



Life Care

## **DEVELOPMENT PLAN AMENDMENT NORMAN TERRACE, EVERARD PARK**

### **TRAFFIC INVESTIGATION**

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**Traffic • Parking • Transport**

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## **1.0 INTRODUCTION**

This report investigates the traffic impacts associated with the potential change of land use in Everard Park within the City of Unley to inform a Development Plan Amendment (DPA).

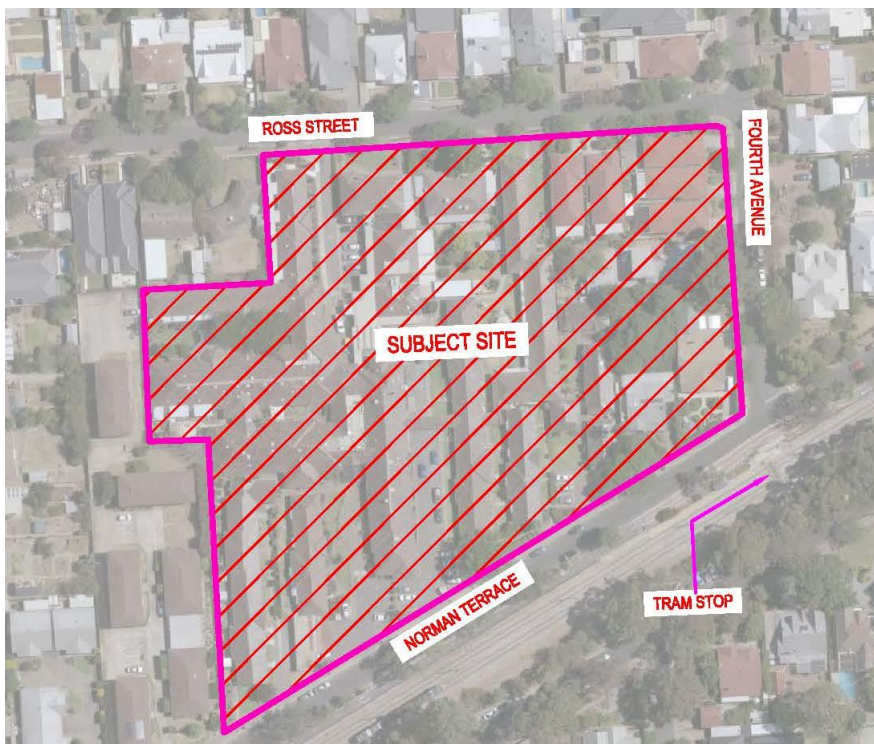
The subject DPA relates to the potential rezoning of the subject land to Residential Regeneration Zone to facilitate such land uses as an aged care facility. This traffic assessment has considered the existing and potential traffic volumes associated with potential development on the subject land relating to the existing and proposed zoning.

In undertaking the traffic investigations associated with the proposed DPA, consideration has been given to the close proximity of the tram corridor and potential connectivity associated with this facility.

## 2.0 EXISTING SITUATION

The subject site is zoned as Residential in the City of Unley’s Development Plan (Consolidated – 19 December 2017). It has an area of approximately 2 hectares. The site is bounded by Norman Terrace to the south, Fourth Avenue to the east, Ross Street to the north and a residential development to the west. The subject site is located in close proximity to the Black Forest tram stop.

Figure 1 identifies the subject site.



**Figure 1: Subject site**

## 2.1 EXISTING DEVELOPMENTS

The site is currently occupied by:

- seven dwellings with one on Norman Terrace, four on Fourth Avenue and two on Ross Street; and
- two supported accommodation facilities with 69 residential aged care (RAC) beds and 46 independent living units (ILU).

There are currently six crossovers on Norman Terrace, five crossovers on Fourth Avenue and seven crossovers on Ross Avenue providing access to the subject land.

## 2.2 ROAD NETWORK

Norman Terrace is a residential street under the care and control of the Council. It has an average annual daily traffic (AADT) volume in the order of 650 vehicles per day (vpd).

On-street parking is generally permitted on Norman Terrace and is primarily related to the commuters riding the tram. Where parking is not permitted, the road is marked with pavement markings. In particular, parking is not permitted adjacent access points on Norman Terrace, potentially to preserve sightlines for vehicles exiting developments to the road. There is also an indented parking facility on the northern side of Norman Terrace adjacent Fourth Avenue. Parking at this facility is restricted to a half hour time limit.

Fourth Avenue is a residential street under the care and control of the Council. It has an average annual daily traffic (AADT) in the order of 450 vpd. On-street parking is not permitted on the western side of Fourth Avenue.

Ross Street is a residential street under the care and control of the Council. It has an average annual daily traffic (AADT) in the order of 250 vpd.

The subject site is within a 40km/h area.

Access to/from the arterial road network is available via a number of routes. The more direct routes include:

- Aroha Terrace which connects to South Road. Only left-in/left-out movements are permitted at the Aroha Terrace/South Road intersection;
- Second Avenue which connects to Anzac Highway via Leader Street. All movements are permitted at the Second Avenue/Leader Street intersection; and
- Leah Avenue which connects to Cross Road via East Avenue. Leah Street and East Avenue is divided by the tram line.

Additional routes are available but are more circuitous. The variety of routes results in a distribution of traffic volumes.

## 2.3 PUBLIC TRANSPORT

The Black Forest tram stop is located in close proximity to the subject site. The tram service provides connectivity to Adelaide City and Glenelg. Pedestrian access to the tram stop is provided opposite Fourth Avenue.



## **2.4 PEDESTRIAN/CYCLIST CONNECTIVITY**

A shared path is available on the southern side of Norman Terrace which forms part of the *Bikedirect* network. Pedestrian footpaths are constructed on the surrounding roads and connect to the shared path via pedestrian ramps. There are two pedestrian ramps located within the vicinity of the site.

### 3.0 PROPOSAL

It is proposed to rezone the subject land to Residential Regeneration zone to facilitate the development of a residential aged care facility. Figure 2 illustrates a concept plan of a possible development option for the subject site.



**Figure 2: Concept plan for the subject site (Source: Marchese)**

The concept plan identifies that the site could be developed to comprise of approximately:

- 90 RAC beds;
- 120 ILUs;
- 16 assisted living apartments (ALAs); and
- community facilities for residents.



### **3.1 ACCESS**

The concept plan identifies that access for the subject site could be provided via a number of crossovers on Norman Terrace. The provision of these access points will potentially result in the removal of the indented parking bays and this will need to be considered in the assessment of any proposal.

As a minimum requirement, access to the subject site will need to comprise:

- Access to a parking facility for the development;
- Separate ingress and egress for a pick-up/set-down facility to cater for direct access for pedestrians to the proposed facility; and
- Access to the ILUs.

While the concept plan identifies two port-cochere at the site, the detailed access requirements can be confirmed during a Development Application (DA) stage for the site. A mix of land uses, such as that identified in the concept plan, may command separate pick-up/set-down facilities for the site albeit there may be an opportunity to consolidate these access points. Separate access may also be required for service vehicles and this will need to be determined during a DA.

Access for the ILUs will be directly to the adjacent road network. This provides for separate access for these units which will ensure that these facilities can be independent. The provision of shared driveways with adjacent units will maximise the available kerb space for on-street parking. Subject to the final design, this will be similar to the existing scenario.

What is important in respect to access to the car park and pick-up/set-down facilities as it relates to the subject DPA is that the majority of access associated with the land will be concentrated on Norman Terrace. This will minimise the impact to adjacent residents associated with vehicles turning to and from the site, given that the access points will be opposite the tram corridor.

### **3.2 PUBLIC TRANSPORT AND PEDESTRIAN ACCESS**

The close proximity of the subject site to the tram station will provide for good accessibility for residents of the ILUs and staff at the aged care facility. Development on the land will need to ensure that pedestrian access is maintained along key desire lines between the site and the tram stop and that this route complies with DDA access requirements.

Consideration was given to the opportunity for a pedestrian linkage through the site to provide a link for the community between the broader residential area and the tram stop. Such a link, however, would bisect the site and create significant development

constraints. A link along the western boundary would increase the walking distance (when compared with the existing publicly accessible route along the road network) and would not likely be utilised. There would also be potential security issues to be addressed. Accordingly, the creation of such a public link was not considered desirable and would not result in orderly development of the land. Notwithstanding that a formalised link would not be desirable, opportunities would exist during the design of the site to encourage integration of the community with the development and develop open vistas for sightlines through the development.

Provision of facilities to effect the pedestrian linkage between development on the subject site and the tram station would potentially reduce the parking and traffic demand, albeit the local road network is still likely to attract commuters who use the tram. That said, the proposed change in land use will not impact the use of this area as a quasi park and ride facility and there may be a positive impact created by the reduction in parking demand associated with public transport users associated with the subject site.

This means that while the proposal may not reduce the existing on-street parking demand associated with the tram, the subject DPA would not exacerbate this existing situation.

### **3.3 PARKING**

Parking for development on the subject site will consist of a number of varying requirements, viz:

- Resident parking for the independent living units. The parking demand for ILUs is often identified as one space per unit for residents, albeit detailed surveys of similar facilities and relevant technical manuals identify that such a rate is higher than is usually realised;
- Resident parking for assisted living units. The parking demand for ALUs is lower than an ILU as these facilities provide for residents who require additional assistance and have a lower vehicle ownership;
- Visitor parking for the ILUs and the ALUs. A rate of one space per four units is often applied for similar developments albeit such a rate is consistent with that required for standard residential dwellings and is higher than identified in surveys of similar developments;
- Parking for the aged care facility. A rate of one space per three beds is adopted in many Development Plans in relation to this type of facility.

Parking requirements for the subject DPA should be consistent with rates utilised in Council's Development Plan. However, there is an opportunity for a reduced parking provision to be justified for this type of development, particularly given the proximity

of the tram. Accordingly, it would be desirable for flexibility to be incorporated in the parking assessment to enable a demand assessment to be considered during a DA.

### **3.4 POTENTIAL DEVELOPMENT DETAILS**

Further consideration will need to be given to detailed design aspects of a development on the subject land during the DA stage to ensure that appropriate design standards and the proposal provides for safe, functional and orderly development. Such aspects include:

- access locations, design and compliance to provide for vehicles to enter and exit in a forward direction and meet minimum safety standards, including sightlines;
- parking demand assessment should the proposal not adopt the rates specified in the Development Plan;
- design and management of parking areas, including compliance with relevant Australian Standards,
- refuse and delivery requirements, including adequate manoeuvring areas to provide for vehicles to enter and exit the site in a forward direction; and
- pedestrian facilities and connectivity within the site.

## 4.0 TRAFFIC ASSESSMENT

The potential traffic impact associated with the development will relate to any increase in the volume of traffic associated with the redevelopment of the land or any change in the type of traffic (from domestic vehicles to commercial vehicles as an example). If there is likely to be a significant increase in volumes as a result of future development, potential mitigation measures may need to be considered, including broader implications on the greater road network and major intersections. If the volume of traffic associated with a potential future development which could occur following the rezoning will be commensurate with the current situation, then it can be deduced that there will be little or no impact associated as a result of the rezoning.

In order to understand the potential impact of the rezoning, therefore, a comparison of the existing and the forecast traffic volumes was completed to determine any potential increase in traffic associated with the proposal. Table 1 identifies a comparative assessment of the existing and potential uses at the site.

**Table 1: Existing and proposed uses at the subject site**

Use	Existing	Potential	Difference
Residential Dwellings	7	0	- 7
RAC Beds	69	90	+ 21
ILUs	46	120	+ 74
ALAs	0	16	+ 16

### 4.1 TRAFFIC GENERATION RATES

#### 4.1.1 RESIDENTIAL

The traffic generation rate adopted for recent DPA assessments is 0.8 trips per hour per dwelling for residential developments.

#### 4.1.2 RESIDENTIAL AGED CARE AND ASSISTED LIVING UNITS

Traffic surveys conducted by MFY at other aged care facilities have indicated a peak traffic generation rate of less than 0.25 trips per bed. For the purposes of this assessment, a rate of 0.25 trips per bed has been used to analyse the traffic generation.

Residents of assisted living apartments are not typically independent and need additional assistance. It is therefore anticipated that they will generate traffic akin to an aged care facility.

### 4.1.3 INDEPENDENT LIVING UNITS

Data collected at existing independent living unit facilities identified a traffic generation rate of less than 0.4 trips per unit. This rate is consistent with the peak traffic generation rate identified in the “*Guide to Traffic Generating Developments*” (the RMS Guide) for such a land use.

## 4.2 TRAFFIC IMPACT

Table 2 summarises the forecast change in peak hour traffic volume associated with the proposed rezoning.

**Table 2: Existing and proposed uses at the subject site**

Use	Existing Yield	Potential Yield	Difference	Traffic Generation Rate	Additional Trips
Residential	7	0	- 7	0.8 trips per dwelling	- 6
RAC Beds	69	90	+ 21	0.25 trips per bed	+ 5
ILUs	46	120	+ 74	0.4 trips per unit	+ 30
ALAs	0	16	+ 16	0.25 trips per apartment	+ 4
<b>Total</b>					<b>+ 33 trips</b>

Based on the above assessment, the proposed rezoning could result in an increase to the peak hour traffic by 33 trips which equates to approximately 330 trips per day. This assessment does not account for any potential reduced generation associated with the use of the tram.

The trips associated with development of the site will primarily use Norman Terrace, given the proposed access arrangements, thus potentially resulting in a traffic volume in the order of 900 to 950 vpd. The generally accepted volume for a residential street, such as Norman Terrace, is up to 2000 vpd. Accordingly, the proposed change in land use will not change the nature and function of this street. Further, the low traffic volume increase will result in minimal impact to connect to the greater road network and will have minimal impact on this road. Importantly, no amelioration measures will be required to the road to cater for the anticipated traffic volumes which could be realised as a result of the DPA.

The proposal will result in negligible increases in traffic volumes in Ross Street and Fourth Avenue as the relative generation rates associated with the ILUs compared with the existing dwelling access on these streets will be much lower. Even if there was an increase of 100 vpd on these streets (which would be much higher than anticipated), such an increase would still result in volumes much lower than expected on a residential street. The proposed rezoning, therefore, will not have any appreciable impact on the nature or function of either of these streets.

The trips generated will be distributed to the arterial road network via a number of routes limiting the impact on any one road. In any event, the impact on any one route will be negligible and the road hierarchy will not be impacted as a result of the DPA.

The type of traffic will continue to be primarily domestic vehicles, with the type of commercial vehicles typically limited to refuse, delivery vehicles and the occasional requirement for a bariatric ambulance. Existing commercial vehicle requirements would also be limited to refuse, delivery and emergency requirements and volumes of such vehicles would be low.

### **4.3 PARKING IMPACT**

Consideration has been given to potential parking impact associated with future developments at the subject site, particularly due to the existing on-street parking demand associated with the commuters riding the tram.

If the subject site was to be developed as detached, semi-detached or row dwellings (as could perceivably be considered with the current zoning), there could be a greater demand for on-street parking as the Council's Development Plan does not specify an off-street visitor parking requirement for these types of residential developments. This could mean an increased on-street demand associated with existing development potential.

The subject DPA will provide the opportunity to minimise the risk of reduced on-street parking availability by providing for all visitor parking on the site and maximising the retention of kerbs by sharing driveways to the independent living units. This will mean, there would be minimal impact associated with the DPA, particularly compared to the existing situation and possible development options

The retention of on-street parking is important given the close proximity of the tram stop, the proposed rezoning could provide a positive outcome regarding on-street parking on the surrounding local roads when compared with the current potential impact.

While consideration could have been given to rear access for the independent living units, this would create a potential pedestrian conflict within the development which would not provide for the safest outcome for residents. It is more desirable to maintain parking and traffic movements to the perimeter of the site. Where there is an opportunity to share driveways and provide for pedestrian sightlines to maintain a safe pedestrian environment within the public realm.

## 5.0 SUMMARY

This assessment has confirmed that the proposed DPA will have minimal impact in respect to traffic and parking parameters.

Additional traffic volumes will be minimal and will have a negligible impact on the road network. There will be no change to the nature or function of the roads or the existing road hierarchy. Importantly, there will be minimal impact to residents and no requirement for any infrastructure as a result of the proposal.

Parking associated with the development could be subject to review at the DA stage but should be accommodated on-site to minimise any impact on existing on-street demand associated.

Access requirements for the site should be accommodated on the road network to provide for a safe pedestrian environment on the site but driveways should be located to maximise on-street parking.

Pedestrian connectivity for the development is important to ensure compliant functional access to the tram and adjacent road network. However, a linkage through the site will not provide convenient access for the broader community and will have an adverse impact on functional development of the land.