

Proposed Childcare Centre  
**187-189 Adelaide Street,  
St Marys**

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**TRAFFIC AND PARKING ASSESSMENT REPORT**

10 December 2021

Ref 21852



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## TABLE OF CONTENTS

|                                      |           |
|--------------------------------------|-----------|
| <b>1. INTRODUCTION .....</b>         | <b>1</b>  |
| <b>2. PROPOSED DEVELOPMENT .....</b> | <b>4</b>  |
| <b>3. TRAFFIC ASSESSMENT .....</b>   | <b>8</b>  |
| <b>4. PARKING ASSESSMENT .....</b>   | <b>16</b> |

## LIST OF ILLUSTRATIONS

|                  |                               |
|------------------|-------------------------------|
| <b>Figure 1</b>  | Location                      |
| <b>Figure 2</b>  | Site                          |
| <b>Figure 3</b>  | Road Hierarchy                |
| <b>Figure 4</b>  | Existing Traffic Controls     |
| <b>Figure 5a</b> | Public Transport              |
| <b>Figure 5b</b> | Public Transport              |
| <b>Figure 6</b>  | Existing Parking Restrictions |

## **1. INTRODUCTION**

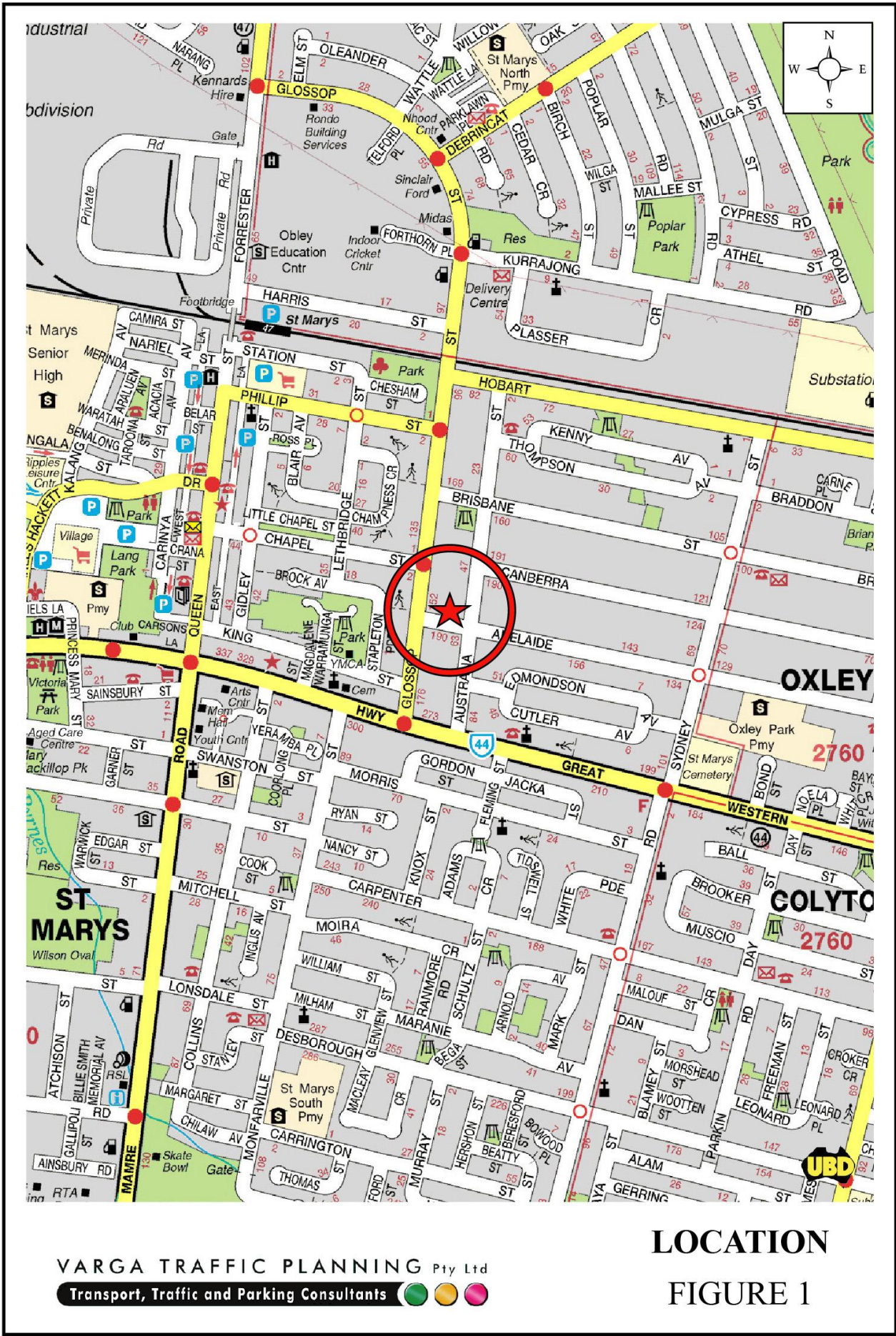
This report has been prepared to accompany a development application to Council for a childcare centre development proposal to be located at 187-189 Adelaide Street, St Marys (Figures 1 and 2).

The proposed development involves demolition of existing structures on the site to facilitate the construction of a purpose-built childcare centre catering for 85 children with 15 staff.

Off-street car parking is proposed to be accommodated in a new basement car parking area in accordance with Council's requirements.

The purpose of this report is to assess the traffic and parking implications of the development proposal and to that end this report:

- describes the site and provides details of the development proposal
- reviews the road network in the vicinity of the site, and the traffic conditions on that road network
- estimates the traffic generation potential of the development proposal
- assesses the traffic implications of the development proposal in terms of road network capacity
- reviews the geometric design features of the proposed car parking facilities for compliance with the relevant codes and standards
- assesses the adequacy and suitability of the quantum of on-street car parking available within a short walking distance of the site.







## 2. PROPOSED DEVELOPMENT

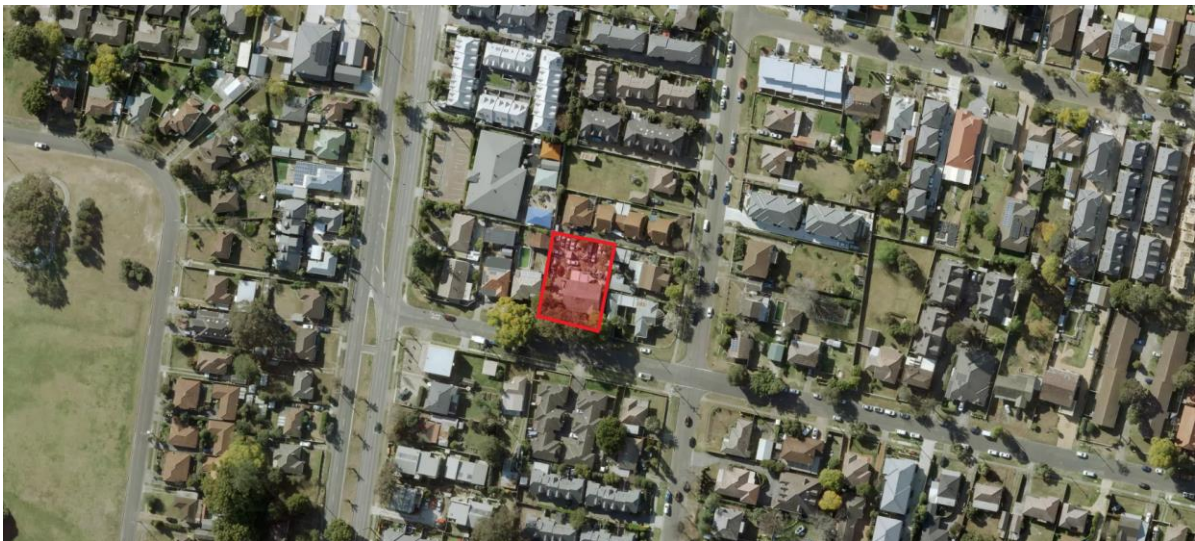
### Site

The subject site is located on the northern side of Adelaide Street, between Glossop Street and Australia Street.

The site has a street frontage approximately 28 metres in length to Howarth Street, and occupies an area of approximately 1,100 m<sup>2</sup>.

The site is currently occupied by 2 residential dwellings, each with a vehicle garage and driveway off Adelaide Street.

A recent aerial image of the site and its surroundings is reproduced below.



Source: MetroMap

### Proposed Development

The proposed development involves demolition of existing structures on the site to facilitate the construction of a purpose-built childcare centre catering for 85 children with 15 staff members.

Off-street car parking is proposed for a total of 26 in a basement car parking area, in accordance with Council's requirements. Vehicular access to the car parking facilities is to be provided via an entry/exit driveway located towards the eastern end of the Adelaide Street frontage.

Garbage collection for the childcare centre is expected to be undertaken by Council's contractor using kerbside pick-up.

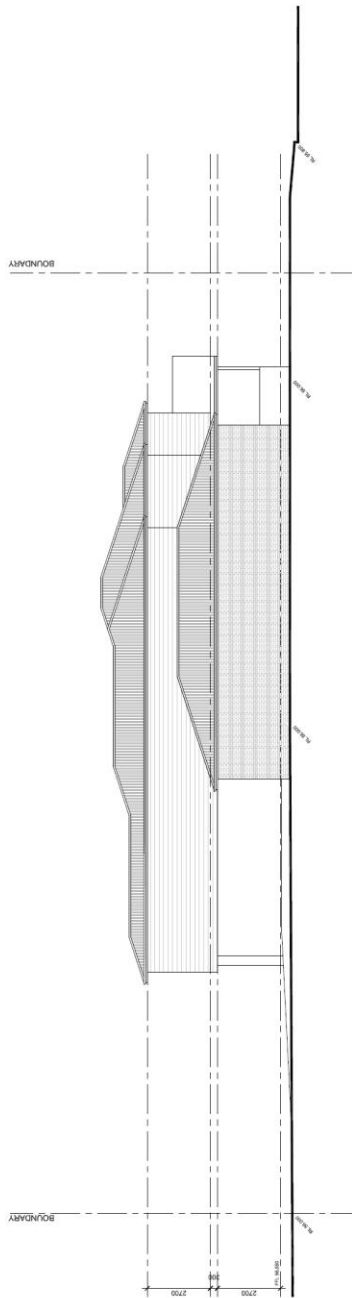
Plans of the proposed development have been prepared by *Janssen Designs* and are reproduced in the following pages.



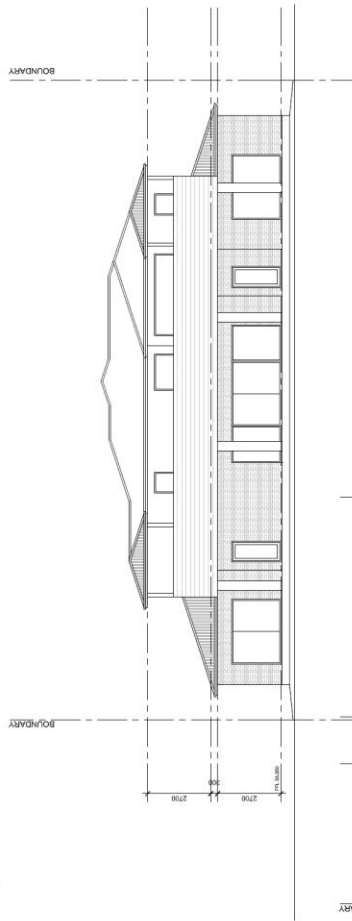


NOTES:  
1. ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SPECIFIED.  
2. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.  
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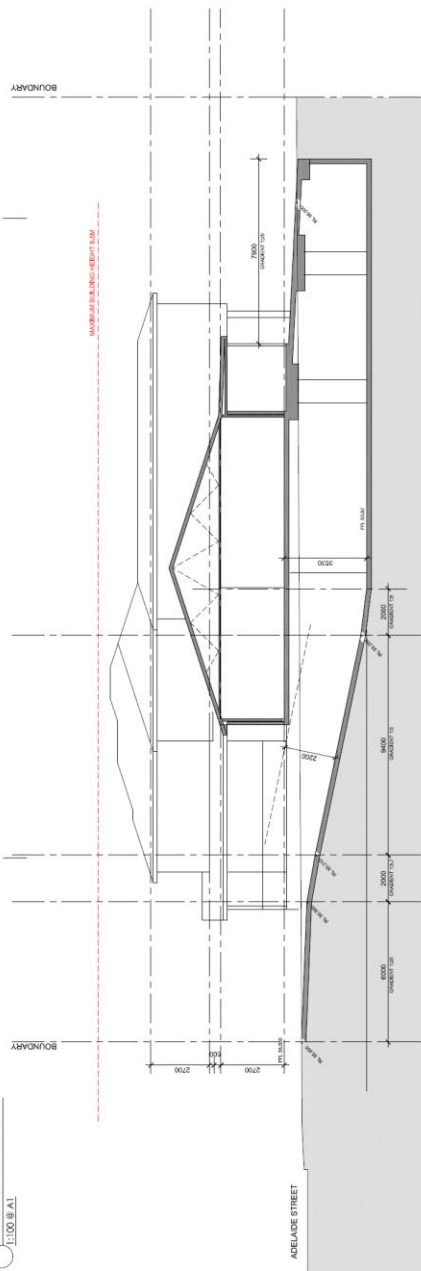
NOTES FOR THE ARCHITECTURAL DRAWING



WEST ELEVATION -  
1:100 @ A1



NORTH ELEVATION -  
1:100 @ A1



SECTION A-A -  
1:100 @ A1



JANSSEN  
DESIGNS

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Incorporated in Australia | Data from NSW Registered Architect 11195



| AMENDMENT |      | Project Title:             |  |
|-----------|------|----------------------------|--|
| NO.       | DATE | Proposed Child Care Centre |  |
|           |      |                            |  |
|           |      |                            |  |
|           |      |                            |  |
|           |      |                            |  |
|           |      |                            |  |
|           |      |                            |  |
|           |      |                            |  |
|           |      |                            |  |

| DRAWING TITLE                    |  | SUBMITTAL                             |  |
|----------------------------------|--|---------------------------------------|--|
| Elevation and Section            |  | Avire Nomak & Crisyl Holdings Pty Ltd |  |
| ASSETS                           |  | LOCAL GOVERNMENT AREA                 |  |
| Map of Adelaide Street, St Marys |  | Perth Council                         |  |
|                                  |  |                                       |  |
|                                  |  |                                       |  |
|                                  |  |                                       |  |
|                                  |  |                                       |  |
|                                  |  |                                       |  |

### 3. TRAFFIC ASSESSMENT

#### Road Hierarchy

The road hierarchy allocated to the road network in the vicinity of the site by the Roads and Maritime Services is illustrated on Figure 3.

Great Western Highway is classified by the RMS as a *State Road* and is a national highway providing the key east-west road link in the area, connecting Sydney to Bathurst. It typically carries three lanes of traffic in each direction within the vicinity of the site. Kerbside parking is generally not permitted on both sides of the road.

Mamre Road is classified by the RMS as a *State Road* and provides the key north-south road link in the area. It typically carries two lanes of traffic in each direction. Kerbside parking is generally not permitted on both sides of the road.

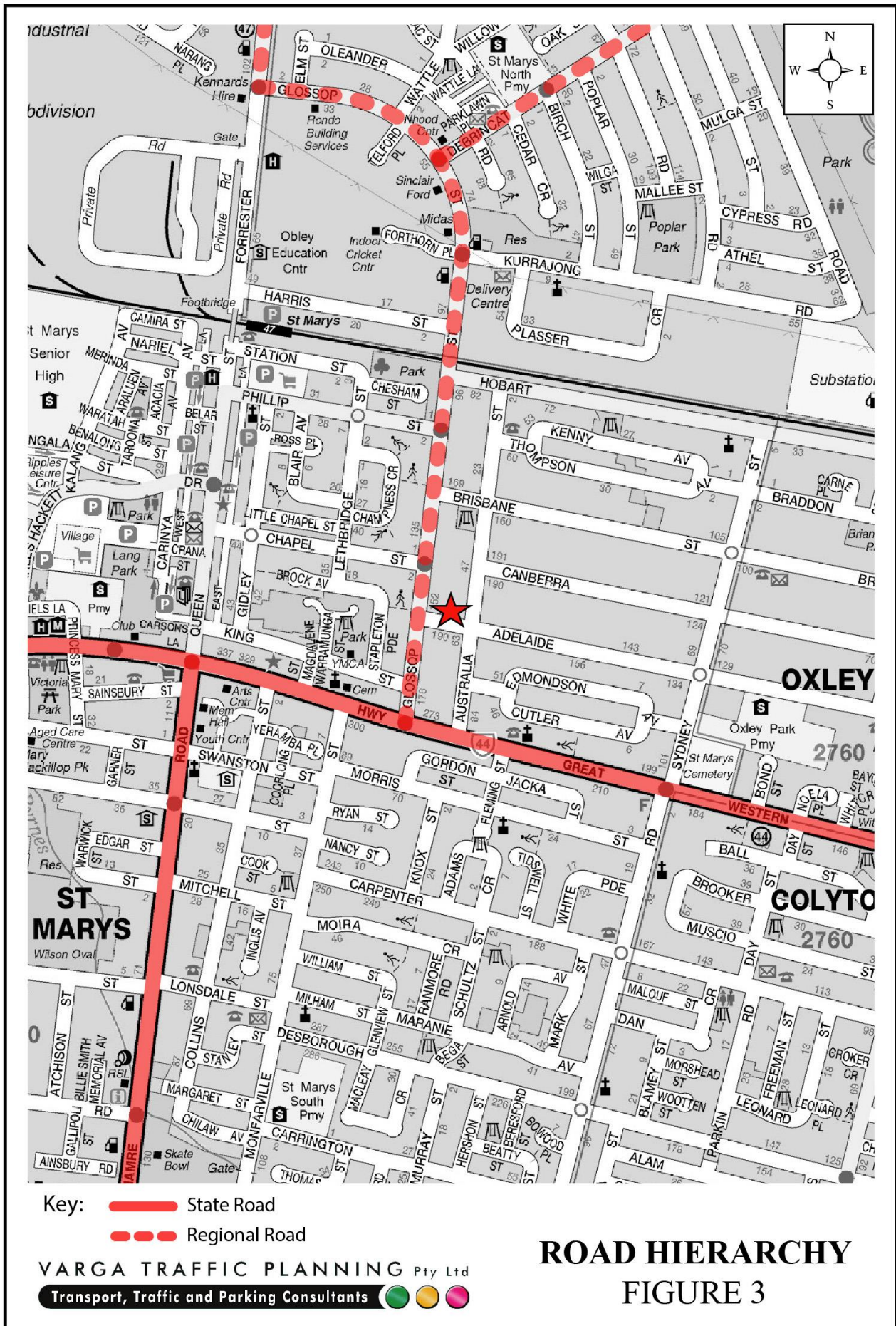
Glossop Street is classified by the RMS as a *Regional Road* and provides another key north-south road link in the area. It typically carries two lanes of traffic in each direction within the vicinity of the site. Kerbside parking is generally not permitted on both sides of the road.

Adelaide Street is a local, unclassified road that is primarily used to provide vehicular and pedestrian access to frontage properties. Kerbside parking is generally permitted on both sides of the road.

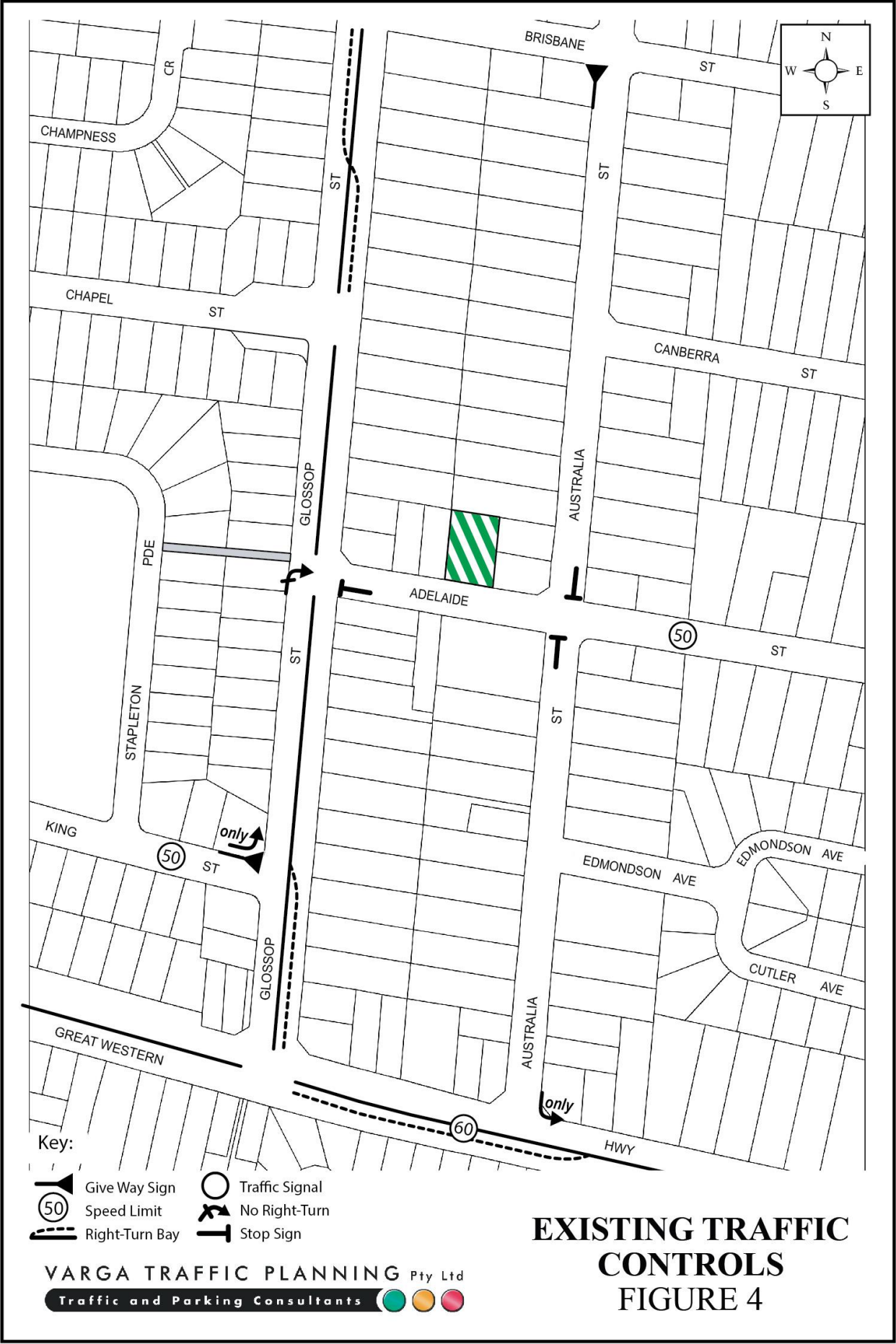
#### Existing Traffic Controls

The existing traffic controls which apply to the road network in the vicinity of the site are illustrated on Figure 4. Key features of those traffic controls are:

- a 60 km/h SPEED LIMIT which applies to Great Western Highway
- a 60 km/h SPEED LIMIT which applies to Glossop Street
- a 50 km/h SPEED LIMIT which applies to Adelaide Street and all other local roads in the area









- TRAFFIC SIGNALS in Great Western Highway where it intersects with Glossop Road
- TRAFFIC SIGNALS in Glossop Street where it intersects with Chapel Street
- STOP SIGNS in Australia Street where it intersects with Adelaide Street
- a STOP SIGN in Adelaide Street where it intersects with Glossop Street

### Existing Public Transport Services

The existing public transport bus services that are available to the site are illustrated on Figures 5A & 5B.

There are currently two bus routes operating within approximately 170 m walking distance of the site on Glossop Street which connect with St Marys Railway Station.

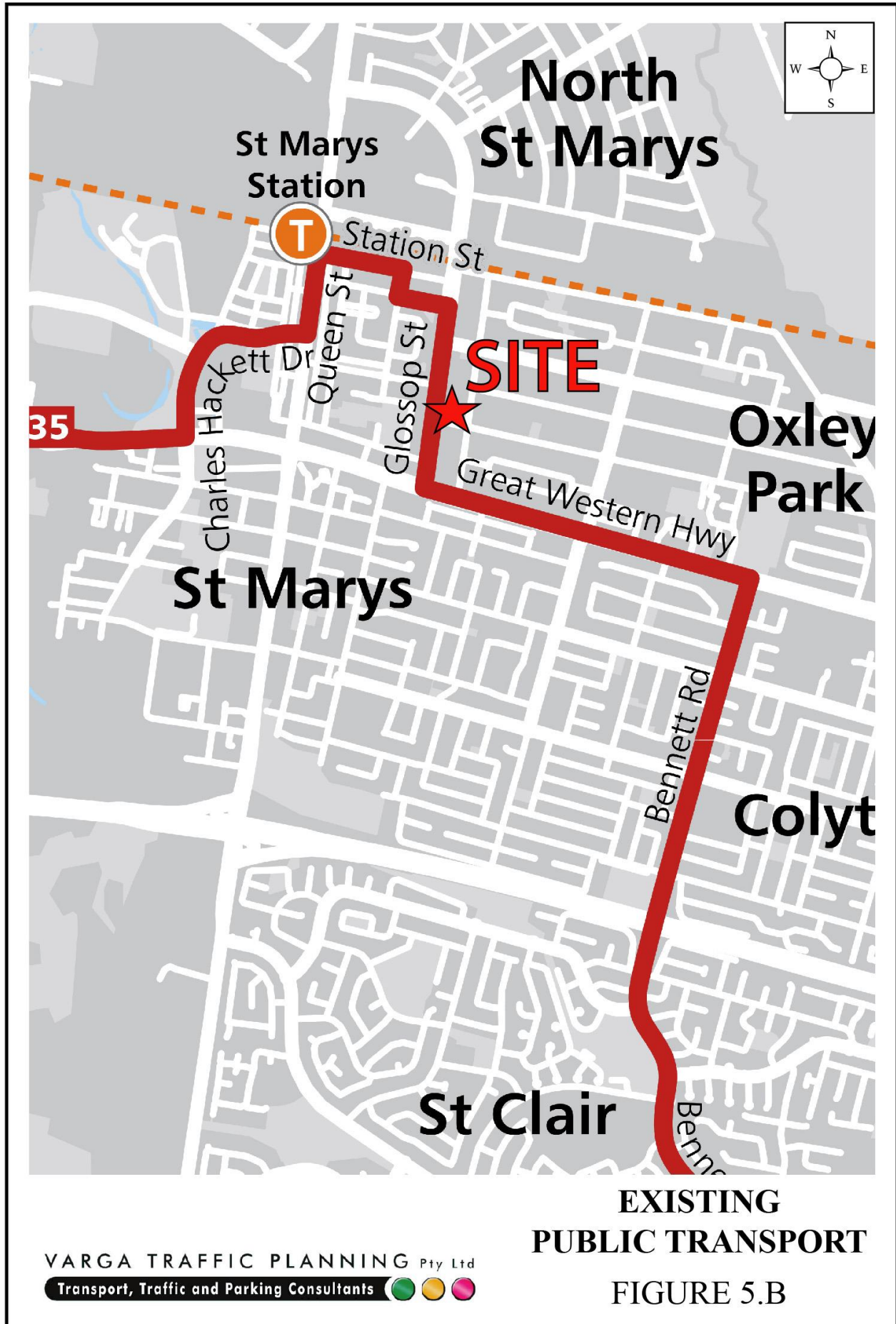
There are also 4 bus routes operating within approximately 650 m walking distance of the site on Phillip Street.

Approximately 210 bus services per day are available in the vicinity of the site on weekdays, decreasing to approximately 113 bus services per day on Saturdays and approximately 62 bus services on Sundays and public holidays as set out below.

The site is therefore considered to be readily accessible to essential services and public transport options.

| Bus Routes and Frequencies |   |           |            |           |           |           |           |
|----------------------------|---|-----------|------------|-----------|-----------|-----------|-----------|
| Route No.                  | Route   | Weekdays  |            | Saturday  |           | Sunday    |           |
|                            |   | IN        | OUT        | IN        | OUT       | IN        | OUT       |
| 745                        | Norwest Private Hospital to St Marys via Stanhope Gardens | 13        | 25         | 11        | 11        | -         | -         |
| 758                        | St Marys to Mount Druitt via Tregear & Shalvey            | -         | 33         | -         | 24        | -         | 10        |
| 759                        | St Marys to Mount Druitt via Ropes Crossing               | -         | 20         | -         | 16        | -         | 13        |
| 774                        | Mount Druitt to Penrith via Nepean Hospital               | 32        | 35         | 17        | 16        | 13        | 15        |
| 782                        | St Marys to Penrith via Werrington                        | 13        | 12         | 12        | 6         | 11        | -         |
| 835                        | WSU Penrith to Prairiewood                                | 14        | 13         | -         | -         | -         | -         |
| <b>Total</b>               |   | <b>72</b> | <b>138</b> | <b>40</b> | <b>73</b> | <b>24</b> | <b>38</b> |





## Projected Traffic Generation

An indication of the traffic generation potential of the development proposal is provided by reference to the Roads and Maritime Services' publication *Guide to Traffic Generating Developments, Section 3 - Landuse Traffic Generation (October 2002)*.

The RMS *Guidelines* are based on extensive surveys of a wide range of land uses and nominates the following traffic generation rate which is applicable to the development proposal:

### **Childcare Centre**

AM: 0.8 peak hour vehicle trips per child

PM: 0.7 peak hour vehicle trips per child

Application of the above traffic generation rates to the proposed childcare centre catering for 85 children yields a traffic generation potential of approximately 68 vehicle trips per hour (vph) during the weekday AM peak period (i.e. 34 trips TO and 34 trips FROM) and approximately 60 vph during the PM peak period (i.e. 30 trips TO and 30 trips FROM).

That projected future level of traffic generation potential should however, be offset or *discounted* by the volume of traffic which could reasonably be expected to be generated by the existing uses of the site, in order to determine the *nett increase (or decrease)* in traffic generation potential expected to occur as a consequence of the development proposal.

The updated TDT 2013/04a nominates the following traffic generation rates which are applicable to the existing development:

### **Low Density Residential Dwellings (Sydney Areas)**

AM: 0.95 per dwelling

PM: 0.99 per dwelling

Application of the above traffic generation rates to the 2 existing residential dwellings on the site yields a traffic generation potential of approximately 2 vph during both the AM and PM peak hour.



Accordingly, it is likely that the proposed development will result in a *nett increase* in the traffic generation potential of the site of approximately 66 vph during the AM peak hour and 58 vph during the PM peak hour.

**Projected Nett Increase in Peak Hour Traffic Generation Potential  
of the Site as a Consequence of the Development Proposal**

|   | <b>AM</b>     | <b>PM</b>     |
|---|---------------|---------------|
| Projected Future Traffic Generation Potential:        | 68 vph        | 60 vph        |
| Less Existing Traffic Generation Potential:           | -2 vph        | -2 vph        |
| <b>NETT INCREASE IN TRAFFIC GENERATION POTENTIAL:</b> | <b>66 vph</b> | <b>58 vph</b> |

That projected increase in the traffic generation potential of the site as a consequence of the development proposal will not have any unacceptable traffic implications in terms of road network capacity.

## 4. PARKING IMPLICATIONS

### Existing Kerbside Parking Restrictions

The existing kerbside parking restrictions which apply to the road network in the vicinity of the site are illustrated on Figure 6 and comprise:

- NO STOPPING restrictions on both sides of Glossop Street

### Off-Street Car Parking Provisions

The off-street car parking requirements applicable to the development proposal are specified in *Penrith Development Control Plan 2014 – Volume 1, Part C10 Transport, Access and Parking* document in the following terms:

#### Child Care Centre

1 space per 10 children

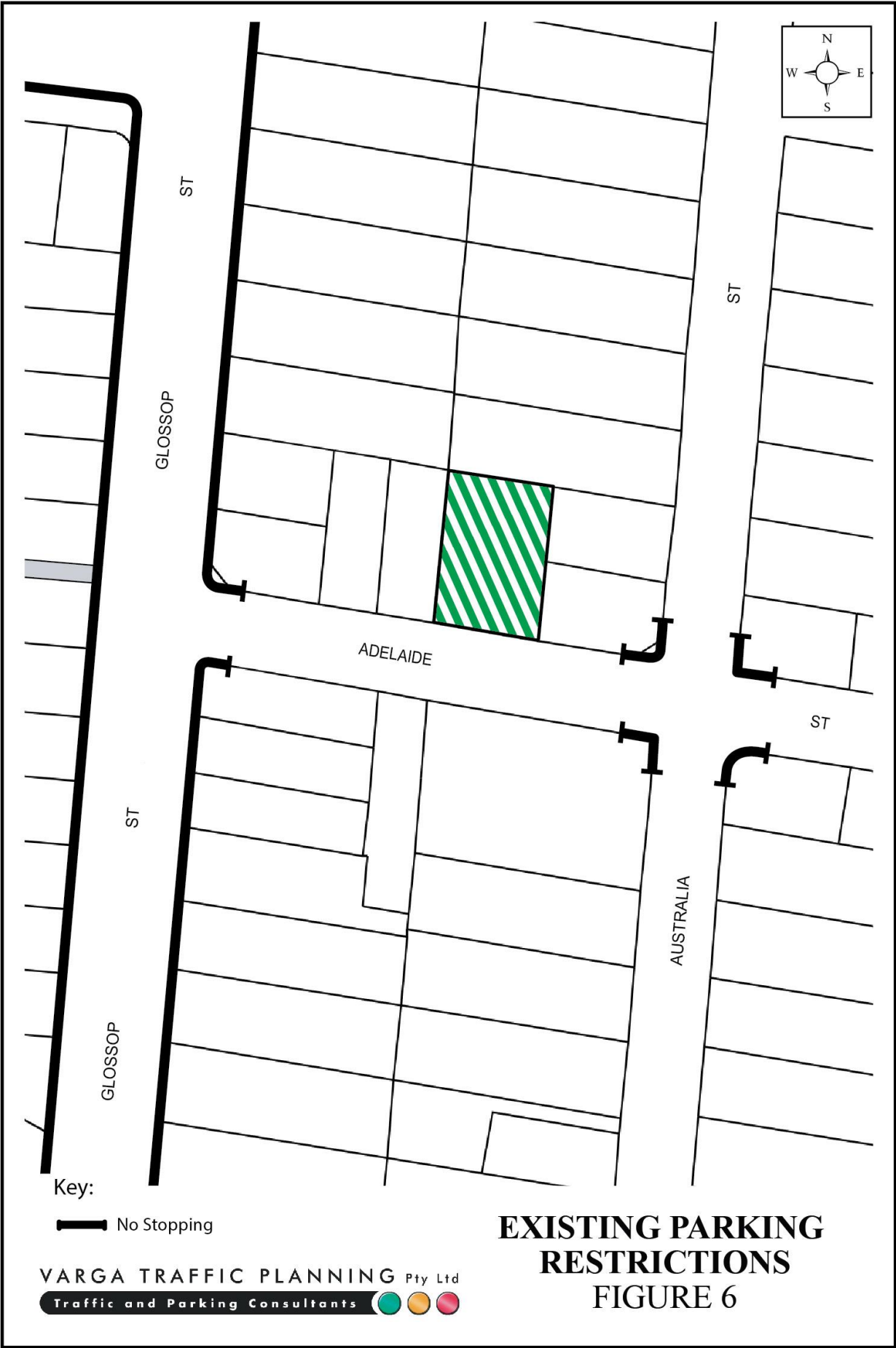
1 space per employee

Application of the above parking requirements to the proposed childcare centre catering for 85 children with 15 staff members yields an off-street parking requirement of 24 spaces as set out below:

|               |                    |
|---------------|--------------------|
| Children      | 8.5 spaces         |
| Staff members | 15.0 spaces        |
| <b>Total:</b> | <b>23.5 spaces</b> |

The above requirements are satisfied by the proposed provision of 26 off-street car parking spaces, comprising 10 spaces for parents/carers and 16 spaces for staff.

The proposed car parking area includes a number of tandem parking spaces. The rear tandem space will be allocated to *staff only*, noting that there will not be any staff arrivals or departures during the peak drop-off or pick-up times. Thus the parent spaces will be vacant whenever staff need to access the rear space in a tandem pair, except in the situation below where a delivery is being made to the centre, noting that such deliveries will be brief and infrequent, and staff will be aware that the delivery driver is in the building in any event.



A number of swept turning path diagrams have been prepared using the *Autodesk Vehicle Tracking 2021* program in accordance with the requirements of *AS2890.1 – 2004* demonstrating two-way traffic flows accessing the site and manoeuvrability within the site. In particular, it is noted that a turning bay has been provided at the end of the car park to assist with vehicle manoeuvring into the car parking spaces. The swept turning path diagrams are reproduced at the end of this report.

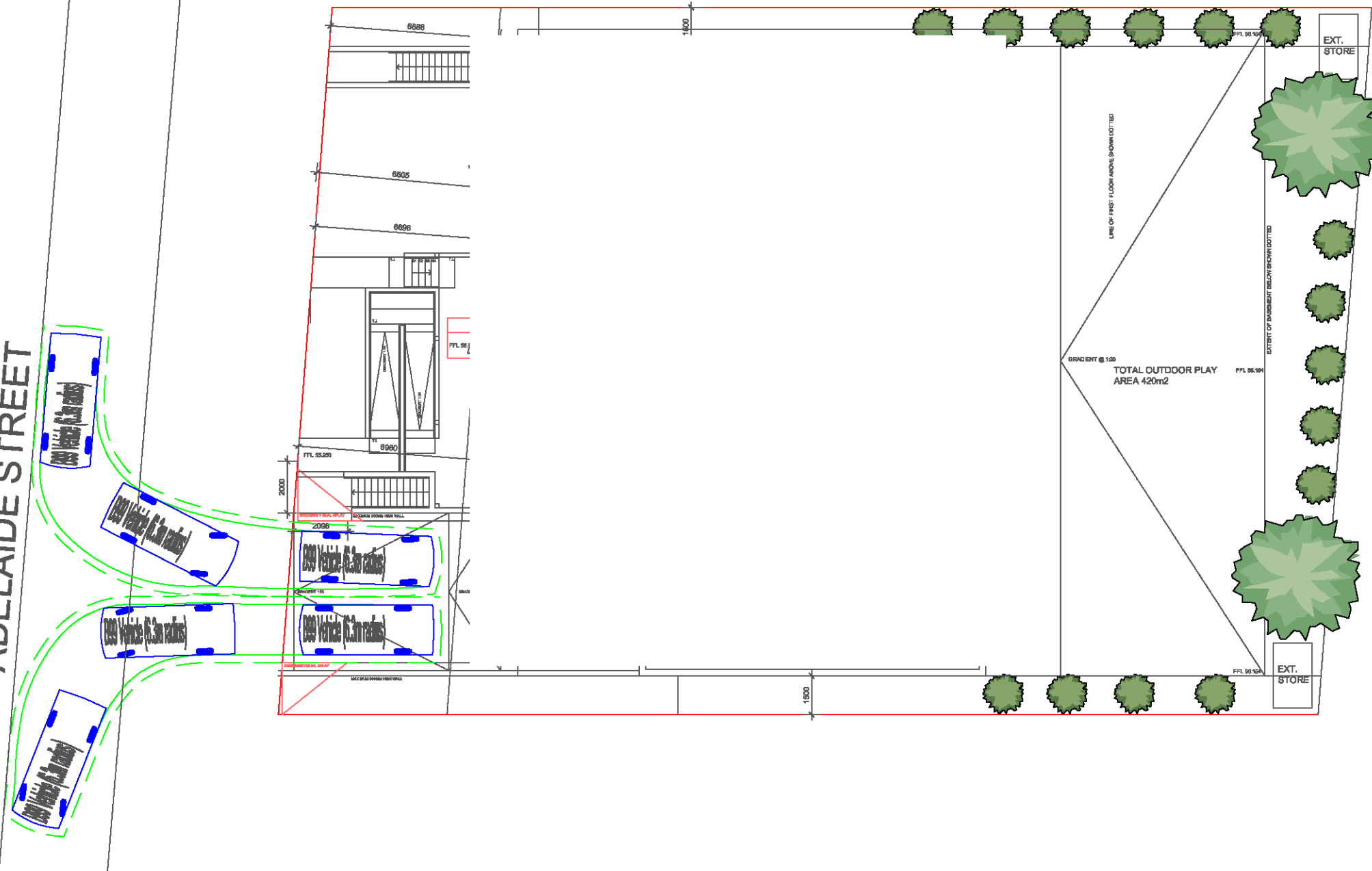
Loading and servicing for the childcare centre will be minimal, and will be undertaken by a variety of light commercial vehicles, such as “white vans” or similar B99 vehicles that can be accommodated in regular parking spaces. All deliveries and servicing will be scheduled outside of the childcare centre’s peak drop-off and pick-up times, when spare capacity will be available within the car parking area.

The geometric design layout of the proposed car parking facilities has been designed to comply with the relevant requirements specified in the Standards Australia publication *Parking Facilities Part 1 – Off-Street Car Parking AS2890.1:2004* and *Parking Facilities Part 6 – Off-Street Parking for People with Disabilities AS2890.6:2009* in respect of parking bay dimensions, aisle & driveway widths, and manoeuvring requirements.

## **Conclusion**

In summary, the proposed parking and loading facilities satisfy the relevant requirements specified in the Council’s DCP as well as Australian Standards and it is therefore concluded that the proposed development will not have any unacceptable traffic or parking implications.





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PROJECT  
RESIDENTIAL DEVELOPMENT

**DRAWING TITLE**  
**B99 Simltaneous**

**ADDRESS**  
187-189 Adelaide St, St Marys

PROJECT NO.  
21852  
REVIEWED  
Robert Varga

1:200 @ A4

DATE DRAWN  
2021-12-10  
PREPARED  
Dominic Lin

**VARGA TRAFFIC PLANNING** Pty Ltd  
**Transport, Traffic and Parking Consultants**





