WARRNAMBOOL
CITY COUNCIL

East Warrnambool Local Area Traffic Management (LATM) Plan

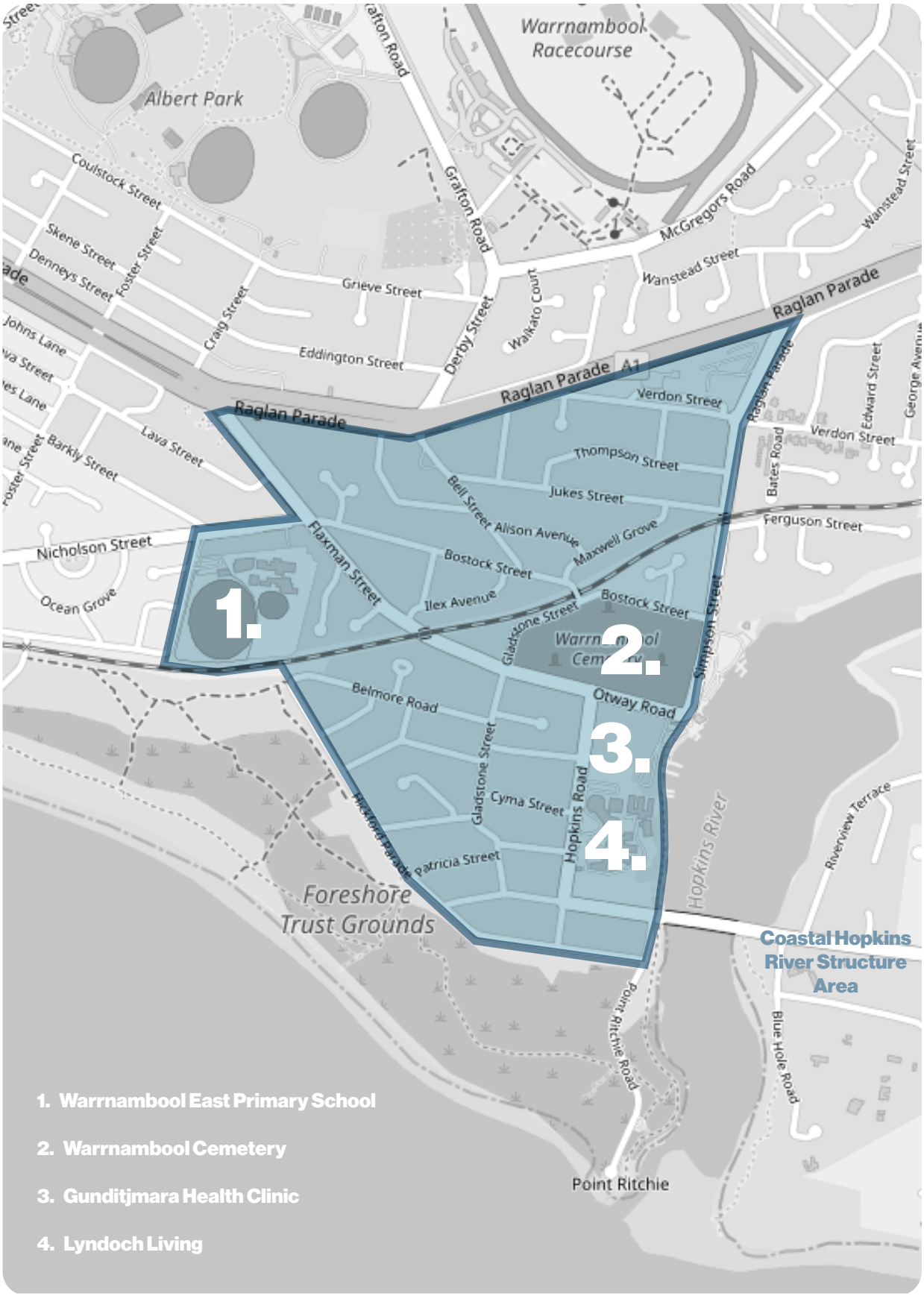
Acknowledgement of Country

Warrnambool City Council acknowledge the Peek Whurrong and Kirrae Whurrung Peoples of the Gunditjmara and Eastern Maar Nations as the Traditional Owners of the lands, waterways, and skies within Warrnambool municipality.

We pay our respects to their Elders, past and present.

Contents

1.0 Study area



1. Warrnambool East Primary School
2. Warrnambool Cemetery
3. Gunditjmara Health Clinic
4. Lyndoch Living

2.0 Why a LATM?

Everyone wants to get where they need to in a safe and timely way. As Warrnambool grows and gets busier, the challenge will be how to do this.

Warrnambool is continuing with a local community approach following the success of the Botanic Local Area Traffic Management Plan (LATM), which was developed with the community to provide cost-effective solutions to complex traffic challenges.

3.0 What do we want in Warrnambool

Great Streets - which consider and balance the needs of people walking, cycling, driving an taking the bus. Streets which are design to benefit everyone; older and younger people, people with limited mobility. Getting this right creates opportunities for social interaction, enabling the wider community to foster independence, social connection, safety and comfort for all.

The East LATM aligns with the W2040 Community Plan:

People
Warrnambool has a safe and connected community

Place
Warrnambool prioritises and encourages sustainable transport

Environment
Zero Warrnambool- a "20 minute city"

4.0 The challenges

What challenges are we facing?

- Space is limited in our streets and for parking
- More people want to go to the same places at the same time
- People are time-poor
- Our reliance on cars
- Some people don't feel safe walking or cycling
- Access to public transport

What does the East Warrnambool LATM aim to do?

The LATM will address the travel challenges in collaboration with the people who work, live and go to school in the area by:

1. Improving safety of the road crossings.
2. Reducing speeds of traffic.
3. Improving congestion by dispersing traffic during peak times (drop-off points, safe crossing to these locations).
4. Filling gaps in the footpath network.

- The LATM will put Council and major stakeholders in the area in a position to take advantage of external funding opportunities
- It will provide solutions which are cost-effective and more easily implemented in a timely manner.
- Ultimately it is aimed at creating safer streets for all road users; especially those walking and cycling.

Who did we work with?

- Department of Transport - Regional Roads Victoria
- Victoria Police
- Moyne Warrnambool Road Share
- Warrnambool Cycling Reference Group
- Warrnambool East Primary School
- Lyndoch Aged Care
- Gunditjmara Health Clinic
- Discussion with the Buslines
- Discussion with Emergency Services- Ambulance and Fire
- Discussion with Local Laws
- Discussion with Planning and Development

5.0 Our approach

The Local Area Traffic Management Plan (LATM) approach has provided cost-effective solutions to address complex traffic challenges. These solutions will be supported by behaviour change programs, which will assist people to use the new infrastructure.

To ensure works are within the capacity of Council to achieve they have been weighted against the criteria below to ensure resources are allocated to deliver the best outcome.

Network and road safety (40%)

- How does the location fit into the road and footpath network. What are the real and perceived risks- including crash data, anecdotal evidence, and current infrastructure assessments.

Links to education facilities (20%)

- The distance from the location to the nearest education facility which is a driver of movement during peak times in the precinct.

Links to community facilities, businesses and destinations (20%)

- The distance from the location to the nearest community facility, business or destination - this includes open space, sporting facilities, off road trails and the Botanic Gardens.

Community feedback (20%)

- How the infrastructure issues were identified- by the community, by the consultant, from observations.

6.0 Behaviour change

The LATM considers how people move through our streets, whether they walk, cycle or drive a car, we all want to get where we want to go safely.

The following behaviour change programs provide education and skills for everyone to share our streets.

7.0 A precinct approach

Rather than addressing each challenge individually the LATM approach takes a precinct approach. Balancing the travel needs of people who walk, cycling and drive. The following table reviews various infrastructure options which are cost effective.

	Advantages	Disadvantages	Safety benefit	Cost
Wombat Crossing Consists of a raised platform to the same level as the adjacent pedestrian footpaths, with Pedestrian Crossing (Zebra) pavement markings on top. Requires speed hump warning sign and 20km/h advisory speed sign. May include flashing lights and other warning signs such as children crossing if warranted This treatment gives priority to pedestrians at all times.	• Effective at reducing vehicle speeds at crossing point • Considered a Safe System treatment as it reduces crash severity • Can be perceived as providing route continuity and coherence • Enhances visibility of the pedestrian crossing • Deterrent to through traffic	• More expensive than standard Pedestrian Crossing (Zebra) (construction, drainage etc.) • May increase traffic noise • May need modifications if on bus or freight routes • Can be uncomfortable for cyclists to negotiate	★★★★★	$ $ $ $ $
Raised School Crossing- current school crossings in the precinct. Consists of a platform raised to the same level as the adjacent pedestrian footpaths. Requires speed hump warning, 20km/h advisory speed sign and red and white striped posts for children crossing flags. May include other warning signs, if warranted such as children crossing. Also includes stop lines for vehicles in advance of the crossing. Depending on location, this is usually accompanied by 40km/h school speed zones. This treatment give priority to pedestrians only when flags are displayed.	• Considered a Safe System treatment as it reduces crash severity • Effective at reducing vehicle speeds at crossing point • Outside of school times this operates as a speed hump • Positively perceived by parents • May have better visibility than standard children's crossing • Can be perceived as providing route continuity and coherence • Deterrent to through traffic	• Does not give priority outside of school times • May increase traffic noise • May need modifications if on bus or freight routes • Can be uncomfortable for cyclists to negotiate • More expensive than standard children's crossing (construction, drainage etc.) • Requires recruitment process for supervisors (and funding)	★★★★★	$ $ $ $ $
Raised Intersection Consists of a raised platform on the intersection and short length of approach roads. Requires speed hump warning, advisory speed sign and may include other warning signs, if warranted such as children crossing. May also need to be lit, depending on location.	• Effective at reducing vehicle speeds at crossing point • Considered a Safe System treatment as it reduces crash severity • Raises awareness levels of drivers	• Can be expensive (construction, drainage etc.) • Comfort level for commercial and heavy vehicles can be compromised • Does not provide priority for pedestrians	★★☆☆☆	$ $ $ $ $

	Advantages	Disadvantages	Safety benefit	Cost
Raised Threshold Consists of a platform raised to the same level as the adjacent pedestrian footpaths. Requires speed hump warning sign, 20km/h advisory speed sign and may include other warning signs, if warranted, such as children crossing. This treatment does not give priority to pedestrians or cyclists.	• An important element for providing continuity of pedestrian/cycle paths • Effective at reducing vehicle speeds at crossing point • Considered a Safe System treatment as it reduces crash severity • Deterrent to through traffic • Pedestrians are more visible to drivers	• Does not give priority outside of school times • May appear to paths users that they have priority • May increase traffic noise • Can be unpopular with local residents • May need modifications if on bus or freight routes • Can be uncomfortable for cyclists to negotiate	★★☆☆☆	$$$$$
Drop Off Points Parking restrictions that allow a two-minute (or similarly short time) stop to drop off children. Driver remains with the car. Must be accompanied by a standard no parking sign to give it legal force. May include indented parking.	• Requires indiscriminate parking and stopping to create a more orderly traffic environment • Easy to install and low cost	• Encourages driving over active transport • Relies on enforcement to be effective	★☆☆☆☆	$$$$$
Roundabout Upgrades Raised platforms or speed cushions on approaches, central island enlargement and kerb realignment to reduce the speed of traffic approaching and travelling through roundabouts.	• Reduce vehicle speeds and therefore the likelihood and severity of crashes within roundabouts • Improve safety for pedestrians using pedestrian crossing points • Improve safety for cyclists riding through roundabouts • Deterrent to through traffic	• Can be expensive (construction, drainage etc.) • May need modifications if on bus or freight routes • Reduced comfort level for motorists • Can be uncomfortable for cyclists to negotiate (raised platforms) • Noise	Site-specific	$$$$$
Shared Path Wide paths shared by pedestrians and cyclists, separated from vehicular traffic.	• Improve Safety by separating vulnerable road users from vehicle traffic Can influence desire lines (ie. preferred routes), keeping pedestrians and cycling on safer routes and crossings • Usually provides a more pleasant walking/riding experience, particularly through parks and other vegetated areas	• Can lead to conflict between cyclists and pedestrians • Off-road sections could be perceived as less safe (eg. Stranger Danger) • Very High Cost	★★★★★	$$$$$
On Road Bicycle Lane Dedicated space for cyclists to the left of the traffic lanes, marked by signs and pavement markings.	• Provide space for cyclists to ride clear of moving traffic • Easy to install and low cost	• Significant safety risk remain including car-dooring and vehicles encroaching the bicycle lane.	★☆☆☆☆	$$$$$
Separated Bicycle Lane (FUTURE PROJECTS) Protect cyclists by positioning them between the parking or traffic lane and the footpath, with physical separation for through traffic and/or parked vehicles.	• ●Improve safety by preventing vehicular access to the bicycle land and providing clearances of the opening of car doors. • Generally provide a high level of service for cyclists and promote increased patronage on cycling routes (compare to unprotected on-road bicycle lanes) • Maintain directness of travel and priority at intersections • May be applied in urban areas where parking is prevalent or where there is insufficient space for an off-road path.	• Can be expensive (construction, drainage etc.) • Frequent maintenance is required to ensure that they do not accumulate debris and litter • Difficult to apply where there are frequent driveways or intersections • Require more space than unprotected on-road bicycle lanes	★★★★★	$$$$$

8.0 Map 1

Possible infrastructure changes to the local streets

Legend:

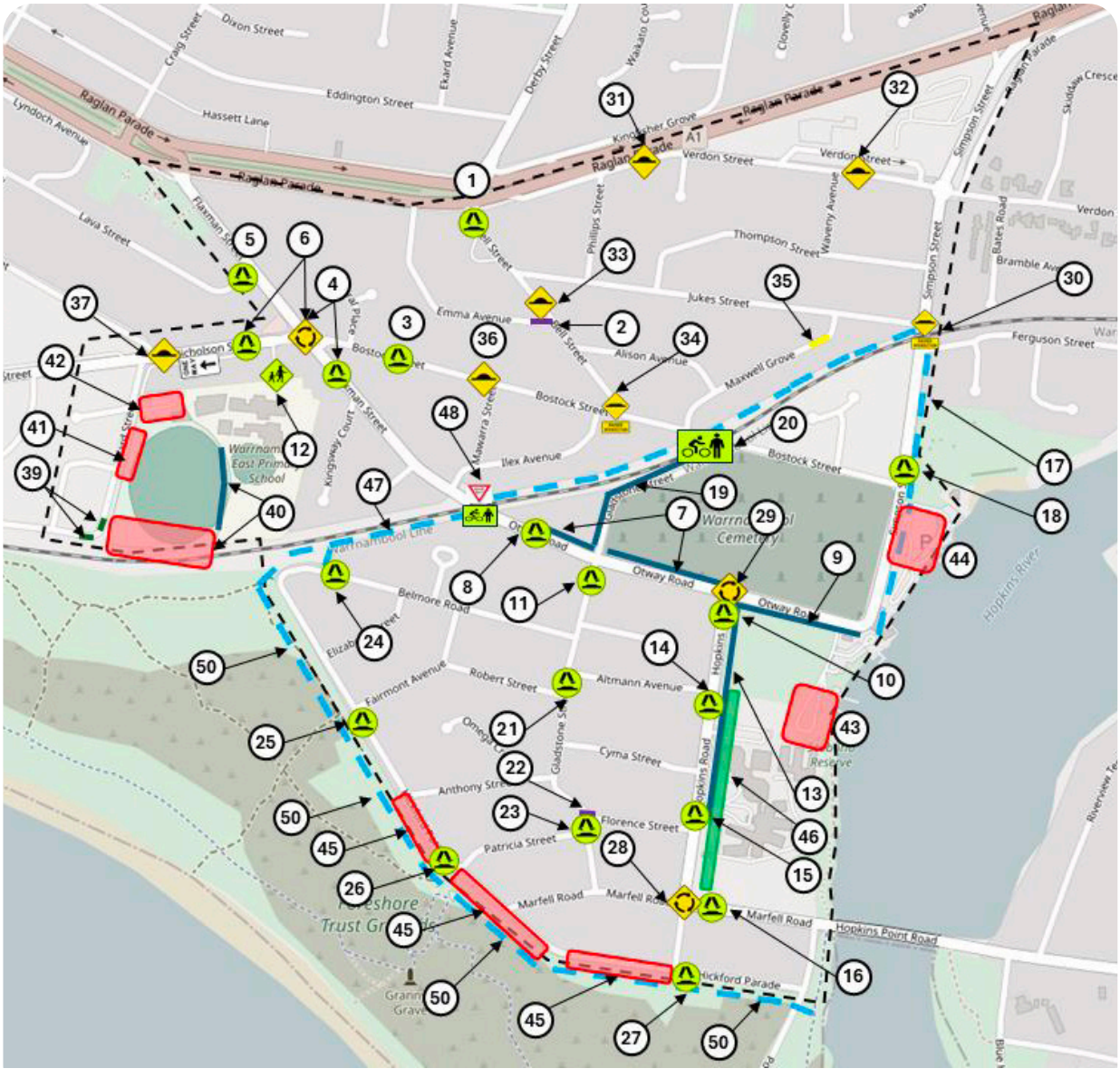
- Wombat Crossing
- Kerb works
- Intersection upgrade (roundabout/signals)
- New footpath
- 'School Street'
- Active travel link
- New shared use path
- Delineation work
- Traffic island
- One way operation
- Parking upgrade
- Raised intersection
- Road hump
- 2P parking restrictions
- Shared use priority crossing

9.0 Map 2

Satellite Image of proposed changes

10.0 Map 3

Map Register Summary of proposed changes



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Walking

Map Ref	Icon	Road	Location	Proposed Treatment	Alternative Treatment
1		Bell Street	South of Raglan Parade	Wombat Crossing	
2		Emma Avenue	Intersection with Bell Street	Kerb works to narrow intersection bell mouth	
3		Bostock Street	#88 Bostock Street	Wombat Crossing – to replace existing school crossing	
4		Flaxman Street	#29 Flaxman Street	Wombat Crossing – to replace existing school crossing	Intersection upgrade – to replace existing school crossing
5		Lava Street	West of Flaxman Street	Wombat Crossing	
6		Nicholson Street	West of Flaxman Street	Wombat Crossing – to replace existing school crossing	Intersection upgrade – to replace existing school crossing
7		Otway Road	North side: #66 Otway Road to Warrnambool Cemetery Main Entrance	New footpath	
8		Otway Road	Mid-block between rail overpass and Gladstone Road	Wombat Crossing	
9		Otway Road	South side: Hopkins Road to Simpson Street	New footpath	
10		Hopkins Road	South of Otway Road	Wombat Crossing	
11		Gladstone Street	South of Otway Road	Wombat Crossing	
12		Nicholson Street	Nicholson Street court bowl	'School Street' / 'Open Street'	
13		Hopkins Road	East side: Florence Street to Otway Road	New footpath	
14		Hopkins Road	South of Altmann Avenue	Wombat Crossing	
15		Hopkins Road	North of Florence Street	Wombat Crossing	
16		Marfell Road	East of Hopkins Road	Wombat Crossing	
17		Simpson Street	Ferguson Street to Otway Road (Proudfoot's Carpark)	Shared Use Path	
18		Simpson Street	North of Bostock Street	Wombat Crossing	
19		Gladstone Street	Otway Road to Bostock Street rail bridge	New footpath	
20		Bostock Street	Bostock Rail Bridge	Active Travel crossing only	
21		Gladstone Street	Between Altmann Avenue and Robert Street	Wombat Crossing	
22		Gladstone Street	Intersection with Florence Street	Kerb works to narrow intersection bell mouth	
23		Gladstone Street	Between Florence Street and Patricia Street	Wombat Crossing	
24		Belmore Road	West of #38 Belmore Road	Wombat Crossing	
25		Hickford Parade	south of Fairmont Avenue	Wombat Crossing	
26		Hickford Parade	north of Patricia Street	Wombat Crossing	
27		Hickford Parade	east of Hopkins Road	Wombat Crossing	

Traffic and Speed Management

Map Ref	Icon	Road	Location	Proposed Treatment	Alternative Treatment
10		Hopkins Road	South of Otway Road	Wombat Crossing	
14		Hopkins Road	South of Altmann Avenue	Wombat Crossing	
15		Hopkins Road	North of Florence Street	Wombat Crossing	
28		Hopkins Road	Intersection with Marfell Road	Intersection upgrade (roundabout)	
29		Hopkins Road	Intersection with Otway Road	Intersection upgrade (roundabout)	
18		Simpson Street	North of Bostock Street	Wombat Crossing	
30		Simpson Street	At Jukes Street intersection	Raised intersection (future conversion to support Deakin Link extension)	
31		Verdon Street	Between Phillips Street and Hillside Avenue	Road hump	
32		Verdon Street	Waveny Avenue and Simpson Street	Road hump	
1		Bell Street	South of Raglan Parade	Wombat Crossing	
33		Bell Street	Jukes Street and Emma Street	Road hump	
34		Bell Street	Intersection with Bostock Street	Raised intersection	
35		Maxwell Grove	South of Jukes Street	Enhanced delineation	Lighting upgrade
3		Bostock Street	#88 Bostock Street	Wombat Crossing – to replace existing school crossing	
34		Bostock Street	Intersection with Bell Street	Raised intersection	
36		Bostock Street	West of Mawarra Street	Road hump	
6		Nicholson Street	West of Flaxman Street	Wombat Crossing – to replace existing school crossing	Intersection upgrade – to replace existing school crossing
37		Nicholson Street	East of Barkly Street	Road hump	
38		Nicholson Street	Service road	One way operation	
39		Ward Street	Continuation with Merri Street	Traffic islands	

Parking

Map Ref	Icon	Road	Location	Proposed Treatment	Alternative Treatment
40		Ward Street	DW Jones Oval (south)	Formalised parking with supporting infrastructure	
41		Ward Street	East side: Barham Avenue to wombat crossing	Indented parking with supporting infrastructure	
42		Ward Street	Ward Street off-street car park	Reconfigure layout	
43		Otway Road	Scoborio Reserve	Upgrade parking module with supporting infrastructure	
44		Simpson Street	Proudfoot's Boatramp	Upgrade parking module with supporting infrastructure	
45		Hickford Parade	Hopkins Road to Anthony Street	Provide parking modules on south side with supporting infrastructure	
46		Hopkins Road	East: Altmann Avenue to Marfell Road	Implement time based restrictions to deter all day parking	

Cycling

Map Ref	Icon	Road	Location	Proposed Treatment	Alternative Treatment
47			South side of rail corridor from Otway Road to Hickford Parade	Shared use path	
48		Otway Road	North of rail overpass	Shared use priority crossing	
49			North side of rail corridor from Otway Road to Simpson Street	Shared use path	
50		Hickford Parade	Hopkins River Trail (Point Richie Parade) to Deakin Link (Belmore Road)	Shared use path	
24		Belmore Road	West of #38 Belmore Road	Wombat Crossing	