Planning Proposal for a
Proposed Mixed Use Development

15-19 Nelson Street, Chatswood

TRAFFIC AND PARKING ASSESSMENT REPORT

29 April 2022

Ref 22108

VARGA TRAFFIC PLANNING Pty Ltd
Transport, Traffic and Parking Consultants

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1. INTRODUCTION

This report has been prepared to accompany a planning proposal to Council for a mixed use development to be located at 15-19 Nelson Street, Chatswood (Figures 1 and 2).

The planning proposal involves the rezoning of the land from *R3 Medium Density Residential* to *B4 – Mixed Use*, increasing the permissible FSR from 0.9:1 up to 6:1 and the subsequent increase of height controls from 12m up to 90m.

The site is situated approximately 600m walking distance south of Chatswood Bus/Rail Interchange, with the site benefiting from a dedicated off-road pedestrian and bicycle path to the Bus/Rail Interchange running parallel to the railway line easily accessed via the eastern end of Gordon Avenue and also Nelson Street.

The planning proposal envisages the construction of a 27-storey mixed use development on the site, comprising a total of 142 apartments located above a commercial/retail component proposed on the ground floor and first floor podium levels of the new building.

Off-street parking will be provided within a new three-level basement parking area located beneath the building and will ultimately be designed to comply with Council and SEPP 65 requirements as well as the relevant Australian Standards. Vehicular access to the parking facilities is to be provided via a new entry/exit driveway located at the southern end of Holmes Lane.

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

- describes the site and provides details of the planning proposal
- reviews the road network in the vicinity of the site
- reviews the public transport services available in the vicinity of the site

- estimates the traffic generation potential of the planning proposal

- assesses the traffic implications of the planning 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.

This planning proposal is consistent with the population growth envisaged by the *Chatswood CBD Planning and Urban Design Strategy (CCPUDS).* It is noted in this regard that the "*Future Conditions Report*" undertaken by Arup in collaboration with Willoughby City Council and TfNSW compared the growth scenarios presented in the *CCPUDS* to the TfNSW base forecast to ascertain the likely impact on the future transport network. The "*Future Conditions Report*" found that:

- travel demand in Chatswood will increase significantly over the next 20 years

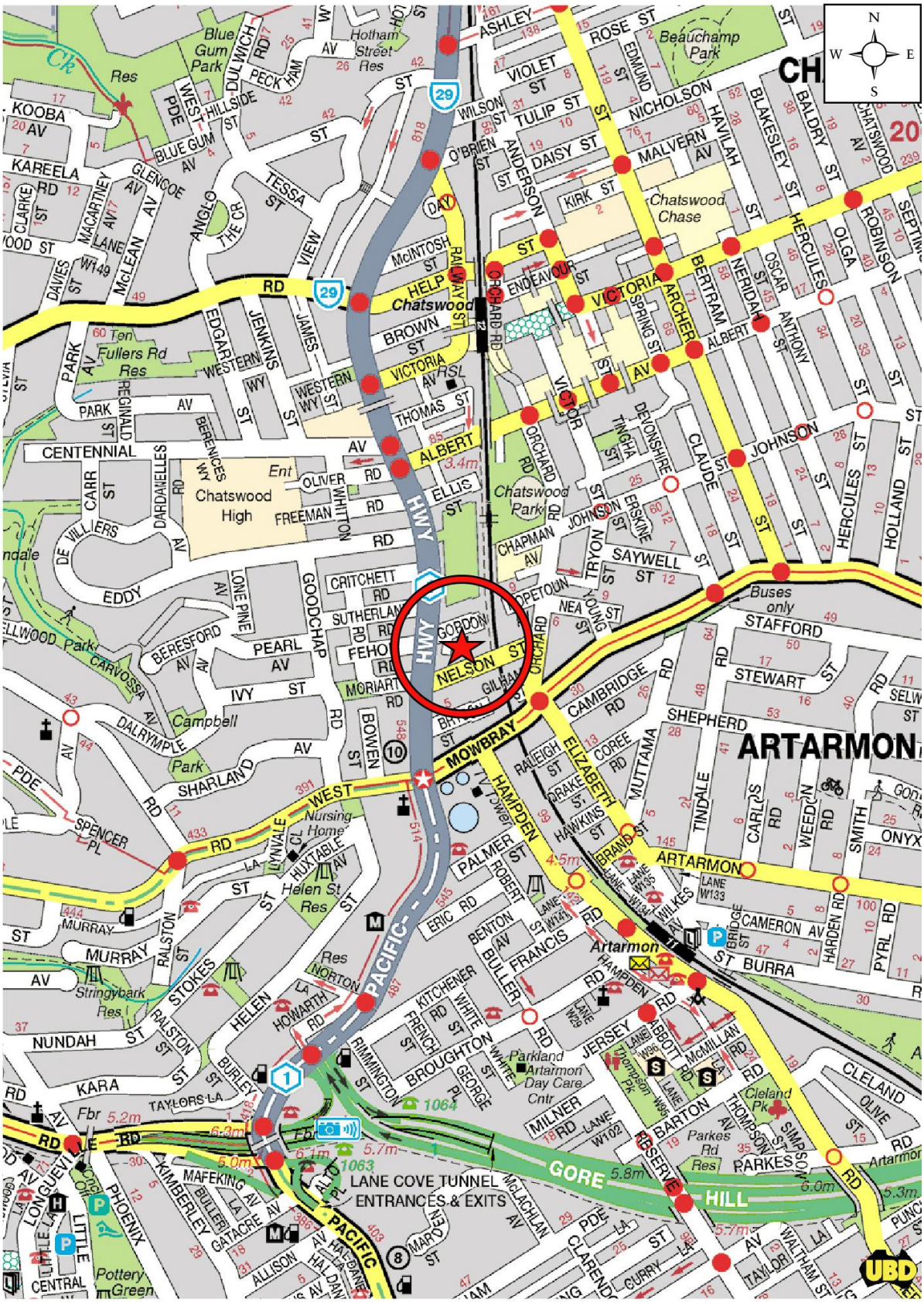
- Sydney Metro will be a key driver for travel patterns in future years, leading to *increased public transport mode shares* and a *significant uplift in the number of passengers using Chatswood Bus/Rail Interchange*

- despite the mode shift towards public transport, private vehicle trips will also increase in the horizon years, however results suggest that the road network has the capacity to accommodate the uplift

- the differences between the base and uplift scenarios on the road network occurred predominantly on the internal road network within the CBD, and

- the base and uplift scenarios had similar impacts on the surrounding arterial roads, such as the Pacific Highway and Mowbray Road.

In summary, the future conditions report found that the *CCPUDS* will have an impact in the same order of magnitude as the current TfNSW base forecast, and that the future transport network will be able to accommodate this demand.



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LOCATION
FIGURE 1

Road Closure / Unformed Road

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SITE
FIGURE 2

2. PLANNING PROPOSAL

Site

The subject site is located on the south-eastern corner of the Nelson Street and Hammond Lane intersection and extends through to Nelson Street. The site has street frontages of approximately 16m in length to Gordon Avenue, approximately 49m in length to Hammond Lane and approximately 43 in length to Nelson Street. The subject site occupies an area of approximately 2,542.7m^2.

The site is currently zoned *R3 Medium Density Residential* and is situated approximately 600m walking distance south of Chatswood Railway Station & Bus Interchange via a dedicated off-road path parallel to the railway line.

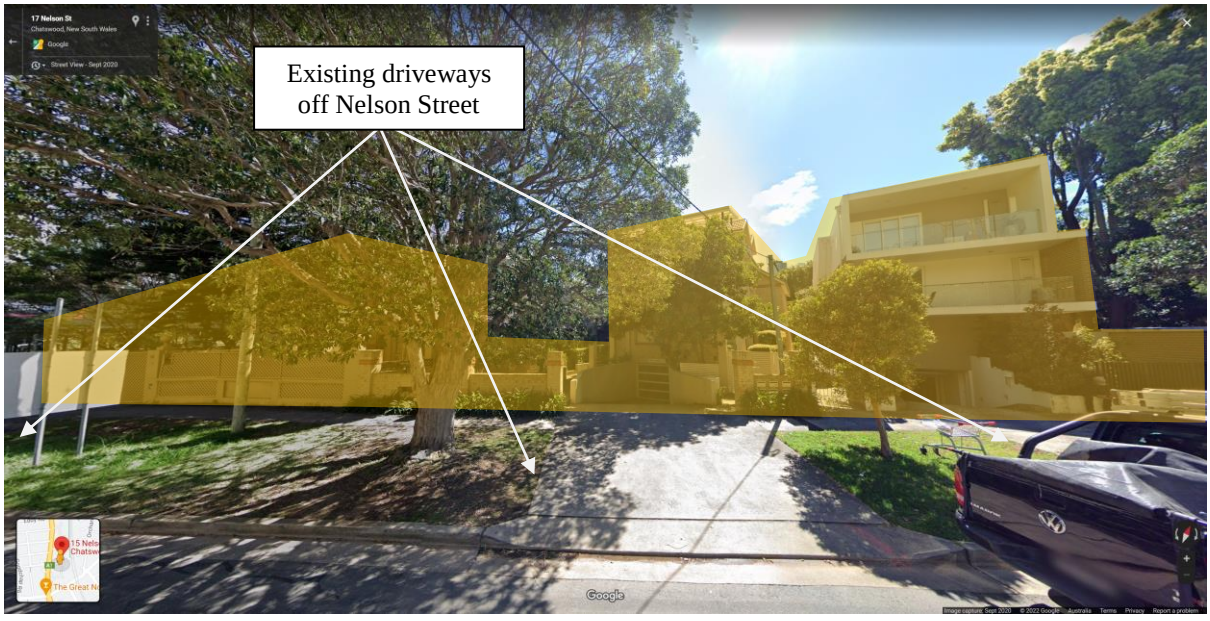
A recent aerial image of the site and its surroundings is reproduced below.

No. 10 Gordon Avenue and No. 15 & No. 17 Nelson Street are currently occupied by three separate three-storey residential apartment buildings, comprising a total of 23 dwellings across the three existing buildings. Off-street car parking is currently provided within separate basement parking areas located beneath the respective buildings, with respective vehicular access driveways provided off the Nelson Street and Hammond Lane site frontages.

No. 19 Nelson Street is currently occupied by a single-storey dwelling house, with off-street parking. Vehicular access to the site is provided via a single driveway located in Hinkler Avenue. A separate lock-up garage is also provided at the rear of the dwelling, with vehicular access provided off Hammond Lane.

Streetview images of the site viewed along Nelson Street and Hammond Lane are reproduced below.

Site viewed at the southern end of the Hammond Lane site frontage



Site viewed along the Nelson Street site frontage

Existing Planning Controls

The primary instrument that governs the mass and scale of the development on the site are contained within the *Willoughby Local Environment Plan 2012 (WLEP 2012).* As noted in the foregoing, the subject site is currently zoned *R3 Medium Density Residential* and subject to a maximum FSR of 0.9:1, with a height limit of 12m.

Planning Proposal

The planning proposal involves the rezoning of the land from *R3 Medium Density Residential* to *B4 – Mixed Use,* increasing the permissible FSR from 0.9:1 up to 6:1 and the subsequent increase of height controls from 12m up to 90m.

The proposed changes to the planning controls have the potential to achieve approximately 142 apartments, with a potential mix as follows:

Development Breakdown	
1 bedroom apartments:	18
2 bedroom apartments:	99
3 bedroom apartments:	25
TOTAL APARTMENTS:	**142**

A number of commercial/retail tenancies are also proposed on the lower ground level, on the ground and first floor level of the new building, with a cumulative floor area of approximately 2,543m^2 as follows:

Retail shops:	843m^2
Commercial suites:	1,700m^2
TOTAL:	**2,543m^2**

Off-street parking will be provided in a new three-level basement parking area and will ultimately be designed to comply with Council and *SEPP* requirements, as well as the relevant Australian Standards. Vehicular access to the site is to be provided via a new entry/exit driveway located at the southern end of the Hammond Lane site frontage.

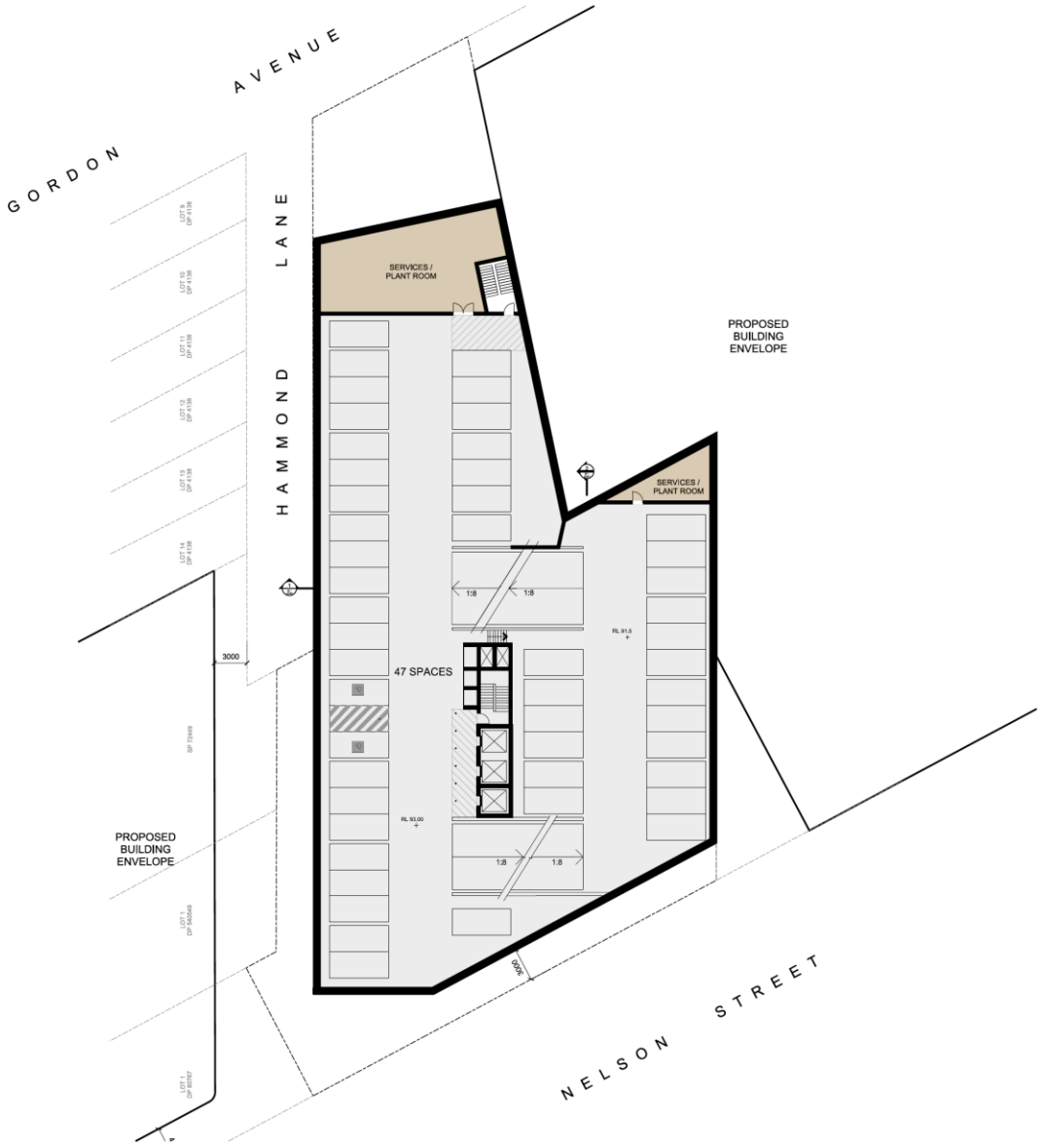
Loading/servicing for the proposed development is expected to be undertaken by a variety of commercial vehicles up to and including 8.8m long MRV medium rigid trucks. A dedicated service area is to be provided on the lower ground floor level along the eastern boundary of the site, which includes a turning area, thereby allowing all service vehicles to enter and exit the site in a forward direction at all times.

In this regard, the dedicated loading area has been designed to accommodate 1 x small rigid truck and 1 x medium rigid truck *independently* which is considered more than sufficient given the small scale of the proposed commercial/retail tenancies, and the relatively infrequent need for residential users to access the loading dock.

Vehicular access to the service area is to be provided via the aforementioned vehicular access located at the southern end of the Hammond Lane site frontage.

Concept plans of the planning proposal have been prepared by *DEM (Aust) Pty Ltd* and are reproduced in the following pages.

nominated architects: Rudi Valla BArch (Hons) nsw reg no 6582 Jon Pizey BArch nsw reg no 6567



dem

COLOUR LEGEND

- SETBACK LINE
- COMMERCIAL/ RETAIL
- 1 BEDROOM MIN. 50 sqm
- 2 BEDROOM MIN. 70 sqm
- 3 BEDROOM MIN. 90 sqm
- BASEMENT LEVEL
- SERVICES/ LOADING/ STORAGE/ PLANT ROOM

15-19 Nelson Street & 10 Gordon Avenue, Chatswood

typical basement floor plan
B1 & B2 levels

date 14/04/22 | scale 1:200 | dwg no. ar--1200 | proj no. 4590-00 | rev no. -03

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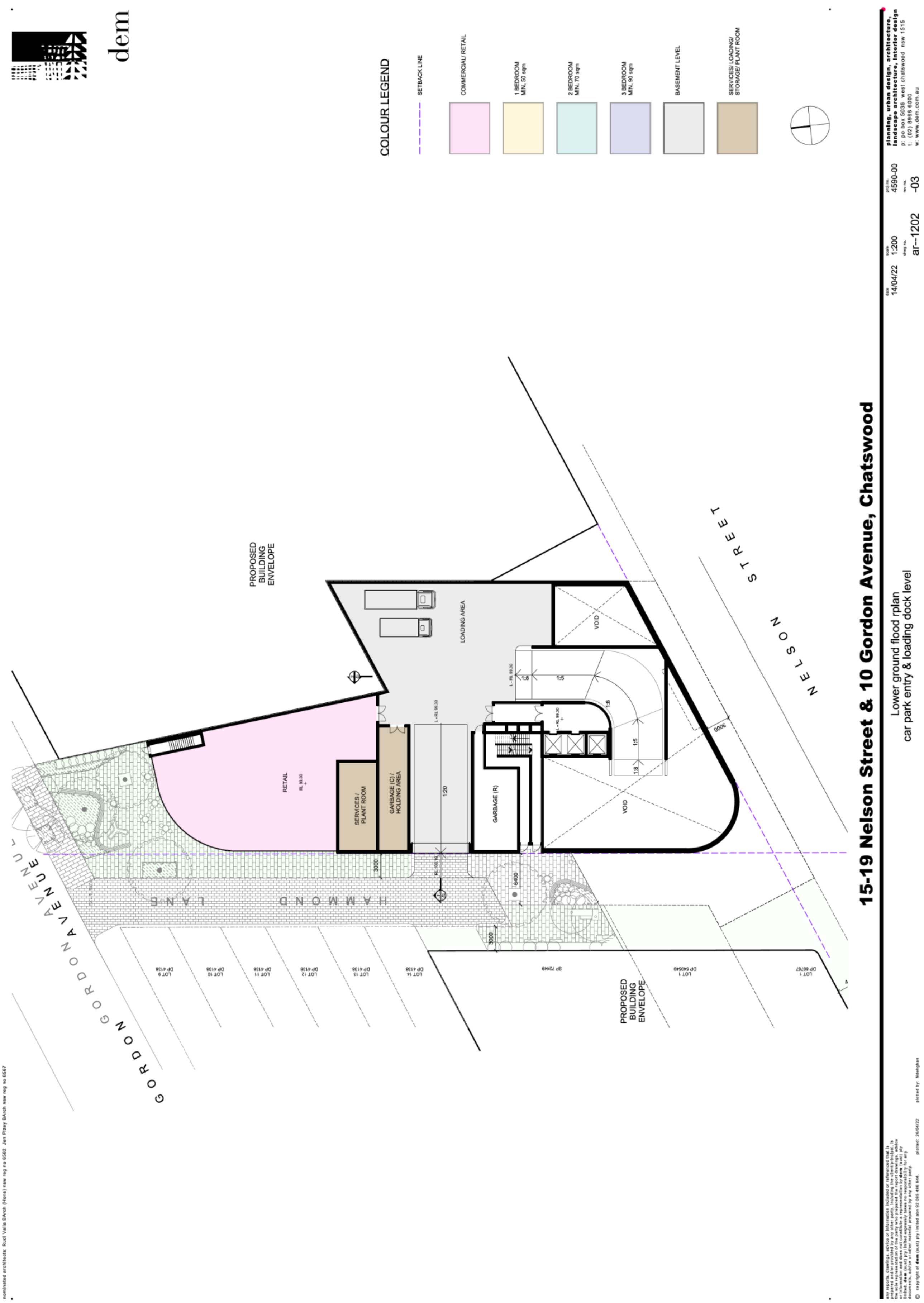
15-19 Nelson Street & 10 Gordon Avenue, Chatswood
Lower ground flood rplan
car park entry & loading dock level
COLOUR LEGEND
SETBACK LINE
COMMERCIAL/ RETAIL
1 BEDROOM MIN. 50 sqm
2 BEDROOM MIN. 70 sqm
3 BEDROOM MIN. 90 sqm
BASEMENT LEVEL
SERVICES/ LOADING/ STORAGE/ PLANT ROOM
dem
PROPOSED BUILDING ENVELOPE
LOADING AREA
VOID
RETAIL
SERVICES / PLANT ROOM
GARBAGE (C) / HOLDING AREA
GARBAGE (R)
1:20
1:8
1:5
3000
6400
NELSON STREET
HAMMOND LANE
GORDON AVENUE
14/04/22
1:200
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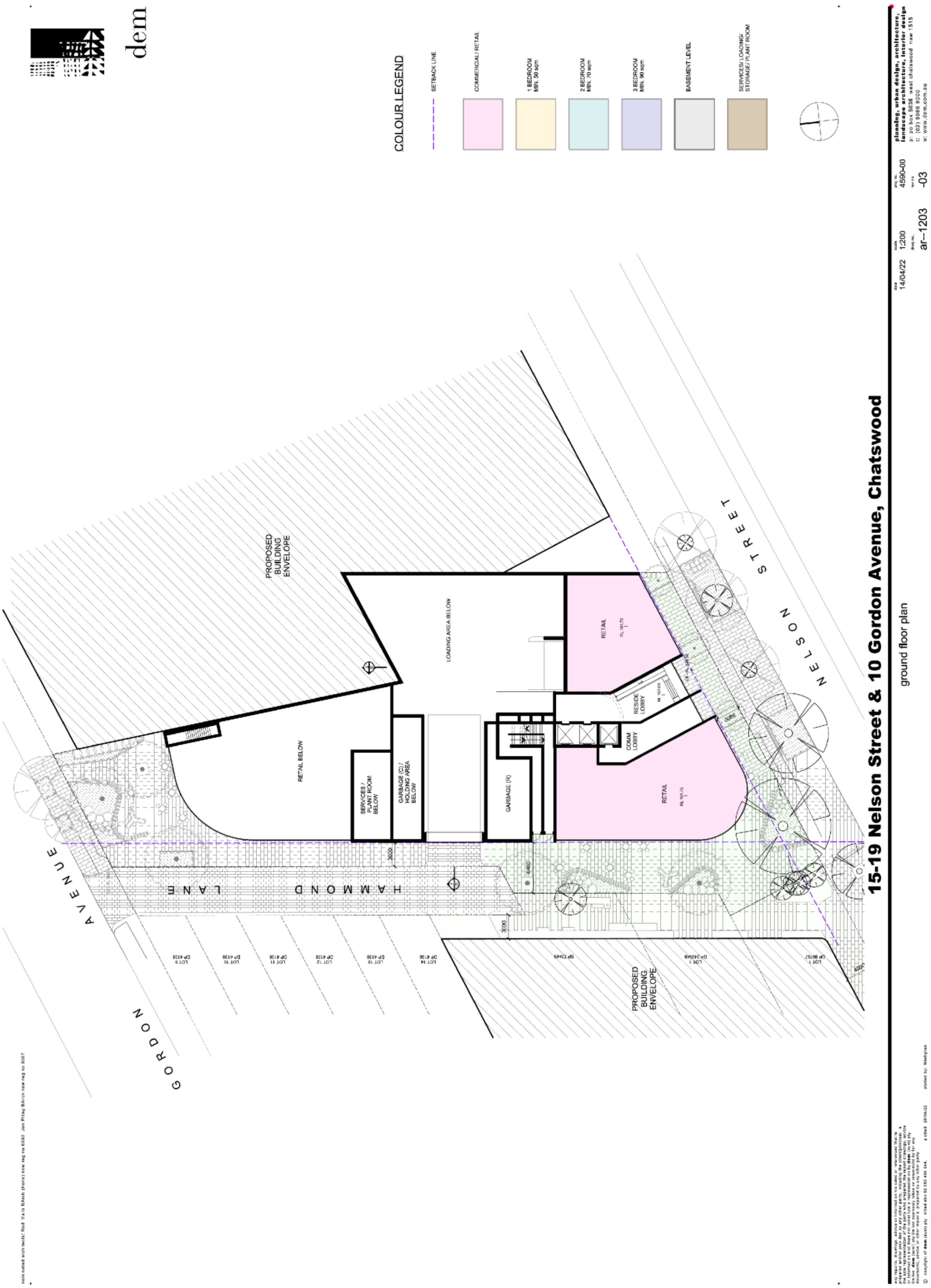
ar–1202
-03


dem
COLOUR LEGEND
SETBACK LINE
COMMERCIAL/ RETAIL
1 BEDROOM MIN. 50 sqm
2 BEDROOM MIN. 70 sqm
3 BEDROOM MIN. 90 sqm
BASEMENT LEVEL
SERVICES/ LOADING/ STORAGE/ PLANT ROOM
PROPOSED BUILDING ENVELOPE
LOADING AREA BELOW
RETAIL
RETAIL BELOW
RESIDE LOBBY
COMM LOBBY
SERVICES / PLANT ROOM BELOW
GARBAGE (C) / HOLDING AREA BELOW
GARBAGE (R)
HAMMOND LANE
GORDON AVENUE
NELSON STREET
15-19 Nelson Street & 10 Gordon Avenue, Chatswood
ground floor plan
14/04/22
1:200
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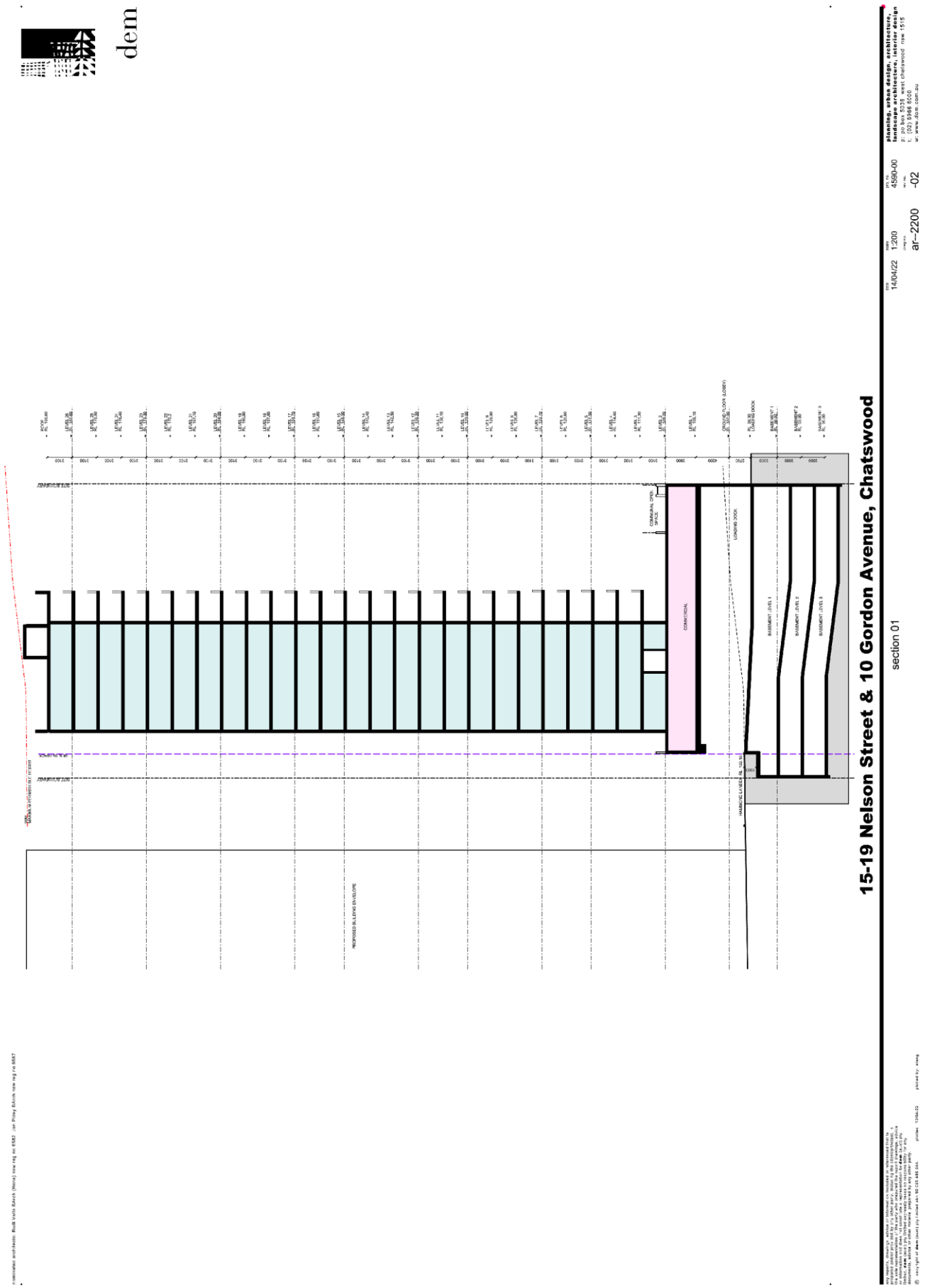
-03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15-19 Nelson Street & 10 Gordon Avenue, Chatswood
section 01
14/04/22
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planning, urban design, architecture,
landscape architecture, interior design
t: (02) 9968 9000
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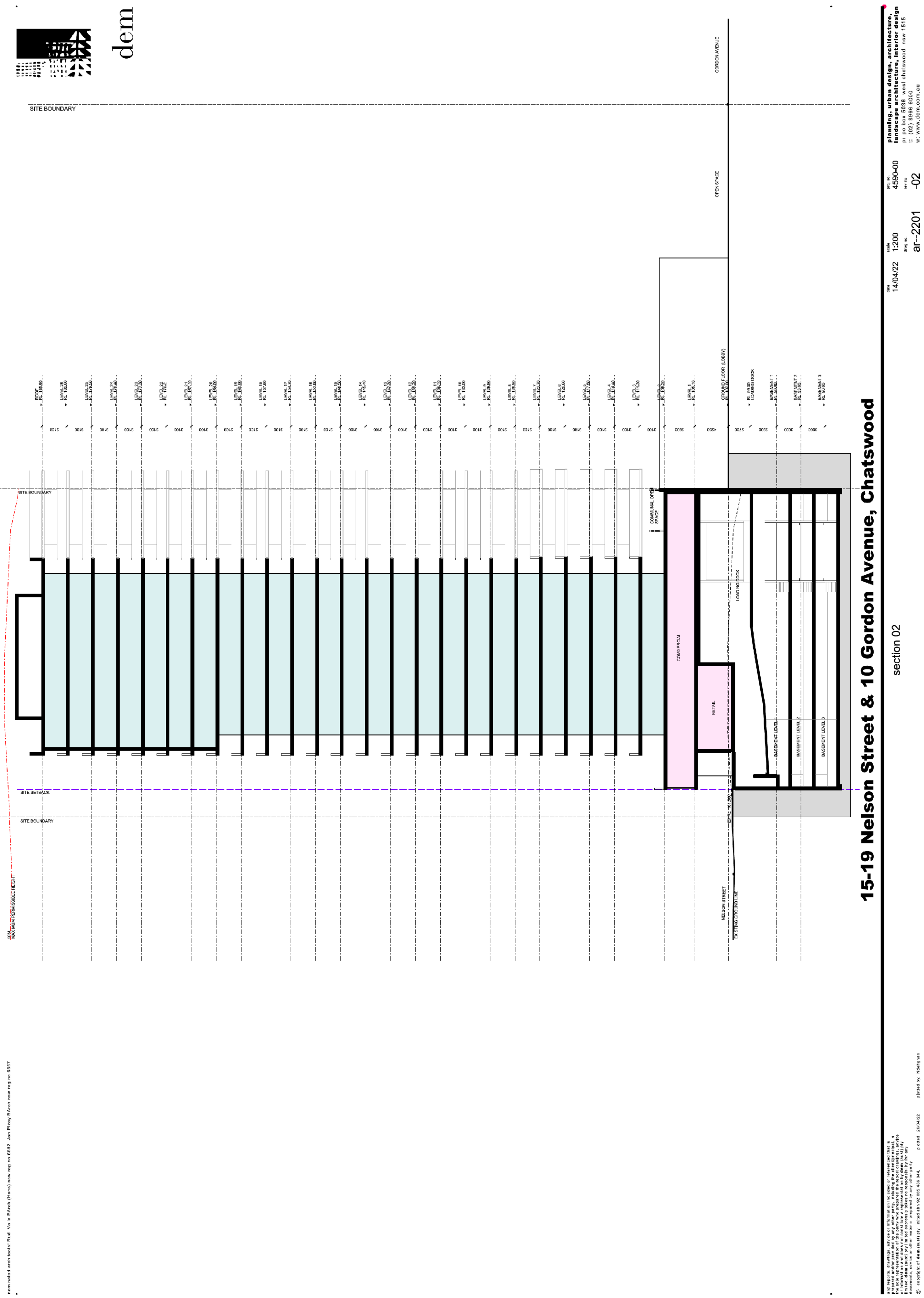
COMMERCIAL
BASEMENT LEVEL 1
BASEMENT LEVEL 2
BASEMENT LEVEL 3
LOADING DOCK
COMMUNAL OPEN SPACE
PROPOSED BUILDING ENVELOPE


15-19 Nelson Street & 10 Gordon Avenue, Chatswood
section 02
dem
planning, urban design, architecture, landscape architecture, interior design
14/04/22
1:200
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-02
SITE BOUNDARY
SITE SETBACK
COMMERCIAL
RETAIL
LOADING DOCK
OPEN SPACE
GORDON AVENUE
NELSON STREET

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.

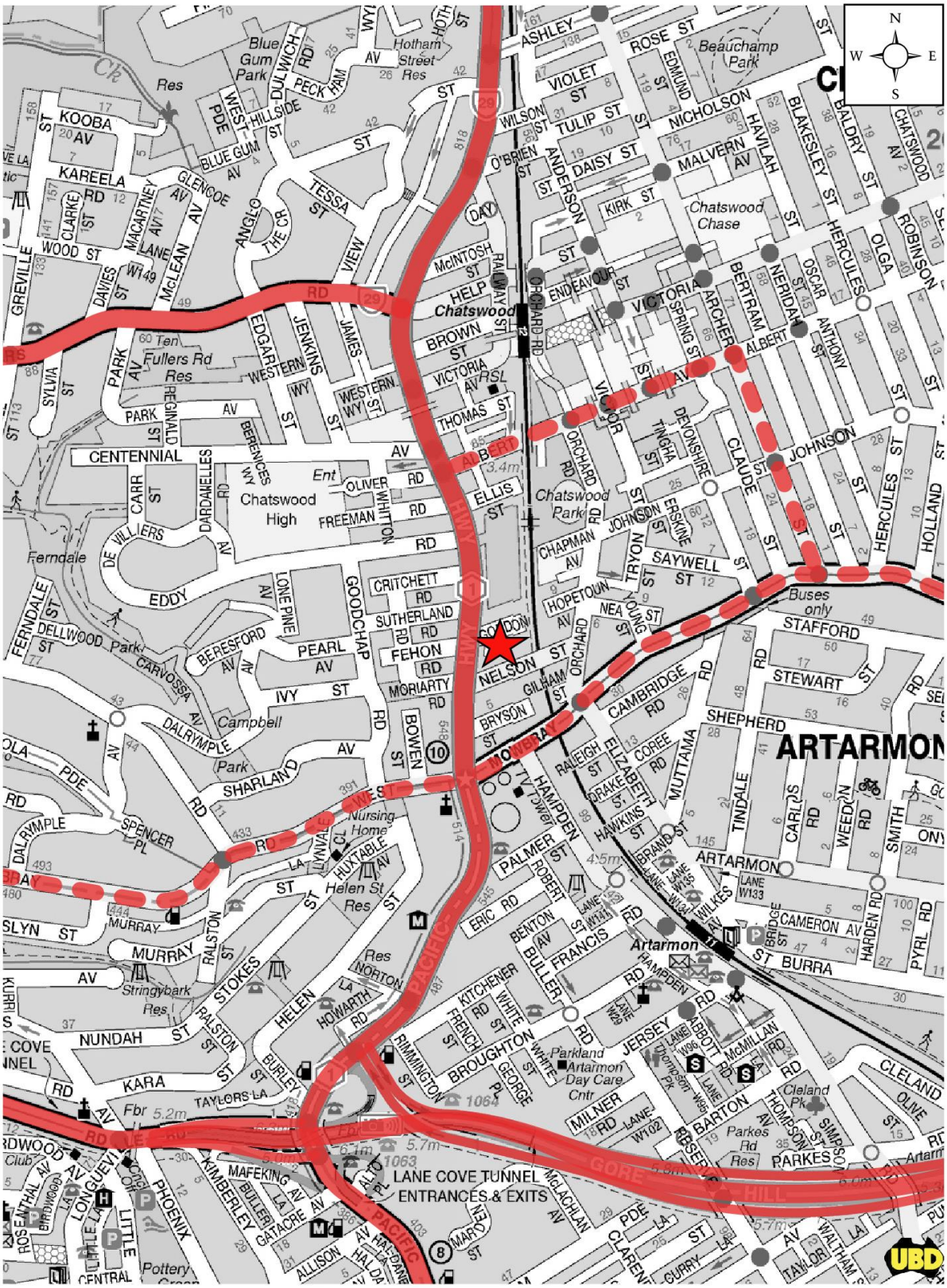
The Pacific Highway is classified by TfNSW as a *State Road* and provides the key north-south road link in the area, linking North Sydney to Hornsby and beyond. It typically carries three traffic lanes in each direction in the vicinity of the site, with opposing traffic flows separated by a central median island. Clearway restrictions apply during commuter peak periods.

The Gore Hill Freeway is also classified by TfNSW as a *State Road* and provides the key east-west road link in the area, linking the Warringah Freeway to the Lane Cove Tunnel. It carries multiple 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 Gore Hill Freeway are grade-separated.

Mowbray Road is classified by TfNSW as a *Regional Road* which provides another key east-west road link in the local area. It typically carries two traffic lanes in each direction in the vicinity of the site, with additional lanes provided at key locations.

Nelson Street is a local, unclassified no-through road which is primarily used to provide vehicular and pedestrian access to frontage properties. Kerbside parking is permitted on both sides of the road, subjected to sign posted restrictions.

Hammond Lane is a local, unclassified no-through service lane which is primarily used to provide rear vehicular and pedestrian access to properties fronting the Pacific Highway. Kerbside parking is generally permitted along the western side of the laneway only.



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ROAD HIERARCHY
FIGURE 3

Existing Traffic Controls

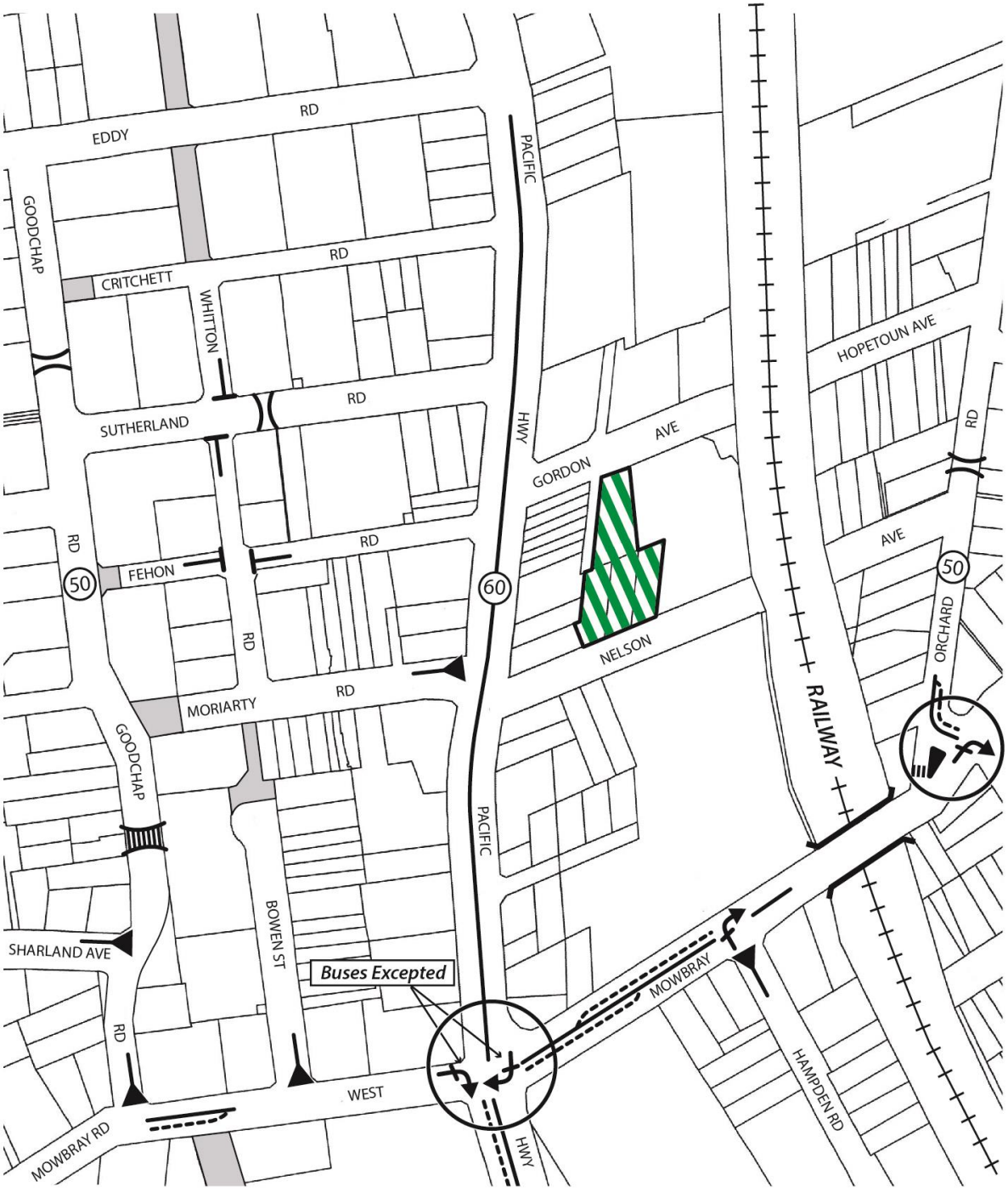
The existing traffic controls which apply to the road network in the vicinity of the site are illustrated on Figure 4. Key features of those traffic controls are:

- a 60 km/h SPEED LIMIT which applies to the Pacific Highway
- a 50 km/h SPEED LIMIT which applies to Gordon Avenue, Hammond Lane and all other local roads in the area
- TRAFFIC SIGNALS in the Pacific Highway where it intersects with Mowbray Road
- a CENTRAL MEDIAN ISLAND in the Pacific Highway which precludes right-turn movements into / out of Gordon Avenue and also Hammond Lane
- a NO RIGHT TURN restriction in the Pacific Highway for southbound traffic turning onto Mowbray Road (Buses Excepted)
- a NO RIGHT TURN restriction in Mowbray Road for eastbound traffic turning onto the Pacific Highway (Buses Excepted).

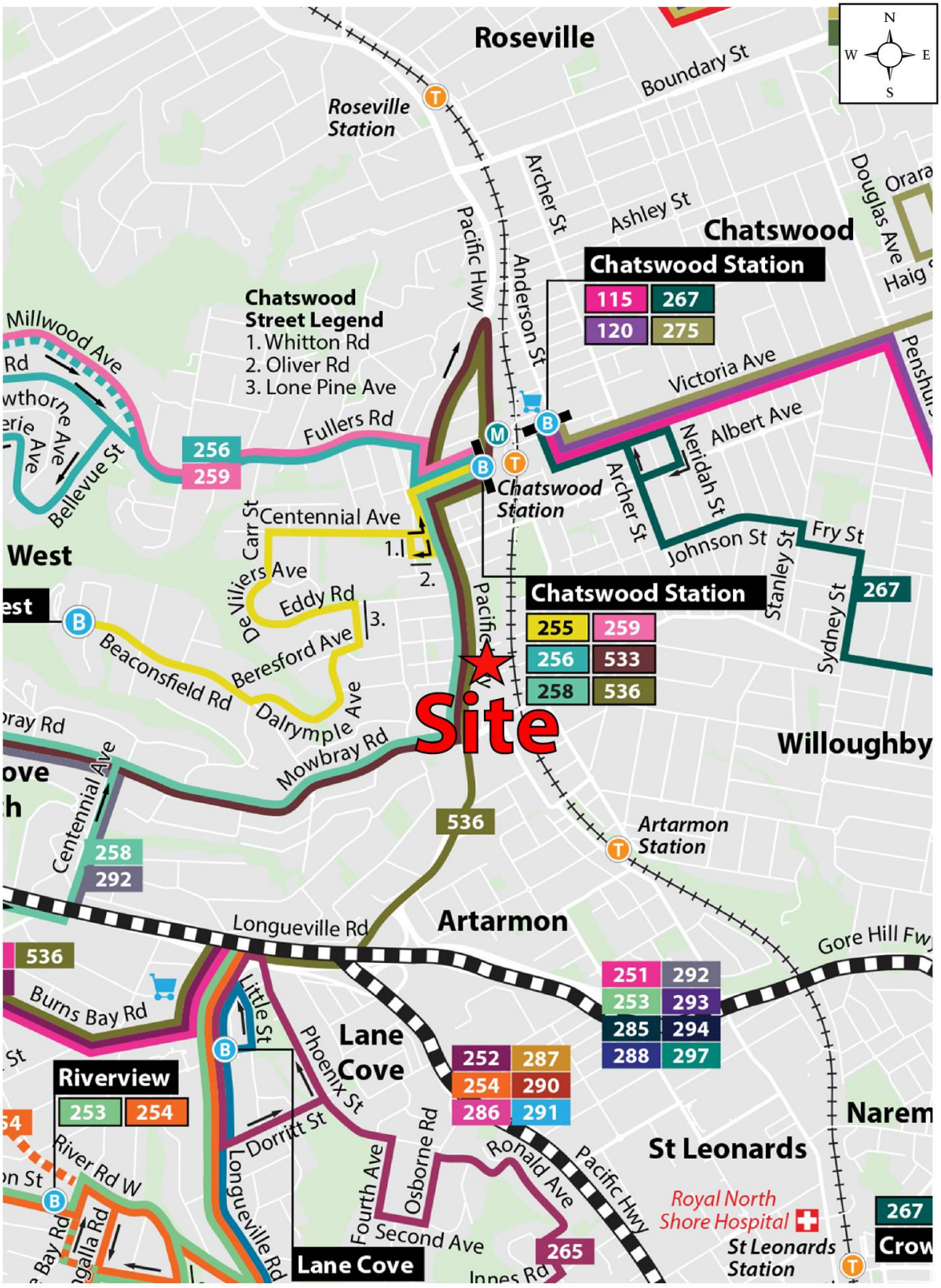
Existing Public Transport Services

The existing public transport services available within the vicinity of the subject site are illustrated on Figures 5a & 5b. The subject site is conveniently located within approximately 600m walking distance south of Chatswood Railway Station via a dedicated off-road path parallel to the railway. Chatswood Station lies on the T1 North Shore, Northern & Western Line, linking Berowra, Hornsby, Epping, Richmond and Emu Plains.

In addition to the train services, a major bus interchange is available outside of the Chatswood Railway Station servicing a number of bus routes, including the 115, 120, 137, 160X, 267, 275, 277, 278, 279, 280, 281, 282, 283, 284, 558 and 565 services.



EXISTING TRAFFIC CONTROLS
FIGURE 4



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EXISTING PUBLIC TRANSPORT SERVICES
FIGURE 5A

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EXISTING PUBLIC TRANSPORT SERVICES
FIGURE 5B

There is also an extensive range of bus services available within 50m walking distance north of the site along the Pacific Highway. A summary of those bus services is provided in the table below, revealing that there are approximately 259 bus services per day travelling near the site on weekdays, decreasing to approximately 150 bus services per day on Saturdays and approximately 118 bus services per day on Sundays, as set out in the table below.

Bus Routes and Frequencies

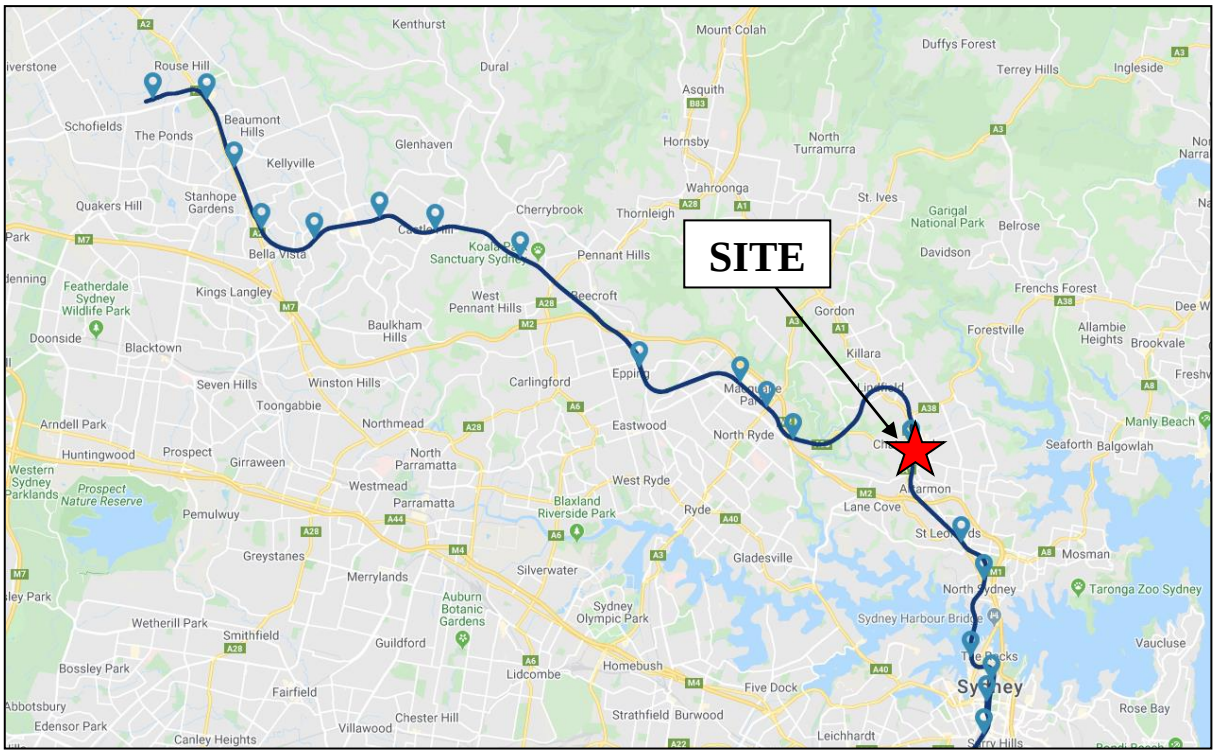
Route No.	Route	Weekday		Saturday		Sunday	
		In	Out	In	Out	In	Out
144	Manly to Chatswood	31	32	32	32	32	32
258	Lane Cove Industrial to Chatswood	2	2	-	-	-	-
261	Longueville & Northwood to City	24	25	11	11	-	-
530	Burwood to Chatswood	42	42	32	32	27	27
533	Sydney Olympic Park to Chatswood	8	10	-	-	-	-
536	Gladesville to Chatswood	21	20	-	-	-	-
	TOTAL	**128**	**131**	**75**	**75**	**59**	**59**

The site is also located within easy walking distance of the Chatswood City Centre which includes a wide range of essential shops and services including licenced clubs, banks, supermarkets, gymnasiums, restaurants and specialty stores.

On the above basis it is clear that the site is extremely well served by existing public transport and essential services and is ideally located to encourage reduced private car usage and an increased use of public transport and active forms of transport such as walking and cycling.

Sydney Metro

Sydney Metro is Australia's biggest public transport project. This new standalone railway will ultimately deliver 31 metro stations and more than 66 kilometres of new metro rail, revolutionising the way Australia's biggest city travels. North West Sydney Metro Map has been reproduced on the following pages.



Metro means a new generation of world-class fast, safe and reliable trains easily connecting customers to where they want to go. Customers don't need timetables – they just turn up and go, with a train every four minutes in the peak. Technology keeps customers connected at all stages of their journey, including smart phone travel apps and real-time journey information at metro stations and on board trains.

When Sydney Metro is extended into the Sydney CBD and beyond in 2024, metro rail will run from Sydney's booming North West region under Sydney Harbour, through new underground stations in the CBD, and beyond to the south west.

Sydney's new metro railway will have a metro train every two minutes in each direction with a target capacity of about 40,000 customers per hour, similar to other metro systems worldwide. Sydney's current suburban system can reliably carry 24,000 people an hour per line.

Sydney Metro, together with signalling and infrastructure upgrades across the existing Sydney rail network, will increase the capacity of train services entering the Sydney CBD – from about 120 an hour today to up to 200 services beyond 2024.

On the above basis it is clear that the site is extremely well served by existing public transport and essential services and is ideally located to encourage reduced private car usage and an increased use of public transport and active forms of transport such as walking and cycling.

Chatswood is one of five current railway stations that has been upgraded to metro standards as part of the first stage of Sydney Metro. This upgrade includes platform screen doors installed along the full length of the platforms to keep people and objects away from the tracks, improving customer safety and allowing trains to get in and out of stations much faster.

The number of train services between Epping and Chatswood has increased to approximately 15 an hour in the peak – almost four times as many trains as previously. Customers will also have a new direct metro service to Crows Nest, Barangaroo and Martin Place when Sydney Metro City & Southwest opens in 2024.

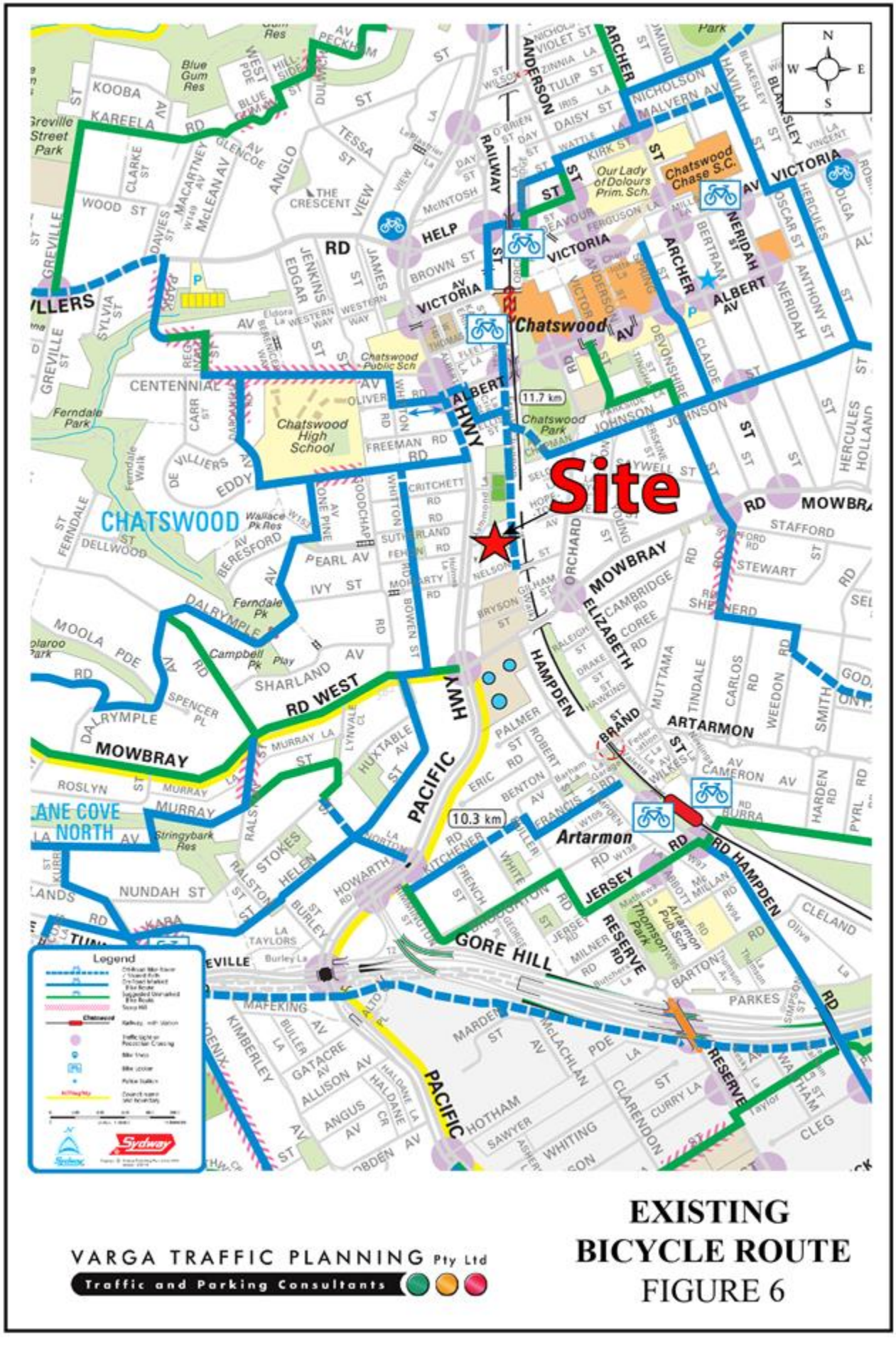
Existing Pedestrian Paths

Existing pedestrian footpaths located in the vicinity of the site provide suitable links for pedestrians accessing local facilities such as schools and shops in the local area. The site is also located within easy walking distance of the Chatswood CBD located north of the subject site.

In particular, a shared Off-Road Pedestrian and Bicycle Path to the Bus/Rail Interchange running parallel to the railway line is easily accessed directly from the eastern end of Gordon Avenue. This shared path allows pedestrians and bicycles to travel safely along an 600m long off-road route which is linked directly to the Chatswood CBD, giving direct access to the Chatswood Railway Station.

Local Bicycle Routes

The existing bicycle routes located in the vicinity of the site are illustrated on Figure 6. The bicycle routes are readily accessible from the subject site and provide a number of on-road and off-road bicycle links through the local area, including the following routes:



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EXISTING BICYCLE ROUTE
FIGURE 6

- to Chatswood CBD from Gordon Avenue and Nelson Street via the shared Off-Road Pedestrian & Bicycle Route running parallel to the railway line

- to Chatswood Public School from Gordon Avenue and Nelson Street via the abovementioned dedicated shared Off-Road Pedestrian & Bicycle Route running parallel to the railway line

- to Willoughby via the dedicated shared Off-Road Pedestrian & Bicycle Route running parallel to the railway line and the on-road bicycle route via Johnson Street, Laurel Street & Edinburgh Road

- to Crows Nest dedicated shared Off-Road Pedestrian & Bicycle Route running parallel to the railway line, and the on-road bicycle route via Johnson Street, Devonshire Street, Shepherd Road & the shared Off-Road Pedestrian & Bicycle Route (starting along Weedon Road).

The proposed development will ultimately make provisions for a bicycle parking area which is to be located on the basement levels, which can easily be accessible from Hammond Lane and will enhance the *active* transport options available to future occupants of the site.

Projected Traffic Generation

An indication of the traffic generation potential of the planning 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 recently published 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.

Neither the RMS *Guidelines* or the updated *TDT 2013/04a* nominate a traffic generation rate for small, local shops, referring only to major regional shopping centres incorporating supermarkets and department stores.

For the purposes of this assessment therefore, the traffic generation rate nominated in *TDT 2013/04a* for offices has been adopted in respect of the retail component of the development proposal.

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:

Offices

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

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

High Density Residential Flat Dwellings

AM: 0.19 peak hour vehicle trips per unit

PM: 0.15 peak hour vehicle trips per unit

Application of the above traffic generation rates to the various components of the planning proposal yields a traffic generation potential of approximately 68 vph during the *morning* commuter peak period and approximately 52 vph during the *afternoon* commuter peak period as set out below:

Planning Proposal Projected Future Traffic Generation Potential

	AM	**PM**
Commercial/retail (2,543m^2):	40.7 vph	30.5 vph
Residential (142 apartments):	27.0 vph	21.3 vph
TOTAL TRAFFIC GENERATION POTENTIAL:	**67.7 vph**	**51.8 vph**

That projected future 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 of the site as a consequence of the planning proposal.

The RMS *Guidelines* nominates the following traffic generation rates which are applicable to the existing dwelling house and 3 x residential apartment buildings, comprising a total of 23 dwellings:

> **Low Density Residential**
> 0.95 AM peak hour vehicle trips
> 0.99 PM peak hour vehicle trips
>
> **Medium Density Residential**
> 0.4-0.5 peak hour vehicle trips/dwelling (up to 2 bedrooms)
> 0.5-0.65 peak hour vehicle trips/dwelling (3 or more 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 existing buildings on the site yields a peak hour traffic generation potential of approximately 13 vehicle trips per hour during commuter peak periods.

Accordingly, the planning proposal could result in a *nett increase* in the traffic generation potential of the site of approximately 55 vph during the AM commuter peak period and approximately 39 vph during the PM commuter peak period, as set out below:

Projected Nett Increase in the Traffic Generation Potential of the Site as a Consequence of the Planning Proposal

	AM	**PM**
Projected Future Traffic Generation Potential (Proposed WLEP Controls):	67.7 vph	51.8 vph
Less Existing Traffic Generation Potential:	-12.6 vph	-12.6 vph
NETT INCREASE IN TRAFFIC GENERATION POTENTIAL:	**55.1 vph**	**39.2 vph**

In practice however, it is likely that the traffic generation potential of the planning proposal will be less than is set out above given that car parking on the site is to be *constrained*, as detailed in Chapter 4 of this report.

In any event, that projected increase in the traffic generation potential of the site as a consequence of the planning proposal is minimal and will clearly not have any unacceptable traffic implications in terms of road network capacity.

In particular, it is noted that this planning proposal is consistent with the population growth envisaged by the *Chatswood CBD Planning and Urban Design Strategy (CCPUDS)*. It is noted in this regard that the "*Future Conditions Report*" undertaken by Arup in collaboration with Willoughby City Council and TfNSW compared the growth scenarios presented in the *CCPUDS* to the TfNSW base forecast to ascertain the likely impact on the future transport network. The "*Future Conditions Report*" found that:

- travel demand in Chatswood will increase significantly over the next 20 years

- Sydney Metro will be a key driver for travel patterns in future years, leading to *increased public transport mode shares* and a *significant uplift in the number of passengers using Chatswood Bus/Rail Interchange*

- despite the mode shift towards public transport, private vehicle trips will also increase in the horizon years, however results suggest that the road network has the capacity to accommodate the uplift

- the differences between the base and uplift scenarios on the road network occurred predominantly on the internal road network within the CBD, and

- the base and uplift scenarios had similar impacts on the surrounding arterial roads, such as the Pacific Highway and Mowbray Road.

In summary, the future conditions report found that the *CCPUDS* will have an impact in the same order of magnitude as the current TfNSW base forecast, and that the future transport network will be able to accommodate this demand.

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 7. Key features of those parking restrictions are:

- CLEARWAY restrictions along both sides of the Pacific Highway during commuter peak periods

- NO PARKING restrictions along the eastern side of the Pacific Highway in the vicinity of the site at all other times

- 1 HOUR PARKING restrictions along the southern side of Gordon Avenue, between Pacific Highway and Hammond Lane

- NO PARKING restrictions along the eastern side of Hammond Lane, south of Gordon Avenue intersection

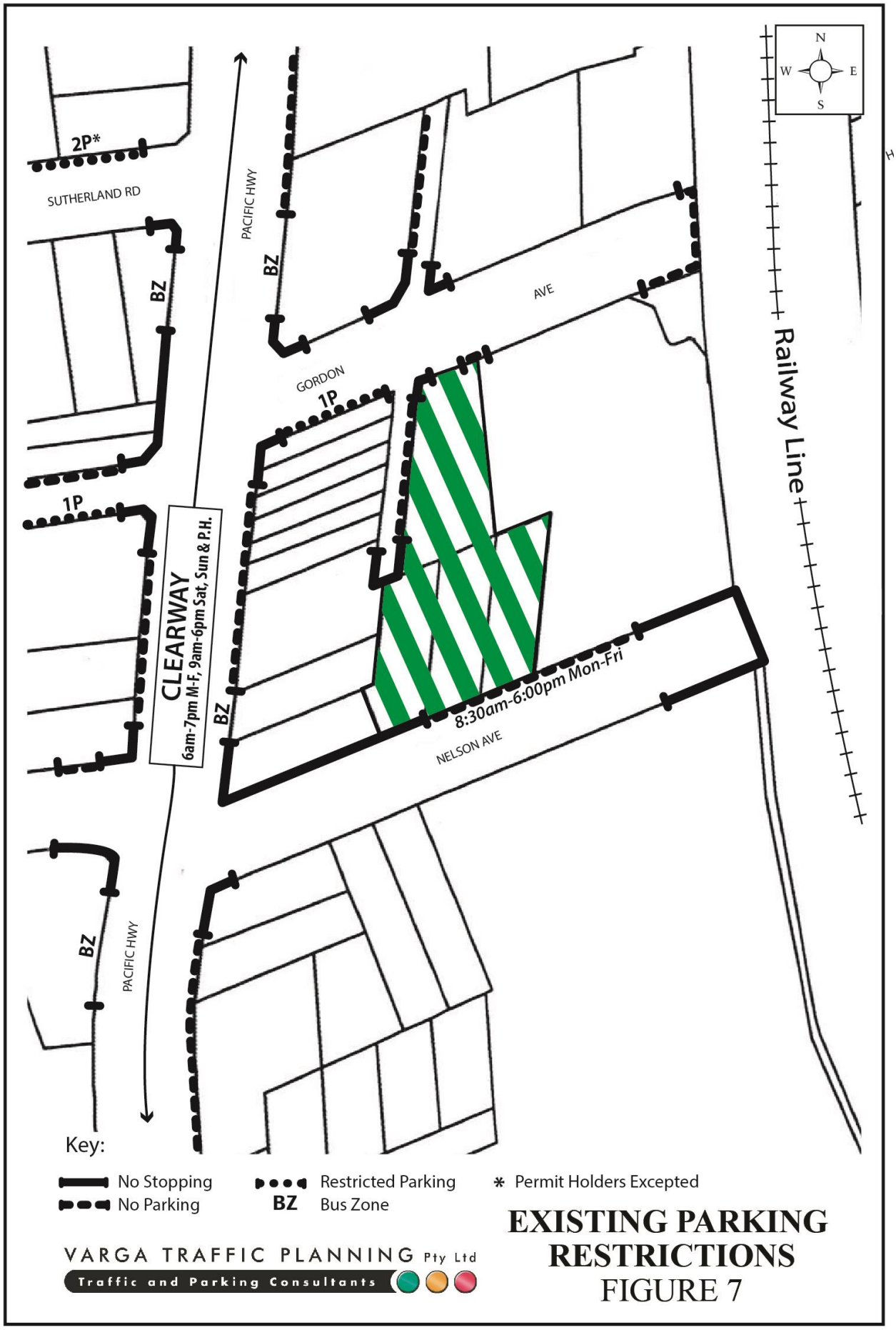
- NO STOPPING / NO PARKING restrictions along the northern side of Nelson Street, including along the site frontage, between 8:30am and 6:00pm, Monday to Friday

- generally UNRESTRICTED kerbside parking elsewhere along the southern side of Nelson Street, the western side of Hammond Lane and along both sides of Gordon Avenue, including along the Gordon Avenue site frontage

- BUS ZONES located at regular intervals along both sides of the Pacific Highway.

Off-Street Car Parking Provisions

The off-street parking requirements applicable to the development proposal are specified in Council's Willoughby *Development Control Plan – Part C.4: Transport Requirements for Developments* document in the following terms:


N
W
E
S
2P*
SUTHERLAND RD
PACIFIC HWY
BZ
BZ
AVE
GORDON
1P
1P
CLEARWAY
6am-7pm M-F, 9am-6pm Sat, Sun & P.H.
BZ
8:30am-6:00pm Mon-Fri
NELSON AVE
Railway Line
BZ
PACIFIC HWY
Key:
No Stopping
No Parking
Restricted Parking
BZ Bus Zone
* Permit Holders Excepted
VARGA TRAFFIC PLANNING Pty Ltd
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EXISTING PARKING RESTRICTIONS
FIGURE 7

Shop Top Housing

Studio – 0.5 space

1 space/dwelling (other than studios)

Visitor spaces – 1 per 4 dwellings

Office/Business Premises within Railway Precincts and Major Public Transport Corridors

1 space/110m^2

Shop

1 space/25m^2

Application of the above parking requirements to the various components of the planning proposal yields an off-street car parking requirement of 226 spaces as set out below (the number of spaces required will be rounded down to the nearest whole number as per DCP):

Residents (142 apartments):	142.0 spaces
Visitors:	35.5 spaces
Commercial (1,700m^2):	15.5 spaces
Retail (843m^2):	33.7 spaces
TOTAL:	**226.7 spaces**

However, the subject site is located within 800 metres of a railway station in the Sydney metropolitan area, and therefore the residential component of the planning proposal is also subject to the parking requirements specified in *State Environmental Planning Policy No 65 – Design Quality of Residential Flat Development (Amendment No 3), 2015* in the following terms:

30 Standards that cannot be used to refuse development consent or modification of development consent

(1) If an application for the modification of a development consent or a development application for the carrying out of development to which this Policy applies satisfies the following design criteria, the consent authority must not refuse the application because of those matters:

a) if the car parking for the building will be equal to, or greater than, the recommended minimum amount of car parking specified in Part 3J of the Apartment Design Guide.

Reference is therefore made to the *Apartment Design Guide 2015, Section 3J – Bicycle and Car Parking* document which nominates the following car parking requirements:

> **Objective 3J-1**
> Car parking is provided based on proximity to public transport in metropolitan Sydney and centres in regional areas
>
> For development in the following locations:
>
> - on sites that are within 800 metres of a railway station or light rail stop in the Sydney Metropolitan Area; or
> - on land zoned, and sites within 400 metres of land zoned, B3 Commercial Core, B4 Mixed Use or equivalent in a nominated regional centre
>
> the minimum car parking requirements for residents and visitors is set out in the Guide to Traffic Generating Developments, or the car parking requirement prescribed by the relevant council, whichever is less.
>
> The car parking needs for a development must be provided off street.

Comparison therefore needs to be drawn between the off-street car parking requirements for residential flat buildings outlined in the Council's *WDCP* and also in the RMS *Guidelines* to determine the *lesser* requirement. The relevant car parking rates outlined in the RMS *Guidelines* are reproduced below:

> **RMS Guidelines – High Density Residential Flat Buildings in Metro Regional Centres**
> 0.4 spaces per 1 bedroom unit
> 0.7 spaces per 2 bedroom unit
> 1.2 spaces per 3 bedroom unit
> 1 space per 7 units for visitor parking

The minimum off-street car parking requirement applicable to the residential component of the planning proposal is 127 spaces, comprising 107 residential spaces and 20 visitor spaces as set out on the following page:

Comparison of Residential Parking Requirements

	WDCP	SEPP 65 / RMS Guidelines
Residents:	142.0 spaces	106.5 spaces
Visitors:	35.5 spaces	20.3 spaces
Total:	**177.5 spaces**	**126.8 spaces**
Lesser Residential Car Parking Requirement: 127 spaces		

Accordingly, the minimum off-street car parking requirement applicable to the planning proposal is therefore 176 spaces as set out below:

Residential (142 apartments):	106.5 spaces (SEPP 65/RMS)
Visitors:	20.3 spaces (SEPP 65/RMS)
Commercial/business (1,700m²):	15.5 spaces (DCP)
Retail (843m²):	33.7 spaces (DCP)
TOTAL:	**176.0 spaces**

Whilst the number of parking spaces to be provided as part of a future development proposal is not yet known, it is clear that the above parking requirements can be satisfied within the basement parking area proposed on the subject site. In this regard, following advice sought from the pre-planning proposal, Council recommended a reduced parking provision.

Accordingly, it is reasonable to conclude that the proposed development will not have any unacceptable parking implications.

The geometric design layout of the future car parking facilities will ultimately be designed to 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*.

Swept turning paths have also been attached for the B99/B85 vehicles in accordance with *AS2890.1:2004* which demonstrates the vehicles can enter and exit the site simultaneously whilst travelling in a forward direction at all times.

Off-Street Motorcycle and Bicycle Parking Provisions

The motorcycle and bicycle parking requirements applicable to the development proposal are also specified in *Willoughby Development Control Plan Part C.4 – Transport Requirements for Development* document in the following terms:

Motorcycle

1 motorcycle space per 25 car spaces

Bicycle

Residential (lockers):	1 space per 10 units	*plus*
Residential (rail/racks):	1 space per 12 units	
Commercial (lockers):	1 space per 600m^2	*plus*
Commercial (rail/racks):	1 space per 2,500m^2	
Retail (lockers):	1 space per 450m^2	*plus*
Retail (rail/racks):	1 space per 150m^2	

Application of the above motorcycle and bicycle parking requirements to the various components of the planning proposal yields an off-street parking requirement of 6 motorcycle spaces, 19 bicycle lockers and 18 bicycle rails/racks.

Whilst the number of motorcycle and bicycle parking spaces to be provided as part of the planning proposal is not yet known, it is clear that the above parking requirements can be satisfied within the proposed of basement parking area on the subject site.

Loading/Servicing Provisions

The proposed new mixed use building is expected to be serviced by a variety of commercial vehicles up to and including 8.8m long medium rigid trucks A dedicated service area is to be provided on the lower ground floor level along the eastern boundary of the site, which includes a turning area, thereby allowing all service vehicles to enter and exit the site in a forward direction at all times. Vehicular access to the service area is to be provided via the aforementioned vehicular access located at the southern end of the Hammond Lane site frontage.

In this regard, it is noted that the dedicated loading area has been designed to accommodate up to 1 x SRV and 1 x MRV truck *independently*.
The manoeuvring area has been designed to accommodate the swept turning path requirements of these 6.4m long small rigid trucks and 8.8m long rigid trucks, allowing them to enter and exit the site whilst travelling in a forward direction at all times, as per the attached *swept turning path* diagram.

The geometric design layout of the proposed loading facilities will also ultimately be designed to comply with the relevant requirements specified in the Standards Australia publication *Parking Facilities Part 2 - Off-Street Commercial Vehicle Facilities AS2890.2* in respect of loading dock dimensions and service area requirements for SRV and MRV trucks.

Conclusion

Based on the analysis and discussions presented within this report, the following conclusions are made:

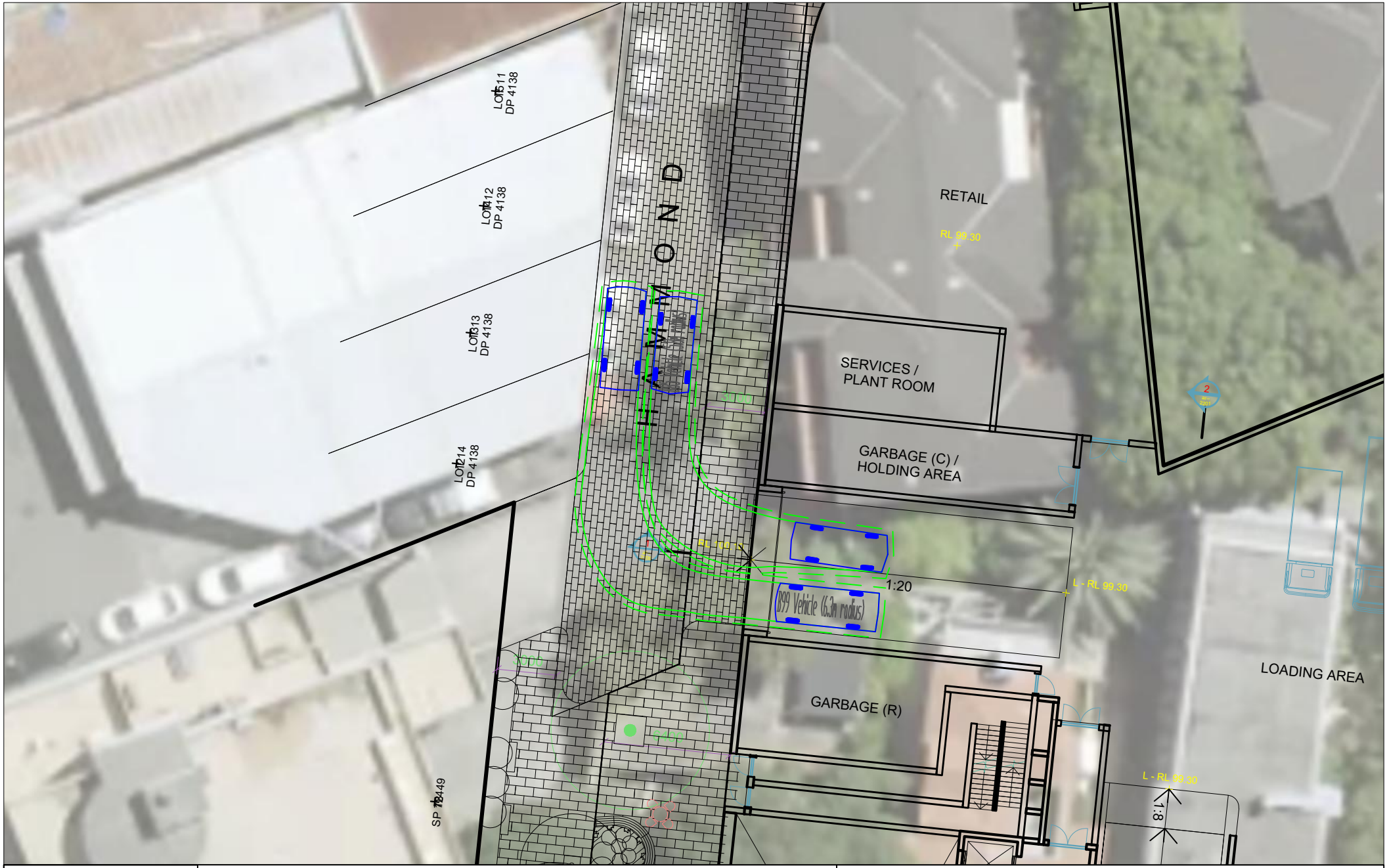
- the planning proposal seeks approval to increase the allowable FSR and height controls for the site, resulting in the potential for approximately 142 apartments and approximately 2,543m^2 of retail/commercial floor space

- the planning proposal is consistent with the CBD Strategy, with no changes proposed to the previously endorsed scheme

- the future car, motorcycle, bicycle and loading facilities will ultimately be provided and designed in accordance with Council's requirements, *SEPP 65* and the relevant Australian Standards

- the future vehicular access arrangements will be designed in accordance with Council and RMS requirements.

It is therefore reasonable to conclude that the planning proposal will not have any unacceptable implications in terms of road network capacity or off-street parking/loading/access requirements.



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www.vargatraffic.com.au
Sydney, Australia

PROJECT
MIXED USE DEVELOPMENT

N

DRAWING TITLE
B99 OUT & B85 IN
Simultaneous Passing At Access To Lower Ground

1:250 @ A4

ADDRESS
15-19 Nelson Street,
Chatswood

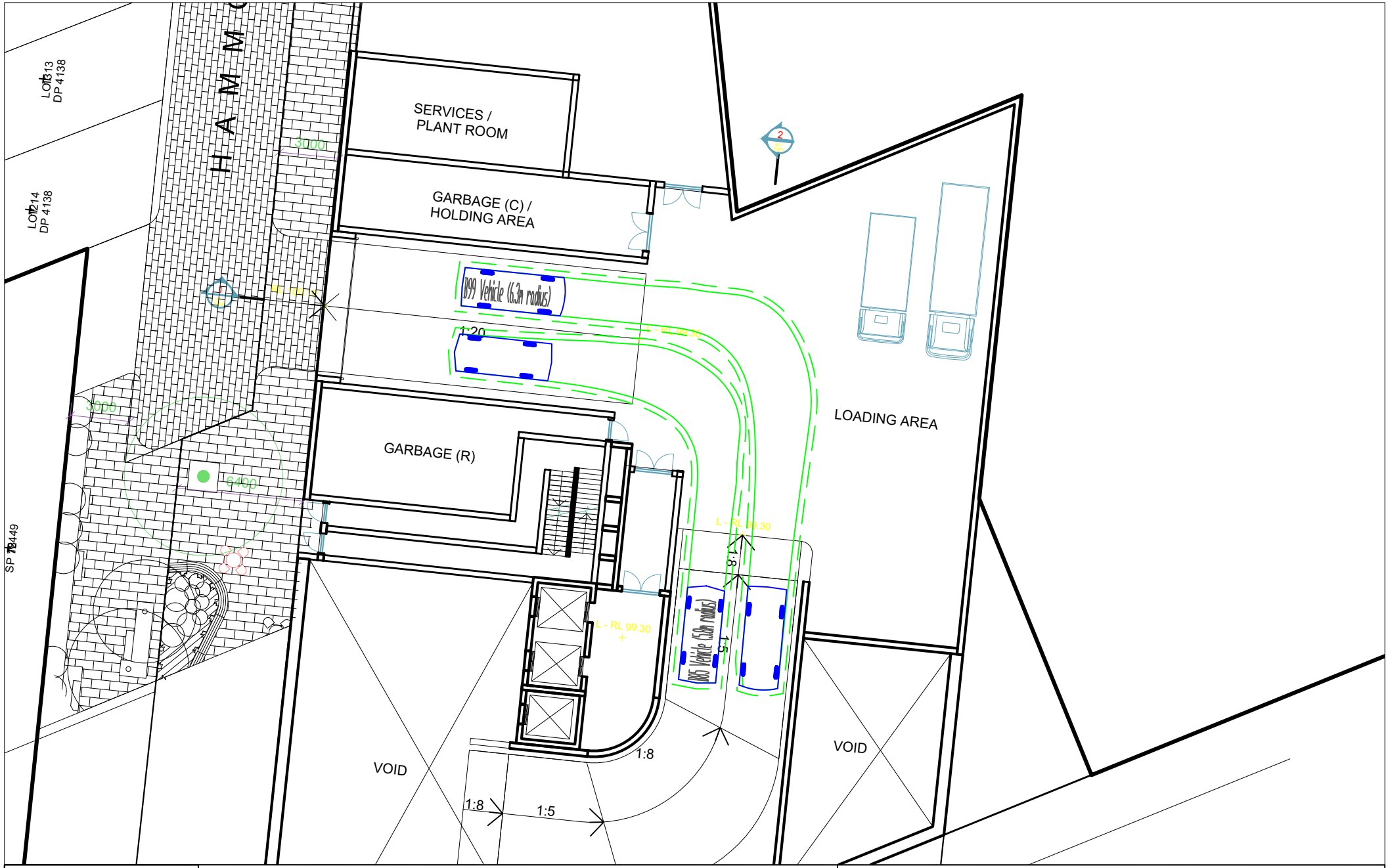
PROJECT NO.
22108

DATE DRAWN
2022-4-26

REVIEWED
Donald Lee

PREPARED
Dominic Lin

VARGA TRAFFIC PLANNING Pty Ltd
Transport, Traffic and Parking Consultants



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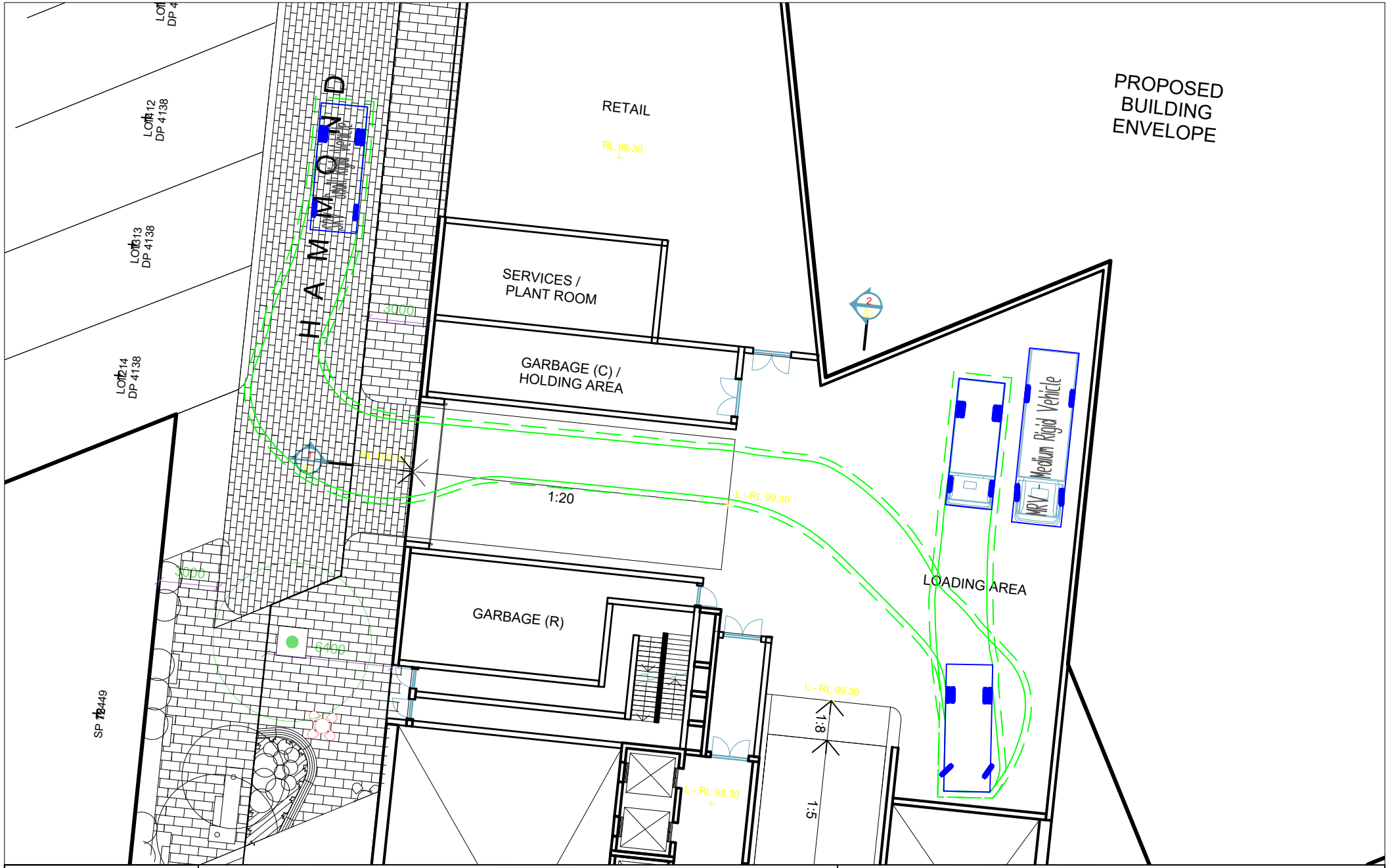

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DRAWING TITLE
6.4m SRV - Lower Ground
Entry Manoeuvre Into Loading Bay 1

1:250 @ A4

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15-19 Nelson Street,
Chatswood

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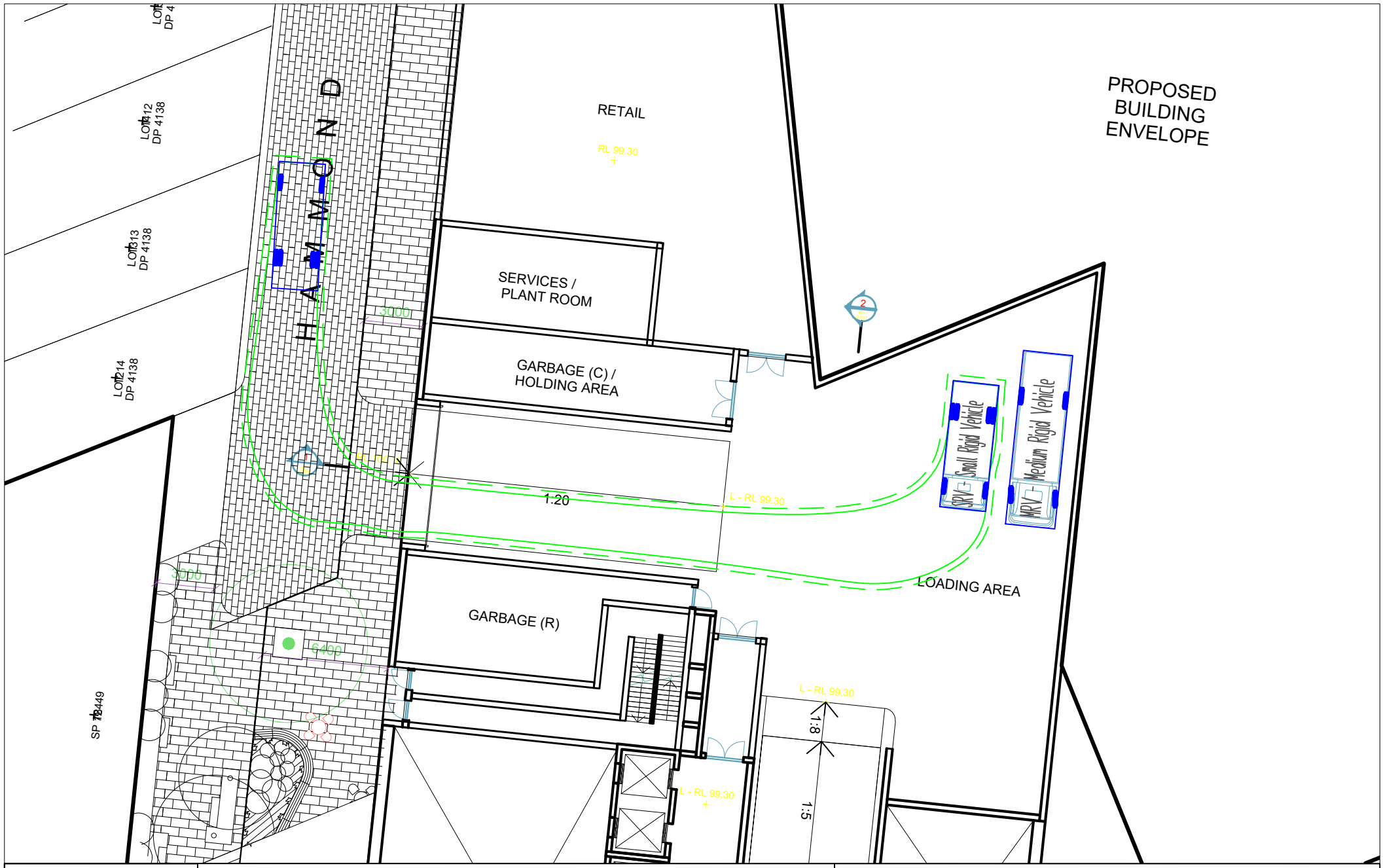

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6.4m SRV - Lower Ground
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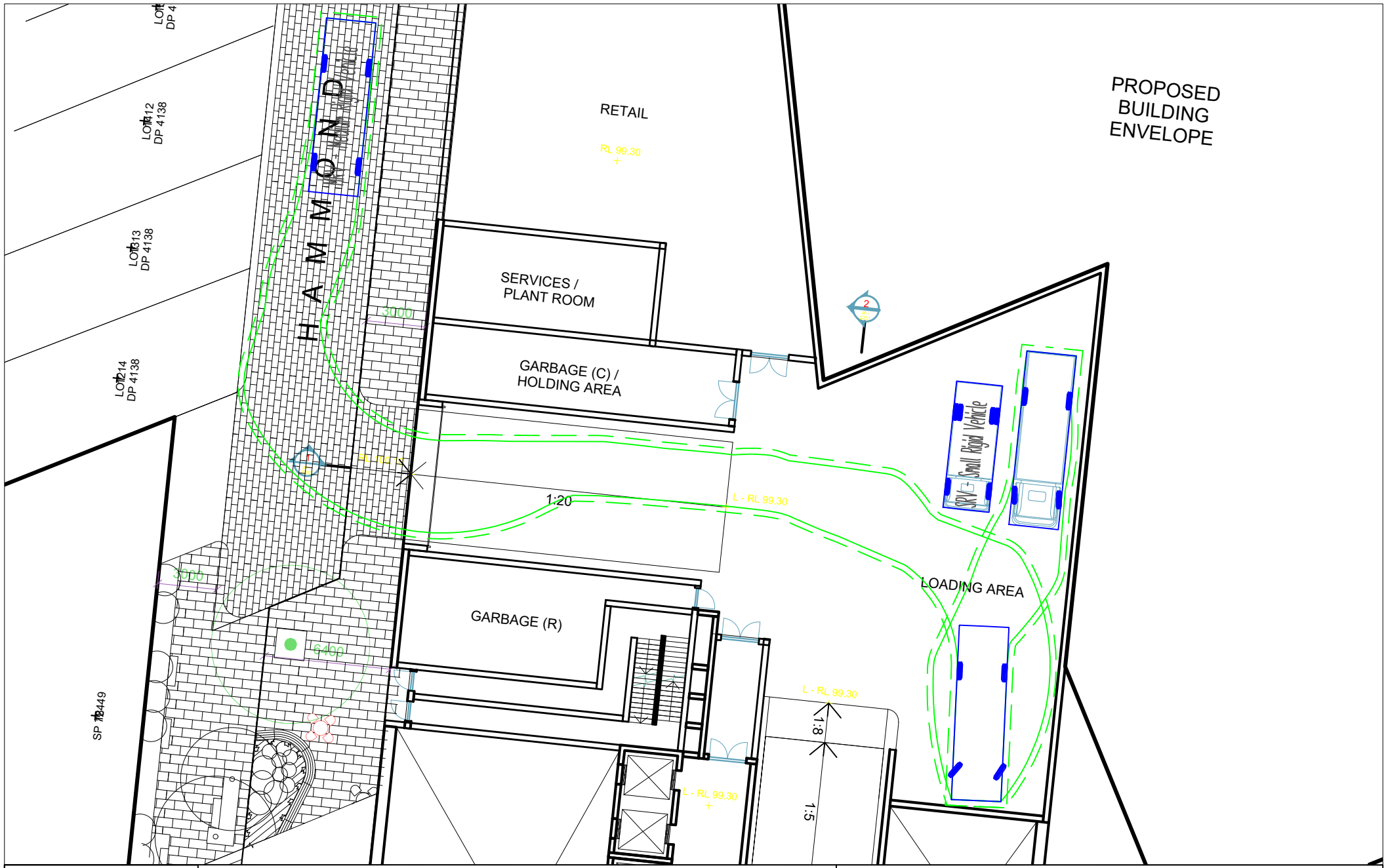

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PROJECT
MIXED USE DEVELOPMENT

N

DRAWING TITLE
8.8m MRV - Lower Ground
Entry Manoeuvre Into Loading Bay 2

1:250 @ A4

ADDRESS
15-19 Nelson Street,
Chatswood

PROJECT NO.
22108

DATE DRAWN
2022-4-26

REVIEWED
Donald Lee

PREPARED
Dominic Lin

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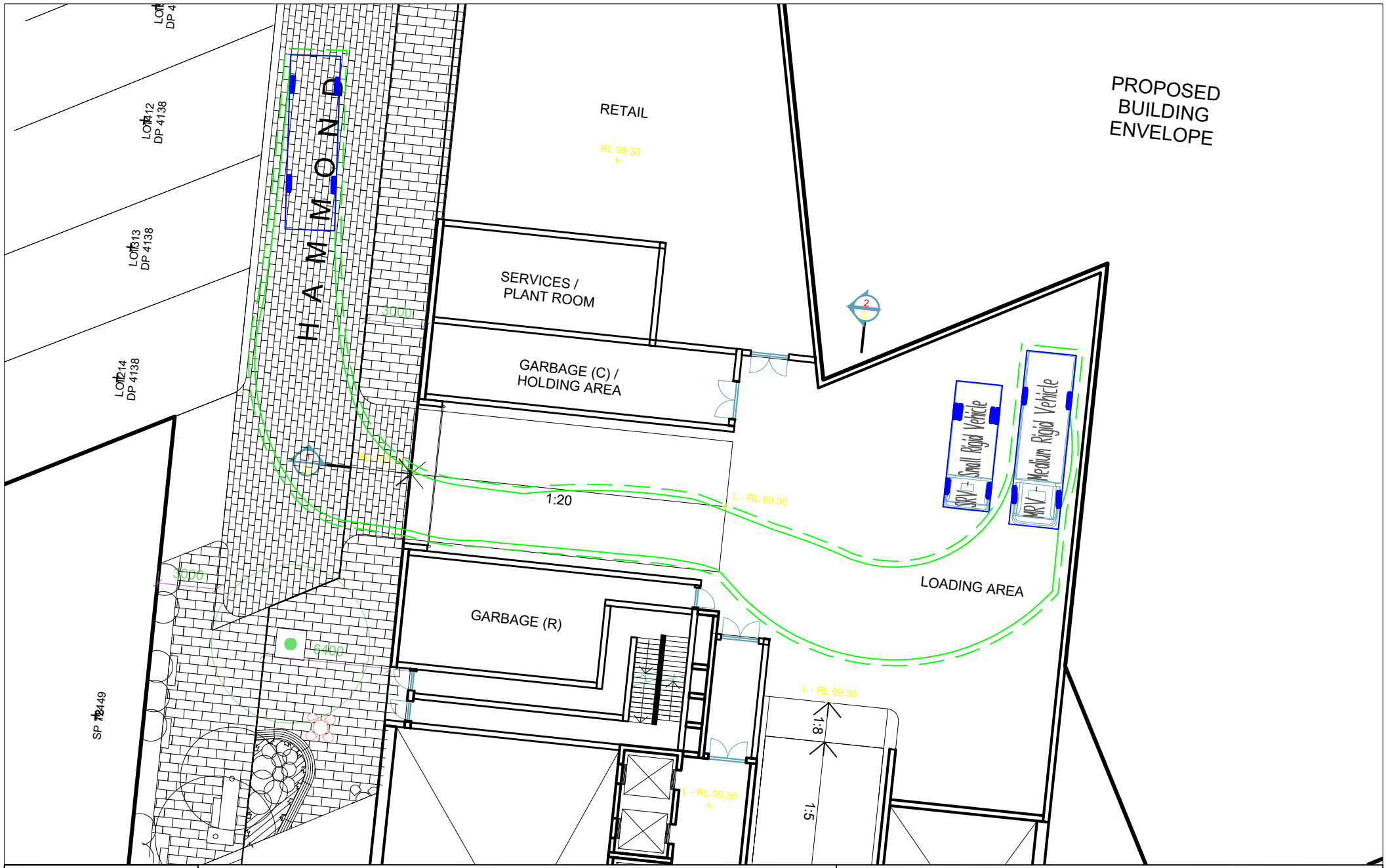

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8.8m MRV - Lower Ground
Exit Manoeuvre From Loading Bay 2

1:250 @ A4

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