

Suburban Centres Cycle Network Planning


Miramar Blueprint



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Prepared By



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1 Introduction

Opus International Consultants Ltd was commissioned by Wellington City Council to prepare a Cycle Network Blueprint for the Miramar Suburban Centre.

1.1 Project Objective

The objective of this project was to create a suburban cycle network blueprint for Miramar by engaging with key stakeholders and the local community to identify key routes for development in the long term. It should be acknowledged that this report is a snapshot in time and will be subject to change as demands and land-use patterns change.

1.2 Report Content

This report documents the outcomes of the Miramar Suburban Centre Cycle Network Blueprint project and includes the following information:

- Engagement – a high level summary of the engagement undertaken.
- The Blueprint – a description of and justification for the identified potential routes.
- Priorities – a prioritisation of the potential routes.
- Summary – a summary of the outcomes of the project.

1.3 Project Area

The project area is shown in Figure 1 below.

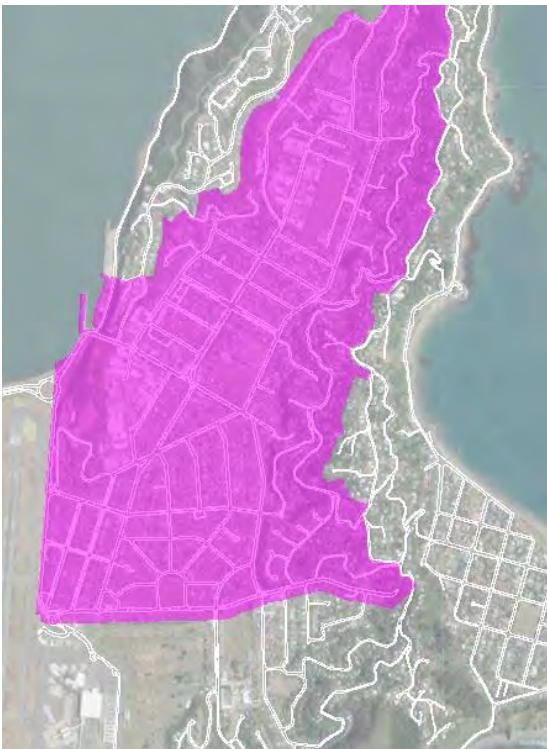


Figure 1: Study Area

2 Engagement

Community engagement was carried out by Opus International Consultants Ltd on behalf of Wellington City Council regarding cycle network planning for the Kilbirnie and Miramar suburban areas. The aims of the engagement were to:

- Seek public feedback on priorities and views on developing any new cycle facilities.
- Engage with key stakeholders in order to understand current needs and expectations of the future.
- Provide feedback on the benefits and issues of potential upgrades to feed into the overall evaluation.

Engagement methods used included:

- Initial design workshop with Wellington City Council.
- Face-to-face meetings and workshops with stakeholder and community groups.
- Two public open days, held within the two suburban neighbourhoods.

Using interactive media, feedback from both the open days and the community workshops was captured on large maps of the area, and provided directly to the design team. Discussions held at these meetings and open day events raised some key themes, such as:

- The need for increased safety (and feelings of safety) by physical separation from vehicles.
- Better clarity of the rights of cyclists to use different routes (i.e. shared paths, cycle lanes, and off-road routes).
- The Miramar cutting and Broadway Road were mentioned several times at different events as key areas on the existing network that needed improvements.

Attendees at the open days, and to some extent at community meetings/workshops tended to be people who were already active recreational or commuter cyclists, and people who already had strong opinions about the value of cycling and active transport.

A comprehensive report on the community engagement has been prepared titled *Community Engagement Feedback: Miramar Suburban Centre Cycle Network Planning*.

3 Identified Potential Cycle Improvements

The following potential cycle routes identified by the community form the network Blueprint for Miramar. The overall Blueprint and the existing typical cross sections along each of these routes are shown in Appendix A. The colour of each route is just to distinguish between routes.

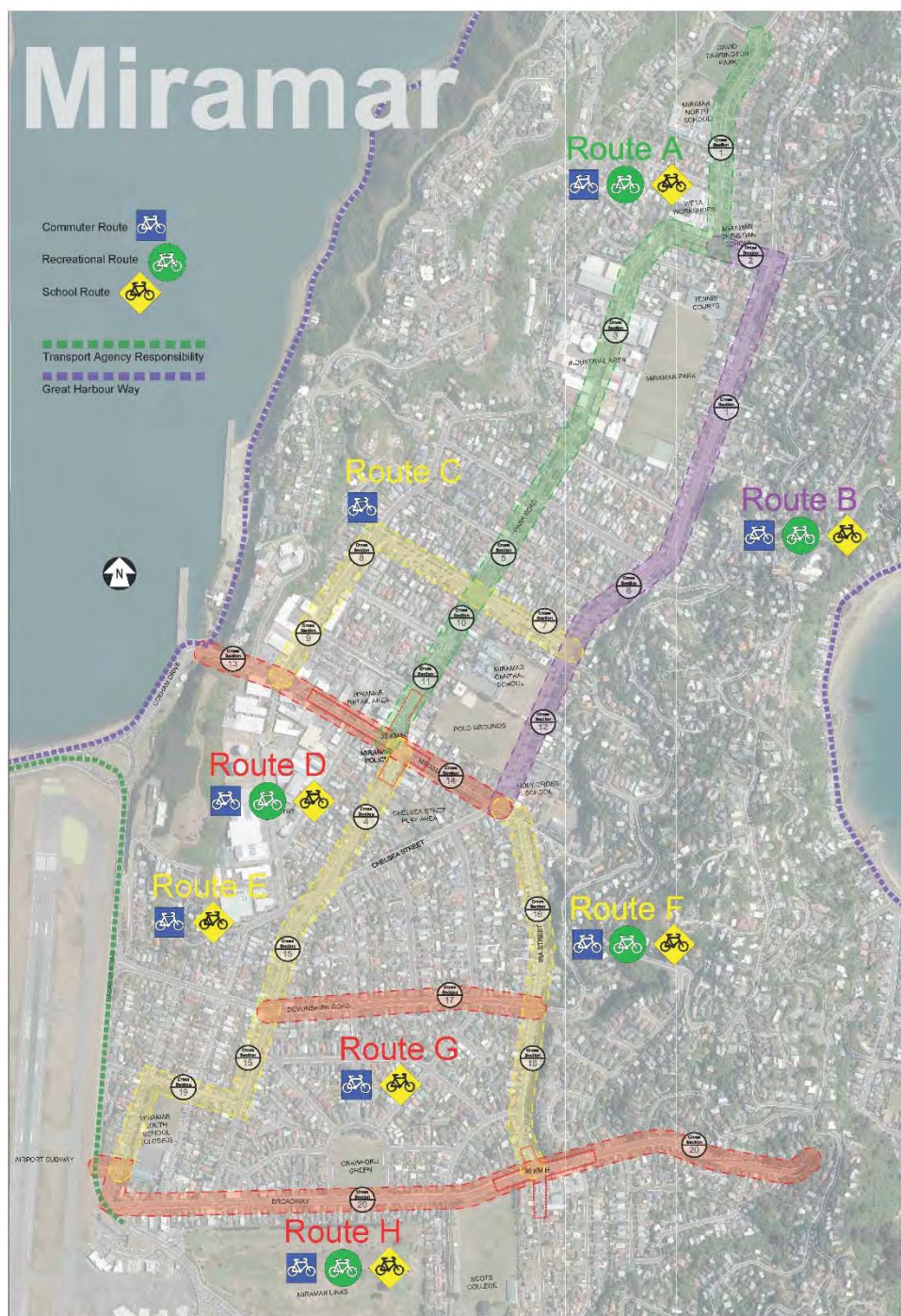


Figure 2: Cycle Network Blueprint

3.1 Route A

Description

Weka Street, Camperdown Road and Park Road.

Reason for Selection

Key north-south spine connecting northern and central Miramar with the town centre and arterial routes into the city. Connects to bottom of Mountain Bike Park, provides access to industrial / film areas, provides access to school and park.

Alternative Routes Considered

Route B (Para Street) – both included.

Target Audience

School, Recreational and Commuter Cyclists.



Potential Impact on corridor

Removal of painted median, reduction in road width and reduction in grassed berm.



Traffic Volumes / Cycle Crash History

1,000 – 7,000 vpd/ three recorded cycle crashes between 2004 and 2013 (refer Appendix C).

3.2 Route B

Description

Camperdown Road, Darlington Road and Para Street.

Reason for Selection

Key north-south spine connecting the western hills / Seatoun Heights with the Miramar town centre and key routes into the city. Also provides access to schools and recreational areas.

Alternative Routes Considered

Route A – both included.

Target Audience

School, Recreational and Commuter Cyclists.



Potential Impact on corridor

Removal of painted median, reduction in road width and reduction in grassed berm.



Traffic Volumes / Cycle Crash History

2,000 – 7,000 vpd/ three recorded cycle crashes between 2004 and 2013(refer Appendix C).

3.3 Route C

Description

Tauhinu Street and Brussels Street.

Reason for Selection

Provides a bypass of the Miramar Town Centre and connects to north-south arterial routes.

Alternative Routes Considered

Rotherham Terrace – not selected as would increase duplication of north-south routes. Rotherham Terrace would require back tracking to connect to Awa Road.

Target Audience

Commuter Cyclists.



Potential Impact on corridor

Reduction in road width and reduction in grassed berm.



Traffic Volumes / Cycle Crash History

1,100 – 5,000 vpd/ six recorded cycle crashes between 2004 and 2013 (refer Appendix C).

3.4 Route D

Description

Miramar Avenue.

Reason for Selection

Connects to one of two key routes into city, collects five north-south routes. Provides access to town centre and community facilities.

Alternative Routes Considered

None.

Target Audience

School, Recreational and Commuter Cyclists.



Potential Impact on corridor

Removal of painted median, reduction in road width and reduction in grassed berm.



Traffic Volumes / Cycle Crash History

9,000 – 20,000 vpd/ 12 recorded cycle crashes between 2004 and 2013 (refer Appendix C).

3.5 Route E

Description

Hobart Street, Kedah Street and Miro Street.

Reason for Selection

Key north-south route connecting Miramar with Airport Underpass and access to Kilbirnie and the city. Would provide priority through many intersections.

Alternative Routes Considered

- Chelsea Street – not chosen as less direct.
- South end of Hobart Street – not chosen due to busy intersection with Broadway.
- Kauri Street – could be considered at next stage of design.

Target Audience

School and Commuter Cyclists.



Potential Impact on corridor

Reduction in road width and reduction in grassed berm.



Traffic Volumes / Cycle Crash History

300 – 3,000 vpd/ three recorded cycle crashes between 2004 and 2013 (refer Appendix C).

3.6 Route F

Description

Ira Street.

Reason for Selection

To provide a connected network and access for south east Miramar.

Alternative Routes Considered

None.

Target Audience

School, Recreational and Commuter Cyclists.



Potential Impact on corridor

Removal of painted median / reduction in grassed berm.



Traffic Volumes / Cycle Crash History

5,000 – 6,000 vpd/ four recorded cycle crashes between 2004 and 2013 (refer Appendix C).

3.7 Route G

Description

Devonshire Road.

Reason for Selection

To provide a connected network and access for southern Miramar.

Alternative Routes Considered

Strathavon Road / The Quadrant – not chosen as less connectivity.

Target Audience

School and Commuter Cyclists.



Potential Impact on corridor

Reduction in road width / berm.



Traffic Volumes / Cycle Crash History

2,000 – 5,000 vpd/ two recorded cycle crashes between 2004 and 2013 (refer Appendix C).

3.8 Route H

Description

Broadway to Airport Underpass.

Reason for Selection

Key east-west connection to Kilbirnie and the City in the east and Miramar South, Strathmore and Seatoun in the west. Safety issues identified. Provides access to schools and recreational areas.

Alternative Routes Considered

None.

Target Audience

School, Recreational and Commuter Cyclists.



Potential Impact on corridor

Removal of planted median / reduction in road width. Potential parking impact.



Traffic Volumes / Cycle Crash History

6,000 – 12,000 vpd/ six recorded cycle crashes between 2004 and 2013 (refer Appendix C).

3.9 Improvement Types

The following improvement types may be considered for each of these routes:

- Shared Path
- On-Road Cycle Lanes
- Protected Cycle Lanes
- Improved Signs and Markings
- Slow zones.

4 Priorities

To assist Wellington City Council with sequencing and seeking funding the following prioritisation process has been identified.

4.1 Criteria

The following Criteria have been identified, and each route has been scored on a 10 point scale as shown in Table 1 below.

Table 1: Priority Ranking Criteria

Criteria	Weighting	Comments
Existing Facility	15%	10 points if no existing facility, 0 points if existing facility.
Existing Demand	15%	Subjective assessment of existing demand based on feedback and counts; 0 = low demand, 10 = high demand.
Safety Issues	20%	Subjective assessment of current safety based on feedback and reported crash history; 0 = low risk, 10 = high risk.
Potential Demand	15%	Subjective assessment of potential demand based on feedback and counts; 0 = low demand, 10 = high demand.
Buildability	15%	Subjective assessment of buildability of potential improvements; 0 = complex, 10 = simple.
Community Impact	20%	Subjective assessment of community impact (parking / loss of recreation space) of potential improvements; 0 = high, 10 = low.

4.2 Ranking

The priority order of the routes identified in the blueprint are listed below with further detail shown in Appendix B.

1. Route H – Broadway
2. Route D – Miramar Avenue
3. Route C – Tauhinu Street & Brussels Street
4. Route B – Darlington Road & Para Street and Route E – Hobart Street to Airport Underpass
5. Route F - Ira Street
6. Route A – Park Road & Weka Street
7. Route G - Devonshire Road

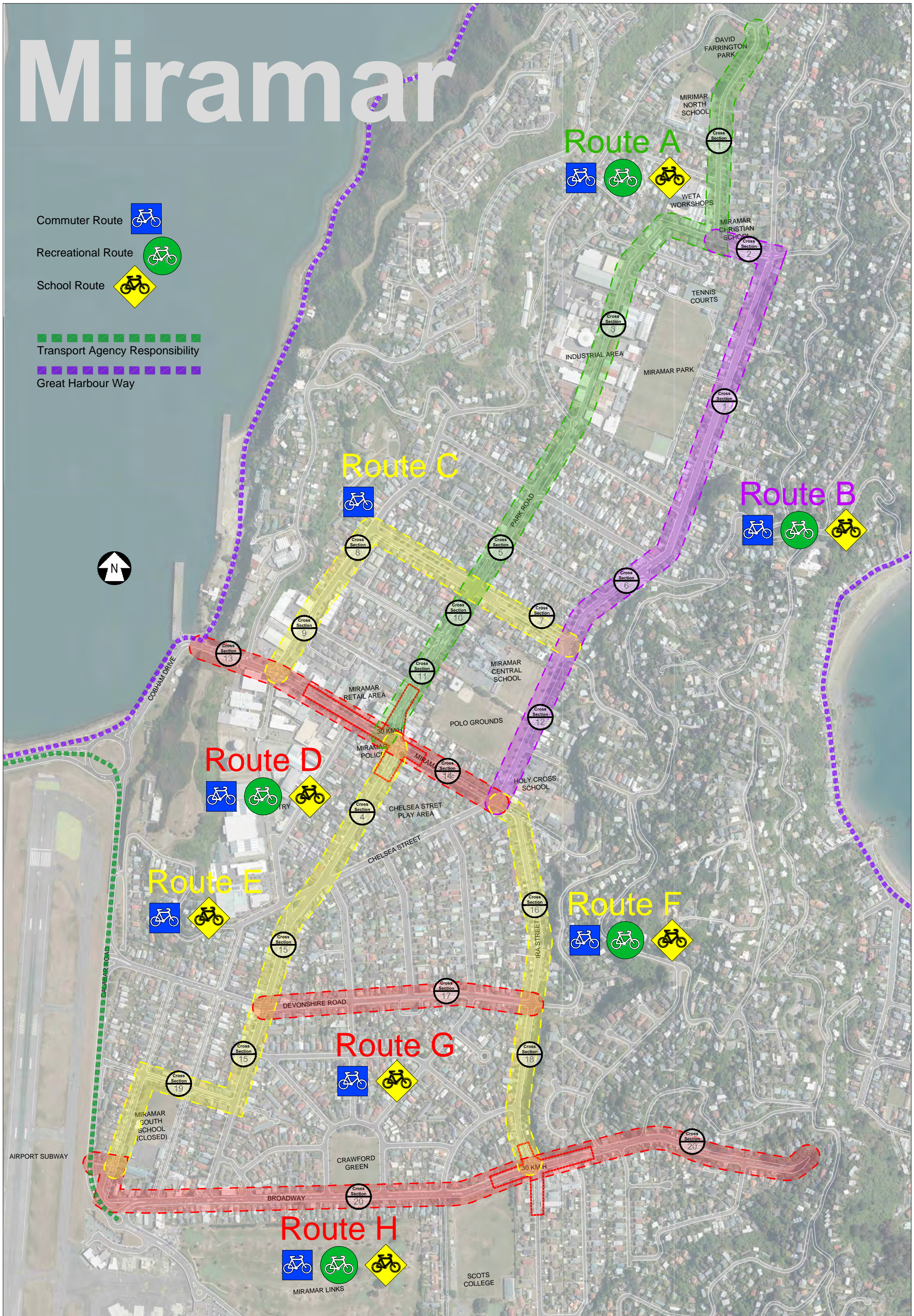
5 Summary

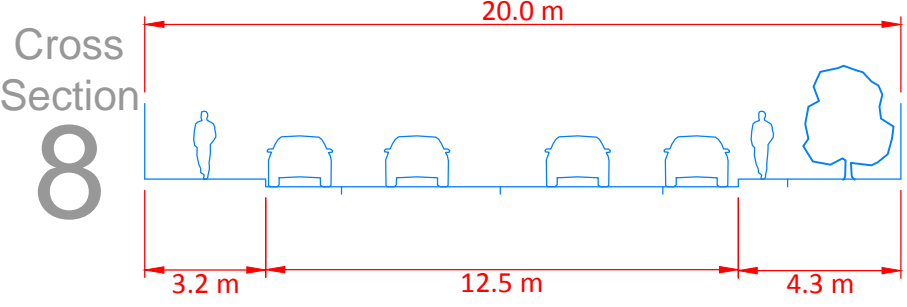
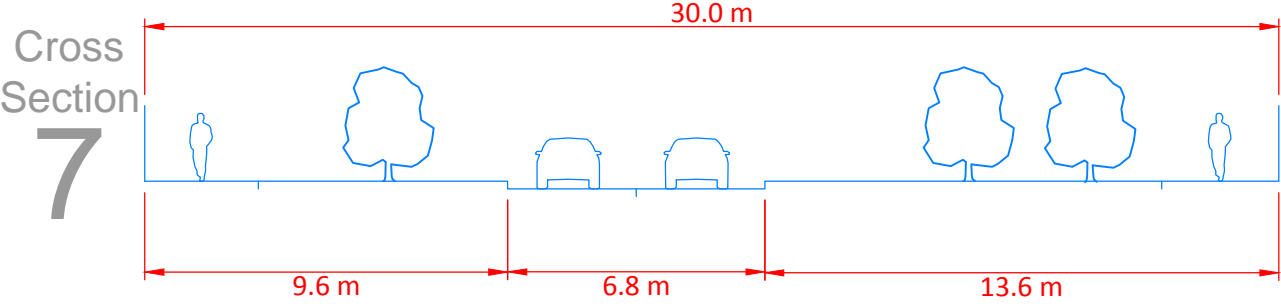
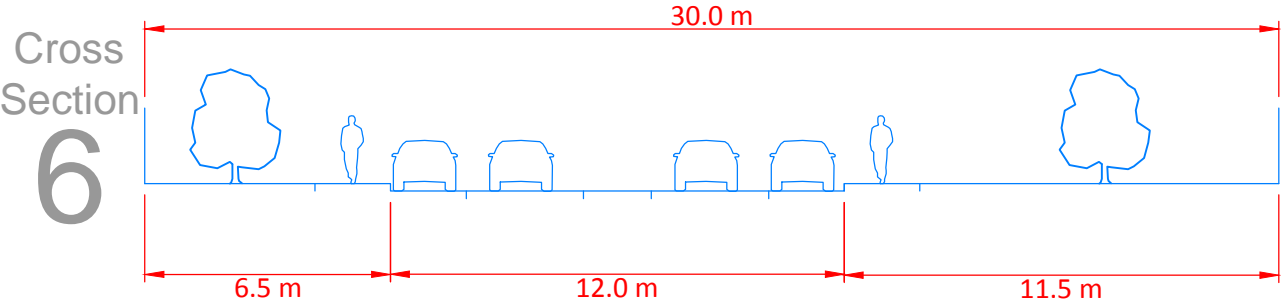
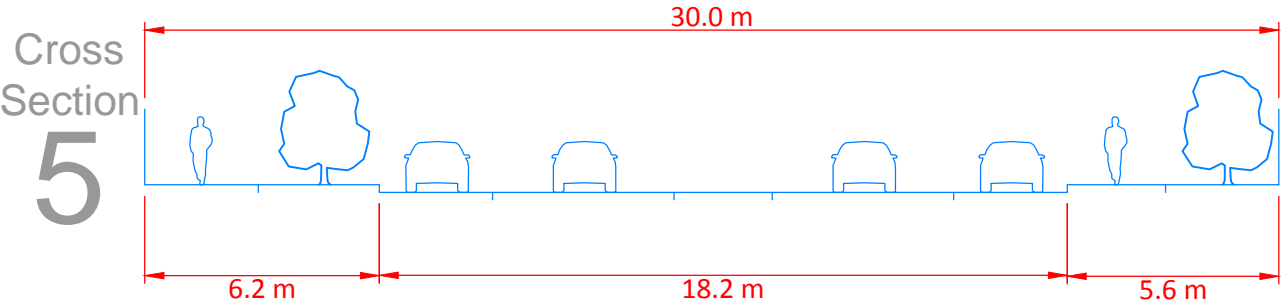
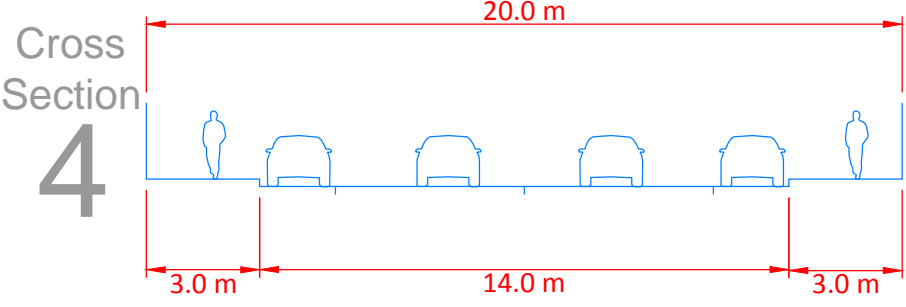
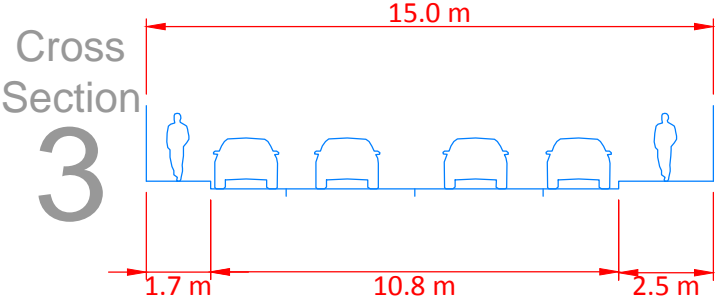
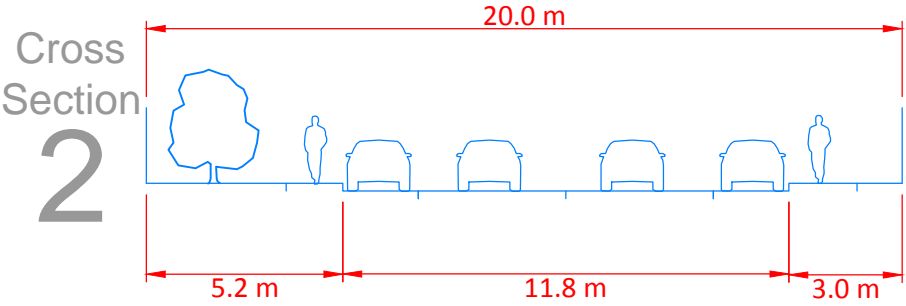
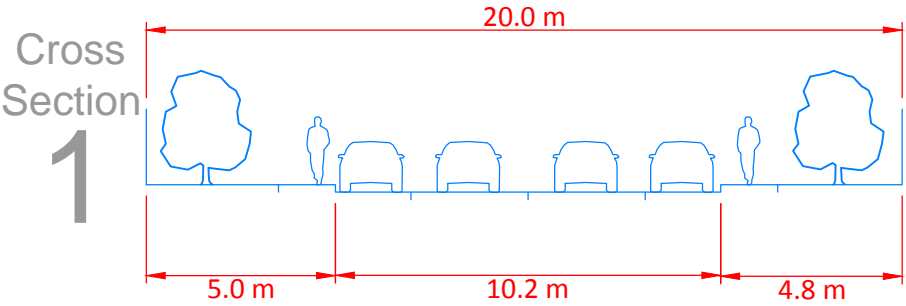
This Cycle Network Blueprint for the Miramar Suburban Centre has identified a proposed prioritised network of routes for cycle improvements based on community engagement and network planning principles. This information will be used by the Council to select routes for the next stage of development. This will include further engagement, identification of specific improvements and effects.

Appendix A – Cycle Network Blueprint

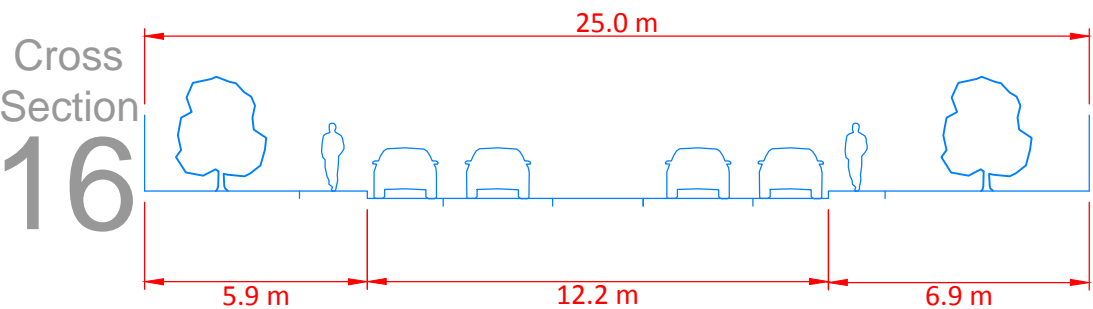
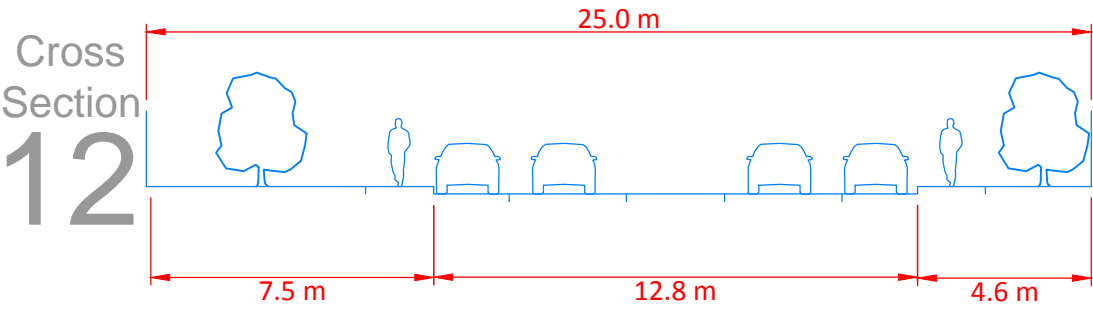
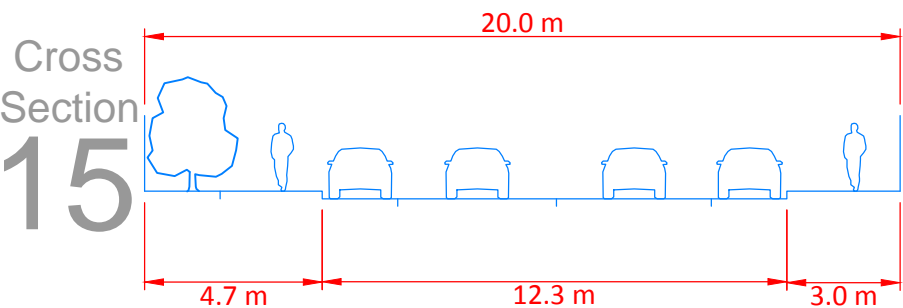
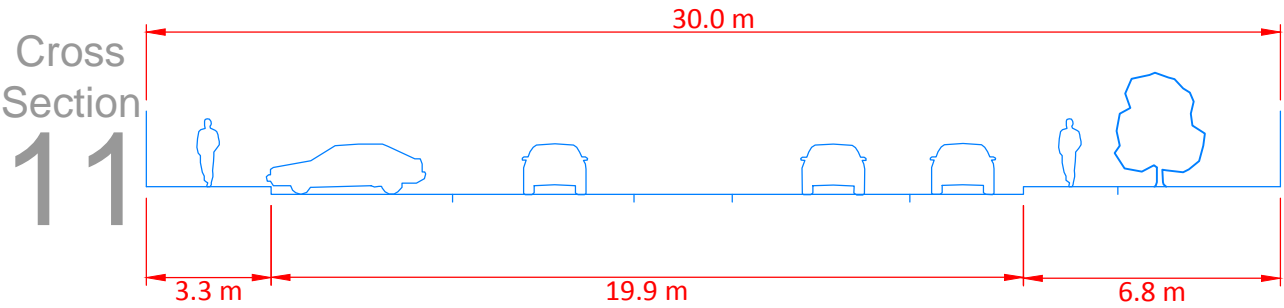
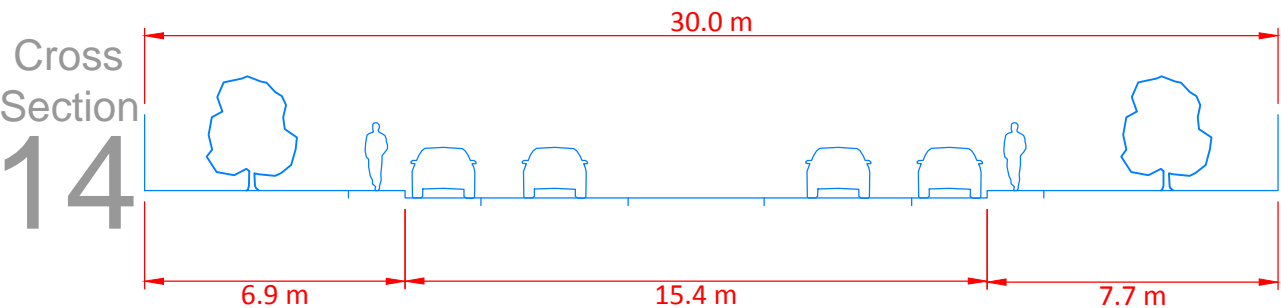
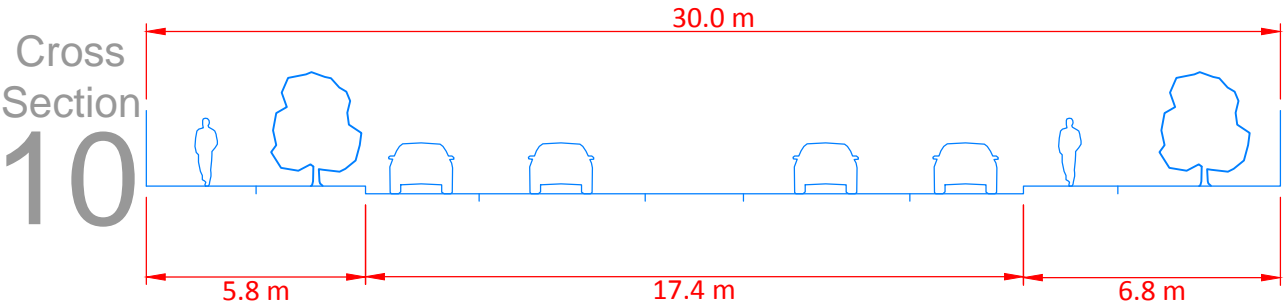
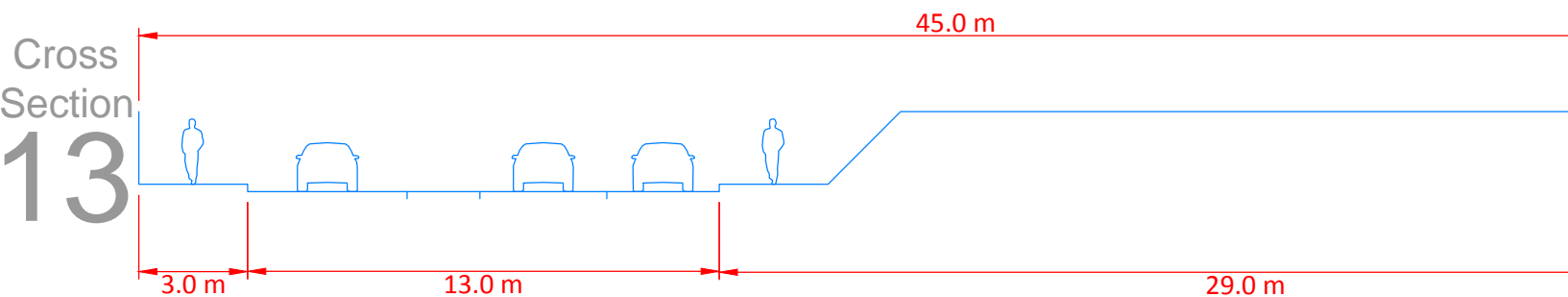
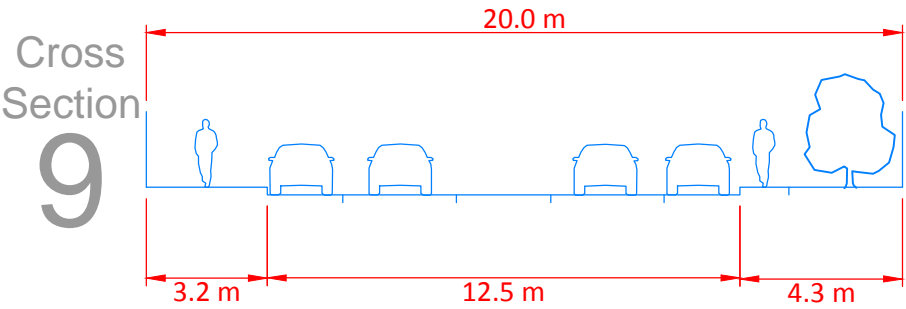
Miramar

- Commuter Route 
- Recreational Route 
- School Route 
- Transport Agency Responsibility 
- Great Harbour Way 

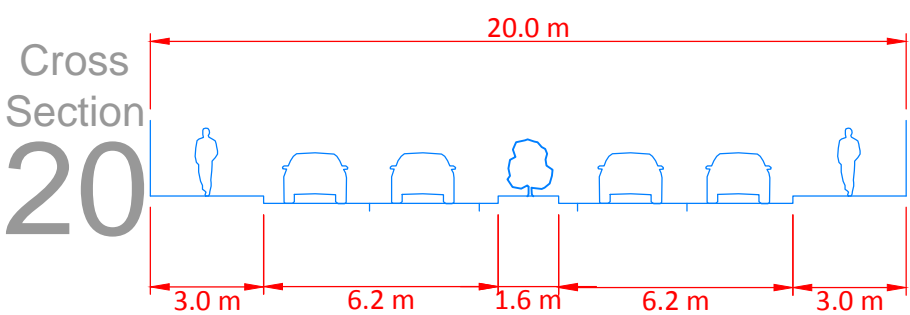
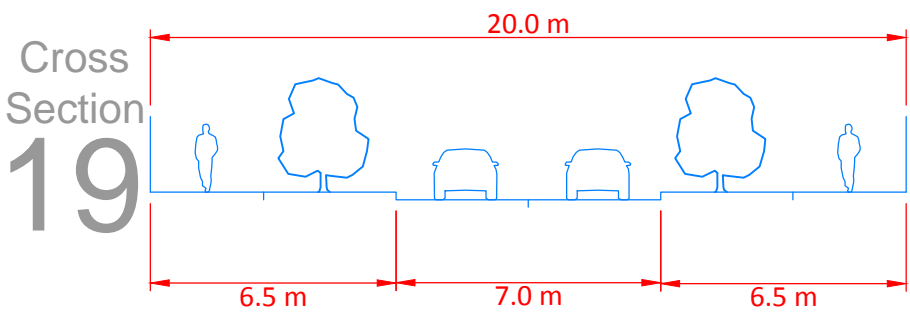
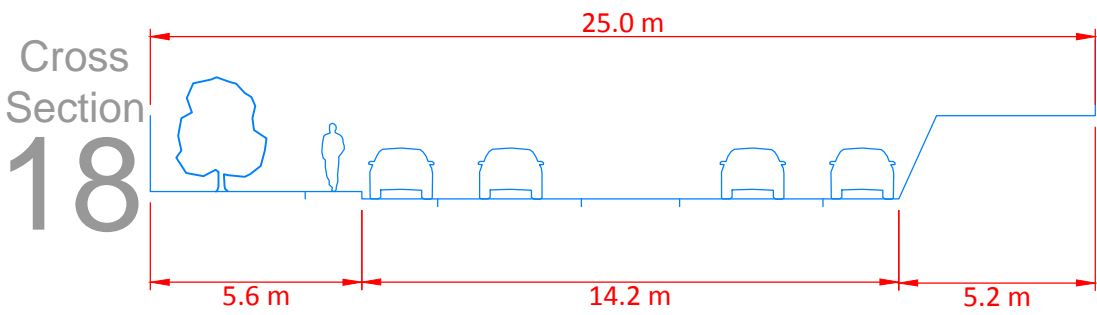
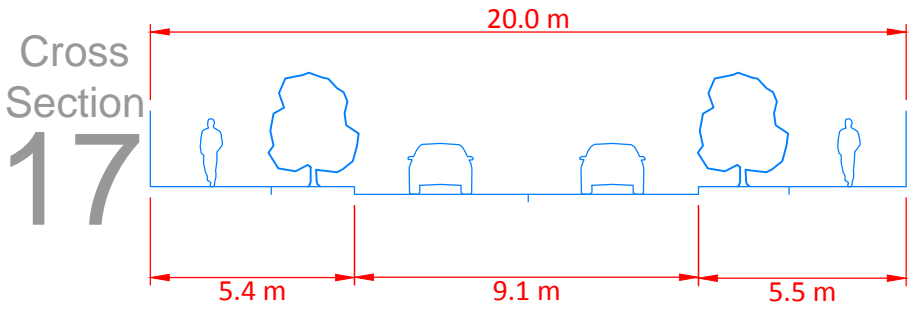




Miramar



Miramar

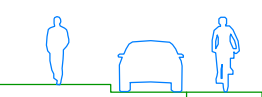


Potential Improvement Cross-sections

Shared Path



On-Road Lanes



Protected Lane



Miramar

Appendix B – Priority Calculations

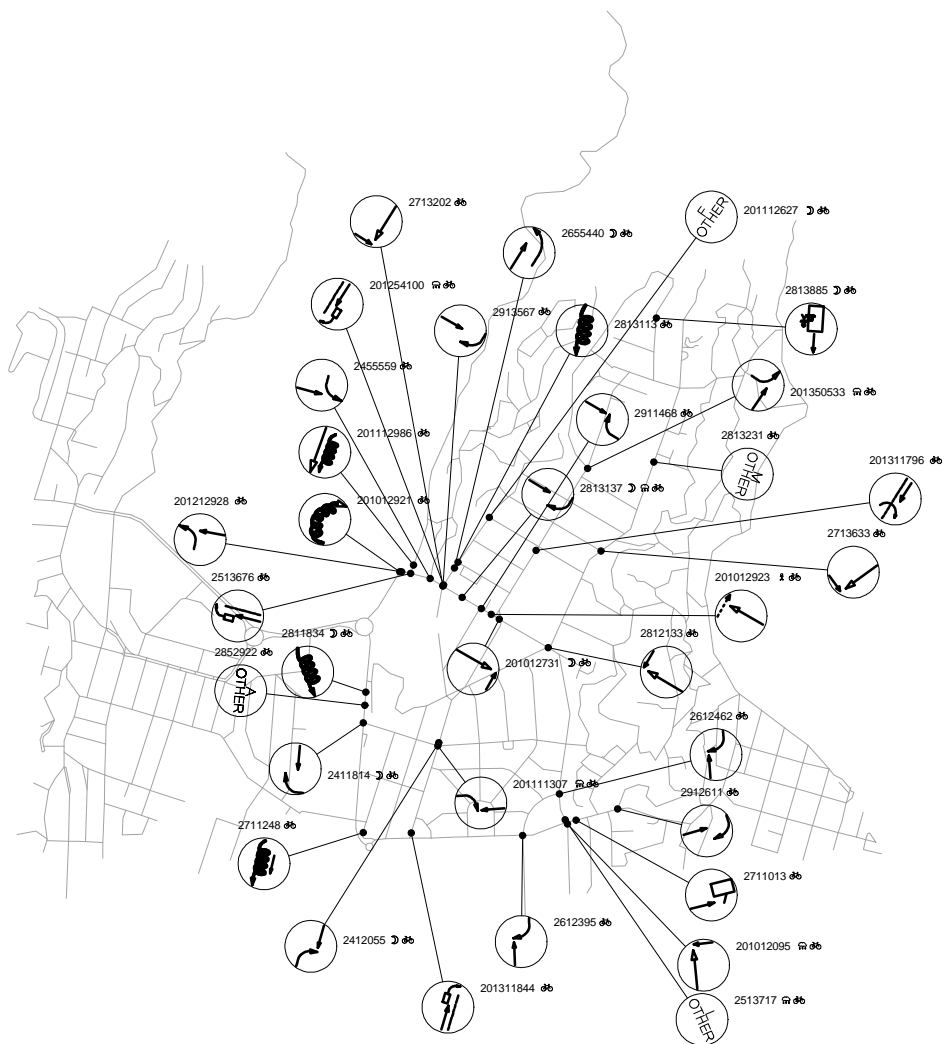
Miramar Route Prioritisation

#	Description	Existing Facility		Existing Demand		Safety Issues		Potential Demand		Buildability		Community Impact		Weighted Score	Rank
Weighting:		15%		15%		20%		15%		15%		20%		TRUE	
A	Park Road & Weka Street	N	10	Medium	5	Medium	5	Medium	5	Complex	0	High	0	4	6
B	Darlington Road & Para Street	N	10	Medium	5	Low	0	Medium	5	Complex	0	Low	10	5	4=
C	Tauhinu Street & Brussels Street	N	10	Medium	5	Low	0	High	10	Complex	0	Low	10	5.75	3
D	Miramar Avenue	N	10	High	10	High	10	High	10	Complex	0	Medium	5	7.5	2
E	Hobart Street to Airport Underpass	N	10	Low	0	Low	0	Medium	5	Medium	5	Low	10	5	4=
F	Ira Street	N	10	Low	0	Low	0	Low	0	Medium	5	Low	10	4.25	5
G	Devonshire Road	N	10	Low	0	Low	0	Low	0	Complex	0	Low	10	3.5	7
H	Broadway	N	10	High	10	High	10	High	10	Medium	5	Medium	5	8.25	1

Note: this prioritisation is subject to change following further refinement of the blueprint

8/08/2014

Appendix C – CAS Data



First Street	C Second street I or landmark	Crash Number	Date DD/MM/YYYY	Day Time DDD HHMM	Description of Events	Crash Factors (ENV = Environmental factors)	Road	Natural Light	Weather	Junction	Cntrl	Tot Inj F S M A E I T R N
BROADWAY	50W GLAMIS AVENUE	2711013	19/01/2007	Fri 1720	CAR2 EBD on BROADWAY opened door into path of another party, CYCLIST1 hit Parked Vehicle	CAR2 didnt see/look behind when opening door or leaving vehicle	Dry	Overcast	Fine	Unknown	Nil	1
BROADWAY	I TIO TIO ROAD	2912611	03/07/2009	Fri 1050	CYCLIST1 (Age 48) EBD on BROADWAY hit CAR2 turning right onto BROADWAY from the left	CAR2 failed to give way at give way sign	Dry	Overcast	Fine	T Type Junction	Give Way Sign	1
COBHAM DRIVE	40W SHELLY BAY ROAD	201212928	16/11/2012	Fri 1438	CYCLIST1 (Age 36) NBD on COBHAM DRIVE hit CAR2 merging from the left	CAR2 failed to give way at driveway, attention diverted by other traffic, didnt see/look when visibility limited by roadside features ENV: entering or leaving other non-commercial	Dry	Bright	Fine	Driveway	Nil	1
COBHAM DRIVE	50W SHELLY BAY ROAD	201012921	21/09/2010	Tue 1423	CAR1 NBD on COBHAM DRIVE lost control turning right on right hand bend	CAR1 too fast entering corner	Dry	Overcast	Fine	Unknown	Nil	1
DARLINGTON ROAD	40S TOTARA TERRACE	2813231	21/09/2008	Sun 1110	CYCLIST1 (Age 12) SBD on DARLINGTON ROAD hit SUV2 manoeuvring	CYCLIST1 driving or riding on footpath SUV2 failed to give way at driveway, didnt see/look when visibility limited by roadside features ENV: visibility limited by hedge or fence, entering or leaving private house / farm	Dry	Overcast	Fine	Driveway	Nil	1
DEVONSHIRE ROAD	I HOBART ST	201111307	07/02/2011	Mon 1312	CYCLIST2 (Age 16) turning right hit by oncoming TAXI1 WBD on DEVONSHIRE ROAD	CYCLIST2 cyclist riding on ped xing or ped signals, cyclist or m/cyclist wearing dark clothing, headlights inadequate or no headlights	Wet	Overcast	Heavy Rain	X Type Junction	Stop Sign	1
HOBART ST	25N BROADWAY	201311844	25/05/2013	Sat 1246	CAR1 NBD on HOBART ST hit rear of CYCLIST2 (Age 12) turning right from left side	CAR1 did not see or look for other party until too late, blind spot CYCLIST2 turned right from left side of road, did not see or look for other party until too late	Dry	Bright	Fine	T Type Junction	Nil	1
HOBART ST	15N CALEDONIA ST	2412055	01/06/2004	Tue 1922	CYCLIST2 (Age 48) turning right hit by oncoming CAR1 SBD on HOBART ST	CAR1 failed to give way when turning to non-turning traffic, misjudged speed etc of vehicle coming from another dirn with right of way ENV: entering or leaving private house / farm	Dry	Dark	Fine	Driveway	Nil	1
IRA ST	I THE QUADRANT	2612462	20/06/2006	Tue 1509	CAR2 turning right hit by oncoming CYCLIST1 (Age 51) NBD on IRA ST	CAR2 failed to give way when turning to non-turning traffic, didnt see/look when required to give way to traffic from another direction	Dry	Bright	Fine	T Type Junction	Nil	1
MIRAMAR AVENUE	I CHELSEA ST	2812133	01/02/2008	Fri 1335	CYCLIST1 (Age 31) WBD on MIRAMAR AVENUE hit TAXI2 crossing at right angle from right	TAXI2 failed to give way at stop sign	Dry	Bright	Fine	X Type Junction	Stop Sign	1
MIRAMAR AVENUE	I HOBART ST	201012731	10/08/2010	Tue 1740	SUV1 EBD on MIRAMAR AVENUE hit CYCLIST2 (Age 39) crossing at right angle from right	SUV1 failed to give way at give way sign, didnt see/look when required to give way to traffic from another direction	Dry	Twilight	Fine	Roundabo	Give Way Sign	1
MIRAMAR AVENUE	I MAUPUIA ROAD	2455559	05/11/2004	Fri 1755	CYCLIST1 (Age 46) EBD on MIRAMAR AVENUE hit CAR2 merging from the left	CAR2 failed to give way at give way sign, didnt see/look when required to give way to traffic from another direction	Dry	Overcast	Light Rain	T Type Junction	Give Way Sign	1
MIRAMAR AVENUE	20W PARK ROAD	201012923	07/09/2010	Tue 1640	CAR1 WBD on MIRAMAR AVENUE hit CYCLIST2 (Age 45) crossing road from left side	CAR1 attention diverted by driver dazzled by sun/lights CYCLIST2 driving or riding on footpath, cyclist riding on ped xing or ped signals ENV: dazzling sun	Dry	Bright	Fine	Unknown	Nil	1
MIRAMAR AVENUE	I SHELLY BAY ROAD	2513676	02/11/2005	Wed 1620	BUS1 WBD on MIRAMAR AVENUE hit rear of CYCLIST2 (Age 22) turning right from left side	CYCLIST2 suddenly turned right, didnt see/look behind when changing lanes, position or direction	Dry	Bright	Fine	T Type Junction	Give Way Sign	1

First Street	C Second street I or landmark Distance R	Crash Number	Date 	Day Time 	Description of Events	Crash Factors (ENV = Environmental factors)	Road Natural Light	Weather Junction	Cntrl	Tot Inj F S M A B I T R N
MIRAMAR AVENUE	100E TAUHINU ROAD	2813137	27/06/2008	Fri 1725	CYCLIST1 (Age 45) EBD on MIRAMAR AVENUE hit CAR2 turning right onto MIRAMAR AVENUE from the left	CAR2 failed to give way at driveway, windscreen or rear window dirty ENV: entering or leaving service station	Wet Dark	Light Rain	Driveway Nil	1
MIRAMAR AVENUE	200E TAUHINU ROAD	2911468	04/02/2009	Wed 1838	CAR2 turning right hit by oncoming CYCLIST1 (Age 39) EBD on MIRAMAR AVENUE	CAR2 failed to give way when turning to non-turning traffic, new driver showed inexperience ENV: entering or leaving service station	Dry Overcast	Fine	Driveway Nil	1
MIRAMAR AVENUE	I TAUHINU ROAD	2913567	09/12/2009	Wed 0738	CYCLIST1 (Age 59) EBD on MIRAMAR AVENUE hit CAR2 turning right onto MIRAMAR AVENUE from the left	CAR2 failed to give way at give way sign, didnt see/look when required to give way to traffic from another direction	Dry Overcast	Fine	Roundabo Give Way Sign	1
MIRAMAR AVENUE	I TAUHINU ROAD	2713202	19/09/2007	Wed 1742	CAR1 SBD on TAUHINU ROAD hit CYCLIST2 (Age 35) crossing at right angle from right	CAR1 failed to give way at give way sign, didnt see/look when required to give way to traffic from another direction ENV: dazzling sun	Dry Bright	Fine	Roundabo Give Way Sign	1
MIRO ST	80W BROADWAY	2711248	22/02/2007	Thu 1530	MOPED1 SBD on MIRO ST lost control while overtaking	MOPED1 driving or riding on footpath, misjudged speed of own vehicle	Dry Overcast	Fine	Unknown Nil	1
MONORGAN ROAD	I BROADWAY	2612395	24/05/2006	Wed 0740	CAR2 turning right hit by oncoming CYCLIST1 (Age 38) WBD on MONORGAN ROAD	CAR2 failed to give way when turning to non-turning traffic, didnt see/look when required to give way to traffic from another direction	Dry Overcast	Fine	X Type Junction Stop Sign	1
PARA ST	I REX ST	2713633	15/11/2007	Thu 0720	CYCLIST1 (Age 19) SBD on PARA ST hit CAR2 crossing at right angle from right	CAR2 failed to give way, didnt see/look when required to give way to traffic from another direction ENV: entering or leaving private house / farm	Dry Overcast	Fine	Driveway Nil	1
PARK ROAD	20S BRUSSELS ST	201311796	16/05/2013	Thu 0834	CYCLIST1 (Age 42) SBD on PARK ROAD hit CAR2 U-turning from opposite direction of travel	CAR2 failed to give way when turning to non-turning traffic, attention diverted by other traffic, attention diverted by driver dazzled by sun/lights	Dry Bright	Fine	Unknown Nil	1
PARK ROAD	I MIRAMAR NORTH ROAD	201350533	19/03/2013	Tue 0745	CYCLIST1 NBD on PARK ROAD hit TAXI2 merging from the left	TAXI2 failed to give way at give way sign, didnt see/look when required to give way to traffic from another direction	Wet Overcast	Fine	Roundabo Give Way Sign	1
RONGOTAI ROAD	I IRA ST	2513717	31/12/2005	Sat 1410	CYCLIST1 (Age 8) SBD on IRA ST hit CAR2 turning right against	CAR2 failed to give way to ped on a xing, didnt see/look when visibility limited by roadside features	Wet Bright	Fine	Roundabo Give Way Sign	1
SHELLY BAY ROAD	40N MIRAMAR AVENUE	201112986	29/10/2011	Sat 0940	CYCLIST2 (Age 27) SBD on SHELLY BAY ROAD lost control while being overtaken by TRUCK1	CYCLIST2 incorrect merging/diverging manoeuvre, misjudged speed, etc of vehicle coming from behind or alongside	Dry Overcast	Fine	Unknown Nil	1
STRATHMORE AVENUE	I IRA ST	201012095	27/05/2010	Thu 0830	SUV1 NBD on STRATHMORE AVENUE hit CYCLIST2 (Age 14) crossing at right angle from right	SUV1 failed to give way at give way sign, didnt see/look when visibility obstructed by other vehicles, blind spot	Wet Overcast	Light Rain	Roundabo Give Way Sign	1
TAUHINU ROAD	I BRUSSELS ST	201112627	07/09/2011	Wed 1750	CYCLIST1 (Age 28) NBD on TAUHINU ROAD hit rear end of CYCLIST2 (Age 28) stop/slow for obstruction	CYCLIST1 attention diverted, misjudged speed of own vehicle	Dry Twilight	Fine	T Type Junction Nil	1
TAUHINU ROAD	5N MIRAMAR AVENUE	201254100	23/10/2012	Tue 0818	CAR1 SBD on TAUHINU ROAD hit rear of CYCLIST2 turning right from left side	CYCLIST2 turned right from left side of road	Wet Overcast	Fine	Roundabo Give Way Sign	1
TAUHINU ROAD	30S TAHI ST	2655440	14/08/2006	Mon 0615	CYCLIST1 NBD on TAUHINU ROAD sideswiped by CAR2 turning left	CAR2 motorist crowded cyclist, misjudged speed, etc of vehicle coming from behind or alongside ENV: entering or leaving car parking building / area	Dry Dark	Fine	Driveway Nil	1

First Street	C Second street I or landmark Distance R	Crash Number	Date DD/MM/YYYY	Day	Time DDD HHMM	Description of Events	Crash Factors (ENV = Environmental factors)	Road	Natural Light	Weather	Junction	Cntrl	Tot Inj F S M A E I T R N
TAUHINU ROAD	I TAHI ST	2813113	22/09/2008	Mon	1515	CYCLIST1 (Age 35) SBD on TAUHINU ROAD lost control; went off road to left, CYCLIST1 hit Kerb	CYCLIST1 misjudged size or position of fixed object or obstacle, inexperience	Dry	Bright	Fine	T Type Junction	Give Way Sign	1
WEKA ST	200S MIRAMAR NORTH ROAD	2813885	15/12/2008	Mon	0025	passenger fell from moving VAN1 SBD on WEKA ST	CYCLIST2 riding in insecure position, vehicle being towed	Dry	Dark	Fine	Unknown	Nil	1
1N/1076/4.002	50S WEXFORD ROAD	2811834	29/01/2008	Tue	2200	CYCLIST1 (Age 48) SBD on SH 1N lost control; went off road to left, CYCLIST1 hit Other	CYCLIST1 lost control	Dry	Dark	Fine	Unknown	Nil	1
1N/1076/4.061	80N CALEDONIA ST	2852922	14/05/2008	Wed	1515	CYCLIST1 (Age 18) SBD on SH 1N overtaking CAR2	CYCLIST1 failed to keep left CAR2 motorist crowded cyclist	Dry	Bright	Fine	Unknown	Nil	
1N/1076/4.122	I CALEDONIA ST	2411814	19/04/2004	Mon	1900	CYCLIST1 (Age 34) SBD on SH 1N hit CAR2 turning right onto SH 1N from the left	CYCLIST1 cyclist or m/cyclist wearing dark clothing, headlights inadequate or no headlights CAR2 failed to give way at give way sign, didnt see/look when required to give way to traffic from another direction	Dry	Dark	Fine	T Type Junction	Give Way Sign	1



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