Draft Ngauranga to Wellington Airport Corridor Plan

May 2008

Introduction

This plan defines a number of packages for improvements to the transport infrastructure with in the Ngauranga to Wellington Airport Corridor. The packages have been grouped into measures that should be completed over the next ten years, and longer term measures that should be developed over the next ten years and then programmed to be implemented as conditions and funding allows.

The key priorities for this corridor are:

- Travel demand management measures to reduce the number of car trips (particularly sole occupant) and encourage alternatives such as public transport, walking, cycling and telecommuting
- A high quality, high frequency public transport spine to cater for travel growth, reduce vehicle congestion, improve liveability; guide and support urban intensification, and to provide resilience against fuel supply and price shocks
- A high quality 'predictable' vehicle 'ring route' for inter-regional accessibility, economic linkages, time critical travel and to support the PT network
- Walking routes to cater for the substantial numbers of people who walk and encourage growth in these numbers, also essential for urban vitality
- Cycling routes and facilities to facilitate the development of this small but growing transport mode.

The Ngauranga to Wellington Airport Corridor

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 North Island Main Trunk and the Wairarapa lines merge and through to Wellington City rail terminals.

Strategic Context

The long term vision for this corridor as described in the RLTS 2007-2016 is:

Along the Ngauranga to Wellington Airport Corridor, access to key destinations such as CentrePort, Wellington City CBD, Newtown Hospital and the International Airport will be efficient, reliable, quick and easy. Priority will be given to passenger transport through this corridor, particularly during the peak period. Passenger transport will provide a very high quality, reliable and safe service along the Wellington City growth spine and other key commuter routes. The road network will provide well for those trips which can not be made by alternative modes and will allow freight to move freely through the corridor. Traffic congestion through the corridor will be managed at levels that balance the need for access against the ability to fully provide for peak demands due to community impacts and cost constraints. Maximum use of the existing network will be achieved by removal of key bottlenecks on the road and rail networks.

The Wellington Regional Land Transport Strategy (RLTS) also contains the following region wide strategic outcomes:

- Increased peak period passenger transport mode share
- Increased mode share for pedestrians and cyclists
- Reduced greenhouse gas emissions
- Reduced severe road congestion

- Improved regional road safety
- Improved land use and transport integration
- Improved regional freight efficiency.

Wellington City Council's Transport and Urban Development Strategies seek to achieve the following outcomes:

- Concentrate future population and employment growth along the Growth Spine, supported by:
  - A dedicated, high quality and high frequency public transport corridor
  - A high quality state highway route with dependable travel times
  - Bus priority along connecting arterial routes
- Convenient and safe walking and cycling routes
- Limit commuter parking in the Central Area
- Improve access to the waterfront.

Development of the plan

Greater Wellington Regional Council, Wellington City Council and Transit New Zealand and have jointly undertaken a strategic study of the corridor which aimed identify the major transport issues throughout this corridor and the most appropriate methods for addressing those issues. The plan development has followed the following process:

- Phase 1 of the study identified issues for the corridor and was completed in May 2006.
- Phase 2 proposed options to address the issues and was completed April 2008.
- Phase 3 involves the development of a proposed corridor plan, which is now released for consultation. Submissions will close on 23 July 2007.
- The Regional Land Transport Committee will consider the submissions, including the hearing of oral submissions, and amend the draft plan as considered appropriate. A final draft plan will be produced. Comment on the final draft plan will be sought from financial stakeholders prior to adoption of a final corridor plan in October 2008.

An adaptable and responsive approach

There are many significant factors that influence travel in the region. There is some uncertainty as to the outlook for some of these factors. Therefore this Plan has been developed to commit to short term developments to address pressing needs and to signal the likely changes needed to address longer term requirements. The timing of longer term changes will be reviewed as significant trends become evident.

The scope of the longer term projects et out in the Plan are based on a number of assumptions which are likely to affect the growth of travel demand. These assumptions are set out below and underpin the transport modelling upon which the Ngauranga-Airport Corridor Plan is based. Any material changes in these assumptions may trigger a review of the timing and or need for the projects in the Plan. The Plan will be reviewed every five years to ensure that it is taking account of significant changes, or earlier if new information arises that affects our understanding of the network. The following outlines the types of changes that may trigger an earlier review.

Urban Form

Current travel demand derives from the existing urban form of the region which primarily influences population and employment densities. If future settlement patterns change densities materially, a review of the Plan may be required. For example, a significant increase in densities within the Wellington City Central Area (along the public transport spine) could bring forward the need for one of the higher capacity public transport options such as bus rapid transport or light rail.

Population Growth

Population for Wellington region is expected to grow by 12% (53,200) by 2026 in line with the 2007 Statistic Department estimates (medium projection). A significant change in population and living locations would affect travel demand and trigger a review of the plan. This would normally be identified following each Census.

Economic Growth

There is a strong correlation between economic growth and the growth in demand for transport. The transport modelling underpinning the Plan assumes 1.8% annual growth in regional Gross Domestic Product, in line with the expectation of the Wellington Regional Strategy. A significant change in the region's economy may require the plan to be adjusted.

Social and Lifestyle Changes

The draft Plan is based on projections of social and lifestyle patterns which are roughly equivalent to the present day. Over the next 30 years it is possible that there will be significant social and technological changes that will affect the demand for transport. A recent example of this is the increasing workforce participation of women since the 1970s and changes in attitudes to child rearing which have resulted in a significant increase in travel demand associated with driving children to school. Future changes could for example include a substantial increase in telecommuting (already technically feasible but not widespread). Where such effects change travel demand significantly; a review of the timing of the Plan may be required.

Operating Costs of Private Motor Vehicles

Predicted travel growth in the corridor is based on the assumption that private vehicle operating costs (including capital costs) remain broadly similar to the present day in real terms and relative to other transport alternatives. Even if costs increase considerably, research[1] shows New Zealanders are reluctant to move out of their cars. The main substitute for private car travel is travel by public transport. Because public transport travel is subsidised, this is in turn subject to variation in accordance with public policy settings of the day.

Any factor which disturbs this relationship materially will affect the demand for private car travel and other forms of travel (passenger transport, walking, cycling, and telecommuting). Factors which could affect this relationship include international oil prices, carbon charges, vehicle technology changes (such as a shift to electric cars) or subsidy policies regarding public transport.

[1] Land Transport New Zealand Research Report 331. Impacts of fuel price changes on New Zealand transport. Booz Allen Hamilton (NZ) Ltd (2007).

The Plan is predicated on the assumption that the difference in the cost of travel for PT and private car remain as they currently are. A significant change in this relationship may require the plan to be adjusted.

Car Ownership and Use

Research shows that the region's level of car ownership has been increasing steadily for decades. This is strongly related to people's need to travel for work, social and recreational purposes. In many cases the private car is the most efficient way of travelling, hence its popularity[2]. While there is an assumption that car ownership and therefore use will continue to rise in line with economic growth, the rate of car ownership growth is forecast to taper off as we near a saturation level. Reaching this theoretical saturation level is forecast to be beyond 2050, so current projections show there is a need to ensure the community's needs for private vehicle transport are reasonably accommodated.

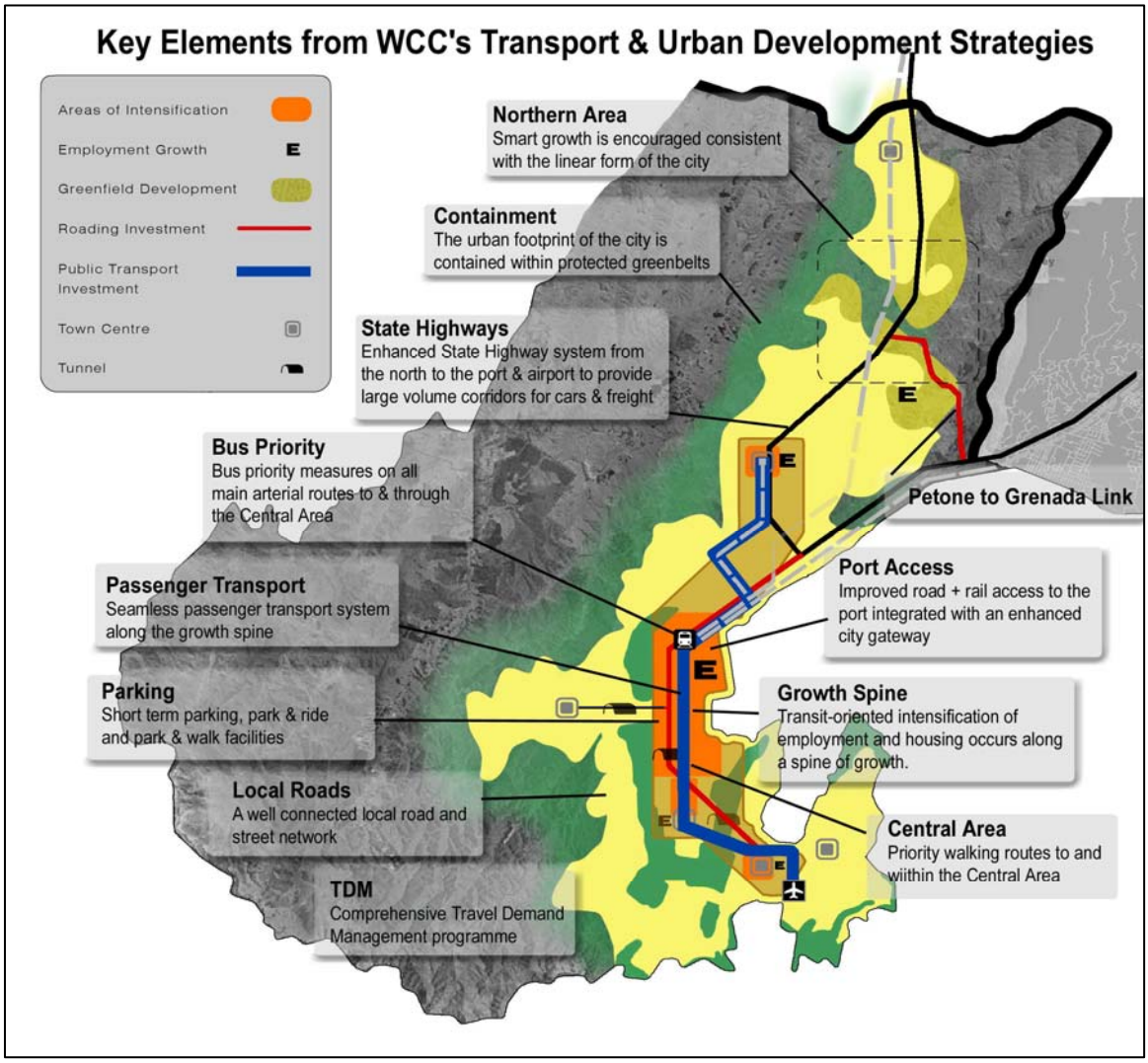
In an era of rapidly rising fuel prices vehicle use may decline or at least the rate of growth may slow. Conversely, if there is a large up take of alternative fuels or electric vehicles then the rates of car use may increase. These statistics will be monitored and any material changes may require the Plan to be amended.

[2] 76% of all weekday trips throughout the region are undertaken in private vehicles.

Activities occurring within the corridor

Land use integration

Population in Wellington City is forecast to grow by 20% (35,000) by 2026. The city has developed a growth strategy, in line with its Urban Development Strategy and the Welling Regional Strategy, aimed at ensuring most of that growth is concentrated along a growth spine from Johnsonville, through the CBD and Newton to Kilbirnie as shown in the following diagram.



This corridor plan assumes that the city manages growth, mainly through controls in its district plan, in accordance with this growth strategy. Passenger transport services will be improved along this growth spine to support the denser urban development that is envisaged.

Travel Demand Management

The region wide Travel Demand Management (TDM) Strategy (December 2005) will be implemented by all agencies. Key initiatives include:

- Ensuring the best use is made of existing infrastructure
- Raising awareness of individual travel choices

- Encouraging integrated land use and transport planning
- Encouraging school and work places to have travel plans
- Advocating to Central Government for the ability to implement congesting pricing.

The TDM Strategy aims to limit car traffic growth particularly at peak times, increase journey to work mode share for passenger transport, walking and cycling; and improve integration between all modes of transport. It is expected that such changes will lead to reduced greenhouse gas emissions, reduced fuel consumption, reduced road congestion, increased residents' satisfaction and the region's economic development being supported.

Greater Wellington will continue to promote its travel planning programme to schools and workplaces. GW is currently working with a number of central government agencies, regional district health boards and tertiary institutions to implement sustainable transport initiatives. GW is also working with 12 schools and plan to extend participation over the coming years.

Transit and Wellington City Council will work together to develop a traffic management capability that will monitor traffic conditions and implement measures to maintain traffic flow and deal with incidents. They will ensure that traffic signal operations are managed to make the best use of available road space for all road users travelling within and through the city.

In September 2007, the Wellington City Council approved a new parking policy which established the role of parking within the city transport network and its contribution to the strategic goals. The policy establishes a number of work programmes including review of central city parking, review of the coupon parking scheme and investigation of park and ride facilities. Work on these programmes will commence in mid 2008.

Walking and Cycling

The region wide Walking and Cycling Plans will be implemented by all agencies. The plans aim to improve the level of service for these modes, thereby increasing safety and use. More detailed short-term, corridor specific actions are set out later in this Plan.

Passenger transport

Greater Wellington is the primary agency responsible for the provision of passenger transport services throughout the region. GW has a number of improvements currently underway that will improve the passenger transport system over the next few years. The key improvements are:

- 61 new trolley buses to replace the aged fleet and increase passenger capacity from 2007 to 2009
- Progressive implementation of real time information from 2009
- Progressive implementation of comprehensive integrated ticketing from 2011
- Upgrading of Johnsonville Line to allow use by all electric multiple units that will operate on the Wellington urban rail network
- Providing additional capacity through the Kaiwharawhara throat (rail bottleneck)
- Ongoing bus fleet renewal will provide more super low floor vehicles to improve accessibility and new buses will have cleaner, more efficient engines that will produce lower emissions.

Wellington City Council has a 10 year plan to progressively implement bus lanes on all key routes to ensure passenger transport services can operate as reliably and efficiently as possible.

A key initiative of this Plan is the development of a passenger transport network to support the growth spine. This Plan proposes a staged approach to the implementation of the passenger transport improvements. In the early years the railway line to Johnsonville will be upgraded and bus priority measures will be provided through the central city where the greatest benefits can be gained for the biggest number of users. Bus priority measures will also be implemented on arterial routes which service the city centre and eventually the network will be completed out to the key suburban centres In later years the dedicated road space that has been allocated for passenger transport use may be upgraded further to provide a high quality busway or light rail service. Alternatively, a personal rapid transport system may be appropriate.

Road network management

Transit will work with Wellington City Council to ensure that the traffic signal operations are managed to ensure the most efficient means of moving public transport, pedestrians and private transport through the roading network and to best meet the competing demands of these modes.

Wellington City Council will implement roading improvements including the installation of new intersections over the next few years to improve access to the Inter Island Ferry Terminal and the CentrePort. These improvements will also service ongoing development at Harbour Quays and on Transrail land in the Pipitea precinct.

Wellington City Council is responsible for the renewal, maintenance and operations programmes for road, footpath, traffic signal and street lighting. The Council will also continue to identify and implement road safety improvements and urban redevelopment projects to revitalise city streets and to enhance motorist safety in using the city's roading network.

Packages of activities within the corridor

This section of the corridor plan defines a number of packages for improvements to the transport infrastructure with in the corridor. The packages have been grouped into measures that should be completed over the next ten years, and longer term measures that should be developed over the next ten years and then programmed to be implemented as conditions and funding allows.

The key priorities for this corridor are to:

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- A high quality, high frequency public transport spine to cater for travel growth, reduce vehicle congestion, improve liveability; guide and support urban intensification and provide resilience to fuel supply and price shocks
- A high quality 'predictable' vehicle 'ring route' for inter-regional accessibility, economic linkages, time critical travel and to support the PT network
- Walking routes to cater for the substantial numbers of people who walk and encourage growth in these numbers, also essential for urban vitality
- Cycling routes and facilities to facilitate the development of this small but growing transport mode.

Funding for the measures will normally be a mix of national and local sources. Larger projects may also require funding from the regional and crown funding sources. This will be determined by the

Regional Land Transport Committee in 2009 as part of the development of the new Regional Land Transport Programme.

Overview diagrams

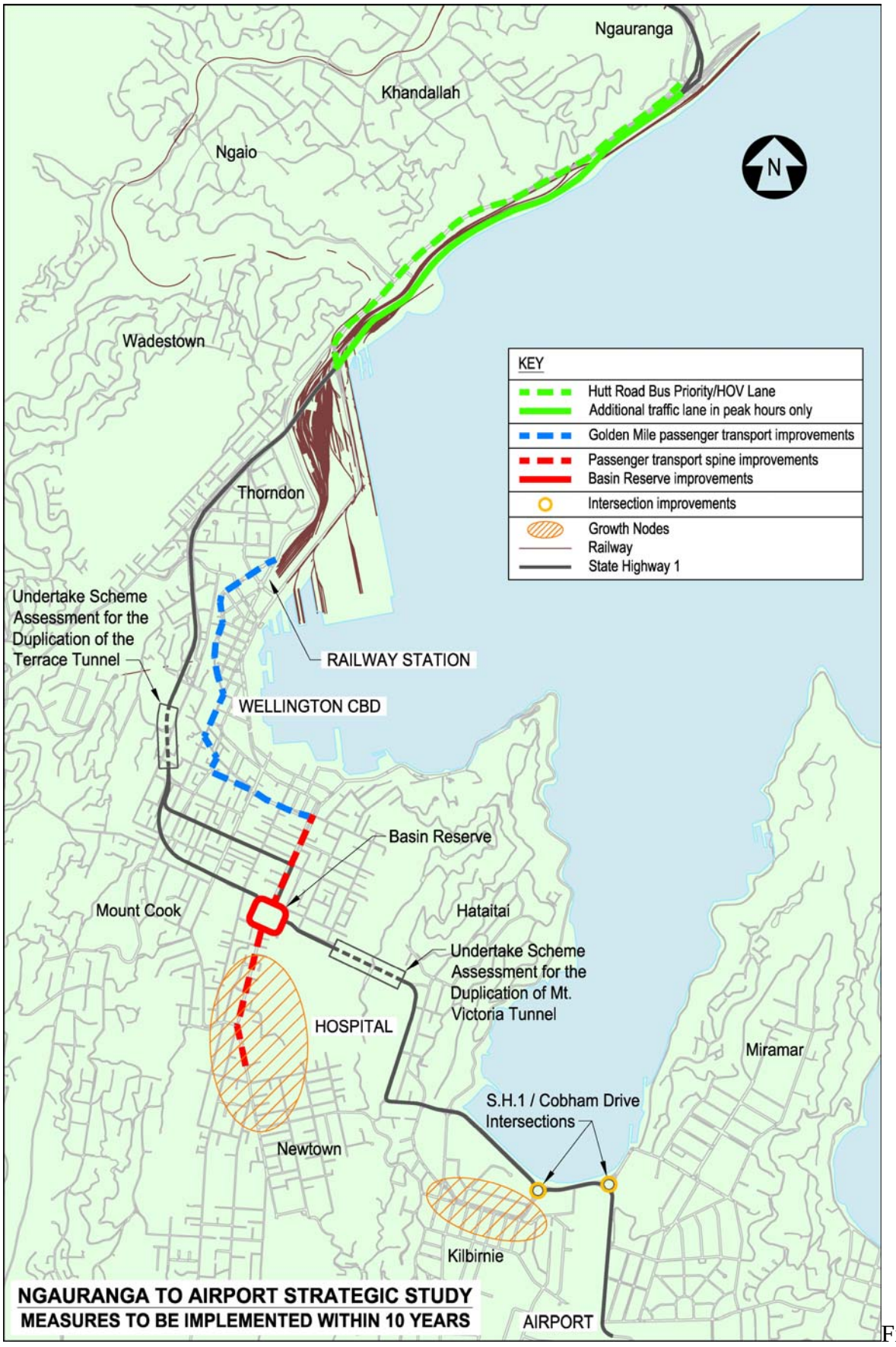

Figure 1: Ngauranga to Wellington Airport Corridor - Measures to be implemented within 10 years.

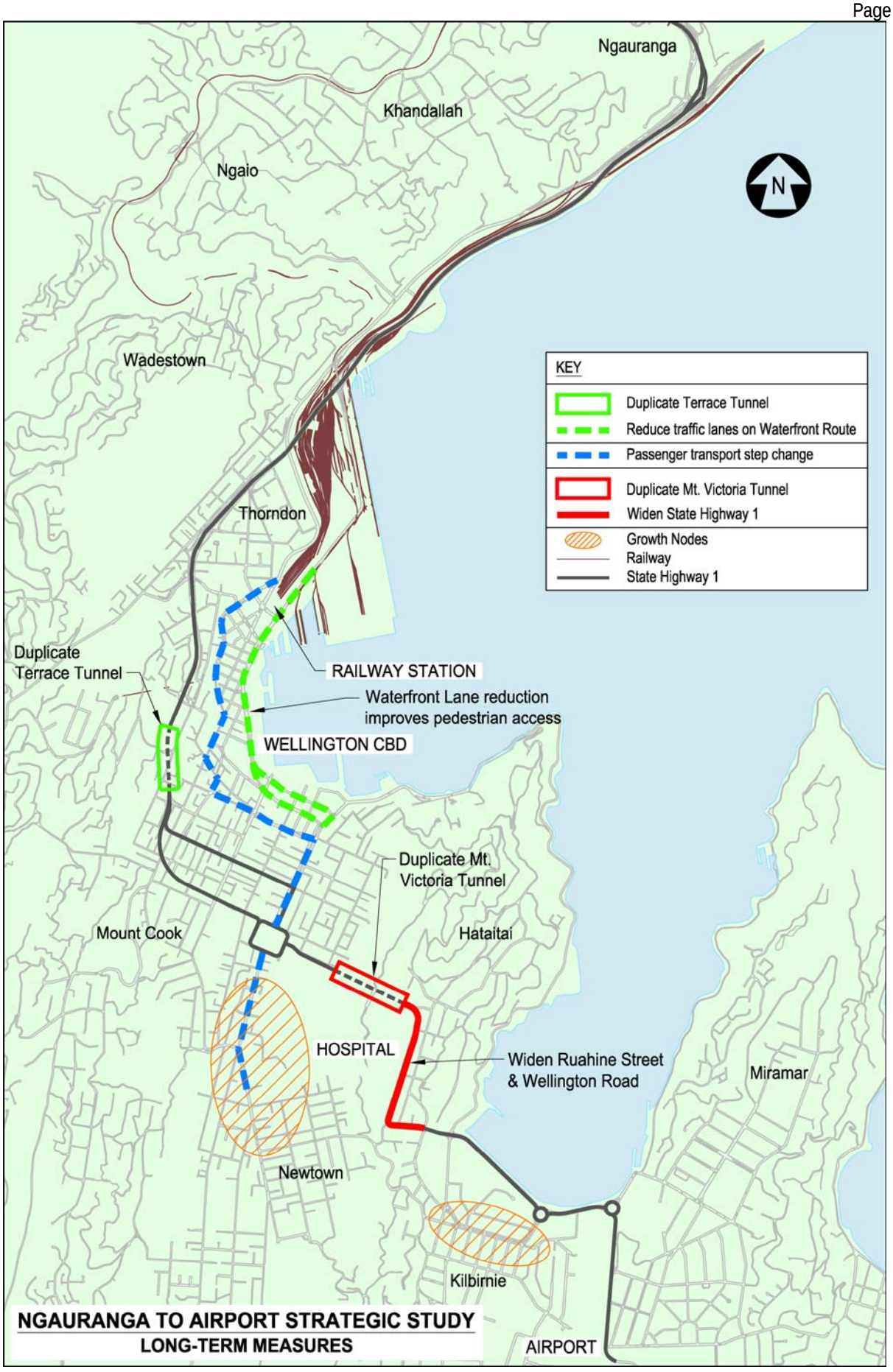

Figure 2: Ngauranga to Wellington Airport Corridor - Measures that may be implemented (beyond 10 years).

Measures to be implemented within 10 years

Measure	Responsibility	Timing	Indicative cost[3] $M	Performance measure(s)
Implement passenger transport improvements (including bus priority measures, signal pre-emption, real time information) along the golden mile route to improve journey times, reliability and passenger waiting and boarding provisions. Improvements to include: • Lambton Quay • Courtenay Place • Kent/Cambridge Tce • Taranaki St • Manners St • Willis St	WCC (lead) GWRC	Ongoing from 2008	5.5	Journey times and reliability Passenger satisfaction
Implement bus priority measures on all arterial routes, including: • Mulgrave/ Murphy/ Molesworth St • Adelaide Rd • Thorndon Quay • The Terrace • Glenmore St	WCC (lead) GWRC	Ongoing from 2009/10	6.6	Journey times and reliability Passenger satisfaction
Implement bus priority measures to all key Suburban Centres, including: • Newtown • Hataitai • Kilbirnie • Brooklyn • Karori • Island Bay	WCC (lead) GWRC	Ongoing from 2011/12	8.0	Journey times and reliability Passenger satisfaction
Review the operational performance and capacity of bus service provisions within the corridor following the completion of the Golden Mile bus lane improvements and the delivery of the new trolley buses	GWRC	2011/12	Administrative	Review complete and reported to GWRC
Develop and implement a Wellington City walking plan	WCC (lead) Transit	Ongoing from 2008	To be determined	Pedestrian volumes Crash rates Pedestrian satisfaction

[3] Indicative costs are December 2007 dollars. The cost shown in this table may be different to previously published figures due to cost escalation and revised definition of project scope.

Measure	Responsibility	Timing	Indicative cost[3] $M	Performance measure(s)
Develop and implement a Wellington City cycling plan	WCC (lead) Transit	Ongoing from 2008	To be determined	Cyclist volumes Crash rates Cyclist satisfaction
Construct Ngauranga to Aotea peak period lanes and reallocate existing lanes on Hutt Road for bus lanes and possibly high occupancy vehicles	Transit (lead) WCC	Construction from 2010/11	30	Passenger transport journey times and reliability Congestion levels Crash rates
Design and construct Basin Reserve improvements to separate east-west traffic from north-south flows and implement passenger transport improvements on Kent Tce, Cambridge Tce and Adelaide Rd	Transit (lead) WCC GWRC	Construction from 2010/11	33	Passenger transport journey times and reliability Congestion levels Crash rates
Implement intersection improvements at Cobham Dr roundabouts	Transit (lead) WCC	Construction from 2010/11	<1	Congestion levels Crash rates
Undertake a scheme assessment for the four laning of Ruahine St and Wellington Road	Transit (lead) WCC	2013/14	1	Scheme assessment complete
Undertake a scheme assessment for the duplication of Mt Victoria Tunnel	Transit (lead) WCC	2013/14	5	Scheme assessment complete
Undertake a scheme assessment for the removal of 2 lanes from the waterfront route and the concurrent duplication of the Terrace Tunnel	WCC (lead) Transit	2013/14	6	Scheme assessment complete

A scheme assessment is a detailed study to determine the scope, options and likely cost of the proposal. If appropriate, the next steps in the project development process are to seek consents and develop detailed construction plans.

Measures that may be implemented (beyond 10 years)

The implementation of these projects will depend on the outcome of the scheme assessments and be influenced by the factors set out in the 'Adaptable and Responsive Approach' section above.

Measure	Responsibility	Timing	Indicative cost $M	Suggested funding
Four laning of Wellington Rd and Ruahine St	Transit (lead) WCC	Likely to be beyond 10 years but may be appropriate to develop in stages. It would be necessary prior to the opening the duplicate Mt Victoria Tunnel	43	To be determined
Duplication of Mt Victoria Tunnel	Transit (lead) WCC	Likely to be beyond 10 years	175	To be determined
Terrace Tunnel Duplication and Waterfront lane reduction	Transit (lead) WCC	Likely to be beyond 10 years	167	To be determined
Investigate improvements to the passenger transport spine giving consideration to further bus improvements, light rail or new personal rapid transport systems	WCC (lead) GWRC	Likely to be beyond 10 years	To be determined	To be determined

How this plan responds to the identified needs and issues

<table>
<tr><th colspan="2">Measures to be implemented within 10 years</th></tr>
<tr><th>Description</th><th>Main Purposes of this Measure</th></tr>
<tr><td>Implement passenger transport improvements (including bus priority measures, signal pre-emption, real time information) along the golden mile route to improve journey times, reliability and passenger waiting and boarding provisions.
Improvements to include:
• Lambton Quay
• Courtenay Place
• Kent/Cambridge Tce
• Taranaki St
• Manners St
• Willis St</td><td rowspan="3">- Contribute to the NZTS objectives of improving access & mobility, protecting & promoting public health & ensuring environmental sustainability
- Contribute to the WRS by supporting better integration between transport and land use and greater housing density around transport points
- Contribute to RLTS targets of increasing peak period PT share, reduced GHG emissions & reduced severe road congestion
- Meet corridor vision for high quality PT through the corridor
- Support WCC Transport & Urban Development Strategies
- Address reliability & travel time issues on existing PT network
- Provide for projected growth in PT demand
- Respond to general support for PT & desire for an improved level of service in submissions
- Prepare for possible future increases in private vehicle operating costs
- Consistent with international best practice for successful cities
- Links with wider network PT objectives</td></tr>
<tr><td>Implement bus priority measures on all arterial routes, including:
• Mulgrave/ Murphy/ Molesworth St
• Adelaide Rd
• Thorndon Quay
• The Terrace
• Glenmore St</td></tr>
<tr><td>Implement bus priority measures to all key Suburban Centres, including:

Newtown
• Hataitai
• Kilbirnie
• Brooklyn
• Karori
• Island Bay</td></tr>
<tr><td>Develop & implement a Wellington City walking plan</td><td>- Contribute to the NZTS objectives of improving access & mobility, protecting & promoting public health, ensuring environmental sustainability
- Contribute to RLTS targets of increased mode share for pedestrians, reduced GHG emissions & reduced severe road congestion
- Meets WCC Transport Strategy objective of providing convenient & safe walking routes
- Provide for projected growth in pedestrian demand
- Respond to general support for walking in submissions
- Prepare for possible future increases in private vehicle operating costs
- Consistent with international best practice for successful cities</td></tr>
</table>

Measures to be implemented within 10 years	
Description	Main Purposes of this Measure
Develop & implement a Wellington City cycling plan	- Contribute to the NZTS objectives of improving access & mobility, protecting & promoting public health, ensuring environmental sustainability - Contribute to RLTS targets of increased mode share for cyclists, reduced GHG emissions & reduced severe road congestion - Meets WCC Transport Strategy objective of providing convenient & safe cycling routes - Respond to general support for cycling in submissions - Prepare for possible future increases in private vehicle operating costs - Consistent with international best practice for successful cities
Implement travel demand management measures including workplace and school travel plans, walking school buses, voluntary travel behaviour change programme, encouraging walking, cycling and PT through various means	- Contribute to the NZTS objective of ensuring environmental sustainability - Contribute to RLTS targets of increased mode share for PT, pedestrians, & cyclists; reduced GHG emissions & reduced severe road congestion - Supports the WCC Transport Strategy objective of a comprehensive TDM programme - Assist with moderating the projected growth in travel demand in the corridor - Prepare for possible future increases in private vehicle operating costs - Consistent with international best practice for successful cities
Direct population & employment growth within the city to areas which are serviced by public transport such as Adelaide Road & Kilbirnie in accordance with the city's Urban Development Strategy	- Contribute to the NZTS objective of assisting economic development & ensuring environmental sustainability - Contribute to the WRS by supporting better integration between transport and land use and greater housing density around transport points - Meets RLTS objective of improved l& use & transport integration - Contributes to RLTS objectives of increased PT mode share, increased mode share for pedestrians, reduced GHG emissions & reduced severe road congestion - Supports WCC Transport & Urban Development strategies - Consistent with development principles in the Wellington Regional Strategy - Consistent with international best practice for successful cities
Construct Ngauranga to Aotea peak period lanes & reallocate existing lanes on Hutt Road for bus lanes & possibly high occupancy vehicles	- Contribute to the NZTS objectives of assisting economic development, improving access & mobility, protecting & promoting public health & ensuring environmental sustainability - Contribute to the WRS by providing better access to the port and airport - Contributes to RLTS objectives of reduced GHG emissions, reduced severe road congestion, improved regional freight efficiency - Supports RLTS objective of increasing PT mode share by freeing up road space on Hutt Road for PT use - Consistent with the corridor vision by providing for trips that cannot be made by alternative modes, allowing freight to move freely, managing congestion & making maximum use of the existing network by removing key bottlenecks - Support the WCC Transport Strategy by providing a high quality State Highway route with dependable travel times - Provides capacity identified by transport modelling as being required for travel growth on this route - Responds to those submissions which identified the need for increased road capacity on this route - Matches capacity where it meets the wider transport network at the Ngauranga Interchange

Measures to be implemented within 10 years	
Description	Main Purposes of this Measure
Design & construct Basin Reserve improvements & associated passenger transport improvements on Kent Terrace, Cambridge Terrace & Adelaide Rd	- Contribute to the NZTS objectives of assisting economic development, improving access & mobility, protecting & promoting public health, ensuring environmental sustainability - Contribute to the WRS by providing better access to the port and airport & supporting an improved PT system - Contributes to RLTS objectives of reduced GHG emissions, reduced severe road congestion, improved regional freight efficiency - Support RLTS objective of increasing PT mode share by improving the efficiency of the intersection. This will allow the establishment of a high capacity PT route along Adelaide Road / Kent / Cambridge Terrace - Consistent with the corridor vision by providing for trips that cannot be made by alternative modes, allowing freight to move freely, managing congestion & making maximum use of the existing network by removing key bottlenecks - Support the WCC Transport Strategy by providing a high quality State Highway route with dependable travel times - Provides capacity identified by transport modelling as being required for travel growth on this route - Responds to those submissions which identified the need for increased road capacity on this route
Implement intersection improvements to Cobham Dr roundabouts	- Contribute to the NZTS objectives of assisting economic development, improving access & mobility, protecting & promoting public health, ensuring environmental sustainability - Contribute to the WRS by providing better access to the port and airport & supporting an improved PT system - Contributes to RLTS objectives of reduced GHG emissions, reduced severe road congestion, improved regional freight efficiency - Support RLTS objective of increasing PT mode share by facilitating the implementation of bus lanes along Cobham drive - Consistent with the corridor vision by providing for trips that cannot be made by alternative modes, allowing freight to move freely, managing congestion & making maximum use of the existing network by removing key bottlenecks - Support the WCC Transport Strategy by providing a high quality State Highway route with dependable travel times - Provides capacity identified by transport modelling as being required for travel growth on this route - Responds to those submissions which identified the need for increased road capacity on this route
Undertake a scheme assessment for the removal of 2 lanes from the waterfront route & the concurrent duplication of the Terrace Tunnel	- Would contribute to the NZTS objective of assisting economic development & improving access & mobility - Would contribute to the WRS by providing better access to the port and airport - Would meet the objective in the WCC Transport Strategy for improved access to the waterfront - Would address the issue of severance identified in the data analysis

Measures to be implemented within 10 years	
Description	Main Purposes of this Measure
Undertake a scheme assessment for the duplication of Mt Victoria Tunnel	- Would contribute to the NZTS objectives of assisting economic development & improving access & mobility - Would contribute to RLTS objectives of reduced GHG emissions, reduced severe road congestion, improved regional freight efficiency - Would contribute to the WRS by providing better access to the port and airport - Consistent with the corridor vision by providing for trips that cannot be made by alternative modes, allowing freight to move freely, managing congestion & making maximum use of the existing network by removing key bottlenecks - Would support the WCC Transport Strategy by providing a high quality State Highway route with dependable travel times - Would provide capacity identified by transport modelling as being required for travel growth on this route - Would respond to those submissions which identified the need for increased road capacity on this route
Undertake a scheme assessment for the four laning of Ruahine St & Wellington Road	- Would contribute to the NZTS objectives of assisting economic development & improving access & mobility - Would contribute to the WRS by providing better access to the port and airport - Would contribute to RLTS objectives of reduced GHG emissions, reduced severe road congestion, improved regional freight efficiency - Consistent with the corridor vision by providing for trips that cannot be made by alternative modes, allowing freight to move freely, managing congestion & making maximum use of the existing network by removing key bottlenecks - Would support the WCC Transport Strategy by providing a high quality State Highway route with dependable travel times - Would provide capacity identified by transport modelling as being required for travel growth on this route - Would respond to those submissions which identified the need for increased road capacity on this route

Longer term measures that may be implemented (beyond 10 Years)	
Description	*Main Purposes of this Measure*
Four laning of Ruahine St & Wellington Road	- Contribute to the NZTS objectives of assisting economic development & improving access & mobility - Contribute to the WRS by providing better access to the port and airport - Contribute to RLTS objectives of reduced GHG emissions, reduced severe road congestion, improved regional freight efficiency - Consistent with the corridor vision by providing for trips that cannot be made by alternative modes, allowing freight to move freely, managing congestion & making maximum use of the existing network by removing key bottlenecks - Support the WCC Transport Strategy by providing a high quality State Highway route with dependable travel times - Provide capacity identified by transport modelling as being required for travel growth on this route - Respond to those submissions which identified the need for increased road capacity on this route
Duplication of Mt Victoria Tunnel	- Contribute to the NZTS objectives of assisting economic development & improving access & mobility - Contribute to RLTS objectives of reduced GHG emissions, reduced severe road congestion, improved regional freight efficiency - Contribute to the WRS by providing better access to the port and airport - Consistent with the corridor vision by providing for trips that cannot be made by alternative modes, allowing freight to move freely, managing congestion & making maximum use of the existing network by removing key bottlenecks - Support the WCC Transport Strategy by providing a high quality State Highway route with dependable travel times - Provide capacity identified by transport modelling as being required for travel growth on this route - Respond to those submissions which identified the need for increased road capacity on this route
Removal of 2 lanes from the waterfront route & the concurrent duplication of the Terrace Tunnel	- Contribute to the NZTS objective of assisting economic development & improving access & mobility - Contribute to the WRS by providing better access to the port and airport - Meet the objective in the WCC Transport Strategy for improved access to the waterfront - Address the issue of severance identified in the data analysis

Contribution to strategic outcomes

The following table shows how the draft corridor plan contributes to the outcomes sought by the Regional Land Transport Strategy (2007-2016) which is consistent with the aims of the New Zealand Transport Strategy to achieve an affordable, integrated, safe, responsive and sustainable transport system.

Key Outcomes / Corridor Plan Measure	Increased peak period passenger transport mode share	Increased mode share for pedestrians and cyclists	Reduced greenhouse gas emissions	Reduced severe road congestion for private vehicles	Improved regional road safety	Improved land use and transport integration	Improved regional freight efficiency
Implement passenger transport improvements along the golden mile	✓	✓	-	×	✓	✓	
Implement bus network priority measures along arterial routes and to suburban centres	✓	✓	-	×	✓	✓	
Develop and implement a Wellington City walking plan		✓	-		✓	✓	
Develop and implement a Wellington City cycling plan		✓	-		✓		
Construct Ngauranga to Aotea peak period lanes and reallocate existing lanes on Hutt Road for bus lanes and possibly high occupancy vehicles	✓		-	×			✓
Design and construct Basin Reserve improvements and implement passenger transport improvements on Kent Tce, Cambridge Tce and Adelaide Rd	✓	✓	-	×	✓	✓	✓
Implement intersection improvements to Cobham Dr roundabouts			-	×			✓

✓ positive outcome - neutral outcome × negative outcome

Passenger transport and active mode use should increase above the business as usual level due to population growth in and around the growth spine, investment in bus reliability and travel time improvements and investment in walking and cycling infrastructure. These measures should also improve road safety and contribute to improved land use and transport integration.

Greenhouse gas emissions remain at near the current level despite significant population and economic growth. Modelling suggests that the measures recommended for the corridor will have very little effect on CO_2 emission levels. This indicates that interventions outside the scope of the regional transport programme will be necessary to achieve significant emission reduction targets.

Severe road congestion is forecast to get worse under all scenarios due to increased use of the road network as a result of population and employment growth. The recommended improvements will

ease some bottlenecks (eg Basin Reserve), but will be insufficient to maintain current congestion levels across the network. Advancing the tunnel duplications does little to improve this outcome as much of the strategic road network in this corridor will be operating near or at capacity for longer periods. Localised improvements will assist some freight movements.