

Proposed Residential Development

**62-62A Copeland Street,  
Liverpool**

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**TRAFFIC AND PARKING ASSESSMENT REPORT**

1 August 2023

Ref 23019

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## **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 62-62A Copeland Street, Liverpool (Figures 1 and 2).

The proposed development involves the demolition of existing two-storey older style residential flat building on the site to facilitate the construction of a new 11-storey residential apartment building, comprising a total of 43 units.

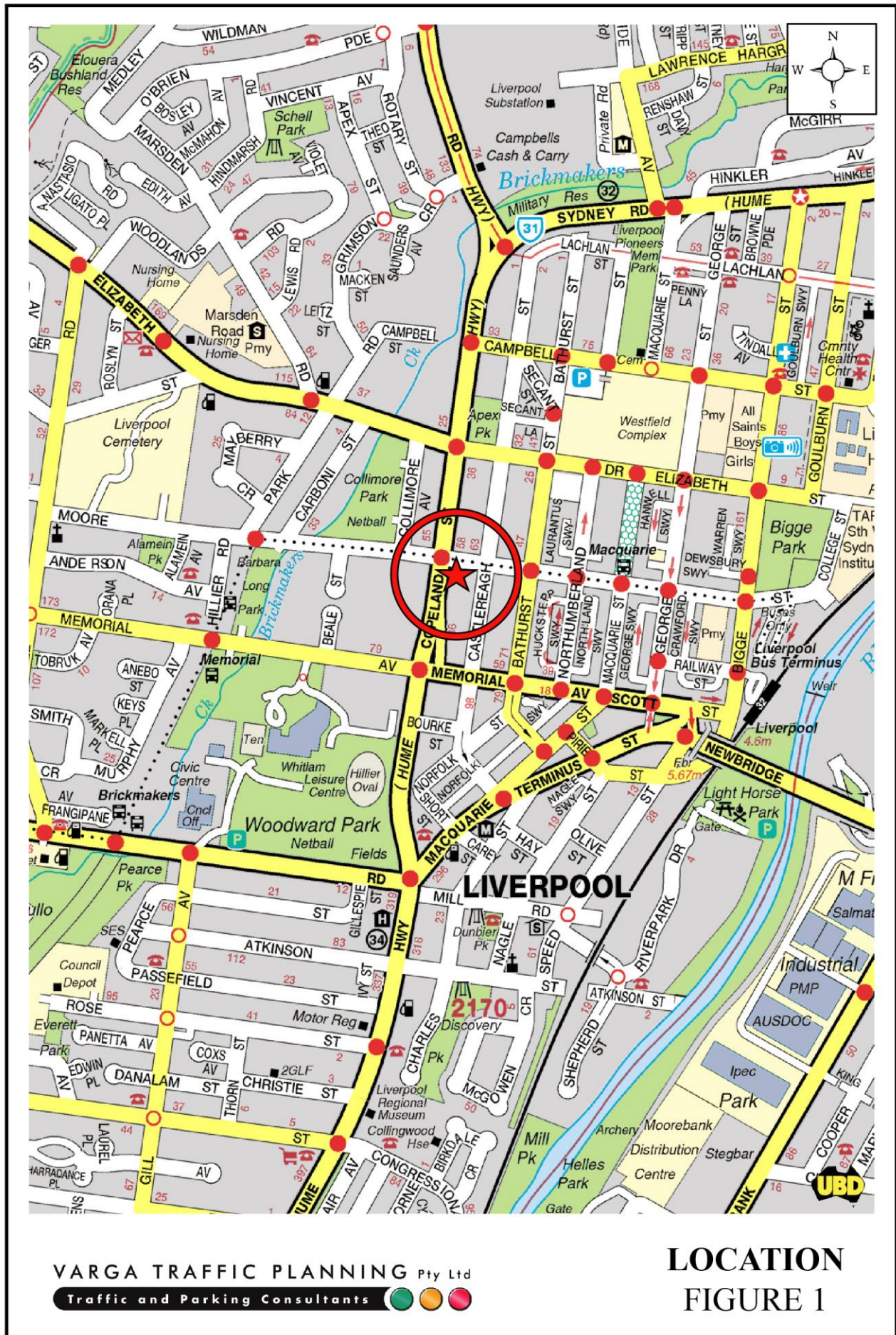
Off-street parking is to be provided for a total of 49 cars in a new two-level basement parking area, in accordance with Council's requirements. Vehicular access to the site is to be provided via a new entry/exit driveway located towards the eastern end of the Moore Street site frontage.

The proposed new driveway will include a raised splitter island dividing the ingress and egress into the site, to channelise vehicular movements and prevent right turn movements to/from Moore Street into/out of the site.

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 and public transport services 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 and loading facilities for compliance with the relevant codes and standards

- assesses the adequacy and suitability of the quantum of off-street car parking and loading provided on the site.







## 2. PROPOSED DEVELOPMENT

### Site

The subject site is located on the south-eastern corner of the Copeland Street and Moore Street intersection. The site has street frontages of approximately 37m in length to Copeland Street, approximately 27m in length to Moore Street and occupies an area of approximately 1,287m<sup>2</sup>. The site is zoned *R4 – High Density Residential*, lies within the Liverpool City Centre and is located within 900m walking distance west of the Liverpool Railway Station.

No. 62 Copeland Street located within the northern portion of the site is *vacant* of structures and was previously occupied by a single dwelling house, with off-street parking. Vehicular access to the site is provided via an entry/exit driveway located at the eastern end of the Moore Street site frontage.

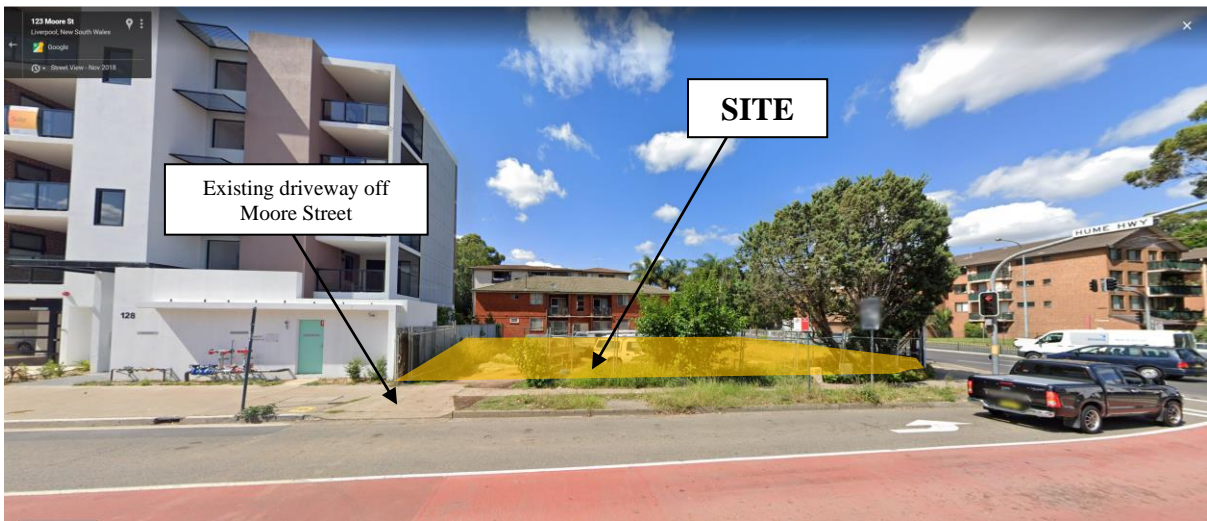
No. 62A Copeland Street located within the southern portion of the site is occupied by an older style residential flat building, comprising 2 x 1-bedroom and 6 x 2-bedroom apartments. Informal off-street parking is currently provided at the rear of the existing residential flat building, with vehicular access provided via an entry/exit driveway located at the northern end of the Copeland Street site frontage.

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





Streetview images are also reproduced below, indicating the location of existing vehicular crossings provided off the Moore Street and Copeland Road site frontages.



Elevation view of the site along the Moore Street site frontage



Elevation view of site along the Copeland Road site frontage

**Proposed Development**

The proposed development involves the demolition of the existing buildings on the site to facilitate the construction of a new residential apartment building. A total of 43 residential apartments are proposed in the new building as follows:

1 bedroom apartments:	14
2 bedroom apartments:	29
<b>TOTAL APARTMENTS:</b>	<b>43</b>
	6



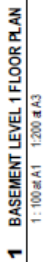
Off-street parking is proposed for a total of 49 cars in a new two-level basement parking area, comprising 43 residential spaces (including 4 disabled spaces), 4 visitor spaces, a dedicated courier bay and car wash bay, in accordance with Council's *DCP* requirements.

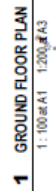
Vehicular access to the site is to be provided via a new entry/exit driveway located at the eastern end of the Moore Street site frontage and includes a triangular splitter island. The splitter island is a common feature for developments with sole access to an arterial road and is aimed at channelising vehicular movements to left-in/left-out *only*, as per TfNSW requirements.

Garbage collection is expected to be undertaken by Council's waste contractor via a wheel-in/wheel-out arrangement directly from the proposed bin holding area located on the ground floor level.

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











### **3. TRAFFIC ASSESSMENT**

#### **Road Hierarchy**

The road hierarchy allocated to the road network in the vicinity of the site by Transport for NSW (TfNSW) is illustrated on Figure 3.

The Hume Highway (Copeland Street) is classified by TfNSW as a *State Road* and provides the key north-south road link in the area, linking Orange Grove Road and Parramatta Road. 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 and turning bays provided at key locations.

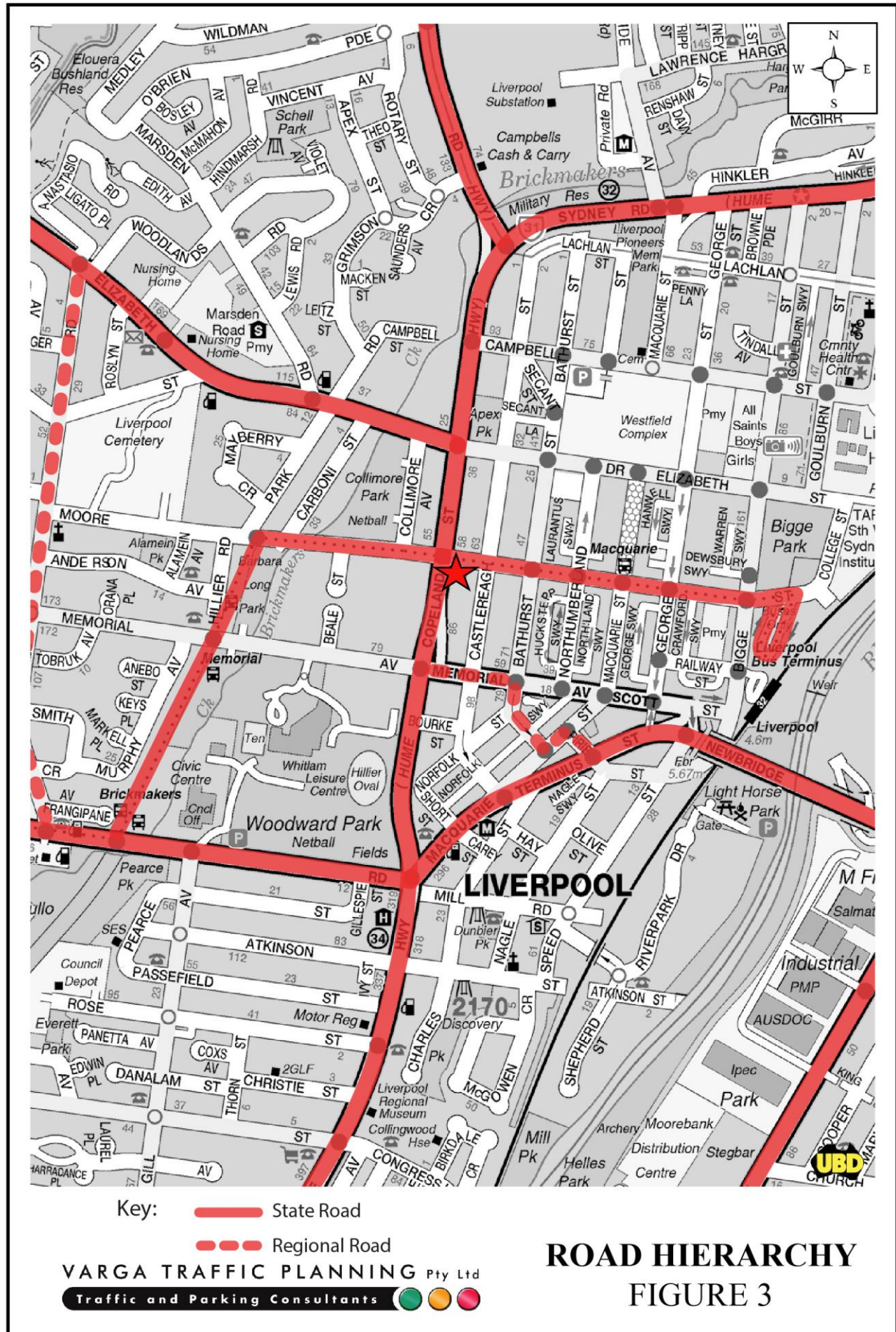
Elizabeth Drive (west of the Hume Highway) is classified by TfNSW as a *State Road* which provides the key east-west road link in the area, linking Liverpool and Kemps Creek. It typically carries three traffic lanes in each direction in the vicinity of the site, with opposing traffic flows separated by a central median island. Clearway restrictions apply along both sides of the road during commuter peak periods.

Moore Street is classified by TfNSW as a *State Road* which provides another key east-west road link in the area. It typically carries one traffic lane in each direction in the vicinity of the site, with dedicated bus lanes along both sides of Moore Street.

#### **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
- a 50 km/h SPEED LIMIT which applies to Moore Street and all other local roads in the area
- TRAFFIC SIGNALS in Copeland Street where it intersects with Elizabeth Drive, Moore Street and also Memorial Avenue









- TRAFFIC SIGNALS in Bathurst Street where it intersects with Elizabeth Drive, Moore Street and also Memorial Avenue
- a CENTRAL MEDIAN ISLAND in Copeland Street which precludes right turn movements into and out of the site.
- a NO RIGHT TURN restriction for northbound traffic on Copeland Street turning onto Elizabeth Drive
- a NO RIGHT TURN restriction for northbound traffic on Copeland Street turning onto Moore Street (Buses Excepted)
- DEDICATED BUS ONLY LANE for through traffic in Moore Street, in the vicinity of the Copeland Street intersection
- a LEFT TURN ONLY restriction in Moore Street turning onto Copeland Street
- STOP SIGN restrictions in Castlereagh Street where it intersects Moore Street.

### **Existing Public Transport Services**

The existing public transport services available in the vicinity of the site are illustrated on Figure 5. There is an extensive range of bus services available within 100m walking distance of the site along Moore Street, which includes the 802, 803, 851, 852, 853, 854, 855, 856, 857, 865, 866, 869, 870, 871 & 872 services.

The abovementioned bus services can be used to interchange with connecting train services at numerous railway stations in the inner western and eastern Sydney areas including Cabramatta, Parramatta, Merrylands, Fairfield & Liverpool Railway Stations as well as a number of rapid bus stops along the Liverpool-Parramatta T-way.

Liverpool Railway Station is also located approximately 900m walking distance east of the site and is situated on the T2 Inner West & Leppington Line, the T3 Bankstown Line and also the T5 Cumberland Line. These services typically operate at a frequency of less than 10 minutes and commuter wait times are expected to be minimal throughout the day.



In addition, Liverpool Shopping Centre is located approximately 400m walking distance east of the site which includes a large range of essential shops and services including a Coles supermarket, pharmacy, Anytime Fitness, dry cleaners, bank, post office, pharmacy, café and other small shops.

On the above basis, it is clear that the site is readily accessible by existing public transport and essential services and is ideally located to facilitate travel by sustainable modes of transport.

### **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 – Land Use Traffic Generation (October 2002)* and the updated traffic generation rates in the RMS *Technical Direction* (TDT 2013/04a) document.

The TDT 2013/04a document specifies that it replaces those sections of the RMS *Guidelines* indicated, and must be followed when RMS is undertaken trip generation and/or parking demand assessments.

The RMS *Guidelines* and the updated TDT 2013/04a 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:

#### **High Density Residential Flat Dwellings**

AM: 0.19 peak hour vehicle trips per unit

PM: 0.15 peak hour vehicle trips per unit

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 43 apartments outlined in the development proposal yields a traffic generation potential of approximately 8 vehicle trips per hour (vph) during the weekday AM peak period and approximately 7 vph during the weekday PM peak period.

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 expected to occur as a consequence of the development proposal.

The RMS *Guidelines* and the updated TDT 2013/04a nominates the following traffic generation rates which are applicable to the former dwelling house and the existing residential flat building development:

**Low Density Residential Dwellings**

AM: 0.95 peak hour vehicle trips per dwelling

PM: 0.99 peak hour vehicle trips per dwelling

**Medium Density Residential**

0.4-0.5 peak hour vehicle trips per dwelling (up to 2 bedrooms)

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

**Definition**

A *medium density residential flat building* refers to a building containing at least 2 but less than 20 dwellings. This includes villas, town houses, flats, semi-detached houses, terrace or row houses and other medium density developments. This does not include aged or disabled persons' housing.

Application of the above traffic generation rates to the former dwelling house and 1/2-bedroom apartments on the site yields a traffic generation potential of approximately 5 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 3 vph during the AM peak hour and 2 vph during the PM peak hour, as set out below:

<b>Projected Nett Increase in Peak Hour Traffic Generation Potential of the site as a consequence of the Development Proposal</b>		
	<b>AM</b>	<b>PM</b>
Projected Future Traffic Generation Potential:	8.2 vph	6.5 vph
Less Existing Traffic Generation Potential:	-4.8 vph	-4.8 vph
<b>NETT INCREASE IN TRAFFIC GENERATION POTENTIAL:</b>	<b>3.4 vph</b>	<b>1.7 vph</b>

That projected *nett increase* in traffic activity as a consequence of the development proposal is minimal, consistent with the R4 zoning objectives of the site, and will clearly 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. Key features of those parking restrictions are:

- CLEARWAY restrictions along both sides of Copeland Street during the *morning* and *afternoon* commuter peak periods
- NO STOPPING / NO PARKING restrictions along both sides of Copeland Street at all other times, including along the site frontage
- NO STOPPING / NO PARKING restrictions along both sides of Moore Street, including along the site frontage
- BUS ZONES located at regular intervals along both sides of Moore Street.

### Off-Street Car Parking Provisions

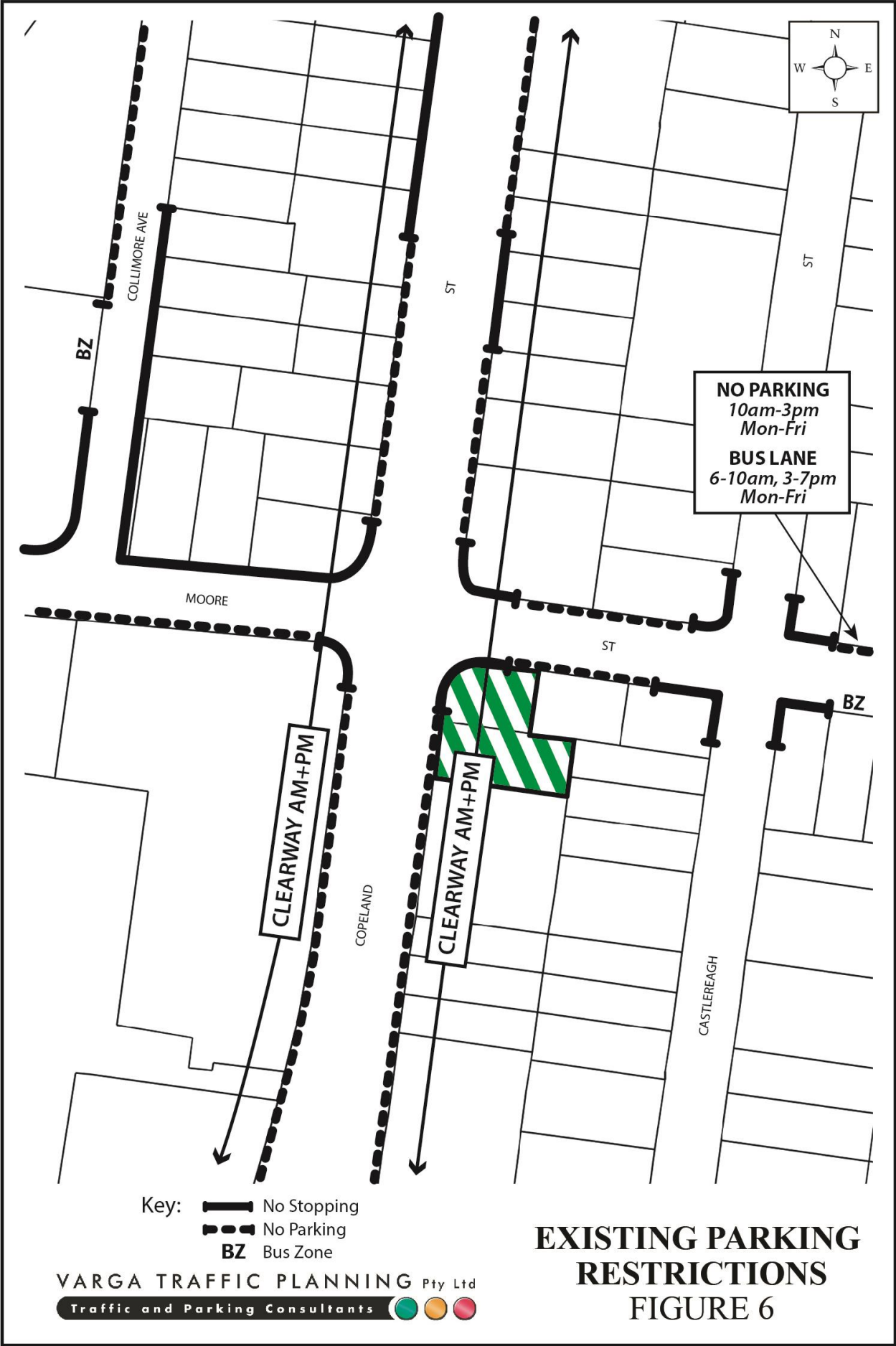
The off-street car parking requirements applicable to the development proposal are specified in Council's *Development Control Plan 2008, Part 4: Development in Liverpool City (6 May 2020)* – Section 4.4 *Traffic and Access* document in the following terms:

#### **Residential Flat Building (R4 – High Density Residential Zone)**

- 1 space per one bedroom or two bedroom apartments
- 1.5 spaces per three or more bedroom apartments
- 1 space per 10 apartments or part thereof, for visitors *and*
- 1 space per 40 apartments for service vehicles (including removalist vans and car washing bays)

Application of the above parking requirements to the 43 residential apartments outlined in the development proposal yields an off-street parking requirement of 46 parking spaces as set out below:

Residential (43 apartments):	43 spaces
Visitors:	4 spaces
Service Vehicle:	1 space
Car wash:	1 space
<b>TOTAL:</b>	<b>49 spaces</b>



The vehicular access arrangements have been designed to accommodate the *swept turning path* requirements of the B99 design vehicle as specified in *AS2890.1*, allowing them to enter and exit the site in a forward direction at all times.

## Off-Street Bicycle Parking Provisions

### Bicycle parking (Residential Flat Buildings)

Application of the above bicycle parking requirements to the 43 residential apartments outlined in the development proposal yields a bicycle parking requirement of 26 bicycle spaces, comprising 22 residential bicycles and 4 visitor bicycles.



The proposed development makes provision for a total of 27 off-street bicycle parking spaces, thereby satisfying Council's bicycle parking requirements.

In summary, the proposed parking facilities satisfy the relevant requirements specified in Council's *DCP 2008* as well as the Australian Standards and it is therefore concluded that the proposed development will not have any unacceptable parking or loading implications.

COPELAND STREET

MOORE STREET

BM  
RL:16.41

(TAIL IN KERB)

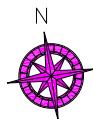
OSD TANK REFER TO  
STORMWATER DRAWINGS  
INSIDE: LEFT TURN ONLY  
OUTSIDE: NO RIGHT TURN

5 STOREY BUILDING  
128 MOORE STREET, LIVERPOOL

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Neutral Bay, NSW 2089

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PROJECT  
RESIDENTIAL DEVELOPMENT



DRAWING TITLE  
B99 VEHICLE TURNING PATHS  
Entering / Exiting Site Access Driveway  
ADDRESS  
62-62A Copeland Street,  
LIVERPOOL

PROJECT NO.  
23019

1:200 @ A4

DATE DRAWN  
2023-7-26  
PREPARED  
DONALD LEE

VARGA TRAFFIC PLANNING Pty Ltd  
Transport, Traffic and Parking Consultants

