

# Proposed Residential Development 10-12, Burrundulla Avenue, Mudgee

## Traffic and Parking Assessment

Ref: 22281

Date: March 2024

Issue: C

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# 1.0 Introduction

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This report has been prepared for Mid-Western Regional Council to accompany a Development Application for a proposed “Key Worker Housing Complex” on the consolidated site of 10-12 Burrundulla Avenue at Mudgee (Figure 1).

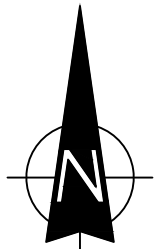
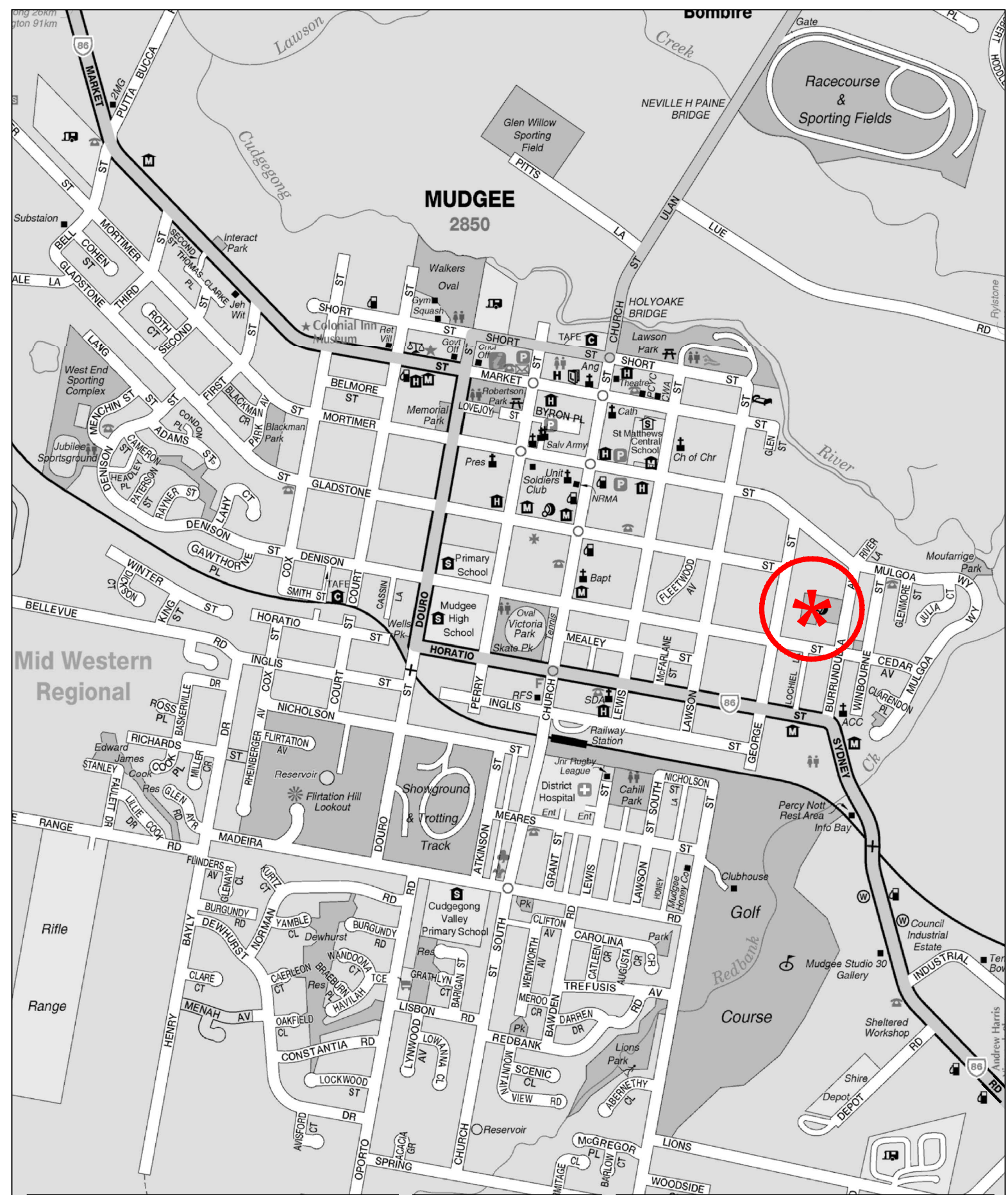
Mudgee, which is a the principal centre in the Mid-Western Region, has active industrial and thriving tourism sectors and with this growing economic base. However, as with most country regional centres, the population growth is resulting in an increased demand for “services” and this in turn has created a need to provide for and maintain “keyworkers”. Council is very aware of this need and the proposed development reflects their pro-active response.

The proposed Affordable Housing development scheme comprises:

- ❖ subdivision of the site with provision of new road and pedestrian networks
- ❖ 47 residential dwellings in various formats

The purpose of this report is to:

- ❖ describe the site, the existing circumstances and the proposed development scheme
- ❖ describe the road network serving the site and the traffic conditions on that network
- ❖ assess the potential traffic implications
- ❖ assess the adequacy of the proposed parking provision
- ❖ assess the proposed access, internal circulation and servicing arrangements



**LOCATION**

**FIG 1**

## 2.0 Proposed Development Scheme

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### 2.1 Site, Context and Existing Circumstances

The site (Figure 2) which is Council land is Lot 122 of DP 1074283 that occupies an irregular shaped area of some 1.67ha with frontages to the western side of the Burrundulla Avenue and the eastern side of George Street.

The site, which is located just to the east of the Mudgee commercial centre, was formerly occupied by a lawn bowls club and is adjoined on all sides by residential dwellings including some new medium density dwellings.

The level site is cleared and vacant with some areas of shrubs while there are 2 access driveways on the Burrundulla Avenue frontage and 1 on the George Street frontage.

### 2.2 Proposed Development

It is proposed to undertake some minor earthworks to provide for services installation, as well as the new roads and building platforms. The proposed Affordable Housing comprising 7 different dwelling types comprising:

9 × one-bedroom

26 × two-bedroom

10 x three-bedroom

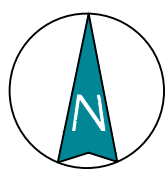
2 x four-bedroom

**Total 47 Dwellings**

A total of 71 parking spaces will be provided within the lots while visitor parking will be accommodated on-street.



**LEGEND**



**SITE**

**FIG 2**

## Transport and Traffic Planning Associates

A new access road will be constructed through the site connecting between Burrundulla Avenue and George Street with a secondary connection facilitating access to the central and northern part of the site. This latter road will be provided in the form of a “Shared Zone” with an appropriate surface treatment and the normal related regulatory signage.

Pedestrian access and circulation will also be provided by a system of pathway along the main access road and with some “through site” links particularly around two proposed “pocket parks”.

Details of the proposed development are provided on the plans prepared by Integrated Design Group which accompany the Development Application and are reproduced in part of Appendix A.

## 2.3 Other Development

### Mudgee Urban Development

Council commissioned a traffic study<sup>1</sup> to provide a Traffic Management Plan for Mudgee township and this study involved the following tasks:

- ❖ assessment of the current existing traffic movements (at that time) on the roads and intersections in the study area
- ❖ assessment of the future increased traffic movements resulting from the projected residential and industrial development
- ❖ identification of the road infrastructure upgrades necessary to accommodate the projected future traffic circumstances

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<sup>1</sup> *Mudgee Township  
Traffic Management Study 2014  
Gennaoui Consulting Pty Ltd*

## Transport and Traffic Planning Associates

- ❖ prioritization of the identified upgrades so that implementation is commensurate with development and for satisfactory levels of service to be maintained
- ❖ provide input for the Section 94 Developer Contributions Plan

## Bunnings Development

A Development Application has been submitted for a new Bunnings on the southwestern corner of the Castlereagh Highway and Lions Drive intersection replacing the existing store on the northwestern corner.

The development scheme includes some industrial lots on a residue part of the large site while it is anticipated that the existing Bunning site will be replaced by bulky goods type uses.

Whilst the proposed and envisaged development outcome is significant assessment undertaken in relation to the traffic outcome has confirmed that there will be no adverse traffic implications subject to the under-taking of some roadworks at the Castlereagh Highway/Lions Drive intersection.

## St Matthew's Catholic School

Development Consent was granted for the relocation of the existing St Matthews Catholic School in Mudgee to a new site at the intersection of Bruce Street and Broadhead Road. This new school will result in some minor changes to traffic movements along and access Castlereagh Highway with redirection away from the former school site on Lewis Street.



## 3.0 Road Network and Traffic Conditions

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### 3.1 Road Network

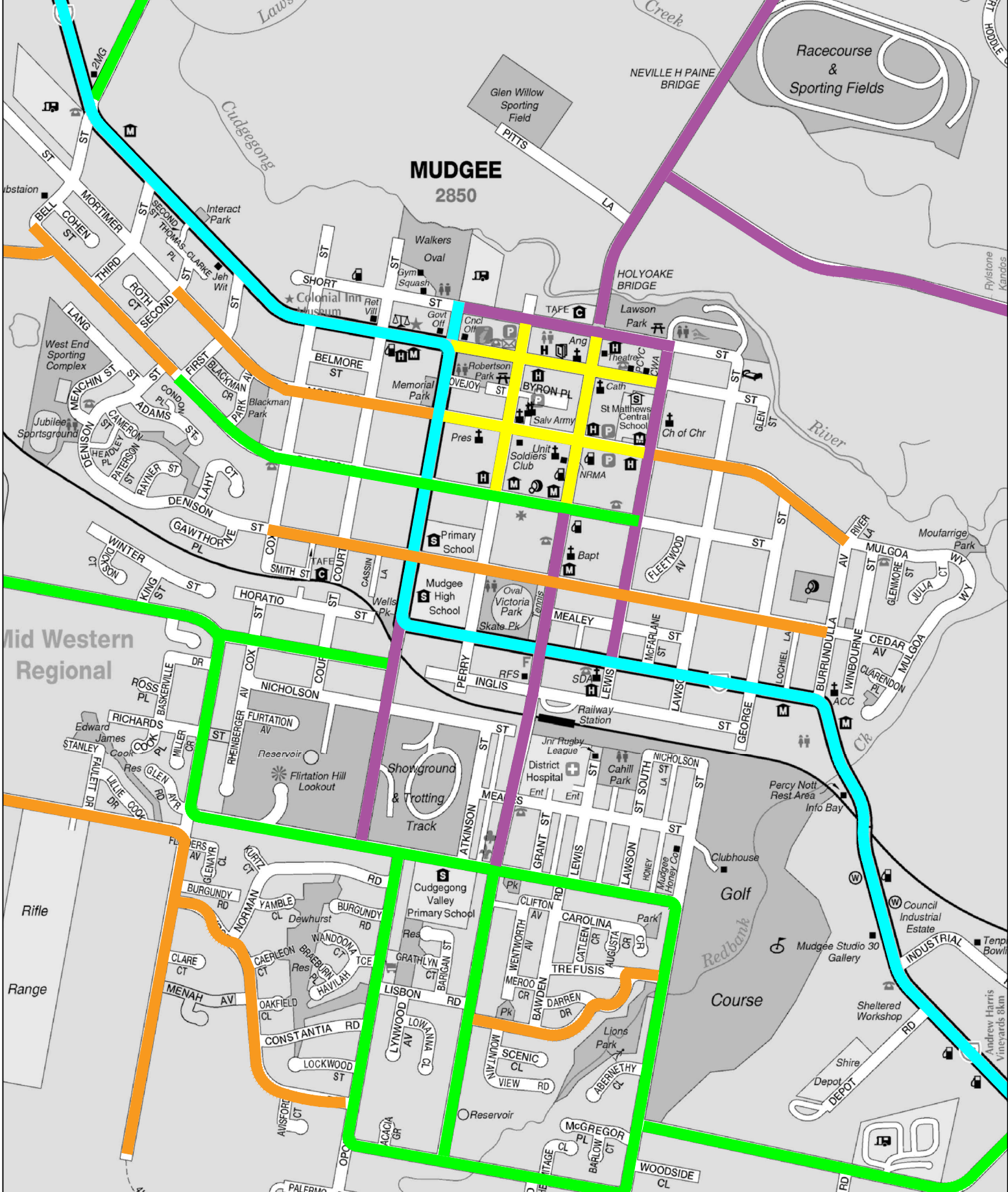
The road network servicing the site (Figure 3) reflects Councils adopted road hierarchy and comprises:

- ❖ *Castlereagh Highway (Sydney Road/Horatio Street/Douro Street)* – a State Road and arterial route which connects between the Great Western Highway at Marrangaroo and the Queensland border
- ❖ *Church Street* – a sub-arterial road (except through the CBD)
- ❖ *Ulan Road/Lue Road*– sub-arteria roads serving the North Mudgee area
- ❖ *Mortimer Street/Market Street/Gladston Street/Denison Street* –collector roads serving the Mudgee Town Center
- ❖ *George Street/ Burrundulla Avenue* – local roads connecting between Mortimer Street and Castlereagh Highway

### 3.2 Traffic Controls

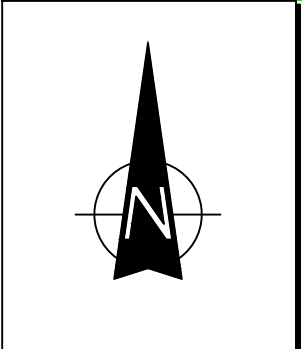
The traffic controls which have been applied to the road system in the vicinity of the site (Figure 4) comprise:

- ❖ the 50 kmph speed restriction on the Castlereagh Highway and the local and collector road network
- ❖ the roundabouts at various intersections along Church Street
- ❖ the GIVE WAY signs along Castlereagh Highway at the Lewis Street, Lawson Street, George Street and Burrundulla Avenue intersections
- ❖ the GIVE WAY signs at intersections along George Street and Burrundulla Avenue



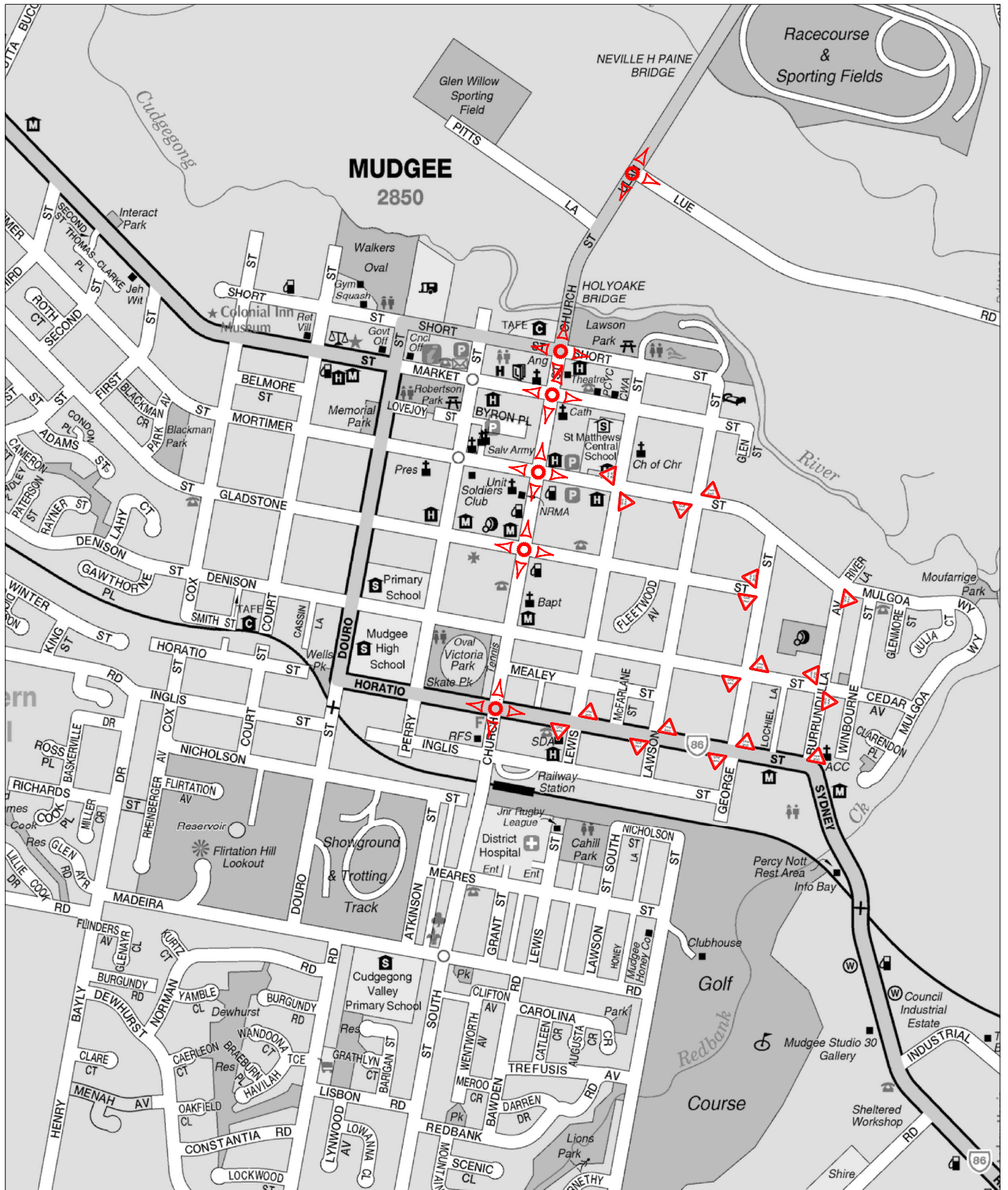
**LEGEND**

- ARTERIAL
- SUB-ARTERIAL
- MAJOR COLLECTOR
- MINOR COLLECTOR
- CBD LOCAL ROADS
- LOCAL ROADS



**ROAD NETWORK**

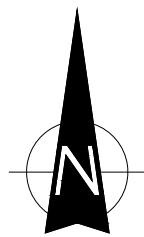
**FIG 3**



**LEGEND**

 **ROUNDBABOUT**

 **GIVE-WAY**



**TRAFFIC CONTROLS**

**FIG 4**

### 3.3 Traffic Conditions

An indication of the existing traffic conditions on the road network serving the site is provided by data published by TfNSW and various other available data<sup>1</sup> as follows:

	<b>AADT</b>
Castlereagh Highway, south of rail crossing	6,577

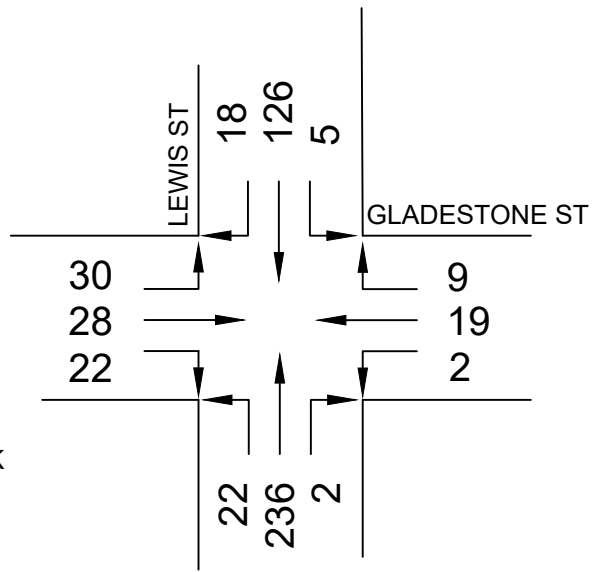
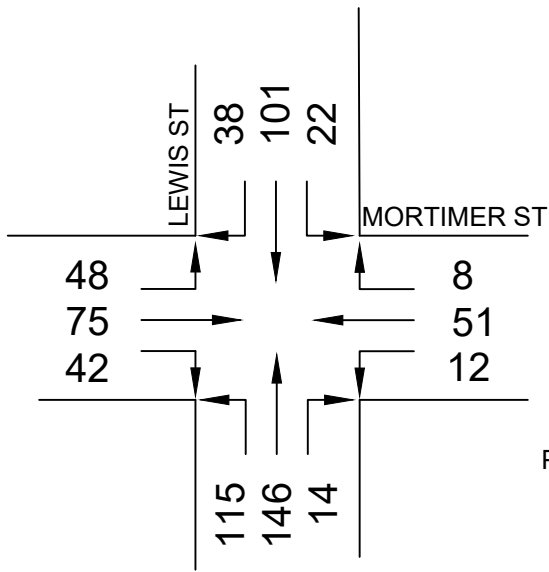
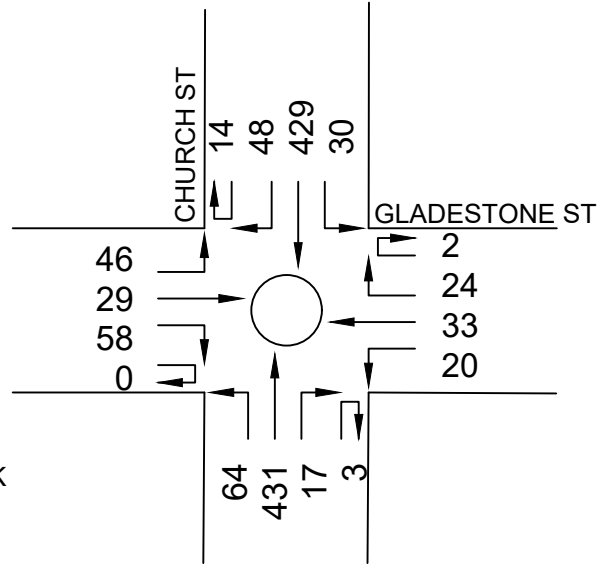
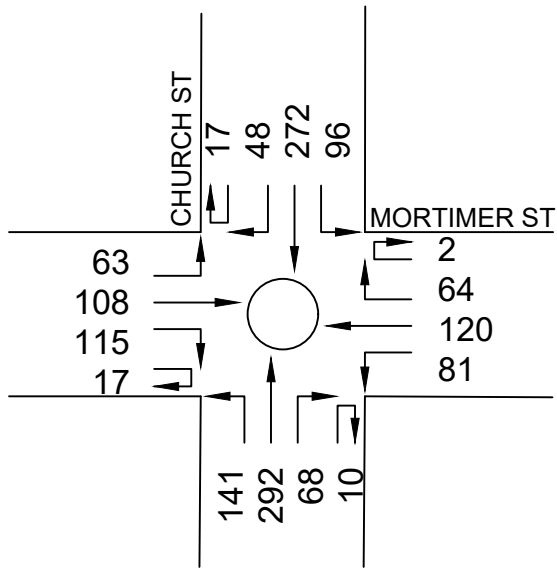
<b>ADT</b>	
Mortimer Street W of Perry Street	581
Church Street @ Railway Crossing	8911
Denison Street W of Perry Street	1111
Market Street E of Perry Street	5561

<b>Level of Service (PM Peak)</b>	<b>LOS</b>	<b>AVD</b>
Sydney Road and Industrial Road	A	11.0
Church Street and Gladstone Street	A	11.8
Church Street and Mortimer Street	A	13.7
Church Street and Market Street	A	13.0
Church Street and Short Street	A	12.1
Church Street and Denison Street	C	29.1

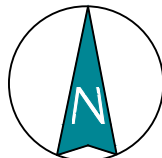
The traffic movements along Burrundulla Avenue and George Street are quite minor and access to the “higher order” road system is facilitated by the roundabouts at intersections along the Castlereagh Highway and Church Street. Peak traffic movements at intersections near the site are shown in Figure 5.

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<sup>1</sup> *Mudgee Township  
Traffic Management Study 2014  
Gennaoui Consulting Pty Ltd*



**LEGEND**



**EXISTING PEAK  
TRAFFIC FLOWS**

**FIG 5**

### 3.4 Transport Services

Bus Route 560 operates on a one-way loop along Mortimer Street and Cedar Avenue (across Burrundulla Avenue and George Street) servicing the site and connecting to the Town Centre and the Reginal Coach services which connect to the rail services at Lithgow. Details are provided overleaf.

Bus stops for the Route 560 service are located within easy walking distance of the site and it is apparent that there will be adequate convenient public transport services available for the proposed development.



# Mudgee Interlink

Effective September 2021

## Buses operating around

- Mortimer Centre
- Mudgee Hospital
- Southside Plaza
- North, South, East & West Mudgee



See back for detailed route descriptions



[www.ogdenscoaches.com.au](http://www.ogdenscoaches.com.au)

## Mudgee Interlink Route Numbers

**560** Mudgee To Mudgee East via Hospital, Spring Rd, Bawden Rd, Redbank Rd, Lions Dr, Sydney Rd, Cedar Ave & Mulgoa Way. Service operates Monday to Friday day time.

**561** Mudgee To Mudgee West via Market St, Bell St (Caravan Park), Denison St & Church St. Service operates Monday to Friday day time.

**562** Mudgee To Mudgee South via Hospital, Golf Club, Southside Shopping Centre, Bellevue Estate, Lawson Gardens Estate & Church St. Service operates Monday to Friday day time.

**563** Mudgee To Mudgee North via Short St, Racecourse, TAFE, Putta Bucca, Bell St (Caravan Park) & Mortimer St. Service operates Monday to Friday day time.

Ogden's Coaches  
ABN 93 126 713 764



**Address:**  
17-23 Burrundulla Rd  
MUDGEE NSW 2850

**Postal Address:**  
PO BOX 966  
MUDGEE NSW 2850

**Telephone:**  
02 6372 2489

**Facsimile:**  
02 6372 6920

**Email:**  
[mudgee@ogdenscoaches.com.au](mailto:mudgee@ogdenscoaches.com.au)

## Mudgee Bus Routes



### Bus Route Legend

**560** Mudgee To Mudgee East

**562** Mudgee To Mudgee South

**561** Mudgee To Mudgee West

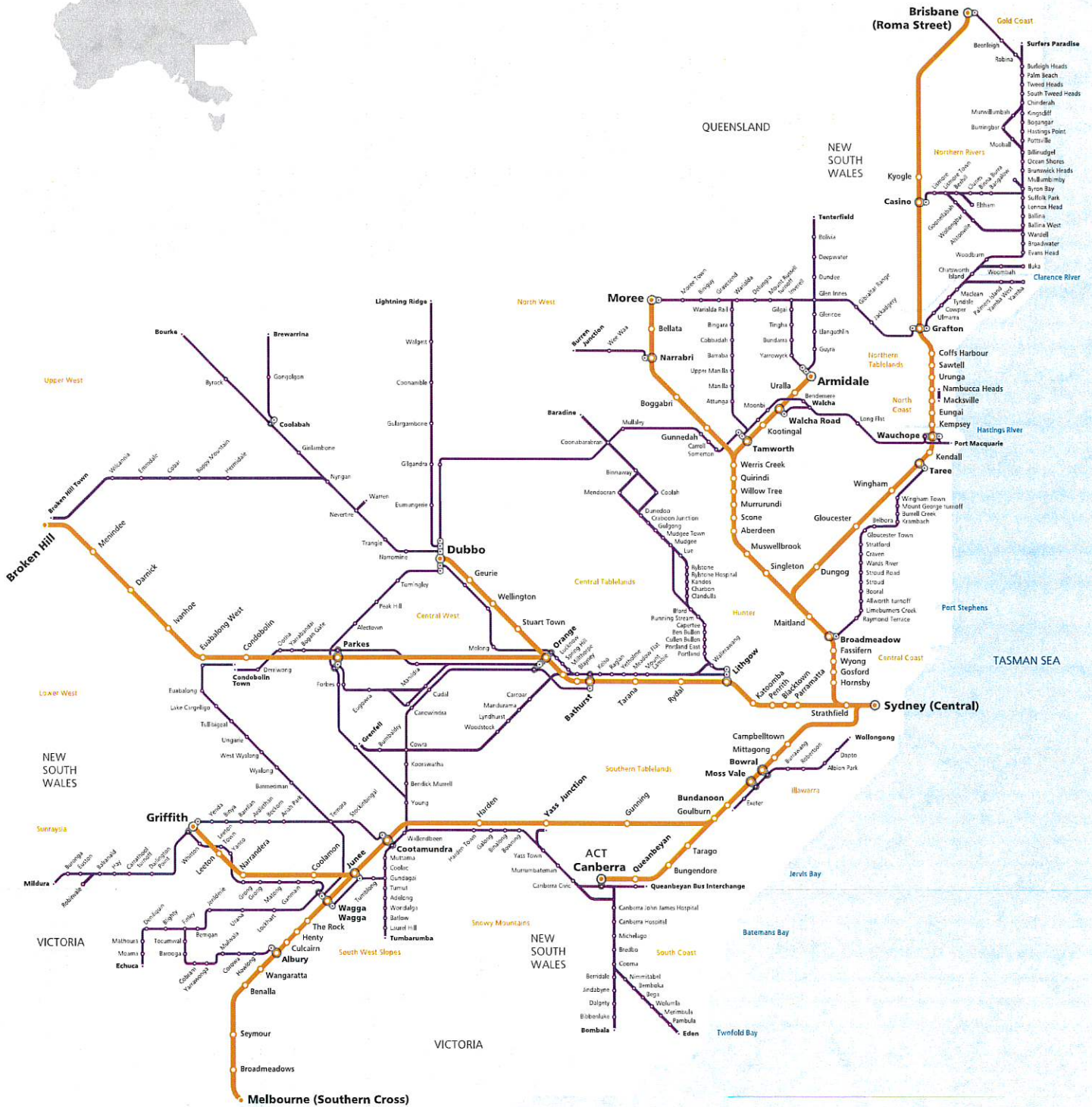
**563** Mudgee To Mudgee North



### Map Legend

- Bus Routes
- Timing Point - See Timetable
- Bus Route Number
- Bus Route Terminus
- Post Office
- Schools
- Hospitals
- Railway Station
- Police Station
- Shopping Centres

# Regional trains and coaches



Port Phillip Bay

Check timetables and trip planners for train services and connections

Visit [transportnsw.info](http://transportnsw.info)



## 4.0 Parking

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The SEPP Housing 2021 specifies a minimum parking provision in relation to Affordable Housing developments as follows:

One-bedroom	-	0.5 space
Two-bedroom	-	1.0 space
Three-bedroom	-	1.5 spaces

Application of this criteria to the proposed development indicates the following:

9 x One-bedroom	-	4.5 spaces
26 x Two-bedroom	-	26.0 spaces
12 x Three-bedroom	-	18 spaces
<b>Total</b>	-	<b>48.55 spaces (49)</b>

It is proposed to provide a total of 71 resident parking spaces for the development, as well as the provision of on-street spaces for visitors. It is apparent that the proposed parking provision will comply with the SEPP requirements and will be quite adequate for the needs of the development.

## 5.0 Traffic

---

The RTA Development Guidelines 2002 in relation to dwelling houses in the outer Sydney Metropolitan Area specify a traffic generation rate of 0.85 per dwelling during weekday peak periods however this criterion is not supported by any study or survey. An indication of the potential traffic generation of the proposed development is provided by the result of the RTA 2010 study for “Low Density Residential”. This study included surveys of LDR precincts in NSW country regional centres (see attached extract indicating the results for the AM and PM Network periods). These results indicate average generation rates of 0.73 per dwelling during AM peak period and 0.77 per dwelling during PM peak period. Application of these rates to proposed development would indicate a total traffic generation during the peak traffic periods as follows:

	AM		PM	
	IN	OUT	IN	OUT
47 Dwellings	5	30	31	6
<b>Total</b>	<b>35</b>		<b>37</b>	

The majority of these movements (some 80%) will be distributed to/from the George Street access and either along Gladstone Street or Mortimer Street with the latter also further distributing to/from Market Street and Short Street.

It is apparent therefore that:

- the total peak traffic generation will be relatively minor (i.e. 1 vtpd each 1.5 minutes)
- there will be a wide distribution of these trips with the only concentration being at the George Street access
- the access intersections in the vicinity of the site currently operate quite satisfactorily and there will be not any adverse traffic implications as a result of the proposed development

## 6.0 Access, Internal Circulation & Servicing

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### 6.1 Access

The proposed principal vehicle access arrangements comprise connections of the new internal access road to George Street and Burrundulla Avenue. These access intersections will be located where sight distances are available and suitably located in relation to other existing intersections particularly in relation to George Street connection. The existing access driveways will be removed/replaced.

### 6.2 Internal Circulation

#### Vehicles

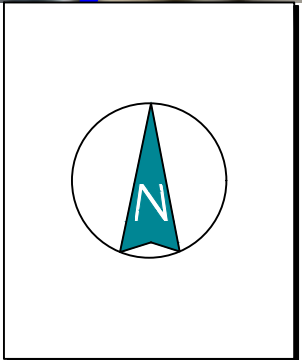
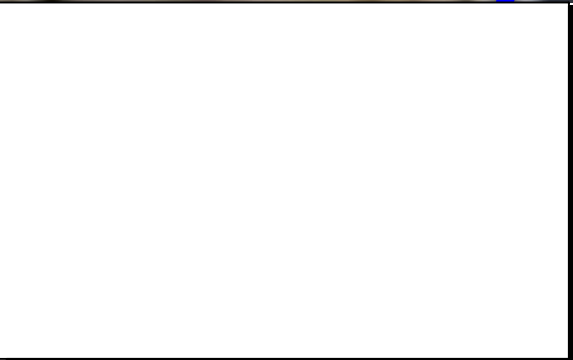
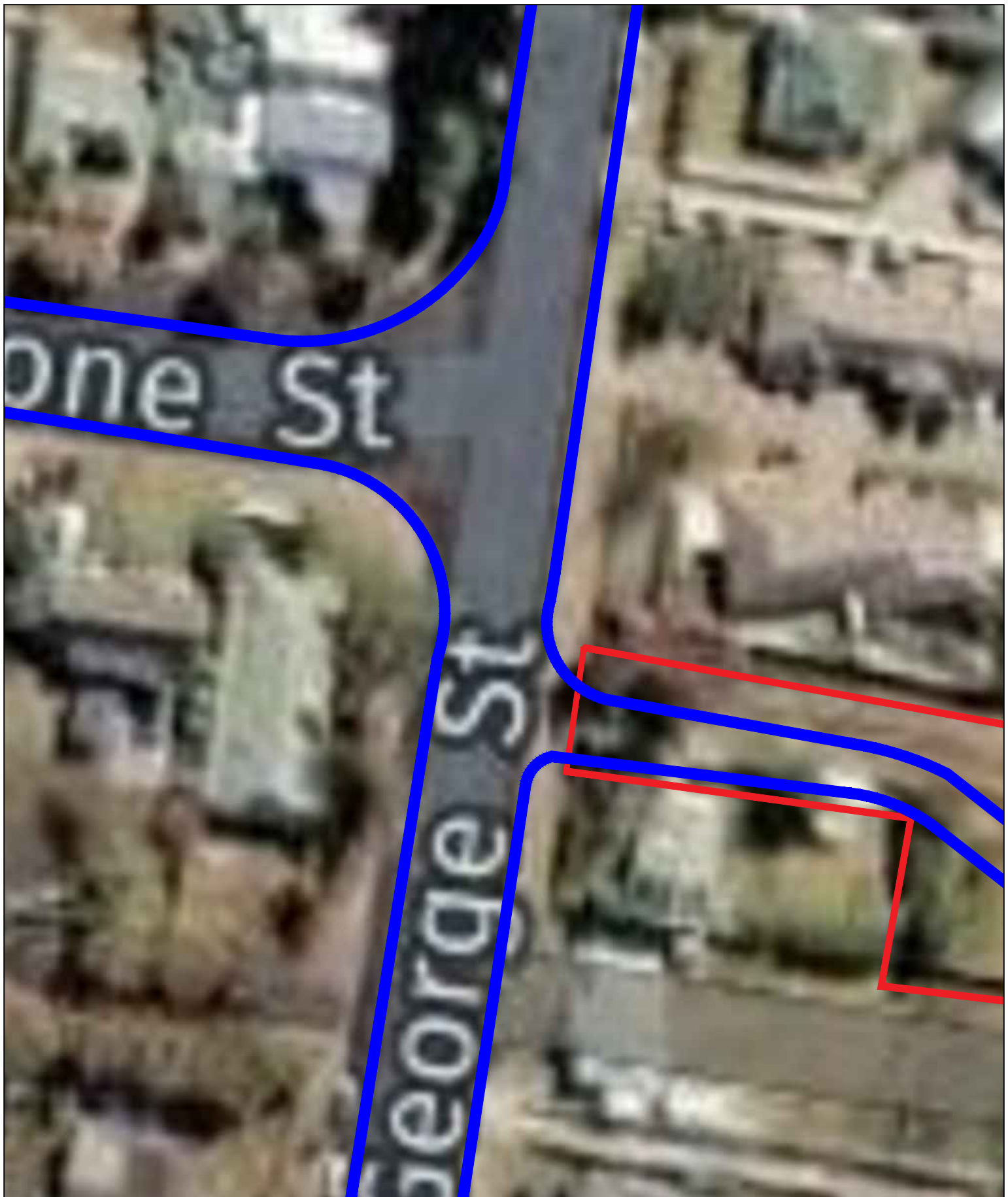
The design of the access driveways and parking bays accords with the design criteria of AS2890.1 and these will also be located where good sight distances are available. Details of the turning path assessments for car parking are provided in Appendix B.

#### Pedestrians

It is proposed to provide footpaths along the main access road as well as internal pedestrian linkages as well as a Shared Zone along the secondary access road. The proposed arrangements will provide good connectivity for pedestrian and particularly access to and around the proposed “pocket parks”.

### 6.3 Servicing

Council’s refuse trucks servicing with the proposed development are 11.0m long and the proposed design provisions for these service vehicles accord with the AS2890.2 criteria with details of the turning path assessment being provided in Appendix B.



**George Street Access  
Intersection**

**FIG 6**

## 7.0 Conclusion

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The Traffic and Parking Assessment provided in this report concludes that the proposed Key Worker (Affordable Housing) development will:

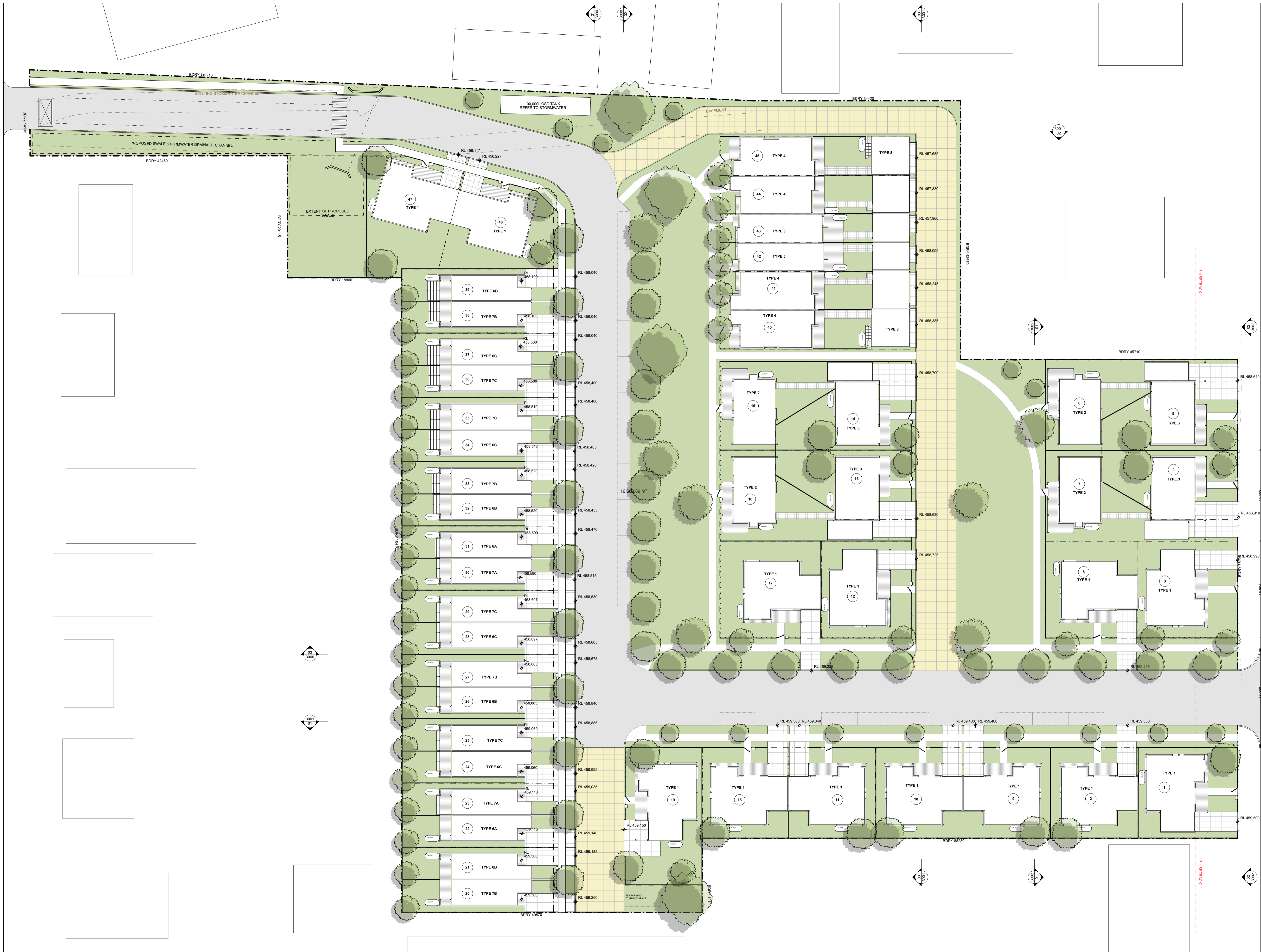
- ❖ not present any unsatisfactory traffic capacity or safety related implications
- ❖ incorporate appropriate car parking provisions
- ❖ provide suitable and appropriate vehicle access, internal circulation and turning arrangements

# Appendix A

## Development Plans

GEORGE STREET

BURRUNDULLA AVENUE



ARCHITECT

**INTEGRATED DESIGN GROUP**  
 ARCHITECTURE INTERIOR DESIGN LANDSCAPE ARCHITECTURE

© Integrated Design Group Pty Ltd  
 ABN 84 115 006 329  
 Nominated Architect  
 Simon Thorne reg. no. 7093  
 info@idgarchitects.com.au  
 www.idgarchitects.com.au

NOTES

1. Figured dimensions take precedence over scaled drawings
2. Contractors to check and verify all levels datum and dimensions on site
3. All materials and workmanship to be in accordance with current written manufacturers instructions, local regulations and SAA codes
4. Conflicting information to be brought to notice of the architect and clarification sought before proceeding with any works
5. All drawings are not for construction and are subject to further design development, consultant input, council and legislative requirements.
6. Refer to General notes page for legend and abbreviations

DISCIPLINES

Access #Access (name/contact)  
 Acoustic #Acoustic (name/contact)  
 Arborist #Arborist (name/contact)  
 BCA #BCA (name/contact)  
 Landscape #Landscape (name/contact)  
 Surveyor #SURVEYOR (name/contact)  
 Planner #PLANNER (name/contact)  
 Traffic #Traffic (name/contact)  
 Waste #Waste (name/contact)

DISCIPLINES

Civil #CIVIL (name/contact)  
 Electrical #ELECT (name/contact)  
 Geotech #Geotech (name/contact)  
 Hydronic #HYD (name/contact)  
 Mechanical #MECH (name/contact)  
 Structure #STRUCT (name/contact)  
 Builder #BUILDER (name/contact)  
 PCA #PCA (name/contact)

CLIENT

MID-WESTERN REGIONAL COUNCIL

PROJECT

AFFORDABLE HOUSING DEVELOPMENT

SITE: 10 BURRUNDULLA AVENUE, MUJGOE, NSW.  
 REF: MRC22098

REVISION

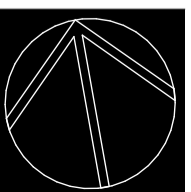
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5/6/202	B	ISSUE FOR CONSULTANT COORDINATION	24
2/17/20	C	ISSUE FOR CONSULTANT COORDINATION	
25/1/20	D	ISSUE FOR CONSULTANT COORDINATION	
13/2/20	E	ISSUE FOR CONSULTANT COORDINATION	

DRAWING

SITE PLAN

DRAWING DD-0101 ISSUE F

DESIGNED BY: [Signature]  
 CHECKED BY: [Signature]  
 SCALE: 1:300 @ 1



## Appendix B

# Turning Path Assessment



BDRY 119210

BDRY 34420

EASEMENT

BDRY 42460

EXTENT OF PROPOSED SWALE

BDRY 20115

BDRY 18800

BDRY 104705

BDRY 42670

BDRY 45710

BDRY 78995

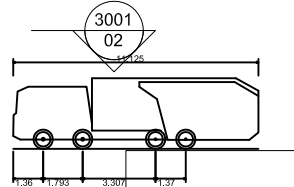
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15.000

18.000

03  
3000

3001  
01

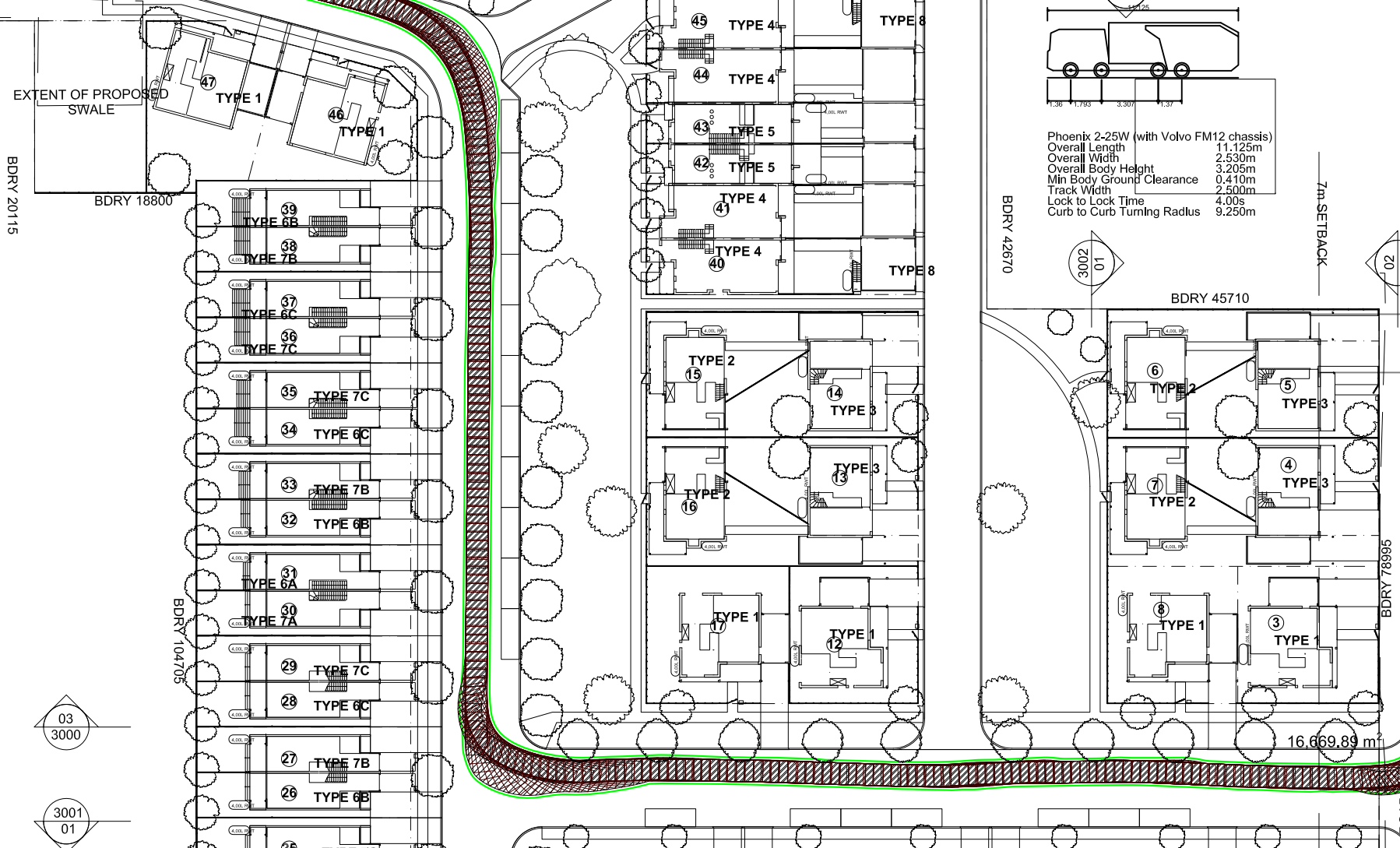


Phoenix 2-25W (with Volvo FM12 chassis)  
 Overall Length 11.125m  
 Overall Width 2.530m  
 Overall Body Height 3.205m  
 Min Body Ground Clearance 0.410m  
 Track Width 2.500m  
 Lock to Lock Time 4.00s  
 Curb to Curb Turning Radius 9.250m

7m SETBACK

3000  
10

02  
3000



**NOTE**

This drawing has been prepared using vehicle modelling computer software AutoTrack V5.00a in conjunction with AutoCAD 2013. The vehicle used is based upon vehicle data provided by Austroads and incorporates a reasonable degree of tolerance. However, it is not possible to account for all vehicle types/characteristics and/or driver ability.



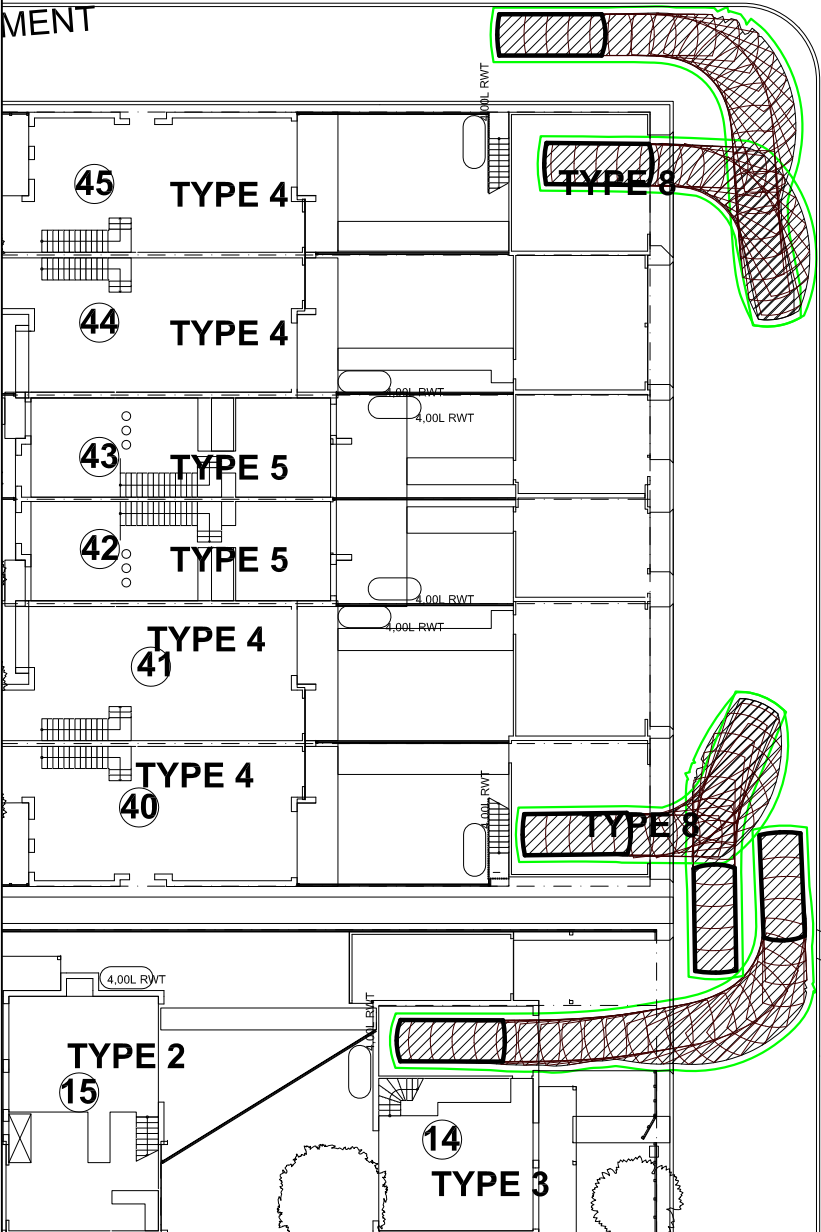
**SWEPT PATH ANALYSIS  
 OF AN 11m REFUSE  
 VEHICLE CIRCULATING THE  
 SITE**

SCALE 1:500(A3)

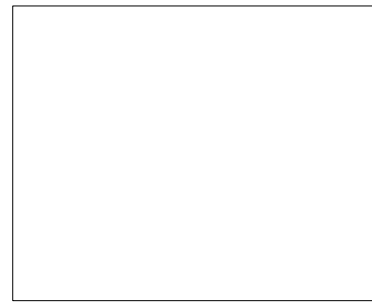
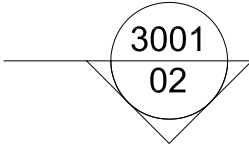
**SP 1**

BDRY 34420

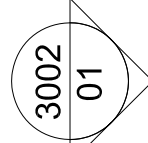
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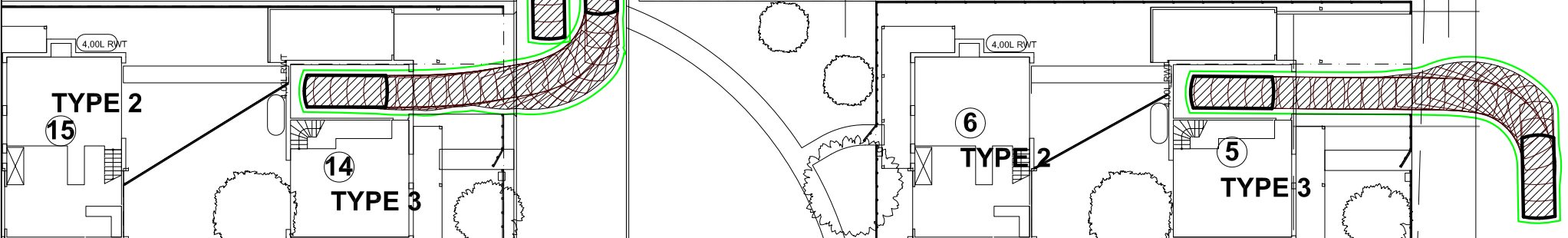
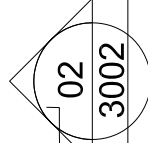
BDRY 42670



7m SETBACK



BDRY 45710



**NOTE**

This drawing has been prepared using vehicle modelling computer software AutoTrack V5.00a in conjunction with AutoCAD 2013. The vehicle used is based upon vehicle data provided by Austroads and incorporates a reasonable degree of tolerance. However, it is not possible to account for all vehicle types/characteristics and/or driver ability.



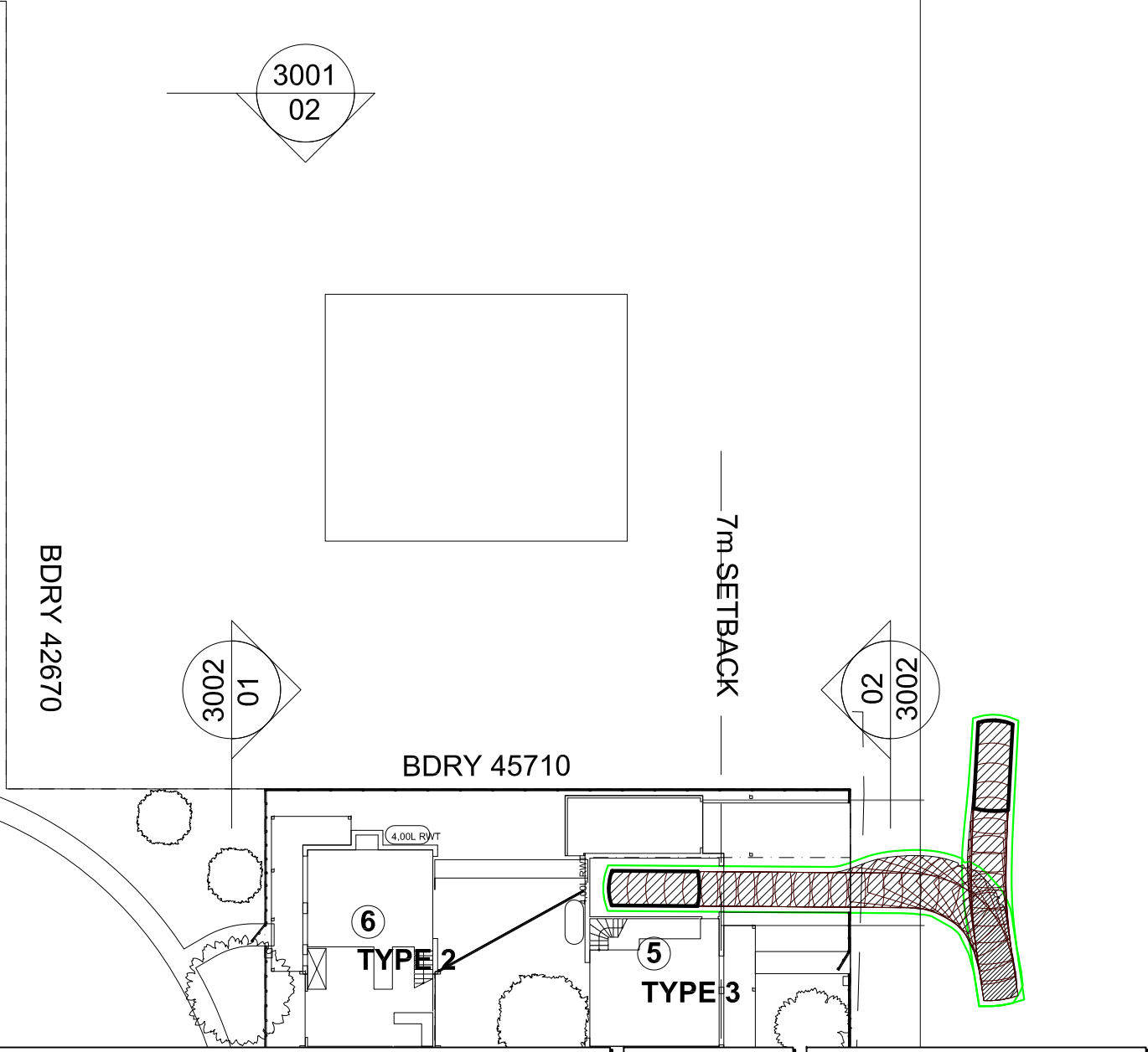
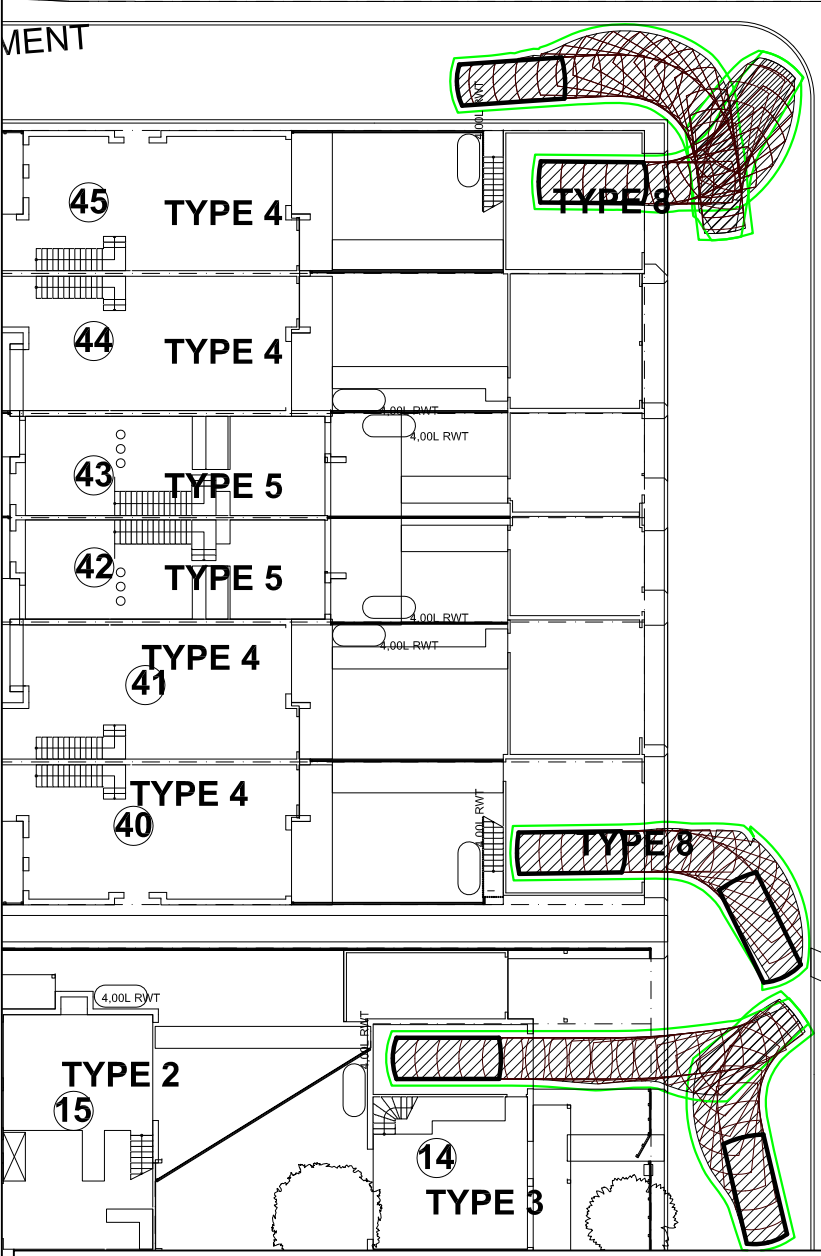
**SWEPT PATH ANALYSIS  
OF 85th PERCENTILE  
VEHICLES ENTERING THE SITE**

SCALE 1:250(A3)

**SP 2**

BDRY 34420

MENT



**NOTE**

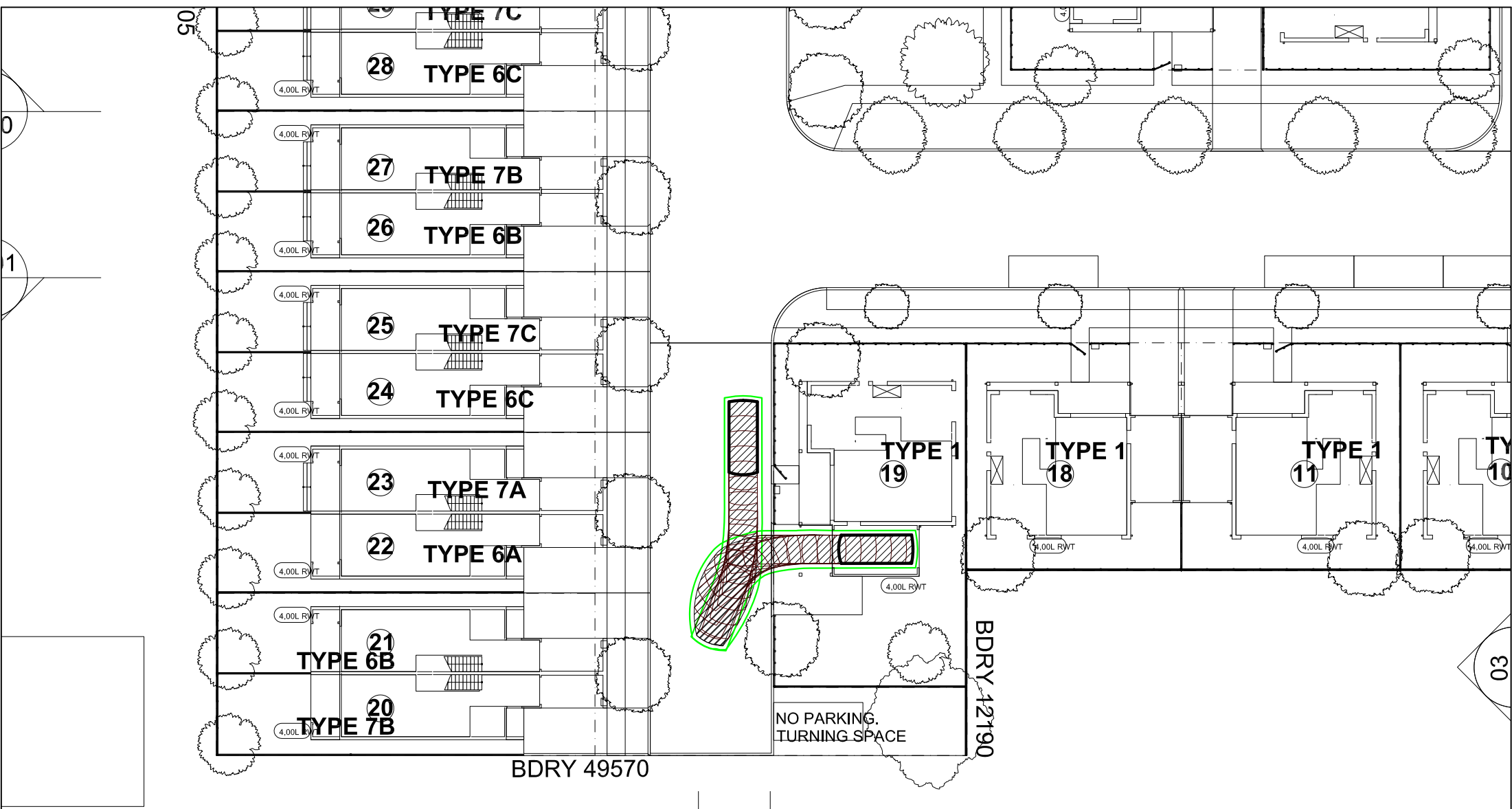
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**SWEPT PATH ANALYSIS  
OF 85th PERCENTILE  
VEHICLES EXITING THE SITE**

SCALE 1:250(A3)

**SP 3**



**NOTE**

This drawing has been prepared using vehicle modelling computer software AutoTrack V5.00a in conjunction with AutoCAD 2013. The vehicle used is based upon vehicle data provided by Austroads and incorporates a reasonable degree of tolerance. However, it is not possible to account for all vehicle types/characteristics and/or driver ability.



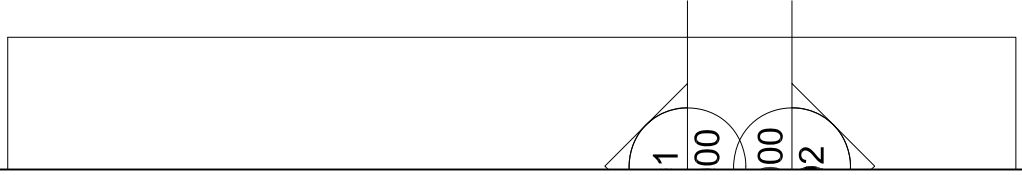
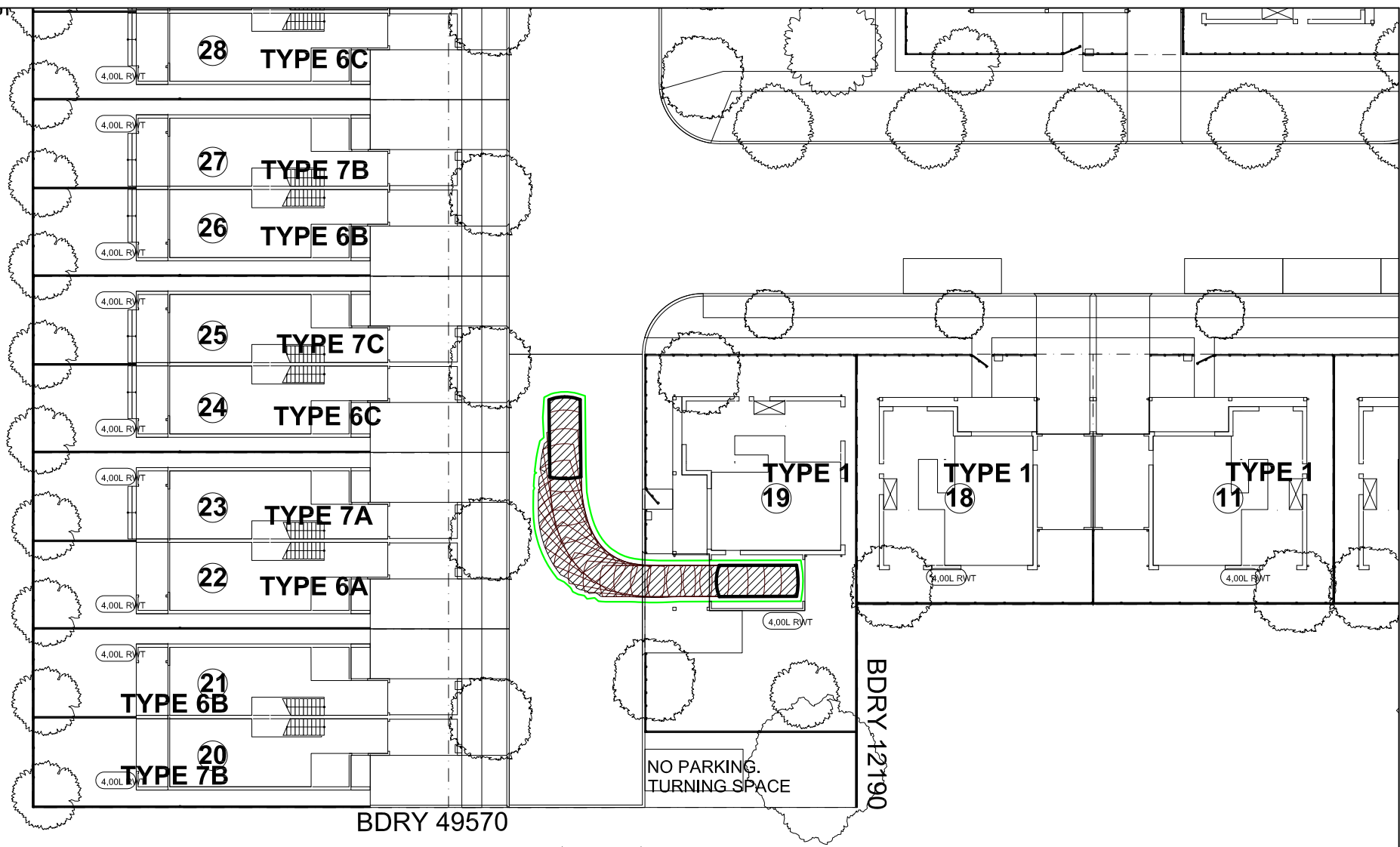
**SWEPT PATH ANALYSIS  
OF AN 85th PERCENTILE  
VEHICLE ENTERING THE SITE**

SCALE 1:250(A3)

**SP 4**

03  
3000

3001  
01



**NOTE**

This drawing has been prepared using vehicle modelling computer software AutoTrack V5.00a in conjunction with AutoCAD 2013. The vehicle used is based upon vehicle data provided by Austroads and incorporates a reasonable degree of tolerance. However, it is not possible to account for all vehicle types/characteristics and/or driver ability.



**SWEPT PATH ANALYSIS  
OF 85th PERCENTILE  
VEHICLES EXITING THE SITE**

SCALE 1:250(A3)

**SP 5**