate matter, especially in Rotorua. However, there have been signs of slight improvement in the measurements from both cities in the past two years. The districts with higher volumes of traffic on unsealed roads are actively reducing the amount of dust generated through seal extension programmes and dust suppression measures.	

On current evidence, the region manages a pass mark for 2006/07 when land transport system performance is measured against strategic outcomes in the RLTS. The evidence collected to date shows there are significant challenges ahead, particularly in improving safety and personal security, and sustainability outcomes. There are also several information gaps that still need to be filled to provide a more complete picture of the region's land transport system.