

# Wellington City Urban Cycleways Programme

## Design Report: Kilbirnie Connections

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**19 February 2018**

**Absolutely Positively  
Wellington City Council**

Me Heke Ki Pōneke



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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.

## 1.2 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, these improvements 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.

## 1.3 Study Area

### 1.3.1 Existing Situation

For the Kilbirnie Connections cycleway, the study covers an area from Newtown in the west, to the airport in the east. The study area comprises of the following road, as shown on the plan below:

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



There is an existing shared path along Kemp Street, from Evans Bay Parade to the ASB Arena. The Leonie Gill Pathway connects Queens Drive in the west to Tirangi Road in the east.

The route will tie-in with the proposed cycleway improvements in Newtown (Southern Corridor – Island Bay to the Basin Reserve) and Miramar, and along Evans Bay and Cobham Drive.

## 1.4 Purpose of this Report

This Design Report has been produced to highlight the decision making process that was gone through in developing the options to the Short List stage. The information from this report will assist

the Council in seeking public opinion on the recommended option for each route, prior to submitting a Business Case for constructing the cycleway.

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 Design Report 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.

## 2. Community and Key Stakeholders

### 2.1 Working Group

In March 2017, two open days were held at the ASB Sports Centre to gather initial thoughts about the eastern cycleways connections. Locals identified safety concerns, talked about things they valued, made suggestions, with some registering interest in being part of a community working group.

Key organisations, including business groups and residents associations, were invited to participate, along with a mix of individuals who had expressed interest. Participants in the groups held a wide range of different views, hopes and concerns with a willingness to consider all perspectives and work together to find solutions. The working group membership was comprised of local home owners, public transport users and cyclist commuters who travel through Kilbirnie. In addition, each group had a representative from Cycle Aware Wellington and pedestrian advocacy group Living Streets Aotearoa. The overall makeup of the group represented a very diverse range of transport users, ranging from walkers, cyclists, public transport users and personal car drivers.

The working group was comprised of the following stakeholders:

- Living Streets (advocate) – 1
- Cycle Aware Wellington (advocate) – 1
- St. Patrick's College (representative) – 1
- Local Residents (2 home owners & 3 public transport users) – 5
- Commuter Cyclists (2 local, 2 non-local) – 4
- Kilbirnie BID (advocate) – 1

\*Representatives from NZTA, WCC, Calibre and GWRC also shared the table with the working group, offering specialist perspective to questions that required a deeper knowledge of certain aspects of transport, like buses and cycling regulation and specification.

With the help of the transport planners, engineers and urban design consultants employed for each of the cycleways projects, the working group, in coordination with Council and NZ Transport Agency staff, developed a check-list of criteria based on all the objectives.

The long-lists of options were then assessed against the criteria to come up with a short-list of options, which were then further scrutinised.

The Kilbirnie Connections Working Group met five times between April and July. During these 2 to 3 hour evening workshops the members worked together to consider the Council and Government's investment objectives for the funding on offer, developed their own community objectives, and came up with a long-list of possible options. By the third workshop, members had confirmed the long list of options with a total of 120 put forward to the next stage of evaluation. At the fourth workshop, the long list of options was further evaluated against all criteria and objectives, resulting in a short list of 39 options. At the fifth and final workshop, the short list of options was reviewed with the workshop members determining 28 options that would be presented for public consultation.

Working group members spent many hours poring over plans, asking questions, looking at things from a range of different perspectives, debating the pros and cons, grappling with challenges and trade-offs, and whittling down the alternatives to come up with the most practical options to go out to the wider public. Among other things, the groups talked about parking, the needs of residents and businesses, trees, heritage features, lane widths, safer speeds, painted median strips, driveways, existing safety issues, pedestrian crossings, intersections and bus stops.



## 3. Issues, Constraints and Opportunities

### 3.1 Issues Paper Summary

The following items were previously identified within the Issues Paper.

	Issue
WCC Plans and Policies	<ul style="list-style-type: none"> <li>• Compatibility between proposed cycleway improvement and flooding mitigation options;</li> <li>• Adjacent cycleway studies – ensuring compatibility in terms of design options and connections;</li> <li>• Bus stop improvements – may impact on any proposals, either positively or negatively;</li> <li>• High capacity buses – liaison with GWRC regarding proposals.</li> </ul>
Existing Road Corridor	<ul style="list-style-type: none"> <li>• 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;</li> <li>• 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.</li> <li>• 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;</li> <li>• High number of crashes between cyclists and traffic – measures to be reviewed and proposed during the study to remove these conflicts;</li> <li>• 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;</li> <li>• Integration of any proposed cycleways into the study area will require a consistent treatment in relation to adjacent projects, to minimise road user confusion.</li> </ul>
People Riding Bikes	<ul style="list-style-type: none"> <li>• None identified</li> </ul>
People Walking	<ul style="list-style-type: none"> <li>• None identified</li> </ul>
People Using Buses	<ul style="list-style-type: none"> <li>• High number of buses during the peak periods may lead to potential conflicts with cyclists;</li> <li>• Interface between cyclists and buses / bus users.</li> </ul>
People Using Vehicles	<ul style="list-style-type: none"> <li>• Large number of vehicles recorded queuing at the Evans Bay Parade / Rongotai Road / Onepu Road intersection, both weekday and weekends.</li> </ul>

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

Details of the comments received from the Open Days can be found in the Issues Paper.

## 4. Cycle Route Development

### 4.1 Background

Through consultation with local stakeholders in 2014, the Council identified the key routes that were to be further investigated for cycling options. These were:

- Constable Street
- Emmett Street and Wilson Street
- Crawford Road
- Rongotai Road between Crawford Road and Te Whiti Street
- Evans Bay Parade between Cobham Drive and Rongotai Road
- Onepu Road between Rongotai Road and the Leonie Gill Pathway
- Childers Terrace
- Queens Drive between Coutts Street and the Leonie Gill Pathway
- Yule Street
- Te Whiti Street
- Coutts Street between Te Whiti Street and the Airport underpass
- Tirangi Road between Coutts Street and the Leonie Gill Pathway

### 4.2 Changes to Routes

Following comments from the Open Day and the Working Group, Emmett Street was removed as an option. As the route passed through a school play area and a park, the Working Group felt that this would lead to conflicts between cyclists and users of the playing area and park.

During Workshop 5, the Council decided that Onepu Road would be removed from this stage of proposals. The estimated costs of improving this section of road for cyclists would not fit within the overall construction budget, and therefore the Council made the decision that Onepu Road would be reviewed at a later stage.

### 4.3 WCC Cycling Investment Objectives

The Council identified five Cycling Investment Objectives, which are as follows:

- **Level of Service** - Achieve a high level of service for cyclists within an integrated transport network.
- **Network Efficiency** - Improve cycling infrastructure and facilities so that cycling makes a much greater contribution to network efficiency, effectiveness and resilience.
- **Cycling Uptake** - Cycling is a viable and attractive transport choice.
- **Cycle Safety** - The crash rate, number and severity of crashes involving people on bikes is reduced.
- **Wellington City Improvements** - Provide transport choices by increasing the opportunity for people to ride bikes so as to improve the sustainability, liveability and attractiveness of Wellington.

## 5. Cycleways Treatment Evaluation

### 5.1 Introduction

During the Open Days, members of the public were encouraged to sign up to join the Working Group. The Council invited those who had shown an interest in being part of the Working Group, and the first meeting was held on 4<sup>th</sup> April 2017 at the ASB Sports Centre. Four other meetings have been held with the Working Group, with the last meeting held on 18<sup>th</sup> July 2017 to agree the Short List options to be taken forward to public consultation.

#### 5.1.1 Working Group

The Working Group consisted of local residents from Kilbirnie and Newtown, as well as stakeholders such as Living Streets, Cycle Awareness Wellington, the Great Harbour Way Trust, and the Kilbirnie Business Improvement District (BID). The local schools were encouraged to attend, but were unable to do so, but they asked to be kept informed.

The Council led the meetings, with support from Calibre Consulting and Isthmus Group (landscape and urban design architects for the project).

The meetings were also attended by WCC Councillors and representatives from Greater Wellington Regional Council (GWRC) and NZTA.

#### 5.1.2 Community Objectives

The following Community Objectives were developed with the Working Group, to be part of the assessment process for each Long List option:

1. Improve the safety of road users, prioritising those most vulnerable – this would be measured by the reduction in number and severity of crashes for all road users and pedestrians.
2. Improve connections for pedestrians and cyclists – this would be measured by providing better connections at intersections, improving the route consistency for cyclists, and reducing the potential for side roads to be used as “rat runs”.
3. Improve the sustainability, liveability and attractiveness of Kilbirnie – this would be measured by increasing the number of people walking and cycling within Kilbirnie, improving the urban amenities and increasing green space where possible, and reducing the number of cars travelling through Kilbirnie.
4. Improve the level of service for pedestrians – this would be measured by increasing the Level of Service rating for pedestrians compared to the existing situation.
5. Improve the level of service for cyclists - this would be measured by increasing the Level of Service rating for cyclists compared to the existing situation.
6. Improve the level of services for buses and bus users – this would be measured by providing a route corridor that enabled bus times to be consistent, and providing safe and convenient bus stop locations (in partnership with GWRC).

## **5.2 Treatment Options Identification (Long List)**

The Working Group developed the Long List options in Workshop 3. The Group were encouraged to develop options that were based on the available road corridor width for each route, rather than consider options that would require significant land purchase. This restriction was due to the available budget of the scheme, and purchasing land would then restrict the treatments that could be applied to the routes, or even remove routes.

Details of the Long List options can be found in Appendix A.

## **5.3 Treatment Options Assessment (Long List to Short List)**

### **5.3.1 Multi-Criteria Analysis (MCA) Criteria**

The Long List options were assessed based on the NZTA criteria. An example of these assessments can be found in Appendix B.

The options were assessed to determine if there were any that would be classed as fatal flaws, such as a route going through a historical site needing to purchase significant sections of land.

No fatal flaws were found for any of the options, therefore all of the options were assessed.

### **5.3.2 MCA Scoring Approach**

Each option was assessed based on the impact of the relevant category.

For the Council and Working Group/Community objectives, they were assessed on an Effectiveness rating of Low, Low-Moderate, Moderate, Moderate-High or High, based on the fit of the route option to the assessment criteria.

If the option scored low overall for the Council objectives, then it was not taken forward. For all routes, a Do-Nothing approach was assessed as having a rating of Low Effectiveness in relation to the Council's objectives, and therefore was not considered further.

If an option scored low overall for both Council and Community objectives, then no further assessment was done. For example, applying "Sharrow" markings on a busy road would not improve the safety for cyclists or provide a high level of service. This would be assessed as higher for quieter residential roads, as the traffic volume would be less.

Should an option meet the criteria of both the Council and the Community objectives, it was then assessed against Effects of the option, the Implementation, and the Cost.

For Effects, these were assessed on a rating of High Negative, Negative, Neutral/No Impact, Positive or High Positive.

For Implementation, the Feasibility of each option was assessed on a scale of Low, Medium or High. The Risk of each option was assessed on a rating of Low, Medium or High.

For Cost, this was assessed on a rating of Low, Medium or High Cost. The amount for each rating varied per route, and was based on the overall length of route, likely costs for consent approval, including public consultation, and any relocation of services.

### **5.3.3 MCA Assessment of Long List**

The options were assessed by Calibre Consulting, with input from Isthmus or other specialists as required. The assessments were then presented to the Working Group at Workshop 4 for their comments on the ratings put forward.

Following the workshop comments, the assessments were reviewed and amended where required.

As part of Workshop 4, the Working Group were asked to indicate what would be their first and second preferred options for each route, to help develop the Short List, as well as give an indication of any options that should not be taken forward. Appendix A contains details of which Long List options were taken forward to the Short List stage.

### **5.3.4 Short Listed Treatment Options**

Between Workshop 4 and 5, the Council, Calibre Consulting and Isthmus assessed the comments put forward by the Working Group, to determine the group's preferred options. Some of these options were developed further to provide a more detailed approach, showing how each section fitted into the overall route, and how Kilbirnie would connect to Newtown and Miramar.

At Workshop 5, Calibre and Isthmus presented the short list options and any alternatives that had been developed by the Council, Calibre and Isthmus. These were then assessed by the Working Group, to determine which options would be taken to public consultation at the next Open Day in September.

Details of the Short List options can be found in Appendix C. Additional options for Wilson Street (Two-Way) and Yule Street were included after Workshop 5. These options added Sharrow markings to both traffic lanes, and have been included in Appendix C.

## **5.4 Treatment Options Assessment (Short List to Recommended Option)**

The Short List options were presented to the public for consultation and feedback at the Open Days in September. Following this feedback, a recommended option for each route was determined, as described below.

## 6. Traffic Resolution

### 6.1 Preferred Option

Following the public Open Days held on 6 and 9 September 2017 for the Short List options, the Council has collated the feedback from the public regarding the options presented.

Following this first round of public consultation, a preferred option and target construction programme was identified by the Steering group made up of specialist consultants, WCC and NZTA staff. This preferred option list was created taking into consideration feedback from the previous round of consultation feedback, details such as bus stops and pedestrian crossing to be integrated on each route as well as cost considerations and the decisions made on streets nearby. The preferred options were then developed in plan and through graphic illustration to assist traffic resolution analysis and a further round of consultation feedback to confirm the option to take forward to detailed design and construction.

A copy of the list can be found in Appendix D.

The preferred option for each route taken through to Traffic Resolution and round 2 of public consultation were as follows:

Route	Preferred Option
Constable Street (Riddiford Street to Coromandel Street)	Option A (as per consultation feedback) – Kerbside bike lane uphill, downhill Sharrow, parking removed one side. Route treatment deferred at present to 2021+ due to budget considerations and provision of alternative route along Wilson Street.
Constable Street (Coromandel Street to Alexandra Road)	Option B (as per consultation feedback) – Protected cycle lane uphill (eastbound), downhill (westbound) Sharrow markings on the traffic lane, parking on south side only. Construction programme target 2018-2019.
Wilson Street (One-Way)	Option A (as per consultation feedback) – Sharrow markings on the traffic lane (eastbound), contra-flow cycle lane heading westbound, parking on north side only. Construction programme target 2018-2019.
Wilson Street (Two-Way)	Option C – Sharrow markings on both traffic lanes. Construction programme target 2018-2019. Consultation feedback in September showed a slight preference for Option A – cycle lane both sides, with parking retained on one side only. The number of parking spaces removed by this option (approximately 42) was determined as unacceptable by the Steering Group in a residential area with Sharrow markings considered to be an acceptable solution for a quieter street given budget constraints for the overall Project. To provide a consistent connection, Sharrow markings are also to be provided along Coromandel St from Wilson St to Constable St.

Route	Preferred Option
Crawford Road	Option A (as per consultation feedback) – Sharrow markings on downhill (southbound) traffic lane, protected uphill (northbound) cycle lane, parking on east side only. Construction programme target 2018-2019.
Rongotai Road (Kilbirnie Town Centre)	Minor changes only - providing cycle stop boxes at the traffic signals. Construction programme target 2018-2019. Consultation feedback in September showed a slight preference for Option A – cycle lane both sides, no parking. The Steering Group determined that further consultation with local businesses would be required to confirm this option for Traffic Resolution including greater certainty around GWRC planned changes to the Kilbirnie bus network and hub, to be confirmed later in 2017/early 2018.
Rongotai Road (Outside Kilbirnie Town Centre)	Option A (as per consultation feedback) – Protected cycle lane both sides, parking both sides with buffer width increased 800mm to provide for pedestrian movement in and out of parked cars. Existing vehicle connections across median area to be retained. Construction programme target 2018-2019.
Childers Terrace	None– Route treatment deferred at present. September consultation feedback showed a slight preference for Option B – protected two-way cycle lane on one side with car parks removed. The Steering Group determined removal of the pedestrian footpath on the western side of the route would require further consultation with residents and St Catherine's School before progressing to Traffic Resolution.
Queens Drive	None – Route treatment deferred at present. September consultation feedback showed a slight preference for the existing layout and without resolution on Childers Terrace, a decision was made to defer a decision and Traffic Resolution.
Evans Bay Parade	None – Route treatment deferred at present. September consultation feedback showed a preference for Option C – Protected cycle lane on the east side (heading south) and parking on both sides, cycle lane within Kilbirnie Park (heading north). Further consultation with WCC Parks staff is required to confirm this as a preferred option to progress to Traffic Resolution taking into consideration existing sports field configuration, parking requirements and appropriate measures to protect the pohutukawa trees.
Yule Street	Option A – Cycle lanes between parking and traffic lane on both sides of the road, parking both sides. The September round of consultation



Route	Preferred Option
	showed a slight preference for the existing layout. The Steering Group determined that an approach consistent with Te Whiti Street would provide better overall service for the network without compromising parking or vehicle movements in a quiet street.
Te Whiti Street	Option A - Cycle lanes between parking and traffic lane on both sides of the road, with buffer between cycle lane and parking, parking both sides. The September consultation round identified a slight preference for the existing layout. The Steering Group determined that the existing cycle lanes without a buffer on a busy street present an unacceptable safety risk that could be improved without compromising vehicle movements.
Coutts Street	Option B (as per consultation feedback) – Protected cycle lane on both sides of road, parking both sides. The Steering Group determined an option for a cycle path (raised above the traffic lanes) should be presented as the preferred option in Traffic Resolution and consultation feedback sought on vertical separation between the footpath and the cycle path. This option was identified as most appropriate for a busy route in the network and to provide greater safety for school children travelling to Rongotai College.
Tirangi Road	Option A (as per consultation feedback) - Protected cycle lane on both sides of road, no parking either side (existing condition).

## 6.2 Preferred Option Development

The options for the remaining routes were then developed further, to show the treatment along the full length of each route and any impacts to parking or bus stops identified.

During the development of the routes, the proposed option for Evans Bay Parade highlighted some issues that required further discussions. These were the new bus hub proposed layout on Evans Bay Parade, which required further discussions with Greater Wellington Regional Council to co-ordinate the layout of the bus stops and the cycleway, and the route of the cycleway within Kilbirnie Park, which would need to be agreed. As these discussions are on-going at the time of this report, the Council has chosen to delay any further public consultation on Evans Bay Parade until the route has been agreed with all affected parties.

In addition, from the feedback given for Constable Street between Riddiford Street and Coromandel Street, and for Childers Terrace and Queens Drive, it was not clear which option was preferred by the public. Therefore, it is recommended to review these roads further and will not be progressed forward at this stage with a cycleway treatment on these three roads.



### 6.2.1 Buffer Treatment

For each option that proposes a cycle lane between the footpath and the parking, an 800mm wide raised buffer has been proposed. This would allow car users to step out of their vehicles onto a pathway, rather than down into the cycle lane. Where there is no parking proposed, the buffer has been reduced to 300mm wide.

The raised buffer is proposed to be 100mm above the road level. Where there are driveways, the buffer is reduced to a height of 30mm. This allows vehicles to drive over the buffer, but at a slower speed, and still provides protection to cyclists.

### 6.2.2 Parking Treatment

Where a protected cycle lane crosses a driveway, a minimum setback of 1.5m on either side of the driveway to the parking bay is proposed. This allows visibility to approaching vehicles for drivers coming out of their properties. For Wilson Street (One-Way) section, a setback of 3m on either side is proposed, to allow more manoeuvring space for turning vehicles within the narrow traffic lane.

This setback has reduced the amount of parking available in front of properties, based on assuming a minimum length of 5.5m for a vehicle to get into and out of a parking space. The parking changes are stated below.

Route	Parking Provision Changes
Constable Street (Coromandel Street to Alexandra Road)	Parallel parking provision for 15 vehicles will be removed on the southern side of the road. 4 angled parking bays will be provided adjacent to the Daniell Street intersection Parking provision for 1 vehicle will be removed on Daniell Street
Wilson Street (One-Way)	No changes to parking
Wilson Street (Two-Way)	Parking provision for 5 vehicles will be removed on the northern side of the road, and 3 vehicles on the southern side
Crawford Road	Parking provision for 63 vehicles will be removed on the western side of the road
Rongotai Road (Kilbirnie Town Centre)	No changes to parking
Rongotai Road (Outside Kilbirnie Town Centre)	Parking provision reduced from 20 vehicles to 15 along the northern side of the road, and from 27 vehicles to 15 on the southern side
Yule Street	Parking provision for 1 vehicle will be removed from both sides at the intersection with Rongotai Road
Te Whiti Street	Parking provision for 1 vehicle will be removed from both sides at the intersection with Rongotai Road, and provision for 1 vehicle will be removed at the intersection with Coutts Street
Coutts Street	Parking provision will be reduced from 46 vehicles to 31 on the northern side of the road, and from 34 vehicles to 27 on the southern side

Route	Parking Provision Changes
Tirangi Road	Parking provision for 8 vehicles will be removed on the eastern side of the road, and 7 vehicles on the western side

### 6.2.3 Bus Stop Treatment

At bus stops, the cycle lane is raised to the same level as the footpath, and narrowed down to 1.5m. Additional painted markings, such as red stripes across the width of the cyclepath, and pedestrian and cyclist symbols, alert both the cyclist and the pedestrian to the presence of each other within this area.

There will be a 1m gap between the kerb and the cyclepath, which will allow bus users to step off the bus into a safe zone before crossing the cyclepath to the footpath. This zone will be highlighted in a different finish, such as exposed aggregate concrete, and will have a clear demarcation line, which will further differentiate it from the cyclepath.

### 6.2.4 Intersection and Driveway Treatment

Across each intersection and major driveway (such as one for a car park or business), green “stripes” will be painted at regular intervals to delineate the route of the cycle lane, and to warn drivers to expect cyclists crossing.

For private property driveways, there is no treatment proposed, as these will be used less frequently than a business or car park.

## 6.3 Post Traffic Resolution Developments

Following the Traffic Resolution public consultation, there were comments from the public which have led to elements of schemes being amended. These are as follows:

### 6.3.1 Crawford Road

Outside the Kilbirnie Tennis Club, the existing bus stop was moved east, closer to Duncan Terrace, to allow parking for three to four vehicles.

Further south, the proposed new pedestrian crossing was moved north from the position shown on the Traffic Resolution drawings. A section of on-road parking provision for nine vehicles was moved from the east side of Crawford Road, to the west side, and a 1m buffer between the cycle lane and parking provided to allow residents access to their properties. This has led to a loss of parking provision for seven vehicles in this section of Crawford Road.

### 6.3.2 Evans Bay Parade

The proposed cycle network map illustrates the long term vision of a connection between the Kilbirnie town centre to the Wellington city centre along Evans Bay Parade. On Evans Bay Parade north of State Highway one is an existing shared pathway which in the long term is proposed to be upgraded to a separated footpath and cycleway.

The preferred option from the previous round of consultation was Option C, “Kerbside parking both sides of the road with parking on both sides”. The proposed option for the traffic resolution stage has been changed from the preferred option during the previous round of consultation due to the narrow corridor and the desire to provide reasonable clearance to the trees.

WCC Parks staff were consulted on the previous option to include a cycle lane with Kilbirnie Park, but they did not support it. A review of an option to place the cycle lane between the parking and the pohutakawa trees was undertaken, and found that a number of tree limbs or roots would need to be removed, to build a smooth path without any height restrictions for cyclists.

The proposed two-way cycle path and segregated footpath along the eastern (St Patrick's College) side of Evans Bay Parade between State Highway 1 and Bay Road creates:

- a suitable facility within the existing transport corridor with suitable clearance from the trees;
- is consistent with the proposed cycleway facilities north of State Highway One;
- maintains parking on both sides of the road wherever possible.

The cycle path would be raised above the road level.

Between Kilbirnie Crescent and Rongotai Road, there is a short section of protected cycle lane for cyclists heading east onto Rongotai Road. For cyclists heading west from Rongotai Road to Evans Bay Parade, a new cycle path is to be constructed as part of Greater Wellington Regional Council's proposed bus hubs for Kilbirnie. The cycle path would be at footpath level, and run behind the new bus shelters. New cycle crossings would be installed across the Rongotai Road and Kilbirnie Crescent intersections, to allow cyclists to cross safely.

### **6.3.3 Coutts Street**

Following discussions with Greater Wellington Regional Council, the existing bus stops outside 203 and 212 Coutts Street will no longer be required when the new bus route service is introduced in July 2018. These stops will be converted to parking, increasing the parking provision by four vehicles along Coutts Street.

The existing stops outside 159 Coutts Street and Rongotai College will be retained for use by the school buses.

## 7. Safety Audit

A Safety Audit was commissioned by the Council from Stantec, and is currently being undertaken. The audit is based on the recommended options put forward for public consultation as part of the Traffic Resolution. Evans Bay Parade was not included in this audit, and will be done separately.

## 8. Conclusion

The Short List options that were agreed with the Working Group at Workshop 5 were taken forward to public consultation in September to determine the recommended option for each route. Following this first round of public consultation, a preferred option and target construction programme was identified by the Steering group made up of specialist consultants, WCC and NZTA staff. This preferred option list was created taking into consideration feedback from the previous round of consultation feedback, details such as bus stops and pedestrian crossing to be integrated on each route as well as cost considerations and the decisions made on streets nearby. The preferred options were then developed in plan and through graphic illustration to assist traffic resolution analysis and a further round of consultation feedback to confirm the recommended option.

Public consultation on the recommended option for all routes except Evans Bay Parade took place between 14 November and 11 December 2017, with Open days held on 22 and 25 November 2017.

A Safety Audit has been carried out on the recommended option for all routes except Evans Bay Parade.




The findings from the public consultation and the Safety Audit will be used to develop the detailed design of the schemes.




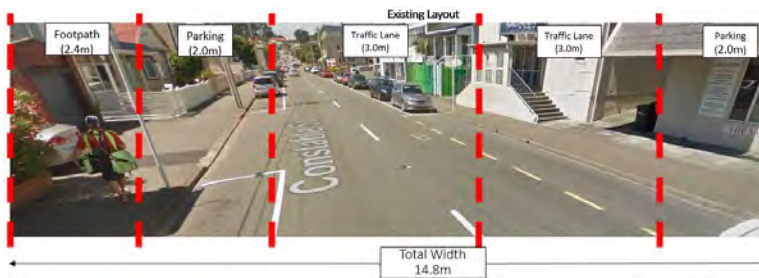
# APPENDICES

## Appendix A – Long List Options


From Workshop 3, the following Long List options were developed by the Working Group.

- **Constable Street – Typical Corridor Width 14.8m**

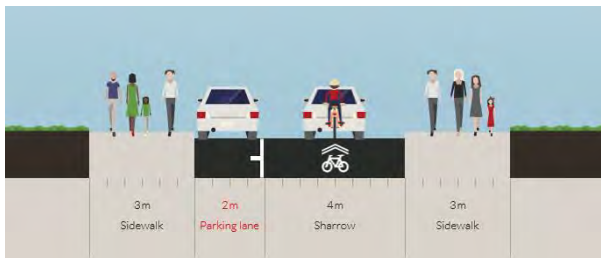

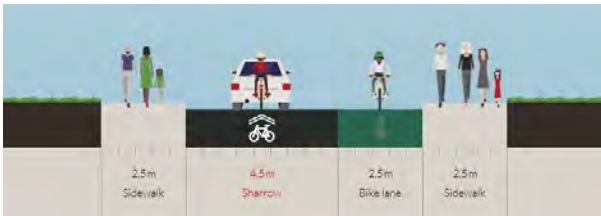

Constable Street Options	Taken Forward	Comments
<p>Option 1 - Shared path on one side and Sharrow markings, parking one side only</p> 	No	Provides a poor Level of Service for cyclists and pedestrians
<p>Option 2 - Two-way cycle path, no parking</p> 	No	Removal of parking not suitable for this road
<p>Option 3 - Protected cycle lane on one side and Sharrow markings, parking on one side only</p> 	Yes	Options 3A and 3B taken forward for the section of Constable Street between Coromandel Street and Alexandra Road


Constable Street Options	Taken Forward	Comments
<p>Option 4 - Protected cycle lane on both sides, no parking</p> 	No	Removal of parking not suitable for this road
<p>Option 5 - Sharrow markings both traffic lanes, parking both sides</p> 	Yes	Amended to accommodate protected cycle lane on uphill section between Coromandel Street and Alexandra Road only
<p>Option 6 - Shared path on both sides, no parking</p> 	No	Provides a poor Level of Service for cyclists and pedestrians Removal of parking not suitable for this road
<p>Option 7 - Do nothing</p> 	No	Does not provide any improvements





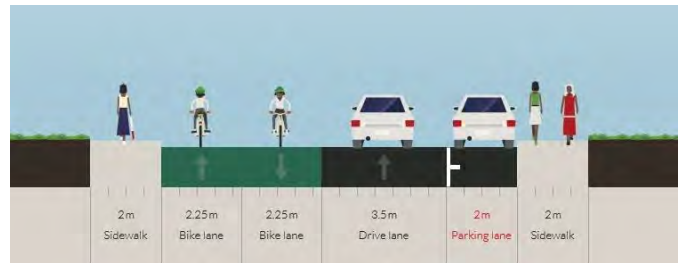
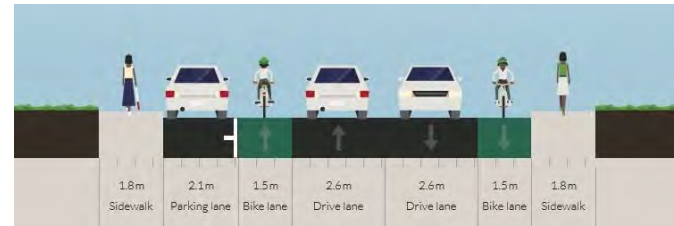
Constable Street Options	Taken Forward	Comments
<p>Option 8 - Cycle lane both sides, no parking</p> 	No	Removal of parking not suitable for this road



• **Wilson Street – One Way – Typical Corridor Width 12.0m**

Wilson Street – One way Options	Taken Forward	Comments
<p>Option 1 - Sharrow markings, parking one side only</p> 	Yes	Amended option with Sharrow markings and parking retained both sides
<p>Option 2 - Protected cycle lane on one side, parking one side only</p> 	No	Reduction of parking not suitable for this road
<p>Option 3 - Sharrow markings and contra-flow cycle-lane, no parking</p> 	No	Removal of parking not suitable for this road
<p>Option 4 - Sharrow markings and contra-flow cycle-lane, parking one side</p> 	Yes	Amended option with footpath widths kept as existing


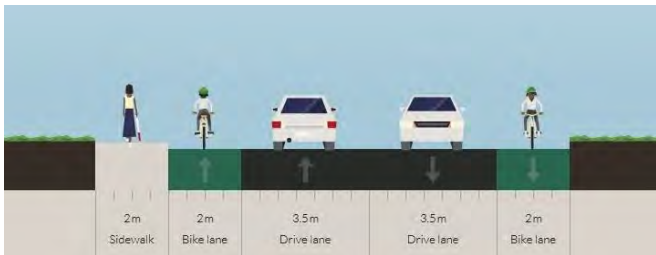
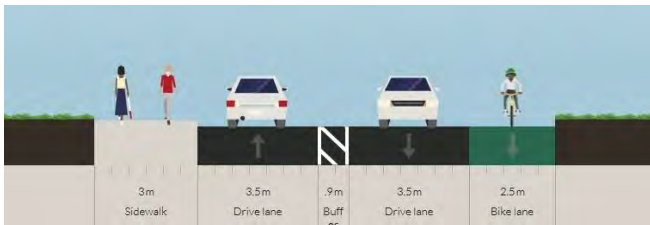

Wilson Street – One way Options	Taken Forward	Comments
<p data-bbox="395 369 689 407">Option 5 - Do nothing</p> 	No	Does not provide any improvements

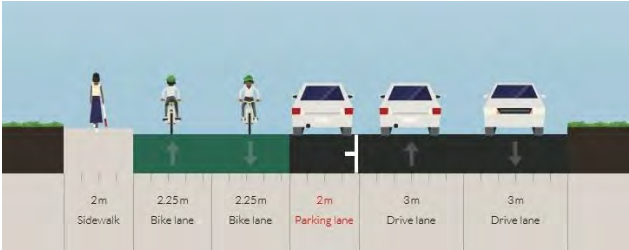



• **Wilson Street – Two Way – Typical Corridor Width 13.9m**

Wilson Street – Two way Options	Taken Forward	Comments
<p>Option 1 - Protected cycle lane on one side, parking one side only</p> 	No	<p>Provides a poor Level of Service for cyclists</p> <p>Removal of parking not suitable for this road</p>
<p>Option 2 - Protected cycle lane on one side (uphill) and Sharrow markings downhill, no parking</p> 	No	<p>Removal of parking not suitable for this road</p>
<p>Option 3 - Separated two-way cycle path on one side, one-way road, parking one side only</p> 	No	<p>Making Wilson Street one-way is beyond the scope of this project</p>
<p>Option 4 - Cycle lane both sides, parking one side only</p> 	Yes	<p>And also as amended option providing cycle lane on one side and Sharrow markings on the other</p>

Wilson Street - Two way Options	Taken Forward	Comments
<p>Option 5 - Sharrow markings both traffic lanes, parking both sides</p> 	Yes	
<p>Option 6 - Do nothing</p> 	No	Does not provide any improvements




- **Crawford Road – Typical Corridor Width 13.4m**

Crawford Road	Taken Forward	Comments
<p>Option 1 - Sharrow markings on downhill traffic lane, protected uphill cycle lane, parking one side only</p>  <p>2m Sidewalk, 2m Parking lane, 3.5m Sharrows, 3.5m Drive lane, 2.5m Bike lane</p>	Yes	
<p>Option 2 - Protected cycle lane both sides, no parking</p>  <p>2m Sidewalk, 2m Bike lane, 3.5m Drive lane, 3.5m Drive lane, 2m Bike lane</p>	No	Removal of parking not suitable for this road
<p>Option 3 - Protected uphill cycle lane only, no parking</p>  <p>3m Sidewalk, 3.5m Drive lane, 0.9m Buffer, 3.5m Drive lane, 2.5m Bike lane</p>	No	Removal of parking not suitable for this road
<p>Option 4 - Shared path for uphill cyclists, Sharrow markings on downhill lane, parking one side only</p>  <p>3m Sidewalk, 2m Parking lane, 3.5m Sharrows, 1.4m Buffer, 3.5m Drive lane</p>	No	Provides a poor Level of Service for cyclists and pedestrians Removal of parking not suitable for this road





Crawford Road	Taken Forward	Comments
<p>Option 5 - Separated two-way cycle path one side, parking one side only</p>  <p>2m Sidewalk, 2.25m Bike lane, 2.25m Bike lane, 2m Parking lane, 3m Drive lane, 3m Drive lane</p>	No	Provides poor connectivity to options at either end of this road
<p>Option 6 - Shared path one side, protected uphill cycle lane, parking one side only</p>  <p>4m Sidewalk, 2m Parking lane, 3m Drive lane, 3m Drive lane, 2.5m Bike lane</p>	No	Provides a poor Level of Service for cyclists and pedestrians Removal of parking not suitable for this road
<p>Option 7 - Do nothing</p>  <p>Existing Layout Footpath (1.9m), Parking (2.2m), Traffic Lane (3.6m), Buffer (2.1m), Traffic Lane (3.6m) Total Width 13.4m</p>	No	Does not provide any improvements
<p>Option 8 - Cycle lane both sides, no parking</p>  <p>1.7m Sidewalk, 1.8m Bike lane, 6m Buffer, 3.2m Drive lane, 3.2m Drive lane, 9m Buffer, 1.8m Bike lane</p>	No	Removal of parking not suitable for this road



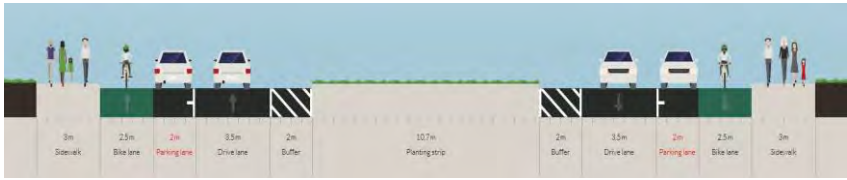
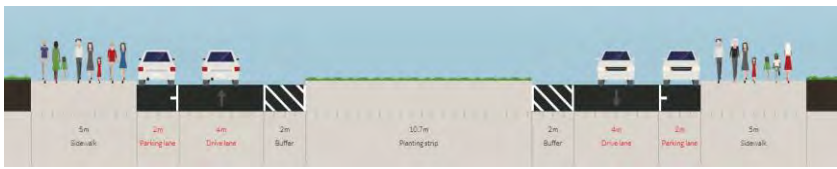


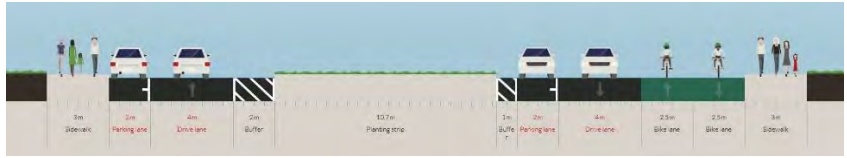
- **Rongotai Road – Kilbirnie Town Centre - Typical Corridor Width**  
**20.0m**

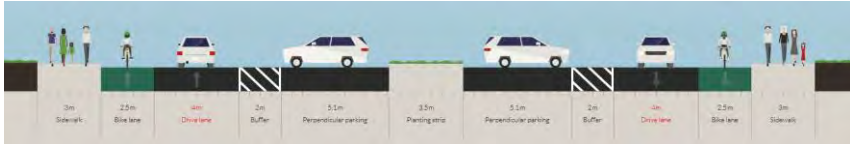



Rongotai Road – Kilbirnie Town Centre	Taken Forward	Comments
<p>Option 1 - Protected cycle lane both sides, parking both sides</p> 	Yes	As amended options that retains existing footpath widths
<p>Option 2 - Separated two way cycle path one side, parking both sides</p> 	No	Provides a poor Level of Service for pedestrians due to narrowed footpath width
<p>Option 3 - Shared path both sides, parking both sides</p> 	No	Provides a poor Level of Service for cyclists and pedestrians



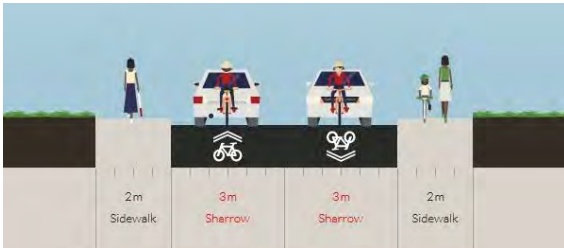



Rongotai Road – Kilbirnie Town Centre	Taken Forward	Comments
<p>Option 4 - Sharrow markings in both traffic lanes, parking both sides</p> 	No	Provides a poor Level of Service for cyclists
<p>Option 5 - Do nothing</p> 	No	Does not provide any improvements
<p>Option 6 - Cycle lane both sides, parking both sides</p> 	No	Provides a poor Level of Service for pedestrians due to narrowed footpath width
<p>Option 7 - Cycle lane both sides, no parking</p> 	Yes	And also as amended option providing parking on one side only

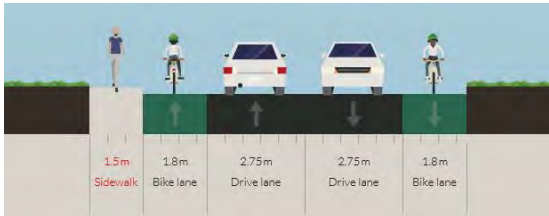

- Rongotai Road – Outside Kilbirnie Town Centre – Typical Corridor Width 36.7m**

Rongotai Road – Outside Kilbirnie Town Centre	Taken Forward	Comments
<p>Option 1 - Protected cycle lane on both sides, parking both sides</p> 	Yes	As amended option with wider buffer for cycle lane and wider central median
<p>Option 2 - Shared path on both sides, parking both sides</p> 	No	Provides a poor Level of Service for cyclists and pedestrians
<p>Option 3 - Cycle lanes in median strip, parking both sides</p> 	No	Provides poor connectivity to options at either end of this road
<p>Option 4 - Sharrow markings in both traffic lanes, parking both sides</p> 	No	Provides a poor Level of Service for cyclists
<p>Option 5 - Separated two-way cycle lane on one side, parking both sides</p> 	No	Provides a poor Level of Service for cyclists

Rongotai Road – Outside Kilbirnie Town Centre	Taken Forward	Comments
<p>Option 6 - Protected cycle lane on both sides, angled parking in median</p> 	No	<p>Provides a poor Level of Service for residents</p> <p>Safety issues for cars reversing</p>
<p>Option 7 - Do nothing</p> <p>Westbound (looking towards the Airport)</p>  <p>Eastbound (looking towards Kilbirnie)</p> 	No	<p>Does not provide any improvements</p>
<p>Option 8 - Cycle Lane both sides, parking both sides</p> 	Yes	<p>As amended option with painted buffer between cycle lane and parking</p>




• **Childers Terrace – Typical Corridor Width 10.5m**

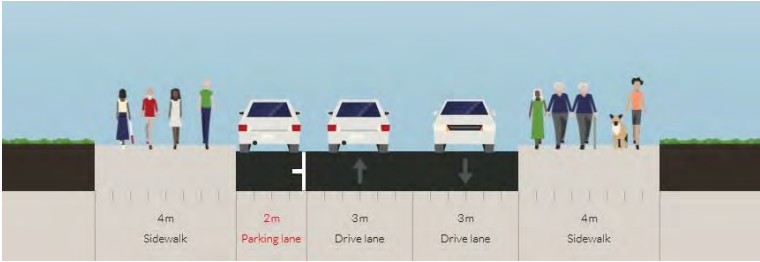

Childers Terrace	Taken Forward	Comments
<p>Option 1 - Sharrow markings in both traffic lanes</p> 	Yes	As amended option retaining existing footpath widths
<p>Option 2 - Shared path on one side</p> 	No	Provides a poor Level of Service for cyclists and pedestrians
<p>Option 3 - Protected cycle lane on both sides, one-way traffic lane</p> 	No	Making Childers Terrace one-way is beyond the scope of this project
<p>Option 4 - Separated two-way cycle lane on one side, footpath one side only</p> 	Yes	As amended option with cyclepath on other side of road

Childers Terrace	Taken Forward	Comments
<p>Option 5 - Cycle lane both sides, footpath one side only</p> 	No	Provides a poor Level of Service for pedestrians
<p>Option 6 - Do nothing</p> 	No	Does not provide any improvements







- **Queens Drive – Typical Corridor Width 14.7m**





Queens Drive	Taken Forward	Comments
<p>Option 1 - Sharrow markings on both traffic lanes, parking both sides</p>  <p>2m Sidewalk 2m Parking lane 3.5m Sharrow 3.5m Sharrow 2m Parking lane 2m Sidewalk</p>	No	Provides a poor Level of Service for cyclists
<p>Option 2 - Separated two-way cycle path on one side, no parking</p>  <p>2m Sidewalk 2.25m Bike lane 2.25m Drive lane 3m Drive lane 3m Drive lane 2m Sidewalk</p>	Yes	As amended option with cyclepath on other side of road, parking on one side only, and footpath widths retained as existing
<p>Option 3 - Cycle lane on both sides, parking on one side only</p>  <p>2m Sidewalk 1.8m Bike lane 3m Drive lane 3m Drive lane 2m Parking lane 1.8m Bike lane 2m Sidewalk</p>	Yes	As amended option with footpath widths retained as existing



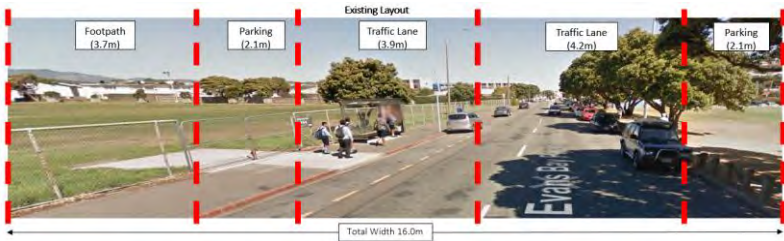
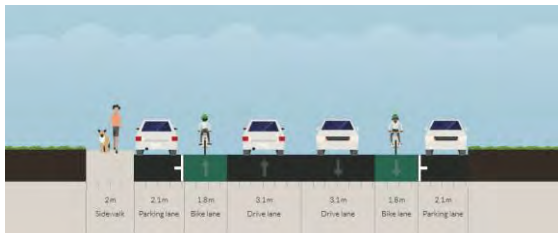
Queens Drive	Taken Forward	Comments
<p>Option 4 - Shared path on both sides, parking on one side only</p>  <p>The diagram shows a cross-section of a road with the following widths from left to right: 4m Sidewalk, 2m Parking lane, 3m Drive lane, 3m Drive lane, and 4m Sidewalk. Pedestrians are shown on the sidewalks, and cars are shown in the drive lanes.</p>	No	<p>Provides a poor Level of Service for cyclists and pedestrians</p> <p>Removal of parking not suitable for this road</p>
<p>Option 5 - Do nothing</p>  <p>The photograph shows the existing layout of Queens Drive with the following widths labeled: Footpath (2.7m), Parking (2.0m), Traffic Lane (3.6m), Traffic Lane (3.6m), Parking (2.0m), and Footpath (1.3m). The total width is 14.7m. The road is flanked by buildings on the left and a hillside on the right.</p>	No	Does not provide any improvements

• **Evans Bay Parade - Typical Corridor Width 16.0m**




Evans Bay Parade	Taken Forward	Comments
<p>Option 1 - Shared path one side, bus lane/parking one side, parking &amp; narrow footpath on opposite side</p>  	No	Provides a poor Level of Service for cyclists and pedestrians
<p>Option 2 - Protected cycle lanes &amp; narrow footpath both sides, bus lane/parking one side, parking opposite side</p>  	Yes	As amended option which retains footpath width as existing, and removes the shared bus/parking lane







Evans Bay Parade	Taken Forward	Comments
<p>Option 3 - Protected cycle lane one side, wide footpath one side, parking one side only</p> 	No	<p>Provides a poor Level of Service for cyclists and pedestrians</p> <p>Removal of parking not suitable for this road</p>
<p>Option 4 - Separated two-way cycle lane one side, parking one side only</p> 	No	<p>Removal of parking not suitable for this road</p>
<p>Option 5 - Shared path one side, parking one side only, protected cycle lane one side</p> 	No	<p>Provides a poor Level of Service for cyclists and pedestrians</p> <p>Removal of parking not suitable for this road</p>
<p>Option 6 - Sharrow markings on both traffic lanes, bus lane one side, parking one side only</p> 	No	<p>Provides a poor Level of Service for cyclists</p>

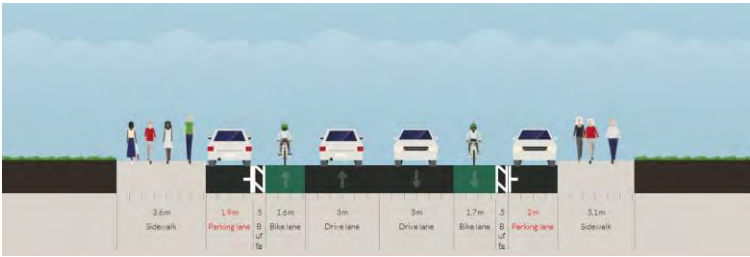
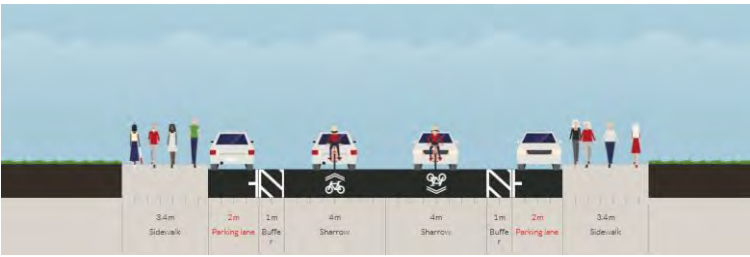


Evans Bay Parade	Taken Forward	Comments
<p>Option 7 - Protected cycle lane both sides, parking one side only</p> 	Yes	
<p>Option 8 - Shared bus/cycle lane one side, cycle lane opposite side, parking one side only</p> 	No	<p>Provides a poor Level of Service for cyclists</p> <p>Removal of parking not suitable for this road</p>
<p>Option 9 - Do nothing</p> 	No	Does not provide any improvements
<p>Option 10 - Cycle lane both sides, parking both sides</p> 	Yes	

- **Yule Street – Typical Corridor Width 20.6m**



Yule Street	Taken Forward	Comments
<p>Option 1 - Protected cycle lane both sides, parking one side only</p> 	No	Removal of parking not suitable for this road
<p>Option 2 - Sharrow markings on both sides, parking both sides</p> 	Yes	As amended options which retains existing footpath widths
<p>Option 3 - Protected cycle lane both sides, parking both sides</p> 	No	Provides a poor Level of Service for pedestrians Moving of kerbs not cost effective for this road

Yule Street	Taken Forward	Comments
<p>Option 4 - Separated two-way cycle lane both sides, parking both sides</p> 	No	<p>Provides poor connectivity to options at either end of this road</p> <p>Moving of kerbs not cost effective for this road</p>
<p>Option 5 - Shared path both sides, parking both sides</p> 	No	<p>Provides a poor Level of Service for cyclists and pedestrians</p>
<p>Option 6 - Do nothing</p> 	No	<p>Does not provide any improvements</p>
<p>Option 7 - Cycle lane both sides, parking both sides</p> 	Yes	<p>As amended option with existing footpath widths retained</p>


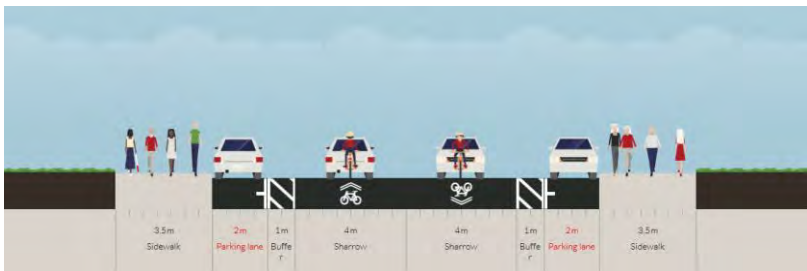

- **Te Whiti Street – Typical Corridor Width 20.9m**




Te Whiti Street	Taken Forward	Comments
<p>Option 1 - Narrow traffic lanes, parking and cycle lane both sides</p> 	Yes	As amended option with narrower traffic lanes
<p>Option 2 - Sharrow markings on both traffic lanes, parking both sides</p> 	No	Provides a poor Level of Service for cyclists
<p>Option 3 - Protected cycle lane on both sides, parking both sides</p> 	No	Moving of kerbs not cost effective for this road
<p>Option 4 - Separated two-way cycle path one side, parking both sides</p> 	No	<p>Provides poor connectivity to options at either end of this road</p> <p>Moving of kerbs not cost effective for this road</p>



Te Whiti Street	Taken Forward	Comments
<p>Option 5 - Shared path both sides, parking both sides</p>  <p>The diagram shows a cross-section of a street with a central drive lane (3m) and two parking lanes (2m each) on either side. Sidewalks are 5m wide on both sides. Pedestrians and cyclists are shown using the sidewalks. The total width is 20.9m.</p>	No	Provides a poor Level of Service for cyclists and pedestrians
<p>Option 6 - Do nothing</p>  <p>The diagram shows the existing layout of Te Whiti Street. It includes a central traffic lane (3.7m) and two cycle lanes (1.4m each) on either side. Parking lanes are 2.0m wide on both sides. Footpaths are 3.1m wide on both sides. The total width is 20.9m.</p>	No	Does not provide any improvements




- **Coutts Street – Typical Corridor Width 21.5m**



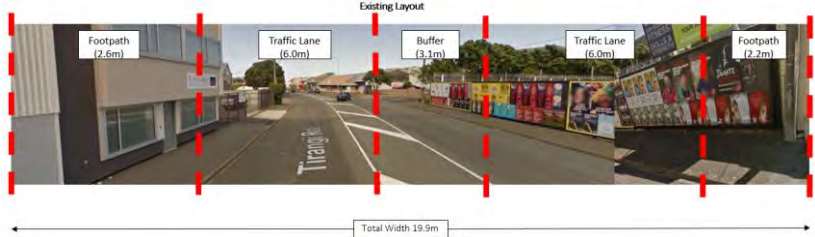

Coutts Street	Taken Forward	Comments
<p>Option 1 - Narrow traffic lanes, parking and cycle lane both sides</p> 	Yes	
<p>Option 2 - Sharrow markings on both traffic lanes, parking both sides</p> 	No	Provides a poor Level of Service for cyclists
<p>Option 3 - Protected cycle lane on both sides, parking both sides</p> 	Yes	As amended option, which retains existing footpath widths

Coutts Street	Taken Forward	Comments
<p>Option 4 - Separated two-way cycle path one side, parking both sides</p> 	No	Provides poor connectivity to options at either end of this road
<p>Option 5 - Shared path both sides, parking both sides</p> 	No	Provides a poor Level of Service for cyclists and pedestrians
<p>Option 6 - Do nothing</p> 	No	Does not provide any improvements



- Tirangi Road – Typical Corridor Width 19.9m**

Tirangi Road	Taken Forward	Comments
<p>Option 1 - Separated two-way cycle path one side, no parking</p> 	No	Provides poor connectivity to options at either end of this road
<p>Option 2 - Shared path one side, Sharrow markings on both traffic lanes, no parking</p> 	No	Provides a poor Level of Service for cyclists and pedestrians
<p>Option 3 - Sharrow markings on both traffic lanes, parking both sides</p> 	No	Provides a poor Level of Service for cyclists No requirement for parking in this section of Tirangi Road

Tirangi Road	Taken Forward	Comments
<p>Option 4 - Protected cycle lane on both sides, parking both sides</p> 	Yes	As amended option which removes parking on both sides
<p>Option 5 - Protected median two-way cycle path, no parking</p> 	No	Provides poor connectivity to options at either end of this road
<p>Option 6 - Do nothing</p> 	No	Does not provide any improvements
<p>Option 7 - Cycle lane both sides, parking both sides</p> 	No	<p>Moving of kerbs not cost effective for this road</p> <p>No requirement for parking in this section of Tirangi Road</p>

## **Appendix B – MCA Assessment**

Overleaf is a copy of the MCA assessment carried out for Crawford Road.

Crawford Road

	Criteria	Consideration	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6	Option 7	Option 8
Objectives Fit	Effectiveness meeting WCC objectives	Achieve a high level of service for cyclists within an integrated transport network	moderate-high	high	moderate-high	low-moderate	high	moderate	low	low-moderate
		Improve cycling infrastructure and facilities so that cycling makes a much greater contribution to network efficiency, effectiveness and resilience	moderate-high	high	moderate-high	low-moderate	high	moderate	low	low-moderate
		Cycling is a viable and attractive transport choice	moderate	high	moderate-high	moderate	high	moderate	low	low-moderate
		The crash rate, number and severity of crashes involving people on bikes is reduced	moderate	high	moderate	moderate	high	moderate-high	low	moderate
		Providing transport choices by increasing the opportunity for people to ride bikes so as to improve the sustainability, liveability and attractiveness of Wellington	moderate-high	high	moderate-high	moderate	high	moderate	low	moderate
	Effectiveness meeting Community objectives	Improve the safety of road users, prioritising those most vulnerable.	moderate-high	high	moderate	low-moderate	high	moderate		moderate
		Improve connections for pedestrians and cyclists	moderate-high	high	moderate	low-moderate	moderate-high	moderate		moderate
		Improve the sustainability, liveability and attractiveness of Kilbirnie	moderate	moderate-high	moderate	moderate	moderate-high	moderate		moderate
		Improve the level of service for pedestrians	moderate	moderate	moderate-high	low	moderate	low-moderate		moderate
		Improve the level of service for cyclists	moderate-high	high	moderate	low-moderate	high	moderate		moderate
		Improve the level of service for buses and bus users	moderate-high	high	moderate-high	moderate-high	high	high		moderate-high
Effects	Cycle Network Fit	Alignment of option to any existing adjacent cycle infrastructure	+	++	+	-	+	+		+
	Transport Network Fit	Alignment to transport corridor function	+	0	0	0	+	+		0
	Cycle Effects	LOS and safety for cyclists	+	++	0	-	++	0		+
	Pedestrians Effects	LOS and safety for pedestrians	0	0	+	--	0	-		0
	Bus Users Effects	LOS and safety for bus users	+	++	+	+	++	++		+
	Motorised Traffic Effects	LOS and safety for other motorised traffic	+	++	+	+	++	++		+
	Parking Effects	Number of parks available	-	--	--	-	-	-		--
		Location of parks	0	--	--	0	0	0		--
		Suitability of parking provision (balance between residential, commercial and commuter)	0	0	0	0	0	0		--
	Property Effects	Effect of acquisition on residual land	0	0	0	0	-	-		0
		Effect on adjacent land-use	0	-	0	0	0	0		-
		Effect on access to business (incl. deliveries and ease of access)	N/A	N/A	N/A	N/A	N/A	N/A		N/A

Objectives Effectiveness

low
low-moderate
moderate
moderate-high
high

Effects : 5 level rating system

-- High Negative effect
- Negative effect
0 Neutral / No impact
+ Positive effect
++ High Positive effect

	Criteria	Consideration	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6	Option 7	Option 8
Effects	Environmental Effects	Light	+	0	0	-	-	0		0
		CPTED (Crime prevention through environmental design) where applicable	0	+	+	0	0	0		+
		Landscaping	0	0	0	0	0	0		0
		Marine	0	0	0	0	0	0		0
		Emissions	+	+	+	+	+	+		+
		Natural Hazards	0	0	0	0	0	0		0
		Resilience	0	0	0	0	0	0		0
		Urban Design	0	+	0	+	+	+		0
	Cultural Effects	Based on mana whenua feedback on cultural effects	0	0	0	0	0	0		0
Implementation	Planning Feasibility	Plan alignment (District, Reserves, Other)	+	++	+	+	+	+		+
		Approvals Risk (consents etc.)	0	--	--	0	0	0		--
	Delivery Feasibility	Traffic disruption during construction	-	--	--	-	--	--		-
		Business disruption during construction	N/A	N/A	N/A	N/A	N/A	N/A		N/A
	Funding Feasibility	Delivery cost within likely available funding	+	+	+	+	+	+		+
		Delivery within UCP timetable (if applicable)	++	++	++	++	++	++		++
Cost	Total Cost	Implementation cost including design, consenting, construction and supervision	\$	\$	\$\$	\$	\$	\$\$		\$

- Option 1

Option 2

Option 3

Option 4

Option 5

Option 6

Option 7

Option 8
- Sharrow markings on downhill traffic lane, protected uphill cycle lane, parking one side only

Protected cycle lane both sides, no parking

Protected uphill cycle lane only, no parking  
Shared path for uphill cyclists, Sharrow markings on downhill lane, parking one side only

only

Separated two-way cycle path one side, parking one side only

Shared path one side, protected uphill cycle lane, parking one side only

Do nothing

Cycle lane both sides, no parking

Feasibility	Risk / Disruption
0 Low	0 Low
+ Medium	- Medium
++ High	-- High

Cost

\$\$\$ High Cost (> \$1M)
\$\$ Medium Cost (\$500k - \$1M)
\$ Low Cost (< \$500k)

## **Appendix C – Short List Options**

The following Short List options were agreed at Workshop 5 by the Working Group to be taken forward to public consultation.



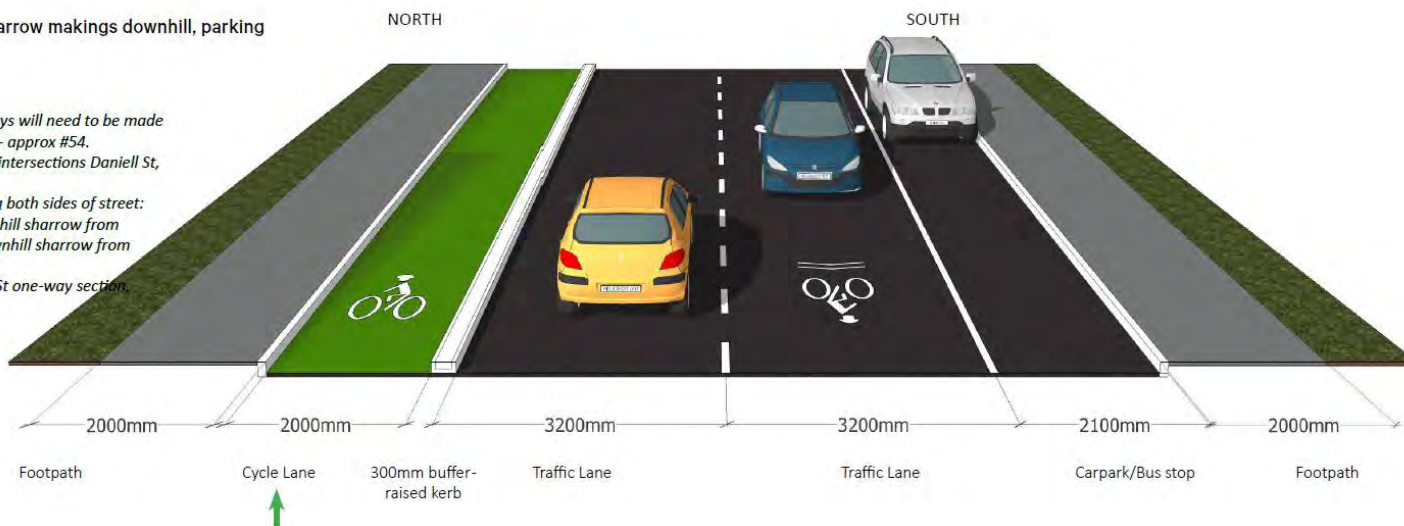
## Constable Street – Riddiford Street to Coromandel Street:

### OPTION 3

Protected cycle lane uphill, sharrow markings downhill, parking on one side only

#### Note:

- Footpath widths narrowed
- Provision for bus stops and driveways will need to be made
- Parking removed on the north side - approx #54.
- Signalised crossing/traffic lights at intersections Daniell St, Owen St and Coromandel St
- Alternative Option to retain parking both sides of street; Protected uphill cycle lane and downhill sharrow from Coromandel St to Alexandra Rd. Downhill sharrow from Coromandel St to Riddiford St. (Needs to be combined with Wilson St one-way section, Option 1a - uphill sharrow)

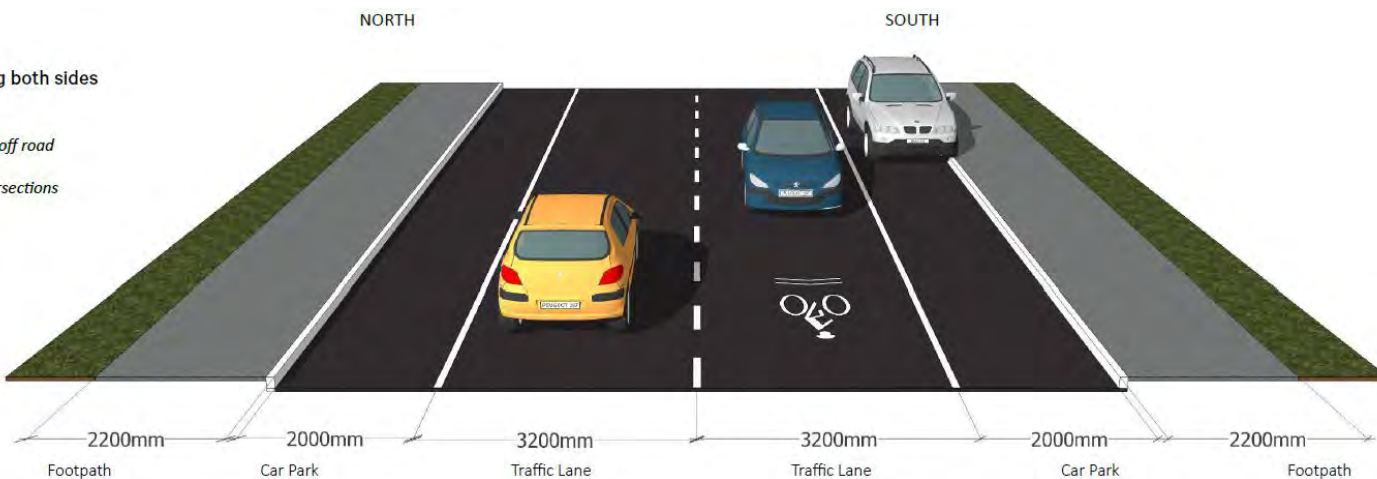


### OPTION 5A

Sharrow marking downhill, parking both sides

#### Note:

- Option 5 amended - sharrow downhill
- Provision for driveways, bus stops and off road parking will need to be made
- Signalised crossing/traffic lights at intersections Daniell St, Owen St and Coromandel St
- Parking retained both sides



Short List Designation

OPTION A

OPTION B

## Constable Street – Coromandel Street to Alexandra Road:

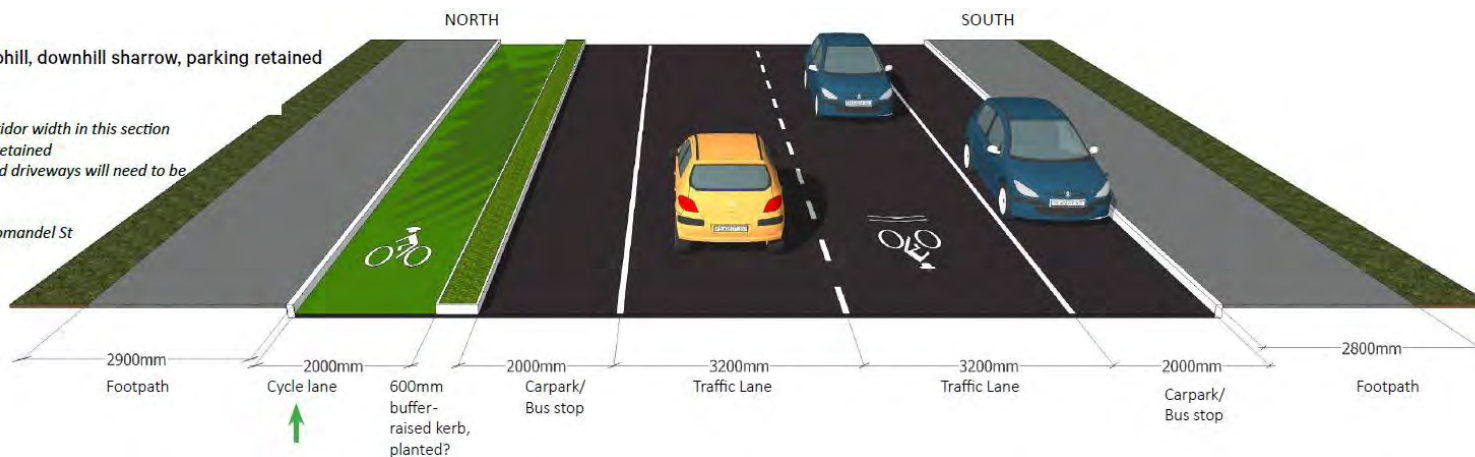
Short List Designation

### OPTION 3A

Protected cycle lane uphill, downhill sharrow, parking retained both sides

Note:

- Option 3 amended to corridor width in this section
- Existing footpath widths retained
- Provision for bus stops and driveways will need to be made
- Parking retained
- Signalised crossing at Coromandel St



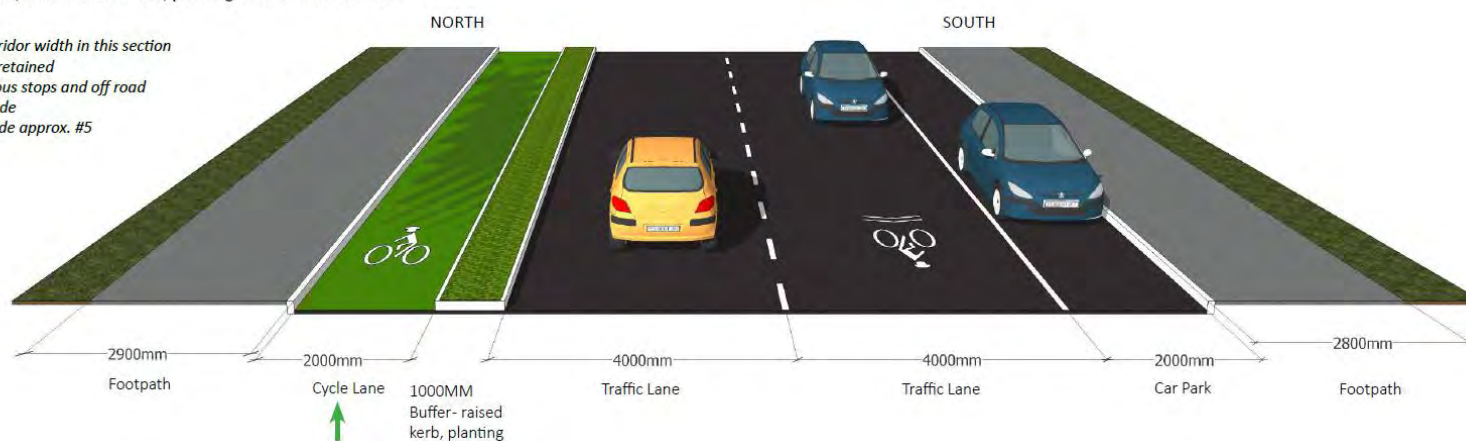
OPTION A

### OPTION 3B

Protected cycle lane uphill, downhill sharrow, parking retained south side

Note:

- Option 3 amended to corridor width in this section
- Existing footpath widths retained
- Provision for driveways, bus stops and off road parking will need to be made
- Parking removed north side approx. #5



OPTION B



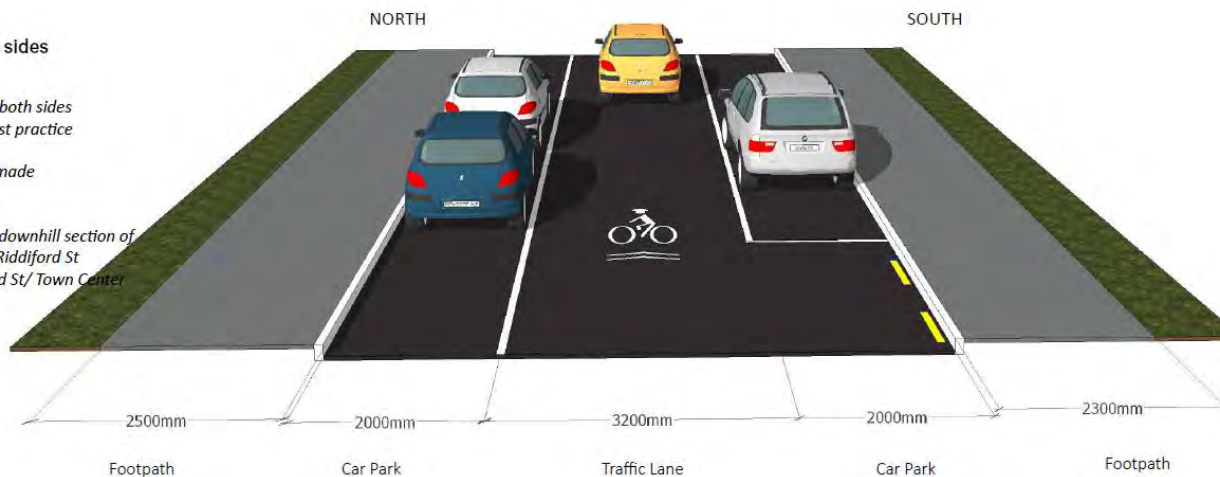
## Wilson Street – One Way

Short List Designation

### OPTION 1A

Sharrow markings and parking both sides

- Note:*
- Option 1 amended to retain parking on both sides
  - Note: uphill sharrow is not considered best practice*
  - Footpath width kept as existing
  - Provision for driveways will need to be made
  - Parking retained on north side
  - Giveaway intersection Daniell St
  - Possible combination with sharrows on downhill section of Constable St between Alexandra Rd and Riddiford St
  - Potential for shared space over Riddiford St/ Town Center section of road

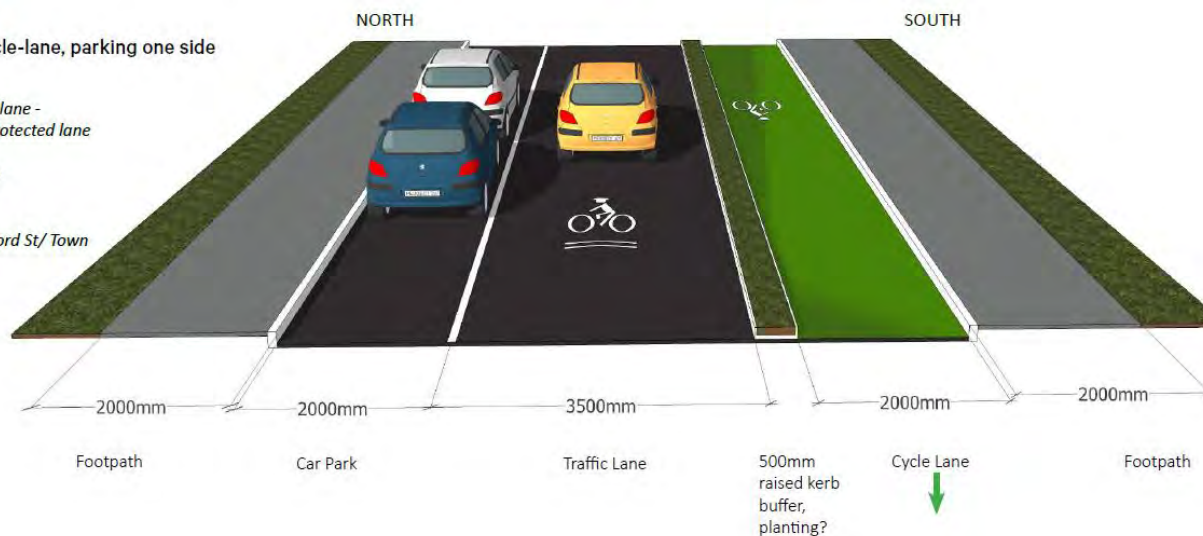


OPTION B

### OPTION 4A

Sharrow markings and contra-flow cycle-lane, parking one side

- Note:*
- Option 4 amended to add protection to cycle lane -
  - Note: best practice guidance is for an uphill protected lane*
  - Footpaths narrowed - new kerb required
  - Provision for driveways will need to be made
  - Parking removed on south side approx #15.
  - Giveaway intersection Daniell St
  - Potential for shared space over lower Riddiford St/ Town



OPTION A

## Wilson Street – Two Way

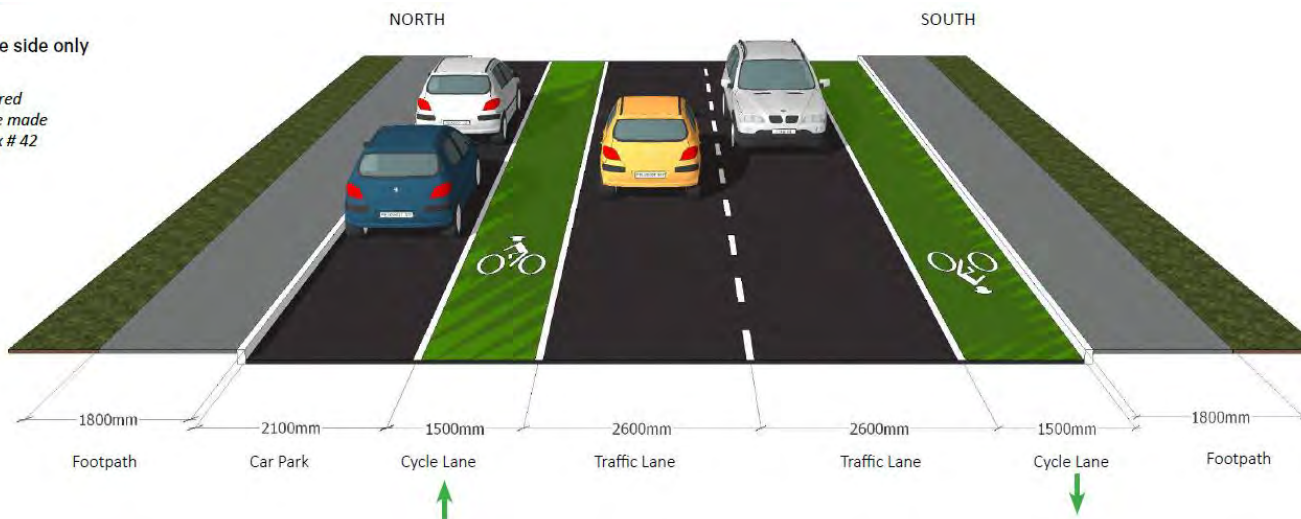
Short List Designation

### OPTION 4

Cycle lane both sides, parking one side only

#### Note:

- Footpaths narrowed - new kerb required
- Provision for driveways will need to be made
- Parking removed on south side approx # 42
- Giveaway intersections



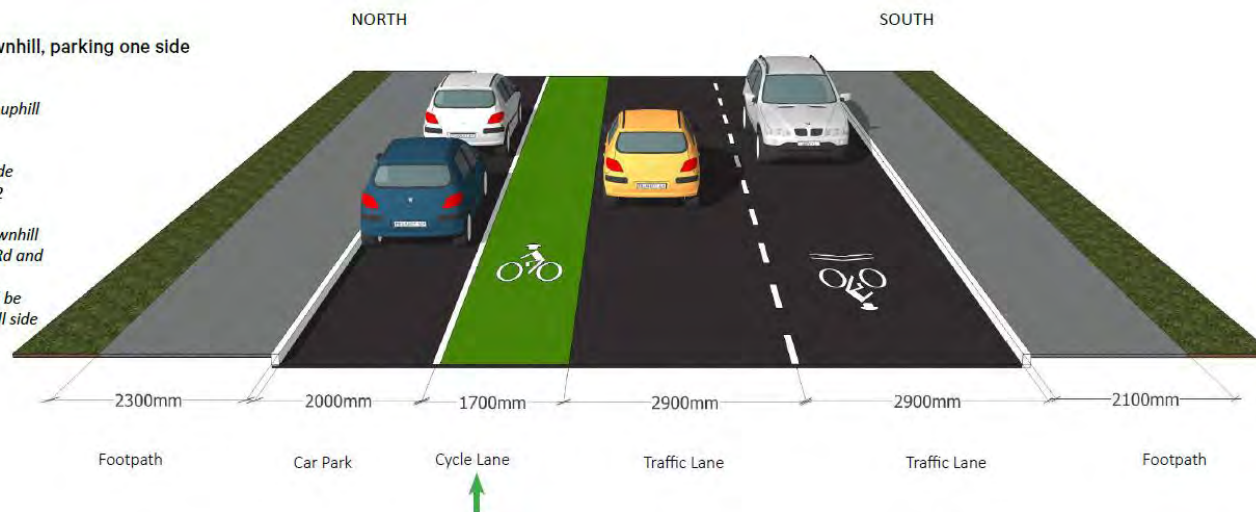
OPTION A

### OPTION 4A

Cycle lane on uphill side, sharrow downhill, parking one side

#### Note:

- Option 4 modified with wider traffic lanes, uphill cycle lane and downhill sharrow
- Footpath width kept as per existing
- Provision for driveways will need to be made
- Parking removed on south side approx # 42
- Giveaway intersections
- Possible combination with sharrows on downhill section of Constable St between Alexandra Rd and Riddiford St
- Alternative 1.5m protected cycle lane could be accommodated if parking retained on downhill side



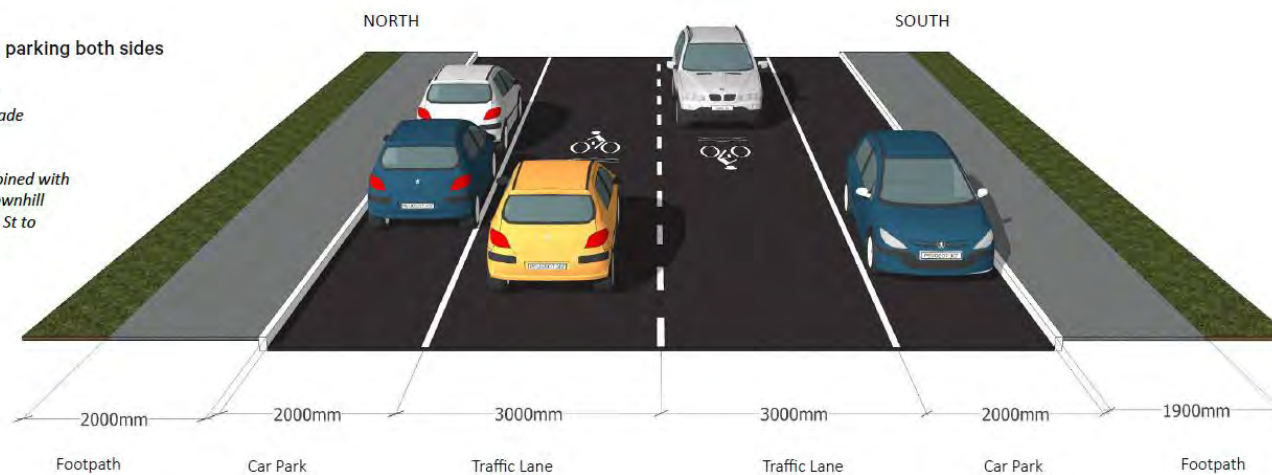
OPTION B

# OPTION 5

Sharrow markings both traffic lanes, parking both sides

Note:

- Footpaths narrowed - new kerb required
- Provision for driveways will need to be made
- Parking retained on both sides
- Giveaway intersections
- Possible alternative - uphill sharrow combined with Wilson St - One Way uphill sharrow and downhill sharrow on Constable St from Coromandel St to Riddiford St



# OPTION C

## Crawford Road

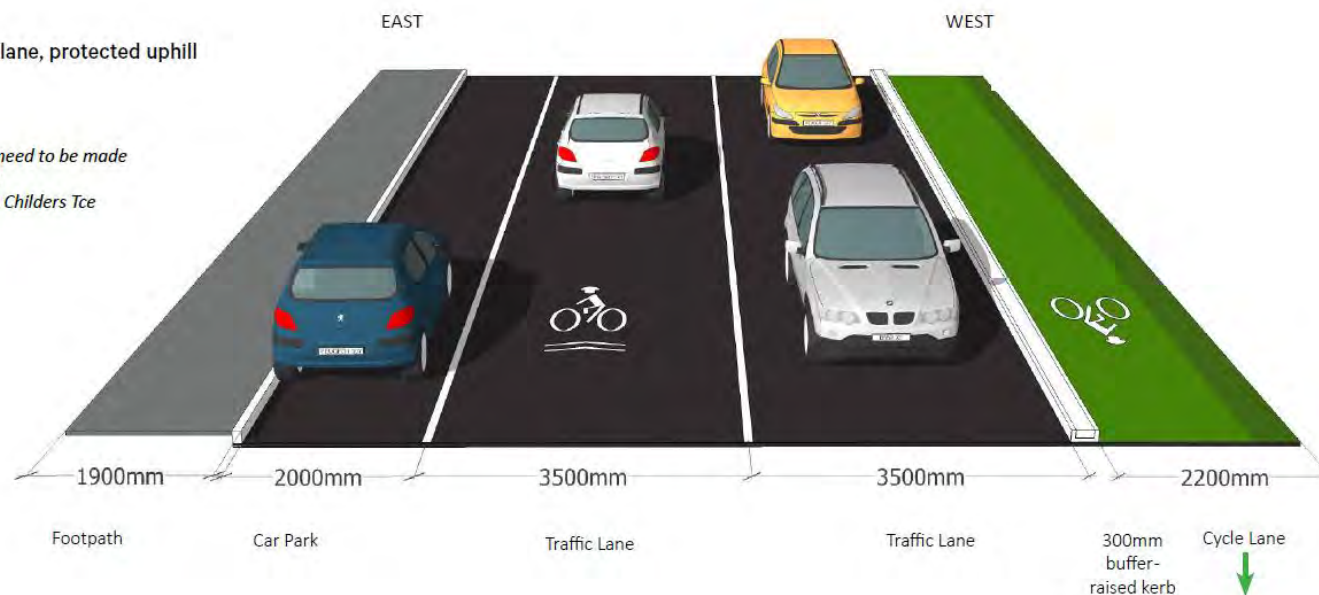
Short List Designation

### OPTION 1

Sharrow markings on downhill traffic lane, protected uphill cycle lane, parking one side only

*Note:*

- Footpath width kept existing
- Provision for bus stops and driveways will need to be made
- Parking removed on west side approx # 43
- Roundabout intersection at Wellington Rd, Childers Tce Giveway to Crawford Rd



### OPTION A



## Rongotai Road – Kilbirnie Town Centre

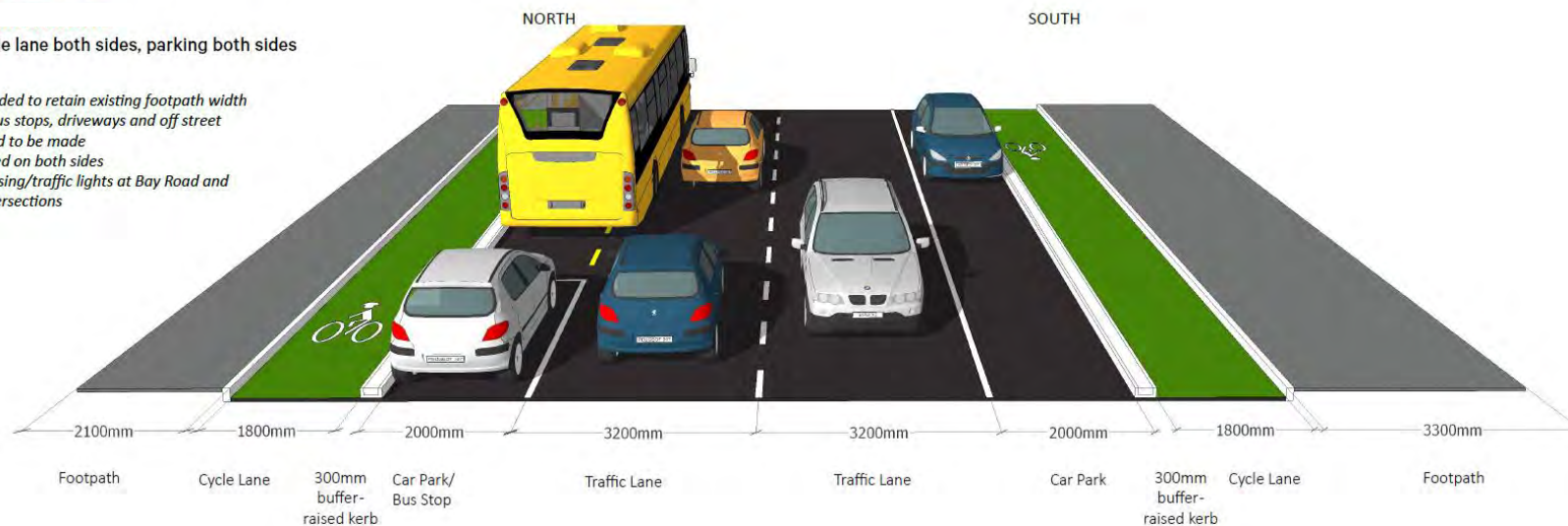
Short List Designation

### OPTION 1A

Protected cycle lane both sides, parking both sides

**Note:**

- Option 1 amended to retain existing footpath width
- Provision for bus stops, driveways and off street parking will need to be made
- Parking retained on both sides
- Signalised crossing/traffic lights at Bay Road and Onepu Road intersections



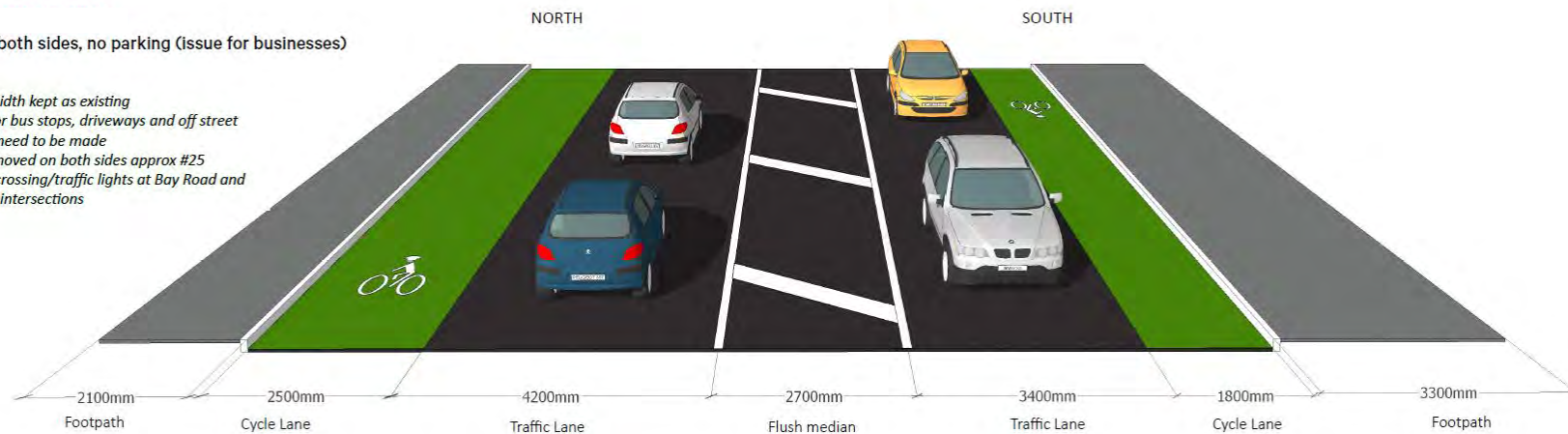
OPTION B

### OPTION 7

Cycle lane both sides, no parking (issue for businesses)

**Note:**

- Footpath width kept as existing
- Provision for bus stops, driveways and off street parking will need to be made
- Parking removed on both sides approx #25
- Signalised crossing/traffic lights at Bay Road and Onepu Road intersections



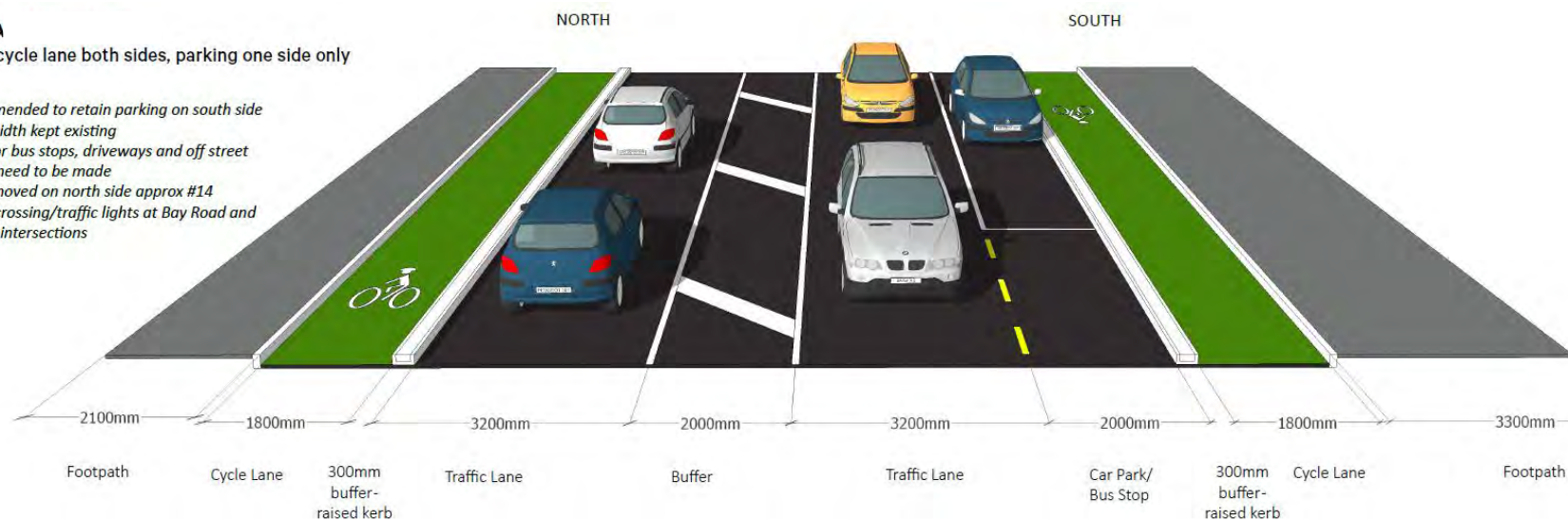
OPTION A

# **OPTION 7A**

Protected cycle lane both sides, parking one side only

## *Note:*

- Option 7 amended to retain parking on south side
- Footpath width kept existing
- Provision for bus stops, driveways and off street parking will need to be made
- Parking removed on north side approx #14
- Signalised crossing/traffic lights at Bay Road and Onepu Road intersections



**OPTION C**

## Rongotai Road – Outside Kilbirnie Town Centre

Short List Designation

### OPTION 1A

Protected cycle lane on both sides, parking both sides

#### Note:

- Option 1 (preferred) amended to retain existing footpath width
- Provision for bus stops, driveways and off street parking will need to be made
- Parking retained
- Wider parking bays provided to allow for buses to use as stops
- Alternative option -buffer to edge of car park could be widened to >1m - green median width reduced
- Signalised crossing/traffic lights to Evans Bay Rd



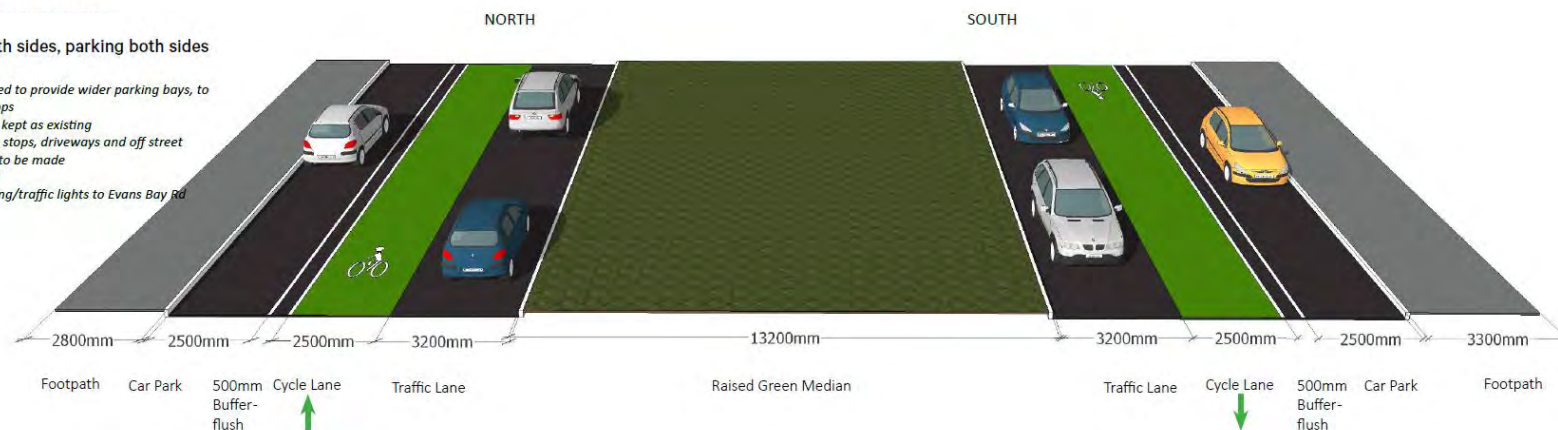
OPTION A

### OPTION 8A

Cycle Lane both sides, parking both sides

#### Note:

- Option 8 amended to provide wider parking bays, to be used as bus stops
- Footpath widths kept as existing
- Provision for bus stops, driveways and off street parking will need to be made
- Parking retained
- Signalised crossing/traffic lights to Evans Bay Rd



OPTION B



## Childers Terrace

Short List Designation

### OPTION 1A

Sharrow markings in both traffic lanes

Note:

- Existing footpath widths remain
- Provision for driveways will need to be made
- Parking removed approx # 15
- Giveway intersection to Crawford Rd- and Coutts St



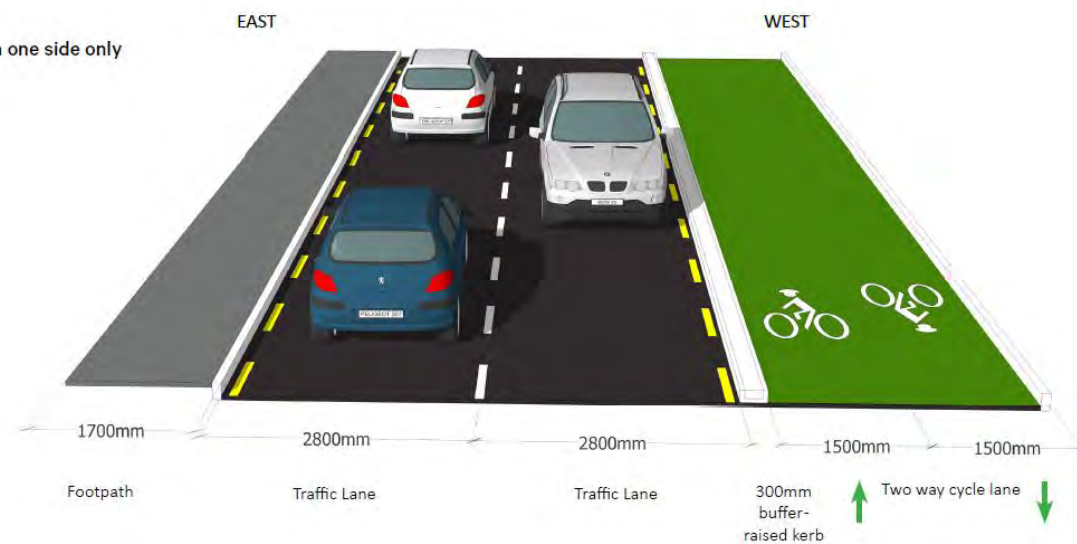
OPTION A

### OPTION 4A

Protected two-way cycle lane on one side, footpath on one side only

Note:

- Option 4 amended to retain footpath width on east side
- Provision for driveways will need to be made
- Parking removed approx # 15
- Giveway intersection to Crawford Rd and Coutts St
- Option could be continued on Queens Dr - Option 2a



OPTION B



## Queens Drive

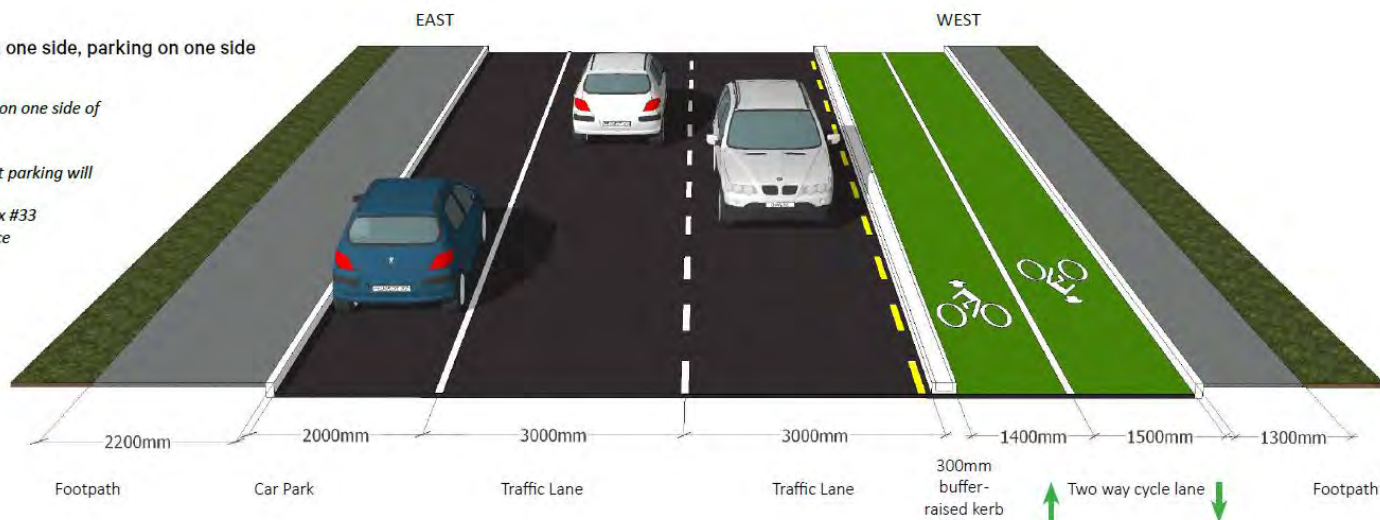
Short List Designation

### OPTION 2A

Protected two-way cycle path on one side, parking on one side

**Note:**

- Option 2 amended to retain parking on one side of the street
- Footpath widths kept as existing
- Provision for driveways and off street parking will need to be made
- Parking removed on west side approx #33
- Consistent with Option 4a Childers Tce



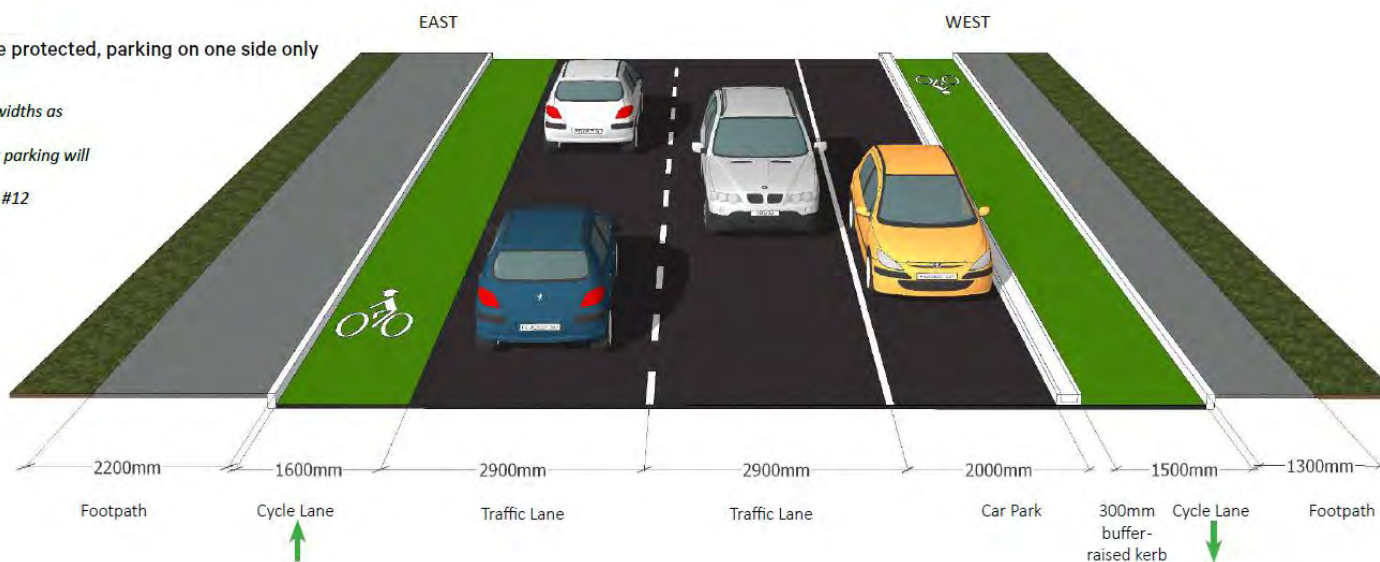
OPTION A

### OPTION 3A

Cycle lane on both sides, one side protected, parking on one side only

**Note:**

- Option 3 amended to keep footpath widths as existing
- Provision for driveways and off street parking will need to be made
- Parking removed on east side approx #12



OPTION B

## Evans Bay Parade

Short List Designation

### OPTION 2A

Protected cycle lane and parking both sides

Note:

- Option 2 amended to keep footpath width as existing
- Provision for bus stops and exit to off street parking will need to be made
- Parking retained on both sides
- Signalised crossing/traffic lights at intersections with State Highway 1 and Kilbirnie Cres. Pedestrian



OPTION C

### OPTION 7

Protected cycle lane both sides, footpath and parking one side only

Note:

- Footpath width reduced. Option for footpath in Park TBC
- Provision for bus stops and exit to off street parking will need to be made
- Parking removed on east side approx #27
- Signalised crossing/traffic lights at intersections with State Highway 1 and Kilbirnie Cres. Pedestrian refuge at Kemp St
- Alternative may be required south of Kilbirnie Park



OPTION A

# OPTION 10

Cycle lane both sides, parking both side

Note:

- Footpath width reduced. Option for footpath in Park TBC
- Provision for bus stops and exit to off street parking will need to be made
- Parking retained on both sides
- Signalised crossing/traffic lights at intersections with State Highway 1 and Kilbirnie Cres. Pedestrian refuge at Kemp St



**OPTION B**



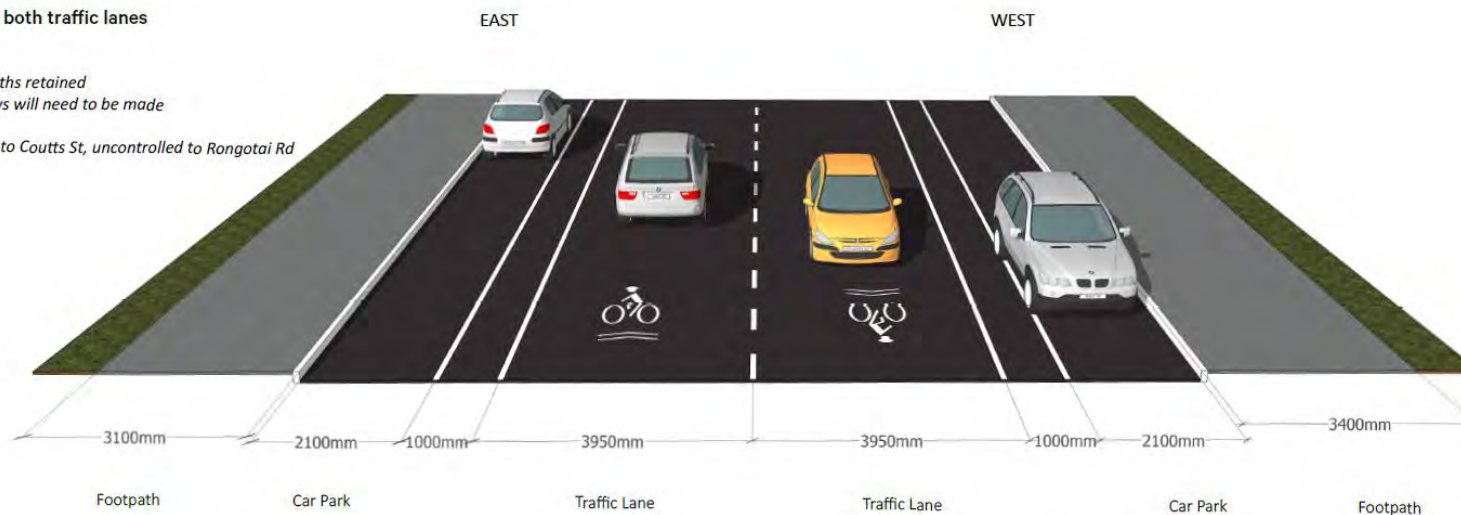
## Yule Street

### OPTION 2A

Sharrow markings in both traffic lanes

**Note:**

- Existing footpath widths retained
- Provision for driveways will need to be made
- Parking retained
- Stop sign intersection to Coutts St, uncontrolled to Rongotai Rd



Short List Designation

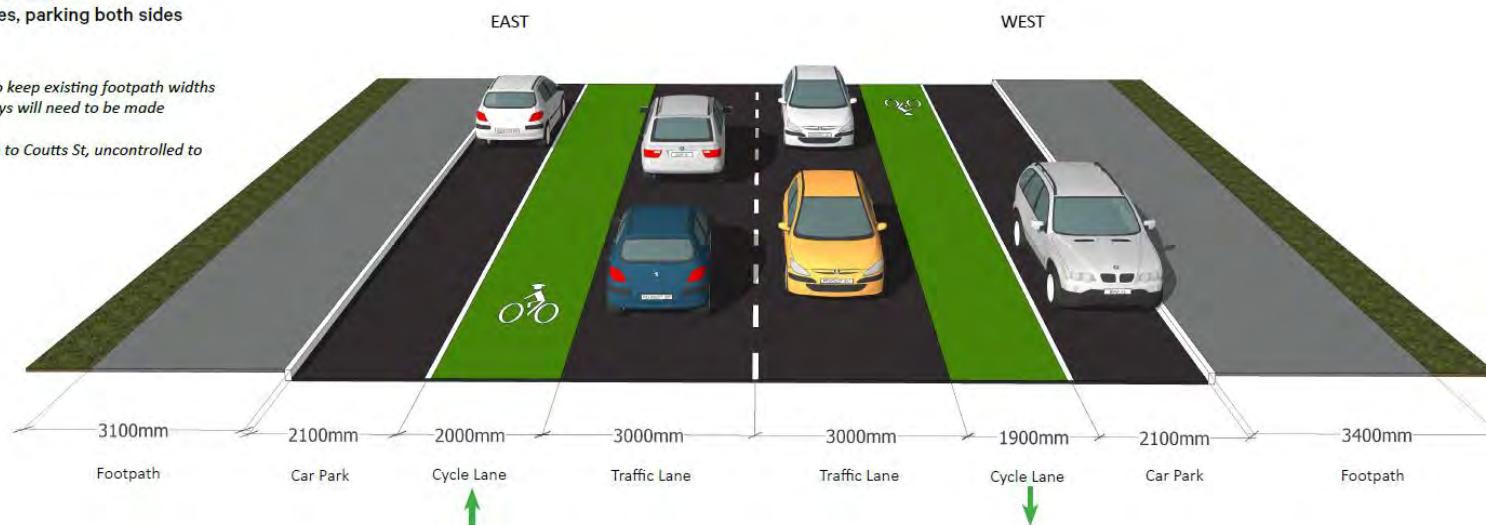
OPTION B

### OPTION 7A

Cycle lane both sides, parking both sides

**Note:**

- Option 7 amended to keep existing footpath widths
- Provision for driveways will need to be made
- Parking retained
- Stop sign intersection to Coutts St, uncontrolled to Rongotai Rd



OPTION A

## Te Whiti Street

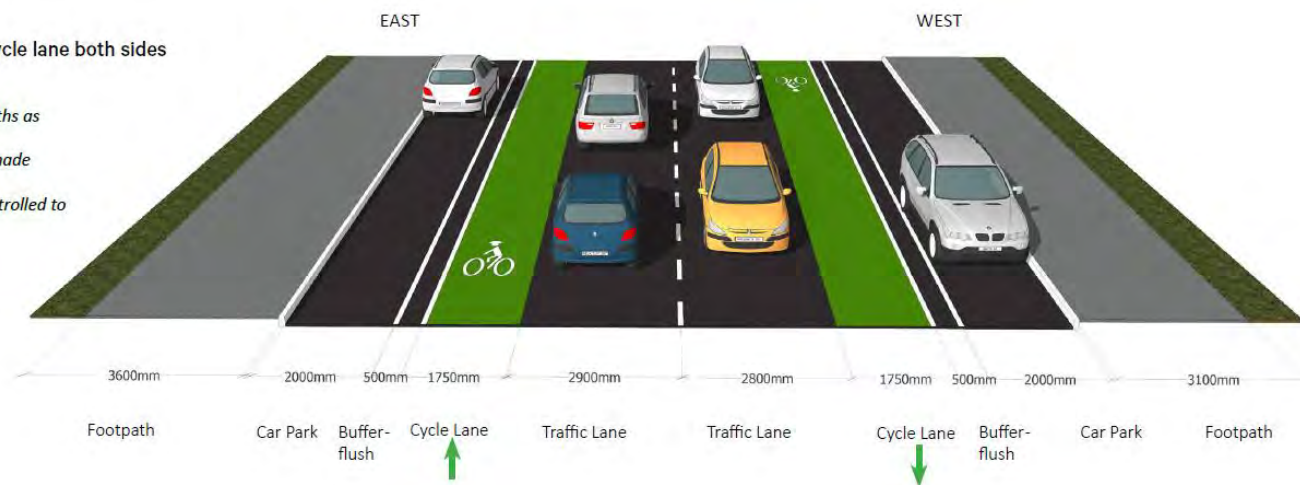
## Short List Designation

### OPTION 1A

Narrow traffic lanes, parking and cycle lane both sides

#### Note:

- Option 1 amended to keep footpath widths as existing
- Provision for driveways will need to be made
- Parking retained
- Giveaway intersection to Coutts St, uncontrolled to Rongotai Rd



### OPTION A

## Coutts Street

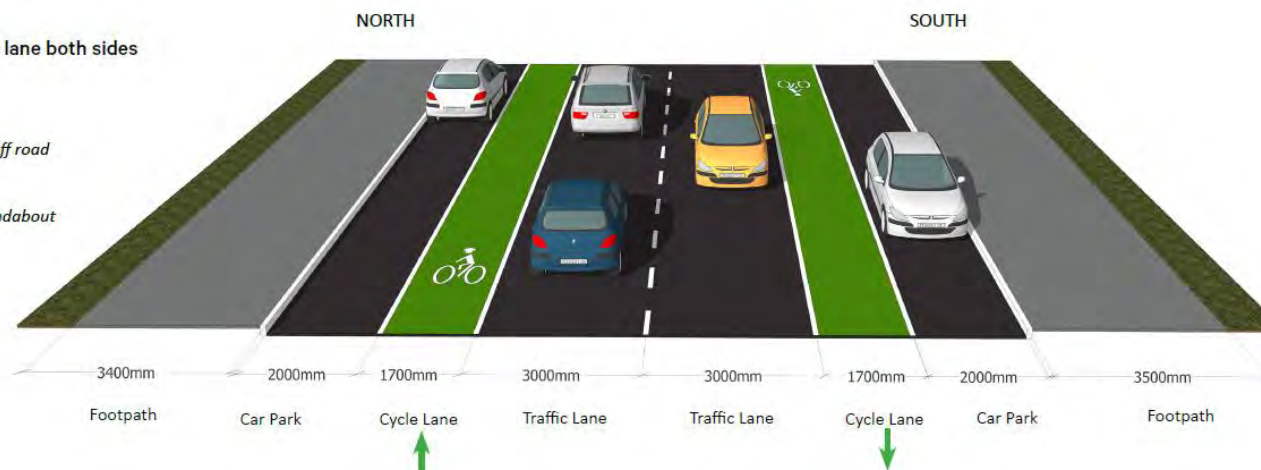
Short List Designation

### OPTION 1

Narrow traffic lanes, parking and cycle lane both sides

**Note:**

- Footpath widths kept as existing
- Provision for bus stops, driveways and exit off road parking will need to be made
- Parking retained
- Giveaway intersection to Te Whiti St and roundabout to Tirangi Rd



OPTION A

### OPTION 3A

Protected cycle lane on both sides, parking both sides

**Note:**

- Option 3 amended to keep existing footpath width on north side
- Provision for bus stops, driveways and exit off road parking will need to be made
- Parking retained
- Giveaway intersection to Te Whiti St and roundabout to Tirangi Rd



OPTION B

## Tirangi Road

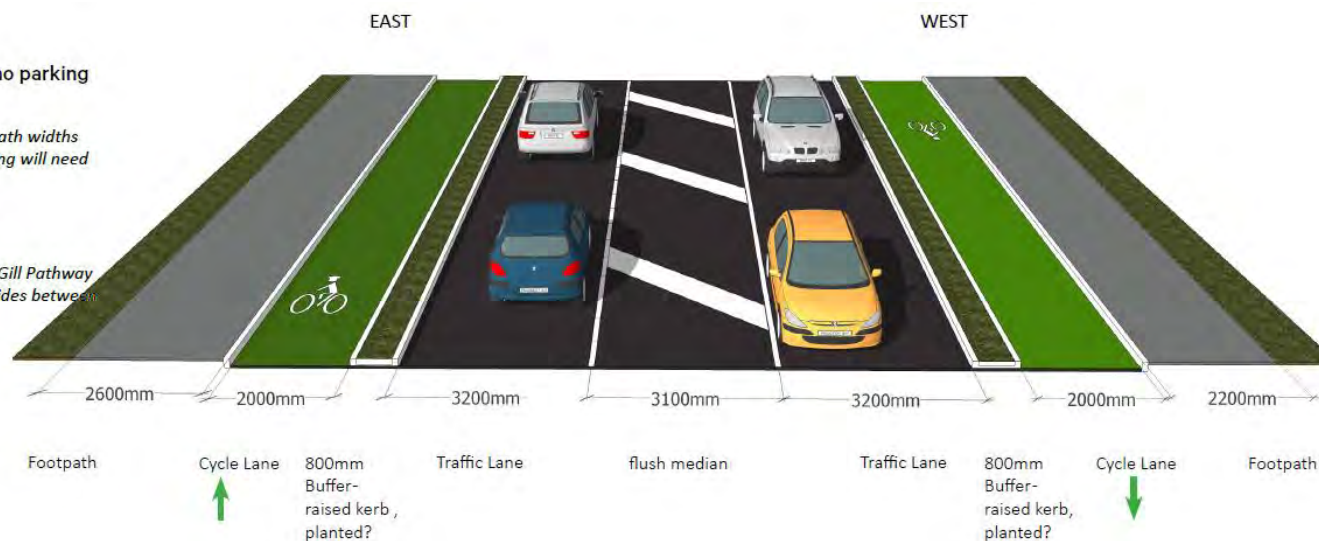
Short List Designation

### OPTION 4A

Protected cycle lanes on both sides, no parking

**Note:**

- Option 4 amended to retain existing footpath widths
- Provision for driveways and off road parking will need to be made
- Parking removed both sides
- Roundabout intersection with Coutts St
- Access to end of Leonie Gill pathway
- No parking between Coutts St and Leonie Gill Pathway
- Approx 20 parking spaces removed both sides between Coutts St and Leonie Gill Pathway



OPTION A





## **Appendix D – Preferred Option List**

The following Preferred Option List was created by the Steering Group, which was made up of WCC and NZTA staff. The creation of the List took into consideration the following:

- Short List feedback received from the previous round of consultation
- Cost considerations
- Decisions made regarding nearby streets
- Overarching schemes within the Eastern Suburbs area

## Eastern Suburbs - Preferred Options - October 2017

Project	Preferred Option	Description	Construction Start				
			17/ 18	18/ 19	19/ 20	20/ 21	21+
Miramar Town Centre							
Phase One	A	Two-way bike path on the Maupuia side of Miramar Avenue and traffic lights at Tauhinu Road	✓				
Phase Two	A	Separate one-way bike paths on each side of Miramar Avenue, between parking and traffic lane, car-door buffer zone					✓
Bays Connections							
Evans Bay Phase One	A	Two-way seaward-side bike path. The path is separated from the traffic lane and the footpath.		✓			
Evans Bay Phase Two	A	Two-way seaward-side bike path. The path is separated from the traffic lane and the footpath.					✓
Oriental Parade		Option to be confirmed by end of November		✓			
Cobham Drive		Two-way seaward-side bike path. The path is separated from the traffic lane and the footpath.	✓				
Kilbirnie Connections							
Constable Street (Riddiford to Coromandel)	A	Kerbside bike lane uphill, downhill sharrow, parking removed one side only					✓
Constable Street (Coromandel to Alexandra)	B	Kerbside bike lane uphill, downhill sharrow, parking one side.		✓			
Wilson Street (One way)	A	Sharrow markings in traffic lane and contraflow bike lane on one side only		✓			
Wilson Street (Two Way)	C	Sharrow markings on both sides of the road		✓			
Crawford Road	A	Sharrow markings on downhill traffic lane, kerbside uphill bike lane, parking one side only		✓			
Childers Terrace	Unclear						✓

Queens Drive	Unclear						✓
Rongotai Road (Town Centre)	Unclear	Minor changes at traffic signals		✓			
Rongotai Road (Outside town centre)	A	Kerbside bike lane on both side, parking both sides		✓			
Yule Street	A	Traffic side bike lanes on both sides of the road, parking both sides.		✓			
Te Whiti Street	A	Traffic side bike lanes on both sides of the road, parking both sides.		✓			
Evans Bay Parade	C	Kerbside bike path on both sides of the road, parking both sides		✓			
Coutts Street	B	Kerbside bike path on both sides of the road		✓			
Tirangi Road	A	Kerbside bike path on both sides of the road, parking removed both sides		✓			
<b>Miramar Connections</b>							
Park Road	A	One-way bike paths between kerb and parking (at footpath level), car-door buffer zone			✓		
Ira Street and Miramar Avenue	A	One-way bike paths between kerb and parking (at footpath level), car-door buffer zone				✓	
Broadway (Miro to Strathmore)	A	One-way bike paths between kerb and parking (at footpath level), car-door buffer zone		✓			
Broadway (Strathmore to Tunnel)	A	One-way uphill kerbside bike path, Tio Tio Road side			✓		
Miro Street and Kedah Street	A	Sharrow markings in traffic lane			✓		
Ferry Street and Dundas Street	Unclear						
Hobart Street (Kedah to Wexford)	C	Alternative route along Kauri Street with sharrows			✓		
Hobart Street (Wexford to Miramar Ave)	A	One-way bike paths between kerb and parking, (at footpath level) car-door buffer zone			✓		