



TRAFFIC IMPACT ASSESSMENT (TIA)

**Proposed Bulky Goods Development
200-204 Condamine Street, Balgowlah**

Reference: 21.516r01v03
Date: October 2022

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CONTENTS

1. Introduction	1
2. Location and Site	2
3. Existing Traffic Conditions	5
3.1 Road Network	5
3.2 Public Transport	7
4. Description of Proposed Development	9
5. Parking Requirements	10
5.1 Car Parking	10
5.2 Accessible Parking	11
5.3 Bicycle Parking	11
5.4 Motorcycle Parking	11
5.5 Refuse Collection and Servicing	12
6. Traffic and Transport Impacts	13
6.1 Existing Site Generation	13
6.2 Development Trip Generation	13
6.3 Net Traffic Generation	14
6.4 Traffic Impacts	14
7. Access and Internal Design Aspects	15
7.1 Site Vehicular Access	15
7.2 Internal Design	15
7.3 Summary	17
8. Conclusions	18

Appendices

Appendix A: Reduced Plans

Appendix B: Swept Path Analysis



1. INTRODUCTION

TRAFFIX has been commissioned by King Living to undertake a traffic impact assessment (TIA) in support of a development application (DA) relating to a proposed bulky goods development at 200-204 Condamine Street, Balgowlah. The development is located within the Northern Beaches Council Local Government Area (LGA) and has been assessed under that Council's controls.

This report documents the findings of our investigations and should be read in the context of the Statement of Environmental Effects (SEE) prepared separately. The development requires access via a Transport for NSW (TfNSW) classified main road and therefore requires referral to TfNSW.

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 is known as 200-204 Condamine Street, Balgowlah and is located on the eastern side of Condamine Street, approximately 96 metres south of Kenneth Road. The site is located approximately 10.6 kilometres northeast of Sydney CBD and approximately 2.2 kilometres northwest of Manly Town Centre.

The site has a total site area of approximately 2,133m² and has a western frontage of approximately 46 metres to Condamine Street. It is bounded to the north and south by commercial developments for approximately 42 metres and 52 metres respectively and is bound to the east by an at grade car park for approximately 45 metres

The site currently consists of three (3) vacated bulky goods stores with vehicular access to the site currently provided via two (2) existing vehicular accesses onto Condamine Street.

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



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:

- **Condamine Street:** part of an TfNSW Main Road (MR 164) in the vicinity of the site, Condamine Street traverses north-south between Pittwater Road in the north and Ernest Street in the south. It accommodates three (3) lanes of traffic and is subject to a speed zoning of 60km/h. The southern kerb side lane is subject to a 'bus lane' restriction between 6:00am and 10:00am and the northern kerb side lane is subject to a 'bus lane' restriction between 3:00pm and 7:00pm. Kerbside parking is generally not permitted along either side of Condamine Street.
- **Kenneth Road:** part of an TfNSW unclassified Regional Road (RR 7344), Kenneth Road traverses east-west between Balgowlah Road in the east and Mildred Avenue in the west. Kenneth Road generally accommodates a single lane of traffic in each direction and is subject to a 50km/h speed zoning east of Roseberry Street and west of Condamine Street and a 60km/h speed zoning between Roseberry Street and Condamine Street. Kerbside parking is generally permitted along either side of Kenneth Road.

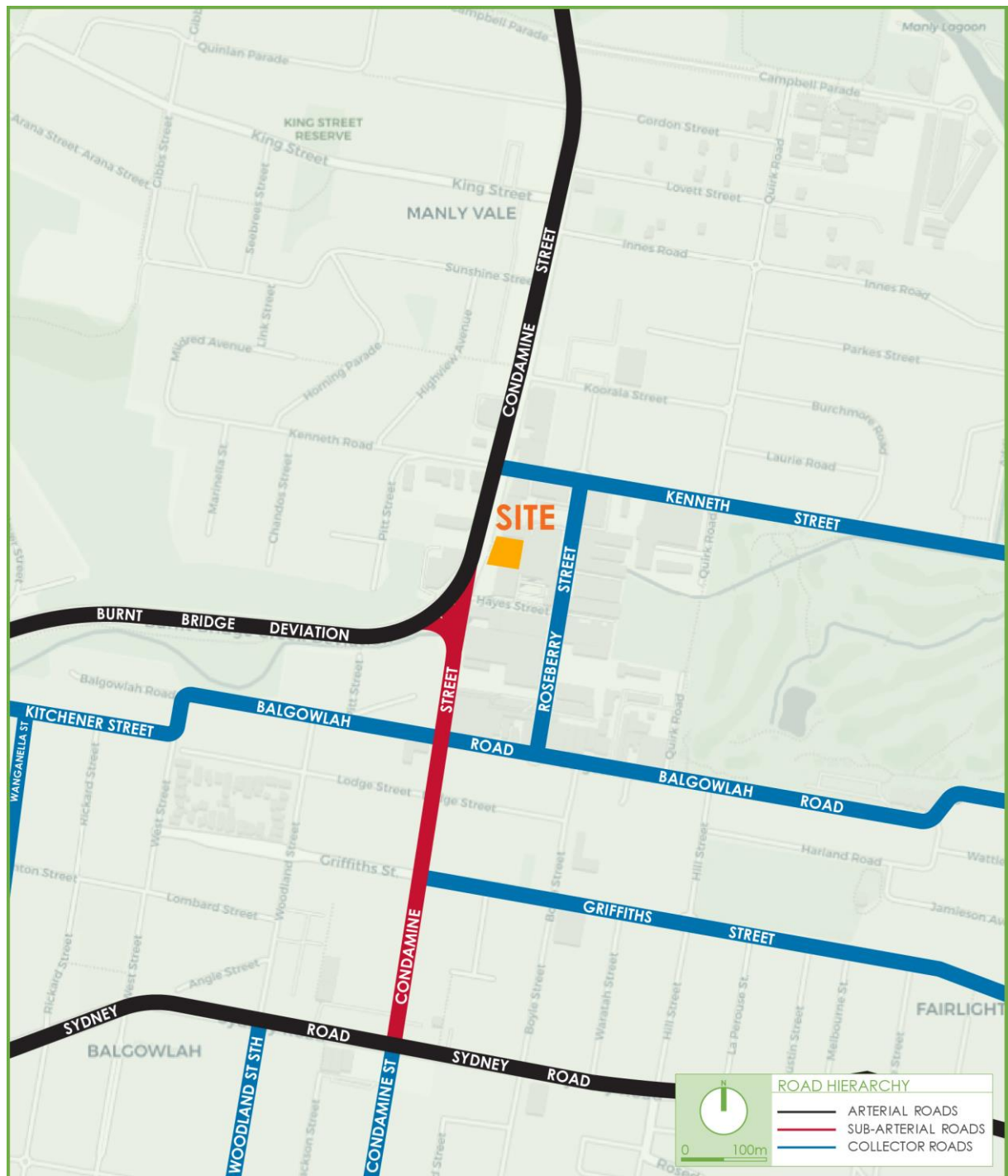


Figure 3: Road Hierarchy



3.2 Public Transport

The existing bus services that operate in the locality are shown in **Figure 4**. It is evident that the development benefits from good bus services with bus stops in either direction being situated within 400 metres of the site along Condamine Street. These provide regular bus services along the following routes:

- 142 – Allambie Heights to Manly
- 145 – Warringah Mall to Seaforth
- 154X – Dee Why to Milsons Point (Express Service)
- 168X – Balgowlah to City Wynyard (Express Service)
- 172X – Warringah Mall to City Wynyard (Express Service)
- 173X – Warringah Mall to City Wynyard (Express Service)
- 174X – Narrabeena to City Wynyard (Express Service)
- 176X – Dee Why to City Wynyard (Express Service)
- 177X – Dee Why to City Wynyard (Express Service)
- 180X – Collaroy Plateau to City Wynyard (Express Service)
- 181X – Narrabeen to City Wynyard (Express Service)
- B1 – B-Line Mona Vale to City Wynyard

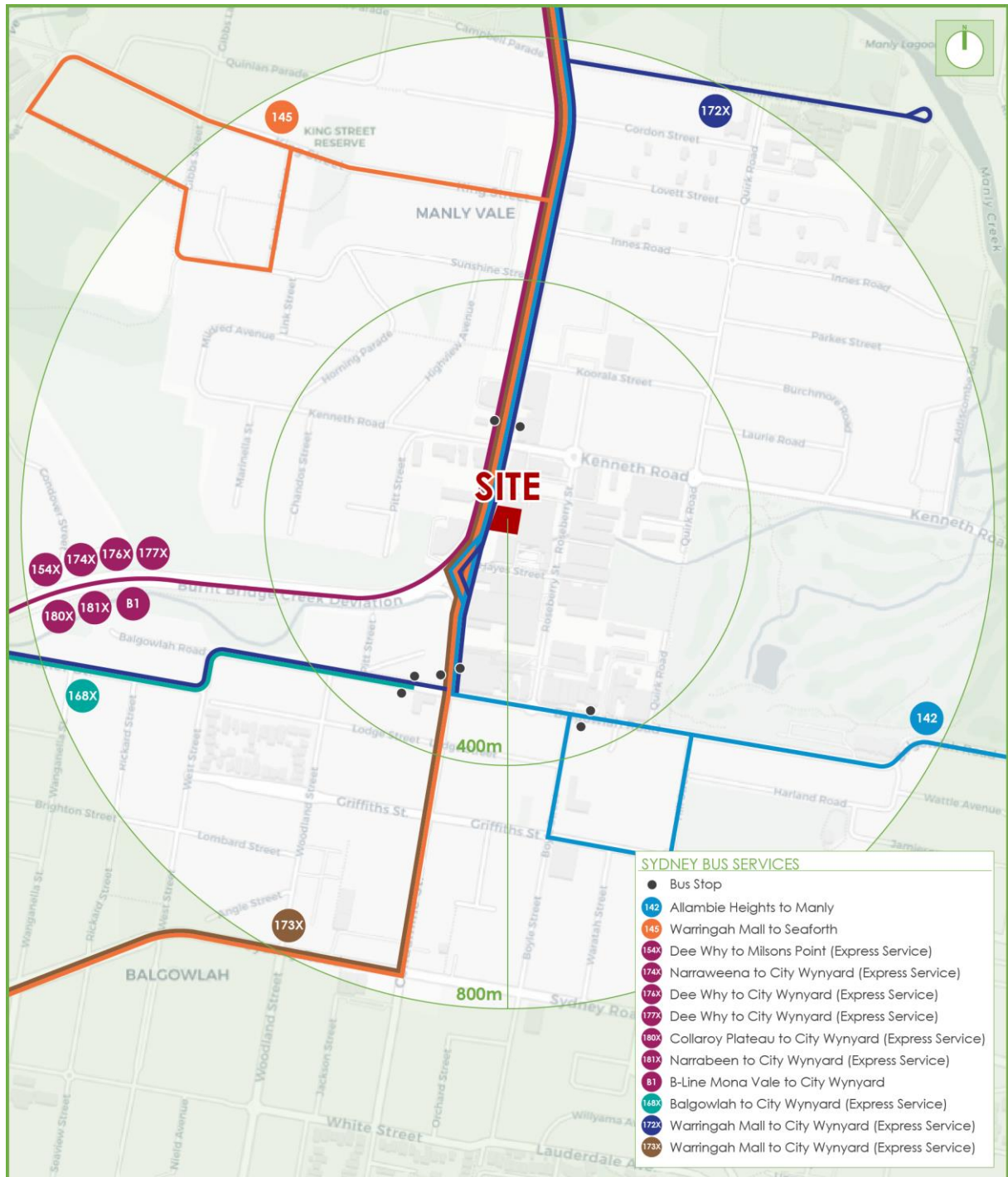


Figure 4: Public Transport



4. DESCRIPTION OF PROPOSED DEVELOPMENT

A detailed description of the proposed development is provided in the Statement of Environmental Effects, prepared separately. In summary, the development for which approval is now sought is a 2-storey bulky goods development comprising of the following components:

- Bulky goods premises with 2,100m² total gross floor area (GFA); and
- A carpark providing parking for 26 vehicles.

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

The Manly Development Control Plan (DCP) 2013, Schedule 3 – Parking and Access, requires parking for bulky goods developments to be determined at the rates shown in **Table 1** below:

Table 1: Council Parking Rates and Provision

Type	Area	Parking Rate	Parking Requirement
Bulky Goods Premises	2,100m ²	1 space per 50m ² GFA for area used for retailing of bulky goods	42
Total			42

It is evident from **Table 1** that the proposed development requires a provision of 42 parking spaces under Council's DCP.

Reference is made to a comparable development application for a bulky goods retail development DA2020/1703 (Coco Republic). The Traffic Engineer Referral Response for DA2020/1703 dated 8 February 2021 references surveys conducted previously of a Freedom Furniture store which found a peak parking demand of 39 parked vehicles for a bulky goods store with 4300m² GFA. This equates to a parking demand of 0.91 spaces per 100m² GFA. It is considered more appropriate to adopt a targeted parking rate based on demand for a similar development (being for the same use and located within the same Council area) over the general bulk goods rate which is applicable for different types of stores. This also demonstrates that there is a precedent in applying the above rate to similar developments within this LGA. The revised parking requirement based on the above survey rate is provided in **Table 2** below.

Table 2: Survey Based Parking Rates and Provision

Type	Area	Parking Rate	Parking Requirement
Bulky Goods Premises	2,100m ²	0.91 spaces per 100m ² GFA for area used for retailing of bulky goods	19
Total			19

As seen in the above table, the development requires 19 parking spaces based on the survey rate. In response, a total of 26 spaces are proposed, exceeding this requirement, and ensuring



that all parking demands can be accommodated on-site. Therefore, the car parking provision is considered supportable and is in line with similar developments (already approved).

5.2 Accessible Parking

Council's DCP does not specify accessible parking rates for bulky goods premises. Therefore, reference is made to the Building Code of Australia which specifies the following rates for accessible parking:

- 1 space for every 100 car parking spaces or part thereof.

Therefore, the development is required to provide a single accessible parking space. The development proposes a single accessible parking space and therefore meets the BCA requirements.

5.3 Bicycle Parking

Council's DCP specify the following rates for bicycle parking:

- One (1) stand per three (3) car parking spaces with a minimum provision of one stand for each premises.

The development proposes 26 car parking spaces and therefore requires nine (9) bicycle parking spaces. This parking rate for bicycles is generic and applied to a variety of uses. Therefore, the bicycle parking rate does not consider the expected customer travel behaviours of a bulky goods store. It is unlikely that customers would ride to this site and therefore no bicycle parking is proposed. However, it is noted that there is sufficient area within the development to accommodate staff bicycle parking on site. This can be provided with a suitable condition, should it be required.

5.4 Motorcycle Parking

The Council DCP does not specify any motorcycle spaces required for the proposed development. In response the development provides no motorcycle spaces, meeting the requirements of the DCP.



5.5 Refuse Collection and Servicing

Servicing and waste collection will be conducted within the car parking area by a vehicle up to an 8.8m medium rigid vehicle (MRV). Both servicing and waste collection will be restricted to occur outside of operational hours to ensure that the carpark is empty and the truck has sufficient manoeuvring area to enter and exit in a forward direction, conducting a three-point turn within the aisle and carparking area.

A swept path analysis has been conducted and is provided in **Appendix B** showing satisfactory movements. All areas that the servicing vehicle traverses provide a head height clearance of 4.5 metres.



6. TRAFFIC AND TRANSPORT IMPACTS

6.1 Existing Site Generation

The subject site currently accommodates three (3) bulky goods stores with an area of approximately 1,590m² GFA. The TfNSW Technical Direction TDT 2013/04a, provides revised trip generation advice for a number of land uses based on survey data obtained since 2009. One of the land uses covered is bulky goods retail store developments. The average Sydney weekday trip rates provided by TDT 2013/04a have been adopted and the relevant trip rates are as follows:

- Morning site peak does not coincide with the network morning peak hour.
- 2.7 vehicle trips per 100m² GFA during the evening peak hour.

Application of these trip rates to the approximately 1,590m² GFA of existing bulky goods floor area and adopting an 50:50 split, results in the following predicted trip generation volumes:

- 43 vehicle trips per hour during the evening peak hour (22 in and 21 out).

6.2 Development Trip Generation

The impacts of the proposed development on the external road network have been assessed having regard for the yield scenarios as summarised in **Section 4** above.

As detailed above, the TDT 2013/04a provides trip generation rates in relation to bulky goods store developments. Application of the above rates to the proposed 2,100m² GFA results in the following traffic generation in the evening peak hour (noting that the morning site peak does not coincide with the network peak hour):

- 57 vehicle trips per hour during the evening peak hour (29 in and 28 out).



6.3 Net Traffic Generation

The net traffic generation of the development, taking into account the existing uses of the site can be summarised as follows:

- 14 vehicle trips per hour during the evening peak hour (7 in and 7 out).

6.4 Traffic Impacts

The net traffic generation of the development in the evening peak hour is 14 vehicle trips, which is comparable to an additional vehicle every four (4) minutes. This increase is expected to be accommodated by the surrounding road network with minimal impacts and as such the development is considered supportable from a traffic planning perspective with no external improvements to the network required.



7. ACCESS AND INTERNAL DESIGN ASPECTS

7.1 Site Vehicular Access

7.1.1 Access

The development proposes a total of 26 staff and visitor parking spaces with access to Condamine Street, a classified main road. It will therefore require a Category 2 driveway under AS2890.1 (2004), being a combined entry and exit width of 6.0 to 9.0 metres. In response, a 10.4 metre driveway has been provided at the property boundary, narrowing to 6.4m on the ramp within the site. It is noted that the existing site provides three (3) vehicular crossovers onto Condamine Street and the proposed development consolidates access requirements to one (1) vehicular access onto the classified main road which is a desirable outcome for TfNSW.

Security for the site is provided by a roller shutter door. The door will be open during operational hours and during the expected servicing hours.

A swept path analysis of all design vehicles entering and exiting the proposed development, including a service vehicle up to an 8.8m MRV, has been included in **Appendix B**, demonstrating satisfactory operation of the proposed Condamine Street access.

7.2 Internal Design

The internal car park complies with the requirements of AS 2890.1 (2004), AS 2890.2 (2018) and AS 2890.6 (2009), and the following characteristics are noteworthy:

7.2.1 Parking Modules

- All staff car parking spaces have been designed in accordance with User Class 1A being for employee parking. These spaces are provided with a minimum space length of 5.4m, a minimum width of 2.4m and a minimum aisle width of 5.8m.
- All customer car parking spaces have been designed in accordance with User Class 2 being for medium term visitor parking. These spaces are provided with a minimum space length of 5.4m, a minimum width of 2.5m and a minimum aisle width of 5.8m.



- 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 (2009), being 2.4m wide, 5.4m long and situated immediately adjacent to a dedicated shared area or the circulating aisle.

7.2.2 Ramps

- The internal ramp has a maximum gradient of 5% (1 in 20) for the first 6.0m inside the property boundary, in accordance with Section 3.3 (a) of AS 2890.1 (2004).
- The internal ramp has a maximum gradient of 6.25% (1 in 16). These provisions satisfy the requirements of AS 2890.2 (2018).

7.2.3 Clear Head Heights

- A minimum clear head height of 2.2m is provided for all areas within the basement car park as required by AS 2890.1 (2004).
- A minimum clear head height of 2.5m is to be provided above all accessible spaces in accordance with AS 2890.6 (2009).
- A minimum head height clearance of 4.5m is to be provided above all areas traversed by the 8.8m MRV.

7.2.4 Loading

- Servicing and waste collection is proposed to be conducted within the carpark area outside of operational hours by up to an 8.8m MRV. A swept path analysis of this manoeuvre has been conducted and is provided within **Appendix B**.

7.2.5 Other Considerations

- All columns are located outside of the parking space design envelope shown in **Figure 5.2** of AS 2890.1 (2004).



- Visual splay has been provided at the 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), AS 2890.2 (2018) 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 Construction Certificate.



8. CONCLUSIONS

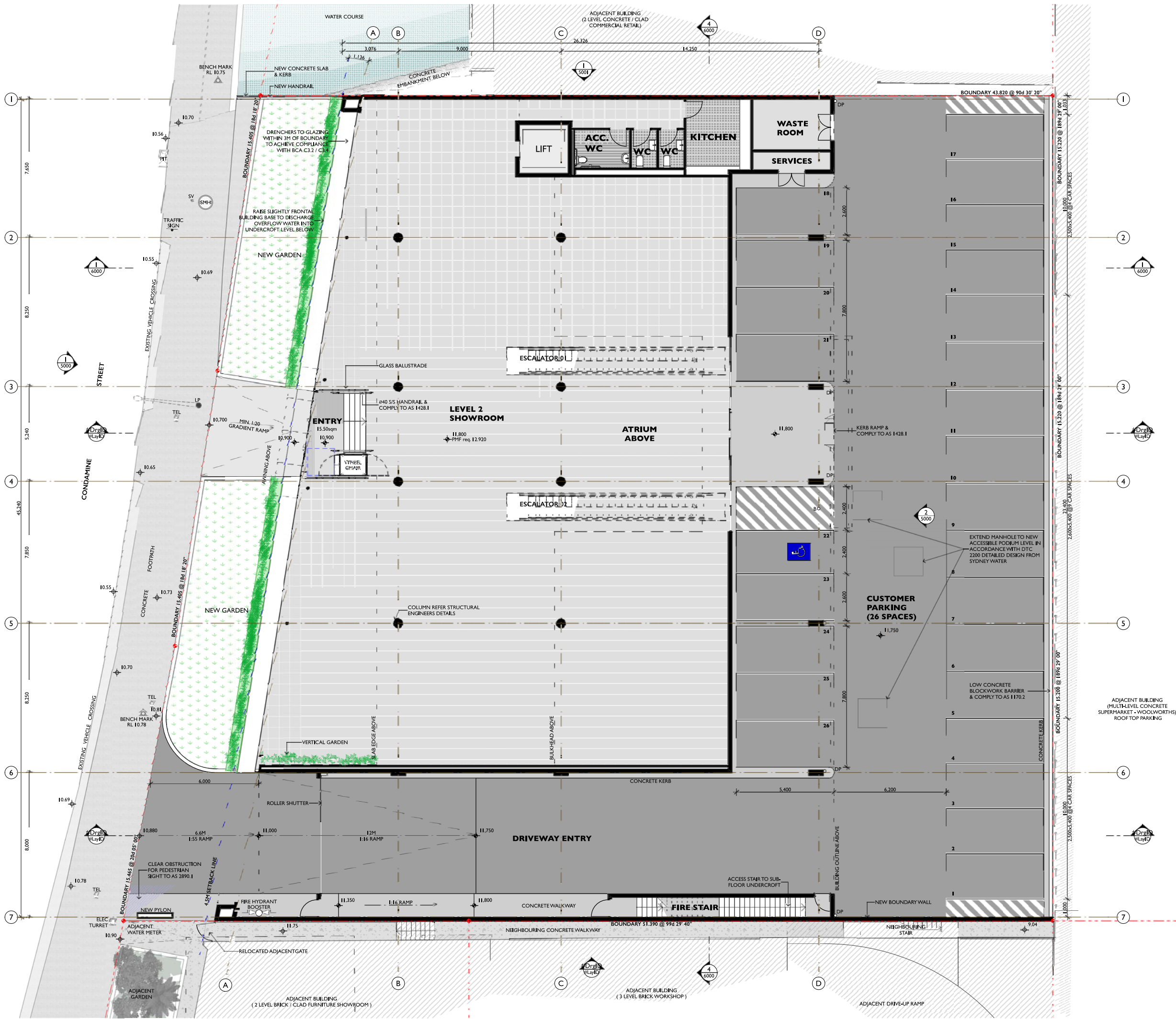
In summary:

- The proposal seeks approval to construct a two-storey bulky goods development at 200- 204 Condamine Street in Balgowlah, comprised of 2,100m² GFA and a carparking area accommodating 26 vehicles.
- The subject site is well connected to the public transport network with reliable access to regular bus services. These provides a good opportunity to encourage future staff / customers to use sustainable transport modes.
- A comparable development application for a bulky goods development (DA2020/1703) conducted surveys of a Freedom Furniture Store which is considered to be a more appropriate and targeted parking rate (being for the same use and located within the same Council area) to apply to the development. Application of the survey based assessment resulted in a minimum requirement for 19 parking spaces. The development proposes a total of 26 parking spaces which meets this requirement and is considered an appropriate provision. The surplus of parking above this rate ensuring that all parking demands can be accommodated on-site.
- The traffic generation arising from the development has been assessed as a net change over existing conditions, and equates to an additional 14 vehicle trips per hour during the evening peak hour with the site morning peak traffic generation not corresponding to the network morning peak hour. As such, no external improvements are required to facilitate the proposed development. The traffic impacts of the development are therefore considered acceptable.
- Waste collection and servicing for the site is to be undertaken onsite within the car park. A swept path analysis of these movements has been conducted showing satisfactory movements.
- The internal car park has been assessed to comply with the requirements of AS 2890.1 (2004), AS 2890.2 (2018) and AS 2890.6 (2009), thereby ensuring safe and efficient operation.

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

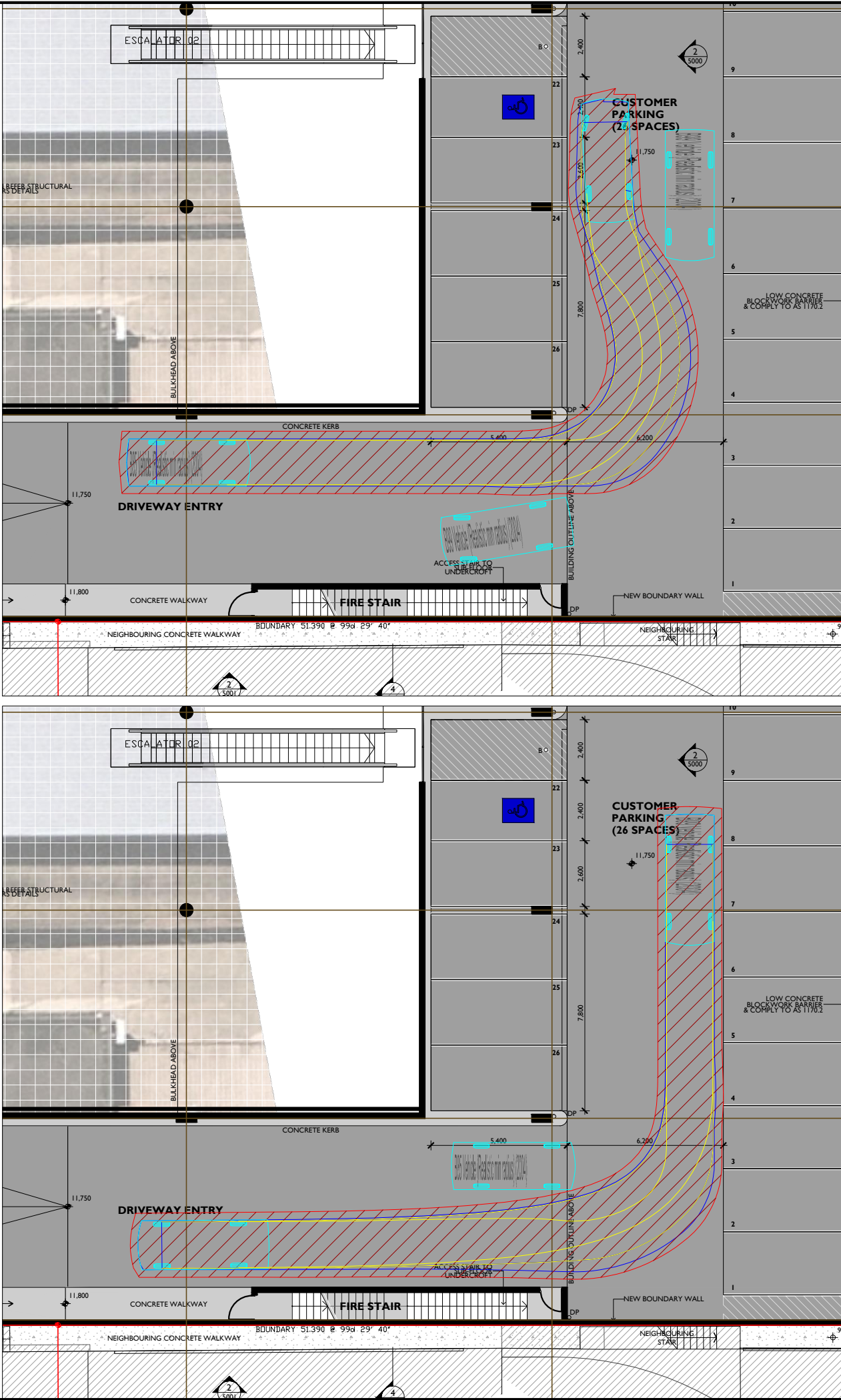
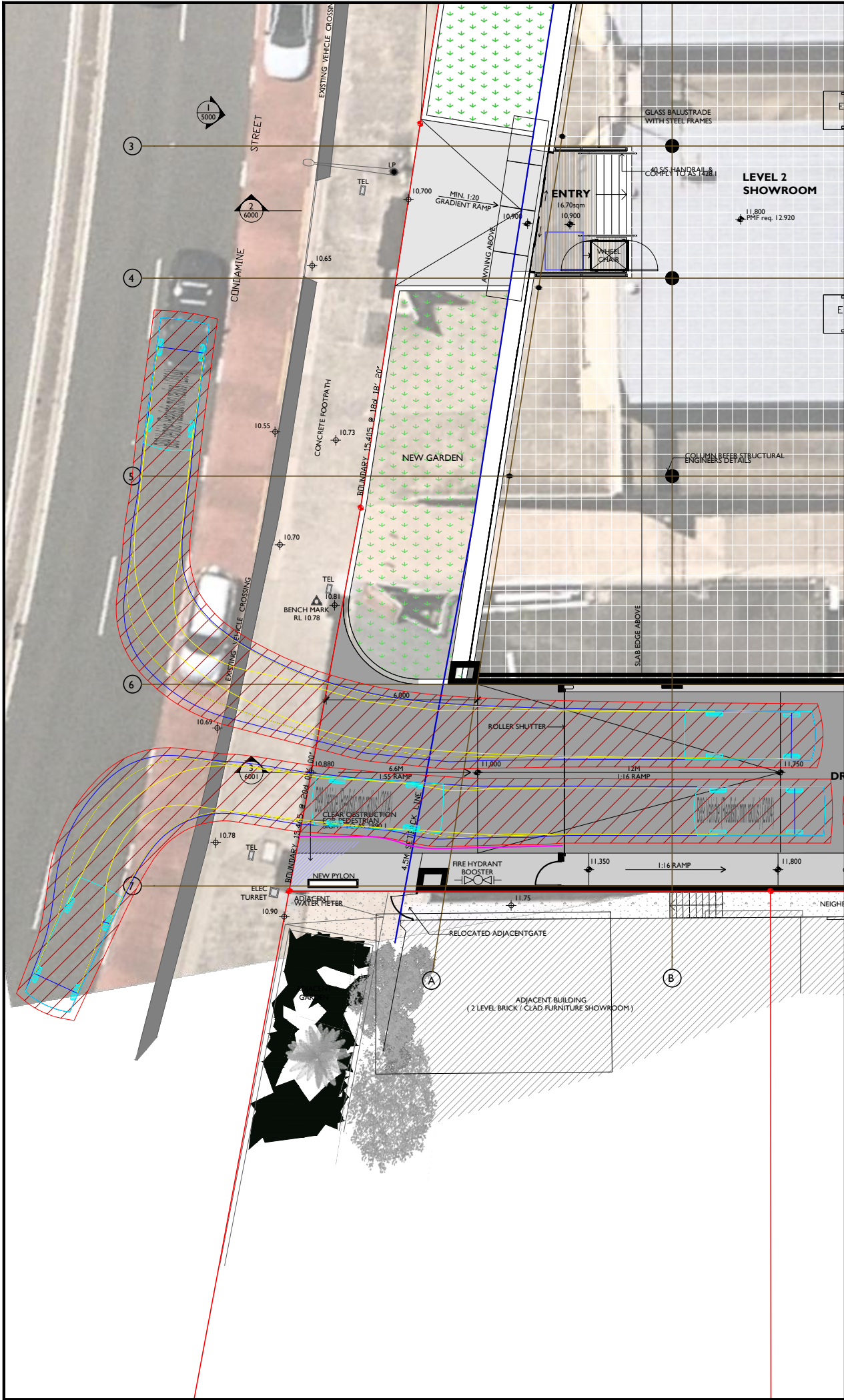


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SITE ADDRESS:	202-204 CONDOMINE ST BALGOWLAH NSW		
CLIENT:	KING LIVING		
ARCHITECT:	DD	DRAWN:	KT
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DRAWING TITLE:	PROPOSED PLAN - LEVEL 1		
DRAWING NO:	0432 - 4000	ISSUE:	H
SCALE:	0m 1 2 3 4 5 6 7 8 9 10 1:100 @ A1		



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 SW 18-07-22

Swept Path Legend
Wheel Path
Vehicle Body Envelope
Clearance Envelope (300mm)

Architect

Client

Scale / Plan Orientation
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1:200 @ A3

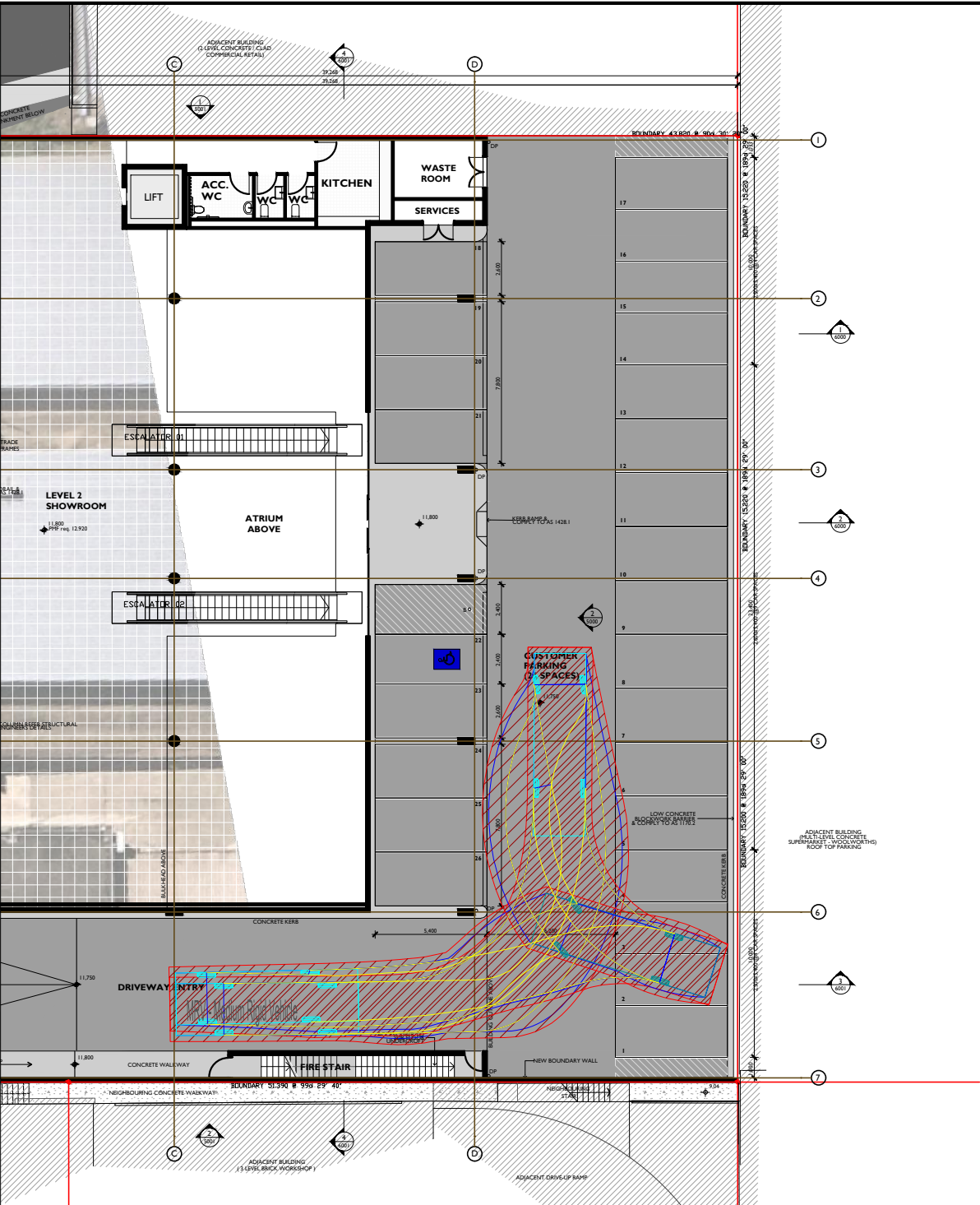
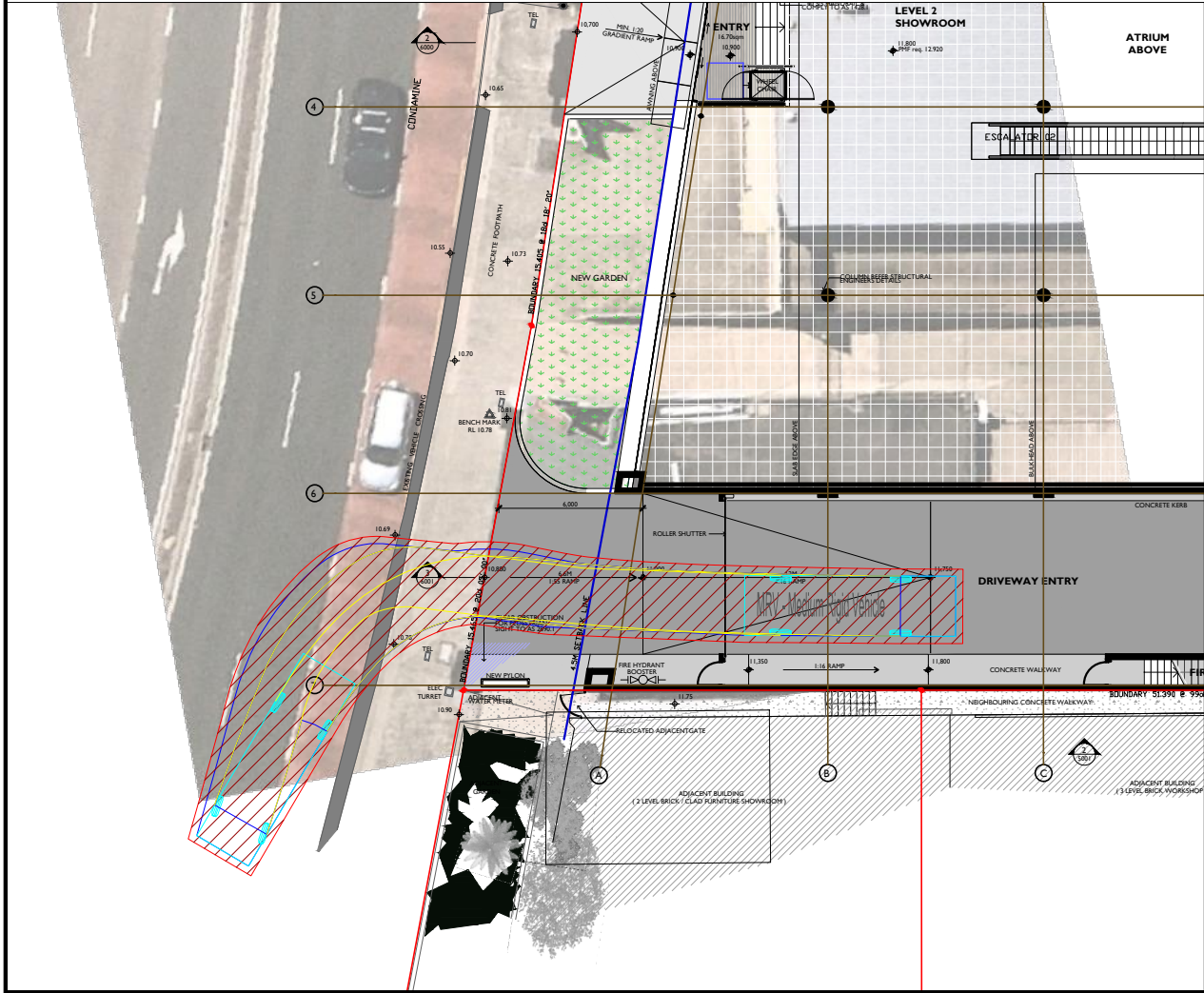
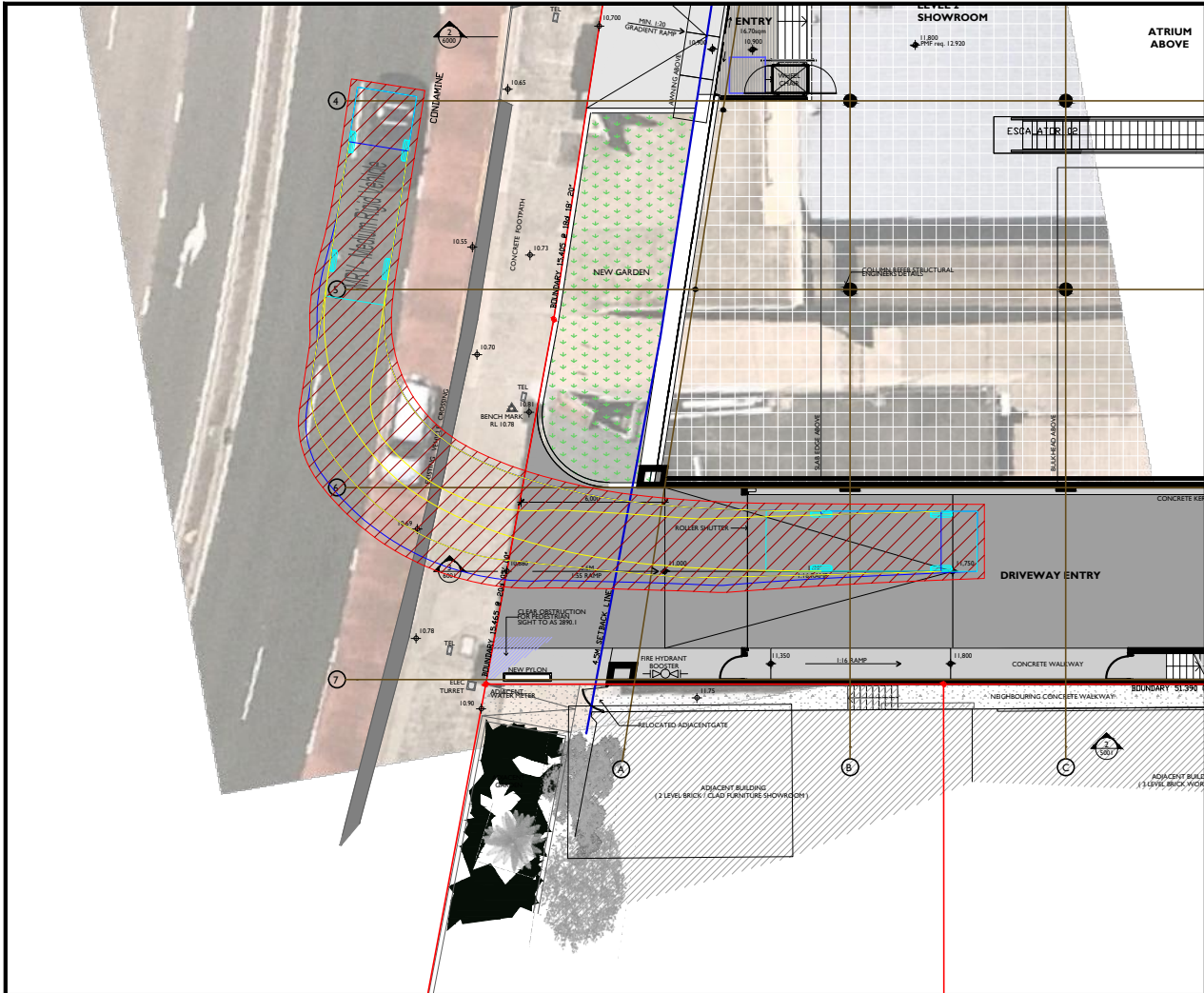
Project Description
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Drawing Title
Swept Path Analysis
Level 1
Left: Entry/Exit Movements at Access - B99 Vehicles
Right: Circulation into Carpark - B85 & B99 Vehicles

Drawn: SW Checked: VD Date: 18-07-22

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



Notes:

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Rev.	Revision Note	By.	Date
A	Swept Path Analysis	SW	18-07-22

Swept Path Legend	
	Wheel Path
	Vehicle Body Envelope
	Clearance Envelope (300mm)

Architect

Client

Scale / Plan Orientation	
1:300 @ A3	

Project Description

200-204 Condamine Street, Balgowlah

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Drawing Title

Swept Path Analysis - 8.8m Medium Rigid Vehicle Level 1

Left: Entry/Exit Movements at Access

Right: 3-Point Turn Within Site

Drawn: SW	Checked: VD	Date: 18-07-22
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21.516d05v01 TRAFFIX [220629 Plans] Design Review.dwg

Project No.	Drawing Phase	Drawing No.	Rev.
21.516	DA	TX.02	A