

KILBIRNIE CONNECTIONS

Issues Paper

April 2017

Draft

KILBIRNIE CONNECTIONS – Issues Paper

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1. Introduction

1.1 Background

Over recent years, Wellington City Council (the Council) has committed a significant amount of capital funding for cycleway development through its Long Term Plan and Annual Plan processes. The investments aim to contribute towards cycling becoming “safer and more convenient” (Cycling Policy Nov 2008) by increasing the level of service for people who use bikes.

Over the next three years, there is a unique opportunity to maximise co-investment with central government through the National Land Transport Fund (NLTF) and Urban Cycleway Fund administered by the New Zealand Transport Agency (NZTA).

The Urban Cycleways Programme (UCP) has provisionally allocated \$9.5 million to Wellington City for investment by 30 June 2019. When contributions from rates and the National Land Transport Fund are taken into account, some \$37.5 million will be invested in cycling over the next three years (by 30 June 2019), with \$2.5 million allocated to the Kilbirnie area (1 of 5 projects in the Eastern Suburbs).

In its efforts to further develop Wellington’s cycleway network, the Council has developed a programme of cycleway routes, targeting to utilise the Urban Cycleway Programme funding source over the next three years. The proposed cycleway routes include improvements in the following areas:

- Wellington Eastern Corridor – Comprising routes through Evans Bay, Kilbirnie, Miramar and along Cobham Drive;
- Wellington CBD improvements; and
- Wellington Southern Corridor – Comprising a southern route through Newtown, joining up with the Island Bay cycleway.

The upcoming phase of work plan is to identify and evaluate treatment types along these routes, and will involve engagement with affected parties and wider stakeholders. The Council will establish a solution working group and several community working groups that will be utilised to guide the formulation of options and designs. The solution groups will ideally report the recommended option(s) to the Council before it considers consulting with the wider public.

1.2 Purpose of This Issues Paper

This Issues Paper has been produced to highlight some of the potential issues that will need to be addressed to deliver a cycleway network within the Newtown and Kilbirnie area. The information from this report will assist the Council in submitting a Business Case for constructing the cycleway by:

- gathering and reviewing the available background information, which will identify any gaps in existing data which may need to be filled, such as traffic surveys;
- identifying any issues or constraints for constructing cycleways within the study area;
- considering any proposals in relation to any other projects/studies within the area, such as adjacent cycling projects, and the forthcoming changes to the bus network, and what likely impacts these may have on all road users.

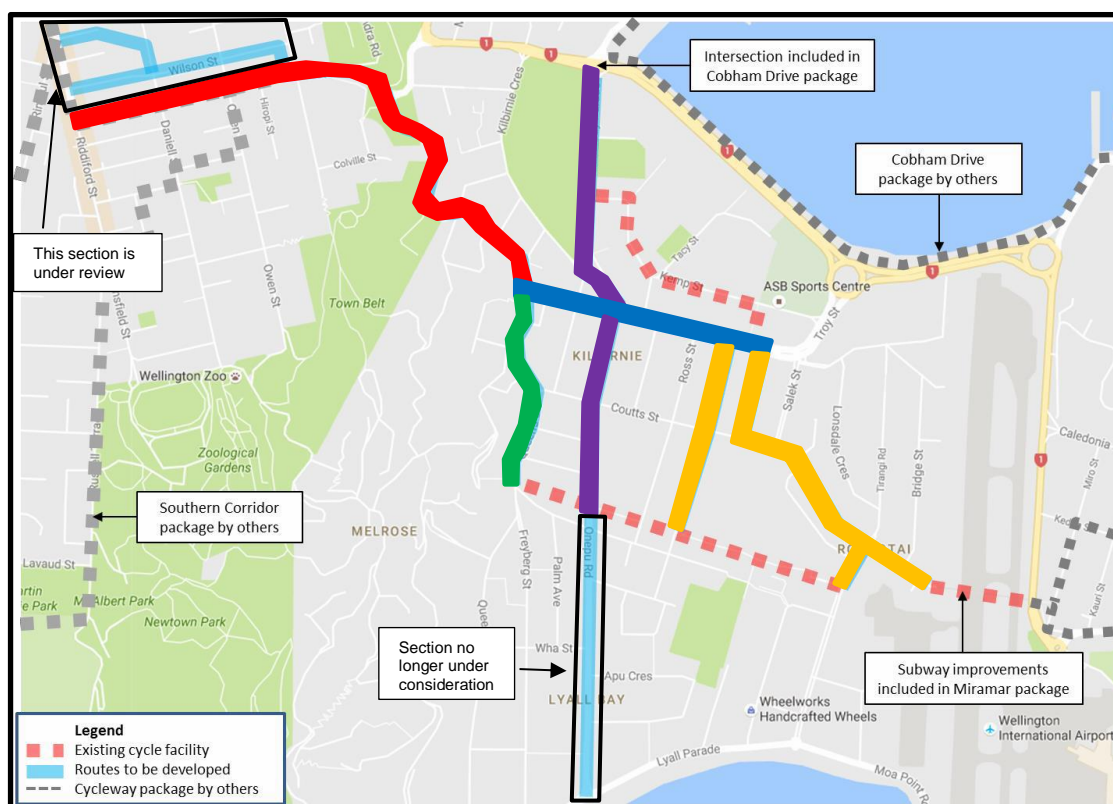
The Council is developing the overall programme and individual projects using the NZ Transport Agency's business case process. To date the 'strategic', 'programme' and 'indicative' business case stages have been completed. This issues paper forms part of the evaluation required to compile the Detailed Business Case. The Detailed Business Case is the basis of the Council's request for funding from the UCP and NLTF for the Kilbirnie Connections Cycleways project.

1.3 Study Area

For the Kilbirnie Connections cycleway, the study covers an area from Newtown in the west, to the airport in the east. For the purposes of this report, the study area has been split into the following individual sections, as shown on the plan overleaf:

1. Constable Street and Crawford Road, from Newtown to Kilbirnie (highlighted red);
2. Rongotai Road (highlighted blue);
3. Evans Bay Parade and Onepu Road (highlighted purple);
4. Childers Terrace and Queens Drive (highlighted green);
5. Yule Street, Te Whiti Street, Coutts Street and Tirangi Road (highlighted orange).

The plan below shows the location of the routes under consideration. The section of Onepu Road south of the Leonie Gill Pathway is no longer part of the study area, and the use of Wilson Street is still being reviewed.



The route will tie-in with the proposed cycleway improvements in Newtown (Southern Corridor – Island Bay to the Basin Reserve), Evans Bay, Cobham Drive and Miramar. It will also tie-in with the existing Leonie Gill Pathway, which runs from Queens Drive to Tirangi Road.

1.4 Project Objectives

The Wellington Cycle Network will contribute directly to the government's land transport objectives in relation to economic growth and productivity, safety, environmental mitigation and the provision of transport choice.

The objectives of the proposed cycle network improvements within the Newtown and Kilbirnie area are aimed to:

- Provide a high Level of Service for people who bike, either by road or on shared pathways;
- Improve the cycling infrastructure and facilities;
- Ensure that cycling is a viable and attractive transport choice;
- Reduce the crash rate, and the number and severity of crashes involving people on bikes; and
- Improve Wellington's sustainability, liveability and attractiveness.

For the NZTA, this improvement and those adjacent are part of the Wellington East Urban Cycleways, as indicated in NZTA's Wellington Urban Cycleways factsheet June 2015. These routes will provide cycling facilities that connect the eastern suburbs of Wellington with local centres, schools and the Wellington CBD. The cycling projects will provide an increased level of service for cycle trips within Kilbirnie and Miramar and will provide access to Wellington airport and the Miramar film industry. They will also link to popular recreational routes around the Miramar Peninsula and coastal areas.

Key matters to be addressed include:

- appropriate provisions for people on bikes at both mid-block and intersections;
- current safety issues;
- vehicle operating speeds and volumes;
- appropriate provisions for pedestrians;
- appropriate provisions for meeting current necessary parking demand.

2. Wellington City Council Plans and Policies

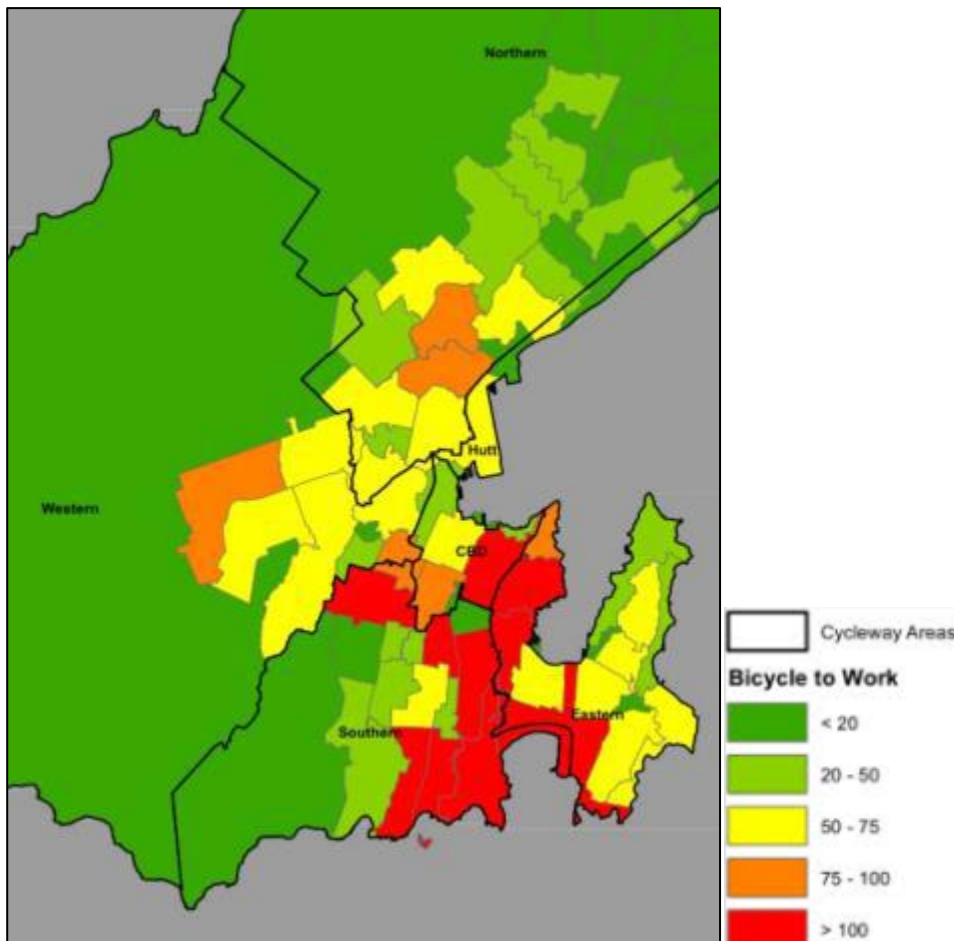
2.1 Cycleways Programme Masterplan

The Wellington Cycleways Programme Master Plan (approved by Council in August 2015) is a guide for the Council to deliver new cycling infrastructure that best meets the community's needs. It outlines the cycling infrastructure and safety, and engagement activities that are proposed, with a focus on work to be done in the first three years. It also explains how the Council will prioritise the development of the cycle network, how it will connect key locations throughout the city, and how it will increase the number of people who choose to get around by bike.

The Master Plan was developed concurrently with the Programme Business Case to support the development of the programme options and to identify the scope, scale and type of interventions that could be developed into an investment programme. The Master Plan and Programme Business Case were developed with Councillors, Council Officers and NZ Transport Agency representatives through a series of workshops. The Master Plan was endorsed by Councillors at the September 2015 TUD Committee meeting.

Due to Wellington's topography and geographical structure, six catchment areas (north, south, east, west, CBD and Wellington Hutt corridor) were identified and used as the basis for understanding the current and potential demand for cyclists. A need to develop a hierarchy of routes (primary, secondary and tertiary) was agreed with councillors and stakeholders with this occurring in the subsequent stages of the network's development.

The plan overleaf shows the areas and concentration where those who currently cycle to work live. It shows that there are medium to high levels of cycle to work activity within the Newtown and Kilbirnie areas.



2.2 Wellington City Council Cycling Framework 2015

In June 2015, the Council adopted the Cycling Framework, which includes a plan of the Wellington Cycle Network, and principles that set out decision-making thresholds for the delivery of each aspect of the network.

2.3 Town Centre Policy

The Council issued the Kilbirnie Town Centre Revitalisation Plan in August 2010. One of the key goals was to improve the pedestrian and cycle access within the area. Part of this was achieved with the construction of the Leonie Gill Pathway, along the line of an existing drainage easement, which improved pedestrian and cyclist access to the Kilbirnie town centre.

The plan also highlighted opportunities to improve the pedestrian and cycle access to schools, community facilities and the Indoor Community Sports Centre, which is in line with NZTA's objectives for the cycleway improvements.

2.4 Urban Growth Plan

Wellington City's population is expected to grow by around 50,000 people with 22,000 new homes planned over the next 30 years. The Urban Growth Plan (approved by Council in June 2015) sets out how the Council will ensure new houses, transport networks and services are provided where needed in a sustainable and integrated way.

The guiding principles behind the Plan are to:

- Keep the City compact, walkable and supported by an efficient transport network;
- Maintain features that support residents' high quality of life;
- Protect the City's natural setting and reduce the environmental impacts of development and transport;
- Make the City more resilient to natural hazards, such as earthquakes and the effects of climate change.

Kilbirnie has been identified as a growth area in the Plan and is expected to accommodate an additional 800+ dwellings by 2043. To support this growth, the Plan sets out the need to ensure that Kilbirnie Town Centre is an attractive place for local communities to shop, access services and socialise. To date, a plan has been developed for Kilbirnie Town Centre, to revitalise the town centre and create an attractive, vibrant, people-friendly and prosperous part of Wellington City. Improving pedestrian and cycle access is one of the key goals to be achieved in the revitalisation of the town centre.

2.5 Road Hierarchy

There are a mix of road hierarchy types within the study area, with the routes under consideration designated as follows:

1. Constable Street and Crawford Road – both classed as a Principal Road for their full length;
2. Rongotai Road – classed as a Principal Road for its full length;
3. Evans Bay Parade and Onepu Road – both classed as a Principal Road for their full length;
4. Childers Terrace and Queens Drive - both classed as an Access Road for their full length;
5. Yule Street, Te Whiti Street, Coutts Street and Tirangi Road – Coutts Street and Tirangi Road are both classed as Collector Roads for their full length, whilst the other roads are classed as Access Roads.

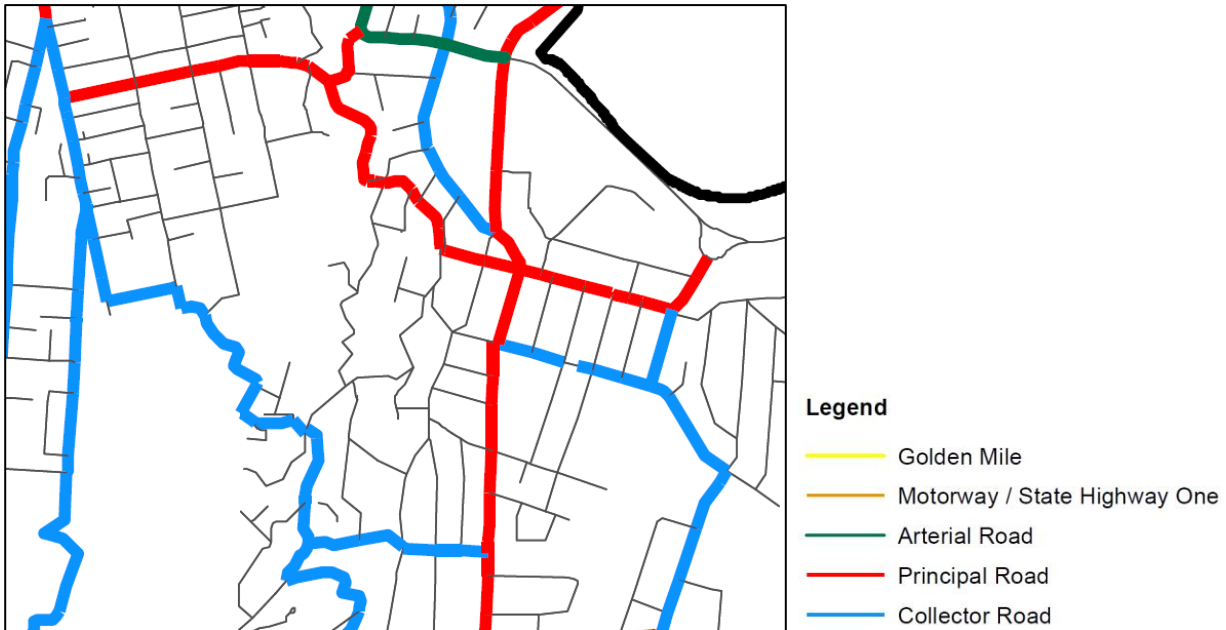
The definition of the road categories are as follows:

- Principal Road: roads that provide access to motorways and to arterial roads having a dominant through-traffic function and carrying the major public transport routes (primary road);
- Collector Road: roads that distribute traffic between and within local areas and form the link between principal and secondary roads (secondary road); and
- Access Road: roads that provide direct access to properties fronting the road and include both long and short cul-de-sacs (secondary road).

As Principal Roads, Evans Bay Parade and Onepu Road (North-South), and Constable Street, Crawford Road and Rongotai Road (East-West) provide the main links across the study area.

As Collector Roads, Coutts Road and Tirangi Road provide connections from the Principal Roads to key areas, such as Airport Retail Park and onto Lyall Bay.

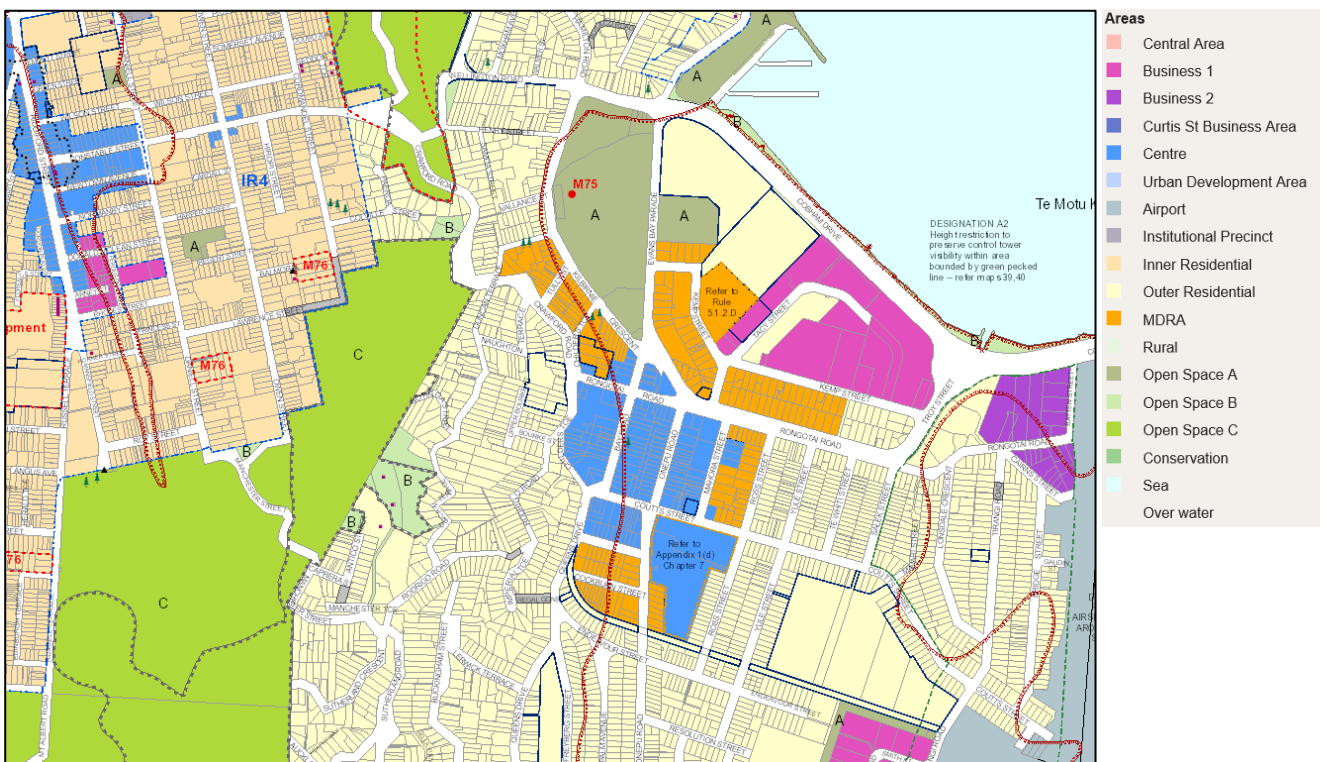
The other roads within the study area are within mostly residential areas, and are designated as Access Roads.



The above plan shows the road hierarchy within the study area.

2.6 District Plan Land Zoning

The Council's District Plan Maps identify activity areas and overlays within Wellington City, and an extract that includes the study area is shown below:



For the routes under consideration, the following District Plan designations apply:

- Within Newtown, the route along Constable Street and Crawford Road has a mix of business and residential use, and the Council has zoned this as Centre, and Inner and Outer Residential designations.
- Crawford Road between Wellington Road and Kilbirnie has a mix of Outer Residential and Medium Density Residential Area (MDRA).
- Within Kilbirnie, there are Outer Residential, MDRA, and Centre zoning designations.

2.7 District Plan Restrictions on Access

No restrictions have been noted within the Council's District Plan for the study area.

2.8 Climate Change

Due to its low-lying elevation and location between two areas of tidal water, Kilbirnie sits within a designated Tsunami Evacuation Zone for all three levels – Red, Orange and Yellow. Sections of Crawford Road and Queens Drive to the west are in a Yellow Zone rating, but still have some risk of tsunami flooding.

There have been several news stories regarding stormwater flooding within Kilbirnie and Rongotai. Wellington Water and the Council are currently determining options to deal with this issue, and these options will be reviewed against any proposed cycleway options. This will ensure that any cycleway improvements do not restrict any of the options, and that any works are co-ordinated or designed to minimise disruption to the public.

2.9 Related Transport Projects

There are four adjacent cycleway studies being carried out, these are:

- Southern Corridor (between the Basin Reserve and Island Bay);
- Evans Bay to Oriental Bay;
- Cobham Drive; and
- Miramar.

This study will need to ensure that it is compatible with the outcomes of the other studies, and that there is a suitable interface and consistency of layout between any proposed cycleway improvements.

Greater Wellington Regional Council (GWRC) are currently implementing improvements to various bus stops across Wellington to accommodate the proposed high capacity buses that will run on certain routes. Evans Bay Parade / Rongotai Road has been identified as an area where these buses may run, and the impact this may have on any cycleway improvements will need to be reviewed.

With high capacity buses being introduced in areas of Wellington, the increased number of people getting on and off the buses will require that any cycle routes at bus stops address this to prevent any conflicts between cyclists and bus users.

Let's Get Wellington Moving

In the wake of the Basin Bridge decision, an alliance has been established between Wellington City Council, the Transport Agency and Greater Wellington Regional Council to develop an integrated multi-modal solution for Wellington's transport needs. The focus is the area from Ngauranga Gorge to the Airport, encompassing the Wellington Urban Motorway and connections to Wellington Hospital and eastern and southern suburbs.

Called Let's Get Wellington Moving this alliance has a programme to develop and consult on recommended scenarios.

While this is being progressed, all previously planned improvements on key parts of the network have been placed on hold, including the Mt Victoria Tunnel Duplication project.

The Great Harbour Way

The Great Harbour Way -Te Aranui o Pōneke (GHW) is the name adopted to a concept which involves the development and marketing of a continuous shared cycle and pedestrian route around the coastline of Wellington Harbour. The 67km route stretches from Pariwhero/Red Rocks to Pencarrow Head and the aim is for it to be located immediately beside the harbour edge as far as is practicable.

In 2008 a number of groups decided to combine their efforts into the Great Harbour Way Coalition. The Coalition proposed to develop the concept further and to seek support from the various agencies and organisations that control and administer the harbour edge and the immediate environs, and to chart a direction to move the GHW from a concept into reality. As a first step, the Coalition commissioned The Great Harbour Way - Te Aranui o Pōneke Report by Boffa Miskell, which establishes the Great Harbour Way Coalition's vision and objectives. Funding for the study came from Wellington City Council (WCC), Greater Wellington Regional Council (GWRC) and the New Zealand Transport Agency (NZTA), all of whom have implemented cycle and pedestrian initiatives and physical works along the proposed route. The GHW concept seeks to integrate these into a route that has its own identity and can be marketed as an overall corridor.

More recently Wellington City Council undertook an Engineering Investigation to identify options for the Miramar to Waitangi Park Precinct section, which includes this study area. The investigation also produced a draft programme, indicative cost estimates, sketches of the options and cross-sections for public consultation.

Two options were assessed, both options included a nominal 5.0m wide path split with a 3.0m cycle path and 2.0m footpath. For Option A, the existing road infrastructure incorporating traffic lanes, parking and on-road cycle lanes would remain unaffected, with the path being built outwards from the existing sea-side kerb-line (including a cantilever deck structure, new seawalls and land acquisition where required). In contrast, Option B considers the development of the route within the existing road corridor, achieved by removal of on-road parking and/or cycle paths, and lane narrowing where practical, bearing in mind the vehicle swept paths of large goods vehicles. Indicative cost estimates for Options A and B were estimated at \$44 million and \$13 million respectively.

2.10 Issues Identified

The following issues have been identified in relation to WCC Plans and Policies:

- Compatibility between proposed cycleway improvement and flooding mitigation options;
- Adjacent cycleway studies – ensuring compatibility in terms of design options and connections;
- Bus stop improvements – may impact on any proposals, either positively or negatively;
- High capacity buses – liaison with GWRC regarding proposals.

3. Existing Road Corridor

The plan below shows the location of the routes under consideration. The section of Onepu Road south of the Leonie Gill Pathway is no longer part of the study area, and the use of Wilson Street is still being reviewed.



For the purposes of this report, the study area has been split into the following individual sections:

1. Constable Street and Crawford Road, from Newtown to Kilbirnie (highlighted red);
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4. Childers Terrace and Queens Drive (highlighted green);
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The route will tie-in with the proposed cycleway improvements in Newtown (Southern Corridor – Island Bay to the Basin Reserve), Evans Bay, Cobham Drive and Miramar. It will also tie-in with the existing Leonie Gill Pathway, which runs from Queens Drive to Tirangi Road.

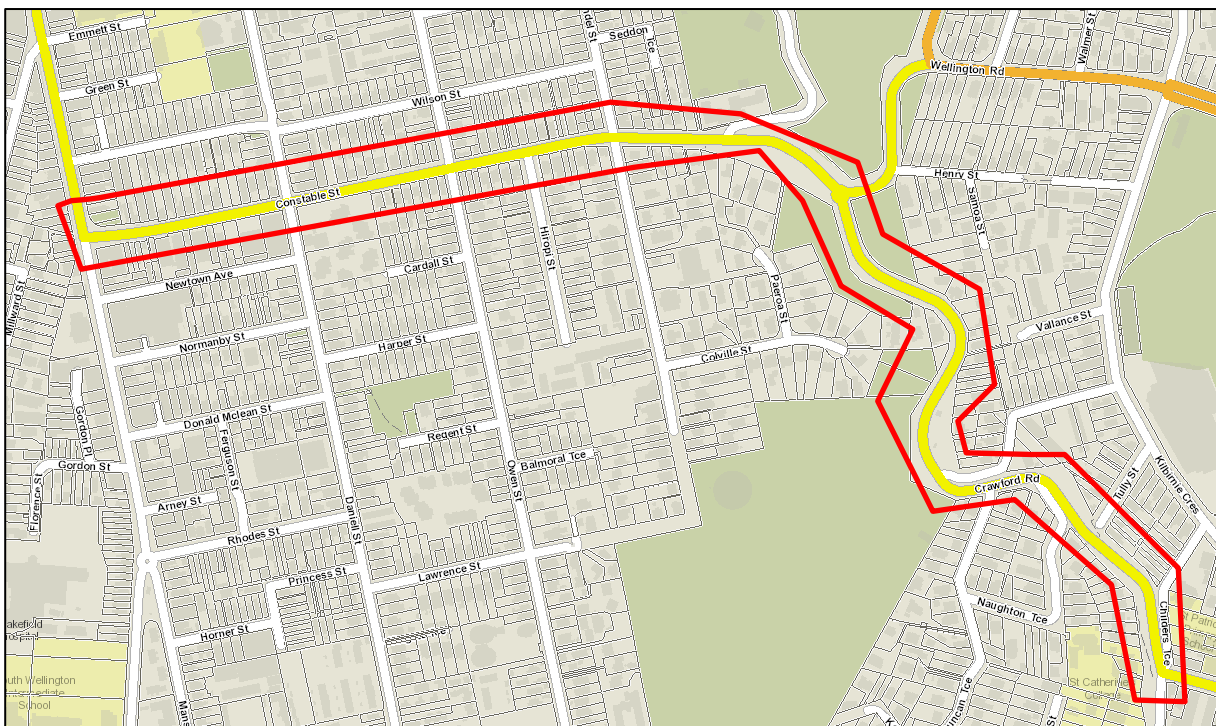
3.1 Constable Street and Crawford Road

- **Road Layout**

Constable Street and Crawford Road is the main link between Newtown and Kilbirnie, and provides a connection to State Highway 1 via Wellington Road.

Constable Street and Crawford Road to the Wellington Road roundabout is a two-way road, running in a relatively straight line. Crawford Road between Wellington Road roundabout and Kilbirnie is also a two-way road with parking, but has a number of bends in the road, and a hatched flush median along the length of this road.

Both roads have designated parking bays and streetlighting along them.



- **Intersection Layouts**

There are three traffic signal intersections along Constable Street, one with Daniell Street, one with Owen Street, and one with Coromandel Street.

There is one roundabout, on the Crawford Road and Wellington Road intersection.

There are a number of side roads off Crawford Road, which join at T-intersections.

- **Extent of Speed and Parking Restrictions**

There is a 50kmh speed restriction along the full length of both roads.

Along Constable Street, in the section between Riddiford Street and Daniell Street, there are parking bays that are a combination of resident parking and time-restricted parking of varying limits. Along the rest of this route, there are no parking restrictions.

- **Parking Provisions**

Along both of these roads, there is a mix of public on-road and residential off-road parking.

- **Facilities for Cyclists and Pedestrians**

There are no specific provisions for cyclists along these roads.

Constable Street has a footpath on both sides along its full length. Crawford Road only has a footpath on the eastern side for the full length, and short sections of footpath on the western side.

The signalised intersections along Constable Street allow pedestrians to cross. Crawford Road has a zebra crossing near the Duncan Terrace intersection, and some uncontrolled crossings at other locations.

- **Issues Identified**

The following urban design and landscapes issues have been identified for this section:

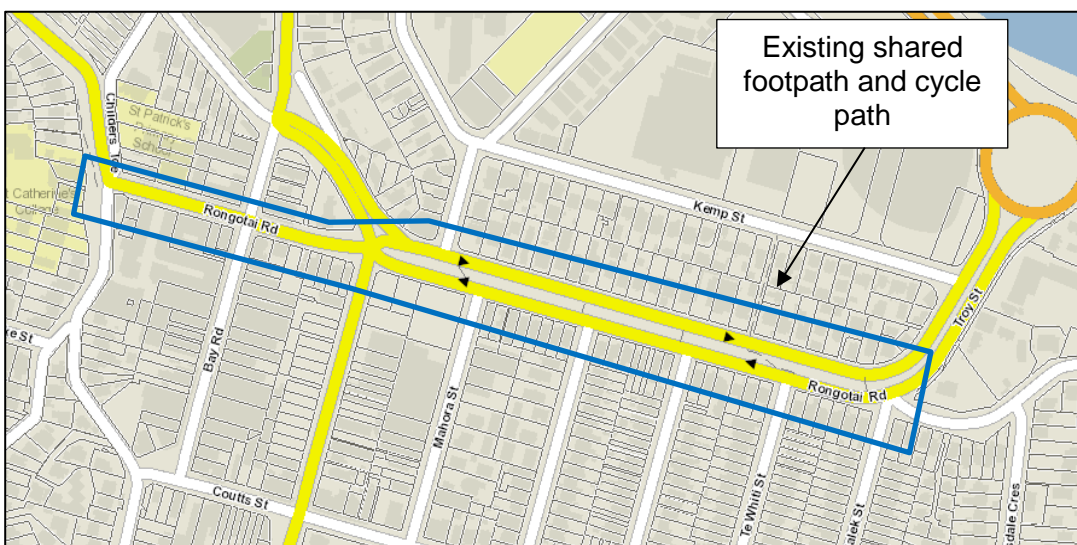
- Narrow road corridor width that changes to any modes of transport cannot be carried out without causing impact;
- Possible impact on Wellington Road and Town Belt recreation/pedestrian e.g. cycleway connections through Wellington Road Park or Southern Walkway edge;
- Potential for increased conflict between road users with greater numbers of cyclists, as this is a main link for vehicles and buses between Newtown and Kilbirnie. An option to use quieter streets where feasible could be investigated.

3.2 Rongotai Road

- **Road Layout**

Rongotai Road is a straight section of two-way road, with the lanes separated by a flush hatched median within Kilbirnie shopping area, and by a raised wide planted median along the rest of the road, with connections across to allow access to and from the roads to the south of Rongotai Road.

There are designated parking bays and streetlighting along Rongotai Road.



- **Intersection Layouts**

The Bay Road and Evans Bay Parade/Onepu Road intersections are both traffic signal controlled. The other roads join Rongotai Road at T-intersections.

- **Extent of Speed and Parking Restrictions**

There is a 30kmh speed restriction within the Kilbirnie Shopping Centre, between Crawford Road and Evans Bay Parade, and the rest of Rongotai Road is 50kmh.

Within Kilbirnie Town Centre, the on-road parking is time restricted, with varying time limits. Outside of the centre, there are no parking restrictions.

- **Parking Provisions**

The parking within Kilbirnie Town Centre is on-road, with two large car parks for Countdown and Pak'n'Save nearby, both of which are customer only parking. Outside of the centre, there is a mix of public on-road and residential off-road parking.

- **Facilities for Cyclists and Pedestrians**

The westbound section of Rongotai Road, to the east of Evans Bay Parade, has a hatched strip between the on-road parking bays and the traffic lane, which can be used by cyclists.

Footpaths are provided along both sides of Rongotai Road. The signal-controlled intersections allow pedestrians to cross, and there is a zebra crossing at the Troy Road end of Rongotai Road. The wide median also allows for pedestrians to cross uncontrolled along Rongotai Road.

There is an existing shared footpath and cycle path from Rongotai Road to Kemp Street to the north, giving a connection to the ASB Arena.

- **Issues Identified**

The following urban design and landscapes issues have been identified for this section:

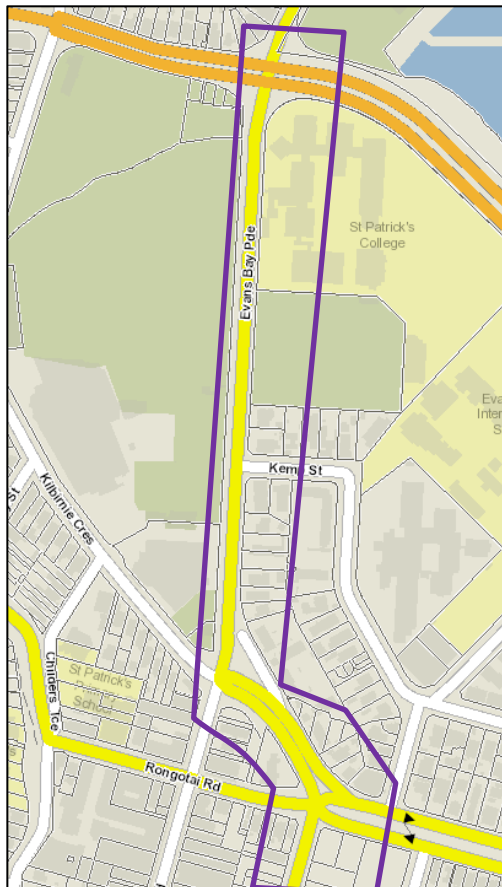
- Rongotai Road varies in width and cross-section along its length, making it difficult to provide a consistent option for all transport modes;
- Any option for altering the road layout within Kilbirnie Shopping Centre would impact on parking for businesses along Rongotai Road, and may increase conflict with buses. Greater Wellington Regional Council are currently considering options to create a bus hub on Evans Bay Parade, which would reduce the number of buses through this section of Rongotai Road, improving the route for other users;
- The existing footpath width along Rongotai Road is insufficient to be shared, and the chance of conflict between cyclists and pedestrians within the Shopping Centre would be very high;
- Whilst the eastern section of Rongotai Road (between Evans Bay Parade and Salek Street) has quite a wide overall road corridor, there are no provisions for cyclists and pedestrians to cross safely. A separated cycle and pedestrian path within the large planted median would provide a safer route, but this would impact on the median green belt including valued pohutakawa trees, and access points for turning traffic would disrupt the route. The existing median on the westbound carriageway provides an informal cycleway, which is often cut across by turning traffic.

3.3 Evans Bay Parade and Onepu Road

- **Road Layout**

Evans Bay Parade and Onepu Road are both two-way roads, with a section of Evans Bay Parade separated by a narrow planted median.

Both roads have designated parking bays and streetlighting along them.



Leonie Gill
Pathway

- **Intersection Layouts**

There are two traffic signal intersections – one at the Kilbirnie Crescent intersection, and one at the Rongotai Road intersection. Evans Bay Parade also joins onto Cobham Drive at a traffic signal intersection.

- **Extent of Speed and Parking Restrictions**

Both roads have a speed restriction of 50kmh.

There are some time-restricted parking areas along Onepu Road – in the section between the supermarkets, and a short section opposite the bus depot. Evans Bay Parade has no parking restrictions.

- **Parking Provisions**

Evans Bay Parade has public on-road parking, with off-road parking available for the residential apartments, the Kilbirnie Leisure Centre and the Plunket nursery. Onepu Road has two large off-

road parking areas for the supermarkets, which are both customer only, and a mix of public on-road and residential off-road parking.

- **Facilities for Cyclists and Pedestrians**

There are no specific facilities for cyclists along these roads.

Evans Bay Parade has a footpath along the full length of the eastern side of the road, and a short length of footpath on the western side between the Kilbirnie Crescent intersection and Kilbirnie Park. Onpeu Road has footpaths along both sides. Both the signalised intersections allow pedestrians to cross safely, and there are some uncontrolled crossing points along Evans Bay Parade.

- **Issues identified**

The following urban design and landscapes issues have been identified for this section:

- The existing footpath widths are insufficient for a shared path;
- The existing connections between Evans Bay Parade and Rongotai Road are poor/complex for cyclists. Better connections through Tacy Street and Kemp Street with improved crossing of Rongotai Road would reduce any conflicts between cyclists and other road users;
- An on or off road cycleway along Evans Bay Parade is likely to impact on residential, school and sports ground parking. An off road connection through Kilbirnie Park could be considered, but this would need to ensure that there are no conflicts with current park use, and that the existing pohutukawas are protected;
- With the narrow lanes and connections to the supermarkets and bus depot, the Onepu Road connection increases conflict between all users. Use of the adjacent quieter streets would provide better connections for cyclists, and minimise disruption to other road users.

3.4 Childers Terrace and Queens Drive

- **Road Layout**

Childers Terrace is narrow section of two-way road, with limited on-road parking availability. There are several speed humps along Childers Terrace.

Queens Drive is a wider section of two-way road, with sections of on-road parking provided.

Both roads have streetlighting along the full length.



- **Intersection Layouts**

All side roads join Childers Terrace and Queens Drive at T-intersections.

- **Extent of Speed and Parking Restrictions**

Whilst both roads have a 50kmh speed restriction, the speed humps along Childers Terrace help encourage a slower speed environment.

There are residents-only and time limit parking restrictions of varying lengths along the northern section of Queens Drive. No other parking restrictions are present.

- **Parking Provisions**

Childers Terrace is mostly off-road residential parking, but there are some spaces where on-road parking can be achieved, with vehicles parked on the footpath. Queens Drive has a mix of on-road public parking and off-road residential parking.

- **Facilities for Cyclists and Pedestrians**

There are no specific provisions for cyclists. There are footpaths on both sides of these roads.

The Leonie Gill Pathway terminates at Queens Drive, and provides a dedicated route for cyclists and pedestrians between Queens Drive and Tirangi Road.

- **Issues identified**

The following urban design and landscapes issues have been identified for this section:

- The existing footpath width is insufficient to be shared;

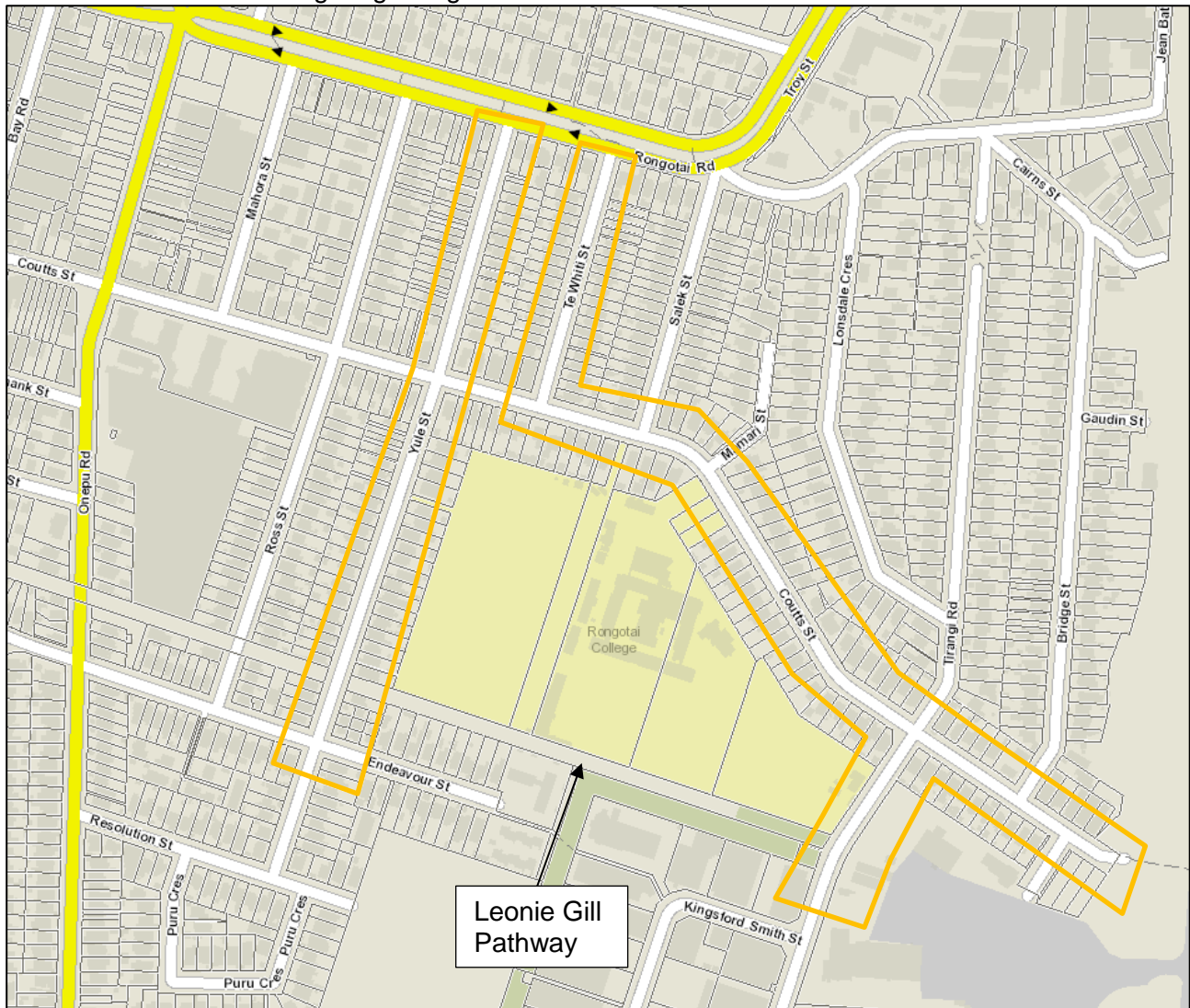
- Due to the narrow width of Childers Terrace, there are potential conflict between pedestrians, cyclists and motorists along this section;
- A separated cycleway may be difficult to provide along extent, due to the narrow road corridor available, and is likely to impact on residential parking.

3.5 Yule Street, Te Whiti Street, Coutts Street and Tirangi Road

• Road Layout

These roads are two-way roads, with parking areas on both sides of the road. There is a short section of on-road cycleway along the eastern end of Coutts Street, ending at the airport underpass.

All the roads have street lighting along them.



• Intersection Layouts

Yule Street and Te Whiti Street have T-intersections where they join onto Rongotai Road, Coutts Street and Endeavour Street. The Coutts Street and Tirangi Road intersection is a roundabout.

- **Extent of Speed and Parking Restrictions**

All the roads have a 50kmh speed restriction, and there are no parking restrictions present.

- **Parking Provisions**

All the roads have on-road public parking on both sides, as well as off-road residential parking.

- **Facilities for Cyclists and Pedestrians**

A section of on-road cycleway has been provided on both sides of Coutts Street, between Mamari Street and the airport underpass. There is also a short section along Coutts Street, between Salek Street and Te Whiti Street.

There is an on-road cycleway on both sides of Te Whiti Street, which connects to the cycleway on Coutts Street.

The Leonie Gill Pathway terminates at Tirangi Road.

All the roads have footpaths on both sides.

- **Issues identified**

The following urban design and landscapes issues have been identified for this section:

- The existing footpath widths are insufficient for a shared path and could increase conflict between all road users along Coutts Street e.g. outside of Rongotai College;
- The existing cycleway and car parking spaces on sections of Coutts St East are relatively narrow and there is no buffer between them. The cycleway has only been provided in sections, and the disjointed treatment can lead to confusion for drivers not used to the area;
- The connection to the Leonie Gill Pathway at the end of Salek Street is through an informal connection via Rongotai College Sports Fields. Clearer directions and connections would improve the use of the pathway for users;
- The retail park and other businesses in this area generate a large number of traffic, including delivery vehicles, and the possibility of conflict between these and cyclists and pedestrians is high.

3.7 Existing Utilities and Services

Services record plans obtained indicate the following services within the study area:

Service Provider	Services
Chorus	Chorus have identified that there is High Capacity and Fibre network within the study area.
City Link	The plans indicate that there are two cable routes in the area – one on Constable street in Newtown, and one on Evans Bay Parade / Rongotai Road / Tacy Street / Kemp Street.
FXnetworks	They have identified cables along Coutts Road, from Tirangi Street to the Airport pedestrian underpass.
LINZ	There are a large number of LINZ survey marks within the study area.
PowerCo	They have indicated that there is Strategic IP gas mains within the study area, as well as the normal gas supply mains.

Service Provider	Services
Wellington Electricity	<p>The records show that there is 33kV line from the Crawford Road/Wellington Road roundabout to the Rongotai Road/Onepu Road intersection.</p> <p>Throughout the study area, there is also 11kV cable, LV and street lighting cables. The overhead bus power lines are also present along Crawford Road, Rongotai Road, and Onepu Road.</p> <p>A lot of the electric lines appear to be overhead, with the poles being used to support the overhead bus power lines.</p>
Wellington Water	<p>Stormwater – Present throughout the study area, leading to outfalls in Evans Bay, and Lyall Bay.</p> <p>Sewers – Throughout the area, connecting to the treatment plant at Moa Point.</p> <p>Potable Water – Water mains are present throughout the study area.</p>

3.8 Ground Conditions

Kilbirnie has been classified by Greater Wellington Regional Council as a Medium to High earthquake hazard, with Moderate hazard of groundshaking and Moderate to Low potential for liquefaction.

Newtown has been classified as Low to Medium for earthquake hazards, Low to Moderate for groundshaking, and Low for liquefaction potential.

There are some slopes between Kilbirnie and Newtown that have been classified as having a Low to Moderate susceptibility failure.

Reviewing the Greater Wellington Regional Council's Strategic Land Use Register (SLUR), there are a number of sites identified where activities involving hazardous substances have or may have taken place. The activities are either historic or current ones. The sites identified are outside the road corridor, and include the Wellington Bus Depot (servicing of vehicles), and petrol stations (underground tanks). Their extents and impact on any cycleway improvements may need to be confirmed during design stage, depending on the final layout.

3.9 Crash Analysis

Within the study area, the following number of crashes involving cyclists, pedestrians and vehicles were recorded between 2011 and 2016:

Cyclists		Pedestrians		Vehicles		All	
Type	Number	Type	Number	Type	Number	Type	Number
Fatal	0	Fatal	0	Fatal	0	Fatal	0
Severe	2	Severe	5	Severe	7	Severe	14
Minor	16	Minor	13	Minor	34	Minor	63
Non-Injury	2	Non-Injury	2	Non-Injury	197	Non-Injury	201
TOTAL	20	TOTAL	20	TOTAL	238	TOTAL	278

Refer to Appendix A for the location of these accidents.

Over half of the crashes involving cyclists involved turning traffic at intersections or vehicles pulling in or out of parking bays. There were also some accidents involving vehicle doors being opened into the path of cyclists.

Whilst the overall percentage of injury and non-injury crashes for both cyclists and pedestrians is low (7%), just over half of the severe and minor injuries involve cyclists and pedestrians. A large number of these could have been avoided.

3.10 Issues Identified - Summary

The following issues have been identified in relation to the Existing Road Corridor:

- Existing road corridor width – narrowness of the available corridor in some locations will restrict any options to alter the road layout to suit more road users;
- Existing services – potential for clashing with services, depending on design layout. Position of poles for overhead lines reduce any options to adjust footpaths, if required;
- High number of crashes between cyclists and traffic – measures to be reviewed and proposed during the study to remove these conflicts.

Issues and potential effects on landscape and urban form and function relate primarily to Section 7 Resource Management Act matters:

- Amenity¹ – including privacy, existing views, neighbourhood and streetscape character and any impact on valued features such as street trees as well as existing recreation activities and connections (Section 7c).
- Quality of the built and natural environment - including effects on contributing factors such as footpath widths, movement in and out of properties/businesses, parking provision, lighting, conflict between different modes of transport, provision for accessibility and safety for all ages. (Section 7f).

For the more constrained routes e.g. Constable Street and Crawford Road, the potential effects of any proposals may be greater (less room to move), and there will be different considerations for residential versus commercial areas (existing activities).

Varying road reserve widths, interconnected routes and links to other parts of the Eastern Bays network bring a greater focus on consistency of treatment e.g. shared paths versus separated, on road or off road. Consistency of design elements such as signage and lighting will also be important. Together, these measures will help all modes of transport to know what to expect. Component design for salt laden air will also be important, as the network is located on a low lying area between Lyall Bay and Evans Bay.

¹ Amenity values - means those natural or physical qualities and characteristics of an area that contribute to people's appreciation of its pleasantness, aesthetic coherence, and cultural and recreational attributes. RMA

4. People Riding Bikes

4.1 Cyclist Movements

Traffic Design Group (TDG) have carried out a number of cyclist counts within the study area, in February 2017. From this, the following information has been obtained.

Rongotai Road, Crawford Road and Childers Terrace

Traffic Direction		8:00–9:00 Weekday	16:45-17:45 Weekday	12:15-13:15 Saturday
Rongotai Road Northbound	Left	0	1	0
	Straight	1	6	0
	Right	1	1	0
Childers Terrace Eastbound	Left	21	10	3
	Straight	5	0	2
	Right	0	0	0
Crawford Road Southbound	Left	0	0	0
	Straight	8	4	3
	Right	6	13	0
Childers Terrace Westbound	Left	3	1	0
	Straight	2	8	0
	Right	1		0
TOTAL		48	44	8

Onepu Road, Rongotai Road and Evans Bay Parade

Traffic Direction		7:45-8:45 Weekday	16:30-17:30 Weekday	12:00-13:00 Saturday
Onepu Road Northbound	Left	1	1	0
	Straight	22	1	4
	Right	1	0	0
Rongotai Road Eastbound	Left	0	0	0
	Straight	1	0	0
	Right	2	0	0
Evans Bay Parade Southbound	Left	4	6	2
	Straight	3	12	12
	Right	0	0	0
Rongotai Road Westbound	Left	0	0	0
	Straight	0	0	0
	Right	9	2	5
TOTAL		43	22	23

Bay Road, Kilbirnie Crescent and Evans Bay Parade

Traffic Direction		8:00-9:00 Weekday	16:30-17:30 Weekday	12:00-13:00 Saturday
Bay Road Northbound	Left	0	0	2
	Straight	10	0	5
	Right	0	0	0
Kilbirnie Crescent Eastbound	Left	0	0	0
	Straight	3	8	3
	Right	1	0	3
Evans Bay Parade Southbound	Left	1	2	8
	Straight	0	6	5
	Right	0	0	0
Evans Bay Parade Westbound	Left	0	0	0
	Straight	7	1	0
	Right	13	2	4
TOTAL		35	19	30

Coutts Street and Tirangi Road

Traffic Direction		8:00-9:00 Weekday	15:15-16:15 Weekday	12:15-13:15 Saturday
Tirangi Road Northbound	Left	1	5	2
	Straight	2	0	1
	Right	9	5	5
Coutts Street Eastbound	Left	0	0	0
	Straight	6	14	1
	Right	1	3	4
Tirangi Road Southbound	Left	0	0	0
	Straight	1	0	0
	Right	1	0	1
Coutts Street Westbound	Left	9	5	2
	Straight	0	8	1
	Right	0	0	0
TOTAL		30	40	17

TDG have also carried out previous cyclist counts, and the results have been presented in their report dated April 2016. From this, the following information has been obtained.

Wellington Road, Cobham Drive, Evans Bay Parade

Survey Year	Survey Count Volumes	Weekday Total	Weekday Average	Survey Count Volumes	Weekend Total	Weekend Average
March 2007	Two Hourly	674	135	-	-	-
March 2008	Two Hourly	1328	266	-	-	-
March 2009	Two Hourly	1167	233	-	-	-
March 2010	Two Hourly	1506	301	-	-	-
March 2011	Two Hourly	1222	244	Four Hourly	638	319
March 2012	Two Hourly	908	182	Four Hourly	663	332
March 2013	Two Hourly	1417	283	Four Hourly	611	306
March 2014	Two Hourly	1511	302	Four Hourly	513	257
March 2015	Two Hourly	1279	256	Four Hourly	520	260
Nov 2015	Two Hourly	1046	210	Four Hourly	368	184
March 2016	Two Hourly	1646	329	Four Hourly	548	274
March 2007	Peak Hourly	450	90	-	-	-
March 2008	Peak Hourly	830	166	-	-	-
March 2009	Peak Hourly	765	153	-	-	-
March 2010	Peak Hourly	897	179	-	-	-
March 2011	Peak Hourly	775	155	Peak Hourly	249	125
March 2012	Peak Hourly	573	115	Peak Hourly	214	110
March 2013	Peak Hourly	911	182	Peak Hourly	201	101

Survey Year	Survey Count Volumes	Weekday Total	Weekday Average	Survey Count Volumes	Weekend Total	Weekend Average
March 2014	Peak Hourly	917	183	Peak Hourly	203	102
March 2015	Peak Hourly	807	161	Peak Hourly	157	79
Nov 2015	Peak Hourly	657	132	Peak Hourly	368	184
March 2016	Peak Hourly	1014	203	Peak Hourly	548	274
March 2007	Average Hourly	337	67	-	-	-
March 2008	Average Hourly	664	133	-	-	-
March 2009	Average Hourly	584	117	-	-	-
March 2010	Average Hourly	753	151	-	-	-
March 2011	Average Hourly	611	122	Average Hourly	638	319
March 2012	Average Hourly	454	91	Average Hourly	663	332
March 2013	Average Hourly	709	142	Average Hourly	611	306
March 2014	Average Hourly	756	151	Average Hourly	513	257
March 2015	Average Hourly	640	128	Average Hourly	520	260
Nov 2015	Average Hourly	523	105	Average Hourly	368	184
March 2016	Average Hourly	824	165	Average Hourly	548	274

Crawford Road, Wellington Road

Survey Year	Survey Count Volumes	Weekday Total	Weekday Average	Survey Count Volumes	Weekend Total	Weekend Average
Nov 2015	Two Hourly	357	71	-	-	-
March 2016	Two Hourly	589	118	-	-	-
Nov 2015	Peak Hourly	236	47	-	-	-
March 2016	Peak Hourly	381	76	-	-	-
Nov 2015	Average Hourly	180	36	-	-	-
March 2016	Average Hourly	296	59	-	-	-

Onepu Road, Rongotai Road, Evans Bay Parade

Survey Year	Survey Count Volumes	Weekday Total	Weekday Average	Survey Count Volumes	Weekend Total	Weekend Average
Nov 2015	Two Hourly	223	45	-	-	-
March 2016	Two Hourly	353	71	-	-	-
Nov 2015	Peak Hourly	139	28	-	-	-
March 2016	Peak Hourly	263	53	-	-	-
Nov 2015	Average Hourly	113	23	-	-	-
March 2016	Average Hourly	183	37	-	-	-

Tirangi Road, Coutts Street

Survey Year	Survey Count Volumes	Weekday Total	Weekday Average	Survey Count Volumes	Weekend Total	Weekend Average
Nov 2015	Two Hourly	445	89	-	-	-
March 2016	Two Hourly	509	102	-	-	-
Nov 2015	Peak Hourly	317	63	-	-	-
March 2016	Peak Hourly	353	71	-	-	-
Nov 2015	Average Hourly	223	45	-	-	-
March 2016	Average Hourly	279	56	-	-	-

4.2 Issues Identified

The following issue has been identified in relation to People Riding Bikes:

- None

5. People Walking

5.1 Pedestrian Movements

TDG have carried out a number of pedestrian counts within the study area, and from this, the following information has been obtained.

Evans Bay Parade, Rongotai Road and Onepu Road

Direction		Weekday AM	Weekday PM	Weekend Midday
Evans Bay Parade Southbound	Heading West	16	18	6
	Heading East	13	31	3
Rongotai Road Westbound	Heading North	1	11	12
	Heading South	2	14	8
Onepu Road Northbound	Heading West	135	146	109
	Heading East	32	195	87
Rongotai Road Eastbound	Heading North	16	41	29
	Heading South	16	66	23

Evans Bay Parade, Bay Road and Kilbirnie Crescent

Direction		Weekday AM	Weekday PM	Weekend Midday
Evans Bay Parade Southbound	Heading West	9	7	3
	Heading East	2	8	5
Evans Bay Parade Westbound	Heading North	116	74	28
	Heading South	36	232	40
Bay Road Northbound	Heading West	5	45	26
	Heading East	10	21	16
Kilbirnie Crescent Eastbound	Heading North	15	7	22
	Heading South	9	13	41

Crawford Road, Childers Terrace and Rongotai Road

Direction		Weekday AM	Weekday PM	Weekend Midday
Crawford Road Southbound	Heading West	0	0	0
	Heading East	0	0	0
Childers Terrace Westbound	Heading North	17	43	21
	Heading South	52	91	27
Rongotai Road Northbound	Heading West	75	111	47
	Heading East	59	159	43
Childers Terrace Eastbound	Heading North	114	54	7
	Heading South	34	179	2

TDG have previously carried out pedestrian counts within the study area, and the results have been presented in their report dated April 2016, and also shown below.

Wellington Road, Cobham Drive, Evans Bay Parade

Survey Year	Survey Count Volumes	Weekday Total	Weekday Average	Survey Count Volumes	Weekend Total	Weekend Average
Nov 2015	Two Hourly	243	49	Four Hourly	247	124
Nov 2015	Peak Hourly	152	30	Peak Hourly	110	55
Nov 2015	Average Hourly	124	24	Average Hourly	62	31

Crawford Road, Wellington Road

Survey Year	Survey Count Volumes	Weekday Total	Weekday Average	Survey Count Volumes	Weekend Total	Weekend Average
Nov 2015	Two Hourly	530	106	Four Hourly	-	-
Nov 2015	Peak Hourly	293	59	Peak Hourly	-	-
Nov 2015	Average Hourly	266	53	Average Hourly	-	-

Onepu Road, Rongotai Road, Evans Bay Parade

Survey Year	Survey Count Volumes	Weekday Total	Weekday Average	Survey Count Volumes	Weekend Total	Weekend Average
Nov 2015	Two Hourly	933	187	Four Hourly	-	-
Nov 2015	Peak Hourly	555	111	Peak Hourly	-	-
Nov 2015	Average Hourly	468	94	Average Hourly	-	-

Tirangi Road, Coutts Street

Survey Year	Survey Count Volumes	Weekday Total	Weekday Average	Survey Count Volumes	Weekend Total	Weekend Average
Nov 2015	Two Hourly	491	98	Four Hourly	-	-
Nov 2015	Peak Hourly	363	73	Peak Hourly	-	-
Nov 2015	Average Hourly	246	49	Average Hourly	-	-

Crossing surveys for the Wellington Road/Cobham Drive/Evans Bay Parade intersection were carried out in November 2016 for the Cobham Drive study. The information from this is below:

Traffic Direction		7:30-8:30 Weekday		16:45-17:45 Weekday		12:00-13:00 Saturday	
		Pedestrians	Bicycles	Pedestrians	Bicycles	Pedestrians	Bicycles
Evans Bay Parade Southbound	Left	9	3	5	7	2	6
	Right	6	10	5	8	9	7
Cobham Drive Westbound	Left	22	6	12	17	5	16
	Right	9	3	18	4	5	26
Evans Bay Parade Northbound	Left	2	1	3	2	1	1
	Right	4	2	6	3	3	3
TOTAL		52	25	49	41	25	59

5.2 Issues Identified

The following issue has been identified in relation to People Walking:

- None

6. People Using Buses

6.1 Bus Routes

From MetLink, the following bus services are within the study area:

Route Number	Route Description
2	Miramar – Wellington
3	Karori – Wellington – Lyall Bay
6	Lyall Bay – Wellington
11	Seatoun – Wellington
14	Rongotai – Wellington – Wilton
18	Campus Connection (Miramar – Karori)
24	Miramar Heights - Wellington
25	Strathmore – Wellington
30	Seatoun Express (Breaker Bay/Scorching Bay – Wellington)
43	Strathmore Park – Wellington – Khandallah (Loop Service)
44	Strathmore Park – Wellington – Khandallah (Loop Service)
91	Airport Flyer (Queensgate – Airport)
1	Island Bay – Wellington (Night service only)

Plans showing the routes can be found in Appendix B.

6.2 Bus Timetable

The above bus routes have the following average hourly services:

Route Number	AM Peak (Hourly)		Mid Peak (Hourly)		PM Peak (Hourly)		Off Peak (Hourly)		Comments
	In	Out	In	Out	In	Out	In	Out	
2	6	4	4	4	3	6	3	3	
3	7	6	6	6	5	7	2	3	
6	2	0	0	0	0	5	0	0	Weekdays only
11	5	4	4	4	4	5	2	2	
14	3	2	2	2	2	4	2	2	
18	3	3	2	2	2	3	0	1	Weekdays only
24	3	3	1	1	2	3	0	1	Weekdays only

Route Number	AM Peak (Hourly)		Mid Peak (Hourly)		PM Peak (Hourly)		Off Peak (Hourly)		Comments
	In	Out	In	Out	In	Out	In	Out	
25	6	0	0	0	0	0	0	0	6 services total during AM peak. Weekdays only
30	0	0	0	0	0	0	0	1	1 service total. Weekdays only
43	1	1	1	1	1	1	2	2	
44	2	1	1	1	2	2	0	2	
91	6	5	3	3	6	6	3	3	
1	0	0	0	0	0	0	0	1	2 services total off peak
TOTAL	44	29	24	24	27	42	14	21	

*Note – In = To Wellington
Out = From Wellington*

6.3 Issues Identified

The following issues have been identified in relation to People Using Buses:

- High number of buses during the peak periods may lead to potential conflicts with cyclists;
- Interface between cyclists and buses / bus users.

7. People Using Vehicles

7.1 Existing Turning Counts at the Intersections

Vehicle turning counts were carried out at four intersections within the study area. The tables below summarise the peak hour flows for the weekday morning and evening, and the weekend.

Rongotai Road, Childers Terrace and Crawford Road

Traffic Direction		8:00–9:00 Weekday	16:45-17:45 Weekday	12:15-13:15 Saturday
Rongotai Road Northbound	Left	24	57	22
	Straight	404	258	267
	Right	1	6	1
Childers Terrace Eastbound	Left	307	261	378
	Straight	48	20	40
	Right	16	14	39
Crawford Road Southbound	Left	10	5	1
	Straight	263	427	459
	Right	117	225	165
Childers Terrace Westbound	Left	16	28	10
	Straight	14	30	21
	Right	12	1	0
TOTAL		1232	1332	1403

Onepu Road, Rongotai Road and Evans Bay Parade

Traffic Direction		7:45-8:45 Weekday	16:30-17:30 Weekday	12:00-13:00 Saturday
Onepu Road Northbound	Left	51	91	112
	Straight	140	177	217
	Right	103	106	122
Rongotai Road Eastbound	Left	2	16	15
	Straight	231	311	314
	Right	62	138	200
Evans Bay Parade Southbound	Left	117	203	160
	Straight	97	232	273
	Right	3	1	1
Rongotai Road Westbound	Left	18	69	74
	Straight	449	336	251
	Right	292	323	252
TOTAL		1565	2003	1991

Bay Road, Kilbirnie Crescent and Evans Bay Parade

Traffic Direction		8:00-9:00 Weekday	16:30-17:30 Weekday	12:00-13:00 Saturday
Bay Road Northbound	Left	51	70	54
	Straight	101	63	48
	Right	4	6	14
Kilbirnie Crescent Eastbound	Left	18	20	14
	Straight	110	228	193
	Right	69	115	144
Evans Bay Parade Southbound	Left	111	187	196
	Straight	126	138	102
	Right	27	15	13
Evans Bay Parade Westbound	Left	3	3	4
	Straight	293	297	320
	Right	149	185	190
TOTAL		1062	1327	1292

Tirangi Road and Coutts Street

Traffic Direction		8:00-9:00 Weekday	15:15-16:15 Weekday	12:15-13:15 Saturday
Tirangi Road Northbound	Left	140	407	417
	Straight	8	23	13
	Right	13	19	12
Coutts Street Eastbound	Left	3	17	16
	Straight	30	25	49
	Right	269	404	500
Tirangi Road Southbound	Left	0	1	2
	Straight	6	9	1
	Right	23	11	9
Coutts Street Westbound	Left	18	14	23
	Straight	24	21	15
	Right	0	1	0
TOTAL		534	952	1057

A turning count was carried out at the Evans Bay Parade / Cobham Drive intersection, for the Cobham Drive study on Saturday 19 November 2016 from 12 noon to 2:00pm and Tuesday 22 November 2016 from 7:00am to 9:00pm. The table below summarises the peak hour flows from.

Traffic Direction		7:15-8:15 Weekday		17:00-18:00 Weekday		12:15-13:15 Saturday	
		Vehicles	Bicycles	Vehicles	Bicycles	Vehicles	Bicycles
Evans Bay Parade Southbound	Left	407	13	629	43	373	14
	Straight	119	6	186	42	180	3
	Right	25	1	48	3	50	0
Cobham Drive Westbound	Left	20	0	16	1	18	0
	Straight	883	0	860	0	872	0
	Right	445	1	287	0	207	0
Evans Bay Parade Northbound	Left	47	3	58	3	131	0
	Straight	160	55	181	5	145	5
	Right	13	1	27	2	22	0
Wellington Road Eastbound	Left	35	6	42	3	41	2
	Straight	1084	13	951	45	895	1
	Right	104	1	116	3	141	0
TOTAL		3342	100	3401	150	3075	25

7.2 Future Increases in Transport Demand due to Land Development

There are no known proposed developments within the study area.

7.3 Vehicle Queuing at Intersections

As part of the vehicle count carried out in February, the number of vehicles queuing was also recorded at the four intersections.

Crawford Road, Childers Terrace and Rongotai Road

		Weekday 7am - 9am	Weekday 3pm - 6pm	Weekend 12pm - 2pm
Crawford Road	Heading South	13	15	10
Childers Terrace	Heading South	2	0	3
Rongotai Road	Heading West	11	6	0
Childers Terrace	Heading North	8	10	0
Total		34	31	13

Evans Bay Parade, Rongotai Road and Onepu Road

		Weekday 7am - 9am	Weekday 3pm - 6pm	Weekend 12pm - 2pm
Evans Bay Parade	Heading South	13	22	22
Rongotai Road	Heading East	16	13	14
Onepu Road	Heading North	7	11	13
Rongotai Road	Heading West	25	30	20
	Total	61	76	69

Evans Bay Parade, Bay Road and Kilbirnie Crescent

		Weekday 7am - 9am	Weekday 3pm - 6pm	Weekend 12pm - 2pm
Evans Bay Parade	Heading South	11	11	9
Evans Bay Parade	Heading West	11	13	12
Bay Road	Heading North	7	7	6
Kilbirnie Crescent	Heading East	6	10	10
	Total	35	41	37

Tirangi Road and Coutts Street

		Weekday 7am - 9am	Weekday 3pm - 6pm	Weekend 12pm - 2pm
Tirangi Road	Heading South	1	0	0
Coutts Street	Heading West	2	1	0
Tirangi Road	Heading North	2	4	0
Coutts Street	Heading East	0	4	0
	Total	5	9	0

7.4 Issues Identified

The following issues have been identified in relation to People Using Vehicles:

- Large number of vehicles recorded queuing at the Evans Bay Parade / Rongotai Road / Onepu Road intersection, both weekday and weekends.

8. Conclusion

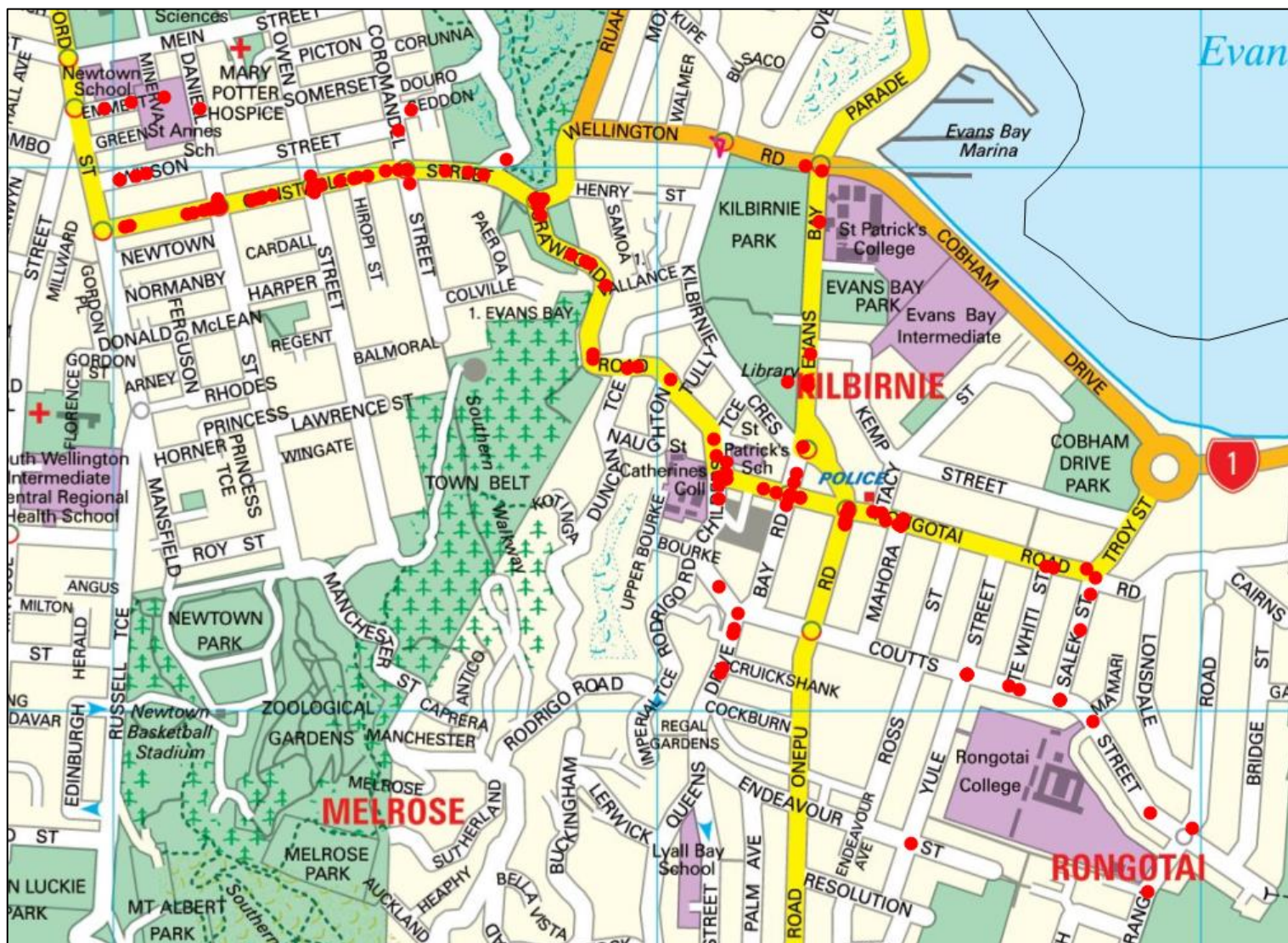
The following items have been identified within the Issues Paper.

	Issue
WCC Plans and Policies	<ul style="list-style-type: none"> Compatibility between proposed cycleway improvement and flooding mitigation options; Adjacent cycleway studies – ensuring compatibility in terms of design options and connections; Bus stop improvements – may impact on any proposals, either positively or negatively; High capacity buses – liaison with GWRC regarding proposals.
Existing Road Corridor	<ul style="list-style-type: none"> Existing road corridor width – narrowness of the available corridor in some locations will restrict any options to alter the road layout to suit more road users; Urban and landscape design – the impact of proposals on the existing road corridor and adjacent land use will need to be reviewed to ensure that it is minimised, and that connections to existing and proposed routes are suitable for all levels of cyclists and pedestrians. Existing services – potential for clashing with services, depending on design layout. Position of poles for overhead lines reduce any options to adjust footpaths, if required; High number of crashes between cyclists and traffic – measures to be reviewed and proposed during the study to remove these conflicts; Amenity of proposals to the existing environment (e.g. businesses, residential, recreational, etc.) will need to be reviewed to ensure that any adverse impact is minimised; Integration of any proposed cycleways into the study area will require a consistent treatment in relation to adjacent projects, to minimise road user confusion.
People Riding Bikes	<ul style="list-style-type: none"> None identified
People Walking	<ul style="list-style-type: none"> None identified
People Using Buses	<ul style="list-style-type: none"> High number of buses during the peak periods may lead to potential conflicts with cyclists; Interface between cyclists and buses / bus users.
People Using Vehicles	<ul style="list-style-type: none"> Large number of vehicles recorded queuing at the Evans Bay Parade / Rongotai Road / Onepu Road intersection, both weekday and weekends.

Two public Open Days were held on Wednesday 15th and Saturday 18th March, to obtain comments from the public on the study.

Details of the comments received can be found in Appendix C.

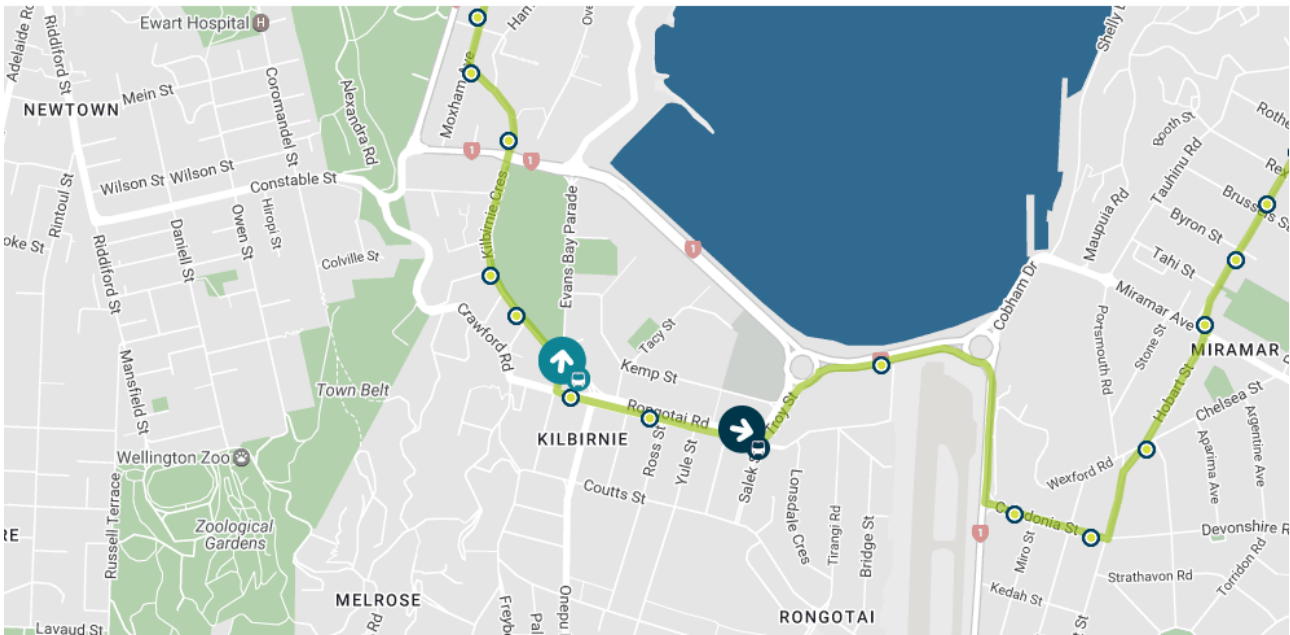
Appendix A – Accident Locations Within the Study Area



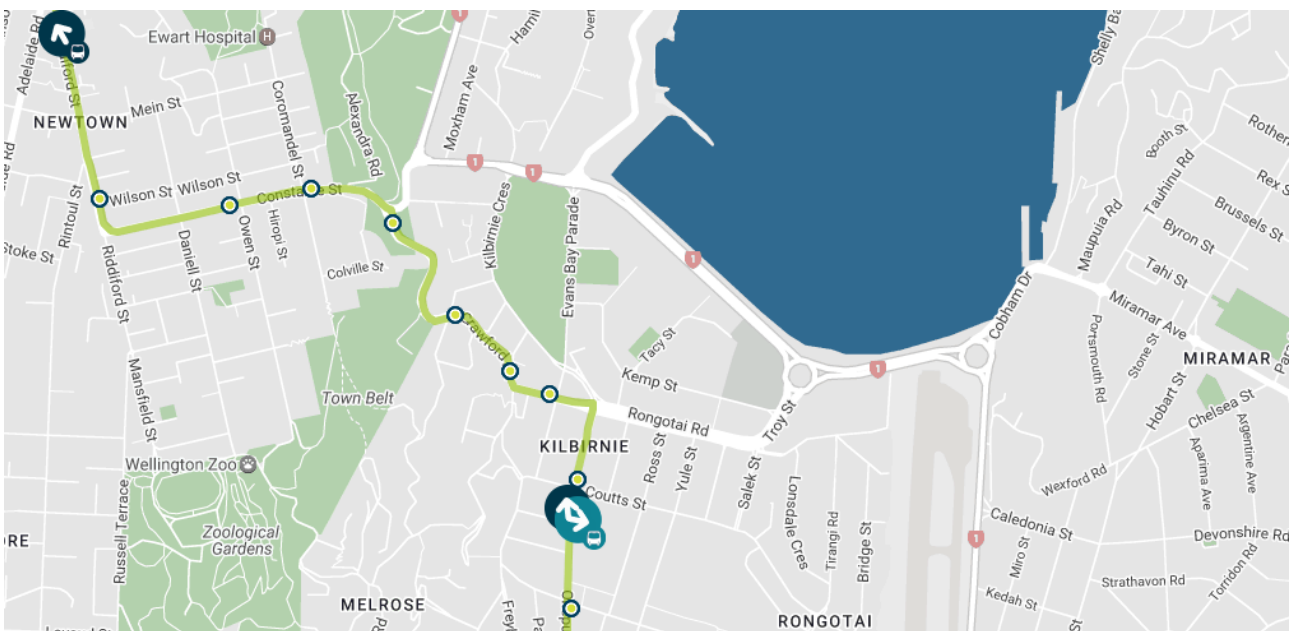
Appendix B – Bus Routes Within the Study Area

The following information has been obtained from the MetLink website.

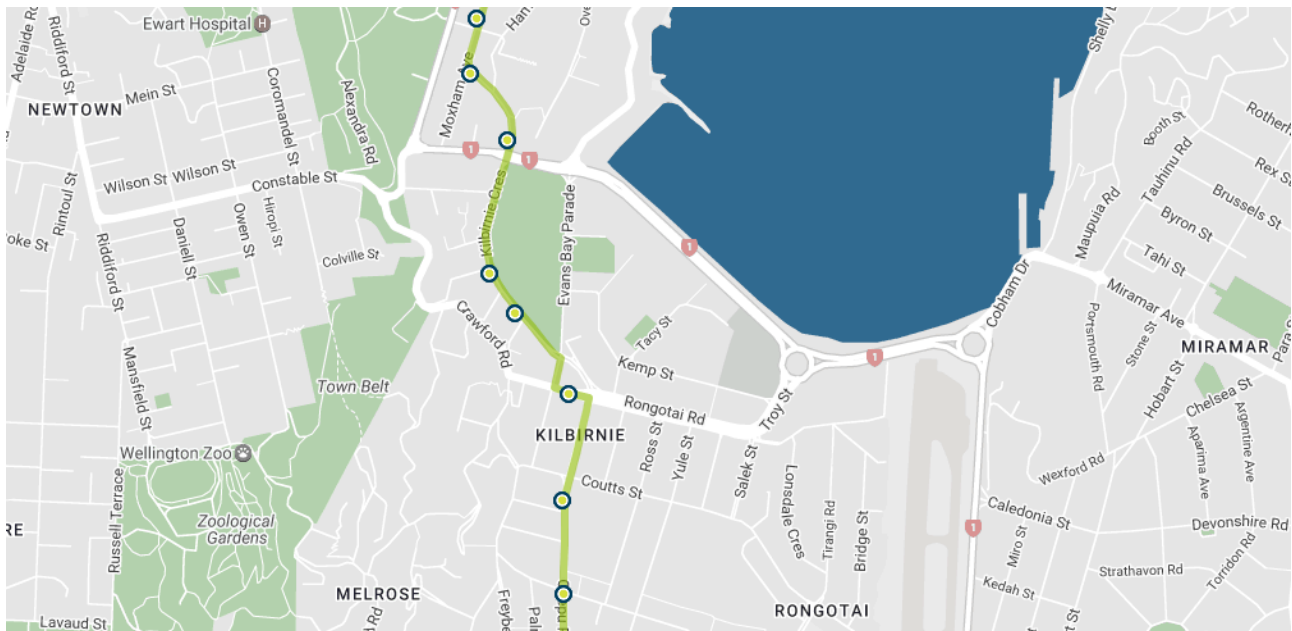
Route Number 2



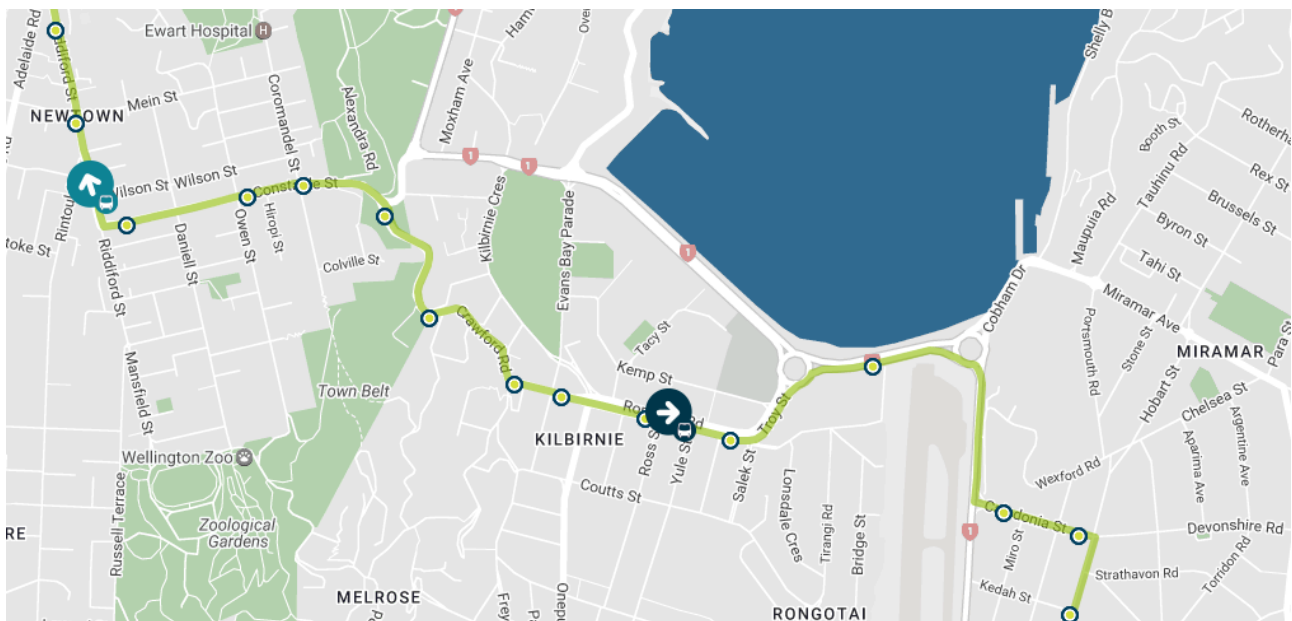
Route Number 3



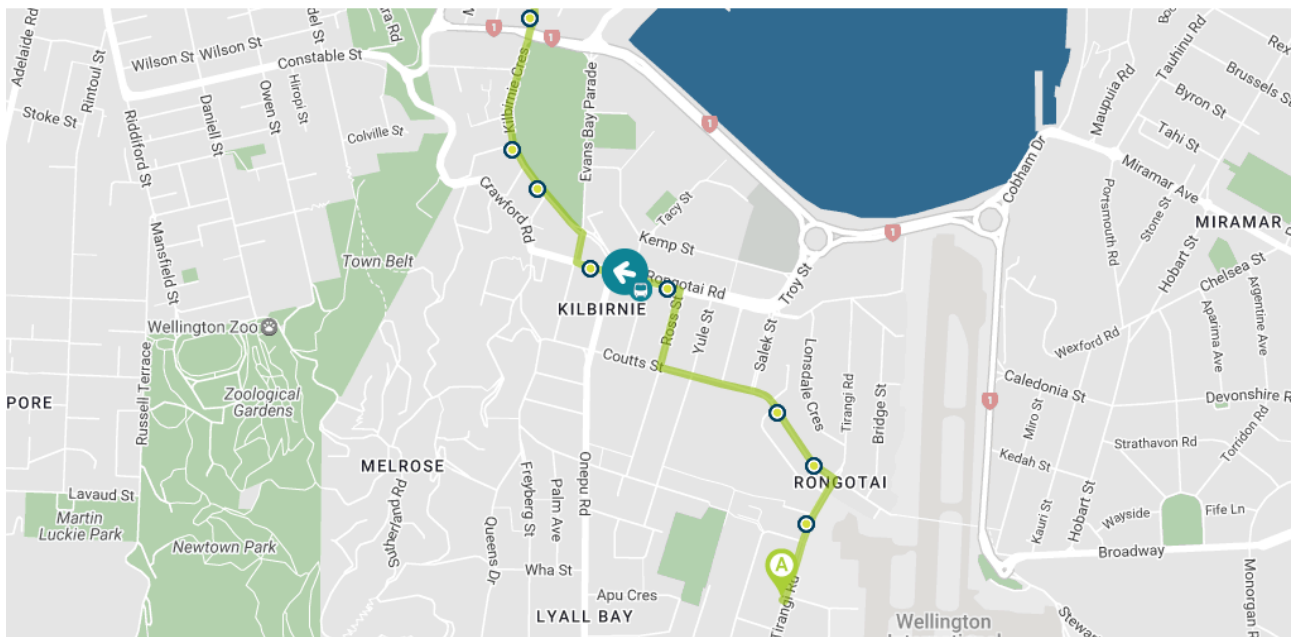
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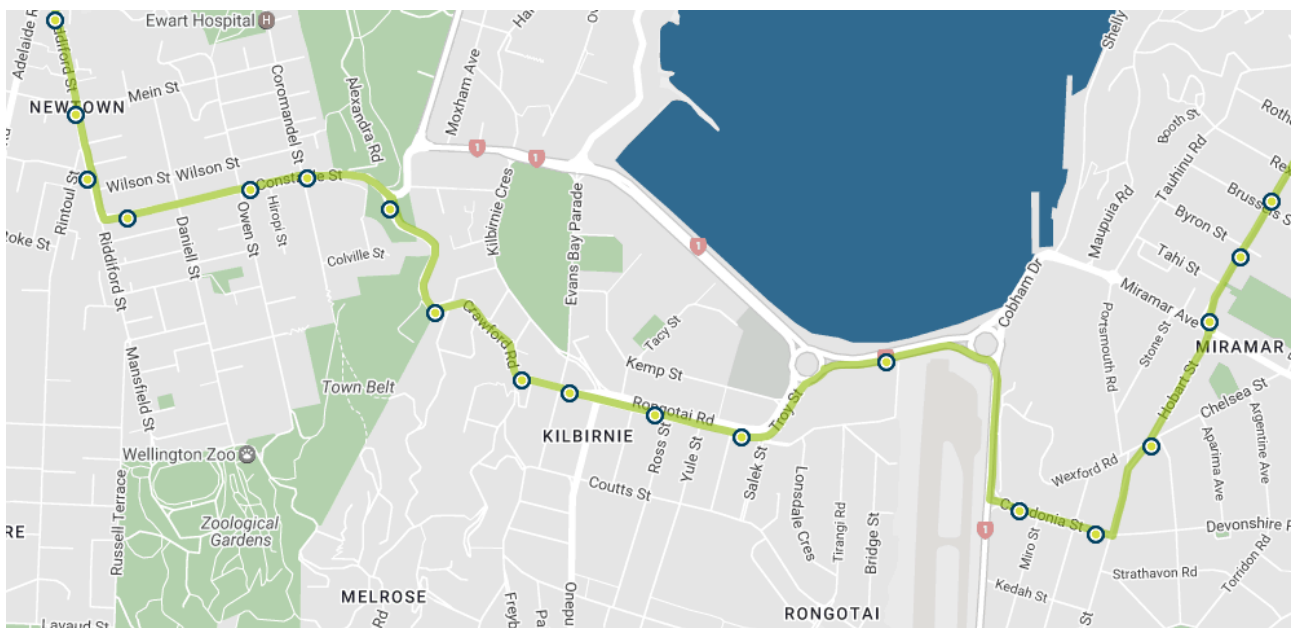
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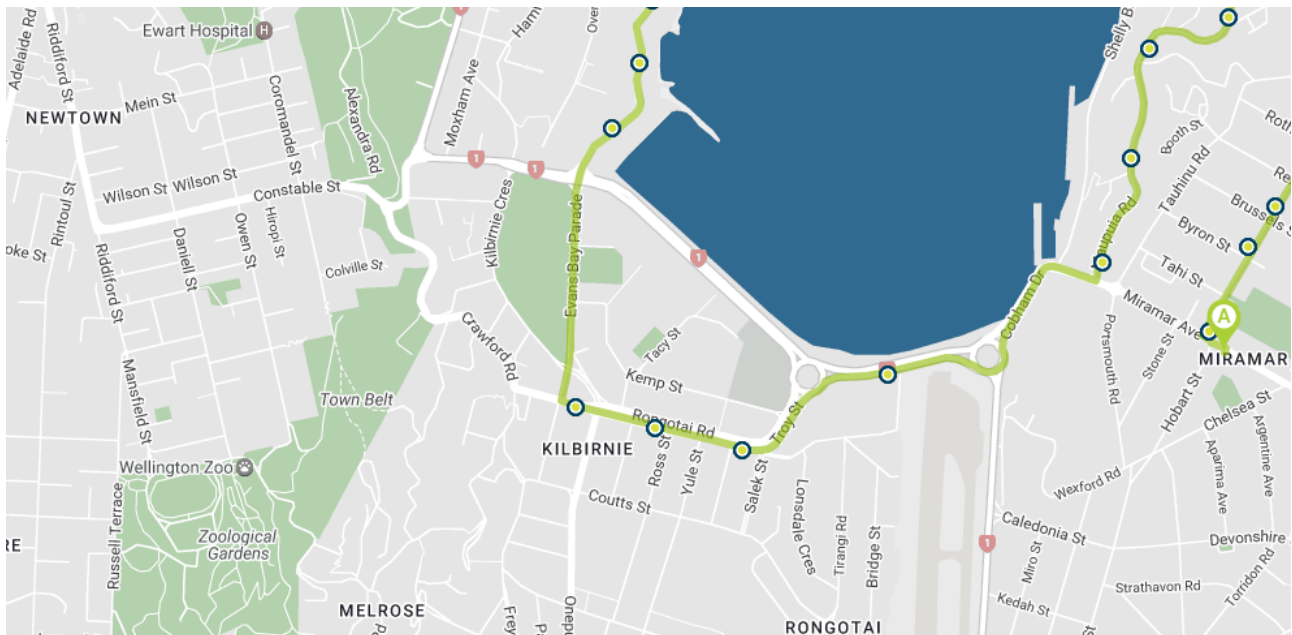
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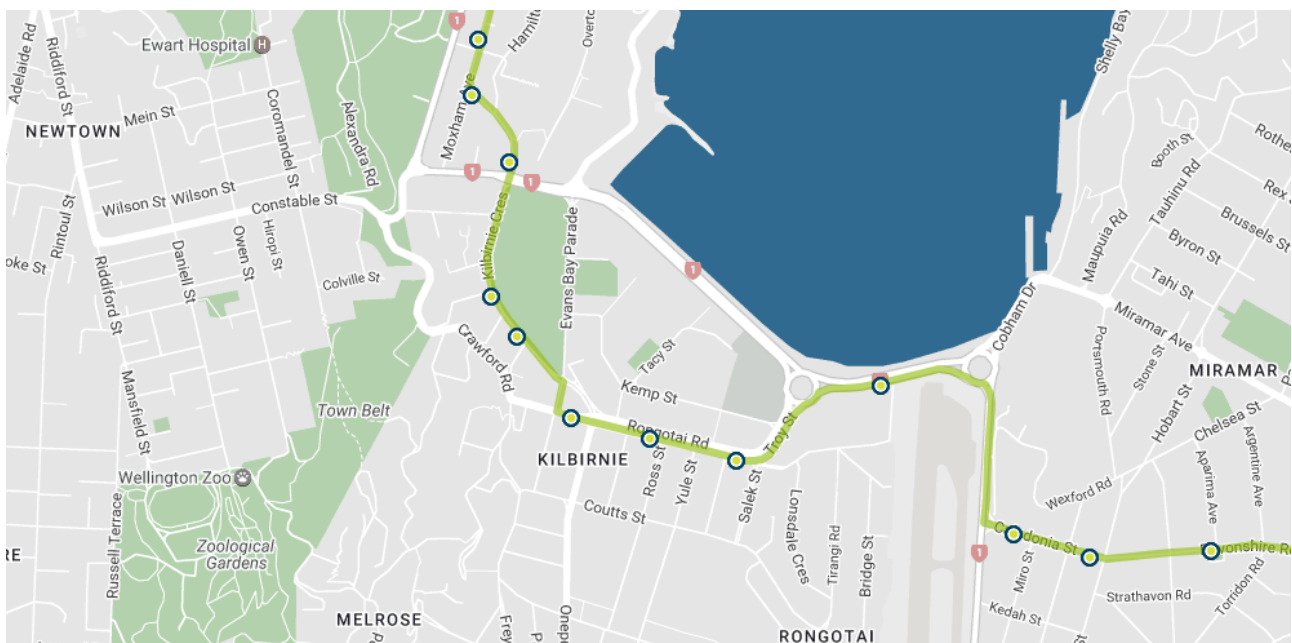
Route Number 18



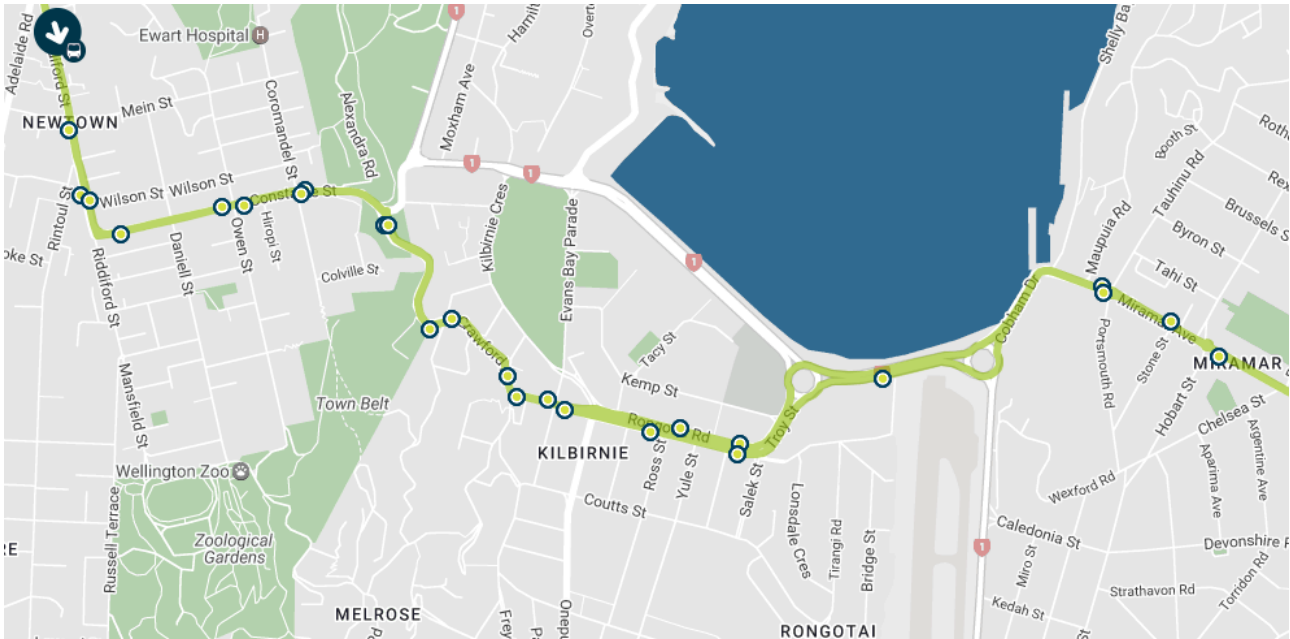
Route Number 24



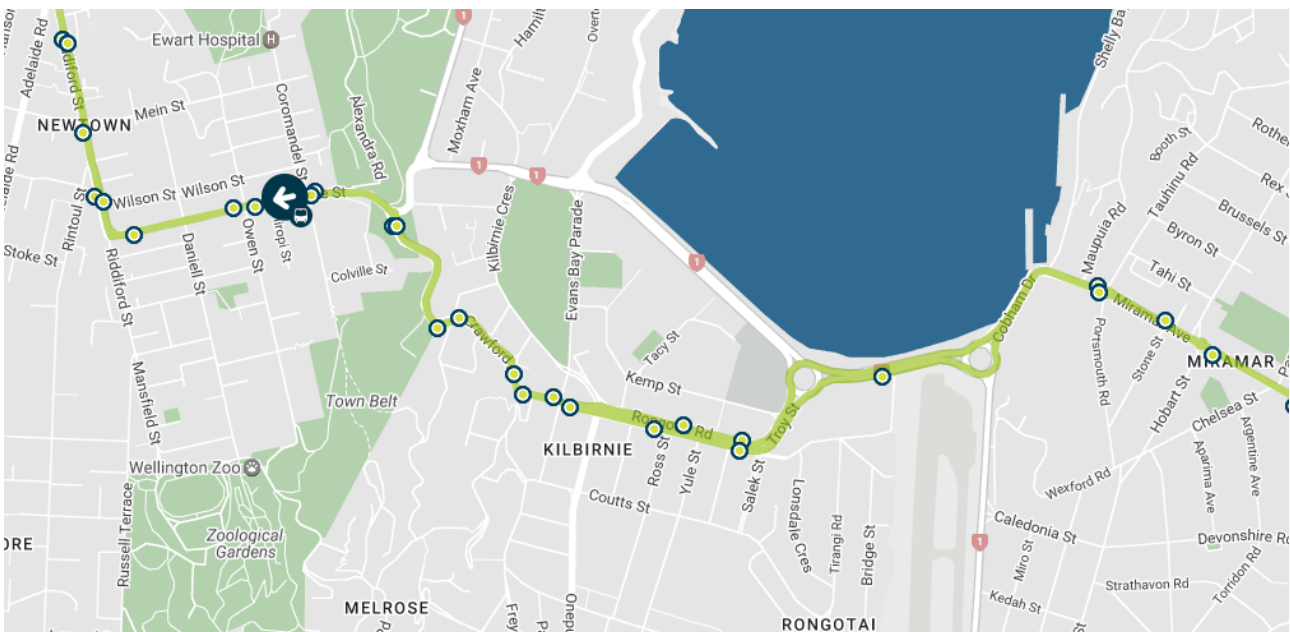
Route Number 25



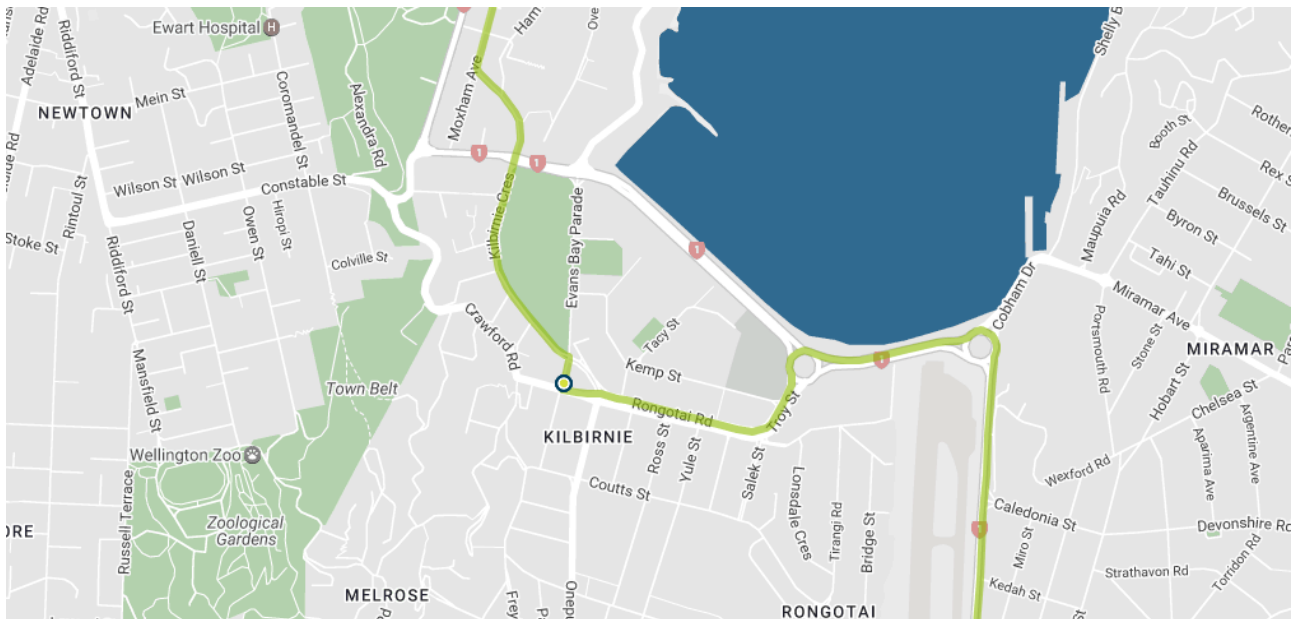
Route Number 43



Route Number 44



Route Number 91



Route Number 30 only stops once in the evening peak hour in Kilbirnie.

Route Number 1 is a night service only, which stops in Kilbirnie.

Appendix C – Public Open Day Feedback

Two public Open Days were held on Wednesday 15th and Saturday 18th March, to obtain comments from the public on the Eastern Suburbs studies. The events were held at the ASB Arena Kilbirnie.



The comments given by the members of public present has been collated overleaf.

Location	Wednesday 13 March 2017	Saturday 18 March 2017
General		Allow bikes to use the footpaths
		Dual cycle lanes on one side preferred over one lane per side, reduces high cycle speeds
		Can the southern footpath on Cobham Drive be used/connected to?
		Carry out a blitz on bikes using footpaths
		Can a trial layout be done?
		Install cycleboxes at intersections
Wilson Street (One-Way)	Install bollards to prevent rat-running cars	Good route – slow traffic speeds
	Could allow cyclists to go both ways	Have contra-flow lane for bikes on this section of Wilson Street
	Temporary road markings for a trial period	
Wilson Street	Quiet route currently	The visibility through the Owen Street/Wilson Street intersection is poor, going east on Wilson Street. Remove a car park on Owen Street
	Install traffic calming measures i.e. narrowing	Lots of traffic on Daniell Street and Owen Street – need to make crossing easier for pedestrians and cyclists
	Make it a low speed environment – 30km/h	This should be a slow zone, shared street
	Install sharrow markings	Connection to Alexandra Road for cyclists isn't ideal
Constable Street	You can take the lane and blitz it on the downhill section	Horrible - busy, highly used route - narrow road width - bus route for several services
	Only an uphill cycle lane necessary	Constable Street isn't good for cyclists lower down
	Shared path – uphill side of Constable Street	Should have cycle lane(s) on the uphill end
	Remove parking on uphill side to create room	Uphill cycle lane already available if no cars are parked

Location	Wednesday 13 March 2017	Saturday 18 March 2017
Crawford Road	Minimum needed is an uphill cycle lane. Remove flush median and traffic islands	When slower cyclists wobble up the hill, they are at risk from passing buses and cars
	Great option for parking on one side only, could roll out more like this	We definitely need an uphill dedicated cycle lane. There will be about 5 resident's car parks retained at about 30 Crawford Rd
		Install bike lane on uphill side
		Install one-way cycle lane uphill. Install Sharrow markings for downhill?
		Widen cycleway at the Wellington Road roundabout
		Narrow the median strip along Crawford Road, improve entry to Constable Street for cyclists
		Currently a pinch point riding uphill
Childers Terrace	Cars turning from Coutts Street onto Childers Terrace need to give way to through traffic/cyclists	Difficult getting from shopping end of Childers Terrace into Rongotai Road or Crawford Road
	Parking in Childers Terrace is needed. Cyclists manage alright now. Don't remove parking. As a cyclist, I manage it alright (if it isn't broke, don't fix it)	A cycle lane in Childers Terrace (south of Rongotai Rd) will only work if parking is removed or the road widened
	Remove parking – this road is becoming an arterial route	Just install a slow zone here
Queens Drive	Parking in Queens Drive is needed. Cyclists manage alright now. Don't remove parking. As a cyclist, I manage it alright (if it isn't broke, don't fix it)	
	Cars are currently backing out of an existing car park onto Queens Drive without looking	
	WCC are proposing to widen footpath and road by 0.5m outside 15-25 Queens Drive	
Rongotai Road (CBD)	Need cycle front box on Rongotai Road to Evans Bay Parade connection	Get rid of courtesy crossings, they make it look like pedestrians have right of way but actually cars do
		Lack of vehicles stopping at Rongotai Road / Crawford Road / Childers Terrace intersection
		Turning out from Bay Road onto Rongotai Road is difficult for cars currently, due to kerb build outs at intersection

Location	Wednesday 13 March 2017	Saturday 18 March 2017
Rongotai Road	Difficult connection for road users – Lonsdale Crescent to Rongotai Road	Provide a protected bike lane with raised markers and buffer space either side
	Need an efficient link between ASB Arena / Cycle path and Te Whiti Street / Salek Street across Rongotai Road	
	Connections to and from ASB Arena needed, and to Cobham Drive, Miramar and Airport	
	Recommend elevated cycle bridge over Cobham Drive, link to Rongotai Road	
	The turn from Rongotai Road to Salek Street is unsafe for cyclists	
	A pedestrian/cycle crossing across Rongotai Road between Salek Street and Te Whiti Street would be welcome	
Evans Bay Parade	This section is used heavily in the morning as a drop off for school children – car doors opening into cyclists' path	Carry out a blitz on cyclists who run red lights
	Kilbirnie Crescent to Evans Bay Parade – difficult connection for cyclists, no shoulder present	Police to blitz on cars running red lights at the intersection of Kilbirnie Crescent & Evans Bay Parade
	Need physical separation between cyclists and vehicles on commuter routes	This is a good flat direct route to Hataitai or around to Evans Bay, few buses use this road
	Providing a connection through Kilbirnie Park would be ok	Add a free left turn for cyclists at the Evans Bay Parade / Kilbirnie Crescent intersection
		Provide better bus stops outside KFC
		Consider providing a shared path from Evans Bay Parade, up Wellington Road SH1 link to the Mount Victoria tunnel
		This road would be good for a cycle lane, possibly provide a two-way cycle lane on the western side?
Onepu Road		Provide a keep clear box outside the Pak'n'Save access to allow road users to get to Rongotai Road
Yule Street	This is a good route to Lyall Bay, better than Onepu Road	Choose the widest street for cycle facilities that has room for the traffic and cycle lanes, car parks, and footpath, and has no buses, like Yule Street. Not Onepu Road

Location	Wednesday 13 March 2017	Saturday 18 March 2017
Coutts Road	Salek Road connection to Coutts Road perceived unsafe currently – this is a route for school children, and large amount of traffic use it during peak hours	A cycle lane is needed to go continuously from Tirangi Road to Onepu Road
	Difficult to cross the road on west and south arms of the Tirangi Road roundabout at weekends	Bike lanes are in car door zone and the lanes start & stop (not continuous)
		Need to connect the Leonie Gill Pathway to Coutts Road underpass (underneath the airport runway)
		Use Bridge Street instead of Coutts St to get to Rongotai Road, it's a quieter road
Leonie Gill Pathway		Maximise the Leonie Gill Pathway for use by pedestrians and cyclists by giving them priority over the roads it crosses
		Don't forget the Leonie Gill Pathway branch to Lyall Bay on maps
Kemp St / ASB Arena		Fix access to ASB for pedestrians and cyclists, providing routes along appropriate "desire lines" outside the entrance