Proposed Industrial Development

15 Jubilee Avenue, Warriewood

TRAFFIC AND PARKING ASSESSMENT REPORT

14 May 2021

Ref 20767

VARGA TRAFFIC PLANNING Pty Ltd
Transport, Traffic and Parking Consultants

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1. INTRODUCTION

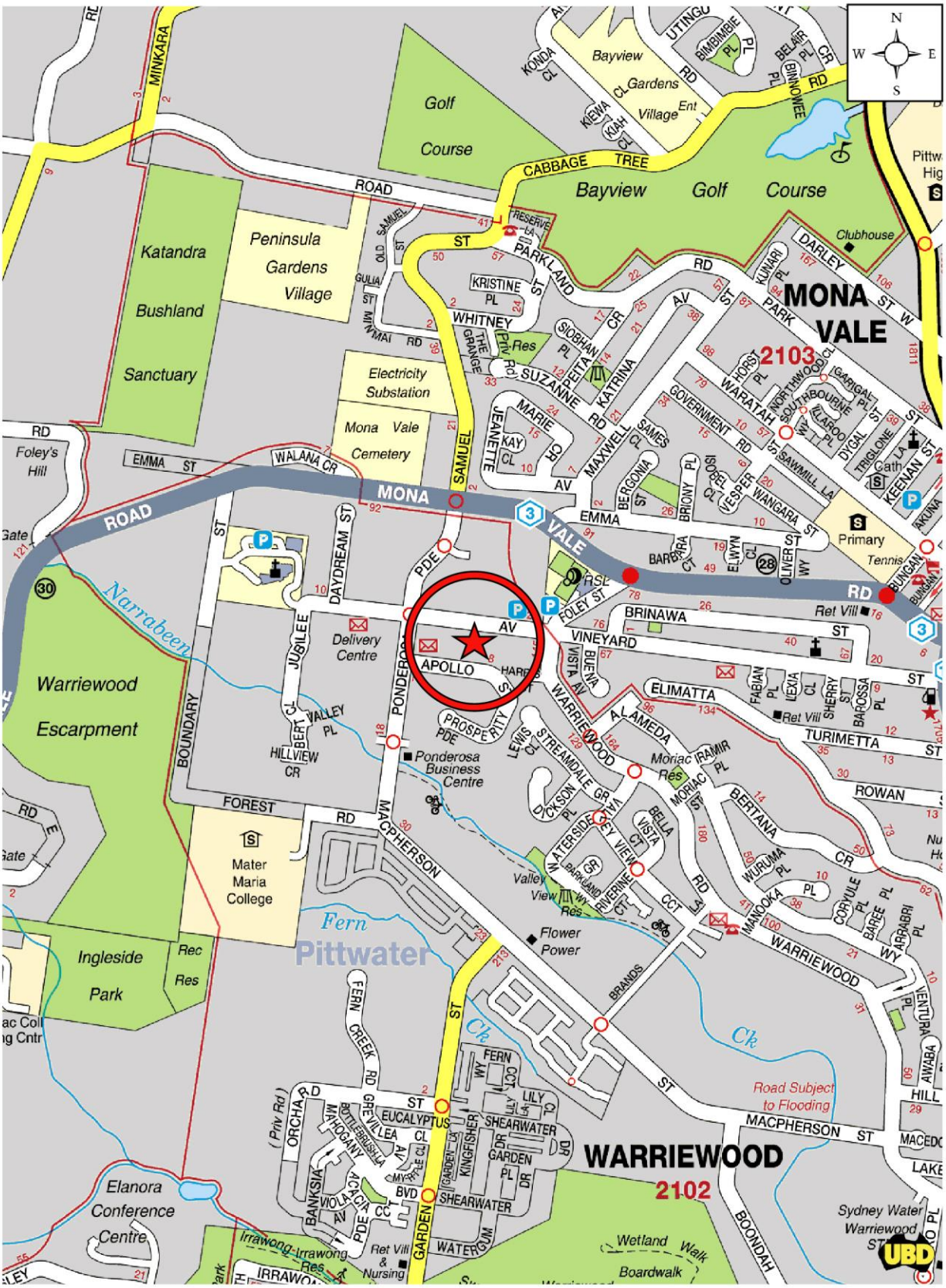
This report has been prepared to accompany a development application to Northern Beaches Council for an industrial development proposal to be located at 15 Jubilee Avenue, Warriewood (Figures 1 and 2).

The proposed development involves construction of a multi-unit industrial development with ancillary offices as well as a "ranch style" self-storage facility on an existing vacant site.

Off-street car parking is to be provided in car parking areas throughout the site in front of the warehouses 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 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
SAMUEL ST
JEANETTE AVE
MAXWELL ST
MONA VALE RD
EMMA ST
PDE
MONA VALE RD
PONDEROSA
JUBILEE AVE
FOLEY ST
VINEYARD ST
BUENA VISTA AVE
APOLLO
HARRIS ST
WARRIEWOOD
ALAMEDA WAY
RD
PONDEROSA
PDE
PROSPERITY
PDE
STREAMDALE
LEWIS CL
McPHERSON ST
DICKSON PL
GR
Road Closure / Unformed Road
VARGA TRAFFIC PLANNING Pty Ltd
Traffic and Parking Consultants
SITE
FIGURE 2

2. PROPOSED DEVELOPMENT

Site

The subject site is located on the southern side of Jubilee Avenue, some 200 metres east of Ponderosa Parade. The site has a street frontage approximately 100 metres in length to Jubilee Avenue, and occupies an area of approximately 4,600m^2.

The site is currently vacant and has an existing 7 metres wide vehicular crossover located towards the western end of the Jubilee Avenue site frontage.

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

Source: Nearmap

Proposed Development

The proposed development involves construction of a multi-unit industrial development with ancillary offices as well as a "ranch style" self-storage facility on an existing vacant site.

A total of 24 units are proposed over two levels comprising a cumulative industrial floor area of 1,491m^2, and a cumulative office floor area of 956m^2.

A "ranch style" self-storage facility is also proposed on the lower level comprising a total of 59 units with a cumulative floor area of 1,551m^2, which allows vehicles to park adjacent to their storage unit.

Off-street car parking is proposed for a total of 40 cars in car parking areas throughout the site in accordance with Council requirements.

Loading / servicing for the proposed development is expected to be undertaken by a variety of commercial vehicles up to and including 6.4m long Small Rigid Vehicles (SRV trucks) and 8.8m long Medium Rigid Vehicles (MRV trucks).

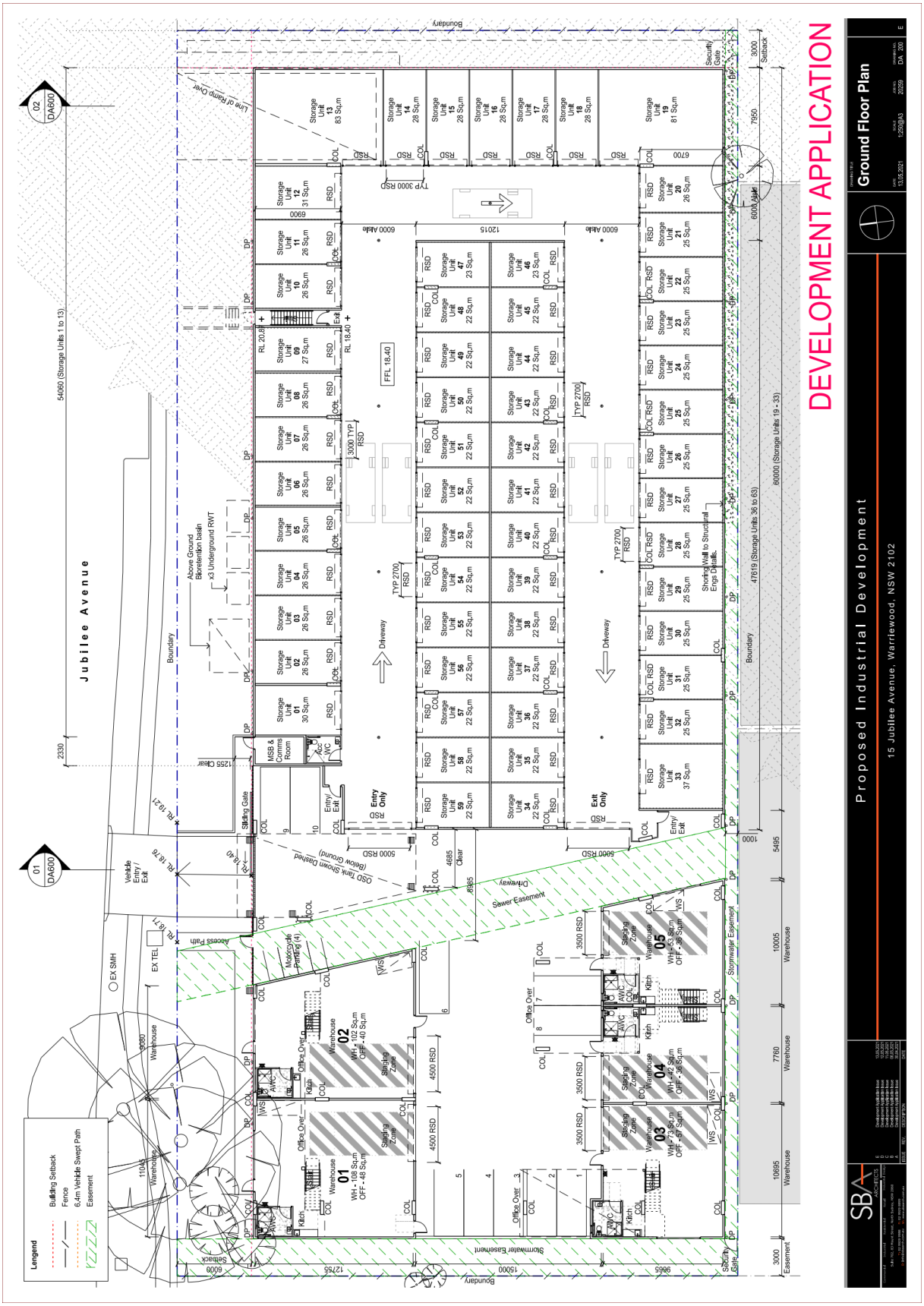
Each warehouse has been designed to be able to accommodate 6.4m SRV trucks in an internal loading bay, and the "ranch style" self-storage units have been designed to allow these 6.4m SRV trucks to circulate and load / unload within the aisle.

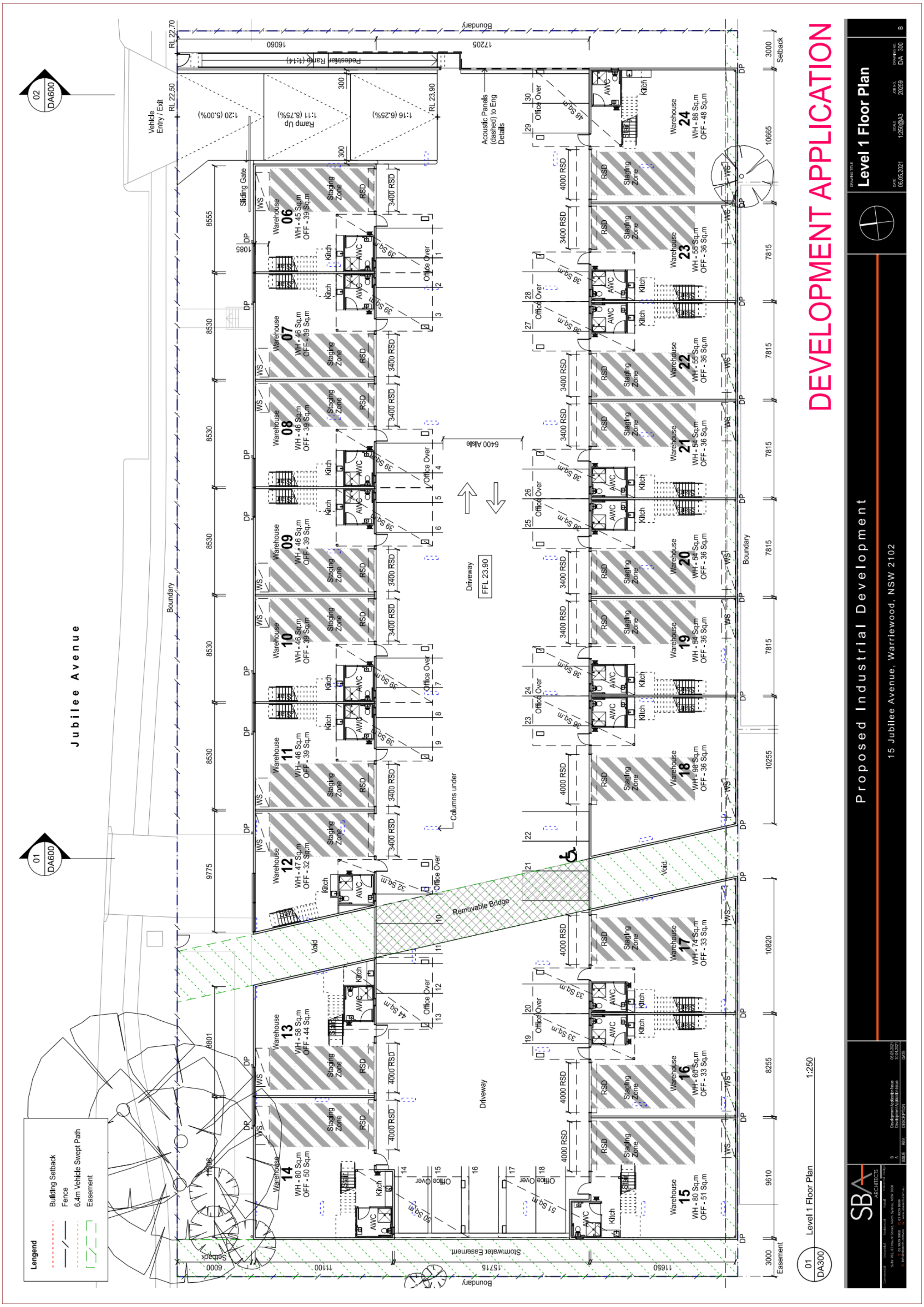
Garbage collection is to be accommodated by a variety of trucks up to and including 8.8m MRV trucks which will be able to turn around on site on both levels to always enter and exit the site in a forward direction.

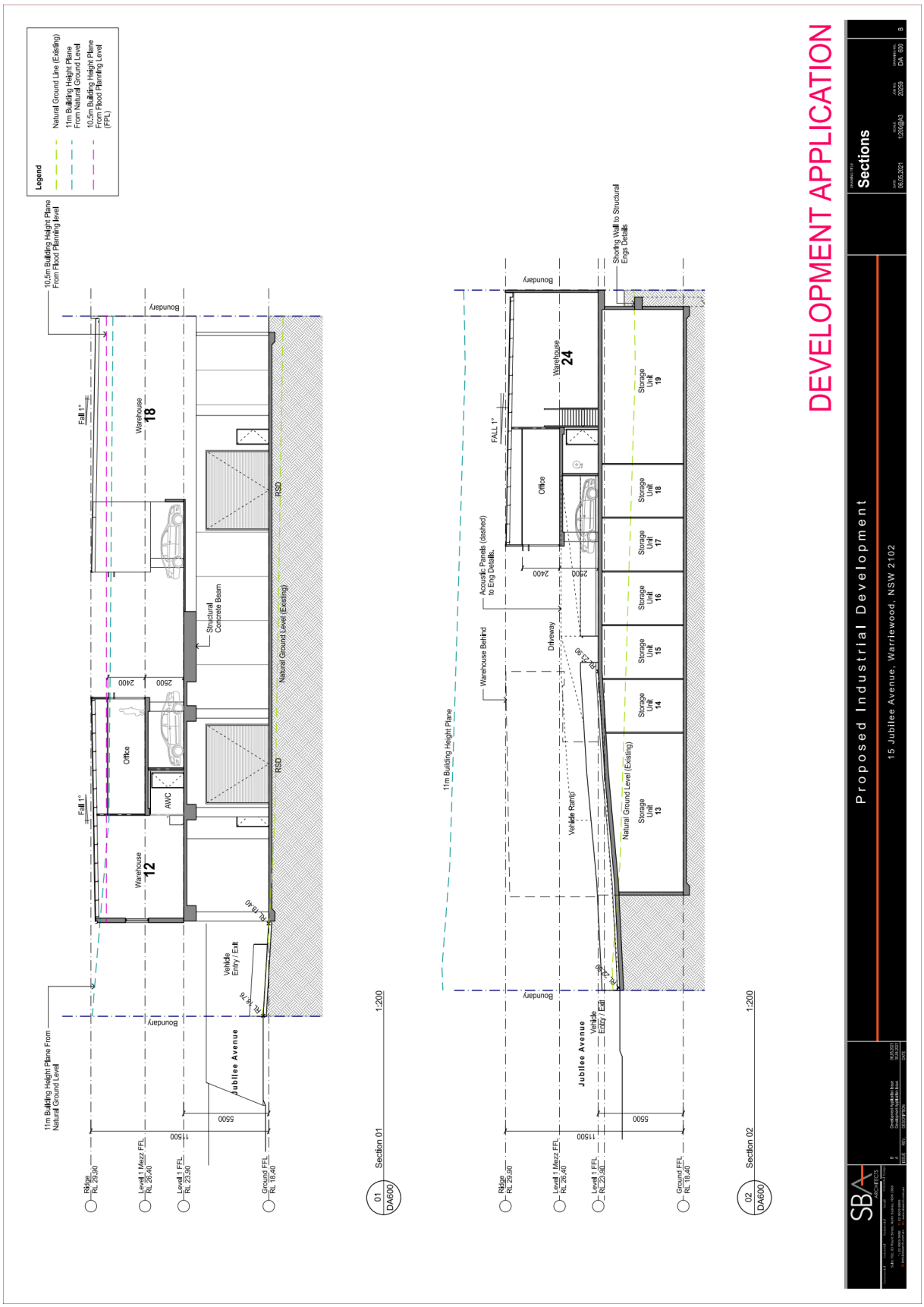
Vehicular access to the lower level is to be provided via the existing combined entry and exit driveway located towards the western end of the Jubilee Avenue site frontage.

Vehicular access to the upper level is to be provided via a new combined entry and exit vehicular access driveway located at the eastern end of the Jubilee Avenue site frontage.

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


DEVELOPMENT APPLICATION
Proposed Industrial Development
15 Jubilee Avenue, Warriewood, NSW 2102
Ground Floor Plan
Jubilee Avenue
Boundary
Driveway
Entry Only
Exit Only
Sliding Gate
Security Gate
Stormwater Easement
Sewer Easement
Legend
Building Setback
Fence
6.4m Vehicle Swept Path
Easement


DEVELOPMENT APPLICATION
Level 1 Floor Plan
Proposed Industrial Development
15 Jubilee Avenue, Warriewood, NSW 2102
Jubilee Avenue
Driveway
FFL 23.90
6400 Aisle
Removable Bridge
Stormwater Easement
Boundary
Level 1 Floor Plan
1:250


DEVELOPMENT APPLICATION
Proposed Industrial Development
15 Jubilee Avenue, Warriewood, NSW 2102
Sections
SBA ARCHITECTS
Legend
Natural Ground Line (Existing)
11m Building Height Plane From Natural Ground Level
10.5m Building Height Plane From Flood Planning Level (FPL)
10.5m Building Height Plane From Flood Planning Level
11m Building Height Plane From Natural Ground Level
Boundary
Warehouse 18
Warehouse 12
Office
AWC
Fall 1°
Structural Concrete Beam
RSD
Natural Ground Level (Existing)
2400
2500
5500
11500
Jubilee Avenue
Vehicle Entry / Exit
Ridge RL 29.90
Level 1 Mezz FFL RL 26.40
Level 1 FFL RL 23.90
Ground FFL RL 18.40
Section 01
1:200
01 DA600
Warehouse 24
Office
FALL 1°
Acoustic Panels (dashed) to Eng Details.
Shoring Wall to Structural Engs Details
Warehouse Behind
Driveway
Vehicle Ramp
Storage Unit 19
Storage Unit 18
Storage Unit 17
Storage Unit 16
Storage Unit 15
Storage Unit 14
Storage Unit 13
Natural Ground Level (Existing)
Section 02
1:200
02 DA600

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.

Mona Vale Road is classified by the RMS as a *State Road* and provides the key east-west road link in the area, linking Mona Vale and Pymble. It typically carries one to two traffic lanes in each direction in the vicinity of the site, and is currently being upgraded from two lanes to four lanes between Manor Road, Ingleside and Foley Street in Mona Vale.

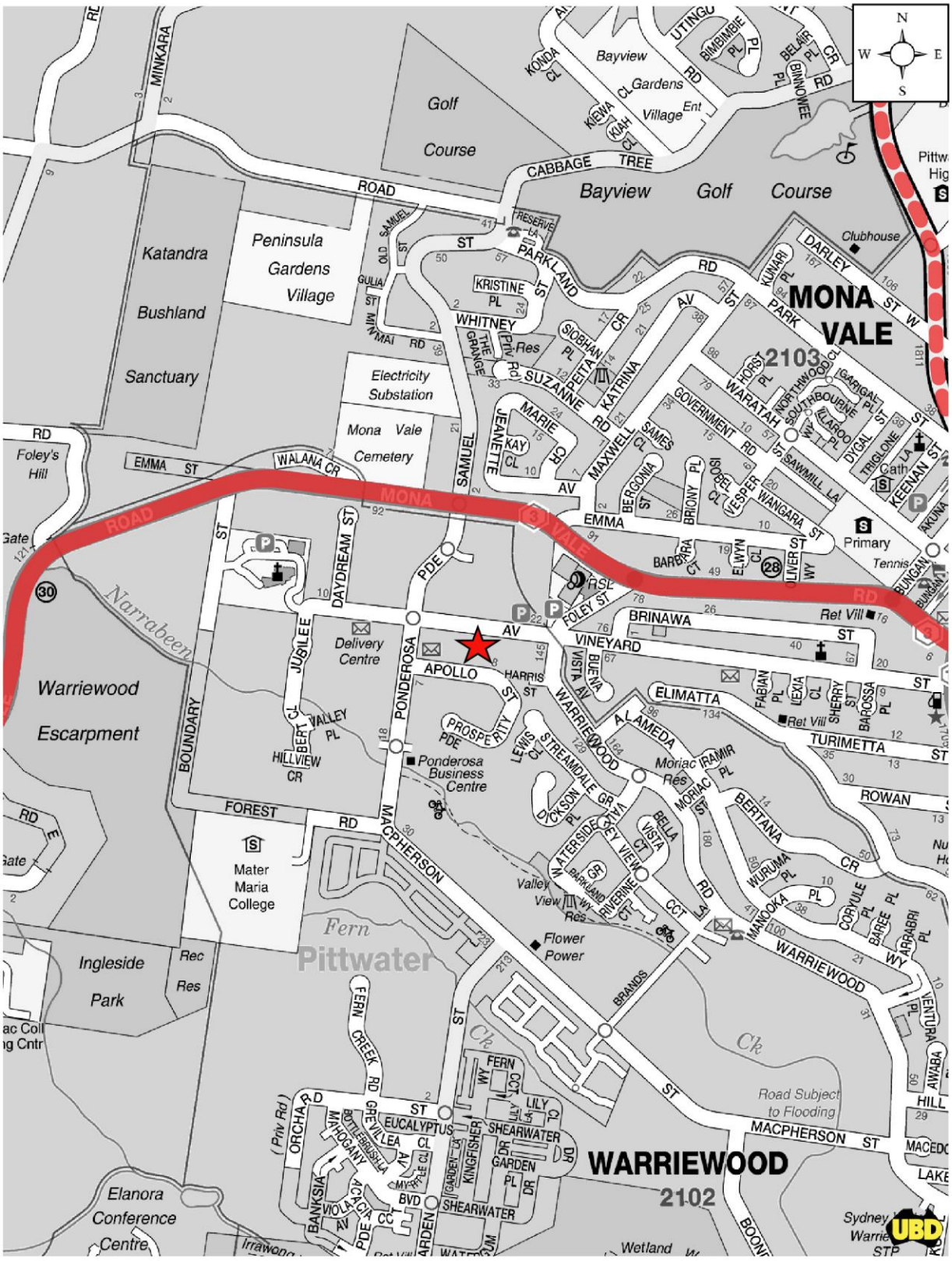
Ponderosa Parade is a local, unclassified road that functions as a *local collector route* dispersing traffic onto Mona Vale Road. It typically carries one traffic lane in each direction and kerbside parking is generally permitted on both sides of the road,

Jubilee Avenue 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.

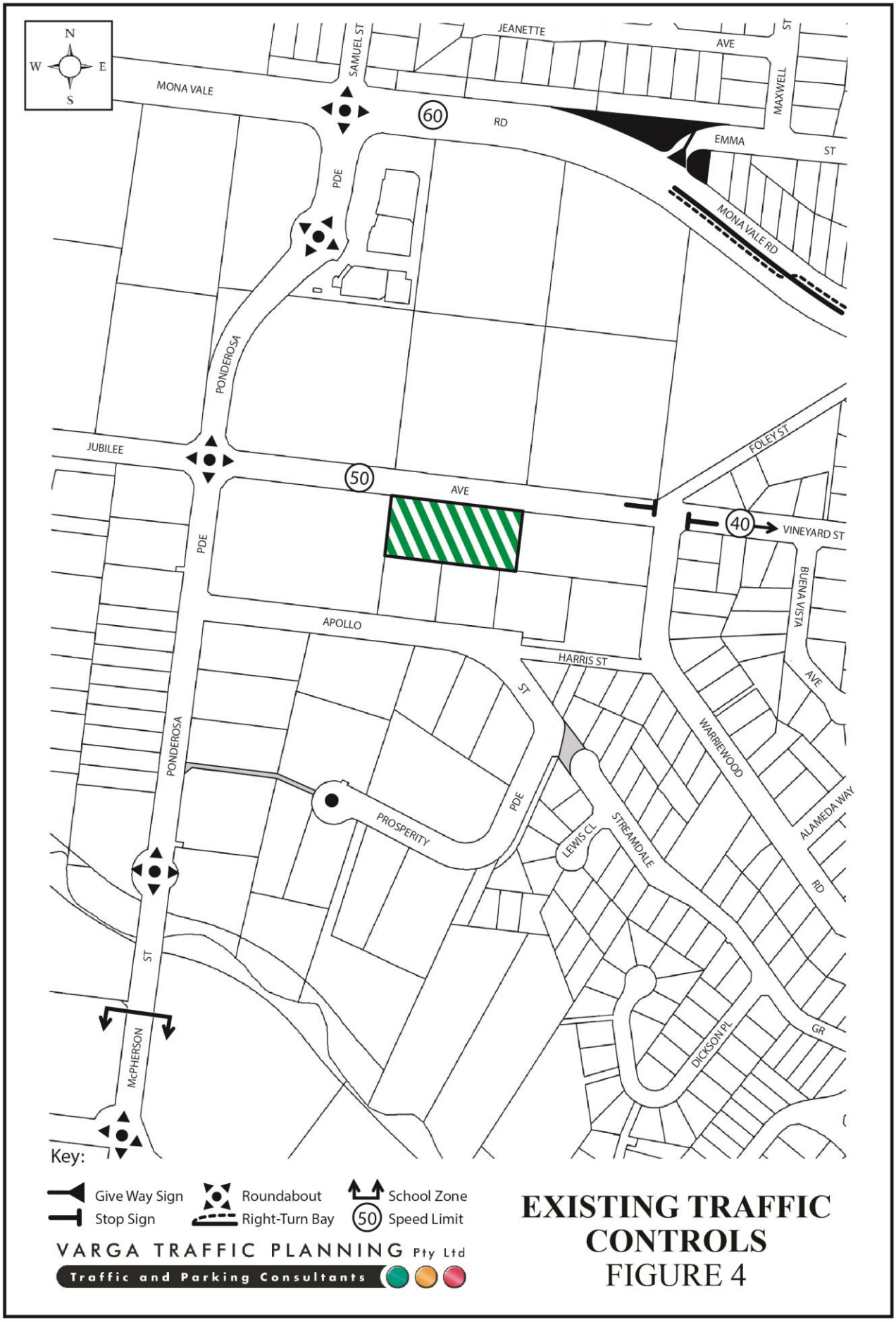
Existing Traffic Controls

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 60 km/h SPEED LIMIT which applies to Mona Vale Road
- a 50 km/h SPEED LIMIT which applies to Jubilee Avenue and most other local roads in the area
- ROUNDABOUTS in Ponderosa Parade where it intersects with Mona Vale Road and Jubilee Avenue.



ROAD HIERARCHY
FIGURE 3


N
W
E
S
MONA VALE
SAMUEL ST
JEANETTE
AVE
ST
MAXWELL
60
RD
EMMA
ST
PDE
MONA VALE RD
PONDEROSA
JUBILEE
50
AVE
FOLEY ST
40
VINEYARD ST
PDE
BUENA VISTA
AVE
APOLLO
HARRIS ST
ST
WARRIEWOOD
PONDEROSA
PDE
PROSPERITY
LEWIS CL
STREAMDALE
ALAMEDA WAY
RD
ST
McPHERSON
DICKSON PL
GR
Key:
Give Way Sign
Stop Sign
Roundabout
Right-Turn Bay
School Zone
50 Speed Limit
VARGA TRAFFIC PLANNING Pty Ltd
Traffic and Parking Consultants
EXISTING TRAFFIC CONTROLS
FIGURE 4

Projected Future Traffic Generation

The traffic implications of a development proposal primarily concern the effects of the *additional* traffic flows generated as a result of the development and its impact on the operational performance of the adjacent road network during the 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 – Land Use Traffic Generation (October 2002)* document.

The RMS *Guidelines* are based on extensive surveys of a wide range of land uses and nominates the following traffic generation rates which are applicable to the development proposal:

Industry
1 peak hour vehicle trip per 100m^2 GFA

Further to the above, the RMS *Guidelines* specify that if the office space component of the industrial development exceeds 20% of the total floor area, allowance ought to be made for additional traffic generation for the office floor area in excess of 20% total floor area.

Reference is therefore made to the following traffic generation rates which are applicable to the office component in excess of the 20% total floor area:

Commercial Premises
2 peak hour vehicle trips per 100m^2 GFA

However, the RMS *Guidelines* do not nominate a traffic generation rate for self-storage facilities. Reference is therefore made to the *Self-Storage Facility Traffic and Parking Study (8 July 2009)* published by the *Self-Storage Association of Australia* (SSAA).

The *Self-Storage Facility Traffic and Parking Study* undertook traffic and parking surveys at self-storage facilities throughout Australia which identified a maximum peak hour traffic generation potential of 20 vehicles per hour (vph) for self-storage facilities with a floor area

of up to 3,000m^2. That level of traffic activity equates to the following peak hour traffic generation rate:

Self-Storage Facilities

Peak Hour Traffic Generation Rate: 0.667 vph/100m^2

Application of the above traffic generation rates and assumptions to the various components of the development proposal yields a traffic generation potential of approximately 39 vehicle trips per hour during both the AM and PM peak hour as set out below:

Projected Future Traffic Generation Potential

Industrial (1,491m^2):	14.9 vph
Ancillary office ≤ 20% of total floor area (489.4m^2):	4.9 vph
Ancillary office > 20% of total floor area (466.6m^2):	9.3 vph
Self-storage (1,551m^2):	10.3 vph
TOTAL TRAFFIC GENERATION POTENTIAL:	**39.4 vph**

That projected increase in traffic activity as a consequence of the development proposal is *minimal*, is consistent with the land 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

There are generally no kerbside parking restrictions that apply on both sides of Jubilee Avenue. However, the road is reduced width along the majority of the site frontage where parking is permitted in indented bays only.

Off-Street Car Parking Provisions

The off-street car parking requirements applicable to various land uses in the former *Pittwater LGA* are specified in *Pittwater 21 DCP* document.

However, Council's DCP do not nominate a car parking rate for industrial developments and instead recommends reference to be made to the RMS *Guidelines* which specifies the following car parking requirements applicable to the development proposal:

Industry
1.3 spaces per 100m^2 GFA

Again, the RMS *Guidelines* specify that if the office space component of the industrial development exceeds 20% of the total floor area, parking provision rate is increased for the office floor area in excess of 20% total floor area.

Reference is therefore made to the following parking rates which are applicable to the office component in excess of the 20% total floor area:

Commercial Premises
1 space per 40m^2 GFA

Reference is also made to the survey results to *Table 3* in the *2016 Traffic and Parking Study Addendum* published by *Self Storage Association of Australia* (SSAA) which identified a parking provision of 6 spaces to accommodate peak parking demands for self-storage facilities with a Maximum Leasable Area (MLA) in the range 0m^2 to 3,000m^2 as set out below:

Table 3: Recommended Number of Parking Spaces per MLA (m^2)					
MLA	**Office Parking**	**Storage Area Parking***	**Staff Parking**	**Trailer/Ute Parking**	**Total Parking Spaces**
0 - 3,000m^2	1	2	2	1	**6**
3,000m^2 - 6,000m^2	2	5	2	1	**10**
6,000m^2 – 9,500m^2	2	8	2	1	**13**

Notwithstanding, SSAA notes that "ranch style" self-storage facilities such as the proposed will not require designated storage area parking as vehicles in these sites will park in aisles adjacent to their storage units.

Accordingly, application of the above car parking requirements to the development proposal yields an off-street car parking requirement of 38 spaces, as set out below:

OFF-STREET CAR PARKING REQUIREMENTS

Industrial (1,491m^2):	19.4 spaces
Ancillary office ≤ 20% of total floor area (489.4m^2):	6.4 spaces
Ancillary office > 20% of total floor area (466.6m^2)	11.7 spaces
Self-storage (1,551m^2):	0 spaces
TOTAL:	**37.5 spaces**

The proposed development makes provision for a total of 40 car spaces, thereby satisfying RMS's car parking code requirements, the SSAA parking recommendations, and is therefore in accordance with Council requirements.

The geometric design layout of the proposed car parking facilities has been designed to comply with the relevant requirements specified in the Standards Australia publication *Parking Facilities Part 1 - Off-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, aisle & driveway widths, overhead clearances, and ramp gradients & grade transitions.

Off-Street Bicycle Parking Provisions

The off-street bicycle parking requirements applicable to the development proposal are specified in *Pittwater 21 DCP* in the following terms:

Busines / Industrial

1 bicycle rack per 1,000m^2 GFA, or

a minimum of 4 bicycle racks, whichever is greater.

Application of the above bicycle parking requirements to the development proposal yields an off-street bicycle parking requirement of 4 spaces.

Bicycles can be easily accommodated in each warehouse if required, well in excess of Council's bicycle parking code requirements.

Off-Street Motorcycle Parking Provisions

The off-street motorcycle parking requirements applicable to the development proposal are specified in *Pittwater 21 DCP* in the following terms:

Busines / Industrial

1 motorcycle space per 100 motor vehicle spaces.

Application of the above motorcycle parking requirements to the off-street car parking provision of 40 spaces yields an off-street motorcycle parking requirement of 1 space.

The proposed development makes provision for a total of 4 motorcycle spaces on the lower level parking area, thereby satisfying Council's motorcycle parking code requirements.

Loading / Servicing Provisions

Loading / servicing for the proposed development is expected to be undertaken by a variety of commercial vehicles up to and including 6.4m long Small Rigid Vehicles (SRV trucks) and 8.8m long Medium Rigid Vehicles (MRV trucks).

Each warehouse has been designed to be able to accommodate 6.4m SRV trucks in an internal loading bay, and the "ranch style" self-storage units have been designed to allow these 6.4m SRV trucks to circulate and load / unload within the aisle.

Garbage collection is envisaged to be accommodated by a variety of trucks up to and including 8.8m MRV trucks.

The manoeuvring areas and driveway have been designed to accommodate the *swept turning path* requirements of these 6.4m SRV trucks and 8.8m MRV trucks, allowing:

- 6.4m SRV trucks to satisfactorily access each and every internal loading bay within the warehouse,

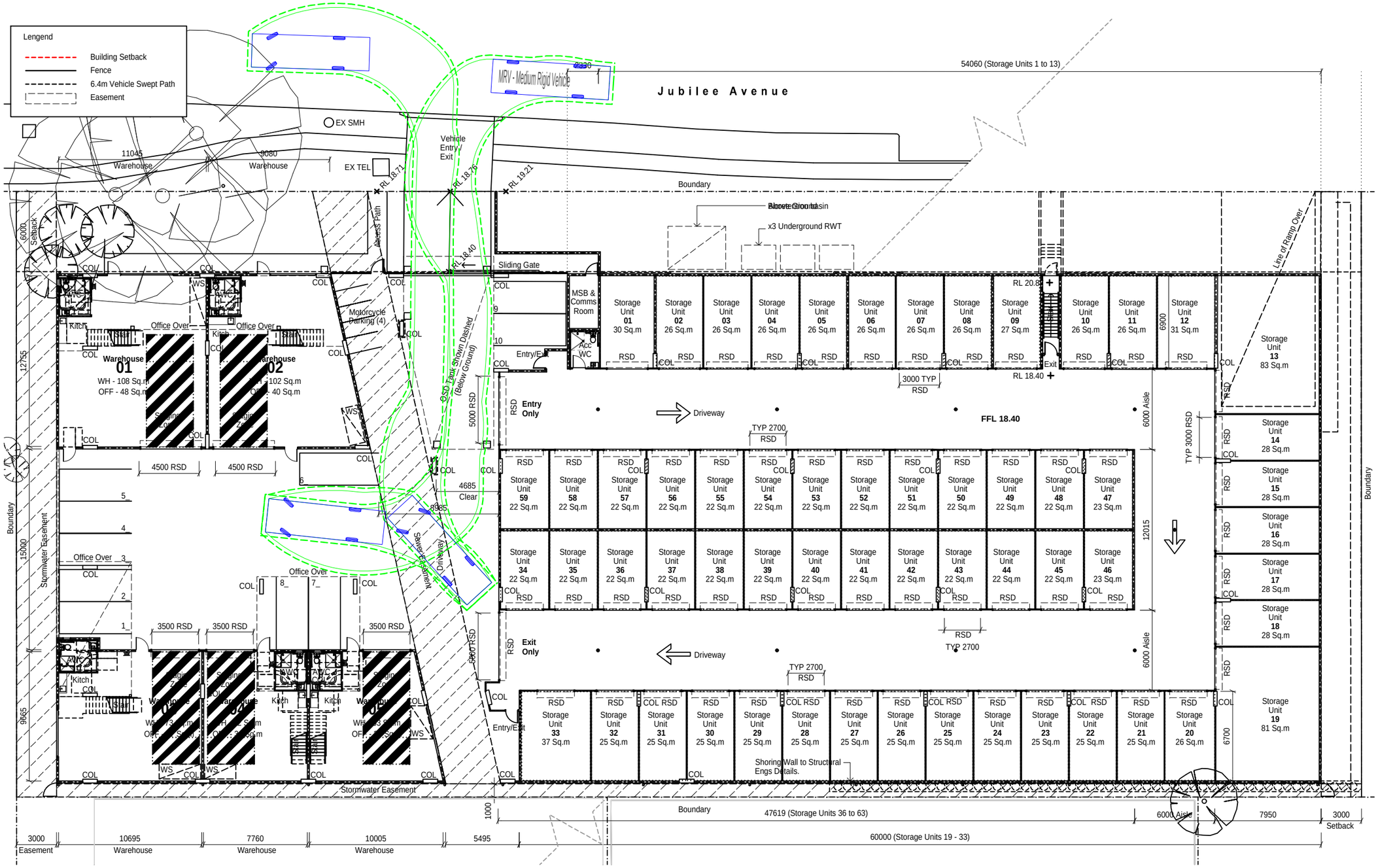
- 6.4m SRV trucks to circulate and load / unload within the aisle in front of the self-storage units, and

- 8.8m MRV trucks to satisfactorily enter and exit the site in a forward direction at all times and being able to turnaround on site.

The geometric design layout of the proposed loading facilities has been 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 6.4m SRV trucks, and manoeuvring requirements for 8.8m MRV trucks.

Conclusion

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



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www.vargatraffic.com.au
Sydney, Australia

PROJECT
PROPOSED INDUSTRIAL DEVELOPMENT

DRAWING TITLE
GF_8.8mMRV_Entry&Exit

1:300 @ A3

ADDRESS
15 JUBILEE AVENUE
WARRIEWOOD

PROJECT NO.
20767

DATE DRAWN
2021-5-14

REVIEWED
RV

PREPARED
TY

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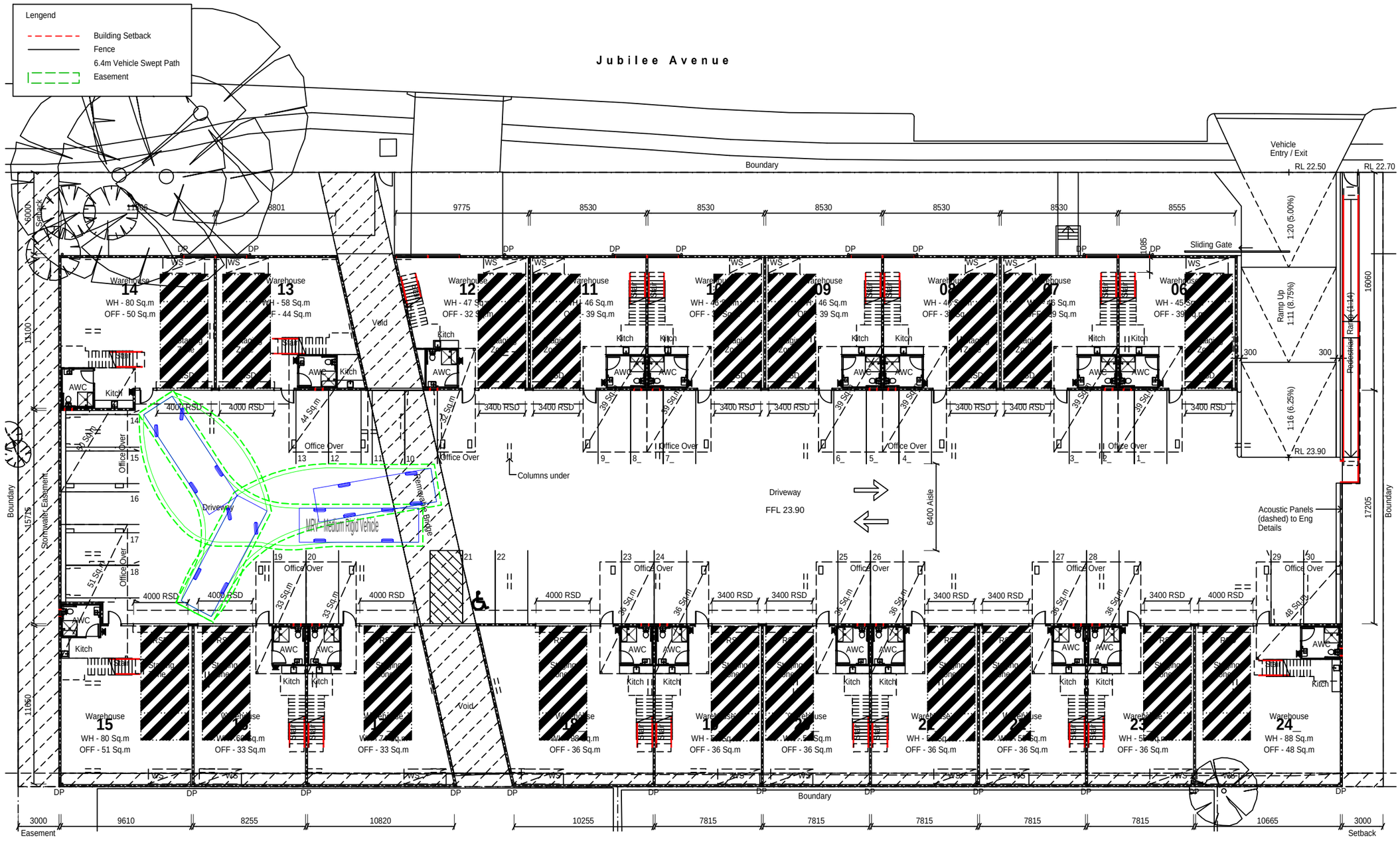

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Sydney, Australia

PROJECT
PROPOSED INDUSTRIAL DEVELOPMENT

DRAWING TITLE
L1_8.8mMRV_Turnaround

1:300 @ A3

ADDRESS
15 JUBILEE AVENUE
WARRIEWOOD

PROJECT NO.
20767

DATE DRAWN
2021-5-14

REVIEWED
RV

PREPARED
TY

VARGA TRAFFIC PLANNING Pty Ltd
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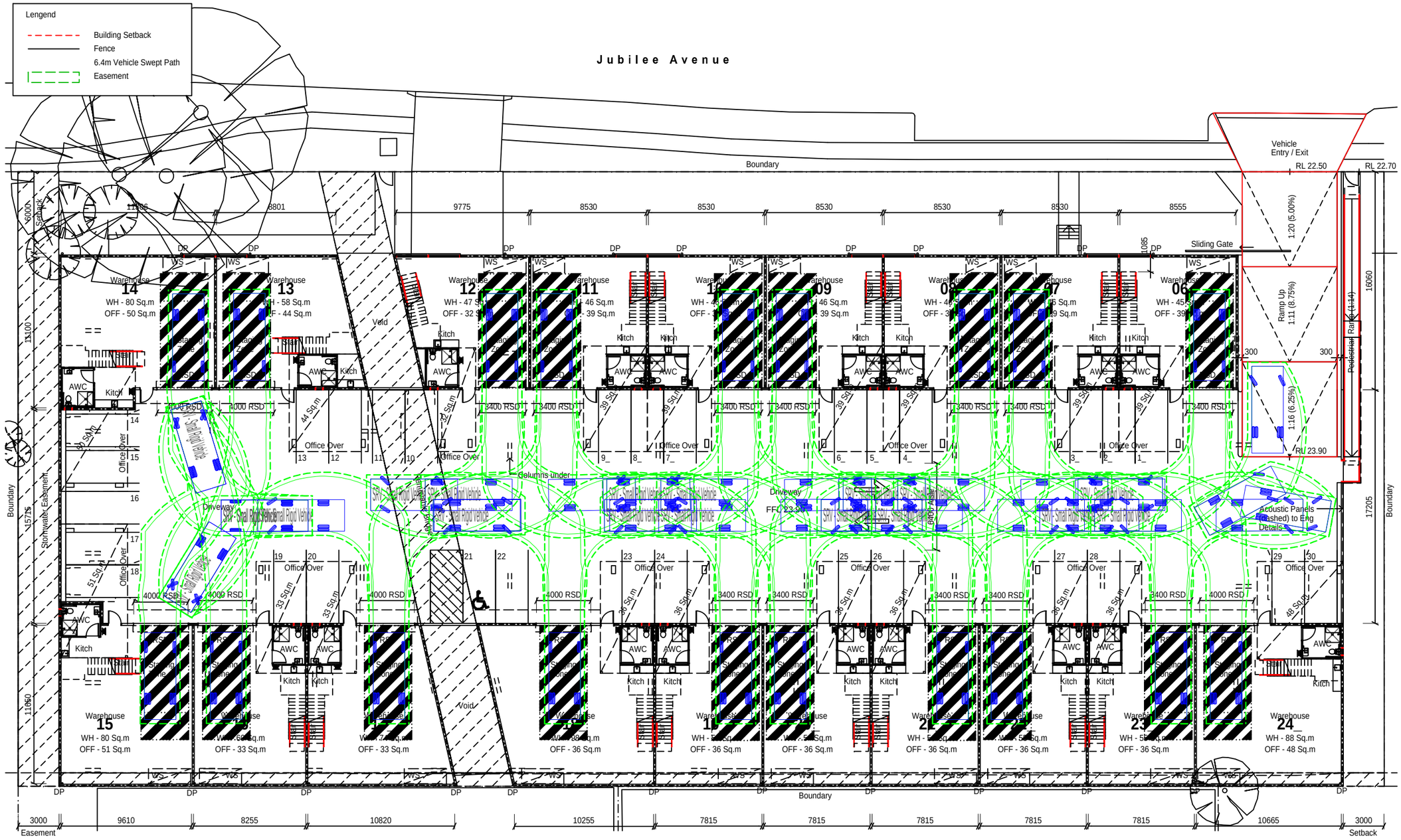
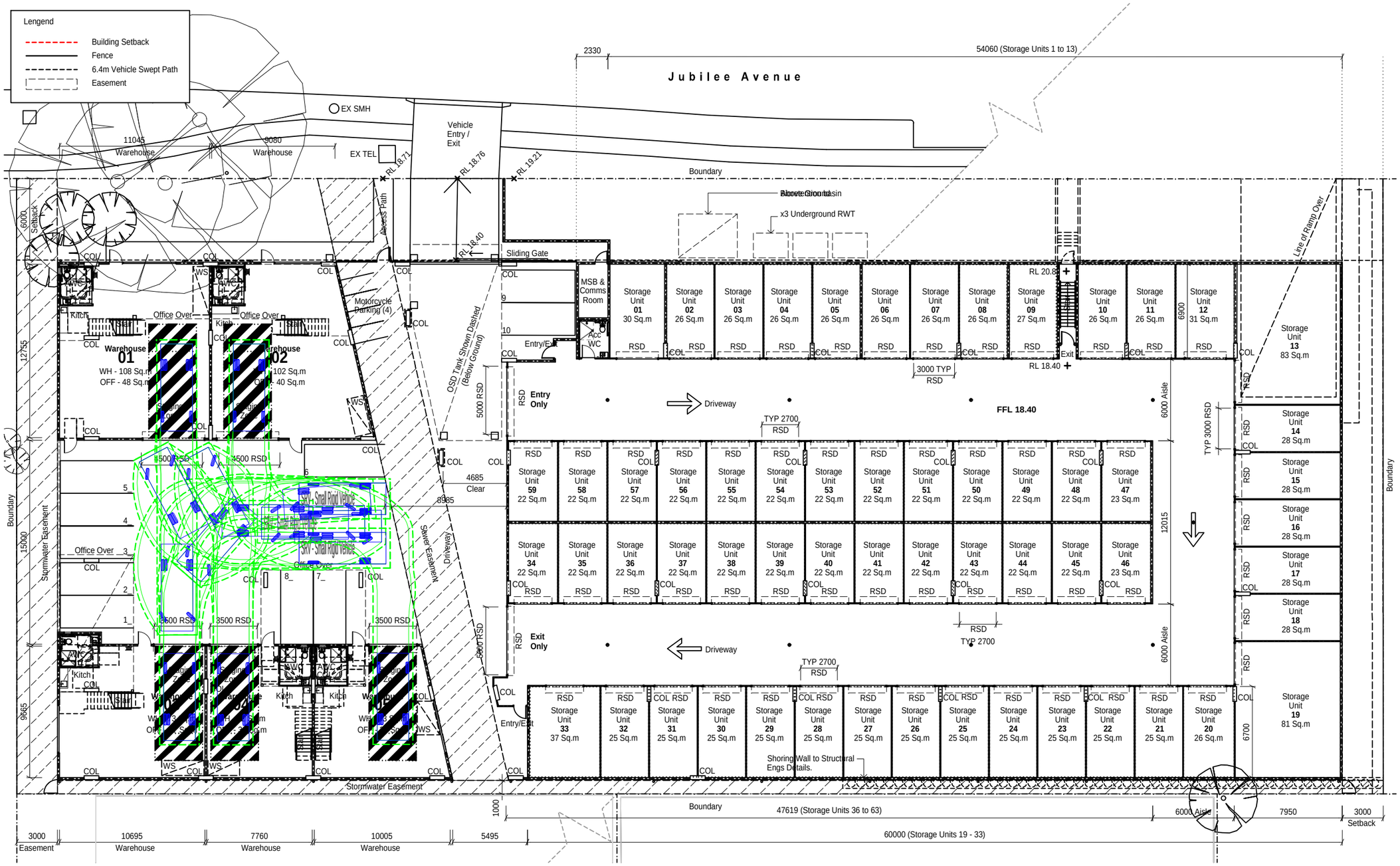


VARGA TRAFFIC PLANNING Pty Ltd ABN 88 071 762 537 Suite 6, Level 1 20 Young Street Neutral Bay, NSW 2089	Phone +61 2 9904 3224 PO Box 1868 Neutral Bay, NSW 2089 www.vargatraffic.com.au Sydney, Australia
PROJECT PROPOSED INDUSTRIAL DEVELOPMENT	
DRAWING TITLE L1_6.4mSRV_SamplePaths	1:300 @ A3
ADDRESS 15 JUBILEE AVENUE WARRIEWOOD	PROJECT NO. 20767 DATE DRAWN 2021-5-14 REVIEWED RV PREPARED TY

VARGA TRAFFIC PLANNING Pty Ltd
Transport, Traffic and Parking Consultants



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Sydney, Australia

PROJECT
PROPOSED INDUSTRIAL DEVELOPMENT

DRAWING TITLE
GF_6.4mSRV_SamplePaths

1:300 @ A3

ADDRESS
15 JUBILEE AVENUE
WARRIEWOOD

PROJECT NO.
20767

DATE DRAWN
2021-5-14

REVIEWED
RV

PREPARED
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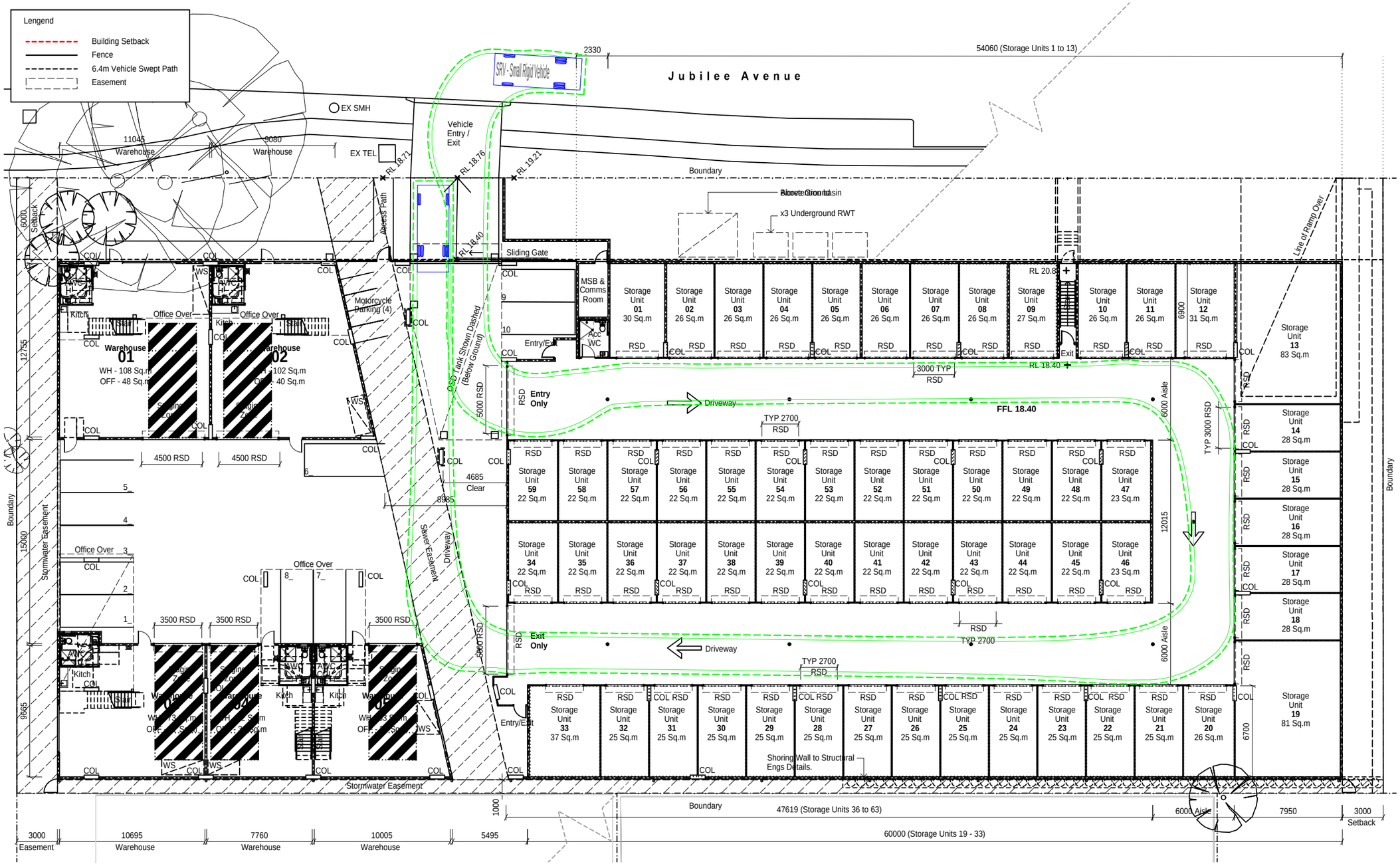

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PROJECT
PROPOSED INDUSTRIAL DEVELOPMENT

DRAWING TITLE
GF_6.4mSRV_Circulation

1:300 @ A3

ADDRESS
15 JUBILEE AVENUE
WARRIEWOOD

PROJECT NO.
20767

DATE DRAWN
2021-5-14

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Transport, Traffic and Parking Consultants