Draft Wellington Regional Land Transport Strategy 2010 - 2040

Contents

Chapter	Page
Chair's foreword	3
Executive summary	4
Introduction	7
Vision	9
Pressures and issues	10
Strategy development	35
Objectives	37
Land transport outcomes	39
Strategy targets	43
Policies	47
Role of transport modes	58
Implementing the RLTS	66
Funding	76
Monitoring, evaluation and review	79
Assessment of the RLTS	82
Relevant regional economic or land-use considerations and likely funding	85
Role of education and enforcement	86
Independent Auditor statement	87
Summary of significance policy	88
Appendix 1 – Strategic transport network	89
Appendix 2 – Statutory context	92
Appendix 3 – Strategic options	103
Appendix 4 – Legislative alignment	111
References	119
Regional Transport Committee members	122

Chair's foreword

Forthcoming

Executive summary

The vision of the Wellington Regional Land Transport Strategy (RLTS) 2010 – 2040 is:

'To deliver, through significant achievements in each period[1], an integrated land transport system that supports the region's people and prosperity in a way that is economically, environmentally and socially sustainable.'

This RLTS has been developed within a broad legislative and policy framework. It meets the requirements of the Land Transport Management Act 2003 and supports the vision of the New Zealand Transport Strategy 2008, that is, *an affordable, integrated, safe, responsive and sustainable transport system.* The RLTS development also took into account the Government Policy Statement on land transport funding (GPS) 2009.

Regional pressures and issues

This strategy seeks to address key issues and pressures faced by the region including:

- Access to goods and services, employment and amenities
- Regional road safety, particularly for cyclists
- Severe traffic congestion, particularly at peak times
- East-west connections between key transport corridors and regional centres
- Reliability of the transport network
- Transport related greenhouse gas emissions
- Public transport capacity and mode share.

The strategy responds to the region's expected economic and population growth and the need to manage an increasing demand for travel. The RLTS, Wellington Regional Strategy and Wellington Regional Policy Statement development processes have been closely aligned to ensure integrated transport and land use outcomes as all are fundamental to the economic and social functioning as well as future growth and development of the greater Wellington Region.

The provision of an affordable, integrated, safe, responsive and sustainable land transport system relies on integration between all modes that make up the regional transport network. Many journeys are multi-modal and to ensure such journeys are as quick, safe and convenient as possible, a good level of integration between the different transport modes is sought by the RLTS.

Proposed activities and projects in support of implementation plans will continue to enhance the prosperity of the Wellington City CBD and the region's centres as the major catalyst for growth in the region and provide for efficient freight movement and increased productivity.

Objectives, outcomes, targets

The RLTS objectives are:

- Assist economic and regional development
- Assist safety and personal security
- Improve access, mobility and reliability
- Protect and promote public health

[1] Short term 0 - 6 years; medium term 6 - 15 years; long term to 30 years.

- Ensure environmental sustainability
- Ensure that the Regional Land Transport Programme is affordable for the regional community.

The strategy identifies a number of key outcomes which the strategy seeks to achieve over the long term. Outcomes have been given a hierarchical structure of 'key outcomes' and 'related outcomes' to clearly signal priorities for the strategy over the next 30 years. Key outcomes of the strategy 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

A new inter-regional outcome: 'improved safety, efficiency and reliability of strategic road, public transport and freight links to the north of the region' has been added.

A series of targets have been developed in order to signal the magnitude of the changes that the RLTS seeks in relation to each of the strategy outcomes. These targets will provide a benchmark against which to measure progress. Targets enable the region to monitor not only whether the strategy is achieving progress in the general direction set by the outcome, but also to measure whether progress has been made to the extent desired.

Policies

The strategy includes a list of policies that support the desired outcomes. Policy areas include network management, demand management, safety, environment and public health, integrated planning, securing transport funds, implementation and programme prioritisation and funding.

Implementation

The vision, objectives and outcomes of the RLTS are translated into action programmes through implementation plans and corridors plans which sit alongside and support this strategy. Longer term initiatives are also included, where possible, to give a future view of transport planning.

The Regional Land Transport Programme is a new legislative requirement that sits alongside the RLTS. The programme sets out the project priorities for the region with estimated timing and costs. The review process for the Programme is every three years and will use an agreed prioritisation tool, taking into account the strategic framework provided by the RLTS.

The most significant features identified in the strategy to be progressed through the supporting implementation documents are:

- Progress on the key routes of national and regional significance (including Roads of National Significance)
- The improvement of the region's rail network, including infrastructure and rolling stock upgrades
- A comprehensive programme of measures to manage the demand for travel.

Funding

The RLTS must be developed with consideration to likely funding. The funding chapter summarises the main sources of funding available to the region. The NZ Transport Agency's National Land Transport Programme sets out the funding available to the Wellington Region over the next three years, and Greater Wellington's Regional Land Transport Programme details indicative funding for the next 10 years.

Monitoring, evaluation and review

The strategy concludes with measures for monitoring, evaluating and reviewing the strategy (and supporting implementation and corridor plans) to ensure it maintains relevance and delivers its vision and objectives within a changing environment.

1. Introduction

The Wellington Regional Land Transport Strategy (RLTS) is a statutory document prepared in accordance with the Land Transport Management Act (LTMA) 2003. It has been developed by the Regional Transport Committee (RTC) of the Greater Wellington Regional Council (Greater Wellington).

The LTMA requires the strategy to contribute to the overall aim of achieving an affordable, integrated, safe, responsive and sustainable land transport system. To meet this requirement the strategy has a long term vision for the region's land transport system and outlines regional objectives, outcomes and policies covering the period 2010 to 2040.

This strategy replaces the previous RLTS 2007 – 2016. The review incorporated the 2008 legislative reforms to the LTMA 2003, the Government Policy Statement on land transport funding (GPS) 2009 and documented trends in travel behaviour and other transport statistics since the last RLTS was adopted.

Chapter 2 of the strategy describes a long term vision for the region's transport network.

Chapter 3 identifies the pressures and issues for the region's land transport system.

Chapter 4 describes the strategy development process.

Chapter 5 identifies the six objectives of the strategy.

Chapter 6 sets out the desired outcomes of the strategy.

Chapter 7 identifies a series of targets in relation to the strategy outcomes.

Chapter 8 sets out a list of policies.

Chapter 9 describes the role of each land transport mode.

Chapter 10 provides an introduction to the detailed implementation and corridor plans which support and give effect to the strategy.

Chapter 11 outlines the strategy's land transport funding sources.

Chapter 12 identifies how the strategy will be monitored and evaluated, and outlines the proposed review programme for the strategy and its implementation documents.

Chapter 13 details how the strategy complies with sections 75 and 76 of the LTMA 2003.

Chapter 14 describes the relevant regional economic or land-use considerations and the likely funding of transport infrastructure associated with those considerations.

Chapter 15 sets out the role of education and enforcement.

Chapter 16 contains the statement of compliance with the LTMA 2003 by the independent auditor.

Chapter 17 sets out the significance policy for variations to the strategy.

The appendices provide further context to the strategy.

2. Vision

The strategy's vision is:

'To deliver, through significant achievements in each period[2], an integrated land transport system that supports the region's people and prosperity in a way that is economically, environmentally and socially sustainable.'

The following detailed aspirations support this vision and give a clear picture of what the region wants for its transport network in the long term and provide some specific context for shorter term decision making.

The regional transport network will provide a high level of access, reliability and safety for both passengers and freight travelling within and through the region to support economic development and improve productivity. The regional transport network will be developed in a way which recognises the vital national role of Wellington as the capital city and the region's geographical position at the northern end of the Cook Strait.

Access to and between key destinations such as Wellington City Central Business District and other regional centres, CentrePort, Wellington International Airport and Wellington Regional Hospital will be quick, easy, reliable and safe. Effective safety measures, behaviour change campaigns and other interventions will help to ensure that no one is killed or seriously injured when travelling within or through the region.

In urban areas there will be viable alternatives to travel by private car for most trips. People will generally walk or cycle for short and medium length trips. Pedestrian and cycling networks will be convenient, safe and pleasant to use. Passenger transport will provide an excellent option for an increasing number of people, particularly at peak times along key commuter corridors. Passenger transport trip times and comfort will compete reliably and favourably with private cars for a majority of commuter trips. The passenger transport system will effectively connect people with key destinations. All passenger transport services will be fully accessible, including physical access, access to information and simple streamlined ticketing.

People will need to travel less because they have access to excellent telecommunications, local job opportunities and live closer to their main destinations for work and play. More vehicles will run on renewable fuels that are non-polluting. People's travel choices will recognise the risk and impact of climate change and diminishing non-renewable resources.

Traffic congestion will be managed at levels that balance the need for access against the ability to fully provide for peak demands due to community impacts and cost constraints.

Bulk freight will be moved by rail and coastal shipping when appropriate.

[2] Short term 0 - 6 years; medium term 6 - 15 years; long term to 30 years.

3. Regional transport network - pressures and issues

3.1 Wellington's regional transport network

The greater Wellington Region's topography and geographic constraints means it has developed a relatively compact urban form along the region's transport corridors (Figure 1). State Highway 1 and the North Island Main Trunk (NIMT) rail line enter the region near Otaki and extend southwards through Kapiti Coast, Pukerua Bay, Porirua and Northern Wellington and through to the Wellington City Central Business District (CBD). State Highway 1 continues through to Wellington International Airport. State Highway 2 and the Wairarapa Line railway enter the region north of Masterton and extend south-west through Wairarapa, the Hutt Valley and on to merge with State Highway 1 and the NIMT line at Ngauranga. State Highway 58 provides a vital east-west link between State Highways 1 and 2. State Highway 53 provides access between Featherston and Martinborough.

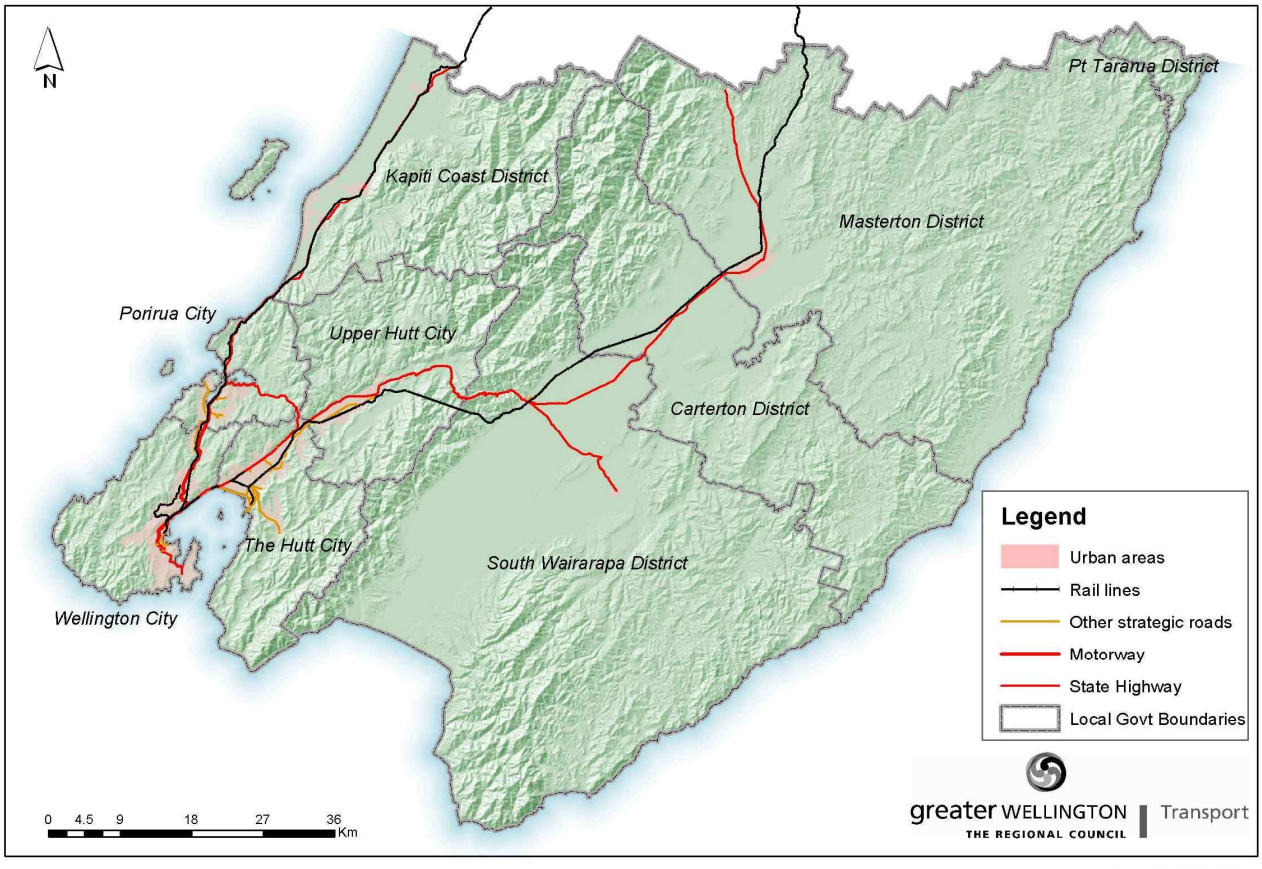

Figure 1: Wellington's regional transport network.

The regional transport network (Figure 1 and described in Appendix 1) provides vital access to key regional destinations including the Wellington City CBD and regional centres, CentrePort (Wellington's sea port) and Wellington International Airport for freight and passengers, and Wellington's regional hospital in Newtown. The compact corridor form supports a good public transport network and consequently reduces some of the energy and other costs associated with private transport.

The region's transport network also provides important access for local trips within communities. It is also important to recognise that some parts of the region are largely rural in character and have different issues and requirements of the region's transport network to urban and suburban areas.

3.1.1 Current transport network performance

The RTC receives an annual monitoring report (AMR) which reports measured network performance against a comprehensive list of indicators. This report tracks the progressive effects of pressures and interventions. The most recent AMR[3], released in October 2009, contains the following key conclusions about the current transport network performance:

- Total regional public transport patronage has been slowly but steadily increasing. In 2008/09 total annual trips (peak plus off-peak) reached 35.4 million trips, an increase of 2.4% over the previous year.
- Regional peak period public transport patronage has been relatively flat between 2005/06 and 2008/09. Over that time, annual peak period passenger trips have decreased by almost 600,000 from the 2005/06 high due to significantly decreased bus patronage, but partially offset by increased rail patronage. Annual off-peak passenger trips by all public transport modes have increased during 2008/09 by 4.7%, or over 811,000 trips.
- The total number of cars travelling into the Wellington CBD during the morning commuter period decreased by 5% in 2009 from the previous year.
- Greater Wellington's road congestion dropped across most periods of the day during 2009. All-day average congestion decreased 15% between 2008 and 2009 (from a near record high of 25 seconds in 2008 to 21 seconds delay per kilometre travelled in 2009 – similar to 2006 levels).
- Killed and seriously injured road casualty numbers continued to increase in general throughout the region[4], up to 376 in 2008. There has been an increase in total recorded casualties for all vehicle types since 2001 and total crash numbers have trended upwards from the year 2000. Regional casualties per 100,000 population remained lower than Canterbury but higher than the Auckland region.
- Cycle casualty numbers for the region decreased by 1 to 149 in 2008. The highest toll for a decade was recorded in 2007 at 150 cyclist casualties.
- Regional fuel consumption decreased by 2.6% between 2008 and 2009 financial years, despite reduced annual average fuel prices. Consequently, while the regional population has grown, transport-generated greenhouse gas emissions have remained at a relatively steady level since 2005.

3.2 Key transport pressures

3.2.1 Growing and aging population

Between 1996 and 2006 the region as a whole experienced population growth of 9.3%. The region is forecast to experience moderate population growth, with an extra 62,000 people expected to live

[3] 2008/2009 Annual Report on the Regional Land Transport Strategy, GWRC, October 2009 (Available on GWRC website).
[4] When corrected for New Zealand Police reporting rates.

here by 2016, a 9% increase from 2001.[5] Farther into the future, the more uncertain population projections become. Under the medium growth scenario (Figure 2) the regional population growth rate is projected to slow after 2026. Regional planning should allow for over half a million inhabitants by 2026.

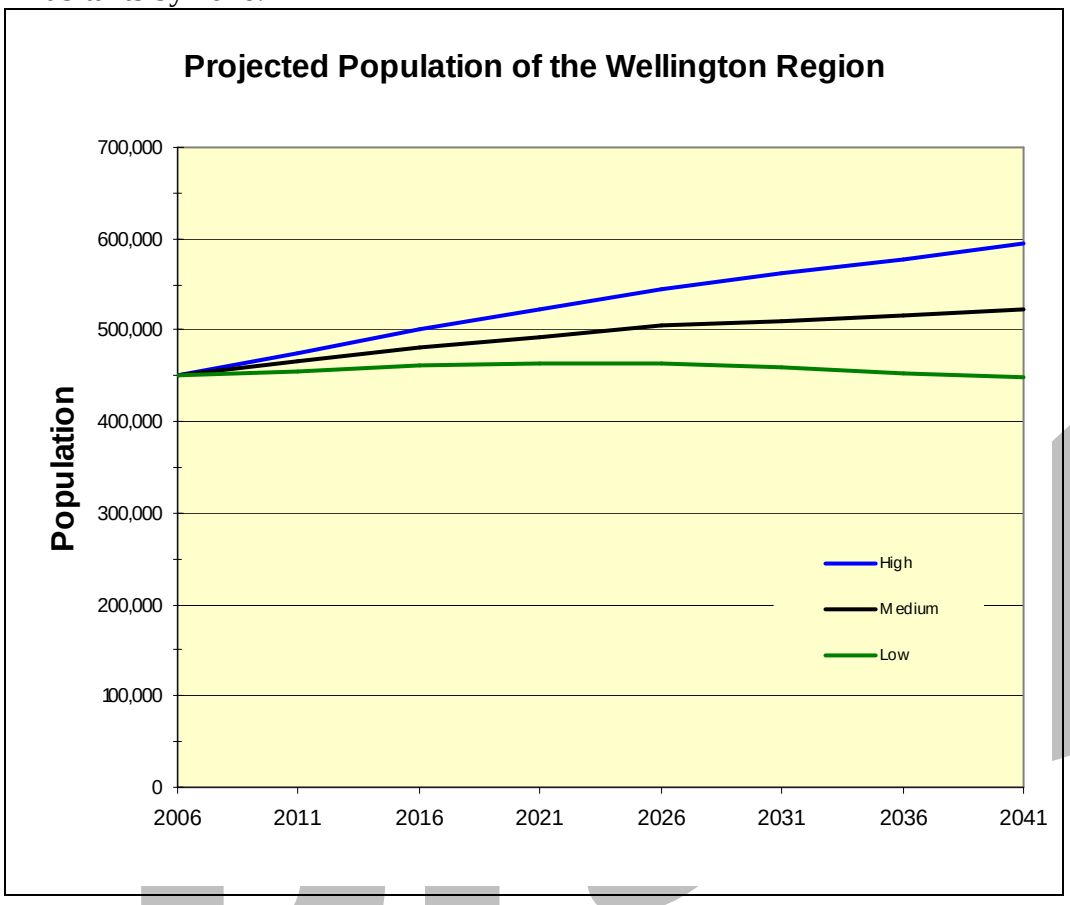

Figure 2: Wellington Region's population growth. Source: GWRC.

Within the region the rate of growth varies widely between districts. Projections developed by Statistics NZ suggest that Wellington City and the Kapiti Coast are likely to experience the most population growth, while it will remain stable or decline in other areas (WRS, 2005).

There is also wide variety in the way our households are made up around the region. Like national and international trends, our regional population is ageing with a high and growing proportion of people aged over 65 years (Figure 3). In contrast, some areas (for example, Porirua) have a high proportion of children. Region-wide a significant gap has been identified in the key working age groups, particularly 25-35 year olds. Household size is falling across the region; the largest households are in Porirua, the smallest in Kapiti (reflecting the large proportion of retirement-aged population in this area)[6]. Overall, the growing population will drive an increase in demand for travel and changes in travel patterns resulting from the aging population.

[5] GWRC. 2008/2009 Annual Report on the Regional Land Transport Strategy.
[6] GWRC 2008/2009 Annual Monitoring Report on the Regional Land Transport Strategy.

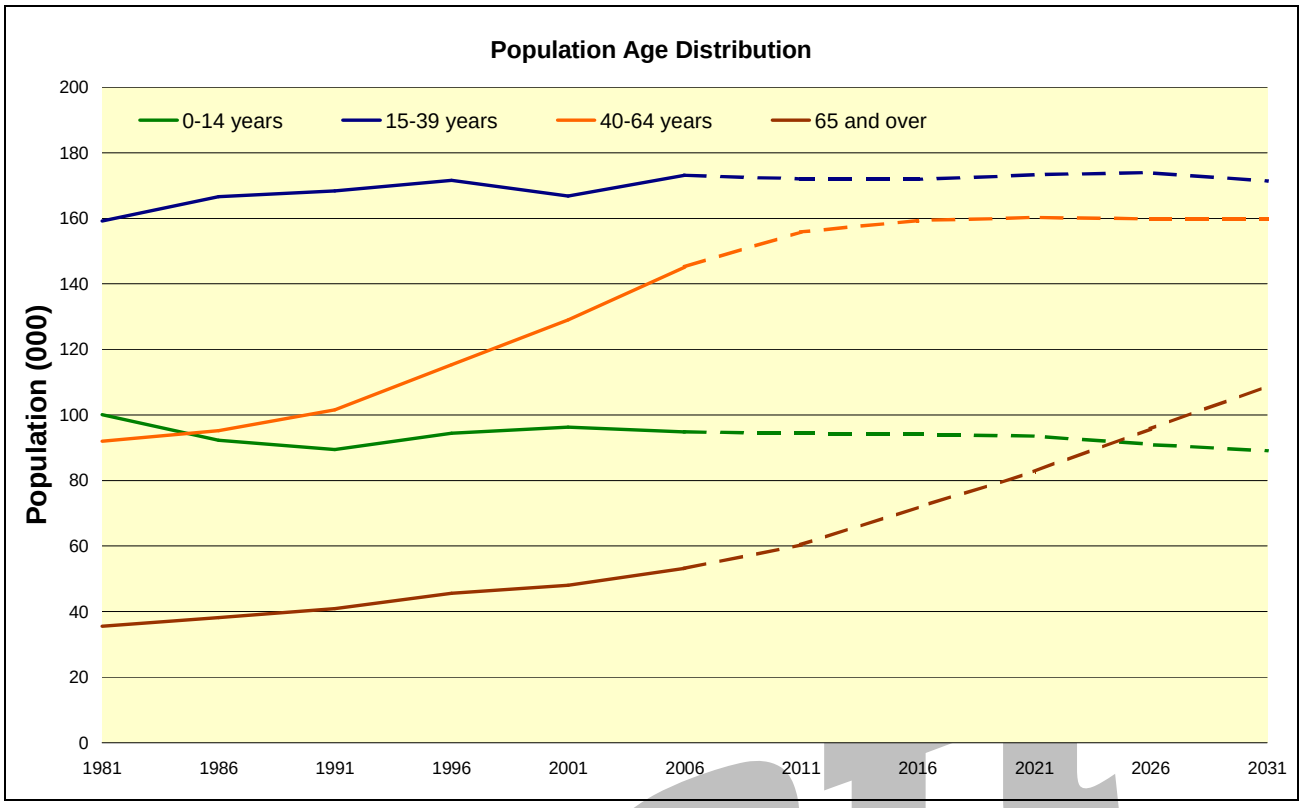

Figure 3: Estimated and projected Wellington Regional population by age group. Source: Statistics NZ; GWRC, Wellington Transport Strategic Model

3.2.2 Growing economy

In 2008 the Wellington Region contributed around 13% of all the goods and services produced in New Zealand (GDP or Gross Domestic Product). In the same year our regional GDP per capita was $50,076 rising by 1.8% over 2007 with a national average of 2.2%. Job numbers in the region are also growing, but at a slower rate than the national average.[7]

The region's economy is expected to continue to grow at a modest rate, driving an increasing demand for travel and freight movement. The efficient movement of people, goods and services is crucial to ensure continued economic growth and prosperity nationally, regionally and locally.

[7] GWRC, Wellington Regional Genuine Progress Index, unpublished.

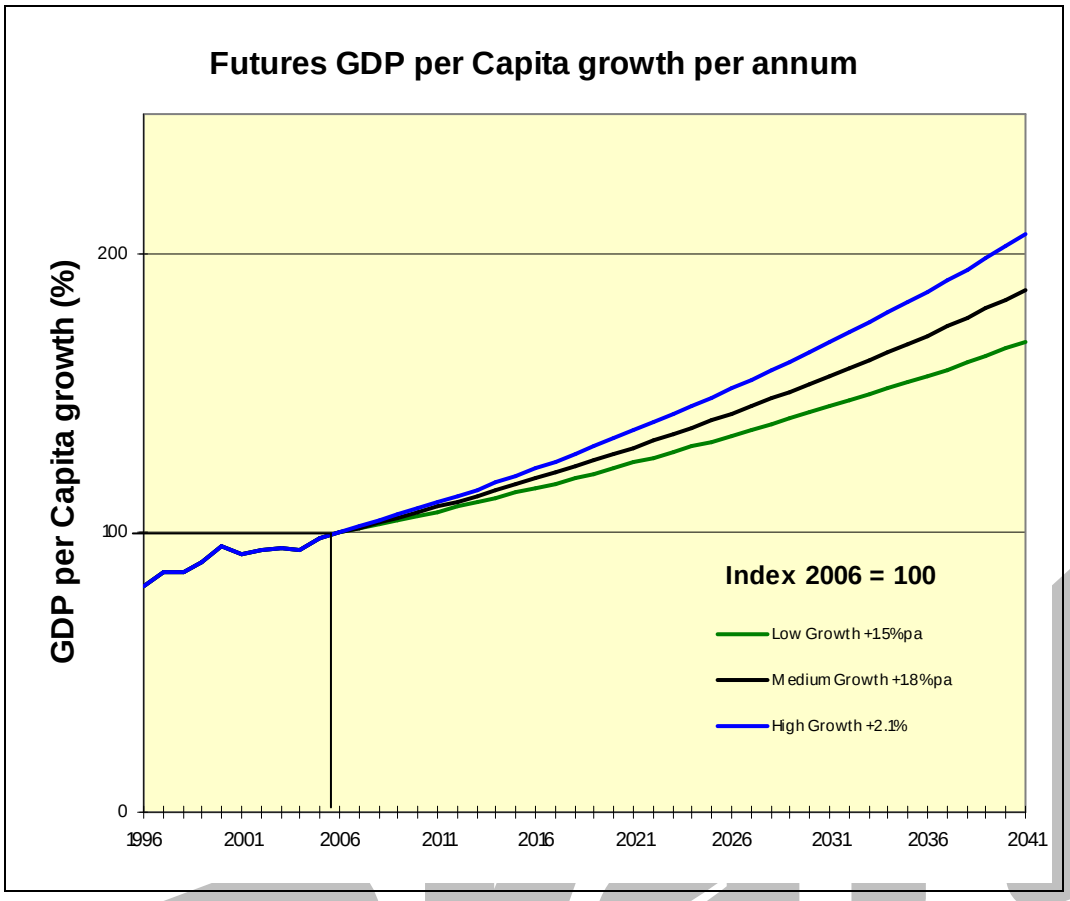

Figure 4: Real GDP growth per capita. Source: Wellington Transport Strategic Model (WTSM).

3.2.3 Increasing travel demand

Population growth and economic growth are key contributors to the regional demand for travel. Faster population growth on the Kapiti Coast is partly driven by people relocating from other areas within the region. Increased numbers of commuters travelling between Kapiti and Wellington will put greater demand on existing transport networks.

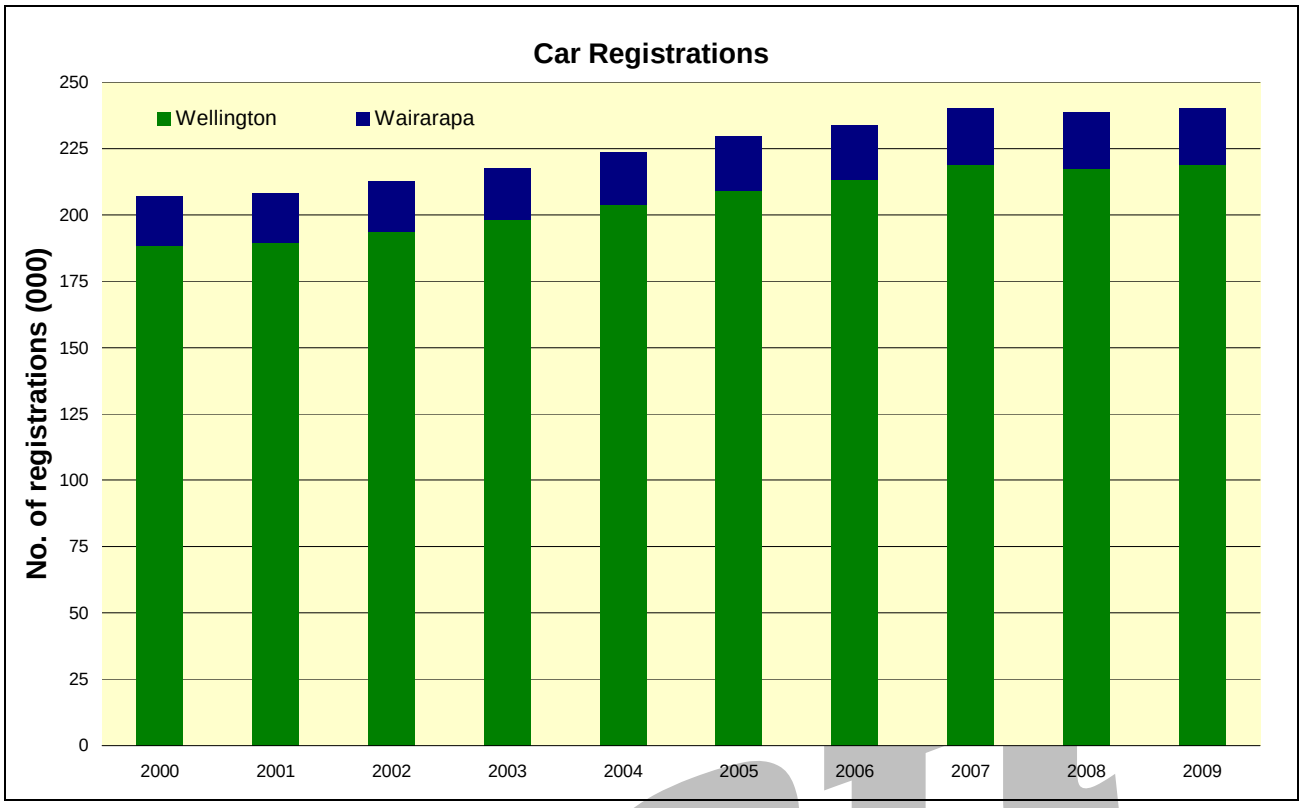

Figure 5: Car registrations (000), Wellington Region. Source: New Zealand Transport Agency, 2009.

Car ownership numbers are steadily increasing in the region. Over the ten years from 2000 to 2009, the total number of cars registered in the region rose by 16% (Figure 5). Increasing car ownership may also contribute to increased car use and greater demand on the road network.

The demand for travel is steadily increasing as a result of increasing population and economic growth, increasing car ownership and a growing expectation of mobility and convenience.

The underlying trend is for people to make more trips, more often, over longer distances. This means more vehicle kilometres travelled (VKT), contributing to additional CO2 emissions and other environmental impacts and increased peak period journey times reflecting increased congestion.

Historically in the Wellington Region, VKT growth is closely related to economic growth. Figure 6 shows State Highway VKT on the region's motorways, urban and rural highways. Total VKT has grown 3.5% between 2002 and 2009 from 1,578 million vehicle kilometres travelled to 1,634 million. It is notable, though, that motorway VKT has decreased 11% while urban VKT has increased 44% over the same period.

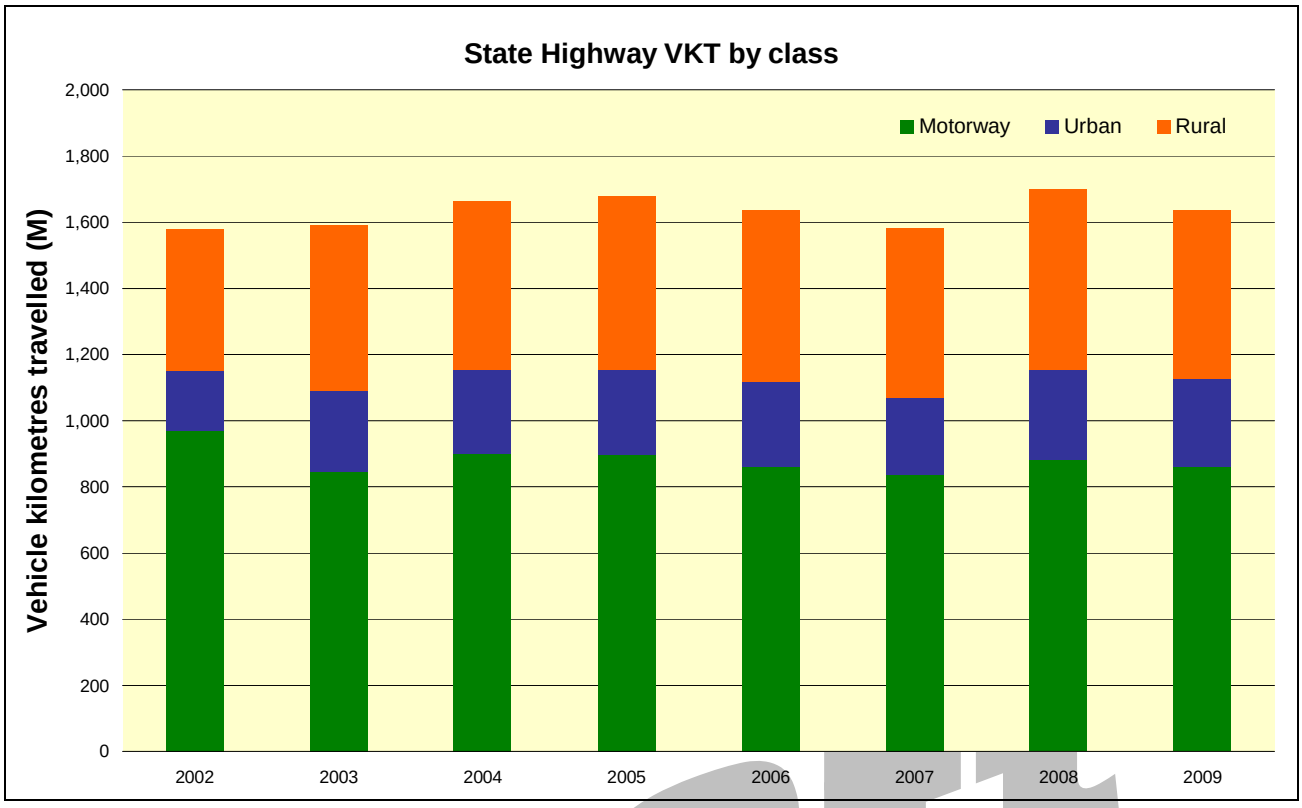

Figure 6: Vehicle kilometres travelled (in millions) by motorway, urban and rural. Wellington Region. Source: New Zealand Transport Agency, 2009.

Figure 4 shows a medium forecast of a further 87% economic growth between 2006 and 2041. As shown in Figure 7, we are forecasting around 24% growth in VKT over the next 30 years. Interventions to reduce growth in VKT need to ensure a high level of access and interaction is maintained to minimise disruption to social and economic activity.

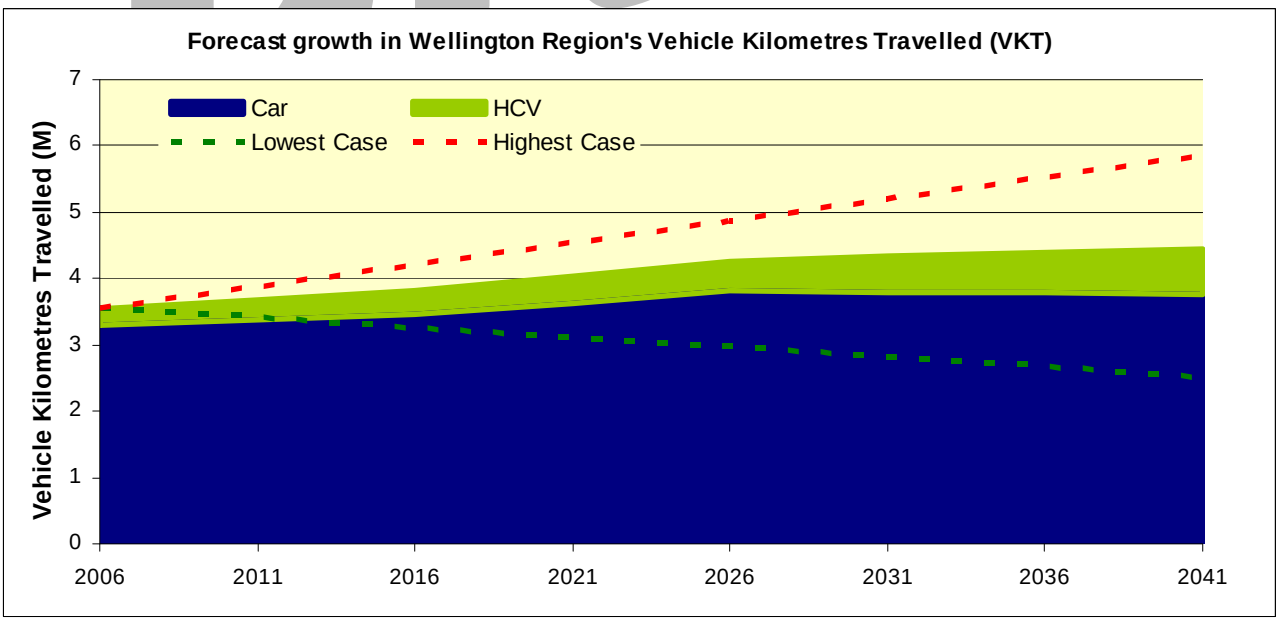

Figure 7: Projected regional vehicle kilometres travelled (VKT) per annum. Source: Wellington Transport Strategic Model.

The number of trips made by passenger transport in the region is also increasing, but at a relatively slow rate (Figure 8). Total patronage by bus, train and ferry for the 2008/09 financial year was 35.4 million passenger trips, an increase of 700,000 (or 2.4%) over the previous year. This increase was most notable during the off peak period, with peak period patronage levelling off over the past three years.

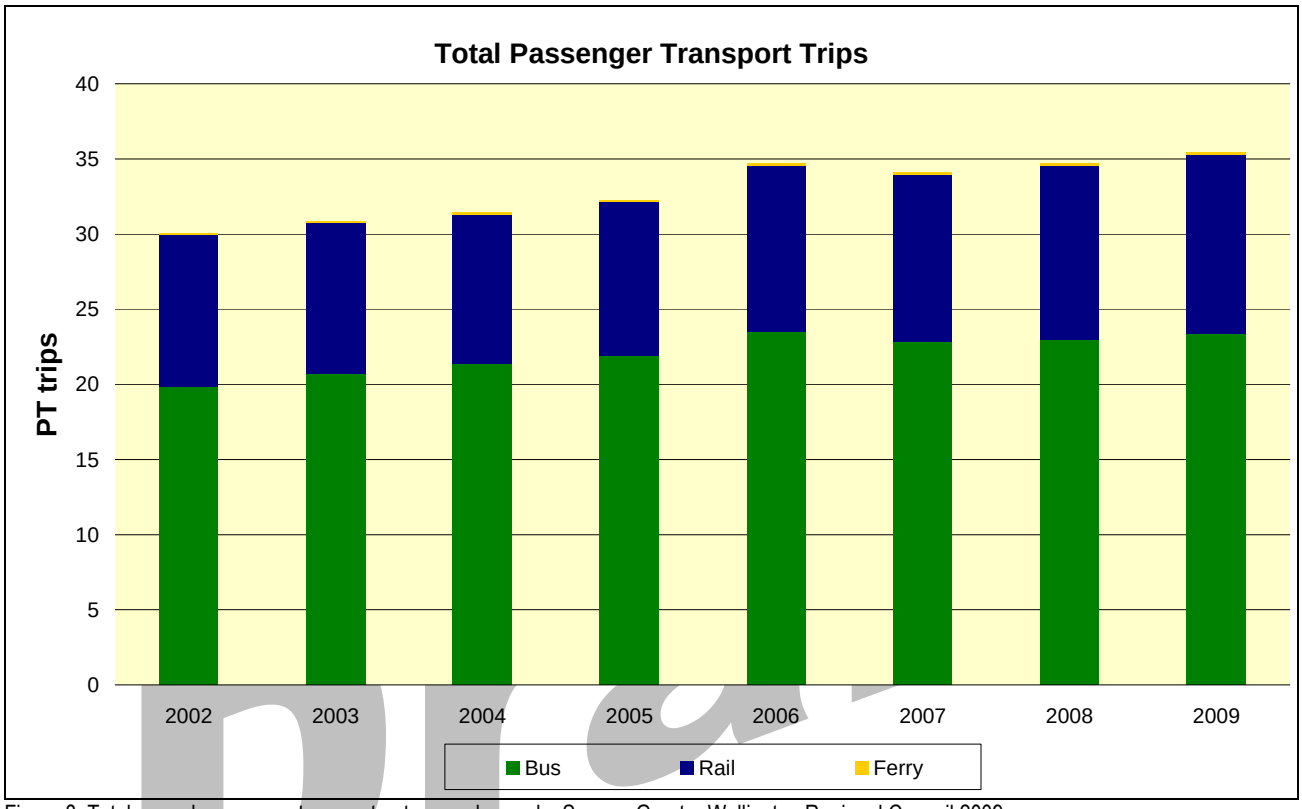

Figure 8: Total annual passenger transport patronage by mode. Source: Greater Wellington Regional Council 2009.

A future demand on the region's transport network is the predicted growth in forestry in Wairarapa and the associated increase in log freight volumes. According to Statistics NZ, the Wellington Region had 4% of New Zealand's total areas forested in exotic tree plantations intended for harvest in 2006. Total log production is expected to grow by 270% in the region between 2006 and 2031, especially after 2015.[8] This will see a significant increase in log freight traffic.

3.3 Transport issues

3.3.1 Access and mobility

The region's transport network enables people to access key goods and services, work, education and leisure opportunities. Access to walking in the region is continually improving, as is access to passenger transport services. However, while increasing vehicle ownership reflects increased mobility, this can have a negative impact on overall transport system accessibility, for example, the adverse impacts of severe congestion on travel by private car and other modes. To maintain a good level of access, there is a pressing need to limit the growth in car traffic in the cities and ensure viable alternatives to travel by private car are available.

[8] *Wood Availability Forecasts* for the major wood-producing regions, produced by MAF.

3.3.2 Climate change

Climate change is a global problem. Worldwide effects to date are evident in the unusual weather conditions experienced in most parts of the world over the last few decades. In the future, New Zealand is expected to suffer from more extreme weather patterns and a rise in sea level. While solutions to this issue require international attention and effort, there is a need for responses at a local level[9].

The regional transport network plays a part in contributing to this global environmental issue, through the consumption of non-renewable fuels and the consequent production of greenhouse gas emissions.

Greenhouse gas emissions are made up of carbon dioxide (CO_2) and non-CO_2 emissions. In 2007 it was estimated that New Zealand emitted 75.5 million tonnes of CO_2-equivalent greenhouse gases into the atmosphere. The national energy sector contributes around 43% of the total greenhouse gas emissions. The transport sector is a subset of the energy sector, contributing almost 46% of the CO_2 emissions, or 20% of total national greenhouse gas emissions. The principal growth in greenhouse gas emissions comes from increased CO_2 emissions, particularly from electricity generation and transport[10]. Wellington Region's use of fossil fuels is primarily for transport purposes and contributes to about 1.5% of national greenhouse gas emissions.

The Kyoto Protocol sets targets for reducing greenhouse gas emissions in developed countries. The first commitment period is from 2008 to 2012. New Zealand is bound by the Kyoto Protocol and has a target to reduce its greenhouse gas emissions to 1990 levels or to take responsibility for excess emissions (NZCCO, 2005). International negotiations in Copenhagen beginning in December 2009 may lead to the creation of a new global agreement to replace the Kyoto Protocol. This potential new agreement will play a significant role in New Zealand's climate change response at all levels of government, with many implications for the transport sector.

Figure 9 shows the projected growth CO_2 emissions from transport in the Wellington Region out to 2041. The medium scenario is for a 25% growth in CO_2 emissions from 2006 levels. Greater efficiency and a mix of technologies (e.g. hybrid, plug-in electric, bio-diesel, etc.) in the private vehicle fleet accounts for a 24% reduction in emissions, even though VKT increases. Lower turnover rates and subsequent slower adoption of new technologies in the heavy vehicle fleet (HCVs) override the gains from private cars with a projected 172% increase in truck CO_2 emissions due to increased economic activity and no significant change in fuel efficiency.

[9] GWRC, June 2009, 'Wellington Regional Climate Change Response' Discussion Document.
[10] Ministry for the Environment, April 2009, New Zealand's Greenhouse Gas Inventory 1990-2007.

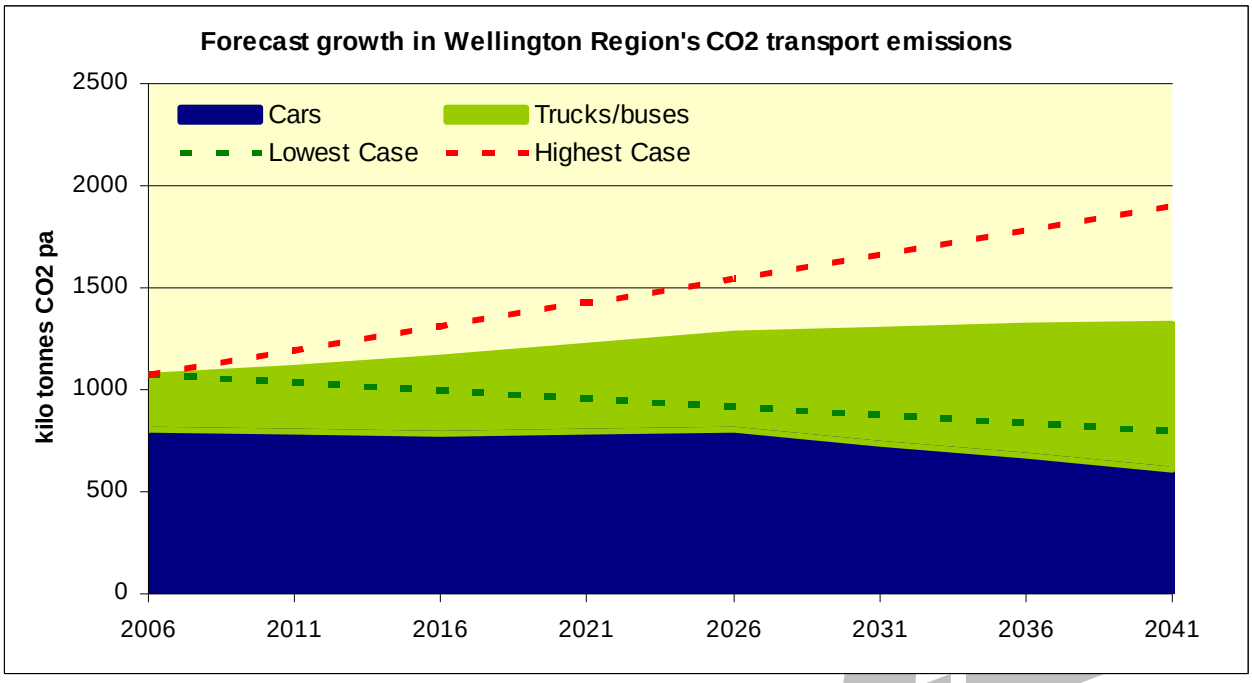

Figure 9: Forecast growth in Wellington Region's annual CO_2 emissions from transport. Source: GWRC, Wellington Transport Strategic Model.

The lowest scenario sees an overall 25% reduction in CO_2 emissions that result from investment to alleviate severe congestion and achieve a strong shift to public transport coupled with a road pricing scheme[11], low population/economic growth, high land use density and higher relative vehicle running costs.

The highest scenario shows an overall 77% increase in CO_2 emissions from minimal investment in transport infrastructure, high population/economic growth, sprawling land development and lower relative vehicle running costs.

While the Wellington Region's contribution to reducing transport related greenhouse gas emissions is only a small part of a wider national commitment, the need for the region to play its part in reducing its share of greenhouse gas emissions is recognised as very important.

There are a number of ways for the region to play its part in addressing this issue. These include the continual improvement of the region's passenger transport network (particularly electric buses and trains) to encourage and provide for increased use of passenger transport, continuing to promote and provide for an increased uptake in walking and cycling, managing the demand for travel and increasing travel efficiency (through network management systems, travel planning programmes, land use integration and advocating for pricing mechanisms).

However, the main mechanisms for addressing this issue primarily fall outside the scope of this strategy. These include improving vehicle fleet efficiency and advances in the availability of alternative fuels. It is appropriate that central government take a much stronger lead in relation to these issues and that as a region we advocate for them to do so.

There are three key ways in which our region's transport network can respond to climate change. The first is reducing transport's contribution to greenhouse gas emissions, as discussed previously.

[11] The region does not have the authority to implement a road pricing scheme under current legislation.

This strategy sets ambitious targets to reduce CO_2 emissions to reflect this goal. The second is to ensure our transport network is resilient and adaptable to the potential impacts of climate change. The third involves making improvements to heavy commercial vehicles (HCV) – their size, average load, switching away from a just in time delivery culture, driver training and more efficient vehicle technology. These issues are important considerations when planning the transport network, particularly in a longer term context.

3.3.3 Peak Oil

Fossil fuel based energy resources are finite, non-renewable and in high demand. The scenario commonly referred to as 'peak oil' needs to be acknowledged as a challenge for its potential impact on access and mobility. Peak oil refers to the likely peak in global oil production in the future, followed by a decline. The timing of such a scenario is still widely debated, with predictions ranging anywhere from 'the peak has passed' to 50 years. Fuel prices are likely to increase and become more volatile over time as supply struggles to keep up with increasing demand and the regional transport network needs to be resilient to the potential impacts.

Rising oil prices have implications for this strategy as the cost of transportation becomes increasingly higher. While petrol and diesel are recognized as being relatively inelastic commodities, there is anecdotal evidence that public behavior is already being influenced by higher fuel prices. This suggests that more people are willing to consider alternatives to private car travel and this will have flow on effects on the public transport system. Increasing passenger numbers may require new routes and additional capacity, particularly during peak travel times. Short trips may be carried out by active modes more often. Freight transport may move towards more fuel efficient modes, such as rail and coastal shipping, and the demand for commercial or industrial land nearer to markets, ports and rail services may increase.

Passenger transport network efficiency and capacity, travel demand management, access to walking and cycling, efficient land use and infrastructure planning, and efficient connections between commercial centres are therefore all important considerations for this strategy.

Once oil production cannot meet demand, New Zealand may not be able to buy sufficient fuel to meet its needs. Impacts could include significant shifts to alternative transport modes and issues for road maintenance if bitumen supplies are limited.

Rising oil prices may also result in increased levels of research into alternative fuels and technologies which have the potential to mitigate the effects of high fossil fuel prices.

3.3.4 Rail network

The rail network is particularly important in the Wellington Region, providing the key medium to long distance and high volume passenger transport service between the Wellington City CBD and the region's other centres and townships, and vital freight connections. Rail connections to CentrePort and the Cook Strait ferries mean the region's rail network is of national importance.

Previous decades have seen a lack of investment in necessary maintenance and renewal of the rail network nationally and regionally. In particular, the bottleneck at the North-South Junction (Paekakariki to Pukerua Bay) cause delays to rail services which have regional and national consequences.

Rail movements that occur across Waterloo Quay during the commuter peak periods contribute to substantial traffic congestion along the waterfront route and queuing back onto the Wellington Urban Motorway at Aotea Quay. Less severe traffic congestion also occurs at other railway level crossing locations, such as Tawa and elsewhere. Similarly, a previous lack of investment has resulted in an urgent need to upgrade ageing rail rolling stock and rail stations. Currently, over half a billion dollars is being invested in upgrading the region's rail network and purchasing new passenger trains.

The new Matangi trains are expected to come into service from mid-2010. In the longer term, the Wellington Regional Rail Plan sets out a programme to 2035 to address infrastructure and rolling stock issues in conjunction with KiwiRail and local authorities. Staggered double-tracking through the North-South Junction will take place throughout the life of the Plan.

3.3.5 Public transport capacity

Annual peak period public transport trips have remained static at 17.5 million over the past three years, despite a growing population. This is largely due to falling bus patronage that is offset by increasing rail patronage.[12] There are several reasons for this, including reliability and comfort issues with old infrastructure and rolling stock, falling fuel prices, and increases in fares.

Modelling (Figure 10) suggests that there is ample opportunity to increase public transport patronage. It is projected that public transport trips will increase 34% in a medium scenario by 2041. Peak period trips are forecast to grow 44%, while inter-peak trips only 25%.

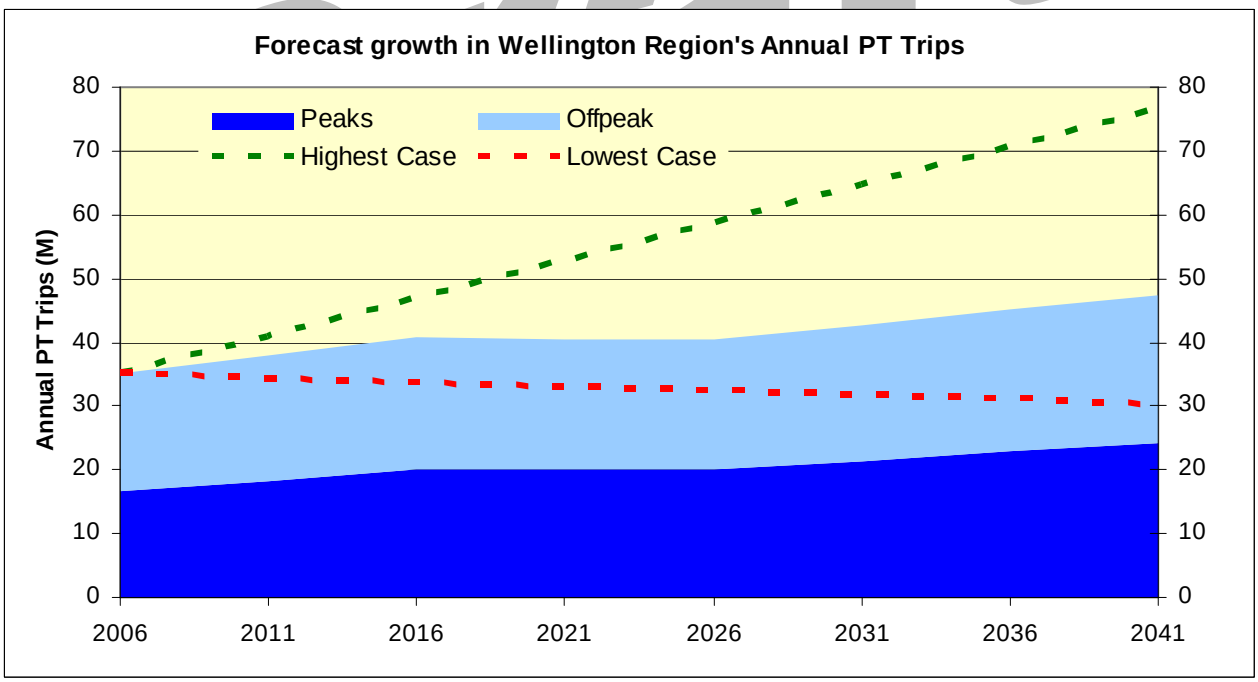

Figure 10: Projected growth in Wellington Regional daily public transport trips. Source: GWRC, Wellington Transport Strategic Model.

Under the highest scenario, annual public transport trips increase 119% that result when population and economic growth are high, the network is improved, and pricing mechanisms are in place that increases the cost of car trips.

[12] GWRC, 2008/09 Annual Monitoring Report.

The lowest scenario sees a decrease of 14% in annual public transport trips as a result of low car trip costs, low population growth and a lack of investment in public transport.

It is important that public transport capacity is increased to cater for potential growth.

3.3.6 Safety and personal security

Despite extensive improvements to road safety made during the 1990s in the Wellington Region, casualties over the last four years have started increasing again and renewed efforts are required to ensure the region is contributing towards the national *Road Safety 2020* strategy targets. In 2008, there were 21 deaths and 355 serious injury casualties, after correcting for the indicative Police reporting rate (Figure 11). The annual social cost of crashes to the Wellington Region in 2008 was $389 million.[13]

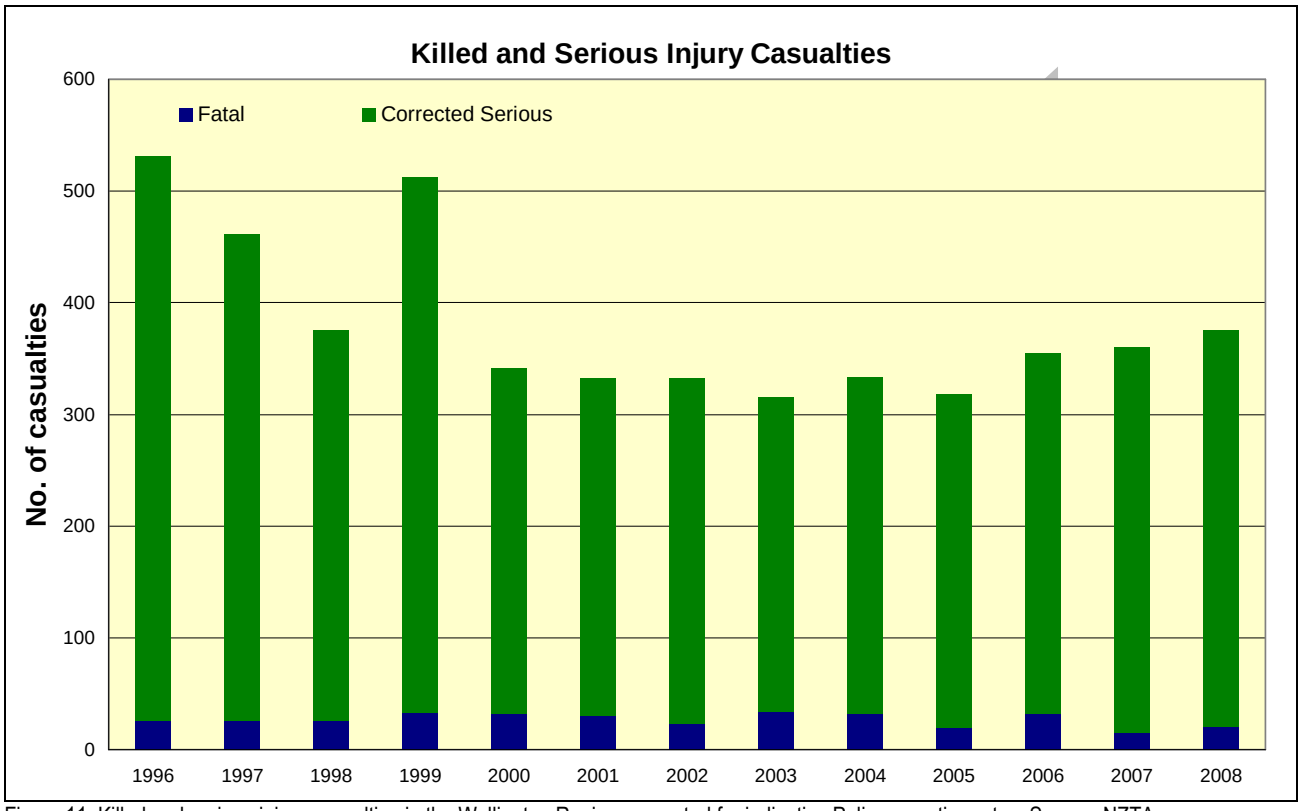

Figure 11: Killed and serious injury casualties in the Wellington Region, corrected for indicative Police reporting rates. Source: NZTA

At the regional level, the significant road safety issues identified as being of particular concern are:

- Urban local roads, particularly intersections, are the main incident site
- Human/driver factors are the main causal factor
- Vulnerable road users, especially cyclists, must be better catered for
- Enforcement resource has not kept pace with population increase
- The fleet is getting older, meaning a lag in the uptake of safety technology

[13] NZ Transport Agency, 2009, Wellington Regional Road Safety report 2004 – 2008.

- Young drivers are particularly vulnerable especially when alcohol and speed are added to the mix.

The perceived and actual safety of pedestrians and cyclists in our region affects the use of these active modes (Figure 12). In a 2008 Greater Wellington perceptions survey[14], respondents who resided in Porirua City felt the "safest" while walking (77% felt safe). Other Territorial Authority (TA) areas ranged from 74% down to 61% of respondents feeling safe. In the same survey, only 27% of respondents throughout the region felt "safe" when cycling. Providing lighting and open streetscapes and increasing pedestrian and cyclist numbers (eyes on the street) can positively affect perceived and actual personal security.

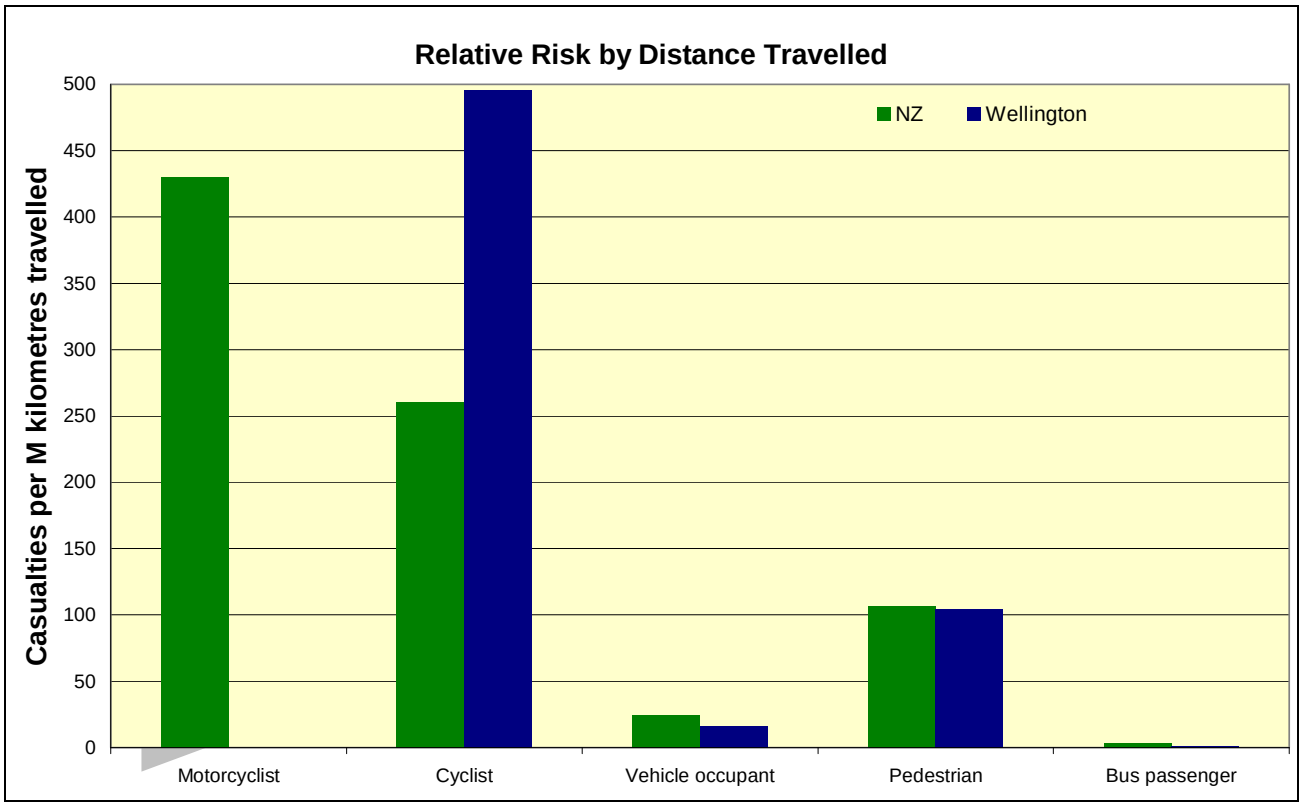

Figure 12: Relative risk by transport mode per million kilometres travelled. Source: Ministry of Transport, reported crashes and NZ Household Travel Survey 2004 -2008.

3.3.7 Transport network reliability

Reliability of the transport network is a significant issue for the region, affecting passenger transport, private vehicle users and freight movement. The following graph (Figure 13) illustrates the perception of network reliability.

[14] NRB GWRC, May/June 2008, Transport Perceptions Survey.

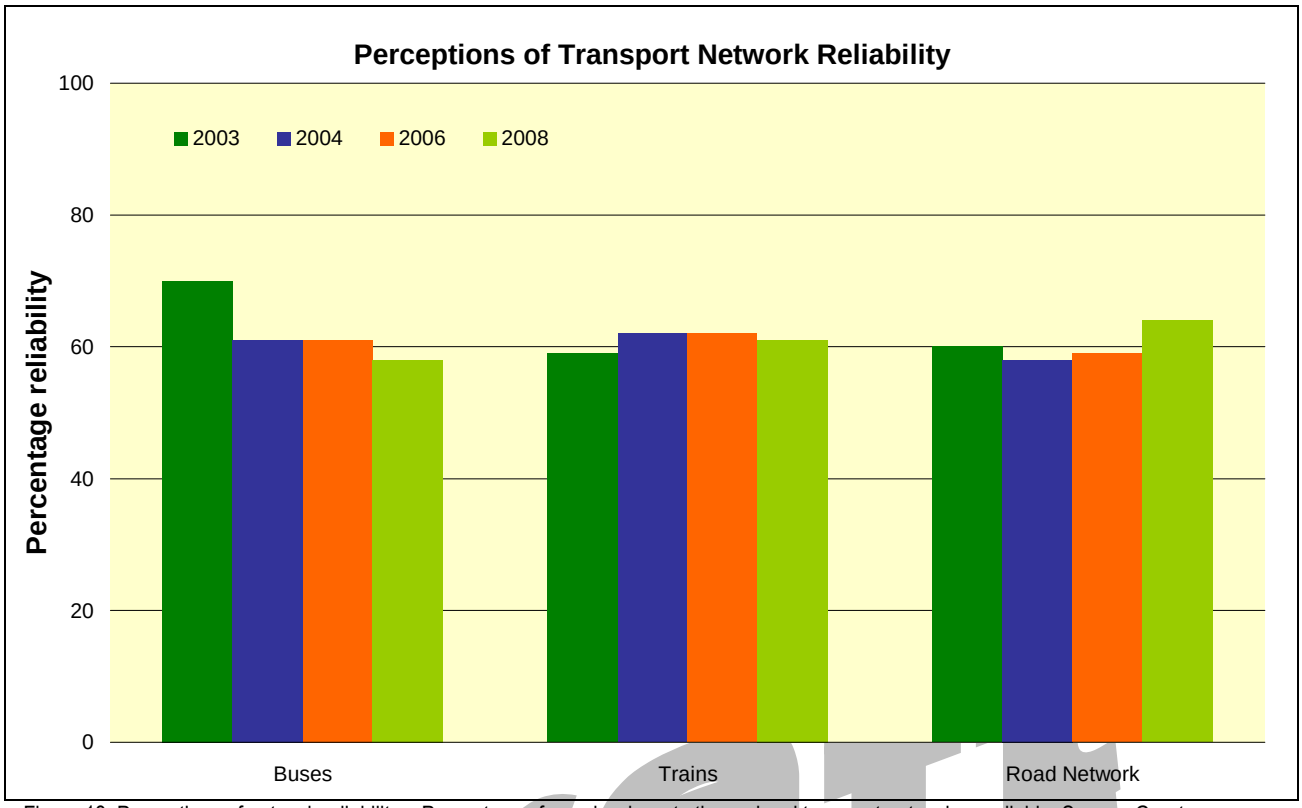

Figure 13: Perceptions of network reliability – Percentage of people who rate the regional transport network as reliable. Source: Greater Wellington perception survey 2003, 2004, 2006, 2008.

The key routes into Wellington's CBD by road are subject to relatively high variability in 'expected' travel times, affecting both private vehicles and bus services. This is due to the fact that even a reasonably minor event can cause significant delays due to congestion levels and lack of alternative routes to avoid the trouble spot (BERL, 2004). In March 2009, AM peak travel times on the strategic road network varied by 18% with PM peak variability at 27%.[15]

Bus service reliability has two components. Firstly, whether the service runs and, secondly, whether it keeps to the scheduled timetable throughout the journey. Service monitoring data shows that scheduled bus services operate at least 99% of the time. Those that don't run are generally a result of operational issues. However, bus journey time delays are often caused by incidents and congestion on the road network. This is a particular problem in the south end of Wellington City's 'golden mile' and peak congestion bottlenecks around the region.

Rail network service monitoring shows that EMU (electric multiple unit) services run to within five minutes of the timetable about 90% of the time. Wairarapa services run to within five minutes of the timetable about 80% of the time. A major contributor to poor service reliability is the ageing rail infrastructure and rolling stock which leaves the network vulnerable to faults and breakdowns. Significant investment is currently being made to upgrade rolling stock and to improve rail network infrastructure to improve rail reliability.

[15] GWRC 2008/2009 Annual Report on the Regional Land Transport Strategy.

The role of the north-south route following State Highway 1[16] and the main trunk railway line is one of national importance. This route, known as the Western Corridor, provides a primary access route into the region and to Wellington City CBD from the north. The route also serves Wellington's CentrePort, the main connector to the South Island and overseas for the southern part of the North Island. Safety and reliability are significant issues for this corridor, with current journey times having a high degree of variability. The highway route is prone to closure following traffic accidents, provides limited access for emergency vehicles and is vulnerable to natural hazards such as landslips and flooding. There are limited alternative routes along this corridor. The single track section of the NIMT railway line north of Pukerua Bay is a significant weak point on the existing rail corridor. The double tracking project out to Waikanae by KiwiRail as part of the Regional Rail Plan will address a significant section of this weak point. However, more work through the North-South Junction is needed. Like the highway, the rail corridor is also vulnerable to slips.

The extent of any disruption to the region's transport network during a hazard event differs, depending on its location and nature. Potential hazard events include flooding, landslides, earthquakes and tsunamis. A major seismic event is likely to have a significant impact on strategic transport links to Wellington, Hutt Valley and Porirua[17]. This would affect access for emergency vehicles in the short term after the event and general access over the medium to long term. Disruption caused by a major hazard event would have a significant social and economic impact on the region. The impact of hazards on network reliability is not currently well measured and is an area where more monitoring to obtain information is required. The resilience of the region's transport network in response to such events and its ability to resume service as quickly as possible will be important in minimising their impact.

The following diagram (Figure 14) was developed by the Wellington Lifelines Group[18] as part of their submission to the Western Corridor planning process. The source of the information shown on the diagram is based on available earthquake-related geological hazard information for the region from Greater Wellington. It has not involved exhaustive hazard risk analysis, but provides a good indication of the potential risks to the strategic transport network in the case of a major seismic event.

[16] A Road of National Significance, GPS May 2009.

[17] Wellington Lifelines Group. Nov 2005. Submission to proposed Western Corridor Plan.

[18] Wellington Lifelines Group comprises utility and transportation sector organisations working collaboratively to reduce the vulnerability of Wellington's 'lifelines' to regional scale hazard events.

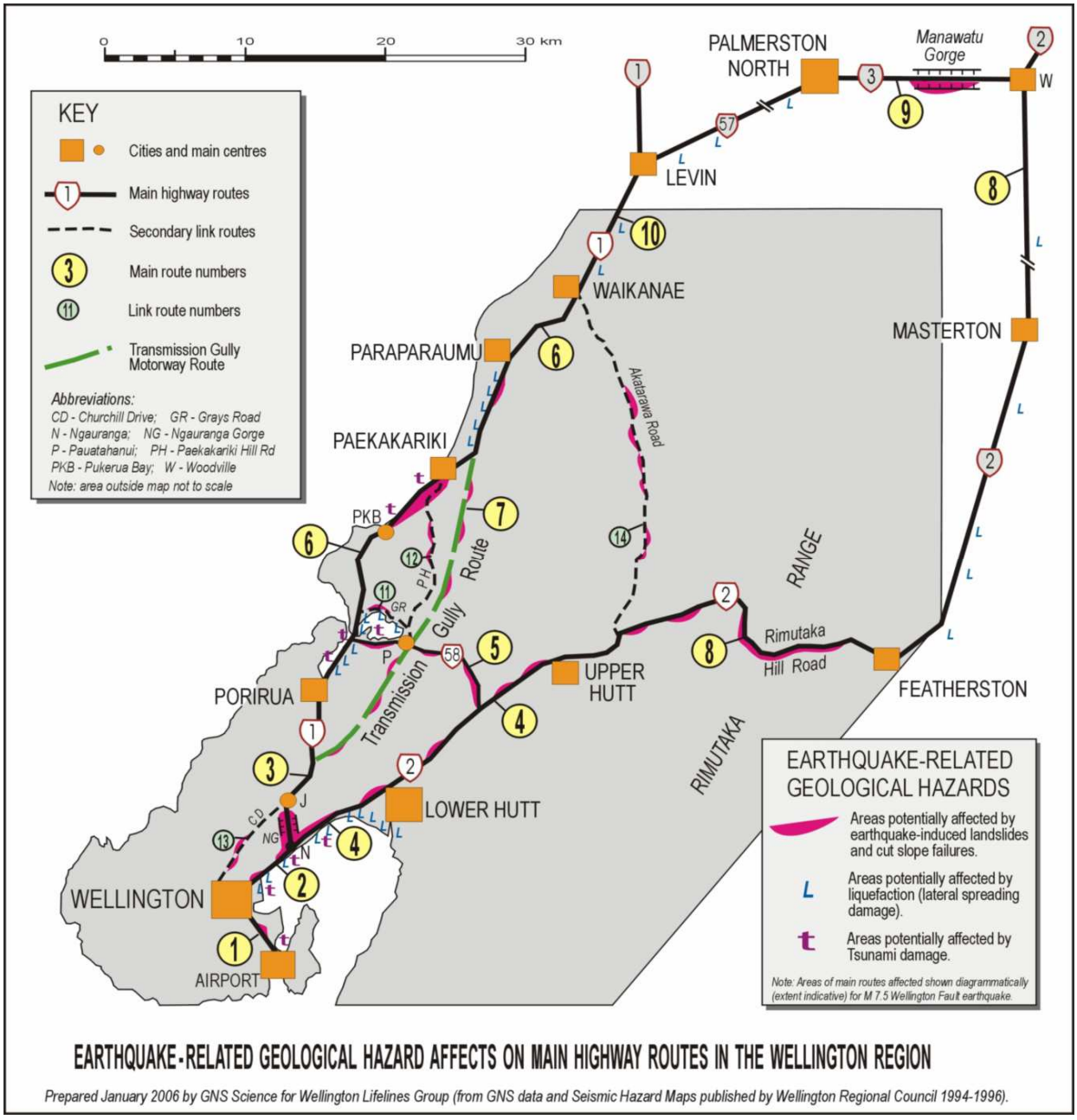

Figure 14: Earthquake-related geological hazard effects on the Wellington region's state highways. Source: Wellington Lifelines Group (2006).

3.3.8 Integration of transportation and land use planning

Ensuring the sustainability of the region's strategic transport network requires an integrated approach to all elements of the network, including integration between land use and transport planning. New land subdivisions and developments which are located at a distance from passenger transport or local facilities can increase people's dependency on cars. Conversely, the need to travel can be reduced by encouraging mixed use development, encouraging businesses to locate in areas close to the workforce, and by ensuring critical infrastructure and services are located in high density residential areas. The WRS identifies the significance of integrating land use and transport planning. The Regional Policy Statement (RPS) and the RLTS will be key mechanisms for addressing this issue by providing a policy framework guiding development of integrated land use and transport.

A good example of integrated land use and transport planning in the region is set out in Wellington City Council's Transport and Urban Development Strategies[19]. The proposed investment in a seamless passenger transport system between Johnsonville and the airport is supported by intensification of employment and housing along the 'growth spine', as demonstrated in the following diagram (Figure 15).

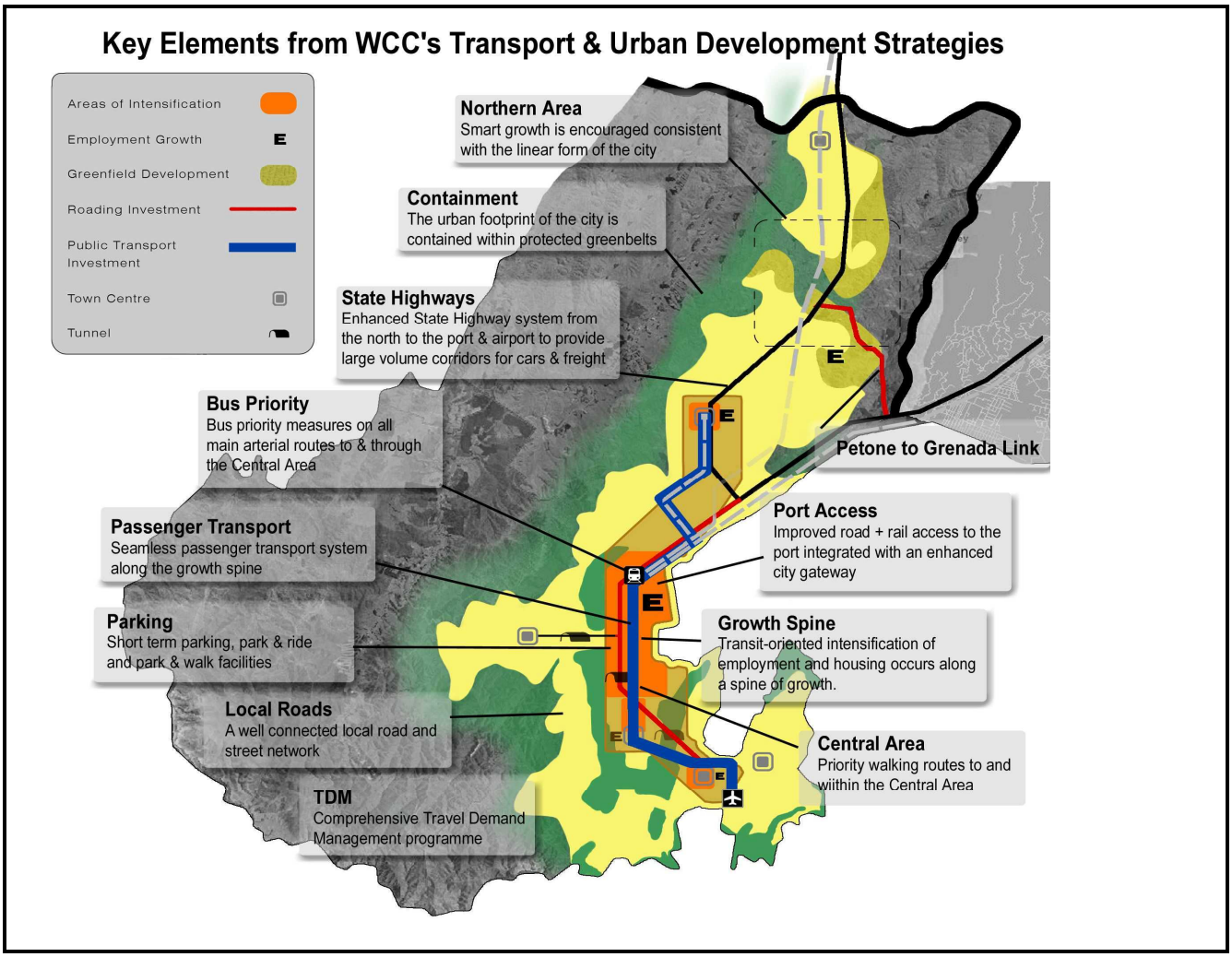

Figure 15: Wellington City's growth spine. Source: Wellington City Council (2006).

Land use intervention is often slow in achieving actual results because it depends greatly on the rate of local development. However, successful results can be spectacular and long term in effect, such as the location of the regional stadium. It is worth noting that, historically, development in this region has been strongly integrated with transport. The development of communities around tramlines and rail services from last century would today be called public transport (transit) oriented development. An increase in inner-city living and street connectivity also substantially increases walking and cycling journey-to-work trips.

It is important to recognise the hierarchy of roads that exists within our region and the different roles played by road types within that hierarchy. Local roads provide for local traffic and access within districts, including access to private property. The region's state highways and other roads that make

[19] Wellington City Transport Strategy 2006 & Wellington City Urban Development Strategy 2006.

up the strategic road network (as set out in Appendix 1) are designed to connect regional centres and important regional destinations, including the regional hospital, port and airport. The region's state highways also provide vital linkages between Greater Wellington and the rest of New Zealand. Protecting the strategic road and rail networks against the adverse effects of inappropriate land use requires careful management through district plans and resource consent processes.

3.3.9 Economic development

Economic growth is occurring at a steady rate in the Wellington Region despite the 2009 economic slowdown and is expected to continue to steadily grow. The development of the Wellington Regional Strategy signals a desire for increased growth. The WRS highlights the need for the region's land transport strategy to support this growth.

Around one third of the region's jobs are located in the Wellington City CBD.[20] The WRS recognises the need for a strong central business district and regional centres, and the importance of links to CentrePort and Wellington International Airport. Access to these areas is currently impacted by congestion problems on this part of the network.

3.3.10 Freight

The region's freight network consists of road, rail and sea freight, with air freight playing a fairly minor role at this time. Road and rail freight are the land transport freight components of that network and provide important connections for the onwards movement of freight by other modes.

There is a direct relationship between economic growth and freight growth. Road freight takes up the vast majority of freight movements on a tonnes per kilometre basis. Road freight accounts for 70% of freight movements while coastal shipping and rail made up 15% each.[21] Rail is likely to play an even lesser role in the Wellington Region given that most freight journeys involve distribution within the region, and tend to be relatively short distances (average heavy commercial vehicle trip length is about 11 km).

The expected growth in road freight volumes, together with timing needs associated with freight delivery will mean an increasing contribution of road freight to peak period congestion. Likewise, the effects of congestion on freight movement have been signalled as a problem which is likely to increase with the expected growth in freight volumes. A focus on future road freight efficiencies such as more advanced technology, higher average loadings, increasing truck sizes and driver training can have substantial benefit. There is a significant volume of log freight by road from Wairarapa to CentrePort. With freight delayed by congestion and anticipated increases in log production, a return to rail freight is being pursued for the movement of logs.

The use of rail for long distance, inter-regional freight has shown a continual decline since 2000.[22] Advocating for the removal of rail infrastructure constraints for freight will be an important role of this strategy to provide opportunities for increasing rail freight efficiency and its share of inter-regional freight movement.

[20] GWRC, 2004, CBD Corridor Study. Pressures & Issues.
[21] Ministry of Transport, New Zealand Transport Statistics, August 2009.
[22] GWRC, 2008/2009, Annual Monitoring Report.

Port traffic at Wellington's CentrePort is expected to increase in line with economic growth trends, with most freight arriving at or departing the port by road.

3.3.11 Traffic congestion

Traffic congestion has several positive aspects. It often influences trip timing and spreads demand, it affects mode choice and eventually influences land use decisions. However, congestion also has many negative impacts. It causes increased fuel use, increased vehicle emissions and has an economic cost in terms of wasted time and lost productivity caused by delays.

Severe congestion occurs particularly at peak times, on the main routes in and out of Wellington City CBD. 'Bottlenecks' on the strategic network include Mana Esplanade, Paekakariki, Pukerua Bay, State Highway 1 Ngauranga interchange, State Highway 2 Dowse to Ngauranga and around the Terrace and Mt Victoria Tunnels. Weekend congestion is a regular problem on State Highway 1 between Otaki and MacKays Crossing and on the State Highway network from the Terrace Tunnel to the airport.

Traffic congestion is a significant issue during peak periods due to its impact on trip reliability. A 2008 Greater Wellington transport perception survey[23] indicated that 43% of respondents felt traffic congestion was worse than it was two years previously. Modelling of the network (Figure 16) suggests that peak period congestion can be maintained at current levels with appropriate investment in the network across all modes.

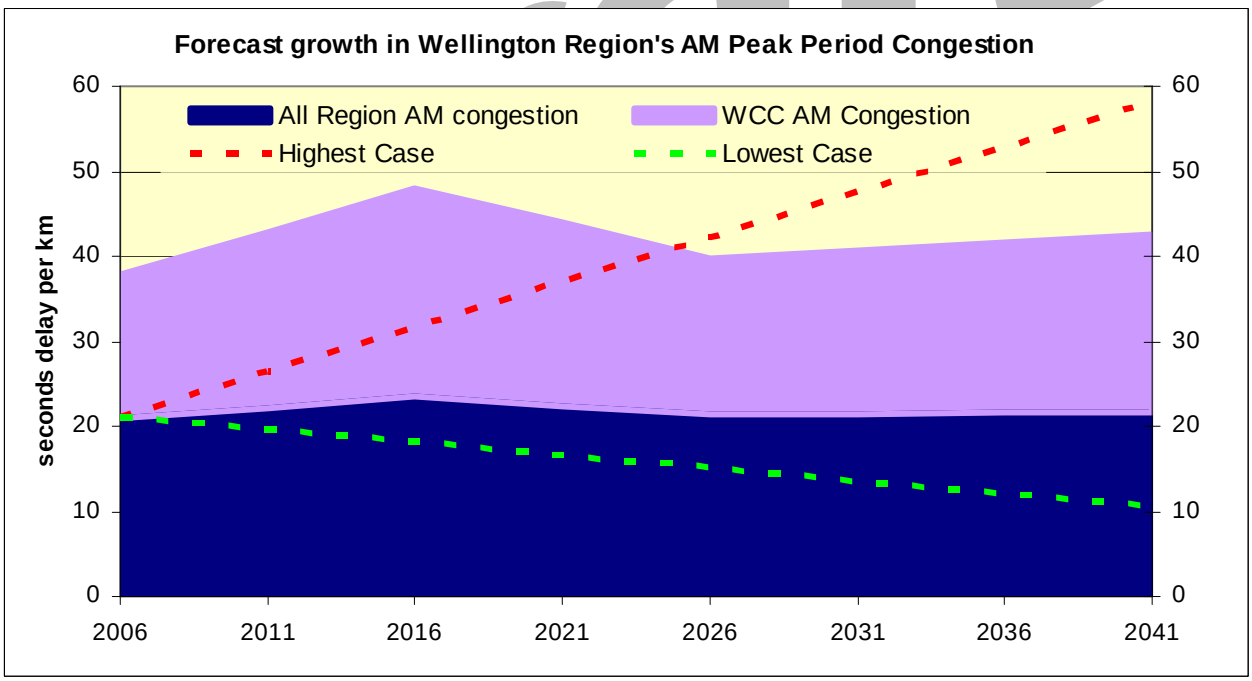

Figure 16: Forecast growth in AM peak period congestion for WCC and the Wellington Region to 2041. Source: GWRC, Wellington Transport Strategic Model.

The map on the following page (Figure 17) identifies the key routes of the regional road network affected by regular traffic congestion during peak periods.

[23] NRB GWRC May/June 2008 Transport Perceptions Survey.

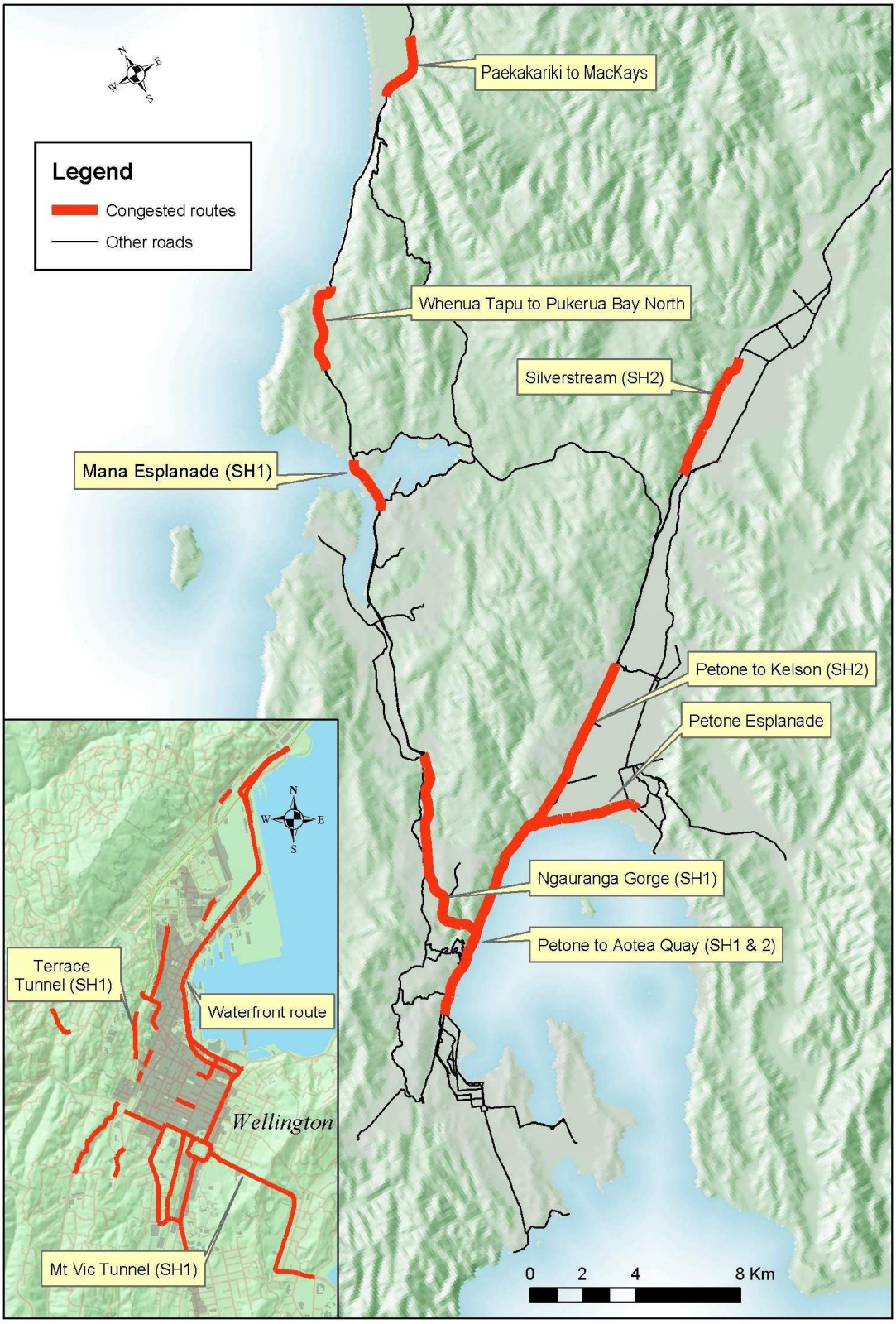

Figure 17: Wellington region's weekday peak congestion bottlenecks. Source: Wellington Transport Strategic Model (WTSM) and other sources. (to be updated)

3.3.12 Strengthening east-west connections

An important issue for the regional transport network is the need for better east-west connections to improve access, efficiency and reliability for trips made between the Hutt Valley, Wellington and Porirua. Currently, road connections between these commercial centres are limited. While State Highway 58 (via Haywards Hill) and State Highways 1 and 2 (via Ngauranga) connect the Hutt Valley to Porirua, an additional link to the south of Melling is proposed to enable more direct and efficient transport connections.

Passenger transport and private vehicle trips between the lower Hutt Valley and Porirua City require travel along one corridor towards Wellington City and then a transfer back out via another corridor. The efficiency of these trips would be increased by improved linkages between the existing corridors. Improving freight movement efficiencies between the corridors is necessary to support the economic development goals of the WRS.

3.3.13 Environmental impacts

Both the use of the transport network and the construction of new transport infrastructure can have adverse impacts on the environment. Local impacts potentially include local air quality, water quality, noise levels, disruption to sites of ecological, cultural and heritage significance, and amenity and community cohesion. Global environmental impacts, such as energy use and CO_2 emissions, are discussed earlier in this section.

Transport emissions contribute a number of pollutants that affect our region's air quality. These include CO (carbon monoxide), NO_x (nitrogen oxides), VOC (volatile organic compounds) and particulate matter emissions. Wellington's level of air pollution is currently relatively low compared with Auckland and Canterbury. Air quality data associated with vehicle emissions is collected via two air quality monitoring stations in the region. Transport emissions are not major contributors to high pollution nights recorded during the winter months in Wairarapa, Upper Hutt and Wainuiomata airsheds, however, they may have some short-term effect in built-up areas of Wellington City CBD. While all air quality indicators are experiencing minor increasing trends, modelling suggests that the transport contribution of these pollutants will decrease over time with improving vehicle technologies and increasing uptake of alternative fuels.

Surface water runoff from our roads can carry large amounts of contaminants (by-products of tyres, brakes and engines and deposition from exhaust gases) into the region's stormwater system. This environmental impact is largely linked to the number of vehicles on the road. Any reduction in vehicle kilometres travelled will help reduce it, as will a high standard of environmental design during construction of new transport infrastructure. We also need to be proactive in relation to transport-channelled stormwater and sediments into sensitive receiving environments such as Porirua Harbour (including Pauatahanui Inlet) and Wellington Harbour.[24]

Increasing traffic volumes on existing roads and the construction of new transport infrastructure has the potential to have a detrimental effect on sites of significant ecological, amenity, cultural and natural heritage depending on its scale and location. It is important that consideration is given to these issues both at a strategic level, where appropriate, and during the detailed project design and consent phase.

[24] Gardiner, L. & Armstrong, B. (2006). *Identifying sensitive receiving environments at risk from road runoff.* Proceedings of the NZWWA Stormwater Conference, Rotorua, New Zealand, 4-5 May 2006.

3.3.14 Public health

Transport activities can have both positive and negative impacts on health. A report prepared by the Public Health Advisory Committee (PHAC)[25] identified a range of direct and indirect health impacts arising from transport. These are:

- Opportunities for physical activity
- Effects on communities
- Noise
- Road traffic injuries
- Air pollution
- Climate change.

Health impacts resulting from pollutants discharged into air and water are covered under environmental impacts earlier in this section.

Active modes such as walking and cycling have twofold benefits. They contribute to reducing the impacts of motorised transport, such as air pollution, accident rates and noise levels. In addition, active modes provide practical forms of physical activity that people can include as part of their daily routine. Even modest increases in physical activity are shown to have health benefits and are important in addressing New Zealand's current diabetes and obesity epidemics.

Transport networks can contribute positively to people's wellbeing by facilitating social networks and providing access to employment, recreation and community facilities. However, severance issues arise when inappropriately designed or located transport infrastructure cuts through neighbourhoods and communities. This can lead to indirect health impacts, for example, disruption to social networks and reduced social support (PHAC, 2003). It may also reduce people's ability to choose active modes to make shorter local trips, leading to greater reliance on private vehicles.

The ability of people to access health services is another important relationship between the transport system and public health. The region's transport network needs to connect people with health services (ranging from local GP clinics to the regional hospital in Newtown) by providing a range of transport options. It is important that those without access to a private vehicle are not disadvantaged in terms of access to health care.

Noise is a factor in the local environment that can impact on the quality of life of people and communities. Transport activities contribute to environmental noise, particularly road traffic and rail along major transport corridors. Noise monitoring along the Wellington Region's major transport corridors in 2008 demonstrate that noise levels average from 61 dBa at Western Hutt Road to 69 dBa at Mana Esplanade[26]. The rail network, particularly rail freight, contributes to adverse noise and vibration effects. These effects are greatest where rail is located close to open areas such as coastal water in close proximity to communities, such as those in the vicinity of Porirua Harbour. The Wellington region's bus fleet consists of electric trolley buses and diesel buses. Trolley buses have positive noise reduction benefits over diesel buses.

Other health impacts are covered under separate headings within this section of the strategy.

[25] PHAC, April 2003, 'Impacts Of Transport On Health – An Overview'.
[26] GWRC, 2008/2009 Annual Monitoring Report.

3.3.15 Access for mobility impaired and an ageing population

Despite considerable progress made in recent years to improve the accessibility of the public land transport system, many disabled people in New Zealand have severe difficulty using public land transport services and infrastructure (HRC, 2005). New Zealand's ageing population reinforces the need to continually improve the accessibility of the regional land transport network.

The Human Rights Commission report 'The Accessible Journey'[27] noted that disabled people and their advocates identified issues of availability, affordability, accessibility and acceptability in relation to conveyances, service information, premises and infrastructure as barriers to using the public transport system.

3.3.16 Travel to educational facilities

A significant number of the region's peak period trips (24%) take place between homes and educational facilities (Figure 18). Fifty eight percent of these trips are carried out by private car. The majority of trips between home and education facilities are less than three kilometres and there is potential to significantly increase the use of active modes.

However, a recent perceptions survey[28] showed that only 62% of adults would allow their children to walk to school and only 41% would allow their children to cycle to school. The main reasons for not allowing children to walk or cycle were 'stranger danger' issues and road safety concerns.

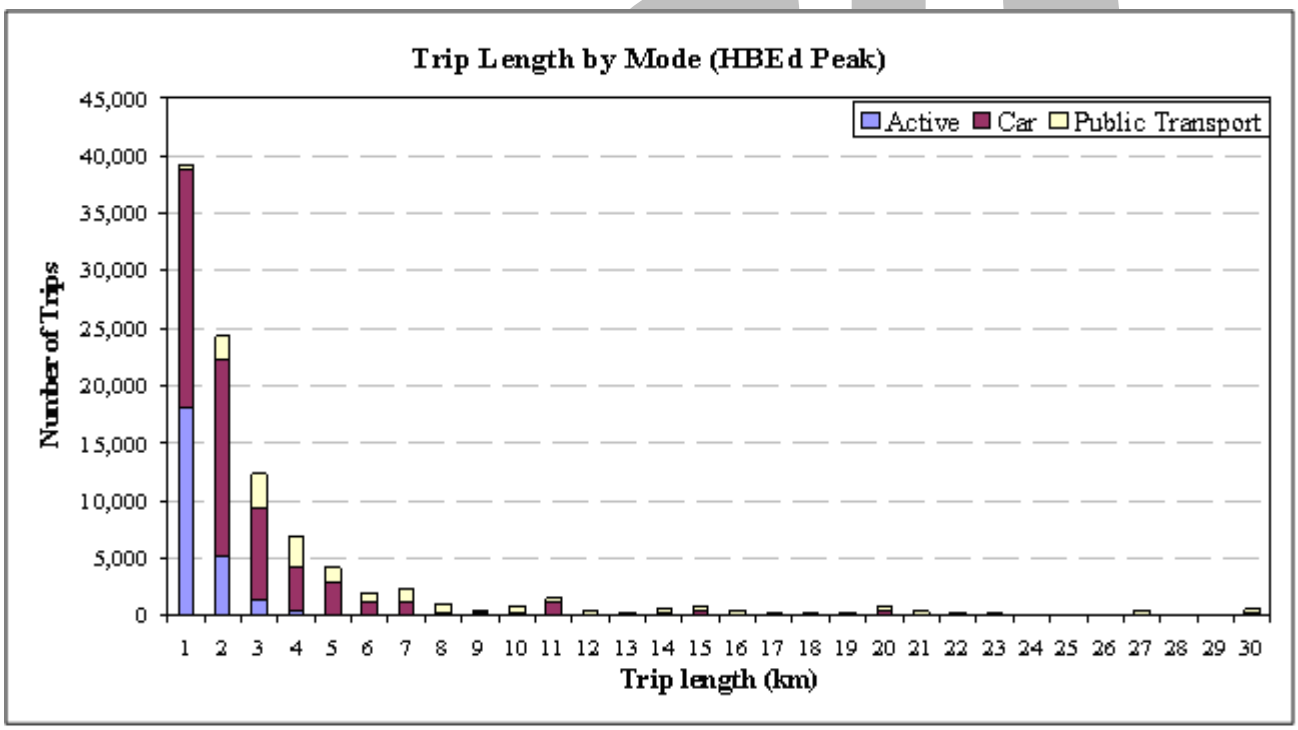

Figure 18: Peak trip length by mode (home to educational facility). Source: Greater Wellington Household Travel Survey 2001.

[27] Human Rights Commission, 2005, The Accessible Journey: Report of the Inquiry into Accessible Public Land Transport.
[28] National Research Bureau (NRB), June 2008, Transport Perceptions Survey.

3.3.17 Cycling Safety

Cycling is a cheap, healthy transport mode which provides an alternative to short to medium length trips by private vehicle. However, in the Wellington region only 1% of all trips are made by cycle. A lack of road space or cycle lanes, steep topography and windy conditions in some parts of the region create barriers to cycling. In other parts of the region, such as Kapiti, Hutt Valley and Wairarapa where conditions are often well suited to cycling, barriers can include perceived safety issues or lack of cycle storage and shower/change facilities.

As set out in the road safety section, cycling has a higher relative risk than other modes. This is further evidenced by the reported low perceptions of cycling safety and level of service. We expect that safety issues are likely to be compounded in the future due to more vehicle traffic for cyclists to contend with on the roads. In two thirds of the accidents involving cyclists and motor vehicles, it was the vehicle driver cited as being at fault. Other factors include vehicle speeds in certain areas and the lack of space dedicated for cycle lanes.

Significant investment will therefore be required to meet the cyclist safety targets. Improving and expanding the cycling infrastructure, driver and cyclist skills training courses, all contribute to increasing the number of cyclists. This is likely to have a positive effect on perceived and real cyclist safety due to a ‘safety in numbers’ effect.

4. Strategy development

The development approach builds upon the existing RLTS and is evidence-based, collaborative, accountable and forward-looking. It involves a multi-step process to incorporate changes in legislation, consideration of strategic options, confirm the region's transport pressures and issues, and align the RLTS with new prioritisation and funding processes through the Regional Land Transport Programme (RLTP). More detail is provided in Appendix 3.

Corridor and implementation plans detail the interventions and activities within the region based on the strategic direction provided by the RLTS. They are reviewed on a rolling basis and augment the region's understanding of the pressures and issues facing various components of the land transport network.

4.1 Strategic framework

The RLTS strategic framework consists of a vision, objectives and outcomes. Policies set out the region's policy position and guide resource allocation in relation to the regional transport network. The development process worked within this established framework. The context within which the strategy has been developed is set out in Appendix 2.

4.2 Strategic options

Six strategic options for a 2040 transport network were developed based around various investment priorities. These started with a 'do minimum' Base Network, on top of which targeted modal investment options (Road Priority, Public Transport Priority and Road Pricing) were then developed. Analysis of these stand-alone modal investment options informed the development of two inter-modal approaches in the Mixed Investment and Mixed plus Road Pricing strategic options.

Nine futures scenarios were created to take account of key variables outside the direct influence of the RLTS that affect transport demand. The key variables identified were growth (economic and population), transport costs, and land use (higher density development versus low density 'sprawl'). High and low values for each were determined. The scenarios consist of all possible combinations of high and low values for the three key variables, with a medium central-case scenario included for comparison.

The six strategic options were analysed within all nine scenarios using the region's strategic transport model. They were assessed using a list of indicators linked to relevant RLTS objectives. A mixed investment strategic option provides the most balanced approach to improvements on all objectives.

It will not be sufficient, however, to deal with demand for the transport network or the CO_2 emissions under higher growth scenarios. Depending on the level of growth, a pricing mechanism (such as road pricing) could be introduced to provide the level of improvements desired, or to defer significant capital investment. Under a lower growth option less investment will be required.

Prioritisation and funding of the projects were not primary considerations in the strategic options. This is because such work is done through the Regional Land Transport Programme process. The RLTP allows detailed prioritisation and funding assessments to be conducted every three years to

ensure individual projects and other activities align with, and give effect to, the direction set out in the final strategy; as well as take account of economic and land-use considerations.

The role of the strategic options in this strategy is to assess the strategic direction set by the RLTS policies (chapter 8). It was determined from this assessment that the policies should continue to promote a mixed investment in roads, public transport, walking and cycling. As well as to continue advocacy for road pricing mechanisms to be made available to the region in case the situation warrants their consideration.

4.3 Impact assessments

Health, environmental and economic impact assessments were carried out during the previous strategy review in 2006. For this review an analysis was done to determine if the conclusions expressed in those impact assessments were still valid for the period out to 2040. This analysis concluded that they were still relevant going forward and therefore did not require updating at this time.

5. Objectives

The strategy's objectives reflect the provisions set out in section 75(a)(ii) of the LTMA 2003 and the New Zealand Transport Strategy, while also taking account of regional issues and objectives.

The objectives form an important component of the strategic framework (the vision, objectives and outcomes) which is aligned with Greater Wellington's Long Term Council Community Plan (LTCCP) and the Wellington Regional Strategy, to ensure the strategy contributes to the community outcomes identified by these documents.

1. Assist economic and regional development

Aid national and regional economic growth; and foster the business, housing, employment, education, health and recreation aspirations of the regional community (in line with the WRS).

2. Assist safety and personal security

Achieve a safer community by developing the region's land transport system in a way that leads to fewer deaths and serious injuries, lower social costs from incidents on our roads, and a community that travels without fear of crime.

3. Improve access, mobility and reliability

Improve the accessibility of facilities and activities that enable the whole regional community (including the transport disadvantaged[29]) to participate fully in society and the economy. Reduce long term reliance of car-based mobility to ensure access for all is improved in an affordable way. Improve connections within Greater Wellington, neighbouring regions and overseas utilising public transport, good urban design, and other specialised transport services. Improved reliability improves travel times and reduces trip time variability for strategic networks (both road and rail) in the event of common incidents such as slips or crashes.

4. Protect and promote public health

Provide a transport system that positively benefits health by improving convenience and ease for social participation and interaction for all; reduced transport impacts on natural resources and communities; and increased uptake of active modes, particularly for short trips.

5. Ensure environmental sustainability

Improve the environmental performance of the transport network, and avoid to the extent reasonable in the circumstances, adverse effects of transport on the environment (in line with the RPS) and communities. This includes, but is not limited to: increased use of passenger transport, cycling and walking; reduced use of private and company cars; increased energy efficiency of the vehicle fleet; reduced greenhouse gas emissions; a high standard of environmental design of transport infrastructure; and recycling of materials.

6. Ensure that the Regional Land Transport Programme is affordable for the regional community

[29] As defined in the Public Transport Management Act 2008 (p. 13): 'people whom the regional council has reasonable grounds to believe are the least able to get to basic community activities and services (for example, work, education, healthcare, welfare and food shopping).' Further development of this definition will be part of the Regional Public Transport Plan and is expected to include disabilities as set out in Section 21(h) of the Human Rights Act 1993.

Take account of funding likely to be available, economic efficiency, and the impact of funding options on regional communities when considering transport packages. Consider the affordability of transport options for all members of the community, including low income groups.

6. Land transport outcomes

The following outcomes are sought for the region's land transport network. No single outcome can be seen in isolation. All must be considered as part of an integrated strategic view of the region's transport system. Outcomes have been given a hierarchical structure of 'key outcomes' and 'related outcomes' to clearly signal priorities for the strategy over the next 30 years.

The land transport outcomes are as follows:

Key outcome:

1.1 Increased peak period passenger transport mode share

Related outcomes:

1.2 Increased off-peak passenger transport use and community connectedness

1.3 Improved passenger transport accessibility for all, including people with disabilities or from low income groups

1.4 Reduced passenger transport journey times compared to travel by private car

1.5 Increased passenger transport reliability

Key outcome:

2.1 Increased mode share for pedestrians and cyclists

Related Outcomes:

2.2 Improved level of service for pedestrians and cyclists

2.3 Increased safety for pedestrians and cyclists

Key outcome:

3.1 Reduced greenhouse gas emissions

Related outcomes:

3.2 Reduced private car mode share

3.3 Reduced fuel consumption

3.4 Increased private vehicle occupancy

Key outcome:

4.1 Reduced severe road congestion

Related outcomes:

4.2 Maintained vehicle travel times between communities and regional destinations

4.3 Improved reliability of the strategic roading network

Key outcome:

5.1 Improved regional road safety

Key outcome:

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

Related outcomes:

6.2 Improved integration between transport modes

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

6.4 Improved transport efficiency

Key outcome:

7.1 Improved regional freight efficiency

Related outcomes:

7.2 Improved inter-regional freight efficiency

Inter-regional outcome:

8.1 Improved safety, efficiency and reliability of strategic road, public transport and freight links to the north of the region

6.1 Links between strategy objectives and outcomes

The following table shows the positive links between the outcomes sought by the RLTS and its objectives. This illustrates how the outcomes sought respond to the regional community's needs for each objective.

RLTS objectives / Land transport outcomes (key outcomes in bold)	Assist economic and regional development	Assist safety and personal security	Improve access, mobility and reliability	Protect and promote public health	Ensure environmental sustainability	Ensure that the RLTP is affordable to the regional community
Increased peak period passenger transport mode share	✓	✓	✓	✓	✓	✓
Increased off-peak passenger transport use and community connectedness	✓	✓	✓	✓	✓	✓
Improved passenger transport accessibility for all, including people with disabilities or from low income groups	✓		✓	✓		✓
Reduced passenger transport journey times compared to travel by private car			✓			✓
Increased passenger transport reliability	✓		✓			✓
Increased mode share for pedestrians and cyclists	✓		✓	✓	✓	✓
Improved level of service for pedestrians and cyclists	✓	✓	✓	✓	✓	✓
Increased safety for pedestrians and cyclists		✓	✓	✓		✓
Reduced greenhouse gas emissions	✓				✓	✓
Reduced private car mode share	✓		✓	✓	✓	✓
Reduced fuel consumption				✓	✓	✓
Increased private vehicle occupancy	✓				✓	✓
Reduced severe road congestion	✓		✓		✓	✓
Maintained vehicle travel times between communities and regional destinations	✓		✓			✓
Improved reliability of the strategic roading network	✓		✓	✓	✓	✓
Improved regional road safety		✓		✓		✓
Improved land use and transport integration (in line with the WRS and local authority urban development strategies)	✓		✓		✓	✓
Improved integration between transport modes	✓	✓	✓		✓	✓
Sustainable economic development supported (in line with the WRS)	✓				✓	✓
Improved transport efficiency	✓		✓		✓	✓
Improved regional freight efficiency	✓		✓		✓	✓
Improved inter regional freight efficiency	✓		✓		✓	✓
Inter-regional Outcome						
Improved safety, efficiency and reliability of road, public transport and freight links to the north of the region	✓	✓	✓		✓	✓

Table 1: Links between strategy objectives and outcomes.

6.2 Inter-regional Outcomes

Section 77(a) of the LTMA 2003 requires the inclusion of inter-regional outcomes. As part of the development process consultation with Horizons Regional Council led to identification of the following inter-regional outcome 8.1: Improved safety, efficiency and reliability of road, public transport and freight links to the north of the region.

Other key outcomes that Horizons identified as supporting this new inter-regional outcome are:

1.1 Increased peak period passenger transport mode share - The double tracking and electrification to Waikanae will be important for Horizons by contributing to congestion relief through the Western Corridor which is the major north/south route between both regions. However, double tracking to Waikanae may impact the future feasibility of the Capital Connection service which may require the need to consider shuttle services for Otaki residents to Waikanae.

3.1 Reduced greenhouse gas emissions – This is not only a regional but national issue.

4.1 Reduced severe road congestion – From an economic development perspective it is critical for freight to get to and from CentrePort, mainly along the Western Corridor and to a lesser extent through Wairarapa. The development of the Roads of National Significance should also help reduce congestion bottlenecks on public holidays, to and through the Horizons region.

5.1 Improved regional road safety – Many of the campaigns to increase road safety are generic throughout the country so gains should not be isolated to one region.

7.1 Improved regional freight efficiency – This outcome is related to 4.1 as reducing congestion will increase efficiency of all modes of traffic.

7. Strategy targets

7.1 Introduction

A series of targets have been developed to signal the magnitude of the changes the RLTS seeks in relation to each of the strategy outcomes. These targets provide a benchmark against which to measure progress. Targets enable the region to monitor not only whether the strategy is achieving progress in the general direction set by the outcome, but also whether progress has been made to the extent desired and the costs and benefits, both financial and non-financial, of that progress.

7.2 Key outcome targets

The need for a shift in emphasis and greater urgency to progress key outcomes has been taken into account in setting what can be described as ambitious or 'stretch' targets for each of the key outcomes (Table 2). Achieving these targets will be very challenging. However, they have been set at a level so that there is potential to achieve them if they are given adequate emphasis and all potential measures are implemented. Achieving these ambitious targets will depend on all agencies, including central government, taking a strong lead in terms of their respective roles.

Key outcome	2020 Stretch target
1.1 Increased peak period passenger transport mode share	Passenger transport accounts for at least 25 million peak period trips per annum. (17.5 million in 2008/09)
	Passenger transport accounts for at least 21% of all region wide journey to work trips. (17% in 2006)
2.1 Increased mode share for pedestrians and cyclists	Increase active mode use to at least 30% of all trips in urban areas. (25% for 2004-08)
	Active modes account for at least 16% of region wide journey to work trips. (13% in 2006)
3.1 Reduced greenhouse gas emissions	Transport generated CO_2 emissions will be maintained below year 2001 levels. (1,057 kilotonnes in 2001; and 1,084 in 2009)
4.1 Reduced severe road congestion	Average congestion on selected roads will remain below year 2003 levels despite traffic growth. (20 seconds delay / km in 2003; 21 seconds in 2009)
5.1 Improved regional road safety	There are no road crash fatalities attributable to roading network deficiencies.
	Fewer than 300 people are killed or seriously injured on the region's road network when corrected for indicative Police reporting rates. (376 killed and seriously injured in 2008; lowest was 316 in 2003)
6.1 Improved land use and transport integration (in line with the WRS and local authority urban development strategies)	All new subdivisions and developments include appropriate provision for walking, cycling and public transport.
7.1 Improved regional freight efficiency	Improved road journey times for freight traffic between key destinations.
Inter-regional outcome	
8.1 Improved safety, efficiency and reliability of strategic road public transport and freight links to the north of the region	Progress measured using information collected for congestion (4.1), reliability (4.3), safety (5.1) and inter-regional freight (7.2).

Table 2: Key outcome targets for 2020.

The overall passenger transport mode share is the key target for passenger transport trips. The target seeks a 4% increase in passenger transport mode share. This equates to around 7.5 million additional peak period trips per annum (a 43% increase in trips from 2008/09) undertaken by passenger transport. To achieve such a target will mean not only ensuring all currently planned passenger transport improvement projects are funded and implemented, but additional avenues of increasing passenger transport capacity and use are actively investigated and given high priority.

Active mode journey to work trips have been steadily increasing over the prior two census periods, 13% in 2006, up from 12.6% in 2001. Most of the growth has occurred in Wellington City. If this trend continues, the target may be achieved. This target will be challenging but recognises that there are potential gains to be made, primarily in relation to walking trips, where residential development in and around regional centres and the Wellington City CBD will mean greater opportunities for walking trips to work and for other purposes. It is also anticipated that travel planning programmes, as well as cyclist and driver skills training programmes will have an influence on the uptake of active modes in future, although the extent of such is largely unknown.

The 2020 CO_2 target is set at maintaining the 2001 emission level, which represents a very ambitious target given that road demand is expected to increase. While the New Zealand Energy Strategy (NZES) indicates that reductions to 1990 emission levels for New Zealand's transport sector is potentially achievable by 2040, significant emission reductions are not expected until after 2020 when alternative fuels are predicted to be widely available. Therefore, this 2020 target is consistent with the NZES and New Zealand Energy Efficiency and Conservation Strategy (NZEECS). Significant factors influencing the achievement of this target include population and economic growth, average age of the vehicle fleet, fuel economy of the vehicle fleet (especially HCV's), and the uptake of alternative fuels. These factors are outside the region's control, but where appropriate the region can advocate for changes. Driver education initiatives to minimise fuel use and encourage more efficient vehicle travel (i.e. trip chaining) are activities Greater Wellington participates in.

The RLTS Vision statement seeks that no one will be killed or seriously injured on the region's roads. Wellington Region's road toll, however, is trending in the opposite direction with figures having increased 19% since 2003, after indicative NZ Police reporting rates are included. Clearly, the region, Police, road controlling authorities and others need to reverse this trend through coordinated engineering, enforcement and education initiatives. This target is seen as particularly ambitious, but signals the importance placed on significantly and continually reducing casualties.

The congestion target represents a 5% decrease from the current situation (2009). This target addresses the most severe congestion, without attempting to eliminate all traffic congestion – which encourages mode shift. It is a 'hold the line' target set to the best performing year in our data. It is considered ambitious and challenging due to forecast population and economic growth as well as increasing car ownership and use. However, if measures to increase passenger transport and active mode share, reduce severe bottlenecks in the road network, diversify travel demand and improve travel efficiency, then there is potential for this target to be realised.

The target for improved land use and transport integration is for all new large subdivisions and developments to include provision for walking, cycling and public transport. Guidance has been included in the proposed Regional Policy Statement and, in turn, affect District Plans. Progress towards this key outcome target will largely rely on advocacy to local authority reviews of their District Plans under the Resource Management Act and it may be some time before adequate provisions are incorporated into all planning documents.

The target for improved regional freight efficiency seeks improved road journey time between key destinations and is closely related to the target seeking a reduction of severe congestion, particularly on strategic routes linking the key freight destinations of Gracefield, Porirua and CentrePort.

The target for improved safety, efficiency and reliability of strategic road, public transport and freight links to the north of the region combines information gathered for other outcome targets and interprets the data from an inter-regional perspective. This measures the level of service between key destinations in the Wellington Region and the Manawatu-Wanganui Region and beyond.

7.3 Related outcome targets

Targets have also been set for each related outcome (Table 3). These targets are set at a level which signals the need for good progress in these areas. In some cases it was considered appropriate to have more than one target to reflect the various components of a particular outcome.

Related outcome	2020 Target
1.2 Increased off-peak passenger transport use and community connectedness	Passenger transport accounts for at least 25 million off peak period trips per annum. (18.0 million trips in 2008/09)
1.3 Improved passenger transport accessibility for all, including disabled people or from low income groups	90% of passenger transport services are guaranteed to be wheelchair accessible. (11.8% in 2005/06) 65% of the region's residents live within 400 metres (5 minutes walk) and 80% within 800 metres of a bus stop or train station with a service frequency of at least 30 minutes. (59% within 400m, 77% within 800m in 2009)
1.4 Reduced passenger transport journey times compared to travel by private car	Continual reduction of peak period passenger transport journey times relative to a similar journey undertaken by a private car for key selected corridors.
1.5 Increased passenger transport reliability	Continual improvement to bus and train services running to time.
2.2 Improved level of service for pedestrians and cyclists	70% of people report a 'good' or 'neither good nor bad' level of service for the strategic cycle network. (52% in 2008) 95% of people report a 'good' or 'neither good nor bad' level of service for the strategic pedestrian network. (88.4% in 2008)
2.3 Increased safety for pedestrians and cyclists	Fewer than 100 pedestrians injured in the region per annum. (167 injured in 2008) Fewer than 75 cyclists injured in the region per annum. (149 injured in 2008)
3.2 Reduced private car mode share	Private vehicles account for no more than 61% of region wide journey to work trips. (68% in 2006)
3.3 Reduced fuel consumption	Petrol and diesel used for transport purposes per annum will remain below year 2001 levels. (441 mega litres in 2001; 451 mega litres in 2009)
3.4 Increased private vehicle occupancy	Vehicles entering the Wellington CBD during the 2 hour AM peak contain on average at least 1.5 people per vehicle. (1.37 people in 2009)
4.2 Maintained vehicle travel times between communities and regional destinations	Average vehicle journey 'speeds' shown in travel time surveys for selected key routes will remain at or above year 2003 levels. (55km/h in 2003; 54km/h in 2009)
4.3 Improved reliability of the strategic roading network	Continual reduction in total incident hours.

6.2 Improved integration between transport modes	The majority of passenger transport services covered by integrated ticketing.
	Continued improvement in walking, cycle and park 'n ride facilities at and around transport nodes
6.3 Sustainable economic development supported (in line with the WRS)	Continued reduction in vehicle kilometres travelled per GDP.
6.4 Improved transport efficiency	Reduced passenger transport expenditure in real terms per passenger. Reduced roading expenditure in real terms per GDP.
7.2 Improved inter-regional freight efficiency	All infrastructure constraints to rail freight movements are removed.

Table 3: Related outcome targets at 2020.

Measures aimed at progress towards the related outcome "reduced private car mode share" will recognise that some types of private vehicle trips (eg. light commercial vehicles used by couriers or tradesmen) are unable to easily transfer to an alternative mode due to the nature of the job and need to carry equipment. Measures will therefore focus on commuter and other trips by car for which viable alternatives are available, particularly where those vehicles are single occupancy.

In addition to the targets shown above, many more indicators will measure progress towards achieving the strategy outcomes. Over 100 indicators will be reported on annually through the Annual Monitoring Report.

8. Policies

The RLTS policies have been developed in direct response to the pressures and issues facing the region's land transport network as outlined in chapter 3 of this strategy. Policies are expressed using a consistent hierarchy of terms. These are 'ensure', 'support', 'encourage', or 'advocate', depending on what is appropriate in each case. Where the responsibility for implementing a particular policy position lies outside the control of the RTC, the policy will need to be progressed through advocacy.

Policies respond to ongoing issues and guide agency resource allocation and practice. Policies are also important references in programme prioritisation, implementation and corridor plans, monitoring and reviews. All are subject to various constraints including funding, legislative provisions, consent and planning processes outside the scope of this strategy.

8.1 Network management

This group of policies seeks optimal use and improvement of the transport network.

a Ensure the critical role of the regional transport network in providing national and regional accessibility is protected.

b Ensure the regional transport network provides effective and efficient connections to the region's principle economic growth and productivity areas, such as the Wellington City CBD and regional centres, Wellington's port and international airport.

c Ensure that the level of service of the regional transport network is continuously monitored and, where necessary, improved.

d Ensure best use is made of network management techniques[30] to optimise the performance of the existing transport network.

e Ensure continuous identification and mitigation of network security risks including, where appropriate, the development of alternative routes for use in emergencies.

f Ensure the important role of public transport in contributing to congestion relief is recognised and protected.

g Ensure the role of the urban passenger rail network is maintained as the key long to medium distance and high volume service.

h Ensure the passenger rail network provides a high level of service and reliability with regard to rolling stock and rail infrastructure.

i Ensure the passenger rail network is developed to improve capacity, frequency, reliability and coverage in line with current and future demand.

j Support the ongoing development of new and existing park and ride facilities.

k Ensure the continuous review and improvement of bus services.

l Support the use of bus priority measures in congested areas.

[30] For example, Advanced Traffic Management Systems, Advanced Traveller Information Systems, High Occupancy Vehicle lanes.

m Support trolley buses in Wellington City and their ongoing upgrade.

n Ensure the provision of public transport services and concessions that recognise the needs of the transport disadvantaged[31] to enhance equity.

o Support continuous development of the cycling network and integration with other modes.

p Support continuous development of the pedestrian network and integration with other modes.

q Support road and rail maintenance expenditure to achieve appropriate service levels.

r Ensure the proposed Transmission Gully Motorway is developed as the long term solution to address access reliability for State Highway 1 between Mackays and Linden.

s Ensure the existing State Highway 1, between MacKays Crossing in the north and Mungavin Interchange in the south, is managed in a way that is consistent with its long term purpose of a scenic access route once Transmission Gully Motorway is operational.

t Support improved east-west transport links between the Western and Hutt Corridors.

u Encourage the separation of arterial and local road traffic where practicable.

v Ensure the transport network provides for freight and commercial needs.

8.2 Travel demand management

This group of policies seeks to manage the demand for travel and move toward correct pricing[32] of the transport network.

a Ensure the availability of reliable information on the transport system and the choices available.

b Support reduced reliance on private[33] motor vehicles, particularly single occupancy vehicle use (excluding motorcycles) and use for short trips.

c Support the increased use of passenger transport.

d Support the uptake of cycling and pedestrian travel, particularly for short trips.

e Encourage appropriately located land development and ensure integration with transport infrastructure.

f Encourage the development of travel plans.

g Advocate for government policy to enable road pricing.

h Support start-up funding for viable 'alternative to road' initiatives.

i Support beneficial rail freight initiatives where net benefits exceed those of road freight.

[31] As defined in the Public Transport Management Act 2008

[32] Road pricing is where drivers pay the true cost of using roads. This includes the social, economic, and environmental costs such as accidents, pollution and time delays, which are currently borne by the community or economy.

[33] In this context private motor vehicles includes company cars not being used for commercial purposes.

8.3 Safety

This group of policies seeks to improve safety and personal security when using transport.

a Ensure continuous improvement of regional road safety based on a 'safer systems approach' involving a combined package of measures targeting safer road users, safer vehicles, safer roads and roadsides, and safer travel speeds.

b Support improved safety (perceived and real) of pedestrians from risks posed by traffic, the physical environment and crime.

c Support improved safety of cyclists from risks posed by traffic and other hazards.

d Support improved safety and personal security (perceived and real) of passenger transport users.

e Encourage mode shift to public transport as a safer mode of travel.

8.4 Environment and public health

This group of policies seeks to avoid, to the extent reasonable in the circumstances, the adverse effects of transport on the environment and public health.

a Support best practice in design, construction and maintenance of transport projects to avoid, to the extent reasonable in the circumstances, adverse impacts on the environment.

b Support continuous improvement in air quality through reduction in harmful vehicle emissions.

c Support the reduction of greenhouse gas emissions arising from the operation of the regional transport network.

d Support government investigations into alternative fuel options and eco-efficient vehicles.

e Ensure the transport network is developed in a way that minimises the use of non-renewable resources.

f Support the use of transport modes that are not dependent on fossil fuels, including active transport modes.

g Ensure location and design of new transport infrastructure enhance access, minimise community severance issues and take account of the special values of the local area including, but not limited to, environmental matters and community concerns.

h Support ongoing installation of stock truck effluent disposal sites at key localities in the region.

8.5 Integrated Planning

This group of policies seeks to ensure full integration of the RLTS with other relevant local government planning processes and strategies.

a Support the growth and land use aspirations of the Wellington Regional Strategy and the Regional Policy Statement, particularly in relation to compact, well designed and sustainable regional form, as well as supporting a strong Wellington City CBD and regional centres, and denser more connected development around passenger transport nodes and key public transport corridors.

b Ensure new transport infrastructure is consistent with the region's urban design principles as set out in the Regional Policy Statement.

c Support land use principles that minimise dependence on the private car.

d Ensure the current and future Road of National Significance[34] and the regional transport network is identified and protected in territorial authority planning documents.

e Support better integration of transport and land use planning by identifying roading hierarchies and advocating for appropriate access controls in district plans.

f Ensure new land use development includes provision for walking, cycling and public transport services, consistent with relevant best practice guidance.[35]

g Ensure that land use and transport decisions take into account the diverse transport needs and views of the region's community.

h Ensure major recreational, tourist and freight traffic flows are taken into account during planning processes.

i Ensure investment in national transport routes is coordinated with other regions.

j Ensure planning of public transport, walking, cycling and road networks support, enhance and integrate with the key public transport corridors.

8.6 Securing transport funds

This group of policies seek to ensure adequate funding for transport in the region.

a Advocate to government for increased funding and appropriate funding instruments;

b Support investigation of mechanisms for addressing funding gaps in the Regional Land Transport Programme, including but not limited to:

(i) Tolling of new roads

(ii) Road pricing of existing roads

(iii) Public/private partnerships

(iv) Development contributions (under the LGA) and financial contributions (under the RMA).

8.7 Implementation policies

This group of policies seek the development and review of detailed plans to implement this strategy.

[34] The Government has identified seven routes nationally that require significant investment. One of these is State Highway 1 from Levin to the Wellington Airport.

[35] The detail of which is covered in the Implementation Plans.

a To prepare and review corridor plans for each of the following, in accordance with the regional framework provided by this strategy, that identify the needs and proposed actions specific to each corridor:

(i) Western corridor

(ii) Hutt Corridor

(iii) Wairarapa Corridor

(iv) Ngauranga to Airport Corridor.

b To prepare and review implementation plans for pedestrians, cycling, road safety, travel demand management, and freight, in accordance with the regional framework provided by this strategy, that identify the needs and proposed actions specific to each mode.

c To prepare and maintain a Regional Public Transport Plan under the Public Transport Management Act 2008.

d To maintain Greater Wellington's Regional Rail Plan which identifies the needs and proposed actions for development of the rail network over the next 30 years.

8.8 Programme prioritisation and funding policies

This group of policies guides the regional land transport programme prioritisation process.

a Maintain an agreed prioritisation process and methodology to be applied when carrying out review of the Regional Land Transport Programme.

b Ensure that the order of priority in the Regional Land Transport Programme takes account of the following prioritisation approach:

(i) First-priority activities are those required to maintain the existing level of service of the region's transport network or those necessary to meet statutory transport planning obligations.

(ii) Second-priority activities are those relatively low cost studies, demand management, walking and cycling activities, minor safety and other improvement works (<$4.5m) that are expected to help the region move quickly toward achieving RLTS outcomes.

(iii) Third-priority activities are the high cost 'large new projects' (>$4.5m).

c Ensure that prioritisation of activities or projects within the Third-priority 'Large New Projects' category in the Regional Land Transport Programme includes consideration of:

(i) Strategic Fit: how the identified problem, issue, or opportunity to be considered by the project or package aligns with the NZ Transport Agency's strategic investment direction which is derived from the Government Policy Statement

(ii) Effectiveness: the extent to which the package or project contributes to the broad policy objectives set out in the RLTS and the effectiveness of the project or package to deliver against the outcomes sought by the RLTS.

(iii) Economic efficiency: a rating that demonstrates how well the proposed solution maximises the value of what is produced from the resources used, as measured by a benefit cost ratio.

Particular consideration shall also be given to safety issues when considering the priority order of these activities and projects.

d Ensure that once a project or package is committed, and construction or implementation has been approved, then that project or package's funding is deemed to be committed and will not be reallocated to another purpose unless significant new information comes to light.

e Ensure that Western Corridor passenger rail infrastructure and other improvements are in place prior to the opening of the Transmission Gully Motorway.

f Ensure the following applies to the allocation of Crown "C" funds:

(i) The use of "C" funds should be used early to maximise buying power as these funds are not indexed against inflation.

(ii) The highest priority for the use of C funds for assisting local share will be passenger rail improvement projects.

(iii) The Kapiti Western Link Road Stage 1 design and construction is the second priority for assistance with the local share.

(iv) C1 and C2 funds will be used to achieve an effective FAR (financial assistance rate) of 90% for passenger rail improvement projects.

(v) C1 funds will be used to achieve an effective FAR of 90% for Stage 1 of the Western Link Road, but will not be available to assist the local share of Stages 2 and 3 of this project.

(vi) Up to $45 million of C1 funds are available to assist the local share of the Grenada to Gracefield Stage 1 project (assistance to the level of half the local share), noting that this project is still subject to further investigations.

(vii) All C3 funds will be used to develop the proposed Transmission Gully Motorway as the long term solution to address access reliability for State Highway 1 between Mackays and Linden.

8.9 Links between strategy policies and objectives

The following table (Table 4) shows the contribution of policies set out in the previous section to the strategy's objectives. It illustrates how the strategy responds to community needs for each objective.

RLTS policies \ RLTS objectives	Assist economic and regional development	Assist safety and personal security	Improve access, mobility and reliability	Protect and promote public health	Ensure environmental sustainability	Ensure that the RLTP is affordable to the regional community
Network management						
Ensure the critical role of the regional transport network in providing national and regional accessibility is protected.	✓		✓			
Ensure the regional transport network provides effective and efficient connections to the region's principle economic growth and productivity areas, such as the Wellington CBD and regional centres, Wellington's port and international airport.	✓		✓			
Ensure that the level of service of the regional transport network is continuously monitored and, where necessary, improved.	✓	✓	✓	✓	✓	✓
Ensure best use is made of network management techniques to optimise the performance of the existing transport network.	✓		✓		✓	✓
Ensure continuous identification and mitigation of network security risks including, where appropriate, the development of alternative routes for use in emergencies.	✓	✓	✓			
Ensure the important role of public transport in contributing to congestion relief is recognised and protected.	✓		✓		✓	
Ensure the role of the urban passenger rail network is maintained as the key long to medium distance and high volume service.	✓	✓	✓	✓	✓	✓
Ensure the passenger rail network provides a high level of service and reliability with regard to rolling stock and rail infrastructure.	✓	✓	✓	✓	✓	✓
Ensure the passenger rail network is developed to improve capacity, frequency, reliability and coverage in line with current and future demand.	✓	✓	✓	✓	✓	✓
Support the ongoing development of new and existing park and ride facilities.	✓		✓		✓	✓
Ensure the continuous review and improvement of bus services.	✓	✓	✓	✓	✓	✓
Support the use of bus priority measures in congested areas.	✓	✓	✓	✓	✓	✓
Support trolley buses in Wellington City and their ongoing upgrade.			✓	✓	✓	
Ensure the provision of public transport services and concessions that recognise the needs of the transport disadvantaged (as defined in the Public Transport Management Act 2008) to enhance equity.		✓	✓	✓		✓
Support continuous development of the cycling network and integration with other modes.			✓	✓	✓	✓
Support continuous development of the pedestrian network and integration with other modes.	✓	✓	✓	✓	✓	✓
Support road and rail maintenance expenditure to achieve appropriate service levels.	✓	✓	✓	✓	✓	✓
Ensure the proposed Transmission Gully Motorway is developed as the long term solution to address access reliability for State Highway 1 between Mackays and Linden.	✓	✓	✓	✓	✓	

RLTS objectives / RLTS policies	Assist economic and regional development	Assist safety and personal security	Improve access, mobility and reliability	Protect and promote public health	Ensure environmental sustainability	Ensure that the RLTP is affordable to the regional community
Ensure the existing State Highway 1, between MacKays Crossing in the north and Mungavin Interchange in the south, is managed in a way that is consistent with its long term purpose of a scenic access route once TGM is operational.		✓		✓	✓	
Support improved east-west transport links between the Western and Hutt Corridors.	✓	✓	✓	✓	✓	✓
Encourage the separation of arterial and local road traffic where practicable.	✓	✓	✓	✓	✓	
Ensure the transport network provides for freight and commercial needs.	✓		✓		✓	✓
Travel demand management						
Ensure the availability of reliable information on the transport system and the choices available.	✓	✓	✓	✓	✓	✓
Support reduced reliance on private motor vehicles, particularly single occupancy vehicle use (excluding motorcycles) and use for short trips.	✓	✓	✓	✓	✓	✓
Support the increased use of passenger transport.	✓	✓	✓	✓	✓	✓
Support the uptake of cycling and pedestrian travel, particularly for short trips.	✓	✓	✓	✓	✓	✓
Encourage appropriately located land development and ensure integration with transport infrastructure.	✓	✓	✓	✓	✓	✓
Encourage the development of travel plans.	✓	✓	✓	✓	✓	✓
Advocate for government policy to enable road pricing.	✓		✓		✓	✓
Support start-up funding for viable 'alternative to road' initiatives.	✓		✓		✓	✓
Support beneficial rail freight initiatives where net benefits exceed those of road freight.	✓	✓	✓		✓	✓
Safety						
Ensure continuous improvement of regional road safety based on a 'safer systems approach' involving a combined package of measures targeting safer road users, safer vehicles, safer roads and roadsides, and safer travel speeds.	✓	✓	✓	✓		
Support improved safety (perceived and real) of pedestrians from risks posed by traffic, the physical environment and crime.	✓	✓	✓	✓		✓
Support improved safety of cyclists from risks posed by traffic and other hazards.		✓	✓	✓		✓
Support improved safety and personal security (perceived and real) of passenger transport users.		✓	✓	✓		✓
Encourage mode shift to public transport as a safer mode of travel.		✓		✓		
Environment and public health						
Support best practice in design, construction and maintenance of transport projects to avoid, to the extent reasonable in the circumstances, adverse impacts on the environment.				✓	✓	
Support continuous improvement in air quality through reduction in and exposure to harmful vehicle emissions.				✓	✓	
Support the reduction of greenhouse gas emissions arising from the operation of the regional transport network.	✓				✓	✓

RLTS objectives / RLTS policies	Assist economic and regional development	Assist safety and personal security	Improve access, mobility and reliability	Protect and promote public health	Ensure environmental sustainability	Ensure that the RLTP is affordable to the regional community
Support government investigations into alternative fuel options and eco-efficient vehicles.	✓				✓	
Ensure the transport network is developed in a way that minimises the use of non-renewable resources.				✓	✓	✓
Support the use of transport modes that are not dependent on fossil fuels, including active transport modes.	✓			✓	✓	✓
Ensure location and design of new transport infrastructure enhance access, minimise community severance issues and take account of the special values of the local area including, but not limited to, environmental matters and community concerns.	✓	✓	✓	✓	✓	
Support ongoing installation of stock truck effluent disposal sites at key localities in the region.	✓			✓	✓	
Integrated planning						
Support the growth and land use aspirations of the Wellington Regional Strategy and the Regional Policy Statement, particularly in relation to compact, well designed and sustainable regional form, supporting a strong Wellington City CBD and regional centres, and denser more connected development around passenger transport nodes and key public transport corridors.	✓	✓	✓	✓	✓	✓
Ensure new transport infrastructure is consistent with the region's urban design principles as set out in the Regional Policy Statement.	✓	✓	✓	✓	✓	✓
Support land use principles that minimise dependence on the private car.	✓	✓	✓	✓	✓	✓
Ensure the current and future Road of National Significance and the regional transport network is identified and protected in TA planning documents.	✓	✓	✓	✓	✓	✓
Support better integration of transport and land use planning by identifying roading hierarchies and advocating for appropriate access controls in district plans.	✓	✓	✓	✓	✓	✓
Ensure new land use development includes provision for walking, cycling and public transport services, consistent with relevant best practice guidance.	✓	✓	✓	✓	✓	✓
Ensure that land use and transport decisions take into account the diverse transport needs and views of the region's community.	✓	✓	✓	✓	✓	✓
Ensure major recreational, tourist and freight traffic flows are taken into account during planning processes.	✓		✓			
Ensure investment in national transport routes is coordinated with other regions.	✓		✓		✓	✓
Ensure planning of public transport, walking, cycling and road networks support, enhance and integrate with the key public transport corridors.	✓	✓	✓	✓	✓	✓
Securing transport funds						
Advocate to government for increased funding and appropriate funding instruments.	✓					✓

RLTS objectives / RLTS policies	Assist economic and regional development	Assist safety and personal security	Improve access, mobility and reliability	Protect and promote public health	Ensure environmental sustainability	Ensure that the RLTP is affordable to the regional community
Support investigation of mechanisms for addressing funding gaps in the Regional Transport Programme, including but not limited to: -Tolling of new roads -Road pricing of existing roads -Public/private partnerships -Development contributions (under the LGA) and financial contributions (under the RMA).	✓					✓
Implementation						
To prepare and review corridor plans for each of the following, in accordance with the regional framework provided by this strategy, that identify the needs and proposed actions specific to each corridor: -Western Corridor -Hutt Corridor -Wairarapa Corridor -Ngauranga to Airport Corridor.	✓	✓	✓	✓	✓	✓
To prepare and review implementation plans for pedestrians, cycling, road safety, travel demand management, and freight, in accordance with the regional framework provided by this strategy, that identify the needs and proposed actions specific to each mode.	✓	✓	✓	✓	✓	✓
To prepare and maintain a Regional Public Transport Plan under the Public Transport Management Act 2008.	✓	✓	✓	✓	✓	✓
To maintain Greater Wellington's Regional Rail Plan that identifies the needs and proposed actions for development of the rail network over the next 30 years.	✓	✓	✓	✓	✓	✓
Programme prioritisation & funding						
Maintain an agreed prioritisation process and methodology to be applied when carrying out review of the Regional Transport Programme.	✓	✓	✓	✓	✓	✓
Ensure that the order of priority in the Regional Land Transport Programme takes account of the following prioritisation approach: - First-priority activities are those required to maintain the existing level of service of the region's transport network or those necessary to meet statutory transport planning obligations – Second-priority activities are those relatively low cost studies, demand management, walking and cycling activities, minor safety and other improvement works (<$4.5m) that are expected to help the region move quickly toward achieving the RLTS outcomes. – Third-priority activities are the high cost 'large new projects' (>$4.5m).	✓	✓	✓	✓	✓	✓
Ensure that prioritisation of activities or projects within the Third-priority 'Large New Projects' category in the Regional Land Transport programme includes consideration of: strategic fit, effectiveness, and economic efficiency. Particular consideration shall also be given to safety issues when considering the priority order of these activities and projects.	✓	✓	✓	✓	✓	✓

RLTS objectives / RLTS policies	Assist economic and regional development	Assist safety and personal security	Improve access, mobility and reliability	Protect and promote public health	Ensure environmental sustainability	Ensure that the RLTP is affordable to the regional community
Ensure that, once a project or package is committed, and construction or implementation has been approved, then that project or package's funding is deemed to be committed and will not be reallocated to another purpose unless significant new information comes to light.	✓					✓
Ensure that Western Corridor passenger rail infrastructure and other improvements are in place prior to the opening of the Transmission Gully Motorway.			✓		✓	
Ensure the following applies to the allocation of Crown "C" funds: -The use of "C" funds should be used early to maximise buying power as these funds are not indexed against inflation. -The highest priority for the use of C funds for assisting local share will be passenger rail improvement projects. -The Kapiti Western Link Road Stage 1 design and construction is the second priority for assistance with the local share. -C1 and C2 funds will be used to achieve an effective FAR of 90% for passenger rail improvement projects. -C1 funds will be used to achieve an effective FAR of 90% for Stage 1 of the Western Link Road, but will not be available to assist the local share of Stages 2 and 3 of this project. -Up to $45 million of C1 funds are available to assist the local share of the Grenada to Gracefield Stage 1 project (assistance to the level of half the local share), noting that this project is still subject to further investigations. -All C3 funds will be used to develop the proposed Transmission Gully Motorway as the long term solution to address access reliability for State Highway 1 between Mackays and Linden.	✓	✓	✓	✓	✓	✓

Table 4: Links between strategy objectives and policies.

9. The role of transport modes

9.1 Introduction

The land transport system is made up of various modes with separate characteristics and roles. These include private vehicles, passenger transport, walking, cycling and freight. This chapter describes the appropriate role for each land transport mode within the Wellington Region and meets the requirement of section 77(f) of the Land Transport Management Act 2003 and reflects the objectives, outcomes and policies outlined above.

In the greater Wellington region, travel by private car is currently the dominant mode choice comprising nearly three quarters of all trips during the peak period and accounting for almost two thirds of journeys to work. However, both bus and rail passenger transport modes are vital to the operation of the region's transport network, comprising around 30% of peak period trips to and from the Wellington City CBD. This is a high mode share compared with many other cities in New Zealand and internationally. The RLTS recognises the importance of improving the provision and uptake of alternatives to private cars in achieving a sustainable land transport system.

9.2 Private vehicles

The appropriate role for private vehicles is the safe and efficient movement of people between many origins and many destinations, at diverse times. It is appropriate over distances that cannot be easily walked or cycled, where there is a need to carry luggage, and/or where the trip cannot be conveniently provided for by passenger transport services. Private vehicles can also provide for the needs of the mobility impaired.

Recently, there has been a significant increase in the growth of motorcycle and moped use. While these vehicles do have efficiency benefits in terms of usage of road space there are some significant drawbacks. Motorcycles are the most relatively risky modes in terms of casualties over both hours and distance travelled nationally. Regional relative risk data is currently not available due to small sample sizes[36]. In the Wellington CBD, there are also few dedicated motorcycle parking spaces.

Trips by private car are currently the dominant mode choice and account for around 76% of all weekday trips undertaken in the greater Wellington region[37]. Even with rising fuel prices, it is anticipated that private cars will continue to be the dominant mode choice and this is appropriate for the period of the strategy.

The flexibility and convenience a car provides in terms of trip origin and destination, time of travel, and trip distance means it is often the most attractive mode choice. Even with a passenger transport system which serves the strategic network relatively well, a proportion of car trips can not easily be transferred to other modes.

Some businesses and individuals rely on private vehicles for trips during the working day which by their nature cannot be as efficiently served by passenger transport or other modes. Private vehicles are often relied on to access a range of economic, social, cultural and recreational opportunities, particularly off peak and at the weekends. Modern society places increasing demands on people's time and we frequently carry out trip chaining (linking a number of trip 'legs' to undertake a number of trip purposes). In such cases, private cars often provide the most convenient and time efficient option.

[36] Annual Monitoring Report 2008/09.
[37] Derived from 2001 household interview survey.

However, while overall demand for travel by private car is forecast to continue to grow, interventions in the strategy aimed at reducing the need to travel, increasing vehicle occupancy and improving transport alternatives to the private car, seek to reduce the current mode share of private cars. This is reflected in the strategy targets set out in chapter 7.

The targets recognise a growing demand for travel by private vehicle in our region is contributing to adverse effect on environmental quality, public health and economic efficiency. High levels of petrol and diesel consumption are having an adverse impact on CO_2 levels and regional air quality. Reliance on private car use also has a detrimental effect on people's health and fitness levels. It also results in worsening congestion and level of service on our roads which can adversely affect the efficiency of our regional economy. Peak period congestion is dominated by journeys to and from work, particularly on the strategic network to and from the Wellington City CBD. Current trends in private vehicle use and its subsequent effects have been relatively static over the past ten years despite population and economic growth.

9.3 Passenger transport

The appropriate role for passenger transport is to provide an alternative to private cars, particularly for longer journeys where active modes are less attractive. It also has a vital role in providing for people who do not own a private vehicle, are unable to drive or cannot use active modes to access the goods or services they need.

Passenger transport covers both scheduled public transport services and other passenger services. This mode includes the region's trains, buses, ferries and taxis which all form important components of a sustainable land transport system. Journeys on public transport services currently account for around 7% of the region's weekday trips.[38] Passenger transport mode share on the critical strategic corridors is around 30% in the morning peak. This is the highest passenger transport mode share in any region of the country.

Compared to single occupant private car journeys, passenger transport trips are generally more energy efficient, generate fewer emissions and result in less congestion, particularly where those trips are well patronised and the vehicles are well maintained and tuned. Passenger transport also has safety benefits over private cars.

There is an important relationship between urban form and the passenger transport network. The intensification of development around passenger transport nodes is recognised in the WRS as an important element in allowing people to lead a lifestyle that is not dependent on private cars.

Different passenger transport modes have different characteristics and roles to play in the provision of an efficient, effective and integrated public transport network. Descriptions of these follow.

9.3.1 Passenger rail

The appropriate role for passenger rail is the safe and efficient movement of many people at a time over medium to long distances. It has a key role in providing for access between regional centres and for commuter trips to and from the Wellington CBD.

Passenger rail provides key services along two main arterial corridors to and from the Wellington City CBD. Commuter services are provided from as far as Palmerston North and Masterton, with more frequent electrified services from Paraparaumu, Upper Hutt, Johnsonville and Melling.

[38] Derived from 2001 household interview survey.

Passenger rail primarily provides access to the Wellington City CBD by carrying large numbers[39] of people along these critical corridors, particularly during peak periods when the roads along these routes are severely congested. In the Wellington Region, the average trip length by rail is around 25 km, compared with 7 km by bus. Hence, while rail accounts for a smaller proportion of trip numbers than buses, it accounts for 72% of passenger kilometres travelled in peak periods.

The RLTS seeks to continue to grow rail patronage and improve peak period mode share, through implementation of the Regional Passenger Transport Plan and Regional Rail Plan. This includes improving the capacity, reliability, frequency and accessibility of rail services.

9.3.2 Buses

The appropriate role for buses is the provision of a safe and efficient network of services that allows the connection of many people between many different origins and destinations, including a short walk at either end of the journey. Buses also have an important role in providing connector services to rail stations.

Buses currently account for almost two thirds of passenger transport trips during peak periods. Buses provide a comprehensive network of routes to and from the Wellington City CBD from the south, east and western Wellington city suburbs, along with direct services along the strategic corridors from northern suburbs such as Churton Park, Newlands and Khandallah. Elsewhere in the region buses play an important supporting role for rail as a local connector service and for connecting local communities with services and facilities.

The RLTS seeks to continue to grow bus patronage and improve peak period bus mode share, through implementation of the Regional Passenger Transport Plan. This includes improving the capacity, service frequency and accessibility of bus services and encouraging the ongoing development of bus priority measures to ensure bus journeys are an attractive alternative to private vehicles.

9.3.3 Taxis

The appropriate role for taxis is similar to that of private vehicles. Taxis also provide a transport alternative for those without access to a private vehicle where scheduled services or routes do not provide adequately for a particular trip. Taxis also provide a door to door service for those with disabilities or are otherwise limited in mobility. The region's Total Mobility scheme utilises taxis for this purpose. The current role of taxis in the Wellington Region will continue to be appropriate for the period of this strategy.

[39] Around 11,237 people arrive at Wellington Station during the AM peak. Source: GWRC AM Peak Cordon Surveys, March 2009.

Passenger trips by taxi account for a very minor (less than 1%)[40] mode share of all weekday trips. Because taxis essentially provide their customers with the same level of mobility as private cars, there is not considered to be a case for taxis to use or benefit from public transport priority schemes such as bus lanes. There may be cases where taxis would qualify for high occupancy vehicle lanes or transit lanes. The regulation of such facilities along with allocation of standing space for taxis is the responsibility of territorial authorities.

When taxis run without passengers, they are in effect single occupancy vehicles – with all the corresponding negative environmental and congestion effects. However, taxi services compliment public transport by offering more choices for trip legs to or from public transport nodes, and reduce parking requirements. Taxis also have positive safety benefits by providing door to door services so people do not 'drink and drive', especially on weekends.

9.3.4 Harbour ferries

The appropriate role for harbour ferries is the safe and efficient movement of many people between limited locations, particularly where they provide a quicker and more direct trip than other modes.

The existing Wellington Harbour ferry provides direct access from Eastbourne across the harbour to the Wellington City CBD with good time savings compared to the same trip by bus or car. Other ferry options may become available over time.

Harbour ferries' share of passenger transport trips in the region is very minor (well below 1%)[41] and this is not expected to change significantly over the next 10 years. The current role of harbour ferries in the region's land transport network is appropriate and will continue.

9.4 Walking

Walking is the appropriate mode for short[42] local trips and for connections between modes and at either end of longer journeys by other modes. Walking is safe and efficient, and has important health, fitness, social and environmental benefits. It is also often the most energy and time efficient means of transport for short trips.

Walking is an essential element of a sustainable transport system and comprises around 17% of the region's daily trips [43]. For the purpose of this strategy 'pedestrians' are defined as any person on foot on a road, and include any person in or on any contrivance equipped with wheels or revolving runners which is not a vehicle (Land Transport Act 1998).

Walking is a significant mode for journeys to work to and from the Wellington City CBD. It is largely influenced by Wellington City's compact form and the intensification of residential development in and around the Wellington City CBD, meaning more people live within easy walking distance of the city centre. The relatively high use of passenger transport to and from the Wellington City CBD also has a high associated walking component.

[40] Derived from the 2001 household interview survey.
[41] Derived from 2001 household interview survey.
[42] Short trips are defined as being those less than 2 km in length.
[43] Derived from 2001 household interview survey.

Most people consider walking to be an easy way of getting around,[44] but we do not walk for as many short trips as we could.[45] Even so, the use of walking as a mode for trips between 1 km and 2 km has increased[46]. The RLTS supports walking as a transport mode through the provision of a safe and convenient pedestrian environment and by increasing people's awareness of the benefits of walking. This includes advocating for land use development and urban design that support walking as a transport mode. In addition, the close link between walking and passenger transport for longer journeys is recognised and this strategy proposes interventions to ensure pedestrian access to passenger transport nodes is easy, safe and pleasant.

The Regional Walking Plan, which sits alongside this strategy, sets out the proposed actions for pedestrian improvements within the region, including the proposed funding and responsibilities for actions.

9.5 Cycling

The appropriate role for cycling is the safe and efficient movement of people between many origins and many destinations, over short to medium distances, as an alternative to private cars.

While comprising a relatively minor 1%[47] of the region's trips over an average weekday, cycling contributes positively towards a sustainable transport system as it is energy efficient, has minimal environmental impacts, is affordable, and has associated health and fitness benefits. Cycling also contributes to reduced congestion as cycles require less road space and parking space than cars.

A hilly terrain and windy climate in parts of the region may contribute to the perception of many greater Wellington residents that getting around the region by cycle is not easy[48]. However, other parts of the region, such as the Kapiti Coast, Hutt Valley and Wairarapa, have topography and climatic conditions more suited to cycling and a growth in this mode should be achievable in these areas.

However, most residents also believe that cycling in the region is unsafe.[49] Cycling does have a higher relative risk than other modes. Therefore perceptions of cycling safety, along with the provision and quality of cycling facilities have an important part to play if cycling is to increase. The RLTS seeks to improve the level of service for cycling throughout the region to enable cycling to perform its appropriate role.

We expect that safety issues are likely to be compounded in the future due to more vehicle traffic for cyclists to contend with on the roads. In two thirds of the accidents involving cyclists and motor vehicles, it was the vehicle driver cited as being at fault. Other factors include vehicle speeds in certain areas and the lack of space dedicated for cycle lanes. Improving and expanding the cycling infrastructure, driver and cyclist skills training courses, all contribute to increasing the number of cyclists. This is likely to have a positive effect on perceived and real cyclist safety due to a 'safety in numbers' effect.

The Regional Cycling Plan, which sits alongside this strategy, includes an action programme and targets and performance measures for this mode. A principle feature is the development and

[44] Source: GWRC perception survey 2008
[45] Source: GWRC perception survey 2008
[46] Source: GWRC active mode survey 2009
[47] Derived from 2001 household interview survey.
[48] GWRC perception survey 2008.
[49] GWRC perception survey 2008.

communication of a regional cycling network. It is also important to ensure that new land use development and urban design support cycling as a viable transport mode, particularly for shorter journeys. Cycling as part of a longer journey combined with passenger transport also needs to be recognised and adequately provided for within our region.

9.6 Freight

The appropriate role for land transport freight traffic is the safe and efficient movement of goods within, to and through the region. Freight includes anything transported as part of a commercial arrangement from a small couriered document to the movement of logs, containers and heavy machinery.

The two primary freight modes are road and rail. Road freight is most appropriate for the movement of goods between many origins and many destinations. Rail freight is most appropriate for the movement of high volumes of goods over longer distances between key production and distribution nodes. To provide for these modes the strategy aims to improve road network efficiency and to support rail freight initiatives where the benefits exceed those of road freight.

Most freight journeys within the greater Wellington region tend to be relatively short (less than 20 km) and not easily transferred to rail (Hyder, 2009). The region's key road freight destinations are Seaview/Gracefield, Petone, Porirua/Tawa and CentrePort. Freight trips by heavy commercial vehicles (HCV) comprise around 9% of weekday vehicle trips on our region's road network .[50] State Highway 2 between Ngauranga and Upper Hutt has the highest daily flow of heavy vehicles in New Zealand.

State Highways 1 and 2 and the North Island Main Trunk and Wairarapa railway lines provide access to CentrePort for road and rail freight from the north. CentrePort is adjacent to the Wellington City CBD and is a key link for freight between the North and South Islands. It is also the only major port in New Zealand with direct access to westward routes from New Zealand. CentrePort has seen increasing freight volumes each year since 1997 (WRS, 2005). Logs and containers are core components of the port's freight traffic. State Highway 58 provides a vital connection for freight movements between the Western Corridor and the Hutt Valley.

Freight movement via the airport is a relatively minor component of the region's freight traffic, largely due to the restriction in aircraft size that can be accommodated by Wellington airport. A future increase in freight movement via the airport is expected as a result of improvements to accommodate containerised airfreight and, potentially, through the introduction of the new Boeing 787. However, it is unknown how significant such growth is likely to be. The importance of access to and from Wellington airport will increase with any future increase in air freight volumes.

A Regional Freight Movements Study was completed in 2006. A Regional Freight Plan, which sits alongside this strategy covers road, rail and sea freight and identifies priorities to improve the efficiency of freight movement to support economic development goals for the region. Freight movement by coastal shipping is minor compared to the other routes and little opportunity for increased freight movement in this sector is foreseen.

[50] Source: Wellington Transport Strategic Model (WTSM).

9.7 Other modes

Modes such as mobility scooters, skateboards and Segways are generally confined to using the existing pedestrian network. While these modes are often important to the user, they are below the scope of strategic regional transport planning. Regulation of use and provision of infrastructure for these are best dealt with at a local community level.

9.8 Integration of modes

The provision of an integrated, safe, responsive and sustainable land transport system relies on integration between all modes which make up the regional transport network. Many journeys are multi-modal and, to ensure such journeys are as quick, safe and convenient as possible, a good level of integration between the different transport modes is sought by the RLTS.

Within the passenger transport network the ease of connecting between modes such as buses and trains, and within the modes themselves, will contribute to faster, more reliable journeys. This is likely to make the passenger transport network more attractive for a greater range of journey purposes and destinations.

Walking often forms a component of longer trips by passenger transport and private cars, so the provision of safe, direct and pleasant pedestrian access to stations, bus stops and park and ride facilities is important. Cycling trips have the potential to be combined with other modes for longer journeys, especially in those areas where public transport cannot be accessed easily by walking. In particular, safe cycling routes and cycle storage provision will be crucial to achieving good integration between cycling and other modes.

There are few opportunities for the integration of rail and road freight due to fundamental differences between these modes. However, opportunities to achieve such coordination should continue to be pursued, for example, the Wairarapa - CentrePort log freight proposal which seeks to move logs from a depot near Masterton via rail, thereby significantly reducing heavy vehicle traffic on State Highway 2.

The following table sets out opportunities to improve the integration between and within modes.

	Rail	**Bus**	**Ferry**	**Walking**	**Cycling**
Private car	Maintain and develop park & ride facilities	Investigate park & ride facilities where appropriate	Investigate park & ride facilities where appropriate	Direct and safe pedestrian access to and within parking areas	**N/A**
Rail	Integrated ticketing, timetable alignment and pedestrian connections	Integrated ticketing, timetable alignment and pedestrian connections	Integrated ticketing, timetable alignment and pedestrian connections	Direct and safe pedestrian connections to railway stations	Safe cycling links to train stations, cycle storage and/or bike carriage facilities
Bus		Integrated ticketing, timetable alignment and pedestrian connections	Integrated ticketing, timetable alignment and pedestrian connections	Direct and safe pedestrian connections to bus stations and stops	Safe cycling routes to bus stations, cycle storage
Ferry			Integrated ticketing, safe and easy access to ferry terminals	Direct and safe walking connections to and from ferry terminals	Safe cycling routes to ferry terminals, cycle carriage on ferries
Walking				Direct and safe pedestrian links	Cycle storage adjacent key facilities
Cycling					Develop the regional cycling network

Table 5: Opportunities to improve integration of transport modes.

10. Implementing the RLTS

10.1 Introduction

A number of implementation plans and corridor plans have been developed to provide specific project interventions to give effect to the RLTS vision, objectives, outcomes and policies. The implementation and corridor plans form stand alone documents which sit alongside the RLTS. Until changed, they represent the policy position for implementing the RLTS.

Implementation plans enable the RTC to gain a region wide perspective for each mode or interest area and therefore to assess the relative priority of interventions specific to each mode. Implementation plans include comprehensive action programmes with project specific targets and timeframes identified. The plans also identify the agency responsible for each activity in the action programmes.

Implementation plans have been developed for the following:

- Travel Demand Management
- Road safety
- Cycling
- Walking
- Freight
- Rail.

A Regional Passenger Transport Plan was developed separately and adopted by Greater Wellington's Transport and Access Committee in 2007. A new Regional Public Transport Plan will be developed in accordance with the Public Transport Management Act 2008.

Corridor plans are multimodal and enable the RTC to gain a perspective of interventions proposed in each corridor, and to assess how proposed interventions interact with each other and with the existing regional and local network. A transport corridor is the alignment of transport infrastructure that links activity centres. Corridor plans aim to provide affordable, efficient, reliable, safe and sustainable connections which can accommodate reasonable capacity and ensure regional and inter-regional accessibility. Corridor plans identify the needs and desired outcomes specific to each of the major transport corridors and provide comprehensive action programmes with responsibilities, targets and timeframes identified.

The following corridor plans have been developed and adopted by the RTC:

- Western Corridor – Otaki to Ngauranga Merge
- Hutt Corridor – Upper Hutt to Ngauranga Merge
- Wairarapa Corridor – Masterton to Upper Hutt
- Ngauranga to Wellington Airport Corridor – Ngauranga Merge to Wellington Airport.

The Western and Ngauranga to Wellington Airport Corridors contain those sections of the Levin to Wellington Airport Road of National Significance that are within the Wellington Region.

The implementation and corridor plans will have an important role in implementing the strategic direction and desired outcomes of the RLTS in relation to each mode or transport corridor. However, not having these detailed plans sit within the strategy itself will enable them to be updated and reviewed on a more regular basis to reflect new information, projects and funding.

Development of implementation and corridor plans involve extensive stakeholder consultation and enable early and focused public consultation on particular transport issues, options and proposed interventions. For many in the wider public, corridor plan consultation will provide the main opportunity for participation in the range of issues surrounding a proposed transport project. Consultation on the RLTS concentrates on the strategic framework and how everything fits together.

Review of the implementation plans and corridor plans will need to ensure alignment of the plans with the new strategic framework provided by the RLTS. The review programme for these plans is set out in chapter 12 of this strategy. Review of the plans will need to be aligned with, and give effect to, the new strategic framework provided by the RLTS.

10.2 Implementation plan summaries

10.2.1 Travel Demand Management

Travel Demand Management (TDM) is a term used for a range of interventions that reduce the need to travel, increase the efficiency of the transport system and influence travel choices, thereby contributing to a more efficient transport network and a sustainable community. Managing the demand for travel, particularly travel by single occupancy motor vehicles, is recognised as playing an important part in meeting the desired outcomes of the RLTS. Measures include road network management tools, land use policies, parking policies, behaviour change programmes, economic pricing measures and new technology and innovation.

TDM interventions have wide ranging potential benefits relating to efficiency, environmental sustainability, reduced traffic congestion, network reliability, economic development, affordability, travel choices, public health, and safety. By optimising the use of the existing network, demand management measures can also defer or remove the need for expensive new capacity improvement projects.

This section of the strategy is consistent with the requirement of section 77(e) of the Land Transport Management Act (LTMA) 2003 to include a demand management strategy. Strategic outcomes and targets for demand management are included in chapter 7 of the strategy.

The strategy outcomes of particular relevance to demand management are:

- Reduced severe road congestion
- Maintained vehicle travel times between communities and regional destinations
- Sustainable economic development supported
- Improved transport efficiency
- Improved land use and transport integration
- Improved integration between transport modes
- Increased peak period passenger transport mode share
- Increased mode share for pedestrians and cyclists
- Reduced private car mode share
- Increased private vehicle occupancy
- Reduced greenhouse gas emissions
- Reduced fuel consumption.

The 2020 strategy targets of particular relevance to demand management are:

- Average congestion on selected roads will remain below year 2003 levels despite traffic growth (20 seconds delay / km in 2003)
- Average vehicle journey "speeds" shown in travel time surveys for selected routes will remain at or above 2003 levels (55km/h in 2003)
- Continued reduction in vehicle kilometres travelled per GDP
- All large subdivisions and developments include appropriate provision for walking, cycling and public transport.
- The majority of passenger transport services covered by integrated ticketing
- Continued improvement in walking, cycle and 'park and ride' facilities at and around transport nodes
- Passenger transport accounts for at least 21% of all region wide journey to work trips. (17% in 2006)
- Active modes account for at least 16% of region wide journey to work trips. (13% in 2006)
- Private vehicles account for no more than 61% of region wide journey to work trips. (68% in 2006)
- Vehicles entering the Wellington CBD during the 2 hour AM peak contain on average at least 1.5 people per vehicle. (1.37 people in 2006)
- Transport generated CO_2 emissions will be maintained below year 2001 levels (1,057 Kt in 2001)
- Petrol and diesel per annum used for transport purposes will remain below year 2001 levels. (441 megalitres in 2001)

A key contribution towards achieving the strategy targets will be implementation of the detailed Regional Travel Demand Management Plan, which sits alongside this strategy, and includes an action programme identifying responsibility, timing, funding sources and specific targets for each action. The table below outlines the key action areas, project targets and associated timetables.

Action area	Project Target	Timing
Road Network efficiency	All road controlling authorities proactively consider use of measures that optimise the existing road network	Ongoing
School Travel Plans	94, or 41% of, primary and secondary/intermediate schools and 26,761,or 34% of school children are involved in or exposed to school travel plan activities by June 2013[51] (24 schools and 7,900 school children were involved by June 2009)	By June 2013
Workplace and Business Travel Tool Box	At least 3,000 people registered in the regional carpool programme (460 people had registered by June 2009)	By June 2013
	At least one new sustainable transport initiative per year made available in which a wide number of employees and workplaces can be involved with	Ongoing

[51] Based on 2008 school roll data.

Travel Awareness	Contribution towards at least one new community behaviour change awareness initiative per year	Ongoing
Promote public transport, walking and cycling	Sufficient funding is included in annual budgets to ensure activities in the relevant regional plans for these modes can be fully implemented	Ongoing
Land use provisions	Next operative Regional Policy Statement and District Plans include provisions to facilitate land use development that reduces travel demand and increases the feasibility of travelling by more sustainable modes	At next review
	Structure plans are used to guide large new growth and development areas where appropriate	Ongoing

Table 6: Travel demand management action areas, targets and timetables

For demand side measures to be successful, particularly those aimed at encouraging a mode shift, the availability of high quality alternatives to travel by single occupant cars are vital. The regional plans for walking, cycling, and public transport sit alongside and integrate with this TDM plan. They focus on the supply side through provision of good quality infrastructure and services for these other modes to ensure they are as easy, safe and attractive to use. Regional plans for road safety and freight have also been developed to allow focus on addressing the relevant issues.

These plans all play an important complementary role to the TDM Plan as shown in the diagram below.

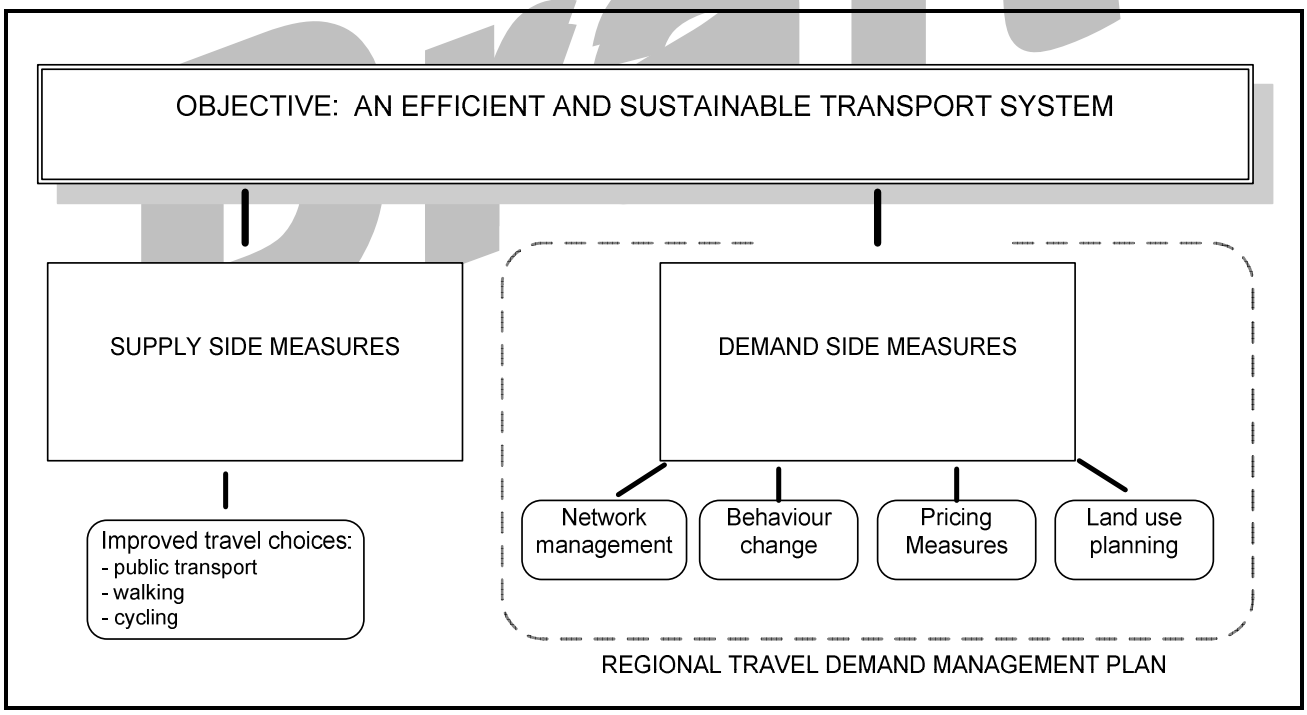

Figure 19: Scope of the Regional Travel Demand Management Plan

10.2.2 Road safety

Continuously improving regional road safety is an important outcome of the RLTS. Chapter 3 of this strategy identifies the significant road safety issues for the region, including a worsening trend in fatal and serious crashes over recent years.

The Regional Road Safety Plan sets out sets out an action programme aimed at improving the region's road safety outcomes. The successful achievement of the outcomes will depend on adequate funding for road safety activities and a number of agencies working together on key projects.

In developing the Regional Road Safety Plan, consideration was given to:

- what can be done differently at a national level
- what can be done at a regional/local level
- whether we are doing enough locally; and
- what we need to do differently.

The plan follows a 'safer systems' approach with a combination of measures to address safer drivers, safer vehicles, safer roads and roadsides, and safer speeds – consistent with the approach used to develop a national road safety strategy to 2020.

Key action areas in the plan include:

- Local Safety Management Systems, Road Safety Action Plans, road safety coordination and education campaigns
- Advocacy for road safety funding and changes at the national level.
- Urban speed management, driver fatigue awareness, enforcement practices, motorcyclist safety, training for inexperienced drivers, repeat offending and safer vehicle fleets.

10.2.3 Cycling

Improving the level of service for cycling, increased use of cycling as a transport mode, and improving cycling safety in the region are important outcomes of the RLTS.

The Regional Cycling Plan provides an action programme which sets out proposed actions and identifies associated targets, timeframes and responsibilities.

Key actions areas in the plan include:

- Improving the cycling network
- Improving cycling integration
- Cycle advocacy and promotion
- Cyclist skills training and safety programmes
- Improving and sharing cycling information

The plan also supports development of the Great Harbour Way, seeking that improvements along the route are consistent with its long term vision.

10.2.4 Walking

Improving the level of service for pedestrians, increased use of walking as a transport mode for short trips, and improving pedestrian safety and security in the region are important outcomes of the RLTS.

The Regional Walking Plan provides an action programme which sets out proposed actions and identifies associated targets, timeframes and responsibilities.

Key action areas in the plan include:

- Improving the pedestrian network
- Improving pedestrian integration (with public transport and within land development)
- Pedestrian advocacy, promotion and safety activities
- Improving information for pedestrians

10.2.5 Freight

Improving the efficiency of road and rail freight (regional and inter-regional) are important outcomes of the RLTS. Efficient freight transport is vital to support a prosperous and sustainable region.

The Regional Freight Plan recognises the different needs of short and long haul freight, road and rail freight, important links to other transport networks such as the port and airport for sea and air freight, existing network constraints and the need for improved linkages.

The freight plan includes an action programme setting out actions which are not already covered by corridor plan action programmes, with associated targets, timing, responsibility, timing, and funding sources for each action.

Key action areas in the plan include:

- Upgrading road links between key freight destinations
- Advocacy for the provision (and retention) of rail freight opportunities
- Advocacy for the removal of rail freight infrastructure constraints.

10.2.6 Passenger transport

Increasing passenger transport use and mode share and improving passenger transport accessibility, capacity, reliability, and frequency are important outcomes of this strategy. A Regional Passenger Transport Plan has been developed separately by Greater Wellington's Passenger Transport Committee and sets out Greater Wellington's intentions for the regional passenger transport system over the next 10 years.

The Regional Passenger Transport Plan forms part of the RLTS and sets out how the passenger transport system will help deliver on its strategic outcomes.

Key policy areas in the current plan are:

- Network standards
- Vehicle and infrastructure standards
- Fares, ticketing and information
- Funding and procurement.

Many of the major passenger transport projects planned over the next 10 years are identified through corridor plans (refer to summaries in chapter 10.3). Other key passenger transport activities to be progressed include new trains and rail network improvements, new trolley buses and more bus priority measures, real time information and integrated ticketing systems.

10.2.7 Rail

The Wellington Regional Rail Plan (RRP) was developed by Greater Wellington and endorsed in November 2008. It provides for the long term development of our region's rail network. It sits alongside the Regional Land Transport Strategy and Regional Public Transport Plan. Implementation of the plan is a condition of ongoing rail funding from various Crown sources.

The purpose of the plan is to set out how to maintain and grow rail's position as the key transport mode for long to medium distance and high volume transport services over the next 25 years. It covers the four rail corridors within the region (Johnsonville, Paraparaumu, Melling, Hutt/Wairarapa), plus the train service that operates from Palmerston North.

The preferred pathway in the plan includes the base case of committed improvements (many of which are underway or in place already), followed by a number of different scenarios to address reliability, frequency, capacity, journey time and reach (coverage) depending on demand and growth.

10.3 Corridor Plan summaries

10.3.1 Western Corridor

This corridor generally follows the line of State Highway 1 and the North Island Main Trunk railway from Otaki to Ngauranga.

The long term vision for this corridor is described below:

Along the Western Corridor from Ngauranga to Otaki, State Highway 1 and the North Island Main Trunk railway line will provide a high level of access and reliability for passengers and freight travelling within and through the region in a way which recognises the important strategic regional and national role of this corridor. These primary networks will be supported effectively by local and regional connector routes. A high quality rail service will accommodate the majority of people using passenger transport to commute along this corridor during the peak period. Comprehensive bus services and adequate park and ride facilities will provide additional access for the community. Traffic congestion on State Highway 1 will be managed at levels that balance the need for access against the ability to fully provide for peak demands due to community impacts and cost constraints. Maximum use of the existing network will be achieved by removal of key bottlenecks on the road and rail networks. Effective safety measures on the road and rail networks will ensure that no one is killed or injured as a result of network deficiencies when travelling in this corridor. East-west connections between this corridor and other corridors and regional centres will be efficient, reliable and safe.

The Western Corridor Plan, which sits alongside this strategy, identifies the needs and proposed actions specific to this corridor. The action programmes within this corridor plan are multi-modal and include consideration of land use integration. Key features of the existing Western Corridor Plan include:

- Rail network improvements, including the extension of rail services north and increased service frequencies
- Construction of Transmission Gully Motorway within ten years
- Construction of Kapiti Western Link Road in the short term
- Upgrading east-west connections between State Highways 1 and 2.

10.3.2 Hutt Corridor

The Hutt Corridor follows State Highway 2 and the Wairarapa railway line from Ngauranga through to Upper Hutt.

The long term vision for this corridor is described below:

Along the Hutt Corridor from Ngauranga to Upper Hutt, State Highway 2 and the Wairarapa railway line will provide a high level of access and reliability for both passengers and freight. These primary networks will be supported effectively by local and regional connector routes. High quality rail and bus services will accommodate the majority of people using passenger transport to commute along this corridor during the peak period. Maximum use of the existing road network will be achieved through measures giving priority to buses and addressing severe traffic congestion. Comprehensive bus services and adequate park and ride facilities will provide additional access for the community. Effective safety measures on the road and rail networks will ensure that no one is

killed or injured when travelling in this corridor. East-west connections between this corridor and other corridors and regional centres will be efficient, reliable and safe.

The Hutt Corridor Plan, which sits alongside this strategy, identifies the needs and proposed multi-modal actions specific to this corridor. Key features of the existing Hutt Corridor Plan include:

- Safety and capacity improvements to State Highway 58
- A proposed new east-west link road between Grenada and Gracefield
- Safety and capacity improvements along State Highway 2.

10.3.3 Wairarapa Corridor

The Wairarapa Corridor follows State Highway 2 from Te Marua (north of Upper Hutt) over the Rimutaka Hill through to Mount Bruce north of Masterton; and the Wairarapa railway line from Maymorn (north of Upper Hutt) through to Masterton; and includes State Highway 53 between Featherston and Martinborough.

The long term vision for this corridor is described below:

The local road network will provide local access to the State Highways and the rail network, which in turn will connect these areas with the Wellington City CBD and other regional centres. Basic, but reliable, local passenger transport (and Total Mobility) services will be easily accessible.

The Wairarapa Corridor Plan, which sits alongside this strategy, identifies the needs and proposed actions specific to this corridor. The action programmes within this corridor plan are multi-modal and include consideration of land use integration. Key features of the existing Wairarapa Corridor Plan include:

- Road safety improvements
- Replacement of the Waihenga Bridge over the Ruamahanga River
- Construct Masterton Eastern Bypass
- Continuous upgrade of the Rimutaka Hill Road
- Support implementation of the Rural Broadband Initiative

10.3.4 Ngauranga to Wellington Airport Corridor

This corridor starts at the Ngauranga Merge and continues through the Wellington City CBD to Newtown (including the regional hospital), the Eastern Suburbs and Wellington International Airport. It includes State Highway One, major arterial routes, the railway line where the North Island Main Trunk and the Wairarapa lines merge and through to Wellington City rail terminals, and key routes for passenger transport, walking and cycling.

The long term vision for this corridor is described below:

Along the Ngauranga to Wellington Airport Corridor, access to key destinations such as CentrePort, Wellington City CBD, Newtown Hospital and the International Airport will be efficient, reliable, quick and easy. Priority will be given to passenger transport through this corridor, particularly during the peak period. Passenger transport will provide a very high quality, reliable and safe service along the Wellington City growth spine and other key commuter routes. The road

network will provide well for those trips which can not be made by alternative modes and will allow freight to move freely through the corridor. Traffic congestion through the corridor will be managed at levels that balance the need for access against the ability to fully provide for peak demands due to community impacts and cost constraints. Maximum use of the existing network will be achieved by removal of key bottlenecks on the road and rail networks.

The Ngauranga to Wellington Airport Corridor Plan, which sits alongside this strategy, identifies the needs and proposed measures specific to this corridor. The action programmes within this corridor plan are multi-modal and include consideration of land use integration. Immediate priorities of the existing Ngauranga to Wellington Airport Corridor Plan for the short-term include:

- Public transport improvements along the Golden Mile
- Bus priority measures on arterial routes and key growth corridors
- Walking and cycling improvements
- Basin Reserve improvements
- Hutt Road bus lanes and SH1 tidal lanes

11. Funding

This chapter sets out the likely transport funding sources that will be available within the greater Wellington region over the next 10 years. The Regional Transport Committee is required to 'take account of' the land transport funding likely to be available during the period covered by the strategy (LTMA s76(b)) which is 30 years out to 2040.

The Regional Land Transport Programme (RLTP) details the indicative funding required and a likely funding range (as advised by NZ Transport Agency) for the next 10 years. The significant proportion of the funding is provided by the NZ Transport Agency through the National Land Transport Programme – which also contains 10 year forecasts of likely funding for land transport at a national level. Long Term Council Community Plans contain 10 year indicative forecasts as well.

Historically, there has been a funding gap between the cost of desired investment and available funding. This situation is likely to continue over the life of the strategy. The preferred strategic option is for investment across all modes of transport by choosing the best performing projects as a response to an identified need.

The greater Wellington region does not consider the preferred strategic option to constitute a preferred package of projects to be completed by 2040. Therefore, no detailed costing on the preferred strategic option was performed and no estimate of required 30 year funding was made. Rather, the preferred option justifies the RLTS policies which seek to encourage investment across all modes of transport.

The preferred strategic option also advocates for exploring other sources of funding (such as road pricing) which could be used to fund any future shortfall. Significant capital investment could also be deferred with road pricing mechanisms in place.

Objective 6 of this strategy is to ensure the RLTP is affordable for the regional community, and that objective is followed through in numerous policies (see Table 4).

Therefore, the Wellington Region will take account of available funding through each progressive RLTP development process, which in order to be consistent with the RLTS will have to be affordable for the region. The selection and prioritisation of individual projects and activities, as well as the pace of implementation will be set through the RLTP process. Guidance will be provided from the RLTS, corridor and implementation plans, as well as other studies.

This process will ensure transparency and accountability in the funding of land transport investments.

11.1 Available funding

There are principally four types of funding currently available to the region:

- Nationally distributed funds (N) are allocated on the basis of national priority by NZ Transport Agency from the National Land Transport Fund in accordance with its allocation process. Funding is mainly derived from road user charges, fuel excise and motor vehicle registrations. Wellington Region's share of N will vary from year to year.

- Regionally distributed funds (R) are allocated by NZ Transport Agency which selects the highest priority activities to ensure value for money and ensure a guaranteed minimum level of

funding for each region. Funding is derived from road user charges and fuel excise. Approximately $118 million is likely to still be available by 2015.

- Crown appropriations (C) are special regional funds which are allocated by NZ Transport Agency. This funding resulted from the Wellington Transport Project which identified increased funding requirements for Wellington Region's transport needs. Total C funding available is now $727 million after spent and committed funds are taken into account. C funds are not indexed, meaning its buying power reduces over time due to inflation. Crown funding has been made available to support specific activities as set out below.

  C1 (announced 27 January 2005)

  - $225 million for increased transport investment as follows:
  - $65 million for existing passenger transport infrastructure and services
  - About $30 million for transport demand management
  - About $30 million for enhancing passenger transport services
  - About $100 million for strategic roading.

  C2 (announced 5 July 2005)

  - $255 million for Western Corridor transport investment to address the following:
  - Enhanced passenger transport
  - Better traffic demand management
  - Intersection safety and bottleneck improvements
  - New roads: Grenada Gracefield (western) and the Kapiti Western Link Road.

  C3 (announced 5 July 2005)

  - $405 million for Western Corridor strategic roading, contingent on regional agreement on the preferred option.

- Local funds (L) are allocated by individual local authorities and are mainly provided through Long Term Council Community Plans via rates, user charges and debt. The regional council funds passenger transport whereas territorial authorities fund roads (including footpaths, etc). Local share has an ongoing impact on rates increases and are subject to local concerns.
- Other funding sources may include tolls, fuel taxes, development levies and contributions and road pricing. While road pricing is not expected to be available over the next 10 years, the strategy calls for further investigation of all realistic funding sources. The amount of funding that would be available from other funding sources is too uncertain to provide reliable figures.
- Funding of the Crown's share for the region's rail network and rolling stock is shared through the NLTP and the Ministry of Transport. The details of the funding mechanisms are currently uncertain.

11.2 Regional Land Transport Programme

The Regional Land Transport Programme (RLTP) sets out the region's expectations for new capital expenditure on strategic roading and expenditure on passenger transport over the next 10 years. The RLTP combines all activities signalled in corridor and implementation plans, as well as other sources, that require national-level funding into one regional document. This constitutes the region's request to NZ Transport Agency for funding through the National Land Transport Programme. An activity must be in the relevant region's RLTP in order to be included in the national-level Programme.

The RLTP is confirmed on a three yearly basis using an agreed prioritisation methodology. This review of project priorities requires both technical and political assessment. Priorities are likely to remain relatively constant from programme to programme, though new projects may be introduced as a result of implementation and corridor plan reviews. Cost, timing and funding availability estimates are variable from programme to programme.

11.3 Government Policy Statement

The Government Policy Statement on land transport funding (GPS) sets out impacts that the National Land Transport Programme seeks to achieve. It also sets out expected expenditure ranges for different activities at the national level.

The NZ Transport Agency must give effect to the GPS. It will do this by determining which of the activities identified in the 17 regional land transport programmes will be supported with national funding in the National Land Transport Programme.

12. Monitoring, evaluation and review

12.1 Monitoring and evaluation

This section discusses how Greater Wellington proposes to measure the performance of the RLTS in achieving its desired outcomes.

Evaluation of the effectiveness and appropriateness of the RLTS is an ongoing process that starts as soon as the RLTS is adopted. While monitoring and evaluation are important inputs to the RLTS review process, there are many evaluation tools used to report back regularly in the interim.

Embedded in the RLTS are the principal evaluation tools of measurable outcome indicators and targets. Targets are used to provide a benchmark against which to measure whether policy and project interventions are acting effectively. Monitoring reports may suggest more, faster or wider interventions where performance continues to trend below target.

The monitoring programme involves the following:

- A quarterly report to the RTC focusing on agency progress towards implementing the projects, activities and actions set out in the supporting implementation plans, as reported by each lead agency.

- An Annual Monitoring Report with over 100 indicators to measure progress towards achieving the outcomes and related targets sought by the strategy. A three yearly monitoring process is required by section 83(1) of the LTMA 2003. The full Annual Monitoring Report will be completed by 30 September each year it is required, reported to the RTC and made publicly available. Additional reporting will be produced annually during the intervening years.

The monitoring programme involves extensive reporting on road and passenger transport network performance, and on measures of regional growth, accessibility, economic efficiency, affordability, safety, public health and environmental sustainability. This will provide a detailed picture of regional performance, sustainability and trends. Insights from the monitoring programme will be used to help identify pressures and issues, thereby informing reviews of the strategy and its components.

To ensure that any significant new pressures not covered by the monitoring programme are identified, and to pick up on changing public perceptions over time, the evaluation process includes regular public surveys.

A regional perception survey is carried out every two to three years by Greater Wellington and offers an understanding of public perceptions of transport related issues. This survey allows some benchmarking against data provided by Auckland Regional Council (ARC), which carries out a similar survey on a biennial basis.

12.2 Strategy review

Section 74(1) of the Land Transport Management Act 2003 states that every regional land transport strategy must be renewed at least once every six years. This RLTS will need to be renewed by 2016.

The following diagram (Figure 20) illustrates how the evaluation and monitoring process assists in identifying the pressures, issues and needs in relation to the region's transport network and how these feed into review of the strategy and follow through to the various implementation plans.

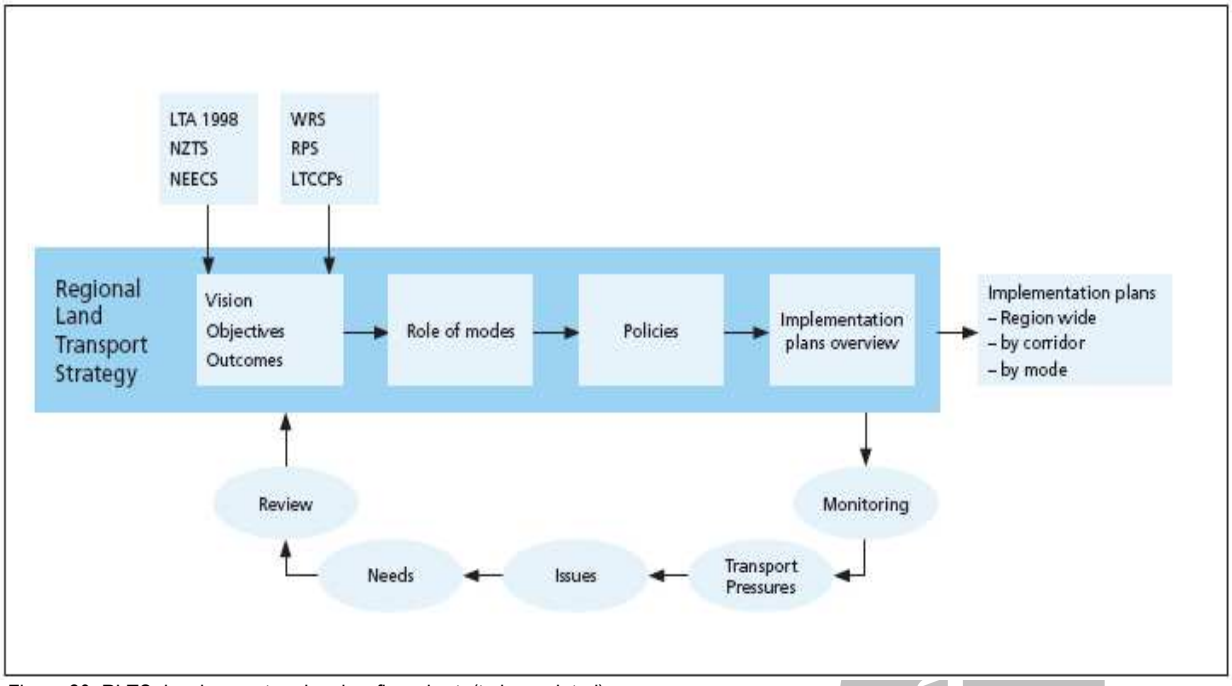

Figure 20: RLTS development and review flow chart. (to be updated)

Review of the RLTS will involve assessment of the legislative and policy context, feedback on progress from monitoring results and survey-based pressures and issues, technical and stakeholder consultation, and a submission process to the RTC. Stakeholder consultation includes consultation with and through the RTC's community and interest group representatives. Section 78(2) of the LTMA 2003 aligns RLTS consultation processes with relevant Local Government Act processes.

12.3 Implementation and corridor plan reviews

The implementation plans and corridor plans, which sit alongside and support the strategy, should be viewed as living documents as they set out projects and activities considered appropriate at the time they were developed and approved, based on the best information available at that time. The plans require ongoing updates and review to ensure they give effect to the RLTS and reflect new information as it becomes available.

The detailed components of these plans are too complex to review at one time. In order to allow the regional community to focus on particular elements of the region's transport network, it is proposed to continue the practice of having a series of rolling reviews of the implementation plans and corridor plans. Corridor plans typically take some 18 months to review and implementation plans take around 12 months to review. The following table (Table 7) sets out the proposed next cycle of the review programme for the implementation documents which support the strategy.

Document	Last approved	Next review
Regional Passenger Transport Plan	Aug 2007	Underway – late 2009
Ngauranga to Wellington Airport Corridor Plan	Oct 2008	2011/12
Regional Rail Plan	Nov 2008	2011/12
Wairarapa Corridor Plan	Dec 2004	Underway – early 2010
Hutt Corridor Plan	Dec 2004	2010
Walking Plan	Oct 2008	2011/12
Cycling Plan	Dec 2008	2011/12
Western Corridor Plan	April 2006	2010/11
Travel Demand Management Plan	Oct 2009	2012/13
Road Safety Plan	Oct 2009	2012/13

Table 7: Proposed review programme for implementation documents.

The scope of implementation and corridor plan reviews will be at the discretion of future RTCs, with a view to avoiding any unnecessarily long, onerous and costly studies or processes. Where comprehensive reviews are needed, they will involve studies and sector assessments, and one or more stages of public consultation, depending on whether options are involved.

12.4 Review of the Regional Land Transport Programme

The Regional Land Transport Programme (RLTP) sets out the region's funding priorities for the next three years and the expectations for new capital expenditure on strategic roading and passenger transport over a 10 year period. The RLTP combines all activities signalled in corridor and implementation plans, as well as other sources, that require national-level funding into one regional document. This constitutes the region's request to NZ Transport Agency for funding through the National Land Transport Programme. An activity must be in the relevant region's RLTP in order to be included in the national-level Programme.

The RLTP is renewed every three years (section 13(1) of the Land Transport Management Act 2003). Wellington's next RLTP will have to be adopted by July 2012. It is expected the review will take account of significant new information that will result from current studies, particularly the Ngauranga Triangle Study. Variations to the RLTP may be made outside the normal review process.

13. Assessment of the RLTS

This section demonstrates that the RLTS is in accordance with section 77(c) of the Land Transport Management Act 2003.

Reference	Provision	Comment
75(a)(i)	The RTC must ensure that the RLTS contributes to the aim of achieving an affordable, integrated, safe, responsive, and sustainable land transport system	RLTS chapter 2: Vision RLTS chapter 6: Outcomes RLTS chapter 8: Policies RLTS table 5: Opportunities to improve integration of transport modes
75(a)(ii)	The RTC must ensure that the RLTS contributes to each of the following- ➢ assisting economic development ➢ assisting safety and personal security ➢ improving access and mobility ➢ protecting and promoting public health ➢ ensuring environmental sustainability	RLTS chapter 5: Objectives RLTS table 1: Links between strategy objectives and outcomes RLTS table 4: Links between strategy objectives and policies
75(a)(iii)	The RTC must ensure that the RLTS is consistent with any- ➢ national land transport strategy ➢ relevant national policy statement or regional policy statement or regional plan that is for the time being in force under the RMA 1991	There is currently no national land transport strategy. Consistency with the Wellington RPS is set out in: RLTS chapter 5: Objectives RLTS chapter 14: Relevant regional economic and land use considerations and likely funding RLTS Appendix 4: (forthcoming)
75(a)(iv)	The RTC must ensure that the RLTS avoids, to the extent reasonable in the circumstances, adverse effects on the environment	RLTS chapter 8.4: Policies – Environment and public health
75(b)(i)	The RTC must take into account the relevant GPS	RLTS Appendix 4: (forthcoming) The RLTS has been reviewed with the impacts sought by the current GPS in mind, with a number of minor amendments made to the text to reflect its emphasis. RLTS chapter 11: Funding
75(b)(ii)	The RTC must take into account any national energy efficiency and conservation strategy	RLTS Appendix 4 (forthcoming) RLTS Appendix 2: Statutory context RLTS chapter 7: Targets
75(c)(iii)	The RTC must take into account any relevant	RLTS table 2 – Outcome 6.1 'Improved

	district plans	land use and transport integration' RLTS chapter 14: Relevant regional economic or land-use considerations and likely funding RLTS chapter 8.5: Policies – Integrated Planning Strategic options modelling in central-case scenarios took account of where District Plans signalled desired future growth.
76(a)	The RTC must also take into account any guidelines issued by the Minister for regional land transport strategies	The NZTA issued guidelines for development of RLTS's in 2004 – these are now somewhat out of date due to the 2008 amendments to the LTMA 2003 – however the general principles in the guidelines have been taken into account. NZTA officers have assisted with the current RLTS review.
76(b)	The RTC must also take into account the land transport funding likely to be available within the region for implementing the strategy during the period covered by the strategy	RLTS chapter 11: Funding The RLTP sets out detailed funding requirements over the 3 year and ten year period. The NLTP includes 3 year funding allocations by region and estimated ten year funding availability for NZ as a whole. Likely available funding over the period of the strategy has been roughly estimated using the limited information available.
76(c)	The RTC must also take into account the views of affected communities	RLTS Consultation Plan (forthcoming)
76(d)	The RTC must also take into account the views of land transport network providers in the region	RLTS Consultation Plan (forthcoming)
76(e)	The RTC must also take into account the need to give early and full consideration to land transport option and alternatives in a way that contributes to the matters referred to in section 75(a)(iv) and paragraph (c)	RLTS Chapter 4: Strategy development Appendix 3: Strategic Options
76(f)	The RTC must also take into account the need to provide early and full opportunities for persons and organisations listed in section 78(1) to contribute to the development of the RLTS	RLTS Consultation Plan (forthcoming) A technical working group consisting of key stakeholders was used to review the strategy and early meetings were held with several interest area groups/representatives.
76(g)	The RTC must also take into account the need to take account of the relevant regional council's	RLTS table 2 – Outcome 6.1 'Improved land use and transport integration'

	function under section 30(1)(gb) of the RMA 1991	RLTS chapter 8.5: Policies – Integrated Planning RLTS chapter 14: Relevant regional economic or land-use considerations and likely funding Appendix 1: Strategic Transport Network
77(a)	A RLTS must contain inter-regional and intra-regional transport outcomes relevant to the region	RLTS chapter 6: Outcomes
77(b)	A RLTS must contain strategic options for achieving those outcomes	RLTS chapter 4: Strategy development RLTS Appendix 3: Strategic Options
77(c)	A RLTS must contain an assessment as to how the RLTS complies with sections 75 and 76	RLTS chapter 13: Assessment of RLTS
77(d)	A RLTS must contain a statement of any relevant regional economic or land-use considerations, and the likely funding of any land transport infrastructure associated with those considerations	RLTS chapter 14: Relevant regional economic or land-use considerations and likely funding
77(e)	A RLTS must contain a demand management strategy	RLTS chapter 10.2.1: Implementing the RLTS – Travel Demand Management
77(f)	A RLTS must contain an assessment of the appropriate role for each land transport mode in the region	RLTS chapter 9: The role of Transport Modes
77(g)	A RLTS must contain an assessment of the role of education and enforcement in contributing to the land transport outcomes	RLTS chapter 15: Role of education and enforcement
77(i)	A RLTS must contain a statement that identifies any strategic option for which co-operation is required with other regions	RLTS Appendix 3: Strategic options (this I have updated)
77(j)	A RLTS must contain a statement that identifies persons or organisations who should be involved in the further development of strategic options	RLTS appendix 2: Statutory context – 1.5 Roles and responsibilities
77(k)	A RLTS must contain measurable targets to be achieved to meet the outcomes of the RLTS	RLTS chapter 7: Targets
77(l)	A RLTS must contain a statement provided by an independent auditor of how the process followed by the RTC complied with the requirements of this Act	RLTS chapter 16: Auditor Statement (forthcoming - hopefully)
77(m)	A RLTS must contain a summary of the policy relating to significance adopted by the RTC under section 106	RLTS chapter 17: Summary of significance policy

Table 8: Alignment between RLTS and LTMA 2003 content requirements

14. Relevant regional economic or land-use considerations and likely funding

There are two key regional documents which identify the significant regional economic and land use considerations. The Regional Policy Statement (RPS), a statutory document developed under the Resource Management Act, provides the regional direction for land use development. The Wellington Regional Strategy (WRS) is non-statutory and provides a sustainable economic growth strategy for the Wellington region.

Key economic growth and land use considerations identified by these documents include: the importance of efficient access to the Wellington City CBD and regional centres, the port and airport; the importance of a compact, well designed urban form; the need for investment in new east-west transport linkages along with investment in existing north-south routes; the need to encourage higher density housing and mixed use development close to centres and public transport links; and the need to encourage local employment opportunities and manage travel demand.

The development of corridor plans and implementation plans alongside this strategy allows for the identification of any investment in land transport infrastructure to address the likely land use development, growth and associated transport demand throughout the region. These transport infrastructure projects are then brought forward for funding consideration through the Regional Land Transport Programme process.

For example, the Ngauranga to Wellington Airport Corridor Plan identifies a number of important public transport, walking/cycling and roading infrastructure projects that respond to the considerations identified by the RPS and WRS above, and to the desire expressed by Wellington City Council's Growth Spine concept to encourage transit-oriented intensification of employment and housing along a key spine between Johnsonville and Wellington Airport.

Rail infrastructure improvements to support the ongoing development of Wellington's passenger rail network are identified through several corridor plans and the Regional Rail Plan, recognising the importance of this network in providing access to and between key economic growth and productivity areas. Extension of the urban rail network to Waikanae and associated planned frequency and capacity improvements respond to expected population growth in Kapiti. Improvements to facilitate rail freight access to the Wellington City CBD and CentrePort are also identified.

Improvements to State Highway 1, 2 and 58 are identified in several corridor plans, reflecting the role that these links have in providing efficient access between regional centres. The regional and national significance of State Highway 1 in supporting economic growth is recognised in the Western and Ngauranga to Wellington Airport corridors as well as by the Ministry of Transport as a Road of National Significance. Several infrastructure projects, including Transmission Gully Motorway, are proposed to address this.

The need for new and improved east-west transport links is identified in the WRS, recognising the value in more efficient connections between key freight and employment destinations such as Hutt Valley (particularly Seaview/Gracefield) and Porirua. A proposed new road link between Grenada and Gracefield has been identified in both the Hutt and Western Corridor Plans to address this need, in addition to improvements to State Highway 58.

These considerations provide a key input to the Regional Land Transport Programme prioritisation process. The RLTP contains 10-year funding forecasts and sets out the associated funding details.

15. Role of education and enforcement

Education plays a major role in achieving the RLTS key outcomes. Improved community awareness and education of the health, safety, environmental and other benefits of increased public transport and active mode use is prominent in the Regional Travel Demand Management, Walking and Cycling Plans. Accessibility to accurate information through journey planners and real time information systems encourage higher use of alternative transport modes contributing to reduced congestion and greenhouse gas emissions. Greater knowledge of the effects of climate change, peak oil and other environmental effects of dependence on private vehicle travel help to promote behaviour change that reduces greenhouse gas emissions. Better knowledge of vehicle and fuel efficiencies is also contributes to meeting the target. Education is also a main plank to increase road safety through driver and cycling skills training courses that increase awareness of other road users – especially in urban areas where the risk of conflict is greater.

Enforcement provides incentives for improved safety and personal security on the region's roads by penalising dangerous, aberrant or otherwise un-desired behaviour. Improved safety, especially for cyclists, is a regional priority, and enforcement is an important part of achieving these outcomes and targets. Increased real and perceived safety leads to higher alternative transport mode shares and consequently reduced greenhouse gas emissions. Enforcement is also a key part in managing infrastructure to ensure the intended benefits of interventions (speed restrictions, bus-priority and cycle lanes, etc.) are provided.

Coordinated education and enforcement initiatives can make substantial gains towards achieving RLTS objectives.

16. Independent Auditor statement

To be included in final draft.

17. Summary of significance policy

Purpose

This policy sets out how to determine the significance of variations to Greater Wellington's Regional Land Transport Strategy (RLTS). This policy is set in accordance with the requirements of section 106(2) of the Land Transport Management Act 2003 (the Act).

Application

The RLTS can be varied at any time. However, consultation will be required in accordance with section 78 of the Act if the variation is significant.

The approach to the consultation will reflect the level of the significance of the proposed variation. Consideration should be given to the costs and benefits of any consultation process or procedure and the extent to which consultation has already taken place.

General determination of significance

The significance of variations to the RLTS will be determined on a case-by-case basis.

When determining the significance of a variation to the RLTS, consideration must be given to the extent to which the variation:

- signals a material change to the balance of strategic investment
- impacts on the strategy's contribution towards NZTS objectives and/or GPS targets
- affects residents (variations with a moderate impact on a large number of residents, or variations with a major impact on a small number of residents will have greater significance than those of a minor impact)
- affects the integrity of the RLTS, including its overall affordability.

Always not significant

Matters which the Transport and Access Committee have deemed not to be significant under the significance policy for the Regional Transport Passenger Plan,[52] and minor editorial and typographical amendments to the strategy, will always be considered not significant.

Usually not significant

Matters that will usually be considered not significant are:

- A matter that has already been consulted on (the addition, removal or amendment of any matter which has already been consulted on in accordance with section 78 of the Act)
- Variations to this policy.

[52] This other policy will determine whether a proposed variation to the regional public transport plan is significant for the purpose of section 21(6) of the Public Transport Management Act 2008.

Appendix 1 - Strategic transport network

The strategic transport network is made up of the region's key railway lines, state highways and those major local roads serving an arterial purpose, as listed and mapped below. This schedule may be amended from time to time by application to the Regional Transport Committee.

When considering strategic transport and land use planning issues it is important to identify, plan and protect the current and future regional transport network (policy 8.5d) "Protect" means "protect strategic (arterial) accessibility". A key function of the strategic transport network is linking the region's centres and important destinations such as the Wellington City CBD, regional centres, CentrePort and Wellington International Airport and Wellington's regional hospital in Newtown, in addition to connecting the Wellington Region with the rest of New Zealand.

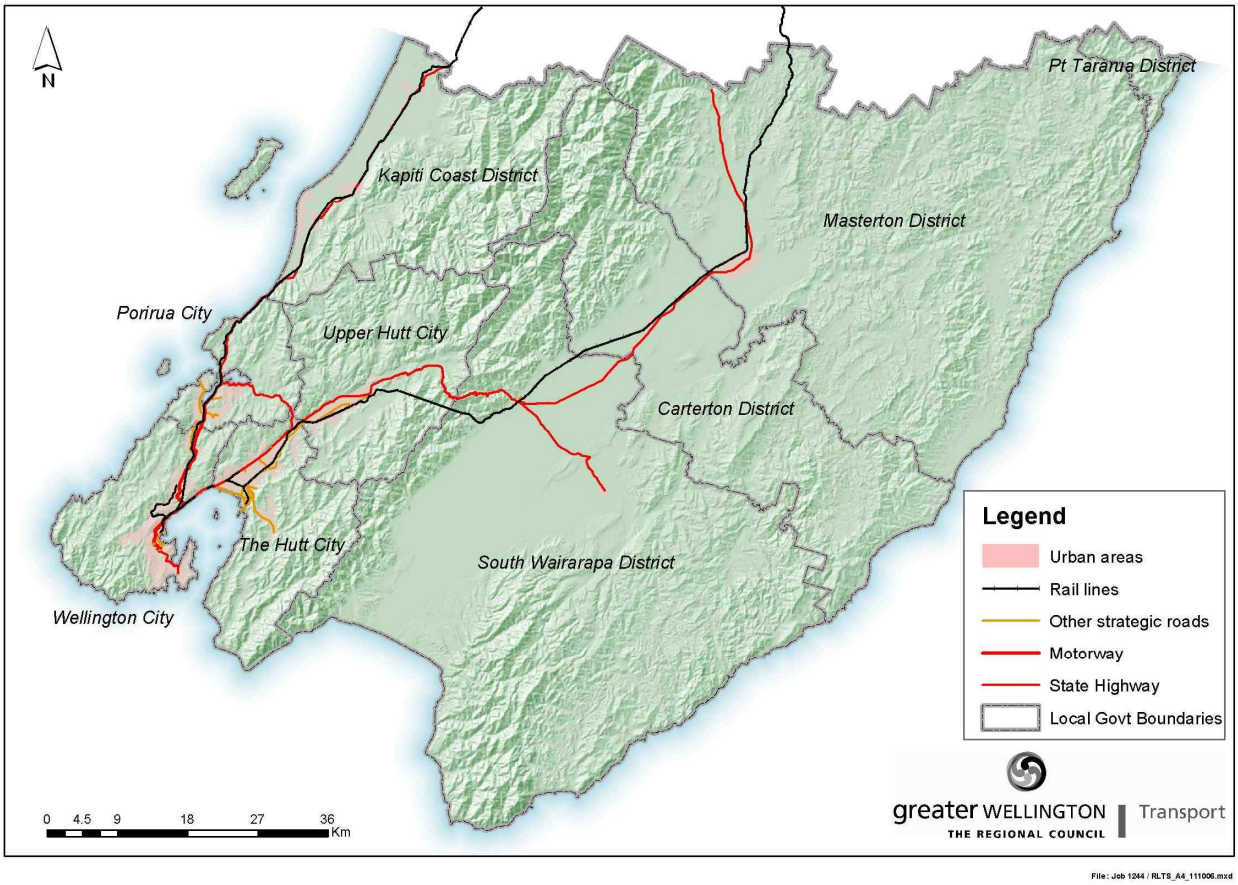

Figure A1.1 Strategic Transport Network.

Key Passenger Transport Corridors

North Island Main Trunk Railway
Wairarapa Line
Melling Line
Gracefield Branch Railway
Johnsonville Line

The key public transport routes from Wellington Station through the CBD to the regional hospital and the airport.

State highways

State Highway 1
State Highway 2
State Highway 53
State Highway 58
Transmission Gully Motorway (designated future route)

Key terminals providing links to other transport networks (air and sea)

CentrePort
Wellington International Airport
Point Howard Wharf

Strategic local roads (by district)

Wellington City

In addition to identifying the strategic importance of State Highways 1 and 2 and the Wellington Urban Motorway, the Wellington City Council District Plan (July 2000 - Volume 3, pages 33 and 34), lists the following as 'Arterial Roads':

Aotea Quay
Arthur Street[53]
Buckle Street
Cable Street
Cambridge Terrace
Customhouse Quay (Waterloo Quay to Jervois Quay)
Dufferin Street
Ghuznee Street
Jervois Quay
Kent Terrace
Karo Drive[54]
Patterson Street
Rugby Street
Sussex Street
Vivian Street
Wakefield Street (Cambridge Terrace to Jervois Quay)
Waterloo Quay

Hutt City

The Hutt City Council District Plan (June 2003) identifies State Highways 2 and 58 as 'Primary Distributors' and lists the following roads as 'Major District Distributors':

Bell Road (Gracefield Road to Parkside Road)
Cambridge Terrace
Clendon Street
Daysh Street

[53] Part of new Inner City Bypass route which opened January 2007.
[54] Part of new Inner City Bypass route which opened January 2007.

Eastern Hutt Road
Fairway Drive
Gracefield Road (Wainuiomata Hill Road to Bell Road)
Melling Link
Naenae Road (Clendon Street to Daysh Street)
Parkside Road
Randwick Road
Seaview Road (Seaview Roundabout to Parkside Road)
The Esplanade
Wainui Road
Wainuiomata Hill Road
Waione Street
Whites Line East (Randwick Road to Wainui Road)

Porirua

The Porirua City Council District Plan (1999) identifies the following roads as 'Major Arterials':

Major Urban Arterials
Kenepuru Drive (Titahi Bay Road to City boundary)
Mungavin Avenue (Mungavin Interchange to Champion Street)
Paremata Road State Highway 58 (Paremata Roundabout to Browns Bay)
State Highway 1 Mana Esplanade (Paremata Roundabout to Plimmerton)
State Highway 1 Pukerua Bay (Grays Street to Pa Road)
Te Whaka Whitianga O Ngatitoa (Parumoana Street to State Highway 1)
Titahi Bay Road
Whitford Brown Avenue (State Highway 1 to Warspite Avenue)

Major Rural Arterials
State Highway 1 (Plimmerton to Pukerua Bay) and State Highway 58 (Pauatahanui to Haywards)

Upper Hutt

The Upper Hutt City Council District Plan (2004) identifies Fergusson Drive, Main Road North and State Highway 2 (River Road) as 'National Routes'. The following roads are listed as 'Primary (Regional) Arterials':

Eastern Hutt Road
Fergusson Drive

Kapiti

The Kapiti Coast District Council identifies the following roads as 'National/Major District Arterials' in its District Plan:

State Highway 1
Kapiti Western Link Road

Appendix 2 – Statutory Context

The Wellington Regional Land Transport Strategy (RLTS) is evidence-based, with clear linkages between issues and interventions. However, in responding to regional issues the RLTS must also be firmly integrated with the national framework.

1. Legislative requirements

1.1 Regional Land Transport Strategy

All regional councils are required by the Land Transport Management Act (LTMA) 2003[55] to produce a Regional Land Transport Strategy for the council. Under section 75 of the Act '*a regional transport committee must, when preparing a regional land transport strategy on behalf of a regional council, –*

(a) ensure that the regional land transport strategy—

(i) contributes to the aim of achieving an affordable, integrated, safe, responsive, and sustainable land transport system; and

(ii) contributes to each of the following:

(A) assisting economic development:

(B) assisting safety and personal security:

(C) improving access and mobility:

(D) protecting and promoting public health:

(E) ensuring environmental sustainability; and

(iii) is consistent with any—

(A) national land transport strategy; and

(B) relevant national policy statement or any relevant regional policy statement or regional plan that is for the time being in force under the Resource Management Act 1991; and

(iv) avoids, to the extent reasonable in the circumstances, adverse effects on the environment; and

(b) take into account—

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

(i) the relevant GPS; and

(ii) any national energy efficiency and conservation strategy; and

(iii) any relevant district plans.'

Under section 76 of the Act *'when preparing a regional land transport strategy on behalf of a regional council, a regional transport committee must also take into account—*

(a) any guidelines issued by the Minister for regional land transport strategies; and

(b) take into account the land transport funding likely to be available within the region during the period covered by the strategy; and

(c) the views of affected communities; and

(d) the views of land transport network providers in the region; and

(e) the need to give early and full consideration to land transport options and alternatives in a way that contributes to the matters referred to in section 75(a)(iv), and paragraph (c); and

(f) the need to provide early and full opportunities for persons and organisations listed in section 78(1) to contribute to the development of those regional land transport strategies; and

(g) the need to take account of the relevant regional council's function under section 30(1)(gb) of the Resource Management Act 1991 to consider the strategic integration of transport infrastructure with land use through objectives, policies, and methods.'

Under section 77 of the Act '*a regional land transport strategy must contain the following matters:*

(a) inter-regional and intra-regional transport outcomes relevant to the region; and

(b) the strategic options for achieving those outcomes; and

(c) an assessment as to how the regional land transport strategy complies with sections 75 and 76; and

(d) a statement of any relevant regional economic or land-use considerations, and the likely funding of any land transport infrastructure associated with those considerations; and

(e) a demand management strategy; and

(f) an assessment of the appropriate role for each land transport mode in the region; and

(g) an assessment of the role of education and enforcement in contributing to the land transport outcomes; and

(h) [Repealed]

(i) a statement that identifies any strategic option for which co-operation is required with other regions; and

(j) a statement that identifies persons or organisations who should be involved in the further development of strategic options; and

(k) measurable targets to be achieved to meet the outcomes of the regional land transport strategy; and

(l) a statement provided by an independent auditor of how the process followed by the regional transport committee complied with the requirements of this Act; and

(m) a summary of the policy relating to significance adopted by the regional transport committee under section 106.'

The RLTS must be renewed at least once every six financial years, and cover a period of at least 30 financial years (section 74(a) of the LTMA 2003).

1.2 Regional Public Transport Plan

The requirement to include a regional passenger transport plan in the RLTS (LTMA section 77(h)) was repealed with the enactment of the Public Transport Management Act 2008 (PTMA section 63(2)). The Wellington Regional Public Transport Plan (PT Plan) is developed separately by the Transport and Access Committee (TAC) of the regional council.

The PT Plan sits alongside the RLTS document and is considered to form a part of the strategy. It will be added to the RLTS when adopted by TAC.

1.3 Statutory policy framework

The following section describes the statutory policy framework that must be considered in developing the RLTS.

1.3.1 New Zealand Transport Strategy

The New Zealand Transport Strategy (NZTS) was released in 2008. The foreword of the NZTS states that transport is a service, not an end in itself, which supports the community's access to the services they need. The vision of the NZTS is to ensure that "people and freight in New Zealand have access to an affordable, integrated, safe, responsive and sustainable transport system." The five objectives of the NZTS have been built into the Land Transport Management Act (LTMA) 2003 and flow into the objectives of the Wellington RLTS (chapter 5). The RLTS reflects the vision, objectives and long-term targets (to 2040) of the NZTS to ensure vertical integration of national, regional and local transport policy.

The NZTS identifies seven key challenges to achieving its objectives and targets. These are responding to climate change, energy security and cost, funding of investment in infrastructure and

services while keeping transport affordable, increases in the environmental and social impacts of transport, changing demands arising from the aging population, land use development and its impact on travel demand, and global terrorism.

The NZTS also identifies several key components for increased priority that are meant to meet the key challenges and overcome the barriers to achieving the NZTS objectives and targets. These are:

- Integrated planning
- Making best use of existing networks and infrastructure
- Investing in critical infrastructure and the transport sector workforce
- Increasing the availability and use of public transport, cycling, walking and other shared and active modes
- Considering options for charging that will generate revenue for investment in transport infrastructure and services
- Using new technologies and fuels
- Maintaining and improving international links.

1.3.2 Government Policy Statement

The LTMA 2003 requires the Minister of Transport to issue a Government Policy Statement on land transport funding (GPS) every three years. A GPS will include the government's overall short to medium-term impacts that the Crown wants to achieve, funding targets for the first 3 years, funding ranges for the next six years, and funding range forecasts for the following four years (for a total of 10 years). It will also indicate any necessary changes to the fuel excise duty, road user charges, and motor vehicle registration fees to fund the proposed activities.

The Act describes how the GPS relates to certain land transport planning and funding processes. The NZ Transport Agency must give effect to the GPS in developing the NLTP and take account of the GPS when approving funding for activities. Regional land transport strategies must also take account of the GPS (LTMA section 75(b)(i)).

1.3.3 Regional Policy Statement (RPS)

The Resource Management Act (RMA) 1991 requires every regional council to prepare a regional policy statement designed to promote sustainable management of natural and physical resources. A regional policy statement provides an overview of the resource management issues for the region and outlines the policies and methods required to achieve the integrated management of the region's natural and physical resources.

The RMA requires a full review be undertaken of a regional policy statement every 10 years after it becomes operative. Greater Wellington proposed a new Regional Policy Statement for the

Wellington Region (RPS) in March 2009. The proposed RPS identifies regionally significant resource management issues and contains Objectives to address those issues. There are also Policies and Methods described to achieve those Objectives.

In accordance with section 75(a)(iii)(B) of the LTMA 2003, consistency between the RLTS and the relevant policies and methods set out in the current RPS has been analysed to check that they are not inconsistent. This analysis forms a background document[56] to this strategy. The 2007-16 RLTS influenced the development of the proposed RPS, and therefore has been incorporated into the policies of the proposed RPS to varying degrees. The issues relevant to the RLTS are air quality, energy, infrastructure, and regional form. The relevance of the RLTS in contributing to these issues varies from being the primary means of achievement to only being indirectly involved.

A number of regional plans (e.g. Regional Freshwater Plan, Regional Coastal Plan, Regional Air Quality Management Plan) have been developed under the strategic framework of the RPS. These plans contain objectives, policies and methods (including regional rules) that are consistent with the RPS. Consequently, the RLTS is not considered to be inconsistent with any relevant regional plan. It should also be noted that the detailed issues covered by the rules in these plans are likely to apply to land transport projects during the resource consent process.

1.3.4 New Zealand Energy Efficiency & Conservation Strategy (NZEECS)

The LTMA 2003 requires that every RLTS take into account any national energy efficiency and conservation strategy (section 75(b)(ii)).

The NZEECS was released by the Minister of Energy in October 2007. The Strategy is a detailed action plan for increasing the uptake of energy efficiency, conservation and renewable energy programmes across the economy and to make doing so part of the normal behaviour of New Zealanders. It seeks to address identified barriers to the uptake of energy efficiency and renewable energy in the wider economy: lack of information, weak price signals, access to capital and split incentives.

The Energywise Transport chapter in the NZEECS sets the objective ‘to reduce the overall energy use and greenhouse gas emissions from New Zealand’s transport system’. Targets aimed at achieving this objective are:

- Reduce per capita transport greenhouse gas emissions by half by 2040
- For New Zealand to be one of the first countries in the world to widely deploy electric vehicles
- To have an average emissions performance of 170g/km of CO_2 (approximately 7l/100km) for light vehicles entering the fleet by 2015
- Cut kilometres travelled by single occupancy vehicles in major urban areas on weekdays, by 10 per cent per capita by 2015 (compared to 2007)

[56] GWRC, November 2009. *Alignment between the proposed Regional Policy Statement and the RLTS 2007-2016.*

- For 80 per cent of the vehicles to be capable of using 10 per cent biofuel blends or to be electric powered by 2015

- Investigate options for improving the efficiency of the North Island main trunk line, including electrification, by 2010.

Transport is our country's single largest energy consumer and transport energy use continues to grow. Within New Zealand, transport accounts for over 43% of all consumer energy use and 46% of the country's carbon dioxide emissions. Wellington Region's use of fossil fuels is primarily for transport purposes and contributes to about 1.5% of national greenhouse gas emissions. (MfE, 2009).

The vision, objectives and land transport outcomes sought under this strategy take into account the NZEECS and contribute to its transport objective. The actions identified in the NZEECS to achieve its objective come through regionally in the Regional Travel Demand Management Plan, Cycling and Walking Plans, and through implementation of the Regional Passenger Transport Plan and Regional Rail Plan. A detailed analysis of the alignment between this strategy and the NZEECS has been carried out and forms a background document[57] to this strategy.

1.4 Other relevant policy documents

The following section describes a number of other important policy documents which inform the development of the RLTS.

1.4.1 Greater Wellington's Long Term Council Community Plan

In addition to meeting national framework requirements, the revised RLTS needs to be consistent with the Long Term Council Community Plan (LTCCP) outcomes for the greater Wellington region. The LTCCP 2009 - 2019 outlines 10 community outcomes and eight activity groups that collectively contribute to achieving the community outcomes. Transport is one of the activity groups and the key transport related outcome is a 'Connected community'. However, several other outcomes have key implications for transport. These are 'Healthy environment', 'Prepared community', 'Essential services' and 'Healthy community'.

The LTCCP outcomes align well with the national framework. The RLTS will play a role in achieving regional outcomes, while also contributing to national objectives. In addition, the LTCCP reflects the direction and priorities identified in the RLTS in relation to transport matters by adopting the RLTS long term targets to 2016.

1.4.2 Wellington Regional Strategy (WRS)

The WRS is a joint project involving Greater Wellington and the nine territorial authorities of the region working together to build an internationally competitive Wellington. It is primarily an economic growth strategy with an outlook to 2025.

[57] GWRC, November 2009. *Alignment between the NZEECS 2007 and the RLTS 2007 - 2016.*

The WRS is firmly based on the proposition that economic growth for the region is necessary and desirable. It is aimed at sustainable economic and population growth which will protect the region's sense of place, build competitiveness, increase our quality of life and protect the values and communities that contribute to making the Wellington region different from anywhere else. Transport outcomes identified in this strategy will play a significant part in facilitating the growth sought by the WRS. For example, new transport corridors, such as the Grenada to Gracefield link road and Johnsonville to Airport growth spine, will be key drivers for economic growth by improving connectivity between economic centres.

1.4.3 National Rail Strategy (NRS)

The National Rail Strategy to 2015 (NRS) was developed by the Ministry of Transport (MoT) under the umbrella of the New Zealand Transport Strategy (NZTS). The NRS provides a framework for the development of the rail network in a way that recognises the government's focus on shifting passenger and freight traffic from road onto rail, wherever appropriate. This is expected to contribute to reducing congestion, providing environmental benefits, and improving safety, personal security and health.

The objectives of the NRS are to enhance rail's contribution to sustainable economic development, to improve rail safety and personal security, to maintain and develop access to rail passenger services, to promote positive health outcomes through enhanced use of rail, and to enhance rail's contribution to an energy efficient and environmentally sustainable land transport system.

While it is not a statutory requirement for a RLTS to take account of this strategy, it provides a relevant national framework for the consideration of rail issues at a regional level.

1.4.4 Other relevant policy documents

A number of other policy documents provide relevant references for the development of a RLTS. These include, but are not limited to:

- New Zealand Transport Agency strategic planning framework documents
- New Zealand Health Strategy (2000) (Ministry of Health)
- New Zealand Tourism Strategy (2001) (Ministry of Tourism)
- New Zealand Disability Strategy (2001) (Office of Disability Issues)
- Getting there – on foot, by cycle (2005) (Ministry of Transport)
- Safer Journeys to 2020 (2009) (Ministry of Transport)

1.5 Roles and responsibilities

The following section provides a description of those persons or organisations who should be involved in the further development of strategic options (refer section 77(j) of the LTMA 2003) and implementation of the strategy.

1.5.1 Ministry of Transport (MoT)

As the government's principal transport policy adviser the MoT both leads and generates policy, including the New Zealand Transport Strategy (NZTS) and Government Policy Statement (GPS), which provides the framework for the development of New Zealand transport policy and funding.

The MoT acts as the Minister of Transport's agent for managing the interface with government transport agencies to give effect to the government's vision of “people and freight in New Zealand have access to an affordable, integrated, safe, responsive and sustainable transport system.” This vision is outlined in the NZTS released in 2008.

1.5.2 Greater Wellington Regional Council (Greater Wellington)

The Land Transport Management Act 2003 requires Greater Wellington to have a key role in planning and monitoring the regional transport network via the RTC. Greater Wellington is the key agency for implementing public transport activities and is responsible for developing a regional public transport plan under the Public Transport Management Act 2008. Greater Wellington is also proactively involved in promoting road safety, walking, cycling and travel demand management. Greater Wellington also has an important role in integration of land use and transport infrastructure through the preparation of a Regional Policy Statement under the Resource Management Act 1991.

1.5.3 Regional Transport Committee (RTC)

The Land Transport Management Act 2003 requires every regional council to establish a Regional Transport Committee comprised of representatives as stated in s105(2) of the Act. The Committee includes representatives from Greater Wellington, all local councils in the region, New Zealand Transport Agency and persons representing access and mobility, economic development, public health, safety and personal security, environmental sustainability and cultural interests. Special interest representatives report RTC issues back to their sector and provide feedback to the RTC from that sector.

The key role of the Committee is to prepare the Regional Land Transport Strategy and Programme, as well as to facilitate and monitor its implementation.

1.5.4 Road Controlling Authorities (RCAs)

RCAs are responsible for identifying transport needs and carrying out maintenance and improvement works on their respective networks. RCAs include Transit New Zealand and territorial authorities.

New Zealand Transport Agency (NZ Transport Agency)

NZ Transport Agency was formed with the merger of Transit New Zealand and Land Transport New Zealand on 1 August 2008. It is responsible for managing the state highway network and, in a similar manner to territorial authorities, must take into account the current RLTS (Section 82(2) LTMA 2003).

NZ Transport Agency is also the central government agency responsible for land transport funding and safety matters. It is responsible for allocating N, R and C funds (see Chapter 11). The objective is to contribute to an integrated, safe, responsive and sustainable land transport system.

Territorial Authorities (TAs)

Territorial authorities (i.e. district and city councils) have a number of regulatory, road safety and planning roles, and ownership interests in transport, largely set out in the Local Government Act 1974. The Local Government Act 2002 also sets out their role in providing for sustainable development in local communities. District and city councils own and operate the local road network which includes the provision of infrastructure that facilitates walking and cycling. Their land transport activities in the RLTP are required to take into account the RLTS outcomes (Section 12(1)(a) LTMA 2003). They are also responsible for developing Road Safety Action Plans (RSAPs).

1.5.5 Regional Public Health Service (RPH)

Regional Public Health promotes positive health outcomes by supporting healthy public policy, community action, healthy environments and the development of individual skills for wellbeing.

1.5.6 KiwiRail

KiwiRail is the trading name of the New Zealand Railways Corporation, created on 1 October 2008. KiwiRail is an amalgam of the rail industry after the Government purchased the private sector rail and ferry operating businesses. It is the network operator for freight, existing long-distance passenger services and the Wellington urban rail passenger service.

KiwiRail is responsible for managing and operating the national rail network on behalf of the Crown following the Crown's purchase of the network from Toll Holdings. KiwiRail controls network operations, provides rail operators with access to the tracks, provides advice to the Crown, manages land and leases on the rail corridor, and implements, co-ordinates, and maintains an approved safety system for the network.

1.5.7 NZ Police

From a transport perspective, the NZ Police are responsible for reducing traffic offending, particularly offences that promote crashes and injuries. Enforcement is the main intervention available to Police to achieve reductions in offending as they work in partnership with engineers and educators to make the greater Wellington region's roads safer. They are responsible for developing Risk Targeted Patrol Plans (RTPPs) to ensure more effective and efficient use of enforcement

resources. Police also have a key role investigating crashes, managing events and attending emergencies on the roads.

1.5.8 Accident Compensation Corporation (ACC)

ACC aims to reduce road crashes and their resultant injuries by working with key road safety partners. ACC has a lead role in the implementation of the New Zealand Injury Prevention Strategy's implementation plan, of which road safety forms a significant part. ACC also aims to provide effective and timely treatment and rehabilitation when injury occurs.

1.5.9 Other Organisations

Numerous other organisations and agencies play a role in facilitating the actions set out within this strategy. However, our approach has been to list the agencies in the region that have been identified as having a key role in implementing the strategy. It is our expectation that these key agencies will collaborate with other organisations, as appropriate, in the course of implementation.

The following table shows the funders and providers involved in delivering various components of the region's land transport system.

Regional land transport system funders and providers			
	Funders	**Component**	**Provider / Owner**
Passenger train services	Farepayers, Greater Wellington, NZ Transport Agency, MOT	Track, signals & platforms	KiwiRail
		Stations, access, carparks	KiwiRail, Greater Wellington, TAs
		Rail rolling stock	KiwiRail, Greater Wellington
Freight train services	Users, Crown	Track & signals	KiwiRail
		Rolling stock	KiwiRail
Bus - contracted services	Farepayers, Greater Wellington, NZ Transport Agency, TA's	Trolley overhead infrastructure	Wellington Cable Car Limited
		Bus stops, shelter, information	TAs, Greater Wellington
		Vehicles	Bus operators
		Bus priority measures	TAs
Bus - commercial services	Farepayers, Greater Wellington, NZ Transport Agency, TA's	Bus stops, shelter, information	TAs, Greater Wellington
		Vehicles	Bus operators
		Bus priority measures	TAs
Total mobility	Farepayers, Greater Wellington, NZ Transport Agency	Hoists	Taxi operators
		Vehicles	Taxi operators
Road freight	TAs, NZ Transport Agency, Private	Local roads	TAs
		State highways	NZ Transport Agency
		Vehicles	Private
Cars	TAs, NZ Transport Agency, Private	Local roads	TAs
		State highways	NZ Transport Agency
		Vehicles	Private
Harbour ferry	Farepayers, Greater Wellington, NZ Transport Agency	Wharves	TAs
		Vessels	Ferry operator
Pedestrians	TAs, NZ Transport Agency, Greater Wellington, DOC	Local roads (footpaths)	TAs
		State highways (footpaths)	NZ Transport Agency
		Pedestrian network (off road)	TAs, Greater Wellington, DOC
Cyclists	NZ Transport Agency, TAs, Greater Wellington, DOC, Private	Local roads & cycle lanes	TAs
		State highways & cycle lanes	NZ Transport Agency
		Cycle ways (off road)	TAs, Greater Wellington, DOC
		Bicycles	Private
Road safety	NZ Transport Agency, ACC, Greater Wellington, TAs, Taxes	Enforcement	NZ Police
		Advocacy & promotion	ACC, NZ Police, Greater Wellington,TAs
		Safer routes	TAs, NZ Transport Agency
Demand management	NZ Transport Agency, Greater Wellington, TAs	Travel planning coordination	Greater Wellington, NZ Transport Agency
		Travel planning initiatives	Greater Wellington, TAs, schools, businesses
		Awareness campaigns	Greater Wellington, NZ Transport Agency

Table A2.1: Regional land transport system – funders and providers/owners.

Appendix 3 – Strategic options

The RLTS vision, objectives and outcomes set out the broad direction of the strategy. They are the basis for the identification, selection, and prioritisation of particular actions in implementation and corridor plans; in Regional Land Transport Programme prioritisation; in monitoring actual network performance; and as the framework for reviews.

In order to test if the broad direction of the strategy provides robust guidance out to 2040, six strategic options for achieving the strategy's outcomes were considered. Two background papers were produced that detail this process: *RLTS Modelling Report* and *Strategic Options Assessment*. The following section describes the strategic options process.

1. Options considered

Section 77(b) of the Land Transport Management Act (LTMA) 2003 requires every RLTS to contain 'the strategic options for achieving those [inter-regional and intra-regional] outcomes'. The land transport outcomes sought for the Wellington region are set out in chapter 6 of this strategy. The LTMA also requires that 'early and full' consideration be given to transport options and alternatives that contribute to avoiding, to a reasonable extent, effects on the environment as well as consistent with the views of the regional community (s76(e)).

External trends and pressures (those that are largely unaffected by the RLTS, but affect travel demand) that were considered consist of population and GDP growth, car travel costs and land-use density. These three key variables were chosen because they can be largely set independent of each other.

The futures scenarios focus on the low and high ranges of each key variable. For population, the low growth figure is overall no growth to around 2040, while the high population growth figure is 32% growth. In the low scenarios GDP grows by 1.5% per annum while in the high growth scenarios it is 2.1% per annum.

'Car travel costs' is considered to include a range of different costs for using a private vehicle from fuel prices, parking charges, and any number of other user charge schemes. In real terms, low growth scenarios assume a 0% growth in these costs while the high growth scenarios include a 70% increase.

Lower land-use density scenarios assume more development occurs in greenfield sites than in the central-case scenario. In the higher land-use density scenarios this new development is focused around public transport nodes and corridors over and above the central-case.

A single medium case scenario for each variable provides a "central" case for comparison. The result was nine futures as demonstrated in the table below.

Future	Growth	Cost	Land Use	Expectation
1	Low	Low	Lower	Potential lower PT demand
2	Low	Low	Higher	
3	Low	High	Lower	
4	Low	High	Higher	Potential lower road demand
5	Medium	Medium	Central	Central-case
6	High	Low	Lower	Potential higher road demand
7	High	Low	Higher	
8	High	High	Lower	
9	High	High	Higher	Potential higher PT demand

Table A3.1: Composition of future scenarios

Strategic options were developed to detail different land transport network forms that the RLTS could encourage. Six strategic options were created.

1.1 Base Network

This strategic option is meant to set a baseline as a 'do-minimum' investment option.

Beyond this operational and maintenance work, only the currently committed and high third priority projects listed in the RLTP are implemented. The high priority large capital projects were included because they are very likely to happen even with low levels of available funding by 2040.

1.2 Roading Priority

This strategic option places priority investment in identified roading projects. It includes possible road projects highlighted in previous studies as well as other projects identified as being required by 2040. Public transport investment is limited to the 'do minimum' Base Network projects.

1.3 Public Transport Priority

In this strategic option, investment in public transport is given top priority at the expense of all other modes. Only the 'do minimum' road projects are carried forward. This strategic option includes the full Regional Rail Plan along with real time information, integrated ticketing, and light rail from Johnsonville, through the Wellington CBD and to the airport, along with the Melling Loop.

1.4 Road Pricing

This strategic option contains the 'do minimum' infrastructure investment programme, but with hard travel demand management measures of the RLTS funding policy 8.6(b) implemented. It involves a peak period, peak direction road pricing scheme as described in the 2005 *Road Pricing Study*. Other pricing options identified in the Travel Demand Management Plan 2009 (including parking, vehicle

registration and carbon charges) can only be included in the model as proxies factored with the peak period, peak direction road pricing.

Road pricing is a surcharge system for motorists as a traffic management tool for travel behaviours that have a negative contribution to the RLTS objectives. Road pricing in this strategic option is in the peak period, in the peak direction, focusing on trips to (AM) and from (PM) the Wellington CBD. Road pricing locations and set prices are as follows:

- SH1 S of Tawa interchange including adjacent roads $1.00
- SH2 S of SH58 interchange including adjacent roads $1.00
- SH2 S of Petone toward CBD only $2.00
- SH1 S of Ngauranga interchange including adjacent roads $1.50
- Mt Victoria screenline including Mt Vic Tunnel, Oriental Parade, Constable St, Manchester St including adjacent roads $3.00

Parallel routes are included in road pricing to prevent 'rat-running' to avoid road pricing. It is expected that the level of road pricing in the future would be determined on a case by case basis to reduce severe congestion on selected routes to manageable levels with the potential to reduce the need for capital investment. However, prices are not optimised to fit these requirements in the modelling.

1.5 Mixed Investment

This strategic option is built around an investment strategy where the current 2007-16 RLTS polices remain in place. It sets out a programme of roading and PT investments that support growing travel demand and encourage mode shift to PT.

The Mixed Investment strategic option was developed after the Public Transport and Roading options in order to incorporate information from the WTSM runs to determine which projects would be included. Public transport and roading projects with marginal benefits were excluded from the Mixed Investment strategic option.

1.6 Mixed Investment plus Road Pricing

This strategic option is an amended Mixed Investment programme where four capital projects are deferred with a road pricing mechanism. These deferred projects are widening Ruahine Street and Wellington Road to 2 lanes in each direction, duplicating the Mt. Victoria and Terrace Tunnels and the removal of 1 lane each way along the waterfront route.

This strategic option most closely matches the current RLTS policies which favour a mixed approach to infrastructure investment and advocacy for various road pricing tools as a long-term option (Policy 8.6(b)).

2. Evaluation of the options

The futures scenarios provide a set of travel demand situations within which the various strategic options were modelled. The 6 strategic options were assessed on how well they managed the level of travel demand in each of the 9 future scenarios. The Wellington Transport Strategic Model (WTSM) was used to perform this analysis. Overall, 54 model runs were conducted.

Four indicators were used to analyse the strategic options within the futures scenarios:

- Total public transport boardings (split by peak and off-peak)
- Home to Work public transport modeshare
- AM peak congestion
- Annualised CO_2 emissions.

The RLTS objectives that this modelling can address include the relevant scenario variables considered and indicators that can be scored. Those objectives that are not addressed in this exercise are listed in *italics*:

Objective	Variables considered	Indicators scored
1. Assist economic and regional development	Land Use Density, Households , Employment	Mode share, PT trips, Congestion, Emissions
2. Assist safety and personal security		*Not Modelled*
3. Improve access, mobility and reliability	Network form	PT Trips, mode share, Congestion
4. Protect and promote public health		*Not Modelled*
5. Ensure environmental sustainability	Land use, network form, technology	Mode share, PT trips, Congestion, Emissions
6. Ensure that the regional transport programme is affordable for the regional community.		*Not Modelled*

Table A3.2: Relationship between RLTS objectives and variables considered and indicators scored in the analysis of strategic options

While the LTMA requires a RLTS to 'take into account the land transport funding likely to be available within the region for implementing the strategy during the period covered by the strategy' this model assessment did not factor implementation costs. Determining funding requirements over a 30 year period is very difficult. The reason for this is that several projects used in the strategic options have no cost implication studies attached. Funding of projects and 10 year future funding forecasts are contained in the Regional Land Transport Programme. The policies in the RLTS that

relate to the prioritisation and funding process through the RLTP is how the Strategy takes into account likely land transport funding.

Focusing on the central case compared with 2006:

- Base Network scores well on the PT indicators, but does not address congestion or CO_2
- Roading Priority network option scores broadly neutral on the PT indicators, holds the line for congestion, but does not address CO_2
- Public Transport Priority network option scores very well on the PT indicators, but does not address congestion or CO_2
- Mixed Investment network option scores well on the PT indicators, holds the line on congestion, but does not address CO_2
- Both Road Pricing and Mixed plus Road Pricing strategic options are the most effective across all of the indicators, showing either a very significant improvement or (in the case of CO_2) broadly holding the line compared with 2006.

Given other futures, a lower growth scenario in general shows less improvement in the PT indicators, but also indicates less of an issue around congestion and CO_2. Conversely, the higher growth scenarios show very strong PT indicators, offset by significant issues of congestion and CO_2.

A mixed investment scenario seems to provide the most balanced approach to improvements on all indicators. Clearly it will not be sufficient to deal with demand for the transport network under higher growth scenarios, so depending on the level of growth, a pricing mechanism could be introduced to provide the level of improvements desired. Under a lower growth option less investment will be required to hold the line.

3. Preferred strategic option

The process and results of the modelling assessment were presented to a Technical Working Group. The Group raised no objections to the process and agreed with the broad conclusions of the assessment.

The preferred strategic option is the option that provides the best results over the widest range of possible futures. The option that best fits this criterion is the Mixed Investment plus Road Pricing strategic option.

All the strategic options managed to handle low growth future scenarios rather well – at least holding the line with 2006 values for PT boarding, PT mode share, congestion and CO_2 emissions. In the moderate growth, central-case future scenario only the strategic options with road pricing managed to improve congestion and hold the line with regard to CO_2 emissions. The Mixed Investment option held the line with regard to congestion but not with CO_2 emissions. In the higher growth scenarios, only the Mixed Investment plus Road Pricing strategic option was able to hold the line on congestion and moderate the growth of CO_2 emissions.

The extent and pace of implementation of this strategic option by 2040 will be largely determined by the availability of funding and the level of population and economic growth (which is the biggest driver of travel demand). Full implementation of this preferred strategic option in a low growth future scenario would probably constitute over-investment given the level of travel demand. There is also no set order of priority for implementing the projects included in the preferred strategic option.

The cost of implementation will be detailed in the RLTP process which is updated every three years. As projects are added to the RLTP with each iteration, funding of the preferred strategic option will become progressively clearer. Although a full costing for this strategic option is not currently available, it is not a perceived role of the strategic options to provide this information. The purpose of the preferred strategic option is to provide a guiding framework for decisions made during development processes for the Regional Land Transport Programme as well as the corridor and implementation plans.

4. Adverse effects on the environment

A number of adverse effects on the environment as a result of transport activity have been identified in chapter 3.3 of this strategy. These range from local environmental impacts (e.g., local air quality) to global environmental issues (e.g., greenhouse gas emissions).

Section 76(e) of the LTMA 2003 requires the RLTS to give early and full consideration to land transport options and alternatives in a way that avoids, to the extent reasonable in the circumstances, adverse effects on the environment.

The indicator used in the strategic options analysis to measure the likely environmental impacts of the different scenarios was the level of CO_2 emissions relative to 2006.

Other adverse effects on the environment include:

- air pollution
- traffic noise
- contaminants in surface water runoff
- efficient land use.

The ability of the Mixed Investment plus Road Pricing strategic option to moderate the growth in CO_2 emissions compared to the other strategic options even in high growth futures suggests that this approach is best able to avoid, to the extent reasonable in the circumstances, adverse effects on the environment. This is accomplished by growth in public transport mode share, neutral growth in congestion and asserted fuel efficiencies of the vehicle fleet. The results of this assessment are probably conservative given that no efficiency gains in the heavy commercial vehicle fleet were assumed to 2040 – which are projected to grow significantly when compared with private vehicles.

Air pollution, traffic noise, and contaminants in surface water runoff were not directly modelled. However, some assumptions can be made based on the modelling results. The strategic options that improved public transport mode share and reduced congestion can be assumed to improve air pollution and traffic noise above and beyond the positive effects from improved vehicle technology.

It is also worth noting that the majority of big new capital projects in the strategic options occur in areas where people do not yet live (e.g. Transmission Gully).

All of the strategic options scored well on both PT mode share and congestion indicators in the low growth future scenarios. The strategic options provided mixed results in the central-case future scenario, with road pricing being shown to have the biggest impact with improvements to both PT mode share and traffic congestion. In most of the high growth future scenarios, all the strategic options improved PT mode share for varying reasons. However, only the preferred strategic option, Mixed Investment plus Road Pricing, held the line with regard to congestion across all the high growth future scenarios at the same time.

Surface water pollution that results from road runoff is largely an issue that is dealt with in the engineering of roads and sewer systems. None of the modelling indicators provides a decent proxy for it. However, the RLTS does contain policies (chapter 8.4) that support design work to minimise pollution from road runoff.

Land use density of regional development was identified as a driver of travel demand not directly affected by the RLTS – although the RLTS does contain policies in support of other regional plans that seek to encourage more efficient land use. In the modelling assessment, land use density was set as a background variable along with population and economic growth, as well as car travel costs. Efficient land use was therefore not tested as part of the strategic options per say. Results detailed in the *RLTS Modelling Report* does indicate that efficient land use (land use density) has a milder effect on the indicators scored in the modelling assessment than the other variables (car travel cost, population and economic growth).

5. Views of affected communities

Section 76(e) of the LTMA 2003 also requires the RLTS to give early and full consideration to land transport options and alternatives in a way that contributes to the views of affected communities.

Residents of the Wellington Region have participated in several consultations over the years prior to the development of this RLTS. These include extensive consultation during the development of the 2007-16 RLTS, Western Corridor Plan, Ngauranga to Wellington Airport Corridor Plan, as well as the Regional Walking, Cycling, Road Safety, and Travel Demand Management Plans.

Most recently, prior to the identification of a preferred strategic option, the Regional Land Transport Programme 2009-12 was consulted on. All these consultation processes report several consistent themes.

One is a growing sense of consultation fatigue amongst the public of the region. Others include:

- Calls to ‘get on with’ implementation
- Strong support for public transport improvements
- Strong support for measures that reduce congestion
- Strong support for road safety measures, particularly for cycling and walking
- Calls to be proactive in preparing for climate change/peak oil

- Mixed support for large roading capital projects.

The preferred strategic option is consistent with these themes from the prior consultations. A mixed approach to infrastructure investments makes improvements to both the public transport network and expands road capacity as necessary to meet travel demand. The Mixed Investment plus Road Pricing strategic option improved or held the line with congestion across all the future scenarios. As mentioned in the prior section, the preferred strategic option also had the least growth in CO_2 emissions across all the high growth scenarios.

6. Cooperation with adjoining regions

Section 77(i) of the Land Transport Management Act states that regional councils must identify any strategic options for which co-operation is required with other regions. As part of the development of this RLTS, Horizons (Manawatu-Wanganui Regional Council) were consulted on inter-regional transport issues and outcomes for policy cooperation.

Feedback received lead to the creation of the inter-regional outcome 8.1 'improved safety, efficiency and reliability of road and rail links to the north of the region'. This inter-regional outcome was developed primarily issues raised around the importance of State Highway 1 and the NIMT line in providing vital access from the north to Wellington City, CentrePort, Wellington International Airport and the South Island. Improvements to both road and rail networks along this route were seen as necessary to ensure the efficient, safe and reliable movement of people and freight.

Cooperation between regions is particularly important in relation to the Western Corridor. Policy 8.5.h in chapter 8 of the strategy seeks to ensure that investment in arterial routes is coordinated with investment made in other regions in those same routes. Therefore, continued consultation with adjoining regions during implementation of the Western and Wairarapa Corridor Plans through the RLTP process is crucial.

There may also be opportunities for cooperation between regions in relation to wider transport issues. For example, advocating to central government on issues such as road safety, road pricing legislation, vehicle efficiency, alternative fuels and passenger transport funding could be strengthened by a coordinated approach and will be pursued whenever appropriate. This strategy also advocates for improvements to rail infrastructure outside the region, and will be pursued through the Regional Freight Plan, which sits alongside this strategy, and the Regional Rail Plan.

Appendix 4 – Legislative Alignment

As detailed in Appendix 2 – Statutory Context, the Regional Land Transport Strategy (RLTS) is required to be consistent with the proposed Wellington Regional Policy Statement (RPS) 2009 and the vision and objectives of the New Zealand Transport Strategy (NZTS) 2008. The RLTS is also required to take into account the Government Policy Statement on land transport funding (GPS) 2009, and the New Zealand Energy Efficiency and Conservation Strategy (NZEECS) 2007.

This appendix is a summary of alignment papers that were produced for the development of the 2010 – 2040 RLTS.

1. Proposed Wellington Regional Policy Statement 2009

The RLTS is generally consistent with the Proposed RPS 2009.

Where the RLTS and the proposed RPS need to be the most closely aligned is where implementation of the RLTS is identified as the primary means of achieving the RPS objective.

RPS Policy 8	**Reducing the use and consumption of non-renewable transport fuels and carbon dioxide emissions from transportation** The Wellington Regional Land Transport Strategy shall include objectives and policies that promote a reduction in: • the consumption of non-renewable transport fuels; and • the emission of carbon dioxide from transportation
RPS Policy 9	**Promoting travel demand management** District Plans and the Wellington Regional Land Transport Strategy shall include policies to promote travel demand management mechanisms that reduce: • the use and consumption of non-renewable transport fuels; and • carbon dioxide emissions from transportation
RPS Policy 32	**Supporting a compact, well designed and sustainable regional form** The Wellington Regional Land Transport Strategy shall contain objectives and policies that support the maintenance and enhancement of a compact, well designed and sustainable regional form

Table A4.1: RPS policies where the RLTS is the primary method of implementation

The RLTS contains objectives (Ensure environmental sustainability), key outcomes (Reduced greenhouse gas emissions, increased public transport, walking and cycling mode share) and policies (particularly those in chapter 8.4 ‘Environment and public health’) that seek to reduce carbon dioxide emissions.

A regional strategy for travel demand management is included as part of the RLTS and is supported by a detailed plan outlining measures to contribute to a reduction in travel demand. This plan includes land use principles consistent with RPS Policy 32.

The RLTS includes the key outcome 'improved land use and transport integration (in line with the Wellington Regional Strategy and local authority urban development strategies) and is supported by policies in chapter 8.5 of the RLTS 'Integrated Planning'.

RPS policy 56 seeks to directly contribute to the RLTS direction and key outcomes in relation to integrating land use and transport:

RPS Policy 56	**Integrating land use and transportation** When considering an application for a resource consent, notice of requirement, or a change, variation or replacement to a district plan, for subdivision, use or development, particular regard shall be given to the following matters, in making progress towards achieving the key outcomes of the Wellington Regional Land Transport Strategy: • Whether traffic generated by the proposed development can be accommodated within the existing transport network and the impacts on the efficiency, reliability or safety of the network; • Connectivity with, or provision of access to, public services or activities, key centres of employment activity or retail activity, open spaces or recreational areas; • Whether there is good access to the strategic public transport network; • Provision of safe and attractive environments for walking and cycling; and • Whether new, or upgrades to existing, transport network infrastructure have been appropriately recognised and provided for.

Table A4.2: RPS Policy 56

The following proposed RPS policies are to be implemented by other district and regional plans. While they do not refer directly to the RLTS, they are consistent with its direction and vice versa.

RPS Policy 6	**Recognising the benefits from renewable energy and regionally significant infrastructure** District and regional plans shall include policies that recognise: a) The social, economic, cultural and environmental benefits of regionally significant infrastructure including • People and goods can travel to, from and around the efficiently; • Public health and safety is maintained through the provision of essential services, supply of potable water and the collection and transfer of sewage; • People have access to energy so as to meet their needs; and • People have access to telecommunication services.

b) The social, economic, cultural and environmental benefits of energy generated from renewable energy resources including:

- Security of supply and diversification of our energy sources;
- Reducing dependency on imported and non-renewable energy resources; and
- Reducing greenhouse gas emissions

RPS Policy 7	**Protecting regionally significant infrastructure** District and regional plans shall include policies and rules that protect regionally significant infrastructure from incompatible subdivision, use and development occurring under, over, or adjacent to the infrastructure.
RPS Policy 38	**Recognising the benefits from renewable energy and regionally significant infrastructure** When considering an application for a resource consent, notice of requirement, or a change, variation or replacement to a district or regional plan, particular regard shall be given to: • The social, economic, cultural and environmental benefits of regionally significant infrastructure and/or energy generated from renewable energy resources; and • Protecting regionally significant infrastructure from incompatible subdivision, use and development occurring under, over, or adjacent to the infrastructure; and • The need for renewable electricity generation facilities to locate where the renewable energy resources exist; and • The nationally significant wind and marine renewable energy resources within the region.

Table A4.3: RPS polices which mention regionally significant infrastructure

Regionally significant infrastructure is defined in the proposed RPS as including:

- The Strategic Transport Network, as defined in the Wellington Regional Land Transport Strategy 2007-2016
- Wellington City bus terminal and Wellington Railway Station terminus
- Wellington International Airport
- Commercial Port Areas within Wellington Harbour and adjoining adjacent land used in association with the movement of cargo and passengers and including bulk fuel supply infrastructure, and storage tanks for bulk liquids, and associated wharflines.

The RLTS describes the strategic transport network as made up of the region's key railway lines, state highways, key terminals providing links to other transport networks and those major local roads serving an arterial purpose. The RLTS recognises the important strategic role that this network plays in providing regionally and nationally significant access. All of the RLTS objectives, outcomes and policies relate to this strategic network, and adjacent local networks where relevant.

2. New Zealand Transport Strategy 2008

When preparing a RLTS Greater Wellington must ensure the strategy contributes to the vision and objectives of the New Zealand Transport Strategy (NZTS) as set out in section 75(a) (i) and (ii) of the LTMA 2003.

The RLTS vision is consistent with the NZTS 2008 vision. Both seek a land transport system that is affordable, integrated, safe and responsive and sustainability (economically, socially, and environmentally sustainable).

The objectives of the RLTS and NZTS largely mirror each other and are thus consistent. The RLTS also contains an affordability objective which adds to consistency with the NZTS vision.

The NZTS targets have not been 'regionalised', making it difficult to gauge the expected contribution by the Wellington Region to the achievement of those targets. The timeframes of the targets are also very different. The NZTS targets go out to 2040 while the RLTS target are to 2020. There are also differences in measurements between comparable NZTS and RLTS targets. However, work done in the *Target Assessment* paper for this RLTS review has determined that there is overall consistency between the intended effects of the NZTS and RLTS targets. There are no significant gaps between target measures in Greater Wellington's Annual Monitoring Report and the NZTS targets in the Ministry of Transport's Transport Monitoring Indicator Framework.[58]

3. Government Policy Statement on Land Transport Funding 2009

The RLTS policy framework and desired outcomes are overall well aligned with the desired 'impacts' sought by the current GPS 2009.

GPS impacts that contribute to economic growth and productivity

- *Improvements in the provision of infrastructure and services that enhance transport efficiency and lower the cost of transportation through:*
    - *improvements in journey time reliability*
    - *easing of severe congestion*
    - *more efficient freight supply chains*
    - *better use of existing transport capacity.*
- *Better access to markets, employment and areas that contribute to economic growth.*
- *A secure and resilient transport network.*

The RLTS seeks to improve the public transport network in the Wellington region which will contribute to improving journey time reliability for public transport users, and for road users through its contribution to reducing traffic congestion. Public transport vehicles make best use of existing transport capacity by carrying large numbers of people travelling along common routes more

[58] Available at: http://www.transport.govt.nz/ourwork/TMIF/.

efficiently than private cars. This is particularly the case on key commuter routes where good access to employment and areas of economic exchange is vital.

Improving walking and cycling networks in the Wellington Region contributes to reducing traffic congestion, particularly in the Wellington City CBD. Walking and cycling trips can make efficient use of existing networks as these modes occupy less space.

The RLTS also seeks to improve the strategic road network in the Wellington Region to contribute to improved journey time reliability and reduced severe traffic congestion. The primary purpose of the strategic road network is to provide good access to employment and areas of economic exchange, including key freight destinations. New strategic road links will provide alternative routes that contribute towards a more resilient transport network.

Improving access to Wellington's Port by all freight modes is vital to support economic growth and access to markets - this is recognised by the strategy.

The RLTS is consistent with the land use and economic growth considerations in the RPS and WRS, contributing towards more efficient use of existing transport capacity and better understanding of future needs, better access to future growth and employment areas, and improved network resilience.

Other GPS impacts

- *Reductions in deaths and serious injuries as a result of road crashes.*
- *More transport choices, particularly for those with limited access to a car where appropriate.*
- *Reductions in adverse environmental effects from land transport.*
- *Contributions to positive health outcomes.*

The RLTS seeks to improve regional road safety through safety improvements and programmes aimed reducing deaths and serious injuries when using the transport system. As a consequence of fewer incidents, the network is more resilient and reliable. Improved road safety reduces the social cost to communities and on the health system.

Improving our public transport system, walking and cycling networks will mean more people have better transport options and choices, therefore contributing towards a more resilient transport network. Public transport and walking are both safer and more environmentally sustainable modes of transport than the private car. Public transport use often involves more walking trips at either end of the journey and contributes to positive health outcomes. Investment in cycling infrastructure is vital to address safety issues for this mode.

Any mode shift from road to rail freight is consistent with a more resilient transport network, improved safety and reduced environmental impacts.

The table below details the alignment between RLTS key outcomes and GPS short to medium term impacts.

GPS Impacts \ RLTS Key Outcomes	Increased peak period passenger transport mode share	Increased mode share for pedestrians and cyclists	Reduced greenhouse gas emissions	Reduced severer road congestion	Improved regional road safety	Improved land use and transport integration	Improved regional freight efficiency
Improvements in journey time reliability	✓			✓	✓	✓	✓
Easing of severe congestion	✓	✓		✓			
More efficient freight supply chains				✓		✓	✓
Better use of existing transport capacity	✓	✓		✓		✓	✓
Better access to markets, employment and areas that contribute to economic growth	✓	✓		✓		✓	✓
A secure and resilient transport network	✓	✓	✓	✓	✓	✓	✓
Reductions in deaths and serious injuries as a result of road crashes	✓	✓			✓		
More transport choices, particularly for those with limited access to a car where appropriate	✓	✓			✓	✓	
Reductions in adverse environmental effects from land transport	✓	✓	✓			✓	✓
Contributions to positive health outcomes	✓	✓	✓		✓	✓	

Table A4.4: Alignment between RLTS Key Outcomes and GPS Impacts sought.

4. New Zealand Energy Efficiency and Conservation Strategy 2007

There is good alignment between the RLTS direction and policy framework and the objectives and targets in the NZEECS transport section.

The NZEECS transport objective to 'reduce the overall energy use and greenhouse gas emissions from New Zealand's transport system' is well aligned with the RLTS key outcome 3.1: 'reduced greenhouse gas emissions'.

The following table details the alignment between the NZEECS 2007 targets and the 2007 – 2016 RLTS.

NZEECS targets	RLTS alignment
Reduce per capita transport greenhouse gas emissions by half by 2040	RLTS outcome 3.1: 'reduced greenhouse gas emissions' **Comment:** The RLTS target is to 'hold the line' with regard to CO_2 emissions despite growth in travel demand. The NZEECS target is similar given that the NZTS anticipates travel demand to roughly double over the same target period (NZTS, p. 25). This is generally well aligned with NZEECS.
For New Zealand to be one of the first countries in the world to widely deploy electric vehicles	RLTS policy 8.4.d: 'support government investigations into alternative fuel options and eco-efficient vehicles' **Comment:** Meeting this NZEECS target requires action be taken primarily at the central government level and is outside the ability of the RLTS to directly influence. The RLTS policy is to support central government action in this area and is therefore fairly well aligned.
To have an average emissions performance of 170g/km of CO_2 (approximately 7l/100km) for light vehicles entering the fleet by 2015	RLTS policy 8.4.d: 'support government investigations into alternative fuel options and eco-efficient vehicles' RLTS policy 8.4.e: 'ensure the transport network is developed in a way that minimises the use of non-renewable resources' **Comment:** Meeting this NZEECS target requires action be taken primarily at the central government level and is outside the ability of the RLTS to directly influence. The RLTS policies are meant to support central government action in this area and are therefore fairly well aligned.

Cut kilometres travelled by single occupancy vehicles in major urban areas on weekdays, by 10 per cent per capita by 2015 (compared to 2007)	RLTS outcome 3.4: 'increased private vehicle occupancy' and RLTS outcome 3.2 'Reduced private car mode share'. The RLTS also includes outcomes to increase public transport and active mode share, and reduce fuel consumption. **Comment:** While the RLTS outcomes and targets don't relate specifically to reduced kilometres travelled by single occupancy vehicles, the intent of the NZEECS target and the relevant RLTS outcomes are fairly well aligned.
For 80 per cent of the vehicles to be capable of using 10 per cent biofuel blends or to be electric powered by 2015	RLTS policy 8.4.d: 'support government investigations into alternative fuel options and eco-efficient vehicles' **Comment:** Meeting this NZEECS target requires action be taken primarily at the central government level and is outside the ability of the RLTS to directly influence. The RLTS policy is to support central government action in this area and is therefore fairly well aligned.
Investigate options for improving the efficiency of the North Island main trunk line, including electrification, by 2010.	RLTS outcome 7.2 'Improved inter-regional freight efficiency' has the associated target 'All infrastructure constraints to rail freight movements are removed.' RLTS chapter 8.1 Network Management contains several policies relating to the rail network in the Wellington Region, including the electric urban passenger rail network. The Regional Rail Plan identifies several pathways for investment on the North Island main trunk line, including electrification and double tracking.

Table A4.5: Alignment between NZEECS targets and the RLTS

References

1 Business & Economic Research Limited (BERL) (2004) *Wellington Transport Package: Social & Economic Impacts*. Wellington Transport Project Group. November 2004. Wellington.

2 Energy Efficiency and Conservation Authority (EECA) and the Ministry for the Environment (2007) *New Zealand Energy Efficiency and Conservation Strategy (NZEECS).* Wellington.

3 Environmental Management Services Ltd (2006) *Draft Wellington Regional Land Transport Strategy: Environmental Performance Review, August 2006.*

4 Gardiner, L. & Armstrong, B. (2006). *Identifying sensitive receiving environments at risk from road runoff.* Proceedings of the NZWWA Stormwater Conference, Rotorua, New Zealand, 4-5 May 2006.

5 GHD Ltd (2006) *Regional Land Transport Strategy Economic Impact and Affordability, September 2006.*

6 Greater Wellington Regional Council (GWRC) (2009) *Alignment between the New Zealand Energy Efficiency and Conservation Strategy 2007 and the Regional Land Transport Strategy 2007 – 2016, November 2009.* Unpublished background technical document.

7 Greater Wellington Regional Council (GWRC) (2009) *Alignment between the proposed Regional Policy Statement and the Regional Land Transport Strategy 2007 – 2016, August 2009*. Unpublished background technical document.

8 Greater Wellington Regional Council (GWRC) (2009) *Wellington Regional Climate Change Response – discussion document for Territorial Authorities and Greater Wellington.* June 2009. Wellington.

9 Greater Wellington Regional Council (GWRC) (2003) *Hutt Corridor Plan, Ngauranga to Upper Hutt, December 2003*. Wellington.

10 Greater Wellington Regional Council (GWRC) (2003) *Wairarapa Corridor Plan, Masterton to Upper Hutt, December 2003*. Wellington.

11 Greater Wellington Regional Council (GWRC) (2004) *Regional Cycling Plan, December 2008*. Wellington.

12 Greater Wellington Regional Council (GWRC) (2004) *Regional Road Safety Plan, October 2009*. Wellington.

13 Greater Wellington Regional Council (GWRC) (2005) *Regional Travel Demand Management Plan, October 2009*. Wellington.

14 Greater Wellington Regional Council (GWRC) (2004) *Regional Walking Plan, October 2008*. Wellington.

15 Greater Wellington Regional Council (GWRC) (2006) *RLTS Modelling Report*. Background technical document.

16 Greater Wellington Regional Council (GWRC) (2009) *Strategic Options Assessment, September 2005*. Background technical document.

17 Greater Wellington Regional Council (GWRC) (2009) *2008/09 Annual Report on the Regional Land Transport Strategy, October 2009*. Wellington.

18 Greater Wellington Regional Council (GWRC) and Transit New Zealand (Transit) (2005) *Proposed Western Corridor Plan. 1 October 2005*.

19 Greater Wellington Regional Council (GWRC) and Transit New Zealand (Transit) (2006) *Proposed Western Corridor Plan –Hearings Subcommittee Report. 8 March 2006*.

20 Human Rights Commission (HRC) (2005) *The Accessible Journey: Report of the Inquiry into Accessible Public Land Transport*. Wellington.

21 Hyder Consulting (NZ) Ltd (2006) *New Zealand Transport Agency Freight Analysis – Wellington, Nelson, Marlborough and Tasman regions, June 2009*. Wellington.

22 Kapiti Coast District Council (KCDC) (2005) *Western Link Road Project Cashflow, draft 2. October 2005*.

23 KiwiRail (2009) *About us.* Retrieved 4 November 2009 from: http://www.kiwirail.co.nz/index.php?page=about-us.

24 Land Transport New Zealand (Land Transport NZ) and the Energy Efficiency and Conservation Authority (EECA) (2004) *Travel Behaviour Change Guidebook*. Unpublished.

25 Maunsell Ltd, Boffa Miskell Ltd and Environmental Management Services Ltd (2005) *Western Corridor Transportation Study Planning Balance Sheet Assessment – Final (TR14), September 2005*. Background technical report.

26 Ministry of Agriculture and Forestry (2008) *Central North Island Wood Availability Forecasts 2008 – 2040*. Available online at: http://www.maf.govt.nz/mafnet/publications/wood-availability/central-north-island/index.htm.

27 Ministry of Economic Development (MED) (2009) *New Zealand Energy Greenhouse Gas Emissions – 2008 Calendar Year Edition*. Wellington.

28 Ministry of Economic Development (MED) (2007) *New Zealand Energy Strategy (NZES)*. Wellington.

29 Ministry of Transport (MoT) (2008) *New Zealand Transport Strategy* (NZTS). Wellington.

30 Ministry of Transport (MoT) (2005) *Getting there – on foot, by cycle.* Wellington.

31 Ministry of Transport (MoT) (2005a) *National Rail Strategy to 2015.* Wellington.

32 Ministry of Transport (MoT (2009). *Safer Journey 2020.* Wellington.

33 Minister of Transport (MoT) (2005) *Western corridor funding media statement, 5 July 2005*. Wellington.

34 New Zealand Transport Agency (NZ Transport Agency) (2009) *National Land Transport Programme 2009/12, August 2009*. Wellington.

35 New Zealand Transport Agency (NZ Transport Agency) (2009) *Wellington Regional Road Safety Report 2004 – 2008*. Wellington.

36 Opus International Consultants Ltd (2006) [for TNZ, GWRC, WCC] *Ngauranga to Airport Strategic Study – Phase 1 Consultation Report*. Wellington.

37 Quigley, R (and others) (2006) *The Greater Wellington Regional Land Transport Strategy Health Impact Assessment, September 2006.*

38 New Zealand Transport Agency (NZ Transport Agency) (2009) *About Us*. Retrieved 4 November, 2009 from: http://www.nzta.govt.nz/about/index.html.

39 Walbran Consulting Limited (July 2006) *Wellington Regional Freight Study, Stage 2. For Wellington Regional Council.*

40 Wellington Regional Council (2009) The *proposed Regional Policy Statement for the Wellington region 2009*. Wellington.

41 Wellington Regional Council (2007) The *Wellington Regional Land Transport Strategy 2007 – 2016*. Wellington.

42 Wellington Regional Strategy (WRS) (2005) *Transport constraints and opportunities in the Wellington Region*. Working Paper 2.16. April 2005. Unpublished.

43 Wellington Regional Strategy (WRS) (2005) *Discussion Document Background Paper: Quality Regional Forms & Systems*. August 2005. Wellington.

44 Wellington Regional Strategy (WRS) (2005) *A sustainable economic growth framework for our region – discussion document*. Wellington.

45 Wellington Regional Strategy (WRS) (2006) Wellington Regional Strategy – Internationally Competitive Wellington. September 2006. Wellington.

Regional Transport Committee members

June 2009

Representative for:	Appointee	Alternate
Economic development **	Charles Finny	
Safety & personal security**	Michael Gross	
Public health**	Dr Stephen Palmer	
Access and mobility**	Thomas Bryan	
Environmental sustainability**	Mike Mellor	
Cultural interests**	Jack Rikihana	
Kapiti Coast District Council	Mayor Jenny Rowan	Cr Lyndy McIntyre
Porirua City Council	Mayor Jenny Brash	Cr Tim Sheppard
Wellington City Council	Mayor Kerry Prendergast	Cr Andy Foster
Hutt City Council	Mayor David Ogden	Cr Joy Baird
Upper Hutt City Council	Mayor Wayne Guppy	Cr Peter McCardle
South Wairarapa District Council	Mayor Adrienne Staples	Cr Viv Napier
Carterton District Council	Mayor Gary McPhee	Cr Barbara Durbin
Masterton District Council	Mayor Carry Daniell	Cr Roddy McKenzie
New Zealand Transport Agency	Deborah Hume	
Greater Wellington	Cr Fran Wilde (Chairperson)	
Greater Wellington	Cr Peter Glensor (Deputy Chair)	
** speaking but not voting rights		