



6-12 Peters Avenue, Wallsend Traffic Impact Assessment

Prepared for:
NSW Land and Housing Corporation

21 July 2022

The Transport Planning Partnership

6-12 Peters Avenue, Wallsend

Traffic Impact Assessment

Client: NSW Land and Housing Corporation

Version: V03

Date: 21 July 2022

TPP Reference: 21148

Quality Record

Version	Date	Prepared by	Reviewed by	Approved by	Signature
V01	17/03/2022	Sokan Chhoun	Oasika Faiz	Wayne Johnson	DRAFT
V02	31/05/2022	Sokan Chhoun	Oasika Faiz	Wayne Johnson	
V02	21/07/2022	Sokan Chhoun	Oasika Faiz	Wayne Johnson	

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APPENDICES

- A. ARCHITECTURAL PLANS
- B. SWEPT PATH ANALYSIS

1 Introduction

The Transport and Planning Partnership (TPPP) has prepared this transport impact assessment (TIA) report to accompany an application for a two-storey residential flat building at 6-12 Peters Avenue, Wallsend.

The development is an initiative of the NSW Land and Housing Corporation (LAHC) and involves the construction of a two-storey development, comprising twenty residential flat dwellings.

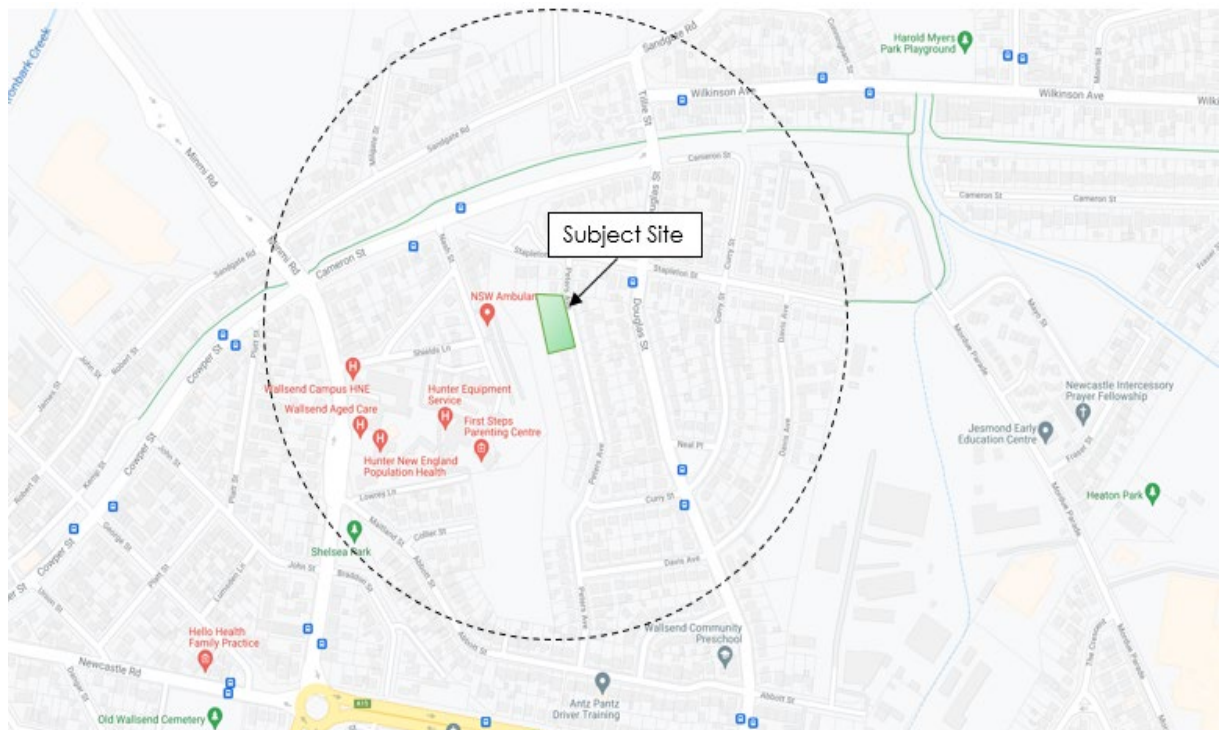
2 Existing Conditions

2.1 Site Description

The subject site is located at 6-12 Peters Avenue, Wallsend and falls within the local government area of Newcastle City Council. The site is currently occupied by four low-density residential dwellings.

The location of the site and its surrounding environment are presented in Figure 2.1.

Figure 2.1: Site Context



Source: Google Maps

2.2 Surrounding Road Network

Peters Avenue is a two-way road, connecting with Abbott Street to the south and Stapleton Street to the north. It is a 6m wide, two-lane road, with a posted speed limit of 50km/h. On-street parking with no parking restriction is permitted.

Douglas Street is a two-way road, connecting with Sandgate Road to the north and Newcastle Road to the south. It consists of two lanes, with a posted speed limit of 50 km/h. On-street parking is allowed with no parking restriction in place.

Newcastle Road is a two-way, divided State Road, aligned in an east-west direction. The road consists of two lanes in each direction, plus auxiliary lanes at intersections. It has a posted speed limit of 60km/h. Kerbside parking is permitted in the vicinity of the site.

2.3 Public Transport Services

The subject site is surrounded by a number of bus stops as shown in Figure 2.1. The nearest stop is within 180m walking distance, at the intersection of Douglas Street and Stapleton Street. Another bus stop near the subject site is located within a 400m walking distance, along Cameron Street. The services at these stops are summarised in Table 2.1.

Table 2.1: Bus Stops within 400m

Closest Bus Stop	Route	Hours of Operation	Weekday Frequency	Weekend Frequency
Douglas St at Stapleton St (Stop ID: 2287180)	24 (Wallsend to Marketown)	Weekday: 5:20am – 10:26pm Weekend: 6:45am – 6:30pm	Peak: every 30 minutes Off-peak: every 1 hour	Every 1 hour
Cameron St after Douglas St (Stop ID: 2287181)	27 (Wallsend to Broad Meadow)	Weekday: 5:45am – 10:36pm Weekend: 7:50am – 7:39pm	Peak: every 30 minutes Off-peak: every 1 hour	Every 1 hour

Reference: TfNSW

In addition, several other bus services can also be found along Newcastle Road within 800m walking distance.

Bus stop ID 2287180 and 2287181, which serve bus route 24 and 27 are situated within 400m walking distance from the subject site. Based on the schedule in Table 2.1, the site meets the 'accessible area' requirements of the *State Environmental Planning Policy (Housing) 2021 (Housing SEPP)*;, which states that an accessible area means land within:

(c) 400 metres walking distance of a bus stop used by a regular bus service (within the meaning of the Passenger Transport Act 1990) that has at least one bus per hour servicing the bus stop between 06.00 and 21.00 each day from Monday to Friday (both days inclusive) and between 08.00 and 18.00 on each Saturday and Sunday.

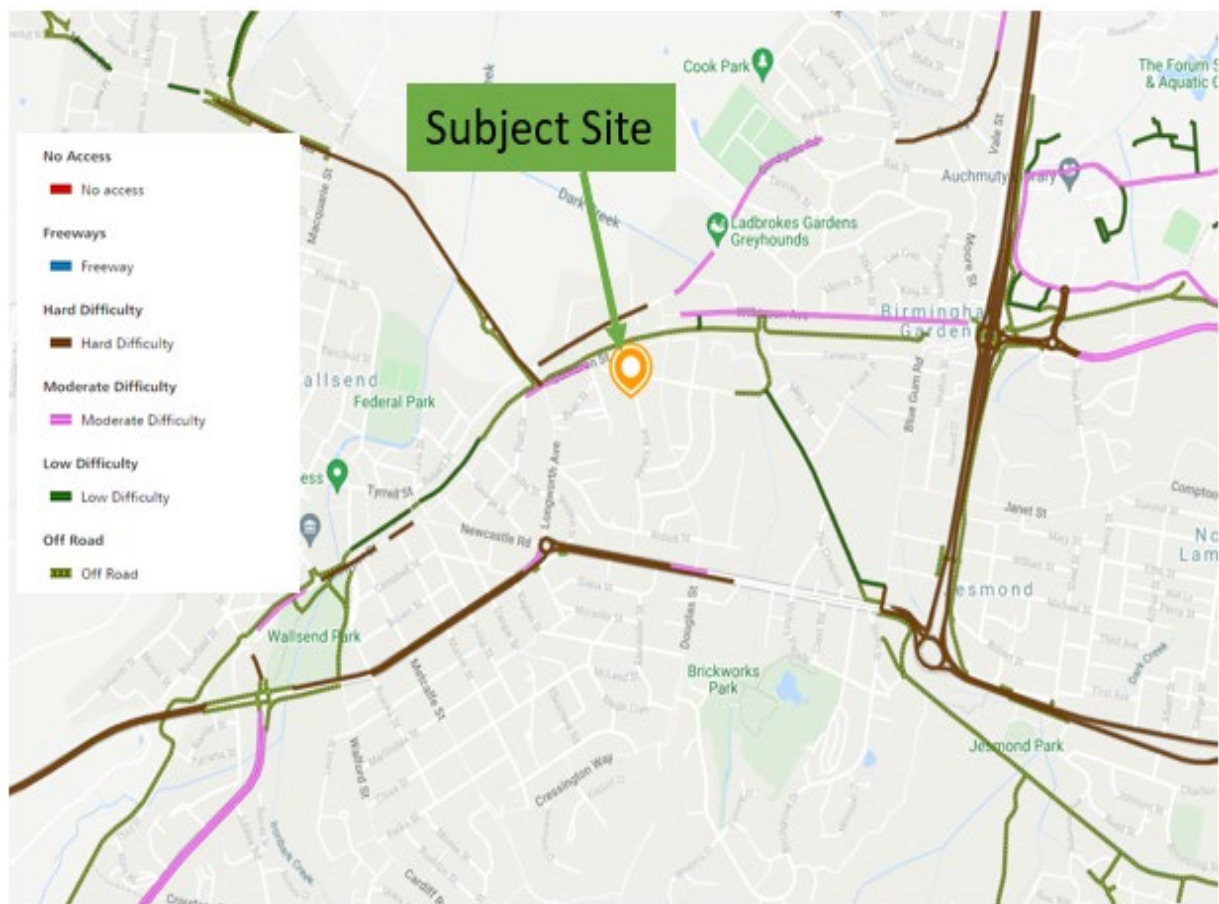
Bus routes 24 and 27 run daily, both with weekday frequency of one hour during the off-peak period and 30 minutes during the peak period, while the weekend service runs hourly. Also, the service starts before 6:00 am on weekdays, 8:00 am on weekends and finishes after 9:00 pm and 6:00 pm on weekdays and weekends respectively. Therefore, the site meets the 'accessible area' criteria of the Housing SEPP.

2.4 Pedestrian and Cycling Infrastructure

Pedestrian footpaths are generally provided along the roads surrounding the site, including on both sides of Peters Avenue. In addition, signalised pedestrian crossings are provided along Newcastle Road which provide safe crossing opportunities to the bus stops along Newcastle Road.

The cycling infrastructure surrounding the site is shown in Figure 2.2.

Figure 2.2: Cycling Infrastructure



Reference: TfNSW

3 Proposed Development

The proposed development involves demolition of existing dwellings and construction of two-storey residential flat building, comprising of 20 residential units at 6-12 Peters Avenue, Wallsend.

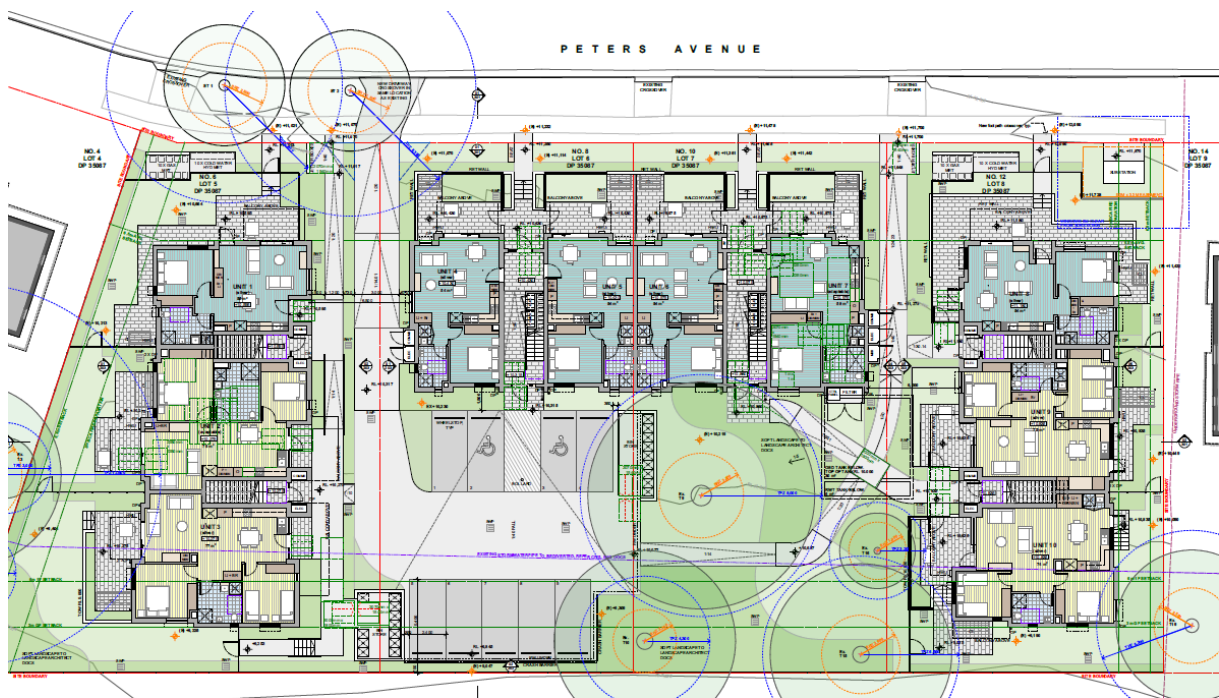
A breakdown of the development is as follows:

- 12 two-bedrooms units
- 8 one-bedroom units.

The site also consists of a one-lane, 3m wide driveway access, connecting to nine car spaces at the rear of the site, including two accessible spaces.

The proposed ground floor layout is presented in Figure 3.1.

Figure 3.1: Proposed Ground Floor Layout



Source: Sam Crawford Architects, May 2022

4 Parking Assessment

4.1 Car Parking Requirements

It is noted that the assessment and approval of the proposed development will be undertaken by Land and Housing Corporation (LAHC). As such, requirements set out in Division 6 (Residential Development – Land and Housing Corporation) of *State Environmental Planning Policy (Housing) 2021 (Housing SEPP)* applies and prevail over any Council Development Control Plan.

Division 6 of Housing SEPP states that residential development with height of 9.0m or less and with 60 dwellings or less should provide the minimum parking spaces:

- for development on land in an accessible area –
 - 0.4 parking spaces for each dwelling containing 1 bedroom;
 - 0.5 parking spaces for each dwelling containing 2 bedrooms; and
 - 1 parking space for each dwelling containing 3 or more bedrooms
- Or, for development that is not in an accessible area –
 - 0.5 parking spaces for each dwelling containing 1 bedroom;
 - 1 parking space for each dwelling containing 2 bedrooms;
 - 1.5 parking spaces for each dwelling containing 3 or more bedrooms.

It is noted that the proposed development is located in an “accessible area” as defined in Housing SEPP. In addition, the building is proposed to be under 9.0m in height. As such, the first parking requirement applies, which means 0.4 parking spaces are required for each 1-bedroom unit and 0.5 parking spaces required for each 2-bedroom unit.

Based on the above, the proposed development comprises twelve one-bedroom units and eight two-bedroom units. As such, nine car spaces are required to be provided.

It is proposed to provide nine car parking spaces on site, which satisfies the Housing SEPP requirements.

4.2 Car parking Design Compliance

The subject site is accessed via Peters Avenue via a 3m wide ramp. The width of the ramp allows for two-way one lane traffic. The driveway has a maximum grade of 1:14. The first 6m of the driveway is provided with a maximum grade of 1:20 as per AS2890.1 requirements. Swept path analysis of the proposed driveway has been undertaken and is provided in Appendix B.

The proposed access is classified as Category 1 driveway in accordance with AS2890.1: 2004 Table 3.1 (i.e. access with frontage along local road that serves less than 25 parking spaces). AS2890.1 specifies a minimum driveway width of 3m to 5.5m for a combined Category 1 driveway. Therefore, the proposed driveway width satisfies AS2890.1 requirement.

Additionally, AS2890.1 requires a passing bay be provided every 30m for long driveways. The proposed driveway is approximately 27m in length between the road and the car park, therefore a passing bay on the driveway is not required.

AS2890.1:2004 indicates that residential parking should be provided as Class 1A parking. The proposed at-grade parking spaces satisfy the design requirements for 90-degree Class 1A, which require minimum 2.4m width, 5.4m length and a 5.8m aisle length. In addition, a clearance of 0.3m is provided where a car space is located adjacent to a wall or obstruction as per AS2890.1 requirements.

AS2890.6:2009 requires accessible parking spaces to be provided as 2.4m wide by 5.4m long with an adjoining shared area of equal dimensions. The accessible parking space complies with this requirement.

5 Transport Assessment

Roads and Maritime Services provides traffic generation rates for different land uses in their Guide to Traffic Generating Developments (Guide) and in their technical direction TDT 2013/04a containing revised rates.

The Guide stipulates the following trip generation rates for medium density residential flat buildings:

- weekday peak hour vehicle trips (up to 2 bedrooms): 0.4-0.5 per dwelling
- weekday peak hour vehicle trips (3 or more bedrooms): 0.5-0.65 per dwelling

By using the trip rates presented above, the proposed development is anticipated to generate approximately 8-10 vehicles per hour during the weekday peak periods.

In addition, TDT 2013/04a indicates that low density residential dwellings generate 0.95-0.99 vehicle trips per dwelling during the weekday peak hours. Therefore, the existing four dwellings on site is estimated to generate four vehicles per hour during the weekday peak hours.

On this basis, the proposed development is anticipated to generate a net additional peak traffic of 4-6 vehicles.

The above traffic generation estimate is considered to be minimal and is not expected to have significant impact on the surrounding road network.

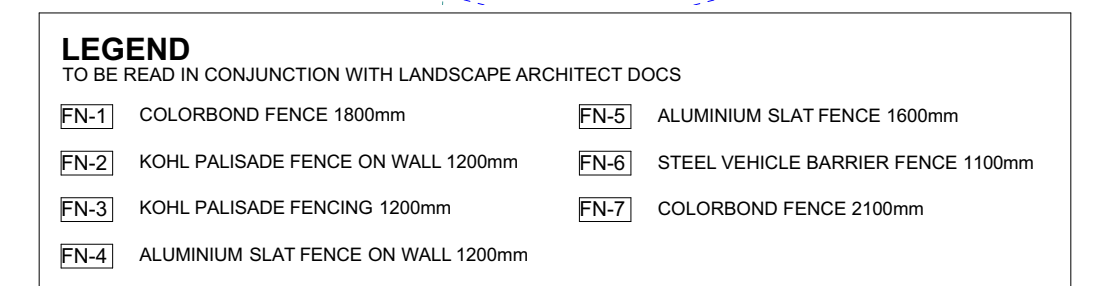
6 Conclusion

This report presents the traffic and parking implications of the proposed residential flat building at 6-12 Peters Avenue, Wallsend. The key findings of the report are presented below:

- The proposed car parking supply meets the minimum Housing SEPP requirement of nine car parking spaces.
- The proposed car park and vehicle access layout comply with the design requirements specified in AS2890.1:2004 and AS4299:1995.
- Traffic generation of the existing and proposed development has been estimated using the rates stipulated in Roads and Maritime Services *Guide to Traffic Generating Developments* (Guide) and in their technical direction TDT 2013/04a. Based on these rates, the proposed development is anticipated to generate between 8-10 vehicle trips per hour or net additional 4-6 vehicle trips per hour during the weekday peak periods.
- The estimated trip generation is considered minimal and is not expected to have a noticeable impact on the surrounding road network.

Appendix A

Architectural Plans

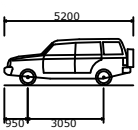


Appendix B

Swept Path Analysis

VEHICLE ENTERING

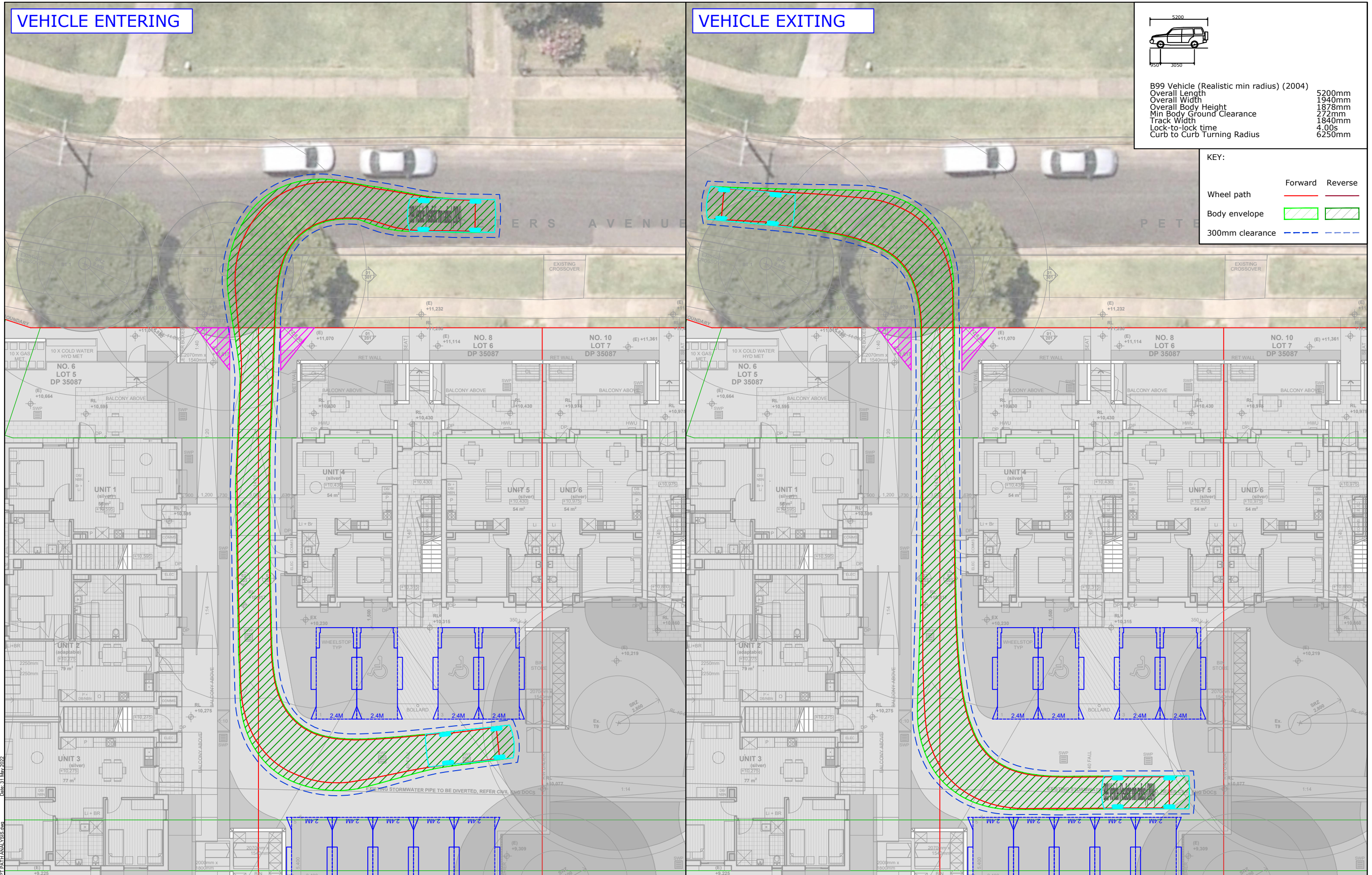
VEHICLE EXITING



B99 Vehicle (Realistic min radius) (2004)
Overall Length 5200mm
Overall Width 1940mm
Overall Body Height 1878mm
Min Body Ground Clearance 272mm
Track Width 1840mm
Lock-to-lock time 4.00s
Curb to Curb Turning Radius 6250mm

KEY:

Forward Reverse
Wheel path
Body envelope
300mm clearance



File name: 21148CAD004-22051 SWEEP PATH ANALYSIS.dwg Date: 31 May 2022

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	HT	OF	WJ	31/05/22



PROJECT	9-12 DOUGLAS STREET & 6 NEAL PLACE, WALLSEND		
TITLE	SWEPT PATH ANALYSIS AS2890.1 5.2m B99 VEHICLE		

DWG No.	21148CAD004 FIGURE 2		
DATE STAMP	31 MAY 2022		
PROJECT No.	SCALE	REV.	
21148	1:200 @A3	A	

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Our Ref: 21148

25 September 2023

Land and Housing Commission
c/o Sam Crawford Architects
Unit 4, 30 Wilson Street
NEWTOWN NSW 2042

Attention: Benjamin Chan (Associate)

Dear Benjamin,

**RE: 6-12 PETERS AVENUE, WALLSEND – LAHC
TRAFFIC RESPONSE TO COUNCIL RFI**

Introduction

A development application has been submitted by the Land and Housing Commission (LAHC) for a proposed boarding house development at 6-12 Peters Avenue, Wallsend.

In response, Newcastle City Council has provided the following comment:

The width of the access driveway be adjusted to 5.5m in the road reserve and extend six metres into the property.

It is understood that the above requirement cannot be met without affecting the adjoining pedestrian path.

As such, it is proposed to retain the 3.0m wide driveway. Based on Australian Standard requirements and an analysis of the probability of conflict between opposing vehicles, the 3.0m width is adequate. Notwithstanding, to alleviate Council's concerns, consideration has been given to installing a traffic signal system that would mitigate any perceived safety or operational concerns that Council may have.

TTPP's assessment of the proposal is as follows.

Australian Standard Requirements

Section 3.2 of the Australian Standard 2890.1:2004 indicates that the development is required a minimum width of 3.0m as a Category 1 facility. It also stipulates that a passing bay is required at the frontage (by providing a width of 5.5m for a length of 6m from the property boundary), where sight distance between ends of the driveway is limited and where the property is expected to generate above 30 vehicles per hour. In addition, long driveways are required passing bays every 30m.

The development has a driveway length of around 27m, is generally flat grade, has a straight alignment and is expected to generate less than 10 vehicles per hour. The frontage road, Peters Avenue is also understood to be a low traffic flow road.

Sight lines between each end of the driveway is expected to be good. An example of what sight lines may look like, can be seen in 5 Peters Avenue (across the road from the site) which has a 30m long driveway and good sight lines, although not completely straight in alignment. The driveway of 5 Peters Avenue is shown in Figure 1.

Figure 1: Driveway to 5 Peters Avenue



On the above basis, the proposed 3.0m wide driveway is compliant with AS2890.1.

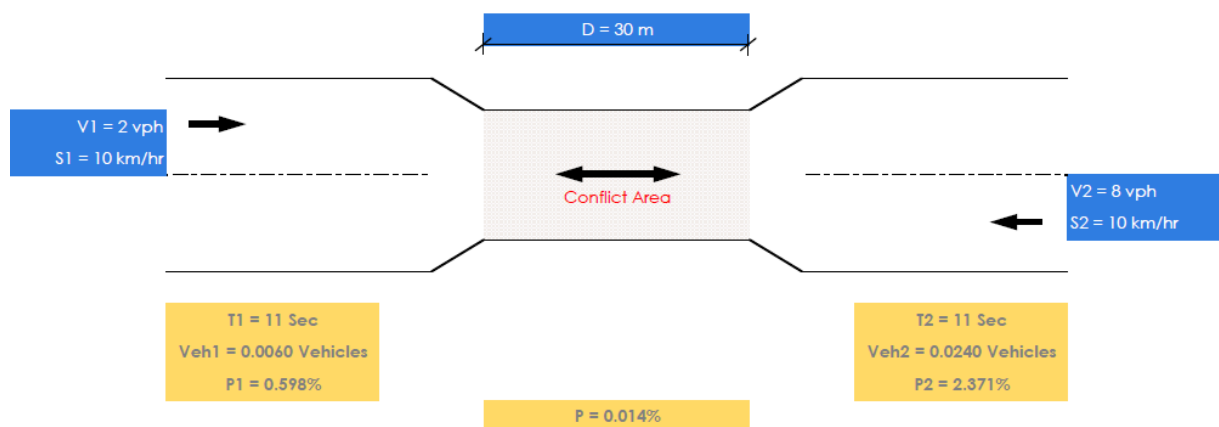
Probability of Conflict Analysis.

To assess the adequacy of the proposed access arrangements and ensure that there would be minimal delay and impact to the traffic operation of Peters Avenue, a probability of conflict analysis has been undertaken.

Based on a traffic generation of up to 10 vehicles per hour and an 80%/20% split of inbound and outbound traffic, it is estimated that there would be an opposing flow of 8 vehicles per hour against 2 vehicles per hour over a driveway distance of 30m (rounded up from 27m for the purposes of this assessment).

On this basis, the probability of two opposing vehicles arriving at the same is 0.014%, which is a low probability of conflict.

Figure 2: Probability of Conflict Analysis



Therefore, there is a low probability of vehicles meeting each other on the driveway and one needing to reverse out.

Additionally, traffic flows to the site are sufficiently low enough that any vehicle would not have to give way to more than one opposing vehicle at a time. Any delay along Peters Avenue is expected to be very low, with vehicles expected to clear the driveway in less than a minute.

Traffic Management Plan

Based on the above assessment, a traffic management system for this site is not required and would be excessive.

Notwithstanding this, if Council still have concerns regarding the operation of the driveway, access to the site can be managed by way of a signalised traffic management system.

The following procedure is proposed for the on-site traffic management system:

- Lanterns are to be installed at either ends of the driveway with adjoining signage stating "Do not enter driveway when light is flashing"
- Sensors at each end of the driveway will trigger the lantern at the opposite end of the driveway to flash, when a vehicle passes.
- Upon exiting the driveway, the second sensor will cause the lights to stop flashing.

The above traffic management measure is adequate for the proposed development when considering the low traffic generated by the development (up to one vehicle every six minutes).

We trust the above is to your satisfaction. Should you have any queries regarding the above or require further information, please do not hesitate to contact the undersigned on 8437 7800.

Yours sincerely,



Wayne Johnson
Director

Our Ref: 21148

25 September 2023

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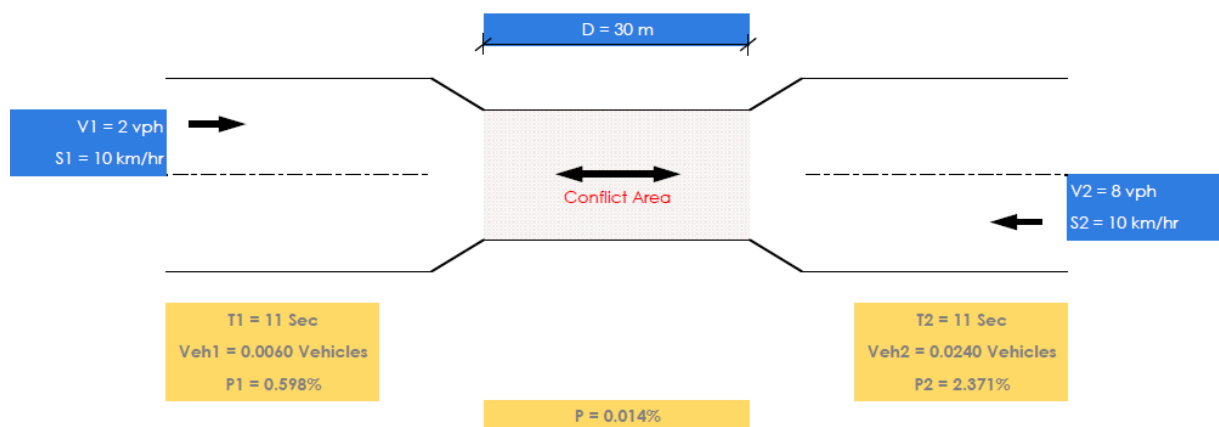
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