



**PROPOSED MIXED-USE DEVELOPMENT
259-269 UNLEY ROAD, MALVERN**

TRAFFIC AND PARKING REPORT



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259-269 Unley Road, Malvern
Traffic and Parking report

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1. INTRODUCTION

CIRQA has been engaged to provide design and assessment advice for a proposed mixed-use development at 259-269 Unley Road, Malvern. Specifically, CIRQA has been engaged to provide advice in respect to traffic and parking aspects of the proposal.

This report provides a review of the subject site, the proposed development, its access and parking provisions and the associated traffic impact on the adjacent road network. Plans for the proposal have been prepared by Woods Bagot (Project no. 140697 Sheet no. 2202 and 2203 Rev E, dated 06/11/2025, refer Appendix A). However, CIRQA have recommended adjustments to the proposal to satisfy the relevant Standards and Guidelines (refer C25076_01H SH01 to SH07, dated 12/11/2025). The traffic and parking assessments have assumed that CIRQA's recommendations will be adopted.

2. BACKGROUND

2.1 SUBJECT SITE

The subject site is comprised of allotments 259-269 Unley Road, Malvern. The site is located on the south eastern corner of Unley Road and Eton Street. The site is bound by Eton Street to the north, residential dwellings to the east, commercial development to the south and Unley Road to the west.

The Planning and Design Code identifies that the site is located within an Urban Corridor (Main Street) Zone, with the following Overlays applicable:

- Airport Building Heights (Regulated) (All structures over 45 metres);
- Affordable Housing;
- Design;
- Noise and Air Emissions;
- Prescribed Wells Area;
- Regulated and Significant Tree;
- Traffic Generating Development; and
- Urban Transport Routes.

The subject site is currently occupied by commercial development, estimated to comprise 150 m² of retail (shop) floor area and 1,520 m² of restaurant/takeaway food floor area (shop with commercial kitchen). Vehicle access is provided via an 8.1 m wide crossover (approximate) on Eton Street and two two-way crossovers

(an 8.4 m and 8.2 m wide crossover) on Unley Road, at which all turning movements are permitted.

Figure 1 illustrates the location of the subject site with respect to the adjacent road network.



Figure 1 – Location of the subject site with respect to the adjacent road network

2.2 ADJACENT ROAD NETWORK

Unley Road is an arterial road under the care and control of the Department for Infrastructure and Transport (DIT). Adjacent the site, Unley Road comprises two traffic lanes and a bicycle lane in each direction. Traffic data obtained from DIT indicates that this section of Unley Road has an Annual Average Daily Traffic (AADT) volume in the order of 26,700 vehicles per day (vpd), of which approximately 2% are commercial vehicles. Adjacent the site, a 60 km/h speed limit applies on Unley Road.

Eton Street is a local road under the care and control of the City of Unley. Eton Street comprises a 12.8 m wide carriageway (approximate) facilitating two-way traffic flow. Parking is generally unrestricted on both sides of the road. Adjacent the site, Eton Street terminates as a no-through road with a pedestrian link

provided, restricting the ability for vehicles to travel to/from the east. A 40 km/h area speed limit applies on Eton Street.

Unley Road and Eton Street form an unsignalised T-intersection (with priority assigned to Unley Road). All turning movements are permitted at the intersection.

2.3 WALKING AND CYCLING

Sealed footpaths are provided on both sides of Unley Road and Eton Street servicing both pedestrians and cyclists. Bicycle lanes are provided on Unley Road, noting that various clearway and parking restrictions apply. Unley Road forms part of the BikeDirect Network and is classified as a 'Main Road with Bicycle Lane'. Cyclists are also able to ride on-street sharing the road with motorists on Unley Road and Eton Street.

Pedestrian Actuated Crossings (PAC) are provided to the south (approximately 130 m) and north (approximately 220 m) of the site on Unley Road.

2.4 PUBLIC TRANSPORT

Public bus services operate regularly in the vicinity of the subject site. Bus stops are located within 70 m of the subject site on both sides of Unley Road. These stops are serviced by the following bus routes:

- 190 - Glenelg Interchange to City;
- 190B - City to Mitcham Square;
- 195 and 195F - Blackwood Interchange to City;
- 196 and 196F - Blackwood Interchange to City;
- 674 - Blackwood High School to City; and
- A024 - Mitcham Square to Adelaide Oval.

3. PROPOSED DEVELOPMENT

3.1 LAND USE AND YIELD

The proposed development comprises the demolition of the existing infrastructure on the subject site and the construction of a multi-storey mixed-use building. Specifically, the building will comprise the following land uses:

- 1,355 m² of commercial (office) floor area;
- 553 m² of shop (retail) floor area;
- 13x one-bedroom dwellings;
- 17x two-bedroom dwellings;

- 33x three-bedroom dwellings; and
- 5x four-bedroom dwellings.

3.2 ACCESS AND PARKING DESIGN

The site will be serviced by a 165-space parking area, of which 2 spaces will be reserved exclusively for use by people with disabilities. The parking area will comply with the requirements of Australian/New Zealand Standard for *"Parking Facilities Part 1: Off-street car parking"* (AS/NZS 2890.1:2004) and *"Parking Facilities Part 6: Off-street parking for people with disabilities"* (AS/NZS 2890.6:2022) in that:

- regular parking spaces accessible to the public will be 2.6 m wide and 5.4 m long (or 4.8 m long with 0.6 m overhang);
- regular parking spaces accessible only by residents will be at least 2.4 m wide and 5.4 m long;
- small car parking spaces will be 2.3 m wide and 5.4 m long;
- the disabled parking spaces will be 2.4 m wide and 5.4 m long (with an adjacent shared space of the same dimension);
- the parking aisle will be at least 5.8 m wide;
- the internal ramps will have a maximum gradient of 1:5, with transitions of 1:8 located at the top and bottom of the ramps;
- a clear height of 4.5 m will be provided where commercial vehicle access is required and at least 2.2 m for all other areas where light vehicle access is required;
- a clear head height of 2.5 m will be provided above accessible parking spaces and the adjacent shared area;
- a 1.0 m end-of-aisle extension will be provided beyond the last parking space in the aisle;
- a turn-around bay will be provided at the end of a publicly accessible parking aisle; and
- 0.3 m clearance will be provided to all objects greater than 0.15 m in height.

Vehicle access to the site will be provided via a 5.8 m wide two-way crossover on Eton Street, while all redundant crossovers will be reinstated as upright kerb. The access point will accommodate two-way movements with entering vehicles able to be driven past another vehicle stored waiting to exit the site. All vehicles will be able to enter and exit the site in a forward direction. Notably, the two existing access points on Unley Road will be closed and reinstated to upright kerbing. The resulting reduction in conflict points on the arterial road network is a positive road safety outcome.

The proposed alterations to the streetscape of Eton Street will increase landscaping and activate Eton Street resulting in improve amenity for the community. The City of Unley have been consulted during the design process to ensure that the proposed alterations are supported by Council.

3.3 COMMERCIAL VEHICLE ACCESS

The site has been designed to accommodate access for commercial vehicles up to 10 m in length. This will be able to accommodate access for service vehicles undertaking refuse collection and general deliveries. It is anticipated that such movements would be undertaken outside of peak periods. Refuse collection will be undertaken on-site via private contractor with the associated manoeuvres accommodated on-site (forward in/forward out).

Appendix B illustrates the turn path for a 10 m rigid vehicle to enter and exit the site in a forward direction.

4. PARKING ASSESSMENT

4.1 CAR PARKING

The Planning and Design Code identifies the following parking provision rates to meet the Deemed-to-Satisfy/Designated Performance Feature (DTS/DPF) criteria relevant to the proposed development (noting the site is within a Designated Area):

- **non-residential development (excluding tourist accommodation)**
 - minimum 3 spaces per 100 m² of gross leasable floor area
- **residential component of a multi-storey building**
 - 1 bedroom dwelling – 0.75 spaces per dwelling;
 - 2 bedroom dwelling – 1 space per dwelling;
 - 3 or more bedroom dwelling – 1.25 spaces per dwelling;
 - visitor parking - 0.25 spaces per dwelling.

Based upon the above rates, the proposed development will have a theoretical requirement of 150 parking spaces (including 58 non-residential parking spaces, 75 residential parking spaces and 17 residential visitor parking spaces). Given that 165 parking spaces will be provided for the site, the DTS/DPF parking criteria of the Planning and Design Code are satisfied.

It is understood that Basement 2 (the lowest level of parking) will be reserved for residents only with the remainder of parking to be shared between non-residential and visitor parking.

4.2 BICYCLE PARKING

The Planning and Design Code identifies the following bicycle parking requirements relevant to the proposed development:

- **residential component of a multi-storey building**
 - 1 space for every 4 dwellings for residents;
 - 1 space for every 10 dwellings for visitors;
- **office**
 - 1 space for every 200 m² of gross leasable floor area plus 2 spaces;
 - 1 space for per 1,000 m² of gross leasable floor area for visitors;
- **shop**
 - 1 space for every 300 m² of gross leasable floor area; and
 - 1 space for every 600 m² of gross leasable floor area for customers.

Based upon the above rates, the proposed development will have a theoretical requirement of 9 staff, 4 customer, 17 resident and 7 residential visitor bicycle parking spaces. Bicycle parking has not been shown on the plans. However, there is ample area to include bicycle parking within the public realm on Eton Street (for customers and visitors) and secure bicycle parking can be accommodated within the amenities/end of trip spatial provision within the site during detailed design. It is also noted that it is common for residents to store bicycles within the apartment or their secure storage cages (particularly for high-end bicycles) which would reduce the overall bicycle parking requirement.

5. TRAFFIC ASSESSMENT

5.1 TRAFFIC GENERATION AND DISTRIBUTION

The RTA's "*Guide to Traffic Generating Developments*" (the RTA Guide), and its subsequent updates, is a document commonly used by traffic engineers in order to determine the forecast traffic generation of a variety of land uses. The following peak hour trip generation rates have been applied to the proposal:

- **high density residential dwellings**
 - 0.19 am and 0.15 pm peak hour trips per dwelling;
- **commercial (office)**
 - 1.69 am and 1.2 pm peak hour trips per dwelling; and

- **retail**
 - 1.78 am and 3.71 pm peak hour trips per dwelling.

On the basis of the proposed development yields, the proposal is forecast to generate in the order of 46 am and 47 pm peak hour trips. For the purposes of this assessment, the following assumptions have been adopted:

- 80% of movements associated with the commercial tenancies will be to the site and 20% from the site in the am (and vice versa for the pm);
- 30% of movements associated with residential dwellings will be to the site and 20% from the site in the am (and vice versa for the pm);
- 50% of movements associated with retail will be to the site and 50% from the site in the am and pm;
- 50% of movements will be from the north via Unley Road and 50% of movements will be from the south in the am and pm peak hours; and
- 30% of movements will be to the north via Unley Road and 70% of movements will be to the south in the am and pm peak hours.

Figure 2 illustrates the forecast am and (pm) peak hour movements at the access point.

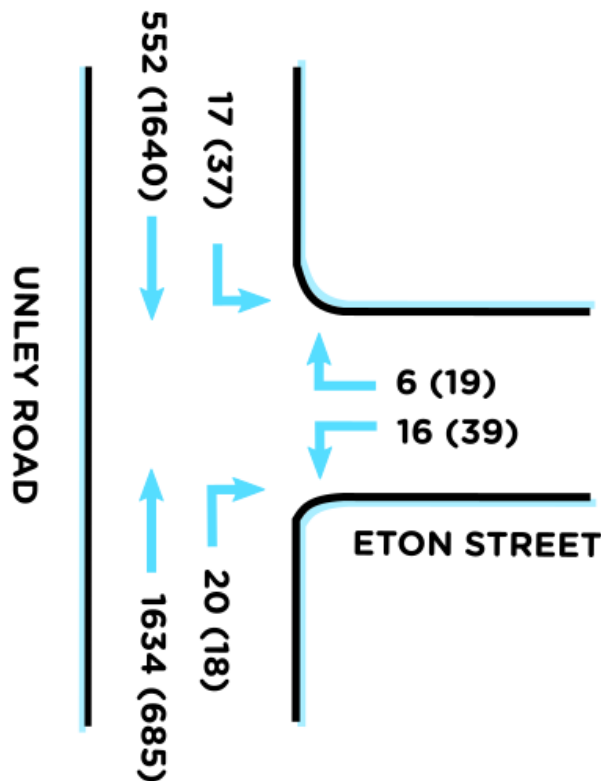


Figure 2 - Forecast am and (pm) peak hour movements at the intersection of Eton Street and Unley Road

In comparison to the above, a traffic generation assessment has been undertaken for the existing development on the subject site. It has been assumed that the RTA Guide identifies the following rates applicable to the existing development:

- **retail** -1.78 am and 3.71 pm peak hour trips per dwelling; and
- **restaurant** -5 peak hour trips per 100 m² floor area.

For the purposes of the assessment, it has been assumed that the existing restaurant tenancies generate 1.5 peak hour trips during the am peak hour (i.e. a 70% discount, based upon the assumption that only staff will access the site during the am peak).

Based upon the above, the existing development generates in the order of 26 am and 79 pm peak hour movements. The proposed development would therefore result in an increase to the traffic generated during the am peak hour (in the order of 20 peak hour movements) and a reduction of movements during the pm peak hour (in the order of 28 movements).

5.2 TRAFFIC IMPACT

SIDRA modelling has been undertaken for the intersections of Eton Street and Unley Road. The modelling of the future scenario (i.e. existing surveyed volumes plus the additional traffic volumes associated with the proposal) has indicated that the intersection will operate with a Degree of Saturation (DoS) of 0.470 or less during the am peak (refer Appendix C). During the pm peak hour, the intersection will operate with a DoS of 0.464 or less for all movements except for the turning movements from Eton Street which will operate with a DoS of 0.952. All movements will operate with a Level of Service (LoS) of 'D' or greater except for the right-out movements from Eton Street during the am and pm peak hours and the left-out movement from Eton Street during the am peak hour which will operate with a LoS of 'F'. SIDRA also indicates that queues on Eton Street will be 5 vehicles or less during the am and pm peak hours which would be readily accommodated in Eton Street.

It is highlighted that the future traffic volumes adopted for the assessment are conservative as movements from the site's existing development would have been captured within the traffic survey. Therefore, the intersection would perform better than indicated above (as the future traffic volumes entering/exiting Eton Street would be less than adopted for the assessment).

Based upon the above, the proposed development and adjustments to Eton Street will readily accommodate future traffic volumes at the intersection of Unley Road and Eton Street. The reported DoS indicates that the intersection will operate within capacity. Higher delays and a low LoS may be experienced by drivers turning right-out from Eton Street. However, such conditions are common for drivers undertaking right turns out of side streets on to the arterial road network (particularly during peak periods). In reality, the right turn movements would often be undertaken opportunistically by drivers when gaps are presented. If excessive delays are experienced by drivers, it is likely that they would divert to a left-turn movement and utilise an alternative route within the road network to reach their destination. Importantly, the proposed development and changes to Eton Street will have a minimal impact on the existing operation of Unley Road.

Discussions have been undertaken with the City of Unley during the design process of the Eton Street streetscape. Consideration had been given to providing separate left and right-turn lanes from Eton Street to minimise the delays associated with the left-out movement from Eton Street. However, the City of Unley had advised that their preference would be to minimise the road width by providing a single egress lane (i.e. left and right turn movements would occur from a single lane) despite the reduced LoS and high DoS reported for the Eton Street movements. Consideration has also been given to the existing queues observed for the car wash access via Eton Street. The Eton Street streetscape has been designed to retain the wide northern lane which would

accommodate a queue into the car wash (which currently occurs) whilst allowing traffic to enter Eton Street, hence retaining the existing arrangement and minimising impacts to Unley Road.

It is noted that the forecast traffic volumes would warrant channelised left and right turn treatments (when assessed against Austroads' *"Guide to Traffic Management Part 6: Intersections, Interchanges and Crossings Management"*). However, the modelling has indicated that the Eton Street intersection (without channelised turn lanes) would operate satisfactorily, with minimal impacts to through-bound movements on the Unley Road. It is also highlighted that channelised turn lanes are not provided for the nearby intersections on Unley Road, of which many would warrant turn lanes. Furthermore, there would be inadequate width within the road reserve to accommodate the turn lanes. Based upon the modelling, inadequate road reserve width and precedent set by nearby intersections, turn treatments are not considered to be warranted for the proposal.

6. SUMMARY

The proposal comprises the construction of a multi-storey mixed-use building with associated access and parking provisions. Vehicle access to the site will be provided via a 5.8 m wide two-way access point on Eton St. The site has been designed such that all movements can enter and exit in a forward direction.

A total of 165 parking spaces will be provided on-site. Such a provision will satisfy the parking requirements of the Planning and Design Code. The parking area will be provided in accordance with the relevant Australian Standard.

The proposal is forecast to generate in the order of 46 am and 48 pm peak hour trips. Such movements will be readily accommodated at the proposed site access and on the adjacent road network. The proposal will also result in the closure of two access points on Unley Road and removal of a number of conflict points on the arterial road (effectively consolidating access via Eton Street). Such an outcome will provide a positive impact in respect to operational conditions and road safety on and adjacent Unley Road.

APPENDIX A

PLANS PREPARED BY WOODS BAGOT

APPENDIX B

PLANS PREPARED BY CIRQA

APPENDIX C

SIDRA SUMMARIES