159 Jamison Road Penrith

Traffic and Parking Assessment

Prepared on behalf Alpha Engineering and Development Pty Ltd

7 March 2019

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Contents

1. Introduction

This traffic assessment is prepared on behalf of Alpha Engineering and Development Pty Ltd to investigate a proposed boarding house development at 159 Jamison Road Penrith NSW.

It is understood that a development application will be lodged with Penrith City Council.

The development plans have been assessed against the following:

- Penrith Development Control Plan (DCP) 2014;
- Penrith Local Environmental Plan (LEP) 2010;
- Australian Standard (AS 2890); and
- RTA (RMS) Guide to Traffic Generating Developments.

1.1. Site Location

The subject site is located at 159 Jamison Road Penrith, as shown in Figure 1-1.

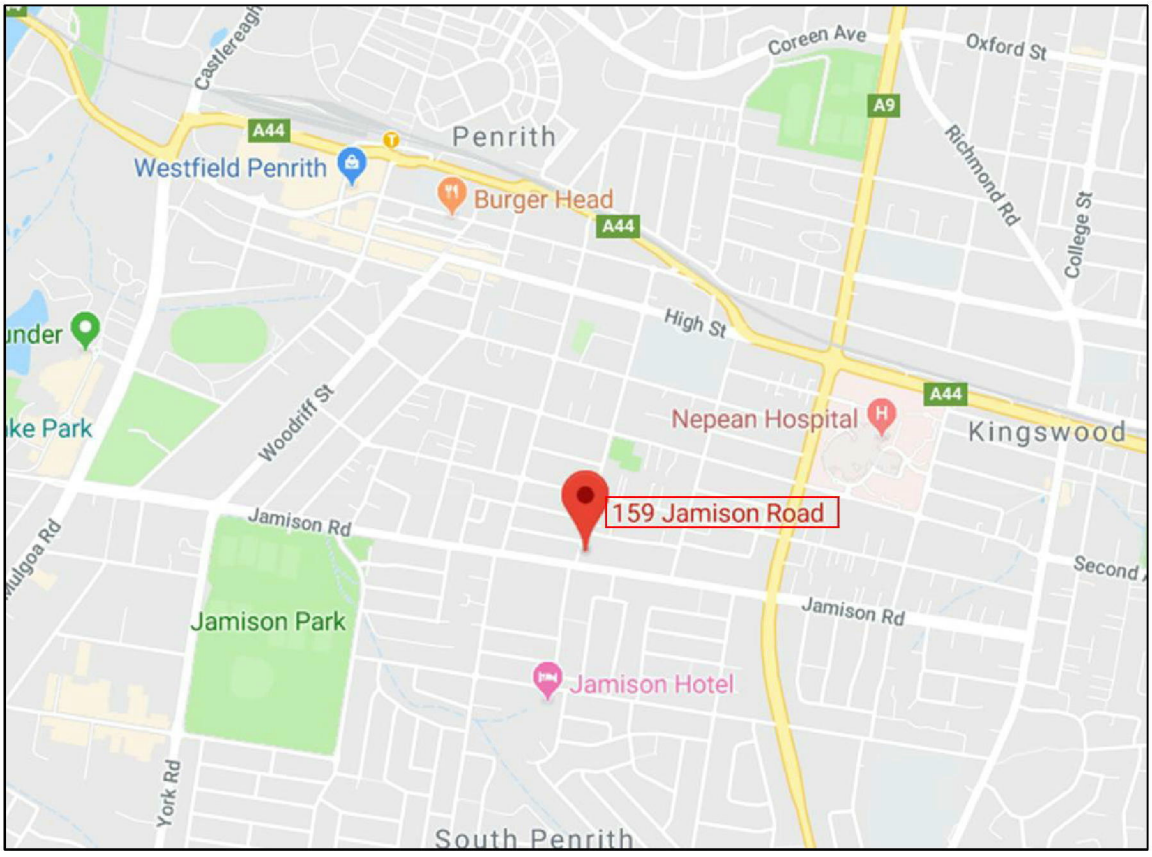


Figure 1-1: Site Location[1]

[1] Source: https://www.google.com/maps/

An aerial photograph showing the site and the surrounding area is shown in Figure 1-2.

Figure 1-2: Aerial Imagery of the Site[2]

1.2. Land Use Zoning

Figure 1-3 shows the land use zoning of the subject site in the context of adjacent sites and the surrounding area.

[2] Source: https://maps.spookfish.com

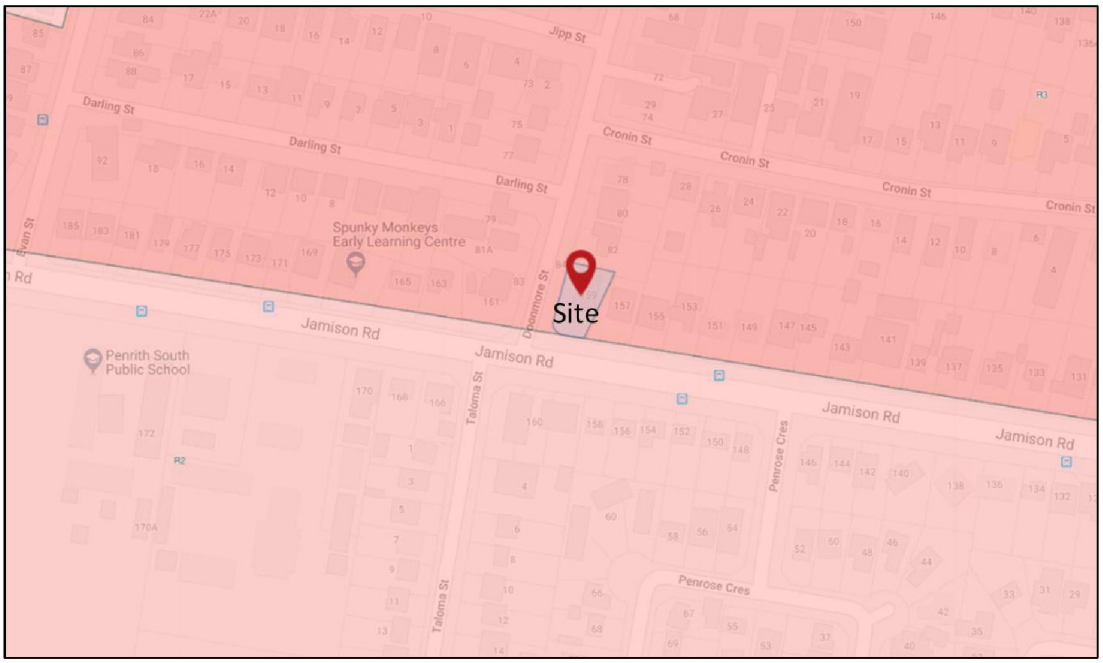


Figure 1-3: Site Location (Land Use Zoning)[3]

The site is located within a Medium Density Residential (R3) Zone, with the land uses in the immediate vicinity of the site being residential (R2 and R3).

The following key features are within vicinity of the site:

- The Penrith Centre (including Penrith Westfield) is located 1.5 km northwest of the site
- Penrith Railway Station is located 1.5 km northwest of the site;
- Nepean Hospital is located 900 metres north east of the site;
- Jamison Park is located 850 metres west of the site; and
- Penrith Panthers is located 1.8 km west of the site.

[3] Source: https://www.planningportal.nsw.gov.au

2. Existing Local Situation

2.1. Road Network

The subject site has street frontages to Jamison Road and Doonmore Street. These roads and the other roads in the vicinity of the site are maintained and controlled by Penrith City Council.

The road characteristics are shown in Table 2-1.

Table 2-1: Road Characteristics

Road	Speed Limit	Lanes	Road Authority
Jamison Road	50kph	4 (undivided, with on-street parking)	Council
Doonmore Street	50kph	2 (undivided plus on-street parking)	Council
Taloma Street	50kph	2 (undivided plus on-street parking)	Council

The intersection of Jamison Road and Doonmore Street is 'Give Way' controlled.

2.2. Assessment of Existing Travel Options

2.2.1. Public Transport

Buses

Bus stops are located Jamison Road within 70 metres walking distance from the site. These bus route that services the bus stop is Route 770 (Penrith to Mount Druitt via Claremont Meadows). This service provides buses every 20 minutes in morning and evening peak periods, and during the off-peak periods.

The bus network map is shown in Figure 2-1.

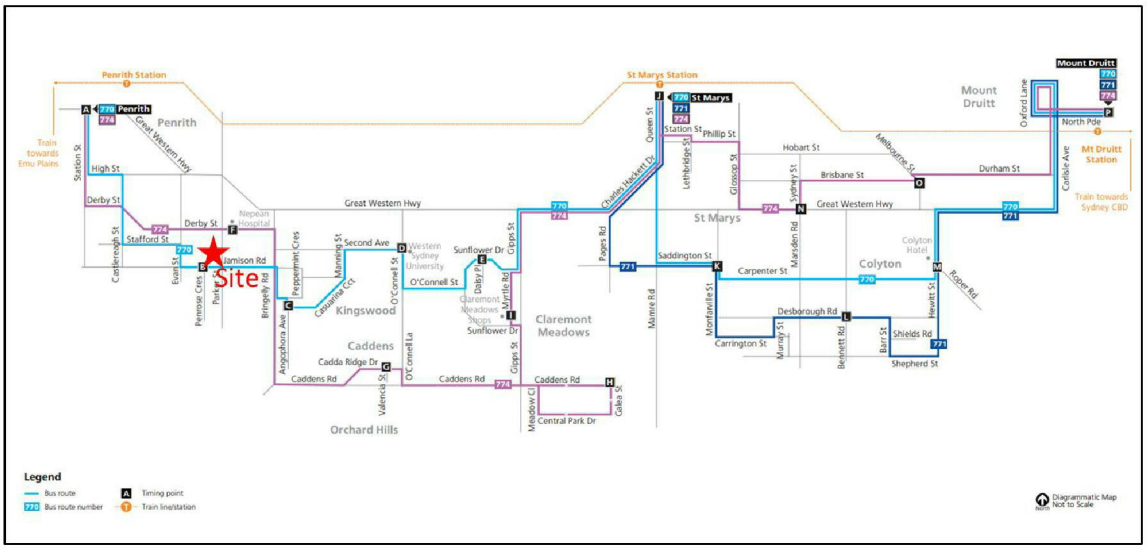


Figure 2-1: Bus Route 770 Network Map[4]

2.2.2. Walking and Cycling Infrastructure

Pedestrian footpaths are located on Jamison Road, Doonmore Street and the streets surrounding the site.

Designated cycle routes are located within the vicinity of the site along Jamison Road, Evan Street, Derby Street and other local roads.

The bike network maps from the NSW Roads and Maritime Services (RMS) are shown in Figure 2-2.

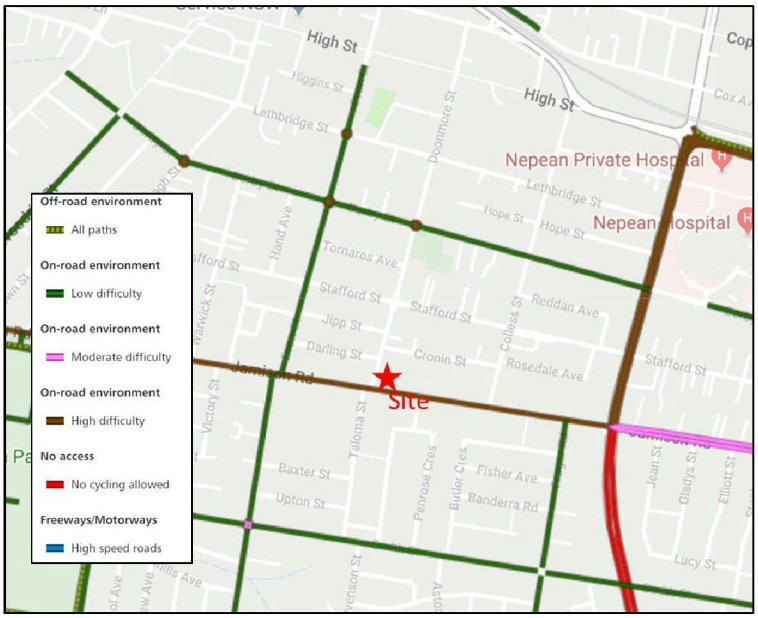


Figure 2-2: RMS Cycle Network[5]

[4] Source: https://www.busways.com.au/
[5] Source: Transport Roads and Maritime Services Website (http://www.rms.nsw.gov.au/roads/bicycles/cyclewayfinder/index.html)

2.3. Existing Parking Survey

A car parking occupancy survey was undertaken at the site on Monday, 18th February 2019, between 4:30pm to 6:00pm. A total of 44 car parking spaces were recorded along Jamison Road and Doonmore Street.

The on-street parking capacity is shown in Figure 2-3.

Figure 2-3: On-Street Parking Capacity

At the time of the parking surveys there were 16 and 17 car parking spaces available for Jamison Road and Doonmore Street, respectively.

A summary of the parking occupancy results is shown in Table 2-2.

Table 2-2: Parking Survey Results

Street Name	Section	Number of On-Street Parking Spaces available	Number of Occupied Parking Spaces	Number of Available Parking Spaces	% of Available parking spaces
Jamison Road	A	16	6	10	63%
	D	8	2	6	75%
Doonmore Street	B	8	3	5	63%
	C	12	0	12	100%

Based on the parking survey results there is spare parking capacity located around vicinity of the subject site along Jamison Road and Doonmore Street.

The site photos during the site inspection is shown in Figure 2-4 to Figure 2-6.

Figure 2-4: View looking north on Doonmore Street

Figure 2-5: View looking east on Jamison Road and Doonmore Street intersection

Figure 2-6: View looking west along Jamison Road

3. Proposed Development

3.1. Development Profile

It is proposed to demolish the existing building on the site and construct a boarding house development at 159 Jamison Road Penrith.

- The development proposal includes:
  - 20 boarding house rooms;
  - One manager room;
  - 10 car parking spaces on-site (including three accessible bays);
  - Four bicycle parking and four motor cycle parking spaces on-site; and
  - Vehicle access is via Doonmore Street.

Figure 3-1 and Figure 3-2 shows the proposed ground level access arrangement and basement level parking prepared by Platform 5 Design. The architectural plans are attached in Appendix A.

Figure 3-1 Proposed Ground Level

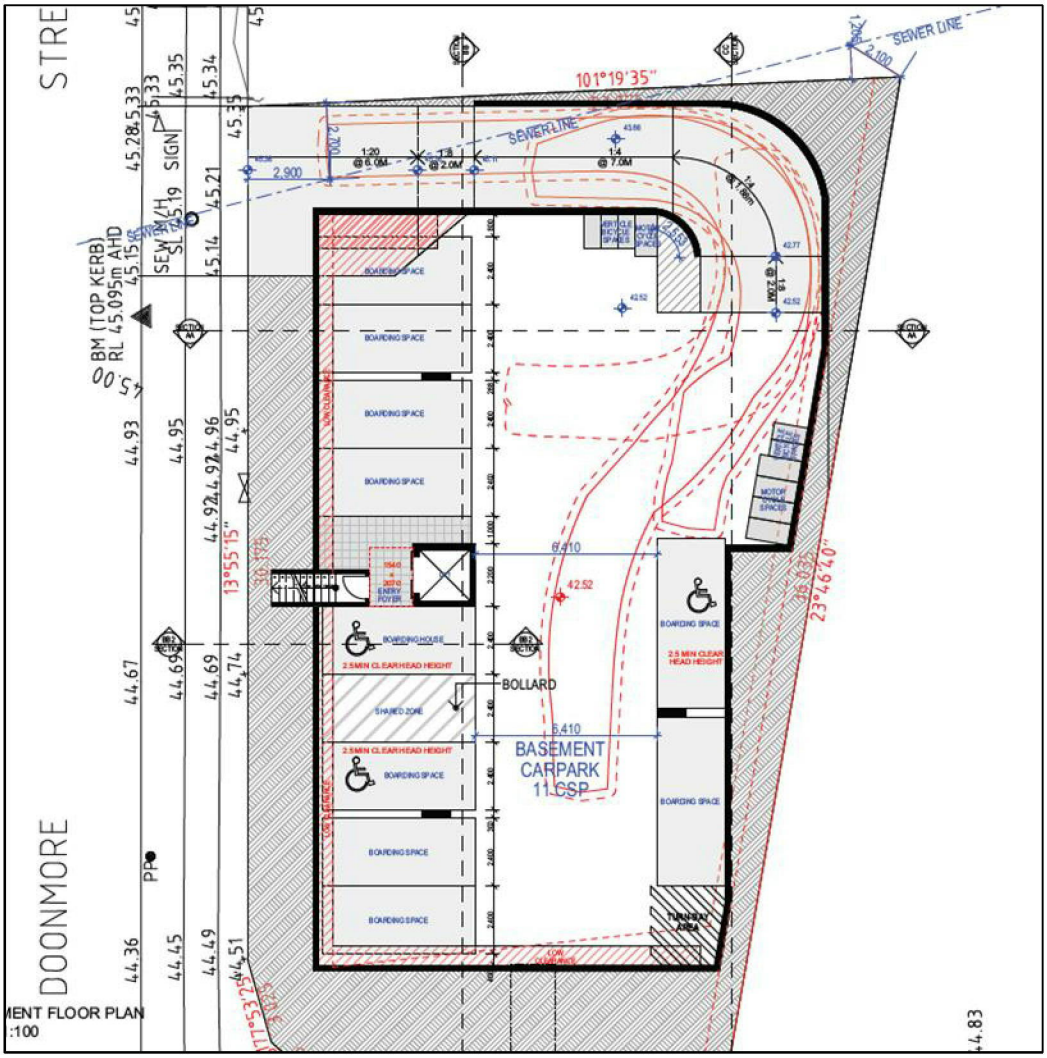


Figure 3-2: Basement Level Car Park

4. Council Parking Supply Requirements

4.1. Council Car Parking Requirements

The Council's Development Control Plan (Penrith DCP 2014) does not specify parking rates for boarding house (accommodation) developments. The 'Affordable Rental Housing State Environmental Planning Policy (ARHSEPP)' has been used to determine the number of car parking spaces provided on site, as detailed in Section 4.2.

4.2. State Environmental Planning Policy (SEPP) Parking Requirements

On 1 June 2018, car parking standards were increased for boarding houses delivered under the State Environmental Planning Policy (Affordable Rental Housing) 2009 (ARHSEPP). The car parking rates is specified below:

- 0.5 car spaces per boarding room in all locations;
- At least one parking space provided for each person employed in connection with the development and who is resident on the site; and
- One bicycle parking space and one motorcycle parking space per 5 boarding rooms.

Table 4-1 presents the car parking requirements in accordance with the State Environmental Planning Policy (Affordable Rental Housing) 2009 (ARHSEPP).

Table 4-1: ARHSEPP Car Parking Rates and Supply

Parking Type	Number of bedrooms	Parking Rates	Parking Requirements	Parking Provisions
Vehicle Parking	20 (excludes manager room)	0.5 car parking space per room	10	9 (including three accessible bay) car parking spaces
Vehicle Parking		At least one parking space provided for each person employed in connection with the development and who is resident on the site	1	1 Car parking space provided to manager
Bicycle parking		1 bicycle per 5 boarding rooms	4	4 bicycle parking spaces
Motor cycle parking		1 motorcycle parking per 5 boarding rooms	4	4 motor cycle parking spaces

From Table 4-1 it can be seen that the car parking provision of 9 car parking spaces does not strictly comply with the ARHSEPP parking requirements, with one car parking space short of the parking requirements.

During the site inspection between 4:30pm to 6:00pm on 18th February 2019 it was observed that on-street parking was available around vicinity of the subject site along Jamison Road and Doonmore Street, as detailed in Section 2.3. The one car parking space can be accommodated on-street along Jamison Road and Doonmore Street without impacting the parking environment.

4.3. Car Parking Layout

The proposed car park design and access arrangement has generally been designed in accordance with the requirements of the Australian Standards (AS/NZS 2890.1:2004).

Table 4-2 identifies the characteristics of the proposed parking and access layout with respect to the relevant design requirements and guidelines. The last column identifies the compliance of each design aspect.

Table 4-2: Car Parking and Access Requirements

Design Aspect	Australian Standards	Proposed Provision	Compliance
Parking space length: Standard bay	5.4 metres	5.4 metres	Complies with AS2890
Parking space width: Standard bay	2.4 metres	2.4 metres	Complies with AS2890
Parking space length: Accessible Bay	5.4 metres	5.4 metres	Complies with AS2890
Parking space width: Accessible Bay	4.8 metres	4.8 metres	Complies with AS2890 and refer to Section 4.4
Aisle Width: Parking aisle	5.8 metres	6.4 metres	Complies with AS2890
Blind Aisle	1 metre beyond the last parking space	Refer to Section 4.5	Refer to Section 4.5
Driveway Width	3.0 to 5.5 metres	3.0 to 5.5 metres	Complies with AS2890 (further details provided in Section 4.6)

Design Aspect	Australian Standards	Proposed Provision	Compliance
Height Clearance	2.2m	2.2m	Complies with AS2890
Height Clearance above accessible bay	2.5m	2.7m	Complies with AS2890
Maximum Gradient Ramp	Up to 20m long – maximum 1 in 4 (25%)	25%	Complies with AS2890
Access Driveway	First 6m from the property boundary shall be a maximum of 1:20 (5%)	First 6m from the property boundary shall be a maximum of 1:20 (5%)	Complies with AS2890
Sight Triangles	Landscaping and signs should not be more than 1.15 metres above the road surface for 2 metres along the property boundary and 2.5 metres along the property exit driveway	Refer to Section 4.7	Refer to Section 4.7

The proposed carpark and access layout generally comply with the requirements of the Australian Standards, with further details provided below:

4.4. Shared Area

As specified in the Australian Standards (AS2890.6):

'An area adjacent to a dedicated space provided for access or egress to or from a parked vehicle and which may be shared with any other purpose that does not involve other than transitory obstruction of the area, e.g. a walkway, a vehicular aisle, dual use with another adjacent dedicated space'

The traffic aisle will form part of the shared area for the parallel accessible bay, this will be considered acceptable for the following reasons:

- The traffic aisle will only be for passing vehicles; and
- Traffic volumes within the site is very low as detailed in Section 5.

4.5. Swept Path Analysis

An evaluation of the car parking spaces has been undertaken using the software package 'AutoTurn'. The vehicle swept paths have been based on the B85 vehicle as outlined in the Australian Standards (AS/NZS 2890.1:2004). The car parking spaces located at the blind aisle will either require a three point turn when entering or exiting the car parking spaces. Vehicle swept path analysis are shown in Figure 4-1 to Figure 4-3.

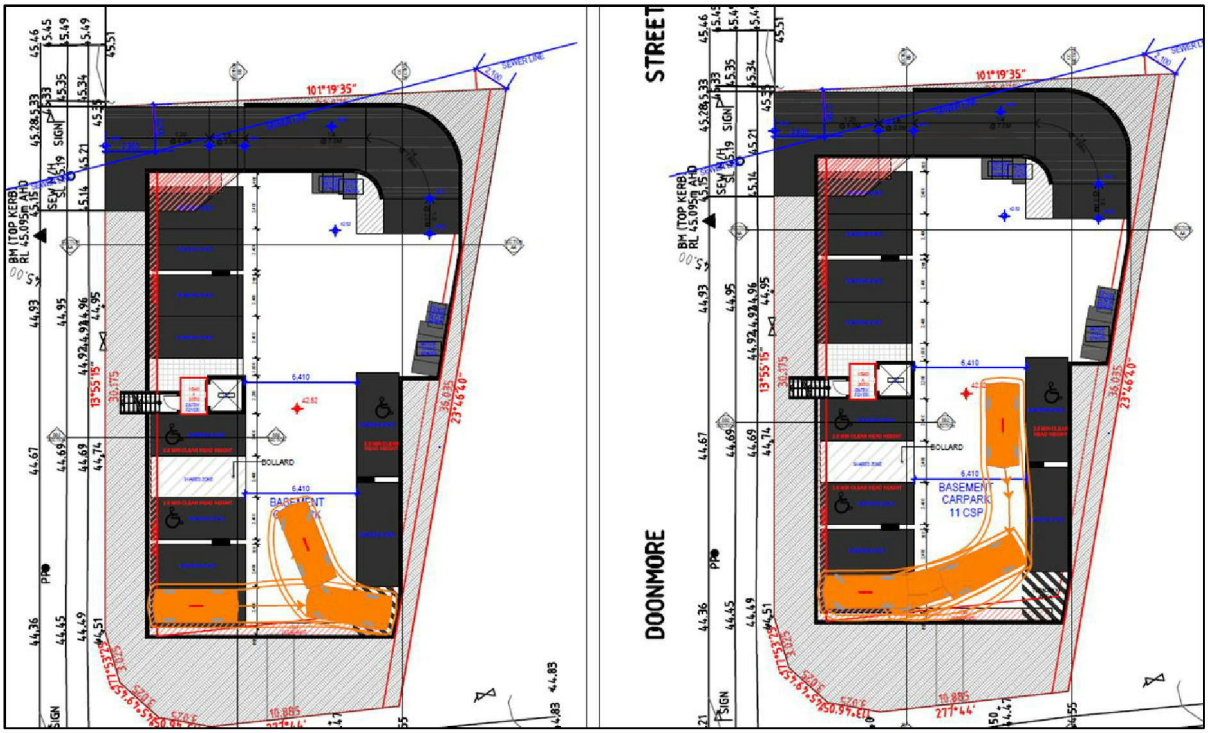


Figure 4-1: Vehicle Swept Path Analysis (Car Parking Space 1)

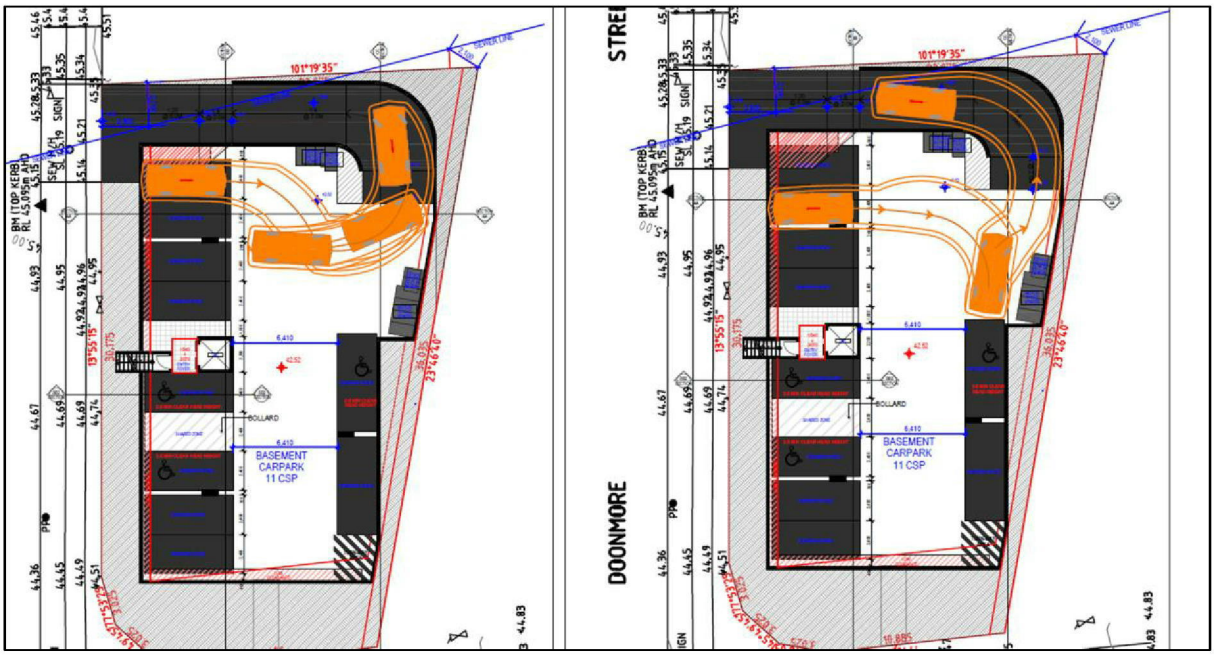


Figure 4-2: Vehicle Swept Path Analysis (Car Parking Space 2)

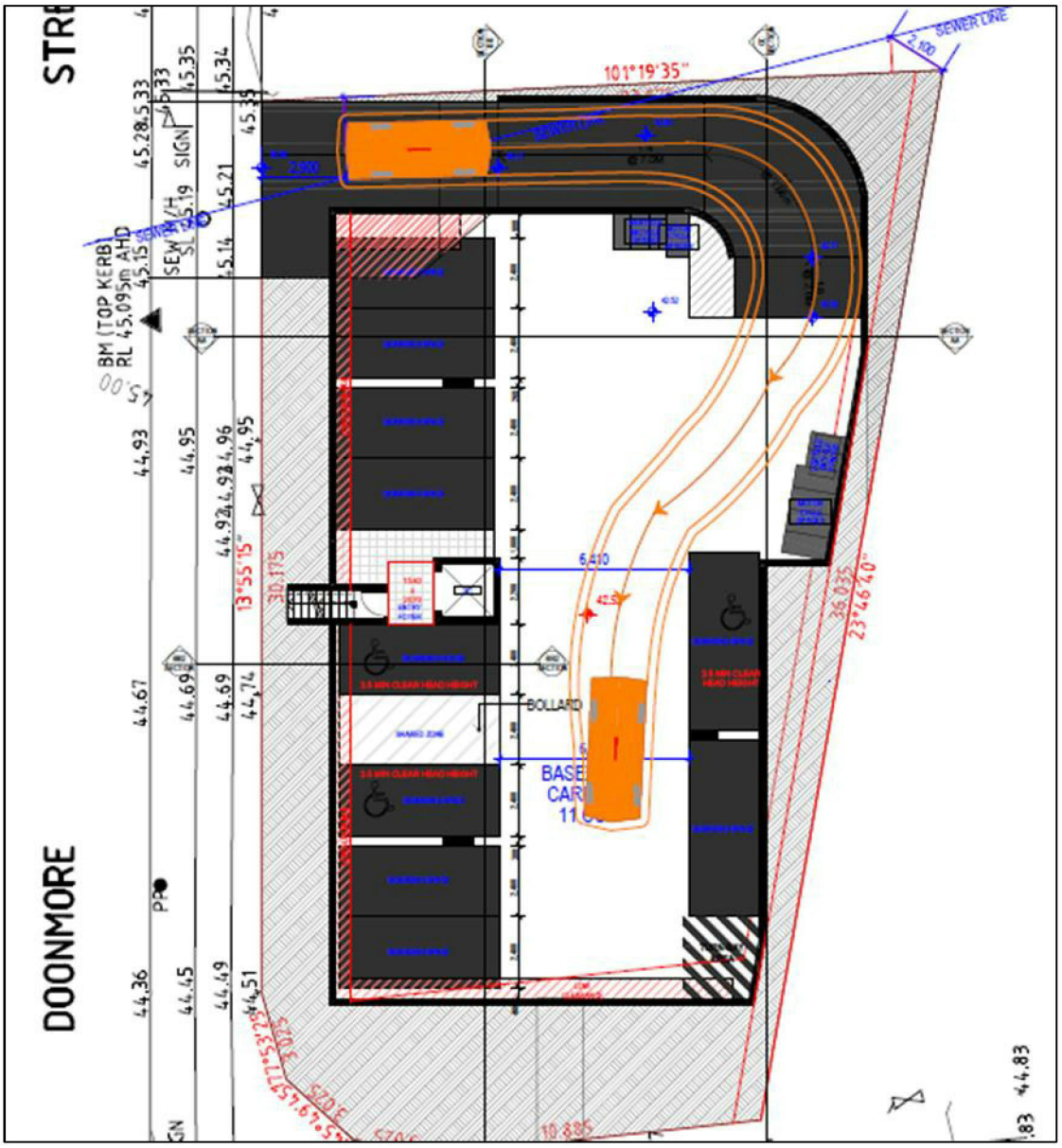


Figure 4-3: Vehicle Swept Path Analysis (Entering the basement level)

4.6. Driveway Access Arrangement

The proposed driveway access is two-way traffic merging to one way traffic flow into the basement level car park. This is acceptable due to the size of the proposed development and the low traffic volumes during the morning and evening peak periods, as detailed in Section 5.

The proposed boarding house development is located 70 metres from the nearest bus stop justifying the reduction in the traffic movements during the morning and evening peak periods.

An evaluation of the access arrangement has been undertaken using the software package 'AutoTurn', demonstrating two vehicles passing at the top of the ramp, as shown in Figure 4-4.

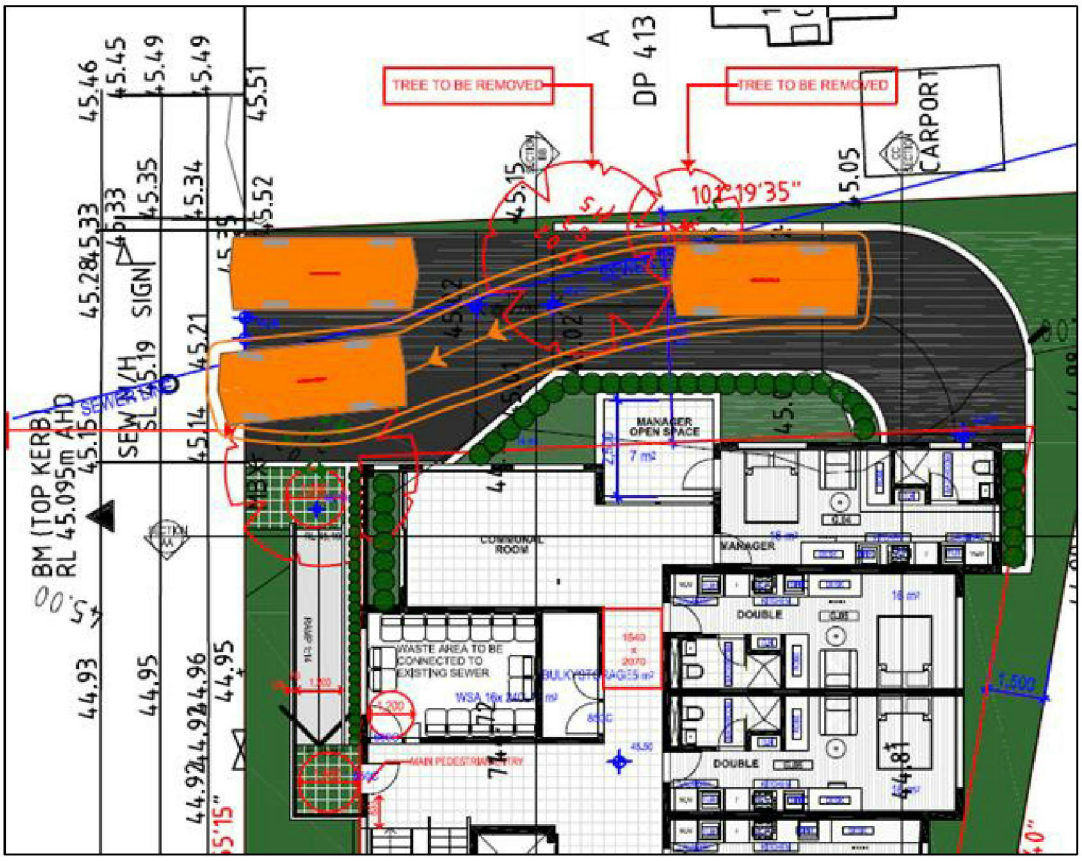


Figure 4-4: Vehicle Swept Path Analysis (Proposed Driveway)

4.7. Sight Triangles

To comply with '*Australian Standards (AS 2890) Parking facilities Part 1: Off-street car parking*' minimum sight lines for pedestrian safety. Landscaping and signs should not be more than 1.15 metres above the road surface for 2 metres along the property boundary and 2.5 metres along the property exit driveway (see Figure 4-5). This is to provide visibility between vehicles exiting the driveway and pedestrians on Doonmore Street.

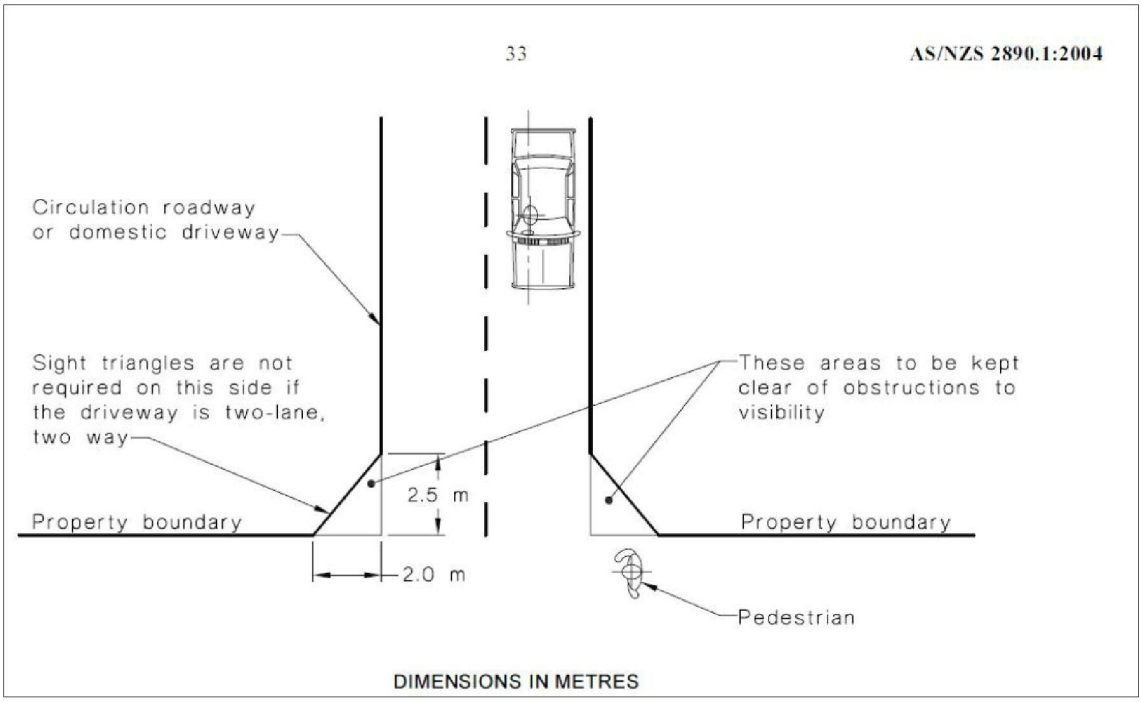


Figure 4-5: Australian Standards – Minimum sight lines for pedestrian safety

It is our advice that the sight triangles would be acceptable at the proposed access. There will be minimal obstructions and kept clear from vegetation and objects. Therefore, there will be minimal conflict with outgoing vehicles from the site and pedestrian activity.

4.8. Service Vehicles

Service vehicles, deliveries and refuse collection will be accommodated kerbside along Doonmore Street. Given the scale and nature of the development it is anticipated that there will be very low and infrequent service vehicle demands for this site. The use of the adjacent kerbside parking is appropriate to meet the needs of the proposed development.

5. Traffic Impacts

The RTA (RMS) 'Guide to Traffic Generating Development Version 2.2 (2002)' specifies land use traffic generation rates for different types of developments. These guidelines do not specify the traffic generation rates for boarding house developments.

Traffic generation rates for medium density residential flat buildings is provided, which can be approximated to generate a similar level of traffic to boarding house developments. Accordingly, medium density residential flat building traffic generation rates have been adopted for the purposes of this assessment.

The expected traffic generation for the development is provided in Table 5-1.

Table 5-1: RMS Traffic Generation Rates

Land Use	RTA Traffic Generation Rates (Peak Hour Vehicle Trips)	Peak Hour Vehicle Trips
Medium Residential Dwelling (21 rooms)	Weekday peak hour vehicle trips – up to 2 two bedrooms 0.4 to 0.5 per dwelling	8.4 to 10.5 (round up to 9 to 11) vehicles

The RMS traffic rates of 0.4 to 0.5 vehicle trips per dwelling results in the proposed development generating up to 11 vehicle movements during the morning and evening peak periods.

It is considered that this level of traffic will have a negligible impact to the intersection of Doonmore Street and Jamison Road, and the road network capacity, or the traffic environment.

6. Response to Council Comments

The following Council comments (Pre-lodgement advice letter dated 31 January 2019) and responses are provided in Table 6-1.

Table 6-1: Council Comments

Council Comments from Pre-Lodgement Meeting Letter dated 03 July 2018	Response to Council Comments
Under the Affordable Rental Housing SEPP, the parking requirements are: • 0.5 spaces per boarding room with 1 space being allocated to a site manager. Due to the number of accessible rooms required to be provided (being 10% of the proposal), 2 of the required car parking spaces need to be accessible in accordance with AS2890.6. Subsequently, the site requires 12 spaces with at least 2 being accessible (disabled) parking spaces. There are 12 spaces proposed, however only one is marked as accessible. • Motorcycle parking is one per 5 boarding rooms, requiring 5 spaces. 4 are proposed, an additional motorcycle parking space is required to be provided. • Bicycle parking is one per 5 boarding rooms, requiring 5 spaces as is proposed	The proposed development is for a boarding house consisting of 20 boarding rooms and one manager room. The Car Parking Rates are taken from the State Environmental Planning Policy (Affordable Rental Housing) 2009 (ARHSEPP), refer to Section 4.2. Refer to Section 4 regarding bicycle parking, motorcycle parking and car parking requirements and supply.
Accessible parking is to be provided in the car park and have complying, accessible paths of travel to the building common areas. This would include headroom clearance (from floor to lowest ceiling obstruction such as light fittings or piping) of at least 2.5 metres above an accessible space and a clear area (possibly a shared space, pedestrian area or aisle) beside the space to allow wheelchair and other access beside the vehicle in accordance with AS 2890.6.	The proposed accessible bay has generally been designed in accordance with the requirements of the Australian Standards (AS2890.1 and AS2890.6) refer to Section 4.3.
Council prefers the provision of two-way ramps to basement car parking for ease of access and access arrangements. If a one-way ramp is pursued, a management system will be required that considers waiting areas to be clear of all turning paths, as well as any stacking of vehicles waiting to access the property to be clear of all turning paths and clear of footpaths.	An evaluation of the access arrangement has been undertaken using the software package 'AutoTurn', demonstrating two vehicles passing at the top of the ramp, as shown in Figure 4-4. In addition, a convex mirror can be installed to provide additional visibility, if required.

Council Comments from Pre-Lodgement Meeting Letter dated 03 July 2018	Response to Council Comments
The parking spaces are not dimensioned; however, they will be required to comply with Council DCP C10 to provide full opening doors as set out in AS 2890.1 Table B1 with at least 2.6 metres wide spaces and there should be an additional 0.3 metres clearance to any walls or other obstructions	The Australian Standard (AS2890) specifies residential parking as Class 1A which states 2.4 metre wide car parking spaces with a 5.8m traffic aisle. Therefore, the proposed 2.4m wide car parking spaces complies with the Australian Standards. Refer to Section 4.3 in regards to the car parking layout.
All vehicles are to enter/exit the site in a forward direction. Consideration will need to be made if all the spaces in the basement car park are full, there should be on site manoeuvring area to enter and leave in a forward direction. Subsequently, swept turn paths are required to be provided for any vehicles accessing the site to demonstrate that the car parking spaces can be accessed, manoeuvring on site to enable a turn around on site with less than 3 turns, and the proposed basement ramp can be used successfully.	An evaluation of the car parking spaces has been undertaken using the software package 'AutoTurn'. The vehicle swept paths have been based on the B85 vehicle as outlined in the Australian Standards (AS/NZS 2890.1:2004). The car parking spaces located at the blind aisle will either require a three point turn when entering or exiting the car parking spaces (refer to Section 4.5) Vehicles are able to enter and exit the site in a forward direction.
All car parking spaces should have complying, headroom, additional widths and clearances from columns, walls and other obstructions.	Refer to Section 4.3 for car park design and compliance
The required sight lines around the driveway entrance and exit are not to be compromised by street trees, landscaping, fencing or signposting.	Refer to Section 4.3 for car park design and compliance

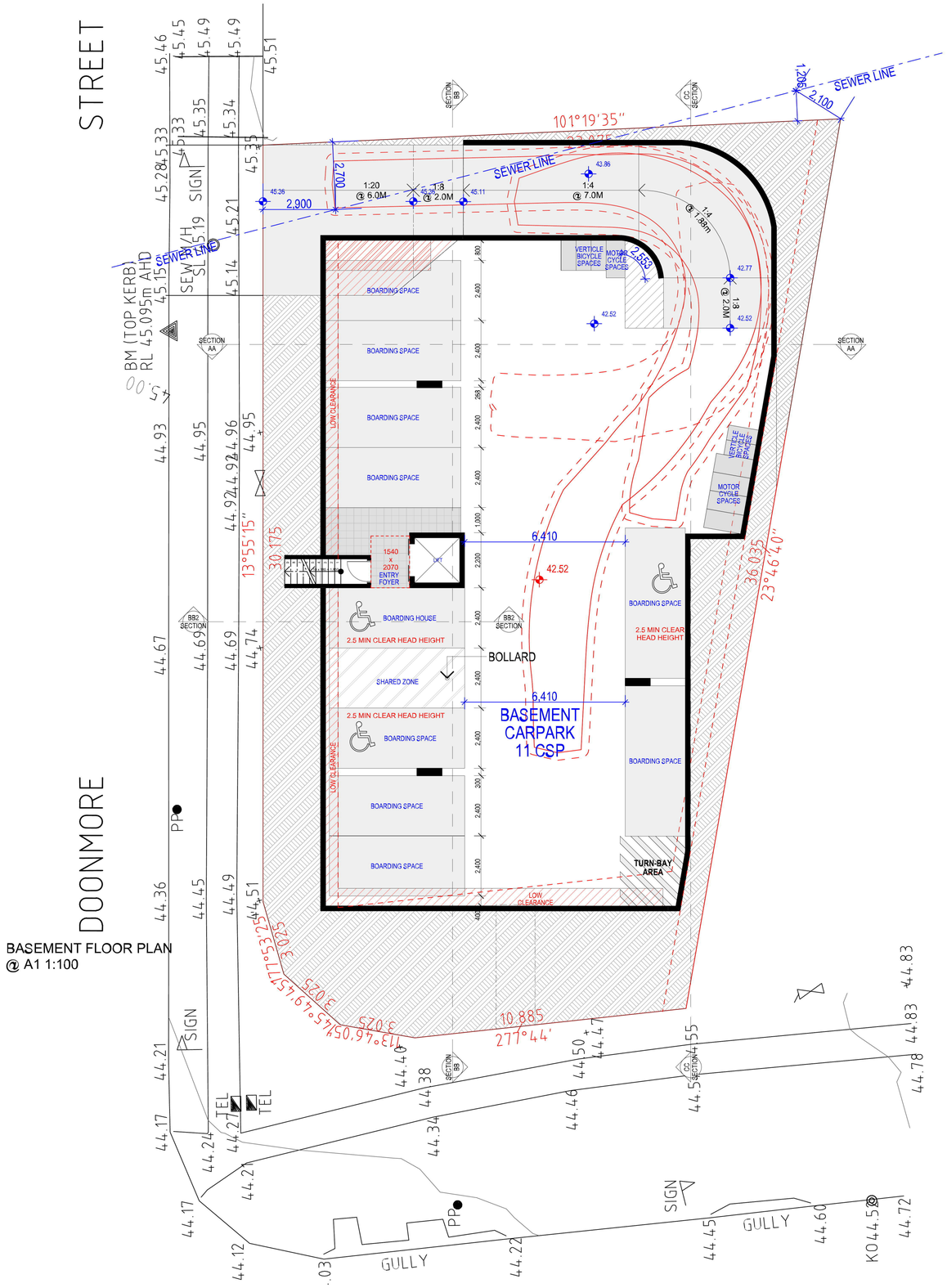
7. Summary and Conclusions

This report has assessed the proposed boarding house development at 159 Jamison Road Penrith. Based on the above assessment, it is concluded that:

- The proposed car parking provision does not strictly comply with the car parking requirements of the State Environmental Planning Policy (Affordable Rental Housing) 2009 (ARHSEPP). The proposed development is less one car parking space on-site. Based on the parking survey results this can be accommodate on-street as detailed in Section 2.3.
- The proposed car parking layout generally complies with AS2890 requirements. Vehicle swept path analysis has been undertaken to demonstrate vehicles manoeuvring in and out of the site and car parking spaces;
- The assessment of the proposed development indicates that the development will not have a significant impact on the surrounding road network or intersections. There is a minor increase of traffic movements of up to 11 vehicles in the morning and evening peak periods; and
- Servicing for this development will be facilitated on Doonmore Street. There will be low and infrequent service vehicle demands for this site.

The proposed boarding house development will result in a negligible change to the traffic and parking environments.

8. Appendix A Site Plans



BASEMENT FLOOR PLAN
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PLATFORM5 DESIGN

REV	DESCRIPTION	DATE	REV	DESCRIPTION	DATE
A	DRAFT FOR REVIEW	07-12-18			
B	DRAFT FOR REVIEW	09-12-18			
C	ISSUED FOR PRE DA	18-12-18			
D	ISSUED FOR INFORMATION	10-02-19			
E					
F					

- 159 JAMISON RD-
- PENRITH -
- NSW - SYDNEY -
DEVELOPMENT APPLICATION TWO STOREY BOARDING HOUSE DEVELOPMENT

2000 FLOOR PLANS

BASEMENT PLAN

Designed

Approved

Project Number **18-030**

Scale **AS SHOWN**

Drawing Number **2001**

Date of Issue **26/02/2019**

PRE DA - ISSUE D

GROUND FLOOR PLAN
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PLATFORM5 DESIGN

REV	DESCRIPTION	DATE	REV	DESCRIPTION	DATE
A	DRAFT FOR REVIEW	07-12-18			
B	DRAFT FOR REVIEW	09-12-18			
C	ISSUED FOR PRE DA	18-12-18			
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F					

- 159 JAMISON RD-
- PENRITH -
- NSW - SYDNEY -
DEVELOPMENT APPLICATION TWO STOREY BOARDING HOUSE DEVELOPMENT

2000 FLOOR PLANS

GROUND FLOOR PLAN

Designed

Approved

Project Number **18-030**

Scale **AS SHOWN**

Drawing Number **2002**

Date of Issue **26/02/2019**

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