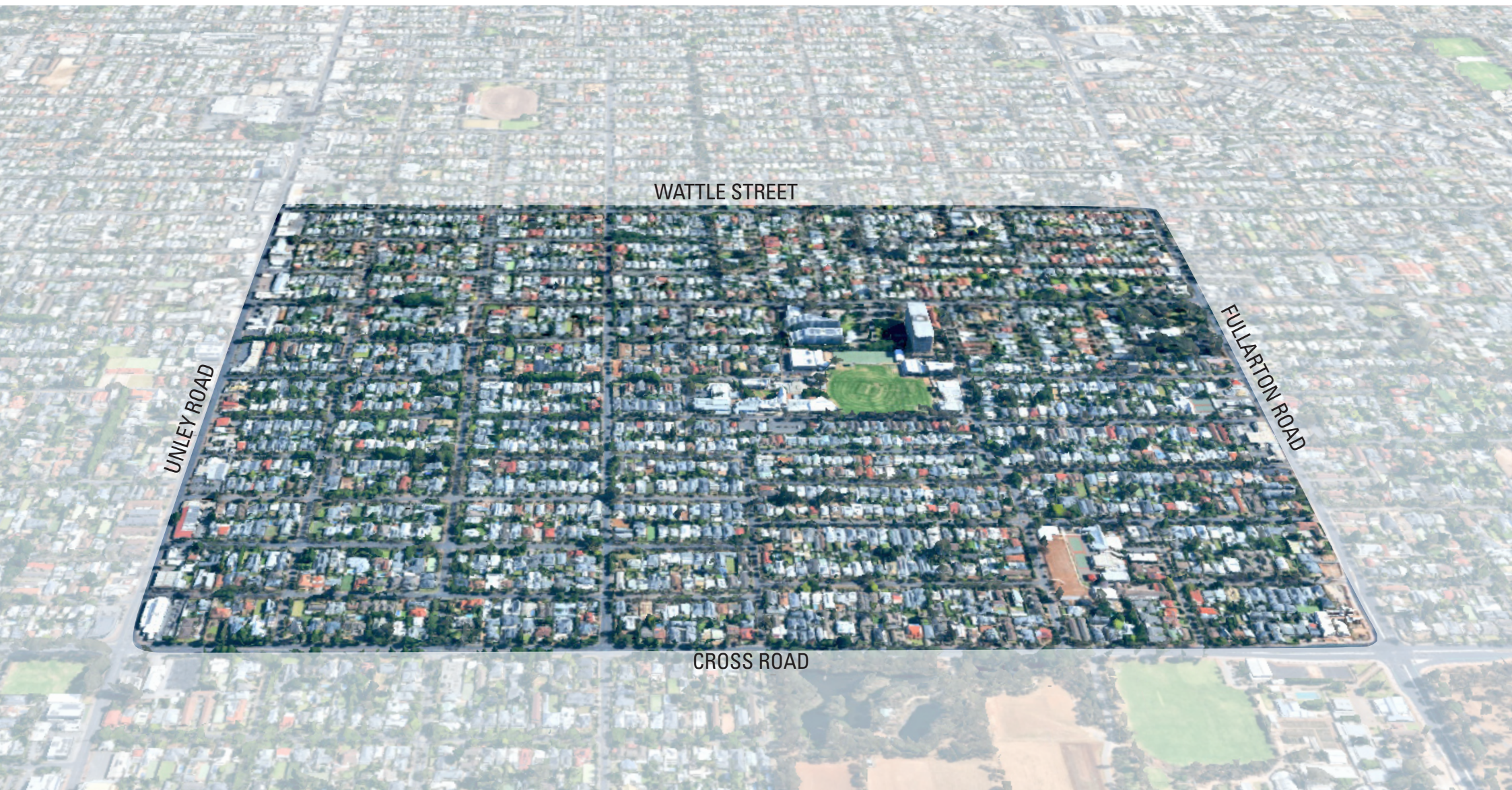


LOCAL AREA TRAFFIC MANAGEMENT: ANALYSIS

MALVERN / FULLARTON / HIGHGATE

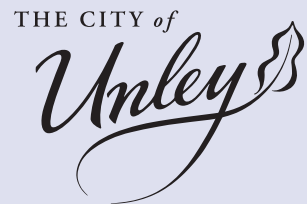
MAY 2026



LOCAL AREA TRAFFIC MANAGEMENT: ANALYSIS **MALVERN, FULLARTON AND HIGHGATE**

LATM ZONE 4

MAY 2026



Report prepared by:



CONTENTS

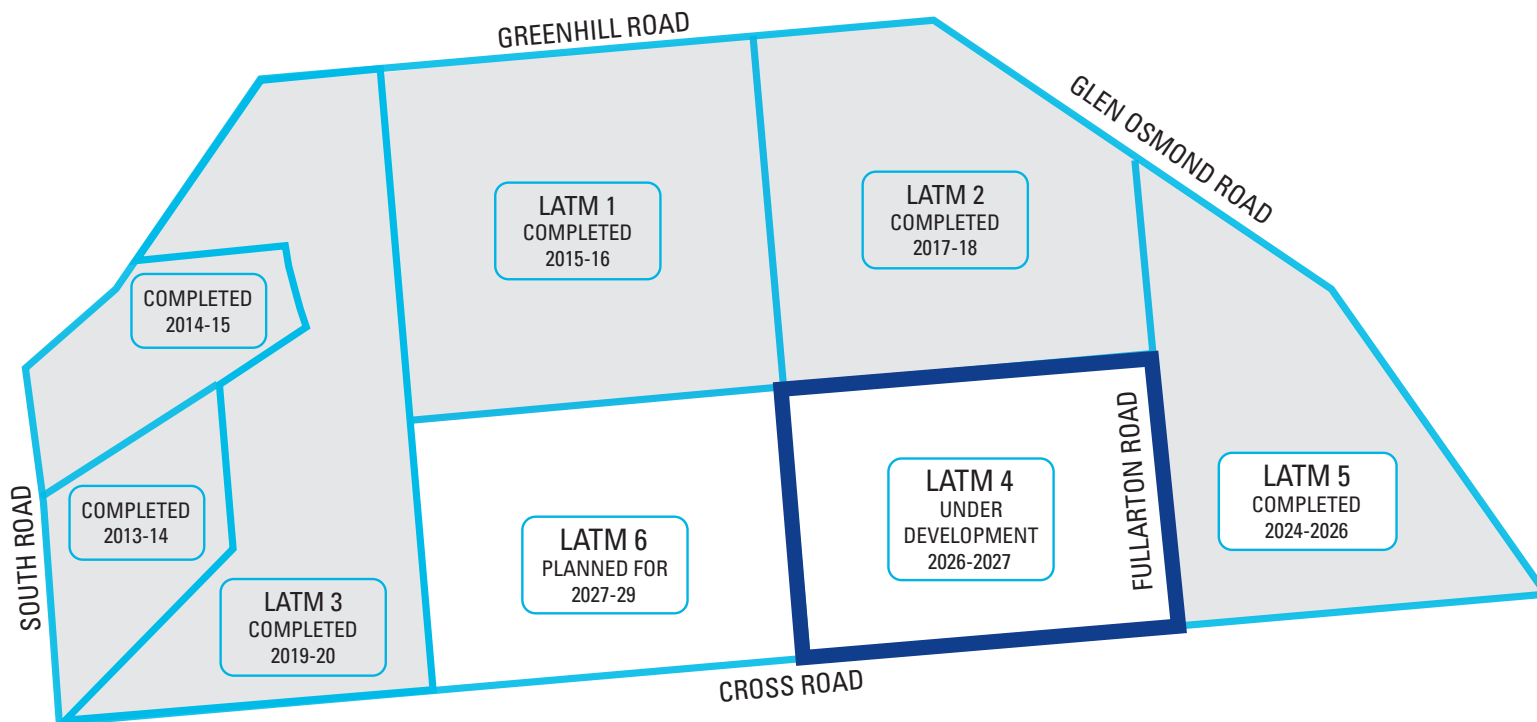
INTRODUCTION	1
LOCAL AREA TRAFFIC MANAGEMENT STUDIES IN THE CITY OF UNLEY	2
What is “local area traffic management”?	2
Methodology	2
Strategic alignment	3
STUDY AREA	5
PARKING CONTROLS	6
CRITERIA FOR INVESTIGATION AND ACTION	7
CRASH ANALYSIS	8
TRAFFIC VOLUMES	9
Average daily traffic volumes	9
Morning and evening peak traffic volumes	11
TRAFFIC SPEEDS	12
COMMUNITY CONCERNS	14
STREETS WARRANTING FURTHER INVESTIGATIONS	16
RECOMMENDATIONS	17

INTRODUCTION

The City of Unley has been progressively preparing a series of Local Area Traffic Management (LATM) plans across the city. As part of this process, traffic conditions in local neighbourhoods were reviewed and the community was engaged to understand local concerns and priorities. The plans propose measures aimed at improving safety and conditions for all road users.

The City of Unley has been divided into precincts to advance the LATM plans, as shown in Figure 1. This plan is for the Malvern, Fullarton and Highgate area, bounded by Unley Road, Cross Road Fullarton Road and Wattle Street (LATM 4).

Figure 1. Progress on completing Local Area Traffic Management studies in the City of Unley



LOCAL AREA TRAFFIC MANAGEMENT STUDIES IN THE CITY OF UNLEY

What is “local area traffic management”?

Local Area Traffic Management (LATM) is a planning and design process focused on improving safety within specific neighbourhoods or precincts. It involves identifying traffic-related issues and then implementing measures to manage traffic flow and reduce vehicle speeds, enhancing safety for all road users, including people who walk, ride or drive.

By planning and managing road space within a local area, LATM plans focus on:

Making streets safer

Managing traffic

Considering walking and cycling needs

Improving street amenity

LATM initiatives are designed for entire neighbourhoods, offering solutions that are tailored to the local context rather than addressing singular issues in isolated locations.

The City of Unley is committed to delivering LATM initiatives in collaboration with the community. We involve residents to confirm our understanding of local issues and then seek feedback on recommended proposals. This thorough consultation process ensures the community can influence street design outcomes in their neighbourhoods.

Methodology



Figure 2 outlines the typical methodology for LATM precinct studies.

The Malvern/Fullarton/Highgate LATM plan is currently in Stage 2. We are seeking community feedback on traffic-related issues, outlined in this report, to ensure that the evidence-based analysis from Stage 1 and the problems identified align with local experiences. This feedback will help us gain a fuller understanding of the area’s issues, guiding the development of proposals in Stage 3. We will then return to the community for input on these proposals in Stage 4 before finalising them in the LATM recommendations report in Stage 5.

Please note that there is no current budget commitment to implement LATM proposals. Once the LATM precinct study is complete, we can request a budget allocation to implement the proposals, based on the prioritisation outlined in the LATM recommendations report.

Figure 2. LATM precinct study methodology

Strategic alignment

LATM is crucial in implementing the Unley Integrated Transport Strategy, which supports the broader City of Unley Community Plan 2033. This section highlights the objectives from these and other strategic plans that LATM projects aim to achieve.



City of Unley Community Plan 2033

The following key objectives are relevant to local area traffic management initiatives:

- 1.1 We foster a community where all people can feel safe, welcomed, and included.
- 1.3 We support and encourage all people to be healthy, active, and socially connected.
- 4.3 We design our streets with people in mind to increase accessibility, active transport, and multi-modal transport options.



City of Unley 4 Year Delivery Plan 205/26-2028/29

The following key objectives are relevant to local area traffic management initiatives:

Community

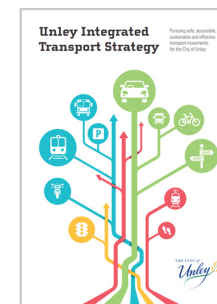
- 5.2 We create opportunities for our community to shape decisions and identify solutions for the future.

Environment

- 1.1 We manage and expand our urban forest on public and private land to create cooler, more biodiverse and resilient urban spaces.

Places and spaces

- 3.1 We lead, promote and support the ongoing transition to active transport modes for people living, working and visiting the City of Unley.
- 3.2 We improve the accessibility of our neighbourhoods by upgrading footpaths, installing safe pedestrian crossings, and supporting safe movement across our City.



Unley Integrated Transport Strategy

The following key objectives are relevant to local area traffic management initiatives:

Active Transport focus area 1

- Unley is recognised as a leader in providing connected, efficient and safe active transport choices.
- Active transport options are more utilised by the local community.

Parking focus area 2

- Unley is recognised for its proactive, innovative, and customer centric approach to parking management.
- Equitable and convenient parking options are delivered throughout the City.

Traffic Management and Road Safety focus area 4

- Unley is recognised as a leader in road safety and traffic management outcomes.
- Safety is at the core of all of our infrastructure, traffic and transport management initiatives.
- Unley's street and path networks provide effective, safe routes for all users.



Walking and Cycling Plan 2022–2027

The following key priority actions are relevant to local area traffic management initiatives:

- ▶ A1. Improve and extend the walking and bicycle network
- ▶ A2. Improve walking and bicycle facilities
- ▶ A3. Improve walking and bicycle infrastructure around schools and support active travel to schools
- ▶ A4. Improve walking and bicycle connections to neighbouring councils
- ▶ A5. Establish high quality street design standards.

The City of Unley's Walking and Cycling Network highlights the following three key bicycle routes in the LATM 4 area:

1. Rugby/Porter bikeway
2. Windsor Street bikeway
3. Duthy Street secondary on-road bicycle route
4. Neighbourhood bicycle routes on Winchester Street, Wattle Street, West Terrace/Avenue Road/Highgate Street/Cross Street

It is recognised that improvements to these streets are needed to enhance bicycle access for the 60% of interested but concerned riders. Upgrades will be addressed as part of Council's Walking and Cycling Implementation Plans rather than through this LATM study. However, any opportunities to enhance walking and cycling at junctions or intersections identified through this study will be considered.



Unley Parking Management Plan 2023–2033

The Unley Parking Management Plan (UPMP) sets out key principles for managing parking in the City of Unley, aiming to balance the needs of residents, businesses, shoppers and visitors. It outlines 13 parking management directions to guide Council in making consistent, well-informed decisions that ensure a fair approach for all street users.

While parking considerations will be taken into account in the development of this LATM Plan, parking congestion issues on a street will not be addressed through the LATM planning process. Instead, such matters will be managed in accordance with the endorsed UPMP and its associated processes for reviewing parking time limits on local streets.

STUDY AREA

The study area is bounded by Fullarton Road, Cross Road, Unley Road and Wattle Street, as shown in Figure 3. This precinct encompasses the entire suburb of Highgate and almost all of Malvern, plus the western half of Fullarton, with the eastern half extending west of Fullarton Road and beyond the study area. The eastern half of Fullarton is addressed as part of LATM area 5.

Approximately 5,700 people live in this area. Educational destinations include Sunrise Christian School, Lady George Kindergarten, Highgate School and Concordia College. Unley Primary School is located on the northern side of Wattle Street at the interface of this precinct and LATM Precinct 2.

The area also contains several aged care or elderly housing facilities, including the large Living Choice Fullarton Retirement Village, Moran Court, Reginald Court and Resthaven Malvern. The Fullarton Park Community Centre is located on the corner of Fisher Street and Fullarton Road, which also contains a reserve area that hosts a regular Saturday market event. The area includes one other open space on Fern Avenue that sits adjacent to the Fern Avenue Community Garden. Local shopping destinations within the study area include Highgate Village, 291 on Unley and Malvern Village, with other clusters of shops along Unley Road and parts of Duthy Street.

5,700
Residents

2,000
Local primary and
secondary school
students

Median age
Malvern **46**
Highgate **41**
Fullarton **43**



Figure 3. LATM Zone 4 study area – Malvern/Fullarton/Highgate

PARKING CONTROLS

The streets in this precinct are reasonably wide, allowing for parallel parking on both sides in most locations. It is estimated that there are 4,239 car parking spaces in this precinct. Only 6.6% of these spaces are time-controlled, primarily on streets off Unley Road, to encourage vehicle turnover in proximity to businesses, and around schools to improve safety and access.

Parking demand in the area is generally low, with 74% of on-street spaces having an occupancy rate of 40% or less along each street or section.

4,239

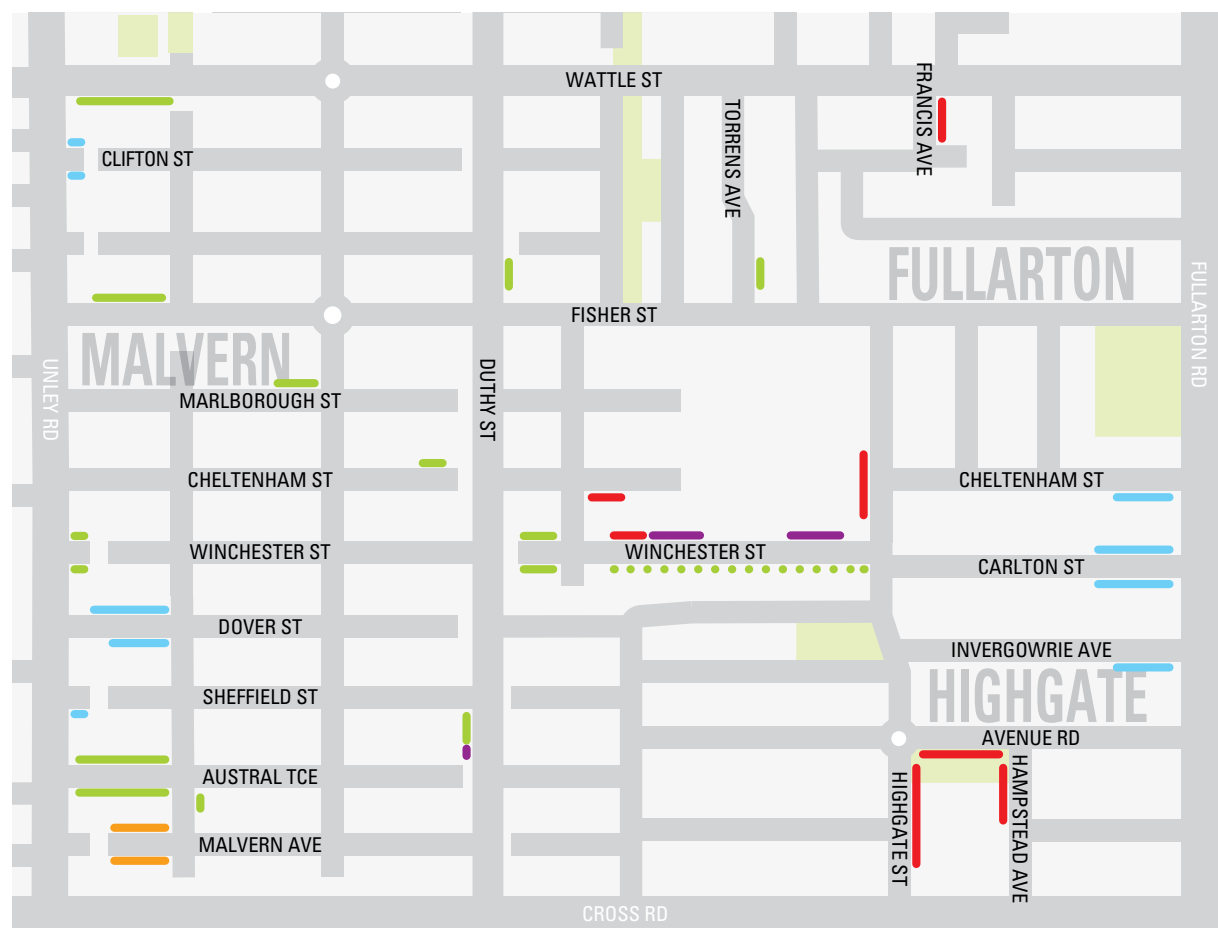
Approximate number of
on-street car parking spaces

7%

278 time-controlled
on-street car parking spaces

Council's Unley Parking Management Plan (UPMP) outlines the key principles for managing parking across the City of Unley, with the aim of balancing the needs of residents, businesses, shoppers and visitors.

While parking considerations will be taken into account in the development of this LATM Plan, parking congestion issues on a street will not be addressed through the LATM planning process. Instead, such matters will be managed in accordance with the endorsed UPMP and its associated processes for reviewing parking time limits on local streets.



Legend

- Three-hour parking limit – 3P
- Two-hour parking limit – 2P
- Two-hour parking limit – 2P between 9 am and 3 pm
- One-hour parking limit – 1P
- 15-minute parking limit – 15 min
- School Kiss and Drop Zone

Figure 4. Streets with time-limited car parking spaces

CRITERIA FOR INVESTIGATION AND ACTION

When using traffic data to guide decision-making, it is important to have agreed-upon criteria or thresholds that indicate when action is needed (e.g., traffic volume exceeding a certain level). Deciding when to make changes to traffic management or the street environment typically relies on objective measures such as traffic speeds, volumes or crash rates, known as 'warrants'.

There is no standardised or formally adopted set of conditions in Australian Standards or Austroads Guides that dictates when LATM measures must be implemented. These conditions should be determined based on the specific circumstances, the professional judgment of traffic engineers and community expectations.

Based on the definitions for three levels of warrants outlined in the Austroads Guide to Traffic Management Part 8: 'Local Area Traffic Management,' as well as an understanding of community perceptions and expectations, Table 1 outlines the City of Unley's approach to determining when further investigations may be warranted for local streets. These warrants take into account the five aspects of traffic environment: daily traffic volume, 85th percentile speed, proportion of traffic during peak hours and crash rates.

This study references these warrants in the investigation of traffic speeds, volumes and crashes within the study area.

Table 1. Warrants for deciding when further investigations for local street conditions may be warranted

Level of problem	Daily traffic volume	85th percentile speed	Proportion of traffic in AM or PM peak	Casualty crashes in a five-year period	Action
Substantial problem					
The problem is significant enough to be included on a funded treatment program, in order of funding priorities.	>= 3,000	>= 50 km/h	>= 20%	3+	Further investigation required
Technical problem					
The problem justifies investigation, but is not sufficient to attract funding in the short-term. Alternative (non-LATM) low cost approach may be considered.	>= 2,000	>= 48 km/h	>= 17%	3+	Further investigation required
Possible problem					
There may be a problem, but not so serious as to attract funding, even in the longer term. Alternative (non-LATM) low cost approach may be considered.	>= 1,500	>= 46 km/h	>= 14%	3+	Further investigation recommended
Not considered a problem					
Typical road conditions, not considered a problem.	< 1,500	< 46 km/h	<14%	<3	No investigation required

CRASH ANALYSIS

Crash data is used to identify specific risks or hazards in the road network that may need further investigation. Crashes often result from human error and are generally more frequent where there is more traffic, with intersections being common hot spots due to complex vehicle movements. Crashes on roads managed by the Department for Transport and Infrastructure (DIT) are usually not included in the LATM studies.

For the study area, crash data in Figure 5 includes both ‘casualty’ (injury or fatality) and ‘property damage only’ crash types, that have been reported to SA Police over the five-year period from 2020 to 2024.

Typically, crashes are considered isolated incidents unless there are three or more crashes at a specific location within five years, which may indicate a pattern or higher risk of future crashes.

Excluding state arterial roads, Duthy Street, Cambridge Terrace and Wattle Street are the only locations in the study area with more than three crashes in close proximity. No other crashes were recorded on local streets.

Crashes involving cyclists:

- Five crashes on Duthy Street involved cyclists.
- Four crashes on Wattle Street involved a cyclist.

One crash on Duthy Street involved a pedestrian.

In response to a fatal cyclist crash on Wattle Street in 2023, Council is progressing the design of bicycle facility improvements along the corridor, in alignment with the Council's Walking and Cycling Plan.



Legend

- Car crash with total number of crashes (car, bike and pedestrian)
- Black spot location
- Crash involving a pedestrian
- Crash involving a cyclist

Figure 5. Number of crashes and crash types recorded in a five-year period 2020-2024

TRAFFIC VOLUMES

Average daily traffic volumes

To study traffic on local streets, surveys are conducted to measure the total number of vehicles passing a specific point on a road over a 24-hour period, referred to as the Average Daily Traffic (ADT) volume. Typically, traffic counters are placed across the street for one week and the averaged weekday counts estimate the typical ADT for the street.

The following traffic volumes are considered appropriate for council roads:

- ▶ Up to 7,500 vehicles on local collector roads
- ▶ Up to 1,500 vehicles on local streets.

ADT traffic volumes exceeding these thresholds indicate that local traffic conditions may not be consistent with the road's designated function.

Between March 2024 and August 2025, the Council conducted traffic surveys at 67 locations throughout the study area, covering most of the streets. Table 2 lists 40 survey locations in the study area with recorded ADTs above 500 vehicles per hour, presented in descending order.

The survey found that higher traffic volumes (1,500 vehicles per day (vpd) or more) align with the local collector roads Wattle Street and Fisher Street (highlighted in Table 2 in grey). With the exception of Cambridge Terrace and Highgate Street, traffic volumes on most local streets were well below the 1,500 vpd threshold, indicating that traffic volumes in the study area are not considered problematic.

Table 2. Study area roads with the daily traffic volumes above 500 vehicles per day

Road name	Survey/counter location	Average Daily Traffic volume	Posted speed limit
Duthy St	Clifton – Eton	11,015	50
Duthy St	Winchester – Dover	10,144	50
Fisher St	Duthy – Windsor	6,357	50
Fisher St	Cross – Highgate	6,307	50
Wattle St	Duthy – Windsor	6,278	50
Wattle St	Fern – Torrens	6,277	50
Wattle St	Cambridge – Duthy	4,972	50
Wattle St	Rugby – Cambridge	4,409	50
Wattle St	Unley – Rugby	4,333	50
Fisher St	Cambridge – Duthy	4,285	50
Fisher St	Rugby – Cambridge	3,753	50
Cambridge Tce	Clifton – Eton	2,530	40
Cambridge Tce	Fisher – Marlborough	2,489	40
Highgate St	Cheltenham – Winchester	1,511	40
Highgate St	Fisher – Cheltenham	1,394	40
Marlborough St	Rugby – Cambridge	1,208	40
Marlborough St	Unley – Rugby	1,200	40
Highgate St	Avenue – Church	1,173	40
Highgate St	Carlton – North	1,125	40
Avenue Rd	Highgate – Hampstead	1,101	40
Balmoral St	Cheltenham – Winchester	1,057	40
Avenue Rd	Hampstead – Fullarton	1,028	40
Dover St	Duthy – West	983	40

Road name	Survey/counter location	Average Daily Traffic volume	Posted speed limit
West Tce	Austral – Malvern	983	40
Austral Tce	Unley – Rugby	962	40
Highgate	Cross – Church	937	40
Cheltenham St	Unley – Rugby	898	40
Balmoral St	Fisher – Marlborough	898	40
Austral Tce	Duthy – West	892	40
Cambridge Tce	Winchester – Dover	888	40
West Tce	Sheffield – Avenue	879	40
Cheltenham St	Balmoral – School	872	40
Cross St	Francis – Wattle	782	40
Sheffield St	Cambridge – Duthy	730	40
Avenue Rd	West – Highgate	725	40
Winchester St	Balmoral – Highgate	718	40
Winchester St	Cambridge – Duthy	657	40
Dover St	Unley – Rugby	653	40
Rugby St	Sheffield – Austral	618	40
Cheltenham St	Rugby – Cambridge	556	40
North Tce	West – Highgate	555	40
Carlton St	Highgate – Fullarton	513	40
Malvern Ave	Cambridge – Duthy	511	40
Eton St	Cambridge – Duthy	509	40
Rugby St	Cheltenham – Winchester	503	40

Morning and evening peak traffic volumes

Peak hour is not a fixed concept; it varies by location and is influenced by the types of trips made by local residents and the street's proximity to key destinations, such as employment hubs, shopping centers or schools.

Morning and evening peak hours are typically identified for each street individually based on traffic survey data. Traffic intensity varies throughout the day, with up to 14% of daily traffic on residential streets typically occurring during the busiest morning peak hour and another 14% during the busiest evening peak hour.

Based on studies of residents' perceptions, if traffic volume during any hour falls between 14% and 16% of the daily total, in traffic studies it is flagged as a 'possible problem'. When hourly traffic volumes reach 17%, it is deemed a 'technical problem,' and at 20%, it is considered a 'substantial problem.' High traffic proportions during peak hours may be an indicator of rat-running in the street.

Rat-running refers to the practice of drivers using local residential streets as shortcuts to avoid congestion or delays on arterial roads or major intersections. This often results in higher traffic volumes and speeds on streets that are not designed for through-traffic, potentially causing safety concerns and disruptions for local residents.

Figure 6 presents the peak hour traffic survey analysis for the study area. The analysis identified 12 streets with traffic volumes between 17% and 20%, which is classified as a 'technical problem' threshold. All of these streets are adjacent to local schools and function as significant car-trip generators. On this basis, the elevated peak traffic volumes are unlikely to be attributable to rat-running.

Although it is acknowledged that rat-running may be occurring on Cambridge Terrace via Fisher Street, Winchester Street, Sheffield Street and Malvern Avenue, the higher traffic volumes on Cambridge Terrace mean it is not identified as rat-running.

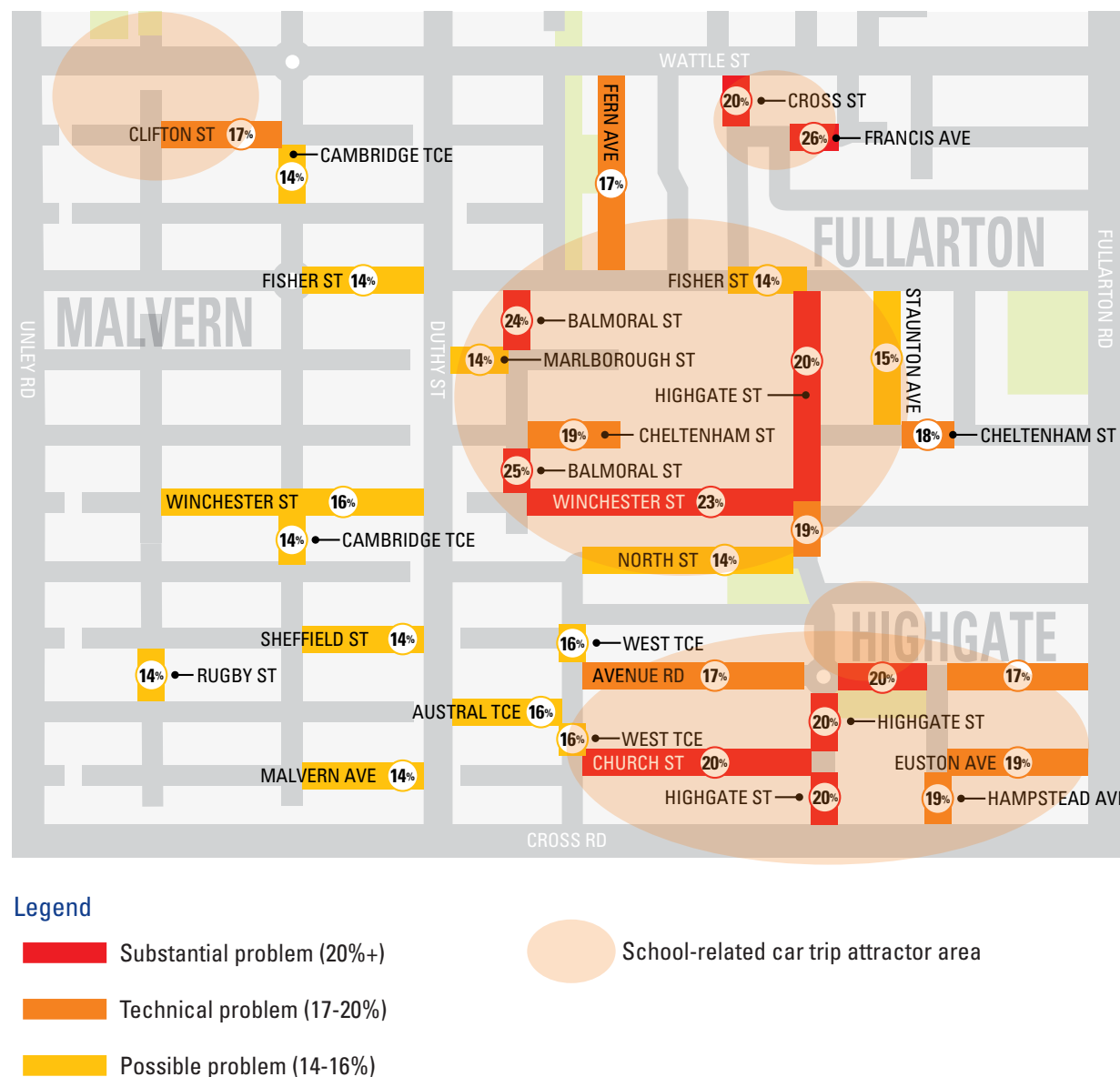


Figure 6. Streets with high traffic volumes in the AM or PM peak

TRAFFIC SPEEDS

Traffic studies typically use the 85th percentile speed, which represents the speed at or below which 85% of cars travel. This metric is a reliable indicator of speeding frequency and severity. It is considered more reliable for understanding speeding than the average speed, as the latter can be skewed by a few cars travelling at extremely high or low speeds, misrepresenting typical travel patterns on a street.

Figure 7 highlights nine local streets with posted speed limits of 40 km/h, where surveys recorded 85th percentile speeds of 46 km/h or higher. These speeds exceed the limit by 6 km/h and street conditions may warrant further investigation. Table 3 on page 13 presents the 85th-percentile speeds in the study area, ranked in descending order, for streets where speeds are 44 km/h or higher, which are approximately 10% above the local street speed limit.

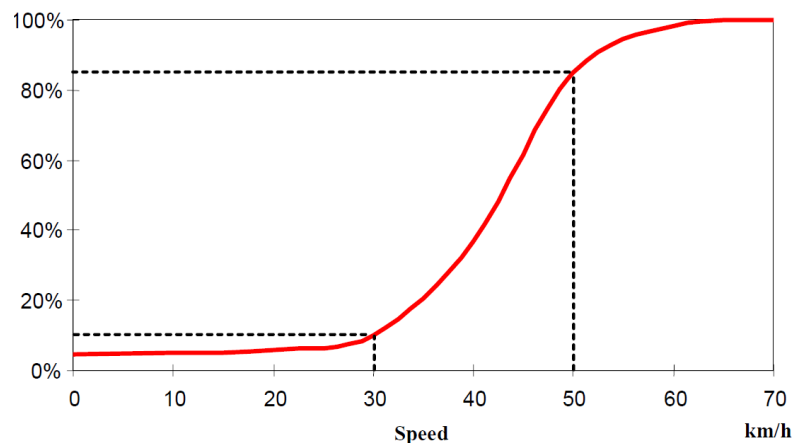


Figure 8. Probability of fatal injury for a pedestrian colliding with a car

Source: (Quoted in many international publications)

- OECD 'Speed Management' 2006
- Interdisciplinary Working Group for Accident Mechanics (1986);
- Walz et al. (1983)
- Swedish Ministry of Transport (2002).



Legend

- Substantial problem (50km/h or more)
- Technical problem (48–49 km/h)
- Possible problem (46–47 km/h)

Figure 7. Local streets with high traffic speeds (85th percentile speeds of 46km/h or more)

Table 3. Study area roads with the 85th percentile speeds of 44 km/h and above

Road name	Survey/counter location	Average Daily Traffic volume	Posted speed limit (km/h)	85th percentile speed limit (km/h)
Fisher St	Cross – Highgate	6,307	50	50.6
Duthy St	Winchester – Dover	10,144	50	48.7
Fisher St	Duthy – Windsor	6,357	50	47.9
Austral Tce	Rugby – Cambridge	454	40	47.6
Duthy St	Clifton – Eton	11,015	50	47.1
Fisher St	Cambridge – Duthy	4,285	50	47.0
Avenue Rd	West – Highgate	725	40	47.0
Cambridge Tce	Clifton – Eton	2,530	40	47.0
Malvern Ave	Cambridge – Duthy	511	40	46.7
Sheffield St	Cambridge – Duthy	728	40	46.1
Cheltenham St	Unley – Rugby	898	40	46.0
Marlborough St	Duthy – Balmoral	327	40	45.9
Cheltenham St	Rugby – Cambridge	556	40	45.8
Malvern Ave	Rugby – Cambridge	285	40	45.6
North Tce	West – Highgate	555	40	45.4
Staunton Ave	Fisher – Cheltenham	185	40	45.2
Eton St	Cambridge – Duthy	509	40	45.2
Sheffield St	Rugby – Cambridge	448	40	45.2
Austral Tce	Duthy – West	892	40	45.0
Rugby St	Cheltenham – Winchester	496	40	44.9
Winchester St	Cambridge – Duthy	657	40	44.6
Austral Tce	Unley – Rugby	962	40	44.4
Avenue Rd	Hampstead – Fullarton	1,006	40	44.5
Dover St	Unley – Rugby	653	40	44.3
Roseberry Ave	Fisher – Cheltenham	208	40	44.3
Dover St	Duthy – West	983	40	44.2
Cheltenham St	Staunton – Roseberry	468	40	44.2
Yeo St	West – Highgate	314	40	44.0
Clifton St	Rugby – Cambridge	315	40	44.0

In recent years, there has been growing awareness of the relationship between car speed and the risk of injury to people walking and riding in the event of a collision. Based on international research, this relationship is depicted in the graph in Figure 8 on page 12. The graph shows that crashes at speeds above 30 km/h are likely to result in severe injuries, highlighting the significant impact of lowering vehicle speeds on safety.

Although current warrants and the existing approach to identifying streets with high-speed conditions are based on a posted limit of 40 km/h, with attention given to streets where the 85th percentile speed exceeds 46 km/h, there is a shift in general practice towards adopting a Safe System approach. Under this approach, local street speeds of 30 km/h are increasingly considered more appropriate. This is because research shows that at 30 km/h, the risk of severe injury or fatality in the event of a crash is significantly reduced, particularly for vulnerable road users like people walking and riding. Lower speeds not only enhance safety by reducing the likelihood of collisions but also provide drivers with more reaction time to avoid crashes altogether. The shift to a 30 km/h speed environment aligns with broader global trends prioritising the safety of all road users and reflects a growing recognition that safer, slower speeds contribute to more livable and sustainable urban areas.

At its meeting on 9 September 2024, Council resolved to commence the process of applying to DIT to reduce the speed limit on all collector roads to 40 km/h. Within the LATM 4 study area, this includes Duthy Street, Wattle Street and Fisher Street. Council is currently awaiting the outcome of the application submitted to DIT in June 2025.

COMMUNITY CONCERNS

The list below summarises correspondence received between 2020 and 2025 relating to the study area, highlighting community concerns and requests for street improvements associated with local traffic management. It focuses on matters that remain unresolved on the Council's road network. Figure 9 maps the streets where concerns were raised or requests submitted and Table 4 summarises known traffic conditions for these streets.

Avenue Street

- Child safety concerns for students walking to school alongside fast-moving traffic.

Cambridge Terrace

- High traffic speeds and volumes during peak times.

Carlton Street

- Speeding and rat-running traffic posing safety risks to children.

Duthy Street

- Concerns with the volume of large trucks using the street.

Eton Street

- Car wash queues spill onto Eton Street, restricting access to businesses and parking.

Malvern Avenue

- Speeding vehicles from Duthy Street creating safety risks.

Rugby Street / Marlborough Street intersection

- Non-compliance with Give Way control at intersection with Rugby Street.
- Safety concerns at the new intersection layout following a car-cyclist near miss.

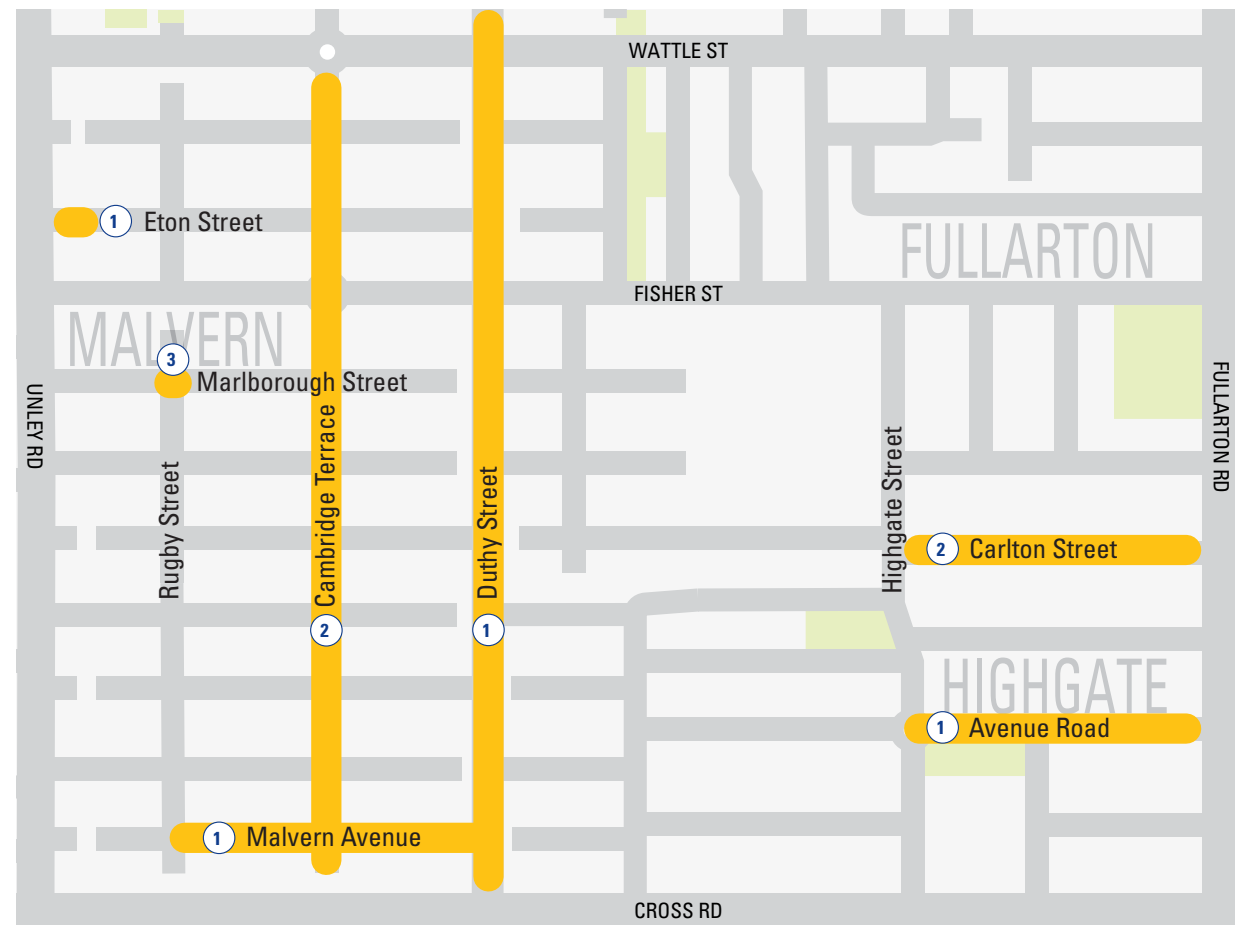


Figure 9. Locations of streets with resident concerns and requests (2020-2025) and number of comments

12

Letters and e-mails were received from 2020 to 2025 with community concerns and requests relating to traffic management in the area

These requests warrant further investigation, as quantitative data alone cannot capture the full range of issues experienced by residents. While speed and traffic volumes can be measured through surveys, user perspectives, local knowledge and on-site observations are essential for identifying matters such as sightline limitations, crossing safety and ease, access to and from arterial roads, and driver behaviour. Although the feedback reflects unprompted community input, further consultation as part of the LATM study will help validate and build on this information to confirm priority issues for action.

Table 4. Survey data available for the streets raised in community concerns or requests

Road name	Survey/counter location	Average Daily Traffic volume	Posted speed limit (km/h)	85th percentile speed limit (km/h)	Proportion of traffic in AM peak hour	Proportion of traffic in PM peak hour	Casualty crashes in a five-year period
Avenue Road	Hampstead – Fullarton	1,006	40	44.5	17.0%	16.2%	0
Cambridge Terrace	Clifton – Eaton	2,530	40	47.0	14.2%	10.2%	4
Carlton Street	Highgate – Fullarton	513	40	41.4	10.7%	11.7%	0
Duthy Street	Clifton – Eton	11,015	50	47.1	7.3%	10.2%	26
Duthy Street	Winchester – Dover	10,144	50	48.7	7.3%	10.2%	26
Malvern Avenue	Cambridge – Duthy	511	40	46.7	11.9%	12.7%	0
Malvern Avenue	Rugby – Cambridge	285	40	45.6	10.5%	14.3%	0
Marlborough Street	Duthy – Balmoral	327	40	45.9	14.0%	11.9%	0
Marlborough Street	Rugby – Cambridge	1,208	40	43.0	11.9%	10.4%	0
Marlborough Street	Unley – Rugby	1,200	40	42.7	10.8%	9.9%	0
Rugby Street	Cheltenham – Winchester	503	40	44.9	10.7%	11.7%	0

Notes:

- The major collector road Duthy Street is highlighted in grey.
- Due to the longer length of some roads, multiple survey points were used, with the table listing data from several counters.

STREETS WARRANTING FURTHER INVESTIGATIONS

Table 5 summarises the technical information for streets in the study area that meet one or more warrant criteria indicating the need for further investigation and potential intervention. Each of these technical conditions has been described separately earlier in the report. The traffic condition figures shown represent the highest recorded condition from the multiple counters installed along the street.

Legend

Substantial problem
Technical problem
Possible problem
Not considered a problem

Table 5. Streets with one or more criteria triggering warrants

Street name	Street previously raised in community requests	Daily traffic volume (vehicles per day)	85th percentile speed (km/h)	Proportion of traffic in AM peak hour	Proportion of traffic in PM peak hour	Casualty crashes in a five-year period
Cambridge Terrace	✓	2,530	47.0	14.2%	11.9%	4
Highgate Street		1,511	38.2	20.2%	16.4%	0
Austral Terrace		962	47.6	15.8%	13.7%	0
Avenue Road	✓	1,028	39.8	19.7%	16.2%	0
Malvern Avenue	✓	511	46.7	11.9%	14.3%	0
Sheffield Street		728	46.1	13.7%	12.1%	0
Cheltenham Street		898	46.0	18.5%	19.3%	0
Carlton Street	✓	513	41.4	10.7%	11.7%	0

FOR LOCAL AREA TRAFFIC MANAGEMENT IN MALVERN/FULLARTON/HIGHGATE

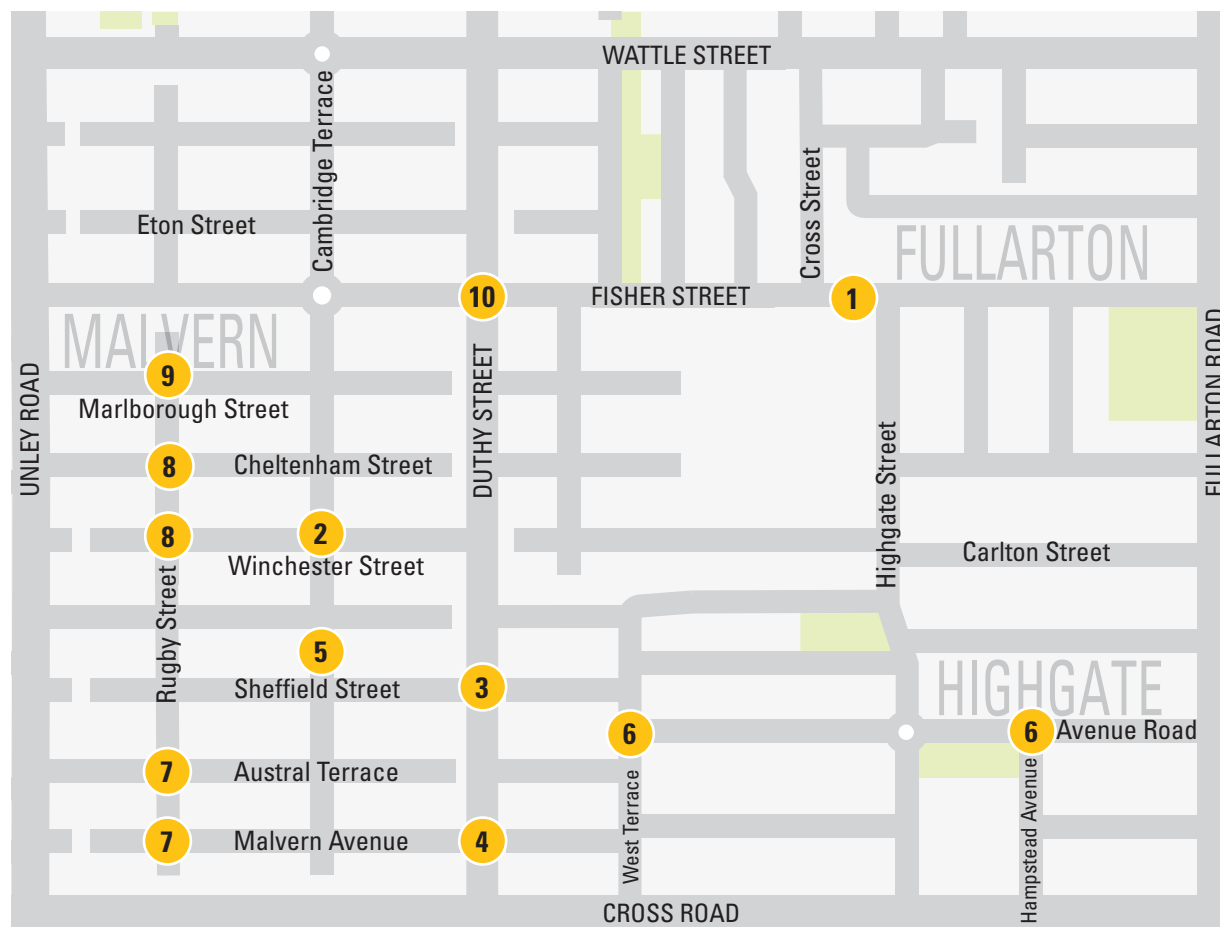


Figure 10. Recommended directions for measures in the study area



- 1 **Fisher Street pedestrian priority ("wombat") crossing**
Upgrade or replace existing kerb build-outs between Cross Street and Highgate Street (just west of Highgate Street) to improve pedestrian accessibility and safety across Fisher Street.
- 2 **Cambridge Terrace / Winchester Street intersection improvements**
Address safety issues at this intersection, which has recorded four right-angle crashes. A roundabout is the preferred option, subject to feasibility and space constraints.
- 3 **Duthy Street / Sheffield Street Shopping Precinct pedestrian and cyclist Improvements**
Improve safety within the shopping precinct following two cyclist crashes. Investigate a new pedestrian crossing point and greening of bicycle lanes adjacent to parked cars.
- 4 **Duthy Street / Malvern Avenue traffic calming measures**
Implement junction treatments to reduce vehicle speeds and traffic volumes along Malvern Avenue. Proposed measure includes kerb build-outs and printed pavement treatments.
- 5 **Cambridge Terrace streetscape and traffic calming feasibility study**
Undertake a design options and feasibility study to calm traffic speeds and volumes, while identifying greening opportunities. Potential measures include: speed humps, centrally planted trees and intersection improvements.
- 6 **Avenue Road / West Terrace and Avenue Road / Hampstead Avenue intersections – improvements near Highgate Primary School**
Introduce raised junction treatments at West Terrace and Hampstead Avenue to reduce vehicle speeds along Avenue Road and improve safety for the Highgate Primary School community.
- 7 **Rugby Street / Austral Terrace and Rugby Street / Malvern Avenue intersection improvements**
Calm traffic movements along Malvern Avenue and Austral Terrace, while improving pedestrian and cyclist safety and access along Council's popular Rugby Street bikeway.

RECOMMENDATIONS PAGE 2 OF 2

FOR LOCAL AREA TRAFFIC MANAGEMENT IN MALVERN/FULLARTON/HIGHGATE

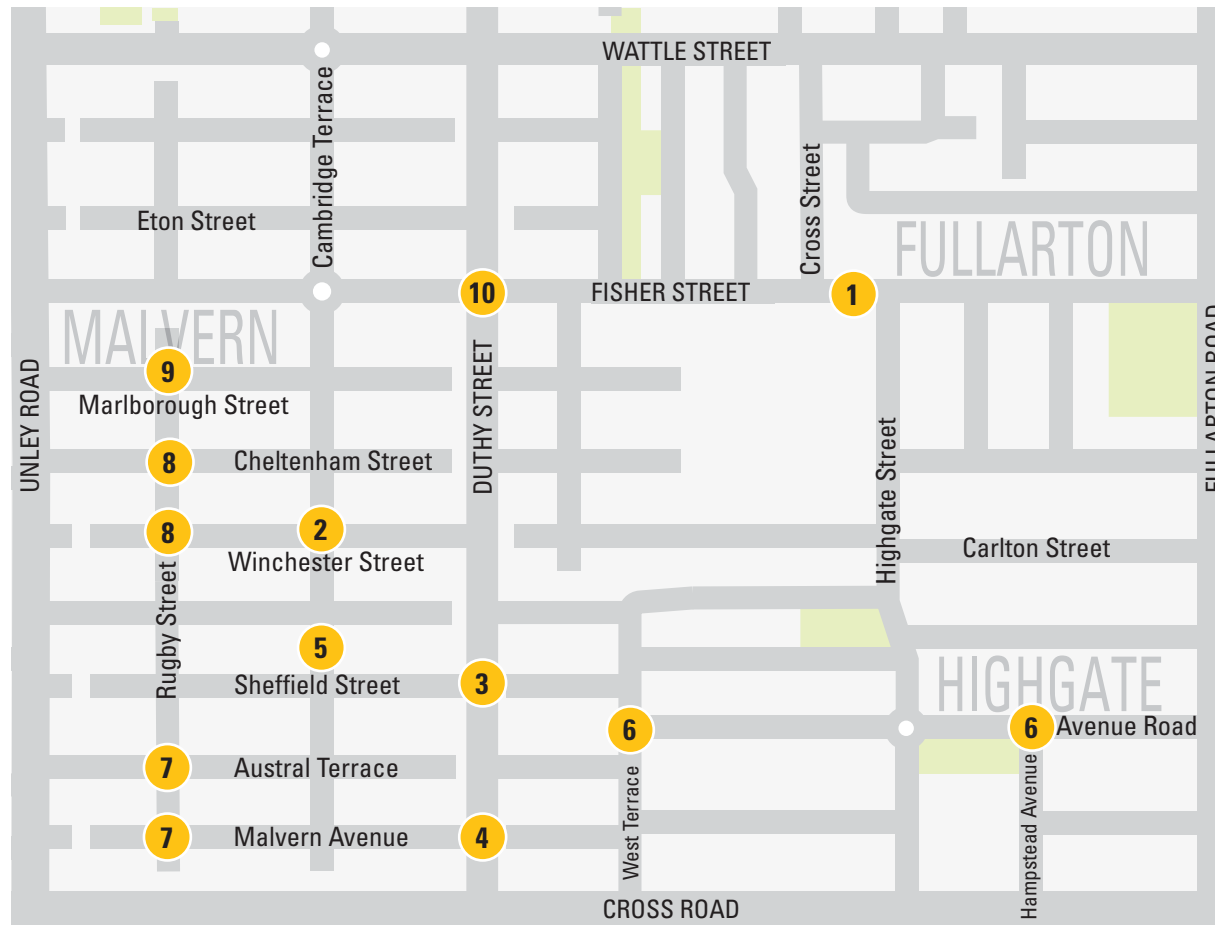


Figure 10. Recommended directions for measures in the study area



- 8** **Rugby Street / Cheltenham Street and Rugby Street / Winchester Street intersection improvements**
Calm traffic movements along Cheltenham Street and Winchester Street, while improving pedestrian and cyclist safety and access along Council's popular Rugby Street bikeway.
- 9** **Rugby Street / Marlborough Street intersection improvements**
Implement additional intersection treatments to address community concerns regarding non-compliance with the "give way" signs on the Marlborough Street approaches.
- 10** **Duthy Street / Fisher Street signalised intersection improvements**
Modify intersection layout to control Fisher Street right turns and improve safety for pedestrians crossing and vehicles.