Final DRAFT

Draft Wellington Regional Land Transport Strategy

(2007 – 2016)

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Final DRAFT

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Chairman's foreword

Creating an integrated land transport system presents many challenges. It must provide for equitable access, support a thriving economy, respond to change, improve safety, strive for environmental sustainability, promote health and participation and remove vulnerability. The Regional Land Transport Committee has developed a transport strategy that endeavours to meet these challenges in a balanced way.

The long term aspirations of the Committee are to deliver a regional road network that is resilient enough to cope effectively with predicted trends and incidents; an outstanding public transport system; and improved travel efficiency through better matching of mode choice with trip purpose, including an increase in the use of cycling and walking for shorter journeys and an increase in the use of rail for longer journeys.

The Regional Land Transport Strategy (RLTS) establishes a framework of objectives, outcomes and policies to guide intervention and presents a programme to progress the outcomes.

The Regional Transport Programme included in this document provides an overview of the projects intended to be undertaken over the next 10 years and beyond. It enables us to describe the future regional transport network to give certainty to agencies, industry and the community. This longer term outlook reflects the long preparation and delivery times in transport and the longer term regional context we are connecting to.

The strategy is the product of months of deliberation by regional leaders and advisors through the Regional Land Transport Committee. The Committee is required to balance statutory criteria and local aspirations against time and resource limits. We cannot list everything that is desired but must select and prioritise. In this strategy we do this for each transport mode, for each transport corridor, and across the region, and submit the balance we have arrived at to public scrutiny.

It is very much a Wellington regional transport strategy. Network resilience is a chronic problem in every corridor of our region. Our geography, history and urban form make for a strong public transport network that can be improved further. Rail is a prominent mode here and the programme proposes a reversal of the long term neglect of rail infrastructure. We are a region full of magnificent villages and local environments that transport should connect.

Transport is about making connections, both in the physical sense and in the broader social and economic sense. The RLTS has been developed in parallel with the Wellington Regional Strategy (WRS), indeed, it was delayed to take account of WRS conclusions. The two documents have a close strategic relationship and therefore consistency between them is vital. The WRS sets out a longer term (out to 50 year) vision for the region and the key action areas it identifies are addressed from a transport perspective in the RLTS. Similarly, we expect the RLTS will also connect with relevant sections of the Regional Policy Statement, developed under the Resource Management Act.

Developing the strategy is just one of the Regional Land Transport Committee's tasks. Facilitating its delivery and monitoring performance against indicators are equally important. The Committee looks forward to shifting its focus to these latter tasks, while maintaining its watch on the overriding objectives and outcomes.

The Committee recognises that the strategy cannot provide a perfect solution to the greater Wellington region's transport needs. Our regional transport network requires further investment, we are always learning more about problems and issues, and demand trends are not sustainable under some scenarios. In this regard, our Travel Demand Management Plan is a key initiative. This is a dynamic strategy and adjustments will be made in response to developing trends and new information.

Project investment needs to be partnered by policy and education to achieve positive change. The RLTS provides strategic direction to support this.

Terry McDavitt

Chairperson of the Wellington Regional Land Transport Committee

Executive summary

The vision of the Wellington Regional Land Transport Strategy 2007 - 2016 is:

To deliver an integrated land transport system that supports the region's people and prosperity in a way that is economically, environmentally and socially sustainable.

This Regional Land Transport Strategy has been developed within a broad legislative and policy framework. It meets the requirements of the Land Transport Act 1998 and supports the vision of the New Zealand Transport Strategy 2002, that is, *an affordable, integrated, safe, responsive and sustainable transport system.*

The strategy seeks to increase travel by public transport, reduce traffic congestion, improve road safety, increase travel efficiency, and improve walking and cycling infrastructure.

Regional issues and objectives

The RLTS reflects regional issues and objectives. This approach has been taken to ensure integration of national, regional and local transport policy.

The RLTS and Wellington Regional Strategy development processes have been closely aligned to ensure integrated transport and land use outcomes as both are fundamental to the economic and social functioning and future growth and development of the greater Wellington region.

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

- Access to goods and services, employment and amenities
- Reliability of the transport network
- Traffic congestion to and from Wellington City CBD and around the region, especially at peak times
- Improving east-west connections between key transport corridors
- Increasing the mode share of public transport and building its capacity.

The strategy responds to the region’s expected economic and population growth and the need to provide for increasing demand for travel.

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 will continue to enhance the prosperity of the Wellington City CBD as a major catalyst for growth in the region and provide for efficient freight movement and increased productivity.

RLTS Objectives

The RLTS objectives are:

- 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 Regional Transport Programme is affordable for the regional community.

The vision and objectives of the RLTS are translated into action programmes for each transport mode for the next 10 years. Longer term initiatives are also included, where possible, to give a future view of transport planning. Targets and performance measures are specified.

Implementation Plans

The action programmes are outlined under the following implementation plans:

- Road Safety Plan
- Cycling Plan
- Pedestrian Plan
- Travel Demand Management Strategy
- Passenger Transport Plan
- Freight Plan.

Corridor Plans

In addition to these region-wide, mode-related action programmes, specific action plans are provided for each of the following four major transport corridors:

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

The corridor plans aim to provide affordable, efficient, reliable, safe and sustainable connections which accommodate reasonable capacity and ensure regional and inter-regional accessibility.

Passenger Transport Plan

The Passenger Transport Plan (PT Plan) has been developed separately by Greater Wellington's Passenger Transport Committee and will form an important component of the RLTS. It sets a clear direction for a public transport network that helps people get around the region easily.

Currently 30% of all journeys to and from the Wellington City CBD at peak times and 4% of all other trips at all times in our region are by public transport. The PT Plan aims to increase this level

of use – the highest in New Zealand – and to ensure public transport is accessible and sustainable. The PT Plan seeks to retain and improve Greater Wellington's public transport network by adopting best practice in terms of transport fleets, infrastructure, integration and accessibility of services, and marketing and promotion under the new Metlink name.

The Passenger Transport Committee is currently seeking feedback on the PT Plan. While submissions on the PT Plan will be considered by the Passenger Transport Committee, the consultation process for this plan will be carried out in alignment with that of the RLTS.

Funding

The RLTS must be delivered within available funding. The Funding Plan sets out the likely funding available to the greater Wellington region over the next 10 years. The proposed 10-year Passenger Transport Programme and the proposed 10-year Strategic Roading Programme show the estimated costs of specific activities and projects.

The plan concludes with measures for monitoring and reviewing the strategy to ensure it maintains its relevance and delivers its vision and objectives within a changing environment.

Consultation on the draft Regional Land Transport Strategy

The Regional Land Transport Committee is interested in your views on this draft Regional Land Transport Strategy. Submissions close on the **16 February 2007**.

Comments are welcome on all aspects of the strategy. However, the Committee is not seeking feedback on chapter 9.2 Western Corridor Plan as this plan was recently adopted (April 2006) following its own extensive consultation process.

1. Introduction

The Wellington Regional Land Transport Strategy (RLTS) is a statutory document prepared in accordance with the Land Transport Act (LTA) 1998. It has been developed by the Regional Land Transport Committee of the Greater Wellington Regional Council (GWRC).

The LTA requires the strategy to contribute to the overall aim of achieving an integrated, safe, responsive and sustainable land transport system. To meet this requirement the strategy has a long term vision and outlines regional objectives, outcomes, policies and a 10 year programme covering the period 2007 to 2016 for the region's land transport system.

This strategy replaces the previous RLTS 1999 – 2004. A review was delayed, initially, due to the legislative reform which resulted in the Land Transport Management Act 2003 and, more recently, to allow for the completion of the Wellington Regional Strategy and Western Corridor Plan.

Chapter 2 of the strategy sets out the policy framework governing the RLTS, including the legislative and policy context, and the roles and responsibilities of key agencies.

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 vision, six objectives and the desired land transport outcomes of the strategy.

Chapter 6 describes the strategic options development, evaluation and consultation process.

Chapter 7 sets out the policies for achieving the vision, objectives and outcomes.

Chapter 8 describes the role of each land transport mode.

Chapters 9 and 10 provide detailed action programmes under the various implementation plans for each mode. Targets and performance measures are specified to enable monitoring and review of progress.

Chapter 11 sets out the Regional Transport Programme.

Chapter 12 outlines the strategy's land transport funding sources and funding issues.

Chapter 13 identifies how the strategy will be monitored.

Chapter 14 outlines the proposed review programme for the strategy and its components.

The appendices provide further context to the strategy.

2. 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. The diagram below and the following sections provide an overview of the national and regional legislative and policy context for the development of the RLTS.

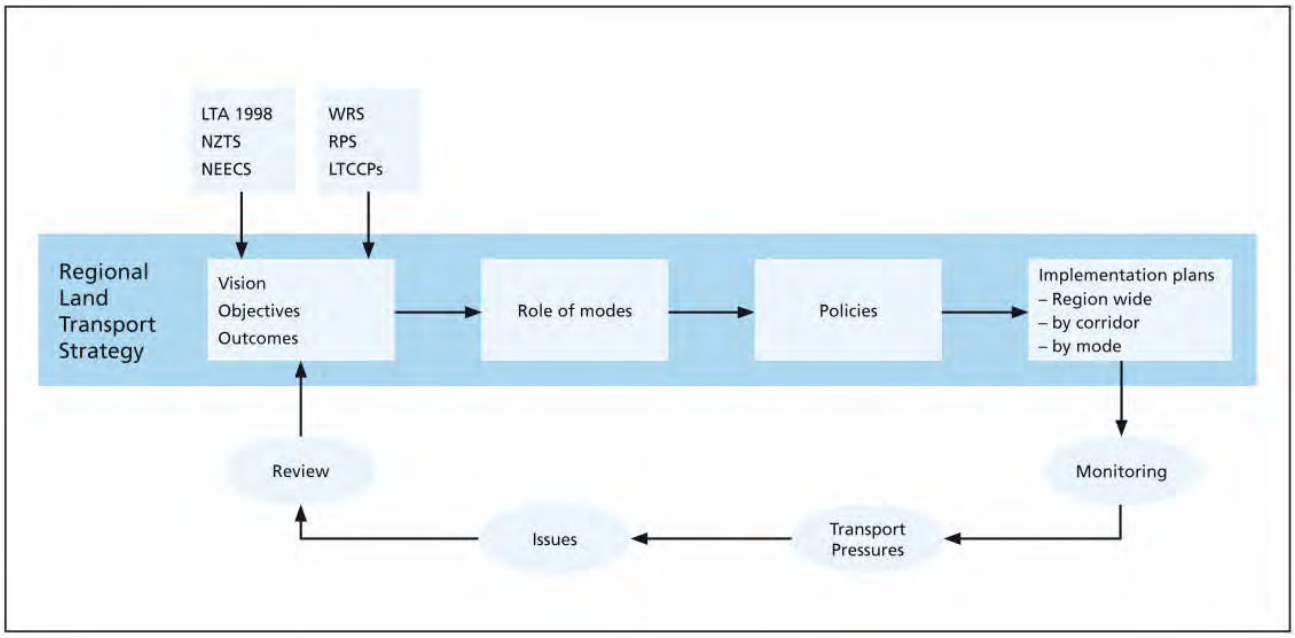


Figure 1: RLTS development process.

The vision, objectives and outcomes set out the broad direction of the strategy. They are used in each implementation and corridor plan (chapters 9 and 10) to identify, select, and prioritise particular actions; in programme prioritisation (chapter 11); in monitoring actual network performance (chapter 13), and as the framework for reviews (chapter 14). They must be relatively stable over time to enable real progress.

In giving effect to the strategic direction, the Regional Land Transport Committee has developed action plans that include policy, education and project interventions to respond to needs and issues. These are set out in implementation plans for modes and in corridor plans for areas.

2.1 Legislative requirements

2.1.1 Regional Land Transport Strategy

All regional councils are required by the Land Transport Act 1998[1] to produce a Regional Land Transport Strategy for the council. Under section 175 of the Act:

(1) Every regional council must prepare a land transport strategy for its region.

[1] As amended by the Land Transport Management Act 2003

(2) Every regional land transport strategy must—

(a) contribute to the overall aim of achieving an integrated, safe, responsive, and sustainable land transport system; and

(b) take into account how the strategy -

(i) assists economic development; and

(ii) assists safety and personal security; and

(iii) improves access and mobility; and

(iv) protects and promotes public health; and

(v) ensures environmental sustainability; and

(c) take into account any national land transport strategy and National Energy Efficiency and Conservation Strategy; and

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

(e) avoid, to the extent reasonable in the circumstances, adverse effects on the environment; and

(f) take into account the views of affected communities; and

(g) take into account the views of land transport network providers; and

(h) take into account the need for persons and organisations preparing regional land transport strategies to give early and full consideration to land transport options and alternatives in a way that contributes to the objectives referred to in paragraphs (e) and (f) when preparing a regional land transport strategy; and

(i) take into account the need to encourage persons and organisations preparing regional land transport strategies to provide early and full opportunities for persons and organisations listed in section 179(1) to contribute to the development of those regional land transport strategies; and

(j) identify an appropriate role for each land transport mode in the region, including freight traffic, public passenger transport, cycling, and pedestrian traffic; and

(k) include any regional passenger transport plan (within the meaning of section 47 of the Transport Services Licensing Act 1989) that has been prepared by the regional council that has prepared the strategy; and

(l) identify land transport outcomes sought by the region and the strategic options for achieving those outcomes; and

(m) identify any strategic options for which co-operation is required with other regions; and

(n) identify persons or organisations who should be involved in the further development of strategic options; and

(o) include a demand management strategy that has targets and timetables appropriate for the region; and

(p) provide for the strategy to be independently audited; and

(q) take into account any guidelines issued by the Minister for the purposes of this section.

(3) A regional land transport strategy may not be inconsistent with any regional policy statement or plan that is for the time being in force under the Resource Management Act 1991.

(4) A regional land transport strategy may not be inconsistent with any national land transport strategy that is for the time being in force at the time of preparation of the regional land transport strategy.

The RLTS must be kept current for at least three years, but not more than 10, and must be renewed every three years (section 176(i) of the LTA 1998).

2.1.2 Regional Passenger Transport Plan

As set out in section 175(2)(k) of the Land Transport Act 1998, every regional land transport strategy must include any regional passenger transport plan (as defined in section 47 of the Transport Services Licensing Act 1989).

In addition, section 176 (2) of the LTA 1998 states that a regional land transport strategy may be amended at any time to include any regional passenger transport plan prepared since the strategy was prepared.

The meaning of a regional passenger transport plan and what it may include is set out in section 47 of the Transport Services Licensing Act 1989:

1) "Regional passenger transport plan" means a plan (identified as a regional passenger transport plan) –

a) Prepared by a regional council or a territorial authority that has the functions, powers, and duties of a regional council under this Act; and

b) Prepared in consultation with the public and constituent authorities (if any) in the region concerned; and

c) Made available to the public; and

d) Specifying the passenger services the regional council or territorial authority proposes to be provided in its region or district, both generally and in respect of the transport disadvantaged.

2) In addition to the matters described in paragraph (d) of the definition (in subsection (1) of this section) of the term 'regional passenger transport plan', such a plan -

a) May specify the conditions of the services the regional council or territorial authority concerned proposes to be provided in its region; and

b) Without limiting the generality of paragraph (a) of this subsection, may specify all or any of the following matters:

(i) Routes, capacity, frequency of service, and fare structure;

(ii) Any special provisions for users of a specified class or description of the services or any of them; and

May specify any other matters the regional council or territorial authority thinks fit.

The Regional Passenger Transport Plan (PT Plan) has been developed separately by the Passenger Transport (PT) Committee. The consultation process and hearing of submissions regarding the plan will be a matter for the PT Committee to decide, in consultation with the chair of the Regional Land Transport Committee. Once adopted by the PT Committee, the PT Plan will be included as a component of this Regional Land Transport Strategy.

2.2 Statutory policy framework

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

2.2.1 National framework

The New Zealand Transport Strategy (NZTS) was released in December 2002. The NZTS is about creating a sustainable transport system that is also affordable, integrated, safe and responsive to our needs. Its five objectives have been built into the Land Transport Management Act 2003 and resulting amendments to other pieces of legislation, including a number of amendments to the LTA 1998 and its requirements for producing a RLTS (s175(2) of the LTA 1998). The requirements for producing a RLTS were amended to better reflect the vision, principles and objectives of the NZTS, to ensure vertical integration of national, regional and local transport policy.

The NZTS identifies several overarching key focus areas for the transport system, through its vision and principles. These translate to achieving the outcomes of an increased proportion of travel by public transport, reduced congestion, improved road safety, greater use of travel alternatives such as telecommuting, and the provision of walking and cycling infrastructure.

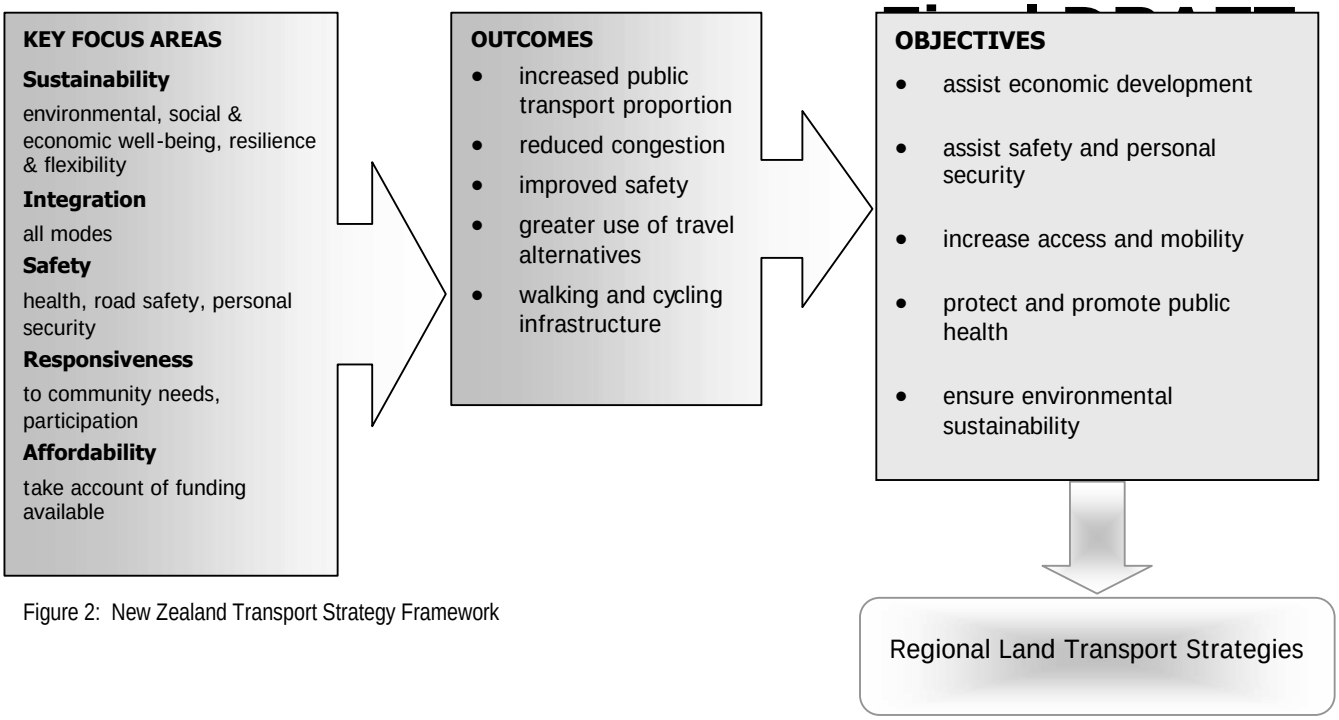


Figure 2: New Zealand Transport Strategy Framework

In addition to outlining the framework in Figure 2, the NZTS is clear in describing transport as a service and not an end in itself. Transport systems serve to facilitate access to economic and social opportunities. This point is important in determining outcomes for transport, and thus recognising that these outcomes are there to aid delivery of greater community outcomes. This becomes significant at a regional level when adapting the national framework to deliver our transport and, hence, community needs. Linking the RLTS with the Regional Policy Statement (RPS), Wellington Regional Strategy (WRS) and the Greater Wellington (GW) Long Term Council Community Plan (LTCCP) is therefore necessary.

Integration with the national framework, as required by the LTA 1998, has in a sense predetermined the RLTS objectives as being, at least, the five established by the NZTS. However, analysis was necessary to ensure consideration of regionally specific objectives in addition to those of the national framework.

The need for compatibility with the national requirements is also reinforced by changes to the Land Transport NZ allocation process. Regional land transport strategies that are not integrated with the national framework, or proposals that do not stem from such a strategy, are unlikely to be included in the National Land Transport Programme (NLTP).

2.2.2 Regional Policy Statement (RPS)

The Resource Management Act 1991 (RMA) requires each regional council to produce a Regional Policy Statement (RPS) in order to promote sustainable management of the region's resources. The purpose of a RPS is to achieve "sustainable management" by providing an overview of the resource management issues of the region, and policies and methods to achieve the integrated management of

the natural and physical resources of the whole region. It is an overview document that provides the framework for managing the resources of the region in a sustainable way[2].

Wellington's RPS took effect in May 1995, with a full review required 10 years afterwards. GWRC's review process commenced with a State of the Environment Report in December 2005. A proposed new policy statement is expected to be available in September 2007. The policy guidelines set out in the current RPS relate primarily to managing the effects of transport on the environment, the use of transport infrastructure to capacity before new infrastructure is built, and integration between the provision of transport infrastructure consistent with regional growth plans. In particular, the RPS recognises the need for a sustainable land transport system which uses energy efficiently and reduces emissions wherever possible.

In accordance with section 175(3) of the Land Transport Act (LTA) 1998, consistency between this 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[3] to this strategy.

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 RLTS projects during the resource consent process.

2.2.3 National Energy Efficiency & Conservation Strategy (NEECS)

The Land Transport Management Act 2003 introduced amendments to the LTA 1998, including the new requirement under the amended Section 175 (2)(c) that every Regional Land Transport Strategy (RLTS) shall take into account the National Energy Efficiency and Conservation Strategy (NEECS).

The National Energy Efficiency and Conservation Strategy was released by the Minister of Energy in September 2001. The strategy's purpose is 'to promote energy efficiency, energy conservation and renewable energy and move New Zealand towards a sustainable energy future' (EECA, 2004).

The NEECS sets two specific energy efficiency targets for the national economy:

- A 20% improvement in energy efficiency by 2012
- An additional 30 Petajoules (PJ) of consumer energy from renewable sources by 2012.

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 (NZCCO, 2005).

The key strategic objectives of the NEECS as they relate to the transport sector are as follows:

- Reduce energy use by reducing the need to travel
- Progressively improve energy performance of the transport fleet

[2] Wellington Regional Council, 1995, page 2. *Regional Policy Statement.*

[3] GWRC, December 2005. *Alignment between the RPS and the RLTS review*.

- Greater provision and use of low energy transport options.

The vision, objectives and land transport outcomes sought under this strategy take into account the NEECS and contribute to its objectives through the travel demand management strategy, cycling and pedestrian plans, and through implementation of the Regional Passenger Transport Plan. A detailed analysis of the alignment between this strategy and the NEECS has been carried out and forms a background document[4] to this strategy.

2.3 Other relevant policy documents

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

2.3.1 GWRC'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 2006 - 2016 outlines 10 community outcomes and seven 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' (Figure 3).

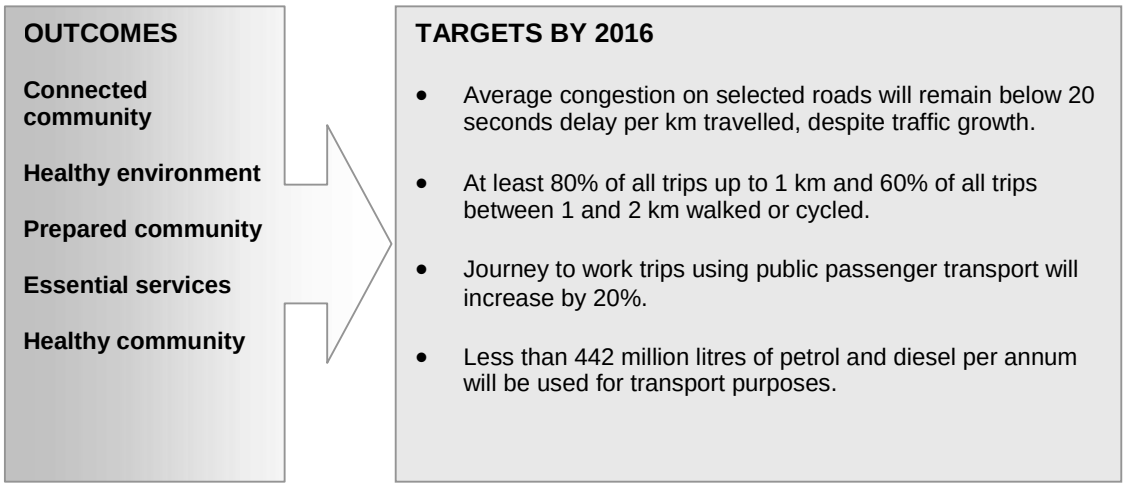


Figure 3: GWRC LTCCP framework for transport outcomes.

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 should reflect the direction and priorities identified in the RLTS in relation to transport matters.

[4] GWRC, September 2005. *Review of RLTS response to NEECS*.

2.3.2 Wellington Regional Strategy (WRS)

The WRS is a joint project involving Greater Wellington Regional Council 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 2050.

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.

2.3.3 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.

2.3.4 Transit New Zealand's strategic planning framework

Transit's Strategic Plan 2004 responds to new requirements under the LTMA and the New Zealand Transport Strategy which emphasise the need for a sustainable land transport system. A number of other Transit planning documents sit below the strategic plan. These include the National State Highway Strategy, key issue plans (e.g., Transit NZ Environmental Plan 2004) and the 10-Year State Highway Forecast.

While there is no statutory requirement for a RLTS to take account of these strategic planning documents, they do provide a framework for understanding Transit's planning and decision making processes. The RLTS has been developed taking account of Transit's latest State Highway Forecast. The primary external drivers for Transit's decisions are the NZTS and regional land transport strategies and available funding.

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

- 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)
- Road Safety to 2010 (2003) (Land Transport New Zealand)

The following diagram illustrates several different RLTS processes. Once completed, the corridor reviews are absorbed in the new RLTS and feed into the Regional Transport Programme. From there the RLTS informs agency programmes for future prioritisation rounds and agency reports.

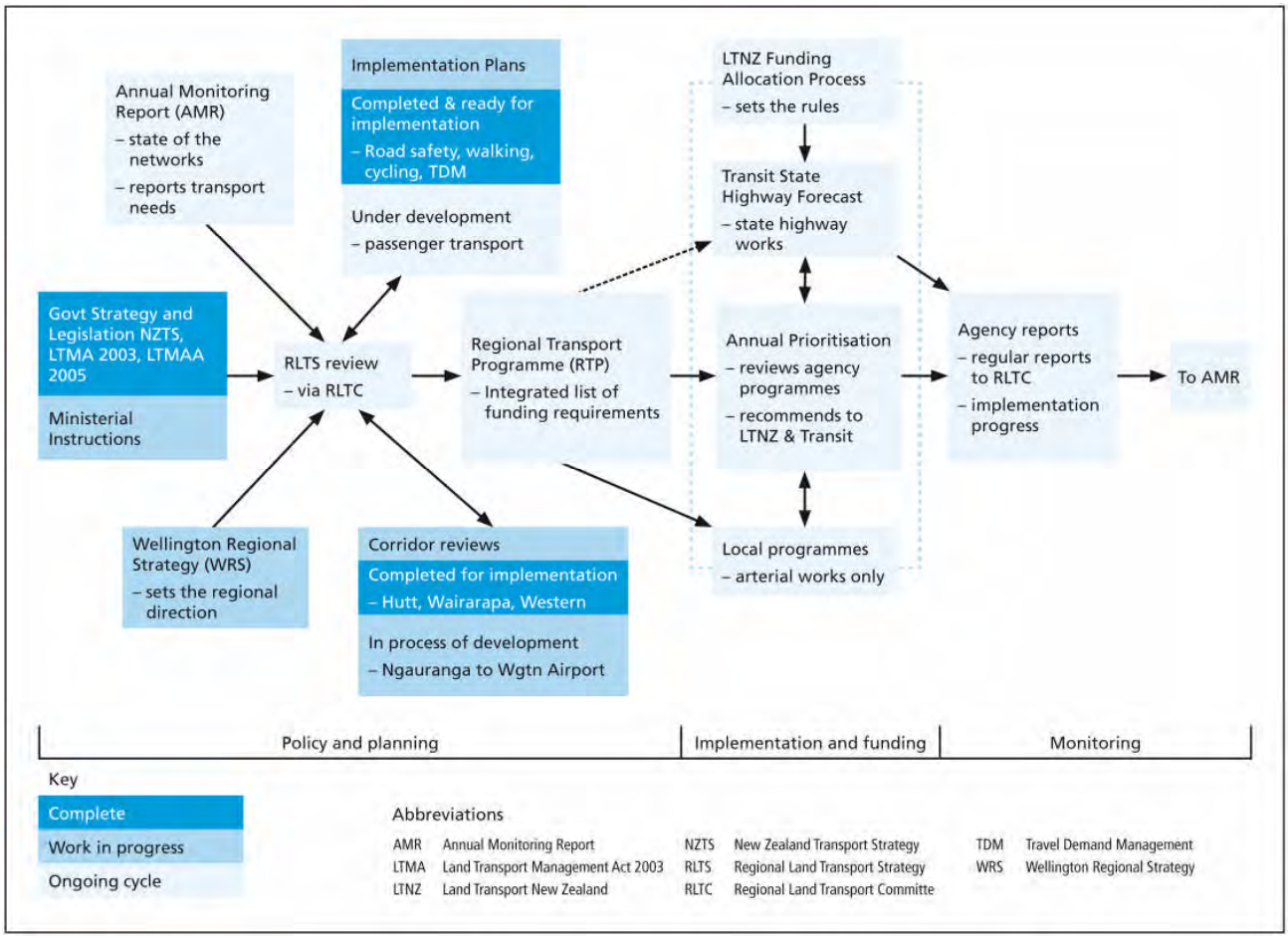


Figure 4: Regional Land Transport Strategy Processes.

2.4 Roles and responsibilities

The following section provides a description of those organisations and stakeholders who should be involved in the further development of strategic options (refer section 175 2 (n) of the LTA 1998) and implementation of the strategy (as identified in the strategy's implementation and corridor plans).

2.4.1 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), which provides the framework for the development of New Zealand transport policy.

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 an affordable, integrated, safe, responsive and sustainable transport system. This vision is outlined in the NZTS released in December 2002 (MoT, 2002).

2.4.2 Greater Wellington Regional Council (GWRC)

The Land Transport Act 1998 requires GWRC to have a key role in planning and monitoring the regional transport network via the RLTC. GWRC is the key agency for implementing passenger transport activities and is responsible for developing a regional passenger transport plan under the Transport Services Licensing Act 1989. GWRC is also proactively involved in promoting road safety, walking, cycling and travel demand management.

2.4.3 Regional Land Transport Committee (RLTC)

The Land Transport Act 1998 requires every regional council to establish a Regional Land Transport Committee comprised of representatives as stated in s178(2) of the Act. The Committee includes representatives from GWRC, all local councils in the region, Land Transport NZ, Transit NZ, ONTRACK and persons representing access and mobility, economic development, public health, safety and personal security, environmental sustainability and cultural interests (see Appendix 5 for current membership). Special interest representatives report RLTC issues back to their sector and provide feedback to the RLTC from that sector.

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

2.4.4 Land Transport New Zealand (Land Transport NZ)

Land Transport NZ was formed on 1 December 2004 from the merger of Transfund New Zealand and the Land Transport Safety Authority. Land Transport NZ is the central government agency responsible for land transport funding and safety matters.

Land Transport NZ is responsible for allocating N, R and C funds. Nationally distributed funds (N) are allocated on the basis of national priority from the National Land Transport Fund. Regionally distributed funds (R) are allocated to activities that are not judged to be of sufficient national priority to be funded from N. Regional priorities are taken into account. Crown appropriations (C) are special regional funds. This funding category resulted from the Wellington Transport Project which identified increased funding requirements for Wellington region's transport needs.

Land Transport NZ's objective is to contribute to an integrated, safe, responsive and sustainable land transport system. It has signalled that it will work in partnership with central, regional and local government and other stakeholders to help develop land transport solutions, with a focus on optimal use and development of New Zealand's land transport system (Land Transport NZ, 2005). Land

Transport NZ has a statutory responsibility to take into account any regional land transport strategy (Section 19(4) of the LTMA 2003).

2.4.5 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.

Transit New Zealand (Transit)

Transit is responsible for managing the state highway network and, in a similar manner to territorial authorities, must take into account the current RLTS (Section 12(5) LTMA 2003). Travel demand management is an essential component of Transit's Transport Strategy. Transit recognises that its design and implementation of a nationally integrated travel demand strategy will contribute towards sustainable management of the state highway network (Transit, 2005).

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 decisions are required to take into account the RLTS relevant to their area (Section 12(5) LTMA 2003).

2.4.6 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.

2.4.7 ONTRACK

ONTRACK 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 in September 2004. ONTRACK 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. No document currently provides a strategic regional framework for the management of the region's rail network. The Regional Land Transport Committee believes ONTRACK should develop a regional rail network management plan to provide such a framework.

2.4.8 Toll NZ Ltd

Toll NZ is the network operator with exclusive rights until 2070 for freight, existing long-distance passenger services and the Wellington urban rail passenger service. Toll NZ freight and passenger rights are subject to 'use it or lose it' provisions[5].

2.4.9 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 Road Safety Action Plans (RSAPs) and 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.

2.4.10 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.

2.4.11 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.

[5] Ministry Of Transport, 2005a. *National Rail Strategy to 2015.*

Regional Land Transport System Funders on Providers			
	Component	**Funder**	**Provider**
Passenger train services	Track, signals & platforms	Land Transport NZ/GWRC	ONTRACK
	Stations	Land Transport NZ/GWRC	GWRC/ONTRACK/Toll
	Subsidised rolling stock	Land Transport NZ/GWRC	Toll
	Commercial rolling stock	Toll	Toll
Freight train services	Track & signals	User access charges	ONTRACK
	Rolling stock	Toll	Toll
Buses	Trolley overhead infrastructure	Land Transport NZ/GWRC	Cable Car Company
	Bus stops, shelter, information	Land Transport NZ/GWRC	TAs, GWRC
	Subsidised vehicles	Land Transport NZ/GWRC	Bus operators
	Commercial vehicles	Bus operators	Bus operators
	Bus priority measures	Land Transport NZ/GWRC/TAs	TAs
Total mobility	Hoists	Land Transport NZ/GWRC	Taxi Operators
	Vehicles	Land Transport NZ/GWRC	Taxi Operators
Road freight	Local roads	Land Transport NZ/TAs	TAs
	State highways	Land Transport NZ	Transit New Zealand
	Vehicles	Private	Private
Cars	Local roads	Land Transport NZ/TAs	TAs
	State highways	Land Transport NZ	Transit New Zealand
	Vehicles	Private	Private
Harbour ferry	Wharves	TAs	TAs
	Vessels	Land Transport NZ/GWRC	Ferry operator
Pedestrians	Local roads (footpaths)	Land Transport NZ/TAs	TAs
	State highways (footpaths)	Land Transport NZ	Transit New Zealand
	Pedestrian network (off road)	TAs, GWRC, DOC	TAs, GWRC, DOC
Cyclists	Local roads & cycle lanes	Land Transport NZ	TAs
	State highways & cycle lanes	Land Transport NZ	Transit New Zealand
	Cycle ways (off road)	TAs, GWRC, DOC	TAs, GWRC, DOC
	Bicycles	Private	Private
Road safety	Enforcement	Land Transport NZ	NZ Police
	Advocacy & promotion	ACC, Land Transport NZ, GWRC, TAs	ACC, NZ Police, GWRC,TAs
	Safer routes	Land Transport NZ/TAs	TAs
Demand management	Travel planning coordination	Land Transport NZ/GWRC	GWRC, Land Transport NZ
	Travel planning initiatives	Land Transport NZ/GWRC	GWRC, TAs, schools, businesses.
	Awareness campaigns	Land Transport NZ/GWRC	GWRC, LTNZ

Table 1: Regional Land Transport System - Funders & Providers.

3. Regional transport network - pressures and issues

3.1 Wellington's transport network

The greater Wellington region's topography and geographic constraints means it has developed a relatively compact urban form along the region's 'Y' shaped transport corridors (Figure 5). State Highway 1 begins at Wellington International Airport and extends through the Wellington City CBD to Ngauranga where the corridor splits. One arm, consisting of State Highway 1 and the North Island Main Trunk (NIMT) rail line, stretches north through northern Wellington, Porirua, Pukerua Bay and up the Kapiti Coast. The other arm, consisting of State Highway 2 and the Wairarapa Line railway, runs through the Hutt Valley to Wairarapa.

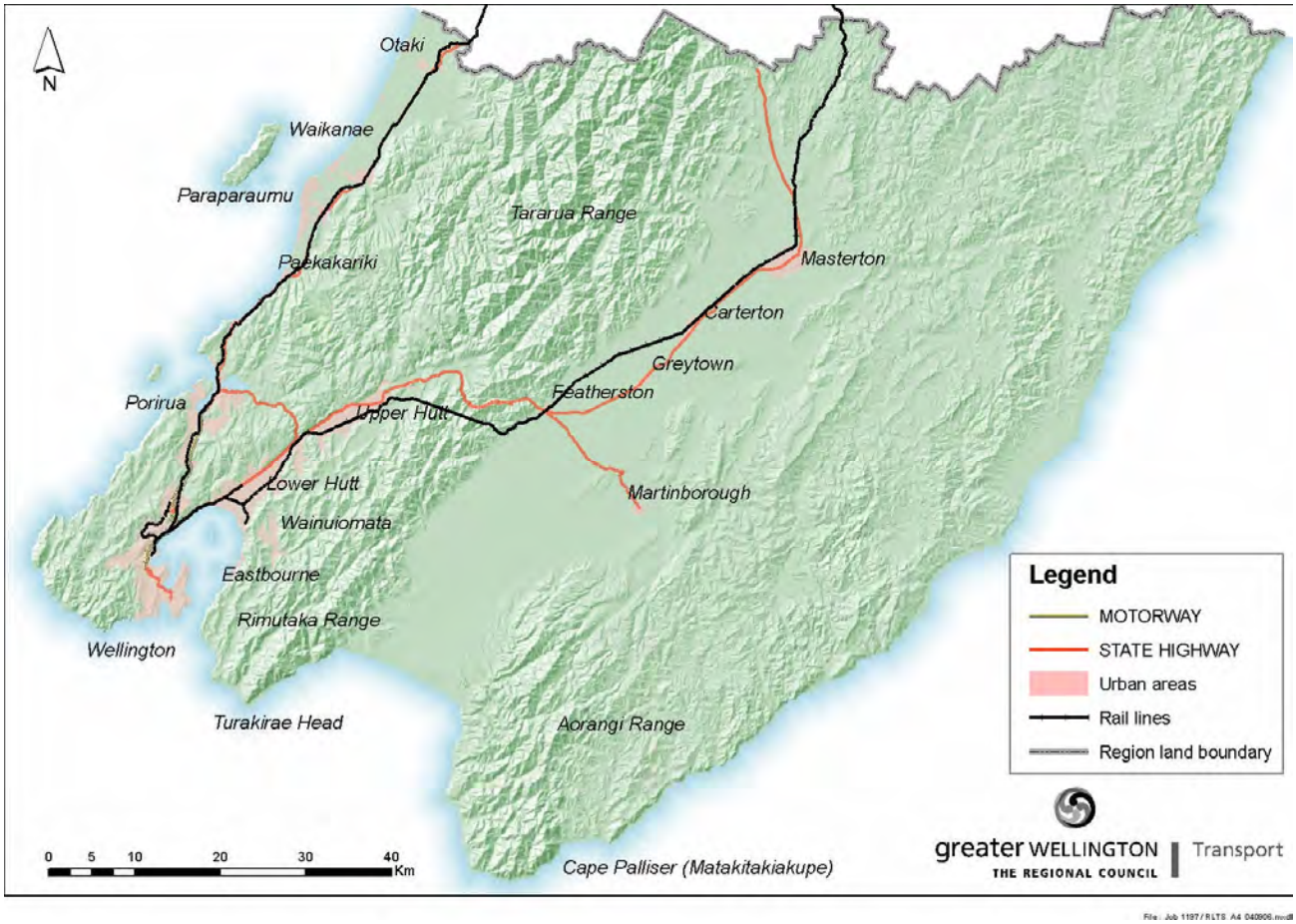


Figure 5: Wellington's regional transport network.

These corridors provide vital access to the Wellington City CBD. They also provide vital connections between the region's secondary centres. 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 RLTC 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[6], released in September 2006, contains the following key conclusions about the current transport network performance:

- Regional public transport patronage showed exceptional growth in the 2005/06 year. Peak passenger trips increased by 1.9 million due to significantly increased bus and train patronage. Off-peak passenger trips by all public transport modes also increased during 2005/06, by 4.6% or over 700,000 trips.
- The total number of cars travelling into the Wellington CBD during the morning commuter period decreased by 8% in 2006.
- Greater Wellington's road congestion dropped to 2003 levels across most periods of the day. All-day average congestion decreased 17% between 2005 and 2006 or from 25 seconds to 21 seconds delay per kilometre travelled.
- Road crash numbers continued to increase in general throughout the region. 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 figures remained lower than those of Auckland and Canterbury regions.
- Cycle casualty numbers for the region increased to 112 in 2005, the highest toll for a decade.
- Regional fuel consumption increased by 1.2% between 2004 and 2005, slightly below the previous year's increase in fuel sales of 1.6%. Consequently, transport-generated greenhouse gas emissions have also increased.

3.2 Key transport pressures

3.2.1 Growing population

Between 1991 and 2001 the region as a whole experienced population growth of 5.8%. The region is forecast to experience moderate population growth over the next 10 years, with an extra 40,000 people expected to live here by 2016, a 9% increase from 2001 (Statistics NZ, 2005).

[6] 2005/2006 Annual Report on the Regional Land Transport Strategy, GWRC, September 2006 (Available on GWRC website).

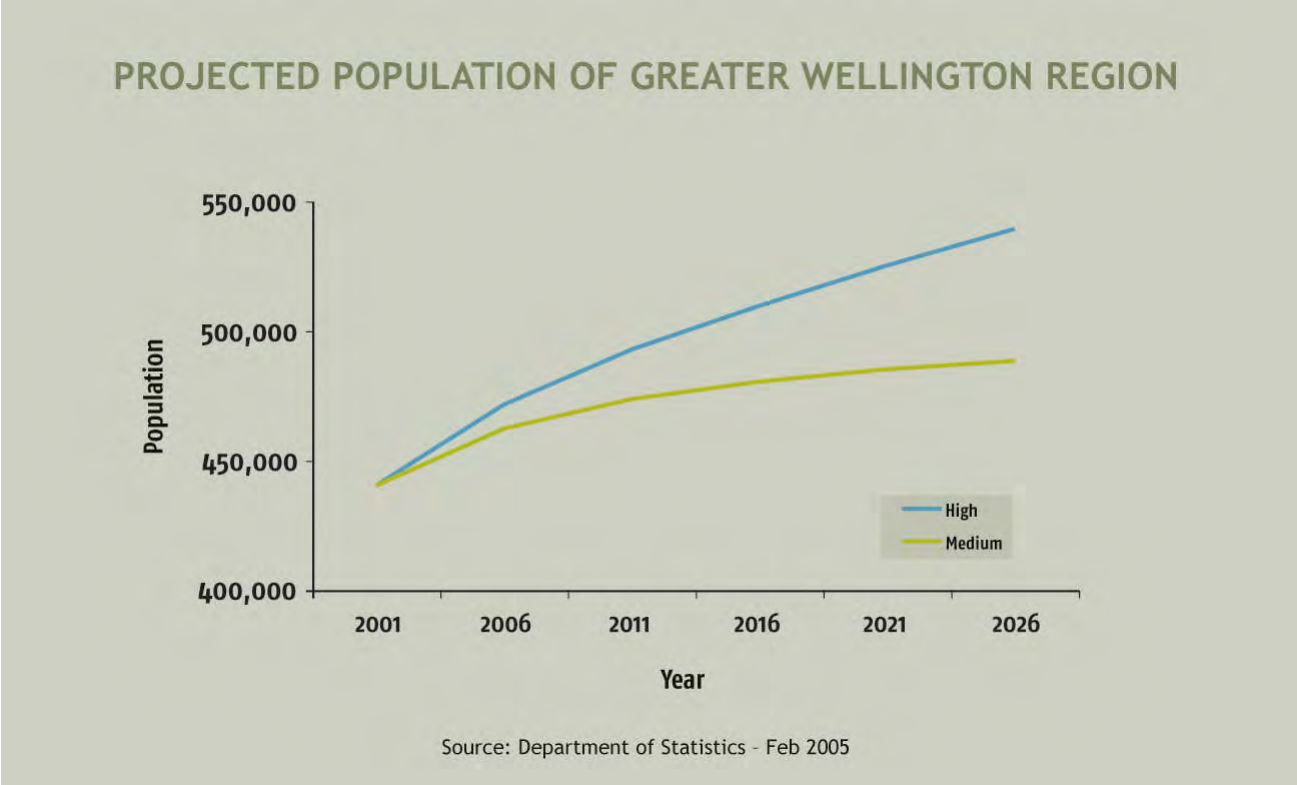


Figure 6: Wellington region's population growth. Source: WRS Growth Framework, 2005.

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 proportion of people aged over 65 years. In contrast, some areas (for example, Porirua) have a high proportion of children. Region-wide a significant gap has been identified in the key middle 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)[7]. Overall, the growing population will drive an increase in demand for travel.

3.2.2 Growing economy

In 2004 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 $36,700, the highest regional figure in New Zealand. Despite this, our per capita GDP only rose by 1.6% per year between 1998 and 2003 compared with the national average of 2.3%. Job numbers in the region are also growing, but at a slower rate than the national average (WRS, 2005).

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.

[7] GWRC 2004/2005 Annual Report on the Regional Land Transport Strategy.

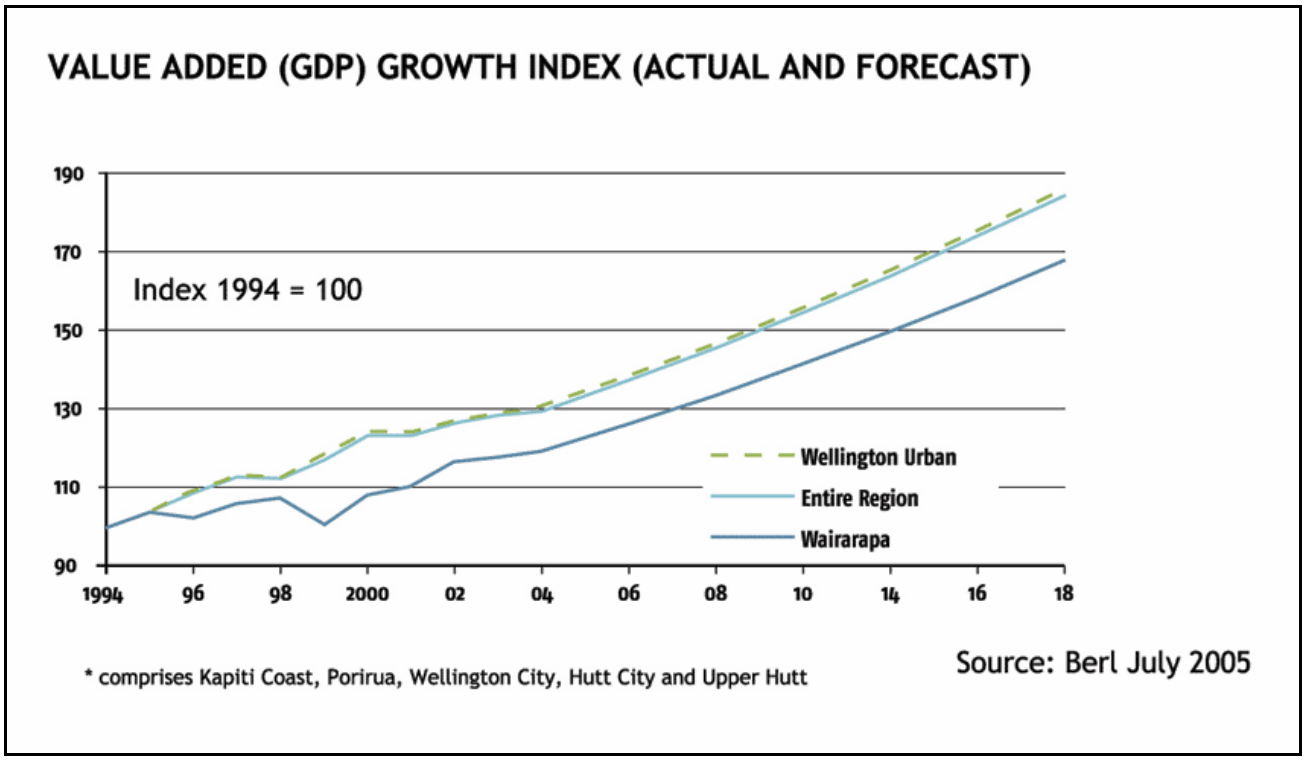


Figure 7: GDP growth index for the Wellington region. Source: WRS Growth Framework, 2005.

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.

Car ownership numbers are steadily increasing in the region. Over the five years from 2000 to 2005, the total number of cars registered in the region rose by 11% (Figure 8). 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 CO_2 emissions and other environmental impacts and increased peak period journey times reflecting increased congestion.

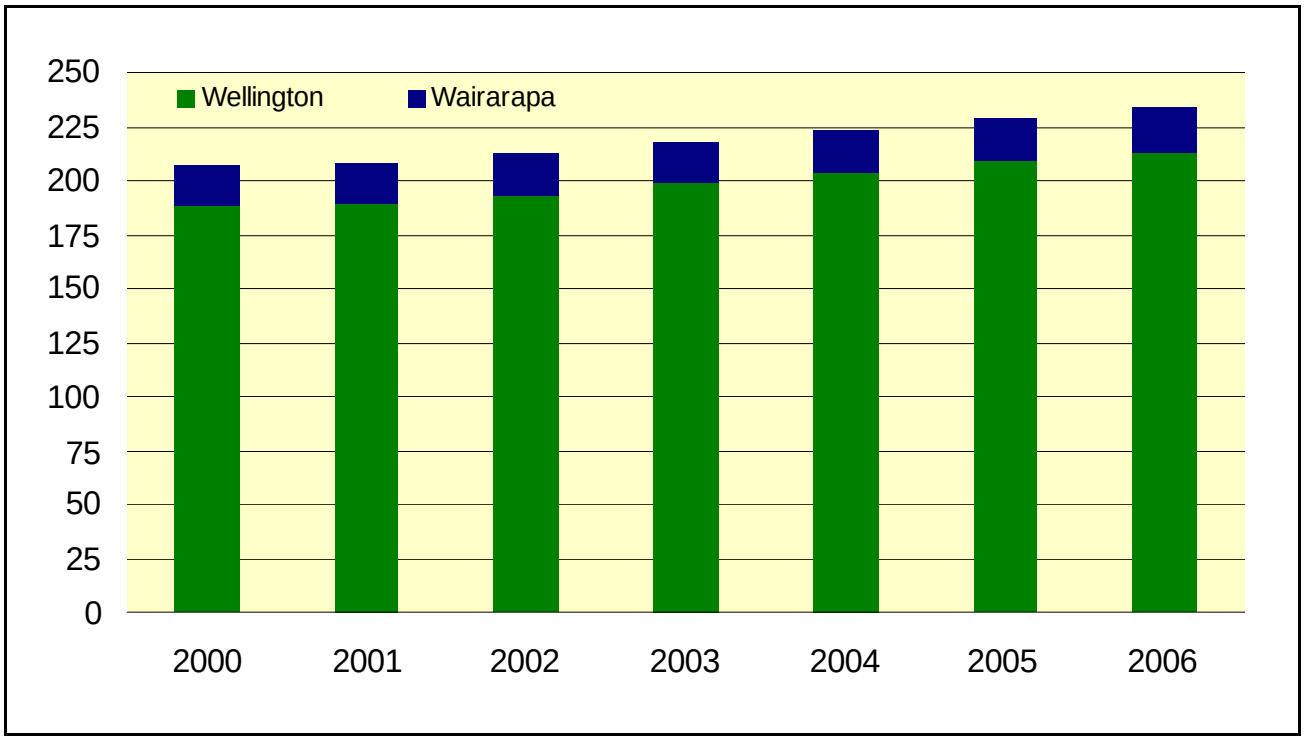


Figure 8: Car registrations (000), Wellington region. Source: Land Transport New Zealand, 2006.

Historically in the Wellington region, VKT growth is closely related to economic growth. Figure 7 shows a forecast further 30% economic growth between 2006 and 2016. As shown in Figure 9, we are planning for around 20% growth in VKT over the next 10 years. Intervention can reduce the rate of growth, however measures to achieve zero growth are likely to severely disrupt social and economic activity.

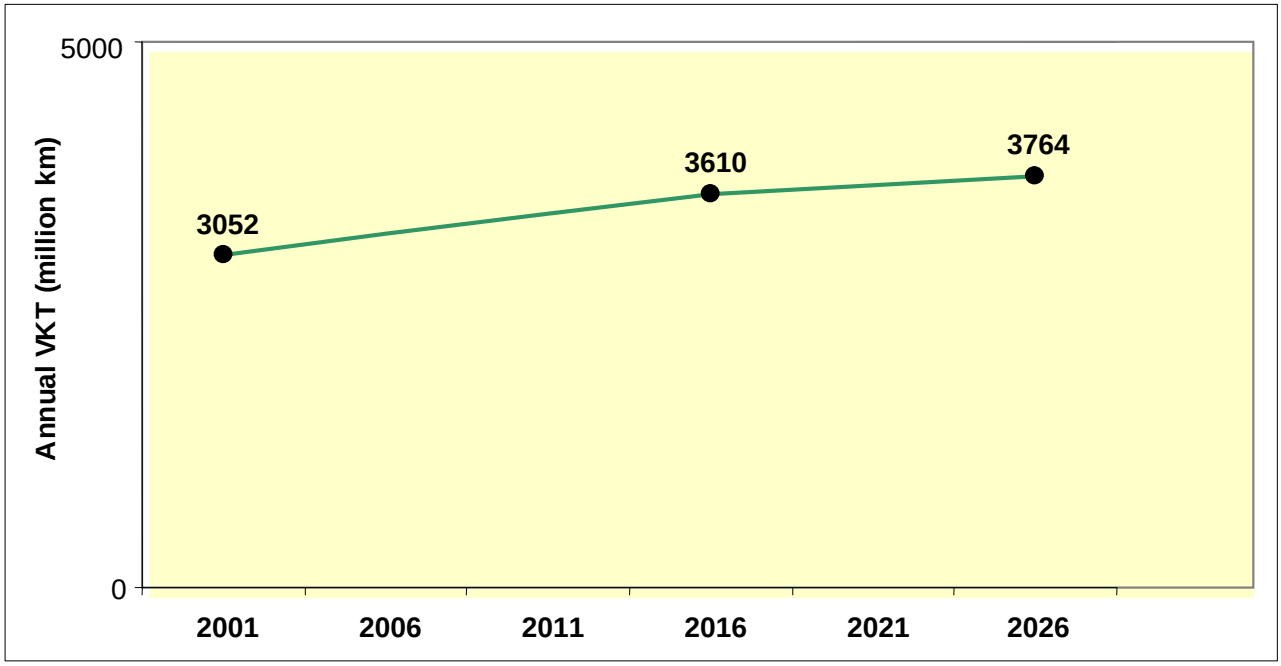


Figure 9: Projected regional vehicle kilometres travelled (VKT) per annum. Source: Wellington Transport Strategic Model.

The number of trips made by passenger transport in the region is also increasing (Figure 10). Total patronage by bus, train and ferry for the 2005/06 financial year was 35 million passenger trips, an increase of 2.6 million (or 8.1%) over the previous year. This increase was most notable during the peak period, with a lesser increase off peak.

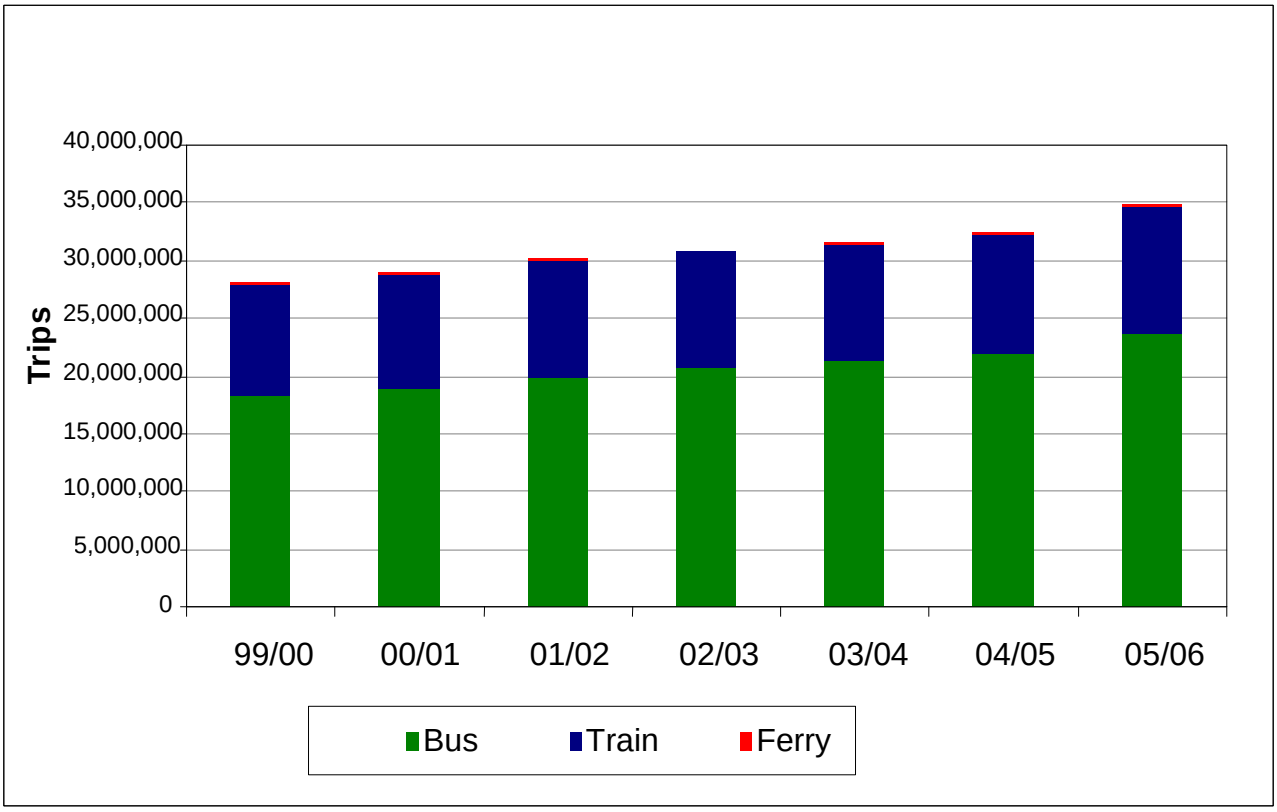


Figure 10: Total annual passenger transport patronage by mode. Source: Greater Wellington Regional Council 2006.

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. Of Wairarapa's total land area, over 45,000 hectares (or 5%) is planted in forestry[8]. With log prices beginning to improve, a significant increase in log production is anticipated. Wood volumes in Wairarapa are predicted to increase from around 800,000 m^3 to 1,600,00 m^3 between 2006 and 2016[9]. We need to recognise and provide for the additional pressure this will place on the region's strategic transport network between Wairarapa and CentrePort (Wellington's port) in Wellington City.

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

[8] Source: Masterton Business Enterprise website.
[9] Source: Masterton Business Enterprise website.

mobility, this can have a negative impact on overall transport system accessibility. For example, the adverse impacts of peak period congestion on travel by private car and other modes.

The nature of the network in many parts of the Wellington region means that cyclists must share the road corridor with vehicles, rather than being able to utilise separate facilities such as cycle lanes. An increasing number of cars on the road has a negative impact on the safety and attractiveness of cycling. Likewise, the pedestrian environment is often less attractive in areas where vehicle traffic dominates. More cars also result in increasing peak period road congestion. With a lack of priority measures for buses and freight in our region, these modes are adversely affected by increasing congestion.

3.3.2 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. Severe 'bottlenecks' on the strategic network include Paekakariki to Pukerua Bay, SH1 Ngauranga interchange, SH2 Dowse to Ngauranga and around the Terrace and Mt Victoria Tunnels.

Congestion is a significant issue during the peak period due to its impact on trip reliability. A 2006 GWRC transport perception survey[10] indicated that 49% of respondents felt traffic congestion was worse than it was two years previously. Modelling of the network suggests that peak period congestion will continue to increase on many parts of the region's road network, despite the recent anomaly reported in the 2005/06 AMR.

The following map identifies the key routes of the regional road network affected by regular traffic congestion during peak periods.

[10] NRB GWRC May/June 2004 Transport Perceptions Survey.

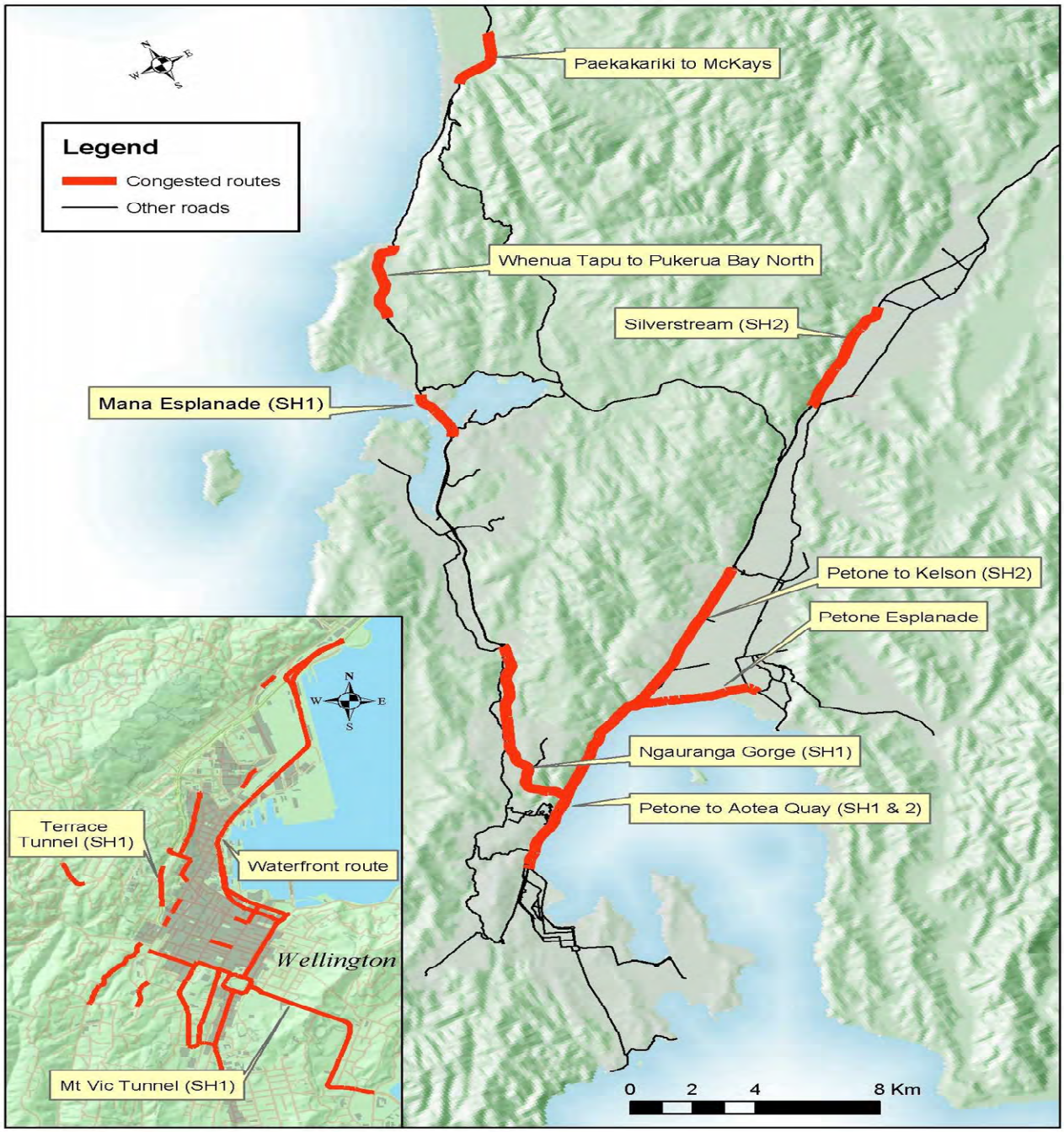


Figure 1 1: Wellington region's congestion bottlenecks. Source: Wellington Transport Strategic Model and other sources.

3.3.3 Rail network

The rail network is particularly important in the Wellington region, providing both freight connections to Wellington's CentrePort and passenger transport connections between the Wellington City CBD and the region's other centres and townships. Rail connections to CentrePort and the Cook Straight ferries mean the region's rail network is of national importance. The recent period has seen a lack of investment in necessary maintenance and renewal of the rail network nationally and regionally. In particular, unsolved bottlenecks at Kaiwharawhara Throat (NIMT/Wairarapa Line

junction) and North-South Junction cause delays to rail services which have regional and national consequences. There is a need for key stakeholders (GWRC and ONTRACK) to examine rail track issues and prioritise responses in this region. Similarly, a previous lack of investment has resulted in an urgent need to upgrade ageing rail rolling stock and rail stations.

3.3.4 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 illustrates the perception of network reliability.

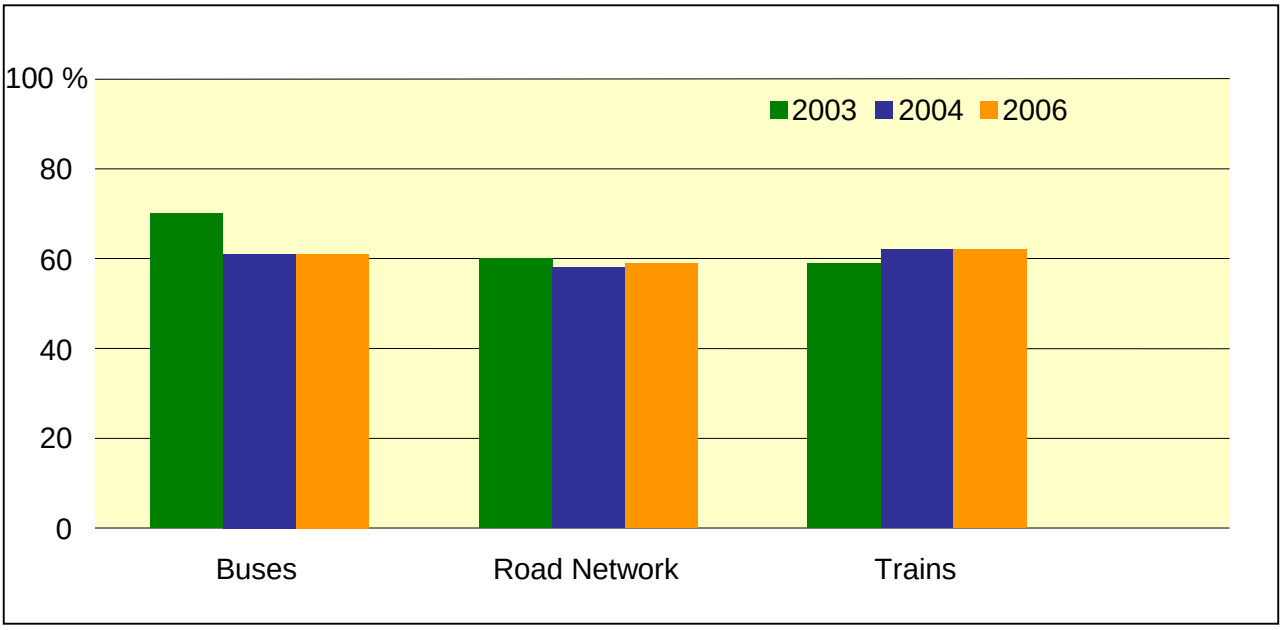


Figure 12: Perceptions of network reliability – Percentage of people who rate the regional transport network as reliable. Source: GWRC perception survey 2003, 2004, 2006.

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 2006, AM peak travel times on the strategic road network varied by 22% with PM peak variability at 21%[11].

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. In Wellington City trolley bus reliability is currently poor, primarily because of the age of the system (buses, overhead wires and power supply) which is overdue for replacement.

Rail network service monitoring shows that EMU (electric multiple unit) services run to within three minutes of the timetable about 90% of the time. Wairarapa services run to within three minutes of

[11] GWRC 2005/2006 Annual Report on the Regional Land Transport Strategy.

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 urgently required to upgrade rolling stock and to improve rail network infrastructure to improve rail reliability.

The role of the north-south route following State Highway 1 and the main trunk railway line is one of national strategic 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 North Island Main Trunk (NIMT) rail line north of Pukerua Bay is a significant weak point on the existing rail corridor. Like the highway, the rail corridor is 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[12]. 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 was developed by the Wellington Lifelines Group[13] 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 GWRC. 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.

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

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

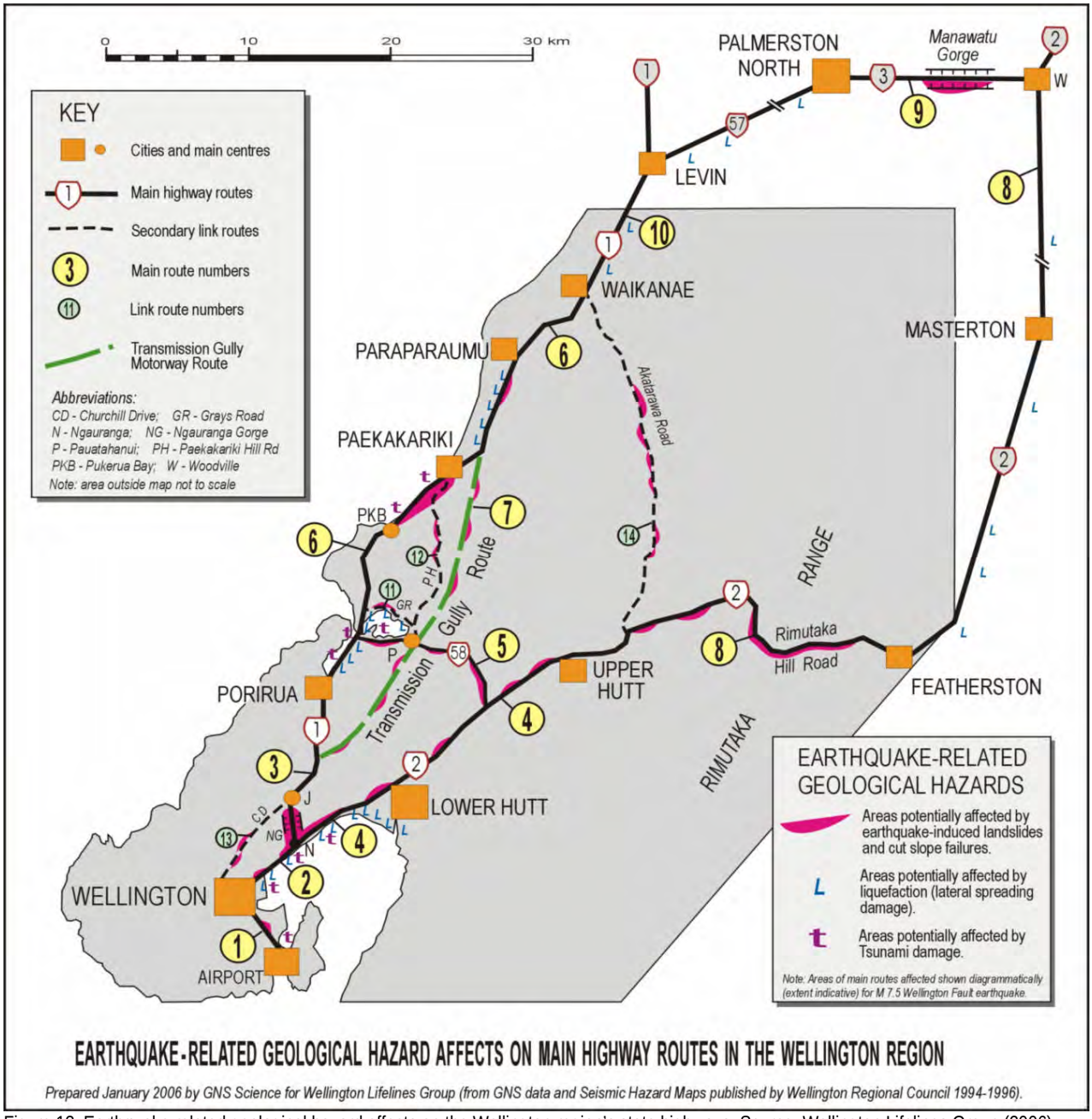


Figure 13: Earthquake-related geological hazard effects on the Wellington region's state highways. Source: Wellington Lifelines Group (2006).

3.3.5 Economic development

Economic growth is occurring at a steady rate, and the development of the Wellington Regional Strategy (WRS) 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[14]. The Wellington Regional Strategy recognises the need for a strong CBD 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.

[14] GWRC, 2004, CBD Corridor Study. Pressures & Issues.

3.3.6 Strengthening east-west connections

There is a need to improve 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 connects the Hutt Valley to Porirua, there is a need for an additional link to the south 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.

3.3.7 Safety and personal security

Despite extensive improvements to road safety made in the 1990s in the Wellington region, casualties over the last four years have plateaued and renewed efforts are required to ensure the region is contributing towards the national *Road Safety 2010* strategy targets. The annual social cost of crashes to the Wellington region in 2005 was $258 million[15].

At the regional level four significant road safety issues were identified as being of particular concern:

- Intersections
- Loss of control
- Vulnerable road users (pedestrians, cyclists and motorcyclists)
- Road user behaviour (alcohol, speed, inattention).

The perceived and actual safety of pedestrians and cyclists in our region affects the use of these active modes (Figure 14). In a 2004 GWRC perceptions survey[16], respondents who resided in Wellington City felt the "safest" while walking (78% felt safe). Other TA areas ranged from 70% down to 51% of respondents feeling safe. In the same survey, only 23% 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 the perception of personal security.

[15] Land Transport NZ, 2006, Wellington Regional Road Safety report 2001 – 2005.

[16] NRB GWRC, May/June 2004, Transport Perceptions Survey.

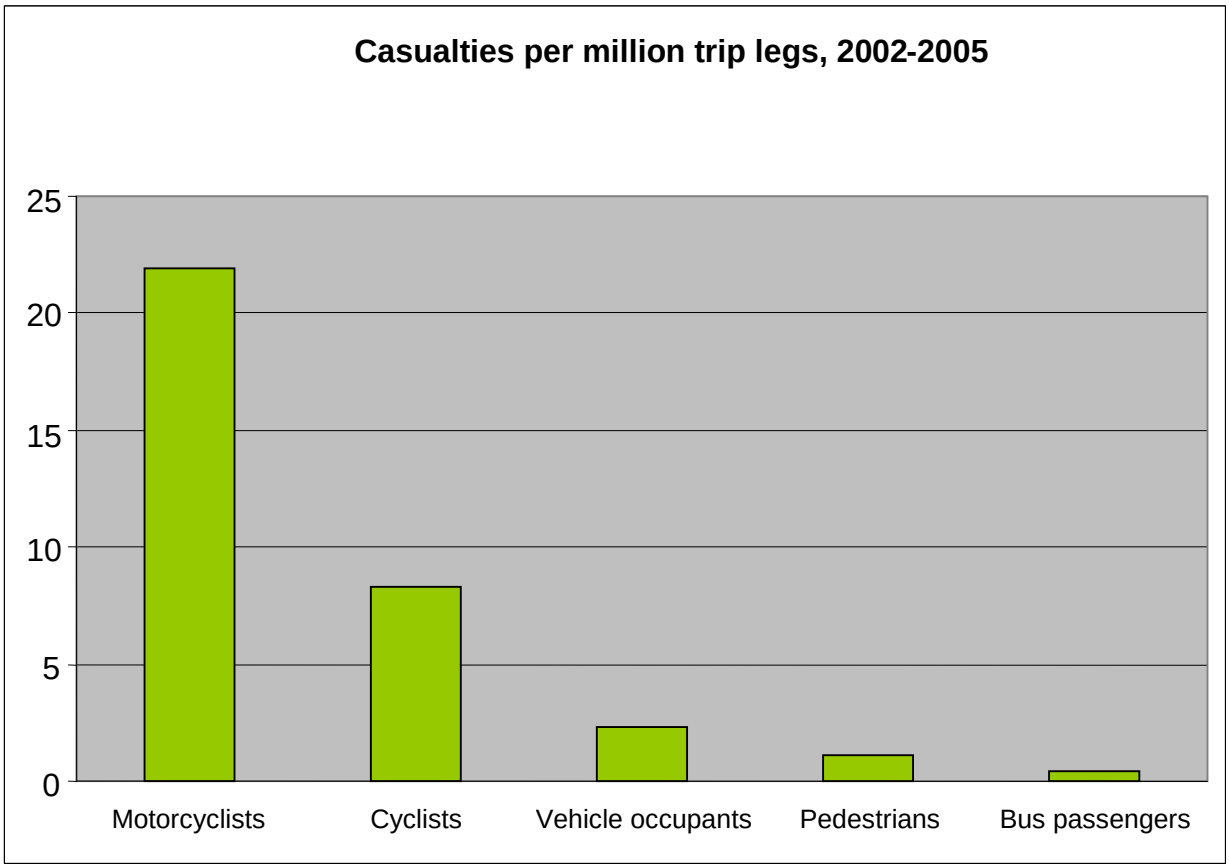


Figure 14: Relative risk by transport mode. Source: Ministry of Transport, reported crashes and NZ Household Travel Survey (2006).

3.3.8 Travel to educational facilities

A significant number of the region's peak period trips (24%) take place between homes and educational facilities (Figure 15). 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[17] showed that only 57% of adults would allow their children to walk to school and only 37% 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.

[17] National Research Bureau (NRB), June 2006, Transport Perceptions Survey.

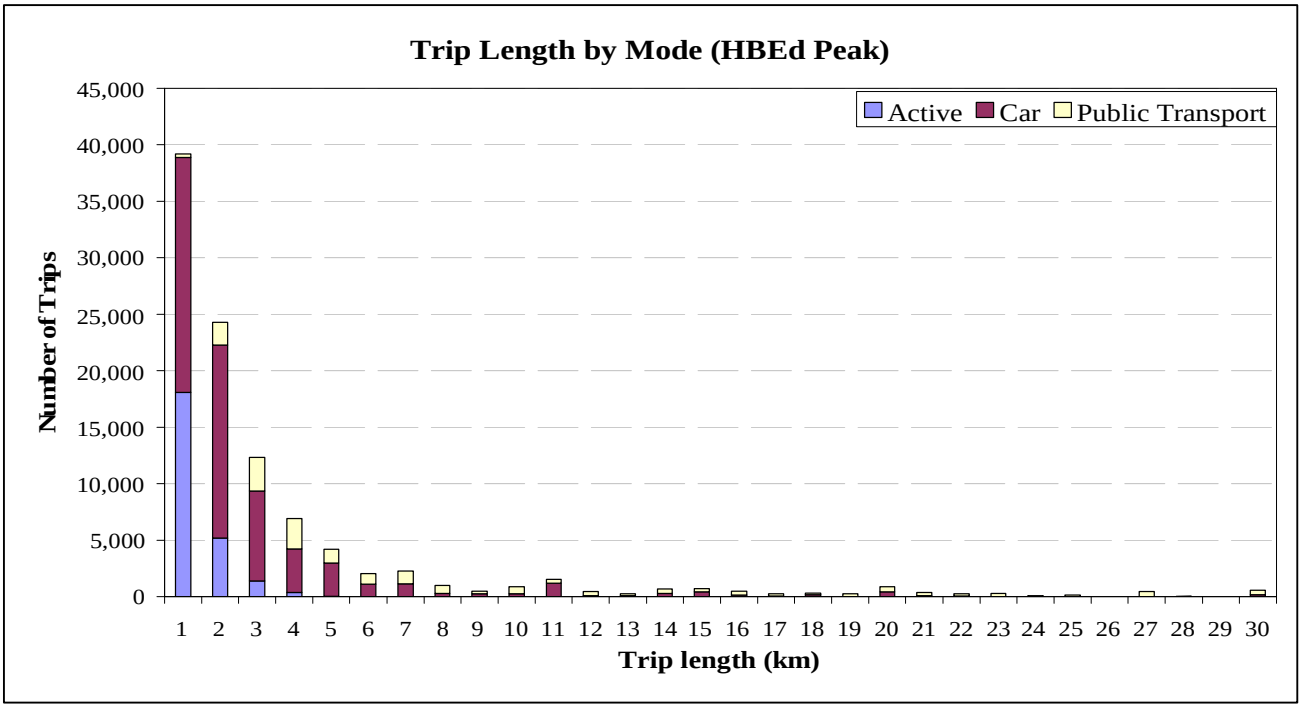


Figure 15: Peak trip length by mode (home to educational facility). Source: GWRC Household Travel Survey 2001.

3.3.9 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 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 in detail in the next 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 PM_{10} (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 three air quality monitoring stations in the region. Two of these are mobile units which will allow different locations to be monitored for 12 months at a time. Transport emissions are not major contributors in the identified vulnerable airsheds of our region (Masterton, Upper Hutt and Wainuiomata) but may have some 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) into the region's stormwater system. However, no definitive data is currently available for the Wellington region. 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 Pauatahanui Inlet and Wellington Harbour.

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 consenting phase.

3.3.10 CO_2 emissions and climate change

The regional transport network also plays a part in contributing to global environmental issues, such as the consumption of non-renewable fuels and the consequent production of greenhouse gas emissions. The transport sector consumes over 40% of New Zealand's energy and accounts for around 42% of the country's CO_2 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).

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 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 place for responses at a local level[18].

As a region, we are unlikely to have a significant impact on national and global CO_2 levels, however, there are a number of ways we can play our part in addressing this issue. These include maintaining and improving our region's passenger transport network (particularly electric buses and trains), continuing to promote an increased uptake in walking and cycling, managing the demand for travel and increasing travel efficiency.

There are also many mechanisms for addressing this issue outside the scope of this strategy. These include improving vehicle efficiency and advances in the availability of alternative fuels. It is appropriate that central government take a much stronger lead in relation to this issue and that as a region we advocate for them to do so.

There are two key ways in which our region's transport network can respond to climate change. The first is transport's contribution to greenhouse gas emissions, as discussed above. The second is ensuring our transport network is resilient and adaptable to the potential impacts of climate change. These issues are important considerations when planning the transport network, particularly in a longer term context.

[18] GWRC, May 2006, 'Our Region, Their Future' RPS Discussion Document.

3.3.11 Public health

Transport activities can have both positive and negative impacts on health. A report prepared by the Pubic Health Advisory Committee (PHAC)[19] 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 in section 3.3.9.

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. Indications from initial noise monitoring alongside the Wellington region's major transportation corridors are that noise levels average from 57 dBa at Vivian Street to 66 dBa at Mana Esplanade. 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.

[19] PHAC, April 2003, 'Impacts Of Transport On Health – An Overview'.

3.3.12 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'[20] 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.

3.3.13 Cycling

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.

3.3.14 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. A recent study[21] by Transport Engineering Research Ltd shows that the amount of freight transported in New Zealand will double by 2020, if economic growth trends of the past 10 years continue. The research suggests that at a national level at least 80% of this freight will have to go by road. 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. 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 between these destinations.

[20] Human Rights Commission, 2005, The Accessible Journey: Report of the Inquiry into Accessible Public Land Transport.

[21] Transport Engineering Research NZ Ltd, 2006, Prediction of New Zealand's freight growth by 2020.

The use of rail for long distance, inter-regional freight movement has shown a continual decline since 2000[22]. Port traffic at Wellington's CentrePort is expected to increase in line with economic growth trends, with most freight arriving or departing by road.

3.3.15 Rising oil prices

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 two years to 50 years. Fuel prices are likely to increase and become more volatile over time as supply struggles to keep up with increasing demand.

Rising oil prices have implications for this strategy as the cost of transportation becomes increasingly higher. While petrol and diesel are recognised as being relatively inelastic commodities, there is anecdotal evidence that public behaviour 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.

3.3.16 Integration of transportation and land use 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 Wellington Regional Strategy identifies the significance of integrating land use and transport planning. The Wellington Regional Policy Statement and Wellington Regional Land Transport Strategy will be key mechanisms for addressing this issue.

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[23]. 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 16).

[22] GWRC, 2004/2005, Annual Monitoring Report.

[23] Draft Wellington City Transport Strategy 2006 & Draft Wellington City Urban Design Strategy 2006.

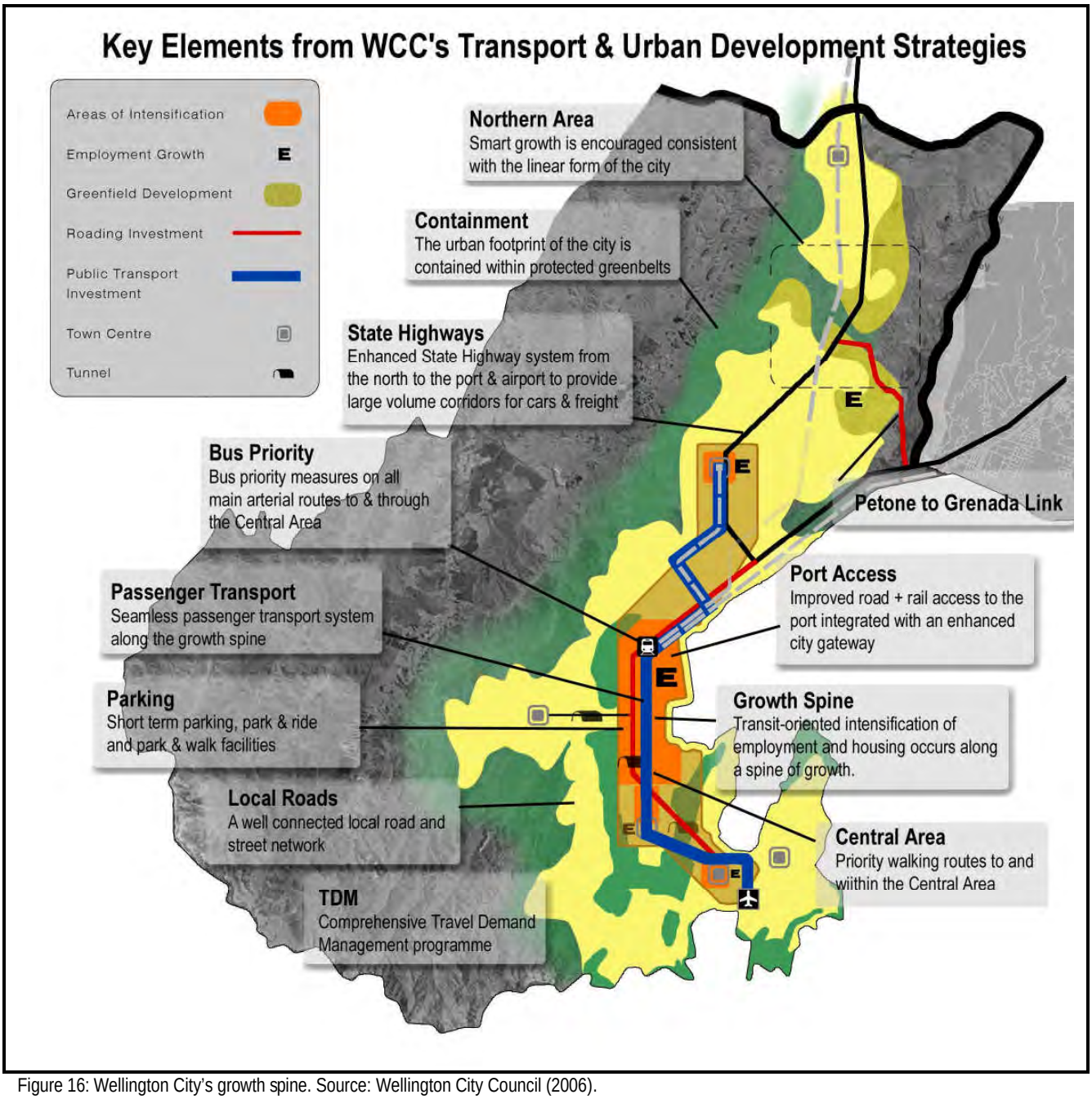


Figure 16: Wellington City's growth spine. Source: Wellington City Council (2006).

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.

It is important to recognise the hierarchy of roads that exist 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 up the strategic road network (as set out in Appendix 3) 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 network against the adverse effects of inappropriate land use requires careful management through district plans and resource consent processes.

3.3.17 Long term sustainability

Ensuring the sustainability of the region's strategic transport network will involve an integrated approach to all elements of the transport network. This means enabling people to travel between home and work, and to access the main regional infrastructure facilities, especially hospitals, the airport and port, and education and social service facilities, in the most efficient way. Wellington's future transport system will need to be resilient to future challenges such as peak oil and climate change while minimising the impact of travel on the environment.

4. Strategy development

The approach to developing the draft RLTS is evidence-based, collaborative, accountable and forward-looking. It has involved a multi-step process to identify the region's transport pressures and issues, to establish a vision, objectives, outcomes and policies, to consider the strategic options, and to propose interventions through the parallel development of corridor plans and implementation plans (cycling, walking, travel demand management and road safety). The Regional Transport Programme then identifies key regional projects over a 10 year period.

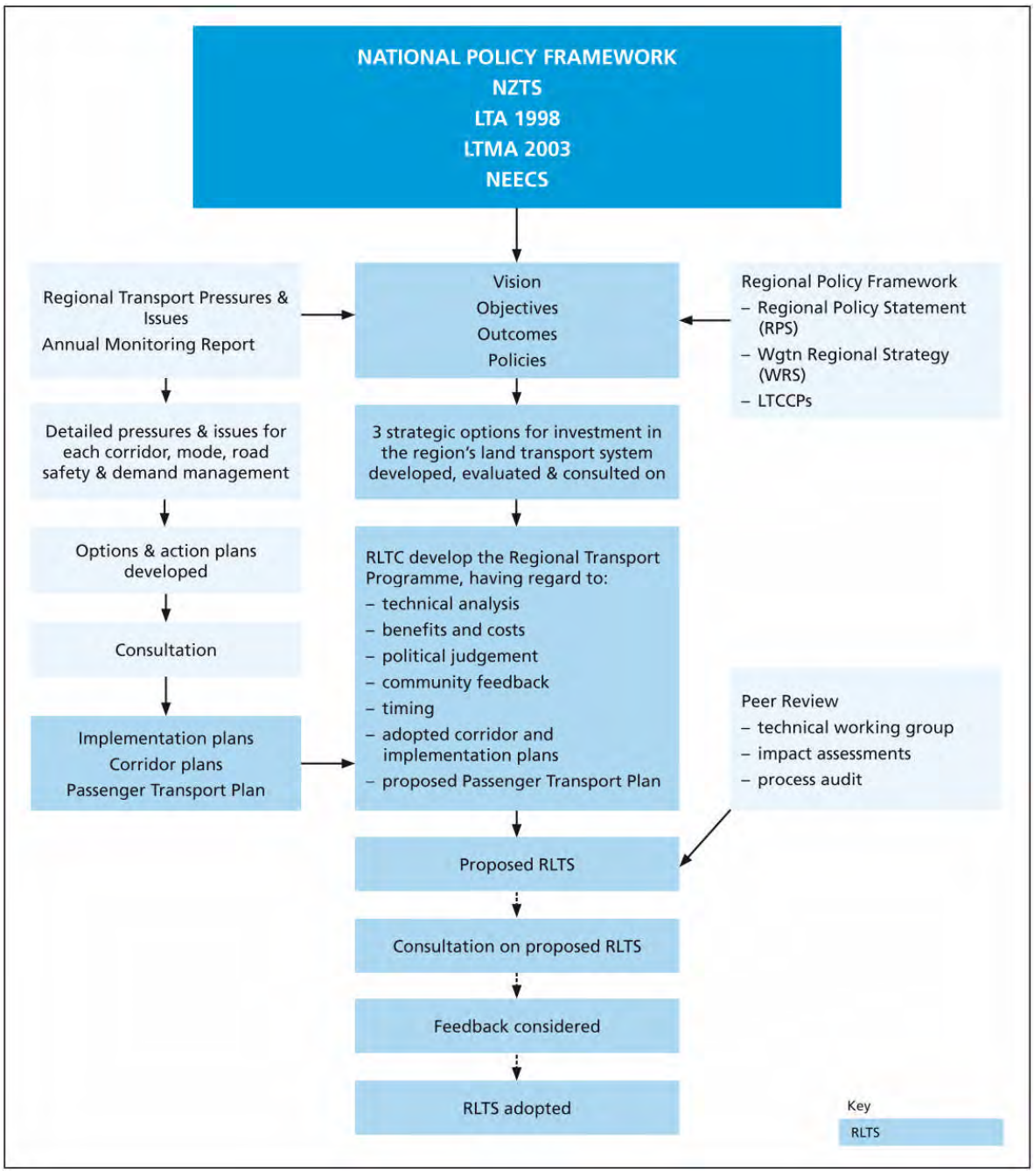


Figure 17: The Wellington RLTS development process.

5. Vision, objectives and outcomes

The strategy has been developed by setting a vision, defining objectives and identifying strategic outcomes. The following sections set out these elements in detail.

The RLTS vision and objectives reflect the provisions set out in section 175(2) of the LTA 1998 and the New Zealand Transport Strategy, while also taking account of regional issues and objectives. The strategic framework of the strategy, its vision, objectives and outcomes, are also aligned with that of the LTCCP and WRS, to ensure the strategy contributes to the community outcomes identified by through these documents.

5.1 Vision

The vision of this Regional Land Transport Strategy is:

To deliver an integrated land transport system that supports the region's people and prosperity in a way that is economically, environmentally and socially sustainable.

5.2 Objectives

1. Assist economic and regional development.

Aid national and regional economic transformation; and foster the housing, employment, education, health and recreation aspirations of the regional community (as identified by the Wellington Regional Strategy).

2. Assist safety and personal security.

Achieve a safer community through a land transport system that meets regional road casualty targets and contributes to a sense of individual and community security when using the transport system.

3. Improve access, mobility and reliability.

Provide for the access and mobility needs of our regional community and recognise the wider access needs of adjoining regions. Improving access and mobility is the primary purpose of a Regional Land Transport Strategy. Improving access enables social participation, inclusion and independence for all, including the disabled. Improving mobility ensures the availability of realistic transport choices for the individual or community, including affordability and equity of cost considerations.

Improve reliability to improve travel times and reduce 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 allows for social participation and interaction, and healthy communities via reduced transport impacts on natural resources 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. This includes, but is not limited to, encouragement of energy efficiency, reduced CO_2 emissions, and a high standard of environmental design.

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

Take account of funding likely to be available, economic efficiency, and the impact of funding options on regional communities when considering transport packages.

5.3 Land transport outcomes

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. The land transport outcomes are as follows:

5.3.1 Roading

- Maintained vehicle travel times between communities and regional destinations
- Reduced road congestion
- Improved reliability of the strategic roading network.

5.3.2 Passenger transport [Bus, rail, harbour ferry]

- Increased peak period mode share
- Enhanced off-peak mode share and community connectedness
- Improved accessibility for all, including disabled people and low income groups
- Improved customer satisfaction
- Improved journey times relative to travel by private car.

5.3.3 Travel demand management

- Limited car traffic growth
- Increased journey to work mode share by public transport and active modes
- Improved integration between transport modes
- Reduced greenhouse gas emissions
- Reduced fuel consumption
- Reduced road congestion

- Increased vehicle occupancy
- Increased resident satisfaction with road and rail reliability
- Improved land use and transport integration (guided by the outcomes of the WRS and local authority urban development strategies)
- Minimise adverse impact on economic development (guided by the WRS).

5.3.4 Pedestrian

- Improved level of service for pedestrians
- Increased mode share for pedestrians, especially for short trips
- Increased safety for pedestrians
- Improved perception of pedestrian safety, especially for children.

5.3.5 Cycling

- Improved level of service for cycling
- Increased mode share for cycling
- Improved perception of cycling safety, convenience and ease
- Increased safety for cyclists.

5.3.6 Road safety

- Improved regional road safety
- Improved perception of road safety
- Safer roading environment.

5.3.7 Freight

- Improved the level of service for freight
- Improved freight linkages
- Improved rail and road freight efficiency.

5.4 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	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 RTP is affordable to the regional community
Roading						
Maintained vehicle travel times between communities and regional destinations	✓		✓			
Reduced road congestion	✓		✓			
Improved reliability of the strategic roading network	✓		✓			
Passenger transport [bus, rail, ferry]						
Increased peak period mode share	✓	✓	✓	✓	✓	
Enhanced off-peak mode share and community connectedness		✓	✓	✓	✓	
Improved accessibility for all, including disabled people and low income groups				✓		
Improved customer satisfaction		✓	✓	✓	✓	
Improved journey times relative to travel by private car			✓			
Travel demand management						
Limited car traffic growth					✓	
Increased journey to work mode share by public transport and active modes				✓	✓	
Improved integration between transport modes			✓			
Reduced greenhouse gas emissions					✓	
Reduced fuel consumption					✓	
Reduced road congestion	✓		✓			
Increased vehicle occupancy					✓	
Increased resident satisfaction with road and rail network reliability	✓		✓			
Improved land use and transport integration (guided by the outcomes of the WRS and local authority urban development strategies)	✓		✓		✓	
Minimise adverse impact on economic development (guided by the WRS)	✓					
Pedestrian						
Improved level of service for pedestrians			✓	✓	✓	
Increased mode share for pedestrians, especially for short trips			✓	✓	✓	
Increased safety for pedestrians		✓		✓		
Improved perception of pedestrian safety, especially for children		✓	✓	✓	✓	
Cycling						
Improved level of service for cycling			✓	✓	✓	
Increased mode share for cycling			✓	✓	✓	
Improved perception of cycling safety, convenience and ease		✓	✓	✓	✓	
Increased safety for cyclists		✓				

RLTS Objectives / Land transport outcomes	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 RTP is affordable to the regional community
Road safety						
Improved regional road safety		✓				
Improved perception of road safety		✓				
Safer roading environment		✓				
Freight						
Improved the level of service for freight	✓		✓			
Improved freight linkages	✓		✓			
Improved rail and road freight efficiency	✓		✓			

Table 2: Links between strategy objectives and outcomes.

6. Strategic options

The RLTS vision, objectives and outcomes set out the broad direction of the strategy. They are used in each implementation and corridor plan (chapters 9 and 10) to identify select, and prioritise particular actions; in programme prioritisation (chapter 11); in monitoring actual network performance (chapter 13); and as the framework for reviews (chapter 14). They must be relatively stable over time to enable real progress.

Having set the broad direction of the strategy, the Regional Land Transport Committee considered three strategic options for achieving the strategy's outcomes. The following section describes the strategic options process.

6.1 Options considered

Section 175(2)(l) of the Land Transport Act requires every RLTS to 'identify land transport outcomes sought by the region and the strategic options for achieving those outcomes'. The land transport outcomes sought for the Wellington region are set out in chapter 5 of this strategy.

The Land Transport Act also requires a RLTS to 'take into account the land transport funding likely to be available within the region during the period covered by the strategy'. Therefore, an important element in the development of the strategic options was consideration of the Wellington region's estimated available funding. The Wellington region's 10 year total strategic transport investment envelope[24] was estimated to be $3432 million, including the additional $660 million government funding announced on 5 July 2005. There are five basic funding components: roading maintenance, roading improvements, passenger rail, bus services and travel demand management.

Three strategic options (scenarios) were developed for achieving the region's land transport outcomes within this funding. These were termed 'Planned Investment', 'Advanced Passenger Transport' and 'Advanced Roading'. These strategic options represented different high level combinations of investment in the five components of the land transport system previously identified. All three scenarios included business as usual road maintenance investment.

The Planned Investment scenario included safety and efficiency improvements to the strategic roading network, including major investment to address Western Corridor issues. Under this scenario, current passenger rail service was maintained and capacity was increased through additional rolling stock to accommodate a 1.7% annual patronage growth rate. The mode share held by bus services was maintained, with enhanced customer service through innovations such as integrated ticketing and real time information. A moderate level of travel demand management investment ($30 million) was expected to include enhancements to walking and cycling infrastructure, improved traffic management and travel planning initiatives.

Advanced passenger transport would involve increasing passenger transport service frequency, coverage and service; and the introduction of a light rail service between Johnsonville and Courtenay Place. It would see a greater investment ($50 million) in travel demand management,

[24] All private costs are excluded e.g. motor vehicle purchase.

including walking and cycling facilities. Such a change would be paid for by reducing road improvements.

Advanced roading would accelerate identified roading improvements, delivering safety and efficiency improvements sooner. This approach would be paid for by reducing passenger transport and TDM investments. The reduced passenger transport investment would accommodate current patronage levels but mode share would decline. It is assumed that no significant changes to the highway network maintenance regime are required as changes to the network are likely to be marginal over the next decade.

6.2 Evaluation of the options

The three strategic options were analysed using the region's strategic transport model and assessed using a list of indicators linked to each of the draft objectives and outcomes of the strategy. The *Regional Land Transport Strategy Strategic Options - consultation document* (15 August 2005) provides full details and forms a background document to this strategy. The analysis of the three scenarios identified a number of trade-offs, depending on how the investment was allocated.

The Planned Investment scenario resulted in reduced traffic congestion, retained passenger transport mode share and improved passenger transport services. It improved most indicators with the exception of fuel use and consequential greenhouse gas emissions.

The Advanced Passenger Transport scenario saw an increase in passenger transport mode share, and was likely to have a number of public health and safety benefits. However, this scenario also resulted in significantly worse road congestion as it involved shifting investment away from road capacity improvements into enhancing passenger transport (PT) services. The model results show that, while enhancing PT services may result in some shift to that mode, it does not fully overcome people's preference for private vehicle use and, consequently, the reduced level of roading investment under this scenario results in worsening congestion.

The Advanced Roading scenario did not perform as well as the Planned Investment scenario. Analysis showed that it would result in significant degradation of PT services and mode share without making any decongestion improvement above the Planned Investment scenario.

All three scenarios failed to reduce greenhouse gas emissions and related indicators, compared with 2001 levels, due to continued growth in private vehicle use. It is unlikely that any strategic option developed at a regional level is likely to have any significant positive contribution to the reduction of vehicle related greenhouse gas emissions, given the current funding and legislative environment.

The analysis concluded that the "Planned Investment" scenario would provide the best solution to the region's transport needs and issues without having a detrimental impact on the region's passenger transport system.

6.3 Strategic options consultation

The strategic options consultation document was widely publicised and distributed to both statutory stakeholders and an extensive list of interested parties in the region, in conjunction with the

Wellington Regional Strategy document. This first stage of consultation in the RLTS review process was undertaken to ensure early and full opportunity for key stakeholders [persons and organisations listed in section 179(1) of the LTA 1998] including network providers, interested parties[25] and members of the general public[26] to contribute to the development of this strategy.

Given the high level description of the strategic options no specific affected communities were identified, however, it was considered that the wide scope of the consultation process would enable any potentially affected groups to provide feedback and to be identified for future consultation purposes. Submitters were given the opportunity to appear in support of their submission at hearings in November 2005 and during the public participation part of the RLTC meeting in December 2005.

Feedback from the strategic options consultation process identified a number of key issues to be addressed during development of the strategy and, overall, indicated strong support for increased investment in passenger transport. The feedback was considered by the RLTC and has been taken account of as one input to the development of the strategy.

6.4 Western Corridor consultation

Consultation on a proposed Western Corridor Plan was carried out as a separate process alongside consultation on the strategic options. This process looked at issues specific to the Western Corridor (from the Ngauranga merge in Wellington City, following SH1 and the NIMT railway line north to Otaki) and options for addressing those.

Following an extensive technical and consultative process, including consideration of around 6,000 submissions, the RLTC adopted a Western Corridor Plan. This plan includes a package of passenger transport, roading, travel demand management, walking and cycling initiatives. A key outcome of the consultation process was the decision to build the new Transmission Gully Motorway rather than upgrading the existing coastal highway. The outcome of this process has been incorporated in the strategy.

6.5 Preferred strategic option

The preferred strategic option is based largely on the Planned Investment scenario but with components of the 'Advanced Passenger Transport' scenario and modifications consistent with the outcome of the Western Corridor Plan process (e.g., Transmission Gully Motorway, 15 minute Western Corridor rail frequency and new rail stations at Raumati and Lindale).

The reasons for the preferred strategic option are:

- Support for increased investment in passenger transport services in the region (through Strategic Options consultation feedback).
- Strong support for building Transmission Gully Motorway (through the Western Corridor Plan feedback).

[25] The RLTS Strategic Options consultation document was mailed out with the WRS Growth Framework to a contact list of around 1400 individuals or groups.
[26] Via public notices, media releases and article in *Elements*.

- The need to address previous under-investment in the region's rail network to ensure improved reliability and to accommodate growing passenger transport patronage.
- The need to complete a number of key roading projects to address key safety, reliability, capacity and access needs in the region.
- The need to address issues specific to the region's four key transport corridors
- A medium level of travel demand management (TDM) investment - to achieve a 5% net reduction in trips - is appropriate at this early stage, to allow for monitoring the effectiveness and risks of TDM investment over the short to medium term.
- These key considerations formed the basis for further development of the strategy.

6.6 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 175(2)(h) of the Land Transport Act 1998 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.

A number of indicators were used in the strategic options analysis to measure the likely environmental impacts of the different scenarios. These indicators included:

- decreased CO_2 emissions
- reduced air pollution
- reduced traffic noise
- reduced contaminants in surface water runoff
- reduced fuel consumption
- supports efficient land use.

All three of the options scored positively in relation to air pollution, due to a forecast reduction in pollutants resulting from improved vehicle technology. All three of the high level scenarios scored neutrally in relation to traffic noise and efficient land use. All scored negatively for reduced CO_2 emissions and fuel consumption (Advanced Passenger Transport scoring 'strongly negative', Advanced Roading and Planned Investment scoring 'very strongly negative'). Likewise, all scenarios scored negatively in relation to contaminants in surface water runoff, based on the expected increase in total car trips.

It is clear that it is very difficult to have any significant positive impact on some environmental indicators (CO_2 and fuel use in particular) within the current funding and legislative environment. Appropriate signals must be provided by central government to enable regional authorities to

respond effectively to these issues. This strategy includes policies which support such advocacy to central government.

However, the strategy contributes to avoidance of adverse environmental effects through travel demand management initiatives, influencing efficient land use and urban form, supporting an increased use of walking and cycling, and maintaining and improving the region's passenger transport network.

6.7 Cooperation with adjoining regions

Section 175(2)(m) of the Land Transport Act states that regional councils must identify any strategic options for which co-operation is required with other regions. As part of consultation on the strategic options, adjoining regional and territorial authorities[27] were asked to identify any inter-regional transport issues or opportunities for policy cooperation.

Feedback was received from Horizons (Manawatu-Wanganui regional council) and Horowhenua District Council. Issues raised primarily related to 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 7.6e in chapter 7 of the strategy seeks to ensure that investment in arterial routes is coordinated with investment made in adjoining regions in those same routes. Therefore, continued consultation with adjoining regions during implementation of the Western Corridor Plan 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 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, as set out in the Freight Action Programme, chapter 9.7.

[27] Manawatu-Wanganui Regional Council (Horizons), Horowhenua District Council and Tararua District Council.

7. Policies

The following policies were developed in direct response to the pressures and issues identified for the region's land transport network as outlined in chapter 3 of this strategy. Similar initiatives are grouped together in an integrated and concise manner. This approach eliminates the duplication that occurs when policies are grouped by objective, and the fragmentation that occurs when they are grouped by mode.

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. Policies need to be responsive to current and evolving issues.

It is important to note that these policies set out the region's desired policy position. All are subject to various constraints including funding, legislative provisions, consenting and planning processes outside the scope of this strategy. Where appropriate, policies have also been specified in the corridor plans (chapter 10).

7.1 Network and service improvement and responsiveness

This group of policies seeks improvement in the operation of the transport network.

a. Maintain urban rail as an arterial priority.

b. Achieve a high passenger rail level of service with regard to rolling stock and line conditions.

c. Determine an agreed set of priority road packages, ensuring integration of appropriate cycling, pedestrian and bus provisions.

d. Monitor and improve the level of service of the regional transport network.

e. Continuous review and improvement of bus services.

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

g. Continuous development of cycling network accessibility and integration.

h. Continuous development of pedestrian network accessibility and integration.

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

j. Continuous identification and mitigation of network security risks.

k. Support current road maintenance investment.

l. Support ongoing development of new and existing park and ride facilities.

m. Allow commercial bus and ferry services on parallel routes to rail services where they complement and increase overall public transport use.

n. Make best use of network management techniques to optimise the performance of the transport network.

o. Provide public transport services and concessions that recognise the needs of the transport disadvantaged (e.g., people on low incomes and people with disabilities) to enhance equity.

p. Provide an appropriate transport network for freight and commercial needs.

q. Recognise the region's central geographical position as critical to national accessibility and that State Highways 1 and 2 pass through the region.

r. Separate arterial and local traffic, where possible.

7.2 Travel demand management

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

a. Reduce the reliance on private motor vehicles, particularly single occupancy vehicle use and use for short trips.

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

c. Encourage the development of travel plans.

d. Advocate for government policy to allow road pricing.

e. Encourage the uptake of cycling and pedestrian travel, particularly for short trips.

f. Encourage increased use of passenger transport.

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

7.3 Securing transport funds

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

a. Advocate effectively for increased transport funding.

b. Advocate for any necessary rail investment.

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

d. Allocate available transport funding to contribute towards the achievement of RLTS outcomes.

7.4 Safety

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

a. Continuously improve the level of regional road safety based on a firmly established safety culture.

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

c. Improve the safety (perceived and real) of cyclists from risks posed by other traffic.

7.5 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. Continuously improve bus emission standards.

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

d. Develop the transport network in a way that minimises the use of non-renewable resources.

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

f. Ensure location and design of new transport infrastructure minimises community severance issues.

g. Seek to reduce greenhouse gas emissions arising from the operation of the transport network.

h. Encourage the use of transport modes that are not dependent on fossil fuels.

7.6 Planning and integration

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 densification around passenger transport nodes.

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

c. Identify, plan and protect the current and future regional transport network.

d. Take account of major recreational and tourist traffic flows.

e. Ensure investment in arterial transport routes is coordinated with adjoining regions.

f. Improve east-west transport links between State Highway 1 and State Highway 2.

7.7 Links between strategy policies and objectives

The following table 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 RTP is affordable to the regional community
7.1 Network and service improvement and responsiveness						
Maintain urban rail as an arterial priority	✓	✓	✓	✓	✓	✓
Achieve a high passenger rail level of service with regard to rolling stock and line conditions	✓	✓	✓	✓	✓	✓
Determine an agreed set of priority road packages, ensuring integration of appropriate cycling, pedestrian and bus provisions	✓	✓	✓			✓
Monitor and improve the level of service of the regional transport network	✓	✓	✓	✓	✓	✓
Continuous review and improvement of bus services	✓	✓	✓	✓	✓	✓
Support trolley buses in Wellington City and their ongoing upgrade			✓		✓	
Continuous development of cycling network accessibility and integration		✓	✓	✓	✓	
Continuous development of pedestrian network accessibility and integration		✓	✓	✓	✓	
Support rail freight initiatives where benefits exceed those of road freight	✓		✓		✓	✓
Continuous Identification and mitigation of network security risks	✓	✓	✓			
Support current road maintenance investment	✓	✓	✓			✓
Support ongoing development of new and existing park and ride facilities	✓		✓		✓	
Allow commercial bus and ferry services on parallel routes to rail services where they complement and increase overall public transport use	✓		✓	✓	✓	✓
Make best use of network management techniques to optimise the performance of the transport network	✓		✓			✓
Provide public transport services and concessions that recognise the needs of the transport disadvantaged (e.g., people on low incomes and people with disabilities) to enhance equity			✓	✓		

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 RTP is affordable to the regional community
Provide an appropriate transport network for freight and commercial needs	✓					
Recognise the region's central geographical position as critical to national accessibility and that State Highways 1 and 2 pass through the region	✓		✓			
Separate arterial and local traffic, where possible.			✓	✓		
7.2 Travel demand management						
Reduce the reliance on private motor vehicles, particularly single occupancy vehicle use and use for short trips	✓	✓	✓	✓	✓	
Encourage appropriately located land development, and ensure integration with transport infrastructure	✓		✓	✓	✓	✓
Encourage development of travel plans	✓	✓	✓	✓	✓	
Advocate for government policy to allow road pricing	✓		✓		✓	✓
Encourage the uptake of cycling and pedestrian travel, particularly for short trips		✓	✓	✓	✓	
Encourage increased use of passenger transport		✓	✓	✓	✓	
Ensure the availability of reliable information on the transport system and the choices available			✓			
7.3 Securing transport funds						
Advocate effectively for increased transport funding	✓					✓
Advocate for any necessary rail investment	✓					✓
Support start-up funding for viable 'alternative to road' initiatives	✓					✓
Allocate available transport funding to contribute towards the achievement of RLTS outcomes	✓	✓	✓	✓	✓	✓
7.4 Safety						
Continuously improve the level of regional road safety based on a firmly established safety culture		✓	✓	✓		
Improve the safety of pedestrians from risks posed by traffic, the physical environment and crime		✓	✓	✓		
Improve the safety of cyclists from risks posed by other traffic		✓	✓	✓		
7.5 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				✓	✓	
Continuously improve bus emission standards via fleet upgrade programmes				✓	✓	
Support government investigations into alternative fuel options and eco-efficient vehicles				✓	✓	

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 RTP is affordable to the regional community
Support ongoing installation of stock truck effluent disposal sites at key localities in the region				✓	✓	
Ensure location and design of new transport infrastructure minimises community severance issues				✓		
Seek to reduce greenhouse gas emissions arising from the operation of the transport network					✓	
Encourage the use of transport modes that are not dependent on fossil fuels					✓	
7.6 Planning and integration						
Support the growth and land use aspirations of the Wellington Regional Strategy and the Regional Policy Statement, particularly in relation to densification around passenger transport nodes.	✓		✓		✓	
Ensure that land use and transport decisions take into account the diverse transport needs and views of the region's community.	✓	✓	✓	✓	✓	✓
Identify, plan and protect the current and future regional transport network.	✓	✓	✓	✓	✓	✓
Take account of major recreational and tourist traffic flows.	✓		✓			
Ensure investment in arterial transport routes is coordinated with adjoining regions.	✓		✓			
Improve east-west transport links between State Highway 1 and State Highway 2.	✓		✓			

Table 3: Linkages between strategy objectives and policies.

8. The role of transport modes

8.1 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 greater Wellington region and meets the requirement of section 175(2)(j) of the Land Transport Act 1998.

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.

The tables within this chapter provide a range of measures for each mode produced by the region's transport model. However, it must be noted that the figures are indicative only because of the inherent uncertainties in the model input for population, households, employment and car ownership, and a number of other assumptions required for the modelling process. The base year figures are derived from 2001 Census data[28] and specially commissioned surveys. The 2016 outlook provides a forecast for each mode as a result of implementing the Regional Transport Programme (RTP) interventions (see chapter 11).

The reported forecasts are considered to be conservative as the modelling process is based on:

- A regional population increase of 25,000, whereas Statistics NZ currently forecasts a growth of 40,000 by 2016.
- Historically low oil prices - it does not take into account recent fluctuations in fuel price.
- A conservative forecast of economic growth, whereas the WRS is seeking to achieve economic transformation which is likely to further increase transport demand.

With respect to walking and cycling, the model does not capture internal trips within the Wellington City CBD, nor does it capture any mode shift as a result of travel planning programmes. Therefore, walking and cycling are under represented in the model outputs. Taking account of a projected increase in the number of people living in Wellington City CBD, and the travel planning and awareness campaigns proposed under the travel demand management strategy, we are likely to see a greater increase in the uptake of these modes than the model forecasts.

The model reports network results as broad averages, so it does not report local results for particular times. Often we are interested in the particular rather than the average as local performance is real and more extreme than network averages (the "peak of the peak" is a special but frequent event). Therefore the model output needs to be supplemented with local information.

[28] 2001 Census data is used because results from the 2006 Census results are not due to be released December 2006.

8.2 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.

The following table sets out the base year and forecast 2016 mode share of private vehicles for various trip purposes.

Mode	2001 (Census Year)[29]	Outlook to 2016 (with RTP interventions)
Private vehicles account for:	76%[30] of all region wide trips per weekday. (1,262,200 trips per day)	76% of all region wide trips per weekday. (1,379,900 trips per day)
	72% of all journeys to work region wide. (193,100 trips to work per day)	72% of all journeys to work region wide. (204,900 trips to work per day)
	55% of all work trips to Wellington City CBD. (47,100 trips to work in the CBD)	52% of all work trips to Wellington City CBD. (49,100 trips to work in the CBD)
	47% of all trips to educational facilities region wide. (34,300 trips to educational facilities)	48% of all trips to educational facilities region wide. (34,900 trips to educational facilities)

Table 4: Forecast mode share of private vehicles to 2016. Source: Wellington Transport Strategic Model (WTSM).

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[31]. 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.

However, the figures in the table support the view that, while overall demand for travel will continue to grow, appropriate interventions can ensure the current mode share of private cars does not increase further over the next 10 years at the expense of other modes. The mode share of private vehicles is expected to decrease for all work trips to the Wellington City CBD.

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 trips 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.

[29] 2001 Census data is used because results from the 2006 Census results are not due to be released December 2006.

[30] Mode share does not include heavy commercial vehicles.

[31] Source: Wellington Transport Strategic Model (WTSM), total region wide trips per weekday.

However, a growing demand for travel by private vehicle in our region is contributing to adverse effect on environmental quality, public health and economic efficiency. Current trends of increasing petrol and diesel consumption are having an adverse impact on CO_2 levels and regional air quality. An increasing reliance on private car use is also having a detrimental affect 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.

The RLTS recognises that for some trips private vehicles are the only viable or convenient mode choice and it provides for these trips by maintaining and developing the road network, while encouraging the use of other modes wherever possible.

Chapter 7 of the strategy sets out the policies relating to the road network and travel demand management. The RLTS includes a travel demand management strategy (refer chapter 9.5) which includes measures to reduce the demand for car travel while maintaining accessibility.

8.3 Passenger transport

The appropriate role for passenger transport (PT) 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.

PT 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[32]. 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 PT 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 PT modes have different characteristics and roles to play in the provision of an efficient and effective PT network. Descriptions of these follow.

8.3.1 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.

[32] Source: Wellington Transport Strategic Model (WTSM)

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. Passenger rail primarily provides access to the CBD by carrying large numbers[33] of people along these critical corridors, particularly during peak periods when the roads along these routes are severely congested. In Wellington, 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 70% of passenger kilometres travelled in peak periods.

The following table sets out the base year and forecast 2016 mode share of passenger rail for various trip purposes.

Mode	2001 (Census Year)	Outlook to 2016 (with RTP interventions)
Rail accounts for:	3% of all region wide trips per weekday. (44,200 trips per day)	3% of all region wide trips per weekday. (50,000 trips per day)
	7% of region wide journeys to work. (19,600 trips to work per day)	8% of region wide journeys to work. (22,500 trips to work per day)
	15% of Wellington City CBD journey to work trips. (13,300 trips to work to the CDB)	17% of Wellington City CBD journey to work trips. (15,800 trips to work to the CBD)
	11% of region wide trips to educational facilities. (8,000 trips to educational facilities)	11% of region wide trips to educational facilities. (8,000 trips to educational facilities)

Table 5: Forecast mode share of passenger rail to 2016. Source: Wellington Transport Strategic Model (WTSM).

As demonstrated by the above table, overall passenger rail patronage is expected to continue to grow over the next 10 years, maintaining its current mode share of 3% of all trips and improving peak period use.

8.3.2 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.

The following table sets out the base year and forecast 2016 mode share of buses for various trip purposes.

[33] Around 11,746 people arrive at Wellington Station during the AM peak. Source: GWRC AM Peak Cordon Surveys, March 2004.

Mode	2001 (Census Year)	Outlook to 2016 (with RTP interventions)
Buses account for:	4% of all region wide trips per weekday. (63,600 trips per day)	4% of all region wide trips per weekday. (71,900 trips per day)
	11% of region wide journeys to work. (28,200 trips to work per day)	11% of region wide journeys to work. (32,300 trips to work per day)
	22% of Wellington CBD journey to work trips. (19,200 trips to work to the CBD per day)	24% of Wellington CBD journey to work trips. (22,700 trips to work to the CBD per day)
	16% of region wide trips to educational facilities. (11,500 trips to educational facilities per day)	16% of region wide trips to educational facilities. (11,500 trips to educational facilities per day)

Table 6: Forecast mode share of buses to 2016. Source: Wellington Transport Strategic Model (WTSM).

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.

8.3.3 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 limited 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.

Passenger trips by taxi account for a very minor (less than 1%)[34] 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. However, the regulation of such facilities along with allocation of standing space for taxis is the responsibility of territorial authorities.

[34] Derived from the 2001 Household interview survey.

8.3.4 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 Days Bay 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%)[35] 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.

8.4 Walking

Walking is a safe and efficient mode for short[36] local trips and for connections between modes and at either end of longer journeys by other modes. Walking 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[37]. 'Pedestrians' in this strategy 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).

The following table sets out the base year and forecast 2016 mode share of walking for various trip purposes. It should be noted that the model does not capture internal trips within the CBD and therefore walking trips are somewhat under represented in the model outputs shown in the table. However, taking account of the travel planning and awareness campaigns proposed under the travel demand management strategy in this RLTS, along with the effect of higher oil prices, we are likely to see a greater increase in the uptake of walking than the model forecasts.

Mode	2001 (Census Year)	Outlook to 2016 (with RTP interventions)
Walking accounts for:	17% of all region wide trips per weekday. (274,000 trips per day)	16% of all region wide trips per weekday. (298,200 trips per day)
	9% of journeys to work region wide. (24,300 trips to work per day)	8% of journeys to work region wide. (24,000 trips to work per day)
	7% of Wellington City CBD journey to work trips. (6,200 trips to work to the CBD per day)	7% of Wellington City CBD journey to work trips. (6,900 trips to work to the CBD per day)
	24% of trips to educational facilities region wide. (17,800 trips to educational facilities per day)	24% of trips to educational facilities region wide. (17,700 trips to educational facilities per day)

Table 7: Forecast mode share of walking to 2016. Source: Wellington Transport Strategic Model (WTSM).

[35] Derived from 2001 household interview survey.

[36] Short trips are defined as being those less than 2 km in length.

[37] Source: Wellington Transport Strategic Model (WTSM) region wide trips per weekday.

Walking is a significant mode of journey 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.

Most people consider walking to be an easy way of getting around the region[38]. However, we do not walk for as many short trips as we could[39] and the use of walking as a mode for trips between 1 km and 2 km could be increased[40]. 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.

Chapter 7 of the strategy sets out the policies relating to walking. The Pedestrian Plan is included in chapter 9.4. It sets out the proposed actions for pedestrian improvements within the region, including the proposed funding and responsibilities for those actions.

8.5 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%[41] 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.

The following table sets out the base year and forecast 2016 mode share of cycling for various trip purposes. However, it should be noted that the model is not designed to accurately forecast cycling trips and therefore the outlook figures presented are indicative only. As with walking trips, the model does not capture cycling trips within the Wellington City CBD or any mode shift associated with travel planning programmes.

[38] Source: GWRC perception survey 2004
[39] Source: GWRC perception survey 2004
[40] Source: GWRC active mode survey 2004
[41] Source: Wellington Transport Strategic Model (WTSM)

Mode	2001 (Census Year)	Outlook to 2016 (with RTP interventions)
Cycling accounts for:	1% of all region wide trips per weekday. (17,500 trips per day)	1% of all region wide trips per weekday. (19,000 trips per day)
	1% of journeys to work region wide. (1,600 trips to work per day)	1% of journeys to work region wide. (1,500 trips to work per day)
	<1% of Wellington City CBD journey to work trips. (400 trips to work to the CBD per day)	<1% of Wellington City CBD journey to work trips. (400 trips to work to the CBD per day)
	2% of trips to educational facilities region wide. (1,100 trips to educational facilities per day)	2% of trips to educational facilities region wide. (1,100 trips to educational facilities per day)

Table 8: Forecast mode share of cycling to 2016. Source: Wellington Transport Strategic Model (WTSM).

The table illustrates the very minor mode share held by cycling region wide. 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[42]. However, other parts of the region, such as the Kapiti Coast, the 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[43]. 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.

Progressing development of the regional cycling network is a key intervention. 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.

The Cycling Plan in chapter 9.3 of this strategy includes an action programme and targets and performance measures for this mode.

8.6 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.

[42] GWRC perception survey 2004.
[43] GWRC perception survey 2004.

Overall, there is a positive trend in inter-regional freight traffic movement[44]. Freight movement through Wellington's port (CentrePort) and by road has shown steady growth since 2002. Inter-regional freight movement by ferry has been steadily increasing since 2000. Conversely, rail freight has shown a continual decline since 2000.

Most freight journeys within the greater Wellington region tend to be relatively short (less than 20 km) and not easily transferred to rail (BERL, 2004). 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 [45].

A significant component of freight movement within the region is the strong interdependent relationship between urban centres and industrial areas, which form part of a supply chain for our regionally produced goods. Efficient and effective linkages between freight transport and industrial land use are therefore critical to the wellbeing of the region's industrial and manufacturing base and to the prosperity of the region. Economic analysis has shown a close relationship between freight movement and regional economic growth. A 1% change in Wellington's regional GDP results in a 1.3% change in regional road freight VKT[46].

The following table sets out both base year and forecast 2016 trip statistics for HCVs.

Mode	2001 (Census Year)	Outlook to 2016 (with RTP interventions)
Freight Heavy Commercial Vehicles account for:	8% of all vehicle trips per weekday region wide. (87,100 trips per day)	11% of all vehicle trips per weekday region wide. (132,400 trips per day)
	8% of vehicle trips per weekday AM peak region wide. (11,600 trips during the AM peak per day)	10% of vehicle trips per weekday AM peak region wide. (17,600 trips during the AM peak per day)

Table 9: Forecast mode share of HCV freight to 2016. Source: Wellington Transport Strategic Model (WTSM).

The table shows that HCV trips are forecast to steadily increase over the next 10 years, consistent with growth in economic activity. It also shows a steady increase in HCV trips as a proportion of all vehicle trips on the road network.

Freight trips on the road network are often subject to congestion and unreliable journey times. Congestion effects on freight are already a problem for the region and, with growth of freight movement volumes, this problem is expected to increase. Present freight movements tend to be evenly spread throughout the day (7am – 6pm), so there is limited opportunity for re-timing of freight trips (BERL, 2004).

The RLTS recognises the effects of traffic congestion on freight and aims to provide an efficient road network and reduce congestion, particularly on the strategic network and between the key destinations identified above. This will be achieved through a combination of appropriate travel demand management measures, improved passenger transport services and new roading provision.

State Highways 1 and 2 provide access to CentrePort for road freight from the north. CentrePort is adjacent to the Wellington City CBD and is a key link for freight between the North and South

[44] GWRC AMR 2004/2005.

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

[46] Source: Wellington Freight Movements Study – May 2006.

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.

There is a growing demand to move forestry products from Wairarapa to CentrePort by rail and initiatives to improve rail freight viability between these locations have been identified. However, investment in such initiatives is sensitive to fluctuating log prices.

The Gracefield/Seaview area of Lower Hutt contains around 50% of the industrial floorspace in Lower Hutt and Wellington. While much of the Gracefield Spur railway line has been removed in recent years, it is appropriate that the rail corridor itself is protected to ensure its potential for future use is maintained.

For inter-regional rail freight, the predominant movement is from the north to CentrePort and Toll TranzLink freight terminal. However, the viability of rail freight on the NIMT line is affected by speed, frequency and capacity limitations, particularly on the line between Pukerua Bay and Paekakariki. While no measures are available to compare current and forecast trends in rail freight, the RLTS seeks to improve the viability of rail freight by advocating for investment by ONTRACK in the region's rail infrastructure and by supporting viable new rail freight initiatives where they provide benefits over road freight.

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 has been completed and a Freight Plan is provided under chapter 9.7 of the strategy. This covers road, rail and sea freight and identifies priorities to improve the efficiency of freight movement to support economic development goals for the region.

8.7 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 well below the scope of strategic regional transport planning. Therefore, policies regarding their use and provision of infrastructure for them are best dealt with at a local community level.

8.8 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 itself 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 or private cars, so the provision of safe, direct and pleasant pedestrian access to stations, bus stops and park and ride facilities are 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, 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 how the RLTS proposes to address and 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 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 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 10: RLTS initiatives to improve integration of transport modes.

9. Implementation plans

9.1 Overview

This part of the strategy translates the RLTS vision, objectives, outcomes and policies into specific implementation plans for the region's key transport modes. Each implementation plan includes a vision, objectives, outcomes and a comprehensive action programme to achieve them. In addition, this section includes a Road Safety Plan and a Travel Demand Management Strategy.

Each action in the implementation plans has been assessed against the RLTS objectives to demonstrate their positive contribution to the overall strategy (Appendix 6).

9.1.1 The implementation plans

These include:

1. Road Safety Plan
2. Cycling Plan
3. Pedestrian Plan
4. Travel Demand Management Strategy
5. Passenger Transport Plan
6. Freight Plan.

The Regional Land Transport Committee welcomes your views on these implementation plans as part of consultation on the draft strategy. This includes the identification of any issues you think should be considered during subsequent implementation plan reviews.

The first four plans listed above were developed under the current strategic framework and adopted by the Regional Land Transport Committee as stand-alone documents, following a consultative process. These documents have been summarised for inclusion in this section of the strategy.

The Passenger Transport Plan (PT Plan) has been developed separately by GWRC's Passenger Transport (PT) Committee. The Freight Plan is a new section which has been developed following completion of the Wellington Regional Freight Transport Study.

9.1.2 Integration between modes

It is recognised that an important element of a sustainable land transport network requires integration between different transport modes. Therefore, these plans are complementary in achieving the objectives of this strategy. Many of the implementation plans directly address the issue of integration with other modes.

9.1.3 Statutory requirements

It is a statutory requirement as set out in Section 175(2) of the Land Transport Act 1998 for every Regional Land Transport Strategy to 'include a demand management strategy that has targets and timetables appropriate for the region' and 'include any regional passenger transport plan that has been prepared by the regional council'. These statutory documents are included within this section of the RLTS.

9.2 Road Safety Plan

The Road Safety Plan (formerly known as the Regional Road Safety Strategy) was developed with the aim of providing a safer community for everyone through a transport system that achieves or improves on targets of the national *Road Safety to 2010* (RS2010) strategy. It sets out a vision shared by the region's key agencies involved in road safety and sets objectives and outcomes for the improvement and promotion of road safety. The plan was adopted by the Regional Land Transport Committee (RLTC) on 17 August 2004.

A Road Safety Action Programme to achieve these objectives and outcomes is included.

While the original plan anticipated a review by September 2008, we have revised the timing of all implementation plan and corridor plan reviews to provide a logical and manageable review programme. It is now proposed to commence a full review of this plan by mid 2009. The review programme is set out in chapter 14 of the RLTS.

9.2.1 Vision

To continuously improve the level of regional road safety based on a firmly established safety culture.

9.2.2 Objectives

- To achieve or exceed the regional road casualty reduction and road user behaviour targets set by the national RS2010 strategy.
- To promote an improved road safety culture which creates safer attitudes, skills and behaviour among road users.
- To develop a safer roading environment to improve public health, safety and personal security.

9.2.3 Outcomes

- Improved regional road safety
- Improved perceptions of road safety
- A safer roading environment.

We expect to see positive outcomes over all indicators (with the primary indicator being regional road crash figures and road user behaviour data) as a result of successful implementation of the interventions detailed in the action programme.

9.2.4 Targets

The short and long term Wellington regional targets for deaths and hospitalisations[47] are set out in the following table.

	2004[48]	2010[49]
Deaths plus hospitalisations	not exceeding 300	not exceeding 240
Deaths plus hospitalisations of more than 1 day	not exceeding 200	not exceeding 150
Deaths plus hospitalisations of more than 3 days	not exceeding 120	not exceeding 90

Table 11: Targets for deaths and hospitalisations resulting from road crashes.

9.2.5 Monitoring

Progress of actions outlined in the following Road Safety Action Programme against respective performance measures will be monitored by GWRC and the Wellington regional office of Land Transport NZ on an ongoing basis. Progress will be reported in the RLTS Annual Monitoring Report.

[47] "Deaths are injuries that result in death within 30 days of the crash. Hospitalisations are the number of hospital admissions reported by the New Zealand Health Information Service. Along with deaths, the number of people hospitalised for more than one day and more than three days have been included as measures of more serious injuries" (LTSA, 2003b, p12). Deaths and hospitalisations are the most practical indicators of road casualties.

[48] LTSA, 2003b, p12.

[49] Specific 2010 targets have yet to be determined by Land Transport NZ for the Wellington region. The targets have been determined using the regional proportions applied in RS2010

Road Safety Action Programme

Actions	Responsibility	Timing	Target	Performance Measure	Performance Indicators
Safety Management Systems (SMS) Ensure that RCAs' decisions about construction, maintenance and management of road networks lead to the achievement of clear safety targets consistent with Land Transport NZ best practice guidelines	RCAs (Development and implementation)	Ongoing	All RCAs to have a SMS in place by the start of the 07/08 financial year	Number of RCAs that have SMSs in place	• New Zealand Health Information Service death and hospitalisation data • Land Transport NZ annual regional road crash and casualty data • Land Transport NZ annual regional attitude survey • GWRC biennial perception survey • Significant regional road safety education campaign evaluation results • Land Transport NZ Safety (Administration) Programme
Road Safety Action Plans (RSAP) Key partners agree on the road safety risks, identify objectives, direct tasks (including policing), set targets, develop plans, and adequately fund, monitor and review progress for each TA	Land Transport NZ with TAs, Police and Transit (Development and implementation)	Quarterly, ongoing	All TAs to have a RSAP and quarterly review programme in place by the start of the 05/06 financial year	Number of TAs that have RSAPs in place	
Road Safety Co-ordinators, Police Education Advisors, ACC Injury Prevention Consultants and Land Transport NZ Regional Education Advisors Ensure that appropriate local education campaigns are undertaken as well as ensuring national strategic road safety campaigns are devolved to a regional and local level to help promote an improved safety culture	TAs, Police, ACC and Land Transport NZ (Development and implementation) GWRC (Facilitation)	Ongoing	Road safety education is promoted at every feasible opportunity at a TA level and a regionally focused campaign is carried out at least annually	To be determined for each project	
Risk Targeted Patrol Plans (RTPP) The Police implement Risk Targeted Patrol Plans to ensure more efficient and effective use of enforcement resources according to risk	Police (Development and implementation)	Ongoing	All areas of the Wellington Policing District to have a RTPP and annual review programme in place by the end of the 04/05 financial year	Number of policing areas that have RTPPs in place	
Adequate RCA Road Safety Funding RCAs to seek adequate funding for road safety works	RCAs (Development and implementation) GWRC (Support, where appropriate)	Annually, ongoing	Sufficient funding is included in annual budgets to ensure safety programmes can be fully implemented	Road safety funding included in annual budgets	

Section Break (Next Page)

9.3 Cycling Plan

This Cycling Plan (formerly known as the Regional Cycling Strategy) was developed to improve the regional level of service for cycling, to promote cycling as an activity and mode of transport and improve the safety of cycling. It sets out a vision shared by the region's key agencies involved in cycling and sets objectives and desired outcomes for the promotion and development of cycling. The plan was adopted by the Regional Land Transport Committee on 27 February 2004.

While the original plan anticipated a review by March 2007, we have revised the timing of all implementation plan and corridor plan reviews to provide a logical and manageable review programme. It is now proposed to commence a full review of this plan by mid 2007. The review programme is set out in chapter 14 of the RLTS.

9.3.1 Vision

The evolution of a cycling culture where cycling is a recognised and valued transport mode that is safe, accessible and pleasant throughout the region.

9.3.2 Objectives

- Create an advocacy ethic that facilitates coordination among lead agencies.
- Enhance cycling safety throughout the region via education initiatives and improved infrastructure.
- Increase accessibility, integration and safety for cycling.
- Improve awareness of all forms of cycling - commuting, recreational and tourism.

9.3.3 Outcomes

- Improved level of service for cycling
- Increased mode share for cycling
- Improved perception of cycling safety, convenience and ease
- Increased safety for cyclists.

The plan takes a balanced and integrated approach incorporating physical works, education and promotion to achieve these outcomes. No element on its own will achieve the gains desired for the region. Critical to this integrated approach and the plan's effectiveness are three interventions outlined in the action programme on the following pages. These are political advocacy, RCA cycling work programmes and a Regional Cycling Coordinator.

Cycling conditions are affected by a number of agencies including Road Controlling Authorities, Regional Public Health, Land Transport NZ, schools and user/advocacy groups. Agencies involved in the development of this plan discerned a clear need for education and promotional initiatives to be centrally coordinated. The success of these activities relies upon ongoing and active support from

the above groups. However, this can be best facilitated by a position dedicated to coordinating relevant strategy actions.

Advancing the vision of a cycling culture also requires RCAs to engage in dedicated work programmes and active coordination to ensure ongoing improvements to the cycling network. Coordinated initiatives, particularly those with region wide or cross-boundary implications, are likely to hold more weight politically. GWRC is in a position to advocate at political levels for adequate funding, locally for RCA programmes and centrally for ongoing cycling funding. The creation of a cycling culture in the region is explicit in the vision and stems from the region wide decline in cycling and the desire for improved cycling safety.

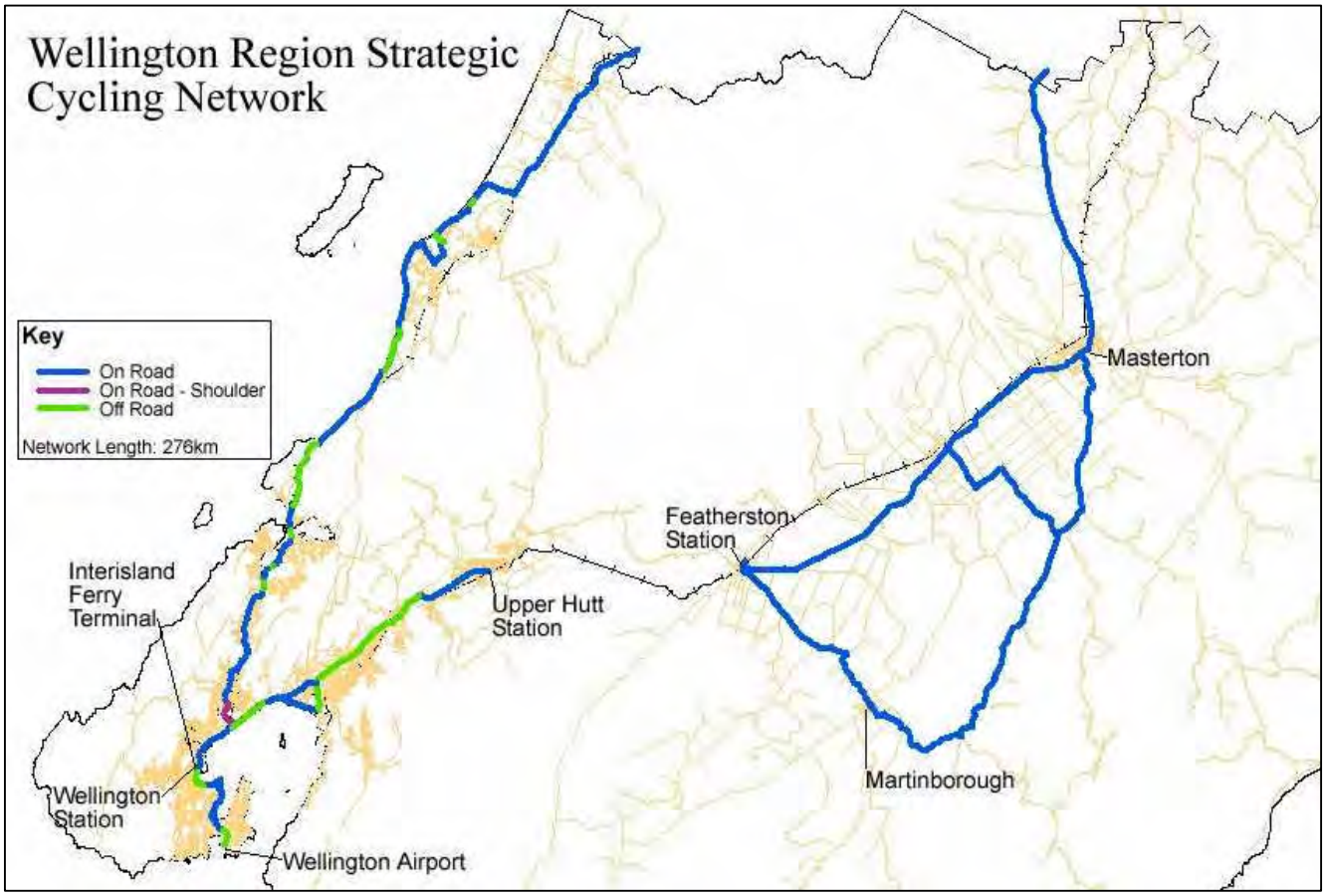


Figure 18: Wellington's strategic cycling network.

9.3.4 Monitoring

Greater Wellington Regional Council will have responsibility for monitoring the progress of actions in the cycling action programme against respective performance measures on an ongoing basis. Monitoring of system wide cycling indicators will be undertaken within the RLTS Annual Monitoring Report process.

The system wide indicators are:

- Level of service for cycling
- Proportion of all trips cycled
- Perception of cycling safety, convenience and ease
- Relative risk of cycling as a transport mode (measured against vehicle, pedestrian and bus travel).

Cycling Action Programme

Objective: Advocacy

Create an advocacy ethic that facilitates coordination among lead agencies.

Actions	Responsibility	Timing	Cost	Funding	Target	Performance Measure
Local level programme implementation Advocacy at local political level during annual planning process for approval and funding RCA cycling programmes	GWRC Access Planning	March 2004 & ongoing	Administrative	GWRC (Land Transport NZ subsidy)	Funding levels to meet that recommended in RCA cycling work programmes	Actual cycle programme funding in Annual Plans compared with that requested by RCAs
Coordinated programmes Regional Cycling Forum	GWRC Regional Coordinator	Quarterly, ongoing	$1,000 pa	GWRC (Land Transport NZ subsidy)	Host quarterly	Cycle Forum continues 20 – 30 attendees per meeting
Regional Cycling Coordinator position	GWRC	July 2004	$45,000 salary + budget support	GWRC (Land Transport NZ subsidy)	To start 04/05 financial year	Position appointed
Central Government Actively participate, where appropriate, in national level programmes/strategy development that have regionally significant impacts on cycling	GWRC Access Planning	Ongoing	Administrative	GWRC (Land Transport NZ subsidy)	Every opportunity to participate taken	Participation in policy development opportunities

Objective: Safety

Enhance cycling safety throughout the region via education initiatives.

Actions	Responsibility	Timing	Cost	Funding	Target	Performance Measure
Driver education 3 year education campaign promoting 'share the road' ethic. Adapt "Don't Burst My Bubble' campaign.	GWRC Regional Coordinator Road Safety Coordinators	1. 03/04 financial year 2. 04/05 financial year 3. 05/06 financial year	$60,000 $30,000 $30,000	GWRC (Land Transport NZ subsidy)	Campaign implemented 1. 03/04 FY 2. 04/05 FY 3. 05/06 FY	Campaign implemented
Cycling skills for adults Assess and investigate the need for visibility/ light use campaign Investigate promotion of community education courses, e.g., "Cycling Skills in the City"	GWRC Regional Coordinator GWRC Regional Coordinator	04/05 financial year 2004/05	$10,000 Administrative	RSC GWRC (Land Transport NZ subsidy) GWRC	04/05 financial year 2004/05	Investigation complete Investigation complete
Kiwi Cycling (Bikewise) Determine a schedule of programmes in schools throughout the region. Set number of schools per year Implementation of schedule (instructor time)	GWRC Regional Coordinator (schedule set up) Bikewise Regional Coordinator	04/05 financial year + ongoing 2005 + subsequent years	Administrative $25,000 per annum	GWRC (Land Transport NZ subsidy) Health Sponsorship Council	Year 6 schedule established to begin 2005 school year 90% of schools in schedule by third year of programme	Schedule in place Programme implemented at all scheduled schools 90% schools participate in schedule & programme

Objective: Accessibility

Increase accessibility, integration and safety for cycling.

Actions	Responsibility	Timing	Cost	Funding	Target	Performance Measure
Regional Cycling Network Identify the regional strategic network	GWRC Access Planning	June 03	Administrative	GWRC	Regional Network published in draft strategy	Network identified
Identify inadequate sections on the regional network. Investigate cost and feasibility of improving level of service on these sections. Prioritise based on strategic importance, lowest level of service and cost.	GWRC Access Planning	March 04	$17,000	GWRC	Network inadequacies identified and remedial actions prioritised	Report published and disseminated to RCAs
Implement identified improvements	RCAs	ongoing	To be determined	RCAs (Land Transport NZ subsidy)	All improvements implemented	All RCAs have work programmes in place
RCA work programmes Develop a work programme for improving the level of service for cycling on respective local networks. Programmes will recognise current best practice guidelines[50] and should adequately consider the following service level elements: ▪ Space allocation ▪ Surface smoothing ▪ Connectivity ▪ Traffic calming measures ▪ Bicycle detection at traffic signals ▪ Maintenance ▪ Links to and from public transport terminals ▪ Priority on roading networks ▪ Bicycle parking Incorporate cycle facilities auditing processes	RCAs	Programme by December 2004 ready for 2005/06 Annual Plan process Ready for 05/06 financial year	Each RCA to determine	RCAs (Land Transport NZ subsidy)	All by start of 05/06 financial year	All RCAs have work programmes in place

[50] Including New Zealand Cycle Design Guidelines (Transit New Zealand) and the Cycle Network Planning Guide (Land Transport NZ) when published and as appropriate.

Actions	Responsibility	Timing	Cost	Funding	Target	Performance Measure
Public transport integration Facilitate cycle carriage on regional train services by reviewing the fare structure to: ▪ Small charge for peak cycle carriage ▪ Free off-peak cycle carriage	GWRC Transport Procurement and Transport Service Design	During tendering/ contract process with new operator July Issue of *Bikenews*	-	-	Specified in new contract	Specified in new contract
Survey ▪ Perception of service levels into and out of stations/terminals for cyclists ▪ Demand for cycle carriage on trains ▪ Demand for cycle carriage on buses ▪ Perception of how a cycling journey could be more attractive	GWRC Access Planning		-	Covered as part of standard $700 monthly contribution	July 2003	Survey undertaken
Regional cycling maps Develop a set of maps for cyclists, covering the major regional areas Distribute in cycle shops, information centres, council offices & centres, etc Update in 2007	GWRC Access Planning GWRC Regional Coordinator GWRC Regional Coordinator	Publish July 2004 July 2004 & ongoing 2007	$25,000 (initial) Reprints $5,000 Initial update $20,000	GWRC (Land Transport NZ subsidy)	July 2004 Update 2007	Maps published and distributed Updates undertaken
Perception survey Undertake a survey to determine the perceived level of service for cyclists around the region and the perception of risk in cycling	GWRC Access Planning	July 03, 04, then 2 yearly	$8,000 per survey	GWRC	Survey July 2003, 2004 then 2 yearly	Survey completed and results reported in AMR

Objective: Awareness

Improve awareness of all forms of cycling - commuting, recreational and tourism.

Actions	Responsibility	Timing	Cost	Funding	Target	Performance Measure
Group rides Annual localised fun rides held in TA areas	GWRC Regional Coordinator RSC CAW RPH	Annual events in individual or combined TA areas as appropriate	$10,000 each ride	GWRC (Land Transport NZ subsidy) TAs RPH	Increasing participation in each successive event. Four events held per year (accounting for combined TA rides)	Participant registration figures Four events held
Webpage Develop Greater Wellington webpage as the main Wellington Region cycling webpage	GWRC	December 2004	$2,000 design & build, $500 per annum updates	GWRC (Land Transport NZ subsidy)	Site redeveloped by December 2004	Site redeveloped

9.4 Pedestrian Plan

The Pedestrian Plan (formerly known as the Regional Pedestrian Strategy) aims to improve the region's level of service for pedestrians, to promote walking as a mode of transport and to improve pedestrian safety. It sets out a vision shared by the region's key agencies involved in walking and sets objectives for the development of walking facilities. The plan was adopted by the Regional Land Transport Committee on 18 May 2004.

While the original plan anticipated a review by May 2007, we have revised the timing of all implementation plan and corridor plan reviews to provide a logical and manageable review programme. It is now proposed to commence a full review of this implementation plan by mid 2007. The review programme is set out in chapter 14 of the RLTS.

9.4.1 Vision

More pedestrians in a convenient, safe and pleasant environment.

9.4.2 Objectives

- Continuously develop pedestrian route connectivity and accessibility.
- Improve pedestrian safety (in relation to traffic, the physical environment and crime).
- Maintain advocacy towards best practice pedestrian provisions and funding availability.

9.4.3 Outcomes

- Improved level of service for pedestrians
- Increased modal share for pedestrians, especially for short trips (75% of trips less than 1 km, 56% of trips less than 2 km)
- Increased safety for pedestrians (i.e., reduced casualty numbers)
- Improved perception of pedestrian safety, especially for children, the elderly and the mobility impaired.

GWRC has a clear role in facilitating and monitoring the plan's implementation. The effectiveness of the plan relies on commitment from all key stakeholders, particularly from RCAs, in establishing a pedestrian review programme for their respective roading networks.

We expect to see positive results over all indicators as a result of successful implementation of the interventions detailed in the following action programme.

9.4.4 Monitoring

GWRC will have primary responsibility for monitoring progress of actions in the pedestrian action programme against respective performance measures on an ongoing basis. Monitoring of system wide indicators will be undertaken within the RLTS Annual Monitoring Report process.

The system wide indicators are:

- Level of service for pedestrian facilities
- Mode share for pedestrians, especially for short trips
- Safety for pedestrians (casualty numbers)
- Perception of pedestrian safety for children.

Pedestrian Action Programme

Actions	Responsibility	Timing	Cost	Funding	Target	Performance Measure
RCA Pedestrian Review RCAs to develop programmes in conjunction with community providers to review pedestrian access to (for example): ▪ Educational institutions ▪ Workplaces ▪ Health ▪ Recreation ▪ Retail Review to include a pedestrian audit[51] that covers: ▪ Route directness ▪ Surface quality, obstructions & maintenance ▪ Lighting & personal security ▪ Shelter ▪ Road crossings ▪ Signage ▪ Space allocation & traffic impacts ▪ Aesthetics ▪ Mobility impaired/disability needs	TAs in conjunction with Transit	December 2005 to establish programme	RCA to determine	RCAs (Land Transport NZ subsidy)	Review programme established	All RCAs have pedestrian review programme
Public Transport Pedestrian Review Review access to public transport nodes and develop a programme to implement improvements. Review to include a pedestrian audit that covers: ▪ Route directness ▪ Surface quality, obstructions & maintenance ▪ Lighting & personal security ▪ Shelter ▪ Road crossings ▪ Signage ▪ Space allocation & traffic impacts ▪ Aesthetics ▪ Mobility impaired/disability needs	GWRC RCAs	Ongoing to 06/07	$30,000pa for 3 years	GWRC (Land Transport NZ subsidy)	Review completed	Deficiencies identified and remedial actions prioritised

[51] *Pedestrian Facilities and Network Planning Guide* (LTSA, 2004), *RTS 14 – Guidelines for Installing Pedestrian Facilities for People with Visual Impairment (LTSA)*; and Living Streets' *DIY Community Street Audit* should provide guidance for TAs.

Actions	Responsibility	Timing	Cost	Funding	Target	Performance Measure
Public Transport Pedestrian Review Programme implementation Implementation of Public Transport Pedestrian Review programme led by RCAs	RCAs	2005/06 and ongoing	RCAs to determine	RCAs (Land Transport NZ subsidy)	Programme Implemented	Programme implementation
Land development review Encourage high levels of accessibility for pedestrians in land developments. Review plan changes and development proposals/ notifications/consent applications	GWRC	Ongoing	Administrative	GWRC (Land Transport NZ subsidy)	Every opportunity taken to review and comment	Active participation in plan change/land development process
Walking school bus/safe routes to school Investigate expanding the role and uptake of walking school bus/safe routes to school	GWRC RPH RCAs Land Transport NZ (Walking School Bus Inter-agency Group)	June 2004	Administrative	GWRC (Land Transport NZ subsidy)	Report published	Investigation completed
Local level programme implementation Advocacy at local political level during annual planning process for: ▪ Approval and funding of RCA pedestrian programmes, and ▪ Strategic planning	GWRC Access Planning	Ongoing	Administrative	GWRC (Land Transport NZ subsidy)	Funding levels to meet that recommended in RCA pedestrian work programmes	Actual pedestrian programme funding in Annual Plans compared with that requested by RCAs
Central Government Actively participate, where appropriate, in national level programmes/strategy development that have regionally significant impacts on pedestrians, including funding processes	GWRC Access Planning Living Streets Aotearoa	Ongoing	Administrative	GWRC (Land Transport NZ subsidy)	Every opportunity to participate taken	Participation in policy development opportunities
Information sharing ▪ Best practice ▪ Pedestrian programmes Biennial perception survey and RLTS Annual Monitoring Report	All key stakeholders (Living Streets Aotearoa website) GWRC Access Planning	Ongoing July 2004, then 2 yearly	Administrative $8,000 per survey	- GWRC (Land Transport NZ subsidy)	Key information published in strategy Survey July 2004	Ongoing role in facilitating information exchange Survey completed and results reported in AMR

9.5 Travel Demand Management Strategy

The Travel Demand Management (TDM) Strategy was developed to signal key regional intentions for travel demand management and to set out a blueprint for improving regional travel efficiency. It meets the requirement of the LTA 1998 section 175(2)(o) to include a travel demand management strategy within every regional land transport strategy and was adopted by the Regional Land Transport Committee on 8 December 2005.

While the original TDM strategy anticipated a review by June 2009, we have revised the timing to provide a logical and manageable review programme. It is now proposed to commence a full review of the TDM strategy by mid 2008. The review programme is set out in chapter 14 of the RLTS.

9.5.1 Vision

To use travel demand management initiatives in achieving sustainable outcomes for the greater Wellington land transport system.

9.5.2 Objectives

- To ensure the most efficient use of existing transport infrastructure and services.
- To increase public awareness of TDM and individual travel choices.
- To encourage integrated land use and transport planning that seeks to maximise transport efficiency.
- To encourage proactive advocacy that facilitates coordination among lead agencies.

9.5.3 Outcomes

- Limited car traffic growth particularly at peak times, while maintaining accessibility
- Increased journey to work mode share for passenger transport and active modes
- Improved integration between transport modes
- Reduced greenhouse gas emissions
- Reduced fuel consumption
- Reduced road congestion
- Increased vehicle occupancy
- Increased resident satisfaction
- Improved land use and transport integration (as defined by the WRS)
- No adverse impact on economic development (as defined by the WRS).

9.5.4 Travel Demand Management methods

A wide range of methods exist to achieve travel demand management outcomes. Some of these are known as “soft” methods, such as travel behavioural change programmes, others are known as “hard” methods, such as road pricing tools. Other methods rely on improving the efficiency of the existing network through various traffic management tools or reducing the need to travel through integrated land use programmes.

Travel behaviour change

Travel behaviour change programmes are designed to inform and motivate people to change how, when and where they travel.

A variety of methods are used to change behaviour including:

- Travel plans
- Awareness and marketing campaigns
- Ride sharing
- Variable work hours
- Teleworking, teleconferencing, telebanking and teleshopping.

Road pricing

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.

Road pricing tools may include the following:

- Cordon charges – fees paid by motorists when crossing a boundary around a particular area.
- Congestion pricing – higher prices under congested conditions and lower prices at less congested times and locations.
- Toll roads – a fee for use of a new or improved road or bridge.
- High Occupancy Toll (HOT) lanes – High Occupancy Vehicle lanes that allow lower occupancy vehicles to use the facility if they pay a toll.
- Area charges or licenses – fees charged or licences issued for driving in an urban area.
- Distance or time based pricing – a fee based on the distance a vehicle is driven.
- Parking charges – increased charge for parking in city centres or congested areas.

Road pricing has the potential to significantly influence peak travel demand on the region's road network, with the added benefit of generating revenue for transport improvements. Initial studies suggest that a road pricing scheme can be designed for the Wellington region which would be financially self-sustaining, reduce congestion and provide other environmental, economic, and safety benefits. However, many issues need further assessment before such a scheme can be proposed.

Changes in legislation at Central Government level are required to enable the introduction of road pricing mechanisms on existing roads. This strategy addresses road pricing by setting out the steps for investigation of road pricing options for our region. Further study will be undertaken and road pricing proposals, if any, will be subject to a separate process at a later stage.

Traffic management tools

Traffic management tools include real time traffic monitoring, advanced traffic management systems (ATMS), advanced traveller information systems (ATIS), incident management systems and traffic signal linking. These tools improve the efficiency of the existing network through various infrastructure improvements.

Integrated land use and transportation

Travel behaviour can be directly influenced by land use development. New subdivisions and developments which are located at a distance from passenger transport or local facilities can increase people's dependency on cars. Likewise, inappropriately designed or located transport infrastructure can result in a reduction of active mode use and greater reliance on private vehicles, due to severance effects.

The need to travel can be reduced by encouraging mixed use development, encouraging businesses to locate in areas close to the workforce, and ensuring critical infrastructure and services are located in high density residential areas. Land use development can also improve travel choices for individuals if high density development is encouraged around transport nodes.

9.5.5 System wide performance indicators and targets

According to the National Energy Efficiency and Conservation Strategy (NEECS), New Zealand is aiming for a 20% improvement in economy-wide energy efficiency (as well as reducing CO_2 emissions to 1990 levels). This is not a mandatory requirement but establishes a benchmark to aim for.

The 'System Wide Performance Indicators' table (Table 12) sets out a number of 'desired outcomes' which take account of the NEECS and seek to achieve improvements to indicators such as CO_2 and fuel consumption in line with Kyoto Protocol targets at a regional level. The desired outcomes relating to greenhouse gas emissions are particularly ambitious and would undoubtedly have adverse impacts on the regional economy if Wellington were out of step with the rest of New Zealand's transport industry. Taking account of this, and the need to set targets 'appropriate for the region', the table also provides a series of targets which are more realistic.

2001 levels are used as a base year because it is the latest Census year for which data is currently available. In many cases the strategy targets optimistically seek to hold the line at the 2001 base levels which will be challenging. In some cases targets will require an improvement in the strategy's indicators of more than 15% compared with the 2016 forecasts. The strong interdependent relationship between fuel use and CO_2 emissions is highlighted in the following System Wide Performance Indicators table. A dramatic predicted increase in diesel usage is also highlighted.

The forecast of underlying traffic growth shows an 18.25 % increase in VKT by 2016 for business as usual. The strategy applies non-priced TDM and PT investment to the forecast and targets a 6% reduction in forecast growth, a level in line with reductions achieved by such measures elsewhere. Greater reductions would be possible under more severe TDM regimes, e.g., pricing, but these are not available to this strategy. Nevertheless, we have targeted zero growth in emissions from 2001 levels, as emission efficiencies and alternative technologies are available that can reduce emissions per VKT. Adoption of this target assumes advocacy to implement such measures will be successful early in the strategy period, in addition to successful measures in relation to the trend in diesel usage.

9.5.6 Monitoring

Progress of strategy actions against respective performance measures will be monitored by GWRC and Transit New Zealand on an ongoing basis. Progress will be reported in the RLTS Annual Monitoring Report (AMR).

System Wide Performance Indicators

Outcome Performance indicator	2001 base	Forecast outcome by 2016[52]	Desired outcome	Strategy target
Limited car traffic growth				
Strategic roading network VKT (annual million kilometres)	1,008	1,192	1,008	1,132[53]
Increased journey to work mode share				
Active	10%	9%	More active and passenger transport	Increased mode share
Passenger transport	17%	18%		
Car	73%	73%		
Reduced greenhouse gas emissions				
CO_2 (annual kilotonnes)	1,065	1,345	877 (1990 level[54])	1,065
Reduced fuel consumption				
Petrol sales (million litres per annum)	300	304	293[55]	300
Diesel sales (million litres per annum)	142	245	77[56]	142
Reduced road congestion				
Strategic roading network travel time (annual million hours)	16.7	20.1	Better than now	16.7
Strategic roading network average speed (PM peak, kilometres per hour)	49	46	Better than now	49
Increased vehicle occupancy				
Vehicle occupancy (Wellington CBD cordon)	1.4	1.4	Increased	1.5
Increased resident satisfaction	2004: 60% felt network reliable	Significantly worse than now	Better than now	>60%
Perception of road network reliability				
Perception of rail network reliability	2004: 60% felt network reliable	Significantly worse than now	Better than now	>70%
Perception of bus reliability	2004: 60% felt network reliable	Same as now	Better than now	>70%
Improved land use & transport integration	N/A	Awaiting WRS	Higher density, especially near PT nodes	To be determined
Economic development	N/A	Awaiting WRS	Outside scope of TDM strategy	To be determined

Table 12: System Wide Peformance Indicators.

Note: The data in the above table are best estimates based on the best information available to GWRC's Transport Division.

[52] Base forecast before regional transport programme.
[53] Target for VKT is to limit growth to 12% in 2016 (6% less than is forecast). In relation to the impact of VKT on fuel use and CO2, note improved fuel efficiency is expected.
[54] As per Kyoto Protocol. 1990 baseline CO_2e target being the average of emissions during the 2008-2012 commitment period.
[55] Calculated fuel use, driven by CO_2 target. Estimated by backcasting from 1998 – 2003 sales data.
[56] Calculated from fuel use, using standard conversion factors, driven by CO_2 target.

9.5.7 Travel Demand Management Action Programme

The following section details the Travel Demand Management Action Programme which is an integrated package of interventions to achieve the previously outlined objectives and outcomes for travel demand management in the greater Wellington region. The TDM Action Programme focuses primarily on non-pricing initiatives that can be implemented in the short term and signals the introduction of pricing tools in the medium term.

Regional travel demand is affected by a number of agencies and the strategy seeks to continue and enhance the proactive and interactive culture that exists among agencies in the greater Wellington region, as well as clarifying the roles of these agencies in working toward the vision and objectives.

Actions associated with regional passenger transport, active modes and road safety (all of which are essential elements of TDM) are detailed in the Regional Passenger Transport Plan and in the Cycling Plan, Pedestrian Plan and Road Safety Strategy presented earlier in this chapter of the RLTS. These address the alternative demand provision element of travel demand management and are essential complementary documents to this strategy, which focuses on demand optimisation. It is expected that, when implemented, the actions within this strategy will have a direct impact on the number of people using these alternative modes and on road safety.

"*Ensuring that walking and cycling are viable, desirable transport options is important to support TDM activities and objectives. At the same time, TDM activities undertaken within a broader sustainable transport framework can play an important role in increasing the desirability of walking and cycling in relation to car use"* (MOT, 2005).

An action identified by the technical working group during the strategy's development was one of investigating rationalisation of fringe benefit tax rules. This has not been included in this strategy, as it is a national level responsibility, appropriately dealt with by government agencies such as the MoT and EECA.

We expect to see positive outcomes over all indicators as a result of successful implementation of the interventions detailed in the following action programme. However, several issues make comprehensive evaluation of the effects of the TDM initiatives challenging. These include:

- Many TDM initiatives are designed to influence small portions of the population. Such small-scale initiatives mean it can be difficult to measure the success of these initiatives at a strategic level.
- It is impossible to separate out external travel demand influences, such as changes in the price of fuel and changes in economic conditions.
- TDM programmes involve multiple TDM measures which make it impossible to isolate the effects of any one measure.

The funding assessment contained within the action programme is indicative only. Land Transport NZ advises that it will allocate funds annually on a project initiative basis.

Objective: Efficiency

Ensure the most efficient use of existing transport infrastructure and services.

Actions	Responsibility	Timing	Cost	Funding	Target	Performance Measure
Integrated Network Management Plan Develop and implement an integrated network management plan to maintain an agreed LoS on the strategic road network. Plan to include ATMS, Ramp Metering, ATIS and HOV lanes	Transit NZ (lead) TAs GWRC Access Planning	Plan developed by end of 2006/07	$15-$20M	Transit NZ (Land Transport NZ subsidy)	Regional plan in place by 2006/07	Plan is developed and reported to RLTC
Transit New Zealand TDM Strategy Develop & implement a travel demand management action plan for the regional state highway network, consistent with this strategy and Transit's TDM Strategy.	Transit NZ (lead) GWRC Access Planning TAs	Plan implemented by 2007/2008	Administrative	Transit NZ (Land Transport NZ subsidy)	Plan is implemented by Transit NZ	Plan is implemented

Objective: Awareness

Increase public awareness of TDM and individual travel choices.

Actions	Responsibility	Timing	Cost	Funding	Target	Performance Measure
Awareness campaign Develop and implement a campaign to raise public awareness of the full cost of their travel and mode choice decisions, including environmental, social and economic costs	GWRC (lead) Land Transport NZ Transit NZ	Ongoing	$100,000 per annum	GWRC (Land Transport NZ and Crown subsidy)	Campaign commences in 2006/07	Campaign implemented

Objective: Planning

Encourage integrated land use and transport planning that seeks to maximise transport efficiency.

Actions	Responsibility	Timing	Cost	Funding	Target	Performance Measure
Integrated land use and transportation Support and advocate for integrated land use and transportation planning which reduces traffic demand, generates sustainable travel options and reduces the need to travel (including district plans, the regional policy statement, and the Wellington Regional Strategy). Encourage sensitive location and design of new transport infrastructure in relation to existing land use and communities to minimise adverse effects	GWRC TAs Transit NZ	Ongoing	Administrative	GWRC (Land Transport NZ subsidy) TAs	Improved planning documents which facilitate increased urban densification, infill around transport nodes, localised job opportunities, facilities and services.	Submissions made to reviews
Travel plans Develop and implement a travel plan programme to encourage the uptake of business, school, community and individual travel plans and associated travel behaviour change initiatives such as ridesharing, teleworking, flexible work hours, walking school buses, etc	GWRC TAs	Ongoing	$525,000 for 2005/06 $900,000 per year	GWRC (Land Transport NZ and Crown subsidies)	Number of businesses, schools and community groups with a travel plan in place by 2010 (to be determined as plan developed)	Number of plans in operation
Develop and implement a travel plan for organisations' offices	GWRC, TAs, Transit NZ, MoT, RPH and Land Transport NZ	Each agency to have a travel plan developed with implementation started by 2006/2007	Each organisation's administrative budget		All agencies to have operating travel plan in place by 2006/2007	Number of plans in operation
Perception survey Undertake surveys to determine regional perceptions of issues related to TDM	GWRC Access Planning	2 yearly	$8,000 per survey	GWRC (Land Transport NZ subsidy)	2 yearly	Survey completed and results reported in Annual Report

Objective: Advocacy

Encourage proactive advocacy that facilitates coordination among lead agencies

Actions	Responsibility	Timing	Cost	Funding	Target	Performance Measure
Road pricing Advocacy to central government for the introduction of legislation allowing for road pricing of existing routes	RLTC GWRC TAs	Ongoing until introduced	Administrative	GWRC TAs	Legislation introduced in the medium term	Advocacy undertaken
Undertake further investigations into an appropriate road pricing scheme for the greater Wellington region which will refine the concepts developed to date, review the social, equity, economic and environmental impacts of road pricing in more detail, and identify the system administration and technological issues, including a robust risk assessment	GWRC	2005/2006	$250,000	GWRC (Land Transport NZ subsidy)	Study completed and reported to RLTC by end 2005/2006.	Study completed
Regional participation at national level Actively participate, where appropriate, in national level programmes/strategy development that have regionally significant impacts upon travel demand management such as the Travel Behaviour Change Advisory Group	GWRC Access Planning Transit NZ	Ongoing	Administrative	GWRC (Land Transport NZ subsidy)	Every opportunity to participate taken	Participation in policy development opportunities
National rideshare programme 1. Development of a national rideshare tool	Land Transport NZ	As soon as possible	Administrative	Land Transport NZ	Introduction of scheme as soon as possible	Scheme developed
2. Actively support national level programmes that seek to develop and implement a national rideshare programme	GWRC Access Planning	Ongoing	Administrative	GWRC (Land Transport NZ subsidy)	Every opportunity to support taken	Participation in national rideshare programme development opportunities

9.6 Regional Passenger Transport Plan

The Regional Passenger Transport Plan (PT Plan) has been developed separately by GWRC's Passenger Transport Committee. The PT Plan will be released for public consultation in conjunction with the draft RLTS and will be included in the RLTS document when it is adopted in early 2007.

9.7 Freight Plan

Efficient freight transport is a cornerstone of a prosperous region. Freight transport forms an integral part of the logistics supply chain with a high degree of interconnectedness between business and freight transport within the region. As a result, there is a direct relationship between economic growth and freight growth. Given the greater Wellington region's current economic growth trends, we can expect freight volumes to increase by around 50% over the next 10 years. Consequently, a much increased freight traffic demand will need to be accommodated by the region's transport network.

The Wellington region's transport network serves several distinct activities:

- Short haul (both origin and destination are in the region).
- Long and medium haul in or out of the region (where either the origin or destination are in the region).
- Long haul through the region – North Island/South Island through traffic (neither origin or destination are in the region).

Congestion, travel time delays and inefficient connections between key destinations are significant issues for road freight. Heavy vehicle counts have shown a very high degree of interdependence between the commercial and industrial activities undertaken in different areas throughout the region. Particularly significant volumes of goods flow between the Wellington City CBD/CentrePort, Gracefield/Petone and Porirua. From a freight perspective, improvements to the road network should be focused on increasing efficiency between these areas.

Freight access to CentrePort both by road and rail is affected by problems on those networks, which can impact on the volume of freight transported onwards by sea from Wellington's port. Current rail access to the port crosses Waterloo Quay at grade, often causing significant interruption to traffic flows along the Quay. Providing grade separation of the Waterloo Quay rail crossing is proposed to address this issue.

The Gracefield/Seaview area of Lower Hutt contains around 50% of the industrial floorspace in Lower Hutt and Wellington. While much of the Gracefield Spur railway line has been removed in recent years, it is appropriate that the rail corridor itself is protected to ensure its potential for future use is maintained. This is consistent with the WRS aim to improve transport connections between key commercial centres in the region.

Rail freight issues relate primarily to a lack of infrastructure and rolling stock which constrains use of the rail network. There is the potential to significantly increase the viability of medium and long haul rail freight through efficiency improvements and by addressing existing constraints both within and outside of the region.

Within the region the section of railway line between Pukerua Bay and Paekakariki, known as North-South junction, is a key capacity constraint in terms of being both single tracked and having restrictive tunnel sizes. The single track means limited capacity for freight trains, particularly during the peak commuter period on this section of track. Double tracking in due course is needed to

address this constraint. The tunnels on this stretch of rail can accommodate 9'6" high containers, however, Toll now uses 10'6" high containers for some domestic freight, particularly dairy freight, and the clearance issue in relation to these tunnels may become a constraint in the foreseeable future (Walbran, 2006).

A key capacity constraint outside the region is the Kai Iwi tunnel, located on the railway line between Marton and New Plymouth. The Kai Iwi tunnel constrains the movement of high cube ISO containers and oversize loads. A major potential customer for CentrePort is Fonterra, who would utilise high cube containers on this line. CentrePort is well positioned to form part of Fonterra's supply chain and can provide an extensive range of shipping options for exporting its products to overseas markets. If CentrePort were able to secure this cargo, it would provide additional volume for CentrePort. ONTRACK advise that they have considered the tunnel constraint issue and have developed plans to re-route the line to avoid the need for a tunnel. Funding constraints have delayed construction of the re-routing to date (Walbran, 2006).

While Wellington International Airport has the infrastructure required to handle significant quantities of air freight, it is generally recognised that international air freight out of the airport is limited, both in terms of capacity and destinations. This is mainly due to the fact that the Boeing 737 aircraft which operate out of Wellington have limited freight capacity and do not accept containerised freight (Walbran, 2006). Consequently, current volumes of freight to and from the airport are relatively small.

Air New Zealand has taken delivery of the first of its new A320 Airbus jets which accept containerised freight and have a slightly larger freight capacity. The new Airbus aircraft will be used to operate some trans Tasman services from Wellington. However, while this change will improve freight capacity out of Wellington airport it is unlikely to be significant. Looking forward, it will be important to make use of modern aircraft technology as it becomes commercially viable for high value perishable goods. Although these are actions best led by other organisations, the implications of any increase in future freight movements to and from the airport are being considered as part of the Ngauranga to Airport Study.

9.7.1 Freight Policies

a. Support rail freight initiatives where benefits exceed those of road freight.

b. Provide an appropriate transport network for freight and commercial needs.

c. Protect and develop rail infrastructure, wagons and facilities for freight and forestry links between Masterton and Wellington.

d. Support the protection of the rail corridor to Gracefield/Seaview.

9.7.2 Outcomes

- Improved level of service for freight
- Improved freight linkages
- Improved rail and road freight efficiency.

9.7.3 Freight initiatives

Several projects identified in the various corridor plans are likely to have significant freight benefits, as identified in the following table. Refer to the relevant corridor plans for the full details of

responsibility, timing, cost and funding for these projects. A number of new initiatives have also been identified which are not covered under existing corridor plans.

Freight Priorities	Ngauranga to Wellington Airport Corridor Plan	Western Corridor Plan	Hutt Corridor Plan	Wairarapa Corridor Plan	New initiatives
Upgrade roads between Gracefield and Porirua					
• Construct Grenada – Gracefield Stage 1: SH1 to SH2		✓	✓		
• Construct Grenada – Gracefield Stage 2: Cross Valley Link		✓	✓		
• Upgrade SH58		✓	✓		
Upgrade roads between Petone and CentrePort					
• Construct Petone – Ngauranga capacity improvements			✓		
• Construct Ngauranga – Aotea capacity improvements	✓				
• Waterloo Quay rail grade separation	✓				
Upgrade SH1 between Porirua and CentrePort					
• Construct Ngauranga – Aotea capacity improvements	✓				
Waterloo Quay rail grade separation	✓				
Facilitate rail based transfer of logs to CentrePort					
• Support development of a log transfer site at Waingawa (Carterton District)				✓	
• Waterloo Quay rail grade separation	✓				
• Advocate for development of log transfer sites at Marton and Wanganui					✓
Protect short haul rail freight opportunities					
• Advocate for the protection of the Gracefield/Seaview rail corridor					✓
Improve long haul rail freight efficiency					
• Advocate for Pukerua Bay – Paekakariki double tracking		✓			
• Advocate for removal of Kai Iwi tunnel constraint (between Marton and New Plymouth)					✓

Table 13: Freight initiatives.

The new initiatives for freight are detailed in the following action programme.

Freight Action Programme

Actions	Responsibility	Timing	Cost	Funding	Target	Performance measure
Facilitate rail based transfer of logs to CentrePort Advocate for the Wanganui/Manawatu (Horizons) RLTS to support the development of log transfer sites at Marton and Wanganui	GWRC	Ongoing	Administrative	GWRC	Log transfer sites supported	Advocacy undertaken
Protect short haul rail freight Advocate to ONTRACK and HCC for the protection of the Gracefield/Seaview rail corridor	GWRC	Ongoing	Administrative	GWRC	Rail corridor protected	Advocacy undertaken
Improve long haul rail freight efficiency Advocate to ONTRACK for removal of the Kai Iwi tunnel constraint (between Marton & New Plymouth)	GWRC	Ongoing	Administrative	GWRC	Constraint removed	Advocacy undertaken

10. Corridor plans

10.1 Overview

Corridor plans translate the vision, objectives and policies of the Regional Land Transport Strategy into specific action programmes for the region's four major transport corridors. A transport corridor is the alignment of transport infrastructure that links activity centres. The corridor plans aim to provide affordable, efficient, reliable, safe and sustainable connections which can accommodate reasonable capacity and ensure regional and inter-regional accessibility. Development of the corridor plans has involved extensive technical studies and multi-step consultation processes. Linkages between corridors are specified in each corridor plan.

Each action in the corridor plans has been assessed against the strategy's objectives and outcomes to ensure their positive contribution to the overall Strategy.

10.1.1 The corridors

The four transport corridors in the Wellington Region are:

1. Western Corridor - Otaki to Ngauranga Merge
2. Hutt Corridor - Upper Hutt to Ngauranga Merge
3. Wairarapa Corridor - Masterton to Upper Hutt
4. Ngauranga to Wellington Airport Corridor.

10.1.2 Matters common to all corridors

Network balance

The Wellington strategic road and rail networks need to be operated and developed in a way that carefully balances capacity throughout the networks. Accordingly, to ensure efficient network performance is maintained, improvements in one part of a network cannot be thought of as independent from the rest of the network.

Corridor plan sequencing

The sequencing of projects may be strategically significant. This happens when large new increments of road capacity are provided which will disturb the network balance if the projects are not sequenced correctly. Where the sequencing of projects is strategically significant this is specified in the corridor plans. It is expected that implementation will occur in line with demand, subject to available funding.

Locally significant routes

A number of locally significant routes, such as the Melling Rail Line and Wainuiomata Road, are not separately identified in the following corridor plans. In these cases, no significant change is proposed as it is assumed that current levels of service will be maintained.

Structure of the plans

The needs and issues for each transport corridor are summarised at the beginning of each corridor plan. All the proposals in the corridor plans derive from technical analysis and a consultative process. The corridor plans outline corridor specific policies and actions for the short to medium term, 2007-2016, and additional projects that may be implemented in the long term beyond 2016. Policies and action programmes for each plan are grouped under the following categories:

- Land use integration
- Travel demand management
- Roading
- Passenger transport
- Walking and cycling
- Freight.

Land use integration

Land use and transport demand are inextricably linked. Land use is controlled by District Plans prepared by each Territorial Authority under the requirements of the Resource Management Act 1991. The Wellington Regional Strategy (WRS) is anticipated to be adopted in late 2006. With clarity expected regarding long term transport infrastructure developments as detailed in this strategy, and urban form directions guided by the WRS, it is necessary that the Regional Policy Statement and District Plans be reviewed to ensure alignment.

Statutory requirements

The statutory requirements of the Regional Land Transport Strategies (sections 175-183 of the Land Transport Act 1998) only apply to the projects shown for the short to medium term, 2007-2016. Roading controlling authorities, the Regional Council, and Land Transport NZ have to take into account the RLTS when performing their functions.

Alternative projects

The proposals put forward for both the short and medium term are those which best meet the transport needs of the region at this time. Alternative projects that equal or better match the framework of the strategy may be acceptable, for instance, the scope of projects may need to be refined in order to meet constraints, including limited funding. Existing technical processes, such as benefit cost analysis and the resource consent procedures under the Resource Management Act, assist with evaluation of alternative projects. Projects identified in the corridor plans will only receive Land Transport New Zealand funding if they satisfy the funding criteria at the time they are ready for implementation.

Costs and funding

The costs shown in the corridor plans are indicative and reflect the best information available at the time of writing. They will be subject to change as the scope and timing of projects, programmes and packages are developed over time. Similarly, the suggested funding communicates the region's expectation at the time of writing. Funding processes are the responsibility of various agencies under various Acts and funding requirements are subject to change.

10.2 Western Corridor Plan: Otaki to Ngauranga Merge

This corridor generally follows the line of State Highway 1 and the North Island Main Trunk Railway from Otaki to Ngauranga. It includes connections to adjacent corridors.

Please note: The Committee is not seeking feedback on this chapter 'Western Corridor Plan' as it was recently adopted (April 2006) following its own extensive consultation process.

10.2.1 Needs and issues

- Serious reliability, resilience and congestion problems for both rail and strategic roads
- Safety issues
- Growing population and transport demand
- The community's clear message that the current uncertainty of transport plans is unacceptable

The need for a long term strategic solution for this corridor.

10.2.2 Key outcomes

- A safer, more reliable road and rail corridor
- User expectations for a consistent regional corridor are met
- Reduced congestion in parts of the corridor

Balanced investment in road and passenger transport, along with Travel Demand Management.

10.2.3 Western Corridor Plan overview

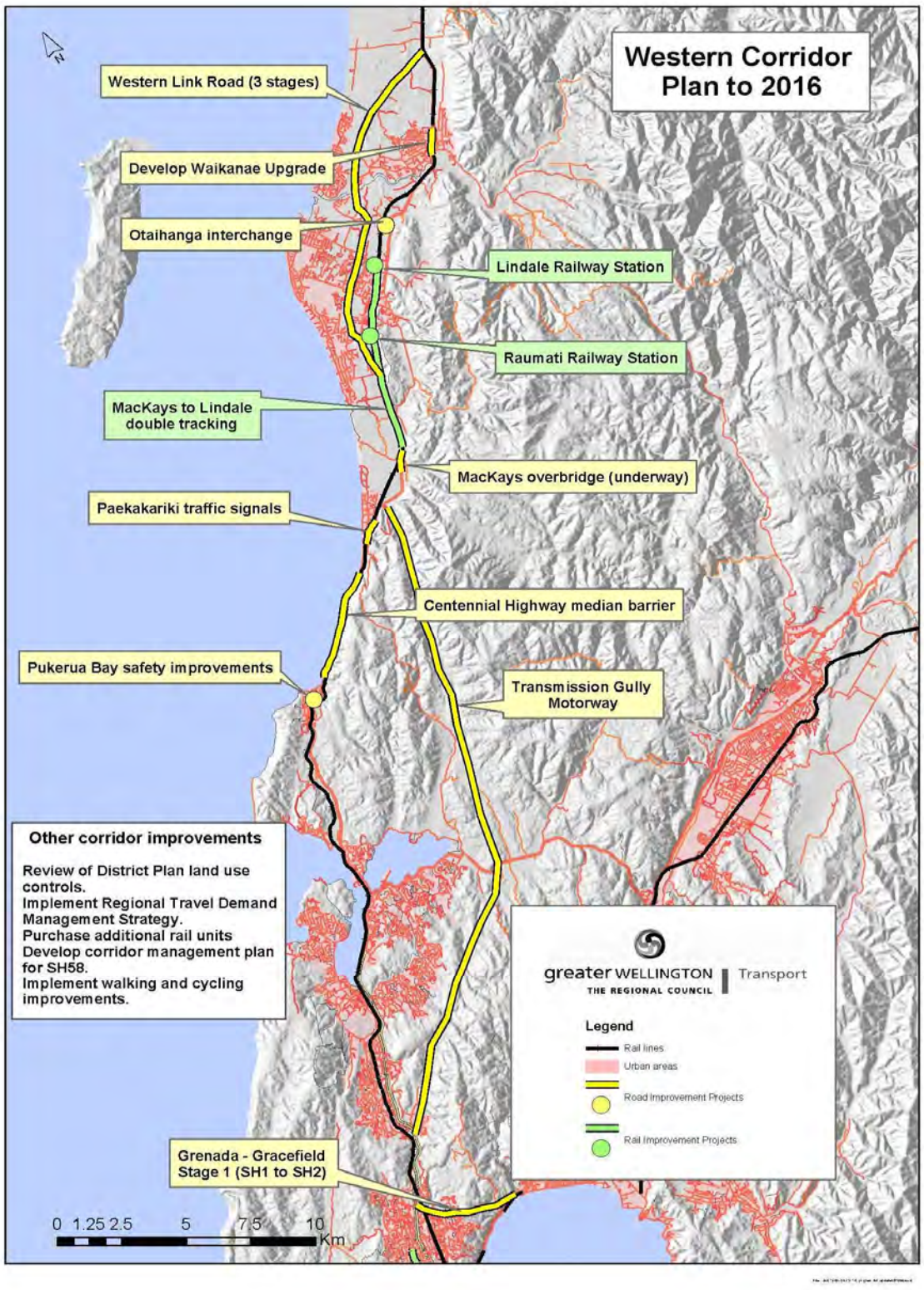


Figure 19: Western Corridor planned improvements to 2016.

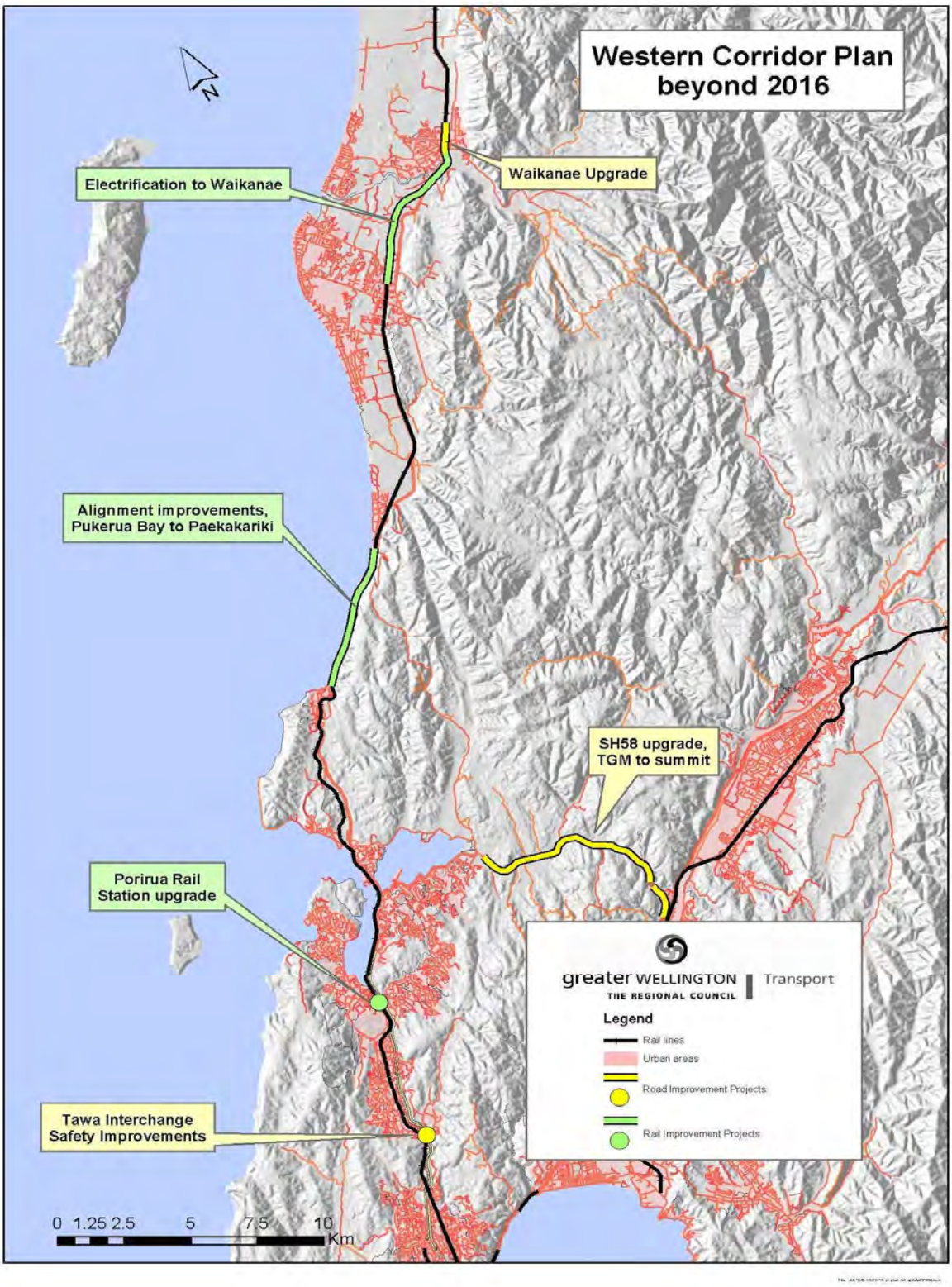


Figure 20: Western Corridor planned improvements beyond 2016.

10.2.4 Land use integration

Policies

a. Support land use that minimises road use.

b. Support intensification of land use around passenger transport nodes.

c. Support better integration of land use planning by identifying roading hierarchies and specifying appropriate access controls in district plans.

Land use integration: short to medium term projects (2007 – 2016)

Action	Responsibility	Timing	Indicative Cost	Suggested Funding	Target	Performance Measure
Review District Plan land use controls to align with the outcomes of the Wellington Regional Strategy, particularly in the vicinity of the junction of TGM and SH58	PCC	Commence review following TGM and WRS decisions	Administrative	L (PCC)	Review complete by Dec 2007	Review reported to KCDC
Review District Plan land use controls to align with the outcomes of the Wellington Regional Strategy	KCDC	Commence review following TGM and WRS decisions	Administrative	L (KCDC)	Review complete by Dec 2007	Review reported to PCC
Review District Plan land use controls to align with the outcomes of the Wellington Regional Strategy	WCC	Commence review following TGM and WRS decisions	Administrative	L (WCC)	Review complete by Dec 2007	Review reported to WCC

10.2.5 Travel Demand Management

Policies

a. Apply travel demand management measures to maintain and increase passenger transport mode share.

b. Manage travel demand south of Tawa.

TDM: short to medium term projects (2007 – 2016)

Action	Responsibility	Timing	Indicative Cost	Suggested Funding	Target	Performance Measure
Implement relevant initiatives of the Regional Travel Demand Management (TDM) Strategy (December 2005)	All named agencies	Ongoing	As set out in the TDM Strategy	As set out in the TDM Strategy	As set out in the TDM Strategy	As set out in the TDM Strategy
Develop and implement ATMS and HOV proposals	Transit (lead) PCC KCDC	To commence 2006/07	$5M	N	Proposals implemented by 2008/09	Proposals implemented

10.2.6 Passenger transport

Policies

a. Maintain rail as the key passenger transport commuting service.

b. Increase rail capacity in line with demand.

c. Enhance accessibility to rail services.

d. Extend rail services to the north in line with demand.

e. Improve efficiency of the existing service.

f. Improve reliability of the existing service.

g. Complement rail services with local bus networks.

h. Provide priority to buses in congested areas.

i. Integrate rail and bus services.

Passenger transport: short to medium term projects (2007 – 2016)

Action	Responsibility	Timing	Indicative Cost	Suggested Funding	Target	Performance Measure
Establish Lindale Rail Station including park and ride facilities	GWRC (lead) ONTRACK KCDC	To open by 2009/10	$10M	R & C2	Open by 2009/10	Station open
Establish Raumati Rail Station including park and ride facilities	GWRC (lead) ONTRACK KCDC	To open by 2008/09	$5M	R & C2	Open by 2008/09	Station open
Establish double track from MacKays to Lindale	GWRC (lead) ONTRACK	To open by 2011/12	$62M	R & C2	Open by 2011/12	Track open

Action	Responsibility	Timing	Indicative Cost	Suggested Funding	Target	Performance Measure
Purchase additional rail units	GWRC	By 2011/12	$40M	R & C2	Operating by 2011/12	Units operating

GWRC is currently undertaking detailed investigations to implement the objective of providing a 15 minute peak train service frequency on the Paraparaumu Line. The outcome of the study may advance some of the timings in the previous table.

Passenger transport: long term projects (beyond 2016)

Action	Responsibility	Timing	Indicative Cost	Suggested Funding	Target	Performance Measure
Improve rail alignment between Pukerua Bay and Paekakariki	ONTRACK	Beyond 10 years	To be determined	To be determined	Not applicable	Not applicable
Upgrade Porirua Rail Station	PCC	Beyond 10 years	$10M	L (PCC)	Not applicable	Not applicable
Extend electrification to Waikanae	GWRC (lead) ONTRACK	Beyond 20 years	To be determined	To be determined	Not applicable	Not applicable

10.2.7 Roading

Policies

a. Develop alternative routes for use in emergencies.

b. Partially relieve congestion south of Tawa with infrastructure.

c. Improve links to the Hutt Valley.

d. Develop a multi-lane median-divided road, tolled if necessary, along the full length of the corridor matching sustainable levels of demand.

e. Manage State Highway 1, between MacKays Crossing in the north and Mungavin Interchange in the south, consistent with its long term purpose of a scenic access route.

Roading: short to medium term projects (2007 – 2016)

Action	Responsibility	Timing	Indicative Cost	Suggested Funding	Target	Performance Measure
Proceed with geotechnical work on Transmission Gully to address cost risk issue	Transit	2006/07	Included in TGM estimate	C3 & C4	Considered by Transit Board by June 2007	Report considered and advised to RLTC
Develop a corridor management plan for SH58 east of Pauatahanui consistent with the RLTS	Transit (lead) PCC HCC UHCC	2006/07	Allowed for in draft State Highway Forecast 2006/07	C3 & C4	Considered by Transit Board by June 2007	Report considered and advised to RLTC
Undertake all necessary preparatory work to ensure Transmission Gully Motorway (TGM) can be built as soon as practicable	Transit	From 2006/07	Included in TGM estimate	C3 & C4	Preparations complete by 2010/11	Preparations completed
Construct TGM as a toll road	Transit	From 2011/12	$955M	C1 C3 Toll funded loan Crown loan	Open by 2015/16	Road completed
Install a median barrier along the coastal section of Centennial Highway	Transit	From 2006/07	$17M	N	Barrier installed by 2007/08	Barrier installed
Construct Western Link Road stage 1	KCDC (lead) Transit	Progressively developed and opened up to 2011/12	$113M	N C2 L (KCDC)	Fully open by 2011/12	Road completed
Construct Western Link Road stage 2	KCDC (lead) Transit	Progressively developed and opened up to 2013/14	$42M	N C2 L (KCDC)	Fully open by 2013/14	Road completed
Implement safety improvements in Pukerua Bay	Transit (lead) PCC	From 2006/07	$2M	R	Safety improvements complete by 2007/08	Improvements completed
Construct Western Link Road stage 3	KCDC (lead) Transit	Progressively developed and opened up to 2009/10	$19M	N C2 L (KCDC)	Fully open by 2009/10	Road completed

Action	Responsibility	Timing	Indicative Cost	Suggested Funding	Target	Performance Measure
Develop the Waikanae upgrade project	Transit (lead) KCDC	Commence development 2011/12	To be determined	C2	Development underway	Progress reported to RLTC
Develop and construct Otaihanga interchange	Transit (lead) KCDC	To open 2015/16	$35M	C1	Open by 2015/16	Interchange completed
Install traffic signals at SH1/Paekakariki	Transit	2006/07	$1M	R	Signals operating by June 2007	Signals operating
Investigate opportunities to incorporate Tawa Interchange upgrade in the scope of the Gracefield – Grenada project	Transit (lead) WCC	Project development to commence from 2006/07	To be determined	N	Study complete by June 2008	Reports considered by relevant Authorities and RLTC
Design, obtain consents and construct Grenada to Gracefield link stage 1	Transit (lead) WCC HCC	Project development to commence from 2006/07	$180M	C2 L	Construction complete by 2014/15	Road completed

Roading: long term projects (beyond 2016)

Action	Responsibility	Timing	Indicative Cost	Suggested Funding	Target	Performance Measure
Commence construction of the Waikanae upgrade project	Transit (lead) KCDC	Beyond 10 years	To be determined	To be determined	Development underway	Progress reported to RLTC
Upgrade SH58 between TGM and SH2	Transit (lead) PCC UHCC HCC	Beyond 10 years	To be determined	To be determined	Development underway	Progress reported to RLTC
If appropriate, upgrade Tawa interchange to address safety issues	Transit	Beyond 10 years	To be determined	To be determined	Development underway	Progress reported to RLTC

10.2.8 Walking and cycling

Policies

a. Implement relevant initiatives of the Pedestrian Plan (May 2004).

b. Implement relevant initiatives of the Cycling Plan (May 2004).

Walking and cycling: short to medium term projects (2007 – 2016)

Action	Responsibility	Timing	Indicative Cost	Suggested Funding	Target	Performance Measure
Ensure appropriate opportunities are taken to include walking and cycling improvements into all projects	RCAs	Ongoing	To be determined	Included in project budgets	Walking and cycling infrastructure demonstrably improved	Progress reported to RLTC
Investigate inclusion of walking and cycling safety works on current coastal route consistent with the present and future function of the road	Transit (lead) PCC KCDC	2006/07	To be determined	Administrative	Reported to authorities by December 2006	Progress reported to RLTC

10.3 Hutt Corridor Plan: Upper Hutt to Ngauranga Merge

The Hutt Corridor follows State Highway 2 and the Wairarapa railway line from Ngauranga through to Upper Hutt. The Hutt Corridor Plan was adopted in December 2003, following a consultative process. It includes connections to adjacent corridors.

10.3.1 Needs and issues

- Low population growth in the Hutt Valley
- Continued employment in Wellington CBD for people living outside of Wellington City
- Slow down in manufacturing regionally
- Peak period road congestion
- Inadequate peak frequency levels of passenger rail in the Hutt Valley
- Increase in freight movements across the Hutt Valley, particularly near or in residential areas
- Increase in journeys for recreation and shopping
- Poor local access in and out of the Hutt Valley
- Lack of direct passenger rail access to the Lower Hutt Central area
- Growing need for improved roads to meet increases in tourism.

10.3.2 Key outcomes

- A safer, more reliable road and rail corridor
- User expectations of a consistent regional corridor are met
- Reduced congestion in parts of the corridor
- Balanced investment in road and passenger transport, along with travel demand management.

10.3.3 Hutt Corridor Plan overview

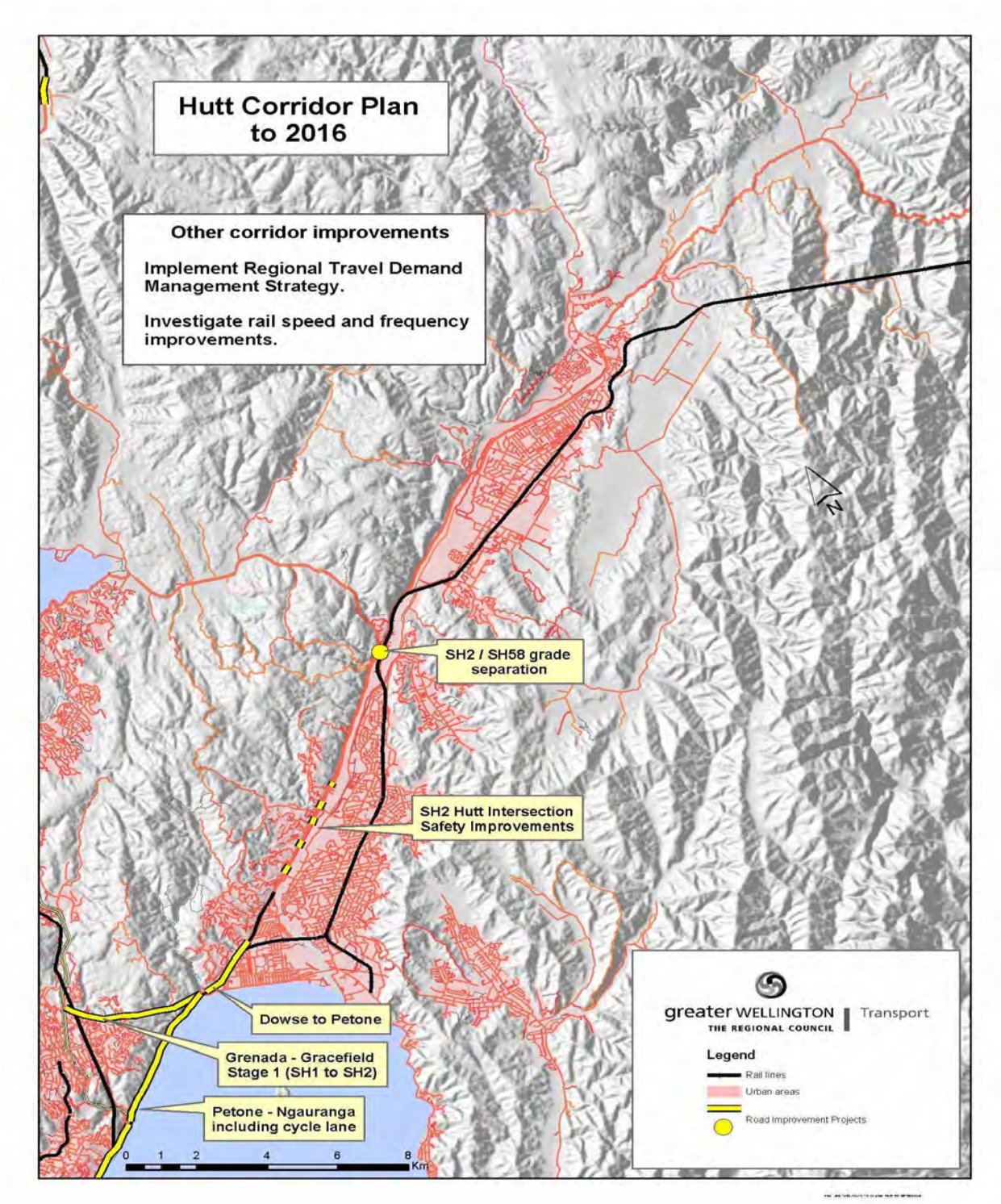


Figure 21: Hutt Corridor planned improvements to 2016.

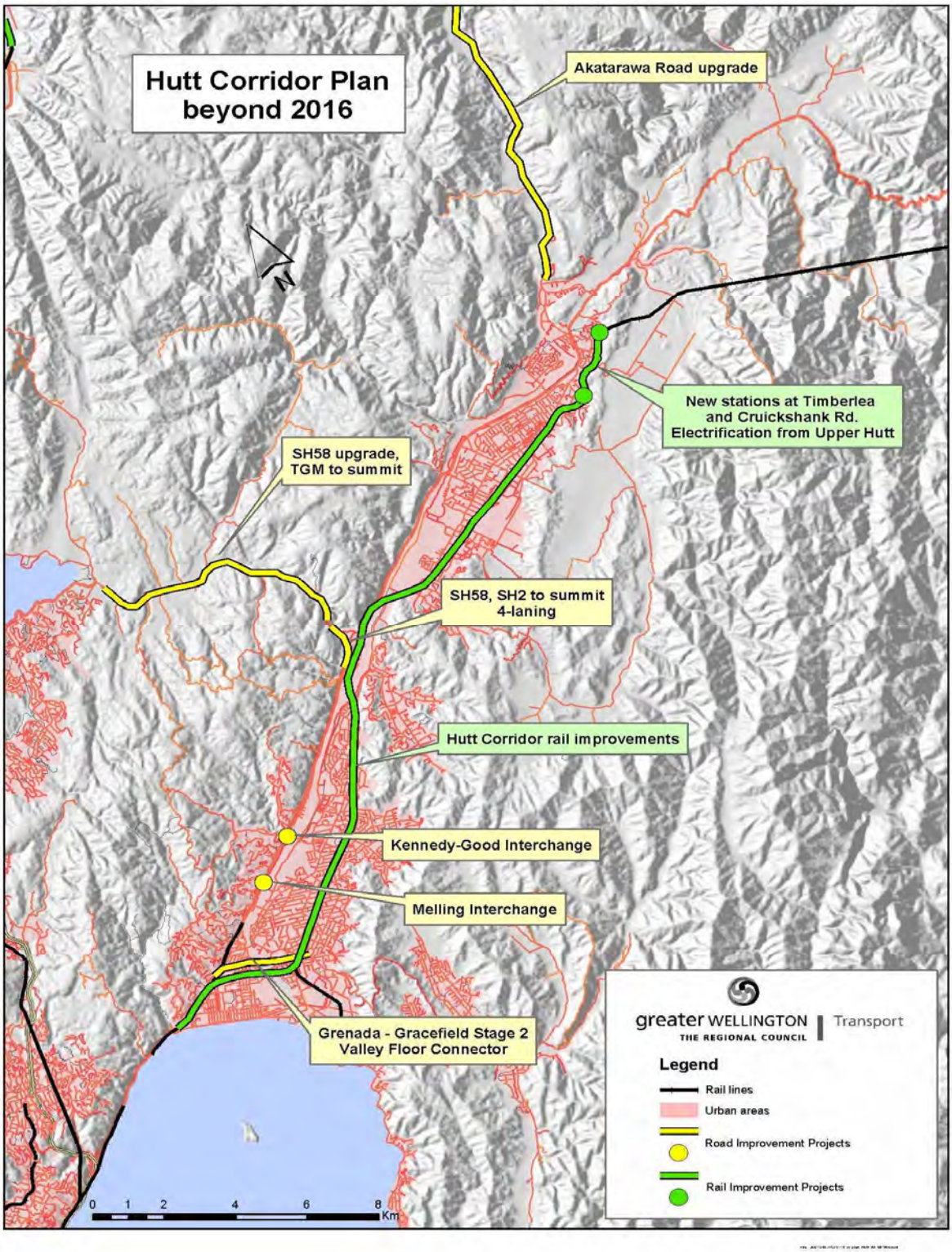


Figure 2 2: Hutt Corridor planned improvements beyond 2016.

10.3.4 Travel Demand Management

TDM: short to medium term projects (2007 – 2016)

Action	Responsibility	Timing	Indicative Cost	Suggested Funding	Target	Performance Measure
Implement relevant initiatives of the Regional Travel Demand Management (TDM) Strategy (December 2005)	All named agencies	Ongoing	As set out in the TDM Strategy	As set out in the TDM Strategy	As set out in the TDM Strategy	As set out in the TDM Strategy
Investigate the provision of a reversible HOT lane between Petone and Ngauranga.	Transit (lead) GWRC	As soon as possible	To be determined	R	Complete investigation by 2007/08	Investigation completed
Construct a reversible HOT lane between Petone and Ngauranga	Transit (lead) GWRC	To commence 2010/11	$60M	R	Construct HOT lane by 2012/13	Construction completed

Note: Further investigation of roading improvements between Ngauranga – Petone and Grenada – Gracefield needs to be undertaken as soon as possible to determine an appropriately coordinated package.

10.3.5 Passenger transport

Policies

a. Allow additional direct bus services from the Hutt Valley to Wellington CBD where these services are commercial and can be shown achieve a mode shift from private vehicles rather than from train services.

Passenger transport: short to medium term projects (2007 – 2016)

Action	Responsibility	Timing	Indicative Cost	Suggested Funding	Target	Performance Measure
Investigate increasing Upper Hutt - Wellington rail operating speed and frequency at peak from 20 minutes to 10 minutes and interpeak frequency from 30 minutes to 15 minutes	GWRC (lead) ONTRACK	Underway	Administrative	GWRC (Land Transport NZ subsidy)	Review complete by 2008/09	Review reported to GWRC
Investigate increasing Melling link rail frequency at peak and interpeak periods, especially extending the evening peak service	GWRC	2010/11	Administrative	GWRC (Land Transport NZ subsidy)	Review complete by 2010/11	Review reported to GWRC

Notes: (i) All proposals to improve rail services assume a continuous programme of improvements to rolling stock, park and ride facilities, bus feeder services, integrated ticketing, real time information and other measures.

(ii) A trial of bus services between Petone and Upper Hutt was undertaken between 2001 and 2003. The service was discontinued due to lack of patronage.

(iii) There is a need to evaluate and determine the most appropriate connections between Hutt CBD and the public transport network in conjunction with the development of the proposed Melling/SH2 interchange (roading project).

Passenger transport: long term projects (beyond 2016)

Action	Responsibility	Timing	Indicative Cost	Suggested Funding	Target	Performance Measure
Implement increasing Upper Hutt – Wellington rail operating speed and frequency at peak from 20 minutes to 10 minutes and interpeak frequency from 30 minutes to 15 minutes where appropriate	GWRC (lead) ONTRACK	Beyond 10 years	To be determined	To be determined	Improvements completed	Operating speed and frequency increased
Design and implement extension of electrification and services northward beyond Upper Hutt, including new stations at Timberlea and Cruickshank Road.	GWRC (lead)	Beyond 10 years	To be determined	To be determined	Extension of services complete	Progress reported to GWRC

10.3.6 Roading

Roading: short to medium term projects (2007 – 2016)

Action	Responsibility	Timing	Indicative Cost	Suggested Funding	Target	Performance Measure
Develop an implementation plan for Grenada to Gracefield links and the Petone – Ngauranga reversible HOT lane	Transit (lead) GWRC HCC WCC	As soon as possible	To be determined	C2 L (GWRC, HCC, WCC)	Complete implementation plan by 2007/08	Implementation plan completed
Construct SH2 Dowse – Petone interchange	Transit (lead) HCC	To commence 2007/08	$73M	N	Open by 2008/09	Improvements completed
Design and construct SH2/SH58 grade separation	Transit (lead) HCC UHCC	To commence 2007/08	$37M	C1	Open by 2011/12	Improvements completed
Construct a link road between Grenada and Petone (Stage 1 of Grenada – Gracefield)	Transit (lead) HCC WCC	Stage 1 to commence 2006/07	$180M	C2 L (WCC)	Open by 2014/15	Road completed
SH2 intersection safety improvements	Transit (lead) HCC UHCC	To commence 2007/08	$10M	N	Improvements complete by 2011/12	Safety improvements completed

Roading: long term projects (beyond 2016)

Action	Responsibility	Timing	Indicative Cost	Suggested Funding	Target	Performance Measure
Construct a link road between Petone and Gracefield (Stage 2 of Grenada – Gracefield)	Transit (lead) HCC	Stage 2 to commence beyond 10 years	$60M	To be determined	Road opened	Progress reported to RLTC
Upgrade SH58 between TGM and SH2	Transit (lead) PCC UHCC HCC	Beyond 10 years	To be determined	To be determined	Development underway	Progress reported to RLTC
Monitor and investigate the optimal connections of SH2 at SH58 and Silverstream intersections to the local road network including a possible direct connection to Stokes Valley by a new bridge across the Hutt Valley. Construct the preferred option as funds are available	HCC	Beyond 10 years	To be determined	To be determined	n/a	n/a
Design and construct an appropriate interchange at the Melling/SH2 intersection	Transit (lead) HCC	Beyond 10 years	$68M	To be determined	Upgrade completed	Progress reported to RLTC
Construct the Kennedy Good Bridge – SH2 interchange	Transit (lead) HCC	Beyond 10 years	$21M	To be determined	Upgrade completed	Progress reported to RLTC
Construct Akatarawa Road upgrade	UHCC KCDC	Beyond 10 years	$20M	To be determined	Upgrade completed	Progress reported to RLTC

10.3.7 Walking and cycling

Walking and cycling: short to medium term projects (2007 – 2016)

Action	Responsibility	Timing	Indicative Cost	Suggested Funding	Target	Performance Measure
Scope and design a two-way cycle and pedestrian facility between Petone and Ngauranga on the seaward side of the rail line	Transit (lead) HCC WCC	Underway	To be determined	N	Review complete by 2006/07	Review reported to RLTC
Construct a two-way cycle and pedestrian facility between Petone and Ngauranga on the seaward side of the railway line. This is a requirement before the improvements on SH2 between Petone and Ngauranga can be completed	Transit TA's	As soon as possible	To be determined	To be determined	Construction complete	Facility open for use

Note: The above actions need to be coordinated with the design of the HOT lane between Petone and Ngauranga.

10.4 Wairarapa Corridor Plan: Masterton to Upper Hutt

The Wairarapa Corridor follows State Highway 2 from Upper Hutt over the Kaitoke and Rimutaka Hills through to Masterton and the Wairarapa railway line from Upper Hutt through to Wairarapa. It also includes SH53 between Featherston and Martinborough. The Wairarapa Corridor Plan was adopted in December 2003, following a consultative process.

Since adoption of the corridor plan, a review of Wairarapa passenger transport services has been completed and the following action programmes have been updated to reflect the planned improvements resulting from the review.

10.4.1 Needs and issues

- Increase in traffic volumes due to increase in rateable properties
- Low population growth in Wairarapa which inhibits local economic growth and suggests access to Wairarapa may be an issue
- The importance of continued access to employment in Wellington CBD and the Hutt Valley by Wairarapa residents
- Substandard bridge widths on SH2 and SH53
- A significant growth in forestry and timber products expected over the next 20 years
- Increase in the demand for freight transport to CentrePort
- Growth in tourism
- Increases in recreation and shopping journeys
- The impact of heavy traffic on townships adjacent to SH2
- Limited passenger rail frequency for commuters, tourism and recreation
- Passenger transport services internal to Wairarapa do not meet the needs of the wider community
- Inadequate passing opportunities on SH2 between Masterton and Kaitoke
- Limited affordable options to increase the Rimutaka Hill Road capacity.

These needs and issues were used to identify the short and long term proposals outlined in the action programmes.

10.4.2 Key outcome

- A safer, more reliable road and rail corridor.

10.4.3 Wairarapa Corridor Plan overview

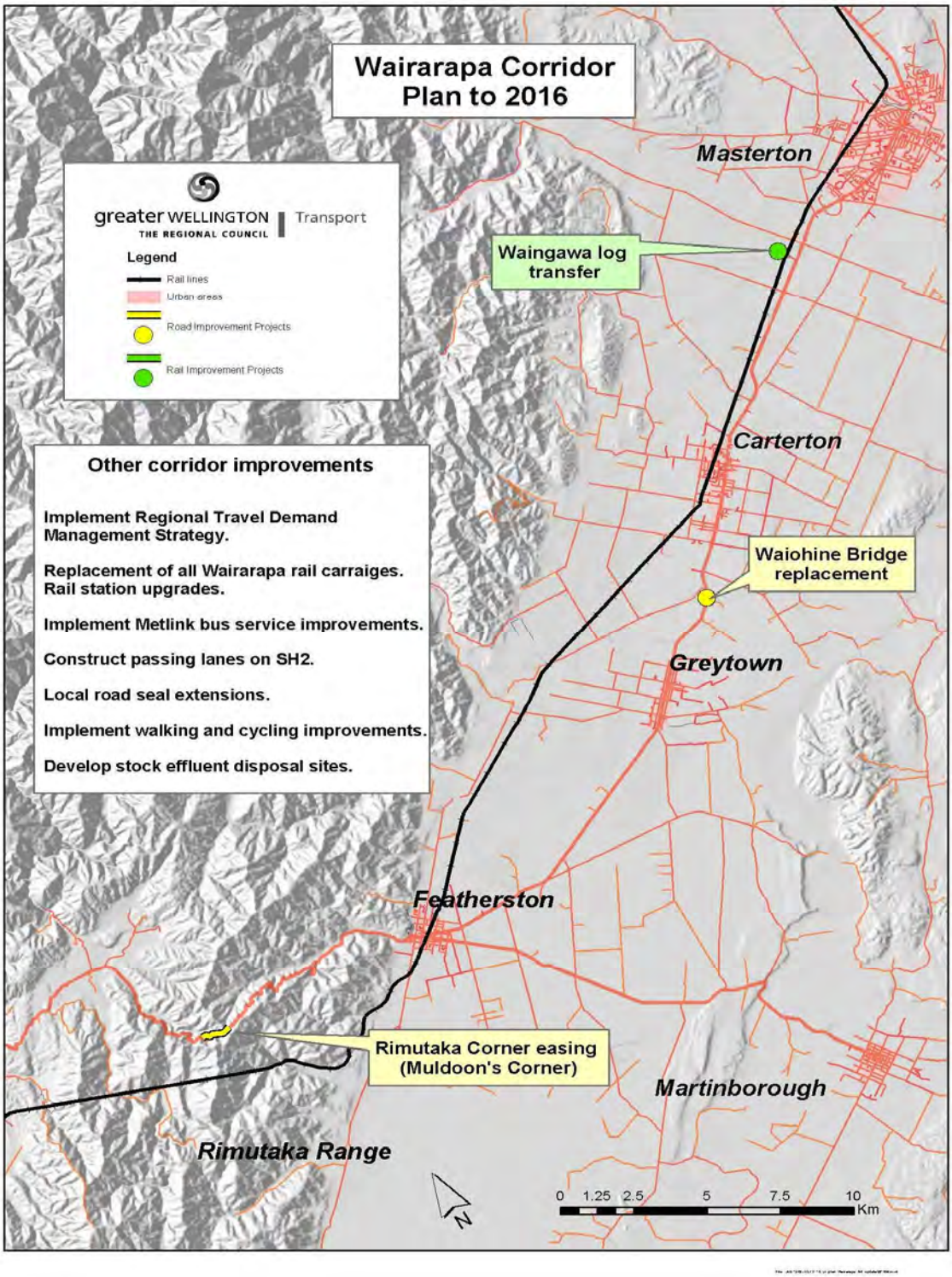


Figure 23: Wairarapa Corridor planned improvements to 2016.

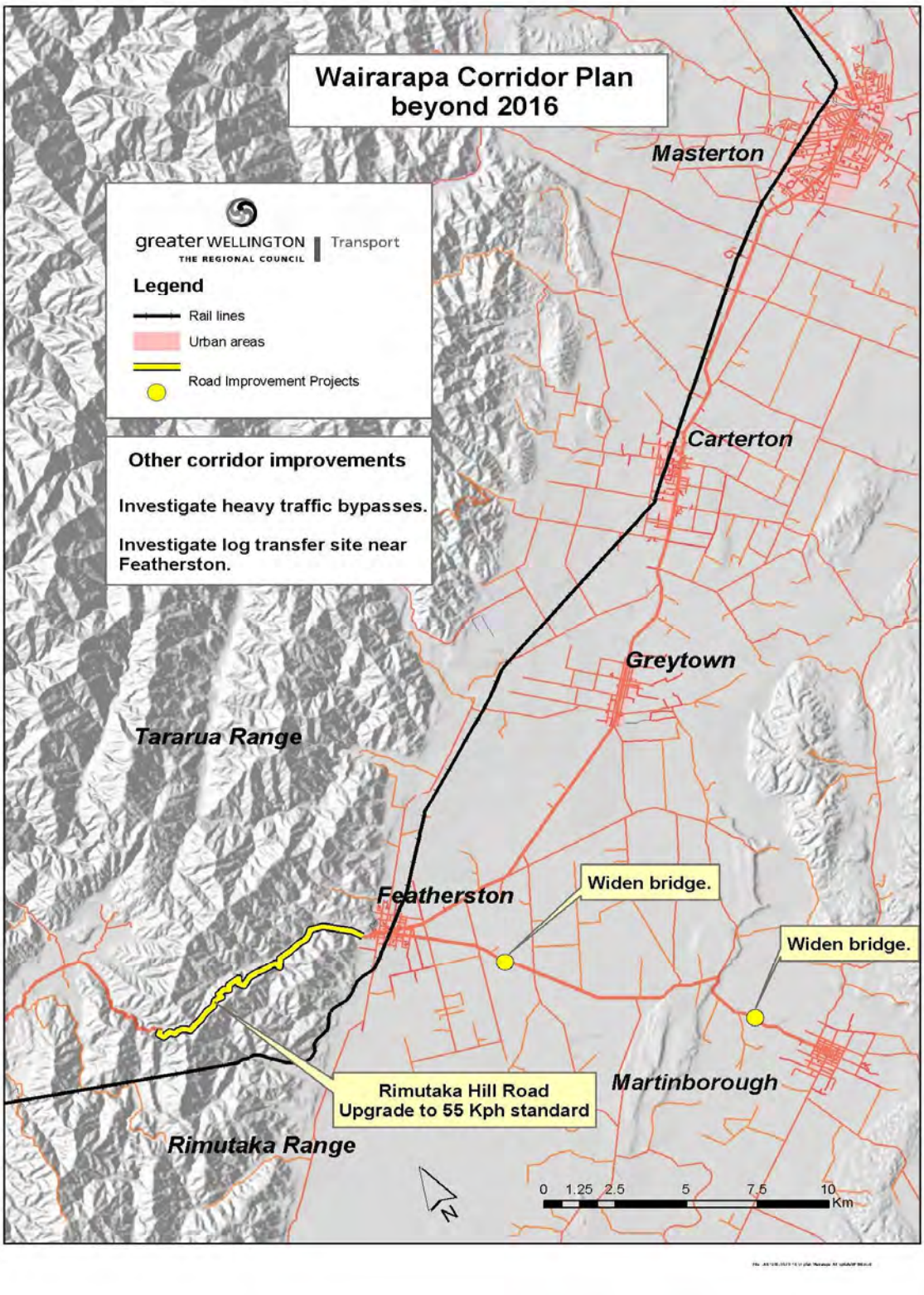


Figure 24: Wairarapa Corridor planned improvements beyond 2016.

10.4.4 Land use integration

Land use integration: short to medium term projects (2007 – 2016)

Action	Responsibility	Timing	Indicative Cost	Suggested Funding	Target	Performance Measure
Ensure provisions in the District Plan facilitate the development of a log transfer and storage site at Waingawa	CDC (Carterton District Council)	Ongoing	Administrative	L (CDC)	Provisions in place by 2006/07	Provisions reported to CDC

10.4.5 Travel Demand Management

TDM: short to medium term projects (2007 – 2016)

Action	Responsibility	Timing	Indicative Cost	Suggested Funding	Target	Performance Measure
Implement relevant initiatives of the Regional Travel Demand Management (TDM) Strategy (December 2005)	All named agencies	Ongoing	As set out in the TDM Strategy	As set out in the TDM Strategy	As set out in the TDM Strategy	As set out in the TDM Strategy

10.4.6 Passenger transport

Policies

a. Continuously improve the quality and accessibility of passenger rail services on the Upper Hutt-Masterton route to meet the needs of commuters, tourists and those engaging in recreation.

b. Provide connecting bus services as required.

Passenger transport: short to medium term projects (2007 – 2016)

Action	Responsibility	Timing	Indicative Cost	Suggested Funding	Target	Performance Measure
Replacement of all Wairarapa carriages	GWRC	Delivered by March 2007	$26.4M	N & Crown loan	Operating by 2006/07	Rolling stock in operation
Upgrade railway stations on the corridor	GWRC	Ongoing from 2006/07	$1.5M (Phase 1)	N, C1 & L (GWRC)	Phase 1 complete by March 2007	Upgrades completed

Provide additional bus connections to train services	GWRC	2006/07	Subject to tender process	N, C1 & L (GWRC)	Operating by 2006/07	Additional services provided
Provide additional inter-peak bus services between Masterton & Featherston, including connections to Masterton Hospital	GWRC	2006/07	Subject to tender process	N, C1 & L (GWRC)	Operating by 2006/07	Additional services provided
Provide some Wairarapa bus services on Sundays	GWRC	2006/07	Subject to tender process	N, C1 & L (GWRC)	Operating by 2006/07	Sunday service provided
Expand Masterton town bus services from 2 days to 5 days per week	GWRC	2006/07	Subject to tender process	N, C1 & L (GWRC)	Operating by 2006/07	Service frequency improved
Introduce initial Wairarapa integrated ticketing products for bus and rail services	GWRC	2006/07	Subject to tender process	N, C1 & L (GWRC)	Introduced by 2006/07	Integrated ticketing operational
Introduce Metlink signage	GWRC	2006/07	Subject to tender process	N, C1 & L (GWRC)	Introduced by 2006/07	Metlink signage implemented

Note: Phase 1 rail station improvements involve raising platform heights to match new rolling stock floor levels to improve accessibility. The timing of these improvements needs to be coordinated with the introduction of new rolling stock.

10.4.7 Roading

Policies

a. Continuously improve the Rimutaka Hill Road to meet growth in traffic, excluding the demands of forestry and timber products.

b. Develop passing lanes on the Featherston to Masterton Road.

c. Bring all bridge structures up to required standards on the Featherston to Masterton Road.

d. Continue to develop the Rimutaka Hill Road to at least 55 kph standards.

Roading: short to medium term projects (2007 – 2016)

Action	Responsibility	Timing	Indicative Cost	Suggested Funding	Target	Performance Measure
Complete design and construction of the "Muldoons Corner" section of the Rimutaka Hill Road	Transit	Project development to commence from 2006/07	$10.2M	R	Construction complete by 2008/09	Upgrade completed
Replacement of the Waiohine River Bridge	Transit	Underway	$4.6M	N	Completed by 06/07	Bridge open
Construct northbound and southbound passing lanes between Featherston and Greytown	Transit	*Awaiting SH Forecast*	$2.5M	N	Completed by 08/09	Passing lanes in use
Construct northbound and southbound passing lanes between Masterton and Carterton	Transit	*Awaiting SH Forecast*	$2.5M	N	Completed by 08/09	Passing lanes in use
Extend the seal on rural local roads of special tourist or forestry significance where cost effective	MDC CDC SWDC	ongoing	To be determined	N & L	Seal extended	Progress reported to RLTC

Roading: long term projects (beyond 2016)

Action	Responsibility	Timing	Indicative Cost	Suggested Funding	Target	Performance Measure
Complete the long term design for a target 55 kph standard strategy for the Rimutaka Hill Road, recognising that a lower standard will apply to some difficult terrain sections. Obtain consents and develop detailed designs so projects are ready to go should funding become available	Transit	Beyond 10 years	To be determined	N	Design complete	Progress reported to RLTC
Investigate the need for heavy traffic bypasses of the townships on SH2 from Masterton to Featherston	Transit (lead) MDC CDC SWDC	Beyond 10 years	To be determined	To be determined	Investigation underway	Progress reported to RLTC

Widen the bridges on Ruamahanga River and Tauherenikau River on SH53	Transit	Beyond 10 years	To be determined	N	Bridge upgrades complete	Progress reported to RLTC

10.4.8 Walking and cycling

Policies

a. Implement relevant initiatives of the Pedestrian Plan (May 2004).

b. Implement relevant initiatives of the Cycling Plan (May 2004).

Walking and cycling: short to medium term projects (2007 – 2016)

Action	Responsibility	Timing	Indicative Cost	Suggested Funding	Target	Performance Measure
Ensure appropriate opportunities are taken to include walking and cycling improvements in all projects	RCAs	Ongoing	To be determined	Included in project budgets	Walking and cycling infrastructure demonstrably improved	Progress reported to RLTC

10.4.9 Freight

Policies

a. Protect and develop rail infrastructure, wagons and facilities for freight and forestry links between Masterton and Wellington by partnerships between commercial interests and service providers.

Freight: short to medium term projects (2007 – 2016)

Action	Responsibility	Timing	Indicative Cost	Suggested Funding	Target	Performance Measure
Develop a log transfer and storage site at Waingawa as a commercial partnership	Commercial joint venture	As soon as possible but dependant on log prices	$1.27M[57]	N & Private funding	n/a	Site operational
Investigate and develop stock effluent sites at key locations	Transit (lead) CARTA[58] MDC CDC SWDC	To be determined	Approx $250K each	To be determined	n/a	Sites operational

[57] Public sector contribution under alternative to road funding provisions.

[58] Central Area Road Transport Association.

Freight: long term projects (beyond 2016)

Action	Responsibility	Timing	Indicative Cost	Suggested Funding	Target	Performance Measure
Investigate and, if feasible, develop a log transfer and storage site near Featherston	Commercial parties	To be determined	To be determined	To be determined	n/a	n/a

10.5 Ngauranga to Airport Corridor Study

This corridor follows State Highway 1 from the Ngauranga Merge through the Wellington City CBD to Wellington International Airport. It includes the railway line where the NIMT line and the Wairarapa lines merge and through to Wellington City rail terminals.

Transit, Wellington City Council (WCC) and GWRC are currently undertaking a strategic study to address the major transport issues along this corridor. The expected timing for the study is as follows:

- Phase 1 of the study identified issues for the corridor and was completed in May 2006.
- Phase 2 proposes scenarios to address the issues and is expected to be completed early 2007.
- Phase 3 involves the preferred package of options (i.e., a proposed corridor plan) released for consultation in mid 2007.

For further information see the Ngauranga to Airport Strategic Study – Phase 1 Consultation Report (May 2006) and the following website www.transit.govt.nz/projects .

10.5.1 Needs and issues

- Congestion including the Terrace and Mt Victoria tunnels
- Access to the airport and surrounding commercial area
- Access to and through the city
- Pedestrian access to the waterfront
- Access to the hospital
- Protection of heritage and urban form
- Inner city speed limits
- Passenger transport, including bus lanes
- Walking and cycling
- Linkages with the railway station
- Availability and cost of parking
- Movement of goods to and through the city
- Funding availability
- Linkages with the Inner City Bypass and other roads
- Energy efficiency and environmental impacts
- Access to Victoria University
- Access to CentrePort
- Rail capacity through the Kaiwharawhara throat.

10.5.2 Provisions in the Regional Transport Programme

A number of passenger transport improvements in the Passenger Transport Plan will enhance the level of service in this corridor over the next 10 years. These include increased bus service frequency, bus priority measures and improved bus information.

In addition, the Regional Transport Programme (see chapter 11) makes provisional allowances ($103 million over the first 10 years and $250 million over the following 10 years) for funding roading improvements in this corridor.

However, firm proposals will be developed and agreed through the Ngauranga to Airport Corridor Plan process. Once adopted, this corridor plan will amend the RLTS.

11. Regional Transport Programme

The Regional Transport Programme (RTP) sets out the region's expectations for new capital expenditure on strategic roading and passenger transport over the next 10 years. Proposed projects originate in the strategy's implementation and corridor plans and their policy fit is addressed there. The RTP knits together those interventions requiring additional financial input into one region wide document to provide a reference for strategic prioritising, sequencing and funding allocation decisions.

The Regional Transport Programme is a subset of the total transport expenditure and is comprised of two parts: the 10-Year Passenger Transport (PT) Programme (includes non-roading projects) and the 10-Year Strategic Roading Programme.

Road maintenance and renewal (e.g., resealing) are not included in the Strategic Roading Programme as it is expected that these activities will continue to enjoy a status of first call on national funding and therefore have no need to rely on regional or Crown funding sources.

11.1 Programme prioritisation

A review of the RTP is undertaken by the RLTC in the first quarter of each year in the annual prioritisation process. Relevant feedback from the RLTS consultation process will be referred to the 2007 prioritisation process. The annual review of project priorities requires both technical and political assessment. Priorities should remain relatively constant from year to year, though new projects may be introduced as a result of implementation and corridor plan reviews. However, cost, timing and funding availability estimates are variable from year to year.

Factors taken into account in prioritisation include:

- New information, e.g., changing costs or process delays
- Urgency and seriousness of the problem being addressed
- Regional and policy significance of projects (expressed in the RLTS, interpreted by the RLTC)
- Readiness - how ready the project is to proceed to the next stage.

The order of projects in the 10-Year Passenger Transport Programme and 10-Year Strategic Roading Programme (Tables 16 and 17) does not reflect their significance or priority. To accelerate any project included in the programme would mean shifting the funding allocation for that project so that it sits earlier in the 10-Year programme.

Some projects are listed but have funding unconfirmed or "beyond 10 years". These are unfunded elements as far as the 10-year programme is concerned, but the RLTC sees such projects as sufficiently significant to be listed and viable enough for preparatory work to continue so they are not unnecessarily delayed. They are candidates for any accelerated or supplementary funding that may become available within 10 years, and their inclusion indicates RLTC will be advocating for them to be brought forward. Often they cannot be included in the fundable portion of the programme now because they are not ready (options not tested, designation not achieved, design not started) but the RLTC expects them to become ready and fundable within 10 years, so in the interests of transparency and completeness they are listed.

The available funding that generates the restraining totals at the bottom of each column, and its affordability consequences, are discussed in chapter 12. The completeness of the lists and the relative balance between the lists are issues for public scrutiny.

11.2 Analysis of the programme

Implementation of the Regional Transport Programme is subject to available funding and as a result it can not include every transport project the region may desire. Developing the RTP has involved making a number of compromises to find the appropriate balance of projects across all of the RLTS objectives and within available funding. It has required consideration of both current and forecast trends in travel behaviour, acknowledging that there are many uncertainties and external influences are likely to affect our transport network and the way we achieve access in the future. Table 14 provides an analysis of the Programme against the objectives of the RLTS[59].

RLTS objective	Objective indicator 2016 AM peak compared to 2001	Regional Transport Programme
Assist economic and regional development	• Reduced congestion • Reduced HCV costs • Reduced PT passenger trip time	✓✓ – –
Assist safety and personal security	• Reduced road traffic injuries • Improved personal security	✓ ✓
Improve access, mobility and reliability	• Increased PT network coverage • Improved PT services • Increased road network coverage • Reduced congestion • Increased car ownership • Improved active mode facilities	✓ ✓ ✓✓ ✓✓ ✓ ✓
Protect and promote public health	• Increased opportunities for physical activity • Reduced road traffic injuries • Reduced air pollution • Reduced traffic noise • Enhanced social cohesion • Reduced severance • Decreased CO_2 emissions	✓✓ ✓ ✓ – ✓ ✓ ××
Ensure environmental sustainability	• Decreased CO_2 emissions • Reduced air pollution • Reduced traffic noise • Reduced contaminants in surface water runoff • Reduced fuel consumption • Supports efficient land use	×× ✓ – × ×× ✓
Ensure the Regional Transport Programme is affordable for the regional community	• Package BCR >1 • Package cost in line with affordability envelope	– ××

✓✓ strongly positive ✓ positive – neutral × negative ×× strongly negative

Table 14: Analysis of Regional Transport Programme (RTP) against RLTS objectives.

[59] See background document – Regional Transport Programme – Modelling and analysis, May 2006.

The RTP makes good progress against many indicators, however a number of trade-offs need to be acknowledged. Addressing road network reliability, congestion and unsafe roads will have positive outcomes in terms of access, reliability, safety, economic and regional development. Investment in improved passenger transport services and travel demand management will also contribute to these outcomes, in addition to having positive public health and safety benefits. However, a major shift towards PT investment to the detriment of roading investment is likely to result in significantly worse congestion given that underlying trends mean traffic volumes are likely continue to increase during peak periods and are unabated outside peak times. This affects not only private car users but many of our region's freight and bus services which depend on the road network.

It is unlikely that any combination of investment within available funding will result in a significant reduction in CO_2 levels compared with the 2001 base level. A much stronger lead from central government around fuel efficiencies/technologies or fleet emission standards is needed if local and regional authorities are to have any real impact in relation to this indicator. Advocating for legislation which enables tools such as road pricing to be used on existing roads is therefore an important action under this strategy, as is continued support and development of our electric powered bus and rail systems.

11.3 Programme balance

The total programme proposes a considerable increase in transport investment in this region over historical levels. The programme for 2006/7-16 proposes $3.1 billion or an average $301 million a year. While there has been a huge increase in identified funding available, a further $1.5 billion is needed to fund projects beyond 2016.

Passenger Transport ($M)	
Corridor	Years 1 - 10
Region wide	1094
Wairarapa	27
Hutt	0
Wellington	91
Western	117
Sub total	1330
Roading ($M)	
Corridor	Years 1 - 10
Region wide	38
Wairarapa	10
Hutt	360
Wellington	103
Western	1198
TGM loan repayment	26
Sub total	1735
Total	**3065**

Table 15: Proposed Regional Transport Programme - funding summary (July 2006).

The Passenger Transport Programme primarily covers rail and bus operations, but also includes allowances for walking, cycling and road safety promotion, travel planning and regional transport planning. Many of the activities in the Passenger Transport Programme are designed to provide an alternative to car travel during peak periods, as well as off peak accessibility improvements for people who can't or choose not to use a car. It also addresses long-standing under investment issues to improve service reliability. In addition, the RLTS's proposed travel planning activity is aimed at

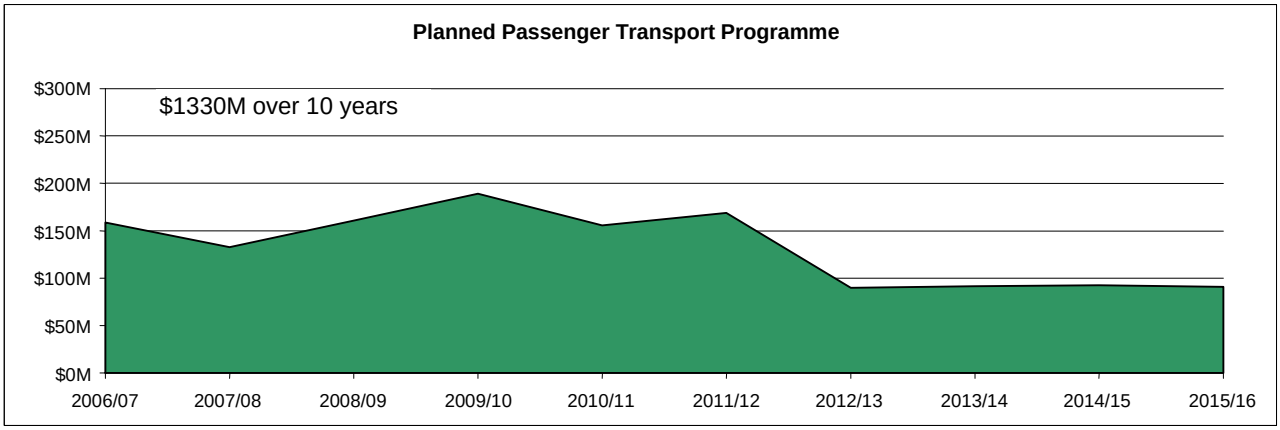
proactively promoting uptake of public transport and active modes, and exploring opportunities to time trips outside peak periods and to reduce unnecessary trips.

The programme proposes a substantial increase in passenger transport investment. Over the last five years the equivalent PT investment has been around $50 million per annum. This programme proposes an average $1.3 billion investment in PT each year, an increase of around 160%.

While many of the projects in the Strategic Roading Programme focus on addressing bottlenecks, thereby improving efficiency by unlocking capacity in the road network, a number of projects provide more efficient connections (e.g., Western Link Road, Grenada – Gracefield) and others primarily improve safety (e.g., Otaihanga Interchange, Muldoon's Corner easing). The Transmission Gully Motorway provides improved national and regional connectivity and reliability while relieving community severance and safety issues. It is the costliest single project, accounting for over half the 10-year roading investment. A cost of this order is one the nation has to address sometime if it is to protect national accessibility through this region's Western Corridor. This programme proposes to address that cost sooner rather than later, using as first call the specific funding made available for this project.

The Regional Transport Programme is based on the best information available at the time of writing. By necessity, it is founded on a number of assumptions. These are set out in the Funding Plan (see chapter 12). As activities and projects are developed the scope, cost and timing of programme elements will change to reflect newer information.

11.4 10 -Year Passenger Transport Programme [includes all non-roading activities]



Planned expenditure

		Total Cost	1	2	3	4	5	6	7	8	9	10
	Passenger transport activities	$M	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
1	Rail operating contract	137.9	17.7	18.0	18.2	14.8	14.7	11.4	11.3	11.3	11.3	9.1
2	Wairarapa rolling stock	26.5	26.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	Rail rolling stock	356.9	57.3	44.8	64.9	91.4	30.6	30.6	9.3	9.3	9.3	9.3
4	Western Corridor rolling stock	40.0	0.0	0.0	0.0	0.0	24.0	16.0	0.0	0.0	0.0	0.0
5	Mackay's to Lindale double track	62.0	0.5	0.5	0.5	1.5	17.0	42.0	0.0	0.0	0.0	0.0
6	Kapiti rail stations	15.0	0.2	0.5	5.3	9.0	0.0	0.0	0.0	0.0	0.0	0.0
7	Rail station maintenance and upgrades	28.6	5.9	4.0	4.0	2.8	1.8	2.0	2.0	2.0	2.0	2.0
8	Park & ride carparks	10.1	0.8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
9	Bus & ferry operating contracts	243.5	24.3	24.3	24.3	24.3	24.3	24.4	24.4	24.4	24.4	24.4
10	Trolley bus contracts	69.8	6.5	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.1
11	Bus stop & shelter maintenance	9.6	1.1	1.6	1.0	1.1	0.8	0.8	0.8	0.8	0.8	0.8
12	Transport information systems	2.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
13	Bus priority measures	21.3	1.0	1.6	1.6	1.6	2.1	2.1	2.1	2.6	3.1	3.1
14	Real time information	21.8	0.0	0.3	3.2	6.8	3.3	1.6	1.6	1.7	1.7	1.7
15	Integrated ticketing	13.3	0.6	4.0	3.6	0.9	0.8	0.7	0.6	0.6	0.6	0.6
16	Service improvements	44.5	1.9	2.5	3.1	3.7	4.2	4.8	5.3	5.8	6.3	6.8
17	Total Mobility	42.6	3.3	3.5	3.7	3.9	4.2	4.4	4.6	4.8	5.0	5.2
18	Rail administration	21.3	2.0	1.8	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
19	Bus & ferry administration	33.0	3.9	3.4	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
20	Transport planning	27.8	3.0	2.3	2.4	2.3	2.9	3.0	2.9	3.1	3.0	2.9
21	Cycle promotion	0.5	0.07	0.04	0.05	0.07	0.04	0.05	0.07	0.04	0.05	0.07
22	Travel Plan Programme	9.6	0.6	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
23	Road safety promotion	0.8	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
24	Wairarapa log freight	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	Additional cost of access HRC review	90.0	0.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
26	Porirua interchange	10.0									To be confirmed	
27	Electrification to Waikanae	40.0									To be confirmed	
28	Pukerua Bay - Paekakariki double track	272.0									To be confirmed	
29	Hutt Corridor rail improvements	173.0									Beyond 10 years	
	Total identified costs	1825	158	133	161	189	156	169	90	91	92	91
	Less costs beyond 10 years	495										
	Total 10 year costs	**1330**										

Table 16: 10-Year Passenger Transport Programme.

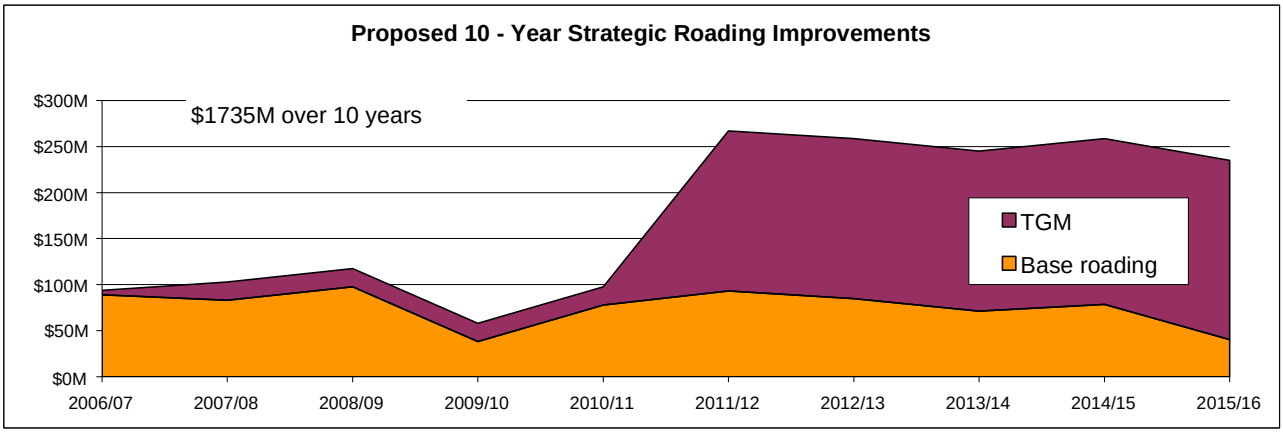
Passenger Transport Programme - activity descriptions

Corridor	Ref.	Activity	Total 10 Year Cost	Description
Regional	1	Rail operating contract	$137.9M	The net cost (after fare revenues are deducted) of the TranzMetro contract which supplies all contracted passenger rail services for the region.
Wairarapa	2	Wairarapa rolling stock	$26.5M	Purchase of 18 new passenger rail carriages for the Wairarapa line to replace existing rolling stock which has reached the end of its useful service life.
Regional	3	Rail rolling stock	$384.9M	Purchase of 58 new electric multiple units (EMU) and refurbishment of 88 existing Ganz Mavag units. This will increase rail capacity in line with a forecast demand growth of 1.7% pa. Maintenance of rolling stock necessary to ensure the reliable operation of the urban passenger rail system. Signal and power system upgrades to accommodate new EMUs. Improvements to the Johnsonville line (subject to the outcome of the current Northern Suburbs Passenger Transport Study).
Western	4	Western Corridor rolling stock	$40M	Purchase of 12 new electric multiple units to increase rail capacity on the Western Corridor.
Western	5	MacKay's to Lindale double track	$62M	Provision of double tracking between MacKay's and Raumati to enable reduction of the timetable frequency from 20 minutes to 15 minutes in the peak periods.
Western	6	Kapiti rail stations	$15M	Provision of new rail stations at Raumati and Lindale including pedestrian access, security, bus interchange and park and ride facilities.
Regional	7	Rail station maintenance and upgrades	$30.7M	Allowance to undertake cyclic replacement, refurbishment and minor upgrading of rail stations including security improvements.
Regional	8	Park and ride carparks	$10.1M	Includes park and ride leases, maintenance and extensions.
Regional	9	Bus and ferry operations contracts	$243.5M	Contracted baseline bus and ferry services, including school bus services and Days Bay Ferry.
CBD	10	Trolley bus contracts	$69.8M	Operation of contracted trolley bus services and maintenance of the overhead wires.
Regional	11	Bus stop and shelter maintenance	$9.6M	Provision for the ongoing maintenance of bus stops and shelters. Provision of new Metlink signage and its maintenance. New shelters.
Regional	12	Transport information systems	$2.3M	Ongoing maintenance of Metlink website, call centre information system and text messaging services.
Regional	13	Bus priority measures	$18.3M	Provision of bus lanes and priority measures, particularly in Wellington CBD.
Regional	14	Real time information	$22.4M	Establishment and maintenance of bus and rail real time information systems.

Corridor	Ref.	Activity	Total 10 Year Cost	Description
Regional	15	Integrated ticketing	$13.7M	Establishment and maintenance of the bus and rail integrated ticketing system.
Regional	16	Service improvements	$45.3M	Allowance for the provision of additional bus services to meet patronage growth. Potential enhancements to rail services resulting from the Wairarapa service review.
Regional	17	Total Mobility	$42.6M	Provision of a half priced taxi scheme, available to people with a permanent disability who, because of that disability, cannot access normal PT services - users currently number around 8000. Includes additional funding to provide for improved information and management system and for increasing use of this scheme by eligible persons. Maintenance of the 29 strong hoist fleet as part of the Total Mobility scheme.
Regional	18	Rail administration	$21.3M	Timetables, call centre, website, signage, administrative support, customer satisfaction monitoring for passenger rail services.
Regional	19	Bus and ferry administration	$33.0M	Timetables, call centre, website, signage, administrative support, customer satisfaction monitoring for contracted bus services.
Regional	20	Transport planning	$27.9M	Development, monitoring, review and reporting of the Regional Land Transport Strategy and RLTS Plans.
Regional	21	Cycle promotion	$0.5M	Implementation of regional council cycling responsibilities.
Regional	22	Travel plan programme	$9.6M	Development and implementation of a travel plan programme to encourage the uptake of business, school, community and individual travel plans, consistent with the TDM Strategy action plan.
Regional	23	Road safety promotion	$0.8M	Implementation of regional council road safety responsibilities.
Wairarapa	24	Wairarapa log freight	$1M	An Alternative To Road (ATR) project in which GWRC is the applicant for a commercial joint venture between a forestry company & CentrePort to move logs from Masterton to the port using rail thereby removing log truck traffic from Rimutaka Hill Rd.
Regional	25	Additional cost of access HRC Review	$90M	Allowance for access improvements to PT infrastructure, to be separately funded by a Crown agent.
Western	26	Porirua interchange	To be confirmed	Allowance for a comprehensive upgrading rail station facilities at Porirua, including pedestrian access, bus interchange, security and park and ride facilities.
Western	27	Electrification to Waikanae	To be confirmed	Allowance for extension of urban passenger rail services from Lindale to Waikanae.
Western	28	Pukerua Bay - Paekakariki double track	To be confirmed	Allowance for double rail track between Pukerua Bay and Paekakariki to assist freight movement during commuter peaks thereby increasing service reliability for both freight and passenger services.

Corridor	Ref.	Activity	Total 10 Year Cost	Description
Hutt	29	Hutt Corridor rail improvements	Beyond 10 years	Allowance for increasing Upper Hutt - Wellington rail frequency at peak from 20 mins to 10 mins and interpeak frequency from 30 min to 15 mins. Increasing Upper Hutt to Wellington rail operating speed. Design and implementation of electrification and services northward beyond Upper Hutt, including new stations at Timberlea and Cruickshank Rd.

11.5 10 -Year Strategic Roading Programme



Planned Expenditure

	Road Activities	20 year cost $M	1 2006/07	2 2007/08	3 2008/09	4 2009/10	5 2010/11	6 2011/12	7 2012/13	8 2013/14	9 2014/15	10 2015/16
1	SH Block Programme	60	3	3	3	3	3	3	3	3	3	3
2	TDM Walking & Cycling	10	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
3	TDM Traffic Management	5	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
4	Inner City Bypass	14	14									
5	Waterloo Quay Rail Grade Separation	22				0.3	11	11				
6	Terrace Tunnel Tidal Flow	20			20							
7	Ngauranga – Aotea Capacity Improvement	20			20							
8	Basin Reserve Interchange	27								6	8	13
9	Basin - Airport Capacity	250									Beyond 10 years	
10	Dowse to Petone	73	33	31	9							
11	SH2/58 Grade Separation	37		1	1	5	15	15				
12	Grenada - Gracefield Stage 1 to Petone	180	3	2	1	1	15	20	40	50	48	
13	Grenada - Gracefield Stage 2 CVL	60									Beyond 10 years	
14	Melling Interchange	68									Beyond 10 years	
15	SH58 SH2 to Summit 4 Laning	99										1
16	Petone - Ngauranga incl. cyclelane	60					20	20	20			
17	SH2/Kennedy Good Interchange	21									Beyond 10 years	
18	SH2 Hutt Intersection Safety Improvements	10		2	2	2	2	2				
19	Akatarawa Upgrade	20									Beyond 10 years	
20	MacKays Overbridge	3	2	1								
21	TDM, Western Corridor ATMS+HOV	5	0.5	0.5	4							
22	Centennial Highway Median Barrier	17	12	5								
23	Western Link Road – Stage 1	107	19	27	26	17	9	8				
24	Western Link Road – Stage 3	19		4	6	8						
25	Western Link Road – Stage 2	42				0.1	2	12	19	10		
26	Pukerua Bay Safety Improvements	2	1	1								
27	Paekakariki Traffic Signals	1	1									
28	TGM Preparation	85	5	20	20	20	20					
29	Transmission Gully Motorway Construction	870						174	174	174	174	174
30	TGM Debt Servicing	382									6	21
31	SH58 Upgrade TGM to SH2	44									Beyond 10 years	
32	Otaihanga Interchange (2 lane)	35							1	1	18	15
33	Waikanae Upgrade	60						1	1	1	1	8
34	Tawa Interchange	15									Beyond 10 years	
35	Rimutaka Corner Easing (Muldoon's)	10	0.2	5	5							
	Total Identified Costs	2753	94	103	118	58	98	267	259	245	258	235
	Less Costs Beyond 10 Years	1018										
	Total 10 Year Costs	**1735**										

Table 17: 10-Year Strategic Roading Programme.

Strategic Roading Programme - project descriptions

Corridor	Ref.	Project	Total 10 Year Cost	Description
Regional	1	SH block programme	$30M	Funding allowance for small projects generally costing less than $3M each, usually with a significant safety component.
Regional	2	TDM, walking and cycling	$5M	Funding allowance for walking and cycling projects which implement the regional pedestrian and cycling strategies.
Regional	3	TDM, traffic management	$2.5M	Funding allowance for TDM roading related projects including ATMS, HOV lanes, and traffic management improvements, consistent with the TDM Strategy action plan.
CBD	4	Inner City Bypass	$14M	Completion of a new route between Willis St and Kent Tce. State highway traffic will be removed from Ghuznee St allowing it to return to a local access road. Vivian St will flow eastbound and a new route, being an extension of Buckle St, will flow west bound. The route is fully connected to the local road network via traffic signal controlled intersections. Footpaths and cycle lanes are being provided.
CBD	5	Waterloo Quay rail grade separation	$22M	Rail over bridge on Waterloo Quay to facilitate more frequent rail freight movement to CentrePort.
CBD	6	Terrace Tunnel traffic flow	$20M	Allowance for the development of a traffic flow system for the Terrace Tunnel to accommodate the direction of peak flows. Links to Wellington Inner City Bypass and motorway improvements. The need for and scope of this project will be considered in more detail in the current Ngauranga to Airport Study.
CBD	7	Ngauranga – Aotea capacity improvement	$20M	Allowance for the provision of an additional lane in each direction to enable existing feeder road capacity to be more efficiently utilised. Prerequisite to Petone – Ngauranga HOT lane and Transmission Gully Motorway. Also related to City Gateway project, Terrace Tidal Flow and Basin to Airport capacity projects. The need for and scope of this project will be considered in more detail in the current Ngauranga to Airport Study.
CBD	8	Basin Reserve interchange	$27M	Allowance for a flyover out of Kent Terrace and over the top of the Basin Reserve (Meritec, 2000, option H). Adds to the benefits of the inner city bypass. The need for and scope of this project will be considered in more detail in the current Ngauranga to Airport Study.
CBD	9	Basin - Airport capacity	Beyond 10 years	Allowance for four laning between the Basin Reserve and Evans Bay, including Mount Victoria Tunnel duplication. The need for and scope of this project will be considered in more detail in the current Ngauranga to Airport Study.

Corridor	Ref.	Project	Total 10 Year Cost	Description
Hutt	10	Dowse to Petone upgrade	$73M	The Dowse to Petone upgrade is aimed at reducing delays and improving safety along this section of SH2. The proposed improvements include building an overbridge at the Korokoro Intersection (connecting the Western Hills with Hutt Road) and an interchange at the Dowse Drive intersection (connecting Dowse Drive and Hutt Road via a roundabout raised over the highway). It also includes safety improvements between the existing Korokoro and Petone intersections. All appeals have now been resolved. Design work is complete. All required properties have now been acquired. Dowse interchange provides access to SH2 for the proposed Grenada – Gracefield Stage 2, Cross Valley Link.
Hutt	11	SH2/58 grade separation	$37M	To improve safety at the intersection of SH 2 with SH 58, Transit is proposing to build a grade-separated interchange (similar in layout to the Porirua Mungavin interchange). Complements SH58 (SH2 - summit) four laning.
Hutt	12	Grenada - Gracefield Stage 1, SH1 – Petone link road	$180M	The investigation of a new link road between Petone and Grenada was identified as a high priority in the Hutt Corridor Plan adopted in November 2003. If established, it will provide a more efficient link between the Hutt Valley and Porirua and shift traffic from the already congested Ngauranga – Petone and Ngauranga Gorge routes. The project will also need to include a major upgrade to the SH2/Horokiwi intersection. Links to Wellington Regional Strategy and Western Corridor Study. Also needs to be considered with Petone-Ngauranga HOT lane and Cross Valley Link proposals.
Hutt	13	Grenada - Gracefield Stage 2 CVL	Beyond 10 years	Establishment of a new Cross Valley Link (CVL) road between the (yet to be built) Dowse interchange and Randwick Rd/Whites Line. Also involves traffic calming the Petone Esplanade to discourage traffic. Links to Dowse to Petone upgrade. CVL has synergies with the Grenada to Gracefield stage 1 and the Petone-Ngauranga HOT lane proposals.
Hutt	14	Melling interchange	Beyond 10 years	This project involves the construction of a new grade separated interchange to replace the traffic signals at the Melling intersection on SH2.
Hutt	15	SH58 (SH2-summit) 4 laning	$1M	To improve safety along the 5 km length of SH 58 from SH 2 to Harris Road, Transit is proposing to realign the road and upgrade it to four lanes with a median barrier. Appeals have been lodged against the resource consents and Notice of Requirement. Transit is working to resolve these. There is also some property yet to be acquired. Links to SH2/58 interchange and SH58 upgrade TGM to SH2.
Hutt	16	Petone - Ngauranga HOT lane and cycleway	$60M	Establishment of a new fifth lane between Petone and Ngauranga, to be managed as a tidal flow, possibly with a toll for low occupancy vehicles.
Hutt	17	SH2/Kennedy Good Interchange	Beyond 10 years	The replacement of traffic signals with an interchange at the Kelson / Kennedy Good Bridge intersection to reduce delays, improve safety and increase accessibility.

Corridor	Ref.	Project	Total 10 Year Cost	Description
Hutt	18	SH2 Hutt intersection safety improvements	$10M	Allowance to undertake safety upgrades at minor road intersections along SH2 between Melling and SH58.
Hutt	19	Akatarawa upgrade	Beyond 10 years	Existing 35 km route (21 km in UHCC & 14 km in KCDC) is windy and narrow with poor sight distance. It is proposed to widen the route to 2 lanes between SH1 and SH2 suitable for vehicles up to 12 m in length including 45 to 50 seater buses and non-articulated trucks providing an alternative regular and emergency route between the two corridors.
Western	20	MacKays Overbridge	$3M	Completion of the bridge over the North Island Main Trunk Rail Line on SH1 south of Paraparaumu.
Western	21	Travel Demand Management, Western Corridor ATMS+HOV	$5M	Allowance for implementation of advanced traffic management measures and high occupancy vehicle lanes on the Western Corridor strategic roading network. Details have yet to be determined.
Western	22	Centennial Highway median barrier	$17M	Continuation of the existing trial wire rope barrier to cover the whole length of the coastal section of SH1 between Paekakariki and Pukerua Bay.
Western	23	Western Link Road – Stage 1	$107	The proposed Western Link Road is a joint project between Kapiti Coast District Council and Transit to build a parallel route to SH1 between Peka Peka (north of Waikanae) and Poplar Avenue (in Raumati). This parallel route would assist in relieving congestion on both the highway and local roads and is planned to be built in three stages. Stage 1 establishes the central section between Waikanae and Raumati. Links to Western Corridor projects and Western Link Road Stages 2 and 3.
Western	24	Western Link Road – Stage 3	$19M	Completion of Stage 3, the southern section of the project.
Western	25	Western Link Road – Stage 2	$42M	Stage 2 completes the route between Waikanae and Peka Peka. Links to Western Corridor projects and Western Link Road Stages 1 and 3.
Western	26	Pukerua Bay safety improvements	$2M	Allowance for safety improvements, largely directed at addressing pedestrian conflicts, in the urban section of Pukerua Bay.
Western	27	Paekakariki traffic signals	$1M	Allowance for safety improvements at the intersection of SH1/Paekakariki, but at a scale consistent with the long term down grading of the highway level of service through this section once the new Transmission Gully Motorway is open.
Western	28	Transmission Gully Motorway preparation	$85M	Allowance for preparatory works to enable construction of Transmission Gully Motorway to commence in five years.
Western	29	Transmission Gully Motorway construction	$870M	Construction of a new inland highway between MacKays and Tawa.
Western	30	Transmission Gully Motorway debt servicing	$26M	Allowance for debt servicing to address the current funding gap resulting from the construction expenditure on Transmission Gully Motorway.
Western	31	SH58 upgrade TGM to SH2	Beyond 10 years	Allowance to upgrade SH58 between TGM and SH2. Links to project 15 (SH58, SH2 – summit 4 laning).

Corridor	Ref.	Project	Total 10 Year Cost	Description
Western	32	Otaihanga interchange (2 lane)	$35M	Grade separated interchange on SH1 at the intersection to Otaihanga township.
Western	33	Waikanae upgrade	$12M	Allowance to commence upgrading of SH1 through the Waikanae urban area to address capacity and safety issues. The timing of this project has been delayed assuming some relief will be provided by the Western Link Road project. (projects 23-25).
Western	34	Tawa interchange	Beyond 10 years	Upgrading the Tawa interchange entry and exit ramps to address substandard areas and improve safety.
Wairarapa	35	Rimutaka Corner Easing (Muldoon's)	$10M	This project includes straightening several tight bends in the highway about 500 metres south of Rimutaka Hill summit. Heavy vehicles regularly cross the centre line at this site. The Transit Board has approved a scheme to provide a 60km/h speed environment along this section of the highway. The project is consistent with the aim to continually improve access to Wairarapa by upgrading the hill road.

12. Funding Plan

This chapter sets out the likely transport funding that will be available within the greater Wellington region over the next 10 years (2006/07 to 2015/16). The Regional Land Transport Committee has taken this funding into account when developing the Regional Land Transport Strategy, as required by section 175(2)(d) of the Land Transport Act 1998. Forecasts are indicative only as priorities, projects, scope, timing and costs will change over time.

12.1 Estimates

The estimates used in this analysis are the best information available at the time of writing. The forecasts for passenger transport activities are 2006 dollars. The forecast for roading projects are 2005 dollars. Generally, no allowances have been made for inflation. However, some budgets do include escalation cost increases expected to result from increased service demand or wear and tear from increased use of assets.

Most major roading project estimates are provided by Transit, and GWRC is reporting the mean cost which makes some allowance for risk. A number of the estimates are rough order costs and further work is required to confirm the scope, cost and timing of these projects. Timings and costs will change over time as project scopes are developed.

A number of estimates are possibly conservative, notably SH58 TGM-SH2 and Grenada to Gracefield Stage 1. These may add significantly to the programme cost.

12.2 Escalation

There is no allowance for escalation in the Crown funding sources. Therefore, over time, the reported funding gap (represented as the 'Crown Loan' for Transmission Gully Motorway construction) will grow because costs will increase due to inflationary pressures but funding will not.

12.3 Types of funding

There are principally four types of funding:

- Nationally distributed funds (N) are allocated on the basis of national priority by Land Transport NZ 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. A forecast of likely N funding, totalling $915 million[60] over 10 years, has been obtained from the 2005/06 National Land Transport Programme. This includes all passenger transport funding plus state highway and local road development funding. Some local road funding is allowed for projects out of the scope of the RLTS, but an estimate of this has not been able to be assessed. $585 million of N funding for state highway and local road maintenance has been ignored because it has first call on funding.

- Regionally distributed funds (R) are allocated by Land Transport NZ to activities that are not judged to be of sufficient national priority to be funded from N. Regional priorities are taken

[60] Using the high range estimate. Indexation of fuel taxes and road user charges from April 2006 which applies to N and R funding only has been removed.

into account. Funding is derived from road user charges and fuel excise. A forecast of likely R funding, totalling $234 million over 10 years, has been obtained from the 2005/06 National Land Transport Programme.

- Crown appropriations (C) are special regional funds which are allocated by Land Transport NZ. This funding resulted from the Wellington Transport Project which identified increased funding requirements for Wellington region's transport needs. Total C funding over the next 10 years is $965 million and it is 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 from Petone to Grenada 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.

C4 (announced 18 May 2006)

$80 million for the investigation and preliminary design work for the Transmission Gully Motorway to enable construction start by 2011/12.

- 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). Total L funding for the activities covered by this plan over the next 10 years is approximately $474 million and is not indexed.

Other funding sources include tolls and road pricing. These sources are not expected to be available over the next 10 years.

12.4 Key investments and the affordability envelope

Background work undertaken for the Wellington Transport Project, GWRC's LTCCP and the Western Corridor Transportation Study has enabled an estimate to be made of Wellington's 10 year total strategic transport investment envelope[61]. There are five basic components: roading maintenance, roading improvements, passenger rail, bus services and travel demand management.

Highway maintenance provides for the operation and maintenance of the region's state highway network. Local roading provides for operation and maintenance ($350 million) plus usual replacements and improvements ($450 million). Costs are funded in current territorial authority LTCCPs and are largely fixed.

Roading improvements provides for safety and efficiency improvements to the strategic roading network, largely the region's state highways, but does allow for strategic local roading investments like Kapiti's Western Link Road.

Passenger rail maintains the current rail service and allows for additional rolling stock capacity to accommodate 1.7% annual patronage growth. Allowances have also been made for improvements to park and ride facilities, stations and track on the Western Corridor and for the purchase of additional units to enable the provision of more frequent train services to the Kapiti Coast.

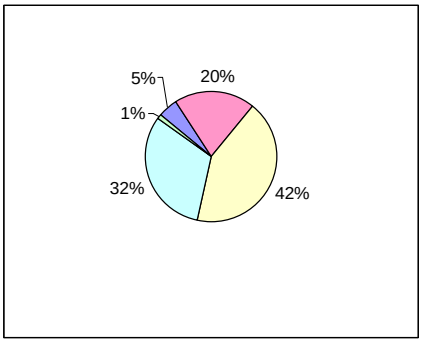
Bus services maintains current mode share and improves customer service with enhanced marketing and innovations such as integrated ticketing and real time information. It also provides for harbour ferry subsidies and the total mobility scheme.

Travel demand management (TDM) plans are at an early stage of development. Components will include enhancements to walking and cycling infrastructure, improved traffic management and travel planning initiatives.

The following table identifies allocation of a total $4120 million funding over 10 years to these five key components.

Component	Funding allocation
Highway maintenance	$200M
Local roading	$800M
Strategic roading improvements	$1715M
Passenger transport	$1375M[62]
Travel demand management	$30M
10 year total	**$4120M**

Table 17: 10-year proposed funding allocation by component.



It is noted that the strategic options scenarios were based on a total available funding of $3432 million. However, the strategy proposes a total 10 year investment of $4120 million. This is largely driven by the completion of Transmission Gully Motorway in the 10 year Strategic Roading Programme, whereas the strategic options scenarios only allowed for a start to upgrading the existing coastal highway.

[61] All private costs are excluded e.g., motor vehicle purchase.
[62] Includes $55M for rail operating contract paid for by fare increases.

The PT Programme investment is now slightly larger than that identified in the 'Planned Investment' scenario, and allows for several new Western Corridor rail improvements. Although around 66% of the total available funding is allocated to roading, it is not considered equivalent to the 'Advanced Roading' scenario, given that the increased investment is not at the expense of passenger transport projects. The funding allocation arrived at takes account of the strong community support for Transmission Gully Motorway and responds to community severance and environmental concerns associated with upgrading the existing coastal highway route.

12.5 Matching investments to funding

N funding is allocated annually, based on need, by Land Transport NZ via the National Land Transport Programme process. A 10 year forecast is available but is unreliable as evidenced by the February 2006 Draft 10-year State Highway Forecast (SHF). A level of N funding over the next 10 years is assumed as being about mid-way between the N level for Wellington advised by Land Transport NZ last year (an optimistic view) and a pessimistic level implied by the draft SHF February 2006.

In accordance with the Western Corridor Plan, construction of the Transmission Gully Motorway is included in the 10 year plan. However, this results in the need for further funding of $300 million (on current designs) to be found in the next 10 years. The Regional Land Transport Committee has signalled this should come from a Crown loan and identified that a further $26 million for debt servicing will also need to be found. If servicing this debt were assigned to regional resources there would be affordability issues for the region.

Local share presents affordability issues for a number of projects and activities. Affected roading projects include Western Link Rd (KCDC), Grenada to Gracefield Stages 1 (WCC) and 2 (HCC). The Committee has addressed this by raising the subsidy rate for Kapiti's Western Link Rd to 90%, which reflects its high regional priority, and by raising the subsidy rate for Grenada to Gracefield to 75%. The passenger transport accessibility project (passenger transport activity 25, cost $90 million) will only proceed if new funding is found for this activity. These expectations require ongoing dialogue with various Crown agents if they are to be realised.

Furthermore, a much greater local share is required for public transport investment, typically 30-40%. So the local contribution required for the proposed public transport programme is over $400 million of the $1.3 billion allocated for public transport, compared with the $70 million of the $1.7 billion total allocation for roading. LTCCPs adopted in 2006, principally GWRC's, undertook this level of commitment to local share. Such a commitment requires a steady increase in regional transport rates (around 8% p.a.) and higher contributions from farepayers.

The following table sets out the 10 year funding summary for the Regional Transport Programme by source.

10-Year funding summary for RTP[63] ($M)			
Source	**Passenger transport**	**Road**	**Total**
N	618	228	846
L	410	70	480
R	70	165	235
C1	84	134	218
C2	47	212	259
C3	0	405	405
C4	0	80	80
New	90	26	116
Toll funded loan	0	115	115
Crown loan	11	300	311
Total	**1330**	**1735**	**3065**

10-Year funding gap ($M)	
Debt funded TGM	300
Toll funded TGM	115
Current funding shortfall	**415**

Table 18: Proposed 10 Year Funding Summary ($M).

[63] The Regional Transport Programme is a subset of the total transport expenditure.

13. Monitoring

This section sets out how Greater Wellington Regional Council proposes to measure the performance of the Regional Land Transport Strategy in achieving its vision and objectives.

The strategy's various action programmes, set out under the implementation plans and corridor plans, contain performance measures and targets specific to the actions or projects identified. In addition, the Regional TDM Strategy (see chapter 9) includes a series of 'system wide' performance indicators and targets to be monitored.

Targets are tools adopted 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 Regional Land Transport Committee focusing on agency progress towards implementing the projects, activities and actions set out in the strategy, as reported by each lead agency.

- An Annual Monitoring Report, required by section 182(1) of the LTA 1998, which documents implementation progress, as well as some 110 indicators to measure progress towards achieving the objectives of the strategy. The Annual Monitoring Report will be completed by 30 September each year, reported to the Committee and made publicly available.

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 (see RLTS strategy processes Figure 4, chapter 2).

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

GWRC's LTCCP 2006 – 2016 includes a number of long term targets to address transport sustainability. These targets relate to walking and cycling for short trips, road congestion, fuel consumption and mode of transport to work. Reporting against these targets will also be included in the Annual Monitoring Report.

14. Strategy review

14.1 Review timetable

The long term direction of the strategy is set by its vision, objectives and outcomes. This direction is supported by the policies outlined in chapter 7. The implementation plans and corridor plans 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 review to ensure they reflect new information as it becomes available.

Section 176(1)(b) of the LTA 1998 states that every regional land transport strategy must be renewed at least once every three years, but provides no guidance as to the scope of the renewal process.

The detailed components of the strategy are too complex to review at one time so, in order to allow the 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 sets out the proposed review programme for the strategy and its components.

Document	Last approved	Renewal due	Next review	Comments
Regional Land Transport Strategy	1999	Nov 2005	Underway – early 2007	Delayed to align with WRS & Western Corridor Plan processes
Regional Passenger Transport Plan	1999	n/a	Underway – early 2007	Aligned to RLTS programme
Ngauranga to Wellington Airport Corridor Plan	1999	2002	Underway – mid 2007	
Wairarapa Corridor Plan	Dec 2004	Late 2007	Early 2007 – mid 2008	
Hutt Corridor Plan	Dec 2004	Late 2007	Early 2007 – mid 2008	
Pedestrian Plan	May 2004	May 2007	Mid 2007 – mid 2008	Propose to delay commencement of the review until after RLTS has been adopted
Cycling Plan	May 2004	March 2007	Mid 2007 – mid 2008	Propose to delay commencement of the review until after RLTS has been adopted
Western Corridor Plan	April 2006	Mid 2009	Early 2008 – mid 2009	
Travel Demand Management Strategy	Dec 2005	June 2009	Mid 2008 – mid 2009	
Road Safety Plan	Sept 2004	Sept 2008	Mid 2009 – mid 2010	Propose delay to spread consultation & workload

Table 19: Proposed review programme for RLTS.

14.2 Scope of reviews

This RLTS will need to be renewed by 2010. There is currently no legislative or other guidance setting out the process that should be followed for this. It is therefore proposed that in 2009 the Regional Land Transport Committee undertakes a review of the strategy. Amendments to the strategy will then be made to ensure alignment with current legislation and to address current issues, based on latest information and experience to date. It is proposed that the 2010 renewal of the policy framework of the RLTS should be a less onerous and expensive process than this one has been and the next major review of the RLTS policy framework would occur in 2013.

Every review will involve assessment of the legislative and policy context, pressures and issues, technical and stakeholder consultation, and a submission process to the RLTC. Stakeholder consultation includes consultation with and through the Committee's community and interest group representatives.

Where more 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. Schedule 2 of LTA 1998 aligns RLTS consultation processes with relevant Local Government Act processes.

14.3 Implementation plans and corridor plans review

Plans will be reviewed in accordance with the previously outlined review programme. The plans will then be amended (renewed) to reflect current information and to address identified issues. The updated plans will form amendments to the RLTS.

The scope of future reviews will be at the discretion of future Regional Land Transport Committees, with a view to avoiding any unnecessarily long, onerous and costly studies or consultation processes.

Appendix 1

Glossary

Accessibility: the ability to obtain desired goods, services and activities.

Active modes (also known as *non-motorised transportation*)**:** include walking, bicycling, small-wheeled transport (skates, skateboards, push scooters and hand carts) and wheelchair travel.

Advanced Traffic Management System (ATMS): an array of institutional, human, hardware and software components designed to monitor, control and manage traffic on streets and highways.

Advanced Traveller Information System (ATIS): ATIS provides drivers with real time information about traffic conditions, accident delays, roadwork and route guidance from origin to destination. Some of the methods used for providing drivers with this information include traffic information broadcasting, pre-trip electronic route planning, on-board navigation systems and electronic route guidance systems.

Benefit Cost Ratio (BCR): an economic assessment tool that expresses benefits and costs as monetary values. A BCR greater than 1 is considered to be an economic investment as the value of benefits exceeds its cost.

Carbon dioxide (CO_2): a significant greenhouse gas produced by the combustion of motor vehicle fuels.

Central business district (CBD): a city's central commercial area as defined in district plans.

CO_2e: Carbon Dioxide equivalent.

Congestion pricing: road pricing that varies with the level of traffic on a congested roadway. Congestion pricing is intended to allocate roadway space efficiently.

Heavy commercial vehicle (HCV): trucks and buses.

High-Occupancy Vehicle (HOV): a passenger vehicle carrying more than a specified minimum number of passengers. HOVs include carpools, vanpools, and buses. HOV requirements are often indicated as 3+ (three or more passengers required) or 4+ (four or more passengers required).

HOV lane: a traffic lane limited to carrying high occupancy vehicles (HOVs) and certain other qualified vehicles.

Intelligent Transport System (ITS): an umbrella term for advanced automation in mobile vehicles.

Level of Service (LoS): a qualitative concept used to describe operational conditions within a traffic stream, and their perception by motorists and/or passengers (including congestion and other factors such as travel time, speed, freedom to change lanes, convenience, comfort and safety).

Long Term Council Community Plan (LTCCP): a local authority's strategic planning document developed under the Local Government Act 2002.

LoS (Level of Service): a qualitative concept to describe travel conditions experienced by users, usually related to congestion levels.

Mobility: the movement of people and goods.

Mode share: the proportion of total transport users using a particular transport mode.

National Land Transport Programme (NLTP): the mechanism through which Land Transport NZ allocates funds to approved organisations.

Passenger transport (PT): includes bus, train, ferry and total mobility services.

Passenger Transport Plan (PT Plan): a regional passenger transport plan as defined by section 47(1) and (2) of the Transport Services Licensing Act 1989.

Ramp metering: the use of a traffic control signal on a motorway on-ramp to control the rate at which vehicles enter the motorway network.

Regional Land Transport Committee (RLTC): a standing committee of Greater Wellington Regional Council established under section 178 of the Land Transport Act 1998. The committee is responsible for the preparation of the Regional Land Transport Strategy.

Regional Land Transport Strategy (RLTS): a statutory document that Greater Wellington Regional Council must produce. It is a key tool for setting transport policy and investment priorities by providing the blueprint for regional land transport investment over the next 10 years. It must contribute to an overall aim of achieving an integrated, safe, responsive and sustainable land transport system.

Regional Land Transport Strategy Annual Monitoring Report (RLTS AMR): the annual report produced by Greater Wellington Regional Council to monitor progress towards achieving the objectives set out in the RLTS.

Road pricing: the framework within which drivers pay the true cost of using roads. This includes social, economic and environmental costs, such as accidents, pollution, time delays, normally borne by the community. Examples of road pricing tools include cordon charges, congestion pricing, tolls roads and distance based pricing.

Single Occupied Vehicle (SOV): a vehicle that only has one person in it.

Travel Demand Management (TDM): various measures that seek to change travel behaviour including the time or form of travel, and increase transport system efficiency to achieve specific objectives, such as reduced traffic congestion, road and parking cost savings, increased safety, improved mobility for non-drivers, energy conservation and pollution emission reductions. Also called *Mobility Management.*

Travel plan: Travel plans provide options to encourage the use of sustainable forms of transport such as walking, cycling, public transport and car sharing within workplaces, schools and communities.

Vehicle Kilometres Travelled (VKT): a term to describe the combined vehicle kilometres over specified section of road.

Walking school buses: an initiative which involves groups of up to 30 children walking together to school accompanied by 2+ adult volunteers. Volunteers are usually teachers or caregivers who would have been driving children to school anyway.

Wellington Regional Strategy (WRS): a cooperative undertaking of the region's local authorities to define an economic growth framework.

Wellington Transport Strategic Model (WTSM): the Greater Wellington Regional Council strategic transport EMME2 computer model.

Appendix 2

Abbreviations

AMR	Annual Monitoring Report
ATMS	Advanced Traffic Management System
ATIS	Advanced Traveller Information System
BCR	Benefit Cost Ratio
CBD	Central Business District
CO_2	Carbon Dioxide
EECA	Energy Efficiency & Conservation Authority
GWRC	Greater Wellington Regional Council
HCV	Heavy Commercial Vehicle
HOV	High-Occupancy Vehicle
LTA	Land Transport Act
LTCCP	Long Term Council Community Plan
LTMA	Land Transport Management Act
Land Transport NZ	Land Transport New Zealand (previously LTSA and Transfund)
LoS	Level of Service
LTSA	Land Transport Safety Authority
MoT	Ministry of Transport
NEECS	National Energy Efficiency & Conservation Strategy
NLTP	National Land Transport Programme
NZTS	New Zealand Transport Strategy
PT Plan	Passenger Transport Plan
RCAs	Road Controlling Authorities
RLTC	Regional Land Transport Committee

RLTS	Regional Land Transport Strategy
RMA	Resource Management Act
RPS	Regional Policy Statement
SOV	Single Occupied Vehicle
TAs	Territorial authorities
TDM	Travel demand management
Transit	Transit New Zealand
VKT	Vehicle kilometres travelled
WRS	Wellington Regional Strategy
WTSM	Wellington Transport Strategic Model

Appendix 3

Schedule of railway lines and roads in the strategic transport network

The strategic transport network is made up of the region's key railway lines, state highways and strategic local roads. A key function of the strategic transport network is linking the region's centres and important destinations, in addition to connecting the greater Wellington region with the rest of New Zealand. When considering strategic transport and land use planning issues it is important to identify, plan and protect the current and future regional transport network, as set out in policy 7.6 c of this strategy.

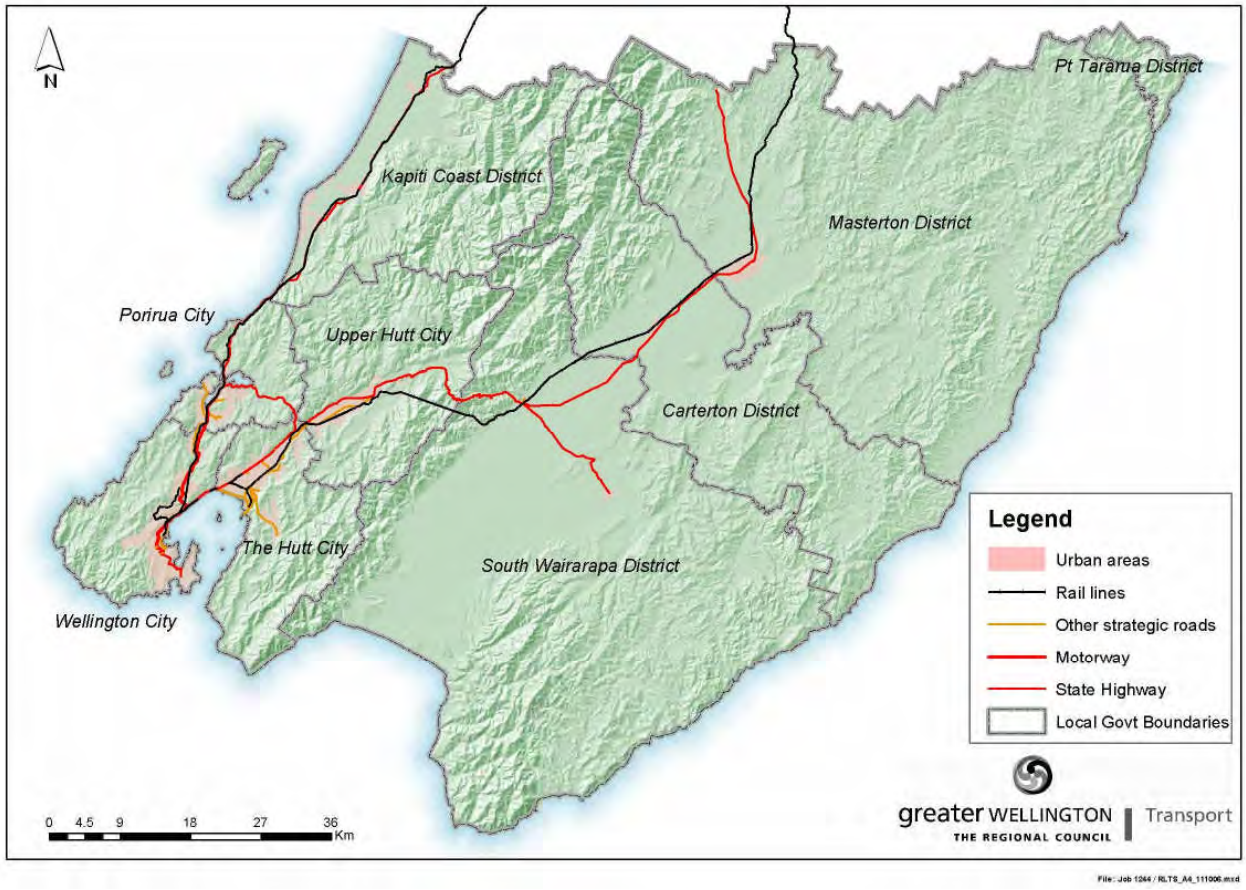


Figure A3.1 Strategic Transport Network.

Railway lines

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

State highways

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

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
Buckle Street
Cable Street
Cambridge Terrace
Customhouse Quay (Waterloo Quay to Jervois Quay)
Dufferin Street
Ghuznee Street
Jervois Quay
Kent Terrace
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
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 4

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Appendix 5

Regional Land Transport Committee members

Representative for:	Appointee	Alternate
Economic Development	Charles Finny (Wellington Chamber of Commerce)	Jeremy Harding
Safety & Personal Security	Howard Royds (AA Wellington District Council)	John Christianson
Public Health	Dr Stephen Palmer (Regional Public Health)	Janet McKay
Access and mobility	John Anderson	Maurie Bognuda
Environmental Sustainability	Mike Mellor (Living Streets Aotearoa)	Paula Warren
Cultural interests	Tom Paku	Jack Rikihana
Kapiti Coast District Council	Mayor Alan Milne	Cr Gordon Strachan
Porirua City Council	Mayor Jenny Brash	Cr Robert Shaw
Wellington City Council	Mayor Kerry Prendergast	Cr Celia Wade-Brown
Hutt City Council	Mayor David Ogden	Cr Joy Baird
Upper Hutt City Council	Mayor Wayne Guppy	Cr Keith Barnard
South Wairarapa District Council	Mayor Adrienne Staples	Cr Viv Napier
Carterton District Council	Cr David Lowes	Cr Michael Blundell
Masterton District Council	Mayor Bob Francis	Cr Roddy McKenzie
Land Transport New Zealand	Ian Hunter	
Transit New Zealand**	Graham Taylor	
ONTRACK**	Mark Gullery	Michael Curran
GWRC	Cr Terry McDavitt (chair)	
GWRC	Cr Ian Buchanan	
GWRC	Cr Glen Evans	
GWRC	Cr Margaret Shields	
GWRC	Cr Chris Turver	
GWRC	Cr Fran Wilde (deputy chair)	
** speaking but not voting rights		

Appendix 6

Analysis of strategy actions against objectives

The analysis in the following table assesses each action in of the strategy's implementation and corridor plans to identify any positive contribution they make towards the 6 objectives of the strategy. For the purpose of this exercise actions identified as short-medium term (to 2016) in corridor plans have been included, those beyond 10 years have not.

The analysis is based on a number of assumptions which recognise that a contribution towards one objective often has common links and secondary contributions towards other related objectives. An explanation of the key linkages and assumptions is provided below:

Safety and public health

Those actions which improve safety in a way which will significantly reduce the likelihood of road crashes occurring are therefore also considered to contribute positively to the public health objective through trauma and injury prevention.

Access and economic development

Those actions which reduce congestion, thereby improving access and reliability of the road network are considered to have an associated positive contribution towards assisting economic and regional development.

Uptake of walking and cycling

Actions which support the uptake of walking and cycling, or encourage a mode shift from private cars to active modes, are considered to have a number of associated positive benefits. These include increased access opportunities, increased physical activity, safety in numbers, reduced vehicle emissions and reduced fuel use. Therefore, any action which is expected to significantly increase walking and cycling uptake is considered to have an associated positive contribution to public health, safety, and environmental objectives.

Passenger transport

Passenger transport journeys usually have an associated walking element at both ends of the journey. Passenger transport is also a relatively safe mode compared with travel by private car. Therefore actions which support the uptake of passenger transport, or encourage a mode shift from private cars to passenger transport modes, are considered to make a positive contribution to public health and safety objectives.

Travel demand management

Travel demand management and travel planning actions are generally aimed at improving travel efficiency, increasing access to a range of travel options, and encouraging use of modes other than single occupant private cars. As a result, these actions are expected to have a number of associated benefits and therefore contribute positively to a number of objectives. These include reduced traffic congestion resulting in improved access and reliability, which assists regional and economic development. More efficient travel behaviour has associated environmental benefits. Increasing access to active modes and passenger transport can result in public health and safety benefits.

Affordability

Large investments (greater than $10 million) included in the Regional Transport Programme are considered to be consistent with regional affordability.

Other notes

There are a number of actions where no contribution to objectives has been identified. This is because the action relates to advocacy (A) data collection (D) or, planning/programming (P). These actions will not directly contribute towards an objective until associated tangible interventions are implemented.

RLTS Objectives / RLTS Actions	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 RTP is affordable to the regional community	
Road Safety Action Programme							
Safety Management Systems		✓	✓	✓			
Road Safety Action Plans		✓	✓	✓			
Road Safety Co-ordination		✓	✓	✓			
Risk Targeted Patrol Plans		✓	✓	✓			
Adequate RCA Road Safety Funding		✓	✓	✓			
Cycling Action Programme							
Local Level Programme Implementation		✓	✓	✓	✓		
Coordinated Regional Programmes		✓	✓	✓	✓		
Actively participate in national level programmes		✓	✓	✓	✓		
Driver Education		✓	✓	✓	✓		
Cycling Skills for Adults		✓	✓	✓	✓		
Kiwi Cycling (Bikewise)		✓	✓	✓	✓		
Regional Cycling Network		✓	✓	✓	✓		
RCA Work Programmes		✓	✓	✓	✓		
Public Transport Integration			✓	✓	✓		
Cycle integration survey							D
Regional Cycling Maps		✓	✓	✓	✓		
Perception Survey							D
Group Rides		✓	✓	✓	✓		
Webpage		✓	✓	✓	✓		

RLTS Actions \ 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 RTP is affordable to the regional community	
Pedestrian Action Programme							
RCA Pedestrian Review							P
Public Transport Pedestrian Review							P
Public Transport Pedestrian Programme Implementation		✓	✓	✓	✓		
Land Development Review		✓	✓	✓	✓		
Walking School Bus/Safe Routes to School		✓	✓	✓	✓		
Local Level Programme Implementation		✓	✓	✓	✓		
Actively participate in national level programmes		✓	✓	✓	✓	✓	
Information sharing, perception survey & AMR							D
Travel Demand Management Strategy							
Integrated Network Management Plan	✓	✓	✓	✓	✓		
Transit New Zealand TDM Strategy	✓	✓	✓	✓	✓		
Awareness campaign	✓		✓	✓	✓		
Integrated land use and transportation	✓		✓	✓	✓		
Travel plans	✓	✓	✓	✓	✓		
Perception survey							D
Road pricing advocacy & investigation							A
Regional participation at national level	✓	✓	✓	✓	✓		
National Rideshare programme	✓		✓	✓	✓		
Freight Action Programme							
Facilitate rail based transfer of logs to CentrePort	✓	✓	✓	✓	✓		
Protect short haul rail freight							A
Improve long haul rail freight efficiency							A
Western Corridor Plan – Land use integration							
Review District Plan land use controls to align with the outcomes of the Wellington Regional Strategy, particularly in the vicinity of the junction of TGM and SH58	✓		✓	✓	✓	✓	
Implement relevant initiatives of the Regional Travel Demand Management (TDM) Strategy (December 2005)	✓	✓	✓	✓	✓		
Develop and implement ATMS and HOV proposals	✓	✓	✓	✓	✓		
Western Corridor Plan – Passenger transport							
Establish Lindale Rail Station including park and ride facilities	✓	✓	✓	✓	✓	✓	
Establish Raumati Rail Station including park and ride facilities	✓	✓	✓	✓	✓	✓	

RLTS Actions \ 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 RTP is affordable to the regional community	
Establish double track from MacKays to Lindale	✓	✓	✓	✓	✓	✓	
Purchase additional rail units	✓	✓	✓	✓	✓	✓	
Western Corridor Plan – Roading							
Proceed with geotechnical work on Transmission Gully to address cost risk issue							D
Develop a corridor management plan for SH58 east of Pauatahanui consistent with the RLTS							P
Undertake all necessary preparatory work to ensure Transmission Gully Motorway (TGM) can be built as soon as practicable							P
Construct TGM as a toll road	✓	✓	✓	✓			
Install a median barrier along the coastal section of Centennial Highway	✓	✓	✓	✓		✓	
Construct Western Link Road stage 1	✓		✓	✓		✓	
Construct Western Link Road stage 2	✓		✓	✓		✓	
Implement safety improvements in Pukerua Bay		✓		✓			
Construct Western Link Road stage 3	✓		✓	✓		✓	
Develop the Waikanae upgrade project	✓		✓			✓	
Develop and construct Otaihanga Interchange		✓		✓		✓	
Install traffic signals at SH1/Paekakariki		✓		✓			
Investigate opportunities to incorporate Tawa Interchange upgrade in the scope of the Gracefield – Grenada project							
Design, obtain consents and construct Grenada to Gracefield link stage 1	✓		✓	✓		✓	
Western Corridor Plan – Walking and cycling							
Ensure appropriate opportunities are taken to include walking and cycling improvements into all projects		✓	✓	✓	✓		
Investigate inclusion of walking and cycling safety works on current coastal route consistent with the present and future function of the road							P
Hutt Corridor Plan - Travel Demand Management							
Implement relevant initiatives of the Regional Travel Demand Management (TDM) Strategy (December 2005)	✓	✓	✓	✓	✓		
Investigate the provision of a reversible HOT lane between Petone and Ngauranga							P
Construct a reversible HOT lane between Petone and Ngauranga	✓		✓		✓	✓	
Hutt Corridor Plan - Passenger transport							
Investigate increasing Upper Hutt - Wellington rail operating speed and frequency at peak from 20 minutes to 10 minutes and interpeak frequency							P

RLTS Actions \ 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 RTP is affordable to the regional community	
from 30 minutes to 15 minutes							
Investigate increasing Melling link rail frequency at peak and interpeak periods, especially extending the evening peak service							P
Hutt Corridor Plan - Roading							
Develop an implementation plan for Grenada to Gracefield links and the Petone-Ngauranga reversible HOT lane.							P
Construct SH2 Dowse – Petone interchange	✓	✓	✓	✓		✓	
Design and construct SH2/SH58 grade separation	✓	✓	✓	✓		✓	
Construct a link road between Grenada and Petone (Stage 1 of Grenada – Gracefield)	✓		✓	✓		✓	
SH2 intersection safety improvements		✓		✓		✓	
Hutt Corridor Plan - Walking and cycling							
Scope and design a two-way cycle and pedestrian facility between Petone and Ngauranga on the seaward side of the rail line							P
Construct a two-way cycle and pedestrian facility between Petone and Ngauranga on the seaward side of the railway line. This is a requirement before the improvements on SH2 between Petone and Ngauranga can be completed		✓	✓	✓	✓		
Wairarapa Corridor Plan - Land use integration							
Ensure provisions in the District Plan facilitate the development of a log transfer and storage site at Waingawa	✓	✓	✓	✓	✓		
Wairarapa Corridor Plan - Travel Demand Management							
Implement relevant initiatives of the Regional Travel Demand Management (TDM) Strategy (December 2005)	✓	✓	✓	✓	✓		
Wairarapa Corridor Plan - Passenger transport							
Replacement of all Wairarapa carriages	✓	✓	✓	✓	✓	✓	
Upgrade railway stations on the corridor			✓				
Provide additional bus connections to train services			✓				
Provide additional inter-peak bus services between Masterton & Featherston, including connections to Masterton Hospital	✓	✓	✓	✓	✓		
Provide some Wairarapa bus services on Sundays			✓				
Expand Masterton town bus services from 2 days to 5 days per week	✓	✓	✓	✓	✓		
Introduce initial Wairarapa integrated ticketing products for bus and rail services			✓				
Introduce Metlink signage			✓				
Wairarapa Corridor Plan - Roading							

RLTS Actions \ 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 RTP is affordable to the regional community
Complete design and construction of the "Muldoons Corner" section of the Rimutaka Hill Road		✓				✓
Replacement of the Waiohine River Bridge		✓	✓			
Construct northbound and southbound passing lanes between Featherston and Greytown		✓	✓			
Construct northbound and southbound passing lanes between Masterton and Carterton		✓	✓			
Extend the seal on rural local roads of special tourist or forestry significance where cost effective	✓	✓	✓	✓		
Wairarapa Corridor Plan - Walking and cycling						
Ensure appropriate opportunities are taken to include walking and cycling improvements in all projects		✓	✓	✓	✓	
Wairarapa Corridor Plan - Freight						
Develop a log transfer and storage site at Waingawa as a commercial partnership	✓	✓	✓	✓	✓	
Investigate and develop stock effluent sites at key locations				✓	✓	

Table A6.1 Links between strategy objectives and actions.

Analysis of Travel Demand Management (TDM) Strategy actions against TDM outcomes

Section 175(2)(o) of the LTA requires every Regional Land Transport Strategy to include a demand management strategy.

The analysis in the following table assesses each action in the TDM Strategy (Chapter 9.5) against TDM outcomes sought. The table identifies how each action contributes towards one or more outcome.

The analysis is based on a number of assumptions which recognise that a contribution towards one outcome often has common links and secondary contributions towards other related outcomes.

There are a number of actions where no contribution to objectives has been identified. This is because the action relates to advocacy (A) data collection (D) or, planning/programming (P). These actions will not directly contribute towards an objective until associated tangible interventions are implemented.

An analysis of all strategy actions in contributing towards all strategy outcomes is available as a background document to this strategy.

TDM Outcomes / TDM Actions	Limited car traffic growth	Increased journey to work mode share by public transport and active modes	Improved integration between transport modes	Reduced greenhouse gas emissions	Reduced fuel consumption	Reduced road congestion	Increased vehicle occupancy	Increased resident satisfaction with perceived level of road and rail network reliability	Improved land use and transport integration (guided by the outcomes of the WRS and local authority urban development strategies)	Minimise adverse impact on economic development (guided by the outcomes of the WRS)
Integrated Network Management						✓		✓		✓
Transit New Zealand TDM Strategy						✓	✓	✓		✓
Awareness campaign	✓	✓		✓	✓	✓	✓			
Integrated land use and transportation	✓	✓	✓	✓	✓				✓	✓
Travel plans	✓	✓	✓	✓	✓	✓	✓			✓
Perceptions survey										
Road pricing advocacy & investigation										
Regional participation at national level	✓	✓	✓	✓	✓	✓	✓		✓	✓
National Rideshare programme	✓			✓	✓	✓	✓			

Table A6.2 Links between TDM strategy and actions.