TRAFFIX
TRAFFIC AND TRANSPORT PLANNERS

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Reference: 22.036r01v03

28 April 2023

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

Attention: Mr Kirk MacDonnell, Associate

Re: 16-22 Funda Crescent, Lalor Park
Proposed Senior's Housing Development
Traffic Impact Statement

Dear Kirk,

TRAFFIX has been commissioned to assess the traffic impacts in support of a Part 5 Activity Submission relating to a seniors housing development located at 16-22 Funda Crescent, Lalor Park. 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 Review of Environmental Factors (REF), prepared separately. The proposed development is considered to be a minor development with less than 300 dwellings. As such, the submission 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 16-22 Funda Crescent, Lalor Park and is located approximately 28.2 kilometres northwest of Sydney Central Business District (CBD). In a local context it is located approximately 1.14 kilometres north of Seven Hills Railway Station. More specifically, it is located on the western side of Funda Crescent, approximately 40 metres north of Noakes Parade.

The site is generally rectangular in configuration and has a total site area of approximately 2,295m^2. It has an eastern frontage of approximately 63 metres to Funda Crescent. The northern, southern, and western boundaries of 35m, 36m and 66m 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:

- Prospect Highway: forms part of a TfNSW Main Road (MR 644) that traverses northeast-southwest between Abbott Road in the northeast and Seven Hills Road South in the southwest. Within the vicinity of the site, it is subject to 60km/h speed zoning and generally accommodates three (3) lanes of traffic in each direction separated by a median. Prospect Highway does not permit on-street parking along both sides of the road.
- Lucas Road: a local road that traverses east-west between Prospect Highway in the east and Cardiff Street in the west. Within the vicinity of the site, it is subject to 50km/h speed zoning and generally accommodates a single lane of traffic in each direction. Lucas Road generally permits unrestricted on-street parking along both sides of the road.
- Northcott Road: a local road that traverses east-west between Johnson Avenue in the east and Turner Street in the west. Within the vicinity of the site, it is subject to 50km/h speed zoning and accommodates a single lane of traffic in each direction. Northcott Road generally permits unrestricted on-street parking along both sides of the road.
- Freeman Street: a local road that traverses north-south between Northcott Road in the north and Lucas Road in the south. Within the vicinity of the site, it is subject to 50km/h speed zoning and generally accommodates a single lane of traffic in each direction within an undivided carriageway. Freeman Street generally permits unrestricted on-street parking along both sides of the road.
- Funda Crescent: a local road that traverses north-south between Burke Road in the north and Kennedy Parade in the south. It is subject to 50km/h speed zoning accommodates a single lane of traffic in each direction. Funda Crescent generally 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 main road network using Prospect Highway and the surrounding local road network such as Northcott Road, Freeman Street, Lucas Road and Funda Crescent serving the region.

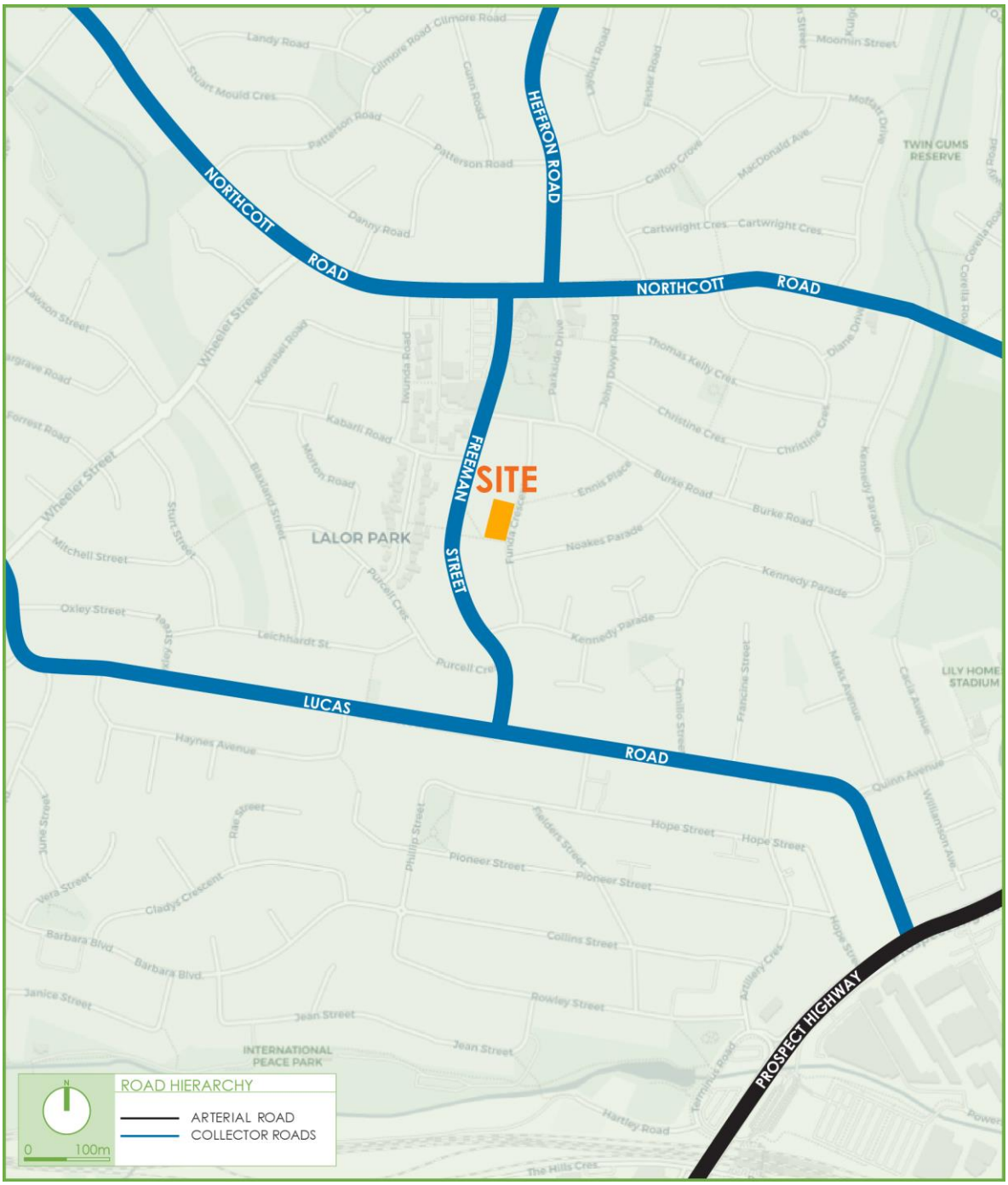

Figure 3: Road Hierarchy

Public Transport

The subject site is within 400 metres of 10 bus stops that currently operate as shown in **Figure 4** which provides the following key services at regular periods:

- 705 – Blacktown Parramatta
- 711 – Blacktown Parramatta

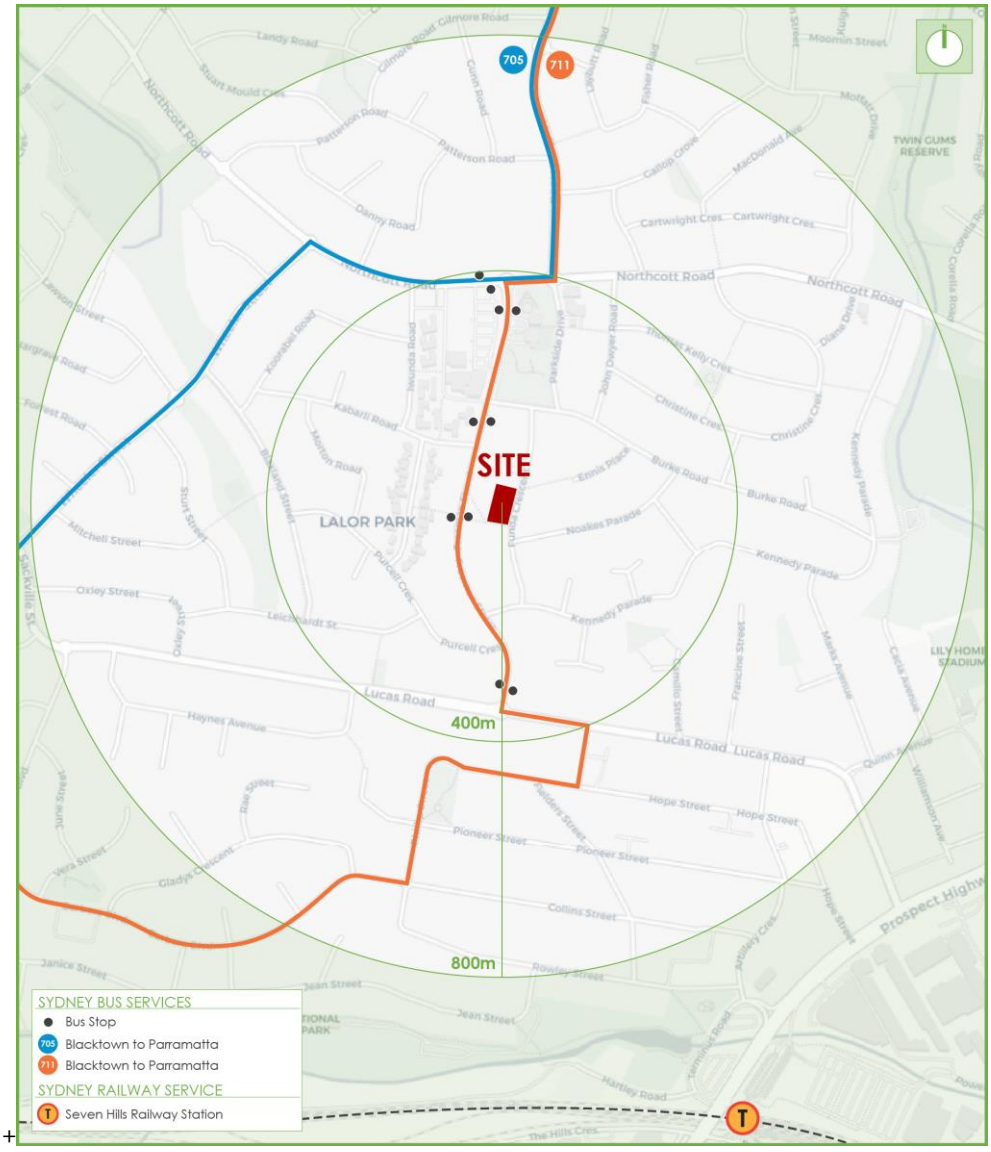

Figure 4: Public Transport

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

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 four (4) residential dwellings and construction of a new Seniors Living facility comprising the following:
  - 18 x Independent Living Units (ILU's) comprising:
    - 10 x 1-bedroom units
    - 8 x 2-bedroom units
  - Provision of eight (8) 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 1** below:

Table 1 – SEPP (2021) Car Parking Rate and Provisions

Type	Number	SEPP Minimum Car Parking Rate	Parking Required	Parking Provided
Seniors Housing				
Dwellings*	18	0.2 spaces per dwelling	3.6 (4)	8
Total			**4**	**8**

**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 four (4) 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, four (4) parking spaces (the minimum parking requirement) have been provided in accordance with AS2890.6 (2009).

Furthermore, an additional four (4) parking spaces have been provided, resulting in a total provision of eight (8) 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, four (4) parking spaces must be provided as accessible parking spaces as set out in AS2890.6 (2009). In response, four (4) accessible 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 four (4) 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 periods; and
- 0.95 vehicle trips per dwelling during the PM peak periods.

Adoption of this rate to the four (4) dwellings results in the following trips generation, adopting an 80:20 split for arrivals and departures:

- 4 vehicle trips per hour during the AM peak (1 in, 3 out); and
- 4 vehicle trips per hour during the PM peak (3 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 18 dwellings and applying and 80:20 split results in the following traffic generation:

- 7 vehicle trips per hour during the PM peak (6 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 four (4) vehicle trips in and AM peak and an increase of three (3) 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 20 minutes.

Access and Internal Design

Access and Queuing

The proposed development incorporates a total of eight (8) car parking spaces with access from Funda Crescent (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**.

It is also noteworthy that a vehicle passing bay has been provided for the very rare occurrence that two (2) vehicles are required to pass each other. A conflict analysis demonstrates there is only a 0.014% 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 6,970 vehicles. This conflict analysis is presented in **Attachment 3**.

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:

- Four (4) 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.
- Four (4) 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.
- It is noted that the northern accessible parking space shared area will be designed as a shared turning bay (bollard positioned further into space) to allow all vehicles to enter/exit the site in a forward direction. Reference is made to supporting documentation prepared by the access consultant in this regard.
- 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).
- 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 16-22 Funda Crescent, Lalor Park 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

FUNDA CRESCENT

AMENDMENTS

REV	DESCRIPTION	AUTH	CHK	DATE
A	FOR COORDINATION	VL	KM	20.09.22
B	PRELIMINARY SKETCH DESIGN	VL	KM	23.09.22
C	FOR COORDINATION	VL	KM	06.10.22
D	STAGE B - SKETCH DESIGN	VL	KM	10.10.22
E	STAGE B - LANDSCAPE UPDATE	VL	KM	11.10.22
F	DRAFT PART 5	VL	KM	17.11.22

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 RL 0.00

PROPOSED LEVEL RL 0.00

UNIT TYPE LEGEND

ONE BEDROOM UNIT

TWO BEDROOM UNIT

LANDSCAPE LEGEND

PRIVATE LANDSCAPE AREA

LAWN AREA

COMMON LANDSCAPE AREA

DEEP SOIL ZONE

PARKING

DRIVEWAYS

WALKWAYS

COURTYARD / BALCONY

GENERAL LEGEND

SITE BOUNDARY

SITE SETBACK

BALCONY OVER

EXISTING SYDNEY WATER MAIN

EXISTING SYDNEY WATER SEWER MAIN

BENCH

EQUIPMENT CLEARANCE

SERVICE RISER

ABBREVIATION LEGEND

AC	AC OUTDOOR CONDENSER
BOL	BOLLARD
COM	COMMS CUPBOARD
CLO	CLOTHESLINE
D	DOOR
W	WINDOW
DP	DOWNPIPE
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
DRAFT PART 5

0m 2 4 6 8 10

NORTH

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syd@modedesign.com.au

ABN: 65 112 807 931

CLIENT
LAHC

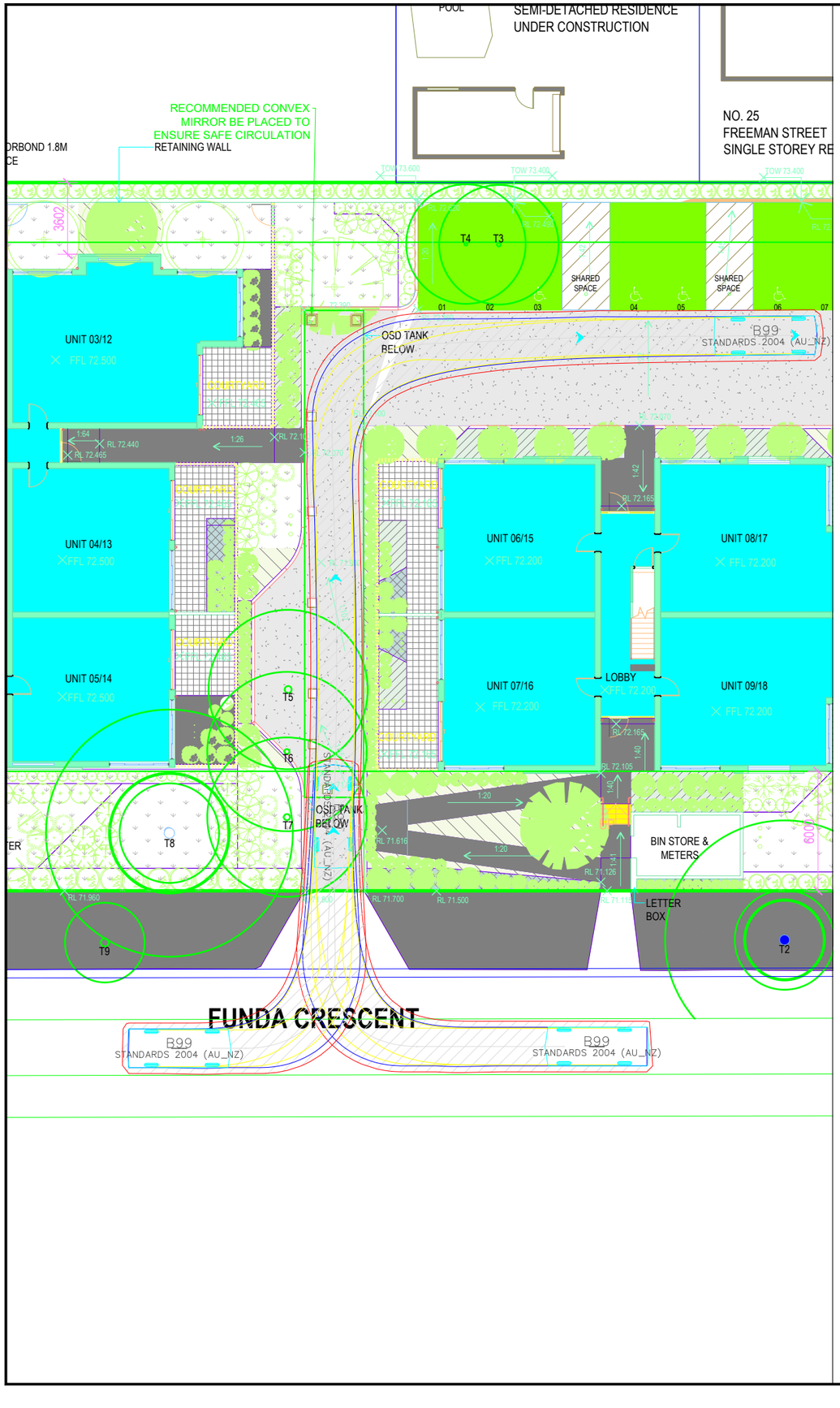
PROJECT
LALOR PARK SENIOR HOUSING
16-22 Funda Crescent, Lalor Park
360, 361, 362 & 363 DP31954

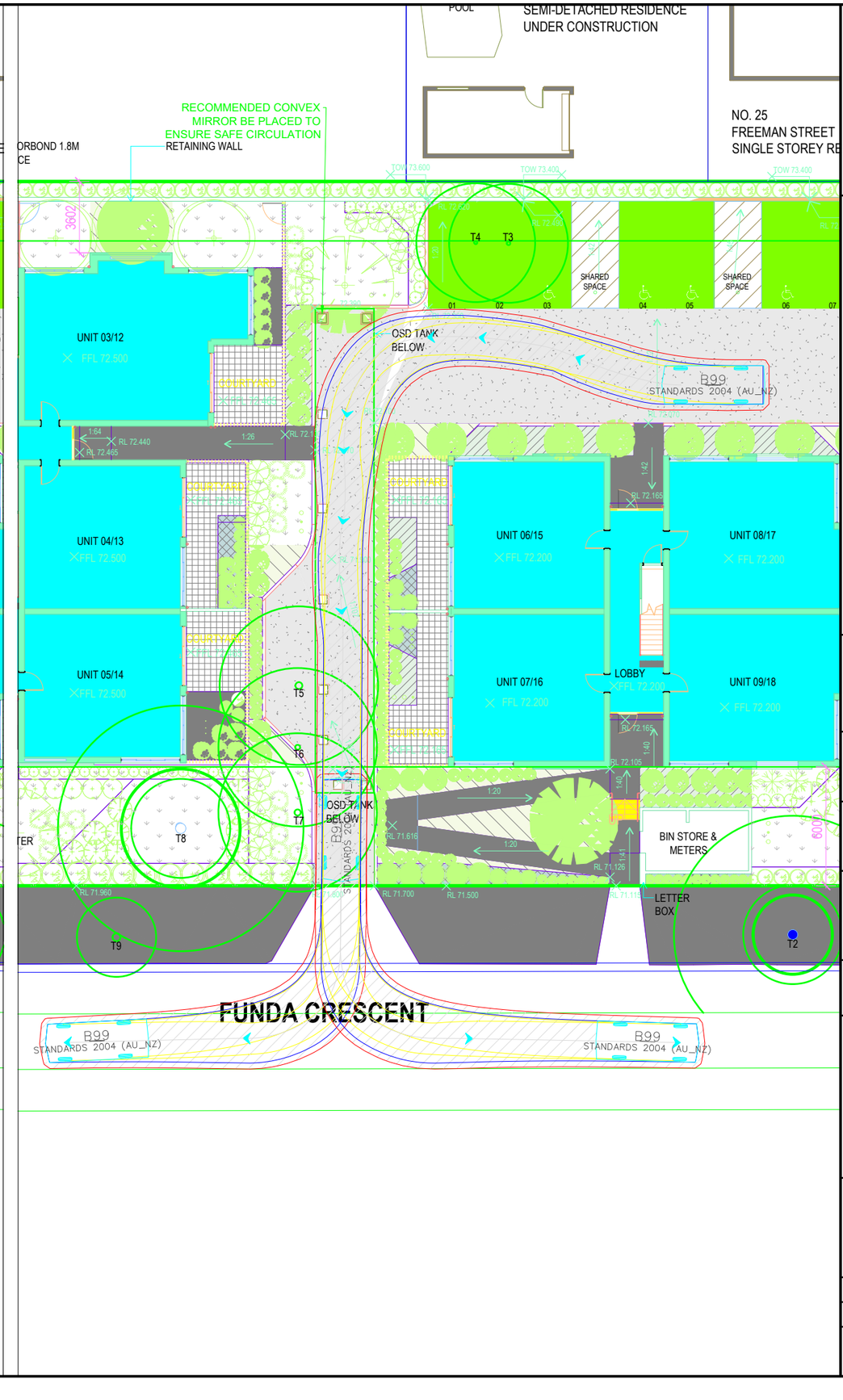
DRAWING TITLE
SITE PLAN

DRAWN VL		CHECKED KM	
ISSUE 17/11/2022 7:12:29 PM		SCALE @ A1 1:200	SCALE @ A3 1 : 400
PROJECT No 22032	STAGE C	DRAWING No AR- 0100	REVISION F

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	Design Review	HK	17-11-22

Swept Path Legend

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

Architect
MODE

Client
-

Scale / Plan Orientation

0 2.5 5 7.5 10m
1:250 @ A3

Project Description
Senior's Housing Development
16-22 Funda Crescent, Lalor Park

Drawing Prepared By

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Drawing Title
Swept Path Analysis
Ground Floor
B99 Design Vehicle
Left: Entry Movements
Right: Exit Movements

Drawn:	Checked:	Date:
HK	BL	08-04-22

22.036d02v01 TRAFFIX [221117 Plans] Design Review.dwg

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

ATTACHMENT 3

Conflict Analysis

User Input:

Length of Conflict	28		m
	Eastbound Vehicle	*Westbound Vehicle*	
AverageVehicle Speed	10	10	km/h
Other Delay	0	0	sec
Flow Rate	1	6	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	10.08	10.08	s
No. of vehicles passing during conflict period	0.003	0.017	veh
Probability of one (1) or more vehicles will pass during the conflict period	0.000%	0.014%	
Probability of Conflict	0.014%		

Summary of Results:

During the peak vehicle flow period:

- the period of conflict is approximately 10.08s, 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 10.08s is 0.000% or 1 in 255579 vehicles.
- The probability of one (1) or more southbound vehicles travelling along the single lane two-way section of the road during the next 10.08s is 0.014% or 1 in 7166 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 10.08s is 0.014% or 1 in 6970 vehicles.