

# Ngauranga to Wellington Airport Corridor Plan

Final draft

Recommended by the Ngauranga to Wellington Airport Hearing  
Subcommittee

for consideration by the Regional Transport Committee

*September 2008*

## **The Ngauranga to Wellington Airport Corridor**

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

### **Introduction**

This plan defines a number of packages for improvements to the transport network within the Ngauranga to Wellington Airport Corridor. In particular, it provides for a major planned shift to passenger transport, walking and cycling in order to improve the sustainability of this part of the region's transport system. This shift is consistent with the targets in the recently released New Zealand Transport Strategy 2008, the Government Policy Statement<sup>1</sup> and the Regional Land Transport Strategy (RLTS) 2007.

This corridor plan aims to strengthen the four key transport elements in the city which are:

1. a high quality and frequency passenger transport 'spine'
2. highly accessible and attractive 'activity' or shopping streets
3. a reliable and accessible 'ring' or bypass route for vehicles
4. interconnected and convenient local street, walking, cycling and passenger transport networks.

The plan identifies measures that should be completed over the next ten years, as well as longer term measures that should be developed over the next ten years and then programmed to be implemented as conditions and funding allows.

### **Immediate priorities**

The immediate priorities for this corridor are:

- Continuing a programme of travel demand management measures to reduce the number of car trips (particularly sole occupant to work) and encourage alternatives such as public transport, walking, cycling and telecommuting, flexible working hours and working from home.
- Establishing bus priority measures as a first step towards the development of a high quality, high frequency public transport spine that will cater for travel growth, reduce vehicle congestion, improve liveability, guide and support urban intensification and provide resilience against fuel supply and price shocks.
- Improving traffic management at the Basin Reserve to enable more reliable bus journey times, improved reliability of the ring route and improved pedestrian and cyclist facilities.

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<sup>1</sup> Government Policy Statement on Land Transport Funding 2009/10 – 2018/19 (Aug 2008).

- Improving the relatively poor cycling routes and facilities, with an emphasis on safety improvements, to encourage the increasing use of this small but growing transport mode.
- Improving the already highly-developed walking routes to cater for the substantial numbers of people who walk and encourage growth in these numbers - also essential for urban vitality.
- Protecting the strategic road network to ensure the ability to provide for future development of a high quality 'predictable' vehicle 'ring route' for inter-regional accessibility, economic linkages, time critical travel and to support the public transport network.

## Strategic Context

The long term vision for this corridor 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 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:

- Concentrated 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.
- Limited commuter parking in the Central Area.
- Improved access to the waterfront.

## **Existing pressures and reasons for change**

### **Sustainability**

National and regional policy clearly signals the need to shift towards more sustainable forms of transport in order to deliver a transport system that is integrated, responsive, safe, affordable and sustainable.

### **Oil supply and price volatility**

Oil prices have risen dramatically over the past three years and are likely to continue to grow. Prices are currently very volatile and this is expected to continue. 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 uptake of alternative fuels or electric vehicles then the historic trends in increasing personal vehicle usage may continue.

### **Increasing travel demand**

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 measures that address pressing needs and to signal the likely changes needed to address longer term requirements. The short term measures will in some cases (e.g. public transport corridor) provide a platform for initiatives that may be needed in the future. The timing of longer term measures will be reviewed as significant trends become evident.

An example of increasing demand is travel generated by the airport. They expect use to double by 2030. There is real potential to move some of this travel from cars to improved passenger transport services.

### **Population Growth**

Population for the whole Wellington region is expected to grow by 12% (53,200) by 2026 in line with the 2007 Statistic Department estimates (medium projection), 66% of this growth is expected to be in Wellington City. Thereafter populations are predicted to stabilise and possibly decline primarily due to aging. 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**

Over the next 30 years it is possible that there will be significant social and technological changes which could affect the demand for transport. Future changes could, for example, include a substantial increase in telecommuting, working from home and flexible working hours. Where such effects change travel demand significantly, a review of the measures in the Plan may be required.

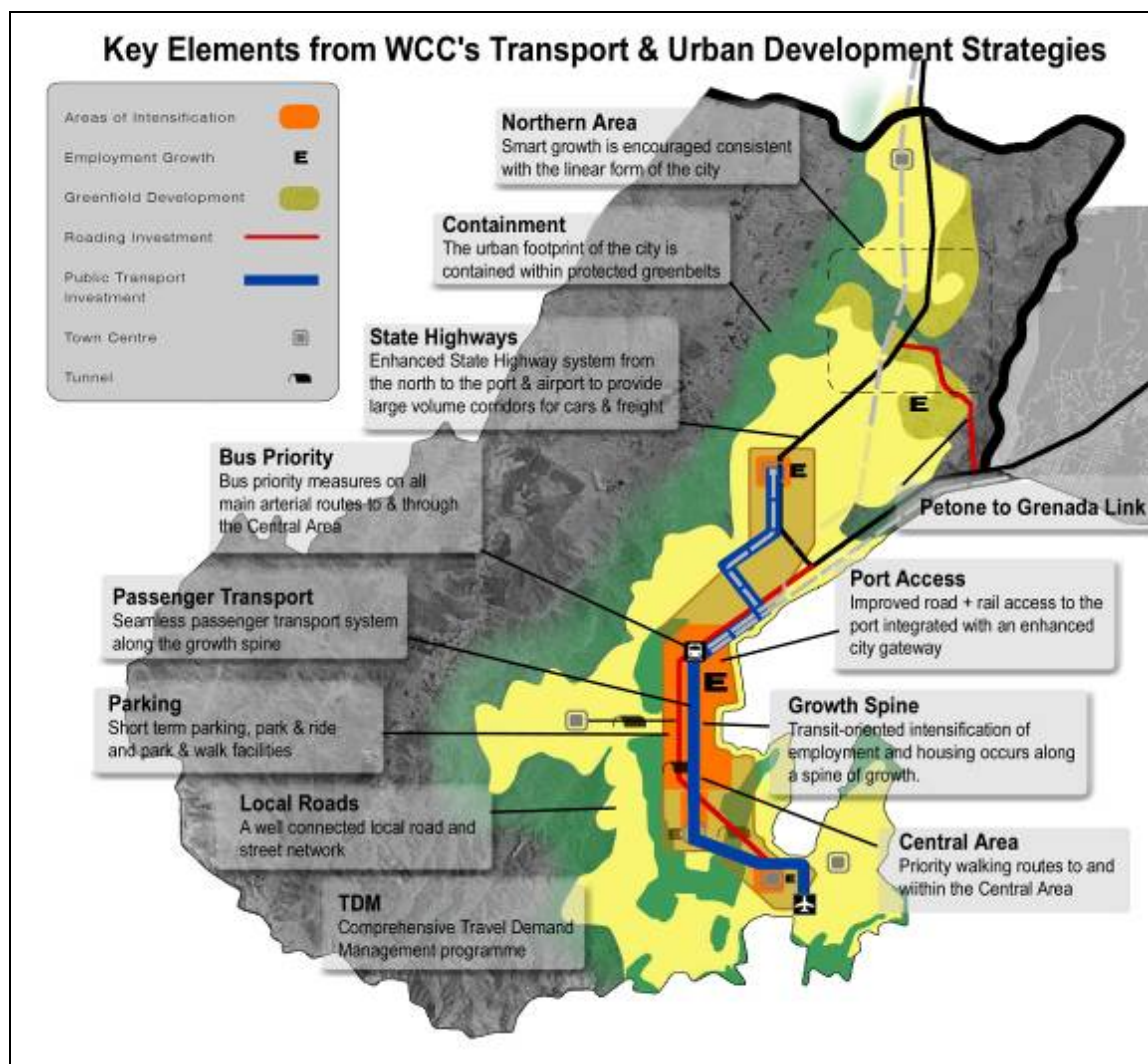
### **Urban Form**

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) or the development of major venues

and attractions in the Eastern Suburbs could bring forward the need for one of the higher capacity public transport options such as bus rapid transport or light rail.

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 Wellington 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 its growth strategy. Passenger transport services will be improved along the growth spine to support the denser urban development that is envisaged.



### Operating Costs of Private Motor Vehicles

Any factor which changes the relationship between the cost of operating private motor vehicles and the cost of alternative transport (passenger transport, walking, cycling, and telecommuting) will affect travel patterns. Factors which could significantly 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. A significant change in such factors 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<sup>2</sup>. While there is an assumption that car ownership and 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 and may also fall if oil prices become too high. 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 provided for.

## **Adaptability**

The scope of the longer term measures set out in the Plan is based on a number of assumptions which are likely to affect the growth of travel demand. These assumptions are set out above. Any material changes in these assumptions may trigger a review of the timing and or need for the measures 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.

## **What we plan to do**

### **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. Greater Wellington is currently working with a number of central government agencies, regional District Health Boards and tertiary institutions to implement sustainable transport initiatives. Greater Wellington is also working with a number of schools and plans to extend participation over the coming years.

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.

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<sup>2</sup> 76% of all weekday trips throughout the region are undertaken in private vehicles.

## Walking and cycling

The plan aims to improve the level of service for walking and cycling. It largely relies on Wellington City Council developing and implementing appropriate improvement programmes.

## Passenger transport

Greater Wellington is the primary agency responsible for the provision of passenger transport services throughout the region. Greater Wellington 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 (2007 to 2009).
- Progressive implementation of real time information from 2009.
- Progressive implementation of comprehensive integrated ticketing from 2011.
- 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, in collaboration with Greater Wellington and the New Zealand Transport Agency, has a 10 plus year plan to progressively implement bus priority measures 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 the 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

NZTA 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 CentrePort. These improvements will also service ongoing development at Harbour Quays and on KiwiRail 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 safety for all users of the city's roading network.

## **Measures within the corridor**

This section of the corridor plan defines a number of measures for improvements to the transport infrastructure within the corridor. The measures have been grouped into those 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. Timing has taken account of the 'immediate priorities' set out above.

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 Transport Committee in 2009 as part of the development of the new Regional Land Transport Programme in accordance with the requirements of the Land Transport Management Amendment Act 2008.



Overview diagrams

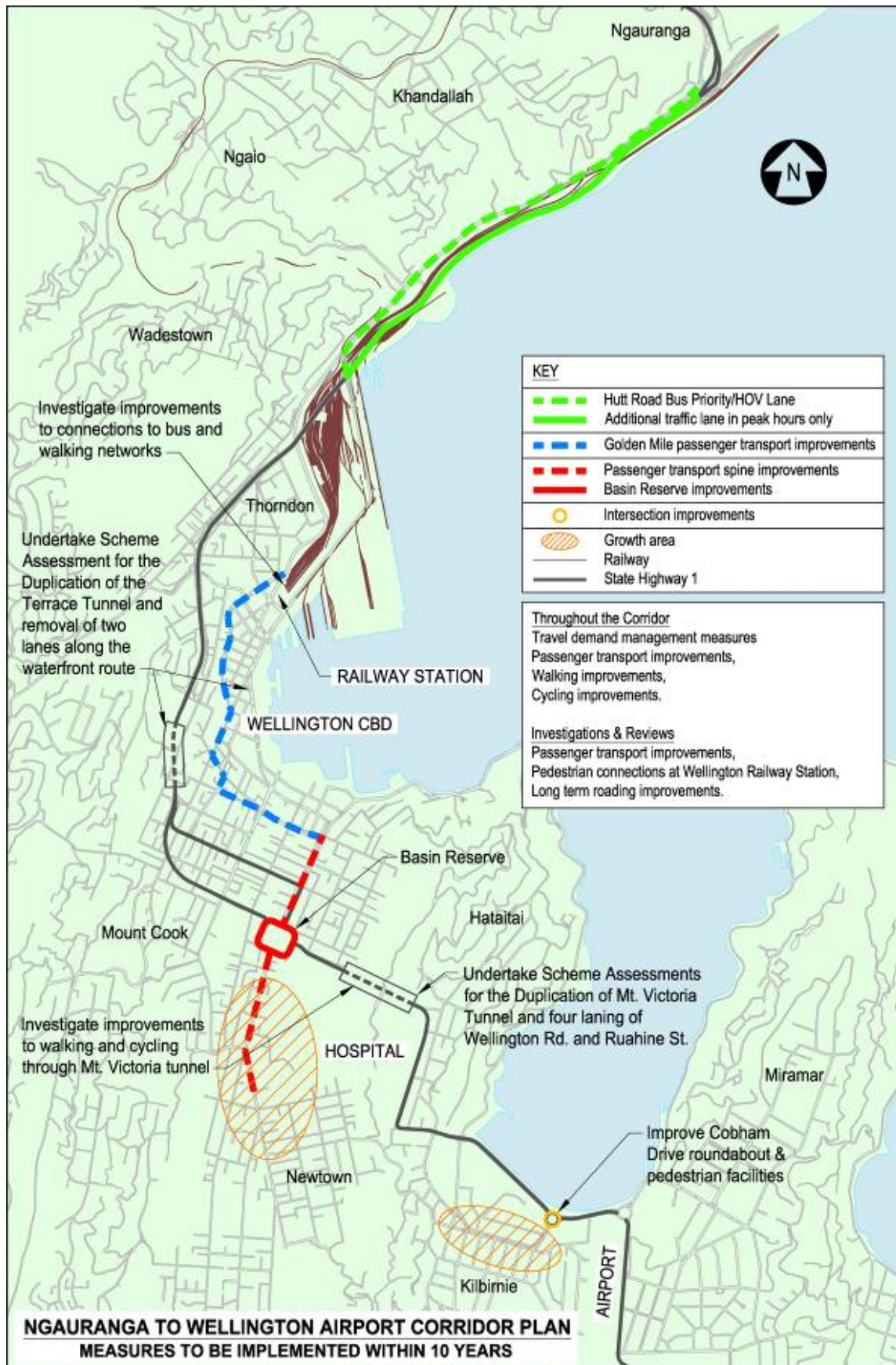


Figure 1: Ngauranga to Wellington Airport Corridor - Measures to be implemented within 10 years.

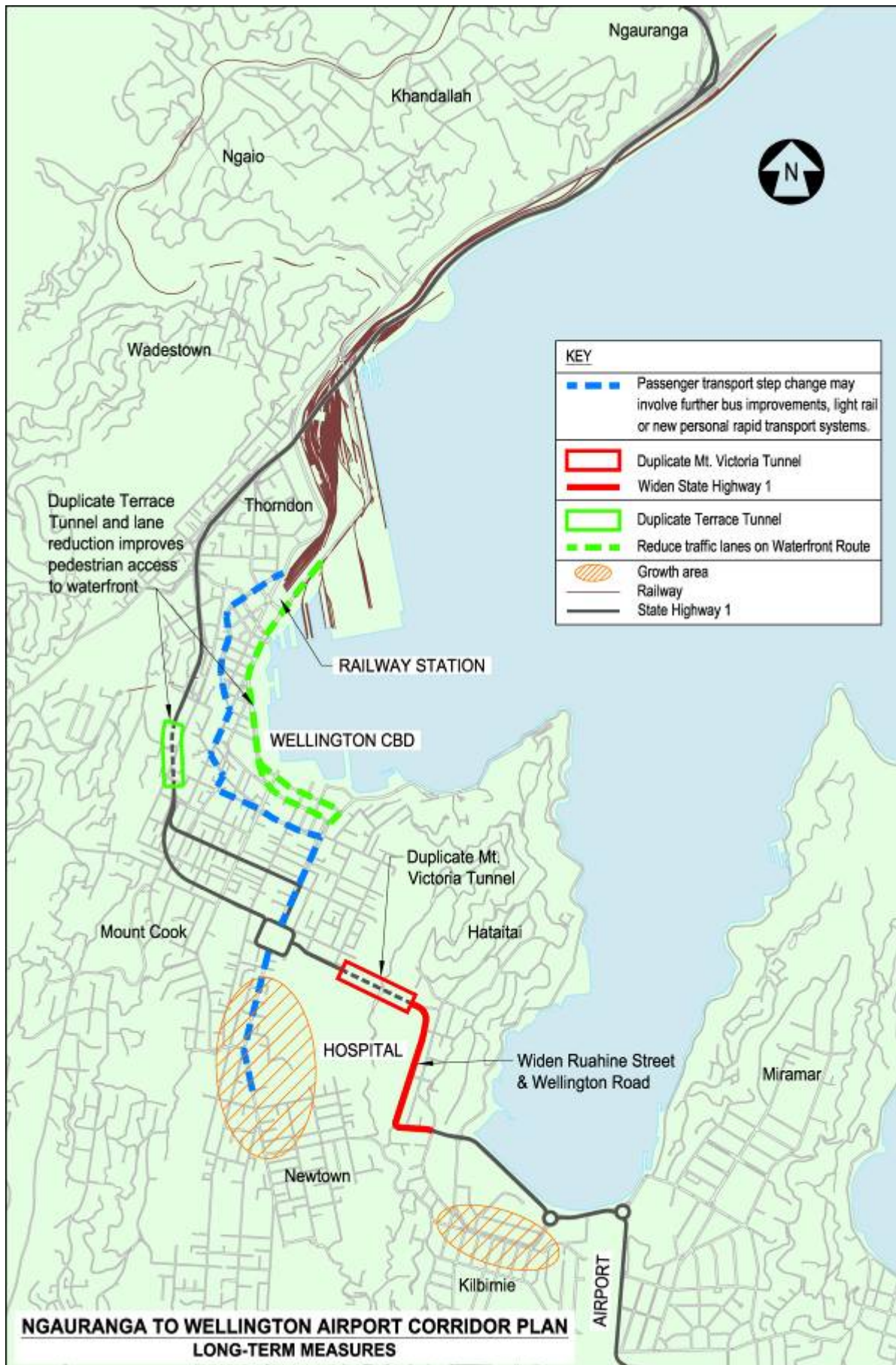


Figure 2: Ngauranga to Wellington Airport Corridor - Measures that may be implemented (beyond 10 years).

## Measures to be implemented within 10 years

Measure	Responsibility	Timing	Indicative cost <sup>3</sup> \$M	Performance measure(s)
<p>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:</p> <ul style="list-style-type: none"> <li>• Golden Mile</li> <li>• Kent/Cambridge Tce</li> <li>• Taranaki St</li> </ul> <p>Implement bus priority measures on arterial routes, including:</p> <ul style="list-style-type: none"> <li>• Mulgrave/ Murphy/ Molesworth St</li> <li>• Adelaide Rd</li> <li>• Thorndon Quay</li> <li>• Glenmore St</li> </ul> <p>Implement bus priority measures to Wellington International Airport and key Suburban Centres, including:</p> <ul style="list-style-type: none"> <li>• Newtown</li> <li>• Hataitai</li> <li>• Kilbirnie</li> <li>• Brooklyn</li> <li>• Karori</li> <li>• Island Bay</li> <li>• Miramar</li> </ul>	<p>WCC (lead)</p> <p>GWRC</p>	<p>Immediate start</p> <p>Ongoing from 2008</p>	<p>20<sup>4</sup></p>	<p>Faster, more reliable journey times</p> <p>Greater passenger satisfaction</p> <p>More passengers carried</p>
<p>Finalise and implement a Wellington City walking policy, including:</p> <ul style="list-style-type: none"> <li>• Safety improvements</li> <li>• Improving the convenience of walking to the central city, suburban centres and educational facilities</li> </ul>	<p>WCC (lead)</p> <p>NZTA</p>	<p>Ongoing from 2008</p>	<p>To be determined</p>	<p>Increased pedestrian volumes</p> <p>Reduced crash rates</p> <p>Greater pedestrian satisfaction</p>
<p>Finalise and implement a Wellington City cycling policy, including:</p> <ul style="list-style-type: none"> <li>• Safety improvements</li> <li>• Improving the convenience of cycling to the central city, suburban centres and educational facilities</li> </ul>	<p>WCC (lead)</p> <p>NZTA</p>	<p>Ongoing from 2008</p>	<p>To be determined</p>	<p>Reduced crash rates</p> <p>Greater cyclist satisfaction</p> <p>Maintained cyclist volumes</p>

<sup>3</sup> Indicative costs are December 2007 dollars.

<sup>4</sup> Excludes the cost of the real time information system which is being progressed separately by Greater Wellington.

Measure	Responsibility	Timing	Indicative cost <sup>3</sup> \$M	Performance measure(s)
Investigate water borne passenger transport services between the Wellington CBD and Miramar Peninsula, and improving passenger transport services to/from the airport	GWRC	Investigation from 2008/09	To be determined	More people using passenger transport to get to /from the airport
Design and construct improvements at the Basin Reserve to improve passenger transport, walking and cycling by separating north-south flows from east-west traffic; and implement complementary bus priority measures on Kent Tce, Cambridge Tce and Adelaide Rd	NZTA (lead) WCC GWRC	Investigation from 2008/09  Construction from 2011/12	33	More passengers carried  Improved Passenger transport journey times and reliability  Reduced crash rates  Reduced severe congestion
Investigate improvement to walking and cycling facilities in Mt Victoria Tunnel	NZTA (lead) WCC	2009/10	To be determined	Increased pedestrian and cyclist volumes
Reallocate existing general traffic lanes on Hutt Road between Ngauranga and Thorndon for bus lanes and possibly high occupancy vehicles; and construct peak period lanes on State Highway 1 between Ngauranga to Aotea Quay	NZTA (lead) WCC	Investigation from 2009/10  Construction from 2011/12	30	More passengers carried  Improved Passenger transport journey times and reliability  Reduced single occupant vehicle trips  Reduced severe congestion
Implement intersection improvements, including improved pedestrian facilities at Troy St/Cobham Dr to reduce congestion and improve safety	NZTA (lead) WCC	Construction from 2009/10	<1	Reduced congestion levels  Reduced crash rates  Improved pedestrian access across Cobham Dr
Investigate improvements to Wellington Railway Station to improve walking connections to buses and the pedestrian network	GWRC (Lead) ONTRACK WCC	2010/11	Administrative	Review complete and reported to GWRC

Measure	Responsibility	Timing	Indicative cost <sup>3</sup> \$M	Performance measure(s)
Undertake a feasibility study for a high quality public transport system, including light rail (the most favourable option(s) will then be developed further by a more detailed scheme assessment after 2013/14)	GWRC (lead) WCC NZTA	2011/12	1	Feasibility study complete and reported to partner agencies
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. This review should also assess the effectiveness of the Hataitai bus tunnel	GWRC	2011/12	Administrative	Review complete and reported to GWRC
Undertake a feasibility study for the four laning of Ruahine Street and Wellington Road and for the duplication of the Mt Victoria Tunnel considering in particular its relationship with the Basin Reserve flyover and improved transport links from the airport to the CBD for freight, taxis and public transport	NZTA (lead) WCC	Investigation from 2011/12	<1	Feasibility study complete and reported to partner agencies
The following scheme assessments are intended to occur within the 5 to 10 year period, after the first review of the Plan, taking account of new feasibility studies.				
Undertake a scheme assessment for a high quality public transport system	GWRC (lead) WCC NZTA	After 2013/14	6	Scheme assessment complete
Undertake a scheme assessment for the four laning of Ruahine Street and Wellington Road	NZTA (lead) WCC	After 2013/14	1	Scheme assessment complete
Undertake a scheme assessment for the duplication of Mt Victoria Tunnel	NZTA (lead) WCC	After 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) NZTA	After 2016/17	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 and implementation 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 'existing pressures and reasons for change' section above.

Measure	Responsibility	Timing	Indicative cost \$M	Suggested funding
Implement further 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	20-140+	To be determined
Four laning of Wellington Road and Ruahine Street	NZTA (lead) WCC	Likely to be beyond 10 years but may be appropriate to develop in stages, particularly to coordinate with improvements to access for Hataitai Park. It would be necessary prior to opening any duplicate Mt Victoria Tunnel.	43	To be determined
Duplication of Mt Victoria Tunnel	NZTA (lead) WCC	Likely to be beyond 10 years	175	To be determined
Duplication of Terrace Tunnel and Waterfront lane reduction	NZTA (lead) WCC	Likely to be beyond 10 years	167	To be determined