



Cobham Drive to Buckle Street transport improvements

Public engagement

Have your say about improvements to Wellington's inner-city transport network between Cobham Drive and Buckle Street

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The inner-city transport network: improvements for a successful capital city

Keeping our people moving

What's proposed

The NZ Transport Agency (NZTA) is planning some improvements to State Highway 1 (SH1) between Buckle Street and Cobham Drive. The improvements include:

- A bridge over Kent and Cambridge Terraces, near the Basin Reserve.
- A second tunnel under Mt Victoria.
- Widening Ruahine Street and Wellington Road.
- A new pedestrian and cycle path between the Basin Reserve and Cobham Drive.

As part of this work, we plan to allocate road space around the Basin Reserve for a high-quality public transport system, such as light rail.

The proposed transport improvements for inner-city Wellington



Why have this open day?

This open day is your opportunity to learn more about the proposed improvements to SH1. Feel free to ask someone on the project team to explain the proposals – they'll be happy to answer your questions.

And remember, we welcome your views on the SH1 improvements and how they could be changed or improved. Simply complete the feedback form at the back of our brochure – you can post or email it to us, or leave it at the information desk.

Thank you for taking the time to come here today.





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Why are these improvements needed?

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The Ngauranga to Wellington Airport Corridor Plan

- The need for the SH1 improvements was identified in the 2008 'Ngauranga to Wellington Airport Corridor Plan'.
- After looking at other options (such as investing only in roads and only in public transport), it was decided that we need an 'integrated multi-modal package'. This involves building roads, improving our public transport system and developing our walking and cycling network.
- Before adopting the Corridor Plan, Greater Wellington Regional Council (GWRC), Wellington City Council (WCC) and the NZTA consulted the people of Wellington on whether these improvements were needed.

Delivering the Corridor Plan

Now that the Corridor Plan has been adopted, GWRC, WCC and the NZTA are responsible for making it happen. Work already completed or about to start includes:

- Relocating the bus corridor along Manners Street
- Investigating the options for a high-quality public transport route between the Railway Station and Wellington Regional Hospital - including the idea of light rail as an alternative to buses along this route.

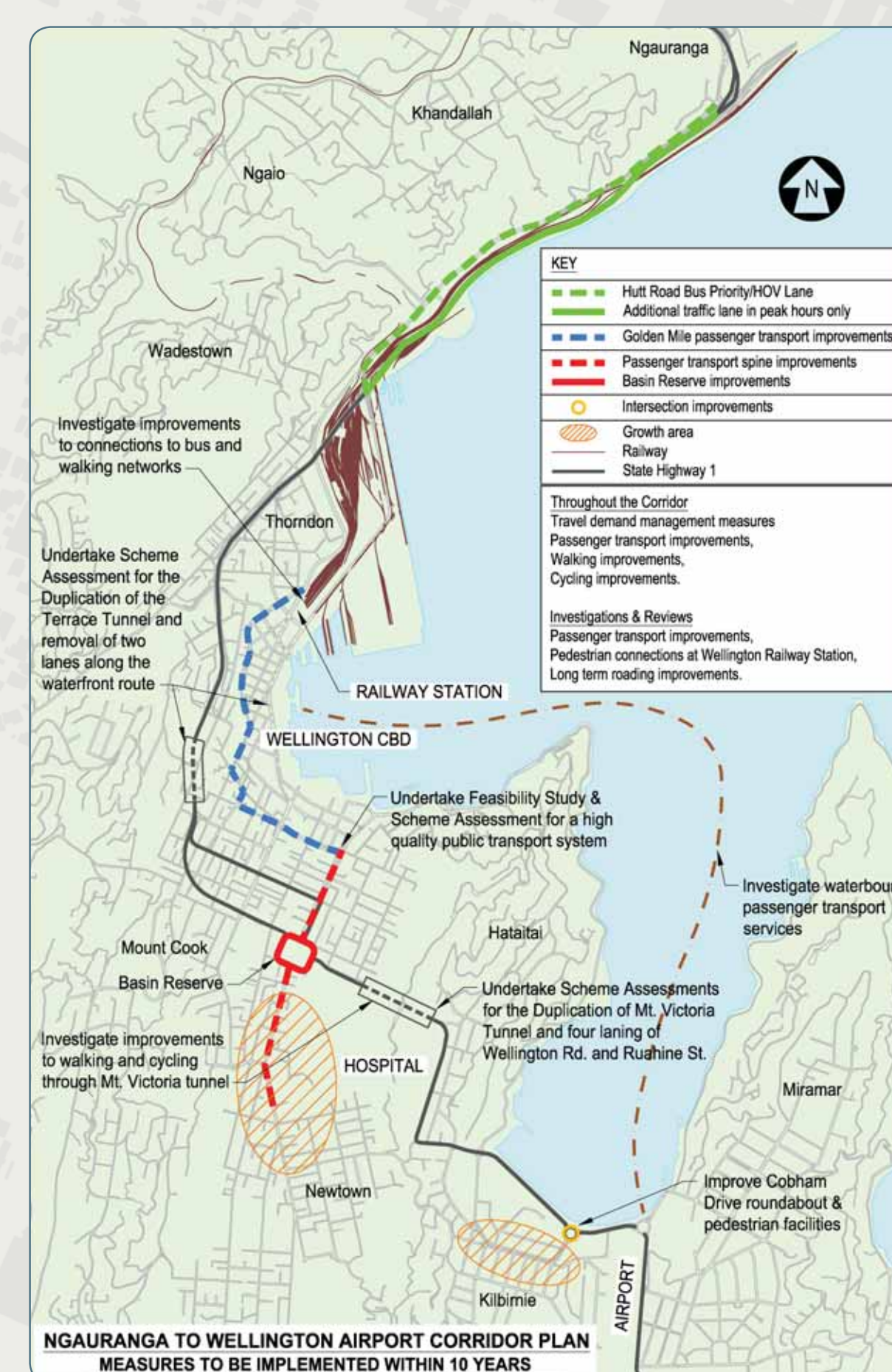
The SH1 improvements are part of the government's 'roads of national significance' (RoNS) programme. This aims to improve the economic performance of our city and region by moving people and freight more effectively, efficiently and safely.

The Corridor Plan goals

The Ngauranga to Wellington Airport Corridor Plan aims to:

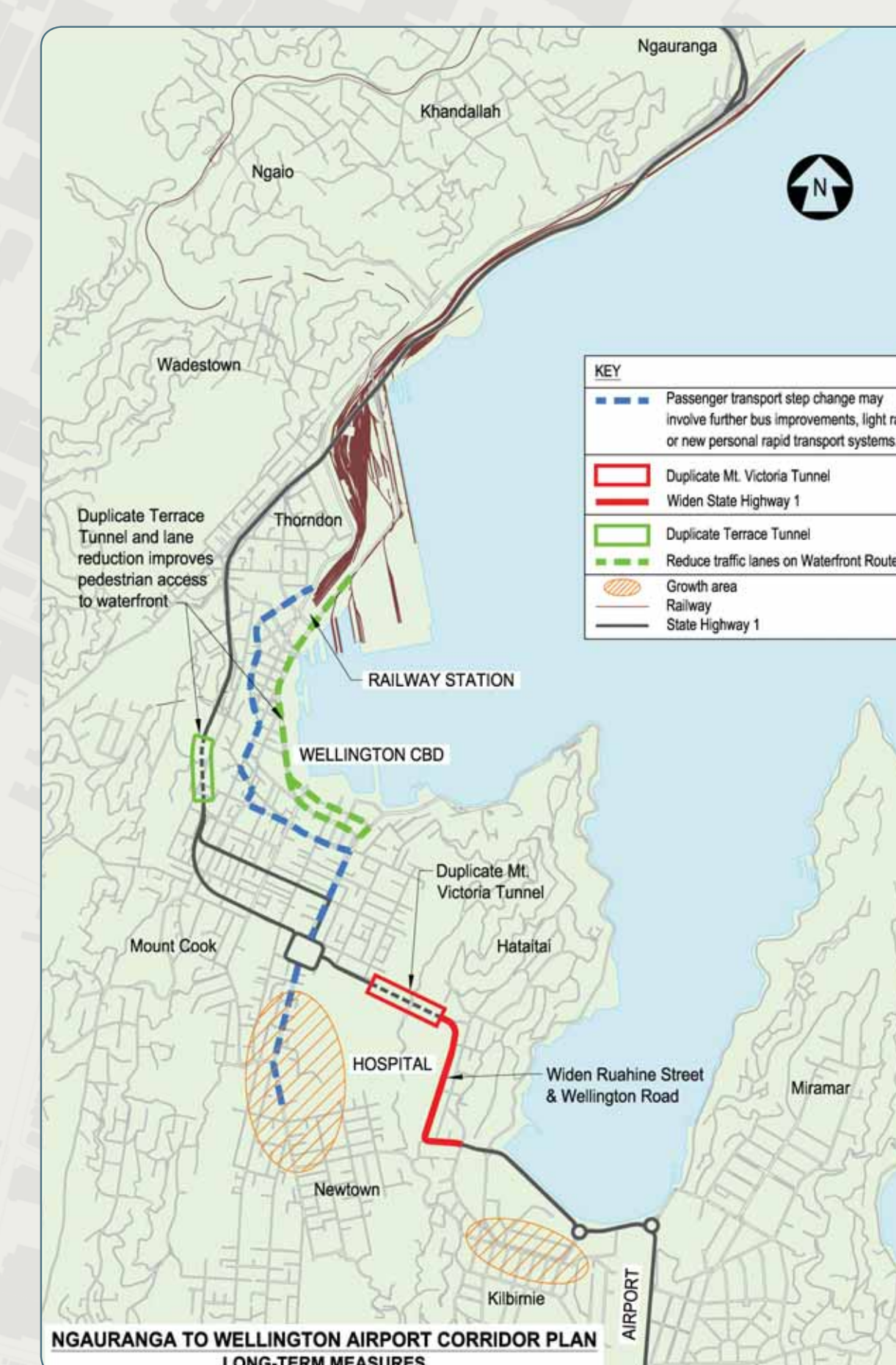
- Create a transport network where vehicular traffic has priority on some roads, and public transport, walking and cycling have priority on others
- To make SH1 more attractive to drivers currently using roads that are more suited to other uses, such as public transport and cycling
- To provide Wellington with a more efficient transport system - for general vehicles and for public transport, pedestrians and cyclists.

You'll find more information on the Corridor Plan at the GWRC website: www.gw.govt.nz.



Corridor Plan (first 10 years)

In 2008, GWRC, WCC and the NZTA consulted the community on whether the Corridor Plan was needed. While the consultation generated a wide range of views, overall there was strong support for the Plan.



Corridor Plan (after first 10 years)





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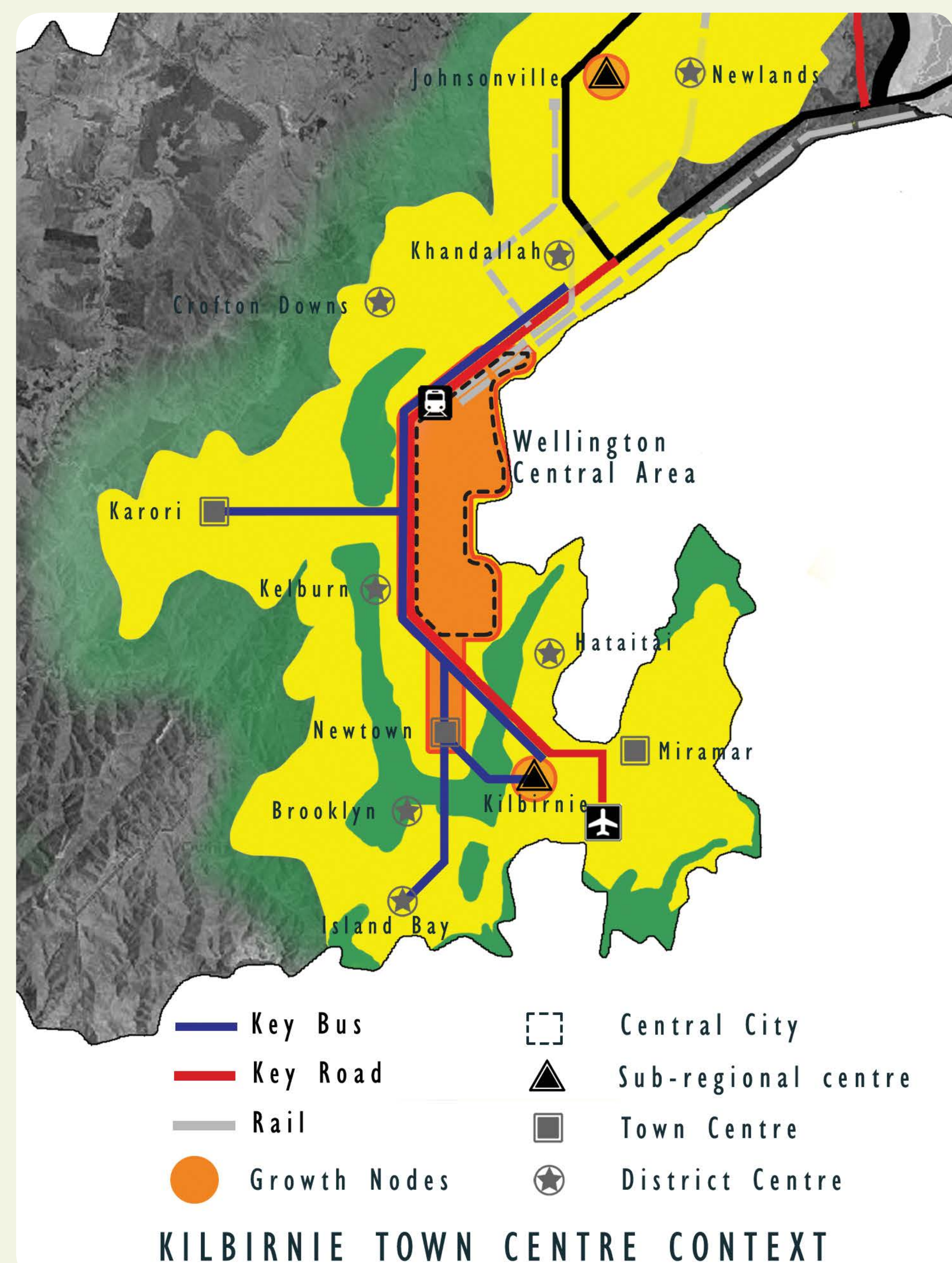
Wellington is growing

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Our city

With its stunning natural landscape and cosmopolitan lifestyle, Wellington is expected to grow significantly in the next 20 years. We need to make sure we're ready, with a transport network that enables people to move efficiently between their homes, workplaces and social and sporting activities.

- Wellington is planning to locate most of its growth along a 'spine' that extends between Johnsonville and Kilbirnie. There are plans for more intensified urban development, particularly along Adelaide Road and in Kilbirnie.
- It's vital that our transport network can handle the journeys that more people, and more vehicles, will be taking.
- To support development in Adelaide Road, the bus route between the Railway Station and Newtown may be replaced with a high-quality public transport system such as light rail.



Wellington's Development Strategy (source: WCC). A significant proportion of Wellington's future growth will happen in the central business district and along the Johnsonville to Kilbirnie 'growth spine'.

Our airport

Wellington International Airport has published a draft master plan that looks ahead to 2030. The plan:

- Predicts that the number of people using the airport will double in the next 20 years
- Anticipates the development of an airport retail park in Lyall Bay.

Both of these developments will mean a significant increase in traffic going to and from the airport area.



Proposed developments along Adelaide Road (source: WCC used with permission).

In November 2008, WCC adopted the Adelaide Road Framework, which anticipates 1500 more people living in the Adelaide Road area. Larger buildings will be encouraged, allowing people to live, work and shop in the area.



Proposed Kilbirnie Town Centre Plan (source: WCC used with permission).

WCC is developing the Kilbirnie Town Centre so that it offers a wider range of activities and homes for about 1000 more people. Like Adelaide Road, larger buildings will be permitted.



High-quality public transport system planned

To support the Adelaide Road development and make the area more attractive to people and businesses, GWRC is investigating a high-quality, fast public transport system between the Railway Station and Newtown. The study may recommend replacing conventional buses along this route a high-quality public transport system such as light rail.



Wellington International Airport predicts that passenger numbers will double in the next 20 years.



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What will the SH1 improvements do for Wellington?

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For general vehicles (including freight)

- Increase the capacity of SH1, making it the preferred and most efficient route for vehicles travelling between the CBD and the eastern suburbs.
- Reduce congestion for vehicles travelling between the CBD and the eastern suburbs.

For public transport

- Improve journey time and reliability for buses travelling around the Basin Reserve.
- Provide road space for light rail or an alternative high-quality public transport system in future.
- Improve bus stop facilities around the Basin Reserve.
- Reduce traffic along Constable Street and Wallace Street.
- Potentially reduce delays for buses travelling between the bus tunnel and Kilbirnie.

For pedestrians and cyclists

- Provide a generous pedestrian and cycle path, linking the cycle path along Cobham Drive to the Basin Reserve and on to the cycle path along Karo Drive.
- Make it safer for cyclists on Evans Bay Parade because there will fewer vehicles using this route.
- Make it easier for pedestrians and cyclists to move around the Basin Reserve.
- Provide a safer drop-off area for school students near the Basin Reserve.
- Reduce traffic by up to 35% around the Basin Reserve and up to 80% along Oriental Parade, making it safer and easier for pedestrians and cyclists using these routes.
- Improve access for pedestrians and cyclists to Hataitai Park.

For the city

- Support economic development in the eastern suburbs, including the airport.
- Help WCC in its plans to develop the Johnsonville to Kilbirnie growth spine.
- Provide a ‘green corridor’ link between the Town Belt and Kilbirnie Park.
- Create a ‘green corridor’ link between the War Memorial and the Basin Reserve.



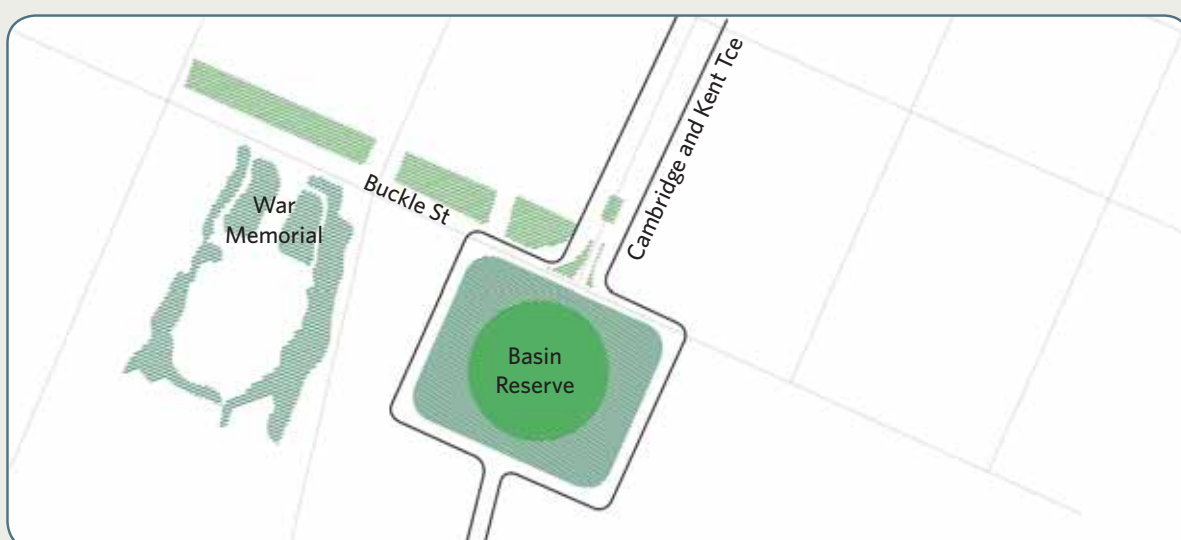
The SH1 improvements mean more traffic will use SH1 instead of local roads and there will be less traffic around the Basin Reserve.



Journey times are expected to reduce significantly along SH1, despite the increase in vehicles using it. Journey times will also reduce along other routes, because fewer vehicles will be using them.



A new 'green corridor' beside Wellington Road will provide a link between the Town Belt and Kilbirnie Park.



A new 'green corridor' beside Buckle Street will provide a link between the War Memorial and the Basin Reserve.

Predicted bus travel times in morning rush hour

(from Kent Terrace to Adelaide Road)

Without improvements	150 seconds
With improvements	98 seconds
Difference in travel time	52 seconds
% improvement	35%





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Meeting Wellington's needs

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Wellington is growing, with predictions of significant increases in peak-hour traffic as well as the number of people walking, cycling and using public transport.

To keep up with that growth and ensure that our city continues to be a great place to live and work, we need a safe and efficient transport system.

How important is SH1?

SH1 is an important 'through route' for the Wellington region. Vehicles also use it to get to other roads within Wellington city, including the CBD.

Today:

- Only about 40% of the vehicles using Mt Victoria Tunnel also use the Terrace Tunnel and the SH1 motorway. The remaining 60% travel to or from the CBD or the southern suburbs.
- SH1 along Ruahine Street and Wellington Road is both a through route and a way for vehicles to access local roads.
- Given SH1's importance for local trips, it needs to keep its connections to the local roading network.

Because SH1 is congested:

- Vehicles are using alternative routes like Evans Bay Parade and Constable Street to travel between the eastern suburbs and the CBD.
- Because these alternative routes are not as direct as using SH1, the vehicles using them are travelling farther – using more energy and discharging more greenhouse gases.
- These vehicles are travelling on roads that buses use, making the buses often slow and unreliable.

What would happen if we didn't improve SH1?

- The amount of traffic using alternative routes would continue to increase.
- This would make bus journeys slower and more unreliable.
- Congestion at the Basin Reserve would affect the region's plans for a high-quality public transport system such as light rail.
- The plans to develop a Johnsonville to Kilbirnie growth spine would also be affected.



Only about 40% of the vehicles using Mt Victoria Tunnel also use the Terrace Tunnel and the SH1 motorway. The remaining 60% travel to or from the CBD or the southern suburbs.



As Wellington's population increases, so will the traffic on our roads – and the congestion on SH1 will mean more traffic using Evans Bay Parade. If we do nothing, Evans Bay Parade will start to carry the same amount of traffic as SH1. The diagram shows the number of vehicles per hour during peak period.





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What are the costs and benefits of the improvements?

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- We estimate that the SH1 improvements will generate at least \$200 million in economic benefits in 30 years.
- We calculated this by giving travel time savings financial value. We also added savings in vehicle operating costs and the financial value of reduced CO2 emissions and reduced crashes.
- Almost 75% of these benefits come from savings in travel time.
- The benefits of creating a pedestrian and cycle pathway between the CBD and the eastern suburbs will contribute about 3% to the total benefits. This is less than the cost of creating the pathway.

The total cost to plan, design and undertake the improvements is estimated at more than \$500 million at this point in time.

- This includes the costs of building the roads and footpaths as well as the costs of land and urban design.
- More than \$60 million will go into providing pedestrian and cycling facilities.
- More than \$70 million is associated with urban design and landscaping.

The benefit-cost ratio (BCR) is calculated in accordance with the NZTA's Economic evaluation manual (EEM). This is the transport industry's standard for the economic evaluation of transport activities.

For the Wellington Northern Corridor RoNS the BCR as a whole is 1.2. This includes taking into account agglomeration benefits which is provided for in the EEM. If wider economic benefits are also taken into account, such as the extra tax take from new employment created by the projects, then the BCR for the corridor is higher.

How is the benefit-cost ratio calculated?

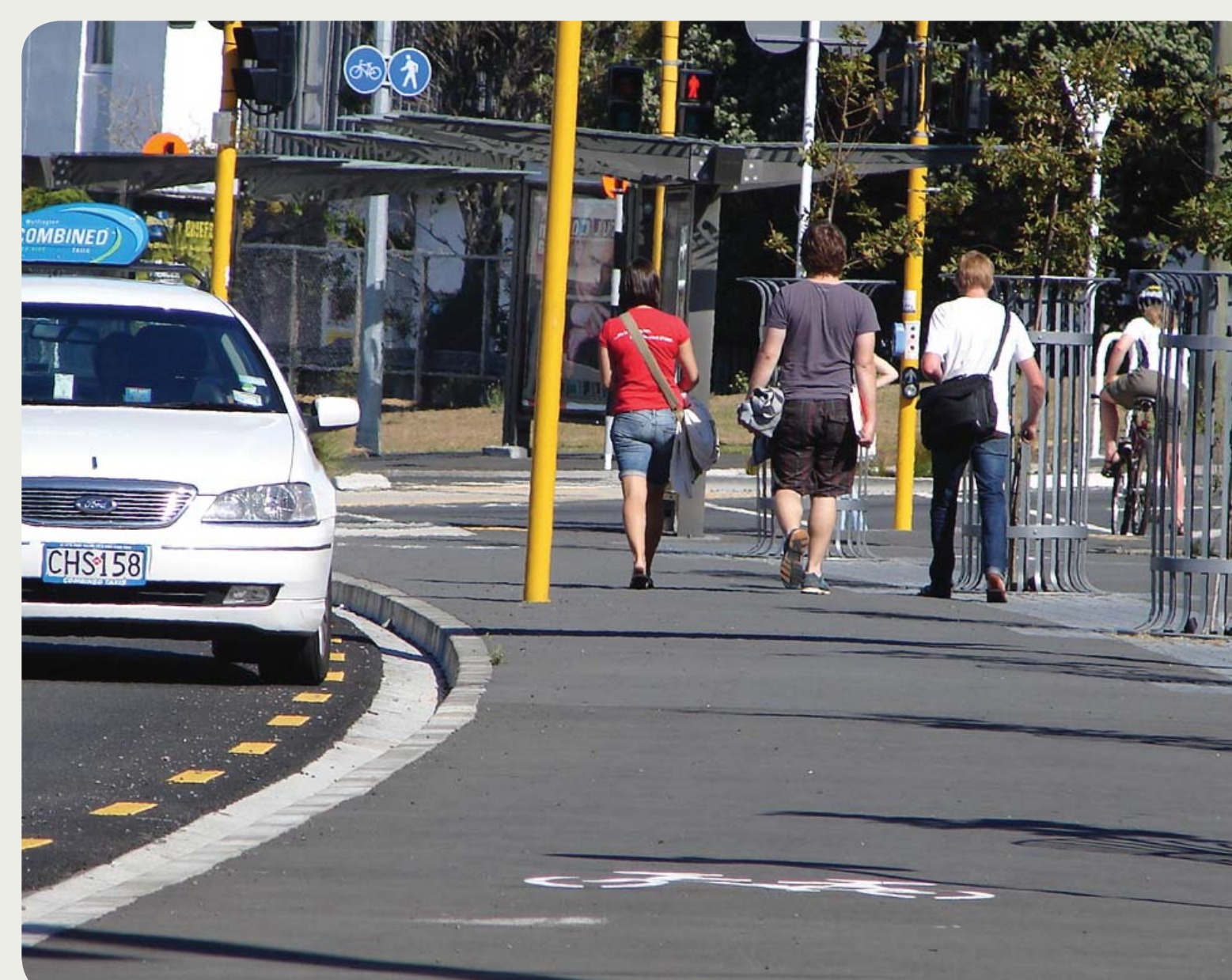
- The BCR is an economic tool for comparing the proposed improvements to SH1 with the existing situation. It only considers those impacts that can be converted to dollars and cents.
- To calculate the economic benefits of the improvements, the savings are calculated for a 30-year timeframe.
- The BCR is calculated after converting both the cost of the project and the future flow of economic benefits to their net present value. This is a process that takes into account the 'time value' of money.
- When the BCR is less than zero, it's better to do nothing than to go ahead with the improvements.
- When the BCR is greater than 1, the improvements will effectively pay for themselves in 30 years.
- When the BCR is less than 1, the project will only go ahead if it's lead infrastructure – being infrastructure that is built before it is needed to stimulate economic activity.

How were the options compared?

- The BCR doesn't consider many of the social, community and environmental impacts of each option, or the benefits of things like landscaping and new parks.
- That's why we seek feedback from the Wellington community and other interested parties on many of these topics. It provides an important perspective in helping us to compare the options and make decisions.
- Engagement is not a vote for a preferred option. It aims to identify issues and generate ideas that help us to decide on alternatives and develop our proposals.



The SH1 network is operating at capacity and is regularly congested. The proposed improvements will make it the preferred and more direct route for general vehicles, and significantly reduce travel times. Reduced travel distances and times reduce energy consumption and CO2 emissions.



Pedestrians and cyclists will be able to travel more safely on a dedicated path that takes them off the main road between Cobham Drive and the Basin Reserve. We estimate that this path will generate about \$1 million in economic benefits each year.



Wellington City's population is growing, and is predicted to continue growing.



A view of Adelaide Road as it is today.



An artist's impression of the Adelaide Road of the future, showing a light rail system and more intensified land use.

The design of SH1 around the Basin Reserve needs to allow for the possibility of light rail and more traffic resulting from this intensified land use.



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Why your views are important

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Your views were an important part of the Corridor Plan's development; they helped us to decide that the improvements to SH1 were needed.

We're now starting to design those improvements, so we're again seeking your views – this time on things like:

- Where we should locate the bridge that passes to the north of the Basin Reserve
- What facilities we should provide for pedestrians and cyclists.

Your views on these topics, together with your comments on the proposed SH1 improvements, will help us to develop our proposals.

Options to date

The options shown are only concept drawings to give you an idea of the proposed improvements. We'll use community feedback and environmental assessments to develop them further and fine-tune our proposals.

How to provide feedback

Please complete the feedback form on the back of the brochure (if you don't have one, you can get one from the information desk). Simply send the form to us by post or email – or hand in your completed form at the information desk.

We welcome your feedback

Need more information?

Visit our website at www.nzta.govt.nz/witi.

It has more material on the proposed SH1 improvements, as well as detailed technical reports that cover the reasons for the SH1 improvements and the options we considered.

Talk to a team member

Members of the project team are available right now to discuss the proposals and answer any questions you may have.

Where to from here?

- Once we've considered your feedback, we'll develop the proposed improvements to SH1 and lodge 'notices of requirement' with the Environmental Protection Authority.

Thank you for taking the time to come here today.



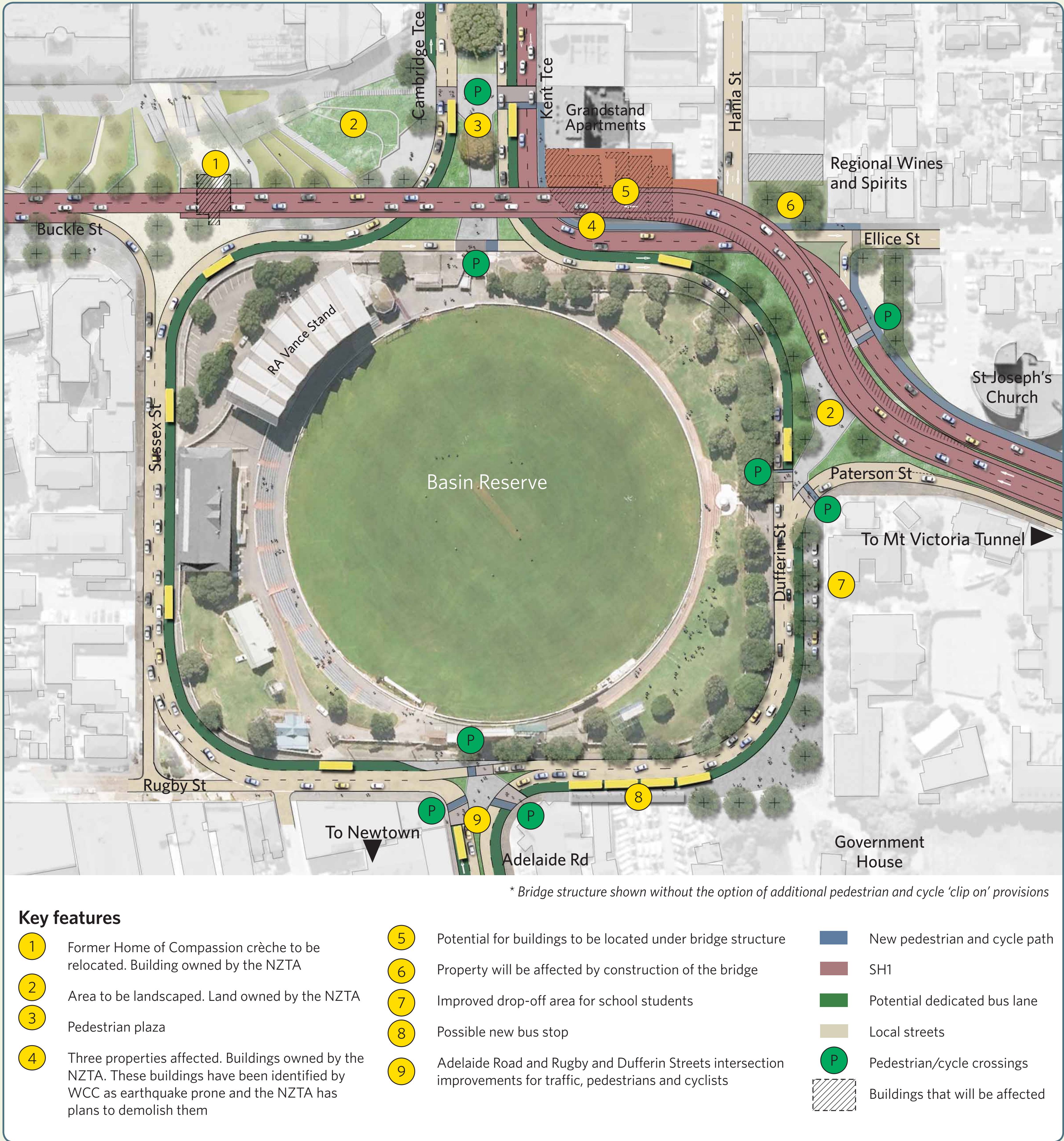


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The Basin Reserve: what we propose

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SH1 westbound traffic will travel on a bridge to the north of the Basin Reserve.

There are two options to consider:

Preferred option - Option A:

A bridge near the Basin Reserve.

Westbound traffic on SH1 will pass approximately 20 metres north of the Basin Reserve gates on a bridge over Kent and Cambridge Terraces. The bridge will be approximately 380 metres long, a minimum of 12 metres wide and a maximum of eight metres above the ground.

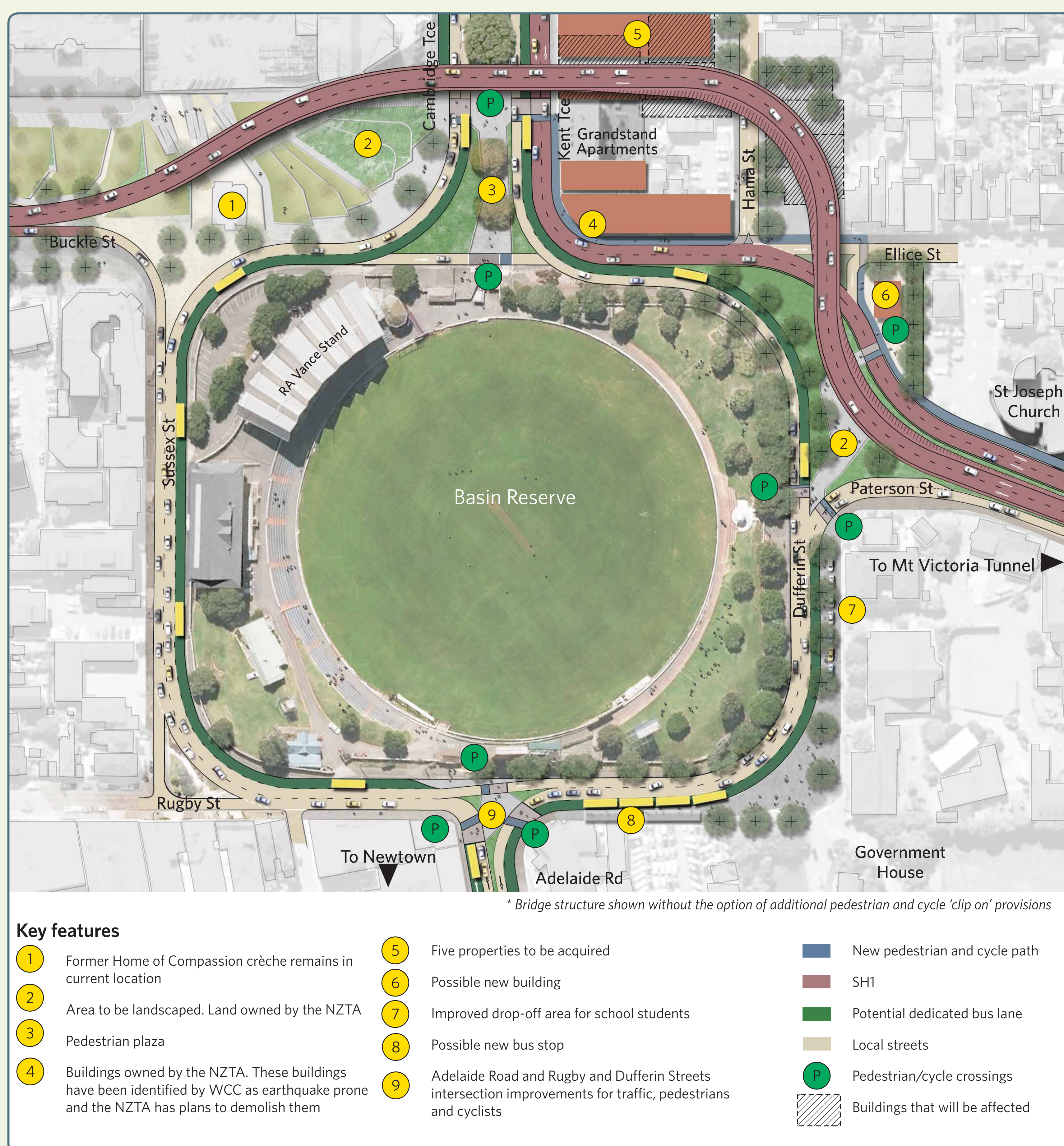


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The Basin Reserve: what we propose

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Alternative option - Option B:

A bridge away from the Basin Reserve

Westbound traffic on SH1 will pass approximately 65 metres north of the Basin Reserve gates on a bridge over Kent and Cambridge Terraces. The bridge will be approximately 440 metres long, a minimum of 12 metres wide and a maximum of eight metres above the ground.



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Mt Victoria Tunnel: what we propose

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Key features

- 1

Brougham Street connection to Paterson Street closed, but connection for pedestrians and cyclists retained
- 2

Between Brougham Street and Austin Street, 14 properties affected. 12 properties owned by the NZTA, two properties need to be acquired
- 3

Mt Victoria Heritage Precinct
- 4

Access to school retained
- 5

Western portal for new tunnel, treated to be consistent with the urban landscape of Mt Victoria
- 6

Buildings on the corner of Austin Street and Austin Terrace may be affected during the construction of the tunnel
- 7

New tunnel includes four metre wide pedestrian and cycle path
- 8

Existing tunnel
- 9

Ruahine Street alignment encroaches into Town Belt up to 15 metres from existing southern kerb
- 10

Eastern portal for new tunnel, treated to incorporate the vegetated slopes of Mt Victoria
- 11

Hataitai Kindergarten would need to be relocated
- 12

Left turn for tunnel traffic into Taurima Street retained. Right-hand turn out of Taurima Street closed
- 13

New pedestrian and cycle bridge
- 14

New parking area to replace parking spaces on Taurima Street
- 15

Six metre wide service lane shared with pedestrians and cyclists
- 16

Four metre wide pedestrian and cycle path between Mt Victoria Tunnel and Hataitai Village
- SH1
- New pedestrian and cycle path
- Local streets
- Buildings that will be affected

A second tunnel will be built immediately to the north of the existing tunnel. It will be 700 metres long and will provide two lanes for eastbound traffic. It will also provide a four metre wide path for pedestrians and cyclists.



Cobham Drive to Buckle Street transport improvements

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Ruahine Street: what we propose

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Aerial view of Hataitai along Ruahine Street and Moxham Avenue.



Key features

- 1 Four lanes for traffic, two in each direction
 - 2 Possible connection between Tapiri Street and service lane
 - 3 Ruahine Street encroaches 15 metres into Town Belt from existing western kerb
 - 4 Six metre wide service lane shared with pedestrians and cyclists
 - 5 Six lanes for traffic, three in each direction
 - 6 New signalised intersection providing improved access to Ruahine Street and Hataitai Park. Will encroach 30 metres into Town Belt from existing western kerb
 - 7 New signalised intersection
 - 8 Seven lanes for traffic, including turning movements
 - 9 War Memorial remains in current location
 - 10 Ruahine Street encroaches 35 metres into Town Belt from existing western kerb
 - 11 Five lanes for traffic, two southbound and three northbound
 - 12 Area to be landscaped with low-level planting
 - 13 Badminton Hall removed or relocated
- SH1
 - New pedestrian and cycle path
 - Local streets
 - Pedestrian/cycle crossing
 - Buildings that will be affected

Ruahine Street needs to be widened to four lanes, with up to seven lanes at places.

Traffic signals will be installed at the intersection of Goa Street and Ruahine Street and at the intersection of Goa Street and Moxham Avenue.

A separate pedestrian and cycle path will follow SH1 along the eastern side of Ruahine Street. This six metre wide facility will be shared with vehicles that need to access properties along Ruahine Street.

Ruahine Street will be widened into the Town Belt.



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The Ruahine Street/Wellington Road intersection: what we propose 12



Aerial view of the new Wellington Road/Ruahine Street intersection.



Improvements to the Wellington Road/Ruahine Street intersection will include traffic signals and a 60kph curve.

Key features

- 1 Area to be landscaped with low-level planting
 - 2 Six metre wide service lane for vehicle access to properties and for pedestrians and cyclists
 - 3 Ruahine Street encroaches 35 metres into Town Belt. Requires a 15 metre high cut into Town Belt
 - 4 New Wellington Road/Ruahine Street intersection
 - 5 Six properties need to be acquired
 - 6 Moxham Avenue connection to Wellington Road closed, but connection to service lane provided
 - 7 From Wellington Road/Ruahine Street intersection to Kilbirnie Crescent 19 properties need to be acquired
- SH1
 - New pedestrian and cycle path
 - Local streets
 - P Pedestrian/cycle crossing
 - Buildings that will be affected

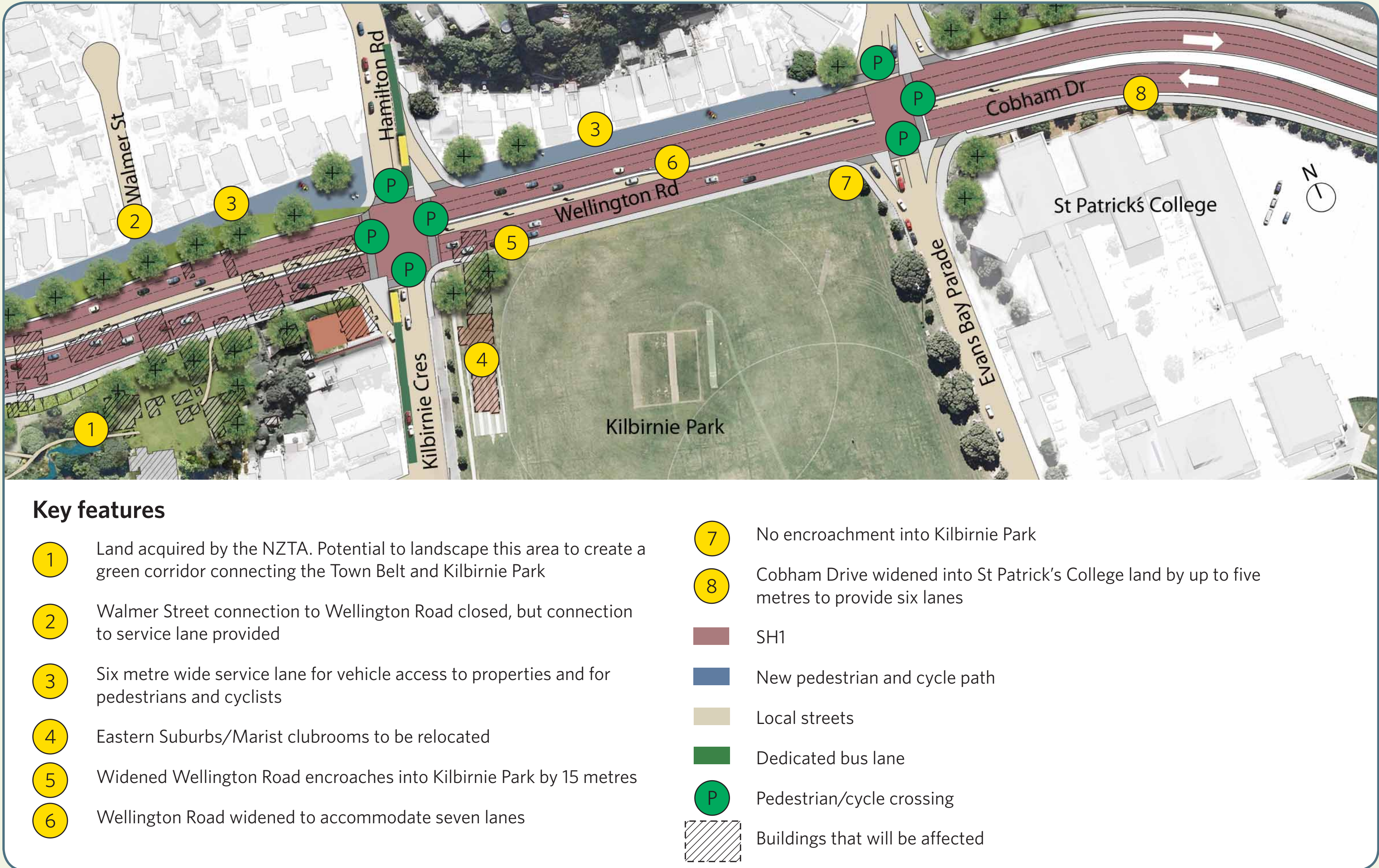
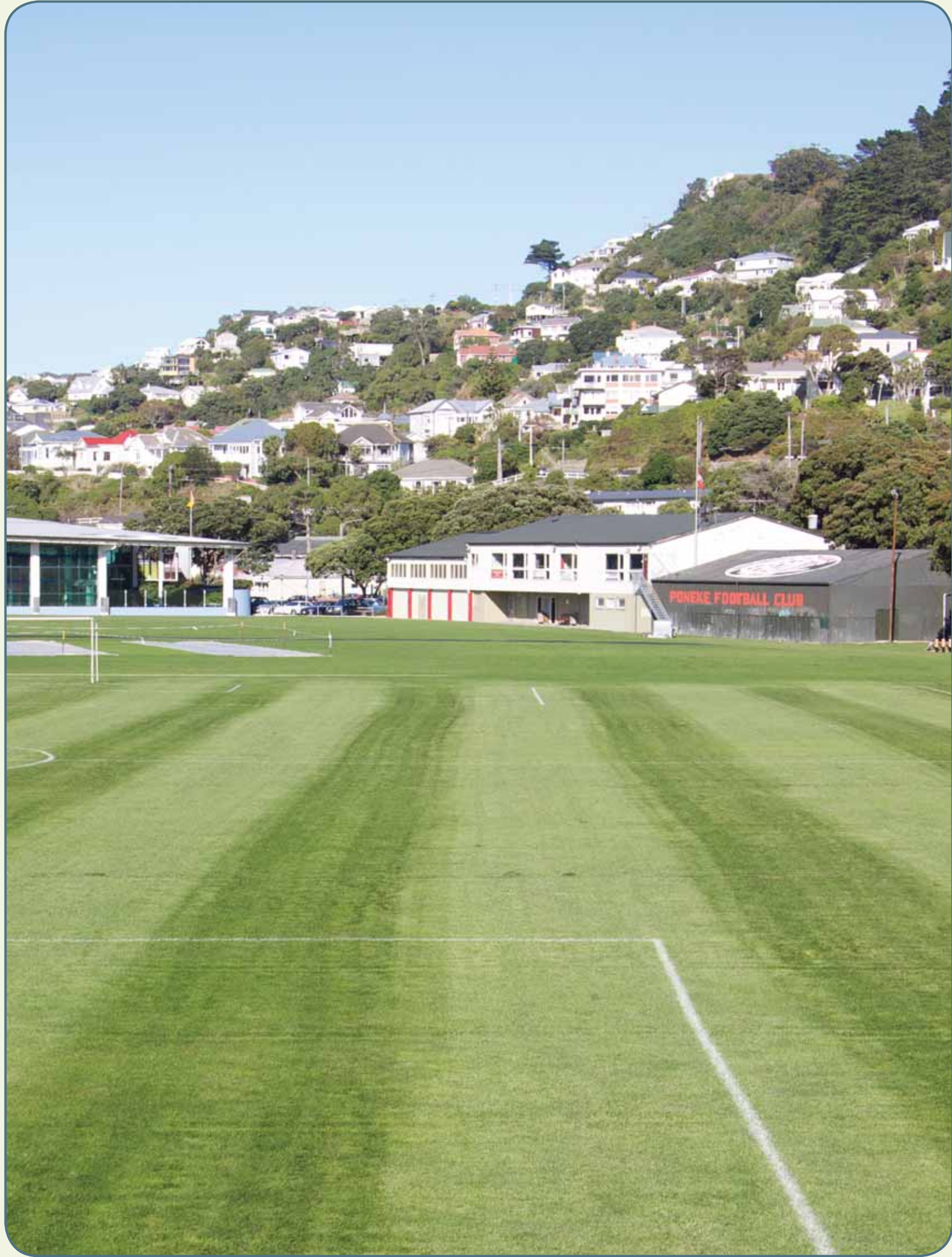


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Wellington Road: what we propose

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Between Ruahine Street and Kilbirnie Crescent, Wellington Road will be widened to the south into private property to accommodate up to seven lanes for traffic.

Between Kilbirnie Crescent and Cobham Drive, Wellington Road will be widened into Kilbirnie Park and St Patrick's College. A six metre wide service lane will be provided to the north of Wellington Road, to be shared with pedestrians and cyclists.



Cobham Drive to Buckle Street transport improvements

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What happens when?

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2006 to 2008	GWRC, WCC and the NZTA undertake the Ngauranga to Airport Strategy and consult on various transport packages.
2008	GWRC consults on, then adopts, the Ngauranga to Wellington Airport Corridor Plan. The Plan describes a package of multi-modal transport improvements, including the improvements to be undertaken for Wellington.
2009	The government announces the RoNS programme, which includes the SH1 projects identified in the Corridor Plan. Planning for the projects begins.
2 July – 26 August 2011	The NZTA seeks feedback on the proposed improvements.
July 2011	GWRC starts the Wellington Public Transport Spine Feasibility Study, which will investigate options for a high-quality public transport system between the Railway Station and Newtown.
Late 2011/early 2012	The NZTA announces its decisions on the options discussed in this brochure and publishes a report on feedback on the improvements.
Mid-2012	The NZTA works with directly affected parties and the public in further assessing the environmental effects of the SH1 improvements.
December 2012	GWRC completes the Wellington Public Transport Spine Feasibility Study.
Late 2012/early 2013	The NZTA lodges notices of requirement, which it anticipates will be determined by a Board of Inquiry. This process will include an opportunity for public submissions and participation in a hearing, and will take in the order of nine months to complete.
Mid-2013	The detailed design of the transport improvements around the Basin Reserve begins.
2014/15 onwards	Construction of the improvements around the Basin Reserve is scheduled to start in either 2014 or 2015 (the interim improvements to Ruahine Street, Wellington Road and the Inner City Bypass may also start at this time). The improvements are likely to take two or three years to complete. The second Mt Victoria Tunnel and the main improvements to Ruahine Street and Wellington Road are currently scheduled to follow the completion of the Kapiti and Transmission Gully sections of the Wellington Northern Corridor RoNS programme.



Cobham Drive to Buckle Street transport improvements

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The Basin Reserve – a key transport hub

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Overview

The roads around the Basin Reserve provide key links to Wellington's transport network. They include:

- SH1 – a key east-west route for the southern and eastern suburbs and the airport
- An important public transport network between Newtown and the Railway Station
- The gateway to Wellington from Mt Victoria Tunnel
- Important pedestrian and cycle routes into and out of the city from the east and south
- The processional route to and from Government House.

In addition, many students use the streets around the Basin Reserve to walk to schools and tertiary institutions in the area.

In this busy part of town there are numerous conflicts between traffic, buses, pedestrians, cyclists and students.

Vehicle traffic – now and in the future

- The street system around the Basin Reserve functions as a large roundabout with signals.
- About 25,000 vehicles enter the system from Kent Terrace each day, with nearly 20,000 going towards Mt Victoria Tunnel.
- About 20,000 vehicles enter the system from Mt Victoria Tunnel.
- 30,000 vehicles travel along Sussex Street every day.
- The number of vehicles travelling between the southern suburbs and the CBD is predicted to increase by up to 30% in future years .
- Because Mt Victoria Tunnel is a bottleneck, the traffic using SH1 isn't predicted to grow. Instead, additional east-west traffic will use routes like Evans Bay Parade.
- Journey times along SH1 are predicted to increase by 60% if no improvements are made.
- Increasing traffic volumes will mean bus journeys get longer and less reliable, making public transport less attractive and affecting any plans to use a high-quality public transport systems (like light rail) in the future.
- Increasing traffic volumes will also cause greater delays for the increasing number of people likely to walk or cycle around and through the Basin Reserve.



Traffic is queued up at peak time as it exits the tunnel and prepares to enter the road network around the Basin Reserve.



The traffic queue extends along Paterson Street back to the tunnel portal.



Most traffic using Sussex Street turns left to Buckle Street and on to Karo Drive.



A cyclist uses the Karo Drive cycle path along the Inner City Bypass. Buckle Street is in the background and traffic is heading from the Basin Reserve towards the Terrace Tunnel. Only 40% of the traffic using Mt Victoria Tunnel travels to the motorway through the Terrace Tunnel.





Cobham Drive to Buckle Street transport improvements

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Public transport, walking and cycling – now and in the future

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Today, bus journeys are slow and unreliable around the Basin Reserve due to delays at intersections and the number of other vehicles using the roads.

It's predicted that by 2016 about 2500 bus passengers will travel through the Basin Reserve area in the two-hour morning peak, a 20% increase from 2006 . If a high-quality public transport system (such as light rail) is provided between the Railway Station and the hospital, this number could increase by as much as 40% .

If the existing situation remains, and as traffic continues to increase, bus travel will become less attractive.

School buses

Today, about 80% of the 3000 students who attend the three schools close to the Basin Reserve take the bus each day.

The existing bus stops conflict with the school drop-off zones, and buses and drop-off vehicles conflict with other traffic in the area.

Pedestrians and cyclists

A 2009 survey counted more than 7000 pedestrians crossing and 1000 cyclists riding through key intersections around the Basin Reserve during the day .

On school days, many of the pedestrians using the streets around the south-east corner of the Basin Reserve are students. A number of parents use St Joseph's Church car park as a school drop-off area, walking their children across SH1 to St Mark's Church School.

According to the last census, about 25% of the people living in Newtown walked or cycled to work . This is likely to increase with proposals to grow Adelaide Road as an attractive place to live and work.

The number of people walking and cycling to and from Hataitai is expected to increase when the new Mt Victoria Tunnel is complete.

Pedestrian and cyclists use many controlled crossings and cross many lanes of heavy traffic in their journeys in and around the Basin Reserve. This creates delays for everyone, including buses and other vehicles.



Paterson Street, and the view for visiting dignitaries arriving at Government House. A steel fence separates traffic from the school bus stop area.



More than 3000 young people attend schools in the area around the Basin Reserve. It's estimated that 80% arrive by bus, yet they need to cross a traffic lane to get to school.



The Rugby Street/Adelaide Road intersection. A large number of pedestrians and cyclists use this area, while a bus lane along Adelaide Road enables buses to bypass the long queue up Adelaide Road in the morning peak.



Kent Terrace. The pedestrian crossing is set back from the intersection with Ellice Street. The entry to the Basin Reserve is poor.



Cobham Drive to Buckle Street transport improvements

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The Basin Reserve environment

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Topography – valley and ridges

The Basin Reserve is situated in a north-south valley between the ridges of Mt Victoria and Mt Cook.

Wellington's topography has always influenced how the city's buildings, streets and roads have been sited and developed. North-south streets, like Kent and Cambridge Terraces and Adelaide Road, run along the valley floor. East-west streets cut in to the valley's side slopes.

Urban grid

The city is defined by its distinctive and historical street grid. Street views often end at bush-clad ridges or the harbour, reminding us of Wellington's amazing natural setting.

The grid includes major urban routes such as Kent and Cambridge Terraces and Buckle Street. The Basin Reserve is a distinctive square in the grid.

Urban form

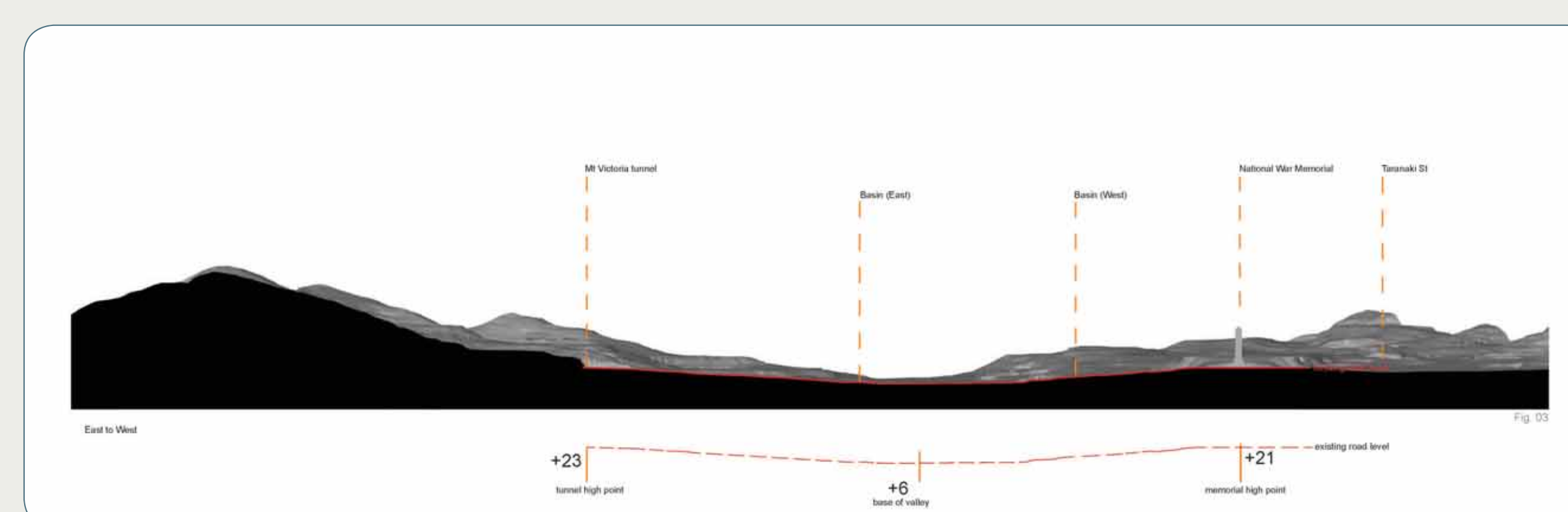
Wellington has a number of distinctive urban areas. Around the Basin Reserve these include:

- The residential areas of Mt Victoria, Mt Cook and Newtown
- The busy commercial and business areas in Te Aro
- The government facilities and schools around the Basin Reserve
- The recreation areas in the Town Belt on Mt Victoria
- The parklands around the Carillon.

Landmarks

The area also includes some landmark buildings that reflect Wellington's natural and cultural heritage. They include:

- The Basin Reserve itself
- The National War Memorial and Carillon
- Government House
- The former House of Compassion/crèche
- The William Wakefield Memorial.



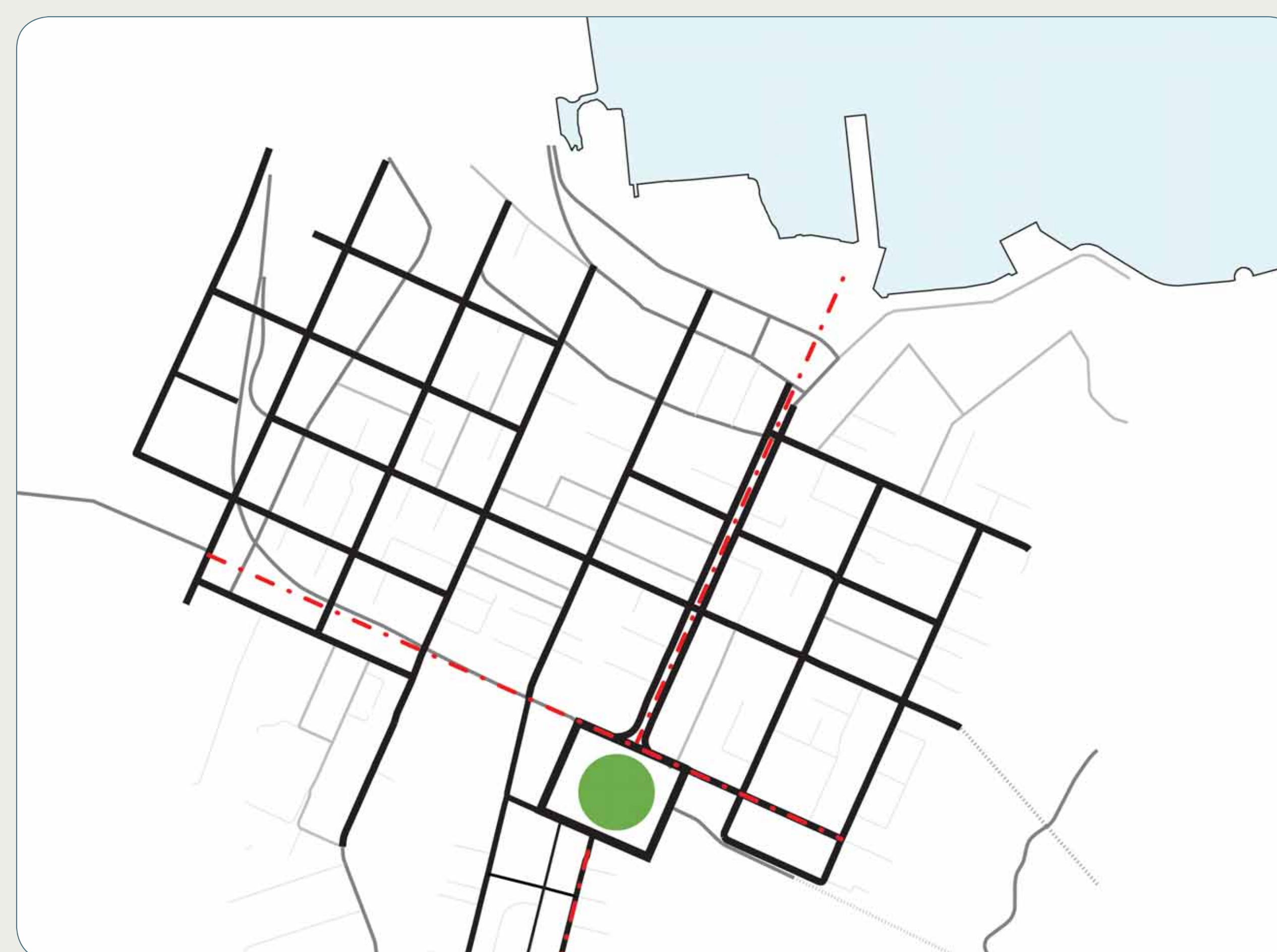
Cross-section of the Basin Reserve.



Te Aro - coarse grained urban form (source: WCC)



Mt Victoria residential zone - fine grained urban form (source: WCC)



Urban grid and main axes around the Basin Reserve.



Former Police barracks



RA Vance stand - Basin Reserve



Mt Victoria Tunnel



Basin Reserve



St Joseph's Church



Former Home of Compassion/crèche



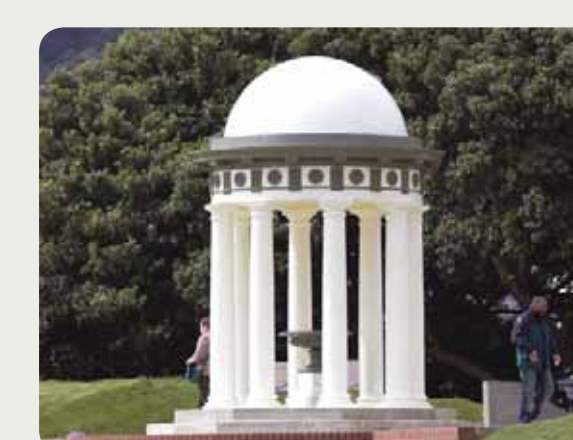
Old grandstand



J.R. Reid gates



Government House



William Wakefield Memorial



St Mark's Church School



National War Memorial Carillon



Cobham Drive to Buckle Street transport improvements

Public engagement

The historic environment – a story of change

18

The Basin Reserve

When European settlers first arrived in Wellington in 1840, the area now known as the Basin Reserve was a shallow lagoon, linked to the harbour by a small stream.

According to Maori oral history, a taniwha originally occupied the lagoon but left with the settlers' arrival. Early plans of the city show that it was intended to turn the lagoon into a sheltered harbour, and build a canal between Kent and Cambridge Terraces to provide a link to the sea.

An earthquake in 1855 raised the land around the Basin Reserve, and the lagoon became a swamp. After prisoners from nearby Mt Cook Prison drained it, the Wellington Provincial Council earmarked the site for a public park. The first game of cricket was played there in 1868.

When the plan of Wellington was compiled in 1840, it created large 'town acre' sections and set aside areas for schools, the hospital and government facilities. By 1900 the large sections had been subdivided into smaller ones.

During the 1930s Government House, Mt Victoria Tunnel, the National War Memorial and the Dominion Museum were built.

Transport connections

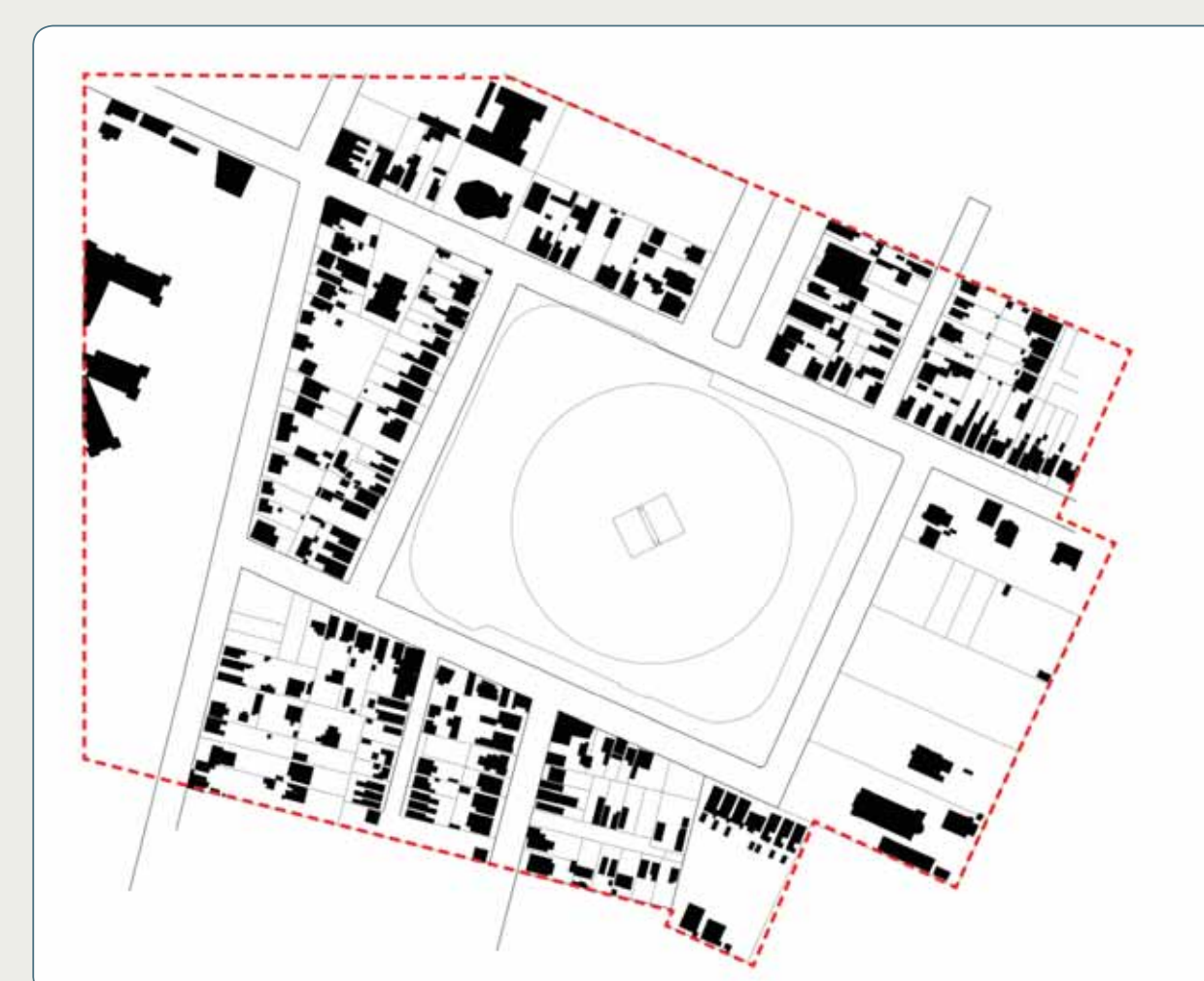
While the Basin Reserve has always been a Wellington icon, traffic congestion in the area has been an issue for more than a century.

As early as 1907 there were proposals to link the growing city by providing tunnels under the Basin Reserve. Wellington's spread south and east led to ideas for flyovers and tunnels, which were revisited many times during the 20th century. However, while Wellington and the area around the Basin Reserve have grown and changed, the only solution so far has been to widen existing roads.

The current plans propose another step that recognises the complex urban environment around the Basin Reserve.



Part of 1840 Mein Survey and Layout of Wellington (source: WCC).



1891 building footprint (source: WCC)



2009 building footprint (source: WCC)



Basin Reserve about 1931 (Source: WCC)



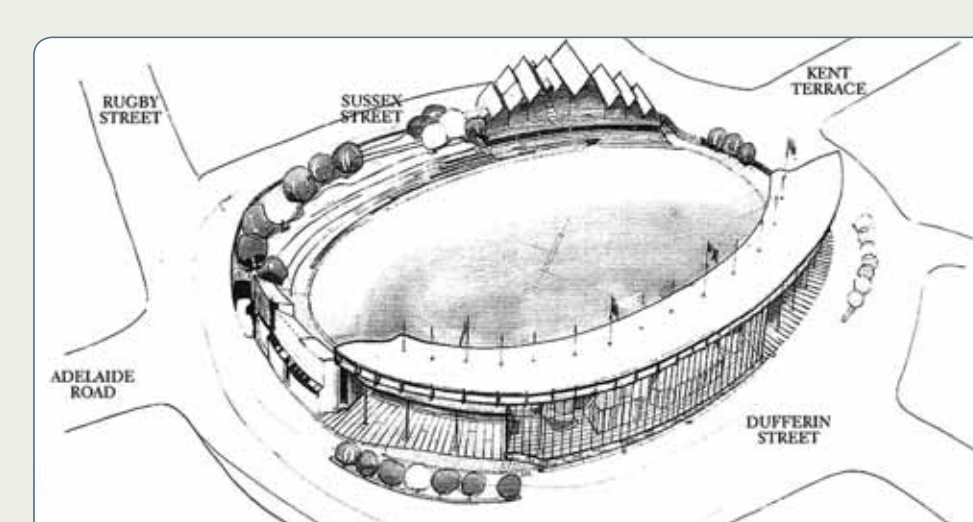
Basin Reserve about 1940 (Source: WCC)



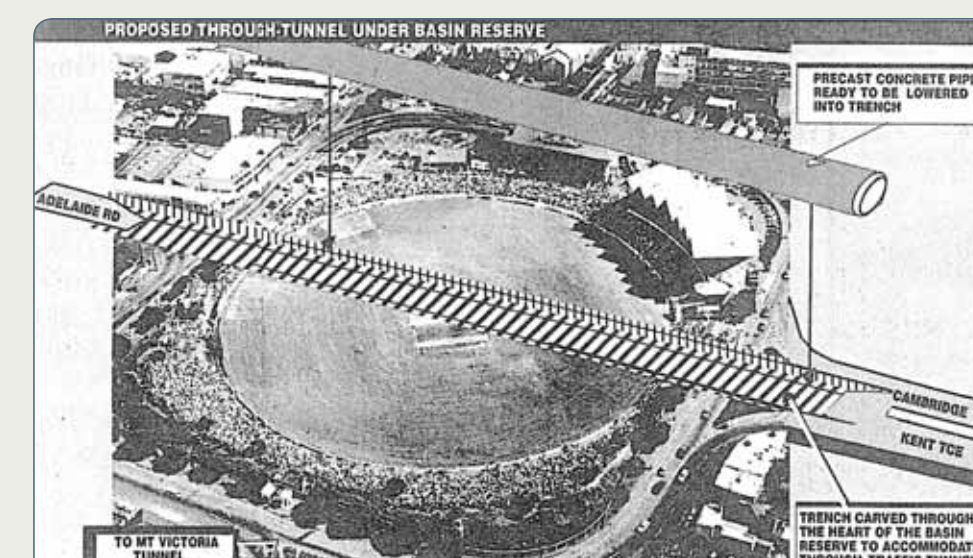
Raised ground with subway – G.E. Humphries, 1907



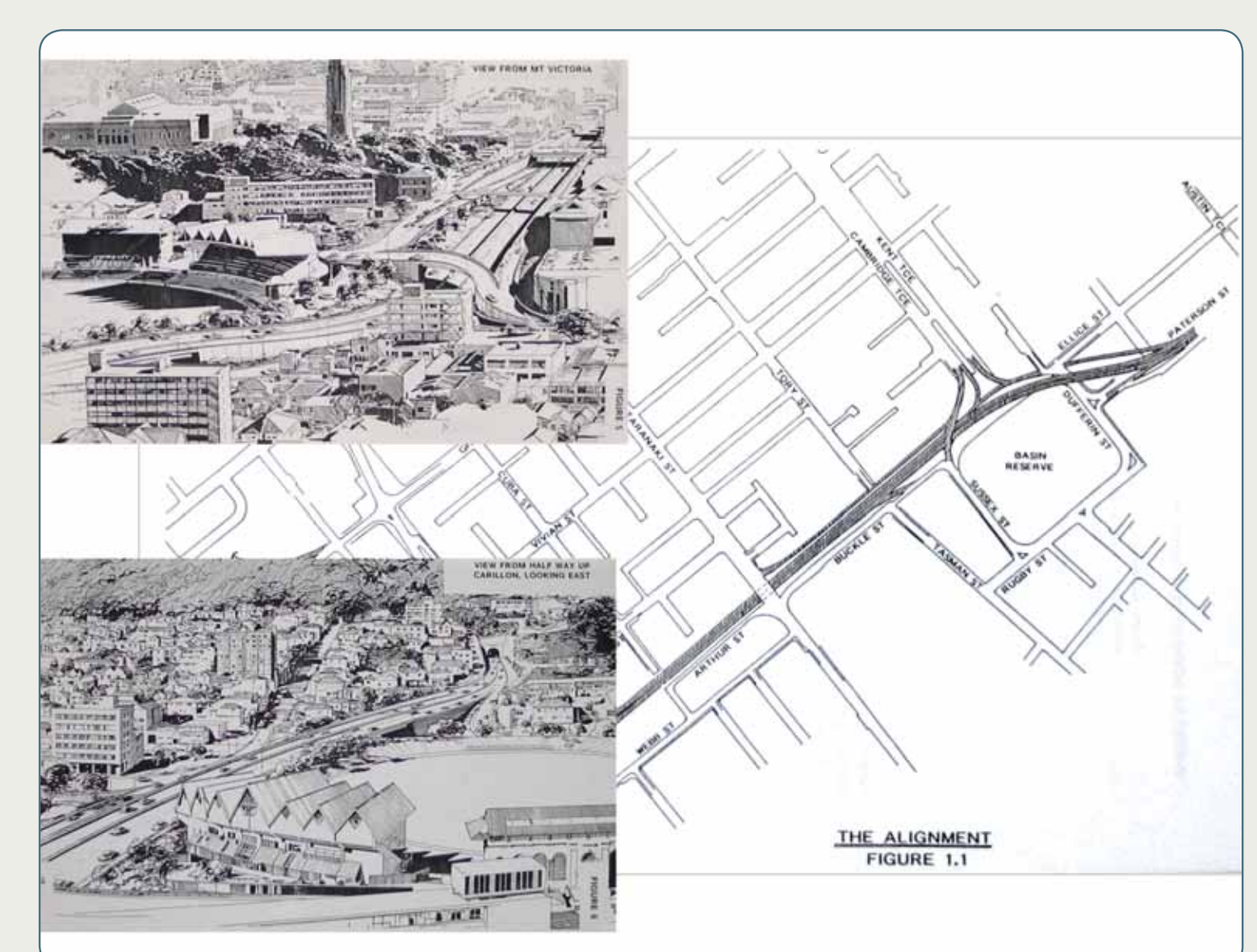
Spaghetti junction – 1963 Foothill Motorway plan



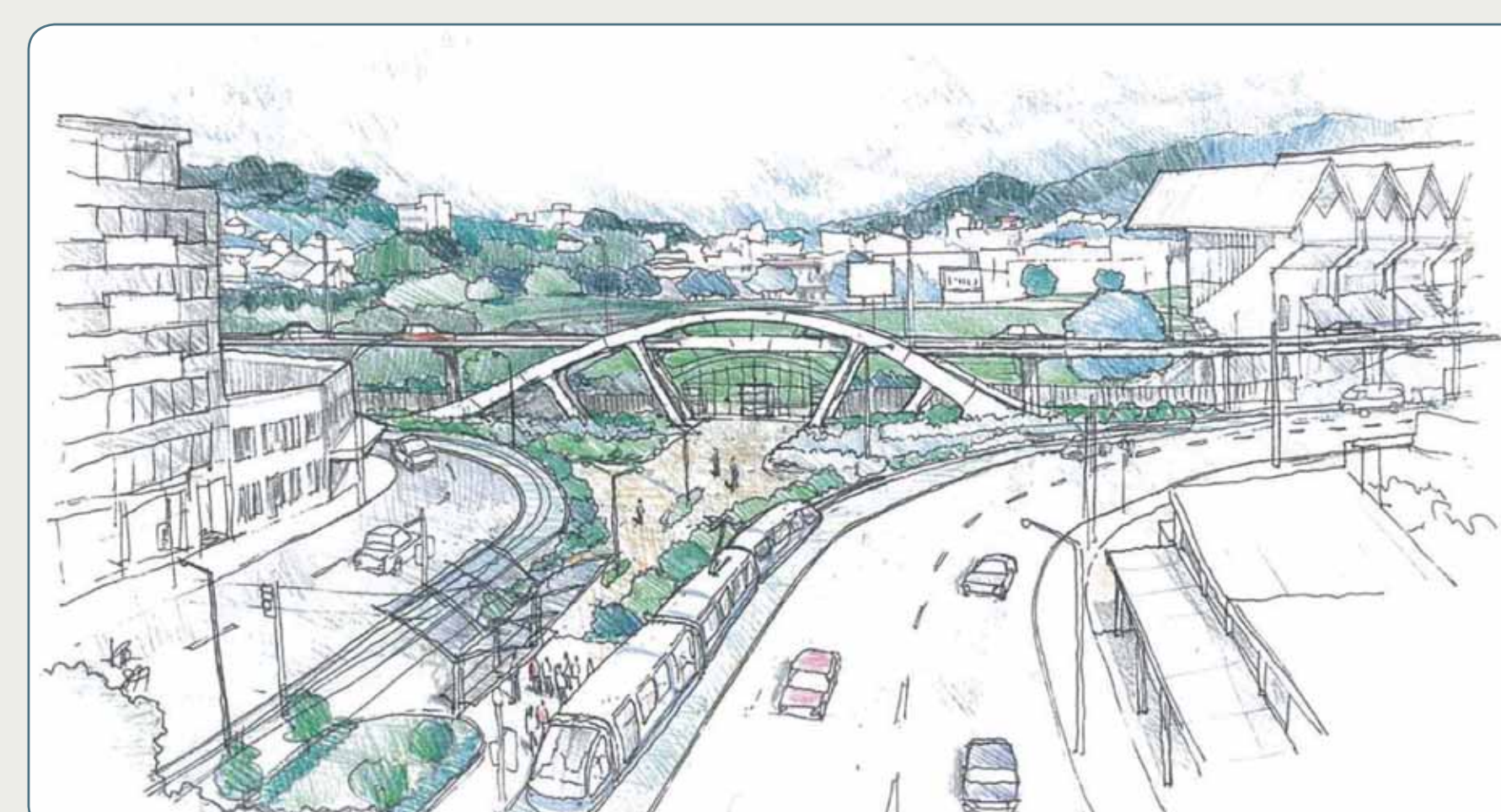
Multi-use arena – Bill Lovell-Smith, 1974



Cut and fill – Cr Brian Weyburne (about 1980?)



Motorway with trench and flyovers (about 1970)



Flyover and light rail Transit NZ (2008).



Cobham Drive to Buckle Street transport improvements

Public engagement

The community environment

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Diversity

The Basin Reserve is at the centre of a number of community precincts. They have a mix of land uses (commercial, residential and institutional) and some regionally significant community facilities.

People use the area for a wide range of purposes, as pedestrians, cyclists and motorists. A significant number of pedestrians use the Basin Reserve for events such as national and international cricket matches and concerts.

Neighbourhoods

The Basin Reserve is on the periphery of the Te Aro, Mt Victoria and Mt Cook residential areas. Local facilities that provide a cultural and social framework for the city's residents include:

- Five major schools (which generate a large number of pedestrians and public transport users)
- Several churches
- The Massey University campus.

Unfortunately many areas near SH1 have become rundown, partly as a result of the traffic. They include the Ellice Street corner of the Basin Reserve, the school drop-off zones and the Rugby Street footpaths.



- | | |
|-------------------------------|--|
| 1. BASIN RESERVE | 10. WELLINGTON COLLEGE |
| 2. NATIONAL WAR MEMORIAL | 11. WELLINGTON EAST GIRLS' COLLEGE |
| 3. PROPOSED MEMORIAL PARK | 12. ST JOSEPHS CHURCH |
| 4. MOUNT COOK PRIMARY SCHOOL | 13. FORMER HOME OF COMPASSION CHRECHE |
| 5. MASSEY UNIVERSITY | a. PATERSON STREET / MOUNT VICTORIA TUNNEL |
| 6. WELLINGTON HIGH SCHOOL | b. ADELAIDE ROAD |
| 7. GOVERNMENT HOUSE | c. BUCKLE STREET |
| 8. WILLIAM WAKEFIELD MEMORIAL | d. CAMBRIDGE TERRACE |
| 9. ST MARKS SCHOOL | e. KENT TERRACE |



The Basin Reserve



The National War Memorial



Massey University



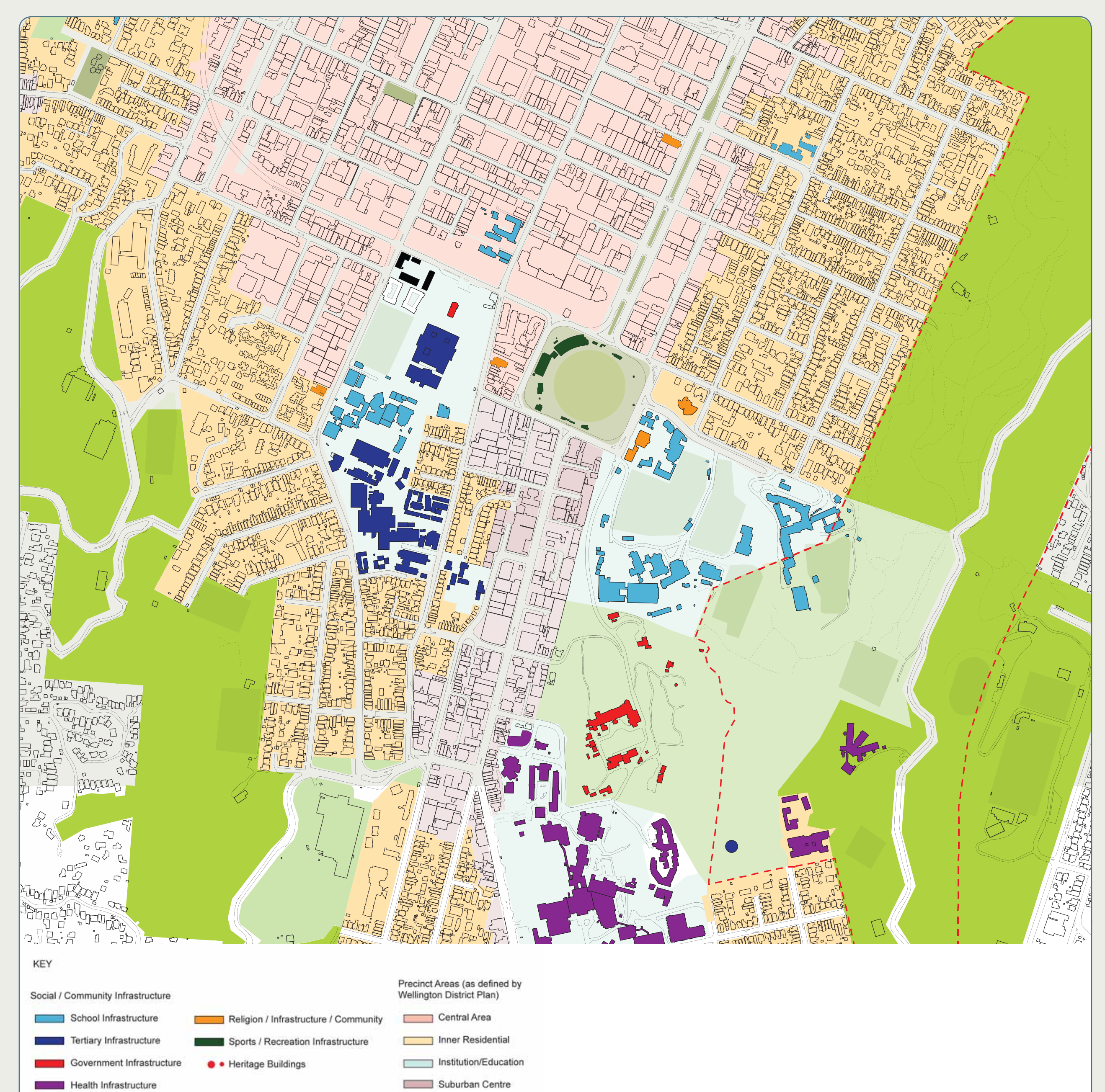
Government House



St Joseph's Church



St Mark's Church School



Communities



Cobham Drive to Buckle Street transport improvements

Public engagement

The journey

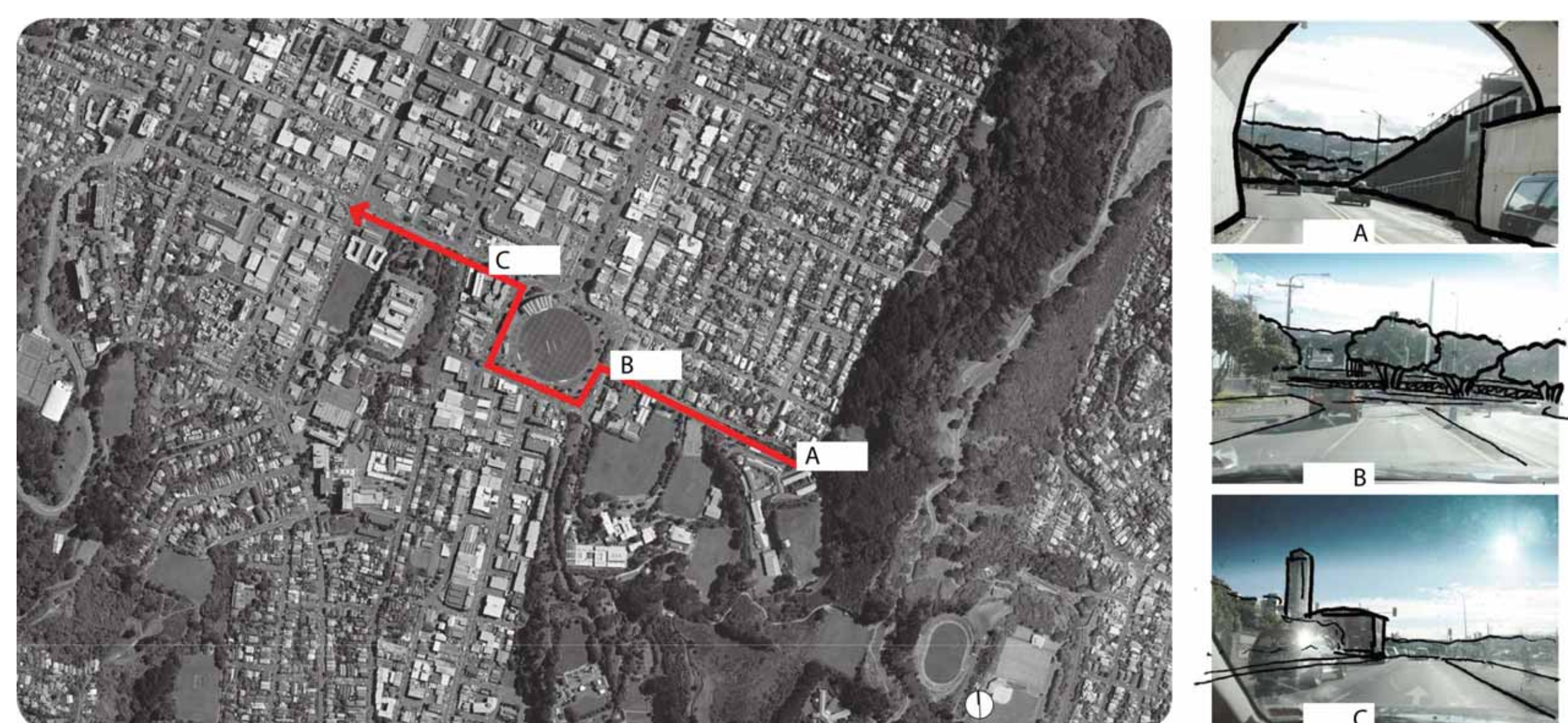
20

Journeys through Wellington are key to experiencing the city's landscape

Airport to city: the harbour and the mountains

The journey from Wellington Airport to the city is one of the city's defining experiences.

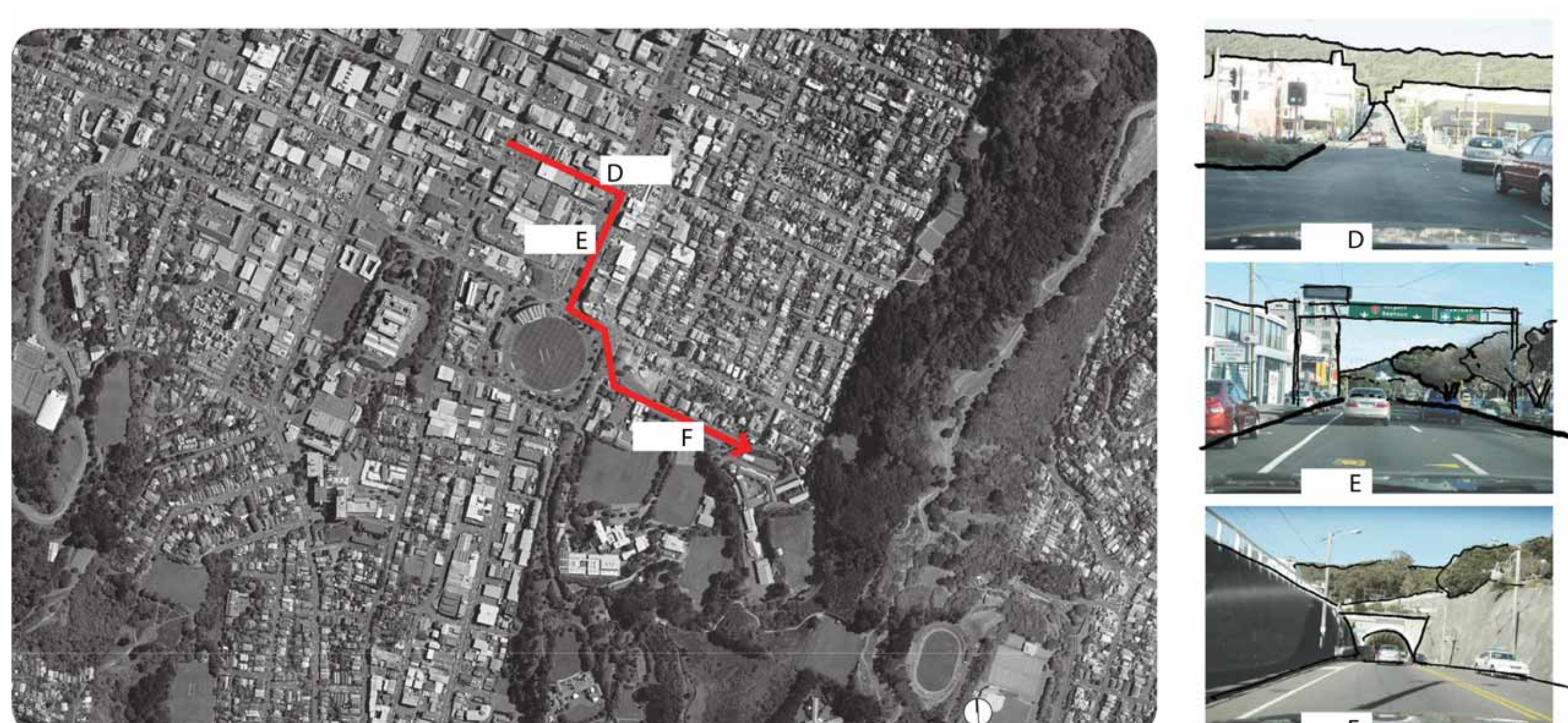
- [A] Evans Bay sets the scene of Wellington as a harbour city, while the route forms the gateway to Wellington's CBD.
- [B] The journey through Mt Victoria Tunnel reveals the city's topography.
- [C] The tunnel exit provides views of the Basin Reserve, the Carillon, the low-rise and high-rise city and the mountains beyond.



City to airport: the city grid

The journey from the city to the airport reveals the city's character and defining grid.

- [D] Vivian Street is an active urban street with long views to Mt Victoria. It might be too narrow for a main highway.
- [E] Kent and Cambridge Terraces are a broad boulevard framing views to the Basin Reserve. The route needs better pedestrian footpaths and more activities on the footpath.
- [F] Mt Victoria Tunnel provides a dramatic exit from the city.



Newtown to city: down the valley to the harbour

Local journeys to the city highlight a lack of urban activity, lacklustre buildings and ill-defined streets. The sense of travelling down a widening valley to the harbour is apparent in the topography, but lost in the urban surroundings.

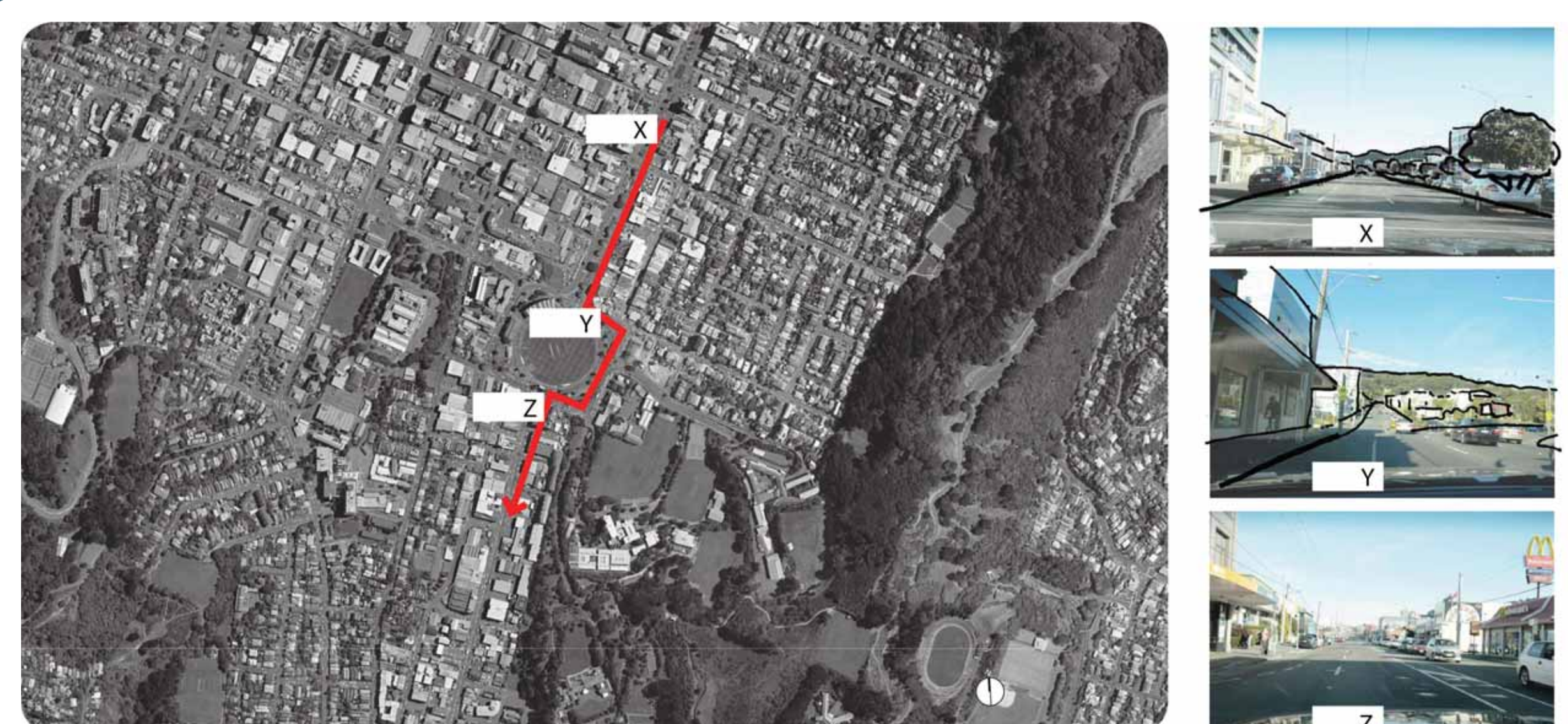
- [J] An enticing view to the Basin Reserve along Adelaide Road is spoilt by busy traffic and inconsistent building design.
- [K] Around the Basin Reserve the roadway crowds the narrow footpaths and heritage buildings.
- [L] Views down the 'terraces' lack harbour views because of poorly sited buildings and other structures. This could potentially be a grand boulevard.



City to Newtown: through the neighbourhoods

Local journeys to Newtown reveal the city-to-suburb transformation.

- [X] Views to the Basin Reserve are flanked by large commercial buildings.
- [Y] The environment around the Basin Reserve is one of contrasts: a lack of pedestrian designations and other activity at Ellice Street; a busy school area; and congested traffic.
- [Z] Adelaide Road gradually turns into a suburb of homes and small businesses.





Cobham Drive to Buckle Street transport improvements

Public engagement

Former Home of Compassion crèche

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The former Home of Compassion crèche was built in 1914 and has recently been registered as a Category I historic place with the New Zealand Historic Places Trust.

It is located on Buckle Street at the north-western corner of the Basin Reserve.

Why is the crèche significant?

- The crèche is a physical reminder of French nun Mother Suzanne Aubert, most famous for her work with children with needs.
- It's a remnant of the intensive Catholic presence in the area from the late 19th century
- It's the oldest remaining purpose-built crèche in New Zealand.

History

- Mother Aubert wanted to help low-income mothers by providing care for their children while they worked.
- The building was designed by John Swan in a domestic Gothic style.
- The original building had a large playroom, dedicated sleeping room, bathroom with separate water closet with sink and two additional rooms.
- In 1973 the crèche moved to new premises in Sussex Street. St Patrick's College then used the building as a classroom, library and art room.

Who was Mother Aubert?

Mother Suzanne Aubert was born in France and studied nursing there before travelling as a missionary to New Zealand in 1860.

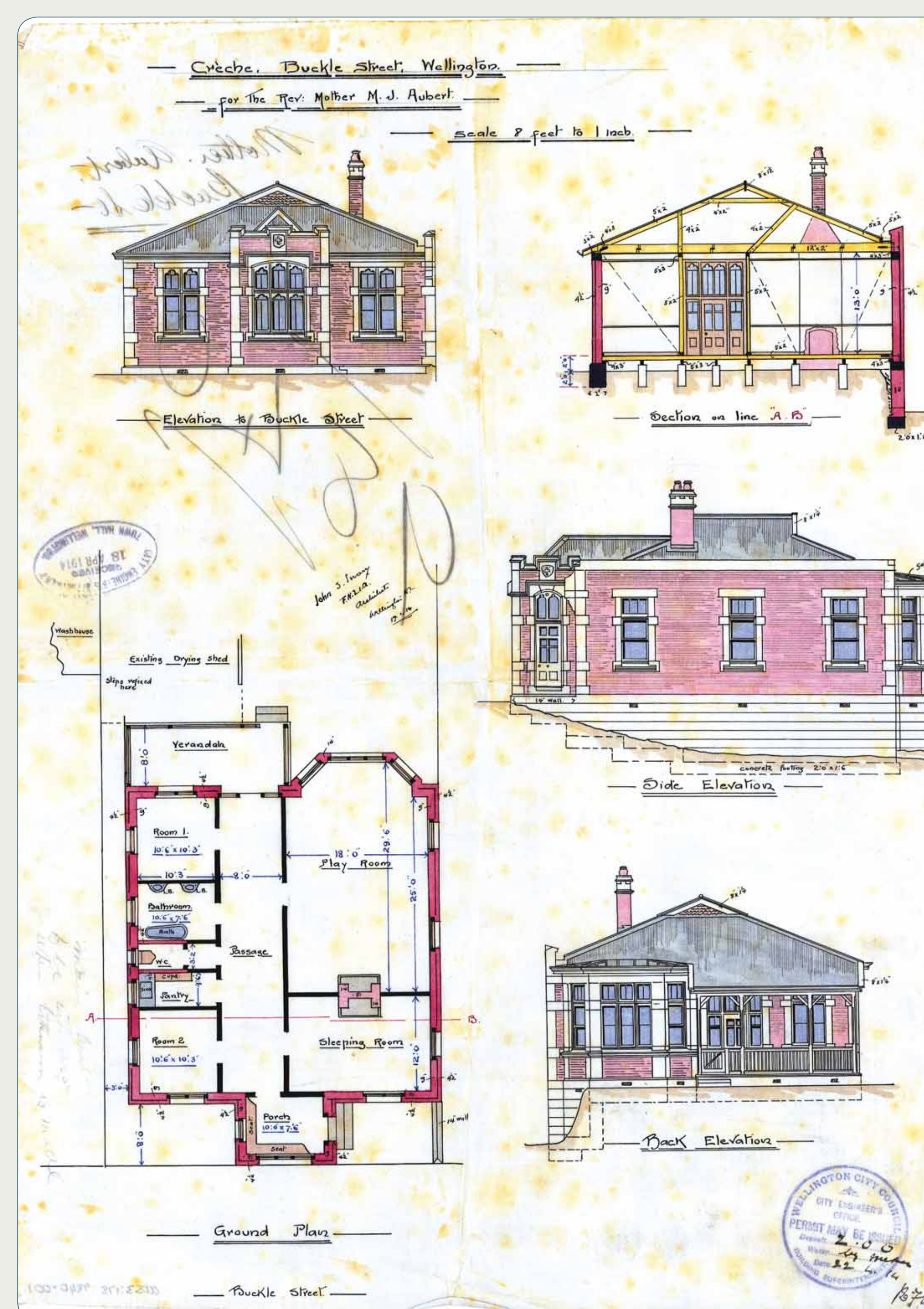
Her life works included establishing the Congregation of the Daughters of Our Lady of Compassion and working among the poor, ill, deformed and disabled and their children throughout New Zealand.

By the end of the 1800s our cities were experiencing dire poverty. Mother Aubert moved to Wellington in 1899, where she founded the St Joseph's Home for Incurables, the Silverstream Home of Compassion, St Anthony's Soup Kitchen, Our Lady's Home of Compassion in Island Bay, and the Home of Compassion crèche. Mother Aubert was also one of the founding members of the Plunket Society. She passed away in 1926, aged 91.

Mother Aubert's pioneering social work made her a national figure and she is now the first New Zealander being considered for canonisation.



View of the crèche from Buckle Street. Many people walk past the building unaware of its existence or historic importance.



The original architectural drawings of the crèche. Mother Suzanne Aubert had the vision to build the crèche, which was the first of its kind in New Zealand. It was designed by John Swan and built in 1914.



Views of the crèche, probably taken in the 1950s.



Cobham Drive to Buckle Street transport improvements

Public engagement

The Basin Reserve improvements: what results will they deliver? 22

SH1

Through traffic from Mt Victoria Tunnel to Buckle Street will be separated from local traffic and take a more direct route to the north of the Basin Reserve.

This will:

- Reduce congestion for vehicles using the streets around the Basin Reserve
- Speed up travel times for SH1 traffic in the morning peak hours (up to 35%)
- Reduce by 35% the traffic in the streets around the Basin Reserve, improving safety for pedestrians and cyclists
- Enable a dedicated public transport lane
- Improve bus journey times and reliability between Adelaide Road and Kent and Cambridge Terraces.

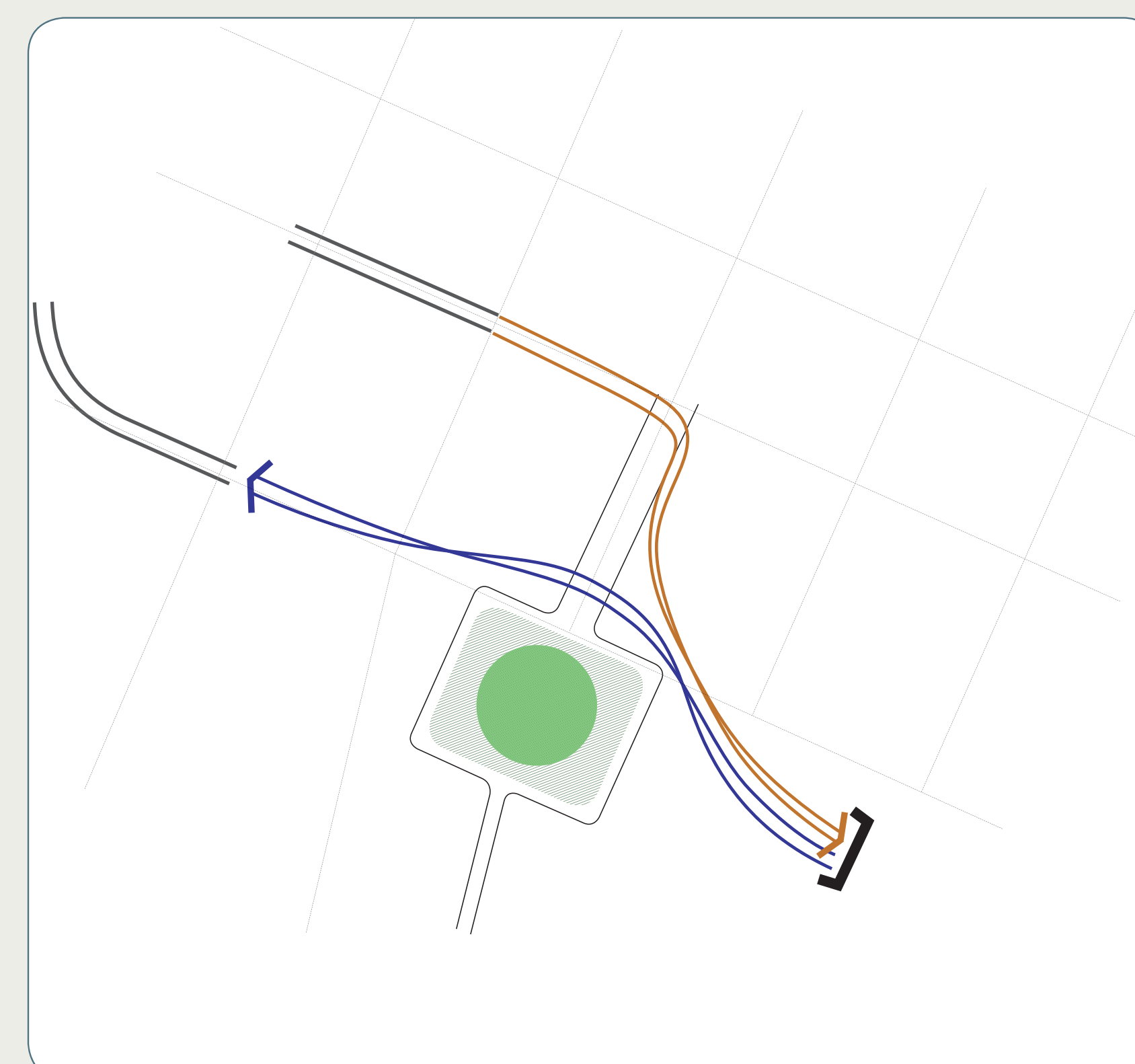
SH1 traffic heading east from the CBD to the airport will generally not be affected by either bridge option, with little change in travel times.

Local traffic, buses and cyclists

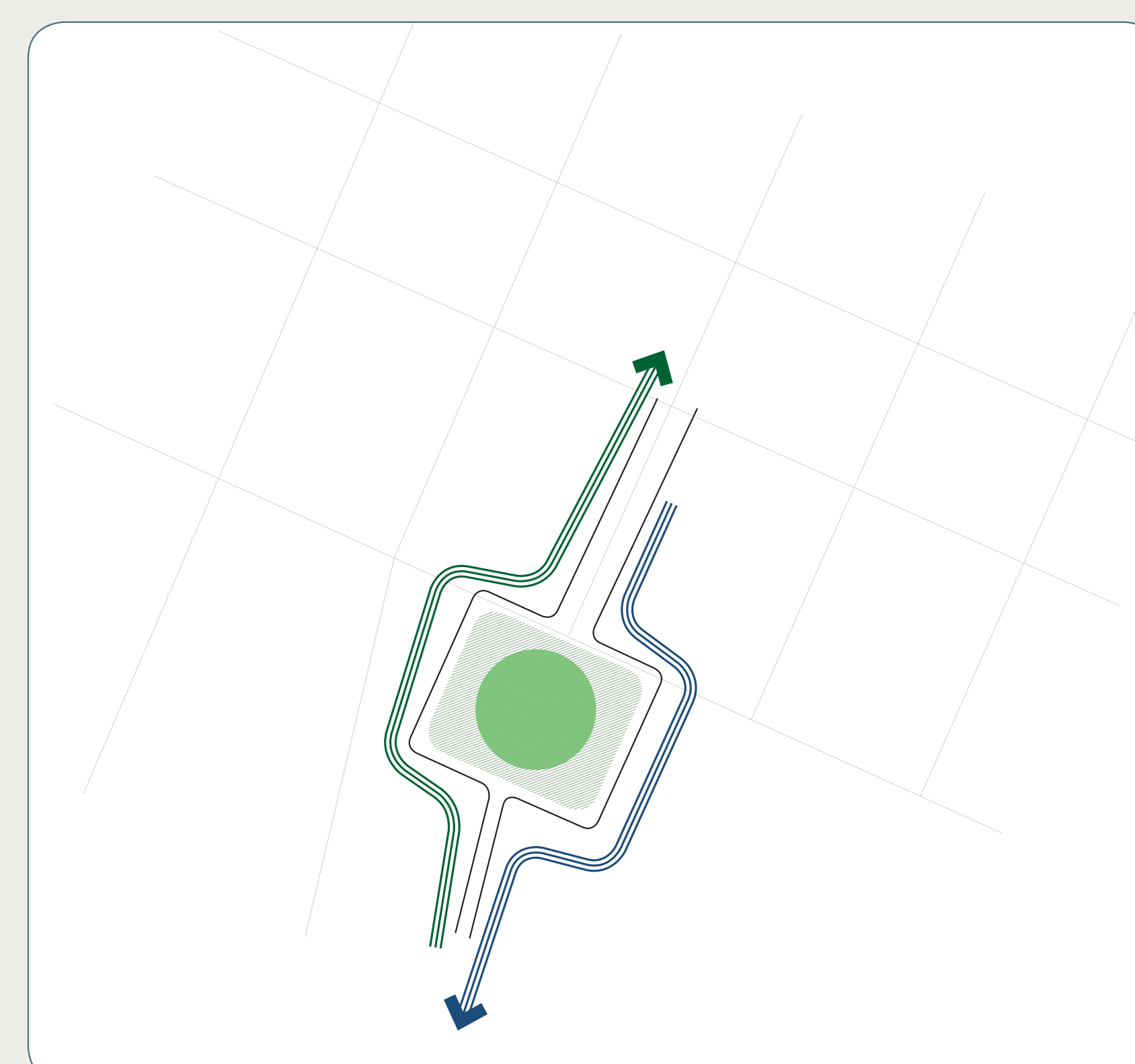
- Local and Wellington Regional Hospital traffic will use the current route around the Basin Reserve.
- The route will include dedicated bus and cycle lanes, which could be upgraded to take a high-quality bus system in future.
- A shared walking and cycle path will be provided between Mt Victoria Tunnel and Kent Terrace

Urban design, pedestrian facilities

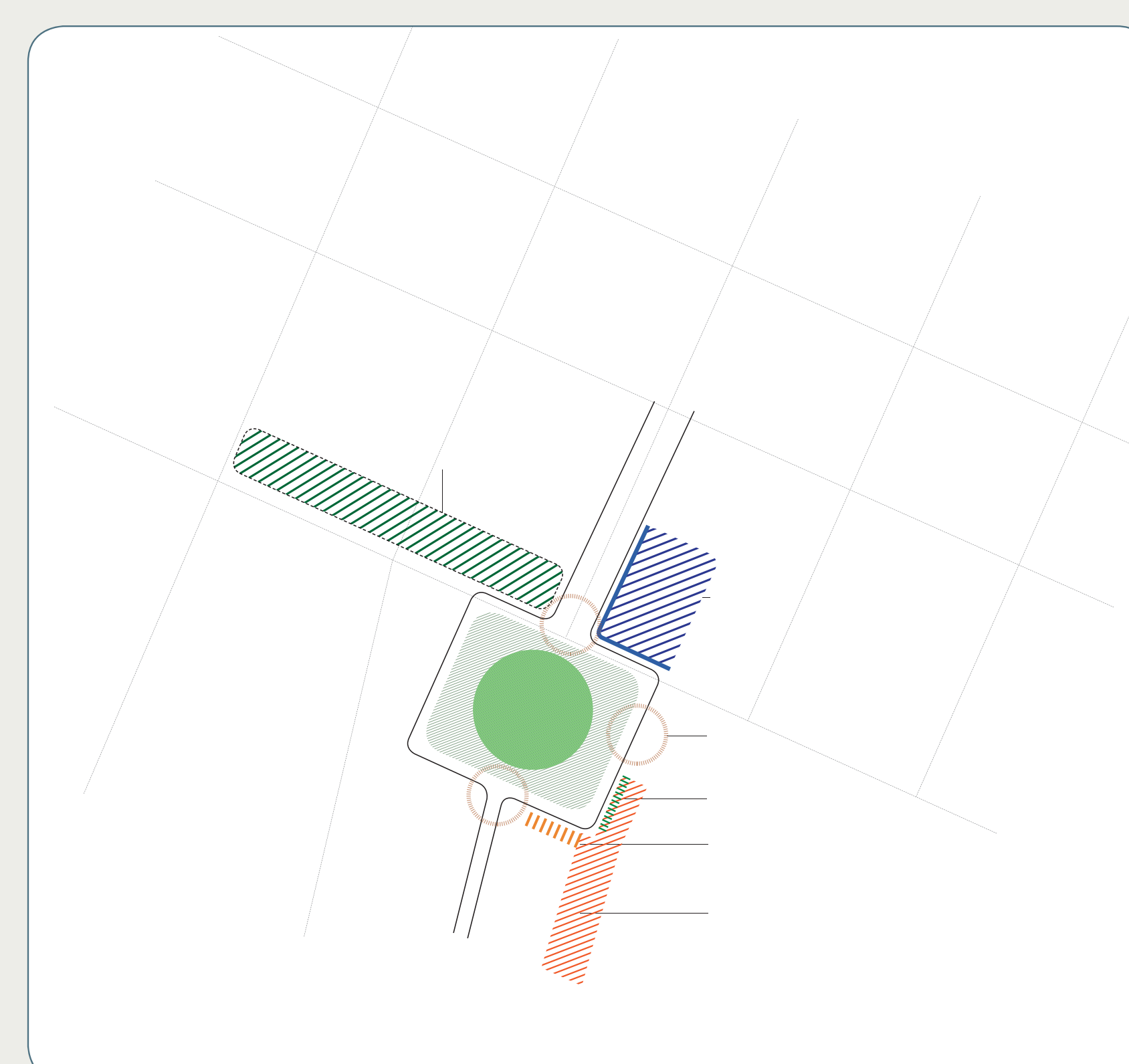
- New buildings, pocket parks and activity areas could be integrated at the edge of the Mt Victoria neighbourhood.
- A new high-capacity bus stop will be built on Rugby Street between Government House and Adelaide Road, for both school pupils and the general public.
- Removing the school bus stop from the drop-off area near St Mark's Church School will reduce students' need to cross traffic lanes.
- A pedestrian plaza will be created at the entrance to the Basin Reserve.
- Improved pedestrian crossings will be installed at Kent and Cambridge Terraces and the Rugby Street/Adelaide Road and Paterson Street/Dufferin Street intersections.



SH1 Strategy: SH1 westbound traffic is separated from local traffic and rerouted on the north side of the Basin Reserve. SH1 eastbound traffic has better access to Mt Victoria Tunnel.



Local traffic strategy: Local traffic stays on the north-south roads, with congestion eased by separating SH1 traffic. Buses and bicycles share a dedicated lane.



The SH1 improvements enable design improvements around the Basin Reserve.



Cobham Drive to Buckle Street transport improvements

Public engagement

Buckle Street – an update on plans for the NZ Memorial Park

23

Background

- Until recently the Ministry for Culture and Heritage (MCH) was responsible for proposals to develop the NZ Memorial Park and Buckle Street.
- The NZTA is now responsible for Buckle Street and for landscaping the vacant land to the north.
- We will work with MCH to develop a 'memorial precinct' on the south side of Buckle Street.
- Previously, MCH considered locating Buckle Street in a tunnel or moving Buckle Street to the north towards Mt Cook School.
- Buckle Street is presently a one-way, two-lane road that widens to three lanes as it approaches Taranaki Street.

Proposed Buckle Street upgrade

Buckle Street will stay at street level. It will be widened to three lanes between Sussex Street and Taranaki Street and moved about 10 metres to the north.

MCH, WCC and the NZTA are working on landscape plans for each side of Buckle Street. These will take into account:

- The landscaping already completed by MCH
- The design principles already established for the NZ Memorial Park
- The land to the north of Buckle Street has the potential to be used for transport/roading purposes in future.

What happens to the vacant land to the north of Buckle Street?

- The NZTA will continue to own this land so that future generations have the option of using it to upgrade the Inner City Bypass.

Other options considered

- Several options were investigated for improving SH1 along Buckle Street in front of the War Memorial, including the idea of locating Buckle Street in a tunnel.
- These investigations revealed that while the tunnel would have social and amenity benefits, it would be expensive and provide minimal transport benefits.



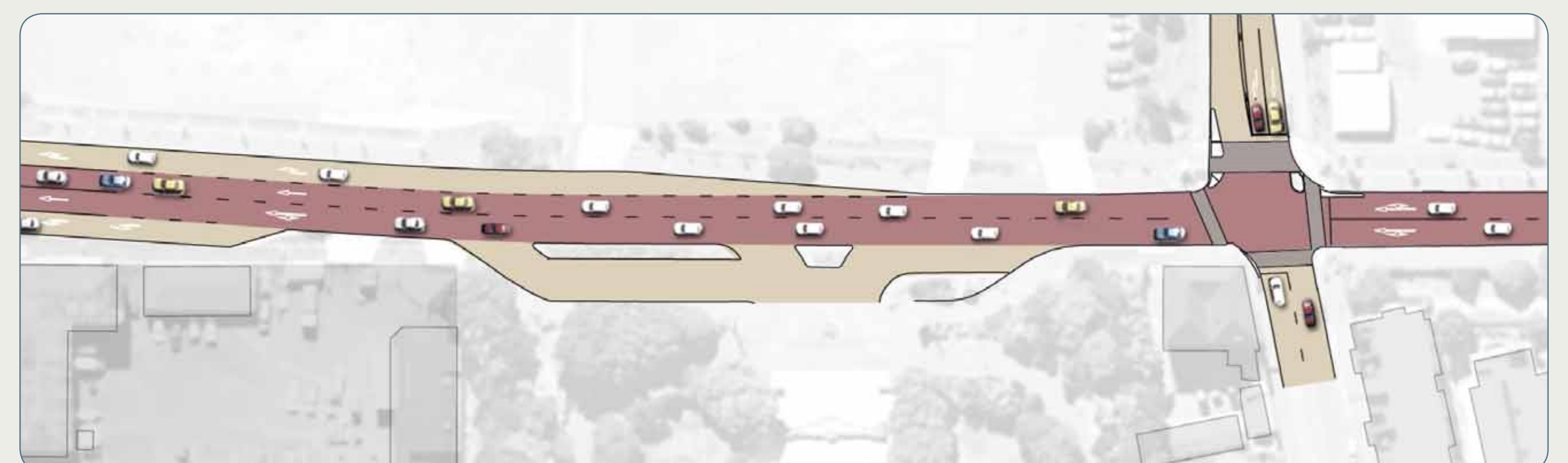
Artist's impression of Buckle Street from the west of Taranaki Street. The War Memorial Carillon is in the middle of the picture. The NZTA owns and will landscape the land to the north of Buckle Street.



We also investigated placing Buckle Street in a tunnel. This artist's sketch shows the tunnel entrance at Taranaki Street, with the NZ Memorial Park developed on top. However, the tunnel is too expensive to build.



Several schools and other educational institutions in the area generate significant pedestrian numbers.



Existing alignment of Buckle Street.



We propose moving Buckle Street 10 metres to the north of its current location and widening it to three lanes. The footpath between Buckle Street and the War Memorial will be improved, while the land to the north of Buckle Street will be landscaped.



Cobham Drive to Buckle Street transport improvements

Public engagement

The existing situation – SH1 around the Basin Reserve

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- The street system around the Basin Reserve functions as a large roundabout with signals.
- About 25,000 vehicles enter the system from Kent Terrace each day, with nearly 20,000 going towards Mt Victoria Tunnel. Another 20,000 vehicles join the system from Mt Victoria Tunnel.
- This means that about 40,000 vehicles in total travel through Mt Victoria Tunnel each day.
- Traffic around the eastern side of the Basin Reserve mixes with the school drop-off zone and bus stops. Some vehicles exit to Adelaide Road, while other vehicles join the system from Adelaide Road.
- This combined traffic travels along Sussex Street, which carries 30,000 vehicles each day. It's the most heavily used road around the Basin Reserve.
- The busiest pedestrian crossings are at the Adelaide Road/Rugby Street intersection and around the school drop-off zones.
- WCC has identified the buildings on the corner of Kent Terrace and Ellice Street as an earthquake risk. We plan to demolish them whichever bridge option is built.

What is proposed

- SH1 westbound traffic will travel on a bridge to the north of the Basin Reserve.
- We've identified two options for the bridge location: near the Basin Reserve and farther away from it.

We've yet to decide on which option to build. In both options:

- Westbound SH1 traffic would travel from Mt Victoria Tunnel to Buckle Street on a bridge
- Westbound SH1 traffic would be separated from local traffic, including buses, travelling north and south. The bridge would also provide the necessary separation from a future high-quality public transport system
- Eastbound SH1 traffic would remain at street level on the current route (or something close to it) into Mt Victoria Tunnel.



Plan of the Basin Reserve today.

We seek your views

We seek your views on our proposal for the bridge around the Basin Reserve. In particular we'd like to know:

- What's important to you about where we should locate the bridge around the Basin Reserve?
- What do you like or dislike about locating the bridge near the Basin Reserve?
- What do you like or dislike about locating the bridge farther away from the Basin Reserve?
- Is it worth the additional expense of providing pedestrian and cycle facilities on the bridge?



Aerial view of the Basin Reserve today.



Cobham Drive to Buckle Street transport improvements

Public engagement

Option A: Bridge near the Basin Reserve

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Option A: what will happen?

Westbound traffic on SH1 will pass approximately 20 metres north of the Basin Reserve gates on a bridge over Kent and Cambridge Terraces. The bridge will be approximately 380 metres long, a minimum of 12 metres wide and a maximum of eight metres above the ground.

Key features

The Option A bridge:

- Defines the outer street edge of the Basin Reserve area
- Is aligned with the Te Aro grid street pattern
- Is located on the Ellice Street building line, keeping the Basin Reserve edges square
- Is highly visible in the Kent Terrace view line
- Is closer to the Basin Reserve than Option B
- Will be visible from within the Basin Reserve
- Requires us to relocate the former Home of Compassion crèche building (registered Category I with the New Zealand Historic Places Trust).

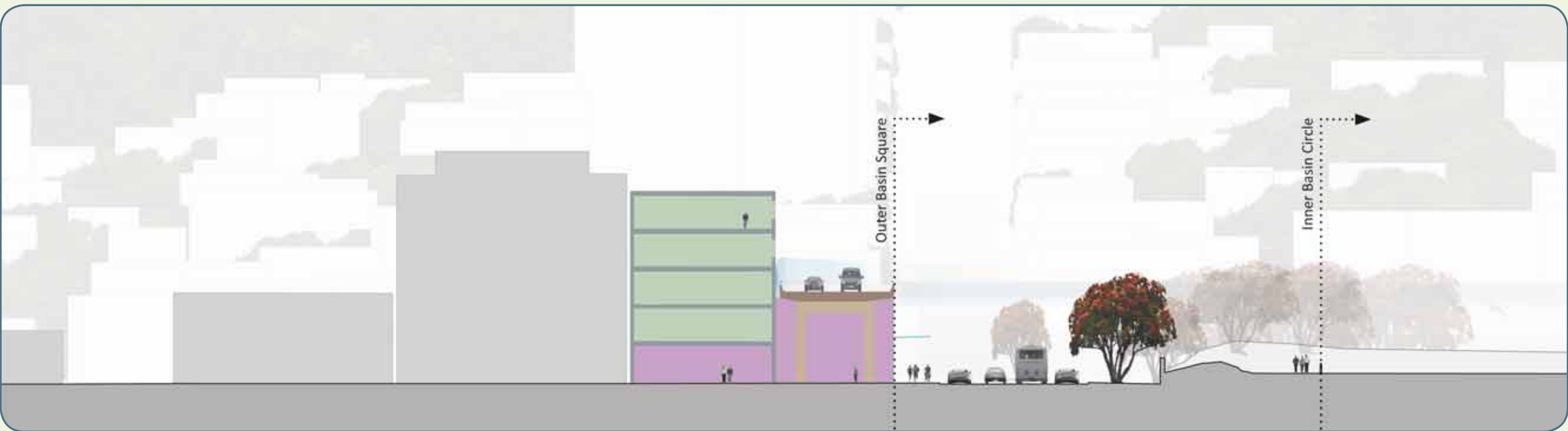
Other features

The proposal includes:

- A sheltered under-bridge route to schools on Dufferin Street
- A new and stylish ‘pedestrian plaza’ entrance to the Basin Reserve
- A ‘green corridor’ to the north of Buckle Street linking the War Memorial and the Basin Reserve
- The potential to intergrate buildings under the bridge at the corner of Ellice Street and Kent Terrace
- Two properties would need to be acquired. There would be minimal noise impacts on the Basin Reserve and residential areas.

The benefit cost ratio

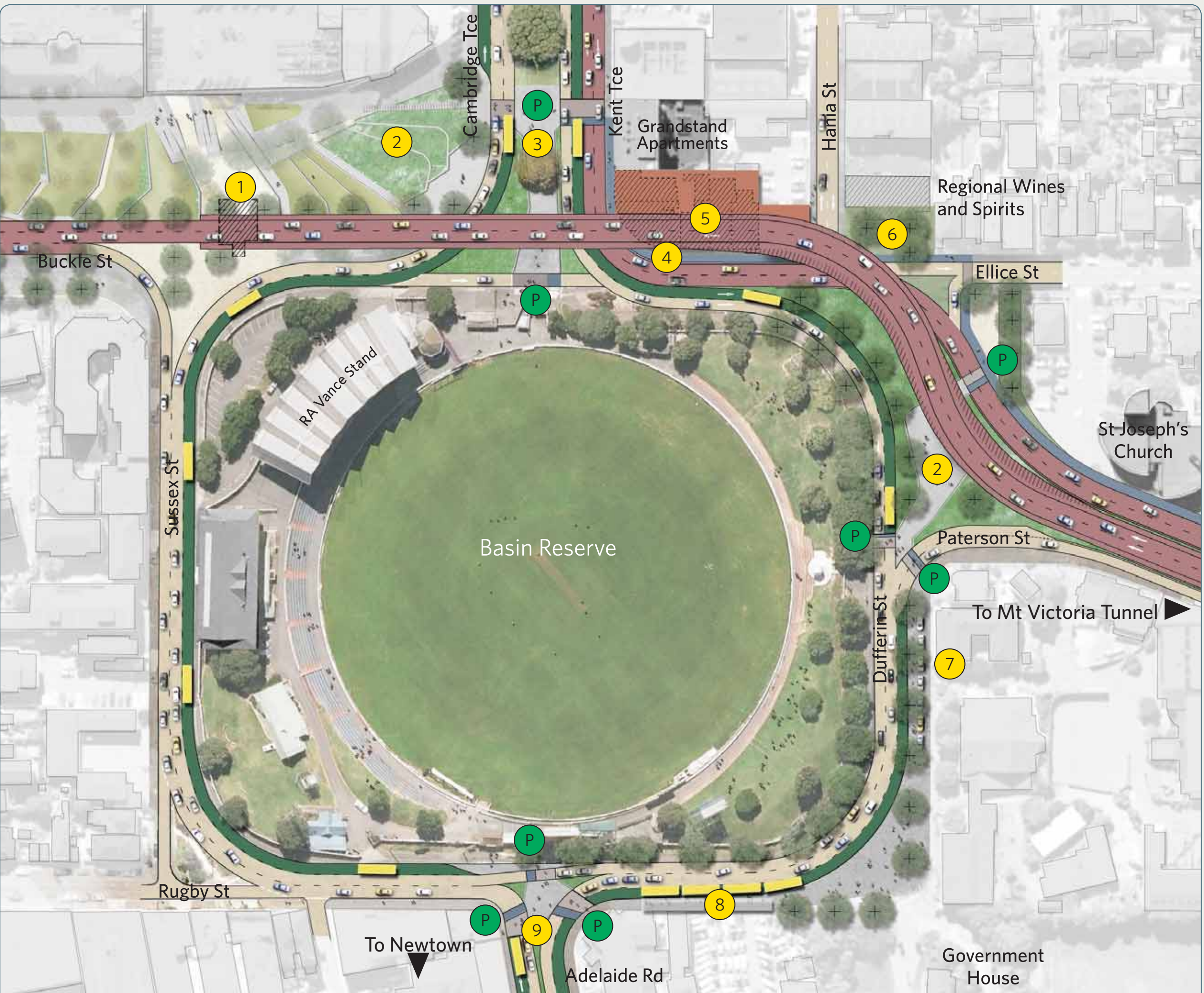
Option A is expected to cost between \$75 million and \$100 million and has an indicative benefit cost ratio of 1.2-1.4. This is likely to be higher when further improvements are made to the Inner City Bypass.



A cross section through bridge showing potential intergration with buildings.



Aerial view of the Basin Reserve with the Option A bridge and the additional Mt Victoria tunnel.



Key features

- Former Home of Compassion crèche to be relocated. Building owned by the NZTA
- Area to be landscaped. Land owned by the NZTA
- Pedestrian plaza
- Three properties affected. Buildings owned by the NZTA. These buildings have been identified by WCC as earthquake prone and the NZTA has plans to demolish them
- Potential for buildings to be located under bridge structure
- Property will be affected by construction of the bridge
- Improved drop-off area for school students
- Possible new bus stop
- Adelaide Road and Rugby and Dufferin Streets improvements for traffic, pedestrians and cyclists

- New pedestrian and cycle path
- SH1
- Potential dedicated bus lane
- Local streets
- Pedestrian/cycle crossings
- Buildings that will be affected

Plan of the Basin Reserve with the Option A bridge.



Cobham Drive to Buckle Street transport improvements

Public engagement

Option A: Bridge near the Basin Reserve

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Before

The existing view from Kent Terrace, looking towards the Basin Reserve. The RA Vance stand and Carillon are in the background.



After

A sleek, modern bridge across the valley, with generous under-bridge space. Pedestrian areas are maximised on Kent and Cambridge Terraces.



Before

The existing view from the entrance to the Basin Reserve looking towards Cambridge Terrace. The Grandstand Apartments are in the middle ground, Mt Victoria behind.



After

The bridge launches from Buckle Street, creating an expansive pedestrian plaza at Basin Reserve entrance.



Before

The existing view from within the Basin Reserve. The Grandstand Apartments and Mt Victoria are in the background.



After

The bridge is visible from the Basin Reserve, between the trees and in front of the Grandstand Apartments.



Cobham Drive to Buckle Street transport improvements

Public engagement

Option B – Bridge away from the Basin Reserve

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Option B: what will happen?

Westbound traffic on SH1 will pass approximately 65 metres north of the Basin Reserve gates on a bridge over Kent and Cambridge Terraces. The bridge will be approximately 440 metres long, a minimum of 12 metres wide and a maximum of eight metres above the ground.

Key features

The Option B bridge:

- Has few visual and other impacts on the Basin Reserve
- Is highly visible in the Kent and Cambridge Terraces view line
- Can be integrated with new buildings and structures along Kent and Cambridge Terraces
- Is close to properties on, and next to, Hania Street. Noise and visual impacts will need to be reduced as much as possible.

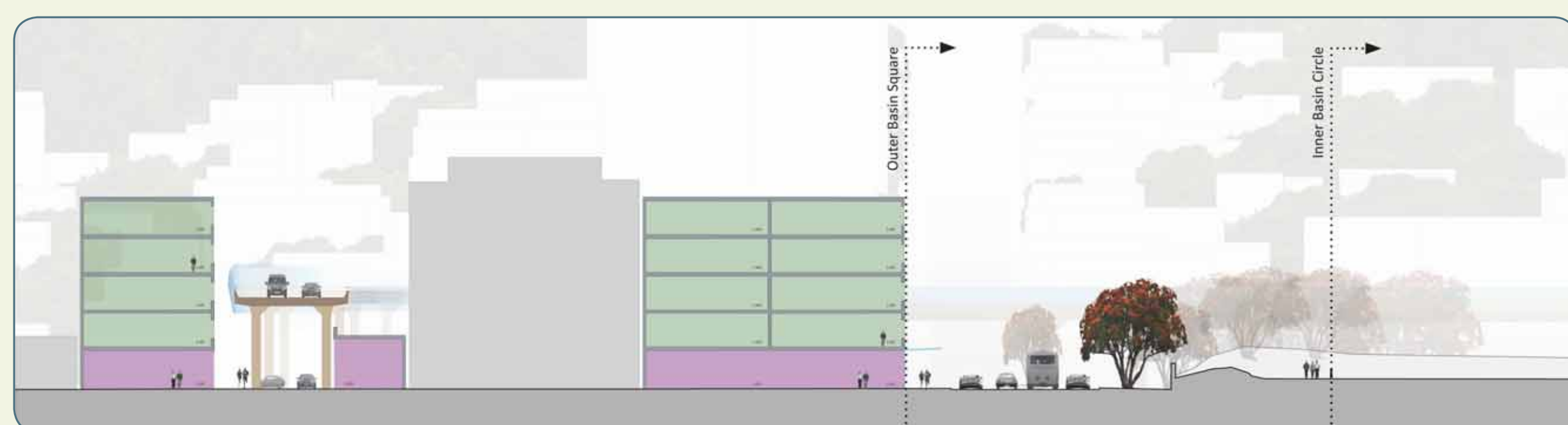
In addition, buildings and other structures can be built on the corner of Kent Terrace and Ellice Street.

Other features

- The bridge doesn't match the Te Aro grid street pattern.
- There is potential for a sheltered under-bridge route to schools on Dufferin Street.
- The proposal includes a new 'pedestrian plaza' entrance to the Basin Reserve, and a 'green corridor' to the north of Buckle Street linking the War Memorial and the Basin Reserve.
- Five properties would need to be acquired.

The benefit cost ratio

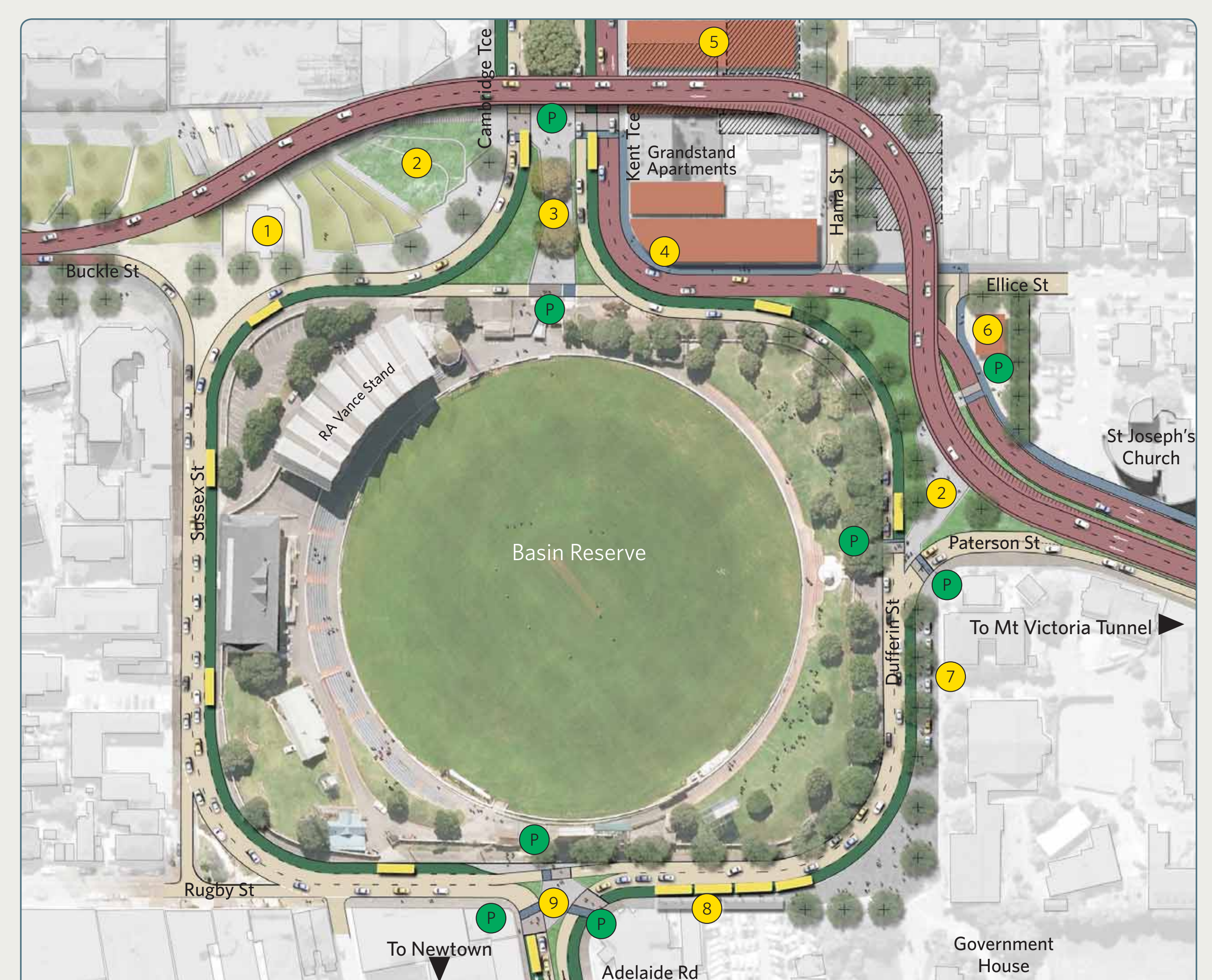
Option B is expected to cost between \$90 million and \$120 million and has an indicative benefit cost ratio of 1.0-1.1. This is likely to be higher when further improvements are made to the Inner City Bypass.



A cross section through bridge showing bridge located between buildings.



Aerial view of the Basin Reserve with the Option A bridge and the additional Mt Victoria tunnel.



Key features

- | | | |
|--|--|---------------------------------|
| 1 Former Home of Compassion crèche remains in current location | 5 Five properties to be acquired | New pedestrian and cycle path |
| 2 Area to be landscaped. Land owned by the NZTA | 6 Possible new building | SH1 |
| 3 Pedestrian plaza | 7 Improved drop-off area for school students | Potential dedicated bus lane |
| 4 Buildings owned by the NZTA. These buildings have been identified by WCC as earthquake prone and the NZTA has plans to demolish them | 8 Possible new bus stop | Local streets |
| | 9 Adelaide Road and Rugby and Dufferin Streets intersection improvements for traffic, pedestrians and cyclists | Pedestrian/cycle crossings |
| | | Buildings that will be affected |

Plan of the Basin Reserve with Option B bridge.

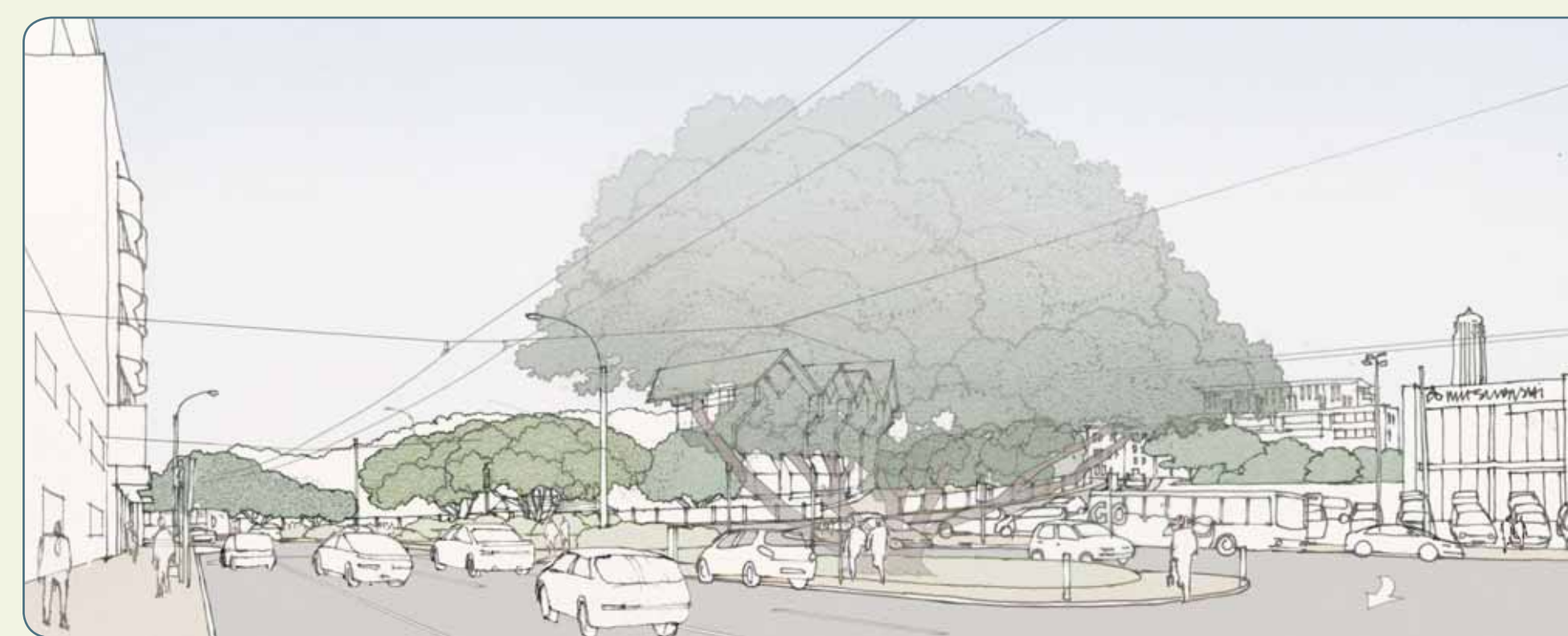


Cobham Drive to Buckle Street transport improvements

Public engagement

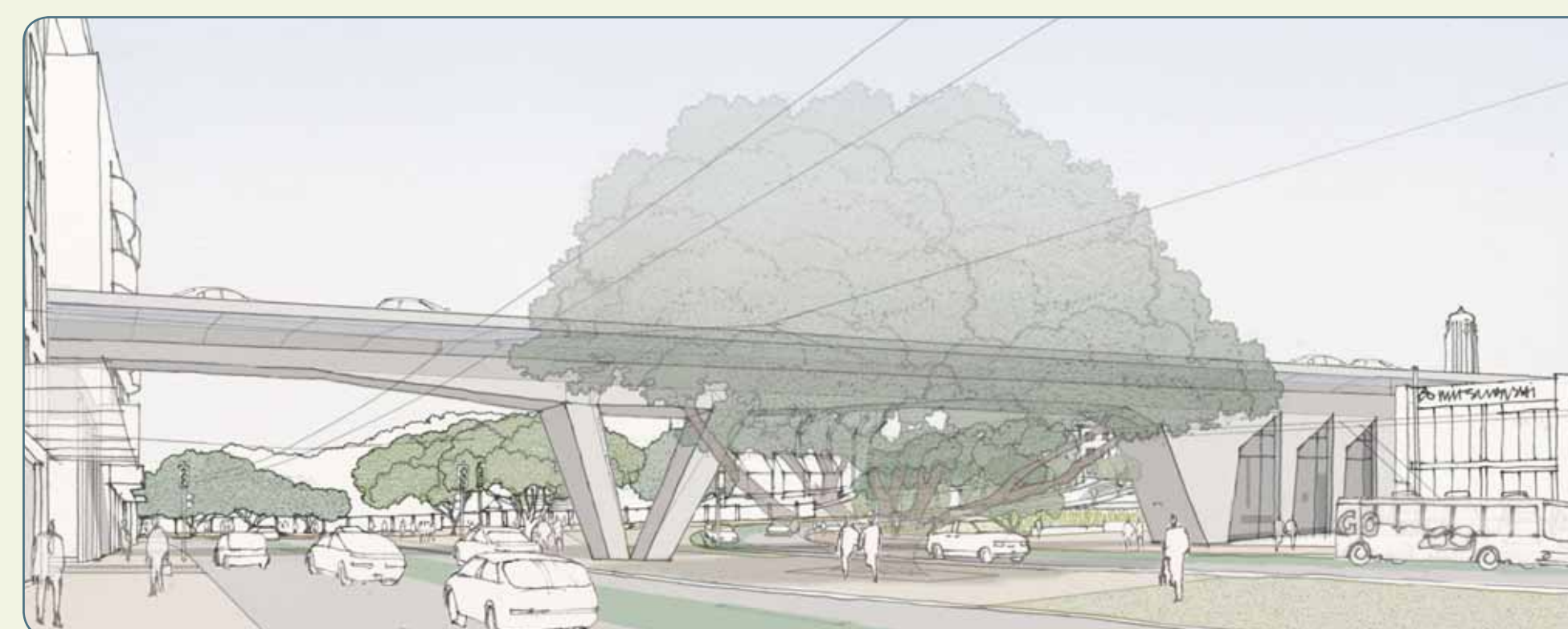
Option B: Bridge away from the Basin Reserve

28



Before

The existing view from Kent Terrace about 100 metres from the Basin Reserve. The Carillon and RA Vance stand are in the background.



After

A sleek, modern bridge across the valley, with generous under-bridge space. Pedestrian areas will be maximised on Kent and Cambridge Terraces.



Before

The existing view from the entrance to the Basin Reserve looking towards Cambridge Terrace. The Grandstand Apartments are in middle ground, Mt Victoria behind.



After

The bridge forms part of the area's urban character outside the Basin Reserve. It is less visible than Option A from this viewpoint. In the foreground the Basin Reserve's northern entry is relatively free of traffic and features an expansive pedestrian plaza.



Before

The existing view from within the Basin Reserve. The Grandstand Apartments and Mt Victoria are in the background.



After

The bridge is just visible near Ellice Street. To the north the Basin Reserve keeps its present character.



Cobham Drive to Buckle Street transport improvements

Public engagement

Facilities for pedestrians and cyclists

29

Pedestrians

- All pedestrian routes will be improved, with wider footpaths, trees, seats and safe, generous crossings.
- North-to-south trips around the Basin Reserve will be improved by an enlarged pedestrian plaza at the northern entry.
- With less traffic on the streets around the Basin Reserve, pedestrian access to schools will be safer and better.
- The access from Ellice Street to the schools will be improved. The under-bridge spaces will be safe and modern.
- The northern entry to the Basin Reserve will be pedestrian-friendly.

Cycling

- Cyclists will have dedicated on and off-road options.
- All options will include shared cycling in bus lanes and off-road pedestrian zones.
- A new shared pedestrian and cycle path between Mt Victoria Tunnel and Kent Terrace.

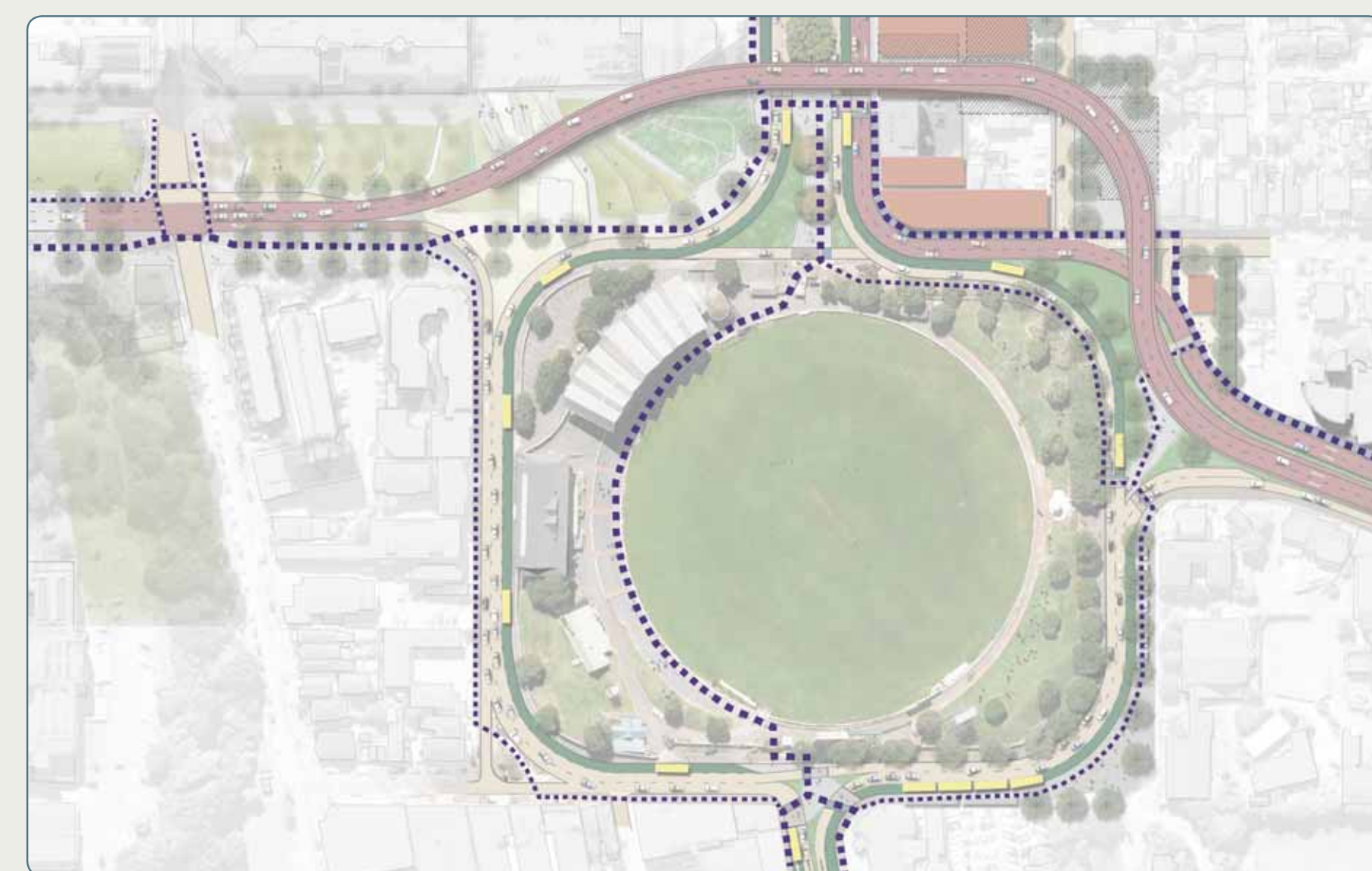
Other ideas being considered

We're considering the option of adding a pedestrian and cycle facility to the bridge structure, at a cost of \$8 million. This would provide panoramic views of the Basin Reserve to the south or Kent Terrace to the north. It would go directly between Taranaki Street and Mt Victoria Tunnel - bypassing traffic and signal-controlled intersections around the Basin Reserve.

Pedestrians and cyclists will still be able to use the streets under the bridge, so we have to decide whether providing this alternative facility justifies the expense.



Key pedestrian and cycling routes for Option A - without a pedestrian and cycle path on the bridge.



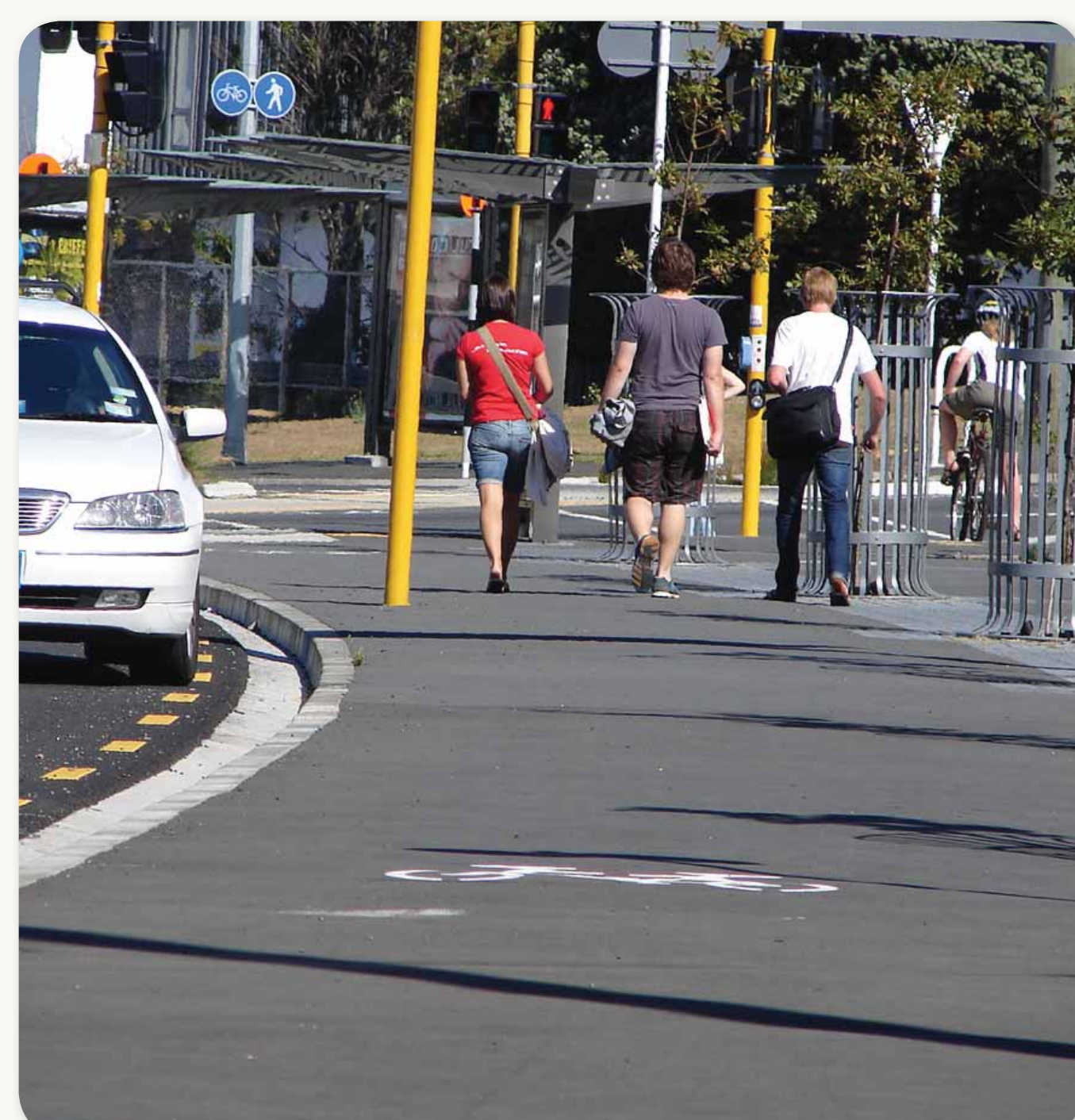
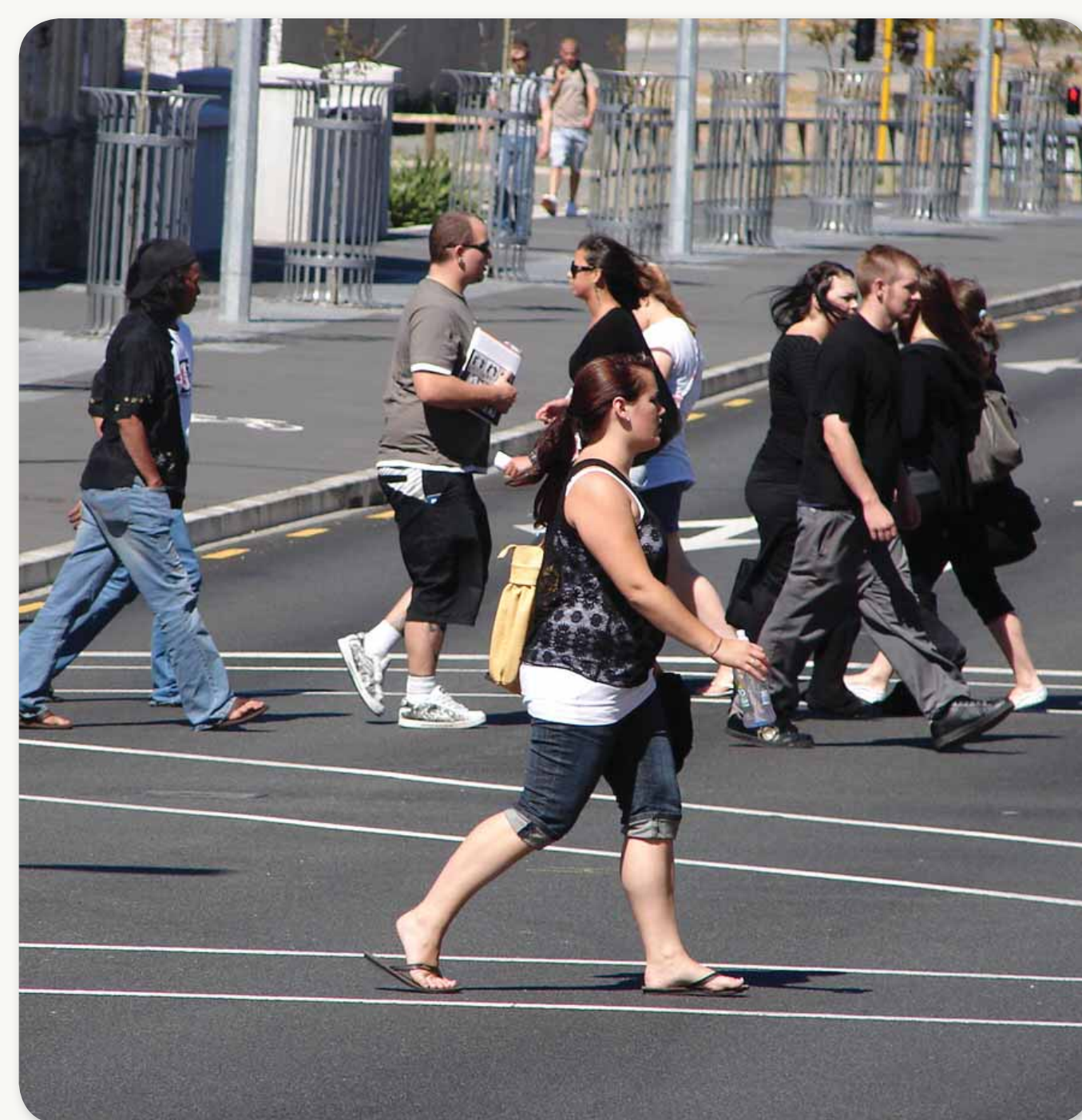
Key pedestrian and cycling routes for Option B - without a pedestrian and cycle path on the bridge.



Key pedestrian and cycling routes for Option A - with a pedestrian and cycle path on the harbour side of the bridge.



Key pedestrian and cycling routes for Option A - with a pedestrian and cycle path on the Basin Reserve side of the bridge.





Cobham Drive to Buckle Street transport improvements

Public engagement

Options investigated but rejected

30

We considered a wide range of ideas before deciding on the bridge options. Many were generated at a workshop attended by a number of interested parties and community representatives.

Here are some of the options that are no longer being considered.

Option C – Ground level and moving SH1 away from the Basin Reserve

Under Option C, east and westbound traffic on SH1 passes approximately 65 metres north of the Basin Reserve gates. SH1 remains at its current level, with a new signalised intersection at Kent Terrace and Cambridge Terrace. No turns are allowed at this intersection.

- While Option C is cheaper than Option A, it provides fewer economic benefits.
- Option C has fewer visual impacts than Options A and B when seen from Kent and Cambridge Terraces.
- Option C provides fewer urban design and social benefits than Options A and B.
- Option C is not as good at separating SH1 traffic from local traffic, particularly buses and possible future light rail.
- Options A and B better meet the needs of future generations, particularly if they want to upgrade the Inner City Bypass.
- Option C has an estimated cost of \$50 million to \$70 million.



Option D – Ground level and moving SH1 closer to the Basin Reserve

Under Option D, westbound SH1 traffic exits Mt Victoria Tunnel and veers right to Dufferin Street and Buckle Street, passing north of the Basin Reserve. Traffic can turn right to Cambridge Terrace via a slip lane. All streets remain at their current level. A new intersection at the corner of Dufferin and Paterson Streets allows local southbound traffic to cross SH1 to Adelaide Road.

- While Option D is cheaper than Option A, it provides fewer economic benefits.
- Option D has fewer visual impacts than Options A and B when seen from Kent and Cambridge Terraces.
- Option D provides fewer urban design and social benefits than Options A and B.
- Option D introduces a very wide road at the corner of Ellice Street and Kent Terrace.
- Option D is not as good at separating SH1 traffic from local traffic, particularly buses and possible future light rail.
- Options A and B better meet the needs of future generations, particularly if they want to upgrade the Inner City Bypass.
- Option D has an estimated cost of \$40 million to \$50 million.



Option E – Putting local traffic on a bridge and in a tunnel

Under Option E, westbound SH1 traffic exits Mt Victoria Tunnel and veers right to Dufferin Street and Buckle Street, passing north of the Basin Reserve in a trench. Traffic can turn right to Cambridge Terrace via a slip lane.

Local traffic travelling south from Kent Terrace to Newtown turns left at Kent Terrace north of the Grandstand Apartments. A new bridge rises up over Hania Street and turns south above Dufferin Street to rejoin the street level before St Mark's Church School on Dufferin Street.

Northbound local traffic travels on Sussex Street, with the option of turning left to Buckle Street or joining Cambridge Terrace via a tunnel under Buckle Street (SH1), before veering left to join Cambridge Terrace.

- Option E offers similar economic benefits to, but is more expensive than, Option A or B.
- Option E provides fewer urban design and social benefits than Options A and B.
- Option E has fewer visual impacts than Options A and B when seen from Kent and Cambridge Terraces.
- Option E is less favourable than Options A and B for a high-quality public transport or light rail system.
- Option E has an estimated cost of \$100 million to \$130 million.



Option F – Putting SH1 in a tunnel near the Basin Reserve

Under Option F, westbound SH1 traffic exits Mt Victoria Tunnel and veers right into a tunnel that passes to the north of the Basin Reserve. The tunnel exits on Buckle Street after Tory Street. Local traffic stays the same.

- This tunnel is only feasible if it extends between Paterson and Taranaki Streets, but this makes it significantly more expensive to build than a bridge.
- The tunnel is costly because it needs to be built in an old swamp. The risk of flooding would also need to be managed.
- Option E has an estimated cost of \$160 million to \$220 million.





Cobham Drive to Buckle Street transport improvements

Public engagement

Other ideas still being considered

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Integrating a building with the bridge

Overhead structures are successful features of many cities, especially when they have spaces under and over them to accommodate buildings.

One idea involves constructing a building under the Option A bridge on the corner of Ellice Street and Kent Terrace.



Cross-section of the bridge showing landscaping and parking under bridge.



Cross-section of the bridge showing buildings integrated with bridge.



We're exploring the idea of locating buildings under the bridge structure on the corner of Ellice Street and Kent Terrace. This image give an example of building structures integrated with roading structures.

(Source: Luuk Kramer, used with permission.)

Pedestrian and cycling facilities on the bridge

We're considering whether to provide an alternative pedestrian and cycle facility on the bridge.



Plan of possible walking and cycle path on Basin Reserve side of bridge.



View of the bridge from the entrance to the Basin Reserve. This artist's impression shows a three metre wide pedestrian and cycle facility on the Basin Reserve side of the bridge. It would provide commanding views of the Basin Reserve grounds and the surrounding area.



Plan of possible walking and cycle path on harbour side of bridge.



View of the bridge from Hania Street, showing the bridge around the Basin Reserve. This artist's impression shows a three metre wide pedestrian and cycle facility on the harbour side of the bridge. It would offer a direct connection from Mt Victoria Tunnel to Tory Street.



Cobham Drive to Buckle Street transport improvements

Public engagement

SH1 – a key national and local route

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Overview

SH1 between the Basin Reserve and Cobham Drive:

- Provides a vital and the most direct route between the eastern suburbs (including the airport) and the CBD
- Provides many connections to local communities, particularly Hataitai and Kilbirnie
- Is the gateway to Wellington for tourists travelling from the airport.

SH1 also provides important links to regional facilities in the Town Belt, such as Hataitai Park, including the netball courts and the velodrome.

This section of SH1 has only one lane in each direction. It has reached its capacity and is regularly congested at peak times on workdays – and increasingly at weekends too.

Vehicle traffic

- Almost 40,000 vehicles travel through Mt Victoria Tunnel each day, while 35,000 vehicles use Ruahine Street and Cobham Drive.
- Because SH1 is at capacity, motorists are increasingly using alternative routes such as Evans Bay Parade, Palliser Road and Constable Street. The traffic on Evans Bay Parade and Palliser Road, for example, is predicted to double in the next 15 years if SH1 isn't improved.
- Because SH1 is at capacity, the amount of traffic using it isn't expected to increase significantly if improvements are not made.
- Because SH1 is congested and more vehicles are using longer alternative routes, vehicles will increasingly use more fuel and generate more CO2 emissions.

Costs

Building a second Mt Victoria Tunnel and widening Ruahine Street and Wellington Road is expected to cost about \$430 million.



The Mt Victoria tunnel was built in 1931. Almost 40,000 vehicles travel through it each day. It is operating at capacity



Ruahine Street was built a couple of years after Mt Victoria Tunnel was completed. Prior to this, traffic used to pass through Hataitai village and Moxham Avenue. Ruahine Street is regularly congested at peak time.



Wellington Road separates the Hataitai and Kilbirnie communities. Between Kilbirnie Crescent and Ruahine Street, Wellington Road only has one lane in each direction and is regularly congested at peak time.





Cobham Drive to Buckle Street transport improvements

Public engagement

Walking, cycling and public transport

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Pedestrians and cyclists

Pedestrians and cyclists can travel between the CBD and the eastern suburbs on tracks over Mt Victoria, through Mt Victoria Tunnel or around the bays. Most use the more direct route through the tunnel.

The tunnel has an elevated, but narrow, shared pedestrian and cycle path on the northern side.

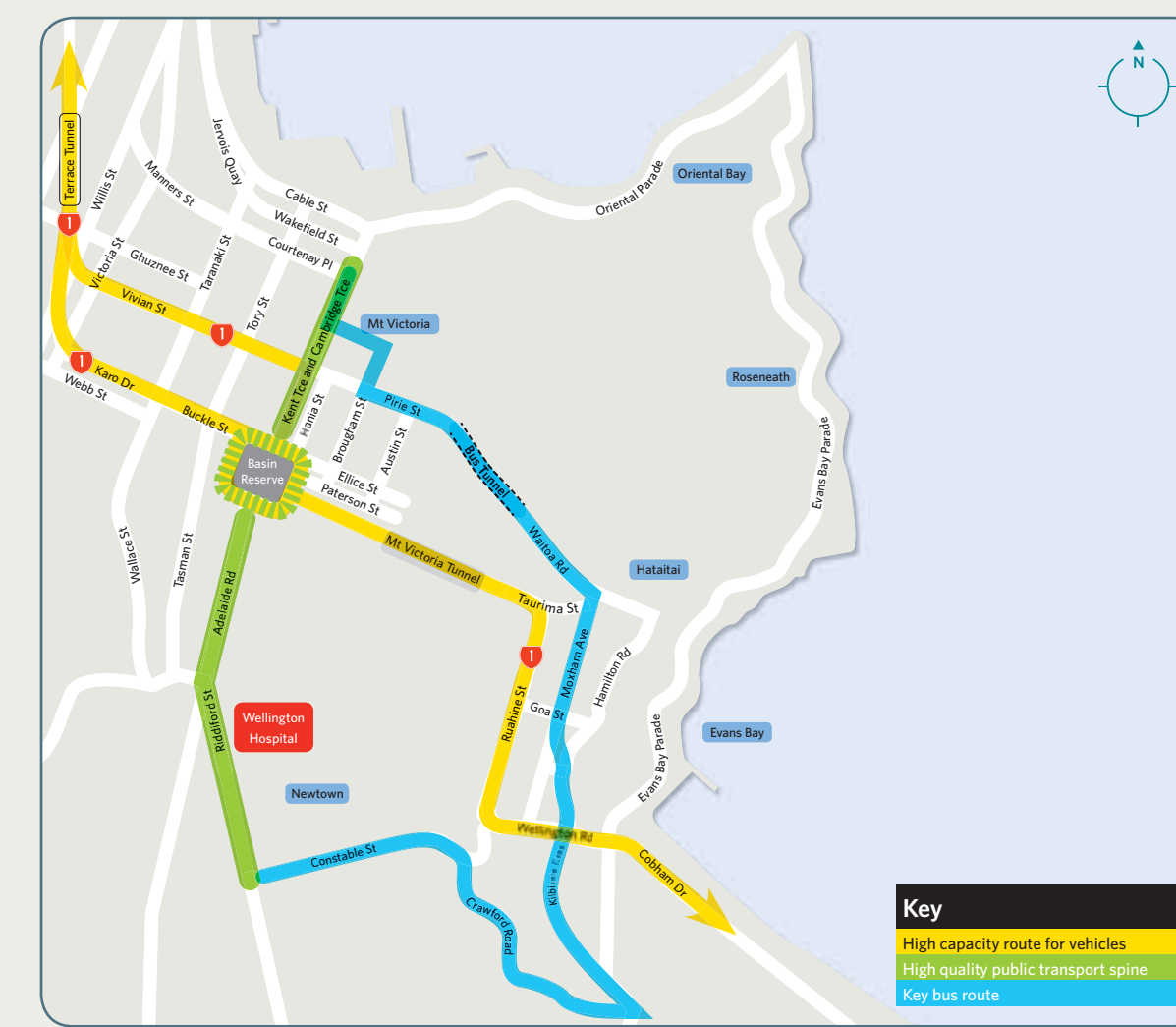
- There are concerns about the comfort and safety of pedestrians and cyclists using the tunnel.
- The number of pedestrians and cyclists using the tunnel is highest in peak times during the working week.
- Research shows that if we improved access for pedestrians and cyclists in the tunnel, the number people walking or cycling between the eastern suburbs and the CBD could double.

Pedestrians and cyclists tend to use Taurima Street and Moxham Avenue instead of SH1. The footpath is on one side of Ruahine Street, close to moving traffic.

The only official crossing place for pedestrians and cyclists on Ruahine Street is a pedestrian bridge that goes over SH1 and links Hataitai village and Hataitai Park. This means SH1 is a barrier for pedestrians between the Town Belt and Hataitai.

Public transport

- Buses between Kilbirnie and Courtenay Place travel along Moxham Avenue and Kilbirnie Crescent.
- While buses don't use SH1, they do cross it at the intersection with Hamilton Road and Kilbirnie Crescent.
- It's important that the SH1 improvements don't delay bus journeys or make them less reliable.



This area contains SH1 (one of Wellington's key roads) and several important public transport routes. Pedestrians and cyclists are encouraged to use Moxham Avenue rather than the busy Ruahine Street.



Buses do not use SH1 and the Mt Victoria Tunnel as a passenger transport route. Instead buses use a dedicated Bus Tunnel that connects Pirie Street with Waitoa Road. The tunnel was opened on 16 April 1907 and was originally used by trams between the eastern suburbs and Wellington City.



View of Hataitai Village showing Taurima Street in the middle of the photo and Waitoa Road to the right. Through traffic uses SH1 allowing the buses to use the less congested bus route via the bus tunnel along Waitoa Road and Moxham Avenue.



Cobham Drive to Buckle Street transport improvements

Public engagement

Wellington city – the environment

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Topography – valleys and ridges

Mt Victoria Tunnel runs through the Mt Victoria ridge line. Ruahine Street, Taurima Street and Wellington Road are at the base of the ridge line's eastern slope.

Wellington's topography has always influenced the way the city's buildings, streets and roads have been sited and developed.

The north-south streets (Ruahine Street and Moxham Avenue in Hataitai, and Kent and Cambridge Terraces in Mt Victoria) run parallel to the Mt Victoria ridge line and along a valley floor. West-east streets tend to slope towards the valley floors; they include Taurima Street, Goa Street, Wellington Road, Paterson Street and Ellice Street.

Urban grid

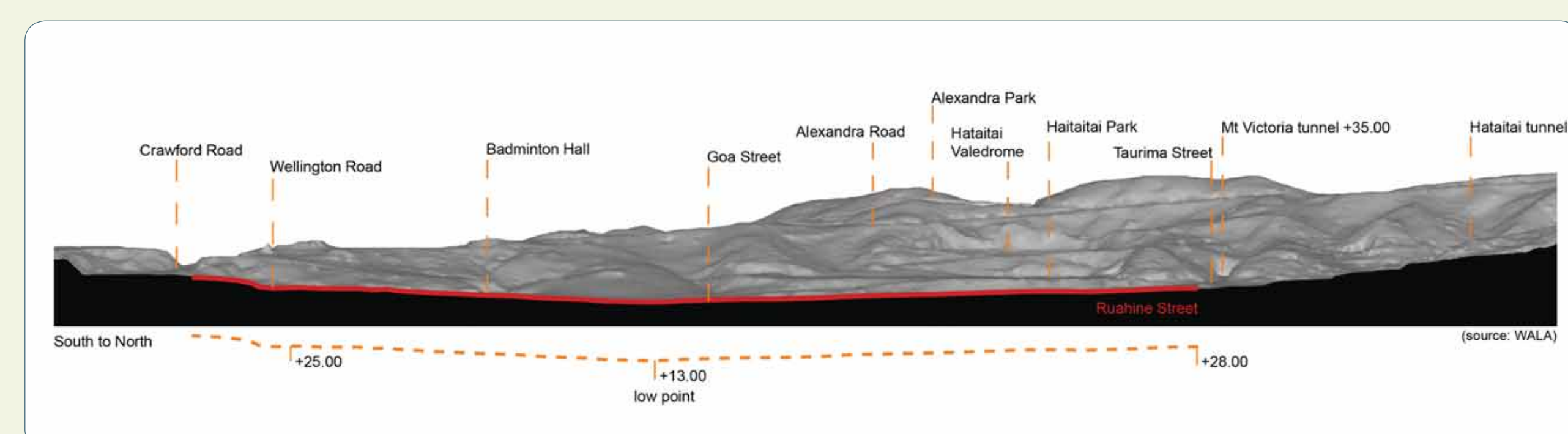
Wellington city is defined by its distinctive and historical street grid. Street views often end at bush-clad ridges or the harbour, reminding us of Wellington's amazing natural setting.

The grid includes some significant urban streets such as Moxham Avenue.

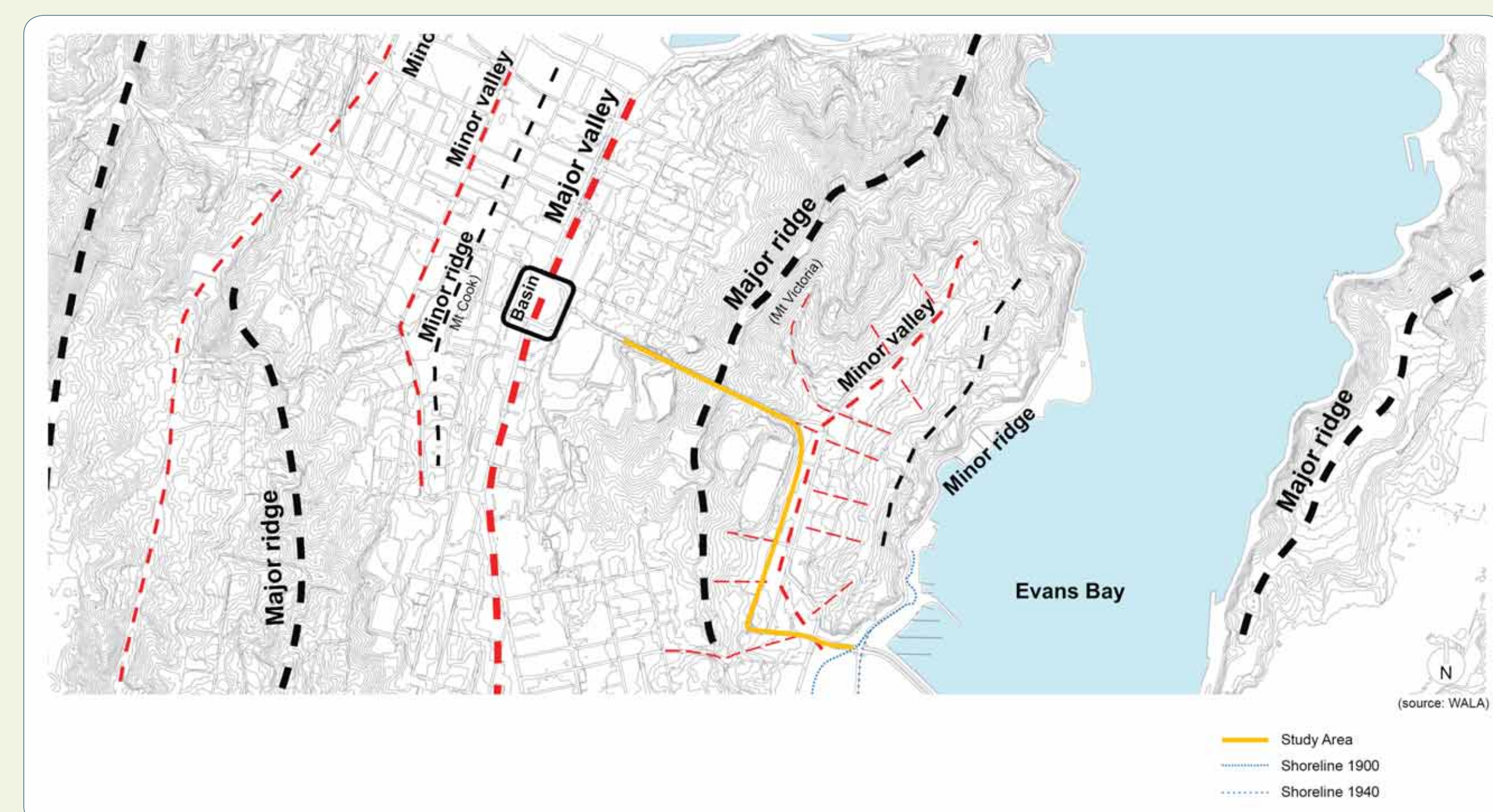
Urban form

Wellington has a number of distinctive urban areas. Around Mt Victoria Tunnel and Hataitai these include:

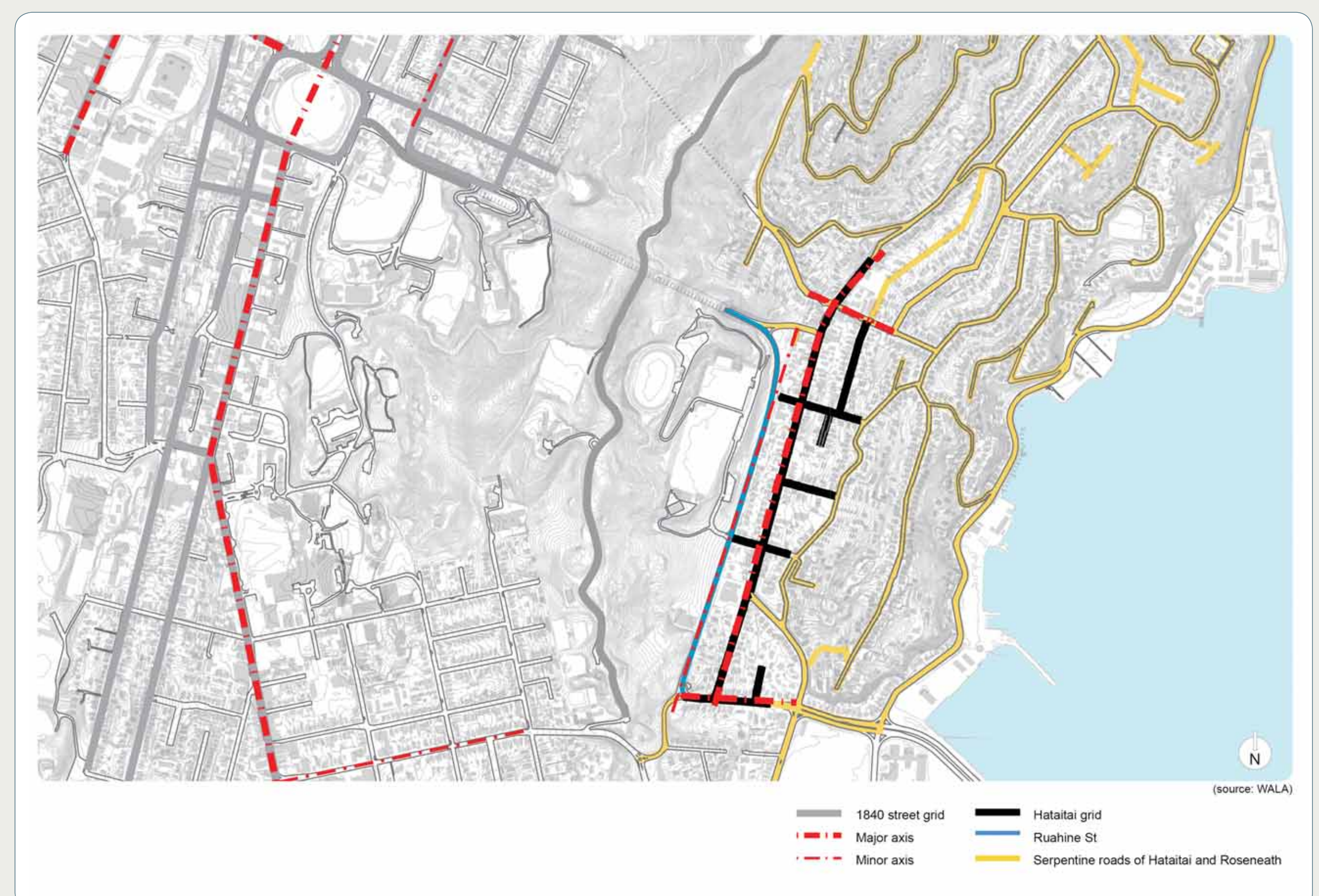
- The residential areas in Mt Victoria and Hataitai – compact settlements that are contained within the open space of the Town Belt
- The recreational areas of the Town Belt and Hataitai and Kilbirnie Parks
- The dense vegetation of the Town Belt.



Cross section along Ruahine Street



Topography within the study area



Urban grid and main axes Hataitai

Landmarks

The area also has some landmark buildings and places that are unique to Mt Victoria and the eastern suburbs, with those on the eastern side of Mt Victoria reflecting Wellington's natural and cultural heritage. They include:



Mt Victoria Tunnel – the west entrance



Mt Victoria Tunnel – the east entrance



The Hataitai shops



Hataitai Park



The Town Belt



The pohutukawa on Ruahine Street



Kilbirnie Park



The Zephyrometer.

Cobham Drive to Buckle Street transport improvements

Public engagement

The historic environment – a story of change

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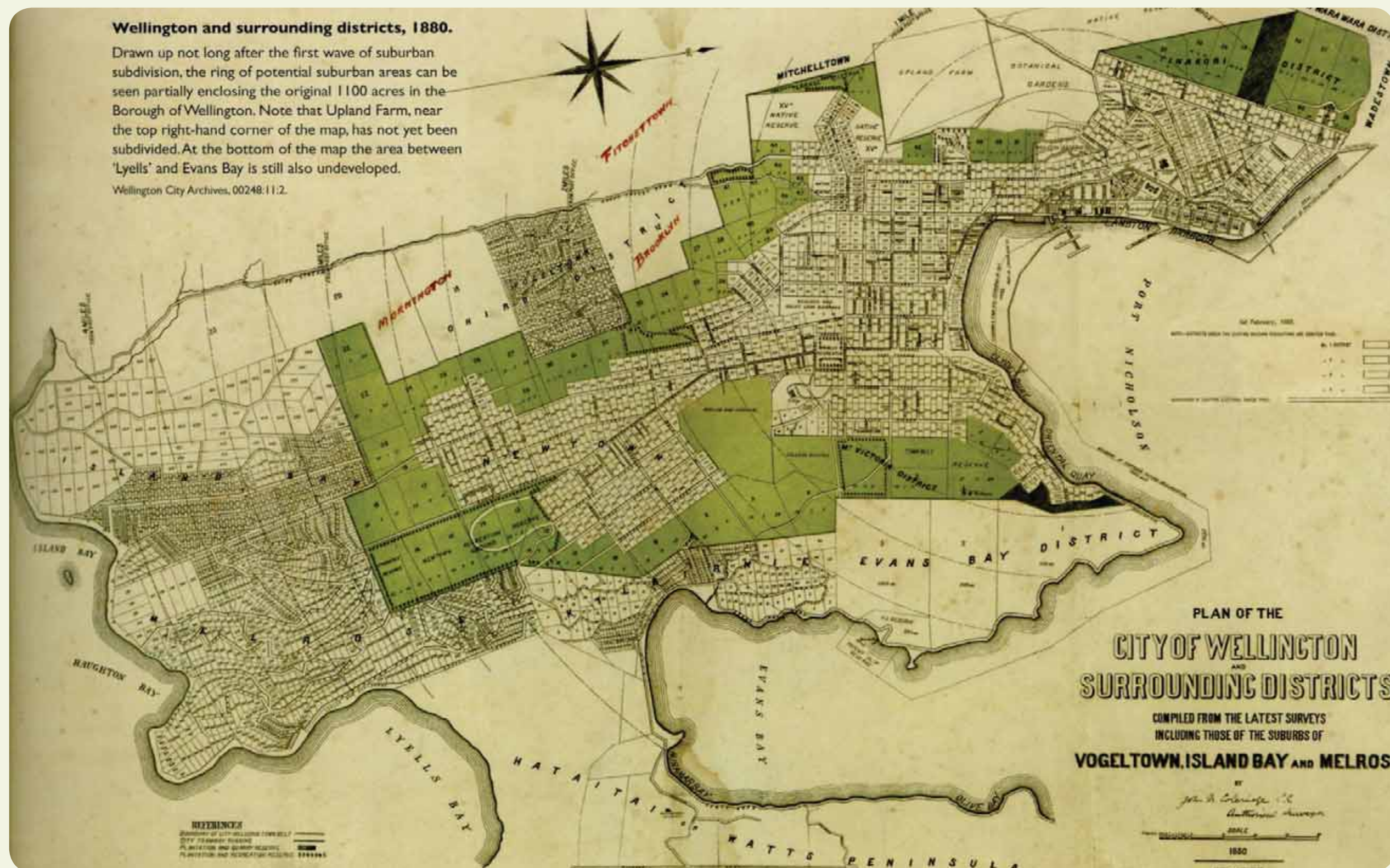
Mt Victoria Tunnel

When the plan of Wellington was compiled in 1840, it created 1100 'town acres'. Parcels of land in the eastern suburbs were bought and allocated in the 1840s and 1850s.

The arrival of roads, tram access and, later, the tram tunnel all helped to encourage settlement and growth in the suburbs east of the Mt Victoria ridge.

James Crawford, a large landowner at Seatoun, suggested a tramline to Seatoun. His plans included a tunnel through Mt Victoria, with trams running to Kilbirnie and on to Seatoun. The plan became a reality when Wellington's second tunnel, the Hataitai Tram Tunnel (now the Pirie Street bus tunnel), opened on 16 April 1907.

Increases in road traffic soon created the need for easier and faster road access from the eastern suburbs to the CBD. Having been suggested as early as 1909, Mt Victoria Tunnel opened in 1931.



The Hataitai street grid

Originally traffic from Mt Victoria Tunnel passed through Hataitai Village and along Moxham Avenue. Ruahine Street was built after the tunnel was opened allowing the increasing traffic volumes to bypass Hataitai's main street.



1880s Subdivision of land parcels

1880s–1907 Further subdivision of larger parcels with street grids constructed on flat land

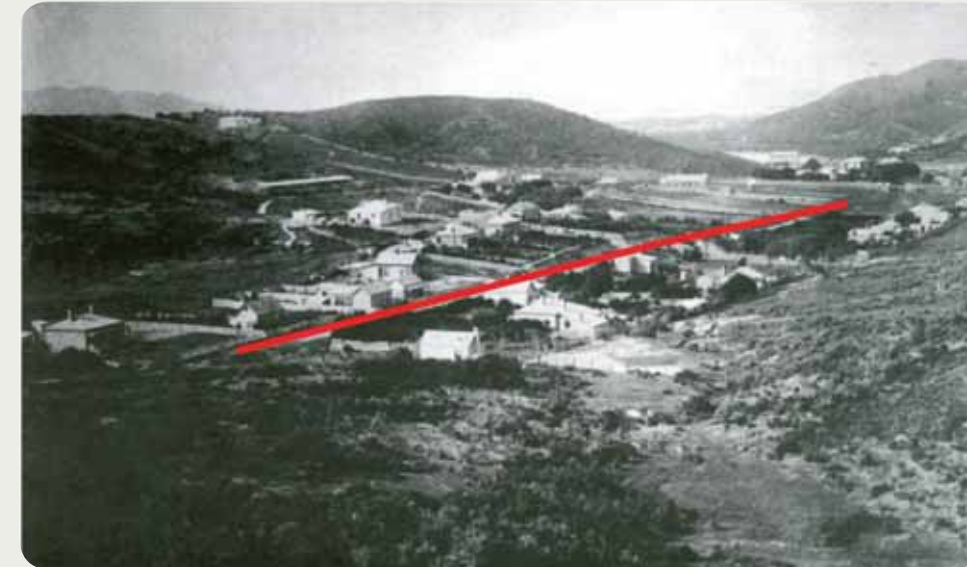
1907 Excavation of bus tunnel and connection to city centre by tramway

1931 Construction of vehicular tunnel and creation of Ruahine Street bypassing Hataitai village to connect eastern suburbs to city centre

The transport connection

While Mt Victoria Tunnel has always been an iconic entrance to and exit from Wellington city, issues of traffic congestion and connections for pedestrians and cyclists have been apparent for many years.

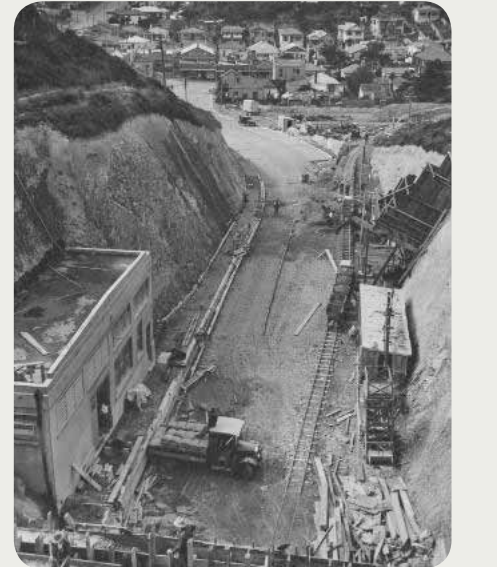
In 1995 light-coloured plastic panels were installed to improve the tunnel's sub-standard lighting. The current plans propose another step that recognises the complex urban environment of Mt Victoria Tunnel and Hataitai.



1980s view over Kilbirnie township
(now Hataitai) towards Lyall Bay.
Moxham Road in red



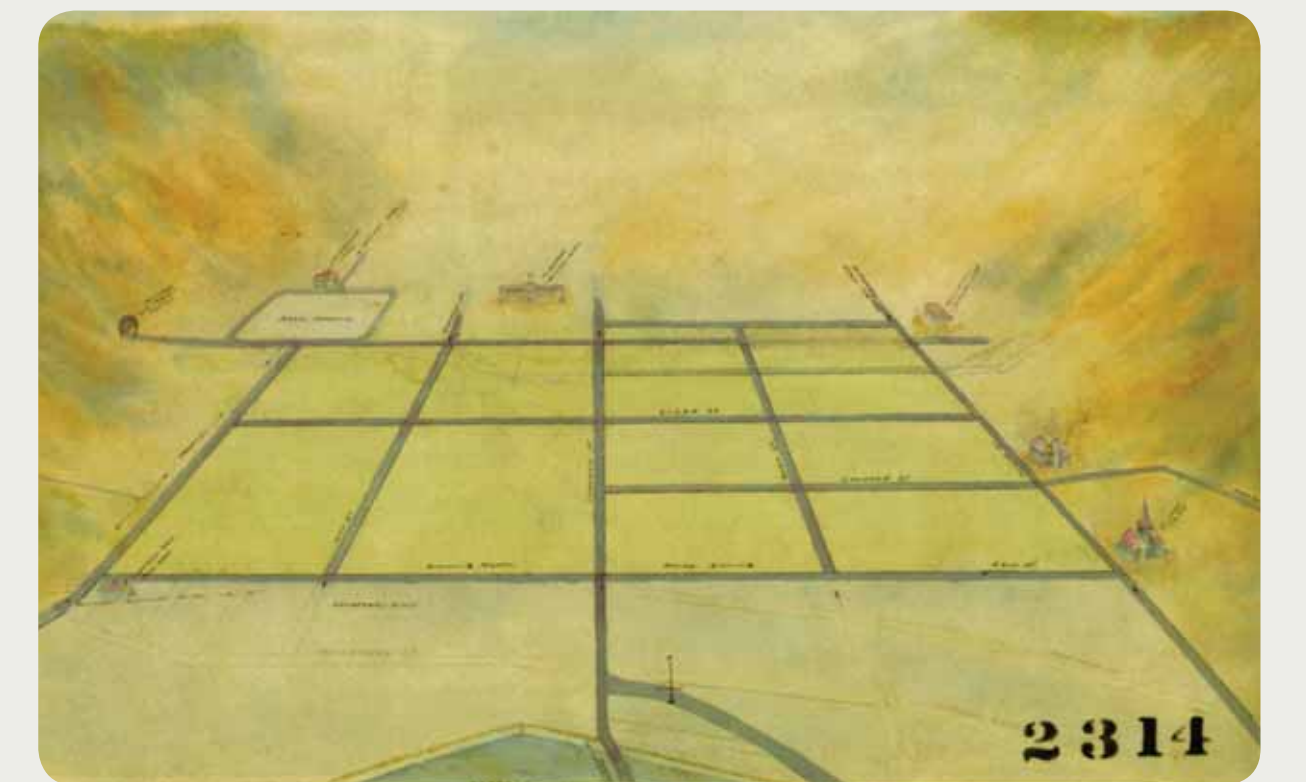
1928 Looking over Hataitai towards Kilbirnie and Lyall Bay. Moxham Avenue in red.



*Mt Victoria Tunnel
eastern exit 1930*



Kilbirnie Hotel (corner Wellington Road and Kilbirnie Crescent) circa 1900. Bourke's dam is in the foreground, with bare hills in the background showing the limited extent of housing in Kilbirnie at this time. The hotel was at the southern end of the township, the adjoining land would not be subdivided until 1901. At back left is the Kilbirnie Recreation Reserve on the foreshore, not yet reclaimed. Burton Bros, Wellington city Archives, 2006/7.



Te Aro area showing proposed new traffic tunnel through Mt Victoria, 1923. Drawn by Leslie Atkinson of the City Engineer's Department, this perspective view shows the main traffic routes within the Te Aro area related to the proposed new traffic tunnel through Mt Victoria. A tunnel was proposed as early as 1909 but it was not constructed until the late 1920s. The route was recommended by an Access Commission established by the city council to investigate how to provide rapid access to the western and eastern suburbs. Wellington City Archives, 00237:127.



Cobham Drive to Buckle Street transport improvements

Public engagement

The community environment

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Diversity

Mt Victoria Tunnel is at the centre of a number of community precincts. They have a mix of land uses, including commercial, residential, institutional and public open space, and some regionally significant community facilities.

This complex environment has equally complex transport needs – to service the area, connect local traffic, and provide parking and pedestrian and cycle links, all in an area that also carries SH1 traffic.

Mt Victoria Tunnel is a significant link between two suburbs for pedestrians, cyclists and motorists.

Neighbourhoods

Mt Victoria Tunnel is situated between the Mt Victoria and Hataitai villages. A number of local facilities provide for a range of cultural and social activities and small business enterprises. All of these rely on good local connections, which need to be managed with the broader needs of SH1.

Unfortunately many areas near SH1 are affected by busy traffic and uncertainty about tunnel and road developments. Ruahine Street lacks the vibrancy and vitality of other eastern suburb neighbourhoods.

Town Belt

The Town Belt runs along the Mt Victoria ridge line over Mt Victoria Tunnel and along Ruahine Street. It features exotic and native plants and trees and is home to several parks and recreational facilities. Regular activities in Hataitai Park and events such as 'one love' held at the Hataitai velodrome generate a large number of pedestrians and vehicle users.



The Basin Reserve



Mt Victoria Tunnel – east entrance



Hataitai Shops



Kilbirnie Park



Church of the Jesus Christ Latter Day Saints

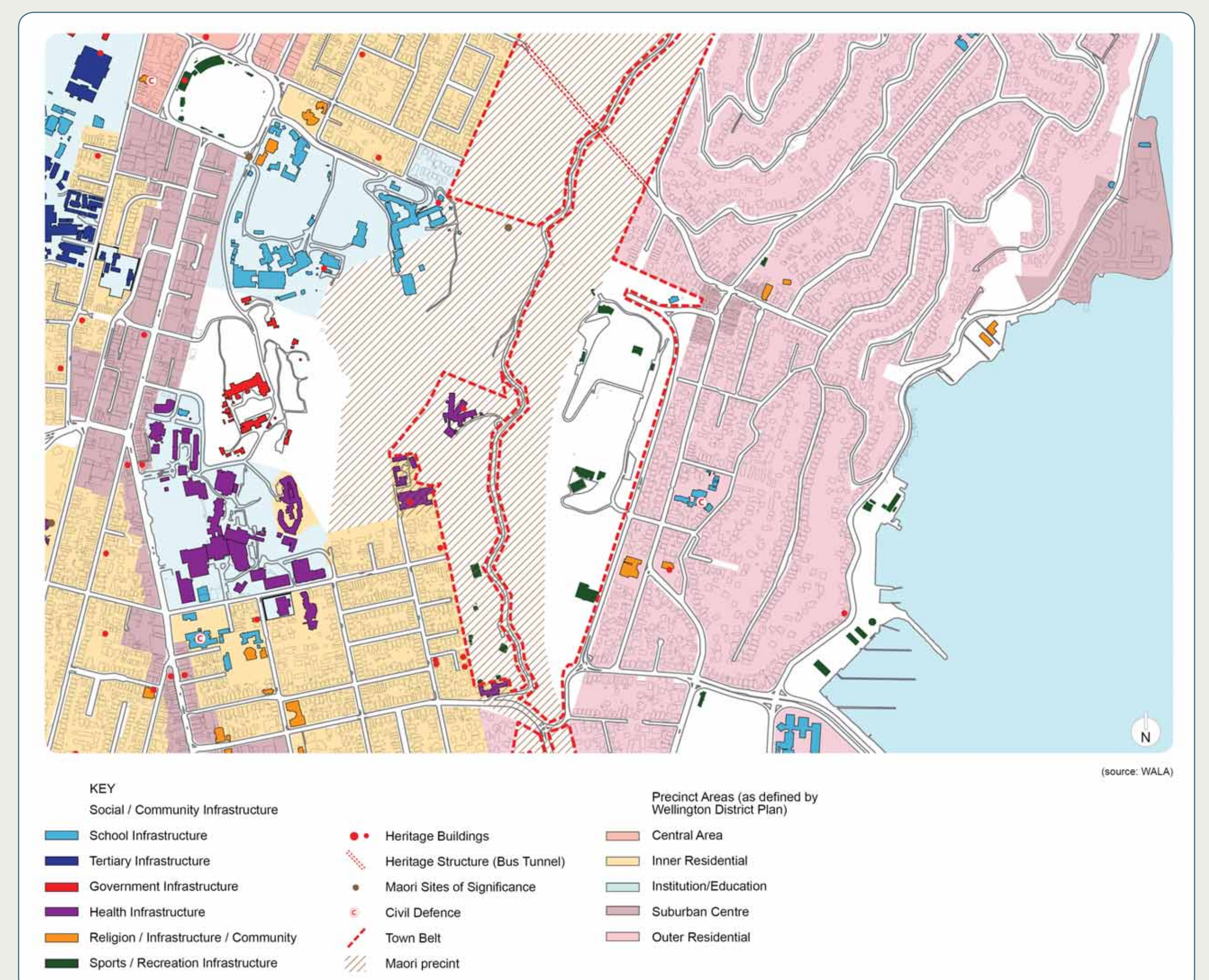


Hataitai Park



1. BASIN RESERVE
2. WELLINGTON BOYS' COLLEGE
3. WELLINGTON EAST GIRLS' COLLEGE
4. SOUTHERN WALKWAY [INNER TOWN BELT]
5. HATAITAI PARK
6. HATAITAI SHOPS
7. WELLINGTON BADMINTON CLUB
8. CHURCH OF JESUS CHRIST OF LATTER DAY SAINTS
9. KILBIRNIE PARK

10. KILBIRNIE SCHOOL
- a. PATERSON STREET
- b. TAURIMA STREET
- c. RUAHINE STREET
- d. WELLINGTON ROAD
- e. WALMER STREET
- f. MOXHAM AVENUE
- g. GOA STREET





Cobham Drive to Buckle Street transport improvements

Public engagement

The journey

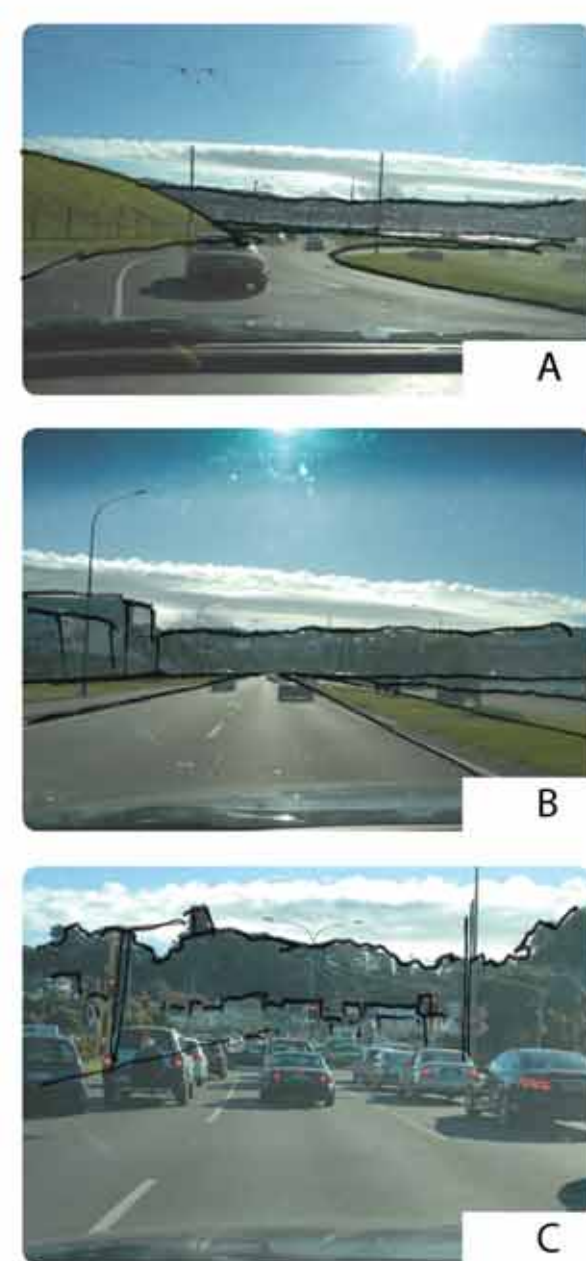
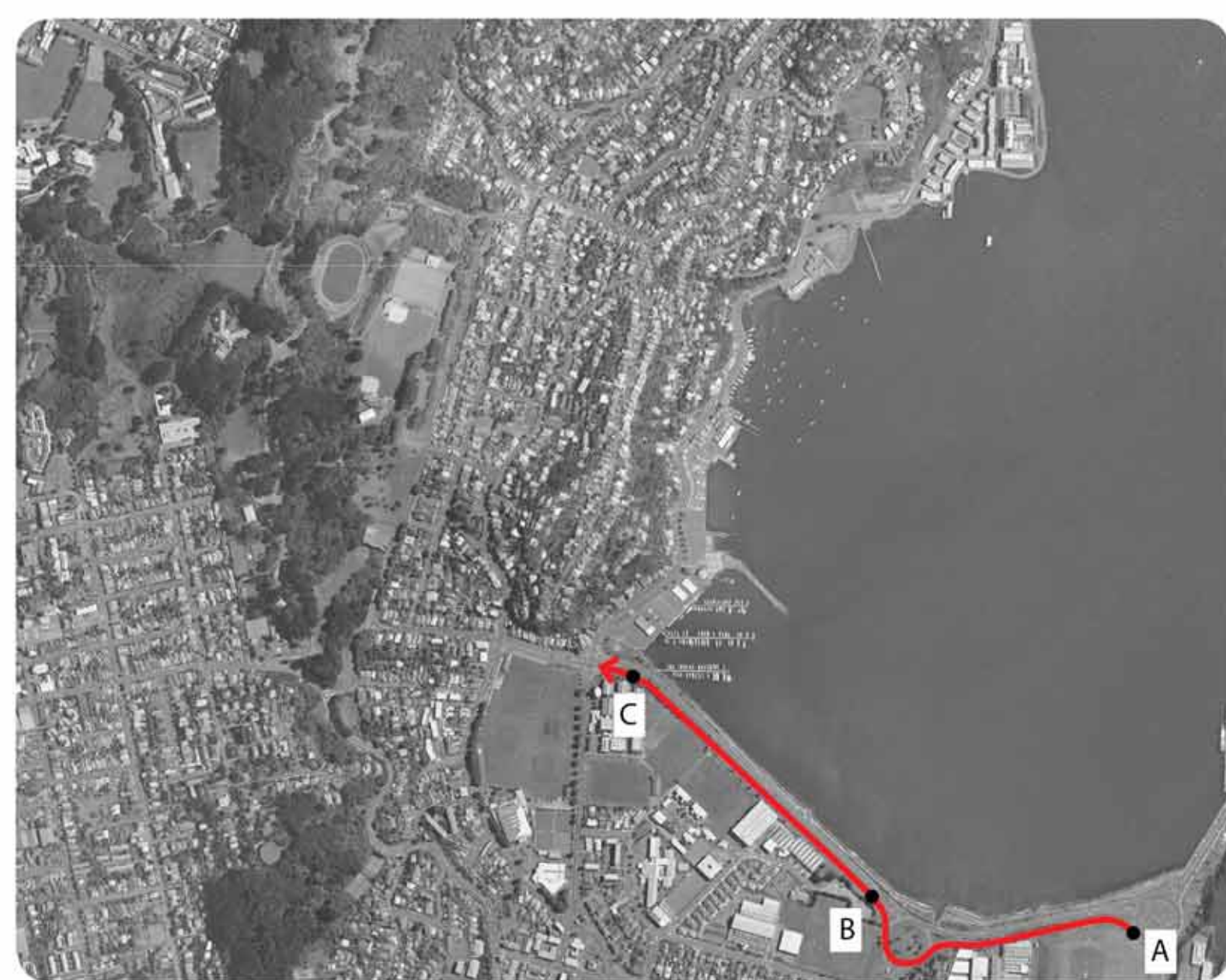
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Journeys through Wellington are key to experiencing the city's landscape

Airport to Cobham Drive: the harbour edge

The journey from Wellington Airport to the city is one of the city's defining experiences.

- [A] Evans Bay sets the scene of Wellington as a harbour city.
- [B] The harbour edge offers distant views of the Hataitai residential area.
- [C] Distant views of the Town Belt and a mix of educational, recreational and residential facilities.



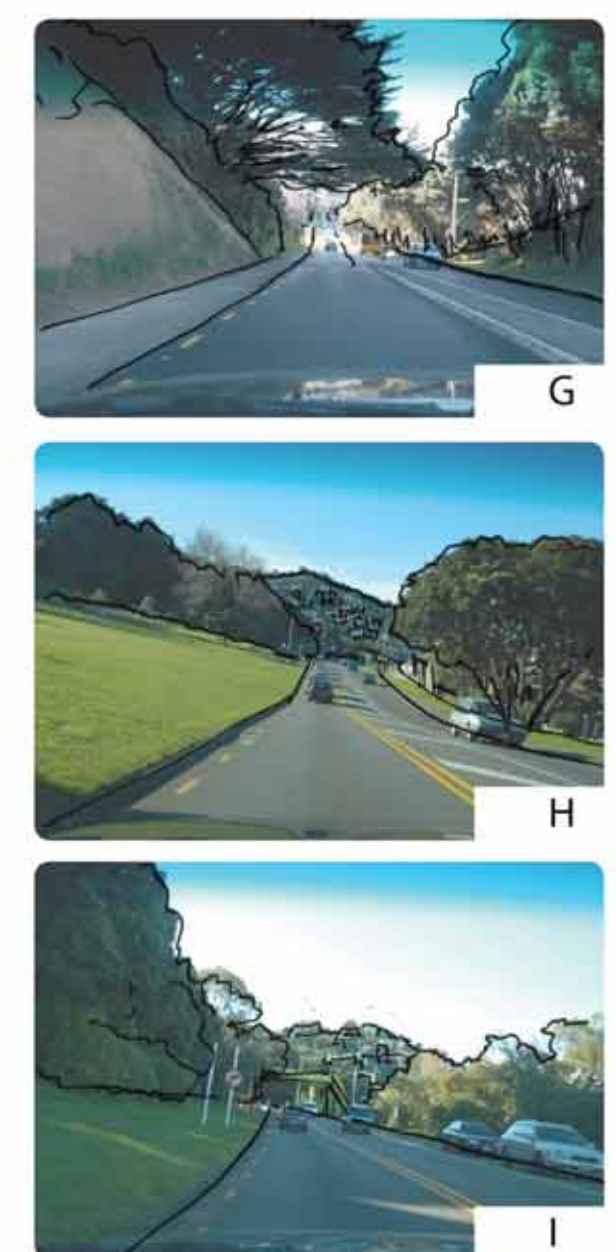
Wellington Road to Ruahine Street: up the ridge

- [D] The treetops of the Town Belt, with residential properties in the foreground.
- [E] The narrowing road. The residential edge frames the Town Belt beyond.
- [F] Residential properties edge the road as it climbs. Tall, dense vegetation dominates the road below.



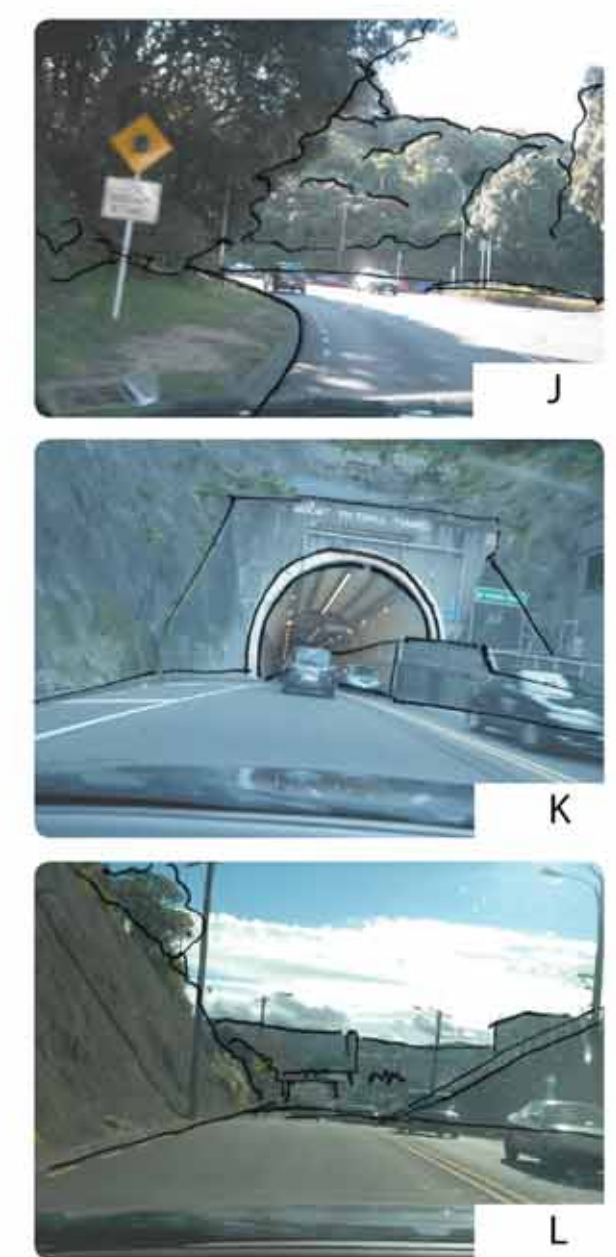
Ruahine Street to Taurima Street: the base of the ridge

- [G] A shaded corner flanked by steep banks. The downhill route is framed by large pohutukawa trees and conifers.
- [H] Ruahine Street opens to a parkland with high vegetation on one side and a verge with pohutukawa and fence lines on the other.
- [I] Vegetation dominates the approach to Taurima Street. Dense vegetation is one of the defining qualities of Wellington city.



Taurima Street to the Basin Reserve: through the tunnel

- [J] The dramatic approach to Mt Victoria Tunnel is framed by steep, bush-clad slopes narrowing towards the entrance.
- [K] Mt Victoria Tunnel provides a dramatic exit from the eastern suburbs, with high vegetated slopes and a distinctive stand of pohutukawa leading to the entrance.
- [L] The tunnel exit provides views of the Basin Reserve, the Carillon, the low-rise and high-rise city and the hills beyond. It signals the entrance to Wellington's CBD.





Cobham Drive to Buckle Street transport improvements

Public engagement

The SH1 improvements: what results will they deliver?

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The project goals

By duplicating Mt Victoria Tunnel and widening Ruahine Street and Wellington Road, we aim to:

- Ensure that most traffic between the eastern suburbs and the CBD uses the more direct and efficient SH1 route, rather than alternative routes such as Evans Bay Parade or Palliser Road.
- Ensure that SH1 functions more efficiently than it does now
- Maintain and improve vehicle access to local streets and key facilities
- Ensure people can still travel between neighbouring communities
- Provide improved and safer facilities and connections for pedestrians and cyclists
- Maintain bus travel times and reliability on the route between Hataitai and Kilbirnie.

As a result of the proposed SH1 improvements:

- The proportion of vehicles using SH1 between the eastern suburbs and the CBD will increase by over 70% by 2026
- Travel times along SH1 will reduce from eight to five minutes (despite the increased traffic)
- Along key local roads, traffic will reduce by 70%, making these routes more suitable for public transport, local access and cycling.

Access to properties and urban streets

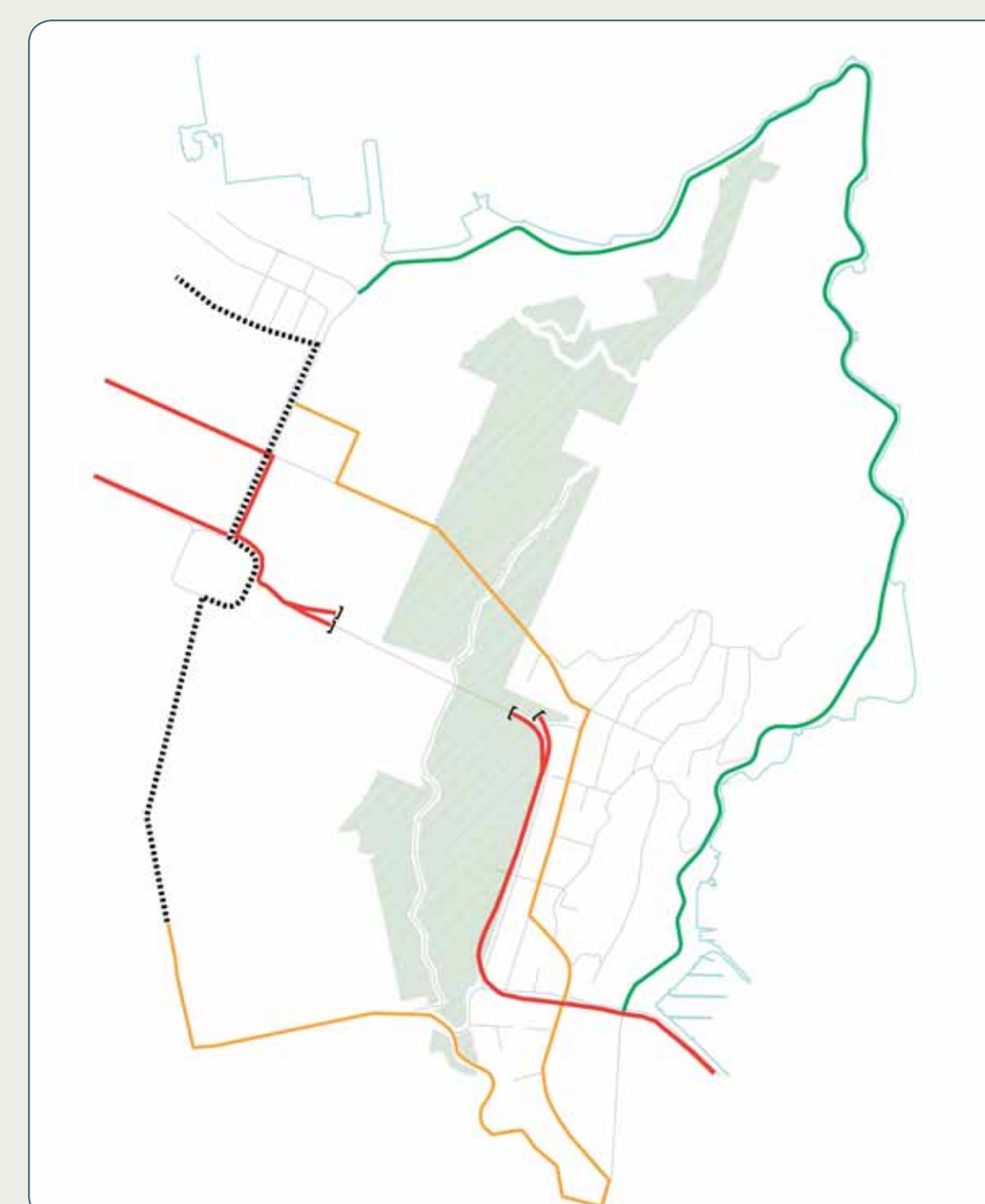
SH1's efficiency as a 'through route' will be improved by:

- Providing a safe 'service lane' that enables people to access their properties along Ruahine Street and Wellington Road
- Limiting the connections to key roads and providing signals
- Removing the connections between some local streets and SH1. Instead, these streets will connect to service lanes, which provide access to private properties.

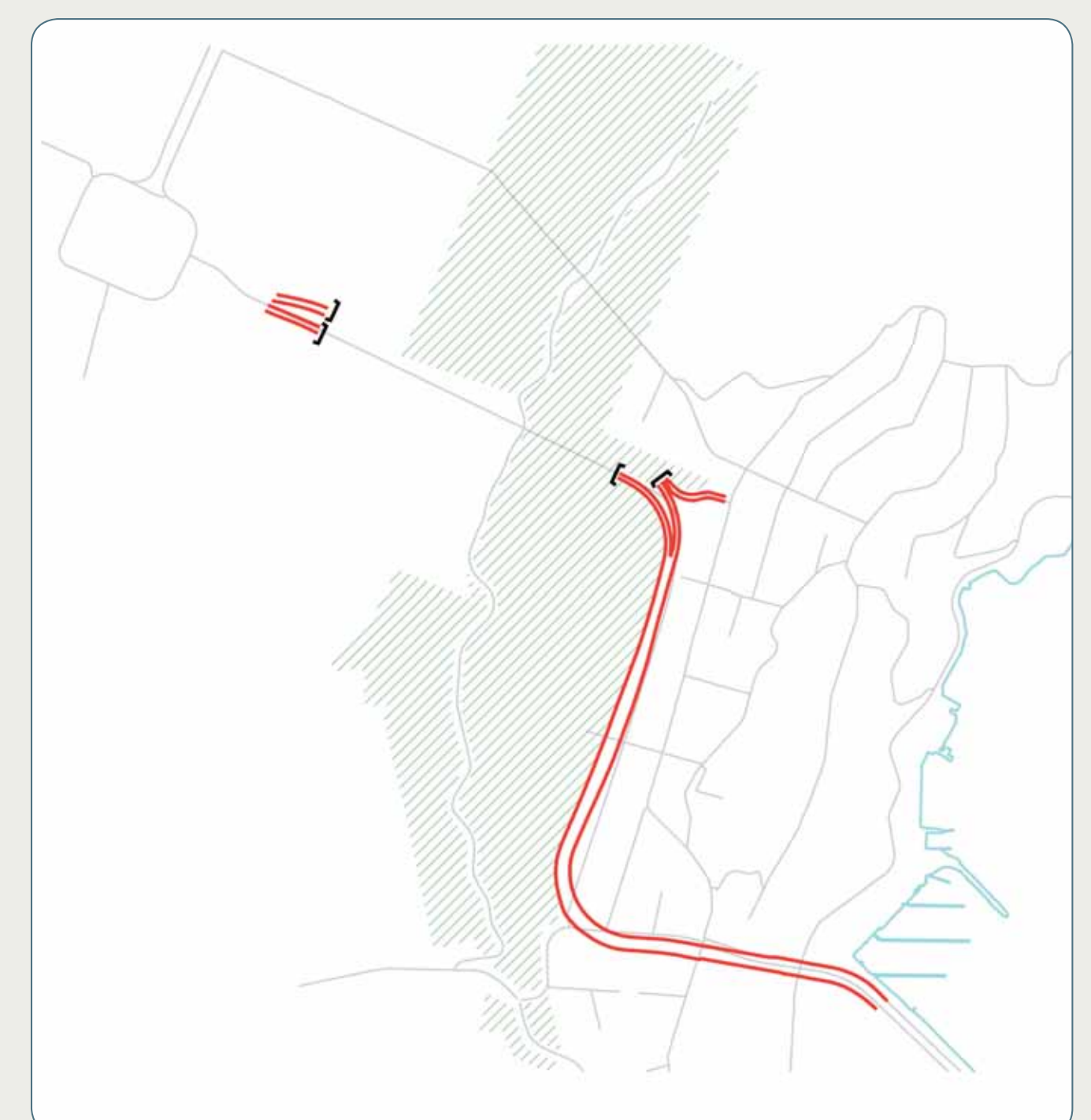
Key Features

The proposed improvements include:

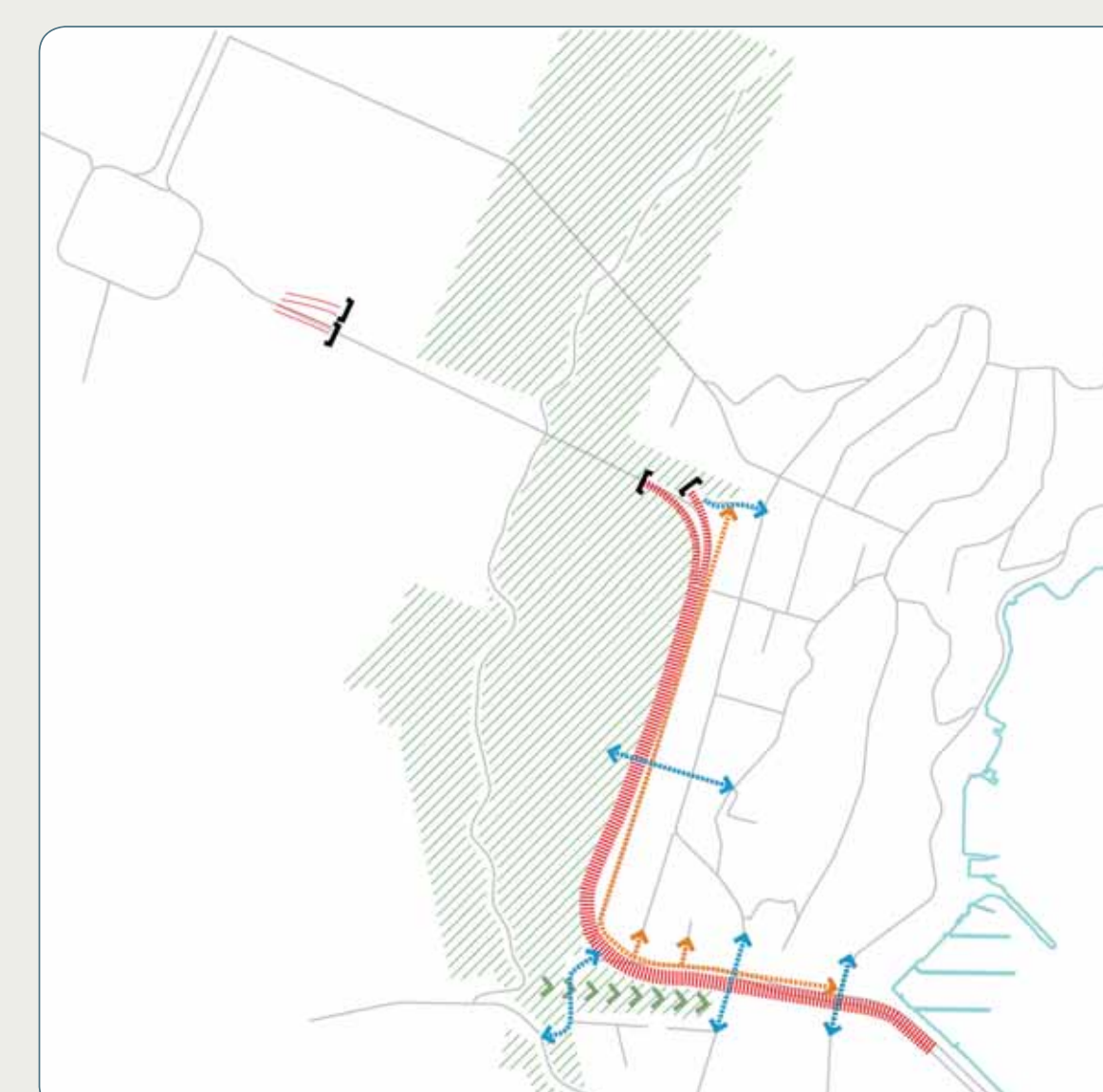
- A wide pedestrian and cycling facility within the new Mt Victoria Tunnel
- A new shared cycle and pedestrian path separated from the SH1 roadway, which will provide pedestrians and cyclists with a generous and safe route between the eastern suburbs and the Basin Reserve. This path connects the existing cycle path on Cobham Drive with the cycle path along Karo Drive. Plantings will help to retain the park-like experience for those using SH1
- Additional signal-controlled pedestrian crossings along Ruahine Street at Goa Street and at the intersection with Wellington Road. This will make it easier for pedestrians to walk between the community and the Town Belt
- Keeping the widened Ruahine Street in its existing location, retaining the historic structure of Hataitai village
- Designing the widened Ruahine Street so that those who drive along it enjoy improved views of the Town Belt
- Keeping the widened Wellington Road in its existing location, retaining the distinction between Hataitai and Kilbirnie
- Creating a 'green corridor' along the southern edge of Wellington Road to connect the Town Belt with Kilbirnie Park and the former sea edge.



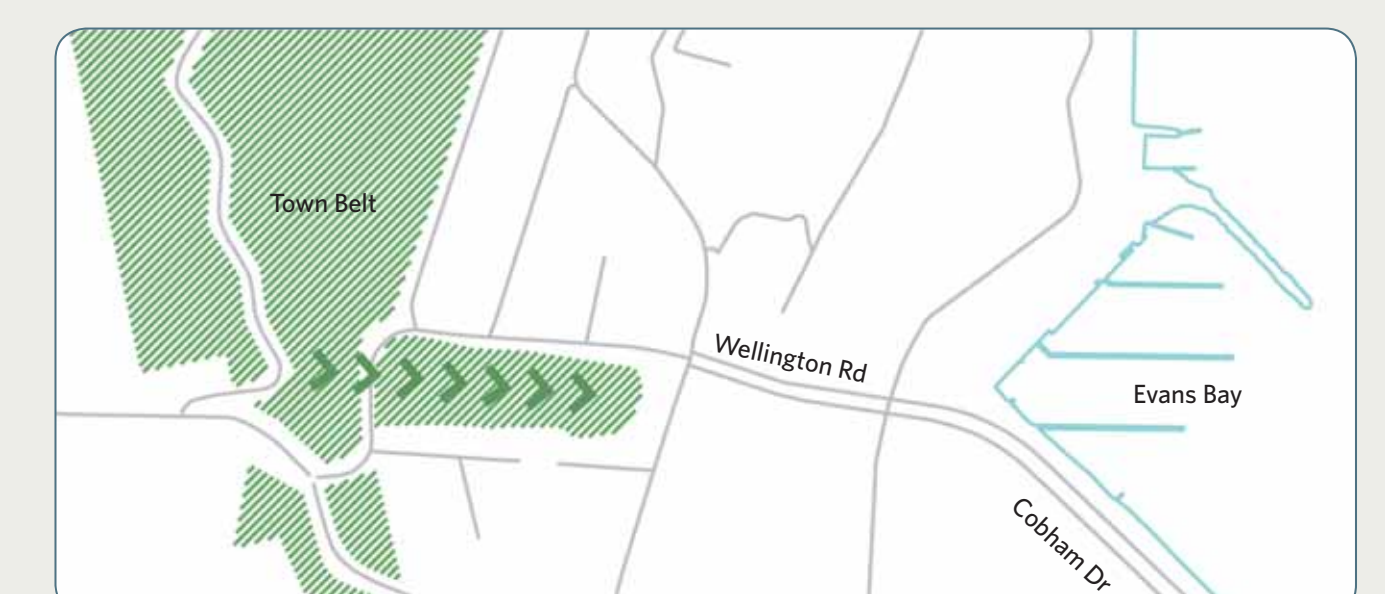
The SH1 improvements will give some routes priority, such as those providing high-quality public transport. Some routes will be used as key bus routes, others for moving large amounts of general traffic. Still other routes will be used for local trips, so will be more pedestrian and cyclist friendly.



SH1 helps to define Hataitai: separating the Town Belt from Hataitai and Hataitai from Kilbirnie.



SH1 is an important 'through route'. Motorists also use it to access communities in the area. While some local streets will not connect to SH1, they will connect to a service lane that runs parallel to SH1.



A 'green corridor' linking the Town Belt with Kilbirnie Park will reinforce Wellington Road's role in defining the boundaries of the Hataitai and Kilbirnie communities.



An artist's view of the pedestrian cycle path along Wellington Road. This path will be shared with vehicles accessing the few properties on Wellington Road.



Cobham Drive to Buckle Street transport improvements

Public engagement

The existing situation – SH1 through Mt Victoria Tunnel

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- The existing 625 metre long tunnel was built in 1931.
- It provides a vital transport link between the airport, the eastern suburbs and the CBD.
- Nearly 40,000 vehicles use it every day. It has reached its maximum capacity.
- The tunnel has only two lanes, one each way. They are only 2.9 metres wide, with narrow shoulders and no barrier between the traffic.
- The tunnel has an elevated, but narrow, shared pedestrian and cycle path on the northern side.
- The tunnel is currently being upgraded to meet modern safety standards.
- It has a 50kph speed limit.
- The need for a second Mt Victoria Tunnel was first considered in 1974, when a pilot tunnel was drilled.
- The 2008 'Ngauranga to Wellington Airport Corridor Plan' identified that a second tunnel should be investigated.



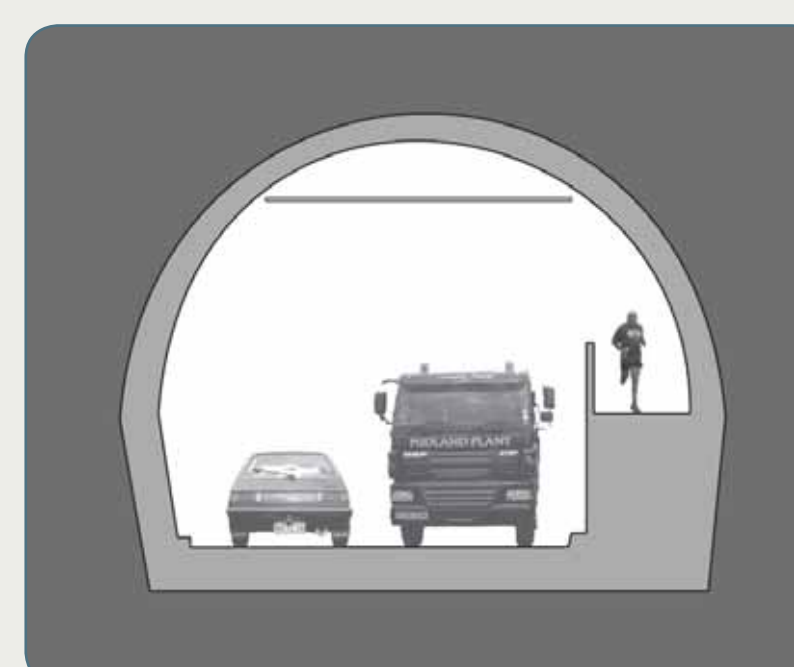
The existing western (Mt Victoria) side of Mt Victoria Tunnel. Paterson Street narrows down to two lanes – one in each direction – before reaching the tunnel entrance.



The existing eastern (Hataitai) side of Mt Victoria Tunnel. Ruahine Street has one lane in each direction. There are concerns about the safety of the Ruahine Street/Taurima Street intersection.



The eastern end of Mt Victoria tunnel is nestled into the Town Belt. The netball courts and velodrome can be seen on the left.



A cross-section of the existing tunnel: it's very narrow, allowing for two traffic lanes (2.9 metres wide) and an elevated but narrow pedestrian and cycle path above a service duct.





Cobham Drive to Buckle Street transport improvements

Public engagement

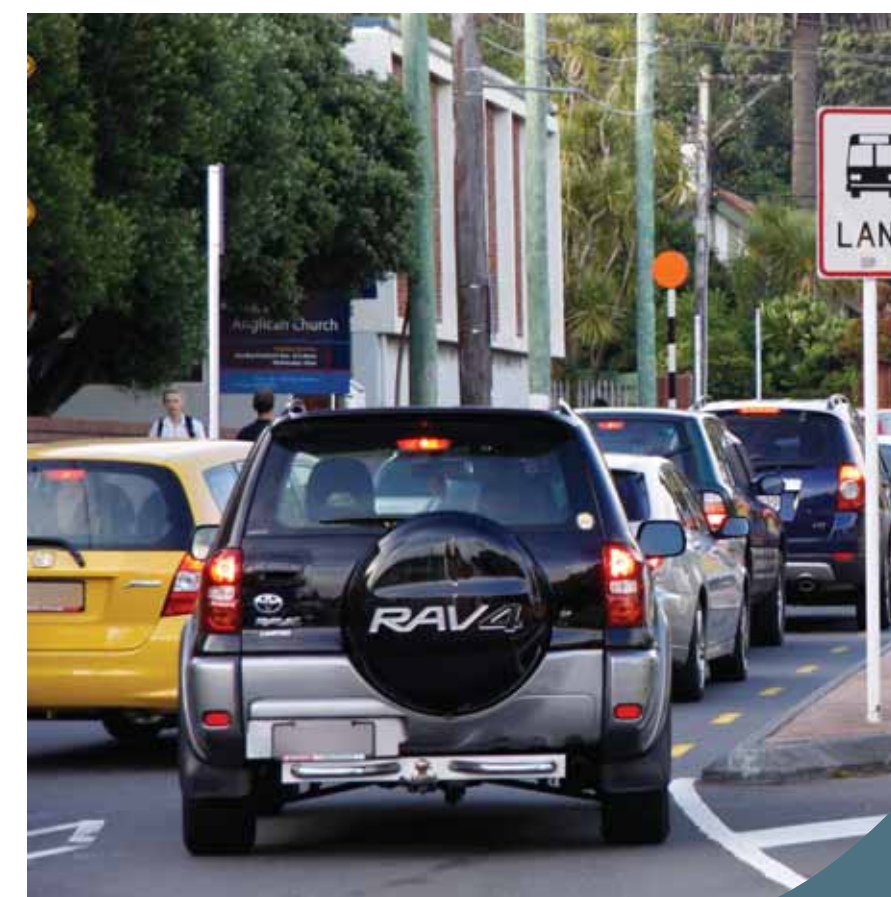
The existing situation – SH1 along Ruahine Street

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- Ruahine Street is only one lane in each direction and is regularly congested with traffic. During peak times traffic is backed up along Ruahine Street and Wellington Road along to and beyond the Cobham Drive intersection.
- At peak times the Ruahine Street/Taurima Street intersection is unsafe, as vehicles try to turn right out of Taurima Street into Mt Victoria Tunnel.
- The current intersection at Goa Street provides access between SH1 and Hataitai Park. This intersection is regularly congested, particularly at weekends.
- Ruahine Street has a 70kph speed limit.
- Ruahine Street's role as a key road is affected by properties that have direct access to it.
- Ruahine Street has no dedicated space for cyclists; they are encouraged to use Moxham Avenue.
- There is an existing 25 metre wide designation in the WCC District Plan, which signals the long-term intention to widen Ruahine Street into the Town Belt.



Ruahine Street today. It has one lane in each direction, with a 70kph speed limit. The route is often congested, especially on weekends when many people travel to enjoy recreational pursuits in the Town Belt.



Cobham Drive to Buckle Street transport improvements

Public engagement

The existing situation – SH1 at the Ruahine Street/Wellington Road intersection

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- This intersection is used by people travelling along SH1 and using SH1 to connect to Kilbirnie, Miramar, the airport and Newtown
- It's a key route for dangerous goods and oversized vehicles that can't use Mt Victoria Tunnel
- It's on a tight bend and has a poor record for car crashes
- Any widening of Ruahine Street and Wellington Road would require an upgrade to this intersection



A view of Wellington Road today. The existing intersection is in the middle ground. The Town Belt is in the background.



The Ruahine Street/Wellington Road intersection today. Combined, the tight corner and the intersection contribute to the frequent car crashes in the area.



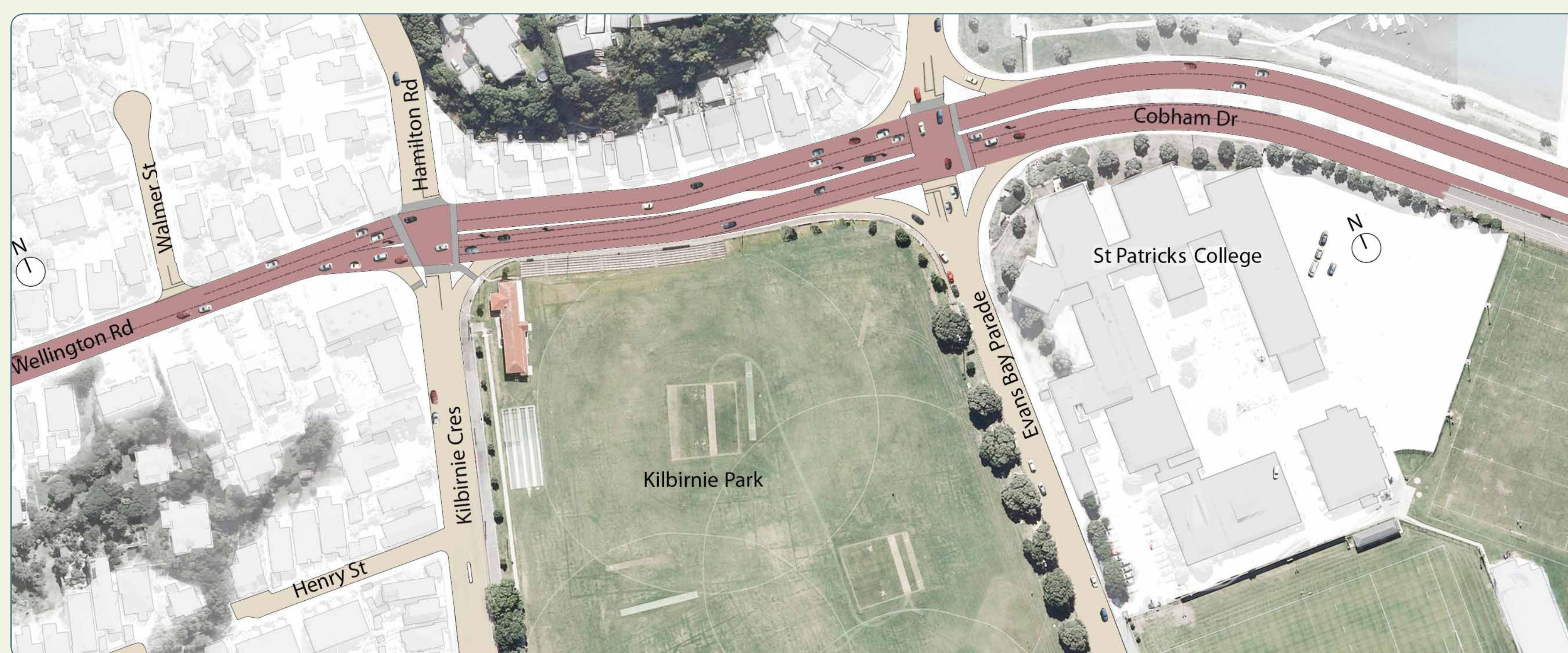
Cobham Drive to Buckle Street transport improvements

Public engagement

The existing situation – Wellington Road

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- Wellington Road between Ruahine Street and Cobham Drive is regularly congested.
- There is 25 metre designation in the WCC District Plan between Kilbirnie Crescent and Ruahine Street, signalling a long-term intention to widen Wellington Road into private property to the south.
- Unlike on Cobham Drive and the southern portion of Evans Bay Parade, there is no dedicated cycle path on Wellington Road.
- Wellington Road separates Hataitai from Kilbirnie.
- Many properties have access to Wellington Road, reducing its efficiency as a key road in the area.



Unlike Cobham Drive, which has two lanes in each direction, Wellington Road has only one lane in each direction west of Kilbirnie Crescent. The many properties that access Wellington Road and the large number of intersections reduce its efficiency, making it less able to function as a key road in the area.



A bird's eye view of Wellington Road today.





Cobham Drive to Buckle Street transport improvements

Public engagement

The new Mt Victoria Tunnel

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What is proposed

The existing tunnel will be kept and provide two lanes for traffic travelling towards the city.
The existing pedestrian and cycle path will be removed.

A second 700 metre long tunnel will be built immediately to the north of the existing tunnel.
It will provide two lanes for traffic travelling towards the airport.

- This is the same location suggested in the 1970s' studies and the Corridor Plan.
- The new tunnel will be built at the same level as the existing tunnel to ensure people can exit in an emergency.
- We expect that both tunnels will be ventilated through the portals, avoiding the need for ventilation stacks on Mt Victoria.

A four metre wide pedestrian and cycle path will connect the Basin Reserve with Taurima Street (at Hataitai village). It will also connect to a new pedestrian and cycle path along Ruahine Street. It will go to the north side of Paterson Street, through the new tunnel and exit to Taurima Street.

Key features

- The eastern entrance will be designed to blend with the bush-clad slopes of Mt Victoria.
- The western entrance will reflect the area's urban landscape.
- The tunnel has been located to minimise its impact on the Town Belt and Mt Victoria's southern edge.

Other features

- Paterson Street will need widening to connect to the western entrance of the new tunnel. This will affect properties along the northern side of Paterson Street. While the NZTA already owns most of them, some are still privately owned.
- An historic building at 7 Paterson Street (built in 1869 for William Waring Taylor) may need to be relocated or removed.
- Hataitai Kindergarten on Taurima Street will need to be relocated or removed.
- While the left turn to Taurima Street from SH1 will stay, drivers wanting to make a right-hand turn from Taurima Street to the tunnel will have to use the intersection at Goa Street.
- Some of the buildings on the corner of Austin Street and Austin Terrace will be affected during the tunnel's construction (their foundations may need strengthening before the boring starts).
- The existing pedestrian bridge at Taurima Street will be replaced with a pedestrian and cycle path.



Before

The view from next to St Mark's Church School on Paterson Street, looking east towards the existing Mt Victoria Tunnel.



After

The approaches to the duplicated tunnel from Paterson Street, showing both entrances. The view shows the single slip lane for traffic exiting SH1 to the Basin Reserve, while cars using SH1 are shown beyond the concrete barrier.



Before

Mt Victoria Tunnel's eastern entrance from Ruahine Street. Taurima Street is just beyond the trees.



After

Ruahine Street widened to four lanes. The view shows the eastern entrance of the new Mt Victoria Tunnel from Ruahine Street. It features a pedestrian and cycle path on the left. The pedestrian and cycle bridge is in the foreground.



Photo of tunnel construction from WTA scoping report. The tunnel will be bored for most of its length. A small section of cut-and-cover tunnel is likely to be needed at the Hataitai entrance.



The tunnel's western entrance (Mt Victoria).

The tunnel's eastern entrance (Hataitai).



Cobham Drive to Buckle Street transport improvements

Public engagement

Ruahine Street widening

44

What is proposed

Ruahine Street needs to be widened to cope with present and future traffic demands. It also needs to connect to key local streets.

The proposal:

- Provides traffic signals at the Ruahine Street/Goa Street intersection and at the corner of Wellington Road and Ruahine Street
- Provides additional traffic lanes at these intersections to ensure they operate efficiently
- Widens Ruahine Street. Up to seven lanes are needed at some intersections.
- Provides traffic signals at the Goa Street/Moxham Avenue intersection, to improve the efficiency of traffic (including buses) travelling along Moxham Avenue.

Key features

A separate pedestrian and cycle path is to be provided along Ruahine Street.

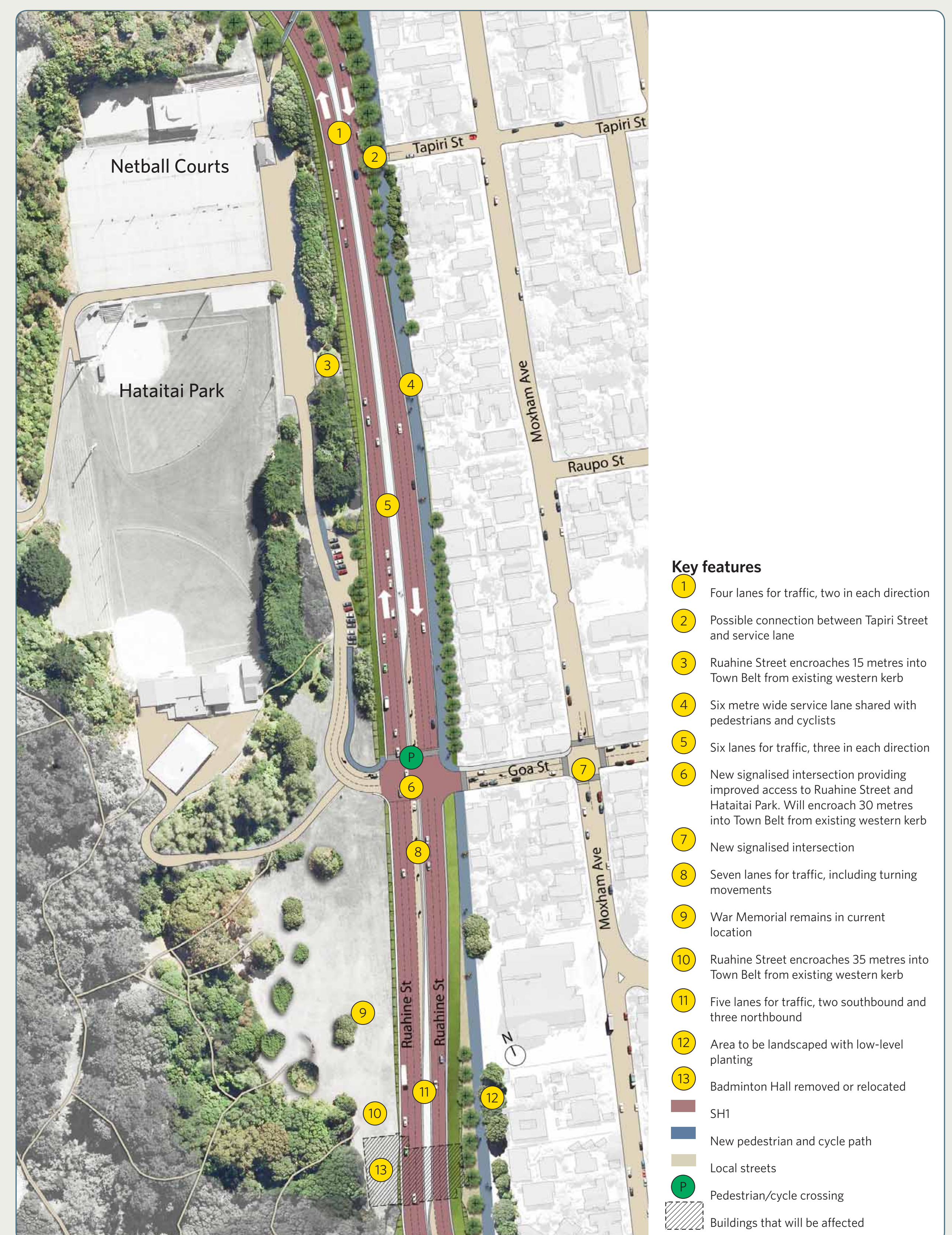
- This six metre wide pedestrian and cycle path will be shared with vehicles that need to get to the few properties that have access to Ruahine Street.
- We'll do more design work on this in the next phase of the project. We welcome your views.

Ruahine Street needs to be widened to accommodate the additional traffic lanes and the service lane.

- We proposed widening it to the west into the Town Belt.
- This will exceed the existing 25 metre widening designation in the WCC District Plan by up to 30 metres.
- We'll need to acquire about 1.6 hectares (between 2% and 3%) of Town Belt land to accommodate the additional lanes for traffic and the service lane.
- The NZTA plans to acquire some adjoining former Town Belt land to preserve the amount of open, green recreational space in the Town Belt.
- We'll also explore ways to reduce the impacts of the widening, such as creating a green corridor linking the Town Belt with Kilbirnie Park to the south of Wellington Road.
- Wellington's Town Belt is governed by a deed of trust and a number of Acts. Town Belt land can be compulsorily acquired under the Public Works Act for roading purposes. You can get more information on this process by visiting our website.

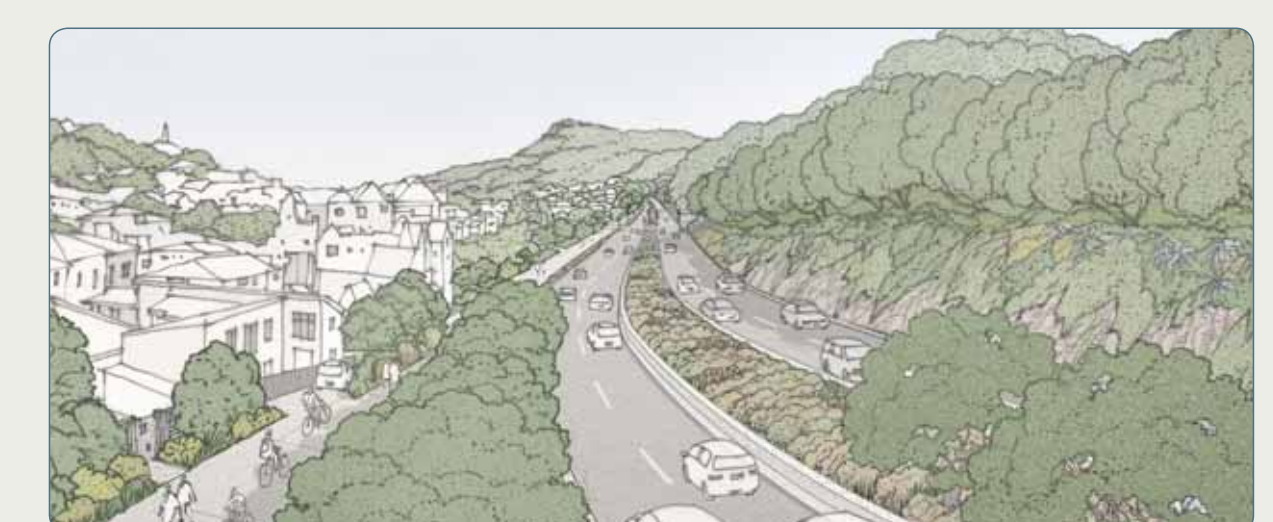
Other features

- A signal-controlled intersection at Goa Street will improve connections between Hataitai and the Town Belt, and improve the safety of pedestrians crossing Ruahine Street.
- By widening Ruahine Street to the west we'll minimise the project's effects on Hataitai – particularly its historic western boundary.
- People living in and visiting properties that have access to Ruahine Street will have better and safer access using the service lane parallel to Ruahine Street.
- We'll need to use most of the Town Belt land currently occupied by the Badminton Hall.
- The widened Ruahine Street will provide a more attractive and welcoming gateway to the CBD from Wellington Airport.



Before

Ruahine Street from the pedestrian bridge looking towards Wellington Road.



After

The improvements from the pedestrian bridge looking towards Wellington Road. A pedestrian and cycle path is located between Hataitai and the widened Ruahine Street.



Cobham Drive to Buckle Street transport improvements

Public engagement

The Ruahine Street/Wellington Road intersection

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What is proposed

- The Ruahine Street/Wellington Road intersection will enable traffic to travel safely at 60kph.
- The intersection will be relocated about 30 metres north of its present location and signals installed.
- A six metre wide pedestrian and cycle path will be provided on the inside of the corner.
- Moxham Avenue will not connect directly with SH1, but will connect with the service lane.

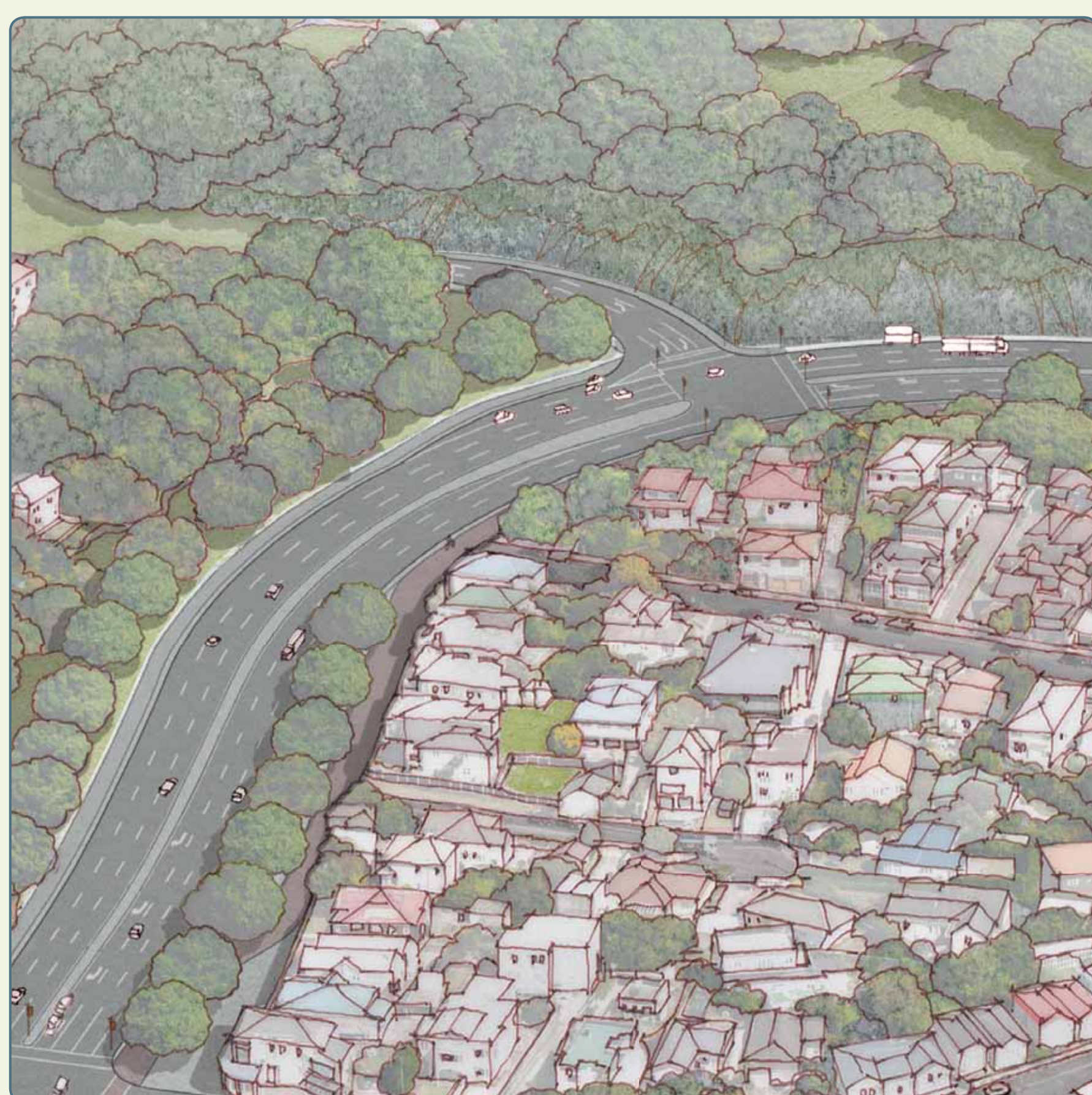
Key features

The proposal requires us to:

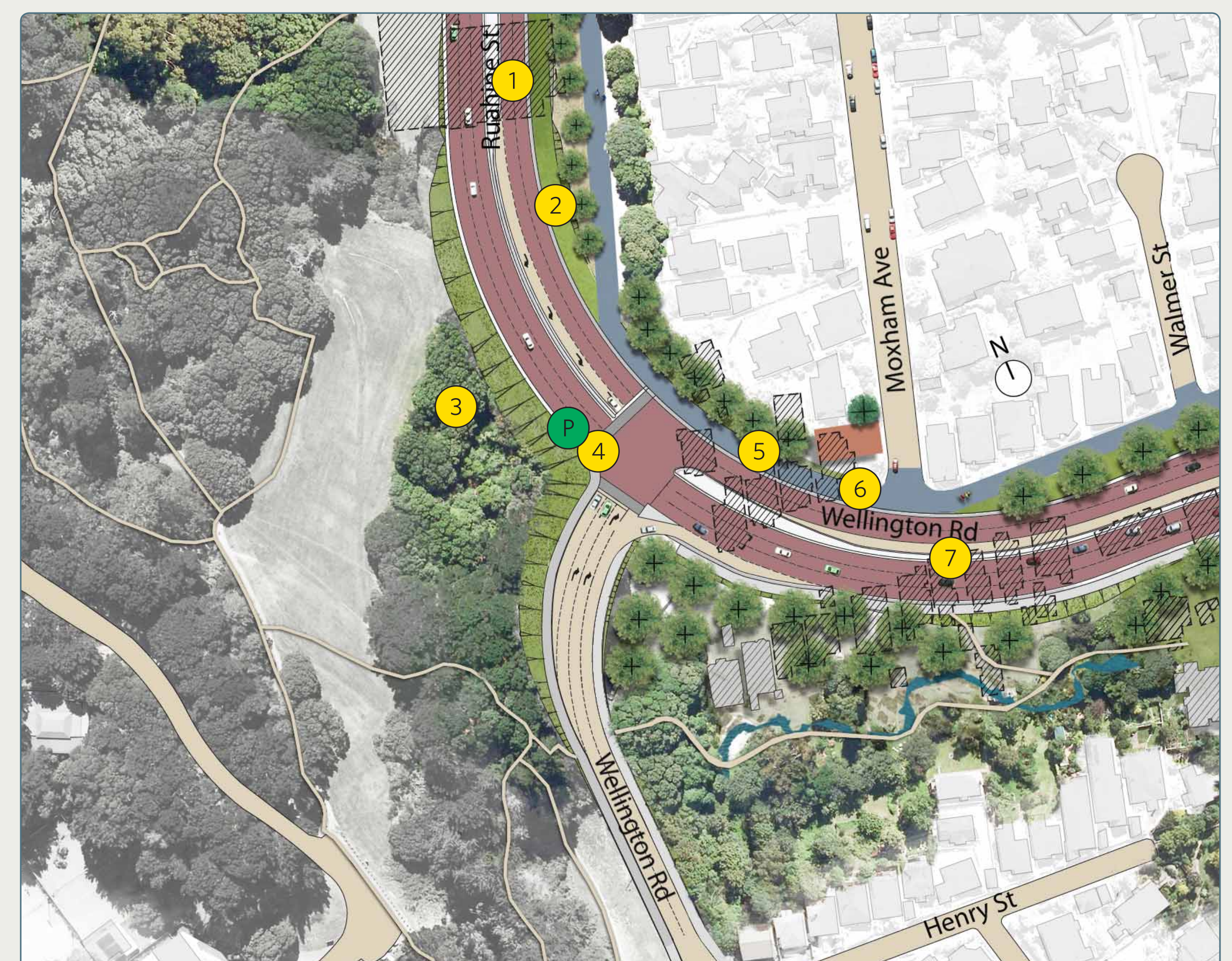
- Acquire six properties on the northern corner of Wellington Road and Ruahine Street
- Widen Ruahine Street into the Town Belt, encroaching 25 to 30 metres beyond the current designation in the WCC District Plan.
- Relocate the Badminton Hall.

Other features

- The encroachment will create a 15 metre high bank into the Town Belt at this corner. This will be higher than the existing bank.
- The area between the service lane and SH1 will be landscaped.



An aerial view of the improved Ruahine Street/Wellington Road intersection. It shows the widened Wellington Road separating the Hataitai community near the bottom left and the Town Belt at the top. Signal-controlled intersections along Ruahine Street will improve pedestrian access between Hataitai and the Town Belt and between Hataitai and Newtown.



Key features

- 1 Area to be landscaped with low-level planting
- 2 Six metre wide service lane for vehicle access to properties and for pedestrians and cyclists
- 3 Ruahine Street encroaches 35 metres into Town Belt. Requires a 15 metre high cut into Town Belt
- 4 New Wellington Road/Ruahine Street intersection
- 5 Six properties need to be acquired
- 6 Moxham Avenue connection to Wellington Road closed, but connection to service lane provided
- 7 From Wellington Road/Ruahine Street intersection to Kilbirnie Crescent 19 properties need to be acquired
- SH1
- New pedestrian and cycle path
- Local streets
- P Pedestrian/cycle crossing
- Buildings that will be affected



Cobham Drive to Buckle Street transport improvements

Public engagement

Widening Wellington Road

46

What is proposed

- Between Ruahine Street and Kilbirnie Crescent, Wellington Road will be widened to the south to accommodate up to seven lanes for traffic as well as a six metre wide service lane.
- Between Kilbirnie Crescent and Cobham Drive, Wellington Road will be widened to the south.
- The Wellington Road/Kilbirnie Crescent and Wellington Road/Evans Bay Parade intersections will be upgraded.
- A service lane for private properties to the north will be provided between Ruahine Street and Cobham Drive. It will be shared with a pedestrian and cycle path.

Key features

- The widening and green corridor will require us to acquire all 19 properties on the southern side of Wellington Road between Ruahine Street and Kilbirnie Crescent.
- Between Kilbirnie Crescent and Cobham Drive, the project will require up to 1200 square metres of Kilbirnie Park and up to 300 square metres of St Patrick's College.
- The pedestrian and cycle path to the north of Wellington Road will connect to the existing path along Cobham Drive to provide a continuous path between Cobham Drive and the Basin Reserve and on to the Koro Drive cycle path.
- The Eastern suburbs/Marist Clubrooms at the corner of Kilbirnie Park will need to be relocated or rebuilt.

Other features

- Bus priority lanes will be installed at the Wellington Road/Kilbirnie Crescent intersection.
- Upgraded intersections will improve the conditions for traffic, pedestrians and cyclists – providing better links between Kilbirnie and Hataitai.



Key features

- Land acquired by the NZTA. Potential to landscape this area to create a green corridor connecting the Town Belt and Kilbirnie Park
- Walmer Street connection to Wellington Road closed, but connection to service lane provided
- Six metre wide service lane for vehicle access to properties and for pedestrians and cyclists
- Eastern Suburbs/Marist clubrooms to be relocated
- Widened Wellington Road encroaches into Kilbirnie Park by 15 metres
- Wellington Road widened to accommodate seven lanes
-

- No encroachment into Kilbirnie Park
- Cobham Drive widened into St Patrick's College land by up to five metres to provide six lanes
- SH1
- New pedestrian and cycle path
- Local streets
- Dedicated bus lane
- Pedestrian/cycle crossing
- Buildings that will be affected



Before

Wellington Road looking west. The Intersection between Wellington Road and Kilbirnie Crescent and Hamilton Road is in the foreground.



After

Wellington Road. To the left is a generous pedestrian and cycle path, separated from Wellington Road by landscaping.



Cobham Drive to Buckle Street transport improvements

Public engagement

Facilities for pedestrians and cyclists

47

Existing

- About 1000 pedestrians and cyclists a day use the existing walkway through Mt Victoria Tunnel.
- There are some concerns about the walkway's comfort and safety for these users.
- On the tunnel's city side, a 1.5 metre wide footpath runs along Paterson Street.
- On the Hataitai side of the tunnel, pedestrians and cyclists are encouraged to use Moxham Avenue, as it has less traffic than Ruahine Street.
- Ruahine Street has a single narrow footpath and Wellington Road has two narrow footpaths. Pedestrians can cross at signal-controlled intersections at Kilbirnie Road and Evans Bay Parade.
- The only safe connection between Hataitai and the Town Belt is a footbridge near the tunnel entrance. It was not designed for cyclists.

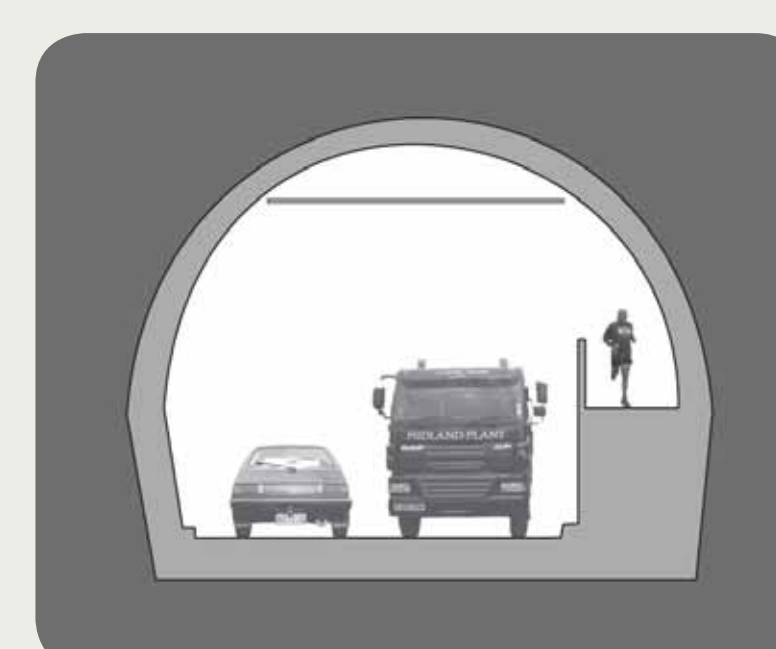
Proposal for Pedestrians and cyclists

- A new and generous pedestrian and cycle path will connect the existing path at Cobham Drive to the Basin Reserve and on to the cycle path along Karo Drive. The path will be up to six metres wide and part of a service lane used by vehicles to access properties along Ruahine Street and Wellington Road.
- There will be a four metre wide pedestrian and cycle path in the new tunnel, providing a good line of sight, effective lighting, attractive finishes and security features such as cameras and emergency phones.

The SH1 improvements will result in additional and safer pedestrian and cycle connections between Hataitai and the Town Belt.

- The existing bridge over Ruahine Street connecting Hataitai village with the Town Belt will be replaced with a new pedestrian and cycle bridge.
- New signals will be installed along Ruahine Street at the intersections with Goa Street and Wellington Road.

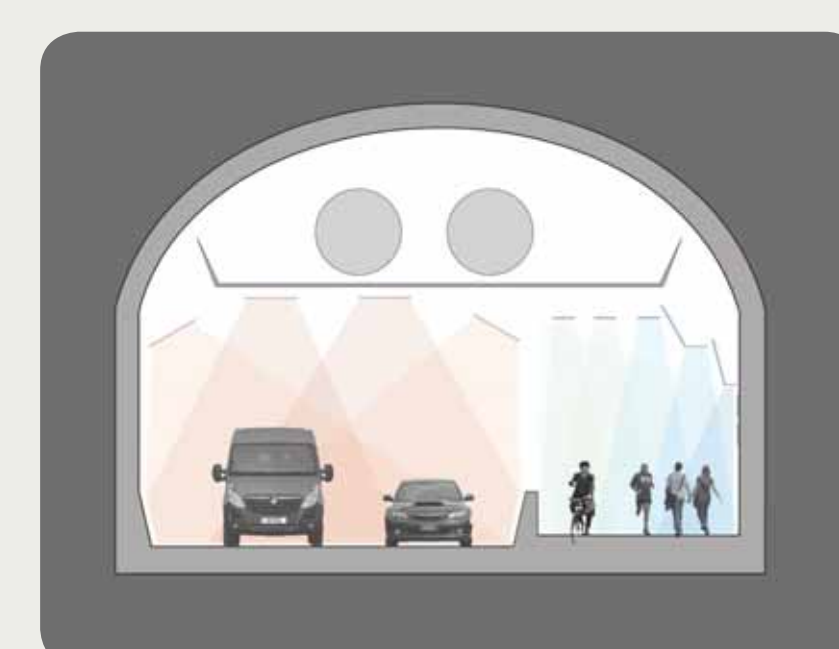
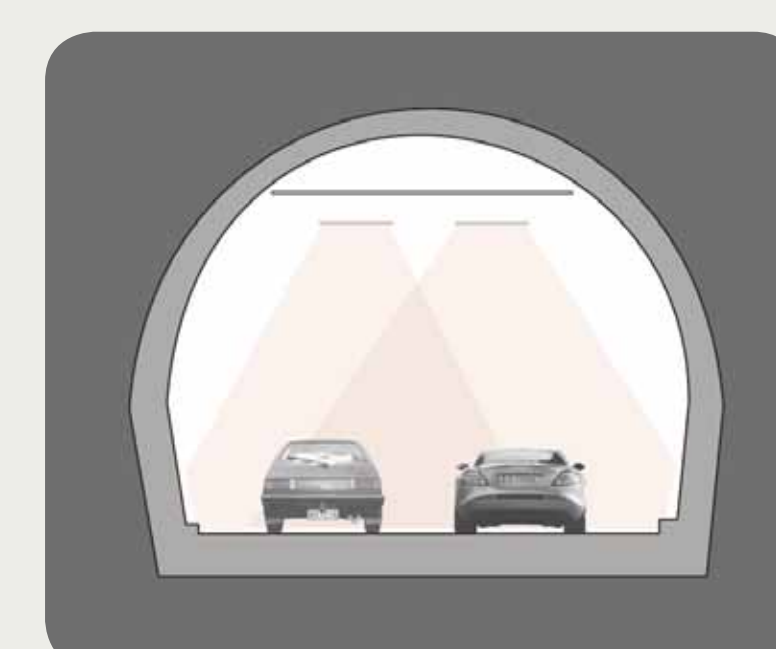
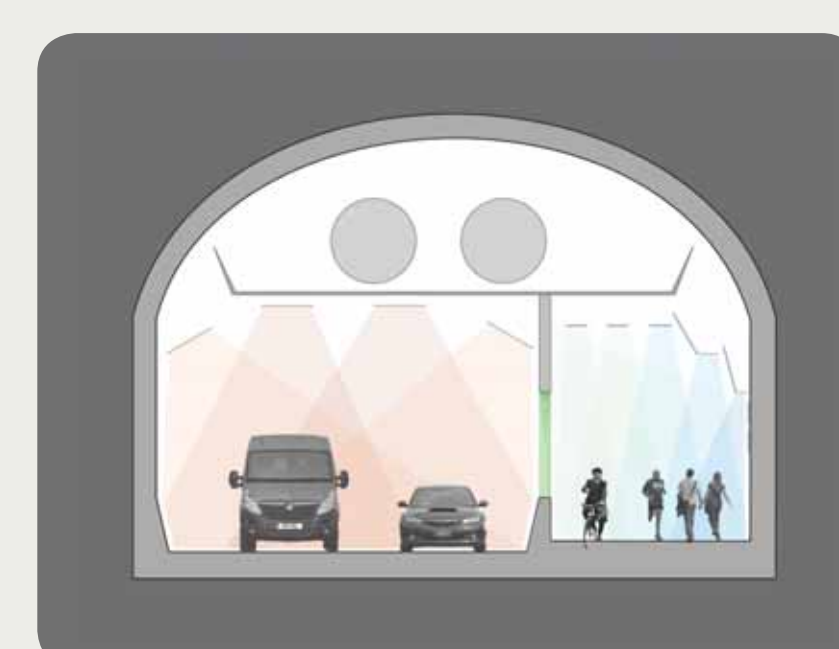
The existing Wellington Road pedestrian crossings at Kilbirnie Crescent and Evans Bay Parade will be retained.



A cross-section of the existing tunnel. While it has a pedestrian and cycle path, there are concerns about its comfort and safety for these users.

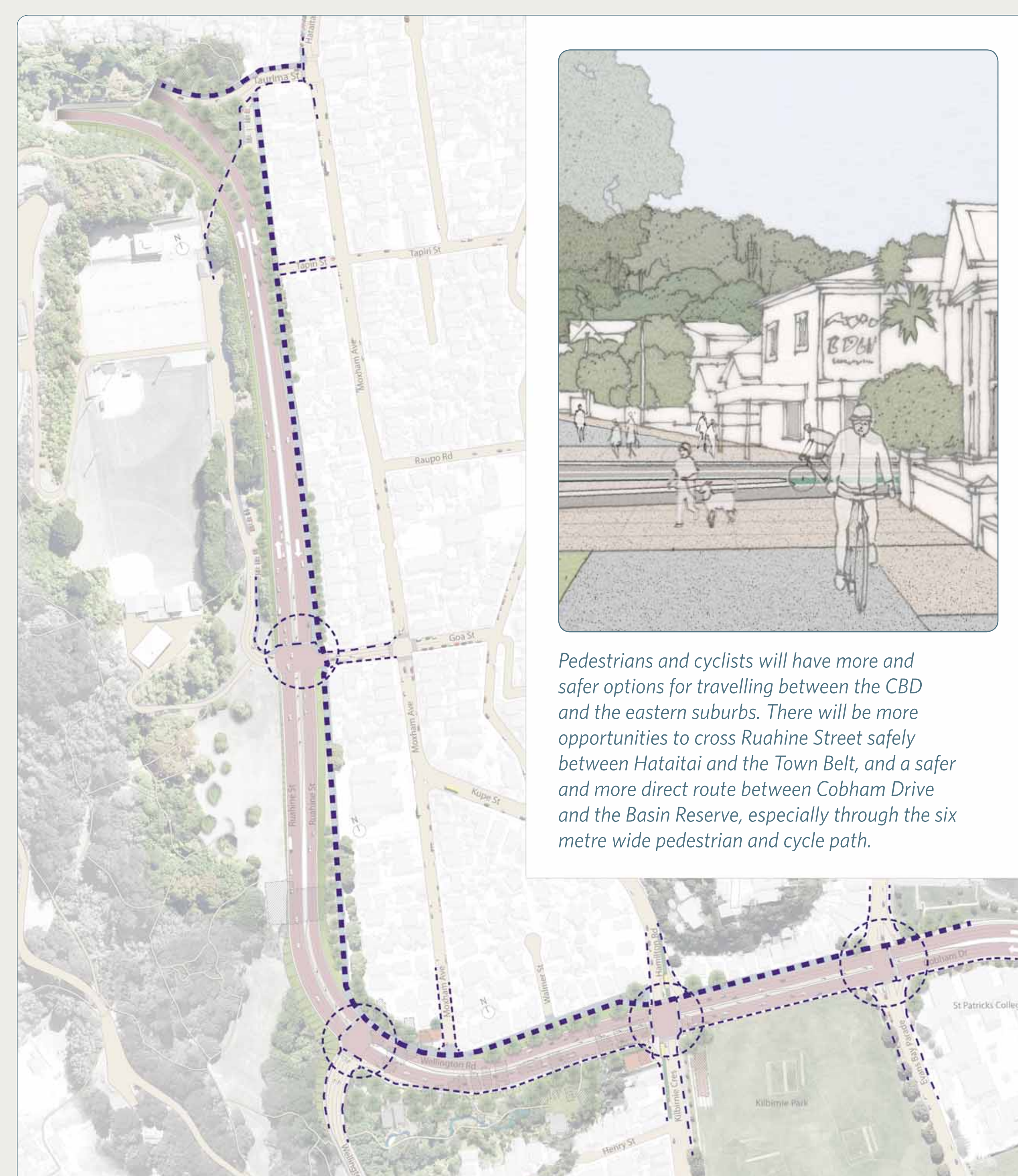


One option is to separate pedestrian and cyclists in the new tunnel, by building a wall between the pedestrian and cycle path and the vehicle lanes. This will reduce noise for pedestrians and cyclists more easily and mean that we can use less expensive ventilation systems in the vehicle tunnel. We'll provide windows in the wall, giving passing motorists views into the pathway (increasing personal security for pedestrians and cyclists).



The other option is to provide a concrete barrier between the pedestrian and cycle path and the vehicle lanes. This will enable passing motorists to see pedestrians and cyclists and provide pedestrians and cyclists with more exit paths, further increasing their personal security.

The NZTA has yet to decide on which of these two options will be built in the new tunnel. We welcome your views on what's important to you when considering pedestrian and cycling facilities in the new tunnel.



Pedestrians and cyclists will have more and safer options for travelling between the CBD and the eastern suburbs. There will be more opportunities to cross Ruahine Street safely between Hataitai and the Town Belt, and a safer and more direct route between Cobham Drive and the Basin Reserve, especially through the six metre wide pedestrian and cycle path.