Proposed Mixed-Use Development

5 Powell Street & 17-35 Parramatta Road Homebush

TRAFFIC AND PARKING ASSESSMENT REPORT

18 December 2019

Ref 19604

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 Strathfield Council for a mixed-use development to be located at 5 Powell Street & 17-35 Parramatta Road, Homebush (Figures 1 and 2).

Council had previously approved a two-staged development on the site comprising three separate multi-storey mixed-use residential apartment buildings over four-levels of common basement.

Two of the three approved buildings have since been constructed, including four levels of common basement that will provide parking for all three buildings.

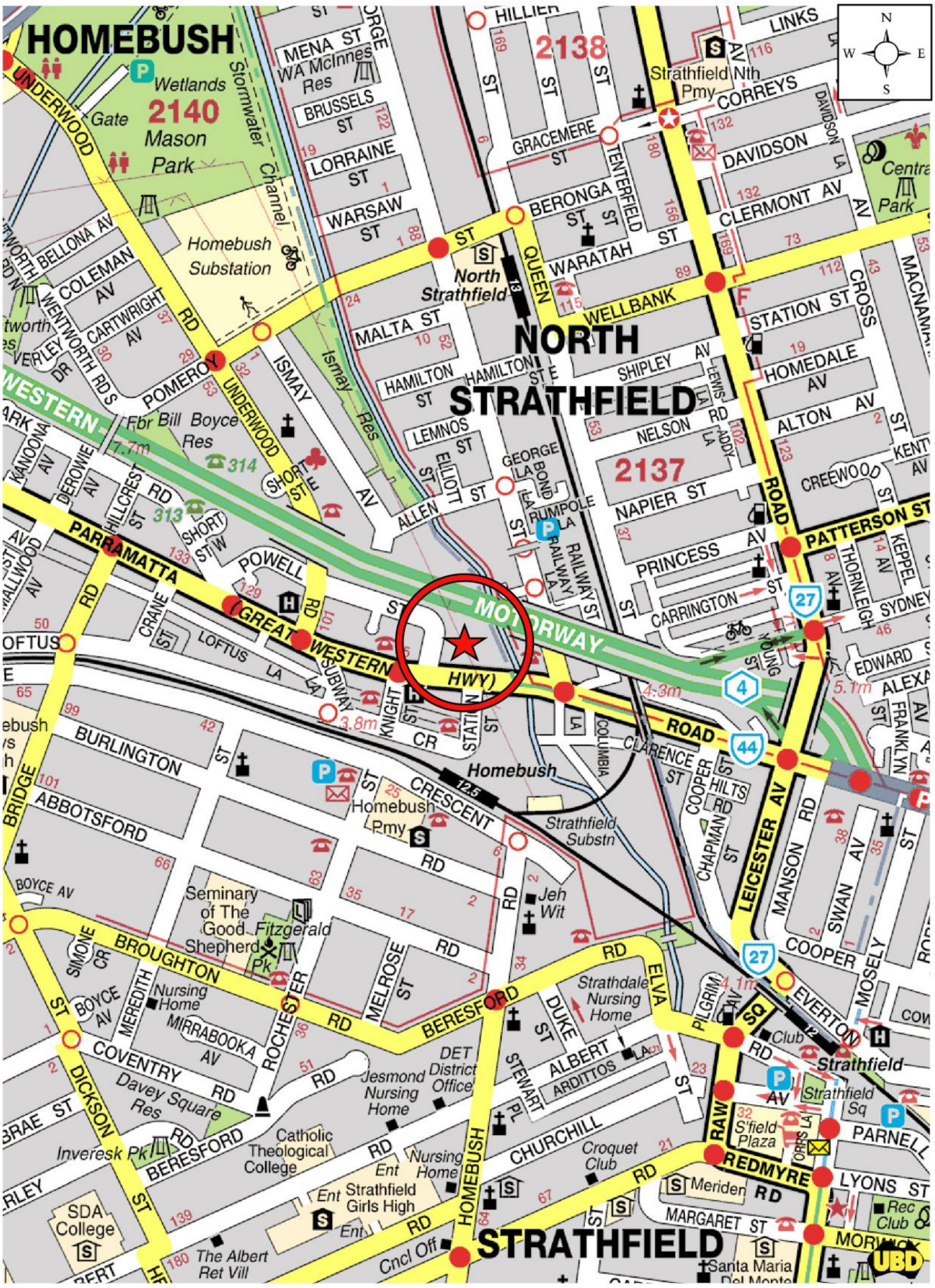
A planning proposal was subsequently approved to permit the uplift of the Stage 2 building situated at the south-eastern corner of the site, allowing it to be increased from 8-storeys to 25-storeys consisting a mix of retail, serviced apartments and residential apartments.

The purpose of this report is therefore to assess the traffic and parking implications of the amended stage 2 development proposal having regarded for the increased development yield, 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
- reviews the public transport facilities 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.



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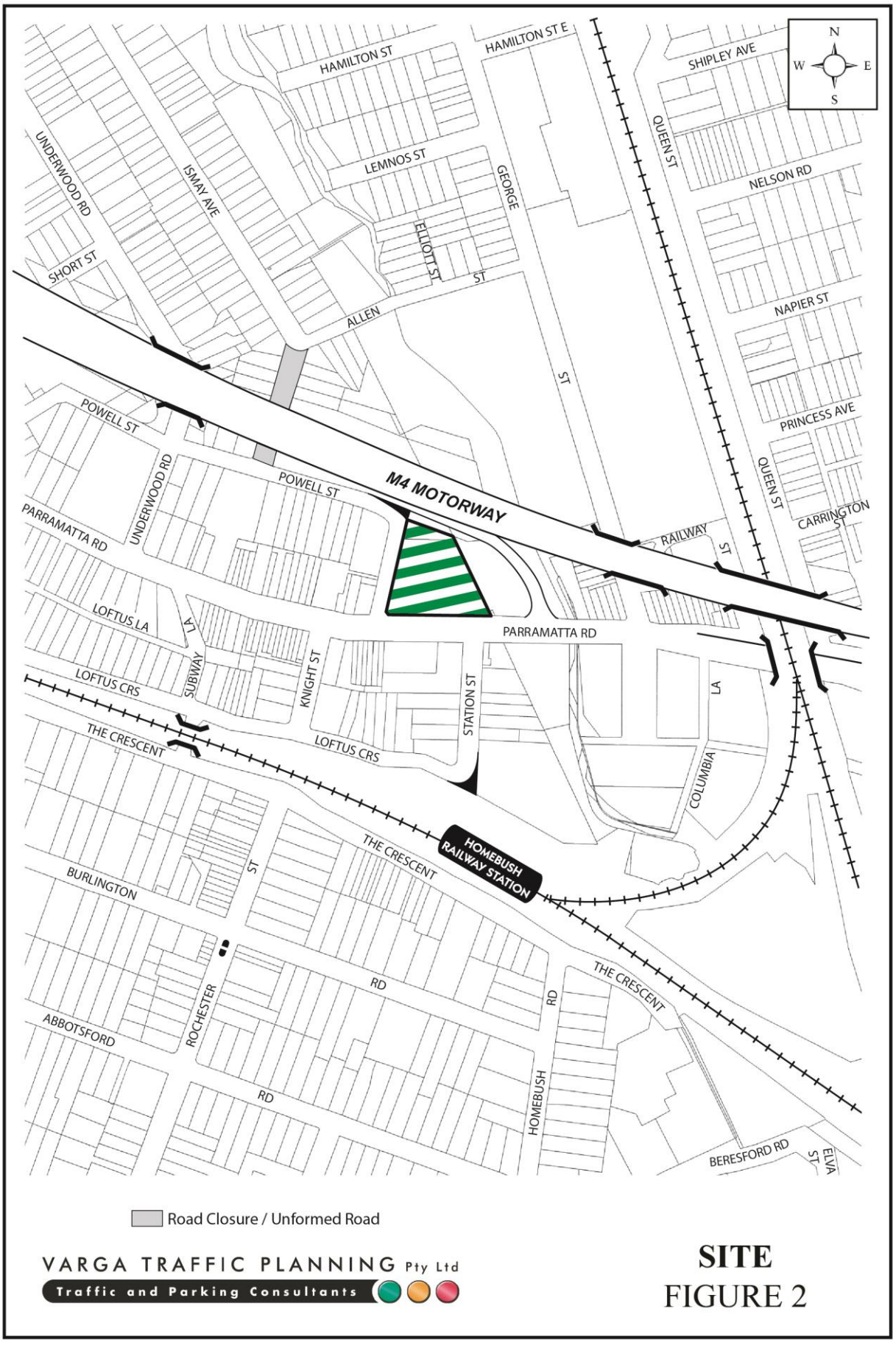
LOCATION

FIGURE 1


N
W
E
S
HAMILTON ST
HAMILTON ST E
SHIPLEY AVE
QUEEN ST
NELSON RD
UNDERWOOD RD
ISMAY AVE
LEMNOS ST
GEORGE
ELLIOTT ST
SHORT ST
ALLEN
ST
NAPIER ST
PRINCESS AVE
POWELL ST
M4 MOTORWAY
UNDERWOOD RD
POWELL ST
QUEEN ST
CARRINGTON ST
PARRAMATTA RD
RAILWAY
ST
LOFTUS LA
LA
PARRAMATTA RD
SUBWAY
KNIGHT ST
LOFTUS CRS
STATION ST
LA
THE CRESCENT
LOFTUS CRS
COLUMBIA
HOMEBUSH RAILWAY STATION
THE CRESCENT
BURLINGTON
ST
RD
THE CRESCENT
ROCHESTER
ABBOTSFORD
RD
RD
HOMEBUSH
BERESFORD RD
ELVA ST
Road Closure / Unformed Road
VARGA TRAFFIC PLANNING Pty Ltd
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SITE
FIGURE 2

2. PROPOSED DEVELOPMENT

Site

The subject site is located on the north-eastern corner of the Parramatta Road and Powell Street intersection. The site has street frontages approximately 100 metres in length to Parramatta Road, approximately 76 metres in length to Powell Street and occupies an area of approximately 6,257m^2.

Council had previously approved a two-staged development on the site comprising three separate multi-storey mixed-use residential apartment buildings over four-levels of common basement.

Two of the three approved buildings have since been constructed, including four levels of common basement that will provide parking for all three buildings as depicted in the recent aerial photograph provided below.

Courtesy of Nearmap Imagery 2019

Proposed Development

The proposed development seeks to obtain Council consent to carry out the recently approved planning proposal that permitted the uplift of the Stage 2 building from 8-storeys to 25-storeys consisting a mix of retail, serviced apartments and residential apartments.

A total of 125 residential apartments, 77 serviced apartments and 339m^2 of retail floor space is now proposed in the 25-storey mixed-use building as set out below (including a summary of the *nett* change in development yield):

- **Residential Apartments**

	Former DA	**Approved Planning Proposal**	**Nett Change**
1 bedroom	21	38	+17
2 bedroom	35	74	+39
3 bedroom	7	13	+6
Sub-Total	**63**	**125**	**+62**

- **Serviced Apartments**

	Former DA	**Approved Planning Proposal**	**Nett Change**
1 bedroom	0	49	+49
2 bedroom	0	28	+28
Sub-Total	**0**	**77**	**+77**

- **Retail**

	Former DA	**Approved Planning Proposal**	**Nett Change**
Retail Area	593m^2	339m^2	-254m^2

Off-street parking is currently constructed for 443 car spaces in a four-level basement car parking area comprising 242 car spaces for the two completed buildings, with the remaining 201 car spaces set aside for the Stage 2 building.

Loading / servicing for the proposed development will remain as per its existing approval, utilising the loading / servicing facilities provided in the uppermost basement level.

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

Parking Summary - Overall	
Stage 1	
Stage 1 - Commercial Spaces	12
Stage 1 - Residential	171
Stage 1 - Residential (Accessible)	28
Stage 1 - Residential Visitor	31
Stage 1: 242	
Stage 2	
Stage 2 - Commercial	6
Stage 2 - Commercial (Accessible)	1
Stage 2 - Residential	124
Stage 2 - Residential (Accessible)	8
Stage 2 - Serviced Apartment	32
Stage 2 - Serviced Apartment (Accessible)	4
Stage 2 - Visitor	24
Stage 2 - Visitor (Accessible)	2
Stage 2: 201	
Total Parking Spaces: 443	

Parking Summary - By Level	
BASEMENT 01	
Stage 1 - Commercial Spaces	12
Stage 1: 12	
Stage 2 - Commercial	6
Stage 2 - Commercial (Accessible)	1
Stage 2 - Residential	10
Stage 2 - Serviced Apartment	32
Stage 2 - Serviced Apartment (Accessible)	4
Stage 2: 53	
BASEMENT 01: 65	
BASEMENT 02	
Stage 1 - Residential	25
Stage 1 - Residential (Accessible)	8
Stage 1 - Residential Visitor	31
Stage 1: 64	
Stage 2 - Residential	34
Stage 2 - Residential (Accessible)	2
Stage 2 - Visitor	24
Stage 2 - Visitor (Accessible)	2
Stage 2: 62	
BASEMENT 02: 126	
BASEMENT 03	
Stage 1 - Residential	72
Stage 1 - Residential (Accessible)	10
Stage 1: 82	
Stage 2 - Residential	40
Stage 2 - Residential (Accessible)	3
Stage 2: 43	
BASEMENT 03: 125	
BASEMENT 04	
Stage 1 - Residential	74
Stage 1 - Residential (Accessible)	10
Stage 1: 84	
Stage 2 - Residential	40
Stage 2 - Residential (Accessible)	3
Stage 2: 43	
BASEMENT 04: 127	

- STAGE 1 - ALL
- STAGE 2 - COMMERCIAL
- STAGE 2 - COMMERCIAL (ACCESSIBLE)
- STAGE 2 - RESIDENTIAL
- STAGE 2 - RESIDENTIAL (ACCESSIBLE)
- STAGE 2 - SERVICED APARTMENT
- STAGE 2 - SERVICED APARTMENT (ACCESSIBLE)
- STAGE 2 - VISITOR
- STAGE 2 - VISITOR (ACCESSIBLE)

DRAFT

1 BASEMENT 4
1 : 200@A1

FOR APPROVAL

Rev	Date	Revision	By	Chk
1	29.11.2019	Issue for review and coordination	JS	NH
2	03.12.2019	Issue for coordination	JS	NH
3	06.12.2019	Issue for review	JS	NH
4	09.12.2019	Draft Issue for DA	JS	NH
5	17.12.2019	Draft Issue for DA		

Nominated Architects: Adam Haddow-7188 | John Pradel-7004

Client: Hyside Projects Subtwo Pty. Ltd.

Project: Homebush Apartments
5 Powell St & 17-35 Parramatta Rd
Homebush NSW

Drawing Name: Basement 4

Date	Scale	Sheet Size
17.12.2019	1 : 200	@ A1

Drawn: JS | Chk.: NH

Job No.	Drawing No.	Revision
6136	DA-0201	/ 5

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- STAGE 2 - VISITOR
- STAGE 2 - VISITOR (ACCESSIBLE)

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1 BASEMENT 3
1 : 200@A1

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Drawing Name: Basement 3

Date	Scale	Sheet Size
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Drawn	Chk.
JS	NH

Job No.	Drawing No.	Revision
6136	DA-0202	/ 5

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- STAGE 2 - VISITOR (ACCESSIBLE)

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1 BASEMENT 2
1 : 200@A1

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Drawing Name: Basement 2

Date	Scale	Sheet Size
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Job No.	Drawing No.	Revision
6136	DA-0203	/ 5

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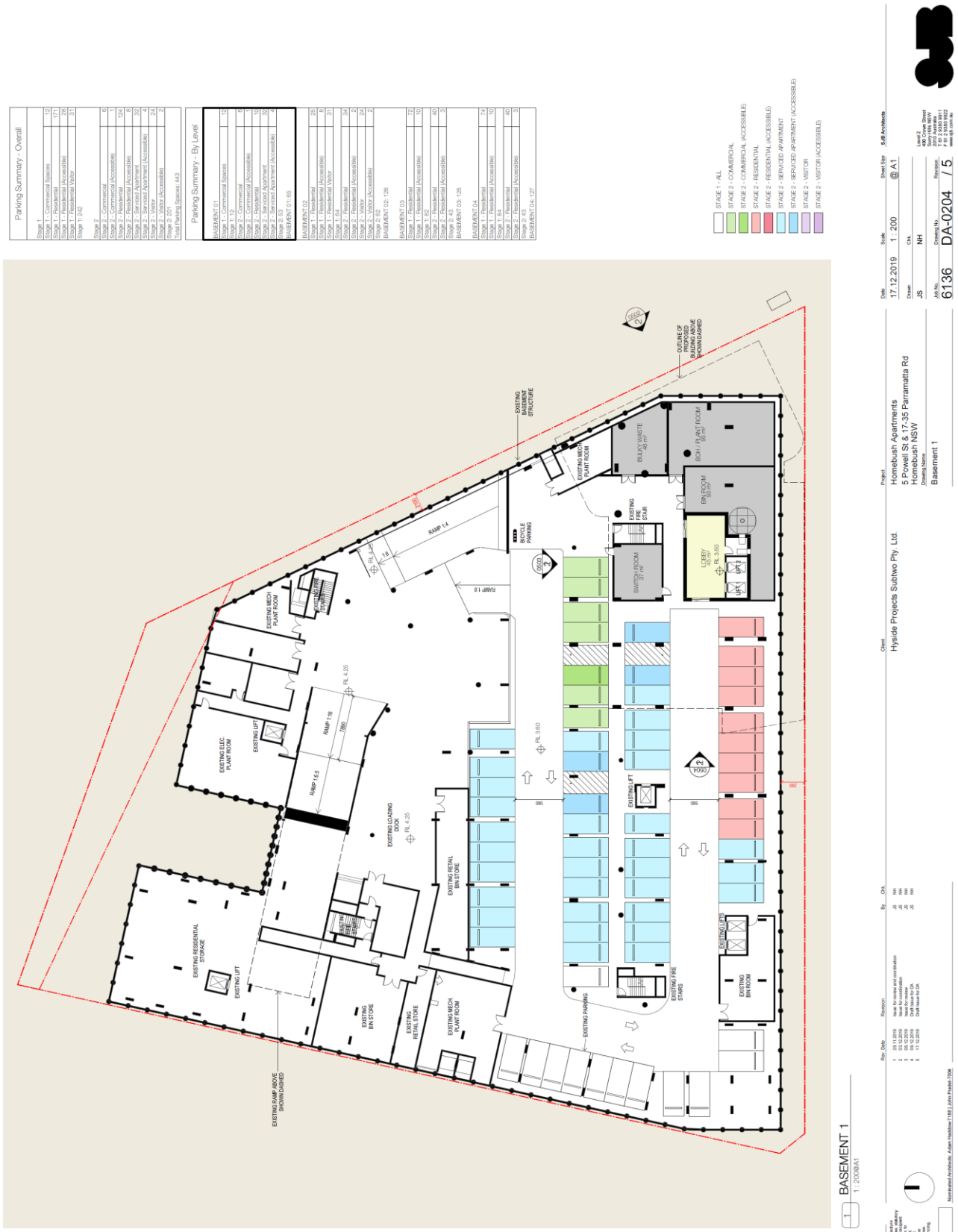
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Stage 2 - Residential 104
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Stage 1 12
Stage 2 - Commercial 6
Stage 2 - Commercial (Accessible) 1
Stage 2 - Residential 51
Stage 2 - Serviced Apartment 10
Stage 2 - Serviced Apartment (Accessible) 1
Stage 2 3.3
BASEMENT 01 65
BASEMENT 02
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Stage 1 84
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Stage 2 - Residential 40
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Stage 2 43
BASEMENT 03 125
BASEMENT 04
Stage 1 - Residential 74
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STAGE 2 - RESIDENTIAL (ACCESSIBLE)
STAGE 2 - SERVICED APARTMENT
STAGE 2 - SERVICED APARTMENT (ACCESSIBLE)
STAGE 2 - VISITOR
STAGE 2 - VISITOR (ACCESSIBLE)
EXISTING BASEMENT STRUCTURE
OUTLINE OF PROPOSED BUILDING ABOVE SHOWN DASHED
EXISTING MECH PLANT ROOM
BULKY WASTE 49 m²
SUB-PLANT ROOM 93 m²
BIN ROOM 93 m²
EXISTING FIRE STAIR
SWITCH ROOM 37 m²
LOBBY 83 m² RL 3.60
BICYCLE PARKING
RAMP 1:4
RAMP 1:8
RL 4.25
RAMP 1:8
RAMP 1:6.5
EXISTING ELEC. PLANT ROOM
EXISTING LIFT
EXISTING LOADING DOCK
EXISTING RETAIL BIN STORE
EXISTING RESIDENTIAL STORAGE
EXISTING LIFT
EXISTING BIN STORE
EXISTING RETAIL STORE
EXISTING MECH PLANT ROOM
EXISTING RAMP ABOVE SHOWN DASHED
EXISTING PARKING
EXISTING FIRE STAIRS
EXISTING LIFTS
EXISTING BIN ROOM
RL 3.60
RL 4.25
DRAFT
1 BASEMENT 1
1 : 200@A1
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1 20.11.2019 Issue for review and consideration JS NH
2 03.12.2019 Issue for coordination JS NH
3 06.12.2019 Issue for review JS NH
4 09.12.2019 Draft issue for DA JS NH
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Homebush NSW
Drawing Name
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Date 17.12.2019
Scale 1 : 200
Sheet Size @ A1
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Chk NH
Job No. 6136
Drawing No. DA-0204
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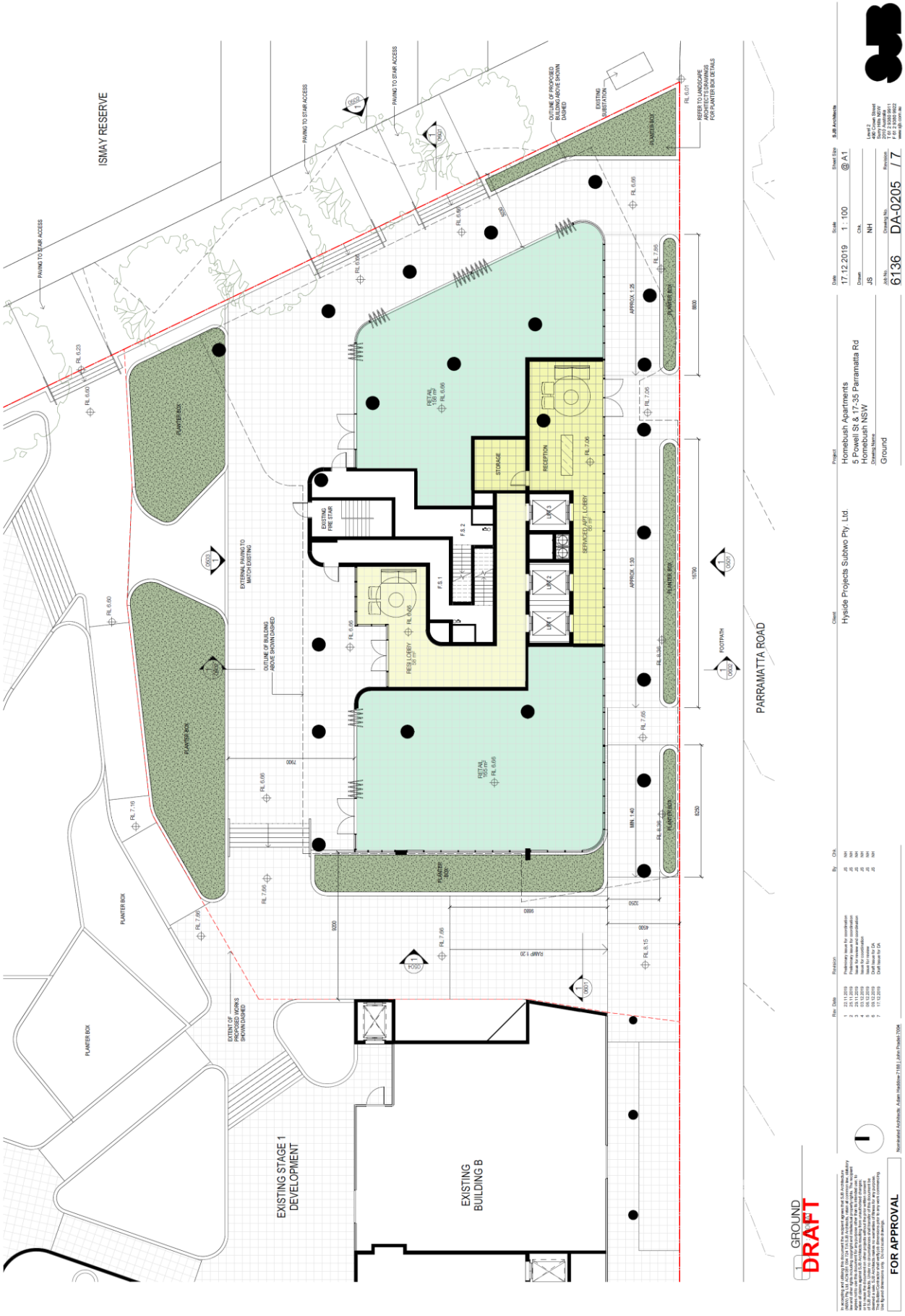
ISMAY RESERVE
PARRAMATTA ROAD
EXISTING STAGE 1 DEVELOPMENT
EXISTING BUILDING B
PAVING TO STAIR ACCESS
EXISTING FIRE STAIR
EXTERNAL PAVING TO MATCH EXISTING
OUTLINE OF BUILDING ABOVE SHOWN DASHED
EXTENT OF PROPOSED WORKS SHOWN DASHED
RETAIL 1 FF 6.66
RETAIL 2 FF 6.66
RESI LOBBY FF 6.66
SERVICED APT LOBBY FF 7.05
RECEPTION
STORAGE
LIFT 1
LIFT 2
LIFT 3
F.S.1
F.S.2
PLANTER BOX
PLANTER BOX
PLANTER BOX
PLANTER BOX
PLANTER BOX
PLANTER BOX
EXISTING SUBSTATION
OUTLINE OF PROPOSED BUILDING ABOVE SHOWN DASHED
REFER TO LANDSCAPE ARCHITECT'S DRAWINGS FOR PLANTER BOX DETAILS
FOOTPATH
RAMP 1:20
APPROX 1.25
APPROX 1.30
MIN. 1.40
7900
8200
8250
8800
16790
0880
0520
4600
RL 6.23
RL 6.60
RL 6.66
RL 7.05
RL 7.16
RL 7.65
RL 7.66
RL 8.15
RL 8.20
RL 8.30
RL 8.50
1 GROUND
DRAFT
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Homebush Apartments
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Ground
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Drawing No.
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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.

The M4 Motorway is classified by the RMS as a *State Road* and provides the key east-west road link in the area, which extends from Concord in Sydney's inner west to Lapstone at the foothills of the Blue Mountains. 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. All intersections with the M4 Motorway are grade-separated.

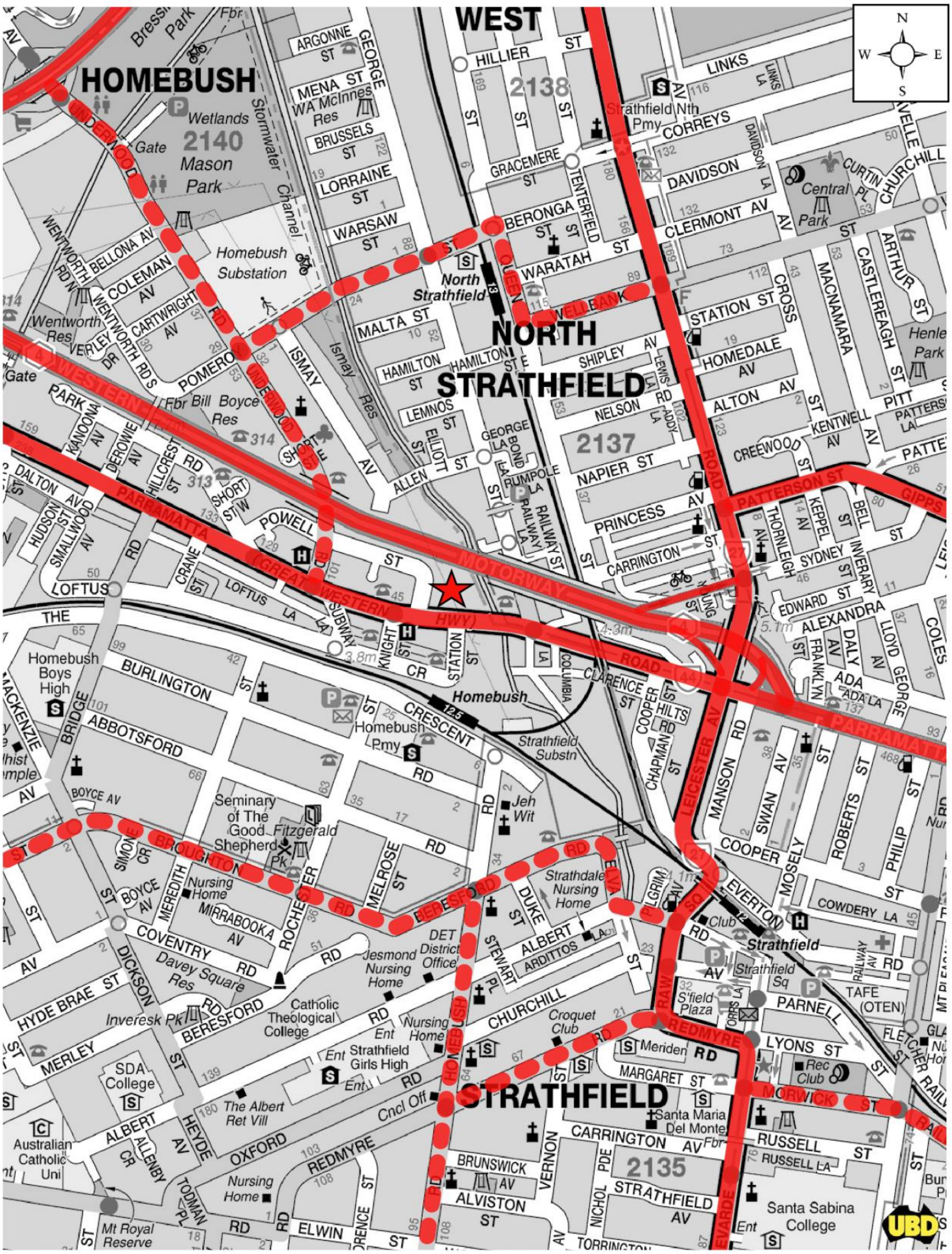
Parramatta Road is also classified by the RMS as a *State Road* and provides another key east-west road link in the area, linking Sydney CBD and Granville. It typically carries three traffic lanes in each direction in the vicinity of the site, with Clearway restrictions applying along both sides of the road during commuter peak periods.

Powell Street is a local, unclassified road that is primarily used to provide vehicular access to those properties with street frontage to Parramatta Road. Unrestricted kerbside parking is generally permitted along 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 90 km/h SPEED LIMIT which applies to the M4 Motorway
- a 60 km/h SPEED LIMIT which applies to Parramatta Road
- a 50 km/h SPEED LIMIT which applies to all local roads in the area



Key:

State Road

Regional Road

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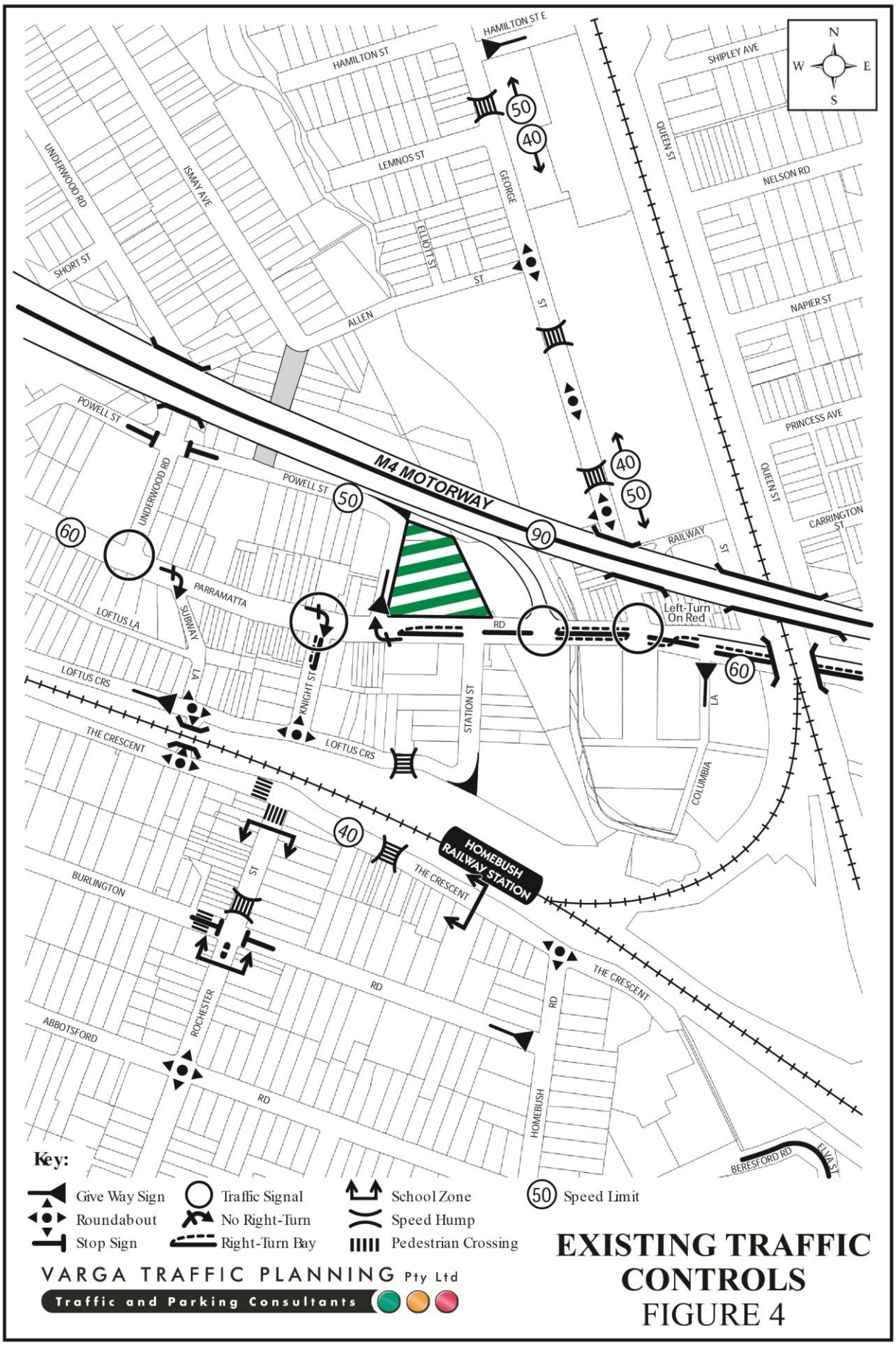
ROAD HIERARCHY

FIGURE 3


HAMILTON ST E
HAMILTON ST
SHIPLEY AVE
N
W
E
S
UNDERWOOD RD
ISMAY AVE
LEMNOS ST
GEORGE
QUEEN ST
NELSON RD
SHORT ST
ELLIOTT ST
ST
ALLEN
NAPIER ST
POWELL ST
M4 MOTORWAY
PRINCESS AVE
UNDERWOOD RD
POWELL ST
QUEEN ST
CARRINGTON ST
RAILWAY ST
PARRAMATTA RD
Left-Turn On Red
LOFTUS LA
SUBWAY
LOFTUS CRS
LA
KNIGHT ST
STATION ST
THE CRESCENT
COLUMBIA LA
HOMEBUSH RAILWAY STATION
BURLINGTON RD
ROCHESTER ST
ABBOTSFORD RD
HOMEBUSH RD
BERESFORD RD
ELVA ST
50
40
60
90
Key:
Give Way Sign
Roundabout
Stop Sign
Traffic Signal
No Right-Turn
Right-Turn Bay
School Zone
Speed Hump
Pedestrian Crossing
50 Speed Limit
VARGA TRAFFIC PLANNING Pty Ltd
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EXISTING TRAFFIC CONTROLS
FIGURE 4

- TRAFFIC SIGNALS in Parramatta Road where it intersects with Knight Street, M4 on-ramp and George Street

- STOP SIGNS in Powell Street onto Underwood Road.

Existing Public Transport

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

The Homebush Railway Station is located within approximately 400 metres walking distance from the site servicing the T2 inner West & Leppington Line travelling between Parramatta or Leppington to City. Train services typically arrive / depart the station at 5-10 minute intervals during commuter peak periods and at 15 minute intervals at other times.

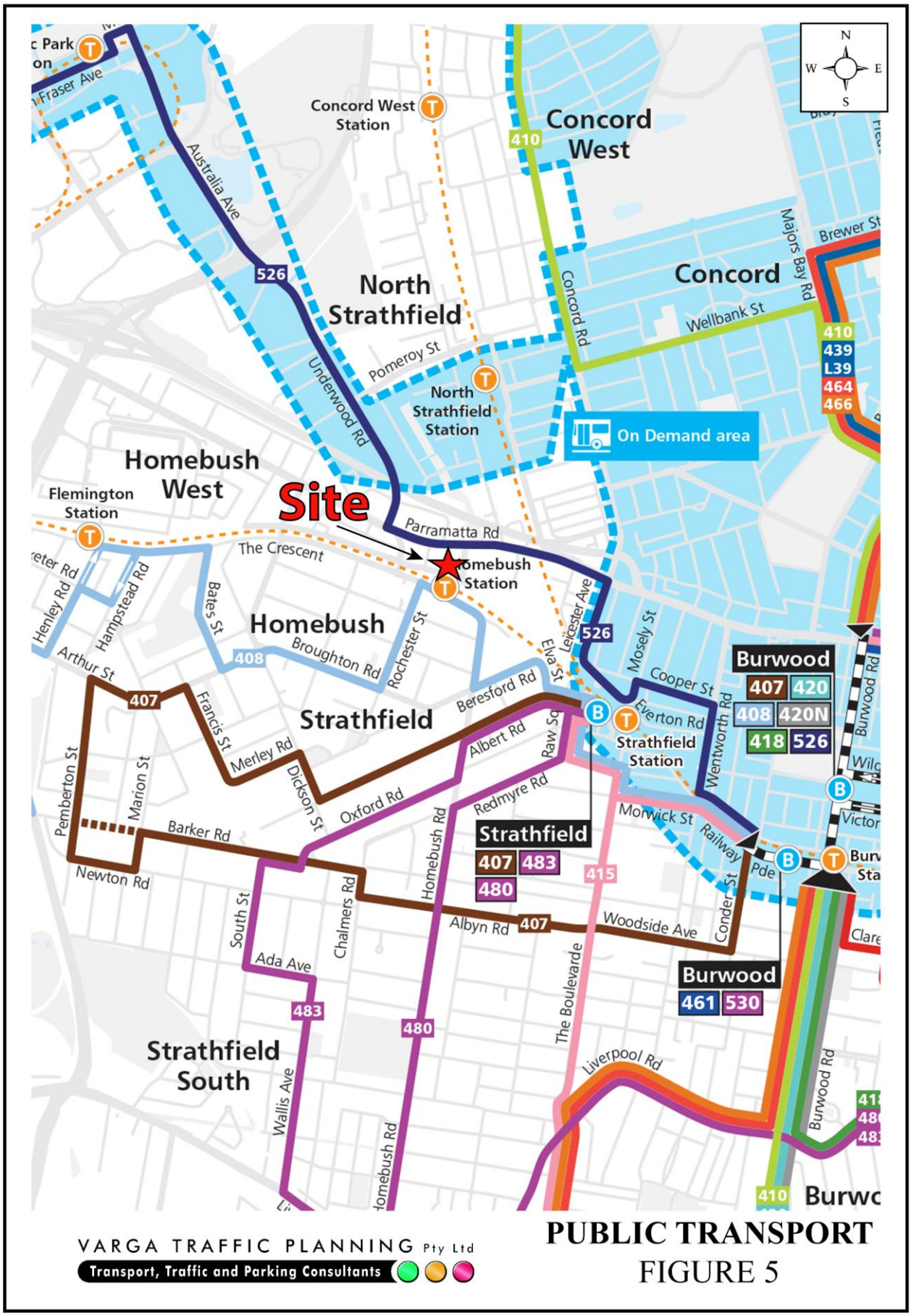
The nearest bus stops in both directions on Parramatta Road are located within a convenient 100 metres walking distance from the site servicing bus route 525 (Parramatta to Burwood via Sydney Olympic Park) and bus route 526 (Burwood to Rhodes Shopping Centre).

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

Projected Traffic Generation

The traffic implications of a development proposal primarily concern the effects of the *additional* traffic flows generated as a result of a development and its impact on the operational performance of the adjacent road network during the weekday morning and afternoon commuter peak periods.

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)* and the updated traffic generation rates in the RMS *Technical Direction (TDT 2013/04a)* document.



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PUBLIC TRANSPORT
FIGURE 5

The updated *TDT 2013/04a* survey data results for high density residential developments are set out in the table below:

Weekday Rates	Sydney Average	Sydney Range	Regional Average	Regional Range
AM peak (1 hour) vehicle trips per unit	0.19	0.07 – 0.32	0.53	0.39 – 0.67
AM peak (1 hour) vehicle trips per car space	0.15	0.09 – 0.29	0.35	0.32 – 0.37
AM peak (1 hour) vehicle trips per bedroom	0.09	0.03 – 0.13	0.21	0.20 – 0.22
PM peak (1 hour) vehicle trips per unit	0.15	0.06 – 0.41	0.32	0.22 – 0.42
PM peak (1 hour) vehicle trips per car space	0.12	0.05 – 0.28	0.26	0.11 – 0.40
PM peak (1 hour) vehicle trips per bedroom	0.07	0.03 – 0.17	0.15	0.07 – 0.22
Daily vehicle trips per unit	1.52	0.77 – 3.14	4.58	4.37 – 4.78
Daily vehicle trips per car space	1.34	0.56 – 2.16	3.22	2.26 – 4.18
Daily vehicle trips per bedroom	0.72	0.35 – 1.29	1.93	1.59 – 2.26

It is appropriate in this instance to adopt the above peak hour traffic generation rates on a *per car space* basis for serviced apartments as they comprise an alternate form of high-density residential dwellings, albeit with reduced on-site car parking demands due to the short-term nature of the dwelling occupancy.

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 following traffic generation rate for "commercial premises" has been adopted in respect of the retail component of the development proposal.

Commercial Premises

AM: 1.6 peak hour vehicle trips per $100m^2$ GFA

PM: 1.2 peak hour vehicle trips per $100m^2$ GFA

Application of the above traffic generation rates and assumptions to the *nett change* of the various components of the development proposal yields a *nett increase* in the traffic generation potential of the site of approximately 16 vehicle trips per hour (vph) during the AM peak hour, and 12 vph during the PM peak hour, as set out below:

Projected Future Traffic Generation Potential

	AM	**PM**
Residential Apartments (+62 apartments):	11.8 vph	9.3 vph
Serviced Apartments (36 car spaces):	5.4 vph	4.3 vph
Retail (-104m^2):	-1.7 vph	-1.3 vph
TOTAL TRAFFIC GENERATION POTENTIAL:	**15.5 vph**	**12.3 vph**

That projected *nett increase* in the traffic generation potential of the site as a consequence of the development proposal is consistent with the recent planning proposal approval for the uplift of the Stage 2 building, 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 and comprise:

- CLEARWAY restrictions on both sides of Parramatta Road including along the site frontage

- generally UNRESTRICTED PARKING on both sides of Powell Street.

Off-Street Car Requirements

The off-street parking requirements applicable to the subject site are specified in *Strathfield Development Control Plan No. 20 – Parramatta Road Corridor Area (in force from May 2006).* The *DCP 20* nominates the following parking rates which could be applicable to the development proposal:

A. Retail Development

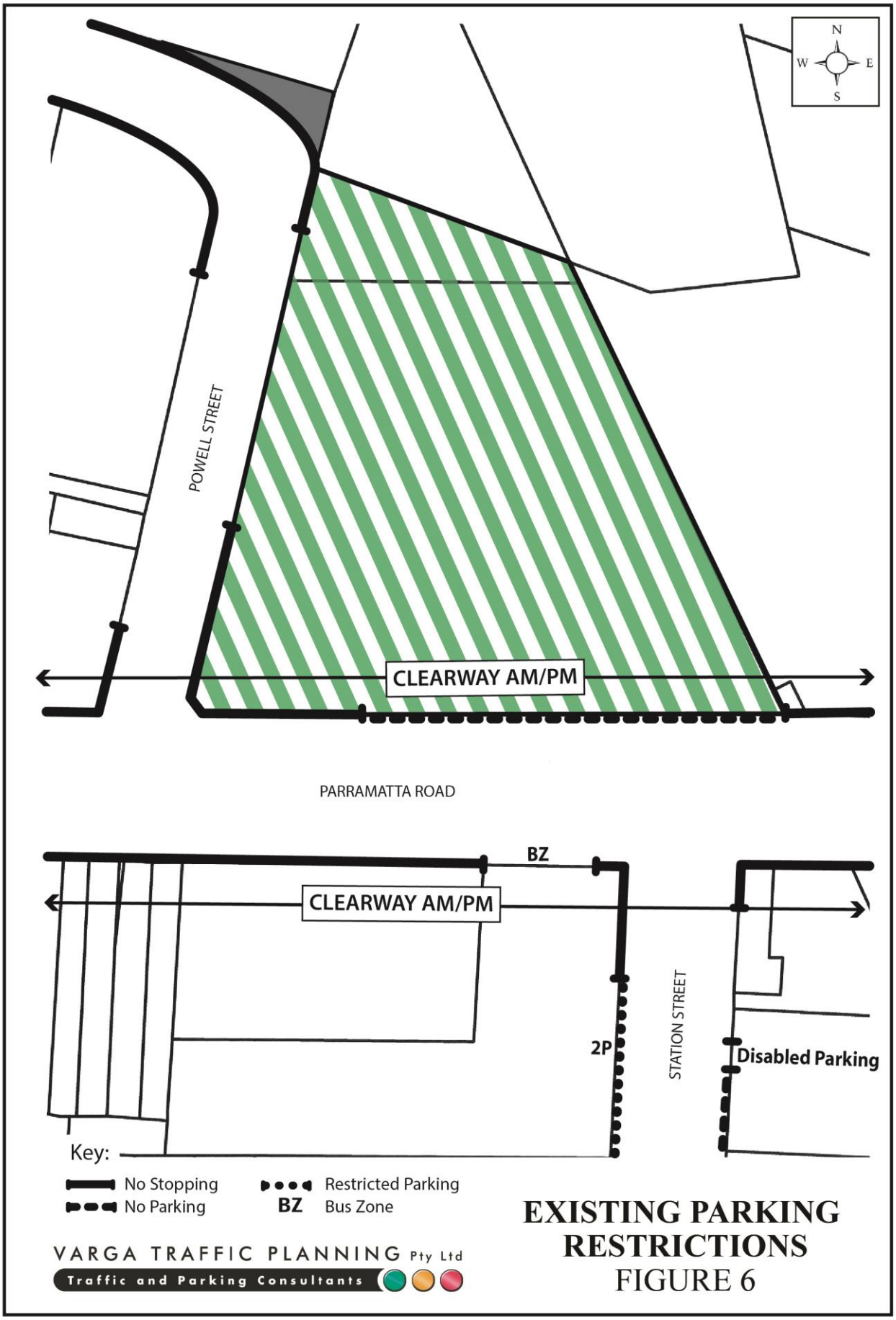
Retail / commercial development to provide parking generally in accordance with Council's DCP No. 4 except as varied below:

- For shops less than 500m^2 GFA, one space per 50m^2.

D. Mixed use Developments

Where a proposed development includes both commercial and residential uses, the following parking provisions for the residential component will be applied.

- 1 space per 1 and 2 bedroom unit.
- 1.5 spaces per 3 or more bedroom unit.
- Visitor parking:
  It is considered appropriate to maximise use of any commercial parking spaces on site as well as nearby kerbside parking supply and part of any public off-street public parking areas for use by visitors. Council will require some provision of visitor parking on-site in accessible locations for large scale residential buildings in excess of 20 units. In this regard 1 parking space per 5 units for visitors is required.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No Stopping
No Parking
Restricted Parking
BZ
Bus Zone
VARGA TRAFFIC PLANNING Pty Ltd
Traffic and Parking Consultants
EXISTING PARKING RESTRICTIONS
FIGURE 6

The DCP does not nominate a car parking requirement for serviced apartments and, for the purposes of this assessment, a parking rate of 1 space each has been adopted in respect of the serviced apartments component.

Application of the above residential parking rates to the various components of the development proposal yields an off-street car parking requirement of 240 spaces as set out below:

Residential (125 apartments):	131.5 spaces
Visitors:	25.0 spaces
Serviced Apartments (77 apartments):	77.0 spaces
Retail (339m^2):	6.8 spaces
TOTAL:	**240.3 spaces**

Off-street parking is currently constructed for 443 car spaces in a four-level basement car parking area comprising 242 car spaces for the two completed buildings, with the remaining 201 car spaces set aside for the Stage 2 building.

That provision of 201 car spaces for the proposed Stage 2 building comprises 132 resident spaces, 26 visitor spaces, 7 retail spaces and 36 serviced apartment spaces, thereby resulting in a theoretical “shortfall” of 41 serviced apartment spaces.

In practice however, the parking requirement for serviced apartments tends to be lower than residential apartments due to the short-term nature of serviced apartment occupancy. Accordingly, the proposed provision of 36 parking spaces for the 77 serviced apartment spaces at an approximate rate of 0.5 spaces per serviced apartment is considered acceptable for that component of the development because:

- the site has excellent connectivity to reliable and frequent suburban rail / bus services offering a genuine alternative to private vehicles when given the right incentive, for instance, having limited availability of on-site parking

- the serviced apartment online booking system will show whether on-site car parking is available at the time of booking

- the demographic of the serviced apartment users will primarily comprise:
    - budget travellers seeking to minimise all costs of their travel, and seldom rent a vehicle
    - business travellers who will often travel by taxi, car share or public transport and will not require a parking space
- travellers requiring a private car can easily locate a nearby car share vehicle using services such as GoGet or Car Next Door.

In the circumstances, it is considered that the proposed car parking provision for the serviced apartment component of the development is appropriate and will help contribute to a sustainable future to deliver an overall positive transport planning outcome for the site and will therefore operate satisfactorily.

The geometric design layout of the proposed car parking facilities will remain consistent with the former DA approval and will continue to comply with the relevant requirements specified in the Standards Australia publication *Parking Facilities Part 1 – O3ff-Street Car Parking AS2890.1* and *Parking Facilities Part 6 - Off-Street Parking for People with Disabilities AS2890.6* in respect of parking bay dimensions and manoeuvrability requirements.

Conclusion

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