Tonkin+Taylor

studiopacificarchitecture

Wellington City Urban Cycleways Programme

Draft Design Report: Evans Bay Parade

November 2017

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Rev.	Status	Prepared By	Checked By	Date
1	80% DRAFT FOR WCC COMMS PURPOSES	B Rodenburg	B Symmans	7 August 2017
2	REVISION 2 ISSUE	B Rodenburg	B Symmans	21 August 2017
3	REVISION 3 ISSUE TO INCLUDE WCC FEEDBACK	B Rodenburg	B Symmans	1 September 2017
4	REVISION 4 ISSUE FOR TRAFFIC RESOLUTION	J Sziklasi	B Symmans	13 November 2017

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1. Introduction

Wellington City Council (WCC) have engaged Tonkin + Taylor (T+T) and Studio Pacific Architecture (SPA) to develop a cycle facility along Evans Bay Parade and Oriental Parade between Cobham Drive in the east and Carlton Gore Road in the west. This report outlines the selection process undertaken to assess the full range of cycle facility options for this route by considering the community feedback (including suggested solutions) and by applying engineering and urban design best practice and New Zealand & (applicable) Australian Standards and Guidelines. From this independent assessment, T+T and SPA have identified and developed two shortlisted design options that are considered to best meet design standards, community desires, and project objectives. This design report details this process, outlines why the two shortlisted options are preferred (pros and cons), and provides a description of these options to allow for further consultation.

1.1 Purpose of this Report

The purpose of this report is to outline the design and community engagement process currently underway for the reconfiguration of Evans Bay Parade and Oriental Parade as part of the WCC Urban Cycleways Programme (UCP). The report provides a summary of key aspects of the process including:

- Background of this site in relation to the WCC UCP;
- Community engagement process;
- Issues, Constraints, and Opportunities Paper;
- Evaluation process and methodology of selecting cycleway options in terms of:
    - Other options that were considered but not pursued,
    - Urban design effects of each design option,
    - Design guidance and assumptions which support the options,
    - Parking impacts of each design option,
    - Rough order estimated costs of each shortlisted option,
    - How public feedback has been accounted for in each option,
    - Other options that were considered but not pursued; and
- The next steps for the project.

1.2 Background

Wellington City's population of 200,000 people is forecast to grow by more than 25% over the next 30 years, placing extra pressure on the transport network. To reduce congestion, give people more transport choice, and to ease transportation to the central city and other important places around Wellington, WCC proposes to develop a safe and comprehensive cycleway network. The aim of the network is to contribute towards "safer and more convenient" cycling (Cycling Policy, November 2008) by increasing the level of service for people who use bikes. Cycleway development will be supported by promotional and safety schemes.

The WCC UCP aims to build a comprehensive cycle network to provide a more liveable city with better transport choices and reduced congestion. The UCP is guided by many of WCC's strategic plans and policies (refer Figure 1). Repeating themes and strategic goals related to improved urban design features, landscaping, and quality of life are incorporated throughout these documents.

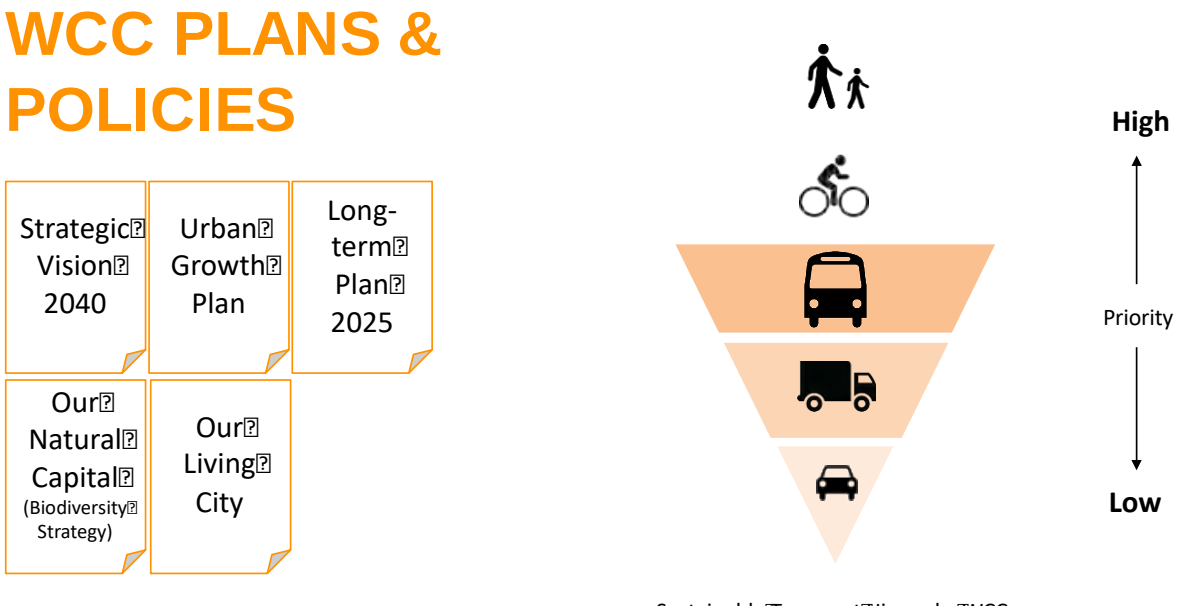


Figure 1 – Sustainable transport hierarchy (WCC)

These themes and goals include, but are not limited to, the following:

- WCC's Long-Term Plan four key objectives:
  - **Connected City** – viable transport choices and the safe and efficient movement of people;
  - **People-centred City** – welcoming, vibrant and embracing diversity. A healthy place to live with great public spaces;
  - **Eco-City** – achieve high standards in environmental performance, coupled with outstanding quality of life, built upon Wellington's environmental strengths; and
  - **Dynamic City** – fostering the central city as a hub of creative enterprise.
- WCC's Urban Growth Plan objectives:
  - A compact walkable city 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; and
  - Make the City more resilient to natural hazards, such as earthquakes and the effects of climate change.
- Creating Wellington's 'Blue Belt': A WCC initiative that embodies the principles of Our Living City with the aim to improve Wellington's quality of life by strengthening urban–nature connections and building economic opportunities from a healthy environment.

- The Greater Wellington Regional Council (GWRC) Great Harbour Way vision for a recreational walking and cycling route along Wellington's coastal edge (Figure 2).

Figure 2 – Great Harbour Way (GWRC and Boffa Miskell)

Over recent years, WCC has committed capital funding for cycleway development through its Long-Term Plan and Annual Plan processes. Additionally, the 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 (NLTF) are taken into account, some $37 million will be invested in cycling in Wellington City by 30 June 2019, with approximately $4.0 million provisionally allocated to the Evans Bay Parade section.

The Bay Connections – Evans Bay Parade cycle route will allow for greater cyclist connectivity between the eastern suburbs (36,660 population, 1,056 commuter cyclists) and the central city by providing a flat route largely free of driveways and intersections. It is also likely to provide more recreation options for pedestrians and cyclists by extending the existing shared path at Oriental Bay forming part of the Greater Harbour Way. This route is already popular with recreational pedestrians and cyclists, including events such as the Round the Bays.

1.3 Project Objectives

The Bay Connections – Evans Bay Parade cycleway project is part of WCC's investment in a safe and comprehensive cycle network to give people more transport choice, reduce congestion and emissions, and make Wellington a more attractive place to live, work and visit. The primary objective is to identify cycleway options that maximise benefits for all users and, in particular, improve the level of service for people who travel by bike.

Generally, the proposed improvements are expected to:

- Improve the level of service for people on bikes along identified routes;
- Improve or maintain the level of service for people using buses along identified routes;
- Maintain or improve the level of service for pedestrians;
- Maintain an acceptable level of service for general traffic movements; and
- Minimise impacts to parking

1.4 Study Area

The study area extends approximately 4 kilometres along Oriental Parade and Evans Bay Parade from Carlton Gore Road in the west to Cobham Drive in the east, including intersections with the local roads of Carlton Gore Road, Maida Vale Road, Rata Road, and Belvedere Road. The study area does not include the intersection with Cobham Drive.

For ease of reference, this report refers to the Cobham Drive as the eastern boundary of the study area. While technically it is to the south, cyclists use this Evans Bay Parade route to travel between the eastern suburbs and the city centre to the west. This east-west terminology is used throughout this project.

In the east, the study area abuts separate study areas including Bay Connections – Cobham Drive and Kilbirnie Connections, which will be delivered by others. In the west, the study area extends to the end of the existing shared path along the Oriental Parade promenade.

The study area is shown below in Figure 3.

Figure 3 – Location plan – Evans Bay Parade cycleway extents

1.5 Existing Situation

A summary of the existing situation is provided below. For a full description of the existing situation refer to the Tonkin and Taylor, *Bay Connections – Evans Bay Parade Issues Paper*, issued June 2017 (Version 4).

Evans Bay Parade is a Principal Road, typically providing local access to properties and leisure destinations, including Evans Bay beach, Cog Park, Greta Point, and Balaena Bay beach. It also provides an alternative route to the SH1 route (along Wellington Road, Ruahine Street and the Mt Victoria Tunnel) between the central city and the eastern suburbs. Evans Bay Parade forms part of the Great Harbour Ways section of the Wellington Cycleways Programme Masterplan, which runs along the coastline from Oriental Bay around to Red Rocks on the south coast. Along Evans Bay Parade and Oriental Parade, the posted speed limit is 50 km/hr within the study area. Some 80 m west of the study area along Oriental Parade, the posted speed limit reduces to 40 km/hr. Evans Bay Parade is a designated over-dimension route and is the alternative route for dangerous goods vehicles that are not permitted to enter the Mount Victoria Tunnel.

Evans Bay Parade carries between 10,000 and 12,000 vehicles per day (vpd), of which approximately 8% (or 900 vehicles) are heavy vehicles. The posted speed limit is 50 km/hr, but vehicle speeds are often higher; near Point Jerningham 85th percentile vehicle speeds of 60 km/hr were recorded during traffic counts.

Side roads along Evans Bay Parade include Belvedere Road (400 vpd), Rata Road (1,000 vpd), Maida Vale Road (2,500 vpd) and Carlton Gore Road (3,000 vpd). Kio Road is for pedestrian access only and does not carry vehicle traffic.

The road is bounded on the east by the Wellington Harbour (Evans Bay) coastline and on the west by residential properties and the Mt Victoria hillside. The route follows the existing coastline and has frequent tight-radius horizontal curves, especially towards the northern end of the study area, which limit the sight distance in many locations.

North of the National Institute of Water and Atmospheric Research (NIWA) site in Greta Point, there are two traffic lanes (3.0–3.5 m wide) with pockets of on-street parking and vehicle accesses to properties. There are also on-road cycle lanes (1.2–1.5 m wide), but these are encroached upon in places by bus stops and parking areas. A footpath (1.5–3.0 m wide) is located on the seaward side. Footpaths are intermittent on the inland side. Along the entire study route, there are three formal crossing facilities for pedestrians or cyclists use.

South of NIWA, there is a shared path (2-5–5.0 m wide) on the seaward side of the road. There is also a separate footpath on the inland side. Typically, parking is permitted on both sides of the road. A flush median extends from the northern end of Greta Point to Rata Road. There are no on-road cycle facilities.

Figure 3 above outlines the existing road corridor and cycling facilities.

The existing number of on-street parking spaces totals approximately 460 spaces (430 unrestricted and 30 time limited). An additional 30 off-street public parking spaces are also available at Balaena Bay, as well as additional parking at the Evans Bay Yacht and Motor Boat Club off-street carpark.

The total parking demand observed during surveys varied between 187 and 269 spaces, or an average of some 50% of the approximately 460 parking spaces available. Residential parking demand was estimated to be approximately 220 vehicles. At Greta Point 100% of parking spaces were occupied during the Thursday survey, with 60% occupancy on Saturday. The results show that

parking demand (residential, short stay and all day parking) varies depending on location along Evans Bay Parade, and that targeted parking mitigation measures may be required in certain locations depending on the impact on parking of the preferred solution.

2. Community and Key Stakeholders

2.1 Community Engagement

Community engagement was undertaken to inform the design process and ensure the outcomes of each stage of design meets community expectations.

2.1.1 Drop-in Sessions

Two open days were held on Wednesday 15 and Sunday 18 March 2017 at the ASB Sports Centre to gather initial thoughts about the eastern cycleways connections. Locals identified safety concerns, talked about things they valued, and made suggestions, with some registering interest in being part of a community working group. The feedback received on these days was subsequently incorporated into the Issues Paper (refer to Section 3.1) and used to form the community objectives (refer to Section 2.2) and long list options for assessment.

2.1.2 Working Group

Key organisations, including business groups and residents associations, were invited to participate in working groups, 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 residents, residents who enjoy the coastal amenities of Evans Bay, and commuters who travel through Evans Bay. 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, including pedestrians, cyclists, public transport users, and personal car drivers.

The working group was comprised of the following stakeholders:

- Living Streets Aotearoa
- Cycle Aware Wellington
- Evans Bay Yacht Club
- Civic Trust
- WCC Councillors
- St Patrick's College
- Local Residents
- Commuter Cyclists

Representatives from NZTA, WCC, T+T, and SPA also shared the table with the working group, offering specialist perspective to questions that required a deeper knowledge of certain aspects of transport, such as bus or cycling regulations and specifications.

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 WCC and NZTA staff, developed a checklist of criteria based on all the objectives. The long list of options was then assessed against the criteria to come up with a short list of options, which were then further scrutinised.

The Evans Bay Connections Working Group met five times between April and July. During these 2 to 3 hour evening workshops, the members worked together to consider WCC's investment objectives for the funding on offer, develop their own community objectives, and come up with a long list of possible options. Following the third workshop, members had confirmed the long list of options with a total of 27 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 four options. At the fifth and final workshop, the short list of options was reviewed with the workshop members determining two 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.

The working group process undertaken is outlined below in Figure 4. The minutes from each workshop session are attached in Appendix H.

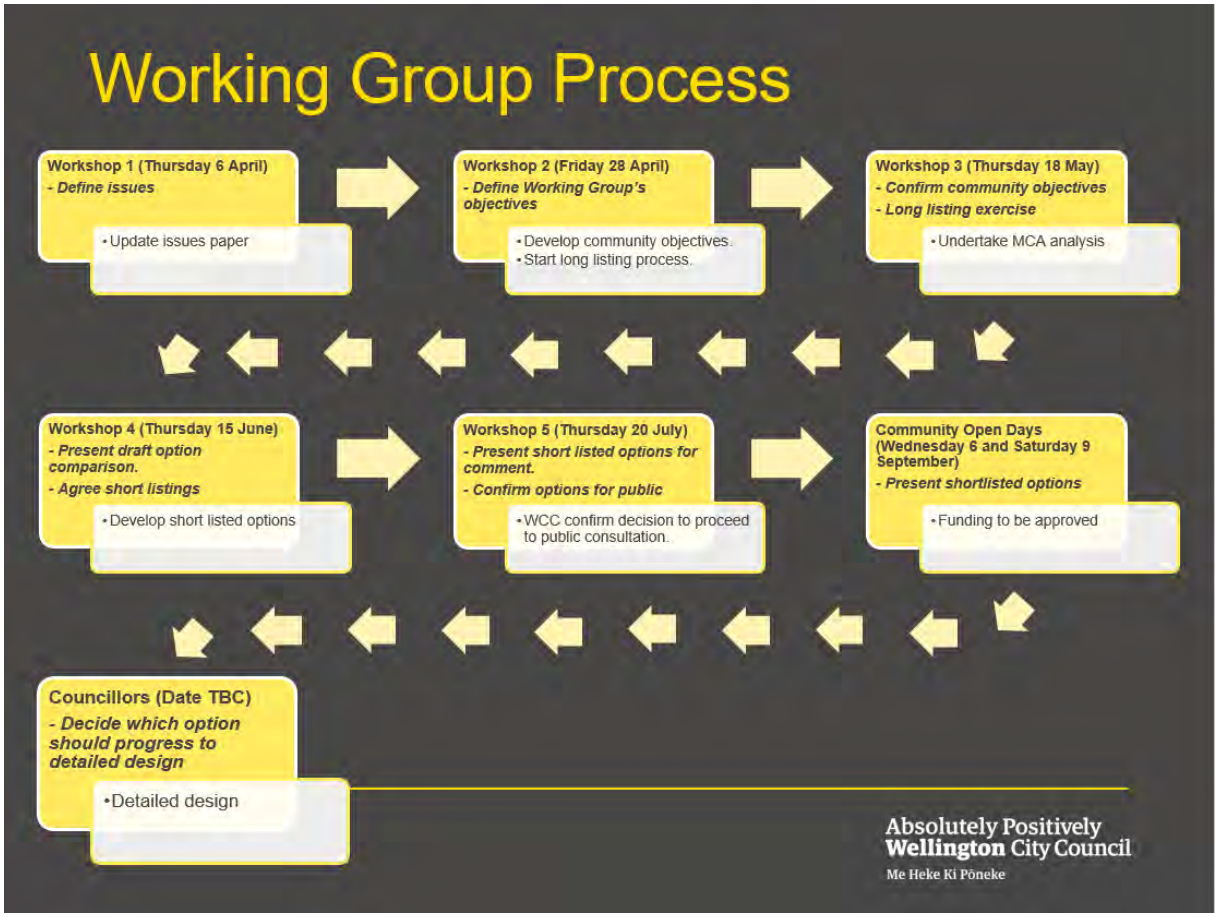


Figure 4 – Working group process

2.2 Community Objectives

A set of community objectives for the project were formed from the community engagement undertaken. These objectives were confirmed and finalised by the working group during Workshops 2 and 3 (refer to Figure 4 above).

Community Objectives:

- Improve the convenience, comfort and reliability of facilities for cycling
- Improve the convenience, comfort and reliability of facilities for pedestrians
- Improve the route consistency for walking and cycling facilities
- Improve the safety of road users
- Improve connections between residential areas and the waterfront
- Rationalise the on-street parking provision
- Enhance the built and natural environment
- Maintain motorised access to local properties

3. Issues, Constraints, and Opportunities

3.1 Issues Paper Summary

The Bay Connections – Evans Bay Parade Issues Paper, issued June 2017 (Version 4), provides the background information to develop and guide future assessment of improvement options for cycling and other road users along Evans Bay Parade.

The paper outlined the plans and policies applicable to the proposed cycleway route, the current level of service for cyclists along this route, and the adequacy and safety of interactions between cyclists, pedestrians, buses, and other vehicles. This includes understanding the existing use of this route and crash risk.

The paper identified issues, constraints, and opportunities for the Evans Bay Parade corridor from sources including:

- WCC policies and previous studies;
- District and Regional Plans;
- Related transport projects (including changes to the bus network);
- Existing road corridor (road layout, landscaping and urban design, parking and safety);
- Walking, cycling, driving and bus passenger demand; and
- Community feedback (Open days and Workshops 1 and 2).

The full list of issues, opportunities, and constraints identified can be found within the Issues Paper (refer to Bay Connections – Evans Bay Parade Issues Paper, Version 4, Tonkin & Taylor Ltd, June 2017).

The issues, constraints, and opportunities identified inform the decisions made by the project team throughout the design process, including route selection, multi-criteria assessment of options, and future detailed design of the preferred option.

3.2 Wellington Cycle Network Investment Objectives

The UCP Programme Business Case (PBC) submitted to the New Zealand Transport Agency (NZTA) for NLTF funding outlines the strategic context and case for investment in the Wellington cycleway network. It states that investment in cycling will improve safety for cyclists, increase transport choice, and lessen environmental impact and traffic congestion by reducing the number of vehicles on the road. As a result, the UCP has high strategic fit with stakeholder partners, including WCC, GWRC, and NZTA in terms of economic growth, urban regeneration and improved accessibility. The following investment objectives were identified for the PBC:

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

4. Cycle Route Development

4.1 Route selection

The study area extends from Cobham Drive in the east to Carlton Gore Road in the west. Evans Bay Parade (and Oriental Parade in the north) follows the coast around the base of Mount Victoria, except through the Greta Point reclamation area where a residential townhouse complex and the NIWA site are on the harbour side of Evans Bay Parade. It forms part of Te Aranui o Poneke (Great Harbour Way), a 67 km shared pedestrian and cycleway concept around the coastline of Wellington Harbour[1]. The route is popular for both commuting and recreational cyclists and pedestrians.

An alternative pedestrian path follows the coast around the Greta Point reclamation area. The path varies between 1.5 m and 2.1 m in width, as constrained between property boundaries and coastal rock armour protection. The path is 200 m longer than travelling via Evans Bay Parade through Greta Point, and highly exposed to rough sea conditions being situated only 0.8 m above Mean Sea Level. This route also bypasses local businesses located at Greta point, which may have an adverse effect on potential cycle-based customers. It is likely that many cyclists may choose to stay on Evans Bay Parade through Greta Point, making this the most sensible route for the development of cycling facilities.

Alternative routes between Cobham Drive and the Wellington City Central Business District, such as via the Mount Victoria Tunnel (State Highway 1), Newtown (Wellington Road and Crawford Road) or Roseneath (Moxham Avenue, Hataitai Road and Palliser Road), were outside the scope of this project and not considered in the assessment. Separate projects considering these routes are outlined in the Issues Paper (refer to Section 3.1).

[1] *Aecom New Zealand Ltd, Great Harbour Way Investigations, July 2016*

5. Cycleways Treatment Evaluation

5.1 Introduction

This section seeks to outline the evaluation approach taken in the assessment of the cycle route options for the Bay Connections – Evans Bay cycleway project.

The evaluation approach aimed to achieve a degree of consistency with the rest of the UCP and to incorporate the feedback received during public engagement undertaken for the project (refer to Section 2).

Where possible, the design and assessment of the effects of each cycleway option was based on national and international best practice guidelines. The guidelines referenced are listed in Appendix D. In some instances, where guidelines were not applicable/appropriate, assessment relied upon the technical expertise of the assessors and the public feedback gathered throughout the community drop-in and working group sessions.

5.2 Treatment Options Identification (Long List)

The community engagement process resulted in a wide range of feedback and suggestions of ideas to improve cycling along Evans Bay Parade. Key to this process were workshops 2 and 3, where attendees were asked to propose a “wish list” outlining ideas to form an ideal corridor that would obtain the desired outcomes. When combined with best practice suggestions from the engineering team, a list of over 100 ideas were identified for development of a long list. These were collated into four broad themes:

Cross section	relating to physical alterations to the corridor;
Traffic management	covering the changes to regulatory or control environment to effect change in behaviour;
Urban design	relating to the enhancement of the place and improving the environment; and
Facilities	providing the services and infrastructure that are necessary to make the project successful.

The ideas identified are listed in Appendix A.

There were several recurring requirements from the separate user groups and stakeholders, which carried across all themes, notably: Improving crossing facilities, speed management, providing safe cycle facilities, removal of the median strip, environmental enhancement, and removing coast side parking. A summary of the most common ideas is given below in Figure 5.

Figure 5 – Community ideas to improve cycling along Evans Bay Parade

These ideas were developed into a long list of 27 conceptual design options for Evans Bay Parade. Desirable and minimum dimensions, determined from national and international best practice guidelines, were applied for each road element to inform the space requirements. These dimensions are detailed in Appendix E.

The options identified broadly followed five principles:

- On-road cycle lanes;
- Kerbside (protected) cycle lanes;
- Two-way cycleways;
- Shared paths (cyclists and pedestrians); and
- Shared lanes (cyclists and drivers).

Each principle was applied to Evans Bay Parade to develop the long list of options by considering (where applicable):

- No change to the existing kerbs;
- Change to kerb locations, no change to road reserve width; and
- Expansion into the Coastal Marine Environment (CMA).

Other separate options considered include shared space and one-way traffic.

The long list options identified are outlined in Appendix B.

5.3 Treatment Options Assessment (Long List to Short List)

The next stage of the assessment process was to identify the preferred options in the long list. This was achieved through an interactive and iterative process using a Multi Criteria Analysis (MCA)[2].

5.3.1 Multi-Criteria Analysis (MCA) Criteria

The MCA acts like a filter, with a large number of options at the top distilled down to a short list of best-fit options at the end.

The MCA starts with a fatal flaws assessment and flows through key criteria, defined in advance through collaborative engagement with WCC, Stakeholders, and the Community and through the application of best practice, sound engineering judgement, and feasibility principles.

A simplistic representation of the evaluation process is presented in the flow chart below:

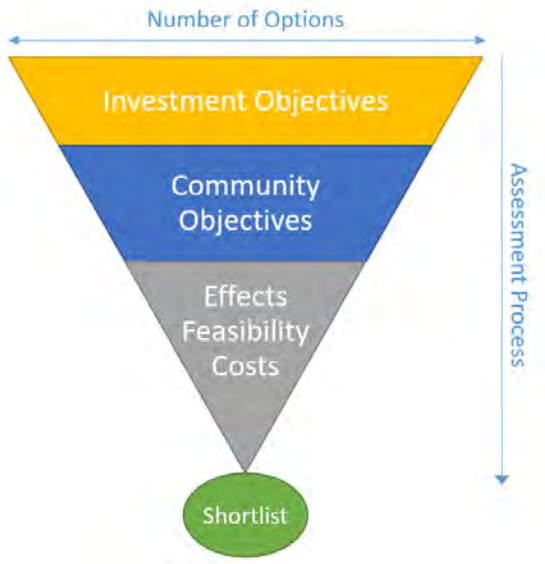


Figure 6 – MCA evaluation process

The MCA scores each option against each criteria on a five-point scale. The assessment of each criterion varies slightly between the different levels of assessment, but all follow the same principle. Results are colour coded to assist in the ease of assessment across the options and criteria.

Table 1 – MCA options criteria

	Strong Alignment
	Minor Alignment
	Neutral
	Minor Detraction
	Strong Detraction

[2] *A MCA is the method by which different options can be assessed against a list of criteria. Those options which have the best overall score (ratio of positive to negative criteria) and have no fatal flaws are continued through each stage of the MCA. The final outcome identifies a small number of options to be continued as a short list.*

The process of evaluation is a simple pass/fail based on the level of alignment with criteria as illustrated in the process map below:

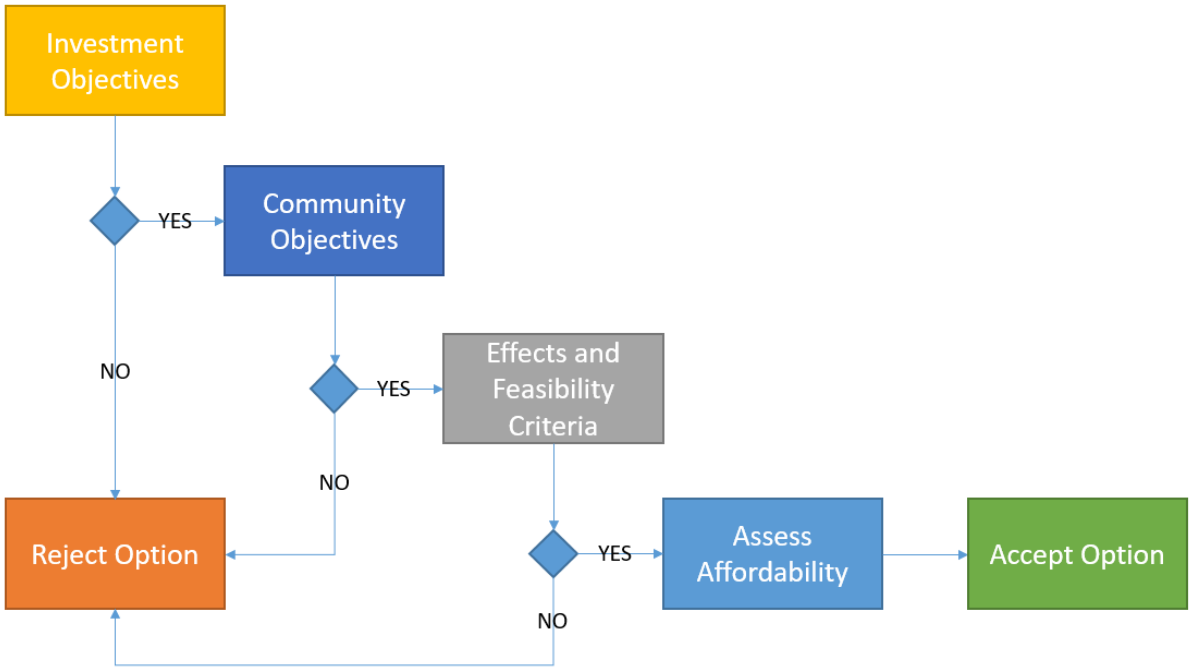


Figure 7 – MCA assessment

In general, the pass/fail criteria is set so that any option that strongly detracts from any one criteria is an automatic fail, as well as any option with no assessments higher than neutral.

The full analysis is included in Appendix F.

5.3.2 Fatal Flaws

Fatal flaws are rare and must be robustly challenged. An example of a fatal flaw is an option that adversely affect an urupa (Maori burial site) or a heritage site. Cost is never a fatal flaw.

For this assessment, the following options were considered fatally flawed and therefore not considered further:

- Options that would create significant community objection, such as the complete removal of parking;
- Options that would result in an fundamentally unsafe environment, such as median cycle lanes; and
- Options that detract from the principles and purpose of the project, such as dedicated bus lanes

These options were excluded from the first stage of assessment during the long list development process. None of the long list options presented were considered fatally flawed.

5.3.3 WCC Investment Objectives

To ensure consistency with the other WCC cycleway projects and to guarantee that the treatment options chosen meet WCC's programme investment objectives, the following five WCC investment objectives were included in the options evaluation process:

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

Each objective was again evaluated against a five-point scale of effectiveness:

Table 2 – WCC investment objective effectiveness scale

	Achieves objective
	Partially achieves objective
	No impact on objective
	Partially opposes objective
	Opposes objective

Only options that met the WCC objectives were continued through analysis. Options that could not be supported by WCC, and therefore would not attract funding, were rejected at this stage. This included options 14, 19, 20, 21, 22, 24, and 26. Table 3 below summarises the results of this stage of the MCA:

Table 3 – MCA WCC objectives

Investment Objective	Facility Treatment Option																										
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
Cycle LOS																											
Cycle contribution																											
Viable choice																											
Reduced crash rate																											
Better choices																											
Pass/Fail	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	x	✓	✓	✓	✓	x	x	x	x	✓	x	✓	x	✓

The remaining options were continued to the next stage of assessment.

5.3.4 Community Objectives

The community engagement process resulted in the following Community Objectives (refer to Section 2) for MCA assessment:

- Improve the convenience, comfort and reliability of facilities for cycling
- Improve the convenience, comfort and reliability of facilities for pedestrians
- Improve the route consistency for walking and cycling facilities
- Improve the safety of road users
- Improve connections between residential areas and the waterfront
- Rationalise the on-street parking provision
- Enhance the built and natural environment
- Maintain motorised access to local properties

Each objective was evaluated against a five-point scale of effectiveness:

Table 4 – Community objectives effectiveness scale

	Achieves objective
	Partially achieves objective
	No impact on objective
	Partially opposes objective
	Opposes objective

Only options that met the community objectives were continued through the analysis. There is no benefit to progressing with options that would be strongly opposed by the community. Those that did not meet the Community Objectives and were therefore rejected at this stage included options 2, 4, 8, 9, 23, and 25.

Options that partially achieved the community objectives but did not achieve them as well as other similar options were also rejected at this stage. This included options 10, 11, 12, 13, 16, and 18. The table below summarises this stage of the MCA.

Table 5 – MCA community objectives sssessment

Community Objective	Facility Treatment Option																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	15	16	17	18	23	25	27
Improve cycling																				
Improve walking																				
Improve consistency																				
Improve safety																				
Improve connections																				
Rationalise parking																				
Enhance environment																				
Maintain access																				
Pass/Fail	✓	x	✓	x	✓	✓	✓	x	x	x	x	x	x	✓	x	✓	x	x	x	✓

Remaining options were continued to the next stage of assessment.

5.3.5 Effects, Feasibility and Cost

Options were assessed on criteria agreed upon by WCC and the working group, which relate to effects, feasibility, and affordability. The themes are outlined below.

Effects how the option fits with key attributes of the wider transport network, levels of service, safety, land use, useability, cultural fit and social needs;

Table 6 – Effects effectiveness scale

	Major Benefits
	Minor Benefits
	Neutral
	Minor Disbenefit
	Major Disbenefit

Feasibility how the option will meet statutory (Resource Management Act), buildability, disruption, and management requirements; and

Table 7 – Feasibility effectiveness scale

	Straightforward
	Possible
	Neutral
	Difficult
	Insurmountable

Cost Value for money determined by rough order scale of costs and affordability.

Table 8 – Cost assessment scale

$$$	High (>$2M)
$$	Medium ($1M - $2M)
$	Low (<$1M)

Those options that did not meet the effects and feasibility criteria were rejected at this stage. This included options 3, 7, 17, and 27. Cost was also considered at this stage to inform the relative benefit of each option. With the exception of option 15, all options were rated as “High” on the cost assessment scale. The table below summarizes these stages of the MCA.

Table 9 – MCA effects, feasibility and cost assessment

Theme	Criteria	Measure	Facility Treatment Option							
			1	3	5	6	7	15	17	27
Effects	Cycle Network Fit	Alignment to existing facility								
	Transport Network Fit	Alignment function								
	Pedestrians Effects	Safety and LOS								
	Bus Users Effects	Safety and LOS								
	Motorised Traffic Effects	Safety and LOS								
	Parking Effects	Number of parks								
		Location of parks								
		Suitability of parking								
	Property Effects	Land requirement								
		Adjacent use								
		Business access								
	Environmental Effects	Light								
		CPTED								
		Landscaping								
		Marine								
	Cultural Effects	Mana whenua assessment								
Implementation	Planning Feasibility	Plan alignment								
		Statutory Risks								
	Delivery Feasibility	Construction Delay								
		Business disruption								
	Funding Feasibility	Affordability								
		Timeliness								
Cost	Total Cost	Scale of Costs	$$$	$$$	$$$	$$$	$$$	$$	$$$	$$$
		Pass/Fail	✓	x	✓	✓	x	✓	x	x

The four remaining options (1, 5, 6 and 15) were continued to the short list and are further detailed in Section 6.

6. Short Listed Treatment Options

This section provides a description of the four short listed options and their potential risks.

6.1 Short List Options

6.1.1 Option 1

Harbour side two-way protected cycleway with dedicated footpath along harbour and parallel parking on one side. Includes:

- Design aspects:
  - Cycleway at road level
  - 3.0 m wide dual cycleway
  - 400 mm wide raised kerb between cycleway and traffic lane with bollards
- Potential issues:
  - The cycleway being at road level and separated vertically by kerbs poses an issue in terms of:
  - Cyclists swerving and making contact with the kerb upstand, potentially falling onto the road. This risk is increased in narrower sections of the cycle route.
  - Mobility impaired persons finding it challenging to cross the carriageway due to the vertical changes between the footpath and cycleway.
  - The buffer zone dimension between parking at cycle lane is less than desirable.

Figure 8 – Short list option 1 artist impression

6.1.2 Option 5

Harbour side two-way protected cycleway with dedicated footpath along harbour and parallel parking on one side. Includes:

- Design aspects:
  - Two-way seaside cycleway
  - Cycleway raised above road level
  - 3.0 m wide dual cycleway
  - No buffer zone between cycleway and traffic lane
- Potential issues:
  - There is potential for conflict between pedestrians and cyclists due to no vertical separation or delineation between the cycleway and the footpath.
  - There is no buffer zone between parking and the cycleway.

Figure 9 – Short list option 5 artist impression

6.1.3 Option 6

One-way protected cycle lanes on each side with dedicated footpath along harbour and parallel parking on one side. Includes:

- Design aspects:
  - Single cycle lanes on both sides of the road
  - Cycle lanes at road level
  - 1.5 m wide cycle lanes
  - 500 mm wide raised kerb between cycle lanes and traffic lanes with bollards
- Potential issues:
  - The cycle lane being at road level and separated vertically by kerbs poses an issue in terms of:
    - Cyclists swerving and making contact with the kerb upstand, potentially falling onto the road. This risk is increased in narrower sections of the cycle route.

- Mobility impaired persons finding it challenging to cross the carriageway due to the vertical changes between the footpath and cycle lane.
- The buffer zone dimension between parking at cycle lane is less than desirable.

- Rock fall debris on the inland side of road will collect in the cycle lane, requiring additional maintenance

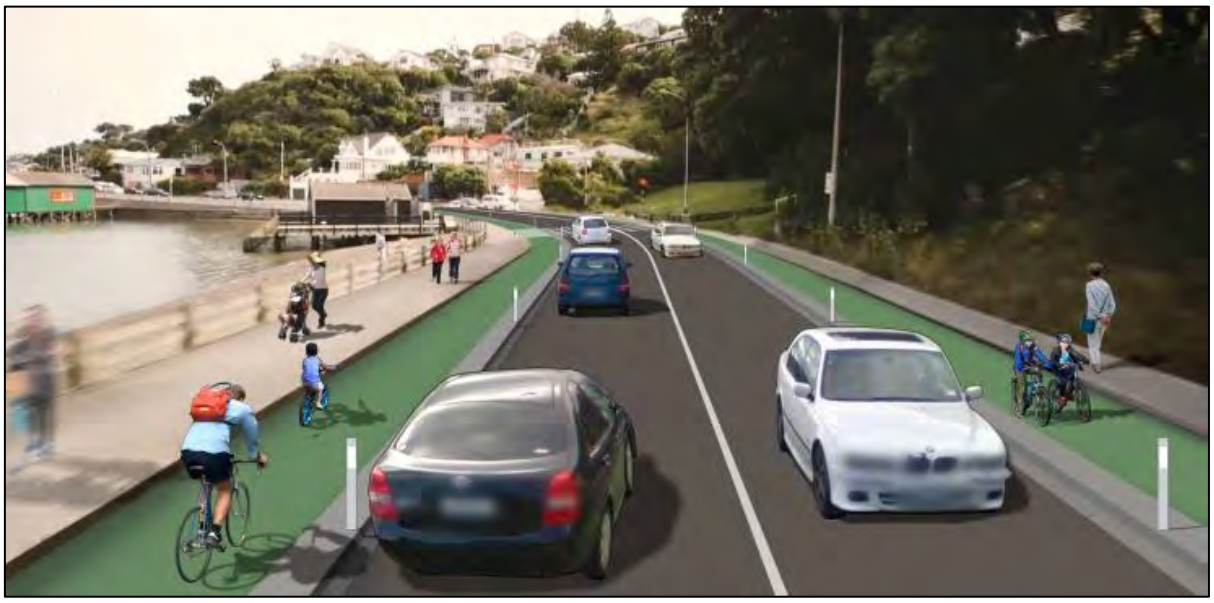


Figure 10 – Short list option 6 artist impression

6.1.4 Option 15

One-way protected cycle lanes on each side with dedicated footpath along harbour and parallel parking on one side. Includes:

- Design aspects:
  - Single cycle lanes on both sides of the road
  - Cycle lane raised above road level
  - 1.5 m wide cycle lanes
  - No buffer zone between cycle lane and traffic lane
- Potential issues:
  - There is no buffer zone between parking and the cycle lane.
  - Rock debris on the inland side of road will collect in the cycle lane, requiring additional maintenance
  - Cyclists are required to cross the road to change direction.

Figure 11 – Short list option 15 artist impression

6.2 Short List to Proposed Options

6.2.1 MCA Assessment of Short List

The four short list options were presented to the working group. Following their feedback, a working group of WCC staff selected two of the short listed options to be presented at community drop-in sessions for September 2017. Plans and detailed descriptions of these two options are provided in Appendix G and Appendix H and summarised below.

In one location, approximately 250m north of Carlton Gore Road on Oriental Parade, the road reserve is too narrow to accommodate desired cycle lanes and width reduces for approximately 50m. Reduced cycle lane widths for this location;

- 1.2m one-way cycle lanes with 0.4m buffer to traffic lane
- 2.2m two-way cycleway with 0.5m buffer to traffic lane

This constraint is further discussed this in Note 4 of the Summary Table (Appendix H).

6.2.2 Two-way seaside protected cycle path (Option A)

Options 1 and 5 are variations of the same option. Option 1 has narrow traffic lanes (3.0 m min.) and wider cycle path (3.8 m including 0.6 m buffer to parking). Option 5 has wider traffic lanes (3.2 m min.) and a narrower cycle path (3.4 m including 0.6 m buffer to parking). There are no other differences, and as such will be combined to Option A for the September 2017 public consultation drop-in sessions.

General design features:

- Physical separation (kerb/upstand) between cycle path and traffic lane/parking
- No on-road cycle facility
- Traffic lane width suitable for heavy vehicles
- Parking maintained on one side of the road

- Maintain footpath width
- Remove flush median

Option A can be designed at road, at footpath level, or in-between. It is recommended that this design aspect be posed as a question at the public drop-in sessions for community feedback.

6.2.3 One-way seaside protected cycle lanes (Option B)

Options 6 and 15 are variations of the same option. Option 6 has cycle lanes at road level, separated from traffic/ parking with physical upstand or other barrier. Option 15 has cycle lanes raised above road level (either at footpath level or just below (Copenhagen Style)), separated from traffic/ parking with physical kerb. There are no other differences, and as such will be combined to Option B for the September 2017 public consultation drop-in sessions.

General design features (to be confirmed):

- Physical separation (kerb/upstand) between cycle lane and traffic lane/parking
- No on-road cycle facility
- Traffic lane width suitable for heavy vehicles to travel within the lane
- Pocket parking where width allows, but large scale parking removal
- Maintain footpath width
- Remove flush median

Option B can be designed at road, at footpath level, or in-between. It is recommended that this design aspect be posed as a question at the public drop-in sessions for community feedback.

6.2.4 Costing

Rough order cost estimates for construction of the two shortlisted options were prepared for the purposes of consultation. These rough order costs are estimates provided to assist the public with assessment and selection of a preferred option.

The following assumptions were made in the cost estimates:

- The extent of works is from Carlton Gore Road to Cobham Drive, a distance of approximately 4.0 km, and includes the intersections of Carlton Gore Road, Maida Vale Road, Rata Road and Belvedere Road;
- All kerbs adjacent to road-level cycle lanes are mountable;
- No resurfacing of the footpath is required;
- Cycle lanes will be constructed with asphalt;
- All existing parking and traffic signage will be re-used;
- There are no changes to the existing light poles

Potential adjustments to the design may be required to meet WCC or community expectations regarding the cost of the improvements. Items that may be adjusted in detailed design for costing purposes include:

- **Carriageway resurfacing:** Costing assumes that the carriageway will be resurfaced in asphalt with new road markings. To minimise costing, existing markings can be removed or

painted black. However, this can result in ghost markings, where the removed markings are still visible, especially in wet conditions.

- **Cycle lane height:** Costing assumes that the cycle lanes are at road level with grade separation from the footpaths and physical separation from the traffic lanes. To minimise costing, the cycle lanes could be constructed at footpath level.
- **Cycle green surfacing:** Costing assumes that the cycle green surfacing will be applied to the entire cycle lane surface area to improve visibility of the cycle space. To minimise costing, surfacing could include a 0.25 m wide green strip along the edges of the cycle lanes with additional surfacing across conflict areas, such as intersections and high-volume driveways.

The estimated cost of each option is outlined below in Table 10.

Table 10 – Rough Order Cost estimates for Short List Options

Description		Option A Cost ($M)	Option B Cost ($M)
High Rough Order Cost Estimate:		9.2–10.7	11.8–13.6
Cost Reduction Opportunities	**Cycle lane at footpath level:**	7.9–9.1	9.2–10.6
	Green surfacing minimised: *(i.e. green strip along edges and additional surfacing across conflict areas)*	7.9–9.2	10.7–12.3
	Road not resealed: *(i.e. no resealing undertaken and old road markings painted/removed)*	5.7–6.5	8.3–9.5
Low Rough Order Cost Estimate: *(Footpath level, minimal green surfacing, and no resealing)*		4.0–4.6	5.4–6.3

6.3 Decision on Recommended Option

Public feedback on the two design options was sought via the WCC cycleways website and two public drop-in sessions, held on 6 September 2017 and 9 September 2017. The feedback received indicated that Option A, a two-way seaside protected cycle path, was the preferred design option.

7. Recommended Treatment Option

After assessing the feedback from the September 2017 consultation period, and the cost estimate prepared for the two shortlisted options, WCC opted to separate the Evans Bay Parade project into two phases. Phase 1 includes the provision of a new cycle path along the length of Oriental Parade and Evans Bay Parade between Carlton Gore Road, and the NIWA driveway located at 301 Evans Bay Parade. Phase 1 is to be progressed through a traffic resolution process for approval to commence construction in 2018. This will allow a higher quality facility to be provided within the available budget. Future funding would be sought to complete Phase 2 of the route to the Cobham Drive intersection, linking to the Cobham Drive cycleway project currently under construction.

The following sections of this design report will address Phase 1 of the project. The revised route and key features provided along the route can be seen on the location plan below in Figure 12.

The public feedback received on the two short-listed options indicated that the preferred treatment option was the two-way, seaside cycle path. A preliminary concept design of the recommended option has been prepared for a traffic resolution process, which will also include an updated rough order construction cost estimate and a road safety audit. The following sections provide a description of the design details and outlines the additional features incorporated into the design for the recommended treatment option. A summary of the design details can be found in Appendix K. Detailed plans have been produced for the purposes of public consultation and can be found in Appendix J.

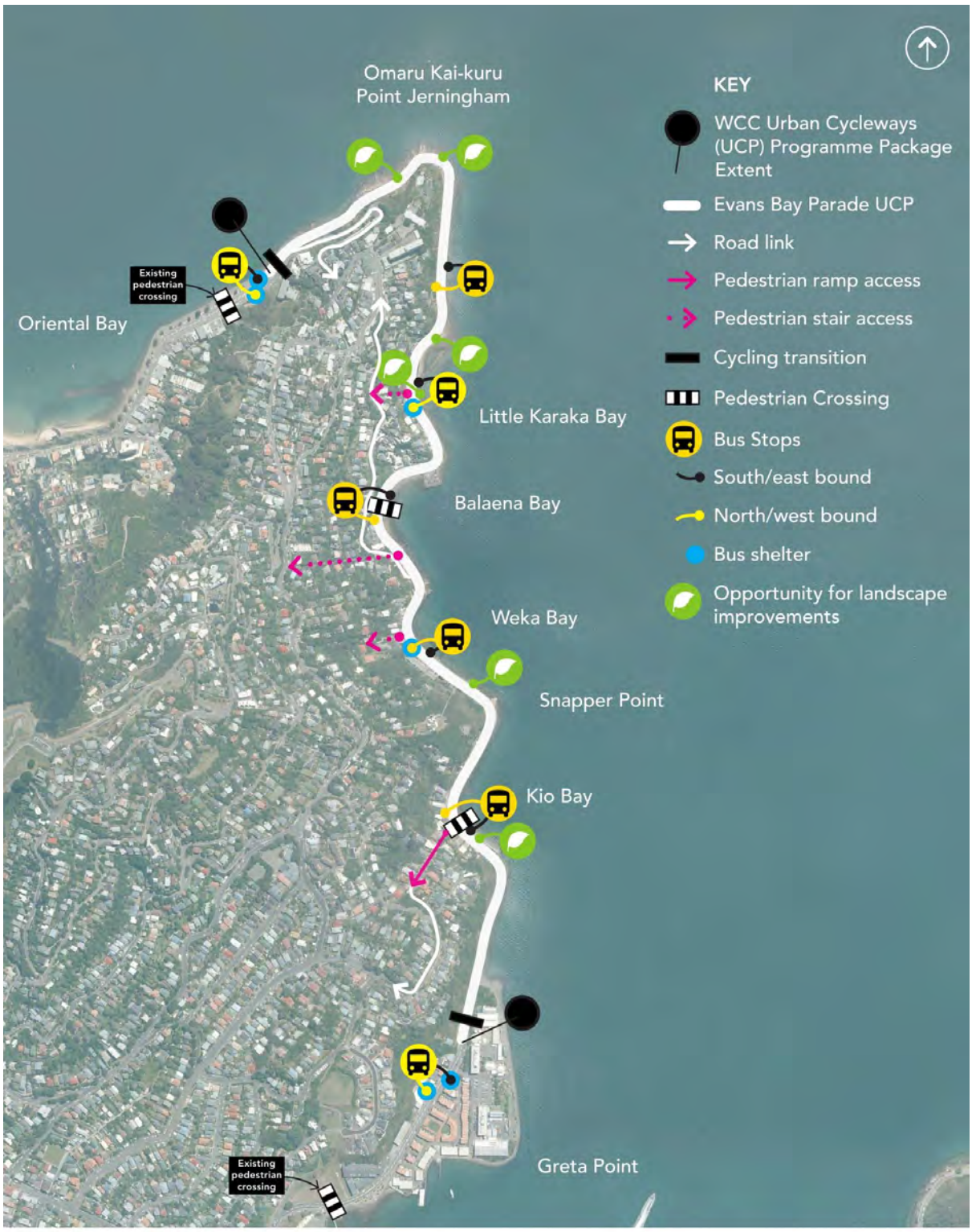


Figure 12 – Revised location plan – Evans Bay Parade cycleway extents

7.1 Design Philosophy

The community objectives (outlined in Section 2.2) have been incorporated into the conceptual design, where practicable, through the application of engineering and urban design principles. Table 11 below outlines the community objectives and details how the design achieves these objects.

Table 11 – Description of how the design meets the community objectives

Community Objective	Assessment
Improve the convenience, comfort and reliability of facilities for cycling	The separated cycle path will provide a dedicated space for cyclists along Oriental Parade and Evans Bay Parade. This will reduce conflict between cyclists and other road users and increase the attractiveness of the route for cyclists. The consistent width and surface treatment for the cycle path will be an improvement for cyclists, and the surface finish will be smoother than the chip seal road surface. "Fast and fearless" recreational cyclists can be accommodated either on the cycle path or within the traffic lanes. If a cyclist chooses to ride within the traffic lane, this will require them to take the lane.
Improve the convenience, comfort and reliability of facilities for pedestrians	The footpath will have a more consistent width and surface treatment along the route. Existing rest areas will be improved, and new rest areas created to improve the level of comfort for pedestrians travelling along the route. During surveys, some cyclists were observed to cycle along the footpath to avoid vehicle traffic on the road. These cyclists will have a dedicated space and should no longer use the footpath.
Improve the route consistency for walking and cycling facilities	Both cycling and walking facilities will have more consistent surface treatments. The footpath will have a more consistent width, widening in areas where the width is currently constrained and less than desirable for the number of users. The seaside cycle path connects with existing seaward side shared paths at Greta Point and Oriental Bay. Cyclists will be able to travel from Cobham Drive (Kilbirnie) to the Wellington waterfront separate from vehicles via a network of off-road shared paths and cycle paths.
Improve the safety of road users	The separation of cyclists, pedestrians and vehicles significantly reduces the likelihood of fatal or serious injury crashes along the route. The cycling facility will have improved width and buffer zones to parked vehicles. Two new pedestrian crossings will improve the visibility and safety of pedestrians crossing between residential areas and the waterfront. Narrower traffic lanes will encourage drivers to travel at slower speeds along Evans Bay Parade, reducing the severity of crashes.

Improve connections between residential areas and the waterfront	New pedestrian crossings will be provided at Balaena Bay and Kio Bay. Cycle ramps and hold bars will be provided at the Carlton Gore Road and Maida Vale Road intersections for cycle crossings.
Rationalise the on-street parking provision	An estimated 15 parking spaces have been removed to accommodate the new cycle path and improved pedestrian and bus facilities. Parking surveys indicate that the remaining 173 spaces adequately provide for parking demand along the route.
Enhance the built and natural environment	The cycle path utilises existing road space and to minimise construction effects on the coastal environment. Urban design elements, including seating, and bike parking, are proposed along the route for the benefit of all road users. Additional planting is proposed at rest areas and where road space is available.
Maintain motorised access to local properties	The seaward side cycle path does not affect property accesses.

7.2 Design Details

This section outlines the details of design for the recommended treatment option, including design dimensions and the assumptions made as a part of the design process.

7.2.1 Target standards

The recommended standard dimensions and the design dimensions for various elements of the road corridor, including cycling, pedestrian, and motor vehicle facilities, have been outlined below in Table 12. The table compares the design dimensions of the recommended treatment option to the absolute minimum and desirable minimum dimensions recommended in design guidance. The recommended standards have been sourced from multiple reference guides; further details on the reference guidance can be found in Appendix D.

Table 12 – Design dimensions and recommended dimensions for design elements

Element of Design	Design Dimensions	Recommended Dimensions from Design Guidance		
		Absolute Minimum	Desirable Minimum	Guidance
Footpath	**Seaward side:** 1.8–5.6 m **Hill side:** 1.2[3]–2.1 m	1.8 m	2.0 m	WCC
		1.5 m	2.7 m	NZTA (PPDG)
		1.5 m	2.0 m	Austroads

[3] *The 1.2 m width on the hill side is an existing footpath facility.*

Element of Design	Design Dimensions	Recommended Dimensions from Design Guidance		
		Absolute Minimum	Desirable Minimum	Guidance
Cycle path (two-way)	2.0–3.0 m	2.5 m	--	WCC
		2.0 m	2.5 m	Austroads
		3.0 m	3.5 m	CCC
Buffer zone (to traffic lane)	0.3–0.5 m	0.6 m	--	WCC
		0.6 m	1.0 m	Austroads
		0.85 m	1.0 m	CCC
Buffer zone (to parallel parking)	0.8–1.5 m	1.0 m	1.2 m	WCC
		--	1.0 m	Austroads
		0.85 m	1.0 m	CCC
Traffic lane	3.3–3.8 m; allowing for widening around curves	--	3.5 m	WCC
		--	3.5 m	NZTA
		3.3 m	3.5 m	Austroads
Parallel parking	Typically 2.1 m	--	2.5 m	WCC
		2.0 m	2.5 m	NZTA
		2.1 m	2.5 m	Austroads
Bus stop	Bus box width: 2.5 m Bus box length: 15 m Lead-in length: 9 m Lead-out length: 5 m	Bus box width: 2.5 m Bus box length: 15 m Lead-in length: 9 m Lead-out length: 5 m	Bus box width: 2.5 m Bus box length: 15 m Lead-in length: 15 m Lead-out length: 9 m	GWRC[4]
		--	Bus box width: 2.5 m Bus box length: 13.5 m Lead-in length: 8 m Lead-out length: 5 m	NZTA

[4] *Specific design guidance surrounding bus stop dimensions was received through direct correspondence with GWRC.*

7.2.2 Assumptions

Throughout the design process, assumptions have been made regarding the design details. The following assumptions were made at the outset of, or during, the design process. These assumptions have directed the development of the recommended treatment option.

- The design will maintain a similar material palette to Cobham Drive;
- The design will adhere were practicable to best practice facility design, the reference material from which guidelines and standards are outlined is attached in Appendix C;
- The route extends from the intersection of Carlton Gore Road and Oriental Parade in the west and extends to the NIWA driveway at 301 Evans Bay Parade in the east;
- Urban design and landscaping features will be integrated into the design regularly along the entire route;
- The project works will remain within the formed road reserve, and will not extend into the coastal marine area (CMA). A planning and consenting review has been sought to confirm the boundaries of the road reserve and the CMA as the boundary varies, including areas where the CMA sits within the formed road, and vice versa;
- The cycle path will sit above road level, either at footpath level or slightly lower than footpath level (Copenhagen style), and will include a buffer zone between the cycle path and the carriageway;
- Cycle ramp kerb crossings will be provided intermittently along the facility to allow access onto and off of the cycle path for cyclists who are not joining or exiting the cycle path at the ends of the facility;
- The cycle path is targeted towards an uptake in cycling for the “interested but concerned” user group. It is not intended that “fast and fearless” recreational cyclists be excluded from using the facility; however they may still choose to ride on the road. If a cyclist chooses to ride within the traffic lane, this will require them to take the lane.
- Further consultation regarding the design in specific neighbourhoods along Evans Bay Parade will take place with the affected residents to gain further insight into the community’s views on the proposed changes; and
- Aspects of the recommended treatment that do not pertain to the traffic resolution process have not been included in the design at this stage or have been included at a conceptual level. These features may be further incorporated into the design at a later stage in the design process. These features include, but are not limited to,:
    - Road surface treatments;
    - Traffic calming measures;
    - Cycle path surface treatments;
    - Bike parking; and
    - The integration of public art into the urban design treatment.

7.3 Landscape and Urban Design Approach

The Evans Bay Parade cycleway project is about more than getting people from their origin to their destination. As a part of the WCC UCP, it is about incorporating all aspects of urban design to enhance the journey and character of the surrounding context (both the natural and built environment) and to fulfil the aspirations of the WCC's strategic plans and policies.

Although the UCP is primarily about providing cycling infrastructure, integrating urban design elements serves to heighten the success of the project in terms of the benefits it will provide for residents, commuters, and visitors in the area. The need to address the urban design elements has been reinforced in the community engagement process through the development of the community objectives (Section 2.2), namely the objective to enhance the natural and built environment.

Figure 13 – Elements of urban design

At a macro scale, the urban design strategy for The Evans Bay Parade cycleway project aims to:

- Improve the frequency of public space pause moments along the route through a series of landscape enhancements;
- Better the quality of landscape amenity and level of interest for all people travelling along the route (with all modes of transport); and
- Improve the overall walking, cycling, and public transport access to key activity nodes along the route (i.e. recreational beaches).

7.3.1 Urban design enhancements

To implement the above goals and objectives, the urban design approach for the recommended design option seeks to address the following themes:

- **Access –** Widen current footpaths widths where practicable to better serve the current range of footpath users, including:
    - Pedestrians;
    - Runners;
    - People with buggies/prams;

- The mobility impaired; and
- Skateboarders and scooter users.

In particular, widen seaward side footpaths where existing dimensions are narrower than the recommended minimums set out in the NZTA Pedestrian Planning and Design Guide.

- **Connectivity** – Improve crossing facilities for pedestrians, cyclists, and public transport users to better connect surrounding residential areas to the harbour and to key recreational activity areas.

Figure 14 – Ecologically responsive coastal planting – Seatoun, Wellington

- **Ecology and Water Sensitive Urban Design (WSUD) –** The landscape enhancements along the route aim to:
  - Reinforce the existing landscape character of the area, such as the regular pulse of sheltered bays and exposed points and the habitat niches that are formed by the landform/coastline/aspect along with their existing flora and fauna; and
  - Provide opportunities for WSUD enhancements where possible to mitigate storm water pollutant run off into harbour. According to the GWRC's State of the Environment Study, the Evans Bay water body has one of the highest levels of contaminants from urban storm water runoff. Evans Bay Parade is a principal road, carrying on average 12,000 vehicles per day; heavy metals contribute to contaminated water flowing directly into the harbour.

There remains the opportunity to provide storm water filtration in order to improve the water quality of Evans Bay. Given that existing storm water services along the route are likely to be adjusted, new Water Sensitive Urban Design measures could potentially be included.

Figure 15 – Waitangi Park: WSUD and biophilic response to urban public realm (Simon Devitt)

- **Placemaking –** Enrich the route by providing:
    - Places to pause with seating, planting, and shelter to make up passive spaces for rest outside of the footpath thoroughfare zone;
    - An incorporated design narrative around historic features and cultural heritage values of the area;
    - Gateway places/thresholds to better define key features along the route, such as landscape improvements to Orua Kai Kuru/Point Jerningham (refer Figure 16) to celebrate this significant landmark; and
    - A consistent look and feel along the Evans Bay Parade route whilst also stitching into the Oriental Parade and Cobham Drive cycleway projects.

7.3.2 Next steps

Details of the urban design enhancements will be developed in the next design phase where further consideration will be given to the abovementioned design elements and features.

Figure 16 – Orua Kai Kuru/Point Jerningham

7.4 Opportunities

Throughout the conceptual design process, opportunities to accommodate alternative designs of the road cross section were identified in particular areas. These alternative design options are not included in the traffic resolution concept design, but their inclusion would result in one or more of the following outcomes:

- Improved connectivity;
- Improved pedestrian facilities;
- Improved cycling facilities;
- Further urban design and enhancements;
- Increased parking.

These areas of opportunity require further input from the community and will be reassessed after the review of public feedback received from the traffic resolution process. The following are the areas of opportunity that have been identified along the route and their respective outcomes:

- The two bus stops south of Point Jerningham have a very low number of users each day. There is an opportunity here to remove these bus stops and, with the additional space created, provide improved pedestrian and cyclist facilities and urban design enhancements, including seating and planting. If the bus stops remain, these improvements could also be achieved by placing the southbound bus stop within the traffic lane.
- At Little Karaka Bay, there is the opportunity to place the northbound bus stop within the traffic lane and provide a kerb buildout, which would provide additional footpath space for pedestrians waiting for the bus, increasing accessibility for bus users.

- At Balaena Bay, the proposed design retains the existing footpath on the hillside and provides a 1.8–2.0 m wide footpath on the seaward side, and narrows the traffic lanes to a less than desirable width. We would like to understand how the community views an option, which removes the existing hillside footpath in order to slightly widen the traffic lanes and increase the pedestrian footpath width on the popular seaward side.
- At Kio Bay, there is an opportunity to place the southbound bus stop within the traffic lane and gain 2–3 additional car parks on the seaward side, as well as improve the cycleway alignment.

The placement of bus stops within the traffic lane require following vehicles to stop briefly for a bus that is servicing passengers at the bus stop. The existing bus stops along Evans Bay Parade are mostly within the traffic lane, so this opportunity proposes little change from the existing layout and operation.

Greater Wellington Regional Council, as managers of the public transport network have been consulted on these proposed changes and are expected to make a submission on the traffic resolution plans.

The opportunities above also align with aspects of the community objectives.

7.5 Resource Consents

In general, construction of the cycleway within the existing formed road would be unlikely to require resource consents from either WCC or GWRC. However as the project proposes urban design upgrades which may have a minor effect on existing seawalls supporting the road, this introduces the potential for resource and building consents, either because the seawalls are considered to be in the coastal marine area or they are identified as historic heritage. In addition, there is some uncertainty along Evans Bay Parade about the jurisdictional boundary between WCC and GWRC. This is in the process of being resolved, which will then enable the identification of any resource consent requirements. If resource consents are required, it is anticipated that it should be a relatively straight-forward process.

7.6 Costing

A rough order cost estimate for construction of the recommended design option has been prepared for the purposes of consultation. This rough order cost is included in Section 6.2.4 above. The cost estimate indicates that the approximate cost of the project will be between $4.6 million and $5.3 million. Potential adjustments to the design may be required to meet WCC or community expectations regarding the cost of the improvements.

The following assumptions were made during the cost estimation process:

- The extent of works is from the intersection of Carlton Gore Road and Oriental Parade in the west to the NIWA driveway at 301 Evans Bay parade in the east, a distance of approximately 2.5 km, and includes the intersections of Carlton Gore Road and Maida Vale Road;
- The carriageway will be resurfaced in asphalt and painted with new road markings;
- The cycle path will be constructed between road and footpath level;
- Cycle green surfacing will be applied to the cycle path surface area to improve visibility of the cycle space;
- The cycle path will be constructed with asphalt;

- All kerbs between the cycle path and the footpath are mountable;
- No resurfacing of the footpath is required;
- All existing parking and traffic signage will be re-used;
- An allowance for a 30%-50% contingency.

An independent cost estimator has been engaged to carry out a more detailed cost estimate on the preliminary design of the recommended option as a part of the Traffic Resolution process.

8. Safety Audit

A road safety audit of the preliminary design will be undertaken In November 2017. The recommended changes that arise from the safety audit process will be summarised in the final Traffic Resolution Report, and in updated plans to be put forward for Councillor approval in March 2018.

9. Next Steps

The recommended design option incorporates feedback from community engagement, transport engineering and urban design best practices, and council strategies, including the Urban Growth Plan, Cycling Master Plan and Framework, and Long Term Plan.

Public feedback will be sought on the recommended design option from 14 November 2017 to 11 December 2017 via the Traffic Resolution consultation process. A road safety audit and a construction cost estimate will be undertaken on the preliminary design.

Following the above processes, the preliminary design and Traffic Resolution Report will be updated to reflect any changes in the project arising from the results of public feedback, the road safety audit, and the construction cost estimate. A final report will be put forward for Councillor approval of the project in March 2018. Following Councillor approval, and NZTA approval of the finalised Detailed Business Case for the Eastern Suburbs cycling programme, implementation will progress through a detailed design stage for the approved Evans Bay project, and onto construction.

Appendix A – Long List of Workshop Ideas

The following table outlines long list Ideas identified in Workshop 3 from the T+T Issues Paper and March Community Drop-in sessions.

ID	Component Description	Theme			
		Cross section	Traffic Manage	Urban Design	Facilities
1.0	***From Meeting Notes***				
1.1	Reduce speed limit to 40 km/hr		✓		
1.2	Add sharrows in places where faster cyclists might want to take the lane and/or cycle path is narrower		✓		
1.3	Speed enforcement		✓		
1.4	Speed cushions		✓		
1.5	Speed platforms (next to the day care centre, etc.) with zebra crossings on top		✓		✓
1.6	Put more crossings in; • At bus stops • At shops • Close to side roads				✓
1.7	Art/murals on grey concrete walls – stories/history			✓	
1.8	Consistently smooth road surface for cycling			✓	
1.9	Cycle parking at beaches and popular destinations (e.g. cafes)				✓
1.10	Create bike park and ride at Cobham Drive end (drive – park – bike)				✓
1.11	Zebra crossings combined with the removal of median strips	✓	✓		
1.12	Stop cars cutting corners/encroaching on-road cycle lane. Physical? Speed?		✓		
1.13	Physical barrier to stop cars encroaching on cycle lane + widen cycle lanes	✓	✓		
1.14	Enforcement – police		✓		
1.15	Two-way seaside protected cycle track	✓			
1.16	Wider on-road cycle lanes / green paint, different separators on different areas i.e. rumble strip, angled (mountable) kerbs, flexi posts	✓			
1.17	Toucan (shared cycle and pedestrian) crossing at Cobham lights				✓
1.18	Island crossing for cyclists to cross just north of Cobham (Drive) from shared path to road		✓		✓
1.19	Two way cycle lane on sea side	✓			
1.20	Remove parking from sea side	✓	✓		
1.21	Remove central flush median	✓			
1.22	Put all parks on land side	✓	✓		

ID	Component Description	Theme			
		Cross section	Traffic Manage	Urban Design	Facilities
1.23	Surfacing (asphalt please)			✓	
1.24	Remove car parking that isn't used	✓	✓		
1.25	Car door buffer zones for cyclists	✓			
1.26	Widen road reserve into CMA (coastal marine area)	✓			
1.27	Reduce traffic lane width to 3.0 m + corner widening	✓			
1.28	Improved on-road cycle lanes, no cycle track	✓			
1.29	Remove current crash risk issues	✓	✓		
1.30	Protected on road cycle lane	✓			
1.31	Cycle track that can get wider when it can using road space from other modes i.e. traffic lane	✓			
1.32	Reduce attractiveness of route for cars		✓		
1.33	Reduce speed of vehicles		✓		
1.34	Make one way for cars – tidal direction		✓		
1.35	Parking clearway in peak hours (one way, two way, both)		✓		
1.36	Time limited parking		✓		
1.37	Eliminate commuter parking		✓		
1.38	Coupon parking		✓		
1.39	Resident parking permit		✓		
1.40	30 km/hr speed limit extension		✓		
1.41	Speed camera		✓		
1.42	Consistent facility along whole route	✓			
1.43	Remove parking from one side of Greta Point (sea side)	✓	✓		
1.44	Shift problematic parking in Greta Point		✓		
1.45	Get rid of flush median	✓			
2.0	***From Trace Sheets***				
2.1	Reduce speed. 30km/h?		✓		
2.2	Reduce parking		✓		
2.3	Reduce vehicle lane	✓			
2.4	Omit buffer	✓			
2.5	Better pedestrian crossings (lights, zebra)				✓
2.6	More crossings + buildouts at strategic locations	✓			✓
2.7	Better bus service (more regular service)				✓
2.8	Clearer cycleway	✓			
2.9	Wands on corners or rumble strips		✓		
2.10	Single cycleways on either side	✓			
2.11	Two way cycleway on one side	✓			
2.12	Seaside boardwalk	✓			✓

ID	Component Description	Theme			
		Cross section	Traffic Manage	Urban Design	Facilities
2.13	Smooth cycleway surface				✓
2.14	Horizontal/vertical delineation for footpath/cycleway/road		✓		
2.15	Slow/ medium/ fast for footpaths and cycleways		✓	✓	
2.16	Seaward side twin cycleway, avoids conflict	✓			
2.17	Parking/cycleway	✓			
2.18	N/W shelter			✓	✓
2.19	Improved bus shelters, protection down to the ground			✓	✓
2.20	Bike racks – beaches + shops			✓	✓
2.21	Planting on seaward side of road (greening)			✓	
2.22	Wind – cycleway on seaside makes more consistent				✓
2.23	Straights and corners – different scenarios			✓	✓
2.24	Sharrows		✓		
2.25	Hataitai Beach – parking on land side	✓	✓		
2.26	Crossing points required at; Balaena Bay Weka Bay Kio Bay Belvedere Road				✓
3.0	***From Cross Sections***				
	Section 7 (Hataitai Beach)				
3.1	Need cycle lanes on both sides	✓			
3.2	Remove parking from sea side, use space to extend footpath and turn into a grade separated shared path	✓	✓		
3.3	Low plantings on kerb buildouts for pedestrian crossings			✓	✓
3.4	Two-way seaside cycleway 3.2 m wide short term.	✓			
3.5	Long term boardwalk or reclamation to increase width to 4.4 m.	✓			
3.6	Possible angle parking in park across road?	✓	✓		
3.7	Reduce lanes to 3.2 m width. Safe hit posts between cycleway and traffic lanes	✓			
3.8	Remove parking from seaside.	✓	✓		
	Section 3 (Weka Bay)				
3.9	Visually break up long straight roads with plantings/trees built out into parking areas			✓	
3.10	Put planters within street furniture space			✓	
3.11	Okay as it is now	✓			
3.12	40 km/hr.	✓	✓		

ID	Component Description	Theme			
		Cross section	Traffic Manage	Urban Design	Facilities
3.13	Murals on sea wall.			✓	
3.14	Remove seaside parking, install 4.4 m wide two-way cycleway. Reduce traffic lanes to 3.4 m width. Remove on road cycle lanes. 0.6 m buffer between parking and traffic lane. Relocate kerbline and reduce footpath width by 0.6 m	✓			
	Section 5 (Greta Point)				
3.15	Allow cyclists to use the 3 m wide path on the sea side	✓			
3.16	Remove median strip and parking buffer and replace with on road cycle lanes.	✓			
3.17	Path widening if possible.	✓			✓
3.18	Keep traffic lanes at 3.5 m width	✓			
3.16	Reduce speed limit to 40 km/hr, combine with speed tables/ pedestrian crossings	✓	✓		✓
3.17	1.5 m wide flush median to allow cars to overtake cyclists	✓			
3.18	Reduce traffic lanes from 3.5 to 3.3 m width.	✓			
3.19	Protected two-way cycleway on seaside, separate from cars by 0.5 m wide planter.	✓		✓	
3.20	Parking removed from sea side	✓	✓		
	Section 1 (Oriental Bay)				
3.21	Widen cycleway	✓			
3.22	Extend 40 km/hr slow speed zone		✓		
3.23	Reduce traffic lane width to 3.3 m. Remove on road cycle lanes, 0.6 m buffer on cliff side	✓			
3.24	Widen path to 4.7 m, delineate cyclist and pedestrian space with different surfacing.	✓			✓
3.25	Consider pedestrian boardwalk or reclamation	✓		✓	✓

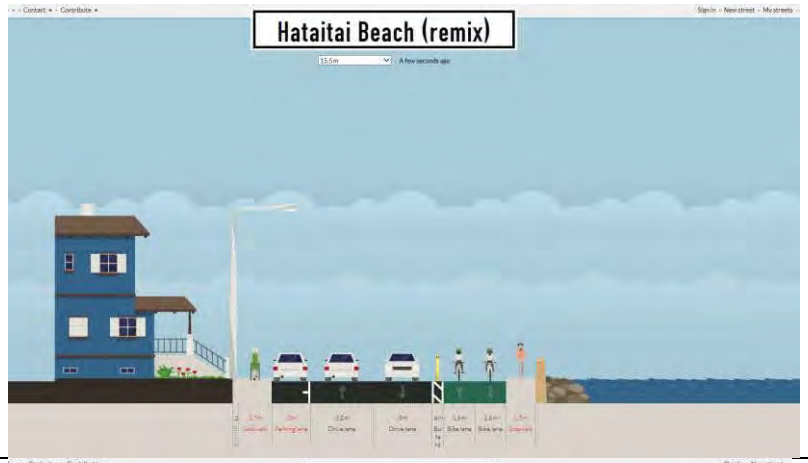
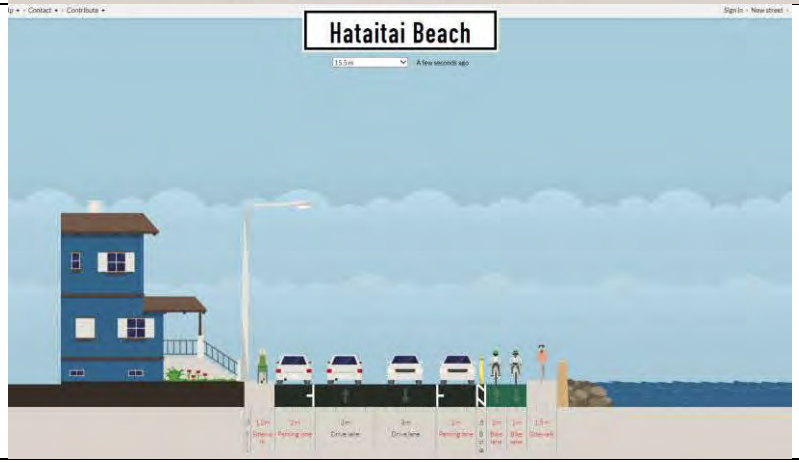
Appendix B – Long List Options

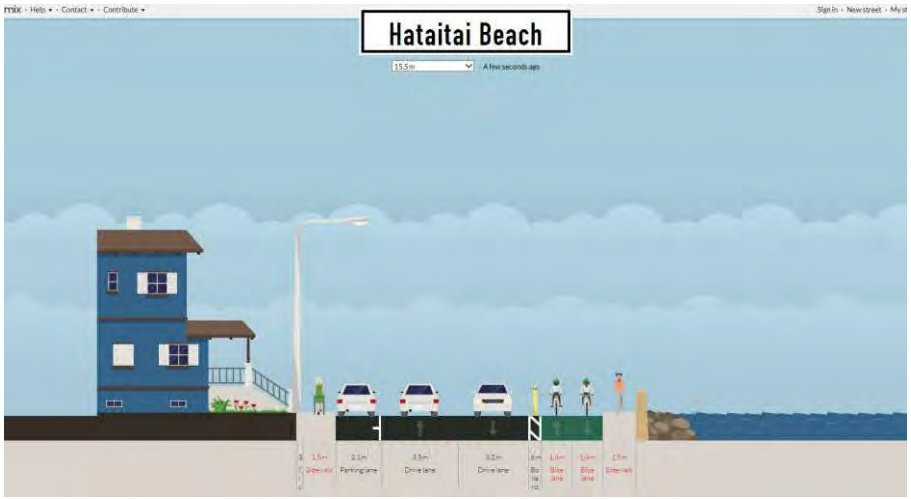
The long list of options are detailed through Streetmix cross sections and descriptions of the key features of each option as presented in Workshop 3.

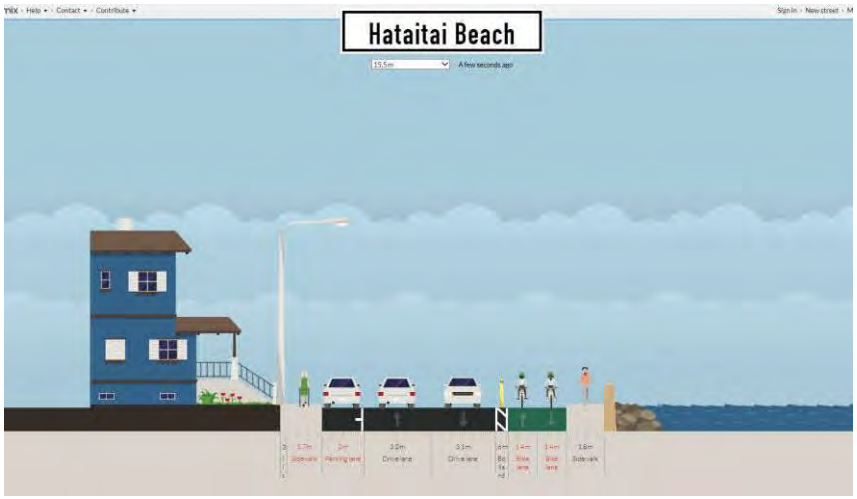
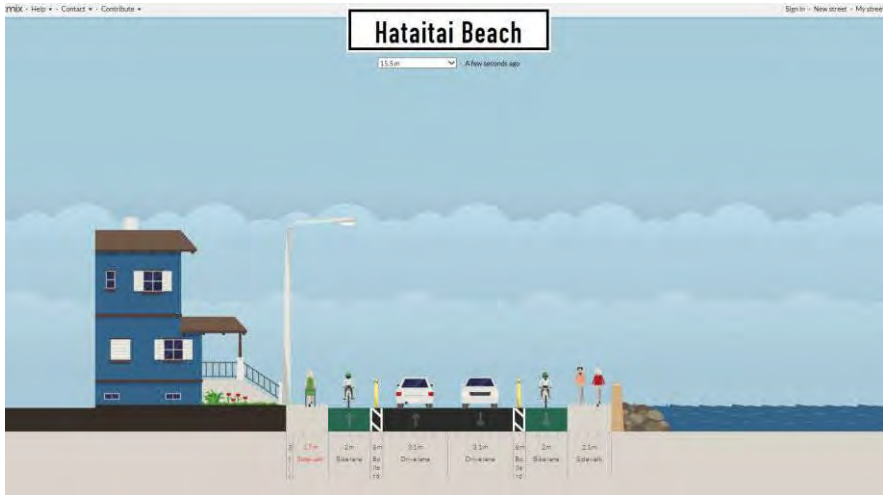
Evans Bay Workshop 4
Long List of Options

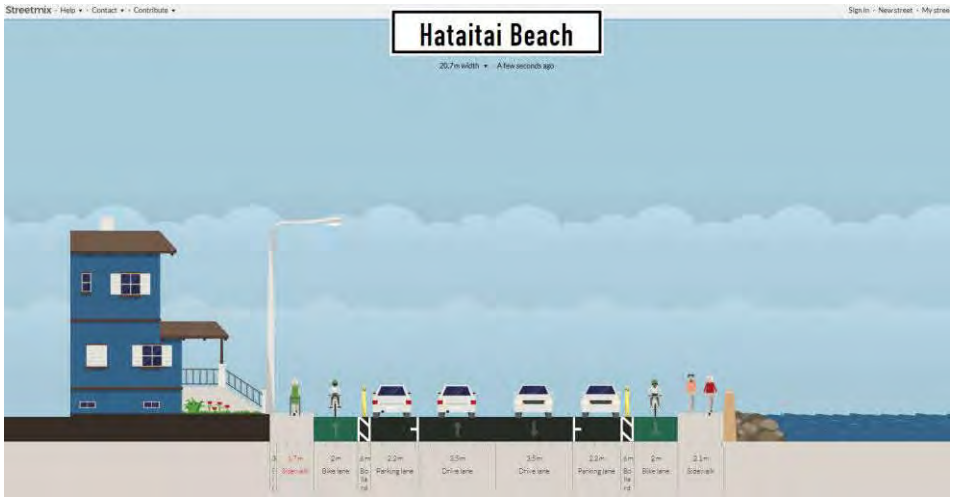
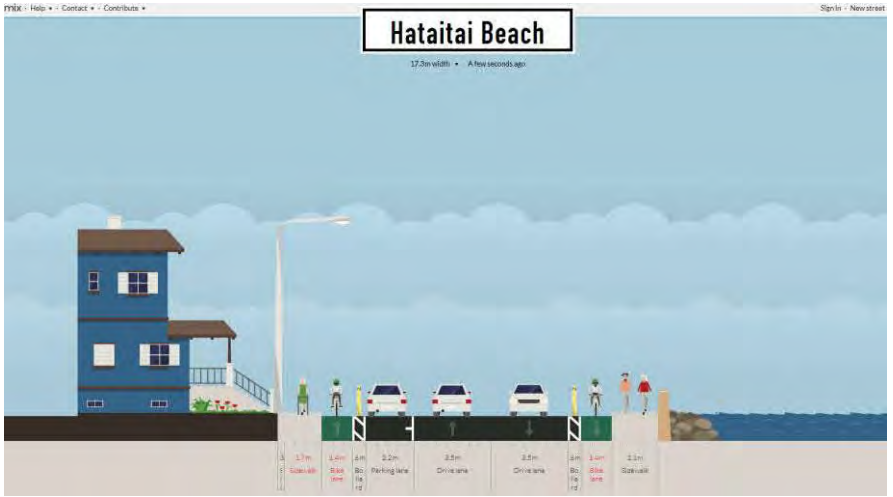
Absolutely Positively Wellington City Council
Me Heke Ki Pōneke

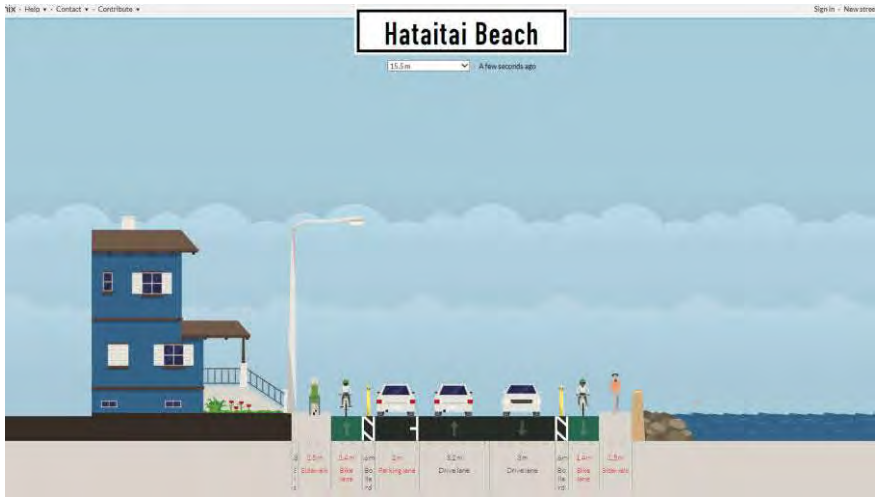
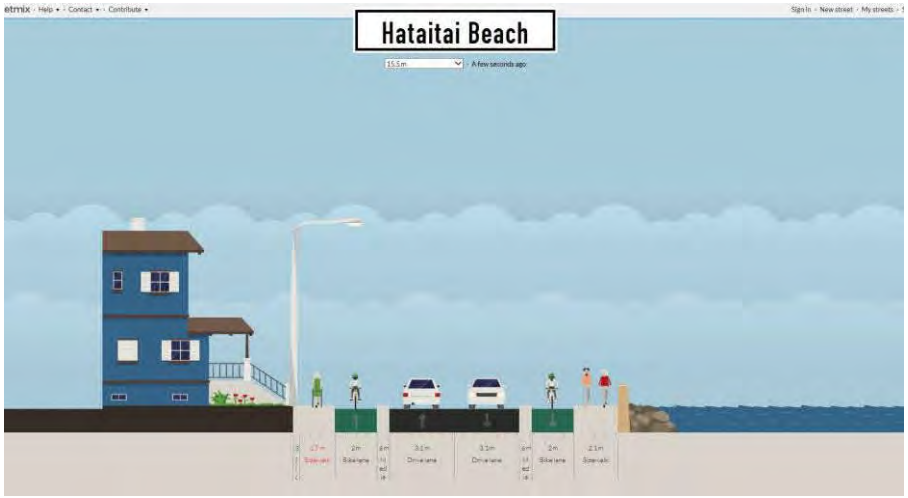
The following table compiles the long list of concept options for the Evans Bay Parade project, developed with the Working Group at workshop #3.

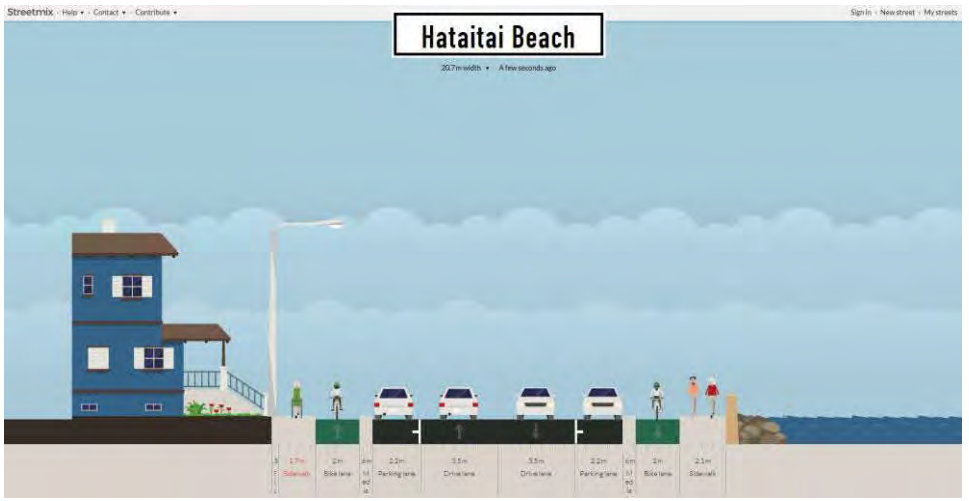
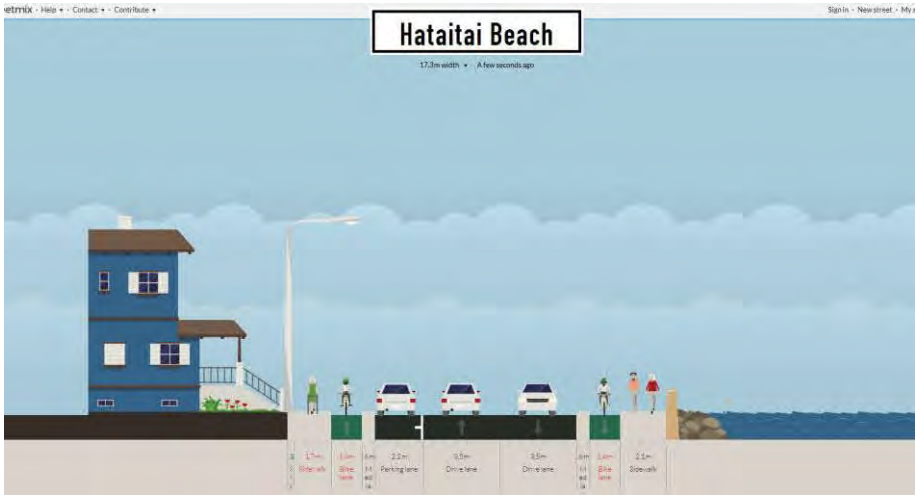
Protected Cycleway Options	
Option 1 – Two-way seaside protected cycle track • Desirable width – 3.8m (includes 0.6m buffer) • Narrower traffic lanes • No on-road cycle facility • Parking maintained single side of road • Footpath width maintained one side • Removal of flush median **SHORT LISTED OPTION**	
Option 2 - Two-way seaside protected cycle track • Less than minimum width – 2.5m (includes 0.5m buffer) • Narrower traffic lanes • No on-road cycle facility • No change to current parking • Reduced footpath width • Removal of flush median	

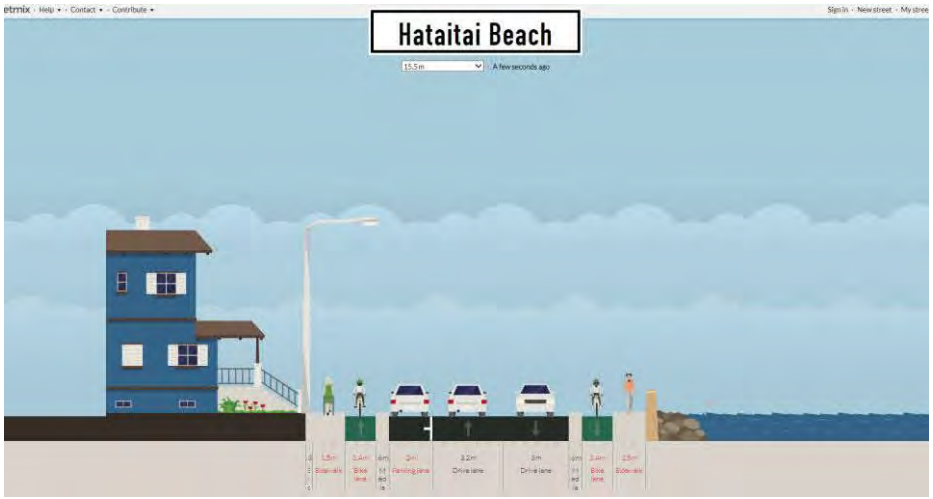
Option 3 - Two-way seaside protected cycle track • Desirable width – 4.6m (includes 0.6m buffer) • Expand road reserve into CMA by 5m • Wider traffic lanes • No on-road cycle facility • No change to current parking • Footpath width maintained	
Option 4 - Two-way seaside protected cycle track • Minimum width – 3.4m (includes 0.6m buffer) • Wider traffic lanes • No on-road cycle facility • Parking maintained single side of road • Reduced footpath width • Removal of flush median	

Option 5 - Two-way seaside protected cycle track • Minimum width – 3.4m (includes 0.6m buffer) • Wider traffic lane width • No on-road cycle facility • Parking maintained single side of road • Maintain footpath width • Removal of flush median **SHORT LISTED OPTION**	
Option 6 - Uni-directional protected kerbside cycle lanes • Desirable width – 2 x 2.6m (includes 0.6m buffer) • Narrower traffic lanes • No on-road cycle facility • Pocket parking where width allows, large scale removal of on-street parking • Footpath width maintained • Removal of flush median **SHORT LISTED OPTION**	

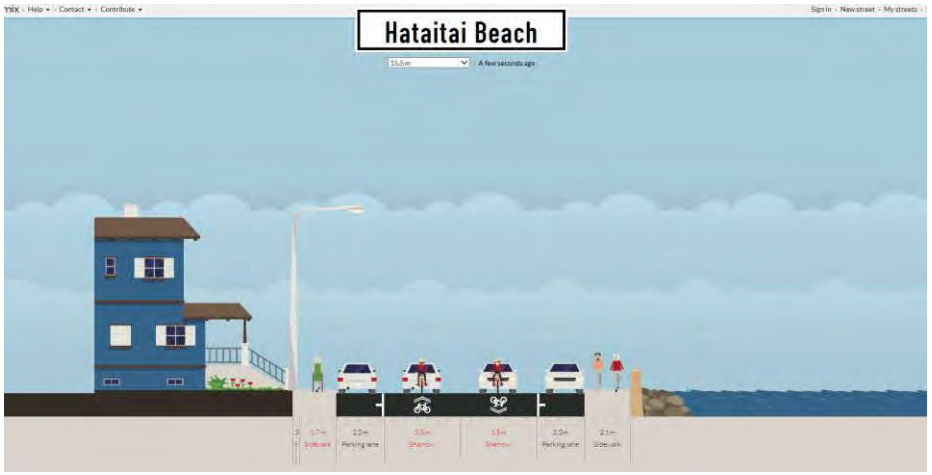
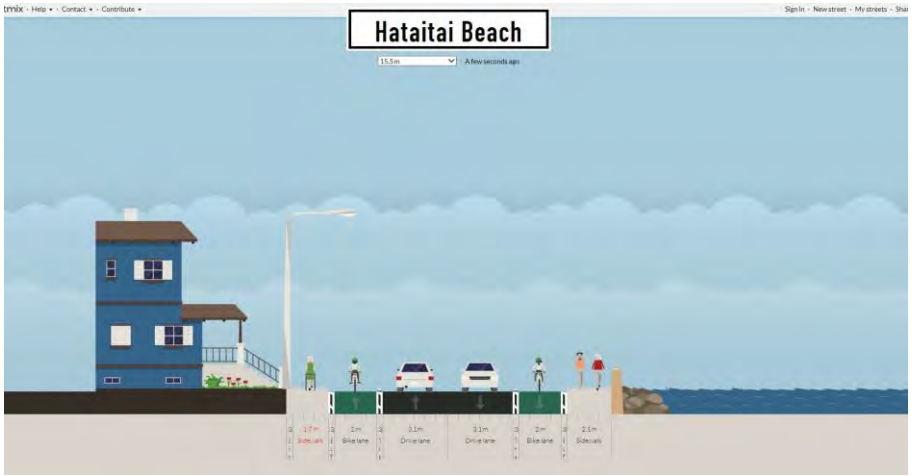
Option 7 - Uni-directional protected kerbside cycle lanes • Desirable width – 2 x 2.6m (includes 0.6m buffer) • Expand road reserve into CMA by 5.2m • Wider traffic lanes • No on-road cycle facility • No change to current parking • Footpath width maintained	
Option 8 - Uni-directional protected kerbside cycle lanes • Minimum width – 2 x 2.0m (includes 0.6m buffer) • Expand road reserve into CMA by 1.8m • Wider traffic lanes • No on-road cycle facility • Parking maintained single side of road • Footpath width maintained	

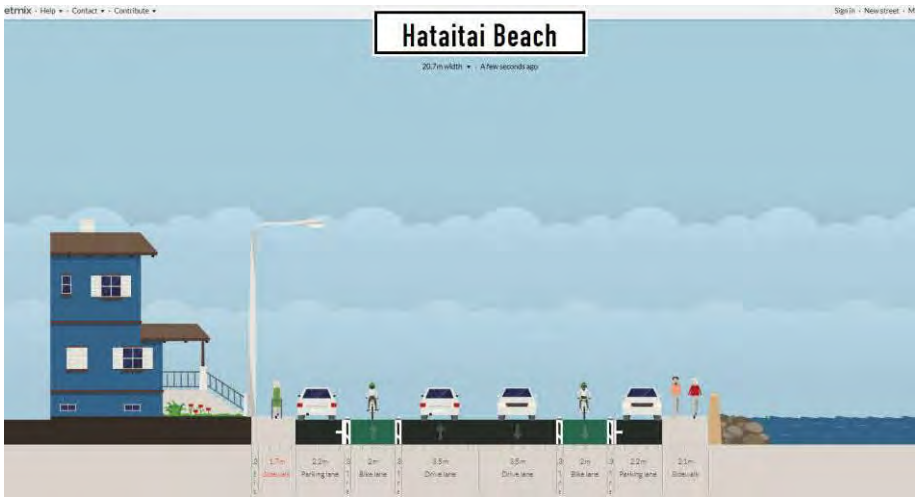
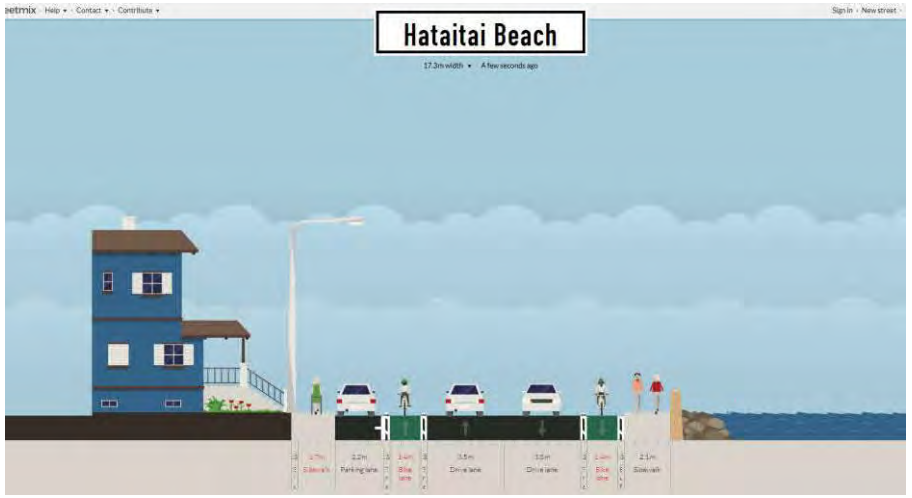
Option 9 - Uni-directional protected kerbside cycle lanes • Minimum width – 2 x 2.0m (includes 0.6m buffer) • Narrower traffic lanes • No on-road cycle facility • Parking maintained single side of road • Narrower footpath width • Removal of flush median	
Option 10 - Uni-directional separated cycle path at footpath level • Desirable width – 2 x 2.6m (includes 0.6m buffer) • Narrower traffic lanes • No on-road cycle facility • Pocket parking where width allows, large scale removal of on-street parking • Footpath width maintained • Removal of flush median	

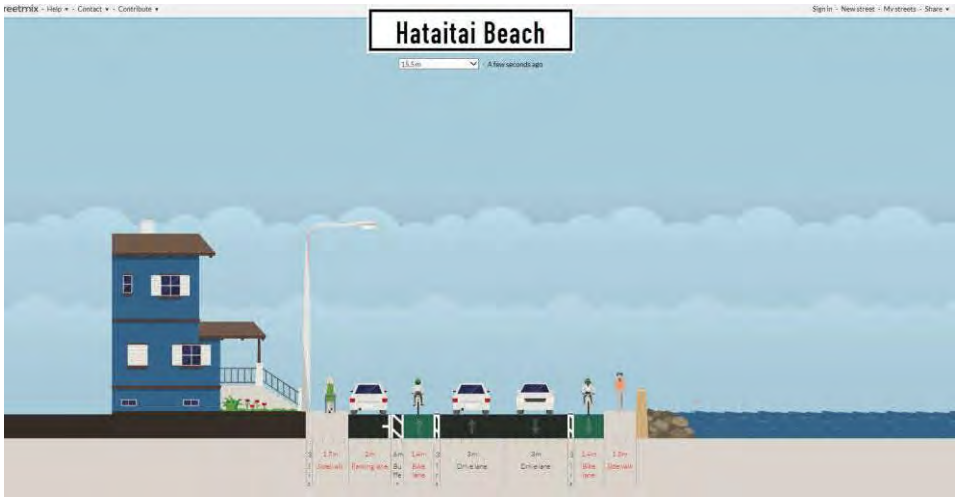
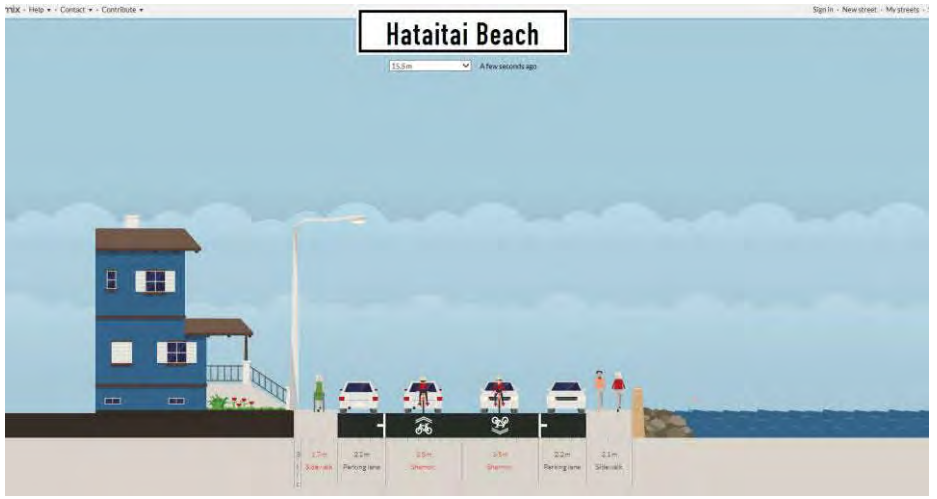
Option 11 - Uni-directional separated cycle path at footpath level • Desirable width – 2 x 2.6m (includes 0.6m buffer) • Expand road reserve into CMA by 5.2m • Wider traffic lanes • No on-road cycle facility • No change to current parking • Footpath width maintained	
Option 12 - Uni-directional separated cycle path at footpath level • Minimum width – 2 x 2.0m (includes 0.6m buffer) • Expand road reserve into CMA by 1.8m • Wider traffic lanes • No on-road cycle facility • Parking maintained single side of road • Footpath width maintained	

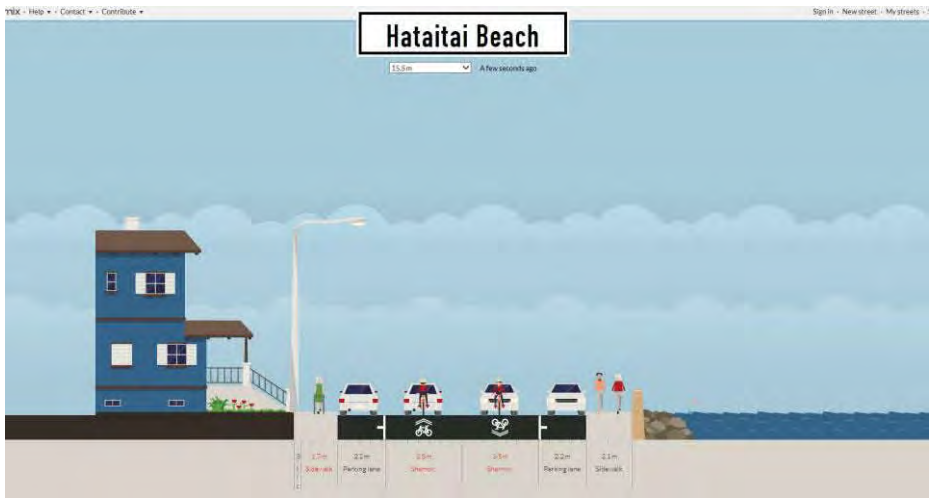
Option 13 - Uni-directional separated cycle path at footpath level	
• Minimum width – 2 x 2.0m (includes 0.6m buffer) • Narrower traffic lanes • No on-road cycle facility • Parking maintained single side of road • Narrower footpath width • Removal of flush median	

On-Road Cycle Options

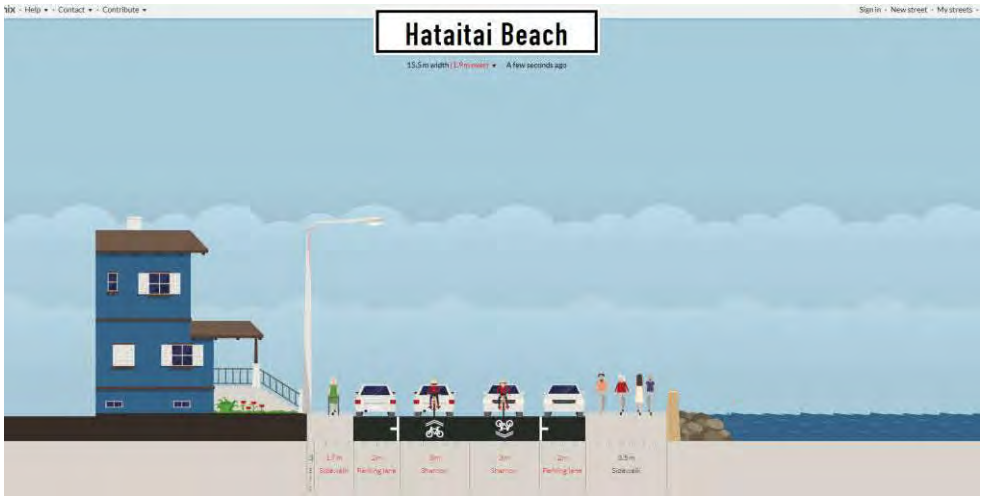
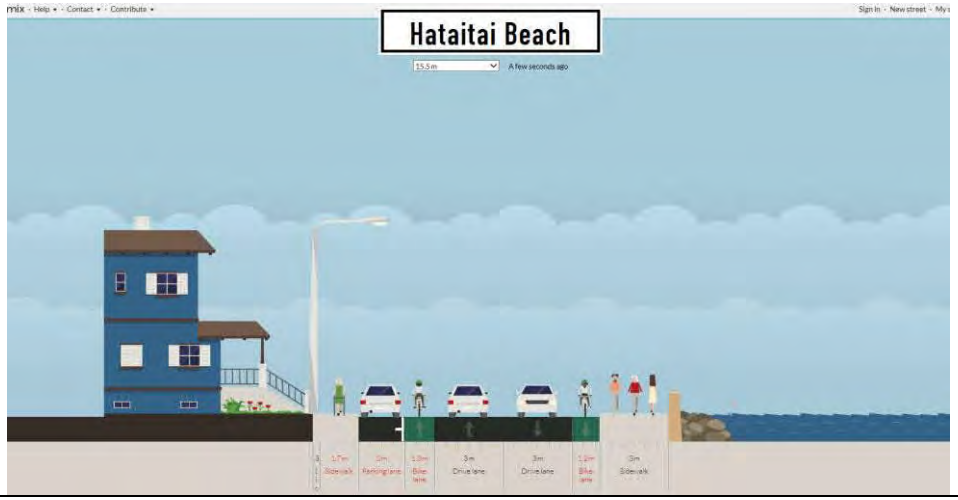
Option 14 – Paint Sharrows • Do minimum option. No change to other road elements	
Option 15 - Desirable width on-road cycle lanes • Desirable width – 2 x 2.6m (includes 0.6m buffer) • Narrower traffic lanes • Pocket parking where width allows, large scale removal of on-street parking • Footpath width maintained • Removal of flush median • Edge delineation (i.e. safe hits/armadillos) **SHORT LISTED OPTION**	

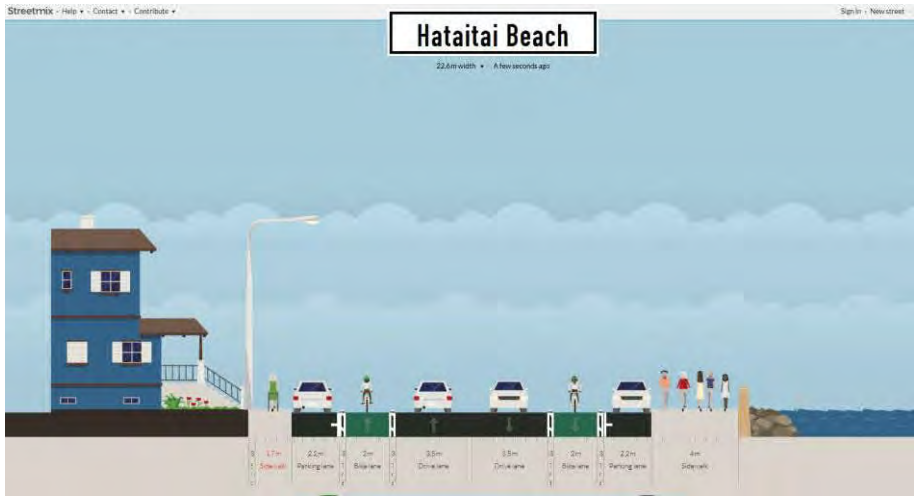
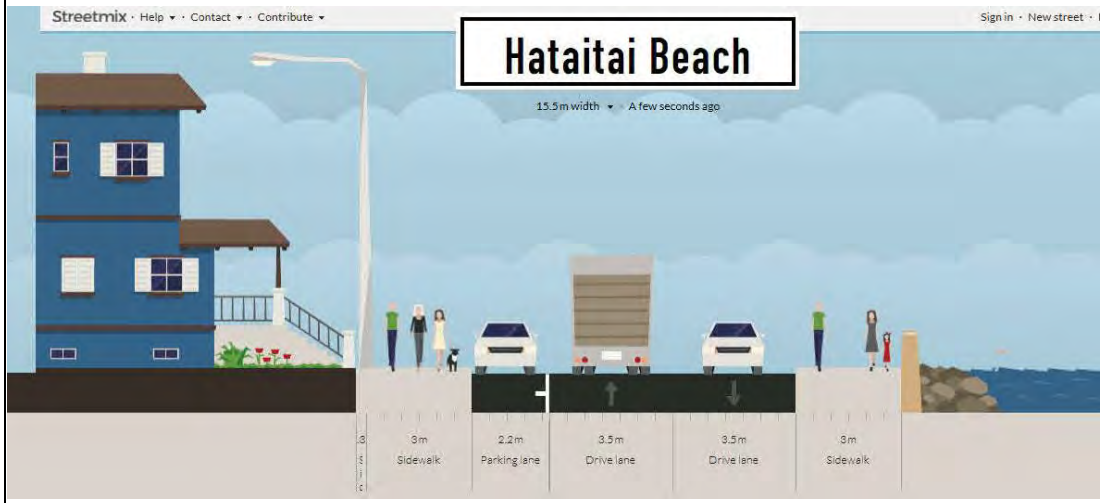
Option 16 - Desirable width on-road cycle lanes • Desirable width – 2 x 2.6m (includes 0.6m buffer) • Expand road reserve into CMA by 5.2m • Wider traffic lanes • No change to current parking • Footpath width maintained • Edge delineation (i.e. safe hits/armadillos)	
Option 17 – Minimum width on-road cycle lanes • Minimum width – 2 x 2.0m (includes 0.6m buffer) • Expand road reserve into CMA by 1.8m • Wider traffic lanes • Parking maintained single side of road • Footpath width maintained • Edge delineation (i.e. safe hits/armadillos)	

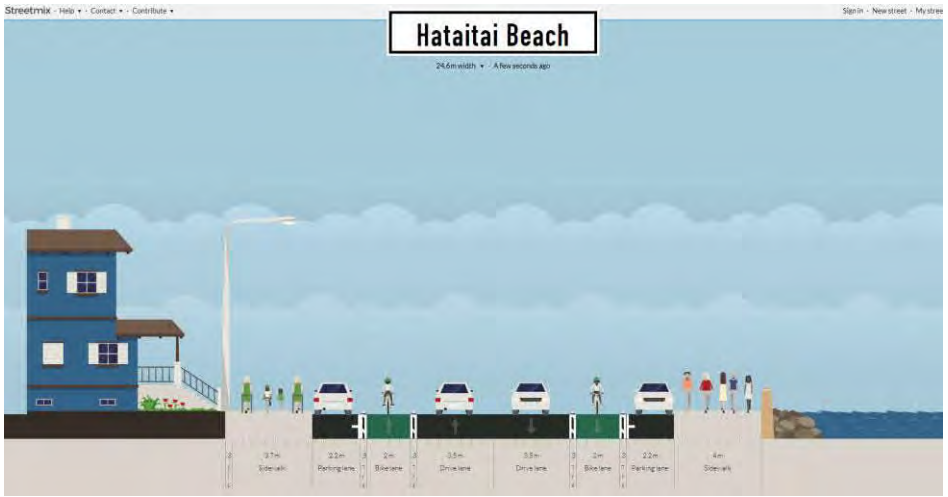
Option 18 - Minimum width on-road cycle lanes • Minimum width – 2 x 2.0m (includes 0.6m buffer) • Narrower traffic lanes • Parking maintained single side of road • Narrower footpath width • Removal of flush median • Edge delineation (i.e. safe hits/armadillos)	
Option 19 - Parking clearway in peak hours • Remove existing cycle lanes • Wider traffic lanes – cycles ride in traffic lane outside of peak and on weekend • Sharrows • No change to current parking except clearway conditions – tidal AM/PM weekday • Footpath width maintained	

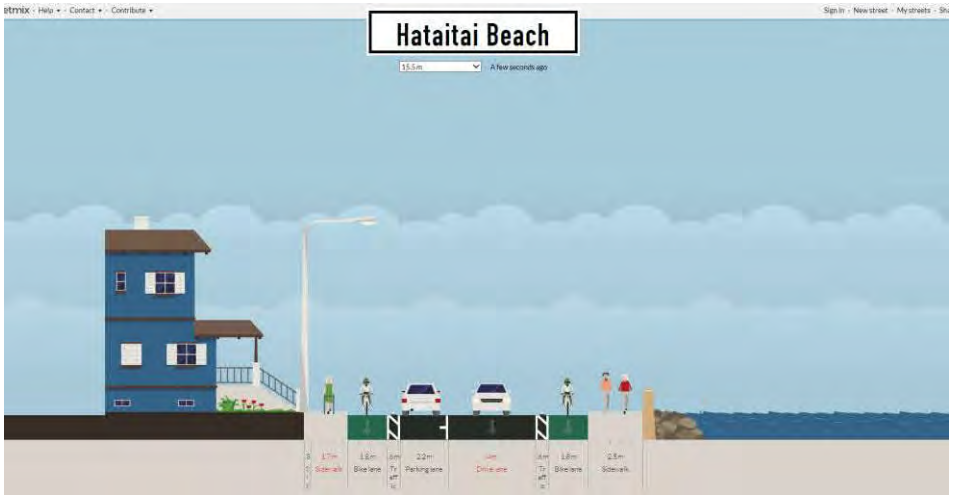
Option 20 - Parking clearway in peak hours	
• Maintain existing cycle lanes • Maintain existing traffic lane width • No change to current parking except clearway conditions – tidal AM/PM weekday • Footpath width maintained	

Shared Options

Option 21 - Seaside shared path • Desirable shared path width • Remove on-road cycle lanes • Sharrows • Maintain existing traffic lane width • Remove flush median	
Option 22 - Seaside shared path • Minimum shared path width • Maintain on-road cycle lanes • Narrow traffic lane width • Minor on-street parking removal • Remove flush median	

Option 23 - Seaside shared path • Desirable shared path width • Expand road reserve into CMA by 7.1m • Desirable width on-road cycle lanes – 2 x 2.6m (includes 0.6m buffer) • Maintain 3.5m traffic lane width • Maintain on-street parking	
Option 24 - Shared path both sides • Minimum shared path width both sides • Wider traffic lane width • Remove on road cycle lanes • Parking maintained one side only • Remove flush median	

Option 25 - Shared path both sides • Desirable shared path width • Expand road reserve into CMA by 9.1m • Desirable width on-road cycle lanes – 2 x 2.6m (includes 0.6m buffer) • Maintain 3.5m traffic lane width • Maintain on-street parking	
Option 26 – Shared Space • A shared space is an urban design approach which seeks to minimise the segregation of pedestrians and vehicles. • This is done by removing features such as kerbs, road surface markings, and traffic signs. • It has been suggested that by creating a greater sense of uncertainty and making it unclear who has priority, drivers will reduce their speed and pedestrians and cyclists will have greater priority and safety.	

Option 27 – One-way traffic direction (restricted traffic area)	
• Tidal flow in single direction, morning and evening peak • Reduced traffic lane width • Increased road space for pedestrians and cyclists	

The above list of concept options has been assessed using an Option Evaluation Framework. Each option is assessed for its contribution to meeting investment and community objectives, and key evaluation criteria in a Multi Criteria Assessment framework, which accompanies this long list document.

Other Options

The following options, as they stand alone are not route treatment options, or are options that could equally apply to all of the above long list options. It is likely that some of these other long list ideas, by themselves may not perform well against the evaluation criteria. If however the same idea is evaluated in combination with another complimentary measure, they could be seen more favourably. These options have not been discounted at this stage as they may form part of a package option with those above, and are intended to be carried forward for potential inclusion on short listed options:

- Reduced speed limit
- Speed limit enforcement
- Speed cushions
- Raised pedestrian crossings
- At grade pedestrian crossings
- Asphalt road surface
- Time limited parking
- Public art
- Toucan crossing at Cobham Drive signals
- Island crossing for cyclists north of Cobham Drive signals
- Cycle parking at popular destinations
- Bike Park and Ride at Cobham Drive end (drive – park – ride)
- Bus shelters
- Planting/greening of the seaside edge
- Water sensitive design

Appendix C – Themes to Options

	Theme	Option 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
	Cross section																											
C1	Zebra crossings combined with the removal of median strips	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
C2	Physical barrier to stop cars encroaching on cycle lane + widen cycle lanes	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	×	×	×	×	×	×	×	×	✓	✓	✓	✓	×	✓
C3	Two-way seaside protected cycle track	✓	✓	✓	✓	✓	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	✓
C4	Wider on-road cycle lanes / green paint, different separators on different areas i.e. rumble strip, angled (mountable) kerbs, flexi posts	×	×	×	×	×	×	×	×	×	×	×	×	×	×	✓	✓	✓	✓	×	×	×	×	×	×	×	×	✓
C5	Two way cycle lane on sea side	✓	✓	✓	✓	✓	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	✓
C6	Remove parking from sea side	✓	×	×	✓	✓	✓	×	✓	✓	✓	×	✓	✓	✓	×	✓	×	✓	✓	×	×	×	✓	✓	×	✓	×	✓
C7	Remove central flush median	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	×	✓
C8	Put all parks on land side	✓	×	×	✓	✓	✓	×	✓	✓	✓	×	✓	✓	×	✓	×	✓	✓	×	×	×	✓	×	✓	×	×	×	✓
C9	Remove car parking that isn't used	✓	×	×	✓	✓	✓	×	✓	✓	✓	×	✓	✓	×	✓	×	✓	✓	×	×	×	✓	✓	×	✓	×	✓	✓
C10	Car door buffer zones for cyclists	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	×	✓	✓	✓	✓	×	×	×	×	×	✓	×	✓	✓
C11	Widen road reserve into CMA (coastal marine area)	×	×	✓	×	×	×	✓	✓	×	×	✓	✓	×	×	×	✓	✓	×	×	×	×	×	✓	×	✓	×	×
C12	Reduce traffic lane width to 3.0m + corner widening	×	✓	×	×	×	×	×	×	✓	×	×	×	✓	×	×	×	×	✓	×	×	✓	✓	×	×	×	×	✓
C13	Improved on-road cycle lanes, no cycle track	×	×	×	×	×	×	×	×	×	×	×	×	×	×	✓	✓	✓	✓	×	×	×	✓	✓	×	✓	×	✓
C14	Remove current crash risk issues	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
C15	Protected on road cycle lane	×	×	×	×	×	✓	✓	✓	✓	✓	×	×	×	×	×	×	×	×	×	×	×	×	✓	✓	×	✓	×	✓
C16	Cycle track that can get wider when it can using road space from other modes i.e. traffic lane	×	×	×	×	×	✓	×	×	×	✓	×	×	×	×	✓	×	×	×	×	×	×	×	✓	×	×	×	✓
C17	Consistent facility along whole route	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
C18	Remove parking from one side of Greta Point (sea side)	✓	×	×	✓	✓	✓	×	✓	✓	✓	×	✓	✓	×	✓	×	✓	✓	✓	×	×	×	✓	×	✓	×	✓
C19	Get rid of flush median	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	×	✓
C20	Reduce vehicle lane	×	✓	×	×	×	×	×	×	✓	×	×	×	✓	×	×	×	×	✓	×	×	✓	✓	×	×	×	×	✓
C21	Omit buffer	×	×	×	×	×	×	×	×	×	×	×	×	×	✓	×	×	×	×	✓	✓	✓	✓	✓	×	×	×	✓
C22	More crossings + buildouts at strategic locations	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
C23	Clearer cycleway	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
C24	Single cycleways on either side	×	×	×	×	×	✓	✓	✓	✓	✓	✓	✓	✓	×	✓	✓	✓	✓	×	×	×	✓	✓	×	✓	×	✓
C25	Two way cycleway on one side	✓	✓	✓	✓	✓	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	✓
C26	Seaside boardwalk	×	×	✓	×	×	×	✓	✓	×	×	✓	✓	×	×	×	✓	✓	×	×	×	×	×	×	✓	×	✓	×
C27	Seaward side twin cycleway, avoids conflict	✓	✓	✓	✓	✓	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	✓
C28	Parking/cycleway	✓	×	×	✓	✓	✓	×	✓	✓	✓	×	✓	✓	×	✓	×	✓	✓	×	×	×	×	×	✓	×	×	✓
C29	Hataitai Beach – parking on land side	✓	×	×	✓	✓	✓	×	✓	✓	✓	×	✓	✓	×	✓	×	✓	✓	×	×	×	×	×	✓	×	×	✓
C30	Need cycle lanes on both sides	×	×	×	×	×	✓	✓	✓	✓	✓	✓	✓	✓	×	✓	✓	✓	✓	×	×	×	✓	✓	×	✓	×	✓
C31	Remove parking from sea side, use space to extend footpath and turn into a grade separated shared path	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	✓	✓	×	✓	×	×	✓
C32	Two way sea side cycleway 3.2m wide short term.	✓	✓	✓	✓	✓	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	✓
C33	Long term boardwalk or reclamation to increase width to 4.4m.	×	×	✓	×	×	×	✓	✓	×	×	✓	✓	×	×	×	✓	✓	×	×	×	×	×	×	✓	×	✓	×
C34	Possible angle parking in park across road?	✓	×	×	✓	✓	✓	×	✓	✓	✓	×	✓	✓	×	✓	×	✓	✓	×	×	×	×	✓	×	✓	×	✓
C35	Reduce lanes to 3.2m width. Safe hit posts between cycleway and traffic lanes	×	✓	×	×	×	×	×	×	✓	×	×	×	✓	×	×	×	×	✓	×	×	✓	✓	×	×	×	×	✓
C36	Okay as it is now	×	×	×	×	×	×	×	×	×	×	×	×	×	✓	×	×	×	×	×	×	×	✓	✓	×	×	×	×
C37	40 km/hr.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
C38	Remove sea side parking, install 4.4m wide two way cycleway. Reduce traffic lanes to 3.4m width. Remove on road cycle lanes. 0.6m buffer between parking and traffic lane. Relocate kerbline and reduce footpath width by 0.6m	✓	×	×	×	✓	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
C39	Allow cyclists to use the 3m wide path on the sea side	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	✓	✓	✓	✓	✓	×	✓
C40	Remove median strip and parking buffer and replace with on road cycle lanes.	×	×	×	×	×	×	×	×	×	×	×	×	×	×	✓	✓	✓	✓	×	×	×	✓	×	×	✓	×	✓
C41	Path widening if possible.	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	✓	✓	✓	✓	✓	×	✓
C42	Keep traffic lanes at 3.5m width	×	×	✓	✓	✓	×	✓	✓	×	×	✓	✓	×	✓	×	✓	✓	×	✓	✓	×	×	✓	✓	✓	×	✓
C43	Reduce speed limit to 40 km/hr, combine with speed tables/ pedestrian crossings	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
C44	1.5m wide flush median to allow cars to overtake cyclists	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	✓	✓
C45	Reduce traffic lanes from 3.5 to 3.3m width.	×	✓	×	×	×	×	×	×	✓	×	×	×	✓	×	×	×	×	✓	×	×	✓	✓	×	×	×	×	✓
C46	Protected 2 way cycleway on sea side, separate from cars by 0.5m wide planter.	✓	✓	✓	✓	✓	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	✓
C47	Parking removed from sea side	✓	×	×	✓	✓	✓	×	✓	✓	✓	×	✓	✓	×	✓	×	✓	✓	×	×	×	✓	×	✓	×	×	✓
C48	Widen cycleway	✓	×	✓	×	×	✓	✓	×	×	✓	✓	×	×	×	✓	✓	×	×	×	×	×	×	×	×	×	×	✓
C49	Reduce traffic lane width to 3.3m. Remove on road cycle lanes, 0.6m buffer on cliff side	×	✓	×	×	×	×	×	×	✓	×	×	×	✓	×	×	×	×	×	×	×	×	×	×	×	×	×	✓
C50	Widen path to 4.7m, delineate cyclist and pedestrian space with different surfacing.	✓	✓	✓	✓	✓	×	×	×	×	✓	✓	✓	✓	×	×	×	×	×	×	×	×	×	×	×	×	×	✓
C51	Consider pedestrian boardwalk or reclamation	×	×	✓	×	×	×	✓	✓	×	×	✓	✓	×	×	×	✓	✓	×	×	×	×	×	×	✓	×	✓	×	×

	Theme	Option 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
	Urban Design																											
U1	Art/murals on grey concrete walls – stories/history	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
U2	Consistently smooth road surface for cycling	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
U3	Surfacing (asphalt please)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
U4	Slow/ medium/ fast for footpaths and cycleways	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	✓	✓	✓	✓	✓	×	✓
U5	N/W shelter	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
U6	Improved bus shelters, protection down to the ground	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
U7	Bike racks – beaches + shops	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
U8	Planting on seaward side of road (greening)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
U9	Straights and corners – different scenarios	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
U10	Low plantings on kerb buildouts for pedestrian crossings	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
U11	Visually break up long straight roads with plantings/trees built out into parking areas	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
U12	Put planters within street furniture space	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
U13	Murals on sea wall.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
U14	Protected 2 way cycleway on sea side, separate from cars by 0.5m wide planter.	✓	✓	✓	✓	✓	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	✓
U15	Consider pedestrian boardwalk or reclamation	×	×	✓	×	×	×	✓	✓	×	×	✓	✓	×	×	×	✓	✓	×	×	×	×	×	×	✓	×	✓	×	×

	Theme	Option 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
	Traffic Management																											
T1	Reduce speed limit to 40 km/hr	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
T2	Add sharrows in places where faster cyclists might want to take the lane and/or cycle path is narrower	×	×	×	×	×	×	×	×	×	×	×	×	×	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	×	✓	✓	✓
T3	Speed enforcement	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
T4	Speed cushions	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
T5	Speed platforms (next to the day care centre, etc.) with zebra crossings on top	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
T6	Zebra crossings combined with the removal of median strips	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	×	✓
T7	Stop cars cutting corners/encroaching on-road cycle lane. Physical? Speed?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	×	×	×	×	×	×	×	✓	✓	✓	✓	✓	×	✓
T8	Physical barrier to stop cars encroaching on cycle lane + widen cycle lanes	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	×	×	×	×	×	×	×	✓	✓	✓	✓	✓	×	✓
T9	Enforcement – police	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
T10	Island crossing for cyclists to cross just north of Cobham (Drive) from shared path to road	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
T11	Remove parking from sea side	✓	×	×	✓	✓	✓	×	✓	✓	✓	×	✓	✓	×	✓	×	✓	×	✓	✓	×	×	×	✓	×	✓	×	✓
T12	Put all parks on land side	✓	×	×	✓	✓	✓	×	✓	✓	✓	×	✓	✓	×	✓	×	✓	×	✓	✓	×	×	×	✓	×	✓	×	✓
T13	Remove car parking that isn't used	✓	×	×	✓	✓	✓	×	✓	✓	✓	×	✓	✓	×	✓	×	✓	×	✓	✓	×	×	✓	✓	×	✓	×	✓
T14	Remove current crash risk issues	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
T15	Reduce attractiveness of route for cars	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
T16	Reduce speed of vehicles	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
T17	Make one way for cars – tidal direction	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	✓
T18	Parking clearway in peak hours (one way, two way, both)	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	✓	✓	×	×	×	×	×	×	×
T19	Time limited parking	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
T20	Eliminate commuter parking	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
T21	Coupon parking	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
T22	Resident parking permit	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
T23	30 km/hr speed limit extension	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
T24	Speed camera	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
T25	Remove parking from one side of Greta Point (sea side)	✓	×	×	✓	✓	✓	×	✓	✓	✓	×	✓	✓	×	✓	×	✓	×	✓	✓	×	×	×	✓	×	✓	×	✓
T26	Shift problematic parking in Greta Point	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
T27	Reduce speed. 30km/h?	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
T28	Reduce parking	✓	×	×	✓	✓	✓	×	✓	✓	✓	×	✓	✓	×	✓	×	✓	×	✓	✓	×	×	×	✓	×	✓	×	✓
T29	Wands on corners or rumble strips	×	×	×	×	×	×	×	×	×	×	×	×	×	×	✓	✓	✓	✓	×	×	×	×	×	×	×	×	✓
T30	Horizontal/vertical delineation for footpath/cycleway/road	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	×	✓	✓	✓	✓	×	×	×	×	×	×	×	×	✓
T31	Slow/ medium/ fast for footpaths and cycleways	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	✓	✓	✓	✓	✓	×	✓
T32	Sharrows	×	×	×	×	×	×	×	×	×	×	×	×	×	✓	×	×	×	×	✓	✓	✓	×	×	✓	×	✓	✓
T33	Hataitai Beach – parking on land side	✓	×	×	✓	✓	✓	×	✓	✓	✓	×	✓	✓	×	✓	×	✓	×	✓	×	×	×	✓	×	✓	×	✓
T34	Remove parking from sea side, use space to extend footpath and turn into a grade separated shared path	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	✓	×	✓	×	×	✓
T35	Possible angle parking in park across road?	✓	×	×	✓	✓	✓	×	✓	✓	✓	×	✓	✓	×	✓	×	✓	×	✓	×	×	×	✓	×	✓	×	✓
T36	Remove parking from sea side.	✓	×	×	✓	✓	✓	×	✓	✓	✓	×	✓	✓	×	✓	×	✓	×	✓	×	×	×	✓	×	✓	×	✓
T37	40 km/hr.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
T38	Reduce speed limit to 40 km/hr, combine with speed tables/ pedestrian crossings	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
T39	Parking removed from sea side	✓	×	×	✓	✓	✓	×	✓	✓	✓	×	✓	✓	×	✓	×	✓	×	✓	×	×	×	✓	×	✓	×	✓
T40	Extend 40 km/hr slow speed zone	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

	Theme	Option 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
	Facilities																											
F1	Speed platforms (next to the day care centre, etc.) with zebra crossings on top	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
F2	Put more crossings in;	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
F3	Cycle parking at beaches and popular destinations (e.g. cafes)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
F4	Create bike park and ride at Cobham Drive end (drive – park – bike)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
F5	Toucan (shared cycle and pedestrian) crossing at Cobham lights	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
F6	Island crossing for cyclists to cross just north of Cobham (Drive) from shared path to road	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
F7	Better pedestrian crossings (lights, zebra)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
F8	More crossings + buildouts at strategic locations	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
F9	Better bus service (more regular service)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
F10	Seaside boardwalk	×	×	✓	×	×	×	✓	✓	×	×	✓	✓	×	×	×	✓	✓	×	×	×	×	×	✓	×	✓	×	×
F11	Smooth cycleway surface	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
F12	N/W shelter	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
F13	Improved bus shelters, protection down to the ground	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
F14	Bike racks – beaches + shops	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
F15	Wind – cycleway on seaside makes more consistent	✓	✓	✓	✓	✓	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	✓	✓	✓	×	×	×	✓
F16	Straights and corners – different scenarios	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
F17	Crossing points required at;	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
F18	Low plantings on kerb buildouts for pedestrian crossings	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
F19	Path widening if possible.	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	✓	✓	✓	✓	✓	×	✓
F20	Reduce speed limit to 40 km/hr, combine with speed tables/ pedestrian crossings	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
F21	Widen path to 4.7m, delineate cyclist and pedestrian space with different surfacing.	✓	✓	✓	✓	✓	×	×	×	×	✓	✓	✓	✓	×	×	×	×	×	×	×	×	×	×	×	×	×	✓
F22	Consider pedestrian boardwalk or reclamation	×	×	✓	×	×	×	✓	✓	×	×	✓	✓	×	×	×	✓	✓	×	×	×	×	×	×	✓	×	✓	×	×

Appendix D – Best Practice Guidelines

The following table provides a summary of the best practice guidelines used for design.

Organisation	**Best Practice Guidelines**
Wellington City Council (WCC)	• *Cycling Framework, June 2015* • *Code of Practice for Land Development, December 2012*
New Zealand Transport Agency (NZTA)	• *Cycling Network Guidance – Planning and Design (Online Portal), accessed July 2017* • *Manual of Traffic Signs and Makings (MOTSAM) Part 2: Markings, August 2010* • *Pedestrian Planning and Design Guide, October 2009* • *Guidelines for Public Transport Infrastructure and Facilities (Interim Consultation Draft), March 2014* • *State Highway Geometric Design Manual Part 6: Cross Section, March 2002*
Christchurch City Council (CCC)	• *Christchurch Cycle Design Guidelines, Part B: Revision B, Design Principles Best Practice Guide, dated July 2016*
Austroads	• *Cycling Aspects of Austroads Guides (AP-G88-17), June 2017* • *Guide to Road Design Part 3: Geometric Design (AGRD03-16), September 2016* • *Guide to Road Design Part 4: Intersections and Crossings (AGRD04-17), June 2017*
Standards New Zealand (SNZ)	• *Land Development and Subdivision Infrastructure (NZS 4404), 2010* • *Parking Facilities Part 1: Off-street Car Parking (AS/NZS 2890.1), 2004* • *Parking Facilities Part 5: On-street Parking (AS 2890.5), 1993*

Appendix E – Design Elements

The following table outlines the desirable and minimum dimensions noted in reference guidelines. The table includes cyclist, pedestrian, motorist, and parking elements, along with key design features including flush medians, bus stops, pedestrian crossings, and driveways.

Element	Design Dimensions		Guidance[1]	Comments
	Desirable	Minimum		
On-road cycle lanes	1.8 m wide 1.2 m wide buffer to parallel parking 0.5 m wide buffer to traffic lane	1.5 m wide 0.6 m wide buffer to parallel parking No buffer to traffic lane	WCC, NZTA, CCC, Austroads	Width varies in concept designs
Protected (kerbside) cycle lanes	2.2 m wide 1.2 m wide buffer to parallel parking	1.5 m wide 0.6 m wide buffer to parallel parking	WCC, NZTA, CCC, Austroads	Width varies in concept designs
Two-way cycle paths	3.5 m wide 1.2 m wide buffer to parallel parking 0.5 m wide buffer to traffic lane	2.0 m wide 0.6 m wide buffer to parallel parking	WCC, NZTA, CCC, Austroads	Width varies in concept designs
Footpaths	4.0 m wide for high pedestrian volumes 2.0 m wide for low pedestrian volumes	1.8 m wide (1.5 m wide for short distances only)	WCC, NZTA	Width varies in concept designs
Shared paths	5.0 m wide	2.0 m wide	NZTA, CCC, Austroads	Width varies in concept designs

Element	Design Dimensions		Guidance[1]	Comments
	Desirable	Minimum		
Traffic/ shared lanes	3.5 m wide N/A N/A 0.5 m wide shy line offset from fixed roadside obstacles	2.7 m wide 3.1 m wide (heavy vehicle routes) 0.3 to 0.9 m curve widening based on curve radius N/A	WCC, NZTA, Austroads	Width varies in concept designs Curve widening to be confirmed in detailed design using vehicle tracking
Parallel parking spaces	2.5 m wide N/A	2.0 m wide (NZTA) 2.1 m wide (WCC, SNZ) 5.4 m long (end space), 6.0 m long (centre space)	WCC, NZTA, SNZ	2.1 m width used for concept design
Angle parking spaces				Not considered for concept design; provides less parking per metre than parallel parking on both sides of the road occupying the same road width
Special parking provisions (bicycle parking, accessible spaces, motorcycle parking, loading zones, etc.)				To be considered for detailed design
Flush median	2.5 m wide	1.0 m wide (if provided)	WCC, NZTA	Width varies in concept designs
Turning bays	3.5 m wide N/A	2.5 m wide 6.0 m length per vehicle, length based on turning demand	NZTA	To be considered for detailed design

Element	Design Dimensions		Guidance[1]	Comments
	Desirable	Minimum		
Driveways	N/A 3.0 m setback to parking	Width varies, typically 2.0–4.0 m 1.0 m setback to parking	CCC, NZTA, Austroads	3.0 m setback from existing driveway widths considered where adjacent to cycle lane, 1.0 m setback otherwise for concept designs
Bus stops		2.5 m wide 11.5 m long (single bus) 8.0 m entry taper 5.0 m exit taper	NZTA	Minimum dimensions used for concept design
Pedestrian crossings		3.0 m long Requires setback to parking on approach for visibility, length dependant of road alignment.	NZTA	To be considered for detailed design

Notes;

1. Refer to Appendix D for reference guides

Appendix F – Multi Criteria Analysis

Multi-Criteria Analysis is outlined as presented in Workshop 4 and described in Section 5. The MCA includes the long list to short list evaluation process and the selection of the two preferred options for presentation at the upcoming public drop-in sessions.

Criteria		Consideration	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6	Option 7	Option 8	Option 9	Option 10	Option 11	Option 12	Option 13	Option 14
	Effectiveness meeting WCC objectives	Achieve a high level of service for cyclists within an integrated transport network	Includes a protected cycle space in both directions with high level of service for cyclists	Includes a protected cycle space in both directions with high level of service for cyclists	Includes a protected cycle space in both directions with high level of service for cyclists	Includes a protected cycle space in both directions with high level of service for cyclists	Includes a protected cycle space in both directions with high level of service for cyclists	Includes a protected cycle space in both directions with high level of service for cyclists	Includes a protected cycle space in both directions with high level of service for cyclists	Includes a protected cycle space in both directions with high level of service for cyclists	Includes a protected cycle space in both directions with high level of service for cyclists	Dedicated cycle space within corridor, improved level of service for cyclists, however cycle path at or near footpath level with potential for pedestrian conflict reduces level of service below protected facility	Dedicated cycle space within corridor, improved level of service for cyclists, however cycle path at or near footpath level with potential for pedestrian conflict reduces level of service below protected facility	Dedicated cycle space within corridor, improved level of service for cyclists, however cycle path at or near footpath level with potential for pedestrian conflict reduces level of service below protected facility	Dedicated cycle space within corridor, improved level of service for cyclists, however cycle path at or near footpath level with potential for pedestrian conflict reduces level of service below protected facility	Sharrows offer no real improvement in safety or level of service for cyclists from the existingn situation
		Improve cycling infrastructure and facilities so that cycling makes a much greater contribution to network efficiency, effectiveness and resilience	Protected facility in both directions most likely to increase cycling uptake, improve people carrying capacity of network, encourage mode shift	Protected facility in both directions most likely to increase cycling uptake, improve people carrying capacity of network, encourage mode shift	Protected facility in both directions most likely to increase cycling uptake, improve people carrying capacity of network, encourage mode shift	Protected facility in both directions most likely to increase cycling uptake, improve people carrying capacity of network, encourage mode shift	Protected facility in both directions most likely to increase cycling uptake, improve people carrying capacity of network, encourage mode shift	Protected facility in both directions most likely to increase cycling uptake, improve people carrying capacity of network, encourage mode shift	Protected facility in both directions most likely to increase cycling uptake, improve people carrying capacity of network, encourage mode shift	Protected facility in both directions most likely to increase cycling uptake, improve people carrying capacity of network, encourage mode shift	Protected facility in both directions most likely to increase cycling uptake, improve people carrying capacity of network, encourage mode shift	Dedicated cycle space within corridor, likely to encourage mode shift, efficiency not as high as protected facility with lower level of service and resilience to pedestrian demand increase	Dedicated cycle space within corridor, likely to encourage mode shift, efficiency not as high as protected facility with lower level of service and resilience to pedestrian demand increase	Dedicated cycle space within corridor, likely to encourage mode shift, efficiency not as high as protected facility with lower level of service and resilience to pedestrian demand increase	Dedicated cycle space within corridor, likely to encourage mode shift, efficiency not as high as protected facility with lower level of service and resilience to pedestrian demand increase	Unlikely to lead to increased cycling uptake, no change to network efficiency of effectiveness
		Cycling is a viable and attractive transport choice	Fully protected kerbside facility with lack of cross movements likely to	Fully protected kerbside facility with lack of cross movements likely to	Fully protected kerbside facility with lack of cross movements likely to	Fully protected kerbside facility with lack of cross movements likely to	Fully protected kerbside facility with lack of cross movements likely to	Fully protected or separated facility likely to attract new users but	Fully protected or separated facility likely to attract new users but	Fully protected or separated facility likely to attract new users but	Fully protected or separated facility likely to attract new users but	Fully protected or separated facility likely to attract new users but	Fully protected or separated facility likely to attract new users but	Fully protected or separated facility likely to attract new users but	Fully protected or separated facility likely to attract new users but	Poor perceived level of service and safety, does not improve cycling as a
		The crash rate, number and severity of crashes involving people on bikes is reduced	Protected cycle space in both directions, single side reduces number of	Protected cycle space in both directions, single side reduces number of	Protected cycle space in both directions, single side reduces number of	Protected cycle space in both directions, single side reduces number of	Protected cycle space in both directions, single side reduces number of	Protected cycle space in both directions, both sides improves safety	Protected cycle space in both directions, both sides improves safety	Protected cycle space in both directions, both sides improves safety	Protected cycle space in both directions, both sides improves safety	Dedicated cycle space in both directions, both sides, safety	Dedicated cycle space in both directions, both sides, safety	Dedicated cycle space in both directions, both sides, safety	Dedicated cycle space in both directions, both sides, safety	No reduction in risk or cyclist crash performance from
		Providing transport choices by increasing the opportunity for people to ride bikes so as to improve the sustainability, liveability and attractiveness of Wellington	Fully protected kerbside facility likely to attract new users, access to	Fully protected kerbside facility likely to attract new users, access to	Fully protected kerbside facility likely to attract new users, access to	Fully protected kerbside facility likely to attract new users, access to	Fully protected kerbside facility likely to attract new users, access to	Fully protected kerbside facility likely to attract maximum number of	Fully protected kerbside facility likely to attract maximum number of	Fully protected kerbside facility likely to attract maximum number of	Fully protected kerbside facility likely to attract maximum number of	Dedicated cycle space in both directions, both sides likely to attract	Dedicated cycle space in both directions, both sides likely to attract	Dedicated cycle space in both directions, both sides likely to attract	Dedicated cycle space in both directions, both sides likely to attract	Addition of sharrows does little to provide improved choice,
		PASS WCC OBJECTIVE SCREEN	Effective overall performance against WCC objectives	Effective overall performance against WCC objectives	Effective overall performance against WCC objectives	Effective overall performance against WCC objectives	Effective overall performance against WCC objectives	Effective overall performance against WCC objectives	Effective overall performance against WCC objectives	Effective overall performance against WCC objectives	Effective overall performance against WCC objectives	Effective overall performance against WCC objectives	Effective overall performance against WCC objectives	Effective overall performance against WCC objectives	Effective overall performance against WCC objectives	Not effective at achieving WCC objectives
Objectives	Effectiveness meeting Community objectives	Improve the convenience, comfort and reliability of facilities for cycling	Includes a desirable width protected cycle space in both directions on seaward side, with high level of convenience, comfort and reliability for cyclists, minimal conflict with other modes	Includes a minimum width protected cycle space in both directions on seaward side, with improved level of convenience, comfort and reliability for cyclists, minimal conflict with other modes	Includes a desirable width protected cycle space in both directions on seaward side, with high level of convenience, comfort and reliability for cyclists, minimal conflict with other modes	Includes a minimum width protected cycle space in both directions on seaward side, with improved level of convenience, comfort and reliability for cyclists, minimal conflict with other modes	Includes a minimum width protected cycle space in both directions on seaward side, with improved level of convenience, comfort and reliability for cyclists, minimal conflict with other modes	Includes a desirable width protected cycle space on both sides, with high level of convenience, comfort and reliability for cyclists. Dual side increases convenience for access, side road treatment of vehicle conflict dictates comfort for cyclists	Includes a desirable width protected cycle space on both sides, with high level of convenience, comfort and reliability for cyclists. Dual side increases convenience for access, side road treatment of vehicle conflict dictates comfort for cyclists	Includes a minimum width protected cycle space on both sides, with high level of convenience, comfort and reliability for cyclists. Dual side increases convenience for access, side road treatment of vehicle conflict dictates comfort for cyclists	Includes a minimum width protected cycle space on both sides, with high level of convenience, comfort and reliability for cyclists. Dual side increases convenience for access, side road treatment of vehicle conflict dictates comfort for cyclists	Includes a desirable width separated cycle space on both sides, with high level of convenience, comfort and reliability for cyclists. Dual side increases convenience for access, side road treatment of vehicle conflict dictates comfort for cyclists, assesed with slightly lower reliability as function of potential for pedestrian conflict	Includes a desirable width separated cycle space on both sides, with high level of convenience, comfort and reliability for cyclists. Dual side increases convenience for access, side road treatment of vehicle conflict dictates comfort for cyclists, assesed with slightly lower reliability as function of potential for pedestrian conflict	Includes a minimum width separated cycle space on both sides, improved convenience and comfort for cyclists. Dual side increases convenience for access, side road treatment of vehicle conflict dictates comfort for cyclists, assesed with slightly lower reliability as function of potential for pedestrian conflict	Includes a minimum width separated cycle space on both sides, improved convenience and comfort for cyclists. Dual side increases convenience for access, side road treatment of vehicle conflict dictates comfort for cyclists, assesed with slightly lower reliability as function of potential for pedestrian conflict	
		Improve the convenience, comfort and reliability of facilities for pedestrians	Overall positive effect for pedestrians by removing sections of	This option maintains a greater number of on-street parking relevant	Overall positive effect for pedestrians by removing sections of	This option maintains a wider traffic lanes, at the expense of footpath	Overall positive effect for pedestrians by removing sections of	Overall positive effect for pedestrians by removing sections of	Overall positive effect for pedestrians by removing sections of	Overall positive effect for pedestrians by removing sections of	This option requires greater width for the two side cycle facility, at	Assumes footpath width maintained, dedicated cycle facility removes	Wider corridor by encroaching into CMA provides benefits for	Wider corridor by encroaching into CMA provides benefits for	This option requires greater width for the two side cycle facility, at	
		Improve the route consistency for walking and cycling facilities	Option assumes ability to maintain a consistent and separate width	Option compromises on cycle facility and footpath width to	Option assumes ability to maintain a consistent and separate width	Option compromises on cycle facility and footpath width to	Option assumes ability to maintain a consistent and separate facility for	Option assumes ability to maintain a consistent and separate width	Option assumes ability to maintain a consistent and separate width	Option assumes ability to maintain a consistent and separate facility for	Option compromises on cycle facility and footpath width, reduced	Option assumes ability to maintain a consistent and separate width	Option assumes ability to maintain a consistent and separate width	Option assumes ability to maintain a consistent and separate facility for	Option compromises on cycle facility and footpath width, reduced	
		Improve the safety of road users	Protected cycle space in both directions, single side reduces number of	Protected cycle space in both directions, less than desirable width for	Protected cycle space in both directions, single side reduces number of	Protected cycle space in both directions, less than desirable width for	Protected cycle space in both directions, single side reduces number of	Protected cycle space in both directions, dual side has manageable	Protected cycle space in both directions, dual side has manageable	Protected cycle space in both directions, dual side has manageable	Protected cycle space in both directions, dual side has manageable	Dedicated cycle space in both directions, dual side has manageable	Dedicated cycle space in both directions, dual side has manageable	Dedicated cycle space in both directions, dual side has manageable	Dedicated cycle space in both directions, dual side has manageable	
		Improve connections between residential areas and the waterfront	Option treatment assumes east-west connection options are	Option treatment assumes east-west connection options are	Option treatment assumes east-west connection options are	Option treatment assumes east-west connection options are	Option treatment assumes east-west connection options are	Option treatment assumes east-west connection options are	Option treatment assumes east-west connection options are	Option treatment assumes east-west connection options are	Option treatment assumes east-west connection options are	Option treatment assumes east-west connection options are	Option treatment assumes east-west connection options are	Option treatment assumes east-west connection options are	Option treatment assumes east-west connection options are	
		Rationalise the on-street parking provision	Assessed on general estimate of effect on parking numbers.	Assessed on general estimate of effect on parking numbers.	Assessed on general estimate of effect on parking numbers.	Assessed on general estimate of effect on parking numbers.	Assessed on general estimate of effect on parking numbers.	Assessed on general estimate of effect on parking numbers.	Assessed on general estimate of effect on parking numbers.	Assessed on general estimate of effect on parking numbers.	Assessed on general estimate of effect on parking numbers.	Assessed on general estimate of effect on parking numbers.	Assessed on general estimate of effect on parking numbers.	Assessed on general estimate of effect on parking numbers.	Assessed on general estimate of effect on parking numbers.	
		Enhance the built and natural environment	Option assumes to contribute to enhancing environment through	Option assumes to contribute to enhancing environment through	This option, whilst achieving the benefits of other options, and has	Option assumes to contribute to enhancing environment through	Option assumes to contribute to enhancing environment through	Option assumes to contribute to enhancing environment through	This option, whilst achieving the benefits of other options, and has	This option, whilst achieving the benefits of other options, and has	Option assumes to contribute to enhancing environment through	Option assumes to contribute to enhancing environment through	This option, whilst achieving the benefits of other options, and has	This option, whilst achieving the benefits of other options, and has	Option assumes to contribute to enhancing environment through	
		Maintain motorised access to local properties	Assessed separately to parking access. Ability to utilise Evans Bay	Assessed separately to parking access. Ability to utilise Evans Bay	Assessed separately to parking access. Ability to utilise Evans Bay	Assessed separately to parking access. Ability to utilise Evans Bay	Assessed separately to parking access. Ability to utilise Evans Bay	Assessed separately to parking access. Ability to utilise Evans Bay	Assessed separately to parking access. Ability to utilise Evans Bay	Assessed separately to parking access. Ability to utilise Evans Bay	Assessed separately to parking access. Ability to utilise Evans Bay	Assessed separately to parking access. Ability to utilise Evans Bay	Assessed separately to parking access. Ability to utilise Evans Bay	Assessed separately to parking access. Ability to utilise Evans Bay	Assessed separately to parking access. Ability to utilise Evans Bay	
		PASS COMMUNITY OBJECTIVE SCREEN	Option 1 effective overall performance against most	Option 2 does not achieve the community objectives as well as	Option 3 broad achievement of most Community Objectives,	Option 4 does not achieve the community objectives as well as	Option 5 effective overall performance against most	Option 6 broad achievement of most Community Objectives,	Option 7 broad achievement of most Community Objectives,	Option 8 does not achieve the community objectives as well as	Option 9 does not achieve the community objectives as well as	Option 10 similar in nature to protected kerbside options, does	Option 11 similar in nature to protected kerbside options, does	Option 12 similar in nature to protected kerbside options, does	Option 13 similar in nature to protected kerbside options, does	

Criteria		Consideration	Option 15	Option 16	Option 17	Option 18	Option 19	Option 20	Option 21	Option 22	Option 23	Option 24	Option 25	Option 26	Option 27
Objectives	Effectiveness meeting WCC objectives	Achieve a high level of service for cyclists within an integrated transport network	Dedicated cycle space within corridor, improved level of service for cyclists. Assessed as having edge delineation i.e. safe hits or armadillos to prevent vehicle encroachment into cycle lane	Dedicated cycle space within corridor, improved level of service for cyclists. Assessed as having edge delineation i.e. safe hits or armadillos to prevent vehicle encroachment into cycle lane	Dedicated cycle space within corridor, improved level of service for cyclists. Assessed as having edge delineation i.e. safe hits or armadillos to prevent vehicle encroachment into cycle lane	Dedicated cycle space within corridor, improved level of service for cyclists. Assessed as having edge delineation i.e. safe hits or armadillos to prevent vehicle encroachment into cycle lane	Existing cycle facilities removed, clearway offers only part time cycle space, parking compliance issues, cyclists in traffic lane outside of peak results in a reduction in the level of service for cyclists	No change to existing facility in north section, south section only offers part time cycle space, no tangible benefit for cyclist level of service	Removing existing on-road facility and encouraging cyclists to share space with pedestrians in less than desirable shared path width results in reduced level of service for both modes	Minimum shared path width not considered to tangibly improve cyclist level of service	Expansion of corridor width into CMA could offer improvement in cyclists level of service if shared path width adequate to minimise pedestrian conflict, combined with improved on road cycle lanes	Removing existing on-road facility and encouraging cyclists to share space with pedestrians in less than desirable shared path width results in reduced level of service for both modes	Expansion of corridor width into CMA could offer improvement in cyclists level of service if shared path width adequate to minimise pedestrian conflict, combined with improved on road cycle lanes	No separate cycle facilities, high vehicle volumes and speeds not appropriate for shared space to operate as intended, cycle level of service reduced	Option likely to significantly reduce vehicle volumes, assessed assuming ability to provide increased road space and dedicated protected facilities for cyclists
		Improve cycling infrastructure and facilities so that cycling makes a much greater contribution to network efficiency, effectiveness and resilience	Dedicated cycle space within corridor, likely to encourage mode shift, not as attractive as protected facility, ease of northbound access from hillside suburbs, flexible design option	Dedicated cycle space within corridor, likely to encourage mode shift, not as attractive as protected facility, ease of northbound access from hillside suburbs, flexible design option	Dedicated cycle space within corridor, likely to encourage mode shift, not as attractive as protected facility, ease of northbound access from hillside suburbs, flexible design option	Dedicated cycle space within corridor, likely to encourage mode shift, not as attractive as protected facility, ease of northbound access from hillside suburbs, flexible design option	Unlikely to drive change in cycling uptake, removal of facility has negative effect on contribution to improving efficiency. Loss of cycling facility not a resilient outcome	No change to existing facility in north section, south section only offers part time cycle space, no tangible benefit for network efficiency or resilience	Unlikely to drive change in cycling uptake, removal of facility has negative effect on contribution to improving efficiency. Loss of cycling facility not a resilient outcome	Unlikely to drive change in cycling uptake, no tangible benefit for network efficiency	Dedicated cycle space within corridor, and desirable width shared path likely to encourage mode shift and improve network efficiency. Design could offer improved resilience to environmental factors for cycle facility	Unlikely to drive change in cycling uptake, removal of facility has negative effect on contribution to improving efficiency. Loss of cycling facility not a resilient outcome	Dedicated cycle space within corridor, and desirable width shared path likely to encourage mode shift and improve network efficiency. Design could offer improved resilience to environmental factors for cycle facility	In this situation - high traffic volumes and speeds, a shared space is likely to lead to a reduction on network efficiency for cyclists and other users	Assuming ability to provide increased road space and dedicated protected facilities for cyclists, cycling efficiency significantly increased, with converse significant reduction in vehicle network efficiency which is not directly related to the cycling facility itself
		Cycling is a viable and attractive transport choice	Unprotected facility is unlikely to attract new users in the interested	Unprotected facility is unlikely to attract new users in the interested	Unprotected facility is unlikely to attract new users in the interested	Unprotected facility is unlikely to attract new users in the interested	Removal of facility has negative effect on perceived safety and	Unprotected facility is unlikely to attract new users in the interested	Improved shared path facility likely to be attractive some target	Improved shared path facility likely to be attractive some target	Dedicated cycle space within corridor, and desirable width shared	Improved shared path facility likely to be attractive some target	Dedicated cycle space within corridor, and desirable width shared	In this situation - high traffic volumes and speeds, a shared space	Option likely to significantly reduce vehicle volumes,
		The crash rate, number and severity of crashes involving people on bikes is reduced	both directions, both sides, safety improvements for	both directions, both sides, safety improvements for	both directions, both sides, safety improvements for	both directions, both sides, safety improvements for	Space allocated for clearway cycling has potential for unsafe	No tangible reduction in risk or cyclist crash performance from	Shared path for cyclists introduces different crash risk with	Maintain on-road facility and introducing shared path offers minor	Maintain on-road facility and introducing a desirable shared path	Removal of on-road facility, minimum shared path width and wider	Maintain on-road facility and introducing a desirable shared path	Removal of any dedicated cycle facility, shared space treatment	'Option likely to significantly reduce vehicle volumes,
		Providing transport choices by increasing the opportunity for people to ride bikes so as to improve the sustainability, liveability and attractiveness of Wellington	Consistent route treatment by adding on-road cycle lanes along	Consistent route treatment by adding on-road cycle lanes along	Consistent route treatment by adding on-road cycle lanes along	Consistent route treatment by adding on-road cycle lanes along	Removal of existing on-road facility, and part time cycle space	Maintaining existing on-road cycle lanes in combination with part	Providing a shared path will likely appeal to some types of new user,	Providing a minimum shared path will likely appeal to some types of	Maintain on-road facility and introducing a desirable shared path	Providing a shared path will likely appeal to some types of new user,	Maintain on-road facility and introducing a desirable shared path	In this situation - high traffic volumes and speeds, a shared space	Assessed assuming ability to provide increased road space
		PASS WCC OBJECTIVE SCREEN	Broad achievement of WCC objectives, with some criteria neutral, continue to effects assessment	Broad achievement of WCC objectives, with some criteria neutral, continue to effects assessment	Broad achievement of WCC objectives, with some criteria neutral, continue to effects assessment	Broad achievement of WCC objectives, with some criteria neutral, continue to effects assessment	Not effective at achieving WCC objectives	Not effective at achieving WCC objectives	Not effective at achieving WCC objectives	Not effective at achieving WCC objectives	Effective overall performance against WCC objectives	Not effective at achieving WCC objectives	Effective overall performance against WCC objectives	Not effective at achieving WCC objectives	Effective overall performance against WCC objectives, negative impact on vehicle network efficiency, continue to effects assessment
	Effectiveness meeting Community objectives	Improve the convenience, comfort and reliability of facilities for cycling	Includes a desirable width, dedicated cycle space on both sides. Not as comfortable for users as a protected solution, assumed edge delineation i.e. safe hits or armadillos to prevent vehicle encroachment into cycle lane will improve convenience and reliability. Dual side increases convenience for access, side road treatment of vehicle conflict and visibility dictates comfort for cyclists	Includes a desirable width, dedicated cycle space on both sides. Not as comfortable for users as a protected solution, assumed edge delineation i.e. safe hits or armadillos to prevent vehicle encroachment into cycle lane will improve convenience and reliability. Dual side increases convenience for access, side road treatment of vehicle conflict and visibility dictates comfort for cyclists	Includes a minimum width dedicated cycle space on both sides, reduced width of cycle lane in this option reduces level of comfort and convenience for certain user type. Not as comfortable for users as a protected solution, assumed edge delineation i.e. safe hits or armadillos to prevent vehicle encroachment into cycle lane will improve convenience and reliability. Dual side increases convenience for access	Includes a minimum width dedicated cycle space on both sides, reduced width of cycle lane in this option reduces level of comfort and convenience for certain user type. Not as comfortable for users as a protected solution, assumed edge delineation i.e. safe hits or armadillos to prevent vehicle encroachment into cycle lane will improve convenience and reliability. Dual side increases convenience for access					Expansion of corridor width into CMA could offer improvement in cyclists comfort and convenience if shared path width adequate to minimise pedestrian conflict, combined with improved on road cycle lanes reliability for all user types		Expansion of corridor width into CMA could offer improvement in cyclists comfort and convenience if shared path width adequate to minimise pedestrian conflict, combined with improved on road cycle lanes reliability for all user types		Option likely to significantly reduce vehicle volumes, assessed assuming ability to provide increased road space and dedicated protected facilities for cyclists
		Improve the convenience, comfort and reliability of facilities for pedestrians	Overall positive effect for pedestrians by removing sections of	Overall positive effect for pedestrians by removing sections of	Overall positive effect for pedestrians by removing sections of	This option requires greater width for the two side cycle facility, at					Assumes a desirable shared path width however shared nature		Assumes a desirable shared path width however shared nature		Option likely to significantly reduce vehicle volumes,
		Improve the route consistency for walking and cycling facilities	Option assumes ability to maintain a consistent and separate width	Option assumes ability to maintain a consistent and separate width	Option assumes ability to maintain a consistent and separate facility for	Option assumes ability to maintain a consistent and separate facility for					Two separate cycling facilities improves choice for different		Two separate cycling facilities improves choice for different		Assessed assuming ability to provide increased road space
		Improve the safety of road users	Desirable width cycle lanes with edge protection/delineation	Desirable width cycle lanes with edge protection/delineation	Minimum width cycle lanes still an improvement on	Minimum width cycle lanes still an improvement on					Maintain on-road facility and introducing a desirable shared path		Maintain on-road facility and introducing a desirable shared path		'Option likely to significantly reduce vehicle volumes,
		Improve connections between residential areas and the waterfront	Option treatment assumes east-west connection options are	Option treatment assumes east-west connection options are	Option treatment assumes east-west connection options are	Option treatment assumes east-west connection options are					Option treatment assumes east-west connection options are		Option treatment assumes east-west connection options are		Option treatment assumes east-west connection options are
		Rationalise the on-street parking provision	Assessed on general estimate of effect on parking numbers.	Assessed on general estimate of effect on parking numbers.	Assessed on general estimate of effect on parking numbers.	Assessed on general estimate of effect on parking numbers.					Assessed on general estimate of effect on parking numbers.		Assessed on general estimate of effect on parking numbers.		Assessed to assume that parking is rationalised within available road
		Enhance the built and natural environment	Option assumes to contribute to enhancing environment through	This option, whilst achieving the benefits of other options, and has	This option, whilst achieving the benefits of other options, and has	Option assumes to contribute to enhancing environment through					This option, whilst achieving the benefits of other options, and has		This option, whilst achieving the benefits of other options, and has		Option assumes to contribute to enhancing environment through
		Maintain motorised access to local properties	Assessed separately to parking access. Ability to utilise Evans Bay	Assessed separately to parking access. Ability to utilise Evans Bay	Assessed separately to parking access. Ability to utilise Evans Bay	Assessed separately to parking access. Ability to utilise Evans Bay					Assessed separately to parking access. Ability to utilise Evans Bay		Assessed separately to parking access. Ability to utilise Evans Bay		The restriction on traffic travelling two-way along Evans Bay Parade will
		PASS COMMUNITY OBJECTIVE SCREEN	Option 15 scores well against most Community Objectives,	Option 16 very similar to Option 15, does not achieve the community	'Option 17 scores well against most Community Objectives,	Option 18 very similar to Option 17, does not achieve the community					Option 23 does not adequately achieve the community objectives.		Option 25 does not adequately achieve the community objectives.		Option 27 scores well against most Community Objectives,

Criteria		Consideration	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6	Option 7	Option 8	Option 9	Option 10	Option 11	Option 12	Option 13	Option 14
Effects	Cycle Network Fit	Alignment of option to any existing adjacent cycle infrastructure	Two way path on the same side as Cobham Drive		Two way path on the same side as Cobham Drive		Two way path on the same side as Cobham Drive	Southbound side good connection to Cobham Drive, northbound cyclists required to cross Evans Bay Parade at signals from Cobham Drive. Connection to Kilbirnie to south achievable	Southbound side good connection to Cobham Drive, northbound cyclists required to cross Evans Bay Parade at signals from Cobham Drive. Connection to Kilbirnie to south achievable							
	Transport Network Fit	Alignment to transport corridor function	Assessed for options contribution to movement of people and goods, and access to business and property. Narrower traffic lanes and reduced parking		Assessed for options contribution to movement of people and goods, and access to business and property. Standard width traffic lanes and parking maintained		Assessed for options contribution to movement of people and goods, and access to business and property. Standard width traffic lanes and reduced parking	Assessed for options contribution to movement of people and goods, and access to business and property. Narrower traffic lanes and significant reduction in parking	Assessed for options contribution to movement of people and goods, and access to business and property. Standard width traffic lanes and parking maintained							
	Pedestrians Effects	LOS and safety for pedestrians	Removes sections of shared use path, separate dedicated		Removes sections of shared use path, separate dedicated		Removes sections of shared use path, separate dedicated	Removes sections of shared use path, separate dedicated	Removes sections of shared use path, separate dedicated							
	Bus Users Effects	LOS and safety for bus users	Assessed for option potential to impact on bus stops, bus		Assessed for option potential to impact on bus stops, bus		Assessed for option potential to impact on bus stops, bus	Assessed for option potential to impact on bus stops, bus	Assessed for option potential to impact on bus stops, bus							
	Motorised Traffic Effects	LOS and safety for other motorised traffic	Traffic lane widths to be designed to accommodate design		Traffic lane widths to be designed to accommodate design		Traffic lane widths to be designed to accommodate design	Traffic lane widths to be designed to accommodate design	Traffic lane widths to be designed to accommodate design							
	Parking Effects	Number of parks available	Assessed on general estimate of effect on parking numbers. Some		Assessed on general estimate of effect on parking numbers.		Assessed on general estimate of effect on parking numbers. Some	Assessed on general estimate of effect on parking numbers. Some	Assessed on general estimate of effect on parking numbers.							
		Location of parks	Assumes parking rationalised and located to achieve best use		No change to existing parking location		Assumes parking rationalised and located to achieve best use	Assumes significant reduction in parking, located predominately for commercial	No change to existing parking location							
		Suitability of parking provision (balance between residential, commercial and commuter)	Balance toward most suitable use of residential and commercial use		Provides for all residential, commercial and commuter use, commuter use not best use of parking		Balance toward most suitable use of residential and commercial use	Assumed provision suitable only for commerical use, significant impact on residential	Provides for all residential, commercial and commuter use, commuter use not best use of parking							
	Property Effects	Effect of acquisition on residual land	Assume no land acquisition		Land acquisition possibly required to maintain consistent corridor width along route. Some areas width is not available without building demolition. Other areas would result in a loss of landscape buffer or front yard		Assume no land acquisition	Assume no land acquisition	Land acquisition possibly required to maintain consistent corridor width along route. Some areas width is not available without building demolition. Other areas would result in a loss of landscape buffer or front yard							
		Effect on adjacent land-use	As above		As above, reduced development or recreational potential		As above	As above	As above, reduced development or recreational potential							
		Effect on access to business (incl. deliveries and ease of access)	Assumes rationalised parking maintains current business access		Existing business access retained		Assumes rationalised parking maintains current business access	Reduced business access assumed	Exisitng business access retained							
	Environmental Effects	Light	No impact assumed		No impact assumed		No impact assumed	No impact assumed	No impact assumed							
		CPTED (Crime prevention through environmental design) where applicable	No impact assumed		No impact assumed		No impact assumed	No impact assumed	No impact assumed							
		Landscaping	Potential opportunity to retain and enhance landscaped areas within		Potential opportunity to retain and enhance landscaped areas within		Potential opportunity to retain and enhance landscaped areas within	Potential opportunity to retain and enhance landscaped areas within	Potential opportunity to retain and enhance landscaped areas within							
		Marine	No effect on Coastal Marine Area, opportunity to		Assumes encroachment into Coastal Marine Area, with resulting		No effect on Coastal Marine Area, opportunity to	No effect on Coastal Marine Area, opportunity to	Assumes encroachment into Coastal Marine Area, with resulting							
	Cultural Effects	Based on mana whenua feedback on cultural effects	Iwi not yet consulted. Option is expected to have minimal cultural		Iwi not yet consulted. Option expetd to have cultural impact		Iwi not yet consulted. Option is expected to have minimal cultural	Iwi not yet consulted. Option is expected to have minimal cultural	Iwi not yet consulted. Option expetd to have cultural impact							
Implementation	Planning Feasibility	Plan alignment (District, Reserves, Other)	The current development envelope is likely to involve works		If works were proposed in the coastal marine area, then the overall		The current development envelope is likely to involve works	The current development envelope is likely to involve works	If works were proposed in the coastal marine area, then the overall							
		Approvals Risk (consents etc.)	Minor but manageable consenting risk		Significant consenting effort and risk		Minor but manageable consenting risk	Minor but manageable consenting risk	Significant consenting effort and risk							
	Delivery Feasibility	Traffic disruption during construction	Temporary removal of parking likely to retain two-way traffic flow		Temporary removal of parking and lane closurs likey to accommodate		Temporary removal of parking likely to retain two-way traffic flow	Temporary removal of parking likely to retain two-way traffic flow	Temporary removal of parking and lane closurs likey to accommodate							
		Business disruption during construction	Minor/moderate disruption to business during construction,		High disruption to business during construction, changes to		Minor/moderate disruption to business during construction,	Minor/moderate disruption to business during construction,	High disruption to business during construction, changes to							
	Funding Feasibility	Delivery cost within likely available funding	Cost similar to budget		Cost above budget		Cost similar to budget	Cost similar to budget	Cost above budget							
		Delivery within UCP timetable (if applicable)	Achievable programme		Challenging programme - consenting and construction		Achievable programme	Achievable programme	Challenging programme - consenting and construction							
Cost	Total Cost	Implementation cost including design, consenting, construction and supervision	$$$ High Cost (>$2M)		$$$ High Cost (>$2M)		$$$ High Cost (>$2M)	$$$ High Cost (>$2M)	$$$ High Cost (>$2M)							
		PASS MCA SCREEN	Yes	No	No	No	Yes	Yes	No	No	No	No	No	No	No	No

Criteria		Consideration	Option 15	Option 16	Option 17	Option 18	Option 19	Option 20	Option 21	Option 22	Option 23	Option 24	Option 25	Option 26	Option 27
Effects	Cycle Network Fit	Alignment of option to any existing adjacent cycle infrastructure	Southbound side good connection to Cobham Drive, northbound cyclists required to cross Evans Bay Parade at signals from Cobham Drive. Connection to Kilbirnie to south achievable		Southbound side good connection to Cobham Drive, northbound cyclists required to cross Evans Bay Parade at signals from Cobham Drive. Connection to Kilbirnie to south achievable										Assume ability to provide excellent alignment to adjacent facilities
	Transport Network Fit	Alignment to transport corridor function	Assessed for options contribution to movement of people and goods, and access to business and property. Narrower traffic lanes and significant reduction in parking		Assessed for options contribution to movement of people and goods, and access to business and property. Standard width traffic lanes and reduced parking										Assessed for options contribution to movement of people and goods, and access to business and property. Significant disruption to access, including public transport and wider network effects
	Pedestrians Effects	LOS and safety for pedestrians	Removes sections of shared use path, separate dedicated		Removes sections of shared use path, separate dedicated										Assumes ability to improve pedestrian LOS and safety
	Bus Users Effects	LOS and safety for bus users	Assessed for option potential to impact on bus stops, bus		Assessed for option potential to impact on bus stops, bus										Assessed for option potential to impact on bus stops, bus
	Motorised Traffic Effects	LOS and safety for other motorised traffic	Traffic lane widths to be designed to accommodate design		Traffic lane widths to be designed to accommodate design										Significant impact on LOS for motorised traffic, re-routing
	Parking Effects	Number of parks available	Assessed on general estimate of effect on parking numbers. Some		Assessed on general estimate of effect on parking numbers. Some										Assumes ability to maintain current provision of parking
		Location of parks	Assumes significant reduction in parking, located predominately for commercial		Assumes parking rationalised and located to achieve best use										No change to existing parking location
		Suitability of parking provision (balance between residential, commercial and commuter)	Assumed provision suitable only for commerical use, significant impact on residential		Balance toward most suitable use of residential and commercial use										Provides for all residential, commercial and commuter use, commuter use not best use of parking
	Property Effects	Effect of acquisition on residual land	Assume no land acquisition		Land acquisition possibly required to maintain consistent corridor width along route. Reduced extent to other options may result in less impacts										Assume no land acquisition
		Effect on adjacent land-use	As above		As above, reduced development or recreational potential, to a lessr extent than other widening options										No land acquistion assumed, but effect of transport network changes reduce land use potential for future development
		Effect on access to business (incl. deliveries and ease of access)	Reduced business access assumed		Assumes rationalised parking maintains current business access										Significant impact on access for business, re-routing required via
	Environmental Effects	Light	No impact assumed		No impact assumed										No impact assumed
		CPTED (Crime prevention through environmental design) where applicable	No impact assumed		No impact assumed										Reduced passive surveillance
		Landscaping	Potential opportunity to retain and enhance landscaped areas within		Potential opportunity to retain and enhance landscaped areas within										Potential opportunity to retain and enhance landscaped areas within
		Marine	No effect on Coastal Marine Area, opportunity to		Assumes encroachment into Coastal Marine Area, with resulting										No effect on Coastal Marine Area, opportunity to
	Cultural Effects	Based on mana whenua feedback on cultural effects	Iwi not yet consulted. Option is expected to have minimal cultural		Iwi not yet consulted. Option expetd to have cultural impact										Iwi not yet consulted. Option is expected to have minimal cultural
Implementation	Planning Feasibility	Plan alignment (District, Reserves, Other)	The current development envelope is likely to involve works		If works were proposed in the coastal marine area, then the overall										development envelope is likely to involve works primarily within the
		Approvals Risk (consents etc.)	Minor but manageable consenting risk		Significant consenting effort and risk										Significant consenting effort and risk
	Delivery Feasibility	Traffic disruption during construction	Temporary removal of parking likely to retain two-way traffic flow		Temporary removal of parking and lane closurs likey to accommodate										Likely to prevent two way flow as part of traffic managament and
		Business disruption during construction	Minor/moderate disruption to business during construction,		High disruption to business during construction, changes to										High disruption to business during construction, lack of
	Funding Feasibility	Delivery cost within likely available funding	Cost lower than budget		Cost above budget										Cost above budget
		Delivery within UCP timetable (if applicable)	Simple to implement		Challenging programme - consenting and construction										Challenging programme - consenting and construction
Cost	Total Cost	Implementation cost including design, consenting, construction and supervision	$$ Medium Cost ($50k - $2M)		$$$ High Cost (>$2M)										$$$ High Cost (>$2M)
		PASS MCA SCREEN	Yes	No	No	No	No	No	No	No	No	No	No	No	No