

ParkTransit

TRAFFIC IMPACT ASSESSMENT – SENIORS HOUSING
36-40 Methuen Parade
15th July 2022

ParkTransit Pty Ltd
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Traffic Impact Assessment Report for

Seniors Housing

36-40 Methuen Parade

For: DTA Architects
Date: 15th July 2022

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Abbreviations

Proposal: Construction of a Seniors Housing Development

RMS: Road and Maritime Services

DCP: Canterbury Bankstown Council Development Control Plan (Draft) – 2021

SEPP (Housing): State Environmental Planning Policy (Housing) 2021

RMS Guide: RMS Guide to Traffic Generating Development 2002

AS2890.1: Australian Standard for Off-Street Parking Facilities AS2890.1-2004

AS2890.6: Australian Standard for Off-Street Parking for people with Disabilities AS2890.6



1. Introduction

ParkTransit have been engaged by DTA Architects to assist with the Part 5 Activity Application process for the construction of a Seniors Housing development located at 36-40 Methuen Parade Riverwood, within the Canterbury Bankstown Council LGA (formerly known as Canterbury City Council).

The proposed development will accommodate a total of 11 residential units with associated parking provided within the at-grade level car park within the site boundary.

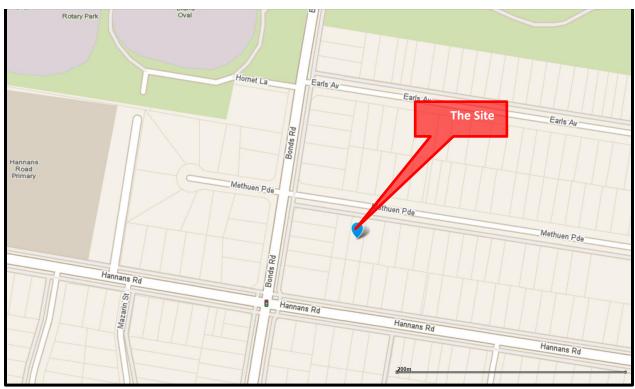


Figure 1-Site Location (Source Whereis Maps)

The purpose of this report is to present the traffic and parking assessment associated with the proposal, and to determine the implications of the projected change in traffic activity on the surrounding road network. The report is structured as follows:

Section 2: Site Description

Section 3: Overview of Existing Traffic Conditions
Section 4: Description of the Proposed Development

Section 5: Traffic Impact Assessment

Section 6: Parking Provision
Section 7: Access Arrangements

Section 8: Conclusions and Recommendations

Section 9: Attachments



The following documents were referenced for the preparation of this report:

- Canterbury Bankstown Council Development Control Plan (Draft DCP 2021);
- The Road and Maritime Services Guide to Traffic Generating Development;
- NSW State Environmental Planning Policy (Housing) 2021;
- Australian Standard for Parking Facilities Part 1: Off-Street Car Parking (AS2890.1-2004); and
- Australian Standard for Parking Facilities Part 6: Off-Street Parking for People with Disabilities (AS2890.6-2009).



2. Site Description

The site is located at 36-40 Methuen Parade, Riverwood in a predominantly residential area and forms part of the Canterbury Bankstown Council LGA. The site is located on the southern side of Methuen Parade and occupies an area of 1,650m².

The site occupies Lot 49, Lot 50 and Lot 51 of DP35142 and has a sole frontage located along Methuen Parade. The site is bordered by residential development to the East, South, and West, Methuen Parade to the North. It has a sole frontage measuring 43m located on Methuen Parade.

The site is occupied by three single storey dwelling houses. Each of the dwelling houses is serviced by a dedicated driveway resulting in a total of three driveways servicing the subject site.



Figure 2-The Site (Source NSW Imagery-Six Maps)

A site visit was undertaken on 23rd February 2021 to observe the operation of the existing road network and the site photographs are presented below:









Photo taken on Methuen Parade looking towards Photo taken on Methuen Parade looking towards **Bonds Road**

The following map shows the hierarchy of the surrounding road network as classified by Road and Maritime Services (RMS).

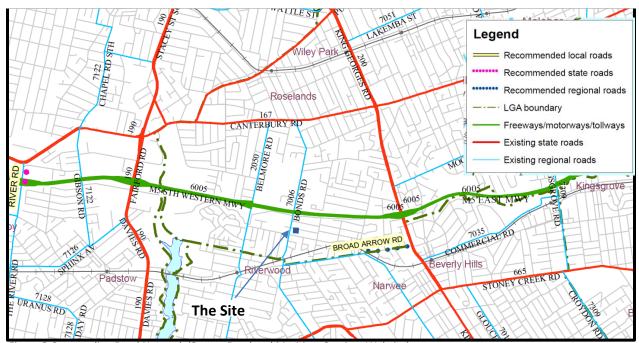


Figure 3-Surrounding Road Network (Source Road and Maritime Services Website)



3. Overview of the Existing Traffic Conditions

3.1. Description of Road Environment

Canterbury Road is classified as a State Road and connects south western Sydney with Sydney CBD. It follows an East-West alignment, and the carriageway is undivided and comprises two traffic lanes in each direction with no on-street parking permitted. A paved footpath is available on both sides and has a posted speed limit of 60kph. A number of properties comprising both retail and residential have their frontages located along the Canterbury Road and these properties are accessible via the driveways located along the Canterbury Road.

Bonds Road follows a North-South alignment and is classified as operates as an alternative route to Belmore Road. It is classified as a Regional Road and the carriageway is undivided and comprises two traffic lanes in each direction with on-street parking permitted. A paved footpath is available on both sides and has a posted speed limit of 60kph. A number of properties comprising both retail and residential have their frontages located along the Bond Road and these properties are accessible via the driveways located along Bond Road.

Hannans Road is classified as a Local Road and follows an East-West alignment. The carriageway is undivided and comprises one traffic lane in each direction with on-street parking permitted. The intersection of the Bonds Road with Hannans Road operates as a signalised intersection. Within the vicinity of the subject site, a number of buses operate along both the Bonds Road and Hannans Road.

Methuen Parade is classified as a Local Road and follows an East-West alignment. The carriageway is undivided and comprises one traffic lane in each direction with on-street parking permitted. The intersection of the Methuen Parade with Bonds Road operates as a priority-controlled intersection with vehicles travelling along Bonds Road having priority over the vehicles travelling along the Methuen Parade.

3.2. Public Transport

The site is serviced by both trains and buses. The nearest station located within vicinity of the site is Narwee, which is situated approximately 1.1 kilometres to the southeast. Narwee Train Station is serviced by the 'T8 Airport Line'. This service operates between Macarthur and Sydney CBD via Airport. During the morning peak period (08:00-09:00am), the service operates with a frequency of four inbound (to City), and four outbound services (to Macarthur).





Figure 4- Train Service Map (Source NSW Transport Info Website)

Bus services within vicinity of the development site are operated by Punchbowl Buses Company and are summarised below:

Route No 942 is a regular bus service operating daily between Campsie and Lugarno. It operates from 06:00am to 10:00pm, with a frequency of one service every 30 minutes. Bus services can be accessed via the bus stop located along Bonds Road north of Earls Avenue.



Route No 944 is a regular bus service operating daily between Bankstown and Mortdale via Peakhurst. It operates from 06:00am to 10:00pm, with a frequency of two services hourly (during the commuter peak periods). Bus services can be accessed via the bus stop located along Hannans Road east of Bonds Road.

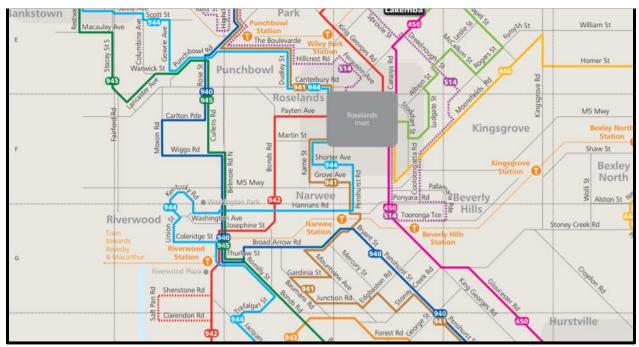


Figure 5- Route Map –Bus Route M91 (Source NSW Transport Info Website)



3.3. Pedestrian Access to the Bus Stop

Bus services are accessible via the bus stops located along Bonds Road (approx 10m north of the Earl Avenue Intersection). The location of the existing bus stops are shown in the figure below.



Figure 6- Bus Stop Location Plan (Source Google Maps)

In relation to accessibility to/from The Site, clause 93(4) of Part 5 of the SEPP (Housing 2021) identifies public transport as the preferred means of transport and recommends any bus stops or rail stations should be located at a maximum distance of 400m from The Site. Additionally, in relation to the topography along the access route to any public transport, the SEPP recommends the gradient along the pedestrian route (connecting the bus stop with the Seniors Housing development) should be flat or even.

The review further indicated that the pedestrian access to/from the subject site to the above bus stops, suggests these bus stops are located within the recommended 400 metre walking distance - therefore, are considered suitable to be used by the residents of the proposed Seniors Housing.

Furthermore, to establish the quality of pedestrian access to/from the site, a detailed gradient survey was undertaken and is presented as **Attachment C**. The gradient surveys demonstrated that the above bus stops are connected via a paved footpath (with the site) and its gradient is even and suitable to be used by the residents of the proposed development.



3.4. Existing Traffic Generation of the Site

The subject site is located within a predominantly residential area and is currently occupied by three single storey residential buildings. The traffic activity associated with the existing development was determined with reference to the RMS Guide to Traffic Generating Development (The Guide). In relation to the existing uses, the Guide classifies the existing residential use as a "Dwelling House" and recommends the following trip generation rates:

Weekday peak hour vehicle trips = 0.85 per dwelling

Application of the above trip generation rate to the three (3) existing dwelling houses results in the 2.55 (say 3) vehicle trip per hour during peak period.

3.5. Crash Data

The NSW Centre for Road Safety collects crash and casualty data on a periodic basis which is publicly available. A review of the latest crash data from 2015-2019 indicates, a limited number of crashes, predominantly non-casualty in nature, were recorded in the surround road network - indicates the local road is operating relatively safely. The Figure below provides the crash location and severity of these crashes recorded in the area.

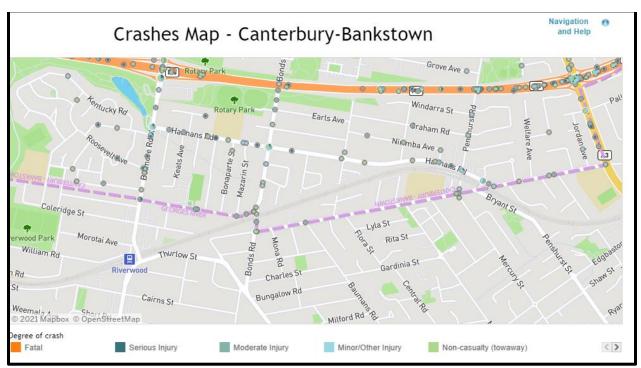


Figure 7 - Crash data (Source NSW Centre for Road Safety)



4. Description of the Proposed Development

The development proposal involves the construction of a double storey Seniors Housing that will accommodate a total of eleven (11) residential units comprising the following:

- Five x one-bedroom units; and
- six x two-bedroom units.

As part of the proposal, an on-site parking provision of five (5) car spaces, including three (3) disabled car spaces. Four of the five car spaces will be accessible via the combined entry and exit driveway located on the Methuen Parade frontage whereas, a disabled car space located to the east of Unit 1 will be accessible via a dedicated combined entry and exit driveway located on the Methuen Parade frontage. The proposed Seniors Housing development is being constructed by a social housing provider.

Architectural plans associated with the proposal have been prepared by DTA Architects, and the plans indicating the car park are presented as **Attachment A**.

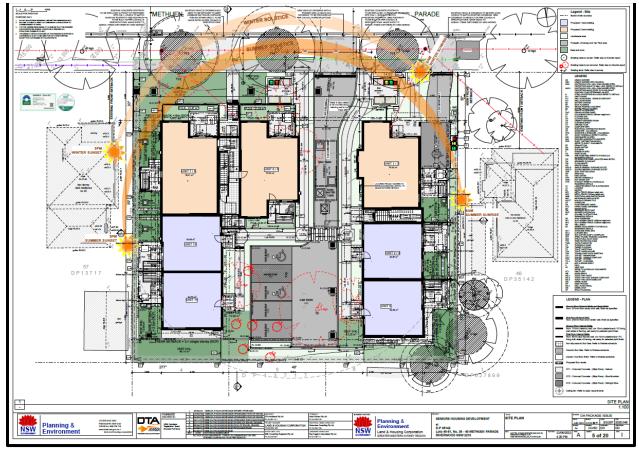


Figure 8 – Proposed Ground Floor Plan (Source DTA Architects) `



5. Traffic Impact Assessment

5.1. Trip Generation

The traffic activity associated with the proposal has been calculated with reference to the 'RMS Guide to Traffic Generation Developments'. The proposal involves the construction of a double storey Seniors Housing that will accommodate a total of eleven (11) residential units.

In relation to the residential component, the RMS has recently published a Technical Direction for traffic, safety and transport practitioners. This document serves to update the existing Section 3 of the RMS Guide which was originally published in October 2002. The TDT classifies Seniors Housing as Housing for aged and disabled persons and specifies the following traffic generation rates:

Daily vehicle trips = 2.1 per dwelling Peak hour vehicle trips = 0.4 per dwelling

Application of the above trip generation rates to the proposed development results in approximately 4.4 (say 4) vehicle trips, during both morning and evening peak hour.

5.2. Impact Assessment

The development is proposed on a site that currently has a peak hour traffic generation of 3.0 vehicle trips (please refer to Section 3.4 of this report for further details).

The projected traffic activity associated with the proposal indicates the site is likely to generate a peak hour traffic flow of 4.0 vehicle trips- representing a trip every 15 minutes or so. A comparison of the existing traffic activity with the projected traffic activity indicates that the new development will result in a negligible increase in traffic activity within the surrounding road network.

The minimal increase in traffic activity is likely to be less than the typical daily variation, which is usually 10% of the peak hourly flow. Additionally, the minimal increased traffic activity will not impact existing, and post development intersection modelling. Therefore, no formal Sidra intersection analysis has been undertaken as part of this project.

In conclusion, the proposal is likely to generate a maximum of 4.0 vehicle trips an hour - which represents an increase of 1.0 vehicle trip an hour. This increase is highly unlikely to have any detrimental impact on the operation of the surrounding road network.

36-40 Methuen Parade 15 15th July 2022



6. Parking Provision

6.1. Planning Requirements

Typically, the on-site parking provision is calculated with the reference to the Council's planning controls (i.e. Development Control Plan and Local Environmental Plan). However, in this instance the proposed development represents a Seniors Housing project and therefore, the on-site parking requirements are determined with reference to the NSW State Environmental Planning Policy (SEPP) (SEPP Housing 2021).

In relation to Self-contained dwellings, Clause 108(j) of the SEPP (Housing 2021) specifies the following parking provision rates (for sites developed by a social housing provider):

Table 1 – SEPP Recommended On-Site Parking Provision

Description	Car Park Provision						
Dwellings	1 car space for each 5 dwelling						

The proposed development will accommodate 11 units comprising of the following:

- Five x one bedroom units; and
- six x two bedroom units.

Application of the above on-site parking provision rate to the proposed development would results in 2.2 (say 3) car spaces.

6.2. Proposed Parking Provision

The proposed on-site provision of five (5) car spaces, including three (3) disabled spaces is compliant with the requirement recommended within the SEPP (housing 2021). Therefore, the proposed on-site parking provision is considered suitable to service the proposed development and is unlikely to result in increased on-street parking.



7. Access Arrangements

The proposed car parking arrangement has been assessed according to the requirements listed in AS2890.1 (2004). Table 1.1 of AS2890.1 provides a classification of the off-street parking facilities based on various land uses, which is essential in determining the associated parking space dimensions. The development is proposed to be occupied by residential use. Therefore, the proposed parking provision has been assessed against the 'Type 1A' user class with a 90-degree parking space configuration (which is associated with Residential and Employee Parking). In relation to the Type 1A user class, Figure 2.2 of the AS2890.1 specifies the following parking dimensions:

Space width – 2.4 metres
 Space length – 5.4 metres
 Aisle width – 5.8 metres

The proposed car park accommodates a total of five (5) parking spaces - four of these spaces are located with the at-grade car park and the remaining one space is located eastern boundary of the subject site. The space dimensions were measured at a minimum of 2.4 metres wide and 5.4 metres long, with an associated aisle width exceeding 5.8 metres, thereby meeting the minimum requirements stipulated by AS2890.1. In this regard, the proposed car parking arrangement has been designed in accordance with the Australian Standard.

7.1. Driveway Arrangement

As part of the proposal, all vehicular access to the site will be provided via the following two driveways located along Methuen Parade frontage:

- Driveway 1 located along the eastern boundary of the site servicing a dedicated car space; and
- Driveway 2 located along the middle of the site servicing the at-grade car park accommodating four (4) spaces.

The figure below presents the location of the above two driveways:

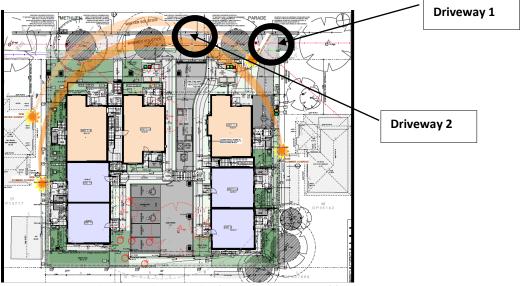


Figure 9 – Proposed Driveway location plan (Source DTA Architects)



Driveway 1 services one car space and therefore, it has been assessed as a "domestic driveway". In relation to the width of the domestic driveway, Clause 2.6.1 of AS2890.1 recommends a minimum width of 3.0m. The proposed driveway was measured to be in excess of 3.0m and therefore considered compliant with the Standard.

Driveway 2 services the at-grade car park accommodating four spaces. Table 3.1 & Table 3.2 of AS2890.1 specifies the width of the access driveway, which is directly proportional to the on-site parking provision and also the type of frontage road.

Taking into account the proposed driveway is located on Methuen Parade (which is classified as a Local Road) and the car park has a capacity of 4 parking spaces, Table 3.1 classifies the proposed driveway as 'Category 1'. Table 3.2 subsequently recommends the driveway width should be within a range of 3.0-5.5 metres, as a combined entry and exit. The width of the proposed driveway is in excess of 3.0 metres and is therefore considered compliant with the Standard.

In order to access the driveway configuration, ParkTransit have undertaken Swept Path Analysis utilising the AutoTrack simulation software. The Swept Path Analysis was undertaken utilising the recommended vehicle type and is presented as **Attachment B**.

The swept path assessment concluded the driveway arrangement is suitable to service the Seniors Housing facility and would not warrant removal of any additional trees located along the Methuen Parade frontage.

7.2. Vehicle Access

The proposal involves provision of two driveways to service the development. As discussed in Section 7.1 of this report, "Driveway 1" (for location details please refer to figure 9 of this report) services the car space associated with the accessible unit and is classified as a "domestic" driveway. The proposed driveway arrangement would warrant the resident to either enter in forward direction and reverse out of the site or reverse in and exit in forward direction. This vehicular access arrangement is typical for a residential dwelling house and therefore is considered compliant with the Standard.

The width of the proposed "Driveway 2" (for location details please refer to figure 9 of this report) was measured to be 3.2 metres wide which is suitable to accommodate one-way flow.

During the morning peak hour, the proposal is likely to generate a total of 4 vehicle movements (for details please refer to Section 5.1 of this report) and would involve most of the commuting drivers exiting the site. Typically, during the morning peak period it is standard engineering practice to assume 80% of the total traffic generated from the residential development will exit the site and the remaining 20% arrives at the site. Application of the above to the projected traffic activity associated with the subject development will result in 2 vehicles exiting the site and 1 vehicle entering the site and vice versa during the evening peak period.

In this regard, the driveway generally operates as a one-way driveway and therefore in accordance with the Australian Standard (Section 3.2 of AS2890.1), a recommended minimum width of 3.0 metres is required to accommodate one-way driveway. The proposal includes the provision of a passing bay at the site entry and exit to the car park - thus minimising the need for motorists to reverse on to Methuen Parade.



In this regard, the proposed access way configuration is considered adequate to service the proposed Seniors Housing development.

7.3. Sight Distance

Section 3.2 of AS2890.1 specifies the recommended sight distance associated with the driveway. The sight distance requirement is prescribed in accordance with the posted speed limit along the frontage road.

The proposed residential development will be accessible via a driveway located along the Methuen Parade frontage, which has a posted speed limit of 50kph.

Section 3.2 of the Standard specifies a desirable visibility distance of 69 metres, and a minimum distance of 45 metres for streets having a posted speed limit of 50kph. The proposed driveway is located on a straight section of Methuen Parade with unobstructed visibility. In this regard, the driveway arrangement is considered safe and appropriate to service the proposed residential development.

7.4. Driveway Location

Figure 3.1 of the Standard shown below, specifies the prohibited location for introduction of a Category 1 driveway.

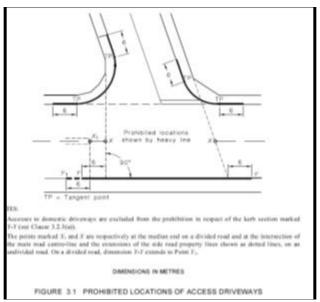


Figure 10- Prohibited Locations of Access Driveway (Source AS2890.1-2004)

A review of the proposed two driveways indicate both these driveways are located well outside the prohibition zone and therefore, the proposal is considered compliant with the Standard.

7.5. Servicing

As part of the proposal, all deliveries (including furniture removalist) will utilize the existing on-street parking provision available along the site frontage. This procedure is considered typical for a development of this size. The



subject site is located within a predominantly residential area where on-street parking is permitted along all the local streets servicing the site. Therefore the occasional delivery vehicle utilising on-street parking to service the development, is highly unlikely to result in any detrimental impact on the overall on-street parking provision.



8. Conclusions and Recommendations

- The provision of five (5) car parking spaces for the proposed senior residential development is considered sufficient to handle the project parking demand;
- Based on the information provided, the proposal does not generate any increase in safety risk to pedestrians or drivers as a result of the access and parking configuration;
- The proposed development will not negatively impact the current traffic conditions; and
- An assessment of the car park layout, including the proposed parking spaces and associated aisle width, indicate the car park layout is compliant with the relevant applicable Standards (AS2890.1-2004).

9. Attachments

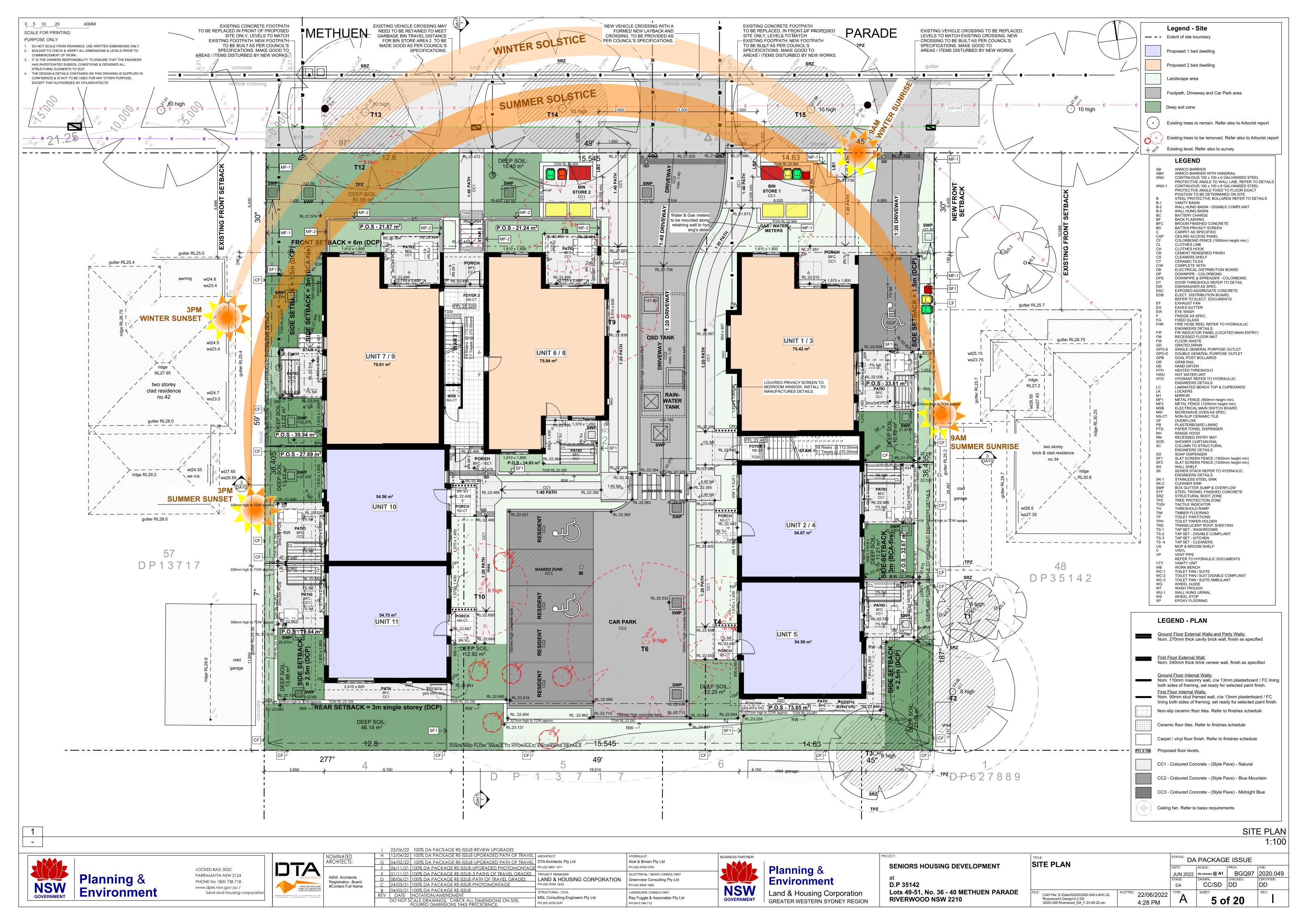
Attachment A - Architectural Plan indicating Access and Car Park Arrangement

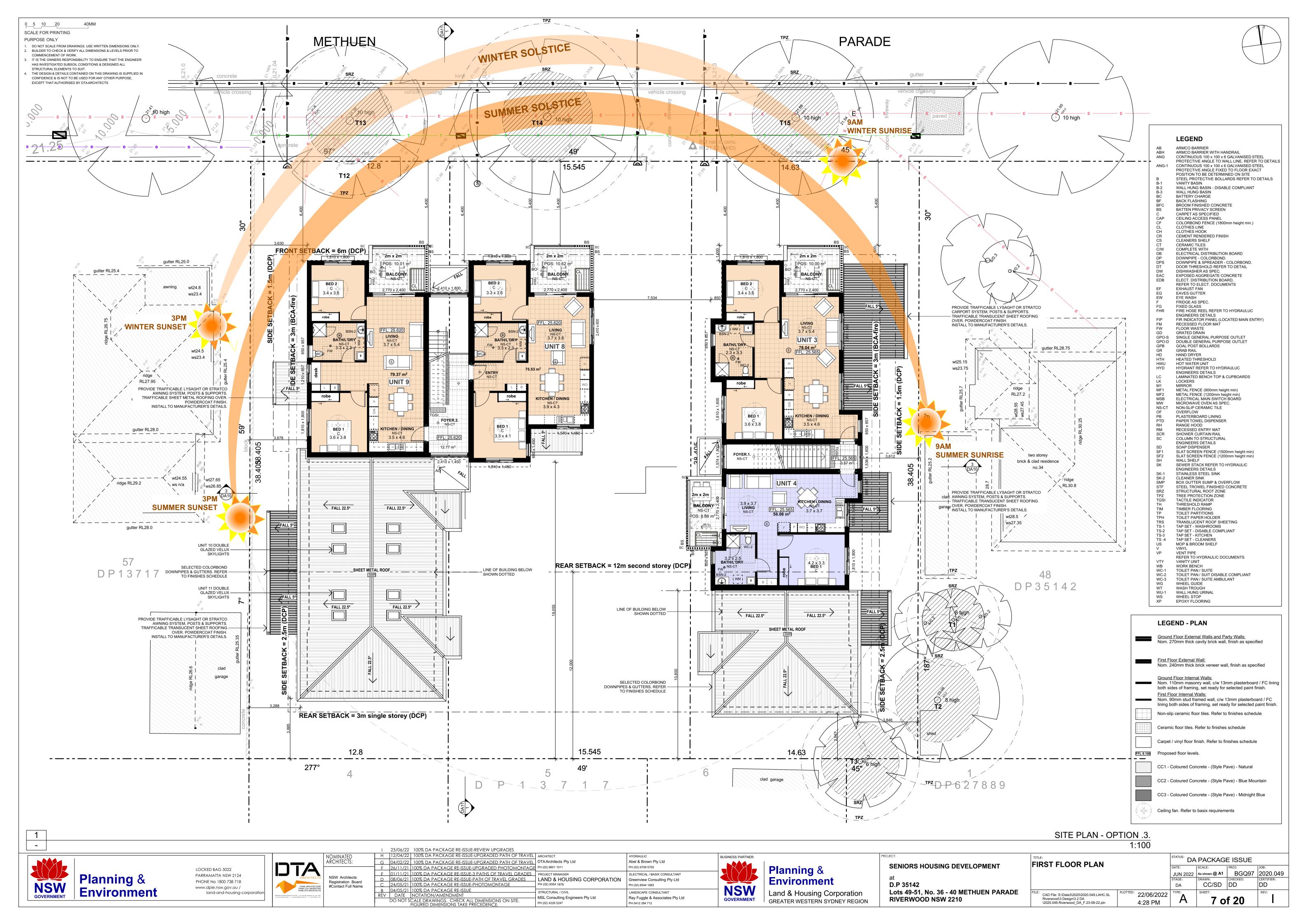
Attachment B - Copy of the Survey Plans

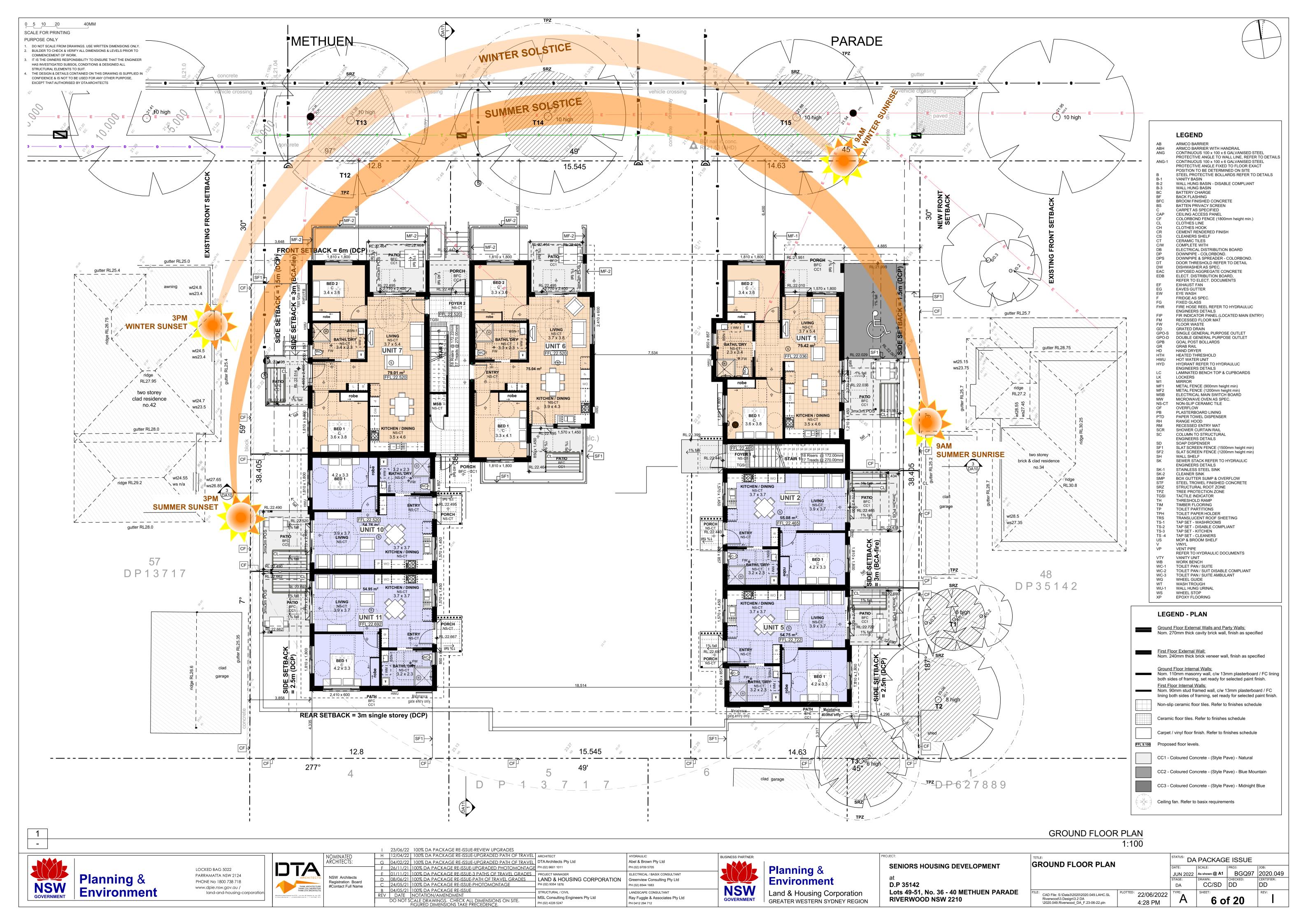
Attachment C- Swept Path Assessment Demonstrating a Standard B85th Vehicle Type Accessing the Car Park

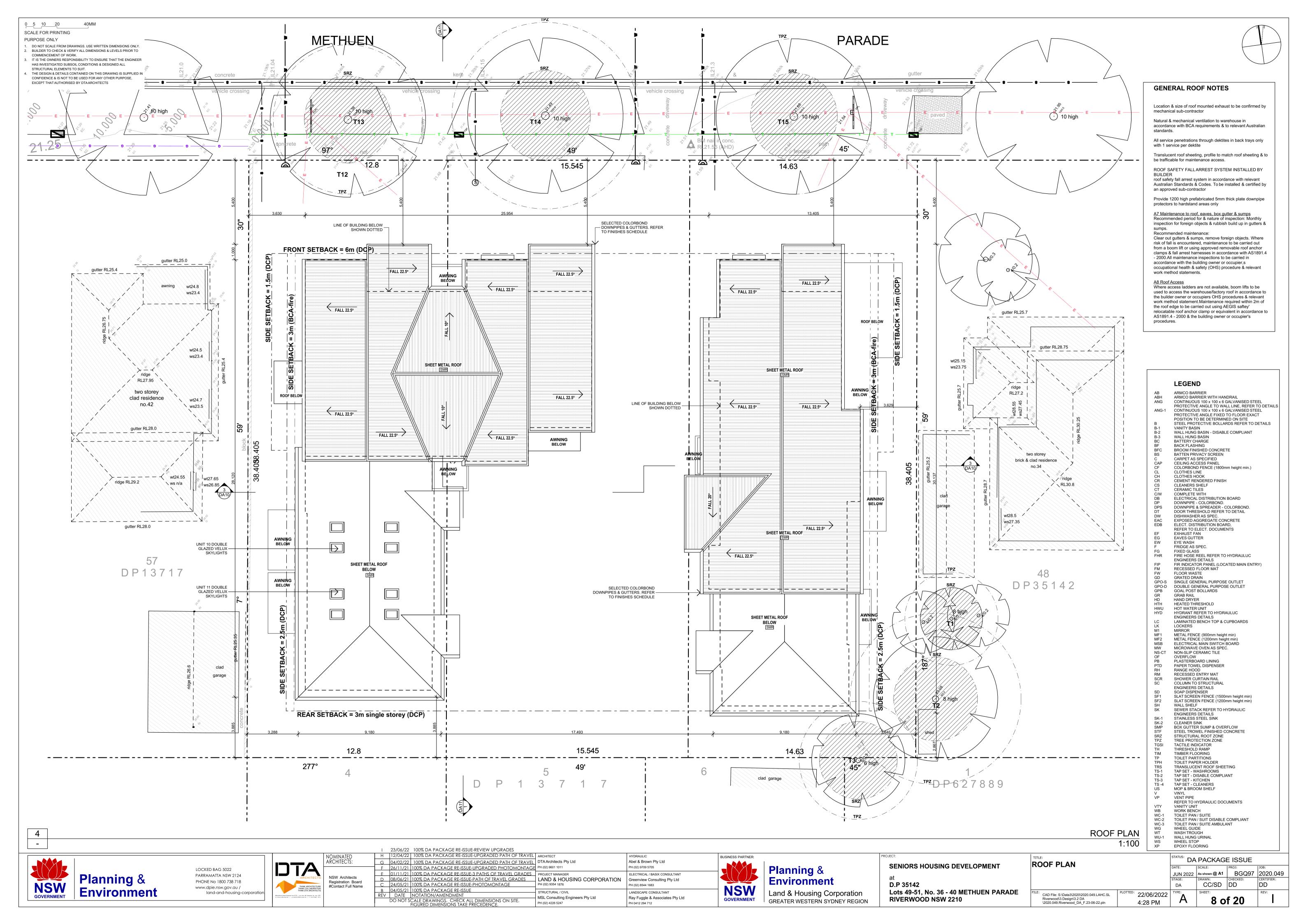


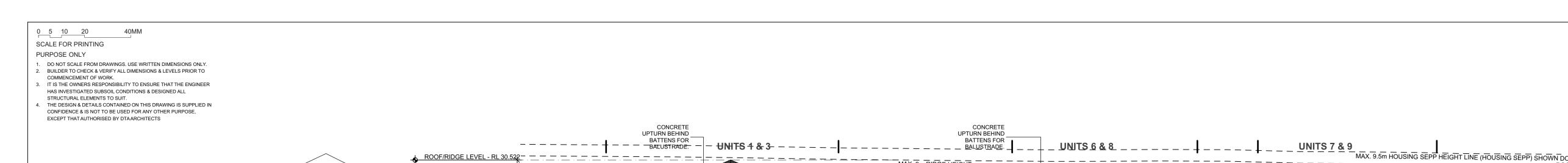
Attachment A - Architectural Plan

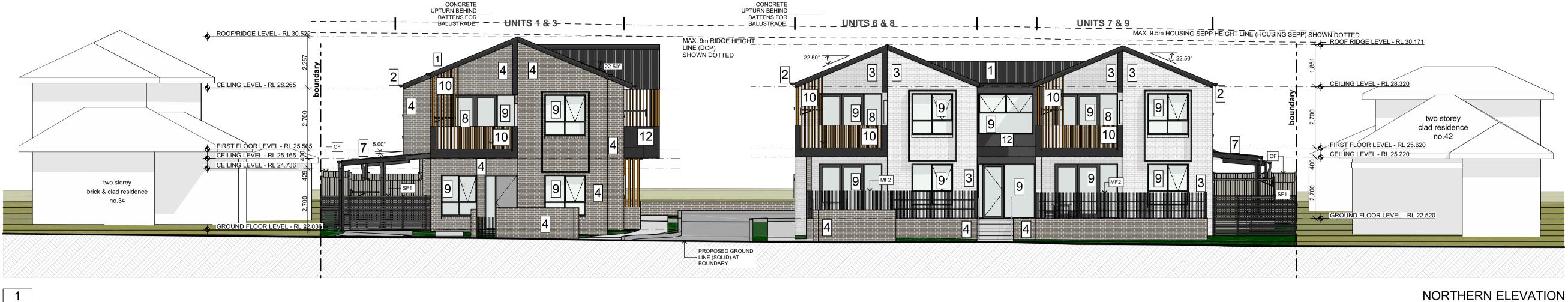
















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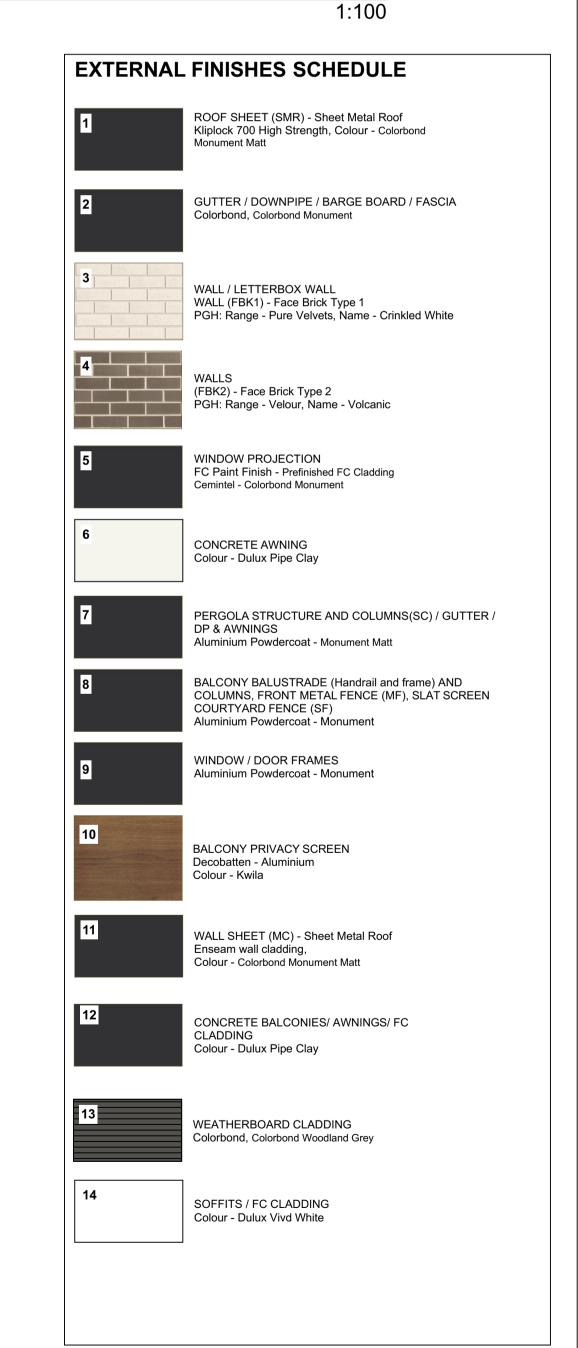
Abel & Brown Pty Ltd

ELECTRICAL / BASIX CONSULTANT

Greenview Consulting Pty Ltd

Ray Fuggle & Associates Pty Ltd

LANDSCAPE CONSULTANT





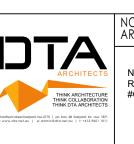


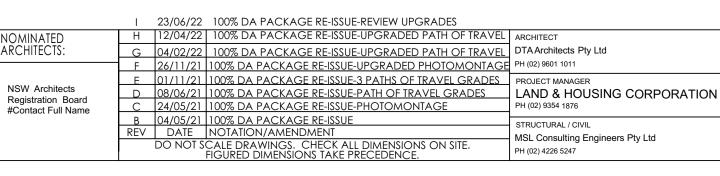
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vironment	at D.P 35142
d & Housing Corporation	Lots 49-51, No. 36 - 40 METHUEN PARADE RIVERWOOD NSW 2210

TITLE: ELEVATIONS			STATUS: DA	PACKAGI	E ISSUE	
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Attachment B – Copy of the Survey Plans

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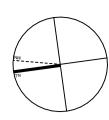
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 DO NOT SCALE FROM DRAWINGS. USE WRITTEN DIMENSIONS ONLY.
 BUILDER TO CHECK & VERIFY ALL DIMENSIONS & LEVELS PRIOR TO COMMENCEMENT OF WORK.

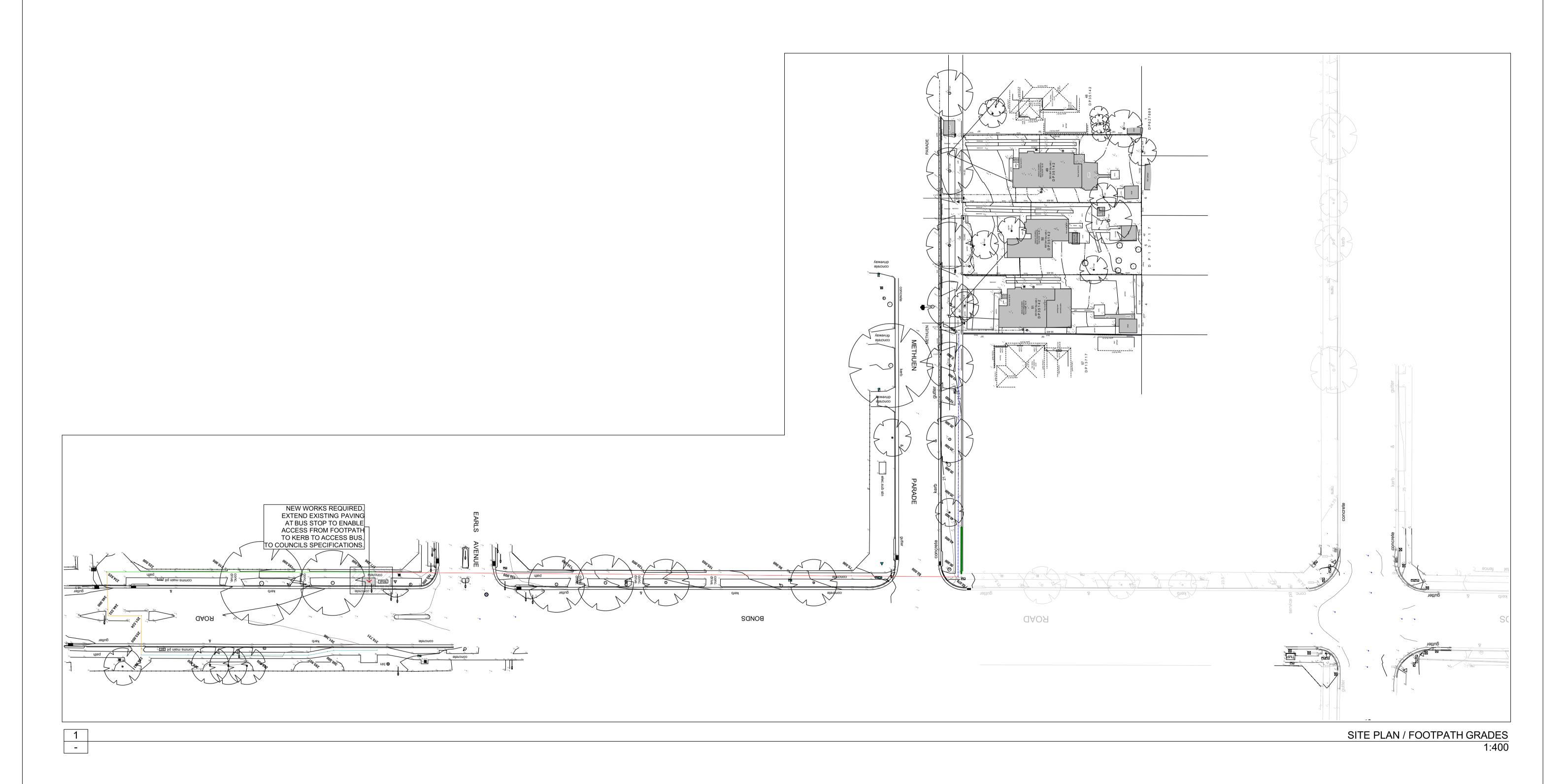
 JULY 15 THE OWNERS RESPONSIBILITY TO ENSURE THAT THE ENGINEER
- HAS INVESTIGATED SUBSOIL CONDITIONS & DESIGNED ALL STRUCTURAL ELEMENTS TO SUIT.

 THE DESIGN & DETAILS CONTAINED ON THIS DRAWING IS SUPPLIED IN CONFIDENCE & IS NOT TO BE USED FOR ANY OTHER PURPOSE, EXCEPT THAT AUTHORISED BY DTA ARCHITECTS



HATCH AREA INDICATES AREA OF WORKS REQUIRED TO EXISTING BUS STOP. EXTEND EXISTING CONCRETE PAVING TO ENABLE ACCESS FROM FOOTPATH TO KERB TO ACCES BUS.









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PHONE No 1800 738 718





1	23/06/22	100% DA PACKAGE RE-ISSUE-REVIEW UPGRADES			
Н	12/04/22	100% DA PACKAGE RE-ISSUE-UPGRADED PATH OF TRAVEL	ARCHITECT	HYDRAULIC	
G	04/02/22	100% DA PACKAGE RE-ISSUE-UPGRADED PATH OF TRAVEL	DTA Architects Pty Ltd	Abel & Brown Pty Ltd	
F	26/11/21	100% DA PACKAGE RE-ISSUE-UPGRADED PHOTOMONTAGE	PH (02) 9601 1011	PH (02) 9709 5705	
E	01/11/21	100% DA PACKAGE RE-ISSUE-3 PATHS OF TRAVEL GRADES	PROJECT MANAGER	ELECTRICAL / BASIX CONSULTANT	
D	08/06/21	100% DA PACKAGE RE-ISSUE-PATH OF TRAVEL GRADES	LAND & HOUSING CORPORATION	Greenview Consulting Pty Ltd	
С	24/05/21	100% DA PACKAGE RE-ISSUE-PHOTOMONTAGE	PH (02) 9354 1876	PH (02) 8544 1683	
В	04/05/21	100% DA PACKAGE RE-ISSUE	STRUCTURAL / CIVII	LANDSCAPE CONSULTANT	
REV		•		Ray Fuggle & Associates Pty Ltd	
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SENIORS HOUSING DEVELOPMENT
at D.P 35142
Lots 49-51, No. 36 - 40 METHUEN PARADE

RIVERWOOD NSW 2210

TITLE:
FOOTPATH GRADES TO BUS STOPS

: CAD File: S:\Data3\2020\2020.049.LAHC.SL Riverwood\3.Design\3.2 DA \2020.049.Riverwood_DA_F.23-06-22.pln

STOPS	DA PACKAGE ISSUE								
31013	DATE:	SCALE:	PROJ:	JOB:					
	JUN 2022	As shown @ A1	BGQ97	2020.049					
	STAGE:	DRAWN:	CHECKED:	CERTIFIER:					
	DA	CC/SD	DD	DD					
22/06/2022	TYPE:	SHEET:		REV:					
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0 5 10 20

SCALE FOR PRINTING PURPOSE ONLY

1. DO NOT SCALE FROM DRAWINGS. USE WRITTEN DIMENSIONS ONLY.
2. BUILDER TO CHECK & VERIFY ALL DIMENSIONS & LEVELS PRIOR TO COMMENCEMENT OF WORK.
3. IT IS THE OWNERS RESPONSIBILITY TO ENSURE THAT THE ENGINEER HAS INVESTIGATED SUBSOIL CONDITIONS & DESIGNED ALL STRUCTURAL ELEMENTS TO SUIT.
4. THE DESIGN & DETAILS CONTAINED ON THIS DRAWING IS SUPPLIED IN CONFIDENCE & IS NOT TO BE USED FOR ANY OTHER PURPOSE, EXCEPT THAT AUTHORISED BY DTAARCHITECTS

lest	5											METHI PARA	UEN														
Height = mm ference= mm	7	32		ncrete Footpath 2	51	12	43	36	29	29	178	PARA 518	DE				574	503	465 Concrete Footpath		432		575		327		124
		0.37 deg	0.40 deg 0.16	eg 0.02 deg	0.58 deg	0.14 deg	0.49 deg	0.41 deg	0.33 deg	0.8 deg 1.	29 deg		1.98 de	leg		2.19 de	ı	1.92 deg	1.77 deg		1.65 deg		2.20 deg		EARLS AVE 1.25 deg		0.58 deg
RL	_: 17.000			0.34 D	egrees Average 1 : 242														1.65 Degrees Avo 1 : 33.9	erage							
(G) Grade	1 : 714	1 : 156	1:143 1:3		1:98	1 : 417	1 : 116	1 : 139	1 : 172	1:72 1:	44.4		1 : 28.9	9		1 : 26.2		1 : 29.8	1:32.4		1 : 34.7		1 : 26		1 : 45.8		1 : 98.8
286	293	261	226	240	191	179	136	100	120	042	864				346		772		569	804		372		797		470	
21	21.	21.	21.2	27.	21.	21.	21.	21.	21.	21.	20.				20.		19		70	18		48		17.		17.	
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Length = m		-		N C	<u>u</u> — — — — — — — — — — — — — — — — — — —	<u> </u>	4	4.	Ψ)	1 43	0				<u> </u>		65		~	-		-				-	
erence= mm		254			246			131		108				7 BONDS ROAD		36	55	142		34 4	,	Bus Stop					
Height = mm ference= mm Deg) Degrees		254 0.97 d		0.9 Concrete	4 deg Footpath			131 50 deg		108 0.63 deg		9 0 deg	2.93 deg	0.06 deg	0.56 deg	36 0.42 deg	55 0.31 deg	0.54 deg Concrete Footpa	0.23 deg h	0.48 deg	,	Bus Stop					
ference= mm				0.9 Concrete	4 deg	verage							2.93 deg		0.56 deg			0.54 deg Concrete Footpa	0.23 deg	7 000	,	Bus Stop					
ference= mm Deg) Degrees 0.93	3 deg		9	0.9 Concrete	4 deg Footpath	verage	0				0.10		2.93 deg	0.06 deg	0.56 deg			0.54 deg Concrete Footpa	0.23 deg h	7 000	,	Bus Stop					
ference= mm	3 deg	0.97 d	9	0.9 Concrete	4 deg Footpath 0.79 Degrees / 1 : 73.6	verage Z08.91	0	50 deg	16.671	0.63 deg	0.10	0 deg	2.93 deg	0.06 deg 1 Degrees Average 1:108.3	0.56 deg	0.42 deg	0.31 deg	0.54 deg Concrete Footpa	0.23 deg h 0.40 Degrees Average 1: 130.3	0.48 deg	0.68 deg 1:84.3	17.179 Bus Stop					

FOOTPATH GRADES - LONG SECTIONS

PHONE No 1800 738 718
www.dpie.nsw.gov.au /
land-and-housing-corporation

LOCKED BAG 5022 PARRAMATTA NSW 2124

	1	23/06/22	100% DA PACKAGE RE-ISSUE-REVIEW UPGRADES		
NATED	Н	12/04/22	100% DA PACKAGE RE-ISSUE-UPGRADED PATH OF TRAVEL	ARCHITECT	HYDRAULIC
IITECTS:	G	04/02/22	100% DA PACKAGE RE-ISSUE-UPGRADED PATH OF TRAVEL	DTA Architects Pty Ltd	Abel & Brown Pty Ltd
	F	26/11/21	100% DA PACKAGE RE-ISSUE-UPGRADED PHOTOMONTAGE	PH (02) 9601 1011	PH (02) 9709 5705
	E	01/11/21	100% DA PACKAGE RE-ISSUE-3 PATHS OF TRAVEL GRADES	PROJECT MANAGER	ELECTRICAL / BASIX CONSULTANT
Architects stration Board	D	08/06/21	100% DA PACKAGE RE-ISSUE-PATH OF TRAVEL GRADES	LAND & HOUSING CORPORATION	Greenview Consulting Pty Ltd
tact Full Name	С	24/05/21	100% DA PACKAGE RE-ISSUE-PHOTOMONTAGE	PH (02) 9354 1876	PH (02) 8544 1683
	В	04/05/21	100% DA PACKAGE RE-ISSUE	STRUCTURAL / CIVIL	LANDSCAPE CONSULTANT
	REV		NOTATION/AMENDMENT	MSL Consulting Engineers Pty Ltd	Ray Fuggle & Associates Pty Ltd
		DO NOT SO	CALE DRAWINGS. CHECK ALL DIMENSIONS ON SITE. FIGURED DIMENSIONS TAKE PRECEDENCE.	PH (02) 4226 5247	PH 0412 294 712



FO	OTPATH GRADES TO	BUS	STOPS
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Attachment C- Swept Path Assessment Demonstrating a Standard B85th Vehicle Type Accessing the Car Park

