Proposed Residential Development

7-9 Castlereagh Street & 8-12 Copeland Street, Liverpool

TRAFFIC AND PARKING ASSESSMENT REPORT

24 June 2015

Ref 15257

VARGA TRAFFIC PLANNING Pty Ltd
Transport, Traffic and Parking Consultants

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LIST OF ILLUSTRATIONS

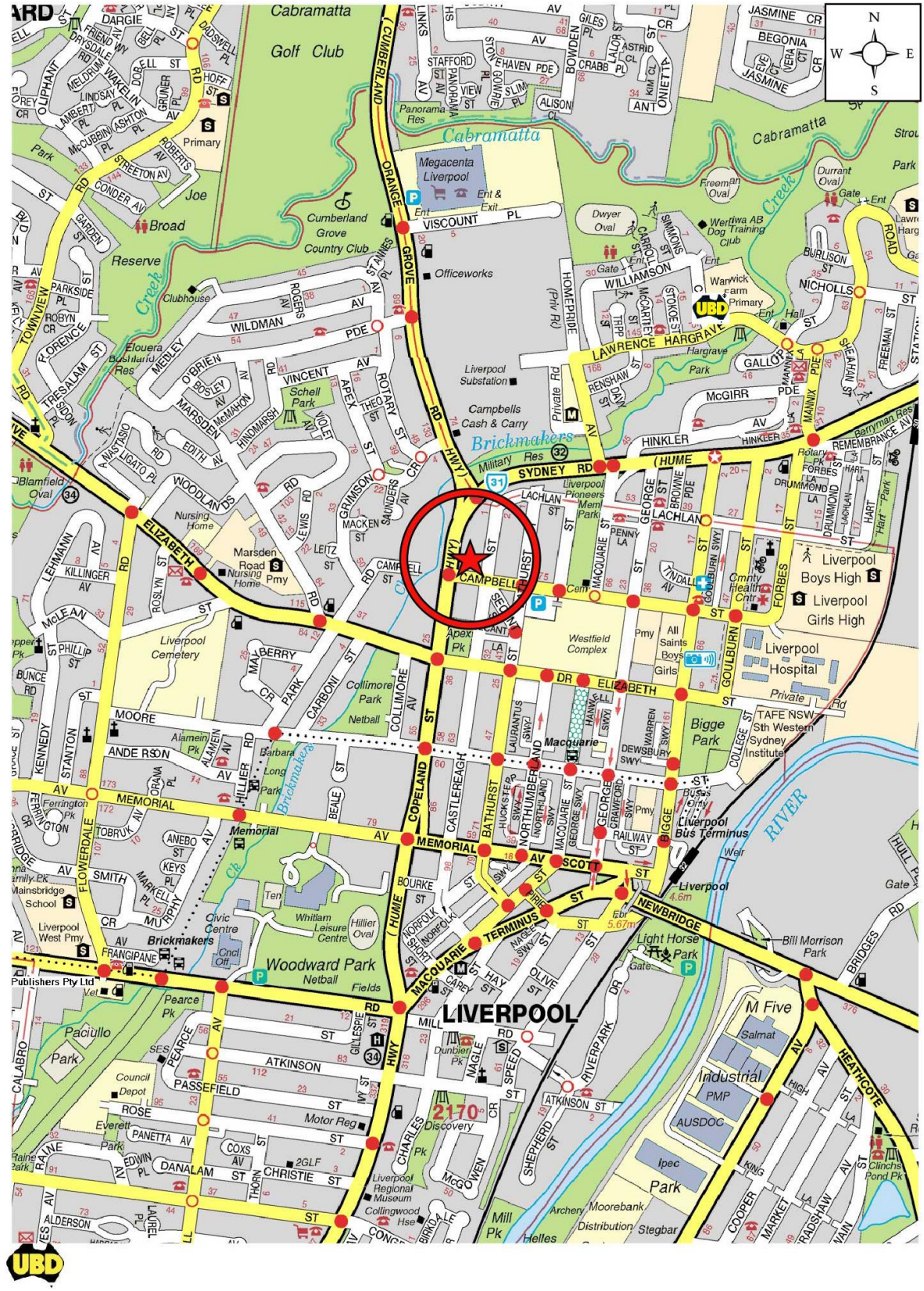
1. INTRODUCTION

This report has been prepared to accompany a Development Application to Liverpool City Council for a residential development proposal to be located at 7-9 Castlereagh Street & 8-12 Copeland Street, Liverpool (Figures 1 and 2).

The proposed development will involve the demolition of the five existing dwelling houses on the site to facilitate the construction of a new residential apartment development. Car parking is to be provided 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, and assigns that traffic generation to the road network serving the site
- 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.



LOCATION
FIGURE 1

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SITE
FIGURE 2

2. PROPOSED DEVELOPMENT

Site

The subject site is located in between Castlereagh Street and Copeland Street, approximately 100m north of Campbell Street. The site has a street frontage approximately 37 metres in length to Castlereagh Street and approximately 58 metres in length to Copeland Street. The site occupies an area of approximately 3,563m^2.

The subject site is currently occupied by five dwelling houses. The two dwellings fronting Castlereagh Street each have a separate vehicular access driveway off Castlereagh Street, and the three dwellings fronting Copeland Street each have a separate vehicular access driveway off Copeland Street

Proposed Development

The proposed development will involve the demolition of the five existing dwelling houses on the site to facilitate the construction of the new residential apartment development.

A total of 120 residential apartments are proposed in the new development as follows:

1 bedroom apartments:	17
2 bedroom apartments:	92
3 bedroom apartments:	11
TOTAL APARTMENTS:	**120**

Off-street car parking is proposed for a total of 143 cars, comprising 128 residential spaces, 12 visitor spaces and 3 service/carwash bays in a new 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 at the southern end of the Castlereagh Street site frontage.

Plans of the proposed development have been prepared by *Mosca Pserras Architects* and are reproduced in the following pages.

mosca pserras architects
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po box 3353, liverpool westfield nsw 2170

client
GLORY PROPERTY GROUP

project
Residential Development

location
7 & 9 Castlereagh Street
8, 10 & 12 Copeland Street
LIVERPOOL

drawing title
Basments 1 & 2

date	checked	project arch	drawn
November 2014		dwg	as
SCALE	no	14023 AP04	issue A

Issue	Description	By	Date
A	DEVELOPMENT APPLICATION	SB	28.04.15

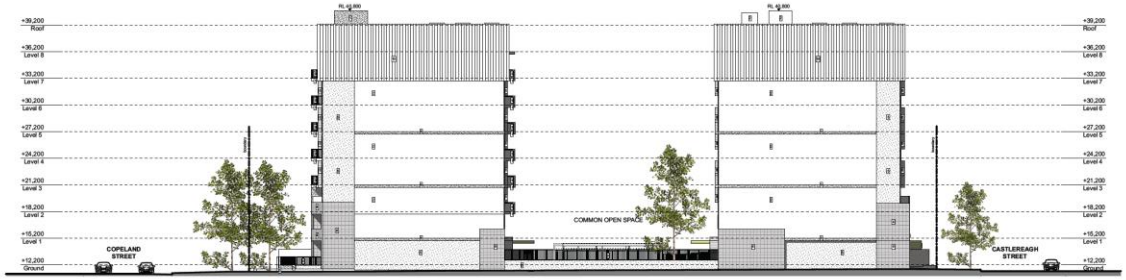
amendments

Notes

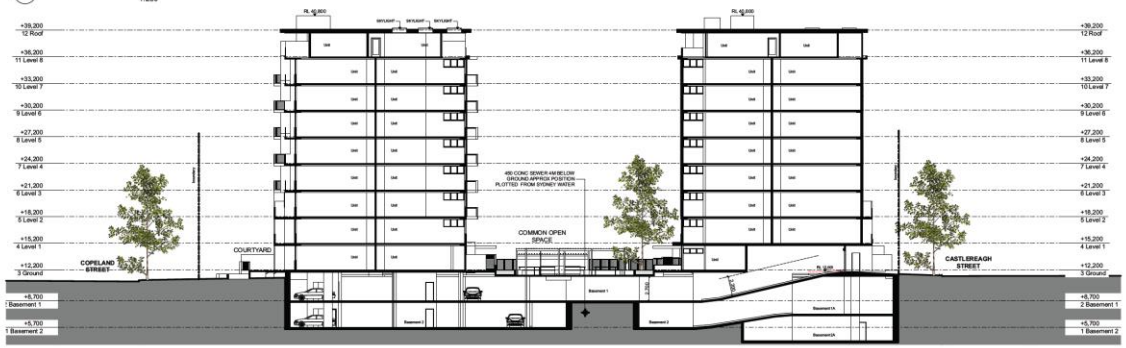
N

- this drawing is copyright and the property of the author, and must not be retained, copied or used without the authority of mosca pserras architects.
- larger scale drawings and written dimensions takes preference.
- do not scale from drawing
- all dimensions to be checked on site before commencement of work.
- all discrepancies to be brought to the attention of the author.


mosca pserras architects
p 02 9601 3244
f 02 9601 6336
a po box 3353, liverpool westfield nsw 2170
client
GLORY PROPERTY GROUP
drawing title
Ground & Level 1 Floor Plans
14023 AP05
A
project
Residential Development
location
7 & 9 Castlereagh Street
8, 10 & 12 Copeland Street
LIVERPOOL
DEVELOPMENT APPLICATION
amendments
Notes
N
Level 1
1:250
Ground Floor
1:250
CASTLEREAGH STREET
COPELAND STREET
No.5
No.11
No.8
No.14
COMMON OPEN SPACE
RMS RESUMPTION



1 South Elevation 1:250



1 Section - A-A 1:250

2 Section - B-B 1:250

1: Dulux 'Domino'
External wall, concrete slabs, hobs & upstands- painted finish

2: Dulux 'Vivid White'
External wall and framing - painted finish

3: Dulux 'Finger Banana'
External entry feature - painted finish

4: [illegible]
External walls

5: Dulux 'Casper White'
External wall, concrete slabs, hobs & upstands- painted finish

6: Performance Glazing
Balustrades

7: Dulux Powdercoat: 'Zeus-Silver Grey Matt (900-51272)'
Garage Door, Windows, Doors, Glass Balustrades & Louvres

8: Composite Aluminium Cladding: 'Silver Grey - Matt finish'
Wall Cladding

9: Dulux Powdercoat: 'Zeus-Charcoal-satin (900-87732)'
Balustrades & Louvres

10: Metal Cladding 'Colorbond-Basalt'
Roof & Wall Cladding

Notes

N

Issue	Description	By	Date
A	DEVELOPMENT APPLICATION	SB	23.06.15

amendments

project
Residential Development

location
7 & 9 Castlereagh Street
8, 10 & 12 Copeland Street
LIVERPOOL

client
GLORY PROPERTY GROUP

drawing title
Elevations & Sections

date	checked	project arch	drawn
November 2014		Greg	SB
scale	no		issue
	14023 AP11		A

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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.

Hume Highway (Copeland Street) is classified by the RMS as a *State Road* and provides the key north-south road link in the area, linking Casula to Ashfield. It typically carries three traffic lanes in each direction in the vicinity of the site, with opposing traffic flows separated by a central median island.

Elizabeth Drive is also classified by the RMS as a *State Road* and provides the key east-west road link in the area, linking between Luddenham and Liverpool. It typically carries three traffic lanes in each direction in the vicinity of the site, with opposing traffic flows separated by a central median island.

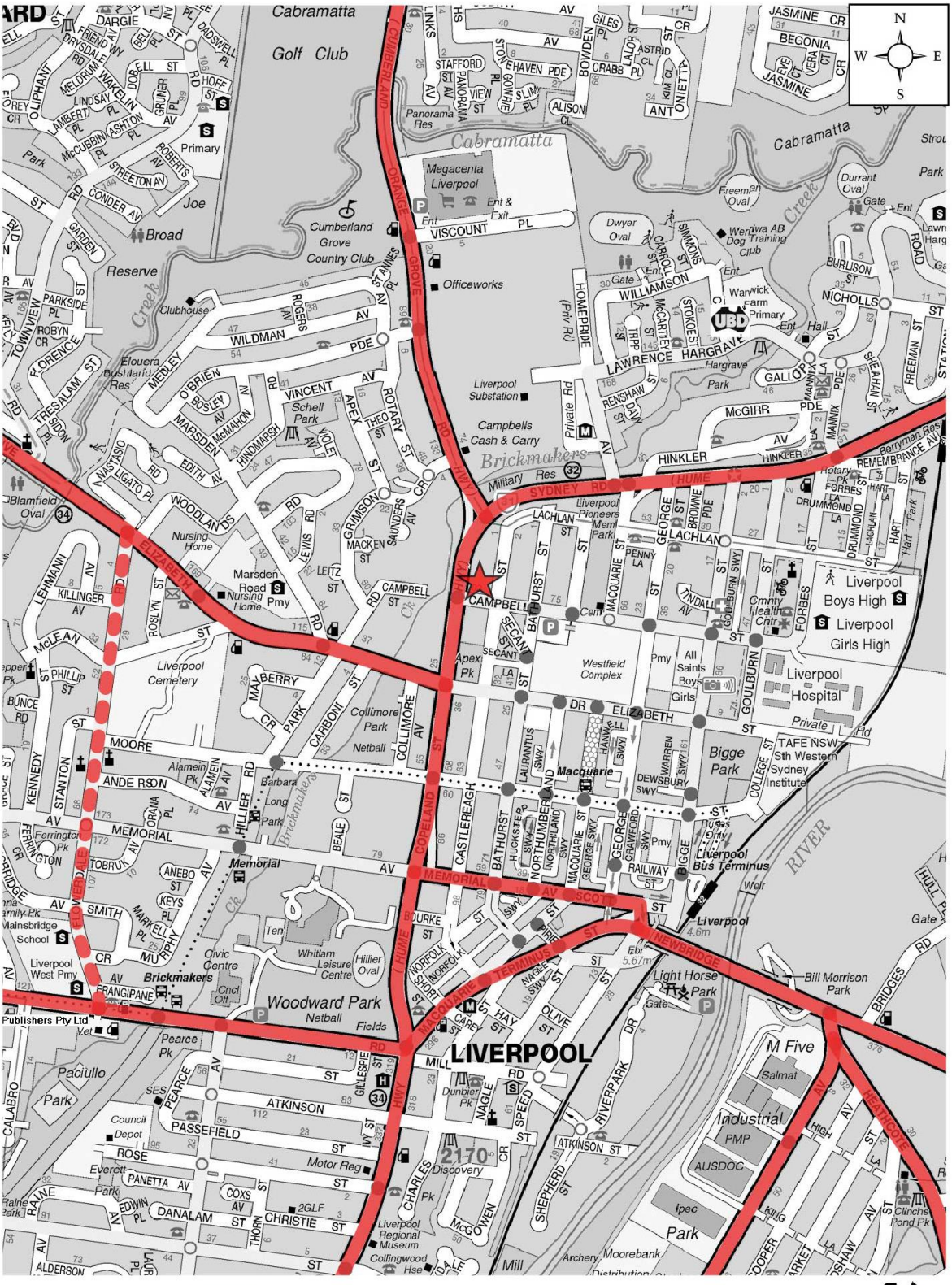
Orange Grove Road is also classified by the RMS as a *State Road* and follows a key north-south road alignment between Liverpool and Cabramatta. It typically carries two traffic lanes in each direction in the vicinity of the site, with opposing traffic flows separated by a central median island. Kerbside parking is generally prohibited.

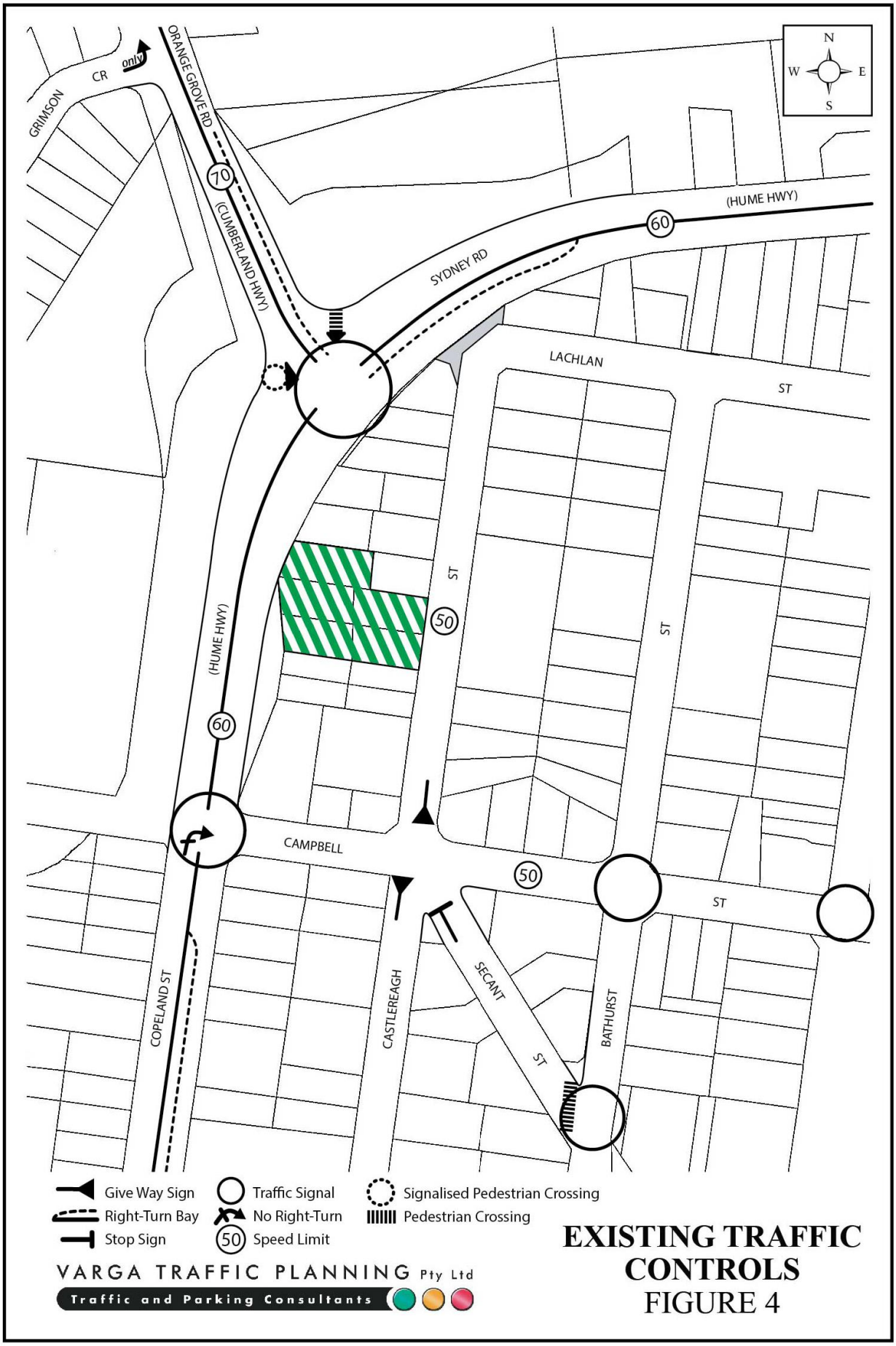
Castlereagh Street and Campbell Street are local, unclassified roads which are primarily used to provide vehicular and pedestrian access to frontage properties. Kerbside parking is generally permitted on both sides of both roads.

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 Copeland Street


Cabramatta
Golf Club
Cumberland Grove Country Club
Megacenta Liverpool
Officeworks
Clubhouse
Reserve
Broad
Joe
Primary
Nursing Home
Marsden Road Nursing Home
Liverpool Cemetery
Liverpool Substation
Campbells Cash & Carry
Brickmakers
Military Res
Liverpool Pioneers Memorial Park
Liverpool Boys High
Liverpool Girls High
Liverpool Hospital
Westfield Complex
All Saints Girls
Bigge Park
TAFE NSW Sth Western Sydney Institute
Liverpool Bus Terminus
Liverpool 4.6m
Macquarie
Collimore Park
Netball
Woodward Park
Fields
Civic Centre
Whitlam Leisure Centre
Hillier Oval
Light Horse Park
Bill Morrison Park
M Five
Industrial
PMP
AUSDOC
Ipec
Park
Salmat
Liverpool Regional Museum
Collingwood Hse
Archery
Moorebank
Mill
Discovery
2170
LIVERPOOL
Key:
State Road
Regional Road
VARGA TRAFFIC PLANNING Pty Ltd
Traffic and Parking Consultants
ROAD HIERARCHY
FIGURE 3


GRIMSON
CR
only
ORANGE GROVE RD
70
(CUMBERLAND HWY)
SYDNEY RD
(HUME HWY)
60
LACHLAN
ST
(HUME HWY)
60
ST
50
ST
CAMPBELL
50
ST
COPELAND ST
CASTLEREAGH
SECANT
ST
BATHURST
N
W
E
S
Give Way Sign
Right-Turn Bay
Stop Sign
Traffic Signal
No Right-Turn
50 Speed Limit
Signalised Pedestrian Crossing
Pedestrian Crossing
VARGA TRAFFIC PLANNING Pty Ltd
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EXISTING TRAFFIC CONTROLS
FIGURE 4

- a 50 km/h SPEED LIMIT which applies to Castlereagh Street and all other local roads in the area

- TRAFFIC SIGNALS in Copeland Street where it intersects with Orange Grove Road and Campbell Street

- GIVE WAY SIGNS in Castlereagh Street where it intersect with Campbell Street.

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 rates which are applicable to the development proposal:

> **High Density Residential Flat Buildings in Sub-Regional Centres**
> 0.29 peak hour vehicle trips/dwelling

The RMS *Guidelines* also make the following observation in respect of high density residential flat buildings:

> **Definition**
> A *high density residential flat building* refers to a building containing 20 or more dwellings. This does not include aged or disabled persons housing. *High density residential flat buildings* are usually more than 5 levels, have basement level car parking and are located in close proximity to public transport services. The building may contain a component of commercial use.
>
> **Factors**
> The above rates include visitors, staff, service/delivery and on-street movements such as taxis and pick-up/set-down activities.

Application of the above traffic generation rates to the new 120 residential apartments of the development proposal yields a traffic generation potential of approximately 35 vehicle trips per hour during commuter peak periods.

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* in traffic generation potential of the site expected to occur as a consequence of the development proposal when compared with the previously approved development on the site.

Application of the "dwelling house" traffic generation rate nominated in the RMS *Guidelines* to the five existing dwelling houses on the site yields a traffic generation potential of approximately 4 peak hour vehicle trips.

Accordingly, it is likely that the proposed development will result in an *increase* in the traffic generation potential the site of approximately 31 vph as set out below:

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

Projected Future Traffic Generation Potential:	34.8 vehicle trips
Less Existing Traffic Generation Potential:	-4.3 vehicle trips
NETT INCREASE IN TRAFFIC GENERATION POTENTIAL:	**30.5 vehicle trips**

That projected increase in traffic activity as a consequence of the development proposal is minimal, is consistent with the rezoning objectives of the area, and will clearly not have any unacceptable traffic implications in terms of road network capacity or traffic-related environmental effects.

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 5 and comprise:

- CLEARWAY restrictions along both sides of Copeland Street during *morning* and *afternoon* peak periods, including along the site frontage

- NO STOPPING restrictions along both sides of the Copeland Street, including along the site frontage

- NO PARKING restrictions along both sides of Campbell Street

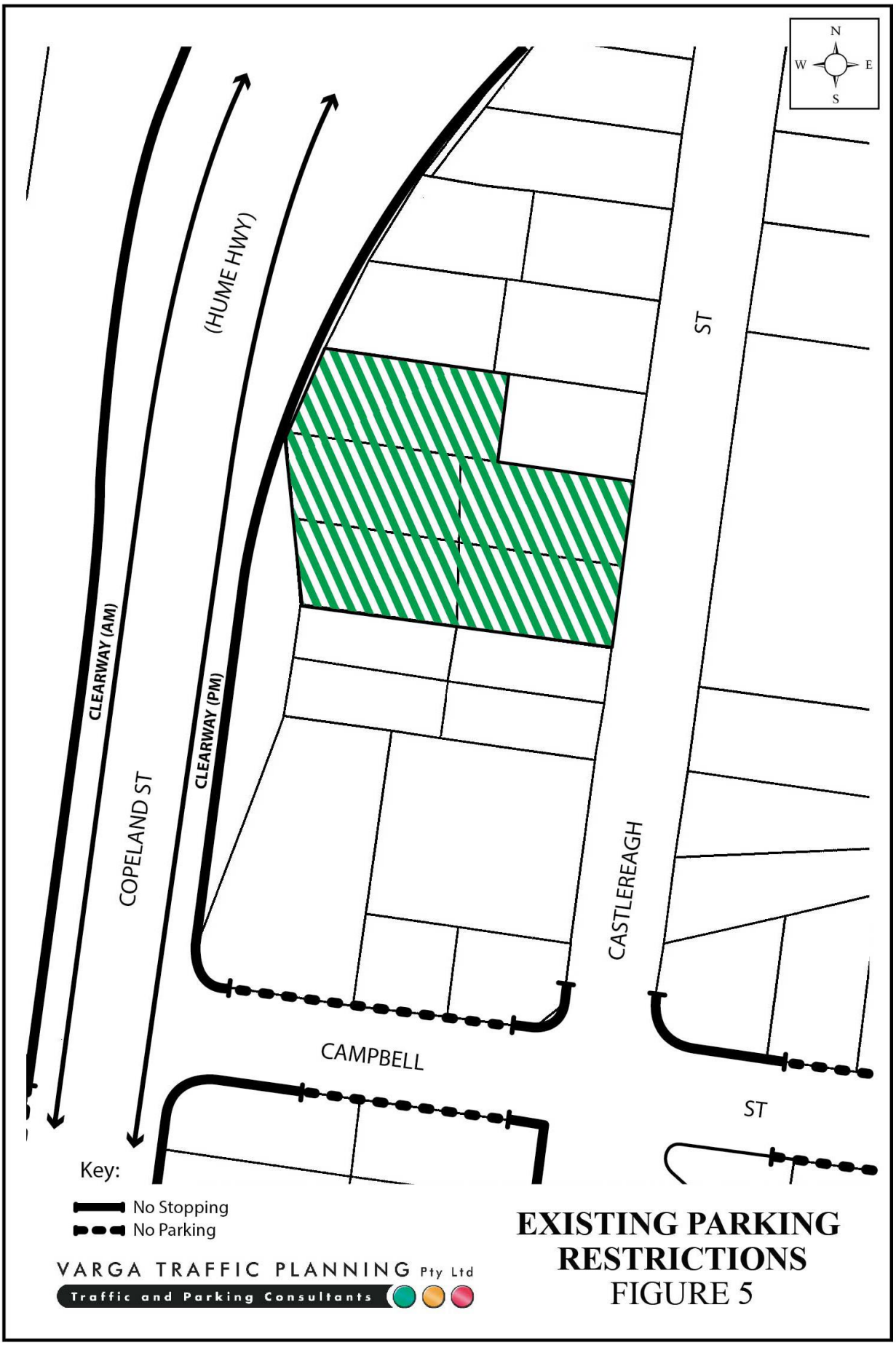
- generally UNRESTRICTED kerbside parking along both sides of Castlereagh Street, including along the site frontage, and throughout the local area

Off-Street Parking Provisions

The off-street parking requirements applicable to the development proposal are specified in Council's *Development Control Plan 2008, Part 4 – Liverpool City Centre, 4. Traffic and Access* document in the following terms:

Car Parking for Residential Development	
1 or 2 Bedroom Apartment:	1.0 space per dwelling
3 Bedroom Apartment:	1.5 spaces per dwelling
Visitors:	1.0 space per 10 dwelling
Services:	1.0 space per 40 dwelling
	(for removalist and car wash bay, maximum of 4 spaces)

Application of the above parking requirements to the residential development proposal yields an off-street parking requirement of 141 parking spaces as set out below:


N
W
E
S
(HUME HWY)
CLEARWAY (AM)
CLEARWAY (PM)
COPELAND ST
CASTLEREAGH ST
CAMPBELL ST
Key:
No Stopping
No Parking
VARGA TRAFFIC PLANNING Pty Ltd
Traffic and Parking Consultants
EXISTING PARKING RESTRICTIONS
FIGURE 5

Residents (120 Apartments):	125.5 spaces
Visitors:	12.0 spaces
Service/Vehicle Bays:	3.0 spaces
TOTAL:	**140.5 spaces**

The proposed development makes provision for a total of 143 off-street parking spaces, comprising of 128 residential spaces, 12 visitor spaces and 3 service/carwash bays, thereby complying with Council's parking code requirements.

The geometric design layout of the proposed carparking facilities have 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* in respect of parking bay dimensions and aisle widths.

In summary, the proposed parking facilities satisfy the relevant requirements specified in both Council's Parking Code as well as the Australian Standards and it is therefore concluded that the proposed development will not have any unacceptable parking implications.