



**Help us keep Wellington on the move**

Have your say on the Ngauranga to Airport Strategic Study  
 - transport initiatives over the next 30 years

For background information, go to [www.Wellington.govt.nz](http://www.Wellington.govt.nz)

**Consultation Period**

6 December 2007  
 to  
 22 February 2008



## The study and you

Wellington's transport system is nearing capacity. With traffic increasing 3 to 4% a year and people keen to live and work in a vibrant, internationally competitive city, there is a need to consider future transport needs.

The options for improving the transport system are limited, so in order to keep the city on the move, we need to consider what's possible, practical and will fit people's requirements.

This is something that affects us all and requires our collective attention and input.

Our hills, tunnels and existing roading network mean there are no easy solutions, so avoiding major congestion and delays has to involve a mix of improvements – increased public transport, more efficient use of existing roads, some new roading initiatives and changes to make it easier for people to walk and cycle.

A study team from Transit New Zealand, Wellington City Council and Greater Wellington Regional Council has been considering our transport issues between the bottom of Ngauranga Gorge, Wellington Airport and the hospital in order to plan for the city's expected growth. There is a range of possible initiatives that could happen in the next 30 years including improving the existing bus system, investing in light rail, building additional tunnels at The Terrace and Mt Victoria, improving access at the Basin Reserve and widening Adelaide Road plus many others, all outlined in this report.

We have split the projects into two parts – those with affordable early benefits and those that are future development. In either case the progress and prioritisation of the proposals is subject to normal Resource Management Act development and consultation with all affected parties.

We've been guided by the key transport issues Wellingtonians identified last year during the first stage of consultation. To help us come up with a draft plan and determine which initiatives should be part of the mix, we would now like you to tell us which transport initiatives you prefer and why. Your feedback is important as it will help to develop a long-term corridor plan to ensure Wellington City stays on the move.

This study is the third on Wellington's major transport corridors with the Hutt Corridor Study completed in 2003 and the Western Corridor Study (SH1) completed in 2006. These studies, along with other studies on state highway transport routes, assist the region to prioritise its transport needs for the future.

To comment on this study, please complete and return the feedback form at the back of this report or comment online at [www.Wellington.govt.nz](http://www.Wellington.govt.nz) by 22 February.

For those who want more information, two more detailed reports – the Problem Framing Report and the Technical Report – are available online at [www.Wellington.govt.nz](http://www.Wellington.govt.nz).

You can also find out more by visiting one of the open days between 29 January and 15 February. Details will be advertised in the new year.



## Strategies for future planning

In order to effectively consider what improvements could be made to the city's transport infrastructure, the study team considered both the New Zealand Transport Strategy and the Regional Land Transport Strategy (RLTS). These strategies seek to achieve an affordable, integrated, safe, responsive and sustainable transport system.

Both strategies seek to improve the relationship between land use and transport, minimising the number and length of trips people make, reducing key areas of congestion and making public transport, walking and cycling more attractive. These measures reduce the use of non-renewable energy resources and help reduce greenhouse gas emissions, thereby reducing the effects on climate change.

In particular the RLTS has a long-term vision for the corridor:

*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 public transport through this corridor, particularly during the peak period. Public transport will provide a very high quality, reliable, safe service along the Wellington City Growth Spine and other key commuter routes. The road network will provide well for those trips which cannot 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.*

## Needs and issues

In May 2006, we asked the community what the key transport issues for Wellington were. They were identified during that first stage of consultation as:

- public transport options, including bus services and bus priority measures, the possible introduction of a light rail (or tram) service and improvements to the existing 'heavy rail' system
- walking and cycling opportunities including pedestrian access to the waterfront
- connectivity between the CBD and waterfront
- access to the hospital, Victoria University, CentrePort and airport including the surrounding commercial area
- the movement of goods to and through the city
- access to and through the city including linkages with the railway station
- inner city speed limits
- the availability and cost of parking
- the protection of heritage and urban form
- energy efficiency and environmental impacts
- removing the congestion points at the Terrace Tunnel and Mount Victoria Tunnel.
- linkages with the Inner City Bypass and other roads
- rail capacity through the Kaiwharawhara 'throat' on the approach to Wellington Station (being addressed by ONTRACK)
- funding availability.



In order to address the issues, the city's future growth needs to be examined as the issues will need to be considered alongside the city's urban development strategy (discussed on page 6).



## Influence of future growth on transport needs

The Wellington region's current population is 449,000 (2006). Of those, 179,000 or nearly 40% live in Wellington City. Recent growth rates for Wellington City have been high and the population is expected to increase over the next 20 years to a projected 204,000 by 2026. Similar growth rates are projected for the whole region, albeit unevenly with some areas growing strongly while others remain largely stable.

In terms of the workforce, approximately 112,000 (2006) people work in Wellington City, the vast majority of which (70,000 or 62%) are based in the central city. The central city is also by far the most important employment area in the region, equating to almost 33% of all jobs in the region. Projections indicate that the number of jobs in the central city will continue to grow at a higher rate than other parts of the region.

### Urban Development Strategy and 'growth spine'

Wellington City Council's Urban Development Strategy expects most of the residential growth will continue in the central city (around 25%) in apartments, with significant growth around the key centres of Johnsonville (7%), Adelaide Road (9%) and Kilbirnie (6%). The remaining growth is expected to occur in other dispersed areas across the city predominantly in the form of new residential subdivisions and infill housing. The previously mentioned growth is based on a 'growth spine' from Johnsonville to the airport incorporating a number of growth areas, or nodes, connected by a high quality public transport system.

A growth node is a small urban area experiencing medium to high density development, usually combining residential, retail, office and recreation – often referred to as mixed use. Growth of this kind is signalled in the Urban Development Strategy at Adelaide Road, and this is likely to change the type of businesses located in the area.

A key feature of high density mixed use areas is the high proportion of trips made by alternatives to the car, such as walking, cycling and public transport. Because of this, these growth areas help make cities more sustainable and healthy by reducing the number and length of car trips and reducing greenhouse gas emissions.

### Future travel patterns

Wellington City's residents not only travel fewer kilometres per year in total, but fewer kilometres by car, and are more likely to travel by public transport compared to residents in other New Zealand cities. As a result, Wellington produces less greenhouse gas emissions per person than any other large New Zealand city. This ties into Wellington City Council's vision of achieving carbon neutrality in the future.

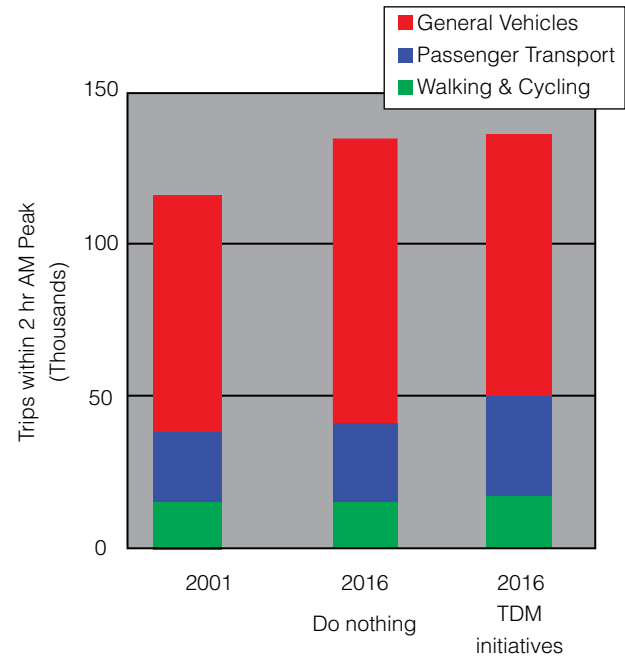
Research has allowed us to consider the number of trips for various transport modes in Wellington City in 2001 and expected for 2016. It also allows us to consider what effect a significant investment in public transport, walking, cycling and travel demand management initiatives (TDM) will have on the number and make-up of these trips. TDM is an initiative that seeks to ease road congestion, improve the performance of the city's transport system and moderate transport demand by encouraging travel behaviour changes and providing better alternatives to single occupancy car trips. This research shows that due to the increase in population and changing travel patterns the number of trips made by people within the study area can be expected to keep on increasing in future years.



An example of a mixed use development that could occur in Adelaide Road.

These observations pose certain problems for our transport infrastructure if nothing is done:

- without capacity improvements, parts of the public transport and road network will experience severe congestion and delays, particularly between Ngauranga Gorge and Aotea Quay, along the waterfront and at the Terrace Tunnel, Newtown and the Mount Victoria Tunnel (and adjacent road network), unless significant demand management, such as congestion pricing, is implemented.
- the expected growth in road freight volumes together with an increase in peak period congestion reduces the efficiency of freight movements. Key routes for the movement of freight include the SH1 network. The constraints on the Mount Victoria Tunnel affects the movement of goods to and from the airport while the constraints between Aotea Quay and the Ngauranga Gorge affect the movement of goods being transported by road to and from the port.
- restrictions caused by the Terrace Tunnel will further increase volumes of traffic using Jervois Quay, which will continue to form a barrier for pedestrians between the city and the harbour.
- the major crossing point for north-south and east-west traffic at the Basin Reserve is already near capacity. This will result in increasing delays as the capacity of the traffic signalled intersection is exceeded.
- congestion near the Mount Victoria Tunnel may inhibit further development in the eastern suburbs and airport.
- growth in the eastern suburbs will worsen congestion through the Mt Victoria Tunnel and alternative routes.
- traffic increases along Lambton Quay and through the city centre mean bus reliability can be expected to worsen in future years.



**Expected changes in trip patterns from 2001 to 2016 showing what happens with travel demand management initiatives or by doing nothing.**

## Range of transport available

### Travel Demand Management (TDM)

TDM initiatives help to discourage sole occupant vehicle trips by encouraging the use of car pooling, public transport, walking, cycling and reducing the number and length of trips that people need to make. These initiatives need to be undertaken in tandem with an enhanced infrastructure for walking, cycling and public transport. Growth nodes, such as the one planned for Adelaide Road, are a TDM measure, as they are known to significantly decrease car trips and increase walking, cycling and public transport use.

Research indicates that techniques to change travel behaviour, such as travel plans, can result in a reduction in car driver trips in the order of 5 to 10%.

In the longer term, congestion pricing (a charge placed on motorists depending on the time of day, specific road, or by specific vehicle type to deter overcrowding at key transport points) may be used as a demand management measure to get the best use out of the existing network.

### Walking and cycling

The Regional Land Transport Strategy has set a target of increased walking and cycle commuting to and from the Wellington CBD.

For those people who live and work in the CBD, walking accounts for over 60% of trips to work. Up to 20% of people who live in the inner suburbs of Newtown, Mt Cook and Wadestown and work in the CBD also walk to work. Existing pedestrian journeys show us that the average walking trip length to/from the CBD in Wellington is 2.2km. Encouraging more people to walk will be limited to people living in the inner suburbs surrounding the city centre as trips beyond this 2.2km length become less attractive for many. Providing a pedestrian friendly environment is essential for good connections and links to public transport facilities – hence minimising reasons not to use the bus or train. Enhanced pedestrian facilities need to be focused on the routes forming part of a pedestrian hierarchy (see figure 1, page 9). Options for improving these routes include footpath widening, improved walking surfaces, enhanced lighting and providing better traffic signal priority for pedestrians.

Less than 3% of work trips to the CBD are made by bike and the average cycle trip length to/from the CBD in Wellington is 5km. Nevertheless, attention could be given to creating a cycle network like that shown in (figure 2, page 9).



Wellington cyclists



Figure 1: – Possible pedestrian hierarchy



Figure 2: – Possible cycle hierarchy

**Public transport**

Wellington City has an extensive public transport system, including a heavy rail public network, a large network of bus services, ferries and a cable car. While the large percentage of the region’s workers who commute to Wellington’s CBD put the transport corridor under pressure, it also makes public transport, particularly fixed systems like heavy rail, more viable.

**Increasing train frequency:** – Train frequency to the northern and western regional centres could be increased to make rail a more attractive alternative to the car. The capacity of the Kaiwharawhara ‘throat’ (the narrow approach to the city rail station) will need to be increased to accommodate increased train frequency – something that is being addressed by ONTRACK.



Bus lanes along the Golden Mile

**Increasing bus frequency:** – Bus services to all suburbs could be increased to make buses a more attractive alternative to cars.

**Public transport corridor:** – The existing population and employment concentration stretching from the central city to Newtown, along with the ‘growth spine’ strategy, will result in a significant consolidation of this area through medium and high density redevelopment. This will open up the possibility of creating a high quality public transport route to serve this corridor. This could provide a reliable, fast and frequent service operating in its own right-of-way separated from general traffic. Such a service is expected to make public transport more attractive as an alternative to a car.

**Existing bus initiatives:** – The Regional Passenger Transport Plan includes desires to introduce electronic ticketing for buses and to install electronic tracking to provide real-time information to both users and service controllers. Electronic tracking can also be linked to traffic signals so that priority is given to buses over other road users at certain intersections.





## Roading

The roading network provides vital access to goods and services, work, education and leisure opportunities and accounts for 65–90% of motorised travel within the study area, depending on the time of day. However, by 2016, the key routes within the study area will be operating at or near capacity. This will occur even with a significant increase in public transport and TDM measures. The potential need to reallocate road space for public transport corridors puts further pressure on the roading network.

Congestion not only causes increased fuel use and vehicle emissions but also has an economic impact, for instance by delaying freight movements. Congestion can also impact on public transport users with buses often getting caught in traffic thereby reducing the speed and reliability of the service.

A strong arterial roading system exists within the study area provided by the state highway network, the Inner City Bypass and key arterial links to the eastern suburbs and airport. However, the capacity of this network cannot be efficiently utilised due to several known bottlenecks including the link between Ngauranga and Aotea Quay, the Terrace Tunnel, the Basin Reserve, Mt Victoria Tunnel, Ruahine Street and Wellington Road. Removing these bottlenecks will not just improve overall efficiency for general vehicles, but create opportunities to reduce traffic on other routes (such as the waterfront) and to reallocate road space for a high quality public transport system.

## Bringing it all together – the options for improving the corridor

The number of peak period trips to the CBD is predicted to increase by 18% between 2001 and 2016. Our analysis shows that attempts to accommodate this growth solely by improvements to public transport or by providing only additional road capacity will not meet the vision for the corridor as set out in the Regional Land Transport Strategy.

Public transport alone will not be enough. Our analysis showed that while increasing the frequency of rail would increase the number of rail passengers, it would not reduce vehicle congestion between Ngauranga and the CBD sufficiently to avoid the need to improve the road capacity between Ngauranga and Aotea Quay. Our analysis also showed that even if bus services were doubled, it would not reduce the number of cars enough to reduce congestion within the study area.

Locations that will be near or at their capacity in the next 10–15 years are:

- Terrace Tunnel southbound
- Basin Reserve
- Mt Victoria Tunnel
- Adelaide Road
- Wellington Road and Ruahine Street

The congestion that this creates will inhibit growth, increase the cost of travel, make it more difficult for businesses to deliver their products and increase greenhouse gas emissions.

Therefore, improvements to the transport network must involve a range of initiatives including public transport, roading projects, implementation of travel demand management and the provision of enhanced facilities for walking and cycling. Key to our success will be the concept of creating stronger links between transport and urban form, particularly the need to support the 'growth spine'. This can only be achieved with the creation of a high quality public transport corridor connecting the railway station with the hospital and creating a very walkable environment within the growth areas themselves.



The combinations of measures to be selected need to address the wider issues, indicated in phase I of consultation.

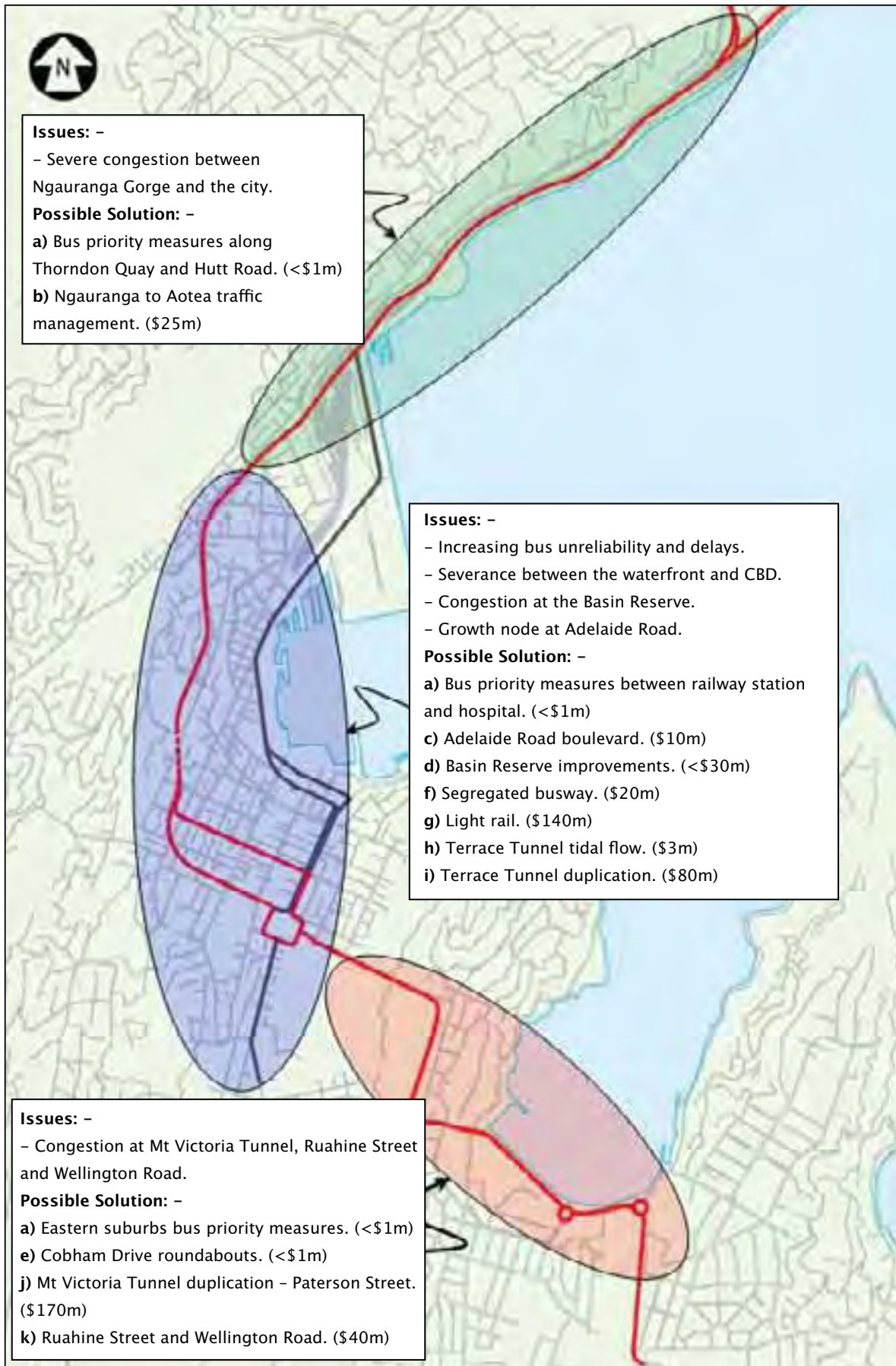
If all the possible solutions identified and shown on the map overleaf are considered and approved for the study area there will be a need to spread the cost over a number of years as the total spend for these options could exceed \$650 million. Once a corridor plan is adopted, further work will be required to determine the staging or prioritising of the various elements making up the plan. Staging will be influenced, among other things, by a project's value for money and economic efficiency as well as the region's ability to fund the projects.

Development of each solution is subject to normal Resource Management Act development and consultation requirements with all affected parties.

The solutions on the map overleaf are described in further detail under the headings of affordable projects with early benefits and future development.



## Issues and possible solutions



## Affordable projects with early benefits

Several projects are considered to be relatively straightforward improvements to enhance and improve Wellington City's transport network. These initiatives have been considered by the study team as a "base case" of work needed to ensure people can keep moving into, out of and through Wellington.

The base case initiatives include:

### a) Bus priority measures: –

In July 2006, Wellington City Council decided that one of its strategic priorities was to improve the performance of the city's passenger transport system through bus priority measures. This priority was reaffirmed in April this year, and staff were requested to develop specific proposals for consideration by the Council. Each of these would involve public consultation.

The list of possible projects includes bus lanes and signal pre-emption from Ngauranga to the Wellington Railway Station, from the station along the Golden Mile to the hospital, from Newtown to Kilbirnie via Constable Street, and from the Hataitai bus tunnel to Kilbirnie

These bus priority measures are designed to improve bus travel times and reliability. They are to be developed and considered on a project-by-project basis, including costs and benefits, and public consultation.

The development of the city bus priority plan will be influenced by the findings of the Ngauranga–Airport Study as they relate to public transport. For example, if it were decided to adopt a busway or light rail system along the Golden Mile, the bus priority proposals would need to be altered accordingly.

### b) Ngauranga to Aotea traffic management: –

This option applies traffic management techniques to allow the shoulder of the existing motorway to be used as an extra lane during the peak time periods. To provide this southbound lane, the Thorndon overbridge will need to be widened to the Aotea off ramp.

#### Key features: –

- Relieves congestion on SH1 north of the city during the morning and evening peak period.
- Providing an extra traffic lane on the motorway for the peak period may provide enough increased efficiency to reduce traffic lanes on the adjacent Hutt Road. This would allow one existing traffic lane on the Hutt Road to be reallocated as a bus lane in future years when the number of buses using this route is sufficient to warrant the dedicated lane.
- Because the volume of traffic using this part of the route is controlled by constraints at either end (ie the Ngauranga Gorge merge and Terrace Tunnel), this project improves travel efficiency (and reduces greenhouse gas emissions) without increasing the volume of traffic entering the city.

### c) Adelaide Road Boulevard

In order to accommodate this growth area, Wellington City Council will be investigating an upgrade of Adelaide Road to provide for public transport and general vehicles with initial thoughts being to provide a tree-lined boulevard. The City Council is also working with the local community and others with an interest in the area to develop a vision and plan for how the area should grow.



**d) Basin Reserve improvements**

Analysis shows that the intersections around the Basin are operating near to their capacity. Although it is coping with the current traffic volume, it does cause problems for schools in the area, access to Government House, access to the expected development of Adelaide Road and Newtown growth area. Options to improve and potentially upgrade the Basin were extensively consulted on in 2000 with options ranging from a flyover to various forms of intersection upgrade. These investigations need to be updated to reflect the balanced approach recommended in this study.

**e) Cobham Drive roundabouts**

This option provides additional lanes at the two roundabouts along Cobham Drive to improve capacity. This will accommodate not only the expected increase in traffic volumes, but will also cater for the proposed Indoor Community Sports Centre.

## Future development

Options for future development of the transport corridor are confined to the inner city and access to the eastern suburbs. No further measures are proposed on the Ngauranga to Aotea section.

**Inner city**

As indicated earlier, these options relate to the need to support Wellington City Council's Urban Development Strategy, which indicates most growth will occur in Wellington CBD, Johnsonville, Adelaide Road and Kilbirnie. This growth spine will encourage further concentration of dwellings and employment between the railway station and Newtown resulting in further medium and high density redevelopment. This will increase the number of trips being made within the area, although an increased proportion of these trips will be made using public transport, walking or cycling.

Possible options to address the above include:

**Enhanced public transport system**

There are two enhanced public transport options that could be used to connect the railway station and the Adelaide Road growth area. They are a light rail system and a segregated busway. It is proposed that these enhanced public transport systems would use the Golden Mile route, effectively following the existing bus route between the railway station and the hospital. The Golden Mile route is closer to major facilities that many people use, meaning passengers have a shorter walk to a stop. For this route, Lambton Quay would be reduced to a one-way operation for general vehicles. If the one-way operation for Lambton Quay is provided for southbound vehicles, then Featherston Street (which presently operates as a one-way street) would need to be returned to two-way.

An alternative may be to use the waterfront. The waterfront provides a significantly faster journey time (an important feature of a high quality public transport corridor) as it has fewer intersections, is more direct and is shorter than the Golden Mile route. But, it is also further away from the main activity areas, so access would be reduced.

Both enhanced public transport options are discussed below. It is possible to view these options as incremental stages to enhancing public transport in Wellington over the next 20 to 30 years. The segregated busway, for example, could be constructed first and then upgraded in future years to a light rail system. It is also possible to choose light rail as a preference without having a segregated busway first. The light rail system would be specifically designed to cater for the CBD and Adelaide Road growth area. Buses would also need to operate on the same routes for passengers travelling beyond those destinations.



**f) Segregated busway**

One option is to use the existing bus fleet on a segregated busway, which provides a dedicated right-of-way for buses. While other vehicles may use the same road corridor, they are generally separated from buses, usually by a physical barrier. This means buses become the primary transport mode and other road users are given a lower priority or are totally restricted.

**Key features: -**

- Improves bus travel times and reliability during the peak periods.
- Buses, including trolley buses, already operate within the city, and so the additional capital expenditure is limited to re-arranging the road space needed to segregate buses from other vehicles.
- Buses that use the dedicated busway can also operate as usual on existing roads in the low density areas.
- Existing diesel buses create more air pollution than light rail units and trolley buses so they will reduce the amenity of high pedestrian areas and retail corridors.
- When used in an urban environment, busways, unlike bus lanes, can restrict the movement of other vehicles, particularly for property access, loading zones and servicing.
- The need to reallocate road space that is presently used by general vehicles to public transport may increase congestion along some other routes and this would impact on travel times for some car journeys.



At present



Artist impression of a possible option

**Busway on Lambton Quay**



A similar level of service to light rail could be provided by modern high quality buses, provided they also operate within their own right-of-way as a light rail system. Such buses can be electric powered and will offer many of the benefits of light rail. It is expected that manufacturers will also provide electronic guided buses in future years - giving them all the same features as a light rail system but without the additional cost of laying rails.

#### g) Light rail

This option provides a light rail system extending from the railway station through to the Adelaide Road growth area and hospital. It means that all bus users wishing to travel through the CBD will be required to transfer from bus to light rail in order for light rail to maximise its economic viability.

Light rail will provide the highest quality public transport service and is able to move a larger number of passengers per hour than a traditional bus-based system. Light rail will encourage the development of high density development envisaged by the growth spine concept.

Creating a safe, reliable and efficient light rail system within the Wellington CBD, where there are a large number of pedestrians, would best be achieved by providing light rail with its own right-of-way, from which other traffic is generally separate, as proposed above in the segregated busway option.

#### Key features: -

- Creates a fast and reliable people moving system within the CBD area, supporting the creation of the city's 'growth spine'. Improves travel times and reliability during the peak periods. Journey times between the hospital and railway station will be half existing travel times.
- Providing light rail together with an integrated transfer station at the railway station increases the attractiveness of heavy rail.
- As light rail is guided and requires fewer vehicles to carry the same number of passengers per hour, they are safer to operate in close proximity to pedestrians, in for example, retail areas.
- Light rail vehicles are often perceived by users as providing a higher quality service than conventional buses, potentially increasing public transport use.
- Light rail is more expensive than a bus-based system, requiring the additional expense of tracks, overhead power wires and control systems. There is a need to provide enhanced transfer stations where light rail and buses connect, as well as providing specialised maintenance and storage areas. Compared to conventional buses, there is also the additional cost of the light rail vehicles themselves.
- While buses and emergency vehicles can use the light rail corridor, other vehicles would be prohibited from using it.
- The need to reallocate road space that is presently used by general vehicles to public transport may increase congestion along some other routes and this would impact on travel times for some car journeys.



Example of a light rail system



Example of a high quality bus system





At present



Artist impression of a possible option

### Light rail along Kent/Cambridge Terrace

#### The Terrace Tunnel – tidal flow or duplication

##### h) Tidal flow:

This option increases the capacity of the Terrace Tunnel through the use of a ‘reversible’ traffic lane, which can be used in either direction depending on the time of day. Two lanes would be used by southbound vehicles in the morning peak period (with the remaining lane northbound) and vice versa for the evening peak period, as at present.

##### Key features: –

- The provision of a second southbound lane through the Terrace Tunnel will reinforce the state highway as the main arterial route for traffic passing through the city.
- Given the limited width of the tunnel, a physical barrier to separate traffic is not possible. Instead overhead variable message signs, automatic telescoping marker posts (poles that rise from the ground to form a moveable median barrier) and illuminated pavement markers will be required to denote usable traffic lanes. While this approach has been used previously, the unique characteristics of the Terrace Tunnel will create some increased safety risks.
- Some northbound morning peak traffic, which presently uses the Terrace Tunnel, is expected to use the waterfront instead, increasing the amount of northbound vehicles using this route. So while the tidal flow option decreases traffic in one direction along the waterfront, it increases it in the other direction meaning that pedestrians may not benefit from reduced traffic along the waterfront.



Tidal flow operating on Auckland Harbour Bridge



**i) Tunnel duplication:**

This option duplicates the existing tunnel to give two southbound lanes and two northbound lanes.

**Key features: –**

- The provision of a second southbound lane through the Terrace Tunnel will ensure that the state highway is the main arterial route for traffic passing through the city.
- The reduction in the amount of southbound traffic in both the morning and evening peak periods along the waterfront may provide an opportunity to reduce the number of southbound lanes from three to two lanes. This will help improve the connectivity between the city and its waterfront. While further traffic lanes could be removed with this option, it would result in an increase in congestion for general vehicles.
- Parts of the Inner City Bypass will operate at, or beyond, their theoretical capacity, which may require the introduction of peak hour clearways.

**Access to eastern suburbs**

The issues with this area relate to the airport and the proposed growth at Kilbirnie and other eastern suburbs. In terms of the airport, access needs to be assured because it is a significant passenger and freight generator.

Like the Adelaide Road growth area, the growth area at Kilbirnie forms part of Wellington City Council’s Urban Development Strategy. The expected growth will increase the number of trips between the eastern suburbs and the CBD and better access will be required for the area to reach its potential.

The limited capacities of the Mount Victoria Tunnel, Ruahine Street and Wellington Road will result in severe congestion to those travelling to and from the eastern suburbs and the airport requiring changes to be made to address future growth. Likewise, public transport services between the CBD and the airport are limited, but appear to match the present level of demand.

A lack of amenity and poor pedestrian/cyclist security using the Mt Victoria Tunnel also needs to be addressed.

The options to address these issues include:

**j) Mt Victoria Tunnel duplication – Paterson Street**

This option involves the duplication of the Mount Victoria Tunnel immediately adjacent to the existing tunnel to provide two lanes in each direction.

It would have the benefit of reducing congestion through the tunnel and would open up the eastern suburbs for further growth and development because of the removal of the pinch point and provision of good accessibility between the CBD and Kilbirnie, the airport and Miramar.

It creates the opportunity to refurbish the existing Mount Victoria Tunnel, removing the ventilation duct to improve lane width and provide road shoulders or facilities to cater for pedestrians and cyclists.

Duplicating the tunnel also has the benefit of reducing traffic flows along Constable Street, improving the amenities in Newtown, and reduces the traffic flows along Evans Bay Parade and Oriental Parade.



### k) Ruahine Street and Wellington Road

This option widens Ruahine Street and Wellington Road to four lanes and makes several intersection improvements including traffic signal-controlled intersections along Ruahine Street at Goa Street and Wellington Road, reducing congestion along this route.

**Key features: –**

- An existing road widening designation (a classification to increase the road width) exists along the western side of Ruahine Street (extending into Hataitai Park) and on the southern side of Wellington Road.
- Banning right hand turns from Taurima Road onto Ruahine Street to improve road safety.
- The Goa Street intersection would improve access to Hataitai Park.



At present



Artist impression of a possible option

### Ruahine Street (view looking north)



At present



Artist impression of a possible option

### Wellington Road (view looking west)



## The costs

### Capital costs

Estimated capital costs are shown on the map on page 12. The total cost of all solutions would exceed \$650 million.

### Operating costs for public transport

Increasing the frequency of buses and trains or providing a light rail system will increase the costs of operating a public transport system in the Greater Wellington region. At present, Greater Wellington Regional Council and Land Transport New Zealand together spend \$31 million per year on bus, trolley bus and ferry operating contracts.

The actual change in bus and train frequency will need to be determined after the preferred package has been selected with a view to maximising the benefits while minimising the operating costs. Nevertheless, by way of illustration, the increase in the total annual subsidy required to support the public transport initiatives could be:

- \$2 to \$4 million for light rail
- \$6 to \$7 million if bus frequencies are increased by 20%
- \$31 to \$35 million if bus frequencies are doubled.

### How funding requirements are met

The measures outlined in this document are not all funded in the same way. While roading and public transport improvements have a one-off cost, public transport measures also require ongoing funding. This is because the full cost of providing public transport services in Wellington cannot be recovered by fares. Greater Wellington Regional Council seeks to recover at least 50% of the cost of providing services from its fares. The other 50% is subsidised by a combination of ratepayer funds and money received from Land Transport New Zealand (taxpayer funds).

Furthermore, the rate of subsidy that roading measures attract differs depending on whether the road being constructed is classified as a state highway or a local road. State highway measures are constructed by Transit New Zealand and are 100% taxpayer-funded. In contrast, local roads are approximately 50% taxpayer-funded and 50% ratepayer-funded.

The cost of Travel Demand Management initiatives and walking and cycling projects will typically be shared between taxpayers and ratepayers.

### Affordability

This is an issue for the next stage of consultation and will need to be considered in the development of the strategy and preferred corridor plan.



### Other options considered

The study considered several projects in addition to those identified that are unlikely to be viable for a variety of reasons. These projects are as follows:

- 1) Extension of the public transport spine to Kilbirnie and the airport – There are a number of serious physical constraints to be overcome in order to extend the public transport spine to Kilbirnie given existing road widths. Such an extension would be costly and significantly adversely affect the level of service provided for other road users. Furthermore, the present bus route through Mount Victoria (Pirie Street bus tunnel), with some priority improvements, is likely to provide an adequate level of service for the number of passengers in the eastern suburbs within the planning horizon. Extending the public transport spine to the airport is unlikely to be viable in the current planning horizon given the low passenger numbers and expected high cost.
- 2) Extension of heavy rail to Courtenay Place – This would require the rail line to be located in a tunnel along the waterfront as a rail line along the street would create a significant barrier to general movements to and from the harbour. Construction would significantly disrupt traffic on the waterfront route. Variable ground conditions and groundwater levels would make construction difficult and costly. Transfers to and from buses for journeys to the south and east are still required, particularly at Adelaide Road, Kilbirnie and the hospital for the growth indicated in Wellington City Council’s Urban Development Strategy.
- 3) Wallace Street four laning – The provision of four lanes along Wallace Street would require several properties to be acquired on the eastern side of the street along with the relocation of some buildings on the Massey University campus. The character of the existing residential street would be changed into more of a vehicle-oriented road and impact on the existing building character.
- 4) Pirie Street Tunnel – An alternative to the Mt Victoria (Paterson Street) Tunnel is to provide a new, two-lane tunnel from Vivian Street through to Ruahine Street thereby negating the need for traffic heading for the eastern suburbs on the state highway to use Kent Terrace. This option would be very difficult to construct and may result in some houses having to be acquired. As the longest tunnel option, costs would be between \$250m and \$390m compared with \$170m for the Mt Victoria Tunnel duplication.



## What happens now

### Further information

To find out more about the options, please come to one of our open days between 29 January and 15 February to look at the displays and talk to the project team members. Details of the open days will be advertised in the new year.

You can also log on to [www.Wellington.govt.nz](http://www.Wellington.govt.nz) to view the Problem Framing Report and the Technical Report that set out the various options in more detail. Hard copies of the reports are available at the Wellington Regional Office of Transit NZ and at the Wellington Central Library.

### Comments and feedback

The purpose of this second stage of consultation is to provide:

- information to interested parties on the different approaches to addressing Wellington's transport problems that are being considered
- an opportunity for you to express your views on the different combinations of public transport and roading improvements and what you see as the key advantages or disadvantages of each.

We will use your feedback to assist us to develop an appropriate corridor plan. This plan will incorporate all the solutions required to ensure the efficient transport needs of Wellingtonians are met for the future.

## Feedback is welcome

The closing date for feedback is 22 February 2008.

Please forward your feedback to:

Freepost 2199  
Ngauranga to Airport Strategic Transport Study  
PO Box 12-003  
Wellington

**or email to:** [transport.study@opus.co.nz](mailto:transport.study@opus.co.nz)

**or complete and submit the feedback form on Wellington City Council's website**  
[www.Wellington.govt.nz](http://www.Wellington.govt.nz)

