



LOCAL AREA TRAFFIC MANAGEMENT STUDY

NORTHCOTE LOCAL AREA TRAFFIC MANAGEMENT STUDY

HIGH STREET – MITCHELL STREET – STATION STREET – CLARKE STREET

9 AUGUST 2018

NORTHCOTE LATM STUDY

CLIENT: Darebin City Council

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1 INTRODUCTION

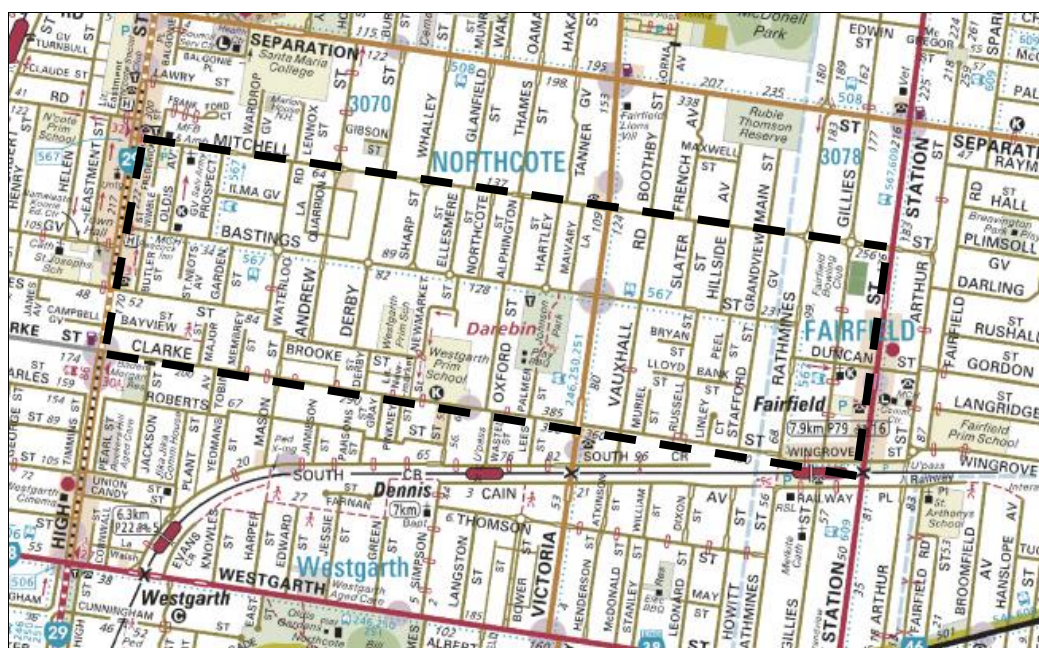
O'Brien Traffic has been engaged by Darebin City Council to undertake a Local Area Traffic Management study of the area bound by High Street, Mitchell Street, Station Street and Clarke Street in Northcote.

In the course of preparing this report:

- The subject area has been inspected;
- Traffic volume and speed data has been reviewed and analysed;
- Crash data has been analysed;
- Community issues and suggestions have been considered;
- Issues and opportunities have been identified; and
- A Local Area Traffic Management Strategy has been developed.

2 STUDY AREA

The study area is bound by High Street, Mitchell Street, Station Street and Clarke Street in Northcote, as shown in **Figure 1**.



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FIGURE 1: STUDY AREA

The study area is predominantly residential. Westgarth Primary School is located near the southern boundary of the study area. Fairfield Bowling Club is located near the north-eastern corner of the study area. Two reserves, Rubie Thomson Reserve and Johnson Park are also located within the study area. Numerous commercial/retail premises front Station Street, forming part of the Fairfield strip shopping centre.

Fairfield Railway Station is located immediately south of the study area, on the southern side of Wingrove Street.

Bus routes operate within the study area, on Victoria Road, Bastings Street, Prospect Grove and part of Mitchell Street.

Mitchell Street, between High Street and Victoria Street, and Victoria Street are bike routes.

High Street, Station Street and Victoria Street form part of the Principal Pedestrian Network and Principal Bicycle Network.

3 EXISTING CONDITIONS

3.1 STREET NETWORK

The area comprises a local street network between High Street and Station Street. The main north-south street through the study area is Victoria Street. Mitchell Street, Bastings Street and Clarke Street provide east-west links between High Street and Station Street/Rathmines Street.

Station Street is a Secondary Arterial Road under the management of VicRoads. Through the Fairfield strip shopping centre, it provides one traffic lane in each direction with parallel parking on the eastern side and angle parking on the western side. Closer to Mitchell Street, two traffic lanes and a parallel parking lane are provided in each direction.

High Street is a Major Council Road. It provides one traffic lane in each direction with kerbside parking provided in marked parallel spaces, a painted median island, and centre of the road tram tracks.

Victoria Road is also a Major Council Road. It provides one traffic lane, a bicycle lane and a parking lane in each direction. Traffic signals are provided at its intersections with Clarke Street and Bastings Street. Pedestrian operated signals are located just north of Mitchell Street.

Mitchell Street is a local street providing an east-west link between High Street and Station Street (and further east to Arthur Street). It provides one traffic lane, a bicycle lane and a parking lane in each direction. Roundabouts are provided at four intersections between High Street and Station Street.

Bastings Street is a local street providing an east-west link between High Street and Rathmines Street. It provides one traffic lane in each direction with kerbside parking typically permitted. Roundabouts are provided at four intersections between High Street and Rathmines Street. Traffic signals are provided at its intersection with Victoria Street. Pedestrian operated signals are located east of Newmarket Street. Roundabouts are provided at four intersections between High Street and Victoria Road.

Clarke Street is also a local street running in an east west orientation between High Street and Rathmines Street (and connecting to Station Street via Wingrove Street). It provides one traffic lane in each direction with kerbside parking typically permitted. Speed humps and bicycle pavement markings are provided along Clarke Street. Traffic signals are provided at the Clarke Street/High Street intersection. At Victoria Street, a central median restricts turning movements to/from Clarke Street to left in/left out.

The default speed limit of 50 km/h applies to the study area, with the exception of Station Street and High Street. High Street has a speed limit of 40km/h between 8am and midnight, and 60km/h at other times. Station Street has a speed limit of 60km/h.

3.2 TRAFFIC VOLUMES AND SPEED DATA

Traffic volume and speed data was provided by Council and is presented diagrammatically in **Figure 2**.

3.2.1 Traffic volumes

With the exception of Victoria Road, Mitchell Street, Bastings Street and Rathmines Street have the highest traffic volumes in the study as follows:

- Mitchell Street – approximately 2,500 vpd west of Victoria Road and 2,000vpd east of Victoria Road;
- Bastings Street – approximately 2,600 vpd west of Victoria Road and 1,900vpd east of Victoria Road;
- Rathmines Street – approximately 1,500 vpd.

Other streets have traffic volumes less than 1,000 vpd.

3.2.2 Vehicle speeds

The vehicle speed data indicates the 85th percentile speeds¹ were typically less than 45 km/h, with the exception of:

- Mitchell Street (53 and 56 km/h east and west of Victoria Street respectively);
- Bastings Street (50 and 46 km/h east and west of Victoria Street respectively);
- Rathmines Street (50 km/h); and
- Vauxhall Road (47 km/h).

3.3 CASUALTY CRASH HISTORY

VicRoads casualty crash data for the period from 1 January 2012 to 4 September 2017 was provided by Council. The crash data is presented diagrammatically in **Figure 3**.

1. The speed at which 85% of all vehicles travel under.

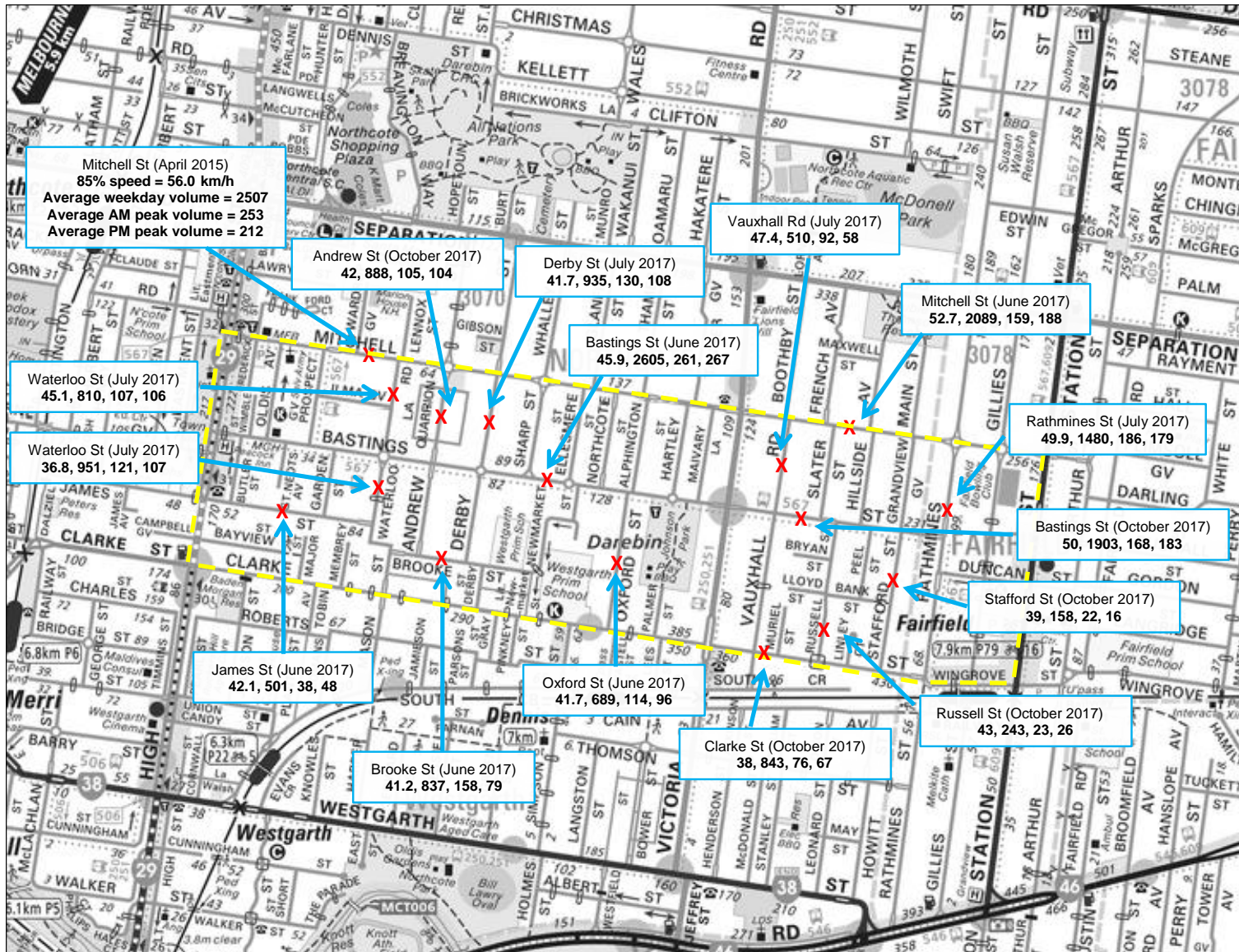


FIGURE 2: TRAFFIC VOLUME AND SPEED DATA

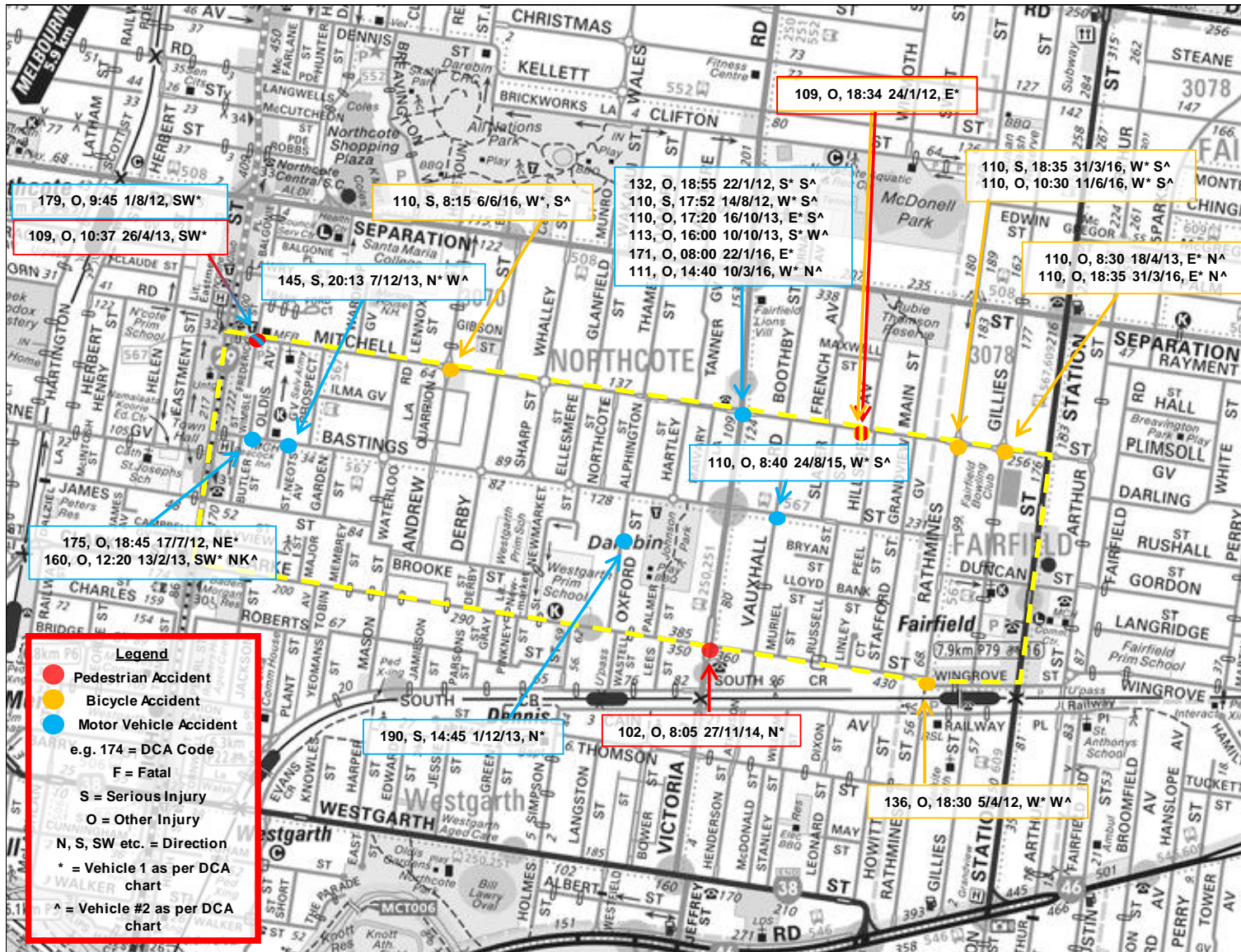


FIGURE 3: CASUALTY CRASH DATA – JANUARY 2012 TO SEPTEMBER 2017

Analysis of the crash data shows the following:

- 21 casualty crashes occurred in the study area (excluding crashes on Station Street and High Street), of which 5 were serious injury crashes and 16 were other injury crashes;
- 7 crashes involved cyclists, including 2 serious injury crashes;
- 3 crashes involved pedestrians, all other injury type crashes.

3.3.1 Crash locations

The vast majority of crashes (14 crashes) occurred along Mitchell Street, including:

- 6 crashes at Mitchell Street/Victoria Street intersection, of which 4 were cross intersection type crashes. It is noted that this intersection will be the subject of a Blackspot funding application;
- 5 bicycle crashes at roundabouts – at Rathmines Street (2), Gillies Street (2) and Andrew Street (1); and
- 2 pedestrian crashes – near Frederick Street (1) and near Hillside Avenue (1).

Bastings Street also had multiple crashes – with 3 crashes occurring between Prospect Grove and High Street, and one crash at Vauxhall Street.

3.3.2 Bicycle crashes

The 7 bicycle crashes that occurred within the study area are described below:

- Two cross-intersection type crashes at the roundabout at Mitchell Street and Rathmines Street (of which one was a serious injury crash);
- Two cross-intersection type crashes at the roundabout at Mitchell Street and Gillies Street;
- One cross-intersection type crash at the roundabout at Mitchell Street and Andrew Street;
- A bicycle struck a pedestrian on Mitchell Street near Hillside Avenue; and
- A right turn side swipe at Clarke Street/Rathmines Street.

3.3.3 Pedestrian crashes

The 3 pedestrian crashes that occurred within the study area are described below:

- A pedestrian crossing Mitchell Street near Hillside Avenue was struck by a bicycle;
- A pedestrian crossing Victoria Street at Clarke Street was struck on the far side by a northbound vehicle; and
- A pedestrian was struck by the vehicle they were boarding/pushing on Mitchell Street near Frederick Street.

3.4 EXISTING LATM TREATMENTS

3.4.1 Roundabouts

Several roundabouts are provided in the study area, specifically:

- On Mitchell Street – at Andrew Street, Sharp Street, Rathmines Street and Gillies Street; and
- On Bastings Street – at Waterloo Road, Derby Street, Ellesmere Street and Hartley Street.

3.4.2 Speed humps

Speed humps are provided on Clarke Street/Wingrove Street between High Street and Station Street. Other speed hump locations are:

- Waterloo Road, between James Street and Bastings Street; and
- Newmarket Street, at Brooke Street – this is currently a raised school crossing and will be converted to a raised zebra crossing in 2019.

3.4.3 One-way treatments

The following streets are restricted to one-way traffic flow:

- Butler Street (northbound);
- Oldis Avenue (northbound); and
- Newmarket Street (southbound).

3.4.4 Threshold treatments

Bastings Street, Mitchell Street and Lawry Street have raised threshold treatments at High Street, with the High Street footpath continuing across the side street at-grade.

3.4.5 Pedestrian crossings

Pedestrian operated signals are provided on:

- High Street, north of James Street; and
- Clarke Street, near Westgarth Primary School.

While not in the study area, it is noted that pedestrian operated signals are also located on

- Victoria Street, north of Mitchell Street; and
- High Street, north of Mitchell Street.

School crossings are provided on:

- Bastings Street, east of Newmarket Street; and
- Newmarket Street, north of Brook Street (as noted in Section 3.4.2 this is a currently raised school crossing and will be converted to a raised zebra crossing in 2019).

Mid-block pedestrian crossing points with refuge islands are provided on:

- Bastings Street, between Russell Street and Slater Street; and
- Mitchell Street, east of Prospect Grove.

3.4.6 Traffic signals

Traffic signals are provided at the High Street/Clarke Street and Bastings Street/Victoria Street intersections.

3.4.7 Other LATM treatments

Other LATM treatments include splitter islands are numerous intersections. A bluestone 'rumble strip' is provided on Vauxhall Street approximately mid-way between Bastings Street and Clarke Street.

3.5 SUMMARY OF EXISTING CONDITIONS

With the exception of Victoria Street, much of the vehicular traffic through the study area uses Mitchell Street and Bastings Street, and to a lesser degree, Rathmines Street. Each of these streets also experience vehicle speeds higher than desirable for local streets.

While traffic volumes are lower on Oxford Street and Vauxhall Street, it is apparent that these streets are being used as 'rat-runs' in peak periods.

Other streets in the study area typically have low traffic volumes and vehicle speeds.

The intersection of Mitchell Street and Victoria Street has been identified as a high-crash location. In addition, several bicycle crashes have occurred along Mitchell Street, typically at roundabouts.

4 PREVIOUS TRAFFIC STUDIES

4.1 WESTGARTH PRIMARY SCHOOL TRAVEL SURVEY AND AUDIT REPORT

The Westgarth Primary School Travel Survey and Audit Report was prepared by Urbantrans in 2012. The report included several recommendations to improve safety for pedestrians and cyclists along three priority travel to school routes.

The recommendations included provision of the following:

- Raised zebra crossing on Clarke Street near western gate to school – this is unlikely to be supported given the proximity of the pedestrian operated signals further east on Clarke Street;
- Kerb extensions on Clarke Street adjacent to the western school gate;
- Refuge island on Derby Street (north) at Brooke Street – installed in 2014; and
- Refuge island on Derby Street (south) at Brooke Street – the width of Derby Street (south) does not facilitate provision of a refuge island of suitable width.

4.2 WALKSPOT SURVEY 2017

The WalkSpot project undertaken by Victoria Walks and CrowdSpot in 2017, allowed participants to record their safe or unsafe walking spots across Melbourne on an interactive map. Over 1,650 people participated in the survey.

Mitchell Street at Derby Street was identified as the 10th worst location in the metropolitan area for its lack of pedestrian crossing facilities on the popular walk to school route.

5 CONSULTATION

A Community Engagement Workshop was held on 21st February 2018 at the Northcote Town Hall. The Workshop sought to obtain the views and concerns of local residents and identify 'problem' locations.

Participants were invited to write down their concerns and suggestions on post-it notes and stick them onto A1 size maps located around the room. O'Brien Traffic and Council staff were available to answer questions and contribute to discussions.

Issues identified from the Workshop related mostly to:

- Mitchell Street – traffic volumes and speed;
- Bastings Street – traffic volumes and speed;
- Mitchell Street/Victoria Street intersection – safety;
- Clarke Street – school traffic and no through movements at Victoria Street intersection;

Issues relating to rat-running and speeding were identified in numerous streets including Oxford Street, Vauxhall Street, Brook Street, Gillies Street, Alphington Street, Rathmines Street, James Street and Thames Street.

A summary of the community's issues and suggestions are provided in **Appendix A**.

Following on from the Community Engagement Workshop, a Reference Group was established. The Reference Group met on the 2nd May 2018 to discuss and agree on a draft LATM scheme.

6 ISSUES AND OPPORTUNITIES

6.1 TRAFFIC CALMING TREATMENTS

6.1.1 Mitchell Street

Mitchell Street is a key east-west local street through the study area. While there is no community appetite to restrict traffic movements along Mitchell Street, there is a desire to 'calm' traffic behaviour.

This could be achieved by the provision of raised intersection treatments along the route – at Waterloo Road/Lennox Street, Vauxhall Road/Boothby Street and Grandview Grove/Main Street.

Additional/improved pedestrian crossing points are also proposed at three locations comprising refuge islands and kerb outstands (see Section 6.3), and these would add to the 'friction' along the route.

6.1.2 Bastings Street

West of Victoria Street, vehicle speeds are well controlled by the existing roundabouts. However, it would be desirable to provide some treatments east of Victoria Street.

Provision of a median island on Bastings Street at Vauxhall Street is proposed to prevent right turn movements to/from Vauxhall Street (see Section 6.1.4). This would also provide a benefit in terms of calming traffic movements along Bastings Street.

Improvements could be made to the existing pedestrian refuge island west of Russell Street, to better facilitate pedestrian crossing movements and provide increased 'friction' to traffic movements. Specifically, improvements could include extending the kerb outstand on the southern side, improving linemarking at the island, and linemarking the parking spaces on the northern side (see Section 6.2).

In addition to the above treatments, a raised intersection treatment could be provided at Stafford Street/Grandview Street. As Bastings Street is a bus route, this would have to be designed with bus-friendly ramps.

6.1.3 Alphington Street – Oxford Street

Thames Street - Alphington Street - Oxford Street has been identified as a rat-run. To prevent through traffic movements across Mitchell Street, a median island could be provided to restrict traffic movements to left in/out at Thames and Alphington Streets.

To discourage southbound traffic re-routing to a parallel street, a right turn ban could be provided from Oxford Street to Clarke Street in the morning peak period. It is recommended that the turn ban end at 8:30am to allow school traffic to continue to access Westgarth Street via Oxford Street and Clarke Street.

6.1.4 Vauxhall Street

Vauxhall Street has also been identified as a rat-run. To prevent through traffic movements across Bastings Street, a median island could be provided to restrict traffic movements to left in/left out to/from Vauxhall Street north and south.

6.1.5 James Street

During the Community Engagement Workshop, the increasing use of James Street as a rat-run was raised. The issue was considered to be exacerbated by the gradient of the street (which encourages higher vehicle speeds) and sun glare in the afternoon (which makes eastbound vehicles harder to see).

To address the community concerns, a PM peak hour right turn ban from High Street into James Street could be implemented, which would eliminate the rat-run movement and significantly reduce eastbound traffic during the evening peak period.

6.2 INTERSECTION SAFETY TREATMENTS

6.2.1 Victoria Street/Mitchell Street intersection

The Victoria Street/Mitchell Street intersection has a poor safety record as noted in Section 3.3.1. During the community consultation, there were also concerns raised about the proximity of the pedestrian operated signals on Victoria Street, approximately 10m north of the intersection, in particular, cars turning out of Mitchell Street not seeing/stopping for the red signal.

These issues could be addressed by removing the pedestrian operated signals and providing traffic signals at the intersection. This would improve safety for vehicular traffic and facilitate pedestrian movements at the intersection.

However, provision of traffic signals at the intersection would likely encourage more traffic to use Mitchell Street. Therefore, it is recommended that if intersection signals are provided, additional traffic management treatments be provided in Mitchell Street, such as those described above (in Section 6.1.1).

6.2.2 Mitchell Street roundabouts

The crash data analysis identified a bicycle crash issue at the roundabouts along Mitchell Street. To address this, bicycle sharrows could be provided at roundabouts. This is discussed further in Section 6.4.

6.2.3 Waterloo Street bend

Improvements could be made to the bend in Waterloo Street between James Street and Brooke Street. This would include provision of physical median islands and linemarking. Note the median islands would need to be fully mountable to accommodate larger vehicles.

No Stopping restrictions currently exist around each bend with parking permitted between the bends. Parked cars are often parked in this section, reducing traffic flow to one lane, which some motorists may find 'uncomfortable' or inconvenient. Consideration could be given to extending the No Stopping to apply between the bends, however given the traffic volume (up to 120 vph) and low speed environment, this is not essential.

6.3 PEDESTRIAN TREATMENTS

6.3.1 Mitchell St

East of Prospect Grove

Cars often park on the northern side of Mitchell Street opposite the pedestrian refuge island east of Prospect Grove, thereby blocking the kerb ramp for pedestrians.

The pedestrian crossing point could be improved by the provision of kerb outstands on each side of Mitchell Street. This would prevent cars parking on the northern side in front of the kerb ramp, and would reduce the overall crossing width for pedestrians.

East of Derby Street

The 2017 WalkSpot survey identified the need for a pedestrian crossing point on Mitchell Street near Derby Street to assist students walking to/from school.

Therefore a new pedestrian refuge island is recommended on Mitchell Street, east of Derby Street.

West of Hillside Avenue

A new pedestrian refuge island could also be provided on Mitchell Street, west of Hillside Street, to assist pedestrians crossing in this vicinity, which is also on route to Rubie Thompson Reserve. It is noted that a pedestrian crash previously occurred at this location.

6.3.2 Bastings St

At Vauxhall Road

The proposed median island on Bastings Street at Vauxhall Road should also cater for pedestrians, providing refuge to allow pedestrians to stage their crossing of Bastings Street.

West of Russell Street

The existing pedestrian crossing point on Bastings Street, west of Russell Street, could be improved by extending the kerb outstand on the southern side and providing linemarking and hatching on the northern side to ensure cars do not park across the pedestrian crossing point.

6.3.3 Rathmines Street

On Rathmines Street, north of Bastings Street, the pedestrian refuge island could be widened to improve pedestrian safety and reduce traffic lane widths. In addition, a pedestrian refuge island could be provided on the southern leg of the intersection.

6.3.4 Wingrove Street

Desirably a pedestrian crossing would be provided on Wingrove Street, adjacent to Fairfield Station to facilitate pedestrian crossing movements. This could be provided as a raised crossing utilising the existing speed hump near the Station.

6.4 BICYCLE TREATMENTS

Numerous bicycle crashes have occurred at roundabouts along Mitchell Street. Provision of sharrows at roundabouts, where the bicycle lanes terminate, would increase motorists awareness of cyclists and improve cyclist safety.

Similarly, sharrows could be provided at the roundabouts along Bastings Street.

7 DRAFT LATM SCHEME

A draft LATM Scheme was developed and presented to a meeting of the Reference Group on 2nd May 2018 for discussion and agreement. Following input from the Reference Group, the draft LATM scheme was refined.

The draft LATM Scheme is shown diagrammatically in **Figure 4**.

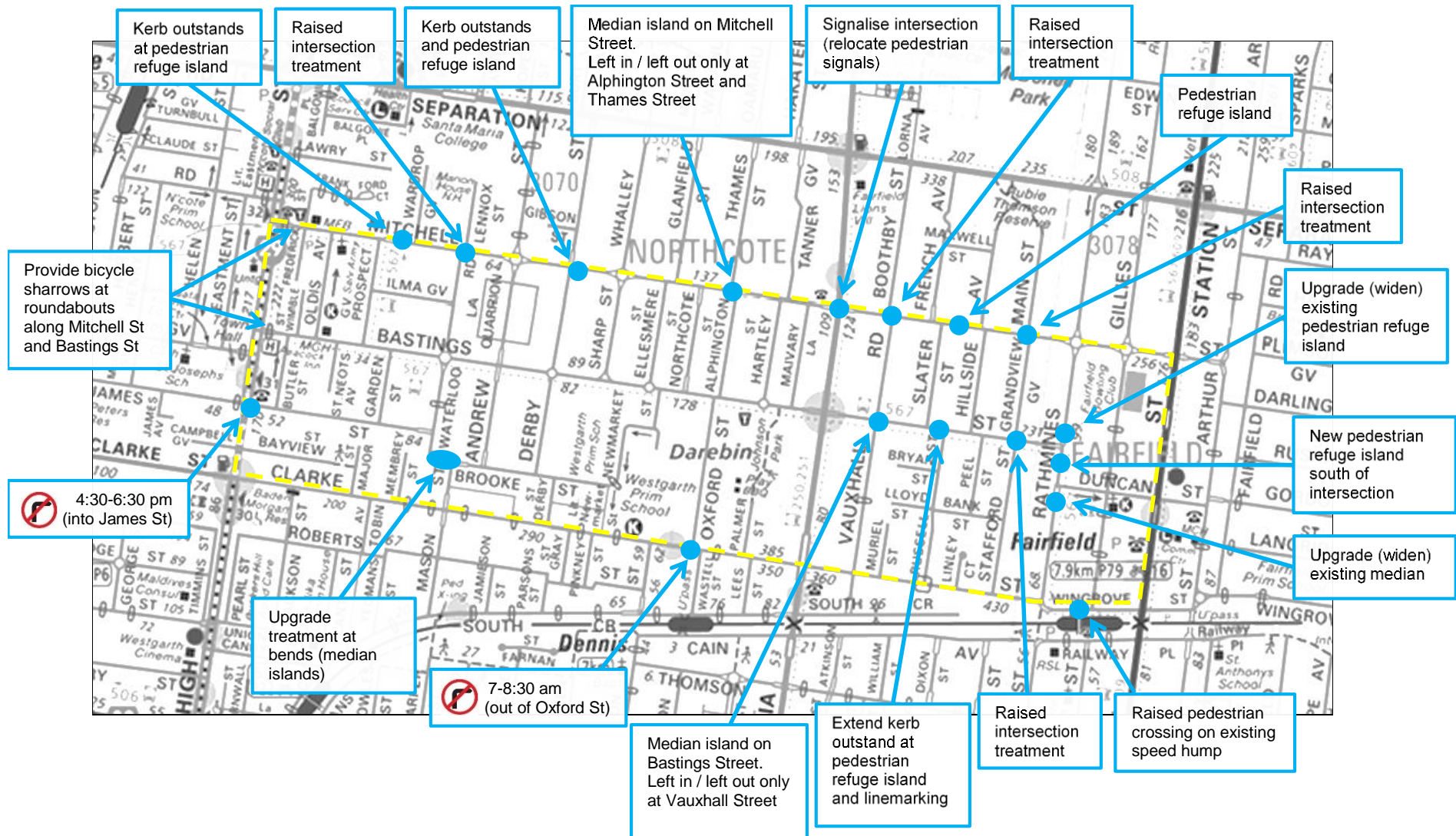


FIGURE 4: DRAFT LOCAL AREA TRAFFIC MANAGEMENT SCHEME

APPENDIX A

COMMUNITY ENGAGEMENT WORKSHOP SUMMARY OF ISSUES AND SUGGESTIONS

LOCATION	ISSUE (NUMBER OF TIMES)	SUGGESTION
Dennis Train Station	<p>Train commuters parking on local roads (2)</p> <p>Lack of bike parking (2)</p>	<p>Restrict all-day parking</p> <p>Provide more parking for bicycles (2)</p> <p>Find catchments of public and active modes, service accordingly</p>
Mitchell St	<p>Vehicles speeding and rat-running (4)</p> <p>Poor visibility near Red Door Café (3)</p> <p>Narrow sections of road caused by truck deliveries (3)</p> <p>Pedestrian crossing (2)</p> <p>Crashes at Station St intersection</p> <p>Bike lane (2)</p> <p>Traffic lights at Victoria Rd intersection (3)</p> <p>Pedestrians jaywalking near High St intersection (3)</p> <p>Provide more parking spaces for residents</p> <p>Poor sight distance near Derby St intersection</p> <p>Cars turning left out of Mitchell St to Victoria St often don't see red signal at pedestrian crossing</p>	<p>Reduce speed limit to 40 km/h (4)</p> <p>Sign speed limits on road surfaces</p> <p>Reduce road width</p> <p>No speed humps, often painful for people with a disability (5)</p> <p>Use speed humps to reduce rat-running</p> <p>Implement speeding cameras (2)</p> <p>Implement chicanes to reduce rat-running</p> <p>Restrict parking near roundabouts as it obstructs visibility</p> <p>Redesign pedestrian crossing at High Street intersection for better safety</p> <p>Reposition traffic lights near High St intersection</p> <p>Allow closure to the fire brigade at Station St intersection</p> <p>Provide more roundabouts</p> <p>Provide safe pedestrian crossings near schools</p>
Bastings St	<p>Bicycle accidents at Oxford St and Alphington St intersections</p> <p>Poor visibility at Vauxhall St intersection</p> <p>Speeding since it looks like a main road</p> <p>Vehicles speeding at traffic lights to cross Victoria Rd</p> <p>Too many roundabouts</p> <p>Risk of accidents at Waterloo Rd intersection</p> <p>Heavy vehicles funnelled due to closure at Clarke St intersection</p> <p>Difficult to turn right into High St, vehicles diverted to Separation St</p>	<p>Provide safe pedestrian crossing near Johnson Park</p> <p>Timed parking during weekends at Johnson Park</p> <p>Prohibit right turn from High St</p>
Victoria Rd	<p>Clarke St intersection (4)</p> <p>Delays caused by level crossing (3)</p> <p>Congestion during peak hour</p>	<p>Remove central median to allow local residents to access Victoria Rd from Clarke St (2)</p> <p>Blockage is main reason of rat-running (2)</p> <p>Relocate pedestrian operated signals to Mitchell</p>

	<p>Bus Service (2)</p> <p>Rat-running occurring on all north-south alternatives</p> <p>Congestion at Separation St intersection caused by cars entering and exiting childcare centre</p> <p>Cars jumping red lights at Westgarth St intersection</p>	<p>Street (i.e. intersection signals) (3)</p> <p>Changes at High St (including speed reduced to 40 km/h) lead to congestion at Victoria Road (2)</p> <p>Extend the time that bus services operate along Victoria Rd (i.e. earlier and later)</p> <p>Restrict cars entering and exiting childcare centre, no crossing the solid white line (2)</p> <p>Provide signals at South Cres intersection</p>
Oxford St	<p>Train commuters parking</p> <p>Speeding</p> <p>Only option to travel to Dennis train station</p> <p>Rat-running</p> <p>Narrow road due to cars parking near school (2)</p>	<p>Restrict all-day parking</p> <p>Reduce speed limits to 40 km/h close to kindergarten and primary schools (4)</p> <p>Make street one-way to reduce risk of accidents near the school (2)</p> <p>Prohibit left turn from Bastings St to reduce rat-running during the morning</p>
High St	<p>Pedestrian crossing at Townhall</p> <p>Difficult to park</p>	<p>Relocate the pedestrian crossing at the Townhall to Westbourne St</p> <p>Install mirrors near dog legs at Mason St and Brooke St.</p>
Waterloo Rd	<p>New developments increasing parking and congestion (2)</p> <p>Narrow road</p>	<p>Improve access to pedestrians near construction sites</p>
Clarke St	<p>High car volume during school drop-offs and pick-ups</p> <p>Access to Victoria Road (2)</p> <p>Dangerous intersection for both pedestrians and cars at Masons St</p>	<p>Allow access to Victoria Road (2)</p>
Duncan St	<p>Cyclist and cars going the wrong way</p> <p>Risks of accidents near kindergarten</p>	
Separation St	<p>Right turns</p>	<p>Provide right-turning arrows at traffic lights</p>
South Cres	<p>Risk for cyclists (2)</p>	<p>Provide safer cycling lanes (2)</p>
Station St	<p>Difficult to turn into from side roads (2)</p> <p>Speeding (2)</p> <p>Parking issues at Mitchell St intersection</p>	<p>More traffic lights needed (3)</p> <p>Provide a cycling lane</p>
Gilles St	<p>Rat-running (2)</p>	<p>Narrow streets to reduce rat-running (3)</p> <p>Speed humps are ineffective</p>
Fairfield Rd	<p>Future planning</p>	<p>Could play a role in planning future connections</p>

		between Heidelberg and Darebin Roads
Alphington St	Risk of accidents involving bicycles or schoolchildren Rat-running	Make it a one-way street One-way exits at northern and southern ends, exempt for cyclists
Rathmines St	Speeding Lack of car parking for residents	
James St	Cannot see incoming traffic nor pedestrians at sunset due to poor visibility (3) Narrow street Rat-running caused by delays of tram stopping at the Townhall	Make it a one-way street to address visibility Restrict all-day parking
Vauxhall Rd	Speeding and rat-running during peak hours	
Oldis Av	Speeding	Use speed humps
Derby St	Dangerous crossing	Provide safe pedestrian crossing at Thames St and Omaru St intersections
Brooke St	Congested and narrow street between Andrew St and Derby St No 'slow down' signs near school Rat-running and speeding	
Mason St	Parking	Prohibit parking near dog leg section
Prospect Gve	Risk of collision with buses	Address issue of buses coming from Bastings St., since cars coming the opposite way, often need to reverse
Gilles St	Speeding and rat-running (2)	Reduce road width to decrease rat-runs, speed humps are ineffective
Thames St	Cycling route Rat-running	Provide a cycling route between Separation St and Clark St.
General	Cyclists riding on footpaths (3) Poor accessibility for pedestrians near construction sites	Signage for cyclists not to ride on footpaths (3) Apply trial measures and consult with residents before making permanent changes No speed humps (5)

TABLE A1: SUMMARY OF ISSUES AND SUGGESTIONS FROM THE COMMUNITY ENGAGEMENT WORKSHOP (INCLUDING WRITTEN SUBMISSIONS)