

Proposed Glass Recycling Facility
**2115-2131 Castlereagh Road,
Penrith**

TRAFFIC AND PARKING ASSESSMENT REPORT

26 September 2017

Ref 17581

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TABLE OF CONTENTS

1. INTRODUCTION	1
2. PROPOSED DEVELOPMENT	5
3. TRAFFIC ASSESSMENT	9
4. PARKING ASSESSMENT	16

LIST OF ILLUSTRATIONS

Figure 1	Location
Figure 2	Site
Figure 3	Road Hierarchy
Figure 4	Existing Traffic Controls
Figure 5	Existing Public Transport Services
Figure 6	Existing Parking Restrictions

1. INTRODUCTION

This report has been prepared to accompany an application to Council for a proposed change of use of an existing industrial building which is located towards the rear of the site at 2115-2131 Castlereagh Road, Penrith (Figures 1 and 2).

The existing industrial building has a floor area of approximately 2,400m², and was previously used by *Crane Enfield Metals Pty Ltd* as a copper warehouse.

It is proposed to convert the existing building for use as a *glass recycling facility* which will be operated by 2-3 staff on-site *plus* 2 truck drivers for the delivery/dispatch of recycling material using a medium sized 9.2m long rigid truck.

The proposed *glass recycling facility* is expected to generate 2 to 4 truck movements per hour during business hours on weekdays. That projected future level of traffic activity is *substantially less* than the traffic generation potential of a 2,400m² industrial building which has the potential to generate some 12 vph to 24 vph when assessed in accordance with the traffic generation rates published in the RMS *Guidelines*.

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
- 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 off-street car parking provided on the site.





2. PROPOSED DEVELOPMENT

Site

The subject site comprises a large industrial development currently occupied by *Crane Enfield Metals Pty Ltd*. The site has a street frontage of approximately 178m Castlereagh Road and occupies an area of approximately 120,403m².

The site is currently occupied by a number of large industrial buildings, with an administrative area and staff car parking areas located towards the front of the site, near Castlereagh Road.

Vehicular access to the site is provided via a large, single two-way driveway approximately 15m in width (plus splays) which has been used to accommodate all truck sizes, including large articulated vehicles such as B-doubles.

Vehicular access through the site to the building which is the subject of this application is provided via two separate two-way internal access roads which extend from the driveway off Castlereagh Road to the subject warehouse building. Both of the internal access roads have previously been used by all truck sizes, including large articulated vehicles such as 19m long semi-trailers and B-double trucks.

Proposed Development

The proposed development will involve the establishment of a proposed 30,000 tonne per annum *glass recycling facility* which is to be operated by *5R Solutions Ltd*. The proposed *glass recycling facility* will occupy an existing warehouse building which is located towards the rear of the subject site, and has a floor area of 2,400m².

The subject building was previously used as a copper warehouse and is currently vacant. There are multiple openings in the western side of the existing building that previously provided truck access into the building which are to be closed.

The proposed *glass recycling facility* will be serviced by medium sized rigid trucks only, approximately 9.2m in length.

It is anticipated that the proposal will generate 2 to 4 truck movements per hour on weekdays, with a maximum of 6 truck movements per hour around midday.

That projected future level of traffic activity is *substantially less* than the traffic generation potential of a 2,400m² industrial building which has the potential to generate some 12 vph to 24 vph when assessed in accordance with the traffic generation rates published in the RMS *Guidelines*.

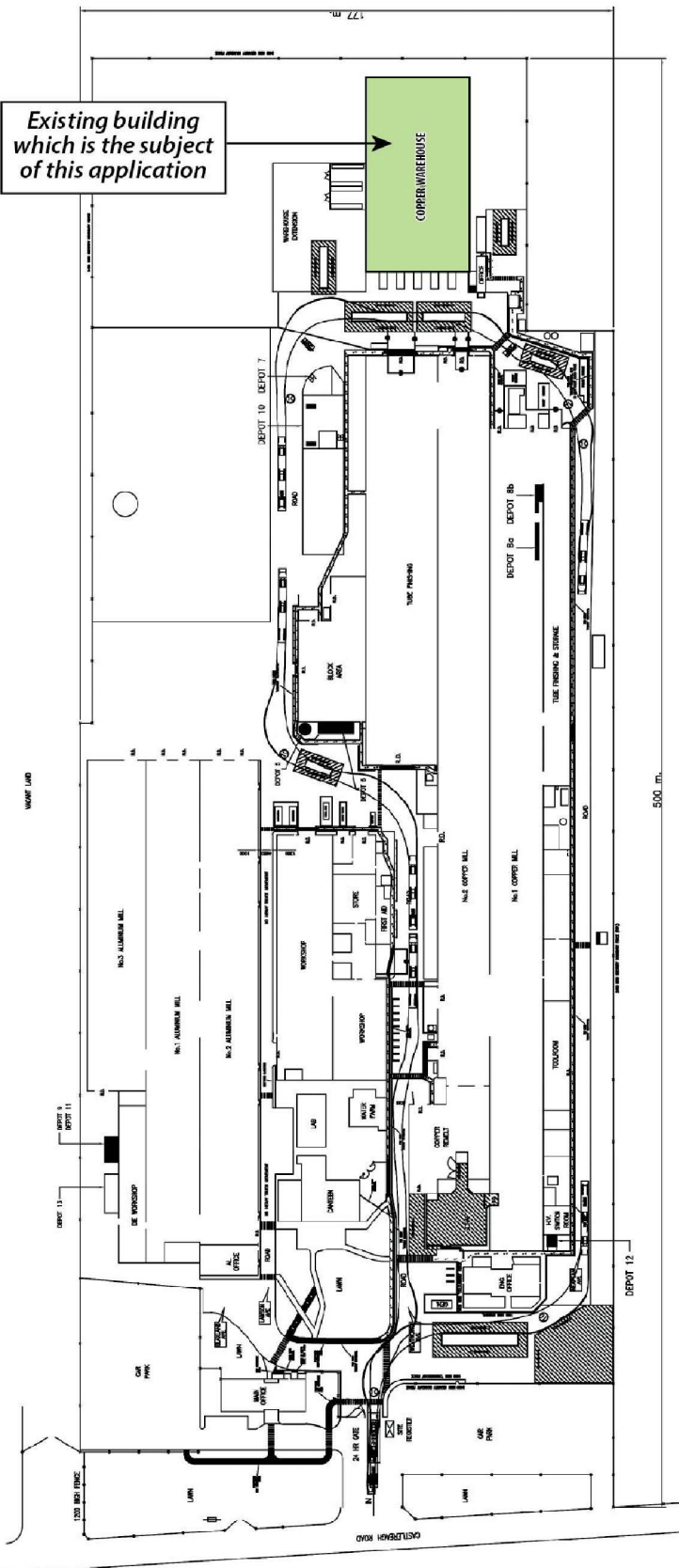
The trucks delivering glass products to the facility for recycling will access the warehouse building using either of the abovementioned internal site access roads. The trucks will drive into the warehouse building in a forward direction. Once inside the building the trucks will proceed to the appropriate stockpile/storage bin where the trucks will reverse to unload before exiting the building in a forward direction.

After sorting and processing the recycled product will be loaded into 9.2m long rigid trucks which will depart the building and proceed to Castlereagh Road in a forward direction.

A plan illustrating the layout of the various buildings on the site was prepared in 2010 by *Crane Enfield Metals Pty Ltd* and is reproduced in the following pages. The plan shows the location of the former copper warehouse building which is the subject of this application.

A plan illustrating the internal layout proposed within the subject building has been prepared by *5R Solutions* and is also reproduced in the following pages.

DO NOT SCALE

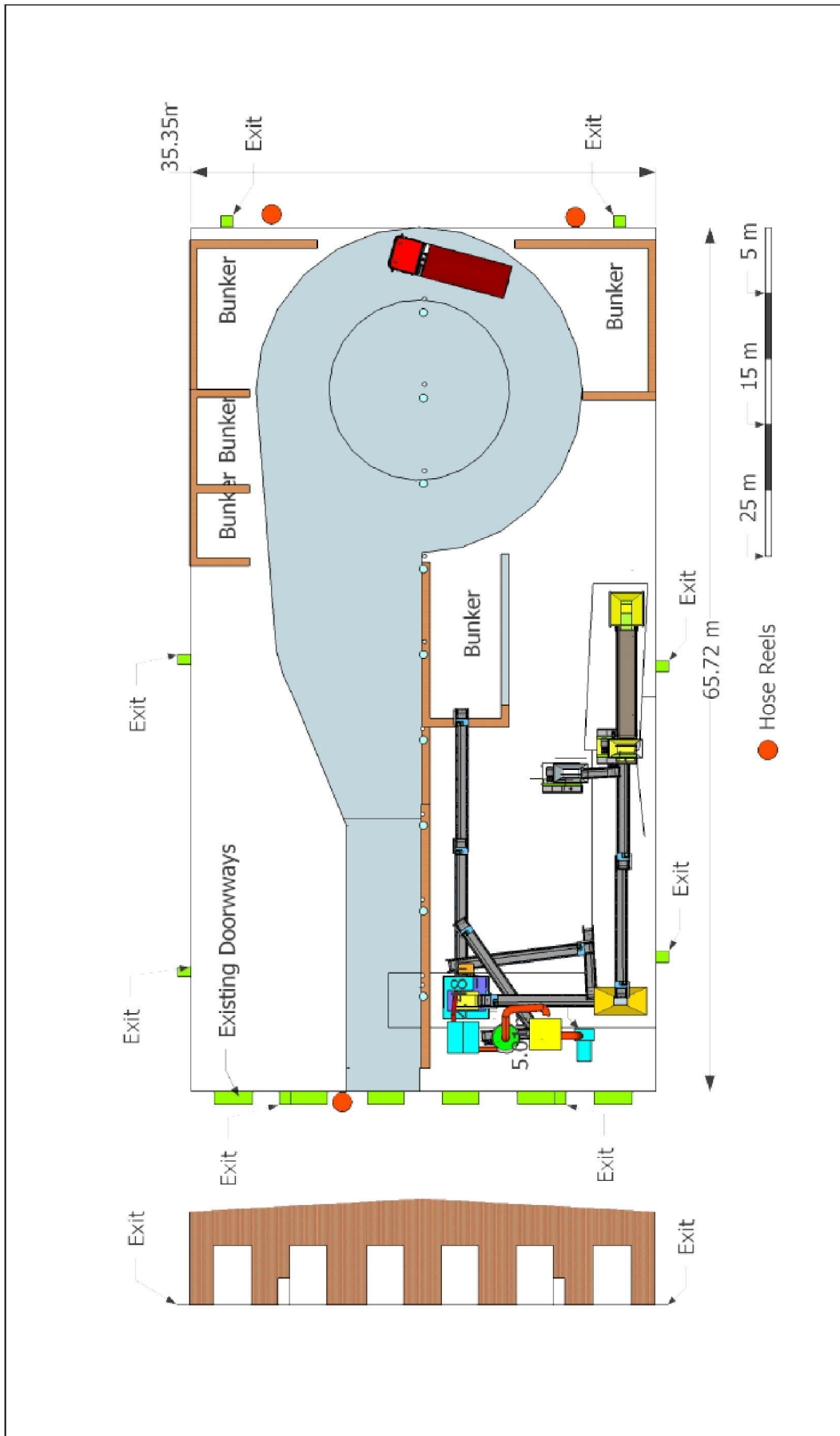


- LEGGEND:
- [Hatched Box] = EXCLUSION ZONE
- [Dashed Box] = PEDESTRIAN CROSSINGS
- [White Box] = HIGH VIS. AREA
- [Thick Line] = HAZARDOUS WALKWAY - EXTERNAL
- [Thin Line] = HAZARDOUS WALKWAY - INTERNAL
- [Double Line] = DESIGNATED WALKWAY - EXTERNAL
- [Single Line] = DESIGNATED WALKWAY - INTERNAL
- [Stippled Box] = DESIGNATED STORAGE AREA
- [Solid Black Box] = DESIGNATED SAFE STANDING ZONE

TOLERANCES	ITEM	DESCRIPTION	APP.	NO.	OFF.	REMARKS
ALL DIMENSIONS TO BE AS SHOWN UNLESS OTHERWISE SPECIFIED	ALL DIMENSIONS	AS SHOWN				
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Crone Entitled Metals Pty. Limited
SITE & BUILDINGS
TRAFFIC MANAGEMENT PLAN - FLETCHER
DATE: 15.11.10
SCALE: 1:600
PROJECT NO: A4262 B

NO.	REVISION	DATE	BY	CHK.	APP.
1	ISSUED FOR TENDERS				
2	REVISED TO AS SHOWN				
3	REVISED TO AS SHOWN				
4	REVISED TO AS SHOWN				



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REVISIONS	
MM/DD/YY	REMARKS
7/7/17	Version 1.00


5Rsolutions glass Recycling Plant

Plant Layout

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.

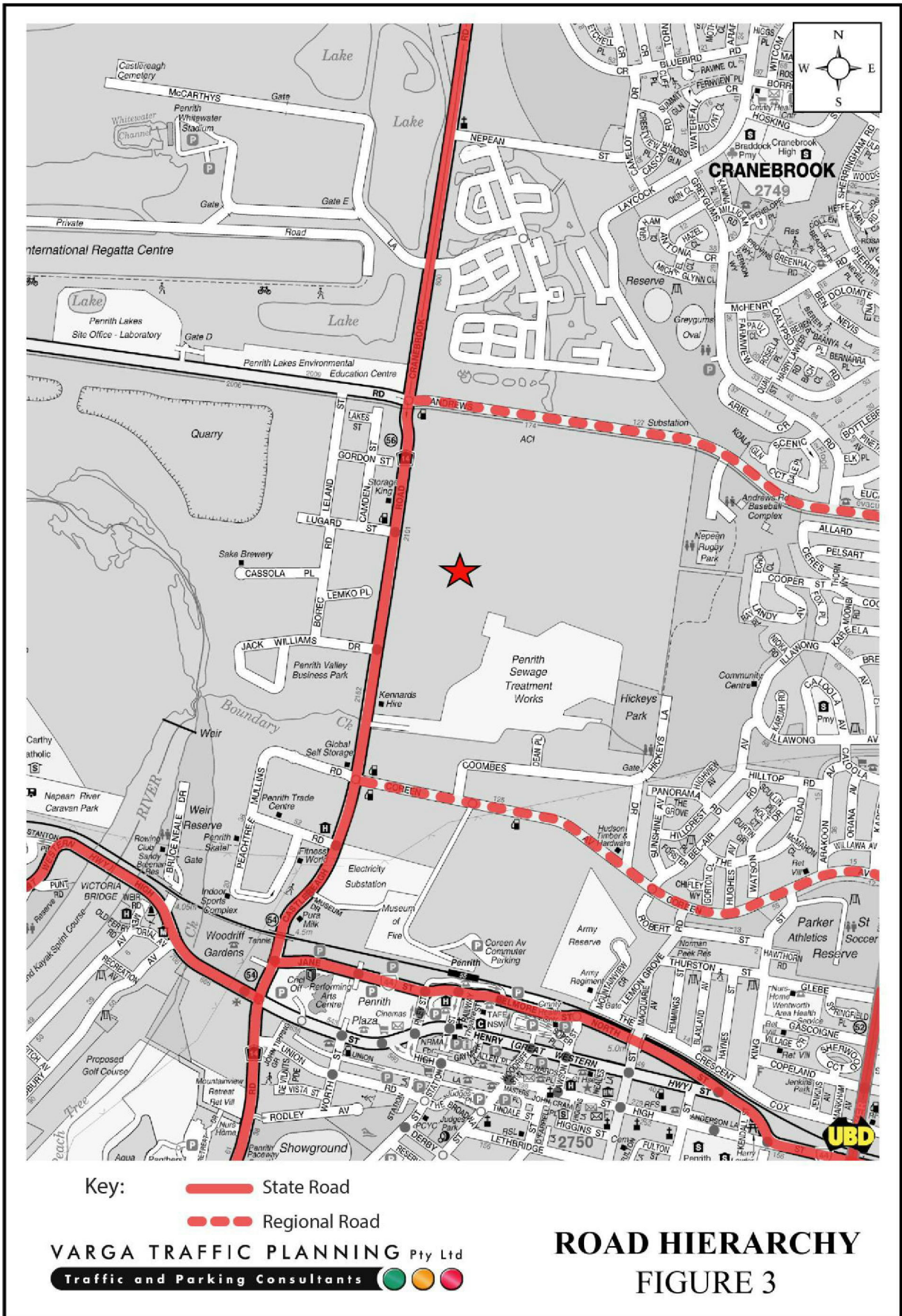
Castlereagh Road is classified by the RMS as *State Road* and provides the key north-south road link in the area. It typically carries two traffic lanes in each direction separated by a raised central median island. Additional lanes are provided at key intersections to accommodate turning movements.

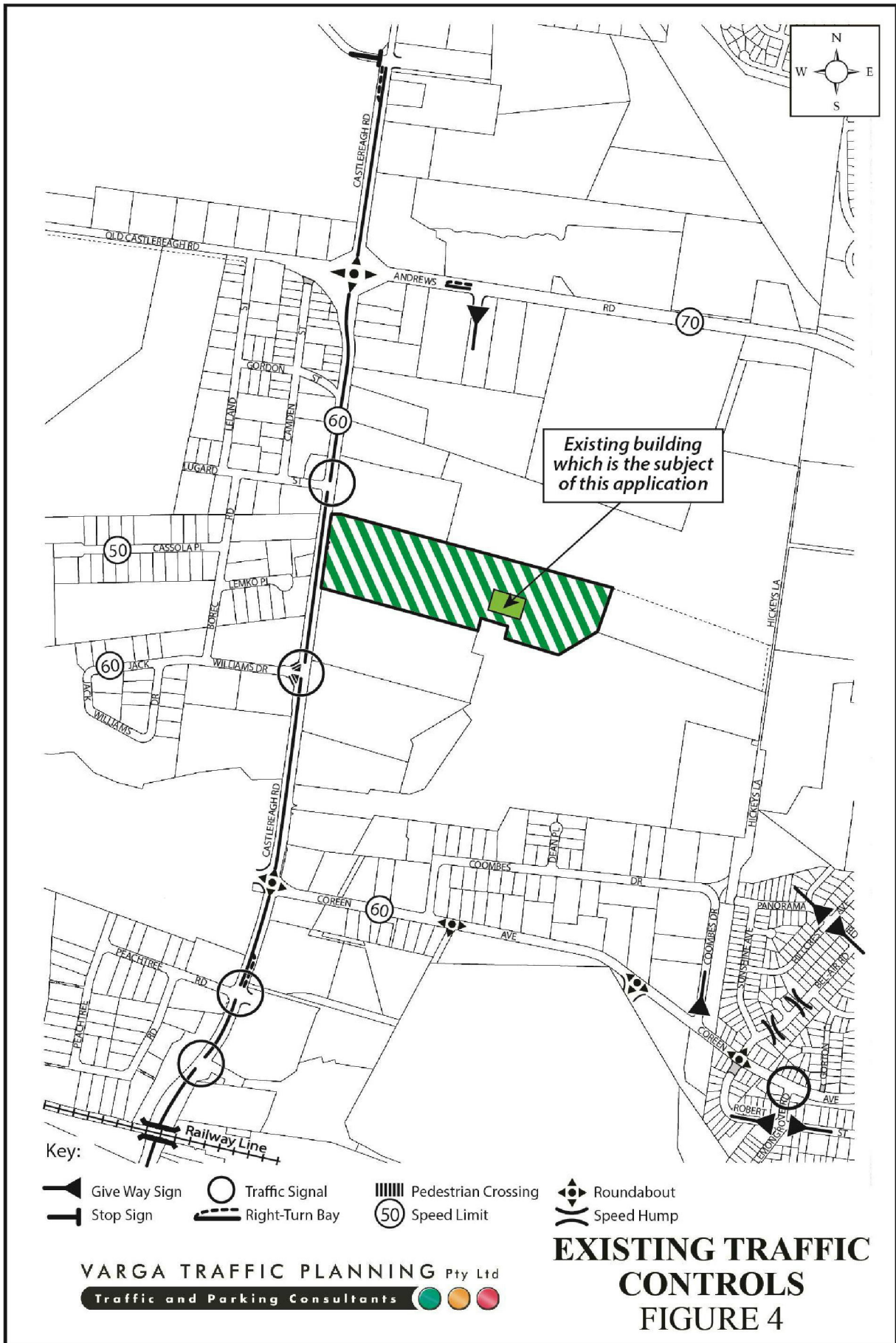
Andrews Road is classified by the RMS as a *State Road* and provides the key east-west road link in the area. It typically carries one traffic lane in each direction.

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 in Castlereagh Road
- a 70 km/h SPEED LIMIT in Andrew Road
- a 50 km/h SPEED LIMIT on most local roads in the surrounding area
- a large ROUNDABOUT at the Castlereagh Road/Andrews Road intersection
- TRAFFIC SIGNALS in Castlereagh Street at its intersections with Lugard St and with Jack Williams Dr
- a large ROUNDABOUT in Castlereagh Street at the Coreen Avenue intersection





Existing Public Transport Services

The existing public transport services available in the vicinity of the site are illustrated on Figure 5.

There are 3 bus routes traversing this section of Castlereagh Road as follows:

- Route 673: Penrith to Windsor via Cranebrook
- Route 783: Jordan Springs to Penrith
- Route 784: Penrith to Cranebrook (Loop Service)

There are 74 services per day travelling along this section of Castlereagh Road on weekdays, decreasing to 24 bus services on Saturdays and 18 bus services on Sundays, as summarised in the table below:

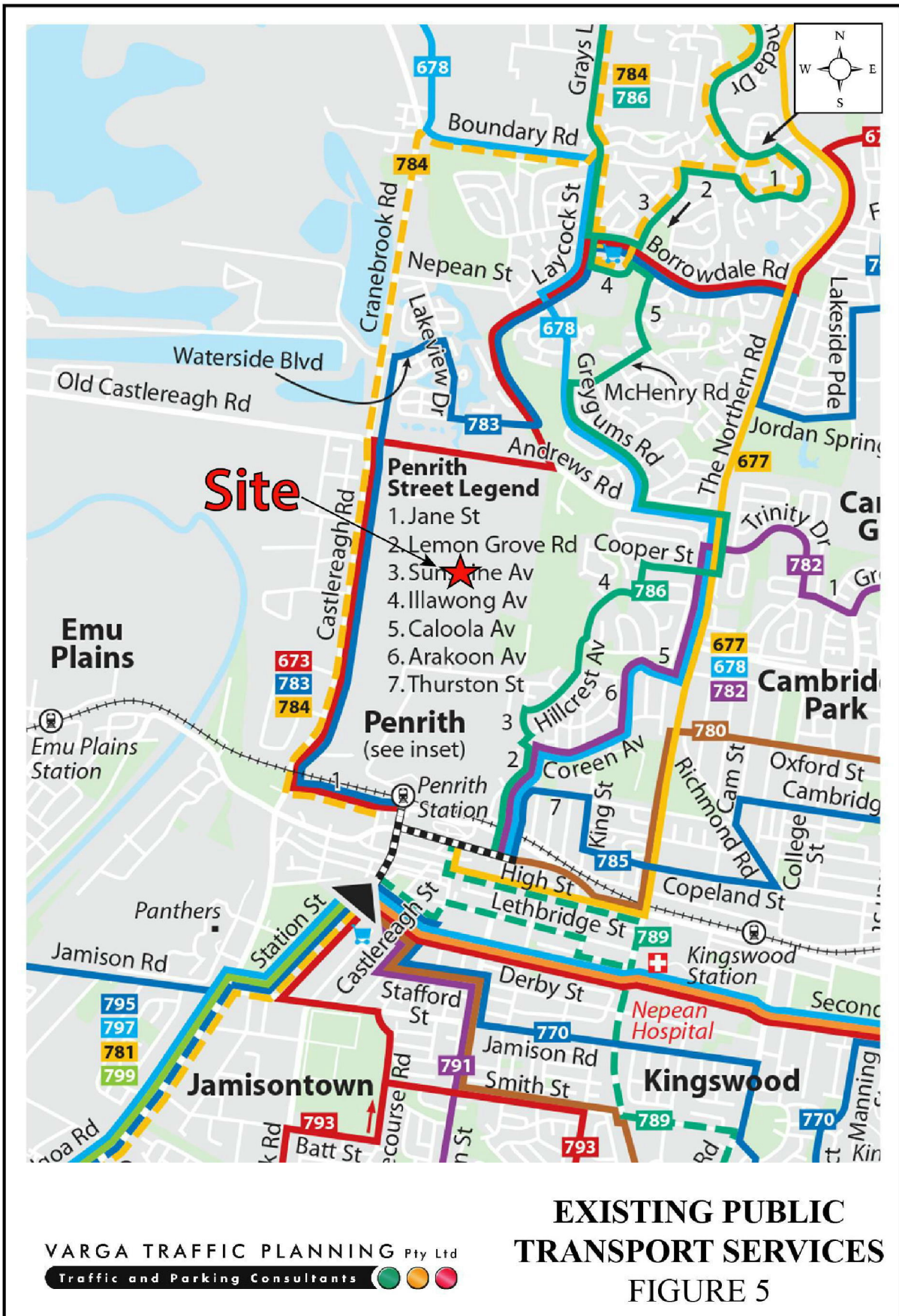
Bus Routes and Frequencies

Route No.	Route	Weekday		Saturday		Sunday	
		In	Out	In	Out	In	Out
673	Penrith to Windsor via Cranebrook	6	6	2	2	0	0
783	Jordan Springs to Penrith	23	23	10	10	9	9
784	Penrith to Cranebrook (Loop Service)	8	8	0	0	0	0
TOTAL		37	37	12	12	9	9

All 3 of the abovementioned bus services can be used to access the suburban railway network at Penrith Station.

Existing Traffic Volumes

An indication of the existing traffic volumes on Castlereagh Road in the vicinity of the site is provided by automatic tube counts carried out in May 2015 on behalf of the Roads and Maritime Services. The data is expressed in terms of *Average Daily Weekday Traffic* and *Average Weekend Daily Traffic* volumes and indicates that Castlereagh Road typically carries 31,800 vehicles per day (vpd) on weekdays as set out in the table below:



Road Sections	Average 7-days	Average Weekday	Average Weekend
Castlereagh Road – 200m north of Jack Williams Drive:	29,866 vpd	31,823 vpd	24,974 vpd

A breakdown of the peak hour traffic volume by direction is provided in the table below, revealing that peak hour traffic flows are typically in the order of 1,500 vph – 1,800 vph in each direction during commuter peak periods:

Section	Road	AM Peak 1 Hour (vph)				PM Peak 1 Hour (vph)			
		Northbound		Southbound		Northbound		Southbound	
		Flow	VCR	Flow	VCR	Flow	VCR	Flow	VCR
Between Andrews Rd and Museum Dr	Castlereagh Road ¹	1597	0.80	1755	0.88	1536	0.77	1493	0.75

Note

1. Road sections with notional capacity of 1000 vehicle/lane

Projected Traffic Generation

An indication of the traffic generation potential of the subject building is provided by reference to the Roads and Maritime Services’ publication *Guide to Traffic Generating Developments, Section 3 – Land Use Traffic Generation (October 2002)*.

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

- Warehouses:** 0.5 peak hour vehicle trip per 100m² GFA
- Factories:** 1.0 peak hour vehicle trip per 100m² GFA

Application of the above traffic generation rates to the existing warehouse building yields a traffic generation potential in the range 12 vph to 24 vph during commuter peak periods.

In this instance, the proposed development will generate *significantly less traffic activity* than a conventional warehouse or factory building as set out above.

The proposed *glass recycling facility* will have 5 staff comprising 3 staff based on-site plus 2 truck drivers.

After the arrival of the 5 staff for work in the morning, the 2 truck drivers will depart the site in their trucks to collect the materials to be recycled.

It is anticipated that the proposed *glass recycling facility* will generate 2 to 4 truck movements per hour (IN and OUT combined), with a maximum of 6 truck movements per hour which is expected to occur around mid-day.

Accordingly, it is anticipated that the proposed development will result in a *significant reduction* in the traffic generation potential of the existing building, and it is therefore reasonable to conclude that the proposed development will not have any unacceptable traffic implications in terms of road network capacity.

In particular, it is clear that no road improvements or intersection upgrades will be required as a consequence of the development proposal.

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. Key features of those parking restrictions are:

- NO STOPPING restrictions on both sides of Castlereagh Road for the majority of its length
- BUS ZONES on both sides of Castlereagh Road at regular intervals
- NO PARKING restrictions on the eastern side of Castlereagh Road directly in front of the site frontage.

Off-Street Car Parking Requirements

The off-street car parking requirements applicable to development proposals in the Penrith LGA are specified in the *Penrith Development Control Plan 2014 Part C10 Transport Access and Parking* in the following terms:

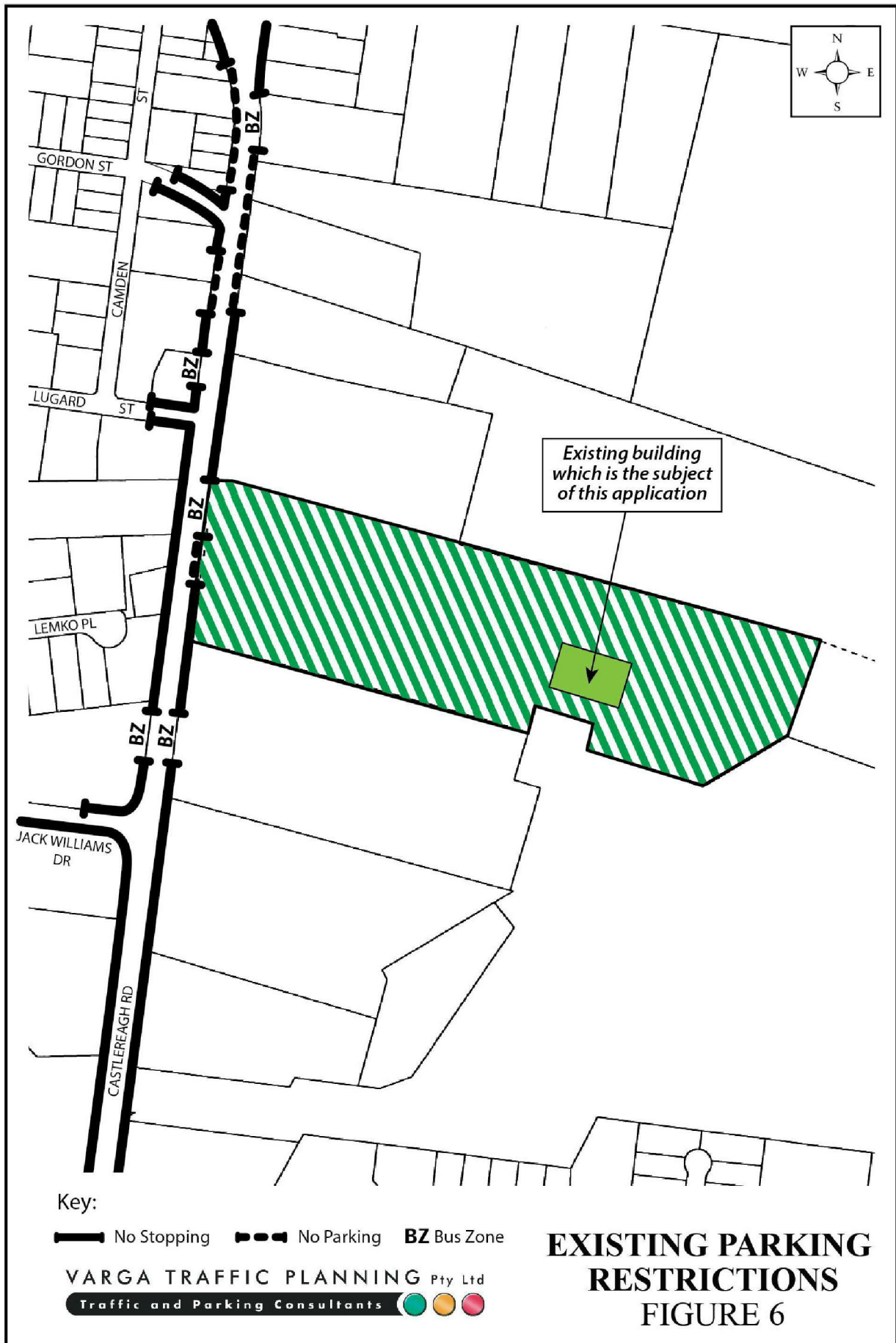
Industries, including ancillary office:

1 space 75m² of gross floor area of 1 space per 2 employees, whichever is the greater

Application of the above parking rates to the existing industrial building yields an off-street car parking requirement of 32 parking spaces.

It is understood that parking for this and the other industrial buildings on the site is provided in the car parking area located near the Castlereagh Road frontage of the site which has a capacity of some 190+ parking spaces.

It is not proposed that staff of the proposed *glass recycling facility* use the existing staff car parking area, as convenient car parking will be available directly adjacent to the side of the existing building which is the subject of this application.



In this instance, the proposed development will have 5 employees and a new parking space for each of those employees is proposed to be accommodated directly adjacent to the building.

Each of the parking spaces proposed adjacent to the building will comply with the dimensional requirements of the Australian Standards' publication *Parking Facilities Part 1: Off-Street Car Parking AS2890.1 – 2004* in terms of the length and width of parking spaces.

In summary, the proposed parking facilities satisfy (or exceed) the relevant requirements specified in Council's *DCP 2013* as well as the Australian Standards and it is therefore concluded that the proposed development will not have any unacceptable parking implications.