

# Traffic Impact Assessment

66-70 Pegler Avenue, South Granville

Proposed Seniors Housing Development

GT22049

Prepared for

Department of Planning & Environment Land & Housing Corporation

8 February 2023



## Contact Information

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## Document Information

Report	Traffic Impact Assessment
Prepared for	Department of Planning & Environment Land & Housing Corporation
Proposal	Proposed Seniors Housing Development
Architects	Brewster Murray
Project Name	66-70 Pegler Avenue, South Granville
Council	Cumberland Council
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Version	Effective Date	Description of Revision	Prepared by	Reviewed by
1	25/11/2022	Draft	Lamone Ng	Bernard Lo
2	08/02/2023	For submission	Lamone Ng, Terry Ong	Bernard Lo



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# 1 Introduction

## 1.1 Background

This report has been prepared to accompany a Development Application to Cumberland Council for a proposed seniors housing development at 66-70 Pegler Avenue, South Granville (Figure 1-1).

Figure 1-1 Site



Source: Mecone

The proposed development involves a 24-unit complex with an associated at grade car park.

## 1.2 Scope of Works

The purpose of this report is to:

- describe the site and the proposed development scheme
- describe the road network serving the site and the prevailing traffic conditions
- assess the adequacy of the proposed parking provision
- assess the potential traffic implications
- assess the suitability of the proposed vehicle access, internal circulation and servicing arrangements



## 1.3 Reference Documents

Reference has been made to the following documents when preparing this report:

- AS2890 (Australian/NZ Standards, 2004)
- Development Control Plan (Cumberland Council, 2021)
- RMS Guide to Traffic Generating Developments, RTA, 2002
- Trip Generation and Parking Generation Surveys: Housing for Seniors, Hyder Consulting for the RMS, June 2009





## 2 Existing Conditions

### 2.1 Site and Surrounding Context

The development site (Figure 2-1) is a consolidation of Lots 14, 15 and 16 in DP 36280, located at 66-70 Pegler Avenue, South Granville. The site occupies a rectangular-shaped area of 2,609m<sup>2</sup> and has a site frontage of 50m to the western part of Pegler Avenue.

Figure 2-1 Site Context



Source: Nearmap (modified by Genesis Traffic)

Three (3) single residential dwellings occupy the site at present, with vehicle accesses located at Pegler Avenue. The surrounding the land uses comprise:

- the adjoining residential developments
- the childcare centres located 150m to the south
- the Blaxcell Street Public School located 350m to the south
- the Dellwood Medical Centre located 300m to the north





## 2.3 Traffic Controls

The traffic controls on the road system in the vicinity of the site comprise:

- the speed humps along Oakleigh Avenue
- the marked pedestrian crossing at the intersection of Blaxcell Street and Oakleigh Avenue
- the roundabout control at the intersection of
  - Blaxcell Street and Guildford Road
  - Pegler Avenue and Dellwood Street
- the School Zone 40 km/h speed limit restriction at Blaxcell Street and Guildford Road intersection
- the No Right Turn restriction from Woodville Road to Guildford Road

## 2.4 Public Transport Services

The subject site is also within walking distance (300m to the nearest bus stop) of several bus services operating in the locality. These bus services are tabulated in Table 2-1.

Table 2-1 Bus Services Provision

Bus Line	Bus Route
<b>908</b>	Merrylands to Bankstown via Birrong & Auburn
<b>M91</b>	Hurstville to Parramatta via Padstow & Chester Hill
<b>S2</b>	Sefton to Granville

## 2.5 Existing Traffic Conditions

Pegler Avenue carries local traffic movement predominantly and is observed to be generally free-flowing during peak periods. Further afield, at the Blaxcell Street and Oakleigh Avenue intersection, moderate delays were observed during the school pick and drop off hour only. There is no apparent capacity constraint in the immediate surrounding road network during peak periods.



### 3 Proposed Development

It is proposed to demolish the existing buildings and outbuildings on the site, undertake earthworks to provide a level building platform on the site, and construct a 3-storey building comprising:

- 24 apartments in the following composition:
  - 13 x one-bedroom apartments
  - 11 x two-bedroom apartments
- 11 x at-grade car parking spaces (including 5 accessible car parking spaces)

A new vehicle access will be provided at Pegler Avenue.

Details of the proposal are indicated in the architectural plans prepared by Brewster Murray which accompany the submission and are reproduced in part in **Attachment 1**.





## 4 Parking Assessment

### 4.1 Car Parking Requirements

SEPP Housing 2021 provides the relevant car parking criteria for this development. Reference is made to the non-discretionary development standards in Division 6, Part 2 (Development for affordable housing) of SEPP 2021, as follows:

*(d) for development on land in an accessible area—the development will result in at least the following parking spaces—*

- (i) for each dwelling containing 1 bedroom—0.4 parking spaces,*
- (ii) for each dwelling containing 2 bedrooms—0.5 parking spaces,*
- (iii) for each dwelling containing at least 3 bedrooms—1 parking space, and*

Having regard to the above, the proposal of 24 units indicates a minimum requirement of 11 parking spaces. For accessible parking space, Division 7, Part 5 (Housing for seniors and people with a disability) of SEPP 2021 specifies as following:

*(j) for a development application made by, or made by a person jointly with, a social housing provider—at least 1 parking space for every 5 dwellings*

Based on the above assessment, the proposal to provide 11 parking spaces (including 5 accessible spaces) satisfies the SEPP criteria.

### 4.2 Access

A 5.8m wide two-way driveway will be provided at Pegler Avenue to provide access to an at-grade carpark, to the rear of the building. The access driveway has been designed in accordance with the AS2890.1 criteria. Details of a swept path analysis demonstrating a satisfactory provision are provided in **Attachment 2**.

### 4.3 Internal Circulation

A detailed review of the parking access and arrangement has been undertaken to assess its conformance with the AS2890.1 design criteria.

Table 4-1 shows the minimum parking dimension in parking modules and access driveway requirements in accordance with the User Class 1A of AS2890.1 and AS2890.6 for reference.





Table 4-1 Parking Arrangement Requirement

Features	Requirement	Provision	Compliance	Notes
<b>Access (Category 1)</b>				
Access Width	3.0m - 5.5m (combined)	Provided	Yes	
Passing Provision	1 per 30m	Provided	Yes	
Location (Category 1)	6m from intersection tangent	Provided	Yes	
Sight Distance (50km/h)	Min 45m	Provided	Yes	
Sight Splays (Pedestrian)	2.5m x 2.0m	Provided	Yes	
<b>Driveway / Ramp</b>				
Ramp Grade	Max 25% (1 in 4)	N/A	Yes	
Transitions	2.0m	N/A	Yes	
Width (One-way)	3.0m	3.0m	Yes	
Gradient for First 6m of Driveway	Max 5% (1 in 20)	N/A	Yes	
<b>Parking Modules (User Class 1A)</b>				
Space Dimension	5.4m long x 2.4m wide	5.4m long x 2.4m wide	Yes	
Door Clearance	300mm	Provided	Yes	
Aisle Width	5.8m	6.1m	Yes	
Height Clearance	2.2m	N/A	Yes	
Gradient	Max 5% (1 in 20)	N/A	Yes	
<b>Accessible Parking</b>				
Space Dimension	5.4m long x 2.4m wide	5.4m long x 2.4m wide	Yes	
Shared Zone	5.4m long x 2.4m wide	5.4m long x 2.4m wide	Yes	
Height Clearance	2.5m	N/A	Yes	





## 5 Servicing Arrangement

Refuse collection will occur on-street along the kerbside of Pegler Avenue. Any occasional loading activities related to deliveries, courier activity, maintenance etc. will rely on the ample on-street parking as is normal for small residential developments of this nature.





## 6 Traffic Assessment

### 6.1 Existing Traffic Generation

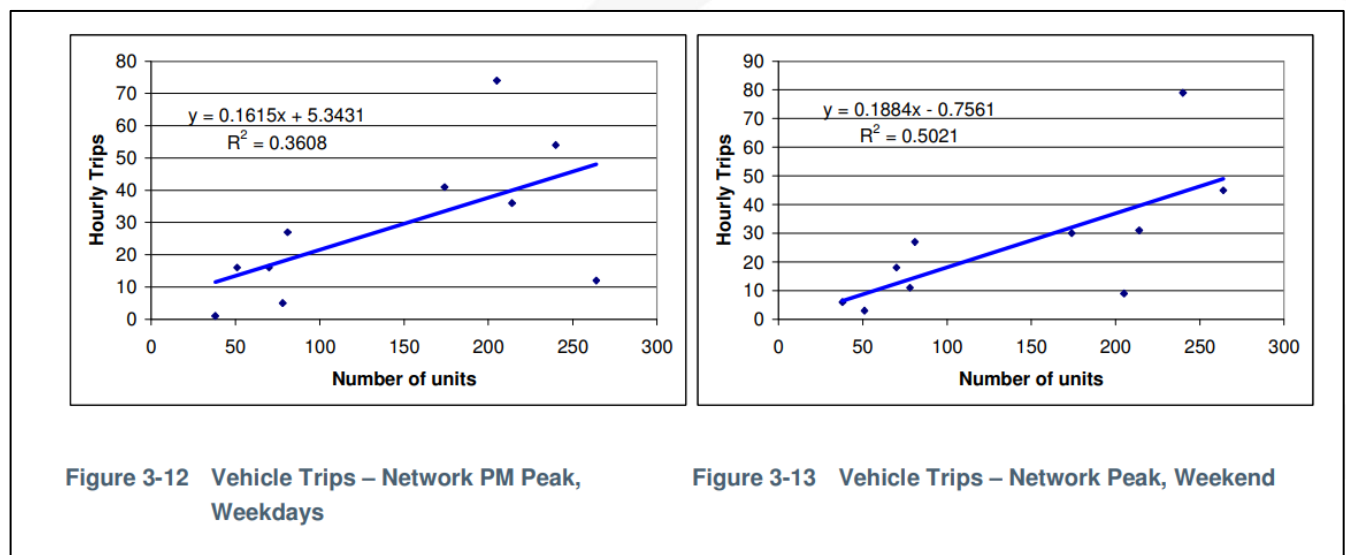
The RMS Guide to Traffic Generating Development provides a peak hour traffic generation rate of 0.85 vtpd for low-density residential dwellings. Application of this rate to the 3 single dwellings would indicate a traffic outcome of 3 vtpd.

### 6.2 Development Traffic Generation

The RMS commissioned Hyder to undertake surveys to study the trip generation for Seniors Housing in 2009. The study examined 10 seniors housing in NSW and provided a simple linear regression to determine the trip generation during PM peak periods. It is noted that the trip generation during AM peak (8:00am-9:00am) is not recorded as the peak generation for senior housing development generally started at noon time.

An extract from the RMS Study is presented in Figure 6-1. It found that the peak hour during weekdays generates a higher traffic outcome in comparison to weekend.

Figure 6-1 Trip Generation for Seniors Housing Development



Source: Hyder Consulting Study, 2009

On this basis, the application of the weekday regression equation to the proposed 24-units development would indicate the following traffic outcome:

$$y = 0.1615x + 5.3431$$

where  $y$  is the peak hour trip generation and  $x$  is the number of units



$$y=0.1615*(24) + 5.3431$$

$$y=9.2191 \text{ vtpd}$$

The proposed development will generate approximately 10 vtpd during the PM peak.

### 6.3 Overall Traffic Generation

Having regard to the above, the additional traffic generation outcome is calculated as follows:

$$\begin{aligned}\text{Additional Traffic Generation} &= \text{Development Traffic Generation} - \text{Existing Traffic Generation} \\ &= 10 \text{ vtpd} - 3 \text{ vtpd} \\ &= 7 \text{ vtpd}\end{aligned}$$

Based on the above, the proposal will likely result in the addition of 7 vehicle movements per hour during peak period. Traffic generation of this order of magnitude is not perceptible in this context of the existing road network. It is concluded that the development traffic will not unduly impact the surrounding road network.



## 7 Conclusion

The traffic and parking assessment undertaken for the proposed Seniors Housing development at 66-70 Pegler Avenue, South Granville has concluded that:

- the traffic generation of the proposed development will not present any adverse traffic implications on the existing road network
- the proposed parking provision will comply with the SEPP (Housing) 2021 criteria and will adequately serve the development
- the proposed access, internal circulation and parking arrangements will be appropriate to AS design criteria





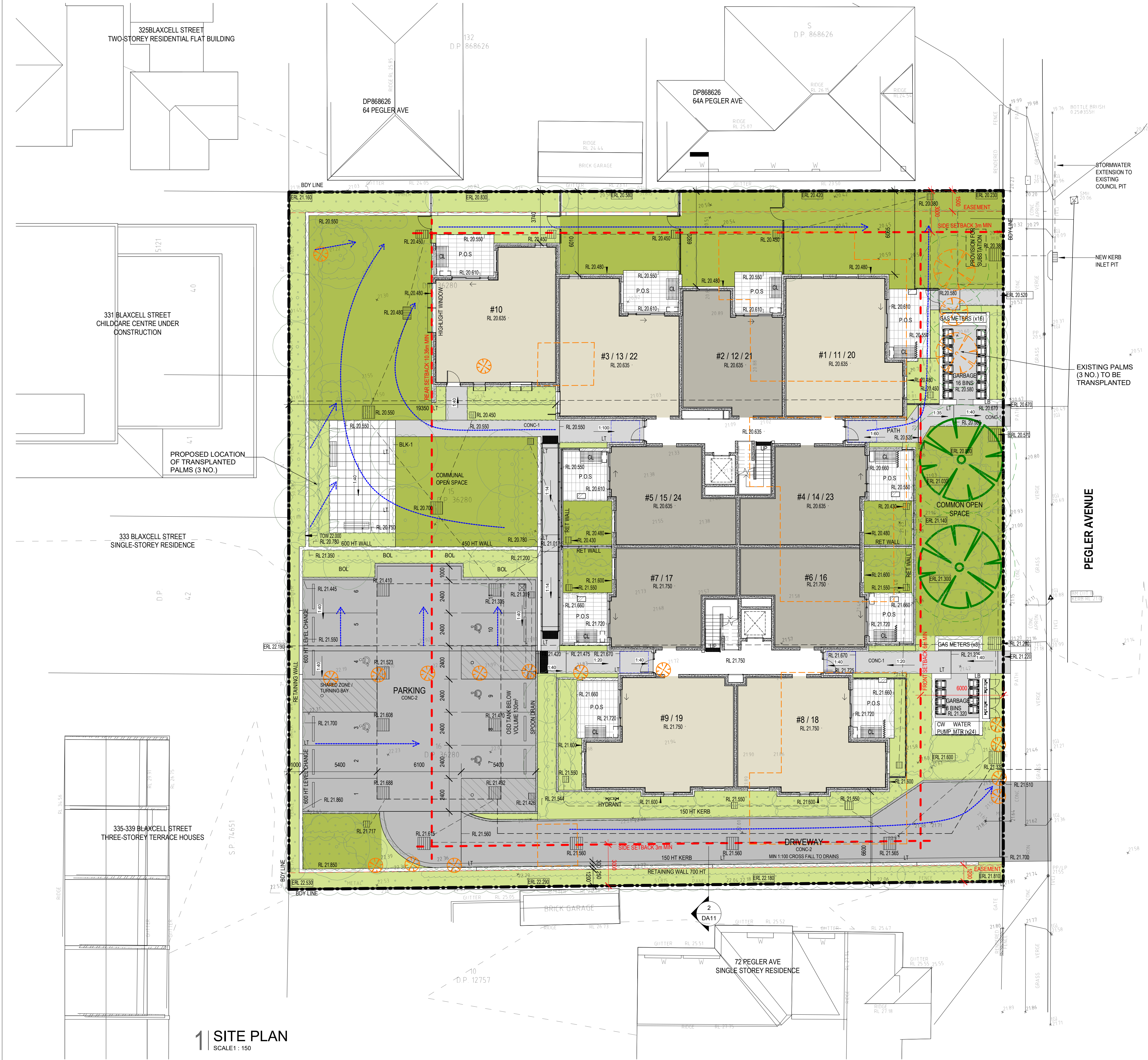
# Attachment 1

## Architectural Plans





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1 SITE PLAN  
SCALE 1 : 150

LEGEND:

- |  |                           |        |   |  |   |
|--|---------------------------|--------|---|--|---|
|  | COMMON STAIRS             |        | BALCONY OVER                                |  | EXISTING TREES:<br>TREE No. FROM ARBORIST REPORT<br>STRUCTURAL ROOT ZONE<br>TREE PROTECTION ZONE<br>LINETYPE INDICATES RETENTION VALUE: |
|  | 1 BEDROOM UNIT            |        | EXISTING BUILDING TO BE DEMOLISHED          |  | EXISTING TREE TO BE REMOVED / RELOCATED   |
|  | 2 BEDROOM UNIT            |        | CIRCULATION CLEARANCE                       |  | EXISTING TREE TO BE RETAINED  |
|  | LANDSCAPE AREA            | LB     | LETTERBOX                                   |  | PROPOSED NEW TREES - REFER TO LANDSCAPE PLAN  |
|  | DEEP SOIL AREA            | G      | GARBAGE AREA                                |  | PROPOSED NEW PLANTING - REFER TO LANDSCAPE PLAN   |
|  | CONCRETE / PATHWAY        | P.O.S  | PRIVATE OPEN SPACE                          |  |   |
|  | DRIVEWAY                  | H/L    | HIGHLIGHT WINDOW                            |  |   |
|  | PAVED COURTYARD / BALCONY | DP     | DOWNPIPE                                    |  |   |
|  | INDICATIVE PROPOSED FALL  | CL     | CLOTHES LINE                                |  |   |
|  |                           | WHW    | GAS HOT WATER HEATER                        |  |   |
|  |                           | PP     | POWER POLE (EXISTING)                       |  |   |
|  |                           | TEL    | TELSTRA PIT (EXISTING)                      |  |   |
|  |                           | BOL    | BOLLARD LIGHT                               |  |   |
|  |                           | LT     | EXTERIOR LIGHT WALL MOUNT                   |  |   |
|  |                           | - PP - | POWER CONDUIT                               |  |   |
|  |                           | - PP - | TELECOM LINE                                |  |   |
|  |                           | - PP - | SEWER LINE                                  |  |   |
|  |                           | - PP - | SETBACK LINE                                |  |   |
|  |                           | - PP - | STORMWATER PIT (REFER TO CIVIL LAYOUT PLAN) |  |   |
|  |                           | - PP - | EXISTING GROUND RL FROM SURVEY TO AHD       |  |   |
|  |                           | - PP - | PROPOSED RL TO AHD                          |  |   |
|  |                           | - PP - | EXISTING RL RETAINED                        |  |   |
- INDICATES HOURS OF DIRECT SOLAR ACCESS ON 21ST JUNE

GENERAL NOTES:

- REFER TO CIVIL ENGINEERS DOCUMENTATION FOR PROPOSED STORMWATER
- REFER TO SURVEY FOR ALL EXISTING SERVICES
- ALL SLOPE ARROWS SHOW SLOPE UP UNLESS ANNOTATED 'FALL'
- READ IN CONJUNCTION WITH CUT & FILL PLAN AND RETAINING WALLS SECTIONS
- REFER TO SHEET DA17 FOR DEEP SOIL ZONES CALCULATION
- REFER TO LANDSCAPE PLAN FOR PLANTING TYPES
- FEN-1 TYPICAL HEIGHT 1.8m
- FEN-2 TYPICAL HEIGHT 1.2m
- FEN-3 TYPICAL HEIGHT 1.5m



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NOMINATED ARCHITECT:  
MICHAEL BULLEN

SIGNATURE:

E 06-02-23 FOR PART 5  
D 11-01-23 FOR REVIEW  
C 20-12-22 FOR REVIEW  
B 16-12-22 FOR REVIEW  
A 07-12-22 DRAFT FOR REVIEW  
REV DATE NOTATION/AMENDMENT  
DO NOT SCALE DRAWINGS. CHECK ALL DIMENSIONS ON SITE.  
FIGURED DIMENSIONS TAKE PRECEDENCE.

ARCHITECT

BREWSTER MURRAY PTY LTD  
PH (02) 9259 0888

BCA CONSULTANT

CONSULTING ENGINEERS

GREENVIEW CONSULTING

LANDSCAPE CONSULTANT

GREENLAND DESIGN

CLIENT

DEPARTMENT OF PLANNING & ENVIRONMENT  
LAND & HOUSING CORPORATION

PROJECT

SENIORS HOUSING DEVELOPMENT UNDER  
NSW HOUSING SEPP 2021

66-70 PEGLER AVENUE, SOUTH GRANVILLE, NSW  
LOTS 14, 15, 16 IN DP36280

TITLE

SITE PLAN

FILE

PLOTTED

STATUS PART 5

DATE 06-02-23

SCALE

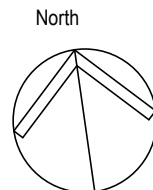
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PROJECT No BGWYQ

DESIGNER AG

CHANGED MB

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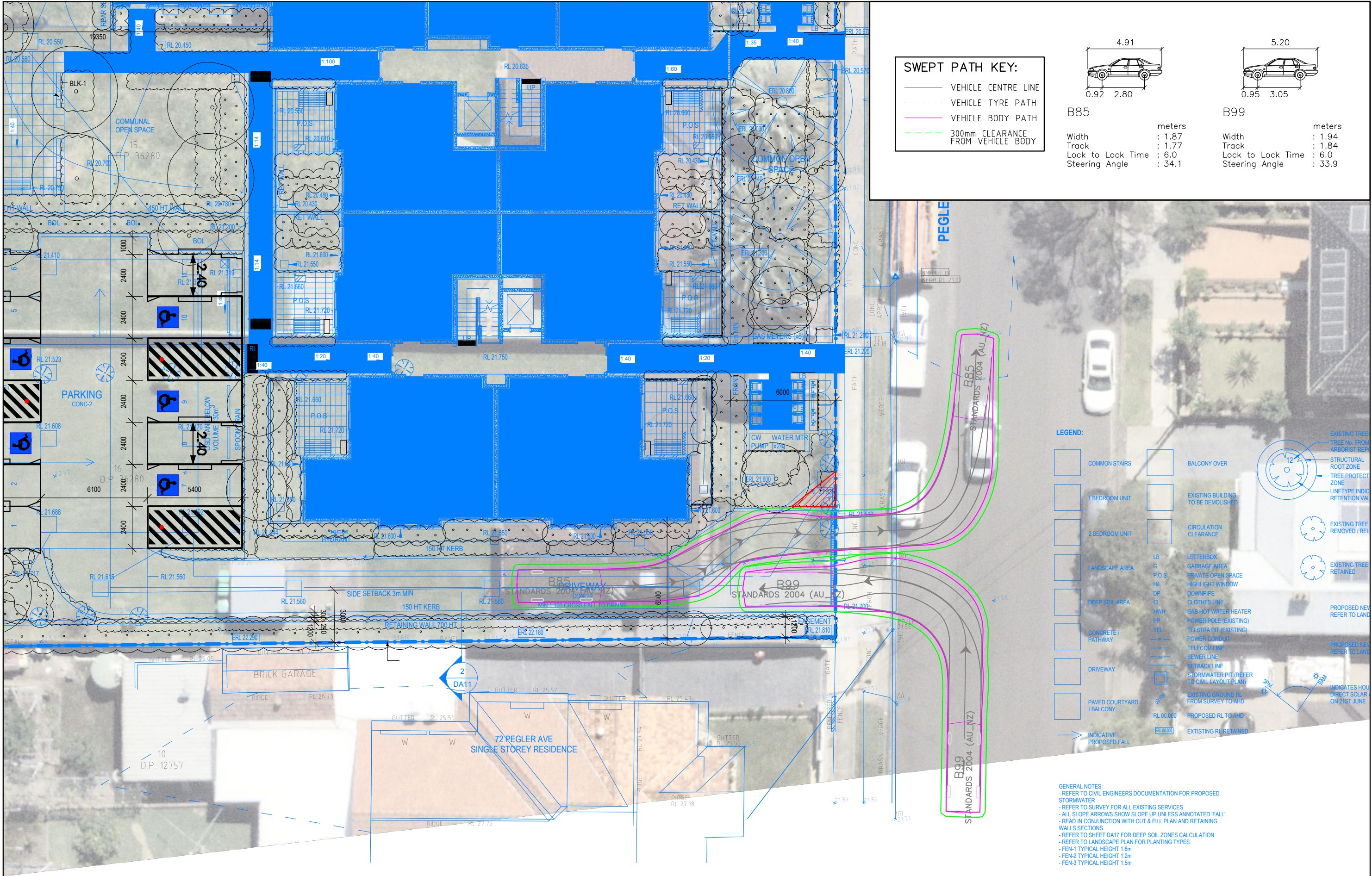


# Attachment 2

## Turning Path Assessments







**SWEPT PATH KEY:**

- VEHICLE CENTRE LINE
- - - VEHICLE TYRE PATH
- VEHICLE BODY PATH
- - - 300mm CLEARANCE FROM VEHICLE BODY

B85		B99	
Width	: 1.87 meters	Width	: 1.94 meters
Track	: 1.77	Track	: 1.84
Lock to Lock Time	: 6.0	Lock to Lock Time	: 6.0
Steering Angle	: 34.1	Steering Angle	: 33.9

**LEGEND:**

	COMMON STAIRS		BALCONY OVER
	1 BEDROOM UNIT		EXISTING BUILDING TO BE DEMOLISHED
	2 BEDROOM UNIT		CIRCULATION CLEARANCE
	LANDSCAPE AREA		LETTERBOX
	DEEP SOIL AREA		PRIVATE OPEN SPACE
	CONCRETE / PATHWAY		HIGHLIGHT WINDOW
	DRIVEWAY		DOWNPIPE
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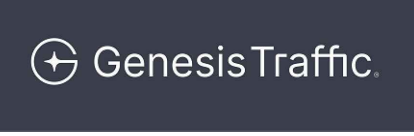
**INDICATES HOUR DIRECT SOLAR ON 21ST JUNE**

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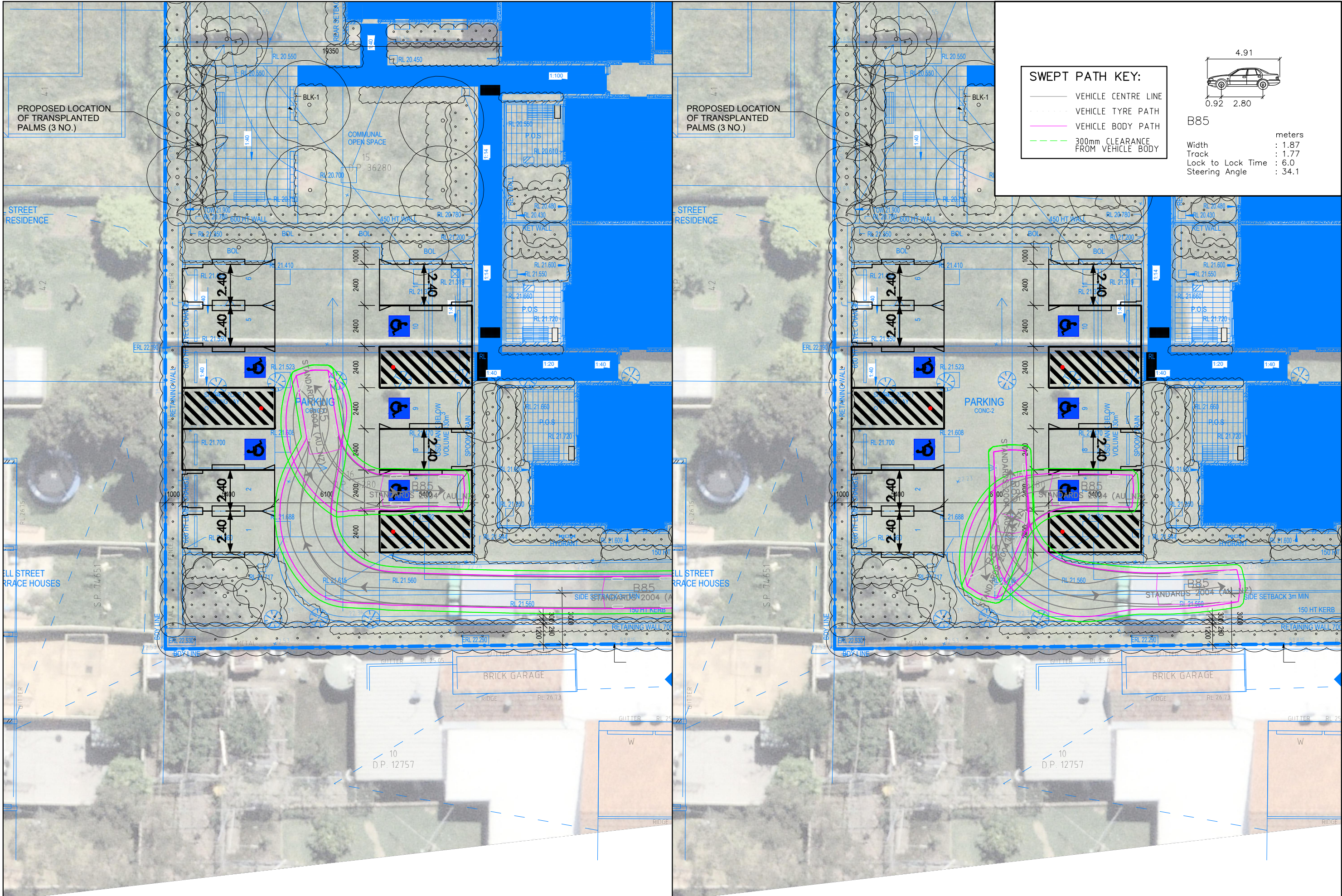


**PRELIMINARY PLAN**  
FOR DISCUSSION PURPOSES  
ONLY SUBJECT TO CHANGE  
WITHOUT NOTIFICATION

**WARNING**  
THE LOCATION OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY  
THE EXACT LOCATIONS SHALL BE PROVEN ON SITE  
ALL EXISTING SERVICES SHOWN ARE NOT GUARANTEED





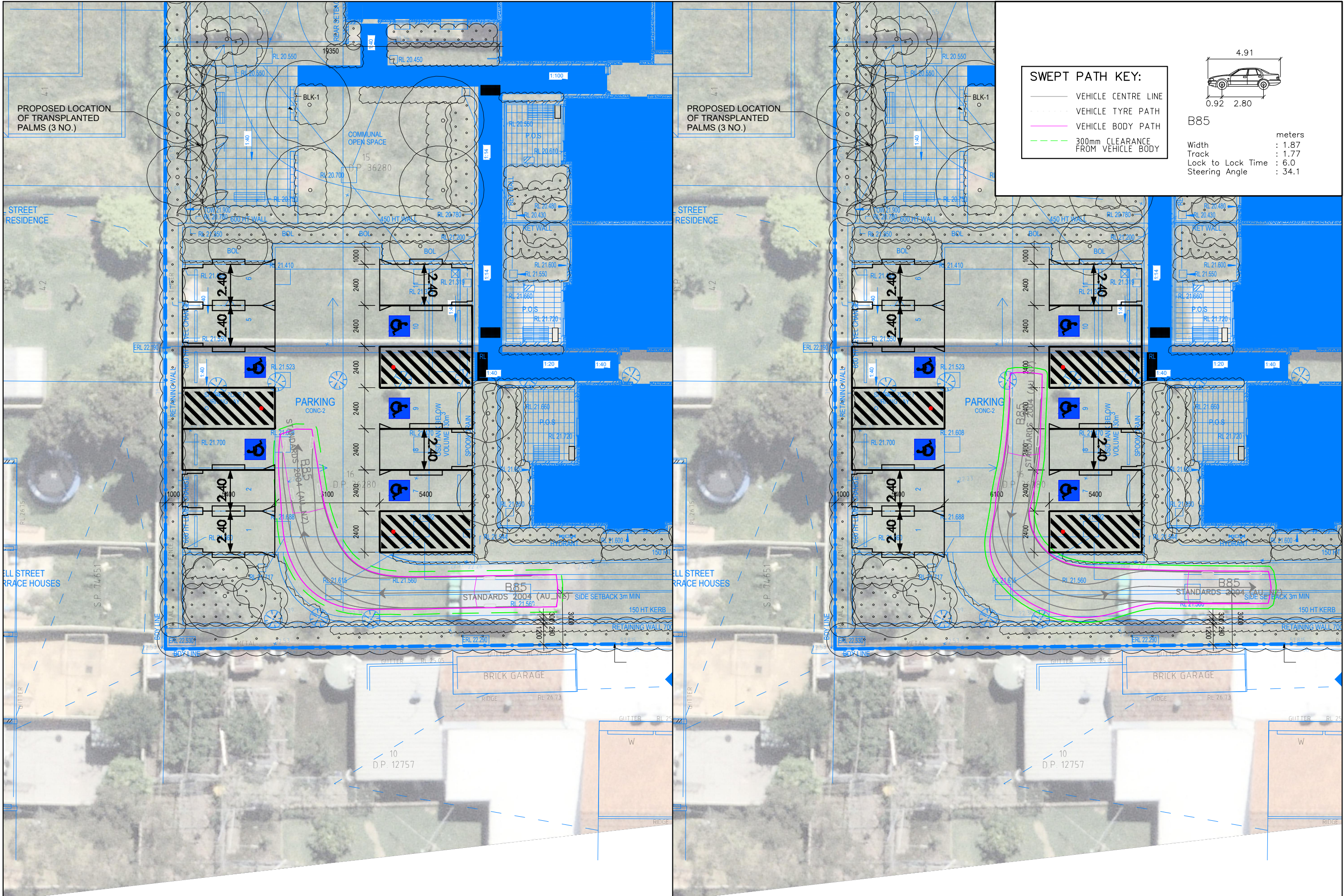


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Better Developments