



TRAFFIC IMPACT ASSESSMENT (TIA)

Proposed Seniors Housing Development 35-39 West Street, Lurnea NSW 2170

Reference: 23.342r01v03
Date: October 2023

Suite 2.08, 50 Holt St
Surry Hills, NSW 2010

t: (02) 8324 8700
w: www.traffic.com.au

DOCUMENT VERIFICATION

Job Number	23.342			
Project	Proposed Seniors Living Development 35-39 West Street, Lurnea NSW 2170			
Client	Mcintosh and Phelps			
Revision	Date	Prepared By	Checked By	Signed
v03	03/10/2023	Hayden Dimitrovski	Thomas Yang	

CONTENTS

1. Introduction	1
2. Location and Site	2
3. Existing Traffic Conditions	5
3.1 Road Network	5
3.2 Public Transport	6
4. Description of Proposed Development	9
5. Parking Requirements	10
5.1 Car Parking	10
5.2 Refuse Collection	10
6. Traffic and Transport Impacts	11
6.1 Existing Site Generation	11
6.2 Development Trip Generation	11
6.3 Traffic Impacts	12
7. Access and Internal Design Aspects	13
7.1 Site Vehicular Access	13
7.2 Internal Design	13
7.3 Summary	14
8. Conclusions	15
Appendices	
Appendix A: Reduced Plans	
Appendix B: Swept Path Analysis	

1. INTRODUCTION

TRAFFIX has been commissioned by McIntosh & Phelps to undertake a Traffic Impact Assessment (TIA) in support of a development application (DA) relating to a seniors living development located at 35-39 West Street, Lurnea comprising 12 units. The development is part of NSW Land and Housing Corporation's (LAHC) business objectives to provide more social housing and has been assessed under State Environmental Planning Policy (Housing) 2021 (herein referred to as "Housing SEPP") requirements.

This report documents the findings of our investigations and should be read in the context of the Review of Environmental Factors (REF) prepared separately. The development is a minor development and does not require referral to the RMS under the provisions of SEPP (Infrastructure) 2021.

The report is structured as follows:

- Section 2: Describes the site and its location
- Section 3: Documents existing traffic conditions
- Section 4: Describes the proposed development
- Section 5: Assesses the parking requirements
- Section 6: Assesses traffic impacts
- Section 7: Discusses access and internal design aspects
- Section 8: Presents the overall study conclusions

2. LOCATION AND SITE

The subject site comprises the following allotments:

- 35 West Street Lot 17 DP215559;
- 37 West Street Lot 16 DP215559; and,
- 39 West Street Lot 15 DP215559.

The subject site is located on the north-western corner of West Street / Jedda Road. In a regional context, the site is located 3.45-kilometres south-west of Liverpool Railway Station and 3.2-kilometres southwest of Liverpool Central Business District (CBD).

The site has a total site area of 1.7-hectares and consists of three (3) single-occupancy residential dwellings. It has an eastern frontage to West Street measuring 51.7-metres, southern frontage to Jedda Road measuring 26.8-metres, western and northern boundaries to adjacent residential developments measuring 58.6-metres and 36.6-metres, respectively.

Vehicular access to the site is currently provided via a single vehicle crossing for each allotment.

A Location Plan is presented in **Figure 1**, with a Site Plan presented in **Figure 2** which provides an appreciation of the general character of roads and other key attributes in proximity to the site.

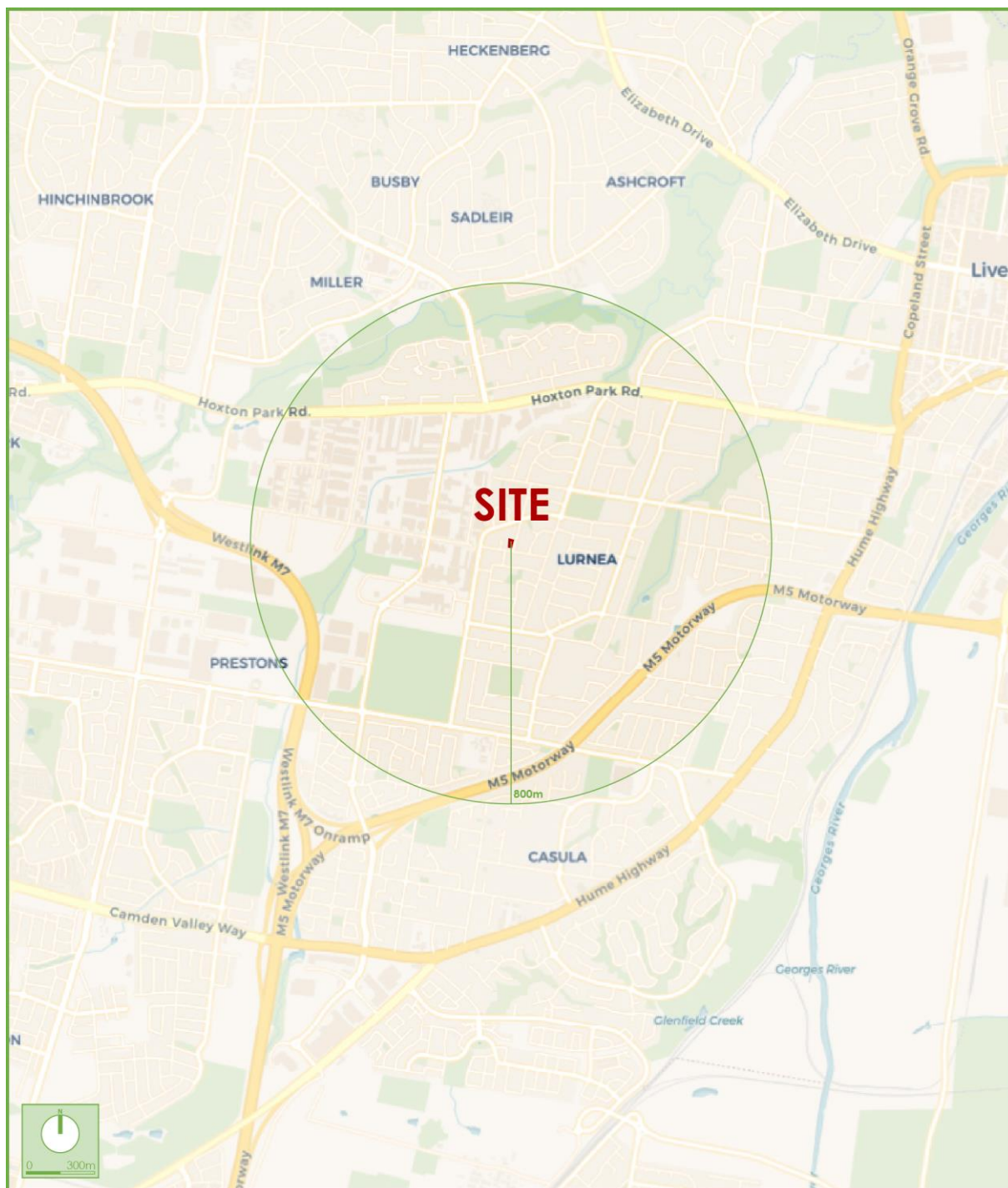


Figure 1: Location Plan



Figure 2: Site Plan

3. EXISTING TRAFFIC CONDITIONS

3.1 Road Network

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

- Hoxton Park Road: a TfNSW Main Road (MR681) that generally runs in an east-west direction between Hume Highway in the east and Cowpasture Road in the west. In the vicinity of the site, Hoxton Park Road has a posted speed limit of 70km/hr and consists of two (2) traffic lanes in both directions separated by a bi-directional T-Way running along the centre of the road. Kerbside parking is not permitted on either side of Hoxton Park Road.
- Hill Road: a local-collector road that generally traverses in a north-south direction between Hoxton Park Road in the north and Hillview Parade in the south. Within the vicinity of the site, Hill Road is subject to 50km/hr speed zoning and accommodates a single lane of traffic in each direction. Unrestricted kerbside parking is permitted along both sides of Hill Road.
- Wonga Road: a local-collector road that generally traverses in a north-south direction between a cul-de-sac in the north and Kurrajong Road in the south. Within the vicinity of the site, Wonga Road is subject to 50km/hr speed zoning and accommodates a single lane of traffic in each direction. Unrestricted kerbside parking is permitted along both sides of Wonga Road.
- Jedda Road: a local road that traverses east-west direction between Hill Road in the east and Bernera Road in the west. Within the vicinity of the site, Jedda Road is subject to a 50km/hr speed zoning and accommodates a single lane of traffic in each direction. Unrestricted kerbside parking is permitted along both sides of Jedda Road.

- West Street: a local road that traverses in a north-south direction between Reilly Street in the north and Jedda Road in the south. Within vicinity of the site, West Street is subject to a 50km/hr speed zoning and accommodates one (1) traffic lane in either direction within an undivided carriageway. Unrestricted kerbside parking is permitted along both sides of West Street.

3.2 Public Transport

The existing bus services that operate in the locality are shown in **Figure 4**. Standard transport planning guidelines state that a development is advantageously located to benefit bus services if it is within 400 metres walking distance of a bus stop. It is evident that the site benefits from great bus services with eight (8) bus stops located within 400 metres of the site. These nearby bus services are listed below:

- 865 – Casula Mall to Liverpool via Lurnea Shops; and,
- 869 – Ingleburn to Liverpool via Edmondson Park & Prestons.

The above bus provides connections to Liverpool Railway Station and Ingleburn Railway Station, further providing access to the wider public transport network. Further information regarding bus frequencies is available from the Transport for NSW information website: <https://www.transportnsw.info>

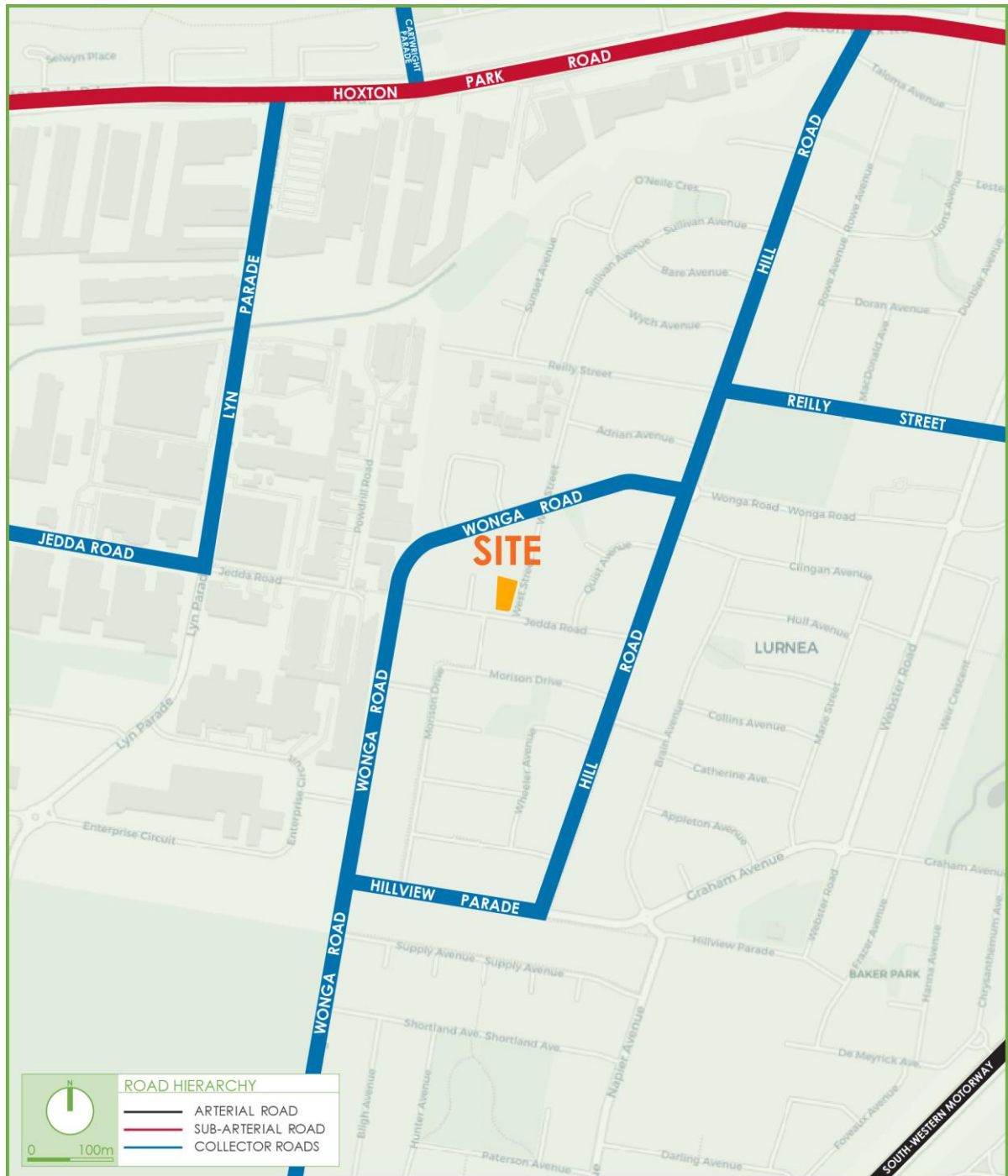


Figure 3: Road Hierarchy

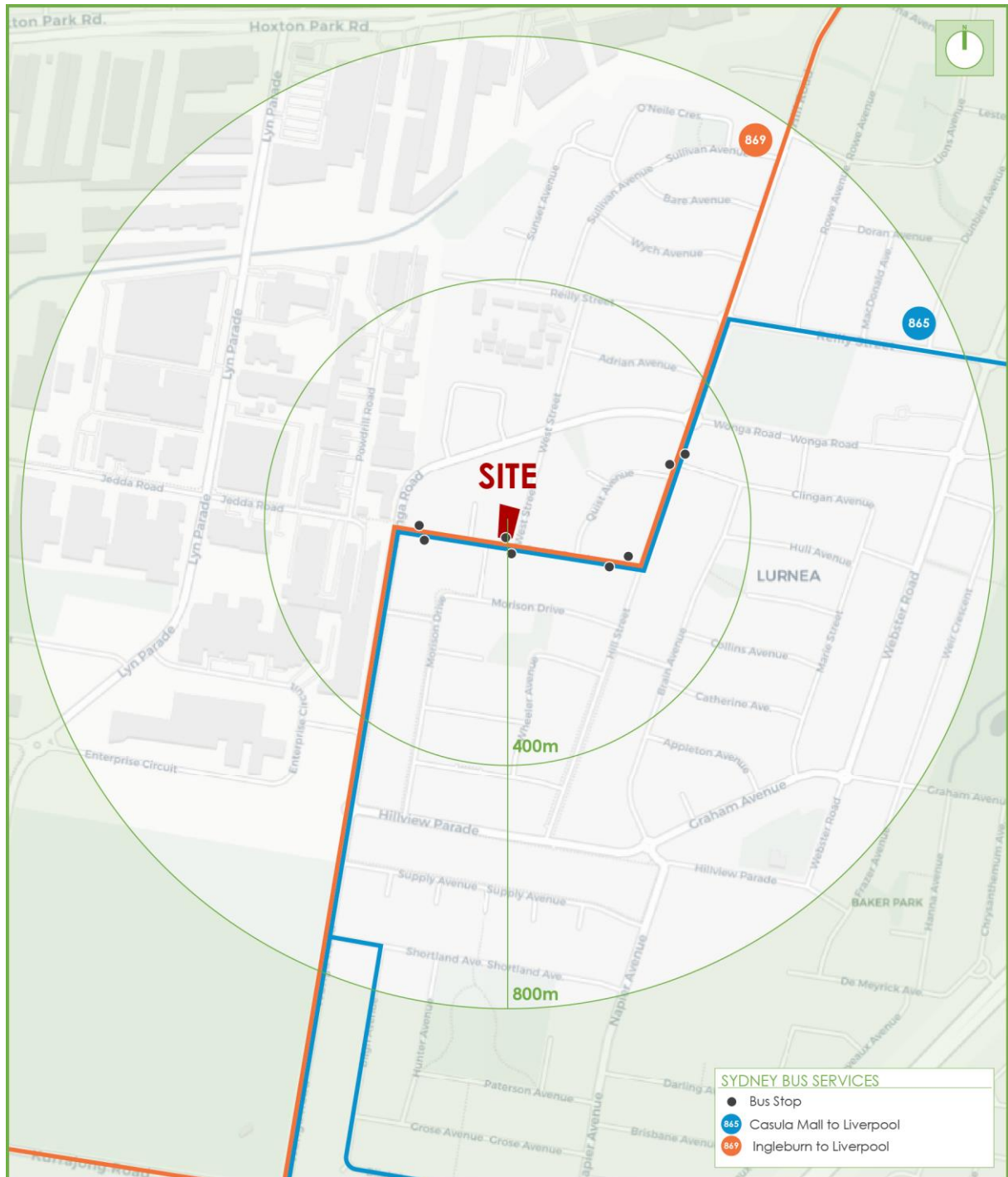


Figure 4: Public Transport

4. DESCRIPTION OF PROPOSED DEVELOPMENT

A detailed description of the proposed development is provided in the Review of Environmental Factors prepared separately. In summary, the development for which approval is now sought is a seniors housing development comprising of the following components:

- Demolition of existing structures;
- Construction of 12 x Independent Living Units (ILUs) comprising:
 - 6 x one-bedroom apartments; and,
 - 6 x two-bedroom apartments.
- At-grade, open-air car park providing parking for six (6) cars.

The parking and traffic impacts arising from the development are discussed in **Section 5** and **Section 6**. Reference should be made to the plans submitted separately to Council which are presented at reduced scale in **Appendix A**.

5. PARKING REQUIREMENTS

5.1 Car Parking

5.1.1 State Environmental Planning Policy (Housing) 2021

Clause 108-(2)-(j) of the Housing SEPP specifies the following non-discretionary parking requirements in relation to development for the purposes of independent living units as outlined in **Table 1**, that if complied with, prevents the consent authority from requiring more onerous standards for the matter.

Table 1: Housing SEPP Parking Rates and Provision

Type	Units	Minimum Parking Rate	Minimum Spaces Required	Spaces Provided
ILUs	12	1 parking space for every 5 dwellings	2.4 (3)	6
Totals			3	6

It is evident from **Table 1** that the proposed development requires a minimum of three (3) parking spaces to satisfy the non-discretionary parking requirements specified in the Housing SEPP. In response, the development provides a total of six (6) spaces including three (3) accessible spaces, thereby exceeding the requirements of the Housing SEPP.

5.2 Refuse Collection

Refuse collection will be undertaken by Council's waste contractor, with bins stored on site and brought out onto kerbside locations on collection days.

This arrangement is considered appropriate and supportable given the low frequency of waste collection and the scale of the proposed development. Reference should be made to the waste consultant's report for additional details.

6. TRAFFIC AND TRANSPORT IMPACTS

6.1 Existing Site Generation

The subject site currently accommodates three (3) single-occupancy dwellings.

The TfNSW Technical Direction (TDT 2013/04a) provides traffic generation rates for low density residential dwellings, which recommends weekday peak hour vehicle trips of 0.95-0.99 per dwelling.

Application of the above trip rates to the existing residential dwelling, and adopting an 80/20 directional split results in the following traffic generation:

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

6.2 Development Trip Generation

The TDT 2013/04a provides traffic generation rates for senior housing developments, which recommends weekday PM peak hour vehicle trips of 0.4 per dwelling. It is noted the TDT 2013/04a specifies that the morning site peak hour traffic of senior housing developments does not generally coincide with the network peak hour, hence, it is reasonable to assume the proposed development will not generate any traffic during the AM peak hour.

Application of the above trip rates to the 12 ILUs proposed, and adopting a 50/50 directional split results in the following traffic generation:

- 0 vehicle trips per hour during the AM peak hour (0 in, 0 out); and
- 5 vehicle trips per hour during the PM peak hour (3 in, 2 out).

6.3 Traffic Impacts

Taking into account the existing traffic generation of the site, the net traffic generation as a consequence of the development proposal is as follows:

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

The above traffic impacts results in a reduction of a vehicle trip every 20-metres during the AM peak period and an additional vehicle trip every 30-minutes during the PM peak period. As such, these traffic impacts are considered negligible and upgrades to the surrounding road network is not required.

On the above basis, it is clear that the development is supportable from a traffic planning perspective and no external network improvements are required.

7. ACCESS AND INTERNAL DESIGN ASPECTS

7.1 Site Vehicular Access

7.1.1 Access

The development proposes a total of six (6) residential parking spaces in an at-grade, open-air carparking area with access to West Street, a local access road. It will therefore require a Category 1 driveway under AS2890.1 (2004), being a combined entry and exit width of 3.0 to 5.5 metres. In response, a minimum 3-metre-wide driveway has been provided.

Swept path analysis has also been undertaken demonstrating a B99 design vehicle will be able to always enter and exit the site whilst driving in a forward direction at all times, provided in **Appendix B**.

7.2 Internal Design

The internal car park complies with the requirements of AS 2890.1 (2004) and AS 2890.6 (2022), and the following characteristics are noteworthy:

7.2.1 Parking Modules

- All standard car parking spaces have been designed in accordance with User Class 1A being for residential parking. These spaces are provided with a minimum space length of 5.4m and a minimum width of 2.4m.
- All spaces located adjacent to obstructions of greater than 150mm in height are provided with an additional width of 300mm.
- Dead-end aisles are provided with the required 1.0m aisle extension in accordance with Figure 2.3 of AS2890.1 (2004).
- All accessible parking spaces have been designed in accordance with AS 2890.6 (2022), being 2.4m wide, 5.4m long and situated immediately adjacent to a dedicated shared area.

7.2.2 Other Considerations

- Pedestrian sight triangles have been provided on both sides of the carpark access driveway in accordance with Figure 3.3 of AS 2890.1 (2004).

7.3 Summary

In summary, the internal configuration of the car park has been designed in accordance with AS 2890.1 (2004) and AS 2890.6 (2009). It is however envisaged that a condition of consent would be imposed requiring compliance with these standards and as such any minor amendments considered necessary (if any) can be dealt with prior to the release of a Crown Certificate.

8. CONCLUSIONS

In summary:

- The proposal seeks approval for the Land and Housing Corporation (LAHC) to construct a seniors housing development located at 35-39 West Street, Lurnea containing 12 Independent Living Units (ILUs) and off-street parking for a total of six (6) car spaces.
- The subject site is well connected to a public transport network with reliable access to regular bus services providing connection to Liverpool CBD, Lurnea Town Centre, Casula Mall and Ingleburn Railway Station, which offers a full range of shops, services, recreational facilities, as well as general practitioner clinics thereby satisfying Clause 93 of the Housing SEPP.
- The proposed development makes provision for a total of six (6) car spaces, compliant with the non-discretionary parking requirements specified in the Housing SEPP and prevents the consent authority from requiring more onerous standards for the matter.
- The traffic impacts associated with the proposed development results in a net reduction of a vehicle trip every 20-metres during the AM peak period and an additional vehicle trip every 30-minutes during the PM peak period. As such, these traffic impacts are considered negligible and upgrades to the surrounding road network is not required.
- The proposed car parking areas have been assessed to comply with the requirements of AS2890.1 (2004) and AS2890.6 (2022).

This traffic impact assessment therefore demonstrates that the subject application is supportable on traffic planning grounds. TRAFFIX anticipates an ongoing involvement during the development approval process.

APPENDIX A

Reduced Plans

JEDDA ROAD

19 JEDDA RD
1 STOREY BUILDING

33 WEST ST
1 STOREY BUILDING

LOT 15, 16, 17 DP 215559
1,723m²
PROPOSED APARTMENT BUILDING
(X12 UNITS)

WEST STREET

1 SITE PLAN
1:100

This work is copyright. Apart from any use permitted under the copyright act 1988, no part may be reproduced by any process, nor may any other exclusive right be exercised, without the permission of McIntosh & Phelps Pty Ltd, Australia.



LEGEND

REVISION

NO	DATE	REF	ISSUE	REVISION	BY
1409				A	DJ

ARCHITECT
McINTOSH & PHELPS
LANDSCAPE ARCHITECT
McINTOSH & PHELPS
02 9221 1461
02 9221 1461
STRUCTURAL & CIVIL ENGINEERS
TOKIN CONSULTING
02 9609 1307
SERVICES ENGINEERS
JWA CONSULTING ENGINEERS
02 9457 1000

ACCESS CONSULTANT
TREVOR & HOWSE
0420 122 611

McINTOSH & PHELPS
ARCHITECTURE
LANDSCAPE ARCHITECTURE
Suite 311, 380 George Street
Sydney NSW 2000
02 9221 1461
www.mcintoshandphelps.com.au

CLIENT
NSW
NEW LAND AND HOUSING CORPORATION
12 DANCY ST, PARRAMATTA NSW 2150

PROJECT
35 - 39 WEST STREET; 5 LEO AVE
LURNEA NSW 2170
LOT 15, 16, 17 / DP 215559; LOT 11 / DP 215559

DRAWING TITLE
SITE PLAN

SCALE @ A1
1:100
SCALE @ A3
1:200
PROJECT NUMBER
BGVDY
SHEET NO
A009
ISSUE
A

LEGEND

CONCRETE PAVING
TYPE 1
CONCRETE PAVING
TYPE 2
EXISTING CONTOUR
EXISTING CONTOUR
REMOVED

DEMOLISH EXISTING
BUILDING
SETBACK
A.POS
ACCESSIBLE PRIVATE OPEN
SPACE
FENCE TYPE 1
STEEL PRE-ROLLED SHEET
COLORBOND FENCE TO
BOUNDARY
HEIGHT 1800mm MAX

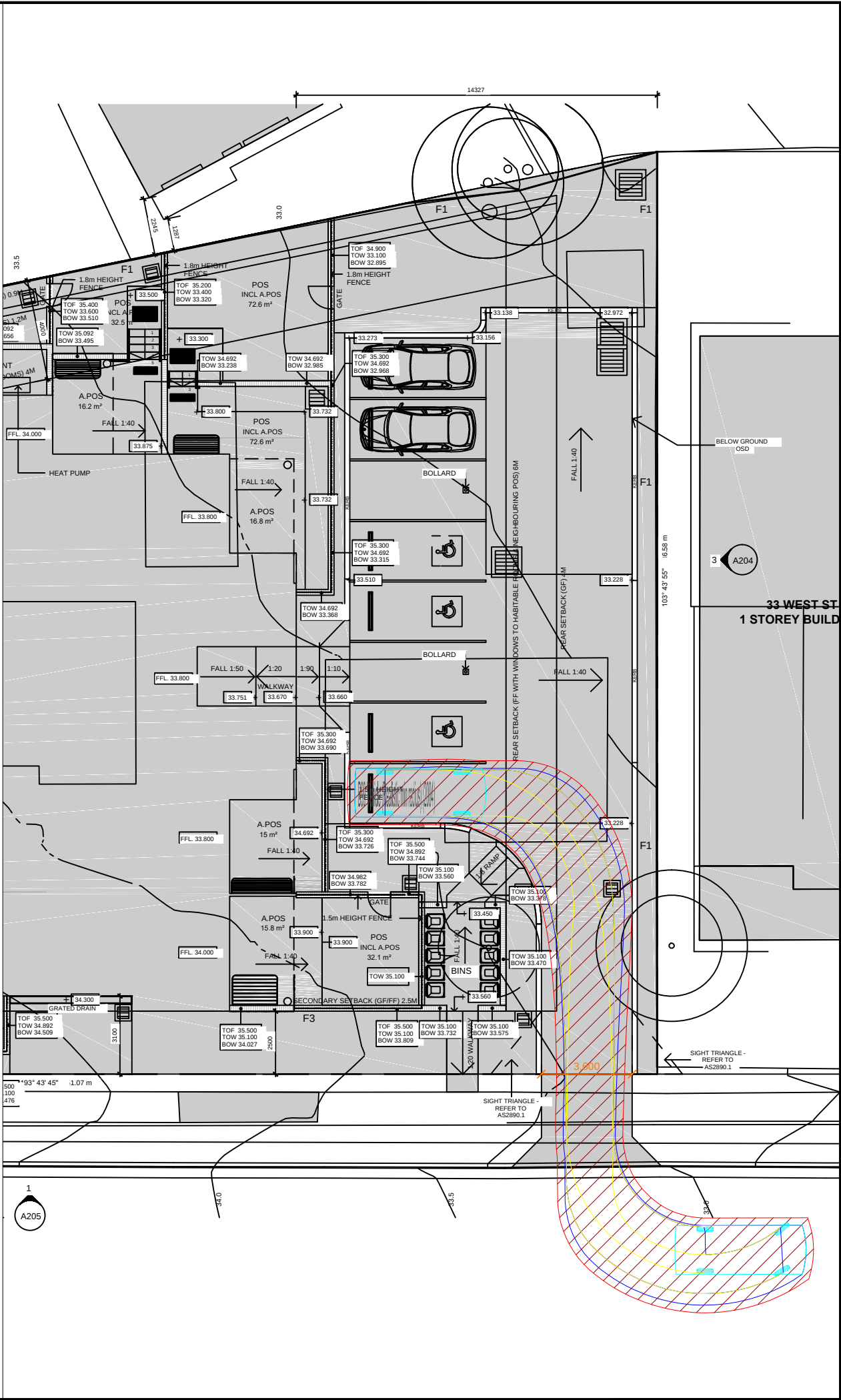
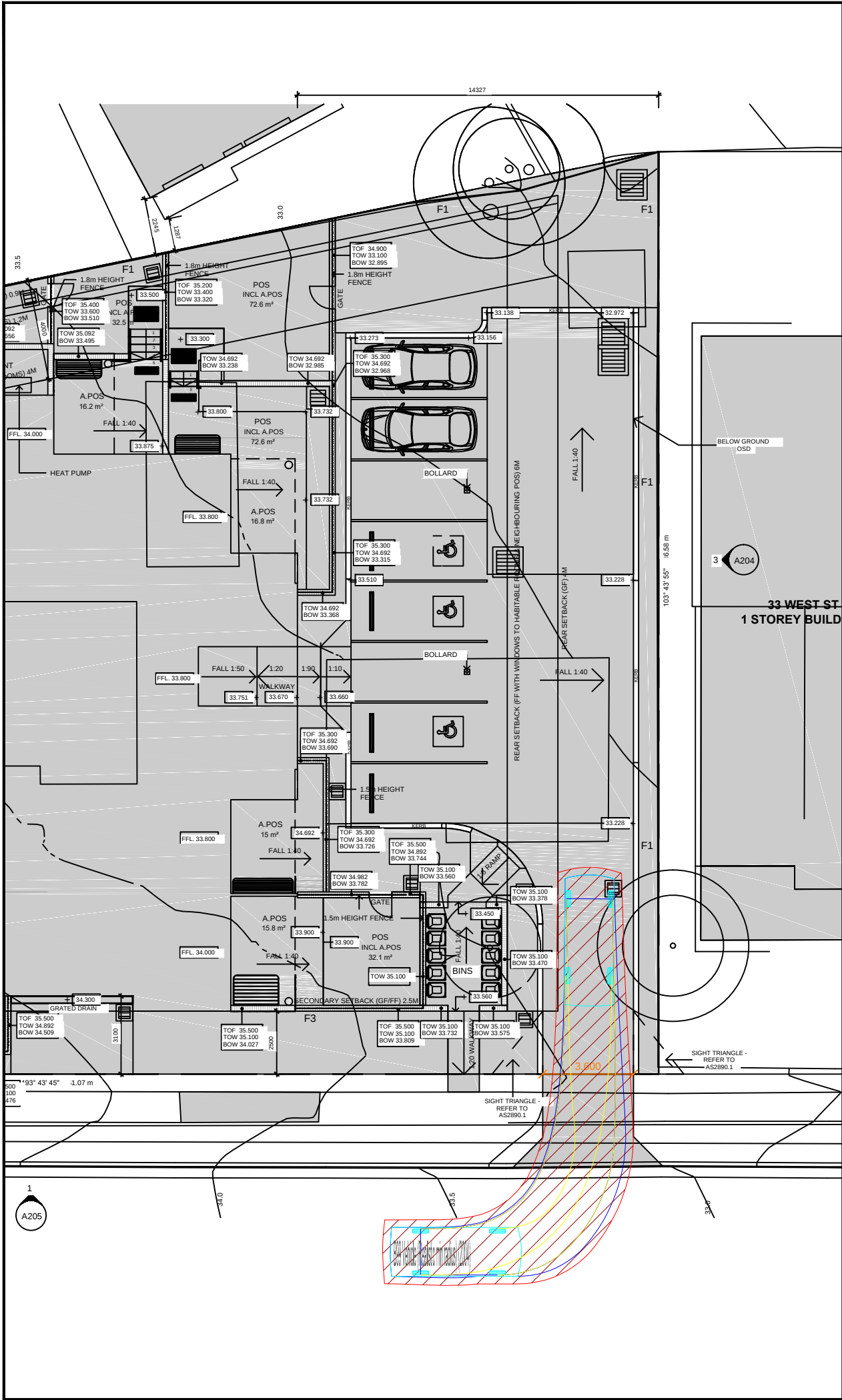
F2
FENCE TYPE 2
FENCE TYPE 2
POWDERCOATED VERTICAL
BATTENS ON FB1 WALL
HEIGHT 1200mm MAX
F3
FENCE TYPE 3
POWDERCOATED VERTICAL
BATTENS ON FB1 WALL
HEIGHT 1500mm MAX

COMMON
LANDSCAPE AREA
289.4 M²
LANDSCAPE AREA
281.2 M²
DEEP SOIL ZONE
MIN. 3M WIDE
89.7 M²
DEEP SOIL ZONE
(AT REAR)
MIN. 3M WIDE
188.1 M²

0 1 2.5 5 10 20M

APPENDIX B

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	TY	15-09-23

Swept Path Legend

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

Architect

Mcintosh Phelps
Suite 311, 350 George Street
Sydney NSW 2000

Client

Mcintosh Phelps
Suite 311, 350 George Street
Sydney NSW 2000

Scale

0 2 4 6 8m
1:200 @ A3

Project Description

Seniors Housing Development
35-39 West Street, Lurnea NSW 2170

Drawing Prepared By

TRAFFIX
TRAFFIC AND TRANSPORT PLANNERS

Suite 2.08, 50 Holt Street
Surry Hills, NSW 2010
PO Box 1124
Strawberry Hills, NSW 2012

t: +61 2 8324 8700
f: +61 2 9830 4481
w: www.traffix.com.au

Drawing Title

Swept Path Analysis

Design Vehicle: B99
Left: Entry
Right: Exit

Drawn:	Checked:	Date:
TY	TY	15-09-23

23.342d02v01 TRAFFIX [230914 Plans] Design Review.dwg

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