TRAFFIX
TRAFFIC AND TRANSPORT PLANNERS

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Reference: 22.037r01v02

21 November 2022

Mode Design
Level 5
111-117 Devonshire Street
SURRY HILLS NSW 2010

Attention: Mr Kirk MacDonnell, Associate

Re: 52-56 Pank Parade, Blacktown
Proposed Senior's Housing Development
Traffic Impact Statement

Dear Kirk,

TRAFFIX has been commissioned to assess the traffic impacts in support of a Development Application (DA) relating to a Seniors Housing development located at 52-56 Pank Parade, Blacktown. The proposed development will involve the construction of a senior's housing development. The subject site is located within the Blacktown City Council Local Government Area and has been assessed under that Council's controls as well as the controls of *State Environmental Planning Policy (SEPP) Housing 2021*.

This statement documents the findings of our investigations and should be read in the context of the Statement of Environmental Effects (SEE), prepared separately. The proposed development is considered to be a minor development with less than 300 dwellings. As such, the DA will not require referral to Transport for New South Wales (TfNSW) under the provisions of State Environmental Planning Policy (Transport and Infrastructure) 2021.

Site and Location

The subject site is located at 52-56 Pank Parade, Blacktown and is located approximately 13.8 kilometres west of Sydney Central Business District (CBD). In a local context it is located approximately 1.9 kilometres west of Blacktown Railway Station and 1.8 kilometres east of Doonside Railway Station. More specifically, it is located on the southern side of Pank Parade, approximately 145 metres west of London Street.

The site is generally rectangular in configuration and has a total site area of approximately 1,663m^2. It has a northern frontage of approximately 46 metres to Pank Parade. The southern, eastern, and western boundaries of 46m, 36m and 37m respectively border neighbouring residential developments.

A Location Plan is presented in **Figure 1**, with a Site Plan presented in **Figure 2**.

Figure 1: Location Plan

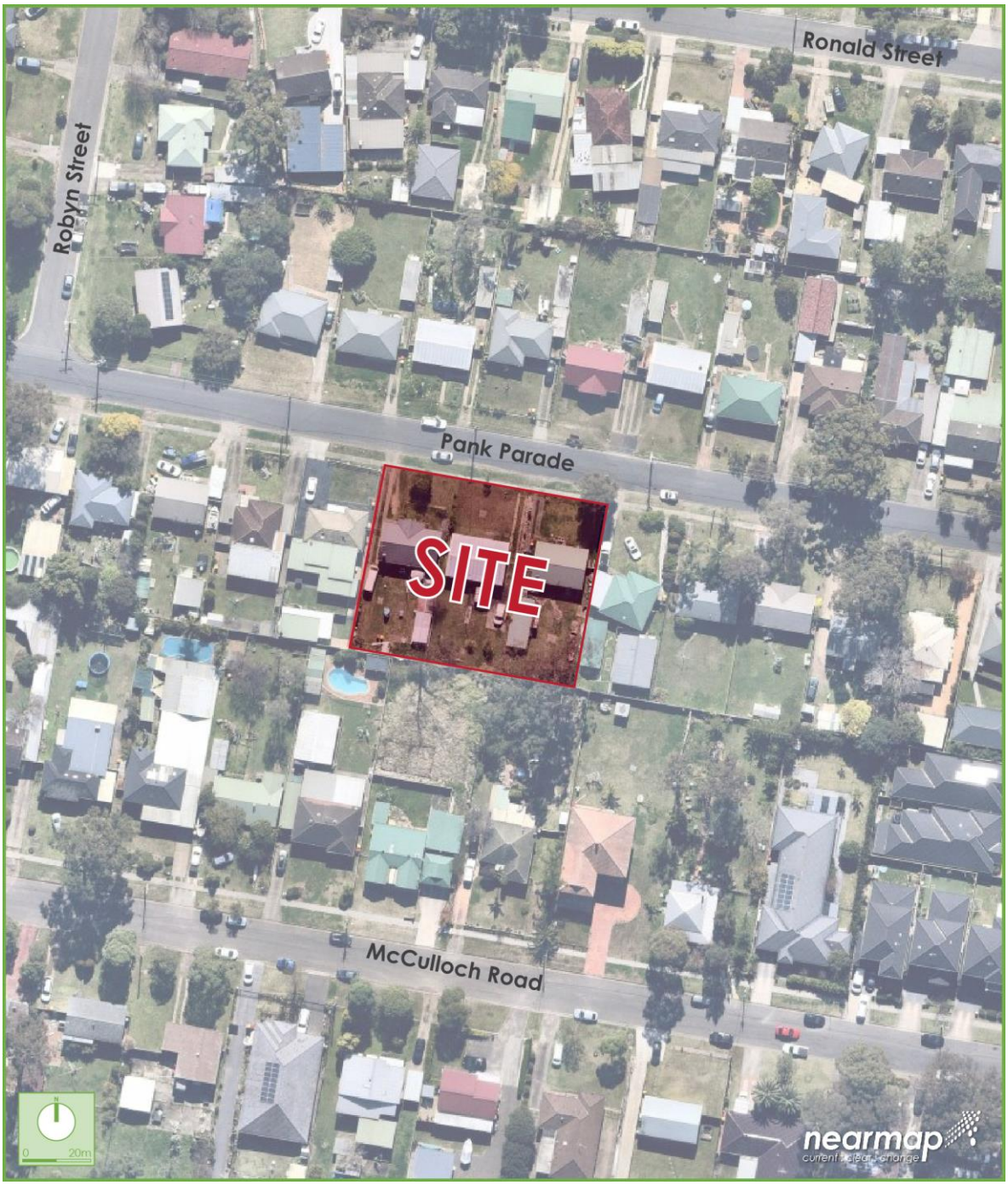


Figure 2: Site Plan

Road Hierarchy

The road hierarchy in the vicinity of the site is show in **Figure 3** with the following roads of particular interest:

- Richmond Road: forms part of a TfNSW Main Road (MR 643) that traverses east-west between Patrick Street in the east and Blacktown Road in the west. Within the vicinity of the site, it is subject to 60km/h speed zoning and generally accommodates two (2) lanes of traffic in each direction within a divided carriageway. Richmond Road does not permit on-street parking along both sides of the road.
- Lyton Street: forms part of a TfNSW Regional Road (RR 7465) that traverses north-south between Richmond Road in the north and Lancaster Street in the south. Within the vicinity of the site, it is subject to 60km/h speed zoning and generally accommodates two (2) lanes of traffic in each direction within a divided carriageway. Lyton Street permits unrestricted on-street parking along both sides of the road where permitted.
- Pank Parade: a local road that traverses east-west between Lyon Street in the east and McClean Street in the west. It is subject to 50km/h speed zoning and accommodates a single lane of traffic in each direction. Pank Parade permits unrestricted on-street parking along both sides of the road.

It can be seen from Figure 3 below that connectivity is provided to the subject site via the local road network using Richmond Road and Lyton Street.

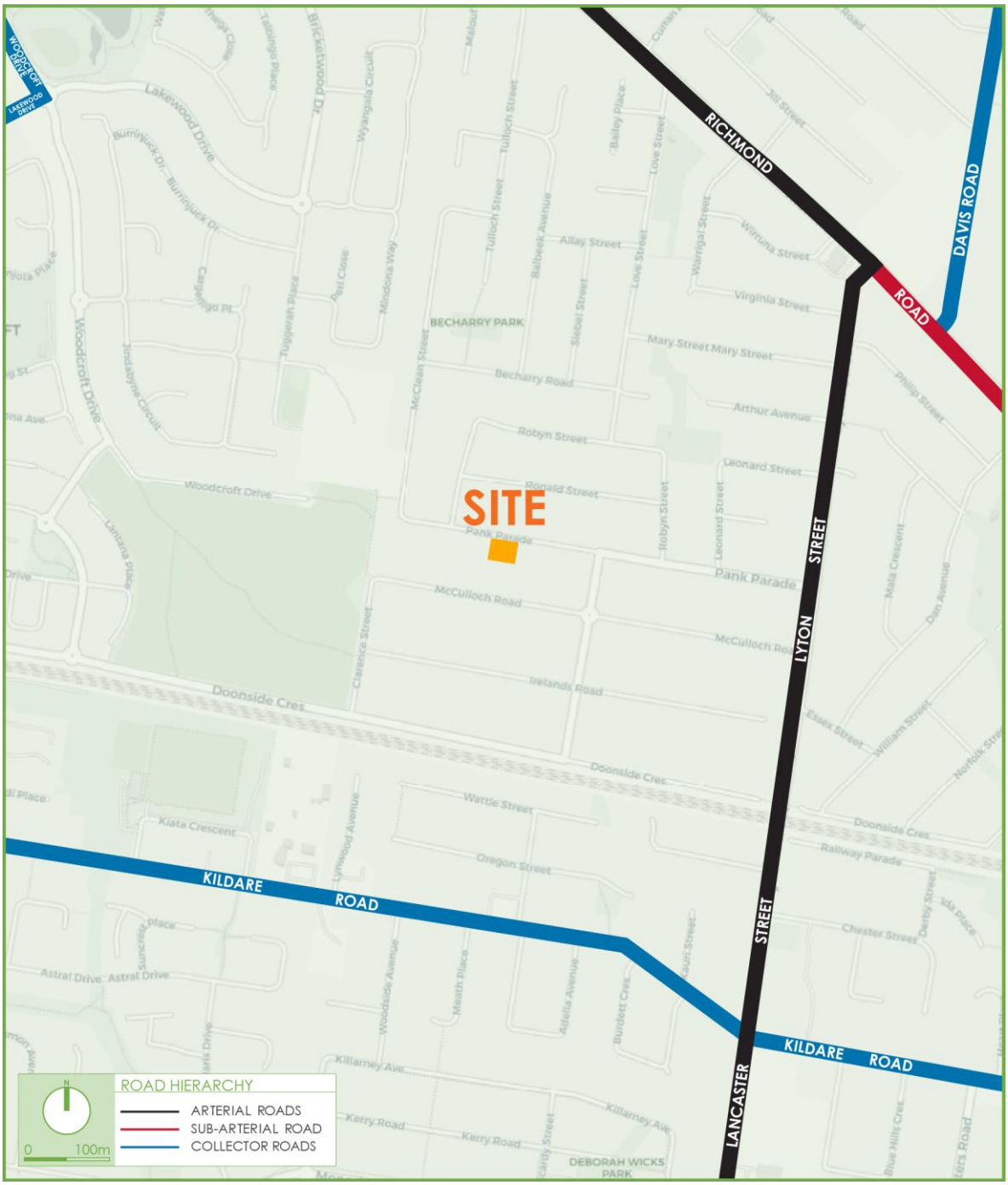


Figure 3: Road Hierarchy

Public Transport

The subject site is within optimal walking distance (400 metres) of several bus stops operating within the locality, with the closest situated on Pank Parade, along the northern frontage of the site. These bus stops are presented in **Figure 4**, with the routes and approximate frequencies outlined in **Table 1** below:

Table 1: Bus Routes and Service Frequency

Bus No	Route	Service Frequency		
		Weekdays	Saturdays	Sundays
753	Blacktown to Doonside	Every 60-minutes (9:00am-6:00pm)	Every 60-minutes (8:30am-4:30pm)	Every 120-minutes (10:00am-4:00pm)
756	Mount Druitt to Blacktown via Plumpton and Woodcroft	Every 30-minutes (5:30am-Midnight)	Every 30-minutes (6:00am-Midnight)	Every 60-minutes (8:00am-11:00pm)

More information concerning all bus service information can be found on the Transport for NSW Info website: https://www.transportnsw.info.

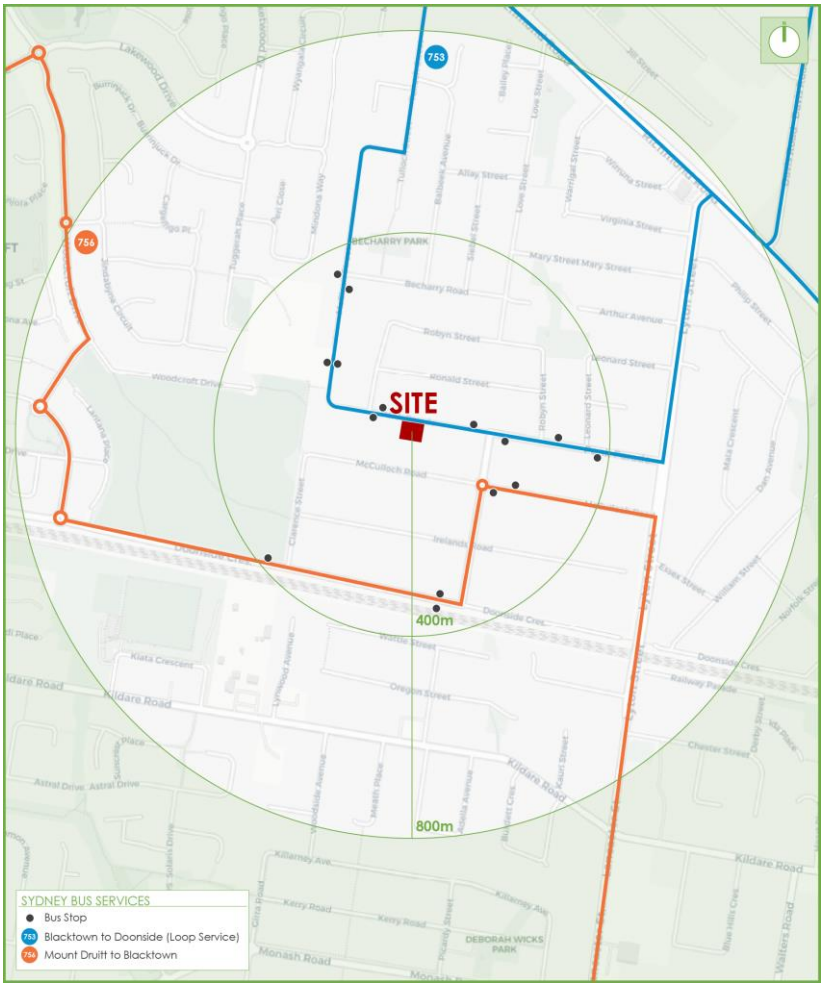


Figure 4: Public Transport

Description of Proposed Development

A full description of the proposed development can be found in the SEE, prepared separately. In summary, the development for which approval is now sought comprises the following components:

- Demolition of the existing three (3) residential dwellings and construction of a new Seniors Living facility comprising the following:
  - 12 x Independent Living Units (ILU's) comprising:
    - 6 x 1-bedroom units
    - 6 x 2-bedroom units
  - Provision of six (6) car parking spaces within an at-grade car park.

Reference should be made to the architectural plans presented at a reduced scale in **Attachment 1**.

Parking Requirements

Car Parking

The subject development is subject to the State Environmental Planning Policy (Housing) (2021) (SEPP (Housing) 2021) which states the parking requirements for housing for seniors and people with a disability under Part 5, Division 7, Clause 108. This *minimum* parking rate and provision is summarised in **Table 2** below:

Table 2 – SEPP (2021) Car Parking Rate and Provisions

Type	Number	SEPP Minimum Car Parking Rate	Parking Required	Parking Provided
Seniors Housing				
Dwellings*	12	0.2 spaces per dwelling	2.4 (3)	6
Total			**3**	**6**

**The subject development is a social housing provider and is therefore subject to a parking rate of 1 space for every 5 dwellings in accordance with SEPP (Housing) 2021.*

It can be seen from **Table 1** that the proposed development is nominally required to provide a minimum of three (3) car parking spaces. Furthermore, in accordance with *SEPP (Housing) 2021 Schedule 4 Part 1 Clause 5*; each parking space must comply with the requirements for parking for persons with a disability set out in AS2890.6. In response, three (3) parking spaces (the minimum parking requirement) have been provided in accordance with AS2890.6 (2009).

Furthermore, an additional three (3) parking spaces have been provided, resulting in a total provision of six (6) spaces which exceeds the minimum requirements of SEPP (Housing) 2021. Therefore, all nominal parking demands are readily accommodated onsite thereby minimising impacts to on-street parking availability to the benefit of residents and visitors.

Accessible Parking

As discussed above, thee (3) parking spaces must be provided as accessible parking spaces as set out in AS2890.6 (2009). In response, three (3) parking spaces have been provided in accordance with AS2890.6 (2009), thereby ensuring that all accessible parking demands will be accommodated onsite.

Motorcycle Parking

Blacktown DCP 2015 does not specify motorcycle parking requirements for Independent Living Units. As such, the development does not provide motorcycle parking spaces. However, all motorcycle parking demands can be readily accommodated within an available car parking space thereby ensuring that any motorcycle parking demands are readily accommodated onsite.

Bicycle Parking

Blacktown DCP 2015 does not specify bicycle parking requirements for Independent Living Units and as such, no bicycle parking spaces are provided.

Refuse Collection

Refuse collection will be accommodated on-street using Council's standard waste collection vehicle. All bins are to be transferred from the bin storage area located on the ground floor to the kerb for collection. Refuse collection will occur infrequently and typically outside of peak periods.

As such, the proposed refuse collection arrangements are considered appropriate and consummate with the modest scale and nature of the subject development.

Traffic Generation

Existing Development

The subject site is currently three (3) existing residential dwellings. The TfNSW Technical Direction (TDT 2013/04a) provides traffic generation rates for single-occupancy dwellings. The Technical Direction recommends the following peak hour trip generation rates:

- 0.99 vehicle trips per dwelling during the AM peak period; and
- 0.95 vehicle trips per dwelling during the PM peak period.

Adoption of this rate to the three (3) dwellings results in the following trips generation, adopting an 80:20 split for arrivals and departures:

- 3 vehicle trips per hour during the AM peak (1 in, 2 out); and
- 3 vehicle trips per hour during the PM peak (2 in, 1 out).

Proposed Development

The *TfNSW Technical Direction (TDT 2013/04a)* recommends the following traffic generation rate for housing for aged and disabled persons:

- 0.4 vehicle trips per dwelling during the PM peak period only.

Application of the above rate to the proposed 12 dwellings and applying and 80:20 split results in the following traffic generation:

- 5 vehicle trips per hour during the PM peak (4 in, 1 out).

Net Traffic Impacts

When accounting for traffic generated by the existing development, the proposed development will result in a net decrease of three (3) vehicle trips in and AM peak and an increase of two (2) vehicle trips in the PM peak. The additional vehicle movements during the PM peak will have negligible impacts to the surrounding road network and equates to an additional vehicle every 30 minutes.

Access and Internal Design

Access

The proposed development incorporates a total of six (6) car parking spaces with access from Pank Parade (minor road). In accordance with AS2890.1 (2004), the proposed development requires a Category 1 vehicular driveway, being a minimum driveway of 3.0 metres. In response, the development provides a driveway of width 3.0 metres in compliance with the minimum requirements of AS2890.1 (2004). A swept path analysis has been undertaken with a B99 design vehicle that demonstrates satisfactory vehicle movements. This swept path analysis is provided in **Attachment 2**.

A passing bay is not considered necessary in this instance for the following reasons:

i. The proposed driveway is less than 30 metres long with excellent sight distance;

ii. The traffic generation is minimal, equating to a vehicle entering the site every 15 minutes;

iii. The traffic movements associated with housing is tidal, that is, the majority (80%) of vehicle movements are either entering or exiting the site;

iv. A conflict analysis demonstrates there is only a 0.005% probability of conflict along the driveway. To put this into perspective, the probability of two vehicles travelling in opposite directions meeting each other along the driveway is 1 in 20,550 vehicles. This conflict analysis is presented in **Attachment 3**.

Noting the points above, the proposed access driveway arrangement is supportable from a traffic engineering perspective.

Internal Design

The at-grade car park generally complies with the requirements of AS2890.1 (2004) and AS2890.6 (2009), with the following characteristics noteworthy:

- Three (3) residential car parking spaces have been designed in accordance with AS2890.1 (2004) User Class 1A, being a minimum width of 2.4 metres, length of 5.4 metres, and providing an aisle width of 5.8 metres.
- Three (3) residential accessible parking spaces have been provided in accordance with AS2890.6 (2009), being a minimum width of 2.4 metres, length of 5.4 metres, and providing an adjacent shared zone with the same dimensions.

- All spaces adjacent to obstructions greater than 150mm in height are to be provided with an additional width of 300mm.
- All blind aisles have been extended by a minimum of 1.0 metre beyond the last car parking space.
- A minimum clear head height of 2.2 metres is to be provided for all trafficable areas.
- A minimum clear head height of 2.5 metres is to be provided above all accessible parking space and adjacent shared zones.
- Visuals splays are to be provided in accordance with Figure 3.3 of AS2890.1 (2004).
- All parking spaces are allocated to individual units and therefore a turning bay is not required or provided.
- A swept path analysis of all critical movements has been undertaken to confirm geometry and compliance with the relevant standards. This swept path analysis is included in **Attachment 2**.

In summary, the internal configuration of the at-grade car park has been designed in accordance with AS2890.1 (2004) and AS2890.6 (2009). It is however envisaged that a standard condition of consent could be imposed requiring compliance with these standards. As such, any minor amendments considered necessary (if any) can be dealt with prior to the release of any Construction Certificate.

Conclusion

On the basis of the above, the proposed Seniors Housing development at 52-56 Pank Parade, Blacktown in our view is considered supportable.

We trust the above is of assistance and request that you contact the undersigned should you have any queries or require any further information. In the event that any concerns remain, we request an opportunity to discuss these with Council officers prior to any determination being made.

Yours faithfully,

Traffix

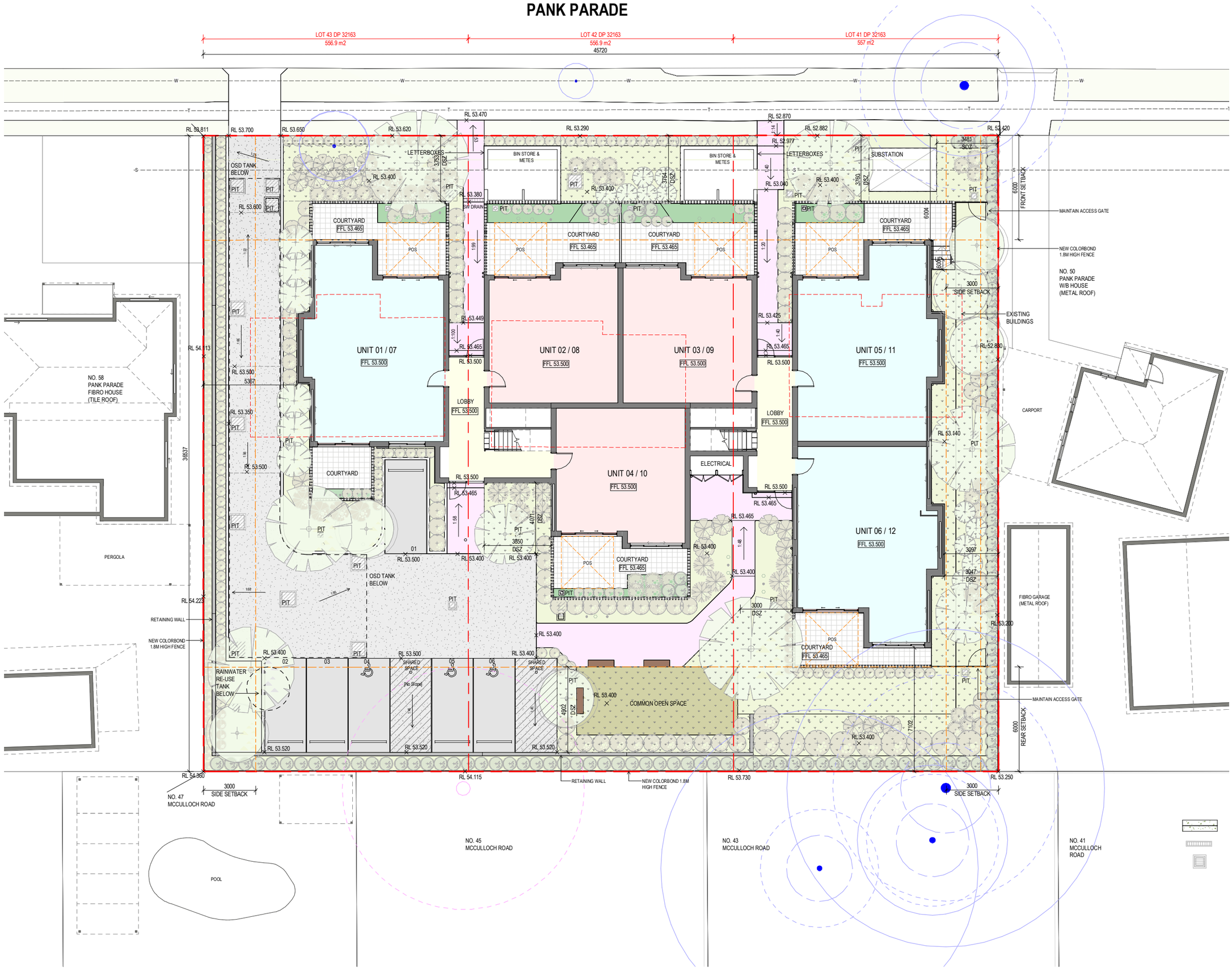
Ben Liddell
Director

Encl: Attachment 1 – Reduced Plans
Attachment 2 – Swept Path Analysis
Attachment 3 – Conflict Analysis

ATTACHMENT 1

Reduced Plans

PANK PARADE



- These designs and plans are the copyright of MODE DESIGN Corp. Pty Ltd and cannot be reproduced without written permission.
- Verify all dimensions on site prior to commencement of work.
- DO NOT scale off these drawings.
- Report any discrepancies to the architect before carrying out any work.

AMENDMENTS

REV	DESCRIPTION	AUTH	CHK	DATE
C	SKETCH DESIGN	VL	LC/KM	28.09.22
D	FOR COORDINATION	VL	KM	06.10.22
E	STAGE B - SKETCH DESIGN	VL	KM	10.10.22
F	STAGE B - LANDSCAPE UPDATE	VL	KM	11.10.22
G	DRAFT PART 5	VL	KM	02.11.22
H	DRAFT PART 5	VL	KM	04.11.22
I	DRAFT PART 5	VL	KM	09.11.22
J	PART 5	VL	KM	16.11.22

TREE LEGEND

TREES TO BE REMOVED

TREES TO BE RETAINED

STRUCTURAL ROOT ZONE (TPZ)
- REFER TO ARBORIST REPORT FOR DETAILS

TREE PROTECTION ZONE (TPZ)
- REFER TO ARBORIST REPORT FOR DETAILS

LEVEL LEGEND

EXISTING LEVEL EL 0.00
PROPOSED LEVEL RL 0.00

UNIT TYPE LEGEND

- ONE BEDROOM UNIT
- TWO BEDROOM UNIT

LANDSCAPE LEGEND

- PRIVATE LANDSCAPE AREA
- COS
- COMMON LANDSCAPE AREA
- DEEP SOIL ZONE
- PARKING
- DRIVEWAYS
- WALKWAYS
- COURTYARD / BALCONY

GENERAL LEGEND

- SITE BOUNDARY
- SITE SETBACK
- BALCONY OVER
- POS
- EXISTING SYDNEY WATER MAIN
- EXISTING SYDNEY WATER SEWER MAIN
- BENCH

ABBREVIATION LEGEND

AC	AC OUTDOOR CONDENSER
BOL	BOLLARD
COM	COMMS CUPBOARD
CLO	CLOTHESLINE
D	DOOR
W	WINDOW
DP	DOWNPIPE
FN	COLORBOND FENCE
GAS	INSTANTANEOUS GAS
GTR	GUTTER
LVR	EXHAUST LOUVRE
PIT	STORMWATER PIT
POS	PRIVATE OPEN SPACE
FIP	FIRE INDICATIVE PANEL
PWR	POWER CPUBOARD
MIMIC	MIMIC PANEL
MP	METER PANEL
MSB	MAIN SWITCHBOARD

STATUS
PART 5

NORTH

0m 1 2 3 4 5

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CLIENT
LAHC

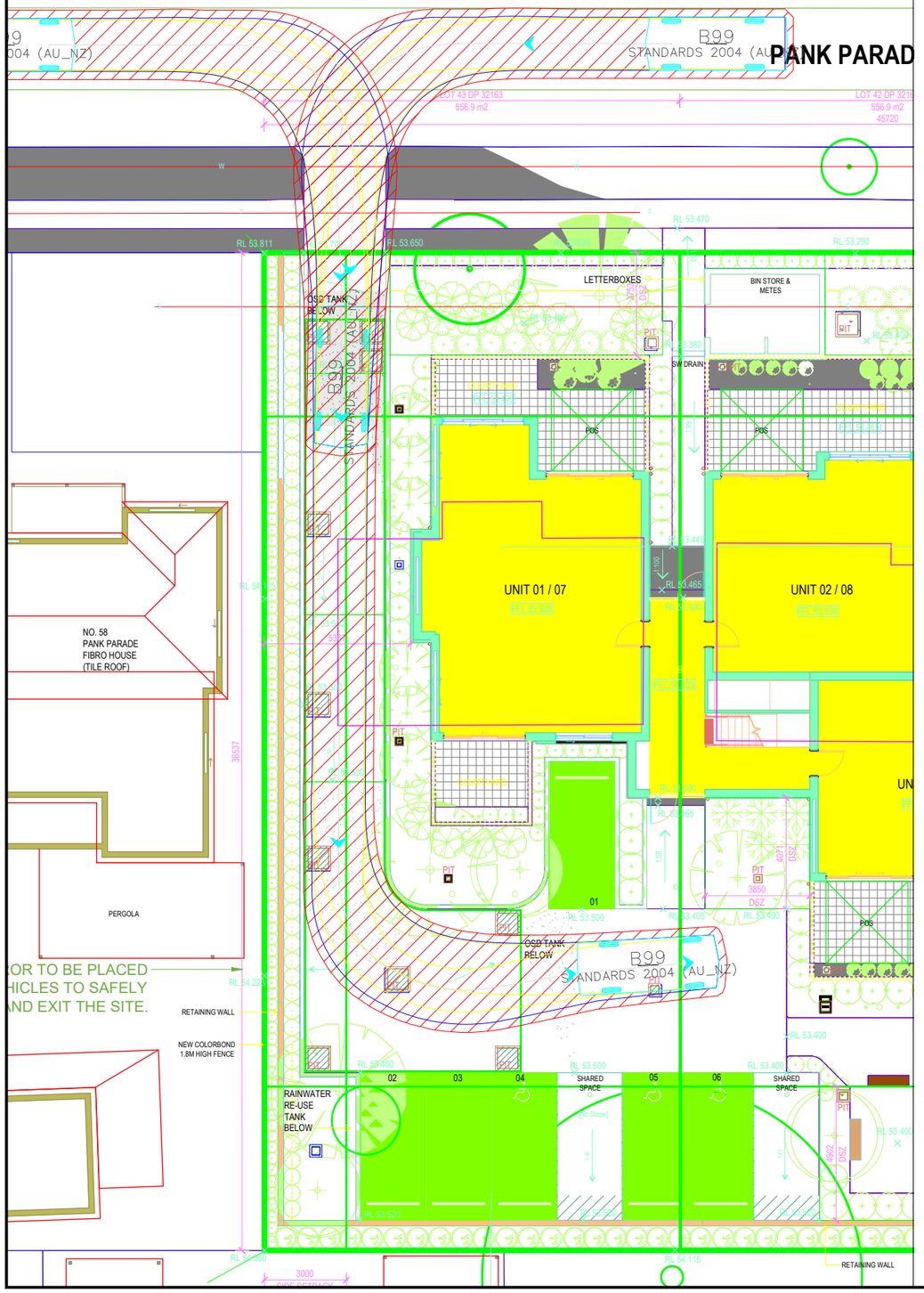
PROJECT
BLACKTOWN SENIOR HOUSING
52-56 Pank Parade, Blacktown
Lots 41, 42 & 43 DP32163

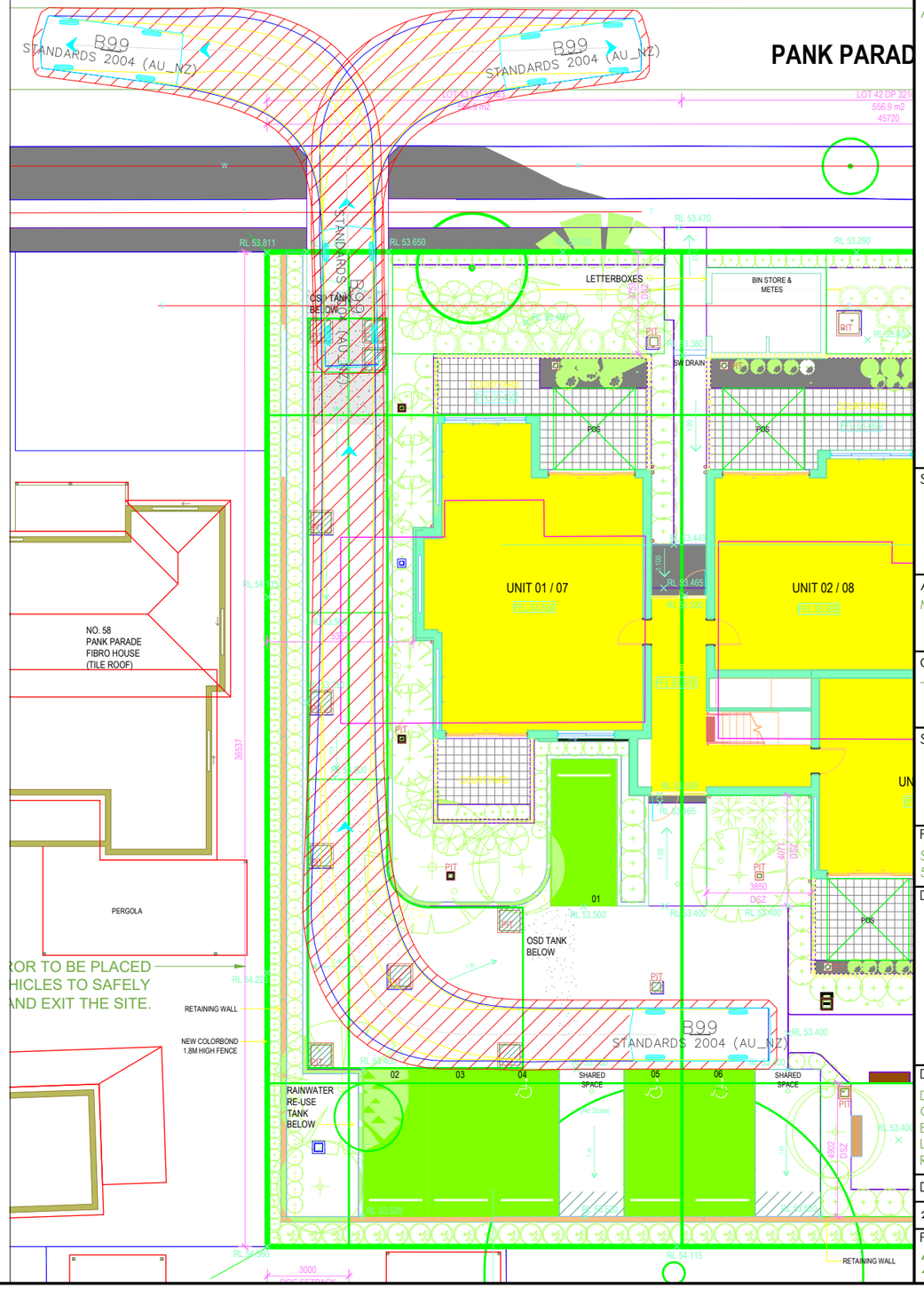
DRAWING TITLE
SITE PLAN

DRAWN	CHECKED		
VL	KM		
ISSUE	SCALE @ A1	SCALE @ A3	
16/11/2022 11:30:59 AM	1 : 100	1 : 200	
PROJECT No	STAGE	DRAWING No	REVISION
22032	DA	AR- 0100	J

ATTACHMENT 2

Swept Path Analysis





Notes:

This drawing is prepared for information purposes only. It is not to be used for construction.

TRAFFIX is responsible for vehicle swept path diagrams and/or drawing mark-ups only. Base drawing prepared by others.

Vehicle swept path diagrams prepared using computer generated turning path software and associated CAD drawing platforms. Vehicle data based upon relevant Australian Standards *(AS/NZS 2890.1:2004 Parking facilities - Off-street car parking,* and/or *AS2890.2:2002 Parking facilities - Off-street commercial vehicle facilities)*. These standards embody a degree of tolerance, however the vehicle characteristics in these standards represent a suitable design vehicle and do not account for all variations in vehicle dimensions / specifications and/or driver ability or behaviour.

Rev.	Revision Note	By.	Date
A	Swept Path Analysis	HK	07-10-22

Swept Path Legend

- Wheel Path
- Vehicle Body Envelope
- Clearance Envelope (300mm)

Architect
MODE

Client
-

Scale / Plan Orientation

0 2 4 6 8m
1:200 @ A3

Project Description
Senior's Housing Development
52-56 Pank Parade, Blacktown

Drawing Prepared By

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Drawing Title
Design Review
Ground Floor
B99 Design Vehicle
Left: Entry Movements
Right: Exit Movements

Drawn:	Checked:	Date:
HK	BL	07-10-22

22.037d03v01 TRAFFIX [221116 Plans] Design Review.dwg

Project No.	Drawing Phase	Drawing No.	Rev.
22.037	DA	TX.01	A

ATTACHMENT 3

Conflict Analysis

User Input:

Length of Conflict	24		m
	Northbound Vehicle	*Southbound Vehicle*	
AverageVehicle Speed	10	10	km/h
Other Delay	0	0	sec
Flow Rate	1	4	veh/h

Calculation:

Disclaimer:

The following calculation has been set out in accordance with *Austroads Guide to Traffic Management, Part 2: Traffic Theory (2008), Section 3.2.2 The Poisson Distribution.*

	Northbound Vehicle	*Southbound Vehicle*	
Conflict Period	8.64	8.64	s
No. of vehicles passing during conflict period	0.002	0.010	veh
Probability of one (1) or more vehicles will pass during the conflict period	0.000%	0.005%	
Probability of Conflict	0.005%		

Summary of Results:

During the peak vehicle flow period:

- the period of conflict is approximately 8.64s, i.e. the time it takes for a vehicle to travel along the single lane section of the road from one end to the other where there are no passing opportunities.

- The probability of one (1) or more northbound vehicles travelling along the single lane two-way section of the road during the next 8.64s is 0.000% or 1 in 347778 vehicles.

- The probability of one (1) or more southbound vehicles travelling along the single lane two-way section of the road during the next 8.64s is 0.005% or 1 in 21841 vehicles.

- The probability of two vehicles travelling in opposite directions meeting each other along the single lane two-way section of the road during the next 8.64s is 0.005% or 1 in 20550 vehicles.