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Traffic Management Report for 18-28 Simpson St, Dundas Valley, NSW

Prepared by

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1. Introduction

Loka Consulting Engineers Pty Ltd has been engaged by Kennedy Associates Architects to provide a Traffic Management Report for the site at 18-28 Simpson St, Dundas Valley, NSW located within City of Parramatta Council (refer to Figure 1-1 and Figure 1-2) for Part 5 Application.

A Traffic Management Plan and Report is required for the proposed development to identify the impacts of the proposal on the local street network and mitigation measures required to ameliorate any impacts. This includes:

- A description of the site and details of the development proposal.
- A review of the geometric design features of the proposed car parking facilities for compliance with the relevant codes and standards; and
- An assessment of the adequacy and suitability of the quantum of off-street car parking provided on site.



Figure 1-1 Subject site (from SIX maps)



Figure 1-2 Site location (from SIX maps)

2. Proposed Development

The proposed new development will involve the demolition of 3 existing buildings (each one is a semi-attached) and the construction of 4 Manor houses development with 2 shared driveways each one serviced 2 Manor houses within a total site area of 2594 m² with total of 16 units.

The proposed development is bounded by

- No. 30 Simpson Street on the East;
- No. 16A Simpson Street on the West;
- Simpson Street on the North, and
- No. 13A-21 Tilley Street on the South.

The development consists of 4 Manor houses of two levels, ground floor and first floor with total of 16 units with two driveways on Simpson Street.

2.1.Public Transportations

1. It takes 3 minutes walking (250m) from the site to Acacia Park, Evans Rd bus stop (refer to figure 2-1).
2. It takes 11 minutes walking (950m) from the site to Kissing Point Rd at Rumsey Cres bus stop (refer to figure 2-2).

Table 2-1 shows the bus line name; routes and the time between two successive trips. Refer to Transport NSW for accurate details.

Table 2-1 Bus line, route, and time

Stop No.	Line Name	Route	Weekday hours	Weekday interval	Weekend hours	Weekend interval
1	513	Carlingford to West Ryde	06:28-18:30	30 min	07:25-18:25	60 min
	545	Macquarie Park to Parramatta	05:31-23:34	15-20 min	08:08 - 20:11	30 min
2	521	Eastwood to Parramatta	06:22 - 18:23	60 min	08:24-17:24	60 min

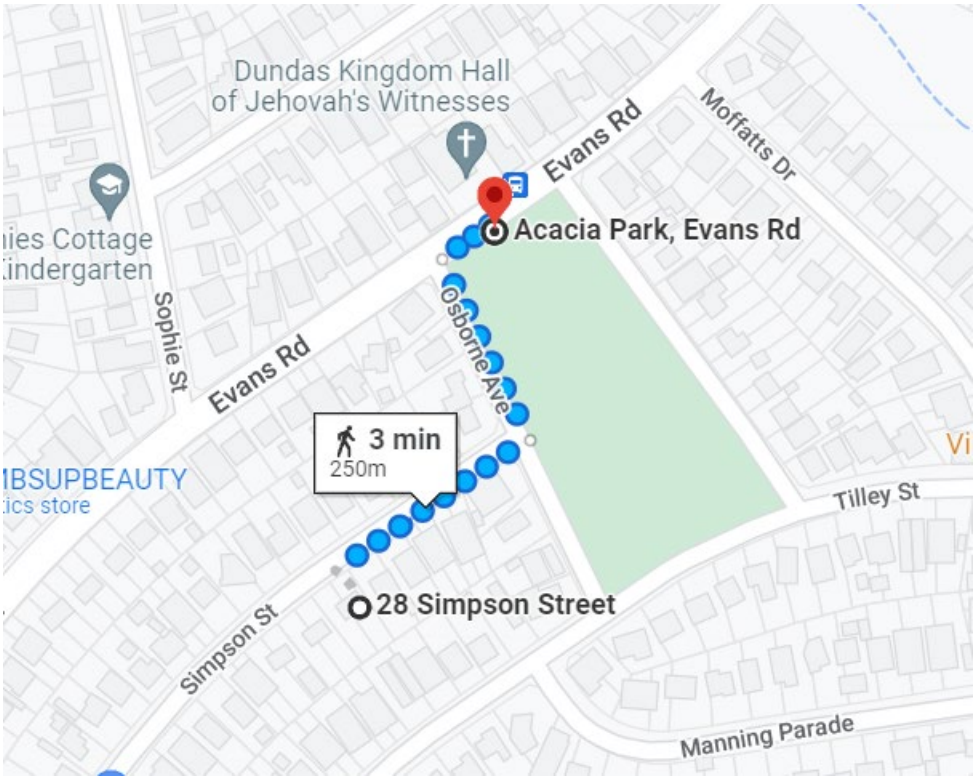


Figure 2-1 Subject Site to Acacia Park, Evans Rd bus stop (from Google maps)

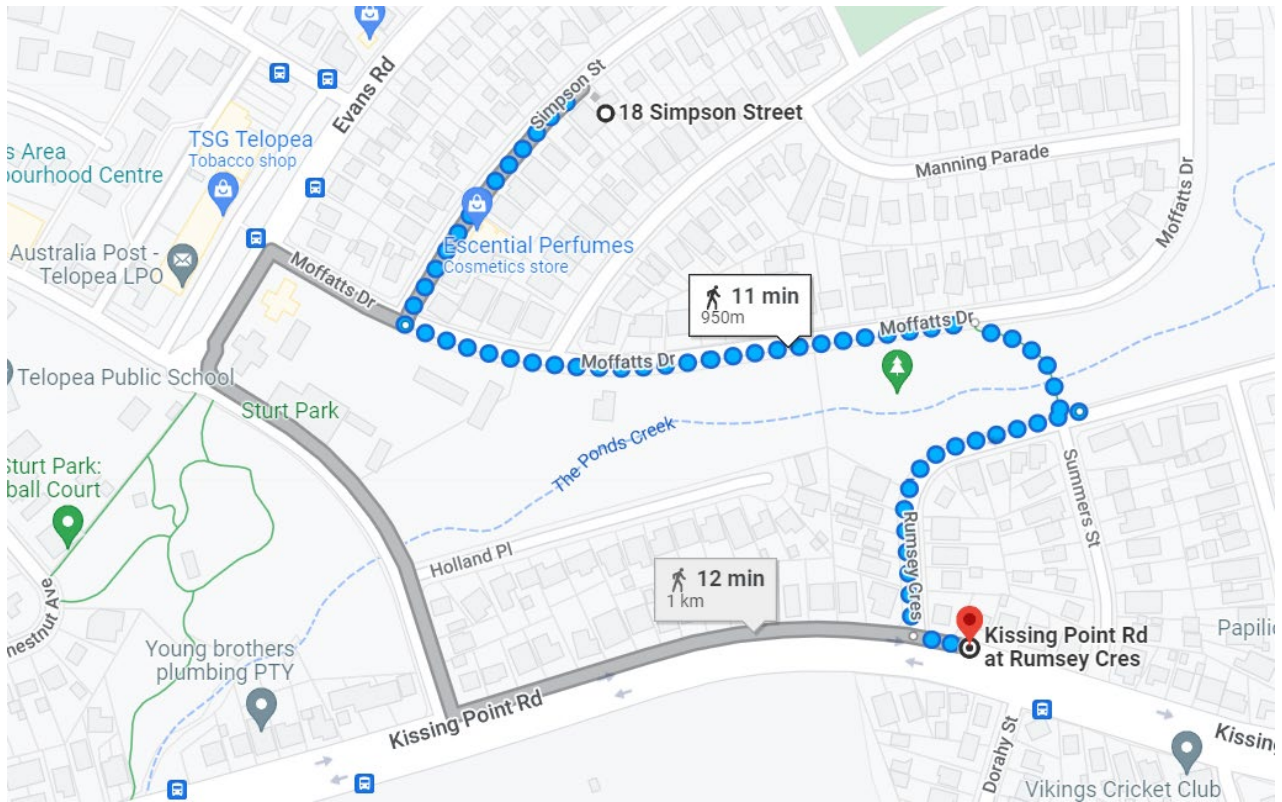


Figure 2-2 Subject Site to Kissing Point Rd at Rumsey Cres bus stop (from Google maps)

3. Off Street Parking Provision

3.1. Car parking

The subject development is proposed to be under Housing SEPP 2021 “State Environmental Planning Policy”. Since the development is proposed by a social housing provider, the car parking requirement and summary are shown in Table 3-1 to 3-3.

Table 3-1 Off-street car parking space provision rate

Land use	Minimum number of car parking spaces
Manor houses	(i) for each dwelling containing 1 bedroom—at least 0.4 parking spaces, or (ii) for each dwelling containing 2 bedrooms—at least 0.5 parking spaces, or (iii) for each dwelling containing at least 3 bedrooms— at least 1 parking space,

Units and bedrooms provided are summarized in Table 3-2.

Table 3-2 Bedroom summary

Manor House	1 Bedroom	2 Bedroom	
1	2	2	4
2	2	2	4
3	2	2	4
4	2	2	4
Total	8	8	16

Accordingly, the car parking spaces required for the proposed development is shown in the below Table 3-3.

Table 3-3 Required minimum car parking spaces

Type	Unit type	No. of unit	Rate	Parking required	Parking proposed
Manor houses 1	1 bed	2	0.4	1.8	2
	2 bed	2	0.5		
Manor houses 2	1 bed	2	0.4	1.8	2
	2 bed	2	0.5		
Manor houses 3	1 bed	2	0.4	1.8	2
	2 bed	2	0.5		
Manor houses 4	1 bed	2	0.4	1.8	2
	2 bed	2	0.5		
Total				7.2	8

The design complies with the requirement from SEPP (2021).

4. Car Park and Driveway Layout

4.1. Driveway and Ramp Design

The design of the driveway, internal roadways & ramps, and car parking spaces must comply with relevant Australian Standards; details are shown in the architectural plan. Table 4-1 and Table 4-2 assess the compliance of the site to Australian Standard and Parramatta DCP 2011.

Table 4-1 Driveway and ramp design

FEATURE	AS 2890.1:2004	Architectural Plan	Compliance
Driveway width	• 3.0 to 5.5 for Category 1. • 6.0 to 9.0 for Category 2.	5.5m at boundary between two 300mm kerbs	The design is complied with AS 2890.1
Ramp width	• One-way – 3.0m minimum between kerbs	3.09m one way between two 300mm kerbs	The design is complied with AS 2890.1

	• Two- way – 5.5m minimum between kerbs • Note: 300mm clearance on both side when there is a high kerb or barrier on both sides.		
Ramp grade	Longer than 20m – 1:5 maximum. Up to 20m long – 1:4 maximum. Transition grade no more than 1:8. First 6m no more than 1:20. Changes of grade no more than 1:8. For The grade of the first 6 m into the car park may be increased to 1 in 8 (12.5%) if the grade is a downgrade for traffic leaving the property and entering the frontage road.	<u>Eastern Driveway</u> 1:19.6 (5.1%) – 1:19.8 (5.05%) @ 8.8m -8.9m 1:16.6 (6.0%) @ 18.10m 1:90.9 (1.1%) – 1:11.2 (8.9%) @ 4.138m <u>Western Driveway</u> 1:19.2 (5.2%) – 1:19.8 (5.05%) @ 8.36m -8.61m 1:20 (5.0%) @ 18.100m 1:270.3 (-0.37%) – 1:11.6 (8.6%) @ 4.08m	The design is complied with AS 2890.1
Headroom	2.2m min between the floor and an overhead obstruction. Headroom above each dedicated space and adjacent shared area should be a minimum of 2.5m.	Open car parking space	The design is complied with AS 2890.1

4.2.Dimensions of Parking Spaces

The design of the car parking spaces should be in compliance with AS 2890.1.

Table 4-2 Dimensions of parking spaces

FEATURE	AS/NZS 2890.1	Architectural Plan	Compliance
Residential parking space	5.4m x 2.4m. Additional 300mm when adjacent a wall	5.45m x 2.4m	The design is complied with AS 2890.1
Aisle Widths	5.8m minimum	8m	The design is complied with AS 2890.1
Blind aisle	1m extension beyond the last parking space	1.3m & 1.33m	The design is complied with AS 2890.1

Gradients within a parking module	1:20 (5%) parallel to the angle of parking. 1:16 (6.25%) in any other direction.	1:20 parallel to the angle of parking.	The design is complied with AS 2890.1
Parking envelope	According to AS2890.1 Figure 5.2	Complies with AS 2890.1	The design is complied with AS 2890.1

** The 1:16 gradient in front of the parking space is at the aisle. Not part of the parking space (it's not related to parking module). Consequently, it's complying with AS2890.1.

As required in AS 2890.1:2004, a triangular area with 2.5m (face to driveway) by 2.0m (face to street) will be kept clear of obstructions to visibility (Refer to Figure 4-1).

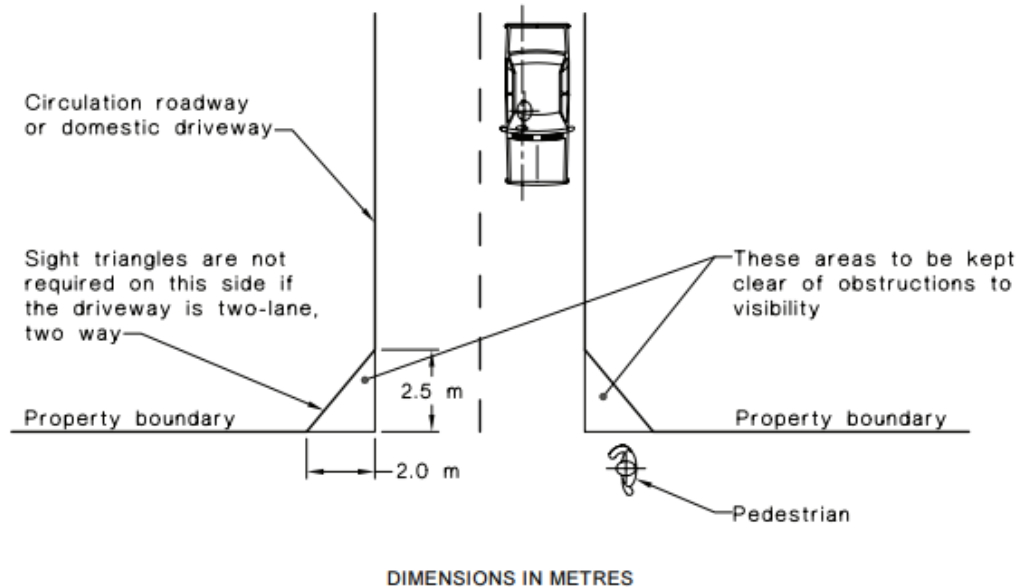


Figure 4-1 AS 2890.1:2004 requirement

In accordance with AS 2890.1:2004, sight triangle is hatched in red and shown in the following Figure 4-2.

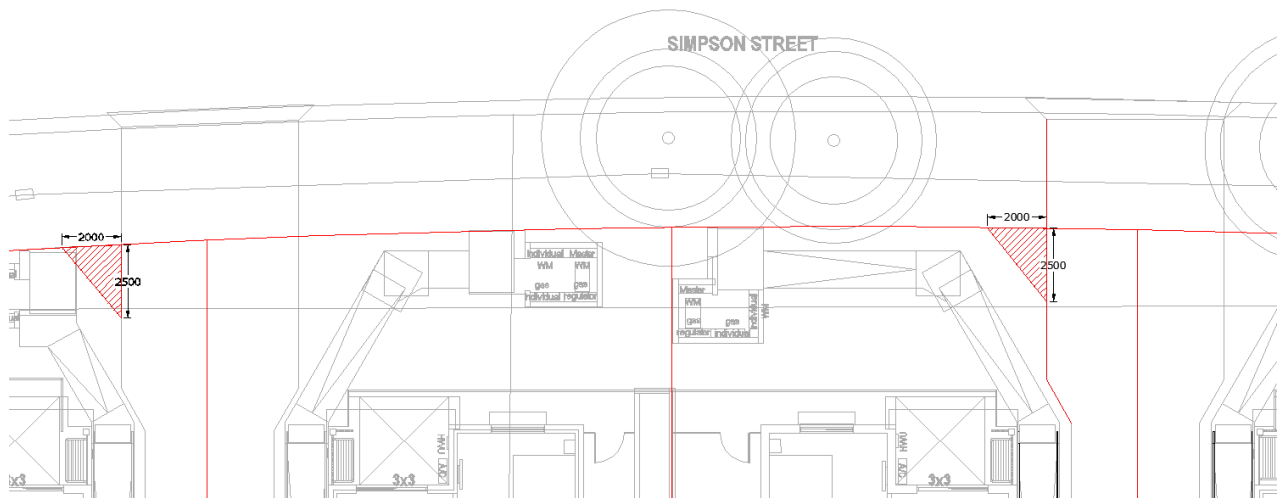


Figure 4-2 Sight triangle

Ensure any object within the sight triangle is max. 1.15m high or 50% transparent above 0.9m if higher than 1.15m.

5. Traffic Generation

An indication of the traffic generation potential of the development proposal is provided in accordance with Roads and Maritime Services (RMS) publication 'Guide to Traffic Generating Developments 2002'.

The RMS guidelines are based on extensive survey of a wide range of land uses.

The subject site is residential.

Residential

Smaller units and flats (up to two bedrooms):

Daily vehicle trips = 4-5 per dwelling

Weekday peak hour vehicle trips = 0.4-0.5 per dwelling.

For the proposed development there are 16 units in total. Therefore, there is a traffic generation potential of approximately 6.4-8 vehicles per hour during peak periods.

Existing dwellings

Daily vehicle trips = 9.0 per dwelling

Weekday peak hour vehicle trips = 0.85 per dwelling

For the existing site, there are 3 existing buildings (each one is a semi-attached). Therefore, there is a traffic generation potential of approximately 5.1 vehicles per hour during peak periods.

The future vehicle trips should be discounted by the existing trips to evaluate the net increase in traffic generation due to the proposed development. This is shown in Table 5-1.

Table 5-1 Traffic generation for future and existing development

Traffic Generation Potential	Land use	Rate	Unit	Vehicle Trips
Future	Manor houses	0.5 per unit	16 proposed	8
Existing	Dwelling houses	0.85 per dwelling	6 existing	5.1
Net				+2.9

According to the Table above, it is likely that the proposed development will result in a change in the traffic generation by approximately **3 additional** vehicle trips/hr during weekday peak hour from Monday to Friday.

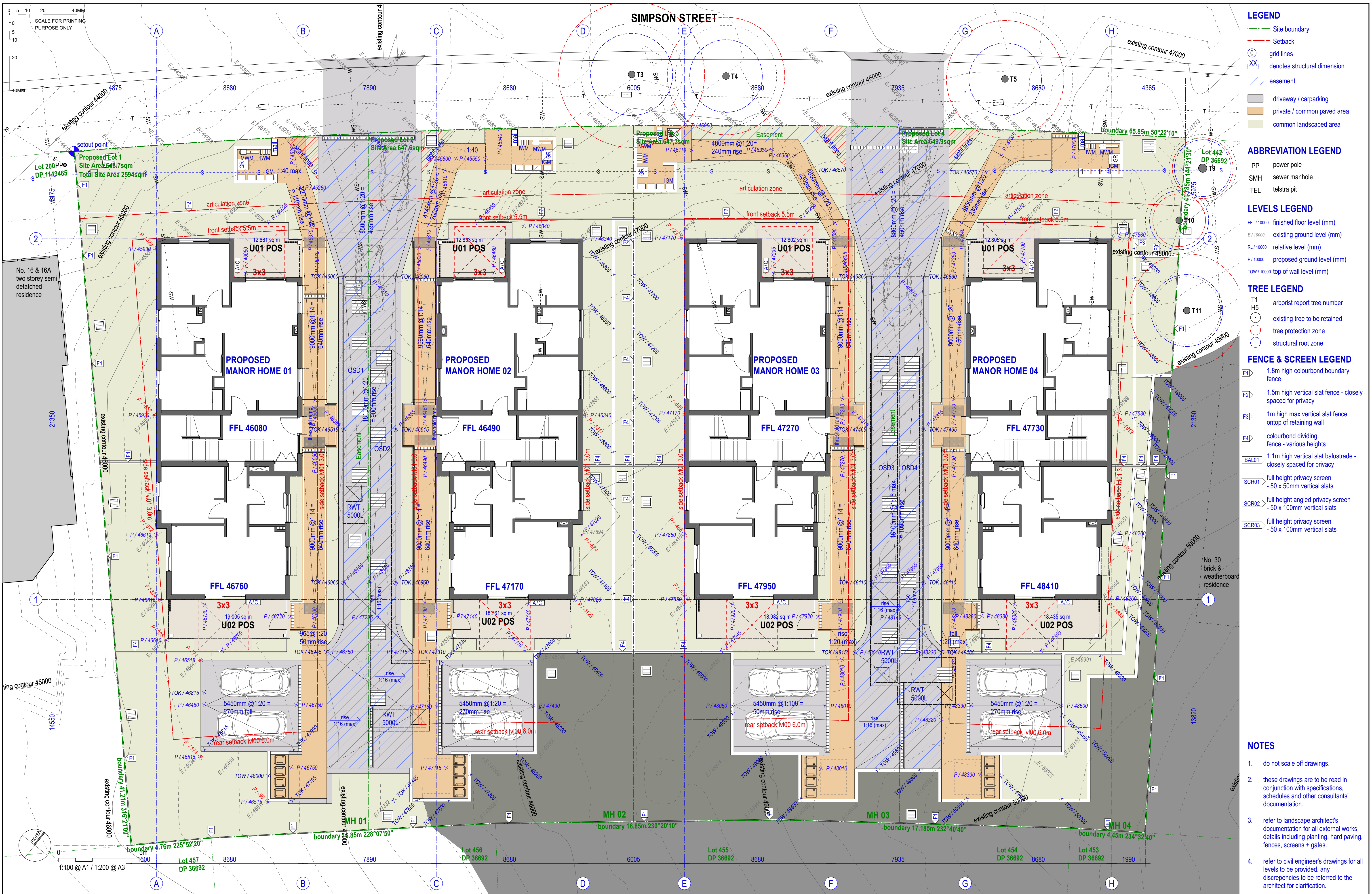
6. Swept Path Analysis

To ensure all vehicles enter and exit the site in a forward direction, swept path analysis has been conducted in the Appendix B.

It is our opinion that the proposed car parking and driveway comply with Australia Standard.

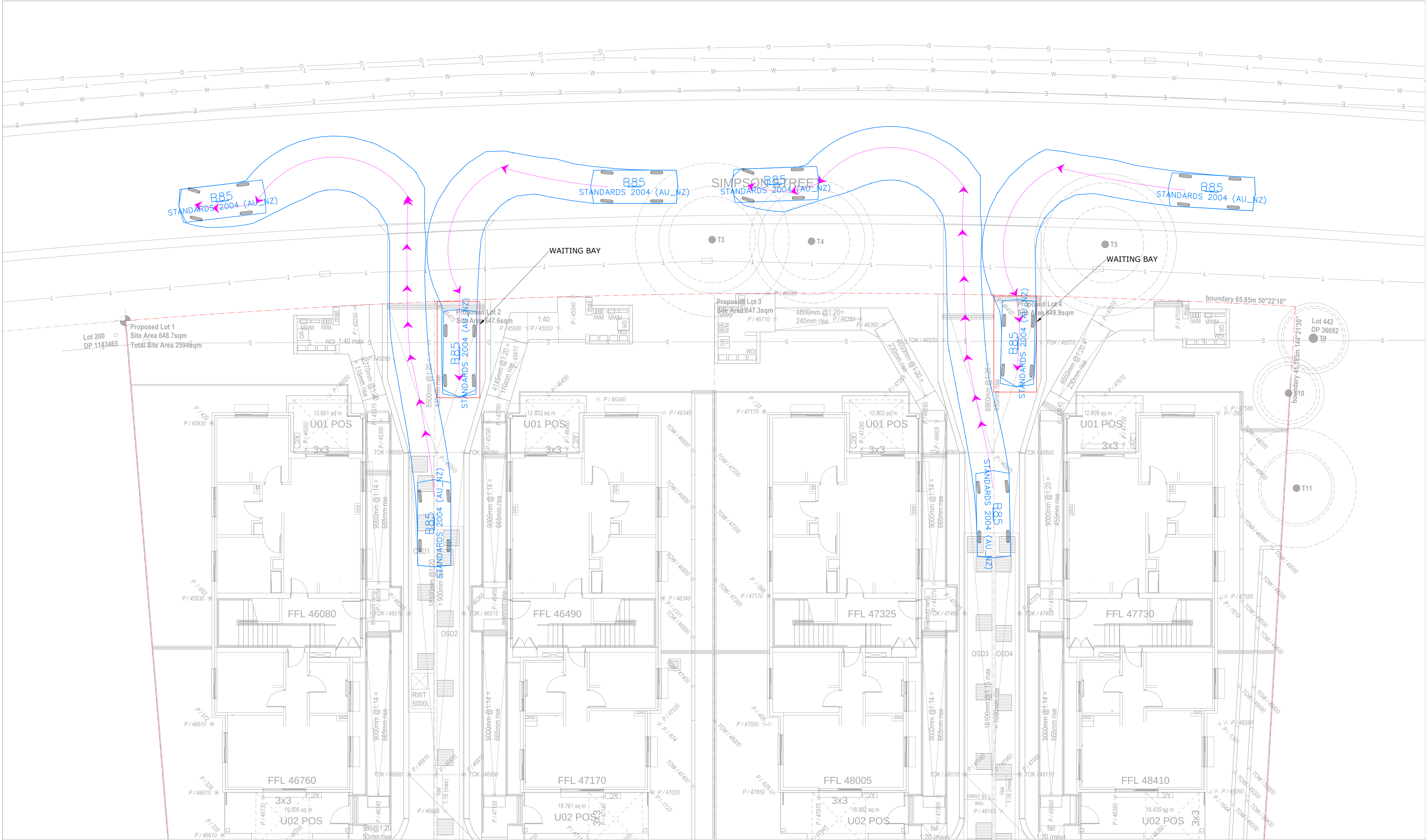
APPENDIX A

Architectural Plan



APPENDIX B

Swept Path Analysis



SWEPT PATH ANALYSIS TWO VEHICLES PASSING EACH OTHER

SCALE 1:100

A1 0 1 2 3 4 5 6 7 8 9 10									
E	FOR PART 5 APPLICATION APPROVAL	N.L.	K.V.	21-07-23					
D	FOR D.A. APPROVAL	N.L.	K.V.	31-03-23					
C	FOR D.A. APPROVAL	N.L.	K.V.	14-03-23					
B	FOR D.A. APPROVAL	N.L.	K.V.	07-03-23					
A	FOR D.A. APPROVAL	N.L.	K.V.	28-02-23					
No	AMENDMENT	ENG	DRAFT	DATE	No	AMENDMENT	ENG	DRAFT	DATE
THIS DRAWING IS THE PROPERTY OF LOKA CONSULTING ENGINEERS AND MUST NOT BE RETAINED, COPIED OR USED WITHOUT THE WRITTEN CONSENT OF THE COMPANY					 Copyright Loka Consulting Engineers as date of issue		ARCHITECT KENNEDY ASSOCIATES ARCHITECTS level 3 / 1 booth street, annandale 2038 nominated architect - anthony nolan - 6773 p + 61 2 9557 6466		
					 LOKA CONSULTING ENGINEERS PTY LTD OFFICE: 14A, S AVENUE OF THE AMERICAS, NEWINGTON, NSW 2127 PHONE: 02 9168 8142 / 8080 9690 FAX: 02 9168 1280 / 8086 9690 MOBILE: 0401 142 083 EMAIL: info@loka.com.au WEB: www.loka.com.au		PROJECT PROPOSED MANOR HOUSES DEVELOPMENT AT 18-28 SIMPSON STREET, DUNDAS VALLEY, NSW		
							SHEET SUBJECT SWEPT PATH ANALYSIS TWO VEHICLES PASSING EACH OTHER		
							PROJECT 18-28 SIMPSON STREET, DUNDAS VALLEY, NSW		
DATE MAR 22		DRAWN K.V.		DESIGNED K.V.		CHECKED N.L.			
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AUTHORISED NERMEIN LOKA				DWG No T01		REV E			

