

Proposed Mixed-Use Development

**51 Arthur Street,  
Forestville**

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**TRAFFIC AND PARKING ASSESSMENT REPORT**

28 August 2020

Ref 20347

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## **1. INTRODUCTION**

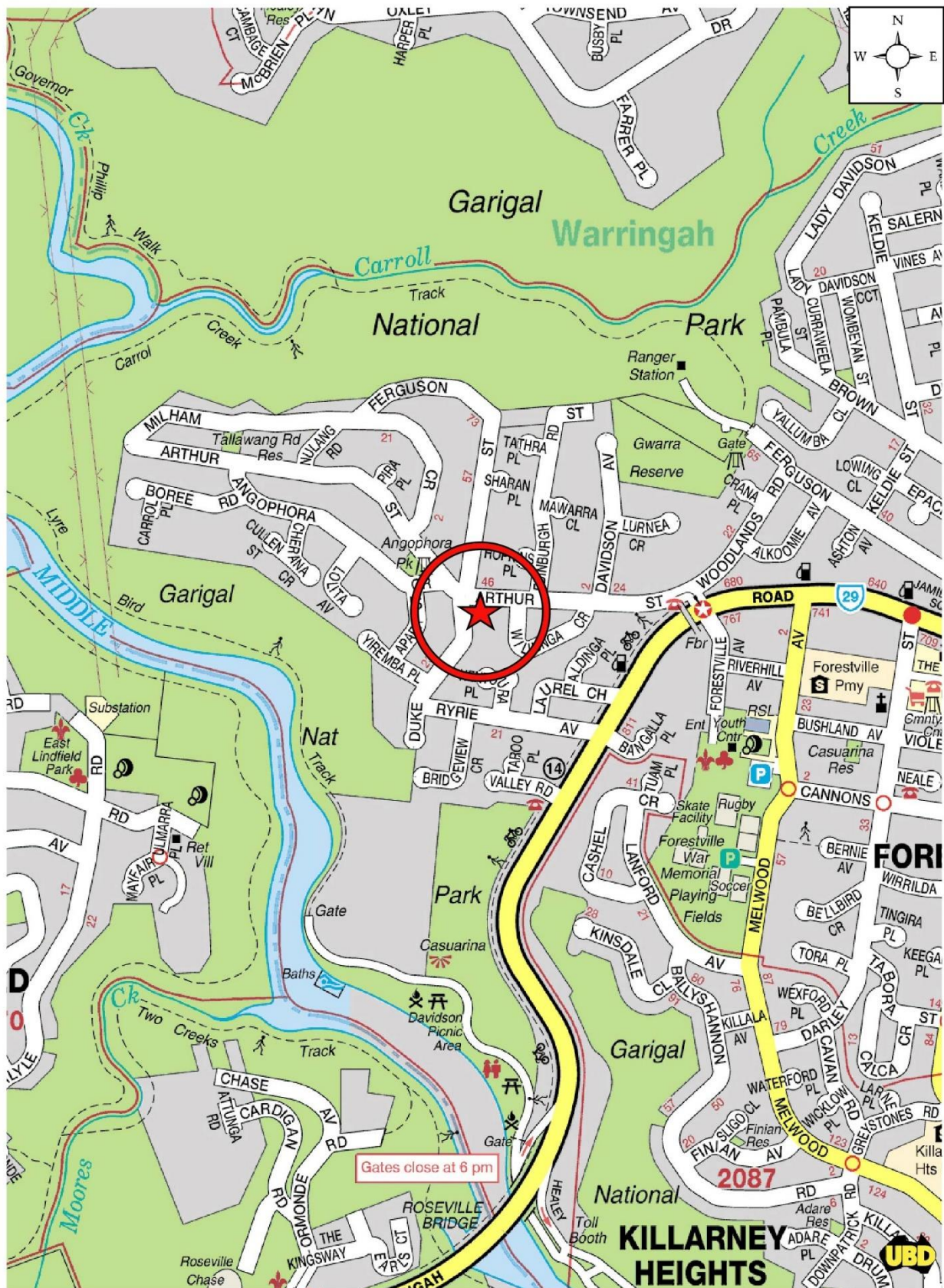
This report has been prepared to accompany a development application to Northern Beaches Council for a mixed-use development proposal to be located at 51 Arthur Street, Forestville (Figures 1 and 2).

The propose development will involve demolition of existing structures on the site to facilitate the construction of a mixed-use development comprising residential apartments above a ground floor retail component.

Off-street parking is to be provided in a single-level basement car parking area generally in accordance with Council requirements.

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

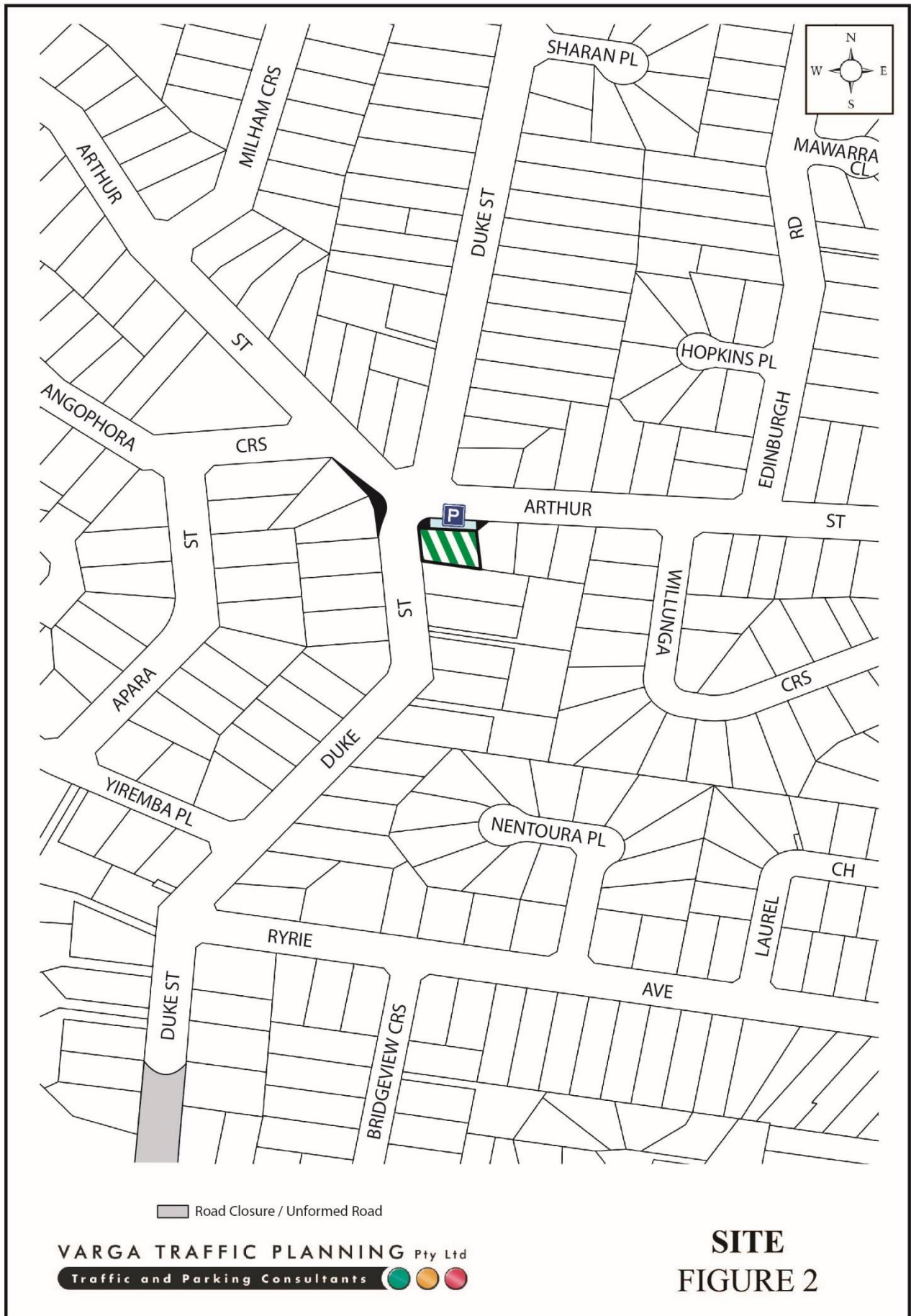
- describes the site and provides details of the development proposal
- reviews the road network in the vicinity of the site
- estimates the traffic generation potential of the development proposal
- assesses the traffic implications of the development proposal in terms of road network capacity
- reviews 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.



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LOCATION  
FIGURE 1





## **2. PROPOSED DEVELOPMENT**

### **Site**

The subject site is located on the south-eastern corner of the Arthur Street and Duke Street intersection. It has site frontages approximately 27.5 metres in length to Arthur Street, approximately 22 metres in length to Duke Street, and occupies an area of approximately 600m<sup>2</sup>.

The site is currently occupied by 6 retail shops with a cumulative floor area of approximately 400m<sup>2</sup>, comprising a karate studio, a café, a dog grooming salon, a physiotherapy clinic, a chiropractor clinic, and a takeaway pizza restaurant.

The premises on No. 51 Arthur Street has a narrow hardstand service area at the rear, connected to a vehicular driveway off Duke Street, which is used for bin storage. There is no off-street parking provided on this site.

Parking for retail / commercial customers is currently provided in the indented 90° angled parking spaces located directly in front of the shops, on the Arthur Street site frontage, comprising 7 × “2P” car spaces.

A recent aerial image of the site and its surrounding environs is reproduced below:



Courtesy of Nearmap Imagery

### **Proposed Development**

The proposed development will involve demolition of existing structures to facilitate the construction of 4 residential apartments above a ground floor retail component.

A total of 4 × two-bedroom residential apartments are proposed in the new building.

A retail component is proposed on the ground floor level comprising 4 shops with a cumulative floor area of 321m<sup>2</sup>.

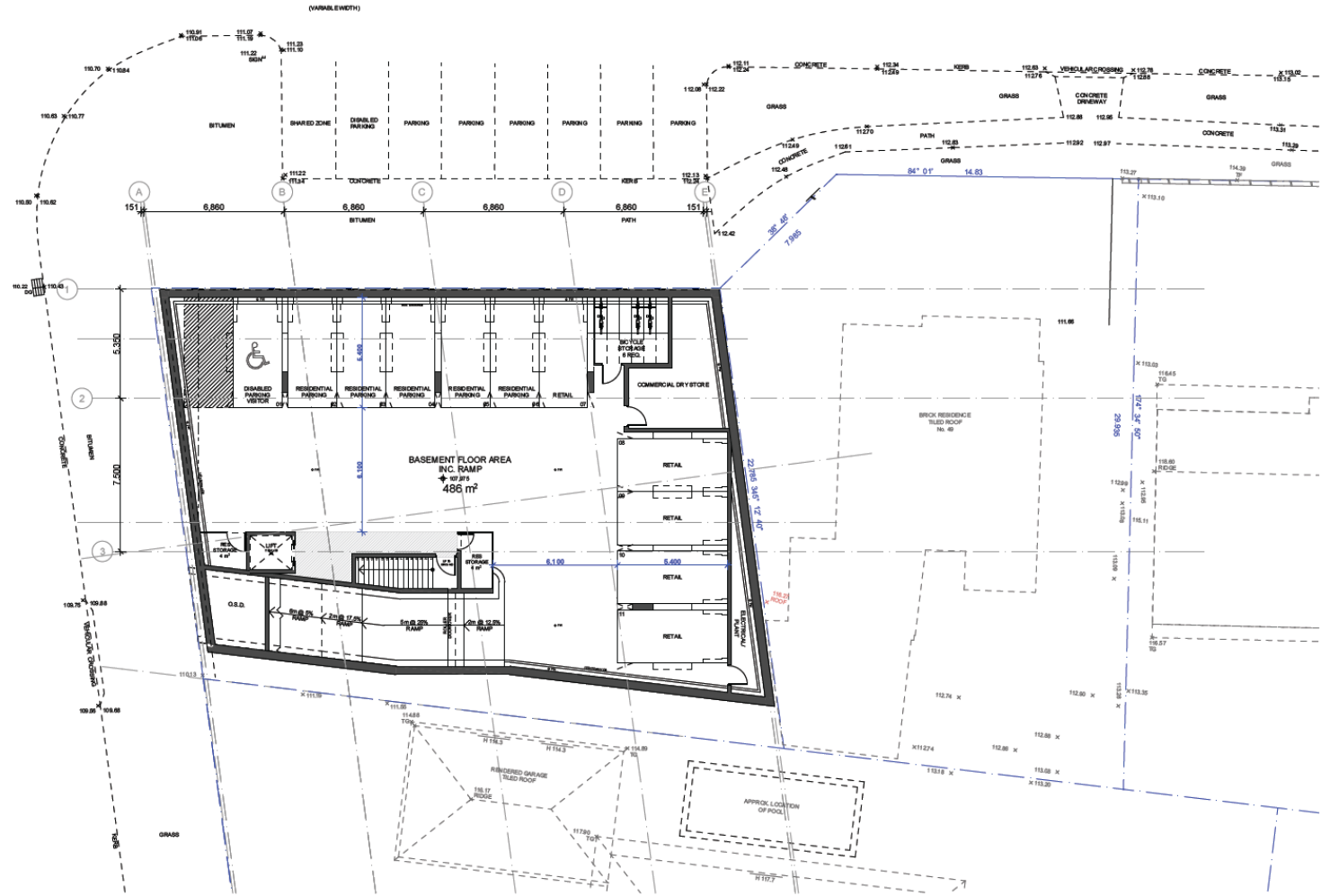
Off-street parking is proposed for a total of 11 cars in a single-level basement car parking area, generally in accordance with Council requirements. Customer car parking will continue to be accommodated in the indented 90<sup>0</sup> angle parking spaces which have been provided directly in front of the shops specifically for that purpose.

Deliveries to the proposed development is expected to be undertaken by a variety of light commercial vehicles up to and including the size of a B99 design vehicle (e.g. *Toyota HiAce*, *Hyundai iLoad* etc.) and less than 2.2 metres in height. These vehicles are commonly used to service smaller retail premises and are capable of fitting into a conventional parking space.

Vehicular access to the off-street car parking facilities will be provided via a new single-lane, two-way vehicular entry exit driveway located at the southern end of the Duke Street site frontage.


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





COORDINATION

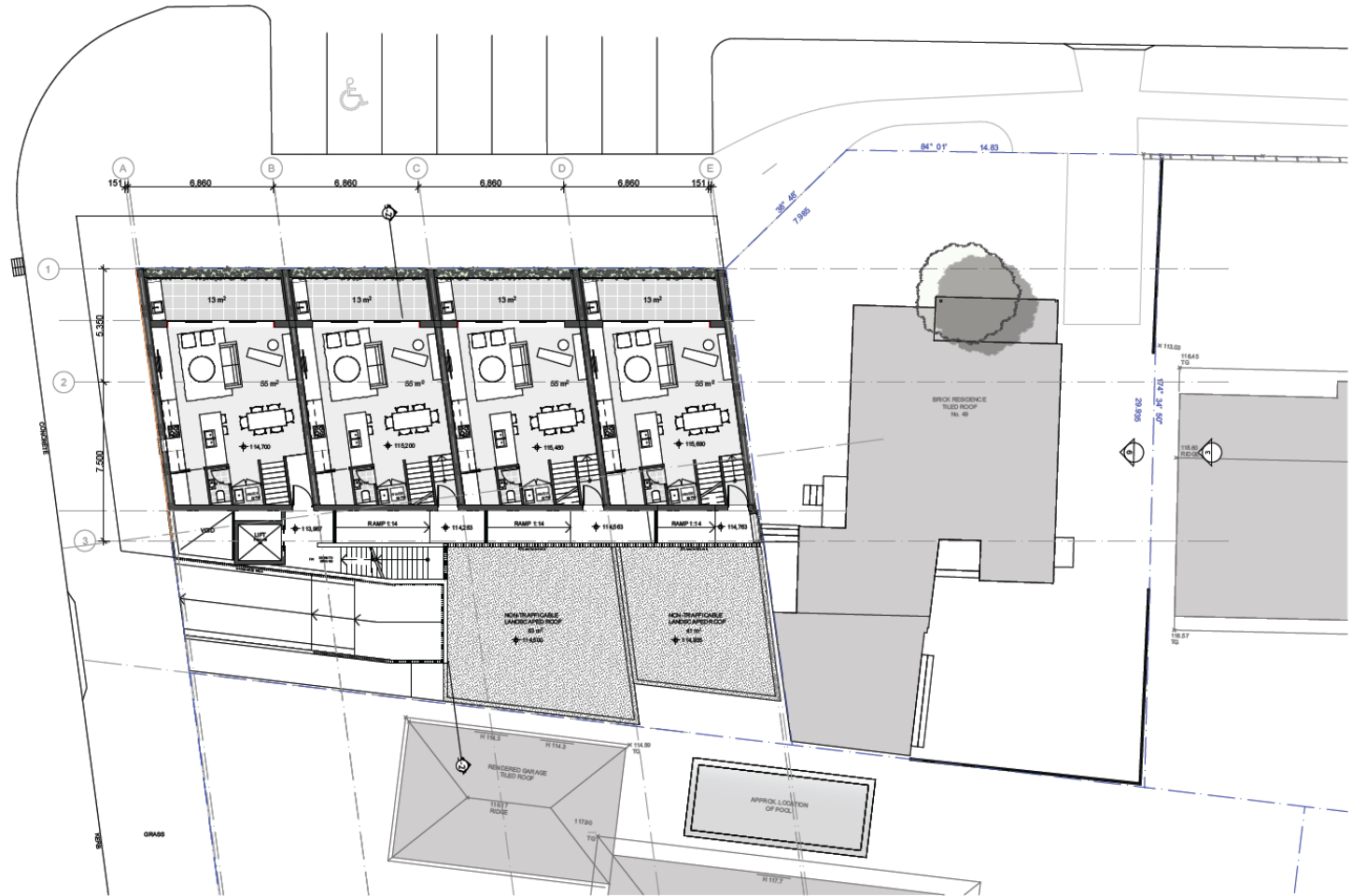
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B	20.04.19	PRELIMINARY CONCEPT	SY
C	11.05.19	FOR REVIEW	SY
D	14.05.19	FOR REVIEW	SY
E	04.02.19	FOR COORDINATION	LR
F	21.03.19	PRE-DA	LR
G	17.05.19	PRE-DA	LR
H	07.08.19	PRE-DA AMENDMENTS	LR
I	11.08.20	FOR COORDINATION	LR
J	27.08.20	FOR COORDINATION	LR

ARCHITECT <b>RAMSAY ARCHITECTS</b> 5 ARTHUR ST BALMAIN NSW 2041 PHONE: +61 408 901 600 www.ramsayarchitects.com.au info@ramsayarchitects.com.au ABN 69 6032649 NOMINATED ARCHITECT L1007 RAMSAY 1008	PROJECT <b>PROPOSED MIXED USE DEVELOPMENT @ 51 ARTHUR ST, FORESTVILLE NSW 2087</b>	CLIENT <b>Gabriellan Holdings Pty. Ltd. 60 Gibbs St, Chatswood NSW 2067</b>	NORTH 	DRAWING NAME <b>BASEMENT FLOOR PLAN</b>	DRAWING NUMBER <b>A10</b>	DRAWING SCALE <b>1:200</b>	PROJECT NUMBER <b>A089</b>	DRAWING STYLE <b>PRE</b>	ISS DATE <b>27/08/2020</b>	REVISION <b>J</b>
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## COORDINATION

REV	DATE	REVISIONMENT	BY	ARCHITECT	PROJECT	DRWING NAME	PROJECT NUMBER	DATE
A	10.02.18	PRELIMINARY - CONCEPT	SY	RAMSAYARCHITECTS	PROPOSED MIXED USE DEVELOPMENT @ 51 ARTHUR ST, FORESTVILLE NSW 2087	GROUND FLOOR PLAN	A089	27/08/2020
B	20.04.18	FOR REVIEW	SY	BALMAIN NSW 2041				
C	11.05.18	FOR REVIEW	SY	PHONE: 02 495 801 800				
D	14.05.18	FOR REVIEW	SY	www.ramsayarchitects.com				
E	04.02.19	FOR COORDINATION	LR	mail@ramsayarchitects.com				
F	21.03.19	PRE-DA	LR	ABINGDON NSW 2205				
G	17.05.19	PRE-DA	LR	NOMINATED ARCHITECT				
H	07.06.19	PRE-DA AMENDMENTS	LR	LLOYD RAMSAY 10/88				
I	11.08.20	FOR COORDINATION	LR					
J	27.08.20	FOR COORDINATION	LR					



# COORDINATION

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B	20.04.18	PRELIMINARY - CONCEPT	SY
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D	14.05.18	FOR REVIEW	SY
E	04.02.19	FOR COORDINATION	LT
F	21.03.19	PRE-DA	LT
G	17.05.19	PRE-DA	LT
H	07.08.19	PRE-DA AMENDMENTS	LT
I	11.09.20	FOR COORDINATION	LT
J	27.09.20	FOR COORDINATION	LT

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PROJECT  
**PROPOSED MIXED USE DEVELOPMENT @  
 51 ARTHUR ST, FORESTVILLE NSW 2087**

CLIENT  
**Gabrielian Holdings Pty. Ltd.  
 60 Gibbs St, Chatswood NSW 2067**



DRAWING NAME  
**FIRST FLOOR PLAN**

DRAWING NUMBER  
**A12**

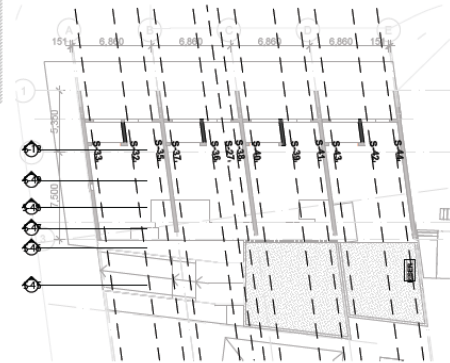
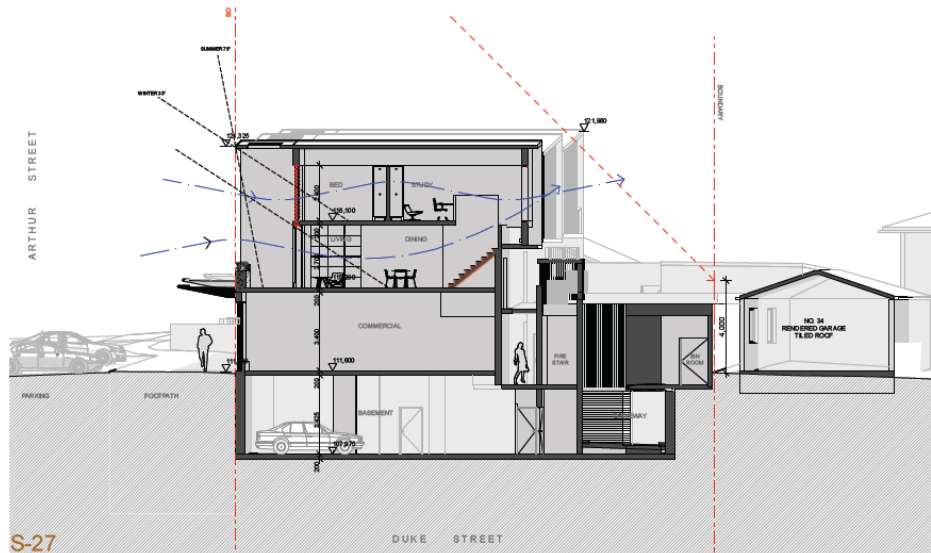
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**A089**

DRAWING TITLE  
**PRE**

ISSUE DATE  
**27/08/2020**

REVISION  
**J**

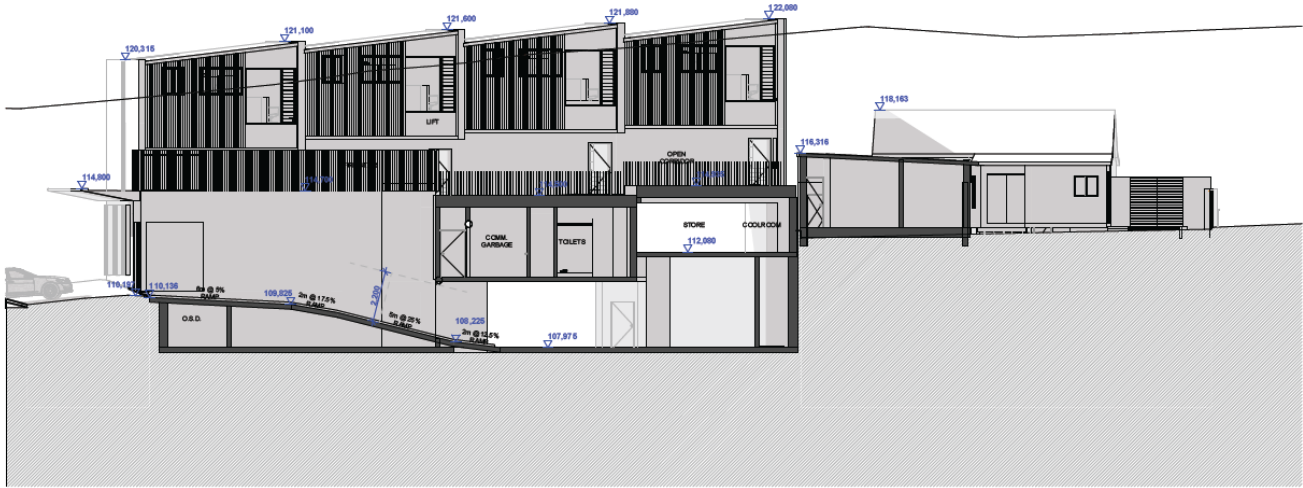





### COORDINATION

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B	28.04.19	PRELIMINARY CONCEPT	SY
C	11.05.19	FOR REVIEW	SY
D	14.05.19	FOR REVIEW	SY
E	04.07.19	FOR COORDINATION	LN
F	21.03.19	PRE-DA	LN
G	17.05.19	PRE-DA	LN
H	07.06.19	PRE-DA AMENDMENTS	LN
I	11.08.20	FOR COORDINATION	LN
J	27.08.20	FOR COORDINATION	LN

ARCHITECT	PROJECT
RAMSAY ARCHITECTS	PROPOSED MIXED USE DEVELOPMENT @ 51 ARTHUR ST, FORESTVILLE NSW 2087
2 ARTHUR ST BALMAIN NSW 2041 PHONE: +61 400 801 930 www.ramsayarchitects.com.au mail@ramsayarchitects.com ARCH: 619 832 9419 NOMINATED ARCHITECT LLOYD PARRY 10180	CLIENT
	Gabriellan Holdings Pty. Ltd. 60 Gibbs St, Chatswood NSW 2067

NORTH	DRAWING NAME	PROJECT NUMBER	ISSUE DATE
	SECTION SHOP 2/UNIT 2	A089	27/08/2020
	DRAWING NUMBER	DRAWING SCALE	DRAWING STATUS
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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.

Warringah Road is classified by the RMS as a *State Road* and provides the key north-south road link in the area, connecting Dee Why and Roseville Chase. It typically carries three traffic lanes in each direction with opposing traffic flows separated by a central median island.

Arthur Street is a local, unclassified road that functions as a *collector route* in the local area, dispersing local traffic onto Warringah Road. It typically carries one traffic lane in each direction and kerbside parking is generally permitted on both sides of the road.

Duke 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.

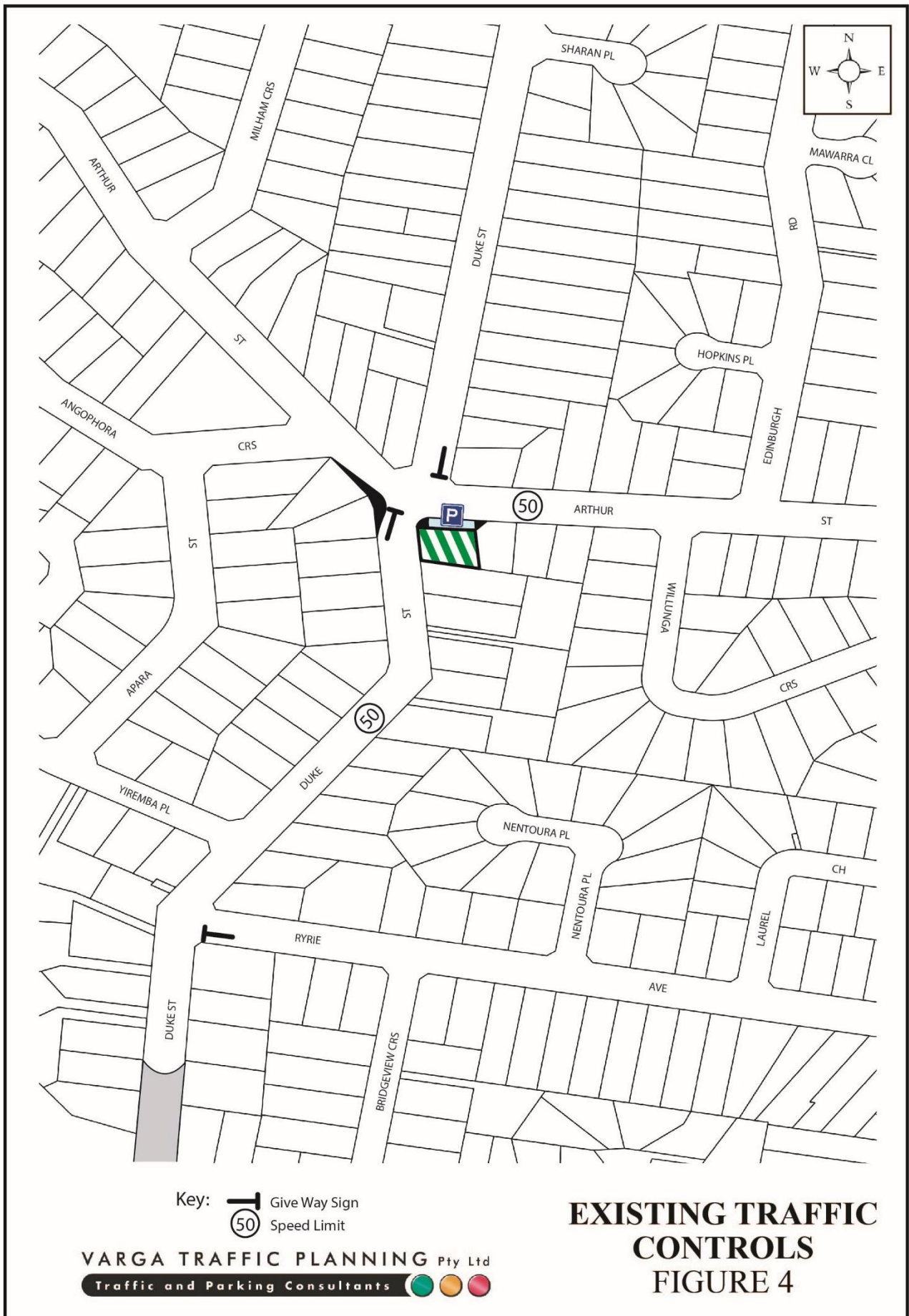
#### **Existing Traffic Controls**

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 50 km/h SPEED LIMIT which applies to Arthur Street, Duke Street and all other local roads in the area
- STOP SIGNS in Duke Street where it intersects with Arthur Street
- STOP SIGNS in Ryrie Avenue where it intersects with Duke Street.

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## 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 RMS *Guidelines* and *Technical Direction* 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:

### Medium Density Residential Flat Building

Up to 2 bedrooms:	0.4-0.5 peak hour vehicle trips per dwelling
3 bedrooms or more:	0.5-0.65 peak hour vehicle trips per dwelling

However, neither the RMS *Guidelines* nor the *Technical Direction* nominate a traffic generation rate for small, local shops, referring only to major regional shopping centres incorporating supermarkets and department stores. For the purpose of this assessment therefore, the *commercial premises* traffic generation rate of “1.6/1.2 peak hour vehicle trips per 100m<sup>2</sup> GFA” has been adopted in respect of the retail component of the development proposal.

Application of the above traffic generation rates to the various components of the development proposal yields a traffic generation potential of approximately 7 vehicle trips per hour (vph) during the AM peak hour and 6 vph during the PM peak hour, as set out below:

### Projected Future Traffic Generation Potential

	AM	PM
Residential (4 apartments):	2.0 vph	2.0 vph
Retail shops (321m <sup>2</sup> ):	5.1 vph	3.9 vph
<b>TOTAL TRAFFIC GENERATION POTENTIAL:</b>	<b>7.1 vph</b>	<b>5.9 vph</b>

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.

Application of the residential dwelling and aforementioned *commercial premises* traffic generation rates to the existing buildings on the site comprising 1 residential dwelling and 480m<sup>2</sup> retail floor space yields a traffic generation potential of approximately 7 vph during the AM peak hour, and 6 vph during the PM peak hour as set out below:

<b>Existing Traffic Generation Potential</b>		
	<b>AM</b>	<b>PM</b>
Residential (1 dwelling):	1.0 vph	1.0 vph
Retail/Commercial Premises (400m <sup>2</sup> ):	6.4 vph	4.8 vph
<b>TOTAL TRAFFIC GENERATION POTENTIAL:</b>	<b>7.4 vph</b>	<b>5.8 vph</b>

Accordingly, it is likely that the proposed development will *not* result in any appreciable change in the traffic generation potential of the site during the AM and PM peak hours as set out below:

<b>Projected Nett Change 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:	7.1 vph	5.9 vph
Less Existing Traffic Generation Potential:	-7.4 vph	-5.8 vph
<b>NETT CHANGE IN TRAFFIC GENERATION POTENTIAL:</b>	<b>-0.3 vph</b>	<b>-0.1 vph</b>

That projected nett change in traffic activity as a consequence of the development proposal is negligible, 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 5 and comprise:

- 7 × 2 HOUR PARKING along the Arthur Street site frontage
- 1 × DISABLED PARKING along the Arthur Street site frontage
- generally UNRESTRICTED PARKING elsewhere on both sides of Arthur Street and Duke Street.

### Off-Street Car Parking Provisions

The off-street car parking requirements applicable to the development proposal are specified in the *Warringah Development Control Plan (WDCP) 2011, Appendix 1 Car Parking Requirements* document in the following terms:

#### Shop-top Housing

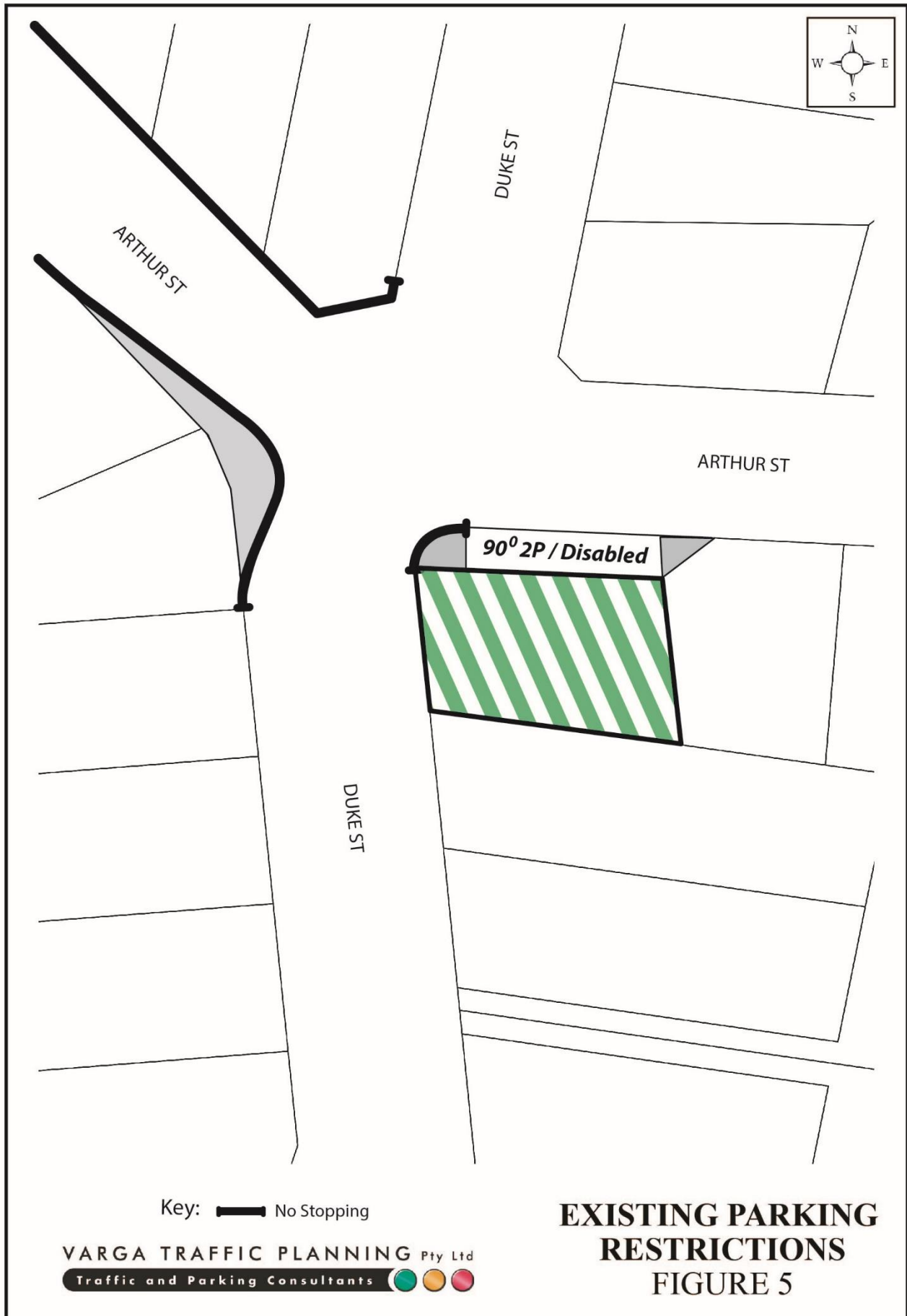
- 1 space per 1 bedroom dwelling
- 1.2 spaces per 2 bedroom dwelling
- 1.5 spaces per 3 bedroom dwelling
- 1 visitor space per 5 units or part of dwellings

#### Shop

- 1 space per 16.4m<sup>2</sup>

Application of the above car parking rates to the various components of the development proposal yields an off-street car parking requirement of 25 spaces as set out below:

Residential (4 apartments):	4.8 spaces
Residential visitors:	0.8 spaces
Retail (321m <sup>2</sup> )	19.6 spaces
<b>TOTAL:</b>	<b>25.2 spaces</b>



The proposed development makes provision for a total of 11 off-street parking spaces (comprising 5 resident spaces, 1 visitor space and 5 retail spaces for staff only), thereby resulting a *shortfall* of 14 car spaces when assessed under Council's DCP.

Notwithstanding the above, application of the above DCP parking rates to the 6 existing retail premises of 400m<sup>2</sup> yields an existing *shortfall* of 25 car spaces as no off-street car parking is currently provided on the site.

Accordingly, the proposed development is expected to result in a less intensive use of the site when compared with the existing development, reducing the car parking *shortfall* from 25 spaces to just 14 car spaces.

In any event, the 6 existing shops have operated satisfactorily for many years by relying on the indented 90<sup>0</sup> angle parking bay located directly in front of the shops along its Arthur Street frontage, *without* any off-street car parking.

It is therefore reasonable to expect that the proposed 4 new shops, with a reduced cumulative floor area, will continue to operate satisfactorily using the existing customer parking provided directly in front of the shops, particularly given that 5 retail staff parking spaces are now proposed in the new basement car parking area.

The geometric design layout of the proposed car parking facilities has been designed to generally 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* in respect of parking bay dimensions and aisle widths.

Vehicular access to the site is proposed to be provided via a single-lane two-way ramp accessed off Duke Street to keep the driveway width to a minimum, and to maintain the existing kerbside parking arrangement along the Duke Street site frontage. This is satisfactory on the basis that the anticipated peak hour traffic movements will be in the order of 7 vph as assessed in the Traffic Assessment section of this report. That peak traffic flow is well below the threshold of 30 vph where passing for two vehicles is required as stipulated in *Clause 3.2.2 of AS2890.1:2004*

## **Conclusion**

In summary, the proposed parking facilities yields a nett improvement compared to the existing development on the site and is expected to cater for the *actual* parking needs of the proposed development, as well as complying with relevant aspects of the Australian Standards. It is therefore concluded that the proposed development will not have any unacceptable parking implications and is recommended for approval.