

Proposed Mixed-Use Development

**160-162 Great Western Highway,
Mays Hill**

TRAFFIC AND PARKING ASSESSMENT REPORT

10 December 2014

Ref 14772

VARGA TRAFFIC PLANNING Pty Ltd
Transport, Traffic and Parking Consultants 

Suite 6, 20 Young Street, Neutral Bay NSW 2089 - PO Box 1868, Neutral Bay NSW 2089
Ph: 9904 3224 Fax: 9904 3228, Email: varga@vtp.net.au

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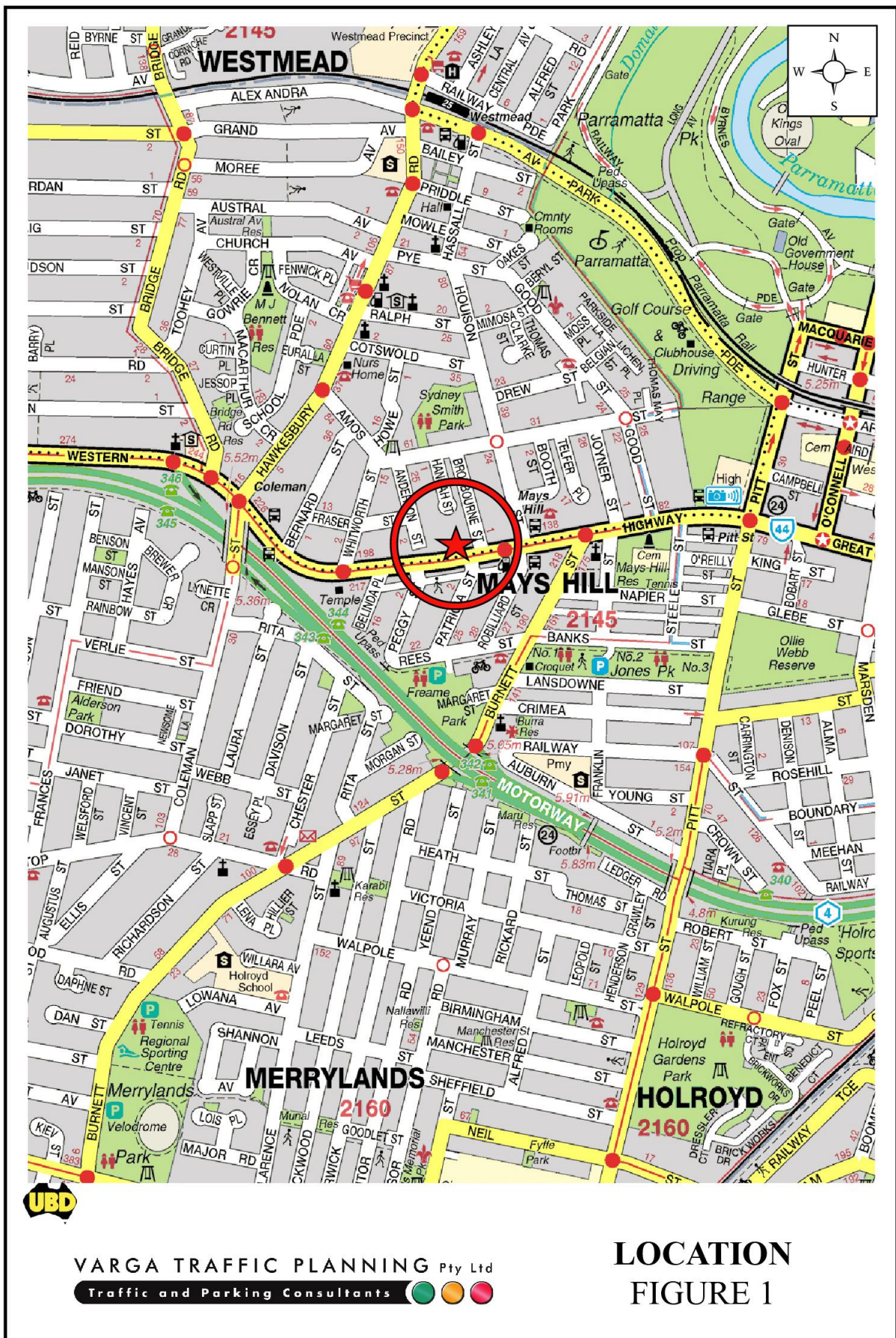
1. INTRODUCTION

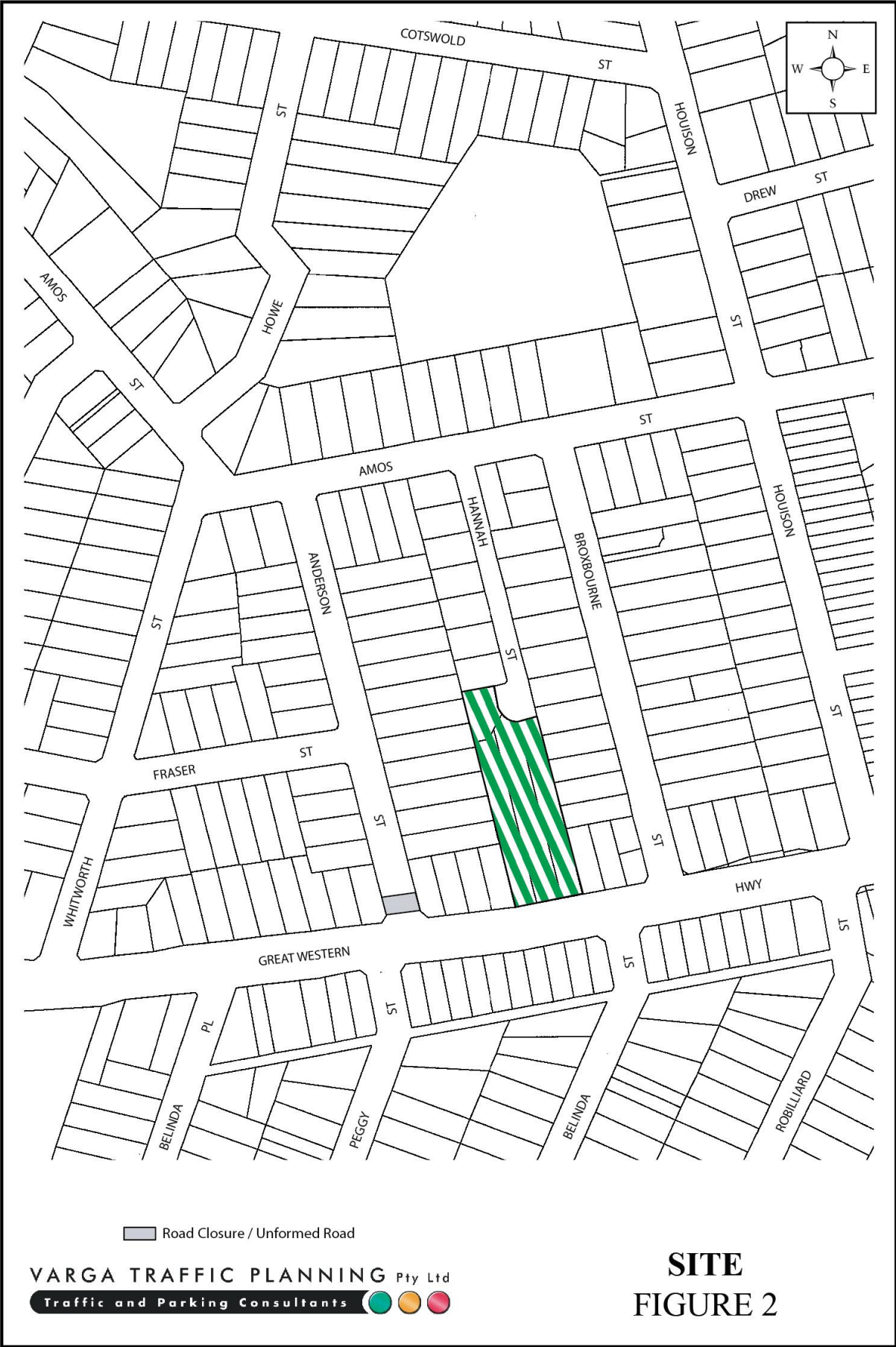
This report has been prepared to accompany a Development Application to Holroyd City Council for a mixed-use development proposal to be located at 160-162 Great Western Highway, Mays Hill (Figures 1 and 2).

The proposed development will involve the demolition of the existing buildings on the site to facilitate the construction of a new mixed-use development. Car parking is to be provided in a new basement car parking area in accordance with Council's 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, and the traffic conditions on that road network
- 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.





2. PROPOSED DEVELOPMENT

Site

The subject site is located between the Great Western Highway and Hannah Street, approximately midway between Anderson Street and Broxbourne Street. The site has a street frontage approximately 41m in length to the Great Western Highway and approximately 35m in length to Hannah Street. It occupies an area of approximately 4,750m².

The subject site is currently occupied by retail/warehouse building with an approximate cumulative floor area of 600m². Vehicular access to the site is provided off Hannah Street.

Proposed Development

The proposed development will involve the demolition of the existing buildings on the site to facilitate the construction of a new mixed-use development.

A total of 88 residential units are proposed in the new building as follows:

1 bedroom/studio units:	11
2 bedroom units:	70
3 bedroom units:	7
TOTAL UNITS:	88

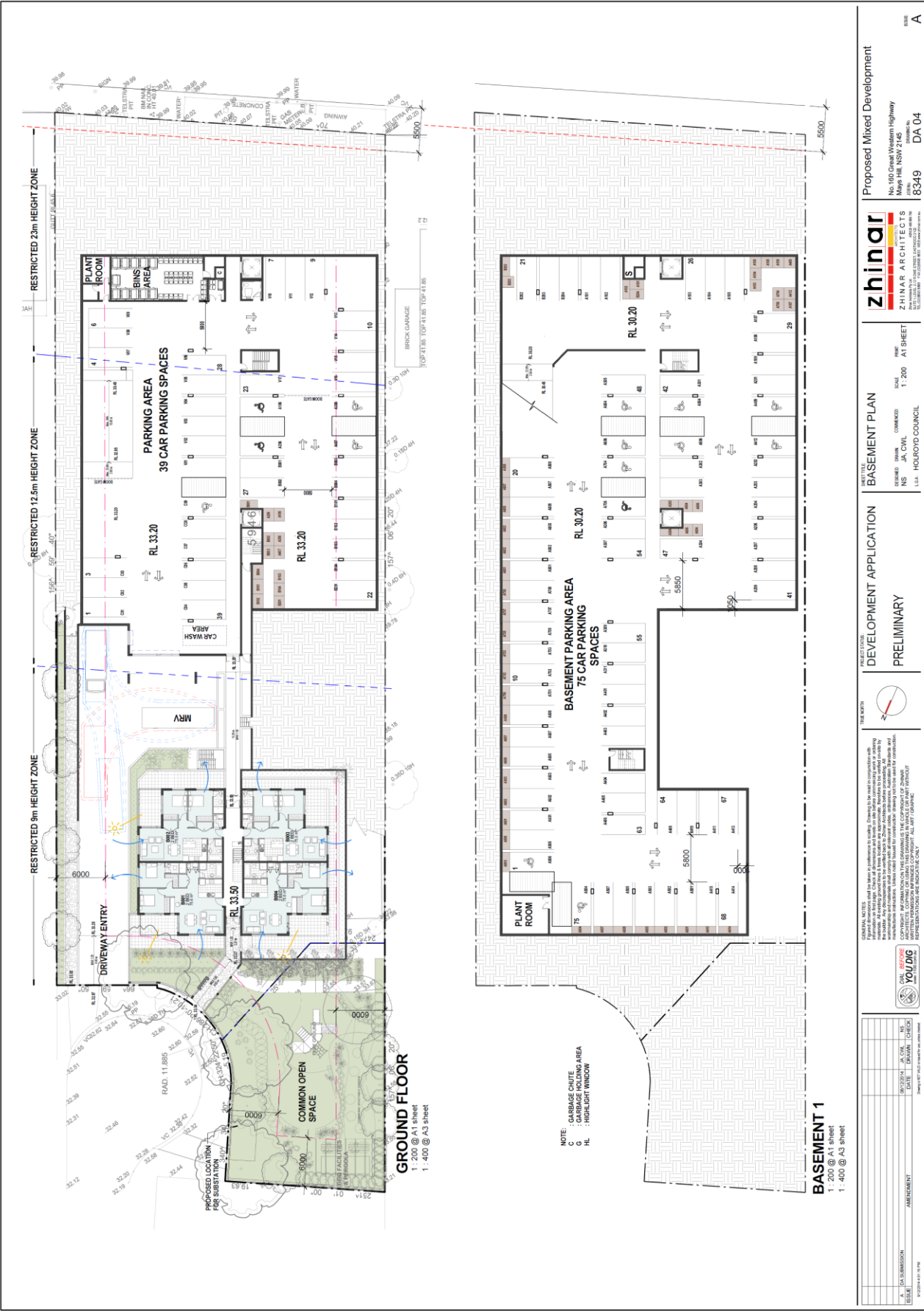
A commercial component is also proposed on the ground floor level fronting the Great Western Highway frontage, with a cumulative floor area of 181m².

Off-street car parking is proposed for a total of 114 cars, comprising 88 residential spaces, 17 visitor spaces and 9 commercial spaces, in a new car parking area in accordance with Council's requirements. Vehicular access to the car parking area is to be provided via a new entry/exit driveway located off Hannah Street.

Loading/servicing for the proposed development is expected to be undertaken by a variety of commercial vehicles up to and including 8.8m long medium rigid trucks. The loading dock is

to be located on the ground floor level, adjacent to the ground floor car parking area. Vehicular access to the loading dock is to be provided via the abovementioned proposed site access driveway.

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





3. TRAFFIC ASSESSMENT

Road Hierarchy

The road hierarchy allocated to the road network in the vicinity of the site by 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 between Concord and Emu Plains. It typically carries three to four 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.

The Great Western Highway is also classified by the RMS as a *State Road* and provides another key east-west road link in the area. It typically carries three traffic lanes in each direction in the vicinity of the site, with additional lanes provided at key locations.

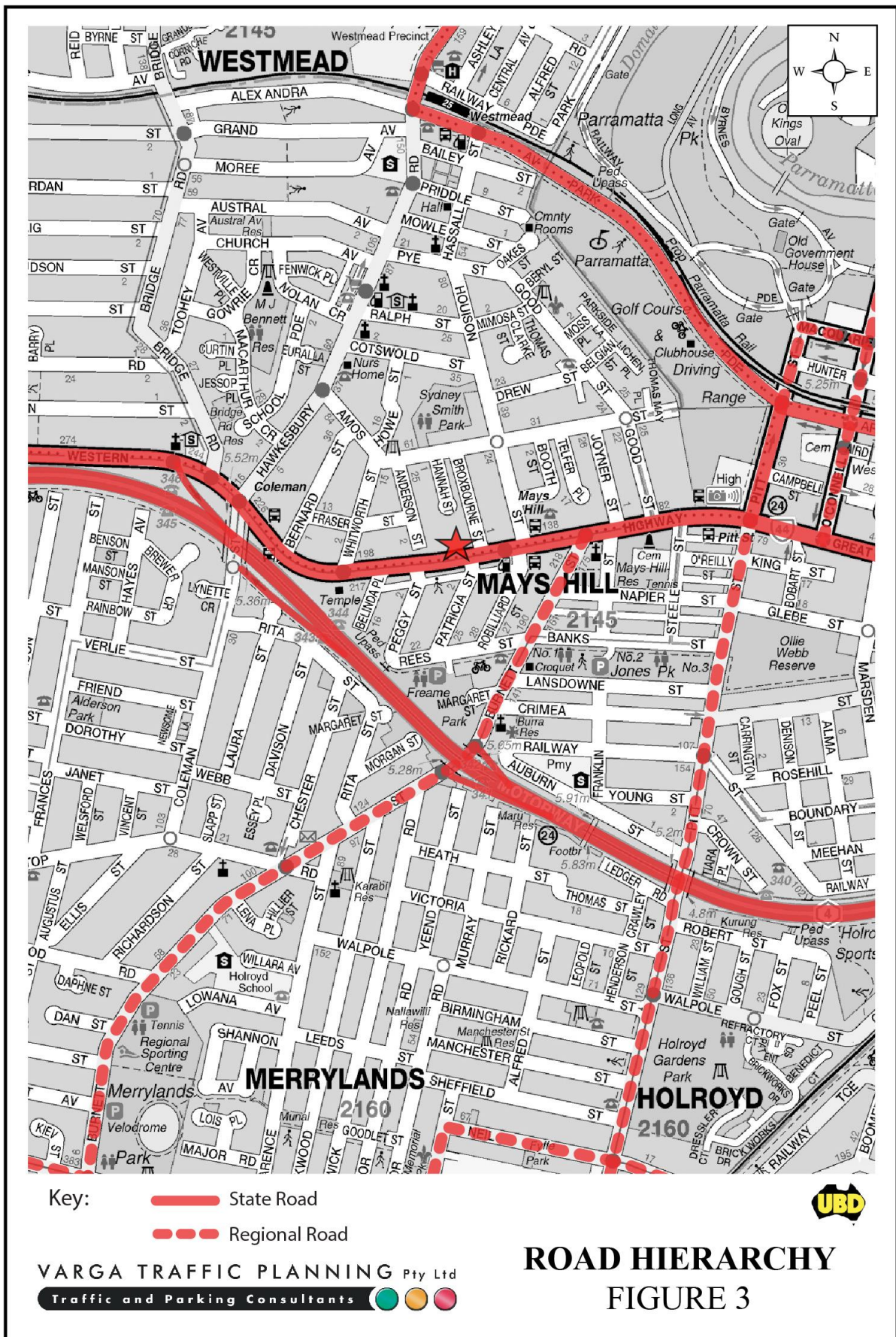
Burnett Street is classified by the RMS as a *Regional Road* and provides a secondary north-south road linking the Great Western Highway to Merrylands Road. It typically carries one traffic lane in each direction in the vicinity of the site, with kerbside parking generally permitted on both sides of the road.

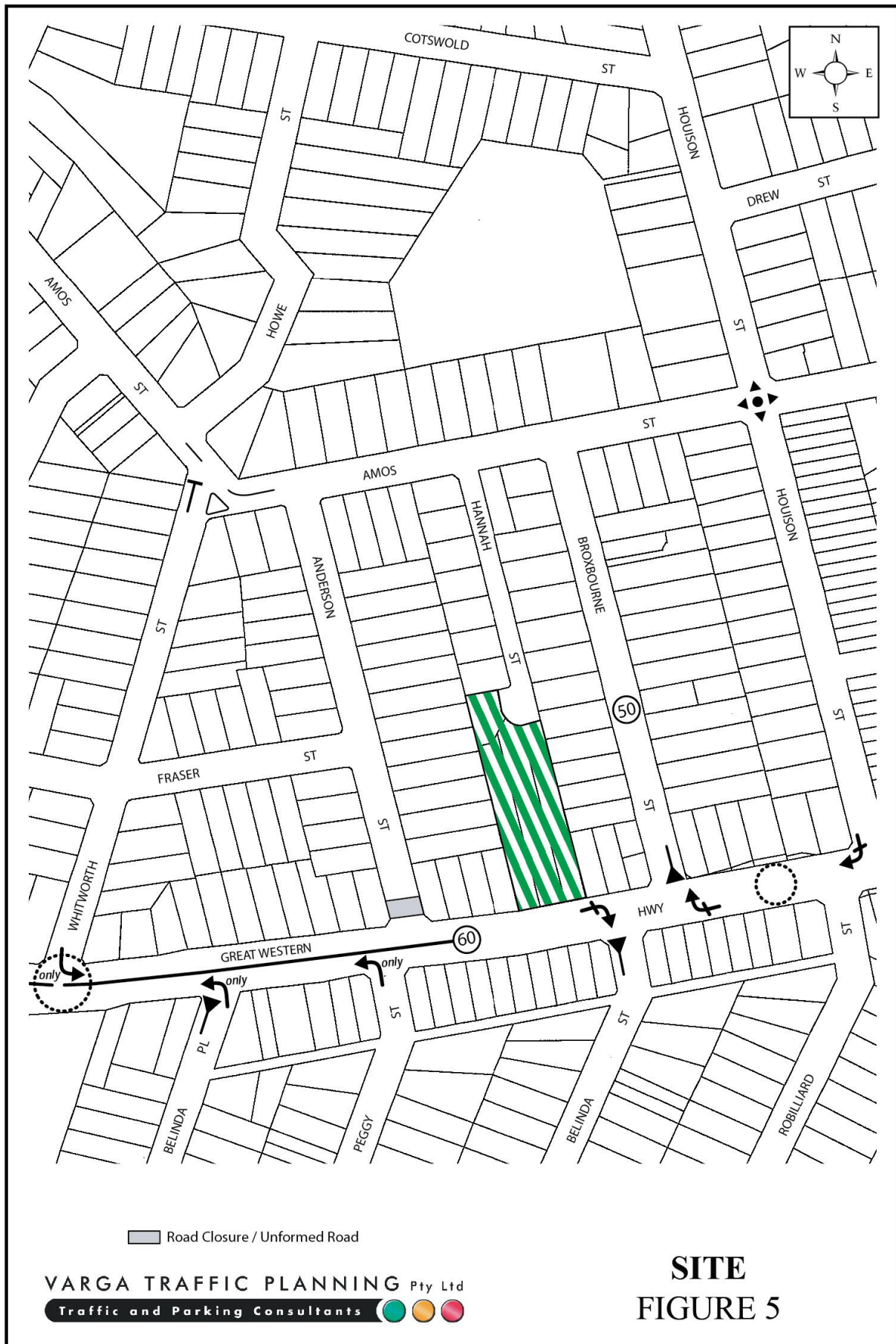
Hannah Street is a local, unclassified road which is primarily used to provide vehicular and pedestrian access to frontage properties. Kerbside parking is generally permitted on both sides of the road.

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 in the Great Western Highway
- a 50 km/h SPEED LIMIT which applies to Hannah Street and all other local roads in the surrounding area





- NO RIGHT-TURN restrictions in the Great Western Highway where it intersects with Broxbourne Street and Belinda Street
- a GIVE-WAY restriction in Broxbourne Street where it intersects with the Great Western Highway.

Projected Traffic Generation

An indication of the traffic generation potential of the development proposal is provided by reference to the former Roads and Maritime Services publication *Guide to Traffic Generating Developments, Section 3 - Landuse Traffic Generation (October 2002)*.

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:

Commercial Premises

2.0 peak hour vehicle trips per 100m² GFA

High Density Residential Flat Buildings in Sub-Regional Centres

0.29 peak hour vehicle trips/dwelling

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

Definition

A high density residential flat building refers to a building containing 20 or more dwellings. This does not include aged or disabled persons housing. *High density residential flat buildings* are usually more than 5 levels, have basement level car parking and are located in close proximity to public transport services. The building may contain a component of commercial use.

Factors

The above rates include visitors, staff, service/delivery and on-street movements such as taxis and pick-up/set-down activities.

Application of the above traffic generation rates to the various components of the development proposal yields a traffic generation potential of approximately 29 vehicle trips per hour during commuter peak periods as set out below:

Projected Future Traffic Generation

Residential Apartments (88 Apartments):	25.6 peak hour vehicle trips
Commercial Premises (181m ²):	3.6 peak hour vehicle trips
TOTAL TRAFFIC GENERATION POTENTIAL:	29.2 peak hour vehicle trips

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 of the site expected to occur as a consequence of the development proposal when compared with the previously approved development on the site.

The RMS *Guidelines* do not 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 of 2.0 peak hour vehicle trips/100m² GFA nominated in the RMS *Guidelines* for commercial premises has been adopted in respect of the retail component of the development proposal.

Accordingly, it is likely that the proposed development will result in an *increase* in the traffic generation potential of the site of approximately 17 vph as set out below:

**Projected Nett Increase in Peak Hour Traffic Generation Potential
of the site as a consequence of the development proposal**

Projected Future Traffic Generation Potential:	29.2 vehicle trips
Less Existing Traffic Generation Potential (Estimated):	-12.0 vehicle trips
NETT INCREASE IN TRAFFIC GENERATION POTENTIAL:	17.2 vehicle trips

That projected increase in traffic activity as a consequence of the development proposal is minimal and will clearly not have any unacceptable traffic implications in terms of road network capacity.

4. PARKING IMPLICATIONS

Existing Parking Restrictions

The existing parking restrictions which apply to the road network in the vicinity of the site are illustrated on Figure 5. Key features of those parking restrictions are:

- 24 HOUR BUS LANES along both sides of the Great Western Highway, including the entire site frontage
- NO PARKING restrictions along the eastern side of Hannah Street, including the entire site frontage
- generally UNRESTRICTED kerbside parking along the western side of Hannah Street.

Off-Street Parking Provisions

The off-street parking requirements applicable to the development proposal are specified in Council's *Development Control Plan 2013, Part A, Section 3.0 – Car Parking* document which specifies the off-street parking requirements applicable to the development proposal in the following terms:

Residential Flat Buildings

One bedroom dwelling:	0.8 spaces per dwelling (min) to 1.0 space per dwelling (max)
Two bedroom dwelling:	1.0 space per dwelling (min) to 1.5 spaces per dwelling (max)
Three bedroom dwelling:	1.2 spaces per dwelling (min) to 2.0 spaces per dwelling (max)
Visitors:	0.2 spaces per dwelling (min) to 0.5 spaces per dwelling (max)

Commercial Premises – B6

1.0 space per 20m² (min) to 1.0 space per 10m² (max)

Application of the above parking requirements to the various components outlined in the development proposal yields an off-street parking requirement of between 114 parking spaces and 192 parking spaces as set out below:



	Minimum	Maximum
Residential (88 Units):	87.2 spaces (min)	130.0 spaces (max)
Visitors:	17.6 spaces (min)	44.0 spaces (max)
Commercial (181m ²):	9.1 spaces (min)	18.1 spaces (max)
TOTAL:	113.9 spaces (min)	192.1 spaces max)

The proposed development makes provision for a total of 114 off-street parking spaces, comprising 88 residential spaces, 17 visitor spaces and 9 commercial spaces, thereby satisfying Council's Parking Code 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 AS2890.1:2004* in respect of parking bay dimensions, ramp gradients and aisle widths.

A number of *swept turning path* diagrams have been prepared as requested by Council confirming that 2 vehicles will be able to pass each other at the top and bottom of the ramps, and that a vehicle will be able to turn around if all visitor parking spaces are occupied. The *swept turning path* diagrams have been prepared in accordance with the requirements of *AS2890.1 – 2004* and are reproduced in the following pages.

Loading/Service 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 MRV trucks. The loading dock is to be located on the ground floor level, adjacent to the ground floor car parking area. The manoeuvring area has been designed to accommodate the swept turning path requirements of these medium rigid trucks, allowing them to enter and exit the site in a forward direction at all times, as indicated by the *swept turning path* diagrams which are reproduced in the following pages.

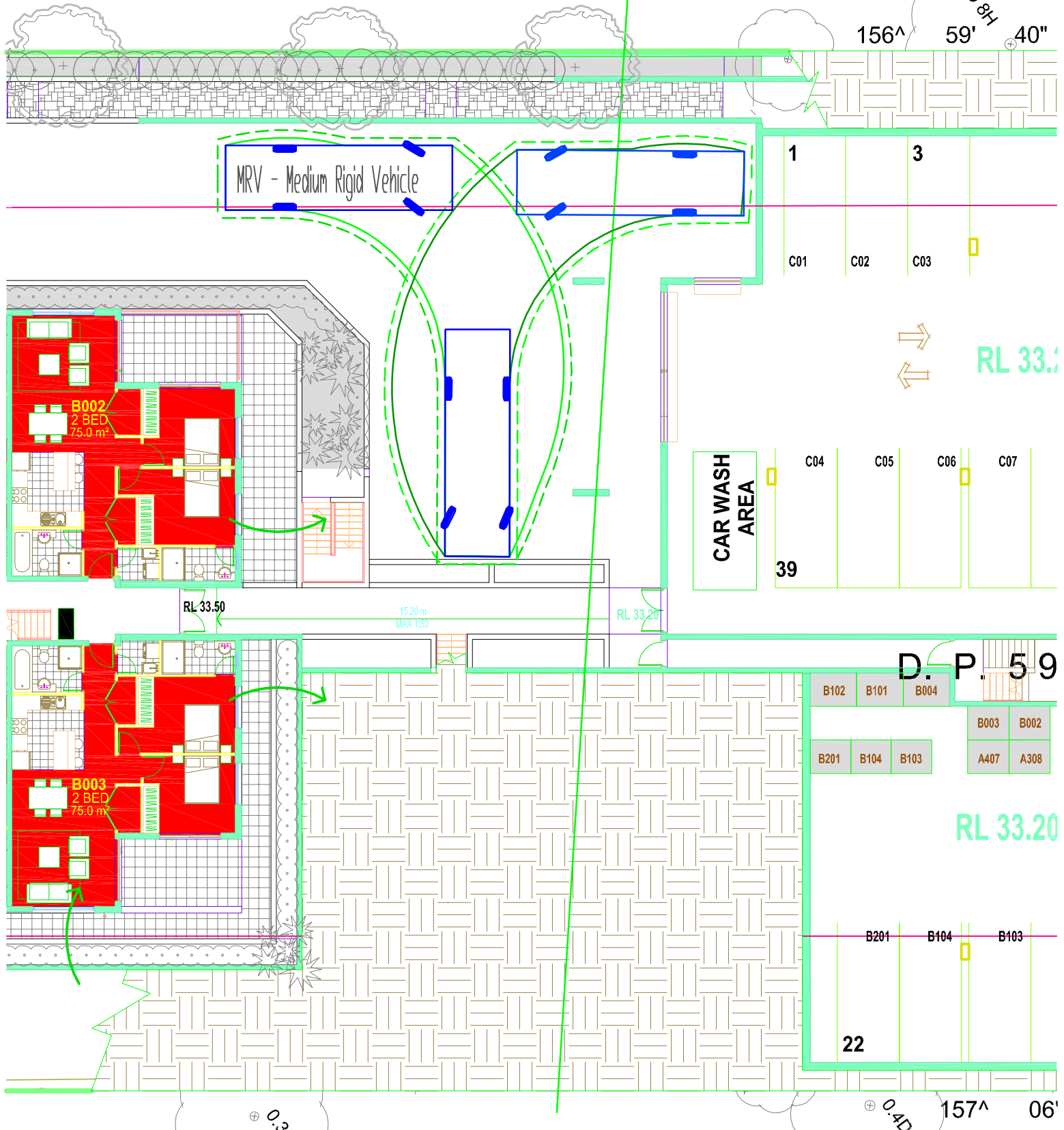
The geometric design layout of the proposed loading facilities has been designed to comply with the relevant requirements specified in the Standards Australia publication *Parking Facilities Part 2 - Off-Street Commercial Vehicle Facilities AS2890.2:2002* in respect of loading dock dimensions and service area requirements for MRV trucks.

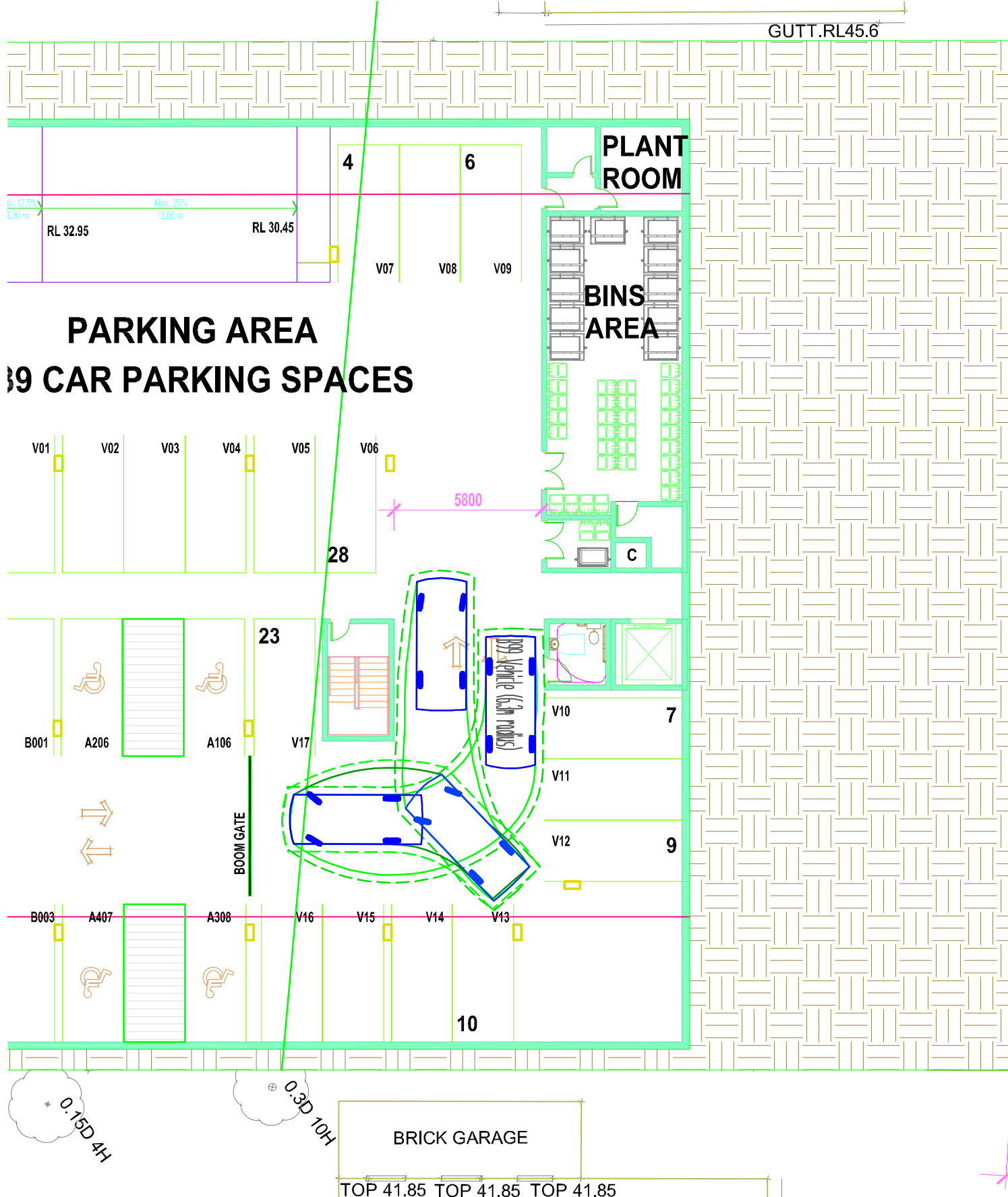
In summary, the proposed parking and loading facilities satisfy the relevant requirements specified in both Council's Parking Code as well as the Australian Standards and it is therefore concluded that the proposed development will not have any unacceptable parking or loading implications.

A horizontal number line representing a distance of 20 metres. The line starts at 0 and ends at 20. Major tick marks are labeled at 0, 2, 4, 6, 8, 10, and 20. There are also minor tick marks between the major ones, representing every 1 unit. The word 'Metres' is written at the right end of the line.

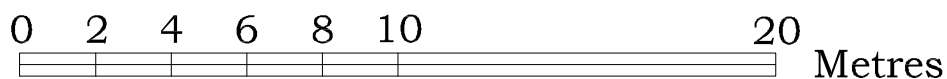
RESTRICTED 9m HEIGHT ZONE

156^{\circ} 59' 40''



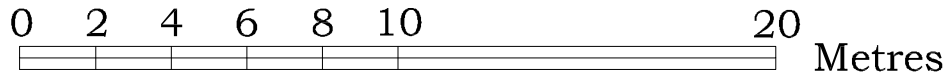


B99 Vehicle Swept Turning Path

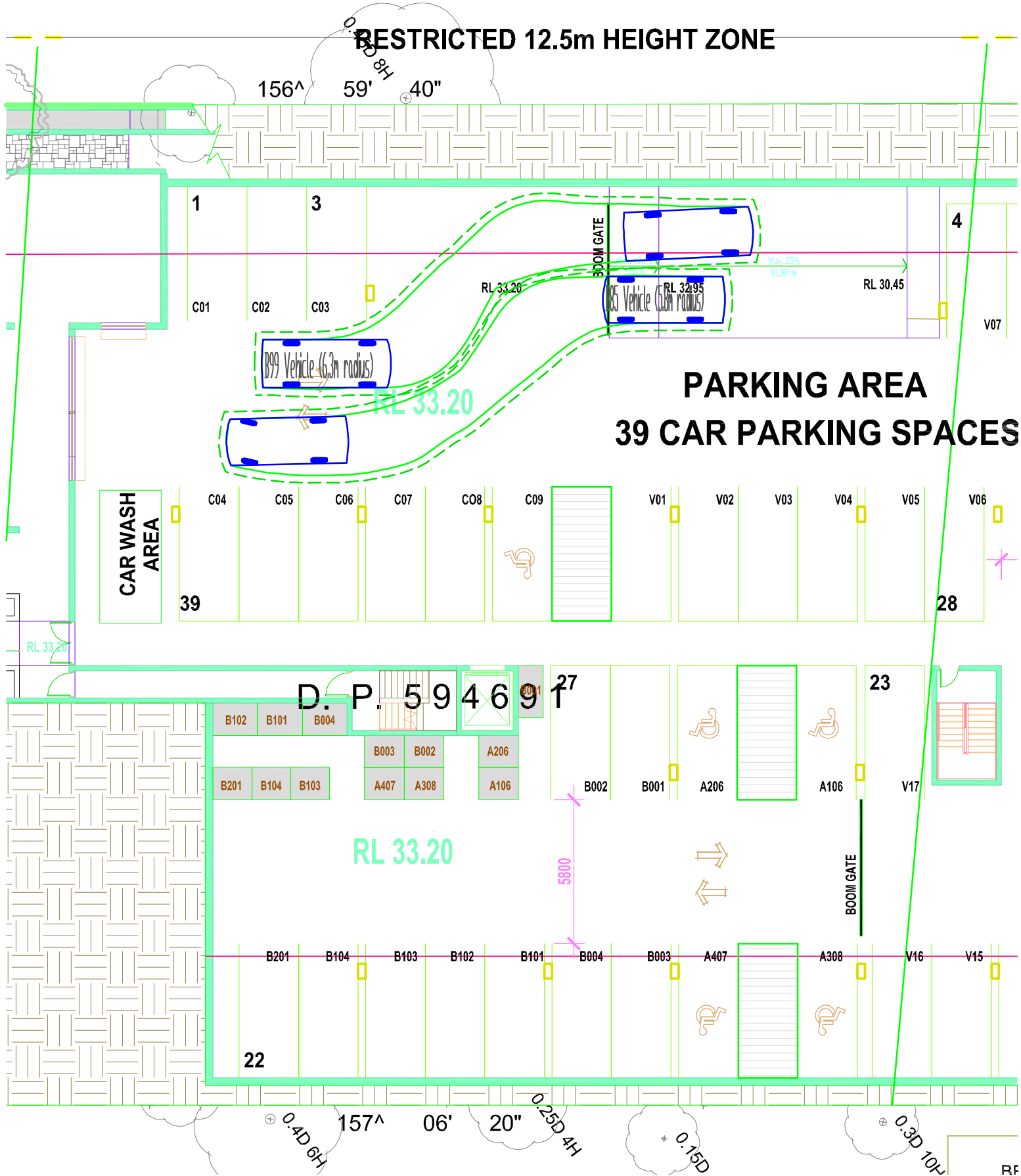


Scale 1:200 @ A4 Size

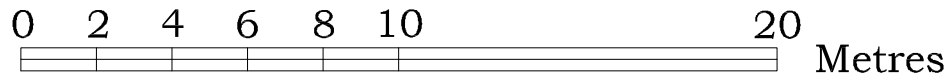
B99 & B85 Vehicle Swept Turning Paths



Scale 1:200 @ A4 Size



B99 & B85 Vehicle Swept Turning Paths



Scale 1:200 @ A4 Size

