

Regional Transport - an integrated system that supports the region's prosperity

Strategic options consultation document

12 July 2005

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1. What is the purpose of this document?

The purpose of this document is to tell you about the Wellington Regional Land Transport Strategy, its relationship to the Wellington Regional Growth Framework and to seek your feedback. It represents initial thinking of the Regional Land Transport Committee about the transport needs of the region over the next ten years, but includes longer term considerations. It is a companion to the Wellington Regional Growth Framework discussion document.

Feedback from this Strategic Options consultation document will be used by the Regional Land Transport Committee in forming the next Regional Land Transport Strategy which is due to be released in mid 2006.



2. Regional transport context and issues

2.1 What is the Wellington Regional Land Transport Strategy and why do we need it?

The Regional Land Transport Strategy (RLTS) is a statutory document¹ that Greater Wellington Regional Council must produce. It is a key tool for setting transport policy and investment priorities through 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 as described in the New Zealand Transport Strategy 2002. The RLTS will support the land use and transport initiatives that flow from the Wellington Regional Strategy process.

The current RLTS was adopted in 1999. Since then it has had many updates:

- Western Corridor Implementation Plan 2000 (currently under review)
- Wairarapa Corridor Plan 2003
- Hutt Corridor Plan 2003
- Regional Cycling Strategy 2004
- Regional Pedestrian Strategy 2004
- Regional Road Safety Strategy 2004.

Set out below are the stages we need to go through before the new RLTS is launched in 2006.

August 2005

• Strategic options consultation alongside WRS Growth Framework

August / September 2005

• Receive public feedback

October – December 2005

 Public feedback collated and used in developing a draft Wellington Regional Land Transport Strategy document

Mid 2006

Wellington Regional Land Transport Strategy adopted

2.2 Our links to the Wellington Regional Strategy

Land use and transport are important considerations for economic and social functioning and future development of our region. Transport issues are identified in three of the focus areas highlighted in the Growth Framework discussion document. The Wellington region will be making major investments in transport infrastructure and services over the next 10 years and beyond so how these relate to our strategic direction is important.

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¹ Under the Land Transport Act 1998

Of particular relevance is the Growth Framework development that is underway. The strategic options consultation document, which forms part of the Regional Land Transport Strategy (RLTS) review process, is aligned with the timetable for consultation and adoption of the Growth Framework. These are coordinated but separate processes.

2.2.1 Regional transport issues

The greater Wellington Region has developed its urban form along two main corridors with their integrated transport systems leading into Wellington City at the focus of these two radial corridors.²

The first route consisting of State Highway 1 (SH1) and the main trunk railway line runs due north linking through to Kapiti, then beyond to the central and western North Island. The second route to the north-east, consisting of SH2 and the railway line through to the Hawkes Bay, links to the Hutt Valley, the Wairarapa, and beyond to the eastern North Island.

These two routes converge at Ngauranga and lead into Wellington City and the port. Links then continue through Wellington CBD to the Main Hospital in Newtown and Wellington International Airport at Miramar.

Network reliability remains a significant issue, affecting passenger transport, private vehicle users, and freight movement. The Wellington Regional economy is currently dominated by sectors which are sensitive to loss of efficiency when the network fails, more so than congestion.

2.2.2 Wellington central business district

The efficient movement of people and freight to and through Wellington CBD is an important issue for the region to address. Access to the Hospital and Wellington International Airport require most of the regions residents to cross the Wellington CBD and are impacted by the current congestion problems on this part of the network.

2.2.3 East west connections

There is a need to improve transport and nodal integration between secondary centres within the region. Currently road connections between the Hutt Valley and State Highway One are limited. Likewise public transport connections between Hutt City and Porirua City involve travel along the arterial route into Wellington City and then a transfer back out to Porirua.

2.2.4 North south reliability

Wellington's north-south network has a national strategic importance in terms of providing a primary access route into the region and to Wellington's CBD. Consultation undertaken as part of the Western Corridor study identified safety and reliability as key factors for the north - south strategic transport network.

Currently corridor journey times within this network have a high degree of unreliability. The route is prone to closure following crashes, provides limited access for emergency

² Wellington Transport Package: Social & Economic Impacts, Wellington Transport Project Group, Nov 2004.

vehicles and is vulnerable to landslip and flooding. There are limited alternative routes particularly for freight.

The single track section north of Pukerua Bay is the weak point on the existing rail corridor. As with the highway the rail corridor is vulnerable to slips. The current train scheduling of approximately 20 minute frequency from Paraparaumu is at the upper limit of the current track configuration, due to the sections of single track.

2.2.5 Passenger transport

The region's passenger transport system (bus and rail) forms a key component of the region's strategic network, providing important links both into and through the Wellington CBD from around the region. Passenger transport mode share on the critical strategic corridors is around 30% in the morning peak. This is the highest passenger transport mode share seen in any region of the country.

The patronage of the region's bus services continues to grow, particularly in off-peak periods. The Wellington region has an aging rail network that will need significant investment in coming years to maintain services at current levels. Greater Wellington's amended 2003-2013 Long Term Council Community Plan now provides sufficient funding to support the passenger rail system.

2.2.6 Freight

The movement of freight within the Wellington Region forms another important element of the regions strategic transport network. The regions freight network consists of road, rail, and port, with air freight playing a fairly minor role.

Road freight contributes to a large proportion of the freight movement within the region and timing needs associated with freight movement mean that road freight is contributing to the regions peak period congestion. Likewise, the effects of congestion on freight movement have been signalled as a problem which is likely to increase with the growth in freight movement volumes. The majority of freight journeys in the Greater Wellington Region tend to be relatively short meaning freight movement is not easily transferred to rail.³

Port traffic at the Wellington port (Centreport) is expected to increase in line with current trends, with most freight arriving or departing by road. In contrast the use of rail for freight has been in decline to date.

2.2.7 Safety

Despite extensive improvements to road safety made in the 1990's 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* strategy⁴.

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³ Wellington Transport Package: Social & Economic Impacts, Wellington Transport Project Group, Nov 2004.

⁴ Regional Road Safety Strategy, Sept 2004.

2.2.8 Transport sustainability

Ensuring the sustainability of the regions 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 possible. Wellington's future transport system will need to minimise congestion, travel time delay, and the impact of travel on the environment (particularly greenhouse gas emissions).

2.3 What do you think?

Have we adequately described the region's transport issues?



Our Vision and the outcomes we want

The Land Transport Act 1998, requires us to identify land transport outcomes sought by the region and strategic options for achieving those outcomes. The Regional Land Transport Committee has developed the following draft vision, objectives and outcomes.

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

Objective 1 Assist economic and regional development

Aid the development of national and regional economic prosperity; and foster the housing, employment, education, health and recreation aspirations of the regional community.

Objective 2 Assist safety and personal security

Achieving a safer community through a land transport system that improves or achieves regional road casualty targets and contributes to a sense of individual and community security when using the transport system.

Objective 3 Improve access, mobility and reliability

Transport should provide for the access and mobility needs of our regional community. Improving them is the primary purpose of a Regional Land Transport Strategy.

Improving access enables social participation, inclusion and independence and improving mobility ensures the availability of realistic transport choices for the individual or community, including affordability and equity of cost considerations.

Objective 4 Protect and promote public health

Provide a transport system that allows for social participation and interaction, and healthy communities via reduced transport impact on natural resources, and increased uptake of active mode use, particularly for short trips.

Objective 5 Ensure environmental sustainability

Avoid, remedy or mitigate the negative impacts of transport on the environment, including encouragement of energy efficiency, reduced CO₂ emissions, and high quality project and new development design.

Objective 6 Consider economic efficiency and affordability

Economic efficiency and funding availability for new transport packages.

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4. Land Transport Outcomes

No single outcome can be seen in isolation. All outcomes must be considered as part of an integrated strategic view of the region's transport system. The proposed land transport outcomes are as follows:

4.1 Roading

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

4.2 Passenger transport

- Maintained peak period mode share
- Enhanced off peak mode share and community connectedness
- Improved accessibility
- Improved customer satisfaction

4.3 Travel Demand Management

- Reduced traffic demand
- Reduced greenhouse gas emissions
- Reduced fuel consumption
- Reduced road congestion
- Improved journey to work mode share
- Increased vehicle occupancy
- Increased resident satisfaction
- More efficient land use (to be defined by the WRS process)
- No adverse impact on economic development (to be defined by the WRS process)

4.4 Pedestrian

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

4.5 Cycling

- Improved level of service for cycling
- Increased proportion of all trips cycled
- Improved perception of cycling safety, convenience and ease
- Reduced relative risk of cycling as a transport mode

4.6 Road safety

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

5. Regional land transport strategic options

5.1 \$3.4B affordability envelope

An estimate of Wellington's ten year total strategic transport investment envelope has been prepared⁵ and includes the additional \$660M Government funding announced on 5 July 2005. 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 (\$350M) plus usual replacements and improvements (\$450M). Costs are funded in current territorial authority LTCCP's 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 the current 1.7% annual patronage growth rate. 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) is likely to include enhancements to walking and cycling infrastructure, improved traffic management and travel planning initiatives. An investment of \$30M for TDM over the next 10 years was signalled in the Government's announcement of increased funding for Wellington region's transport needs on 27 January 2005.

The affordability envelope for the region over the next ten years is estimated to be \$3432M.

5.2 Strategic options

Three indicative strategic scenarios have been developed within this affordability envelope, they are planned investment, advanced passenger transport and advanced roading.

The planned investment scenario is set out in the affordability envelope section above.

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 in travel demand management, including walking and cycling facilities. Such a change would be paid for by reducing road improvements.

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 $^{^{\}mbox{\scriptsize 5}}$ All private costs are excluded e.g. motor vehicle purchase.

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.

Strategic options: Investment by component (\$M)

Component	Advanced passenger transport	Planned investment	Advanced roading
Highway maintenance	200 (6%)	200 (6%)	200 (6%)
Local roading	800 (23%)	800 (23%)	800 (23%)
Roading improvements	860 (25%)	1060 (31%)	1260 (37%)
Passenger rail	1019 (30%)	889 (26%)	770 (22%)
Bus services	503 (15%)	453 (13%)	392 (11%)
Travel demand management	50 (1.5%)	30 (0.9%)	10 (0.3%)
10 year total	3432	3432	3432

Strategic options: Investment by mode (\$M)

Mode	Advanced passenger transport	Planned investment	Advanced roading
Roading	1860 (54%)	2060 (60%)	2260 (66%)
PT & TDM	1572 (46%)	1372 (40%)	1172 (34%)
10 year total	3432	3432	3432

What the investment analysis overlooks is that the 'advanced passenger transport' scenario would be more expensive for the regional community. This is because state highway investments are 100% crown funded, whereas passenger transport investments normally require 40% to 50% local contribution. Therefore, increasing PT investment by some \$200M would require \$80M to \$100M more funding, most likely from regional transport rate and/or fare increases.

5.3 Outcome analysis

The three scenarios have been analysed using the region's strategic transport model and assessed against the draft regional land transport strategy objectives and outcomes. Each objective and outcome has been assessed individually. Indicators have been repeated under different objective/outcome viewpoints. This is not double counting because the ticks and crosses are not added

Analysis against RLTS objectives

RLTS objective	Indicator AM peak compared to 2001 unless stated otherwise	Advanced passenger transport	Planned investment	Advanced roading
Assist economic and regional development	Reduced congestionReduced HCV costs	**	- -	_ _
Assist safety and personal security	 Reduced road traffic injuries Qualitative assessment of personal security improvements 	√ ✓	✓ ✓	- 🗸
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 Decreased CO₂ emissions 	\\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\	- - - ***	* - * * * * * * * * * * * * * * * * * *
Ensure environmental sustainability	Decreased CO ₂ emissions	××	xxx	×××
Consider economic efficiency and affordability	Package BCR >1Package cost in line with affordability envelope	√ √ √	*	/ / /

^{✓✓} strongly positive — neutral ** strongly negative (*** very strongly negative)

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Analysis against RLTS outcomes

RLTS outcome	Indicator	Advanced	Planned	Advanced
	AM peak compared to 2001 unless stated otherwise	passenger transport	investment	roading
Roading				
 Maintained vehicle travel times between communities and regional destinations 	Strategic road network average speed	-	-	-
Reduced road congestion	Strategic road network % at LoS E & F	××	-	-
Improved reliability of the strategic roading network	Subjective considering LoS and availability of alternative routes	×	√	✓
Passenger Transport				
Maintained peak period	Peak PT mode share	* *	-	×
 mode share Enhanced off peak mode share and community connectedness 	Inter peak PT mode share			- 1
Improved accessibility and customer satisfaction	Subjective considering new services, frequency & standard	*	Y	××
Travel Demand Management				
Reduced traffic demandReduced greenhouse	Total car tripsTotal CO₂	**	**	**
gas emissions • Reduced fuel	Total fuel	××	×××	***
consumptionReduced road congestion	Strategic road network % at LoS E & F	××	-	_
Improved journey to work mode share	PT JTW mode share to Wellington CBD	✓✓	✓	-
Increased vehicle occupancy	Subjective considering likely TDM measures	✓✓	✓	-
Increased resident satisfaction	Subjective considering congestion and PT LoS	_	✓	×
 More efficient land use (to be defined by the WRS process) 	Subjective considering land use changes	_	-	-
No adverse impact on economic development (to be defined by the WRS process)	Subjective considering the transport investment programme	√	√ √	√ √

RLTS outcome	Indicator	Advanced passenger	Planned investment	Advanced roading
	AM peak compared to 2001 unless stated otherwise	transport		. ou ug
Pedestrian				
 Increased level of service for pedestrian facilities 	 Subjective considering LTCCP ped investment 	✓	✓	✓
 Increased mode share for pedestrians, especially for short trips 	 Subjective considering ped investment and PT accessibility 	✓	√	-
Increased safety for pedestrians	Subjective considering general safety investment	✓	✓	✓
 Improved perception of pedestrian safety for children 	Subjective considering school journey programmes	✓	√	✓
Cycling				
Improved level of service for cycling	Subjective considering LTCCP cycle investment	×	×	*
 Increased proportion of all trips cycled and perception of cycling safety, convenience and 	Subjective considering increase in car trips	**	××	××
ease				
 Reduced relative risk of cycling as a transport mode 	Subjective considering cycle LoS	×	*	×
Road Safety				
 Improved regional road safety and safer roading environment 	Reduced road traffic injuries	√√	✓	_
 Improved perceptions of road safety 	Subjective considering road safety improvements	✓	✓	✓

^{✓✓}strongly positive — neutral ×× strongly negative (××× very strongly negative)

If you want to know more about the detail behind this analysis you can visit our website to view our technical report.

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6. Conclusions

The main trade off is between roading investment which reduces congestion; and PT enhancement which provides an alternative to car use.

All three scenarios fail to reduce greenhouse gas emissions compared to the 2001 level due to increasing population and vehicle usage. Even the best performing 'Advanced Passenger Transport' scenario produces 21% more CO₂.

Pedestrian and road safety outcomes are expected to improve under all scenarios. Cycling is expected to decline in all scenarios.

The advanced PT scenario improves PT mode share which has significant public health and safety benefits but significantly worsens congestion because PT improvements do not fully overcome the community's preference for private vehicle travel.

The planned investment scenario reduces congestion and retains PT mode share. It improves most indicators with the exception of increased fuel use and consequential CO₂ emissions.

The advanced roading scenario does not perform as well as the planned investment scenario. It results in a significant degradation of PT services and mode share without making any overall decongestion improvement.

This analysis suggests that the planned investment scenario is likely to provide the best solution to Wellington's transport problems without having a negative impact on our passenger transport system. However, it is not possible, under the current affordability envelope, to have any significant impact on greenhouse gas emissions and related indicators compared to 2001 levels.

7. Want to know more?

See our Strategic Options technical report at www.gw.govt.nz.

7.1 What do you think?

Do you support the vision, objectives and outcomes?

What do you think about the strategic options?

7.2 What happens now?

We want your feedback on this document. To recap, the transport issues and strategic options represent our initial thinking on the direction for regional transport over the next ten years and beyond.

Do you agree with our thinking? Do you have other ideas for ensuring our transport system meets the community's needs?

Let us know what you think by completing the relevant section of the website. Alternatively you can complete the form that comes with this booklet and return it in the post.

7.3 What happens to your feedback?

Your feedback will be gathered and reported to the Regional Land Transport Committee who will use it to help shape the new Regional Land Transport Strategy. This will occur over the rest of 2005 and into early 2006.

A further public consultation process will take place in 2006 when our thinking is translated to a full draft RLTS. The Strategy will set out detailed direction and action plans, including what the various initiatives are, and how they will be achieved.

Your views can also help shape the council's 2006 - 2016 long term plans and the Wellington Regional Strategy.

7.4 Want to know more?

See the section on the relationship and links to Long Term Council Community Plans and other regional processes by visiting the WRS Process section at www.wrs.govt.nz

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Appendix 1

Sustainable transport system principles

1. Creates an integrated land transport system

That transport infrastructure provides greater transport choice, integration and flexibility

2. Provides equitable access for all sectors of the community

That people have access to social, economic, educational and recreational activities and freight moves around efficiently

3. Supports a thriving economy

That the transport system maximises the efficient movement of people, goods and services

4. Copes easily with change

That the transport system is responsive to changing demands and technologies and provides a range of opportunities and alternatives

5. Assists safety and personal security

The transport network provides for a social environment that is safe

6. Is environmentally sustainable

The transport system is managed in a way that optimises allocation and use of resources, including non-renewable energy sources.

7. Protects and promotes public health

Allows for social participation and interaction and healthy communities and increases the uptake of physical activity (sport, walking and cycling).

Appendix 2

Glossary

Benefit Cost Ratio (BCR) – an economic assessment tool which 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 (CO₂) – 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.

Heavy commercial vehicle (HCV) – trucks and buses.

LoS – Level of service, a qualitative concept to describe travel conditions experienced by users, usually related to congestion levels.

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

Mode share – the proportion of total transport users that use a particular transport mode.

Passenger Transport (PT) – includes bus, train, harbour ferry and total mobility services.

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 through 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 Committee (RLTC) – a 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.

Travel demand management (TDM) – measures that seek to change travel behaviour and either collectively or individually change the need, time or form of travel.

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

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