TRAFFIX
TRAFFIC & TRANSPORT PLANNERS

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Reference: 20.229r01v03

21 August 2020

Summit Build Pty Ltd
C/- Crawford Architects
Suite 3.01, Level 3/80 Mount Street
North Sydney, NSW 2010

Attention: Ms Georgina Nassif

Re: 349 Barrenjoey Road, Newport
Proposed Mixed Use Development
Traffic Impact Statement

Dear Georgina,

TRAFFIX has been commissioned to assess the traffic impacts in support of a Development Application (DA) relating to a mixed use development located at 349 Barrenjoey Road, Newport. The proposed development will involve the construction of a mixed-use development containing 230m^2 of retail space and six (6) residential units. The subject site is located within the Northern Beaches Local Government Area and has been assessed under that Council's controls.

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. As such, the DA will not require referral to the Roads and Maritime Services (RMS) under the provisions of State Environmental Planning Policy (Infrastructure) 2007.

Site and Location

The subject site is situated at 349 Barrenjoey Road, Newport and is located approximately 26.0 kilometres northeast of Sydney Central Business District (CBD) and approximately 3.0 kilometres northeast of Mona Vale town centre. More specifically, it is located on the western corner of Barrenjoey Road and Robertson Road intersection.

The site is generally rectangular in configuration and has a total site area of approximately 774m^2. The site has a north eastern frontage of 46 meters to Robertson Road and a south eastern frontage of 19 meters. It is bounded to the northwest and southwest by other retail 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 shown in **Figure 3** with the following roads of particular interest:

- Barrenjoey Road: part of an RMS Main Road (MR 164) that traverses north-south between Beach Road in the north and Pittwater Road in the south. In the vicinity of the site, Barrenjoey Road is subject to a speed zoning of 50km/h and accommodates two (2) lanes of traffic in either direction. Kerbside parking is permitted along Barrenjoey Road, subject to various time restrictions.
- Bardo Road: a local collector road that traverses east-west direction between Barrenjoey Road in the east and Nooal Street in the west. In the vicinity of the site, Bardo Road is subject to a speed zoning of 50km/h and accommodates a single lane of traffic in either direction. Kerbside parking is permitted along either side of the road.
- Robertson Road: a local road that traverses south-east to northwest between Barrenjoey Road in the southeast and Nullaburra Road in the northwest. In the vicinity of the site, Robertson Road is subject to a speed zoning of 50km/h and permits a single one-way lane of traffic between Barrenjoey Road and Foamcrest Avenue north-west direction. 45 degree angled parking is permitted along the southern side of Robertson Road.

It can be seen from **Figure 3** that the site is conveniently located with respect to local and arterial roads serving the region, with connectivity to the west using Bardo Road and connectivity to the north and south via the Barrenjoey Road.

Figure 3: Road Hierarchy

Public Transport

The subject site is within optimal walking distance (400 metres) of several bus services operating in the locality. These bus services are presented in **Figure 4** and are summarised as follows:

- 188 – Mona Vale to City Wynyard
- 188X – North Avalon Beach to City Wynyard (Express Service)
- 189X – Avalon Beach to City Wynyard (Express Service)
- 190X – Palm Beach to City Wynyard (Express Service)
- 199 – Palm Beach to Manly

In addition, the subject site is within 800 metres of the Mona Vale B-Line stop along Barrenjoey Road. The B-Line Program is a turn up and go service 7 days a week, operating from 4:30am until 12:30am and aims to provide more reliable journeys between Mona Vale and the Sydney CBD.

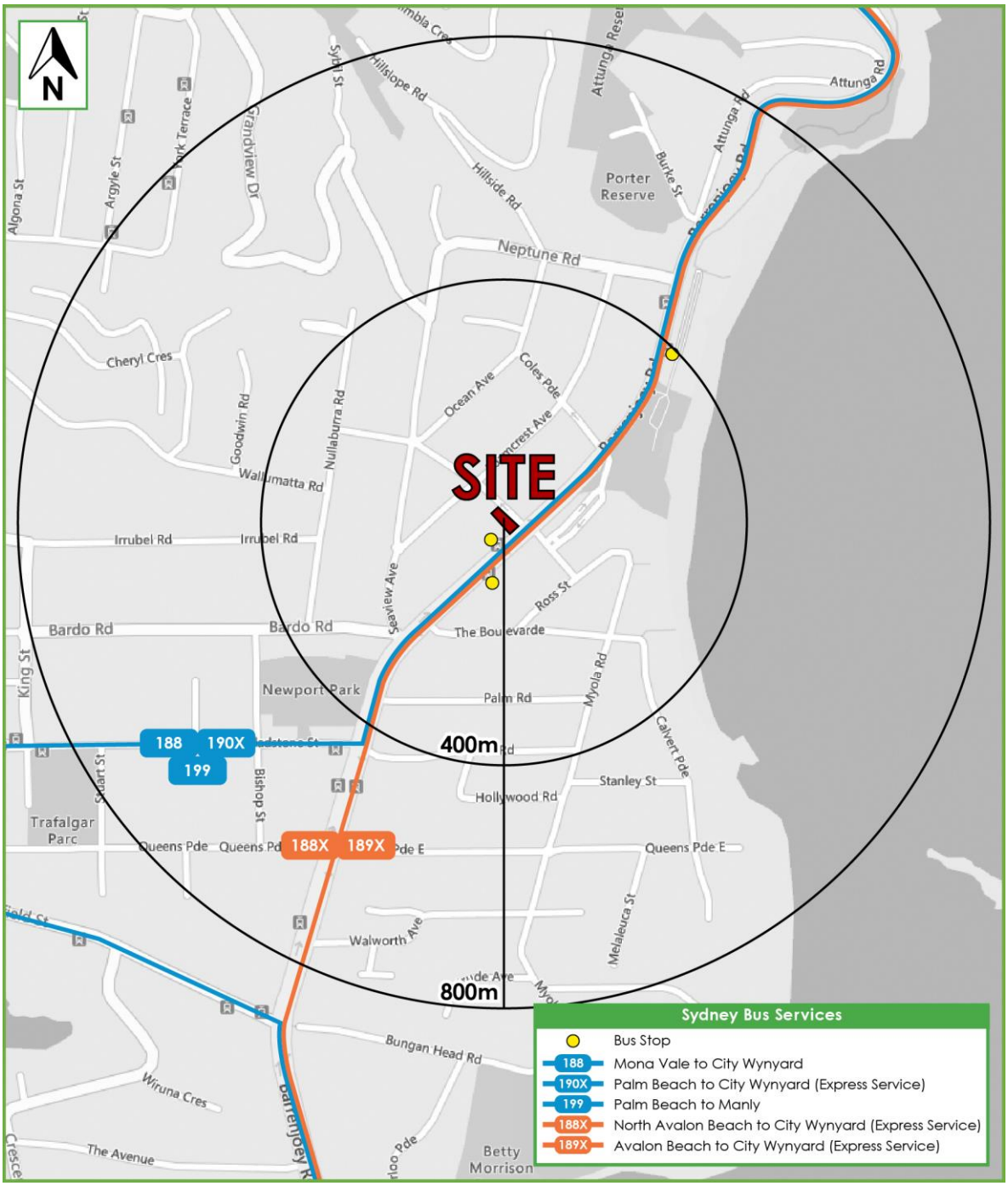


Figure 4: Public Transport

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:

- Shop-Top Housing comprised of:
  - 2 x one-bedroom dwellings;
  - 3 x two-bedroom dwellings; and
  - 1 x three-bedroom dwellings.
- 230m^2 of retail space.
- A basement level providing the provision of 20 car parking spaces.
- Provision of a new vehicular access onto Robertson Road at the north eastern corner of the site.

Reference should be made to the plans submitted separately to Council that are presented at a reduced scale in **Attachment 1**.

Parking Requirements

Car Parking

The Pittwater 21 Development Control Plan (DCP) applies to the subject site which states the minimum parking requirements for mixed-use developments. This *minimum* parking rate and provision for shop top housing are summarised in **Table 1** below:

Table 1 – DCP Minimum Car Parking Rate and Provisions

Type	Units/GLA	DCP Minimum Car Parking Rate	Parking Requirement	Parking Provided
Shop Top Dwellings				
1 Bedroom Dwelling	2	1 space per dwelling	2	10
2+ Bedroom Dwelling	4	2 spaces per dwelling	8	
Visitors	6	1 space per three dwellings	2	2
		Sub-Total	**12**	**12**
Retail				
Retail	230m^2	1 space per 30m^2 GLA	8	8
		Sub-Total	**8**	**8**
		Totals	**20**	**20**

It can be seen from **Table 1** that the proposed development is nominally required to provide a minimum of 20 car parking spaces. In response, the development proposes to provide a total of 20 car parking spaces comprising of ten (10) residential spaces, two (2) visitor spaces and eight (8) retail spaces. It is noted that of the eight (8) retail parking spaces, four (4) will be assigned to staff and four (4) to customers. This total provision complies with the minimum requirement of Council's DCP.

Accessible Parking

Reference should be made to the Disability Access Report prepared by Lindsay Perry Access.

Motorcycle Parking

The DCP states for business/industrial development or additions, comprising of 200m² gross floor area (GFA) or more, provision is to be made for motorcycle parking at a rate of 1 motorcycle parking space per 100 motor vehicle spaces. The development proposes 20 car parking spaces and therefore no motorcycle parking spaces are required. In response, the development does not provide any motorcycle parking spaces and is compliant with the DCP.

Bicycle Parking

The DCP states that for residential developments, secure bicycle storage facilities must be provided within the building at the rate of 1 bicycle rack per 3 dwellings. Application of this rate to the six (6) proposed dwellings results in a requirement for two (2) bicycle racks.

The DCP states for business/Industrial development or additions, comprising of 200m² GFA or more, secure enclosed bicycle storage facilities must be provided within the building at the rate of 1 bicycle rack per 1000m² GFA, or a minimum of 4 bicycle racks, whichever is the greater. As a result, the development is required to provide a bicycle rack for four (4) spaces.

As a result, the development is required to provide a total of six (6) bicycle parking spaces. In response, the development provides a total of eight (8) bicycle rails within the basement level of the carpark, compliant with the DCP requirements.

Servicing and Refuse Collection

The DCP states that provision must be made for garbage collection, removalist vans and emergency vehicles. In response, the development proposes to use a private waste contractor for waste collection for both retail and residential uses. A single service bay is provided within the ground floor, accommodating a maximum 6.4m long small rigid vehicle.

A refuse storage room area is proposed adjacent to the service bay and it is emphasised that refuse collection would occur on an infrequent basis, typically outside of peak periods. As such, this arrangement is considered appropriate and supportable, given the nature and scale of the proposed development.

Traffic Generation

Existing Traffic Generation

The subject site currently accommodates five (5) 'specialty shop' retail tenancies with approximately 777m² GFA. The *RMS Guide to Traffic Generating Developments 2002* (RMSGTGD) recommends the following traffic generation rate for specialty shops:

- 4.6 trips per 100m² gross leasable floor area (GLFA) during the Thursday evening peak period.

The RMSGTGD does not provide morning vehicle trip rates for 'specialty shops', therefore the morning trip rate is assumed to be equal to 20% of the evening peak, representing staff arrivals. It should be noted that according to the RMSGTGD, about 75% of the GFA of a site is deemed to be GLFA, Application of the above traffic generation rates and a 50/50 directional split to the approximately 583 m^2 GLFA retail space results in the following traffic generation:

- 5 vehicles per hour during the morning peak period (4 in, 1 out); and
- 27 vehicles per hour during the evening peak period (13 in, 14 out).

Proposed Traffic Generation

Residential

With regards to the proposed development, the RMSGTGD recommends the following traffic generation rate for a medium density residential development:

- 0.65 trips per dwelling during the morning and evening peak periods.

Application of the above rate to the proposed six (6) dwellings will result in the following traffic generation:

- 4 vehicles per hour during the morning peak period (1 in, 3 out); and
- 4 vehicles per hour during the evening peak period (3 in, 1 out).

Retail

In addition, the development provides four (4) retail tenancies within the ground floor. Application of the above traffic generation rates for 'specialty shops', assuming a morning trip rate equal to 20% of the evening peak, representing staff arrivals and assuming a 50/50 directional split to the 230m^2 GLFA retail space results in the following traffic generation:

- 2 vehicles per hour during the morning peak period (2 in, 0 out); and
- 11 vehicles per hour during the evening peak period (5 in, 6 out).

Combined Traffic Generation

The combined traffic generation of the proposed development is as follows:

- 6 vehicles per hour during the morning peak period (3 in, 3 out); and
- 15 vehicles per hour during the evening peak period (8 in, 7 out).

Net Traffic Generation

Taking into consideration the existing retail use of the site, results in the following net traffic generation:

- 1 vehicle per hour during the morning peak period (-1 in, 2 out); and
- -12 vehicles per hour during the evening peak period (-5 in, -7 out).

Therefore, there is a net decrease in traffic generation in the evening peak period and an increase of one (1) vehicle per hour in the morning peak period. This increase is considered minor and would not adversely affect the local and surrounding road network.

Access and Internal Design

Access

The proposed development incorporates a total of 20 car parking spaces with access from Robertson Road (minor road). In accordance with AS 2890.1 (2004), the proposed development requires a Category 1 vehicular driveway, being a combined entry and exit driveway of 3.0 to 5.5 metres. In response, the development provides a driveway width of 6.0 metres, thereby is sufficient to comply with the minimum requirements of AS 2890.1 (2004).

Appropriate LED signage is to be provided at the vehicular access to retail customers of available spaces and reduce unnecessary vehicle movements into the basement.

A swept path analysis has been undertaken with a B99 design vehicle and a 6.4m small rigid vehicle (SRV) that demonstrates satisfactory vehicle movements. This swept path analysis is provided in **Attachment 2**.

Traffic Signals and Queuing

A signal system is proposed with an on-site waiting bay within the ground and lower basement floor. This provision will ensure safe operation of the one-way ramps between the basement and ground floors. The signals will operate with a 'green' signal in passive mode, so that all arriving vehicles will be able to enter unimpeded to reduce the likelihood of queuing. The only time when an entering vehicle may be delayed is if a vehicle has activated the signals internally to exit the site. Vehicles on upper basement floor will be held within their parking spaces to operate an exit button/remote system or wait on the waiting bay on lower basement floor to activate the green signal internally. Further details and signal arrangements will be determined at the CC stage once a signal consultant has been engaged.

It is recommended that all four (4) spaces within the upper basement floor are allocated to residents or staff as vehicles in these spaces will be required to wait for traffic signals from within the parking bays. This will require a remote or button access to be provided. It is noted that there is sufficient area for retail and visitor spaces to be provided within the lower basement floor. This recommended allocation of parking can be readily accommodated within the basement floors and can be amended at CC stage.

In accordance with AS 2890.1 (2004), a queuing analysis was undertaken to assess the suitability of the proposed waiting bay. This analysis concluded that 98th percentile queue shall be contained with the waiting bay provided in compliance with AS2890.1.

On-Street Parking

The location of the proposed vehicular access currently accommodates three (3) on-street angled parking spaces, consisting of a single non-compliant accessible space and two (2) standard parking spaces. Currently, all existing retail tenancies utilise on-street parking. The proposed development provides eight parking spaces for retail use, this includes four (4) staff parking spaces, four (4) parking spaces including two (2) accessible spaces. Therefore, there is a net increase in the availability of parking for customers and staff within the vicinity of the site. It is also emphasised that the single non-compliant accessible space will be removed a two (2) compliant accessible spaces will be provided within the development. In summary, it is of benefit to the public to provide off-street parking and compliant accessible spaces for the retail component. This in turn ensures more on-street availability (lowering the demand for on-street parking) and providing a safer parking space for people with disabilities.

Internal Design

The basement car park and ground level loading bay generally complies with the requirements of AS 2890.1 (2004), AS 2890.2 (2018), AS 2890.3 (2015) and AS 2890.6 (2009), with the following characteristics noteworthy:

- All residential and staff car parking spaces have been designed in accordance with AS 2890.1 (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.
- All retail customer parking spaces have been designed in accordance with AS 2890.1 (2004) User Class 3A, being a minimum width of 2.6 metres, length of 5.4 metres, and providing an aisle width of 5.8 metres.
- Four (4) accessible parking space are provided within the basement level. Reference is to be made to accessibility report which addresses compliance with AS 2890.6 (2009)
- 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 turning area is provided adjacent to the accessible parking space in the event that car parking spaces are occupied, vehicles are able to exit in a forward direction.
- A minimum clear head height of 3.5 metres is to be provide for 6.4m SRV trafficable and loading areas.
- 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 for the single accessible parking space and adjacent shared zone.
- All columns are located outside of the parking space design envelope as shown in Figure 5.2 of AS 2890.1 (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 basement and ground level car park has been designed in accordance with AS 2890.1 (2004), AS 2890.2 (2018), AS 2890.3 (2015) and AS 2890.6 (2009). It is however envisaged that a condition of consent would 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 a Construction Certificate.

Conclusion

On the basis of the above, the proposed mixed-use development 349 Barrenjoey Road, Newport 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,

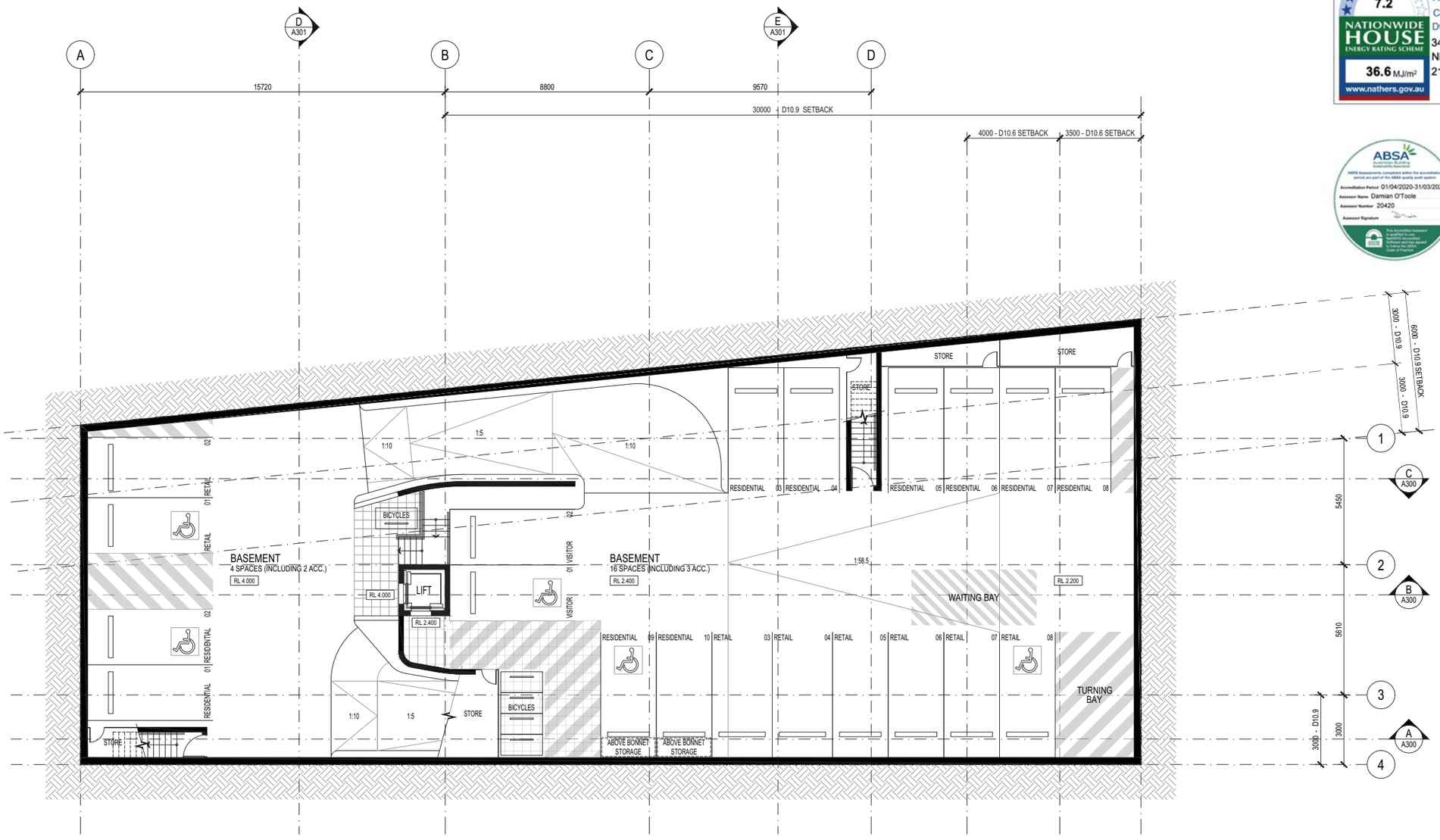
Traffix

Vince Doan
Executive Engineer

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

ATTACHMENT 1

Reduced Plans



Certificate no.: 0005073143
Assessor Name: Damian OToole
Accreditation no.: 20420
Certificate date: 04 Aug 2020
Dwelling Address:
349 BARRENJOEY RD
NEWPORT, NSW
2106

7.2 NATIONWIDE HOUSE ENERGY RATING SCHEME
36.6 MJ/m²
www.nathers.gov.au

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ABSA
Accreditation Period 01/04/2020-31/03/2021
Assessor Name Damian O'Toole
Assessor Number 20420
Assessor Signature

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ISSUE	DATE	AMENDMENTS
A	20.08.12	DA ISSUE

CLIENT: SUMMIT BUILD P/L

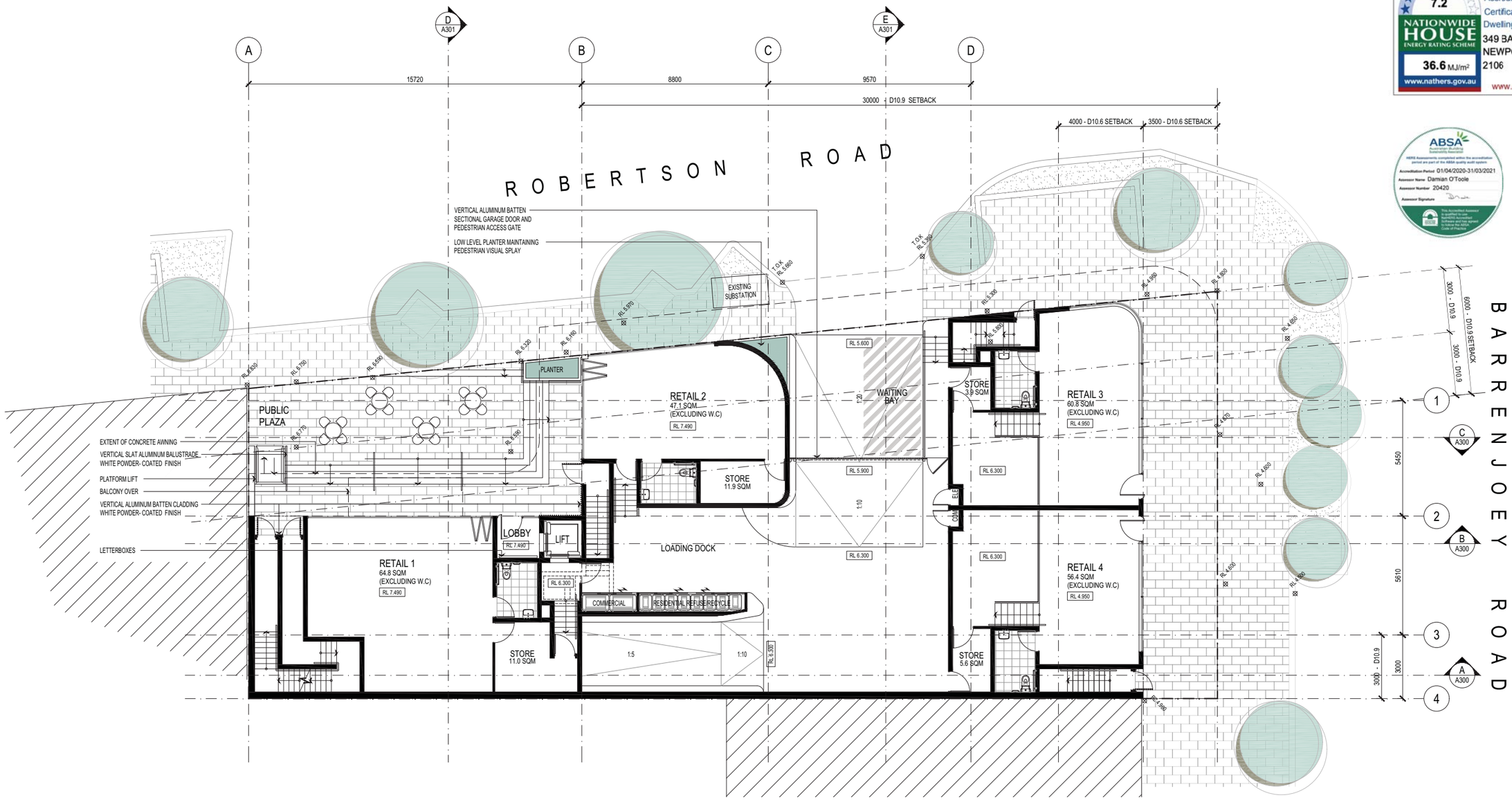
PROJECT: MIXED USE DEVELOPMENT
349 BARRENJOEY ROAD NEWPORT NSW 2106

TITLE: FLOOR PLAN BASEMENT

SCALE 1:100 @ A1 / 1:200 @ A3
APPROVED
DRAWN MN
CHECKED TG
DATE JULY
STATUS DA

PROJECT NUMBER 19032
DRAWING NUMBER A100
ISSUE A

crawford architects



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ISSUE	DATE	AMENDMENTS
A	20.08.12	DA ISSUE

CLIENT: SUMMIT BUILD P/L

PROJECT: MIXED USE DEVELOPMENT
349 BARRENJOEY ROAD NEWPORT NSW 2106

TITLE: FLOOR PLAN GROUND

SCALE 1:100 @ A1 / 1:200 @ A3
APPROVED
DRAWN MN
CHECKED TG
DATE JULY
STATUS DA

PROJECT NUMBER 19032
DRAWING NUMBER A101
ISSUE A

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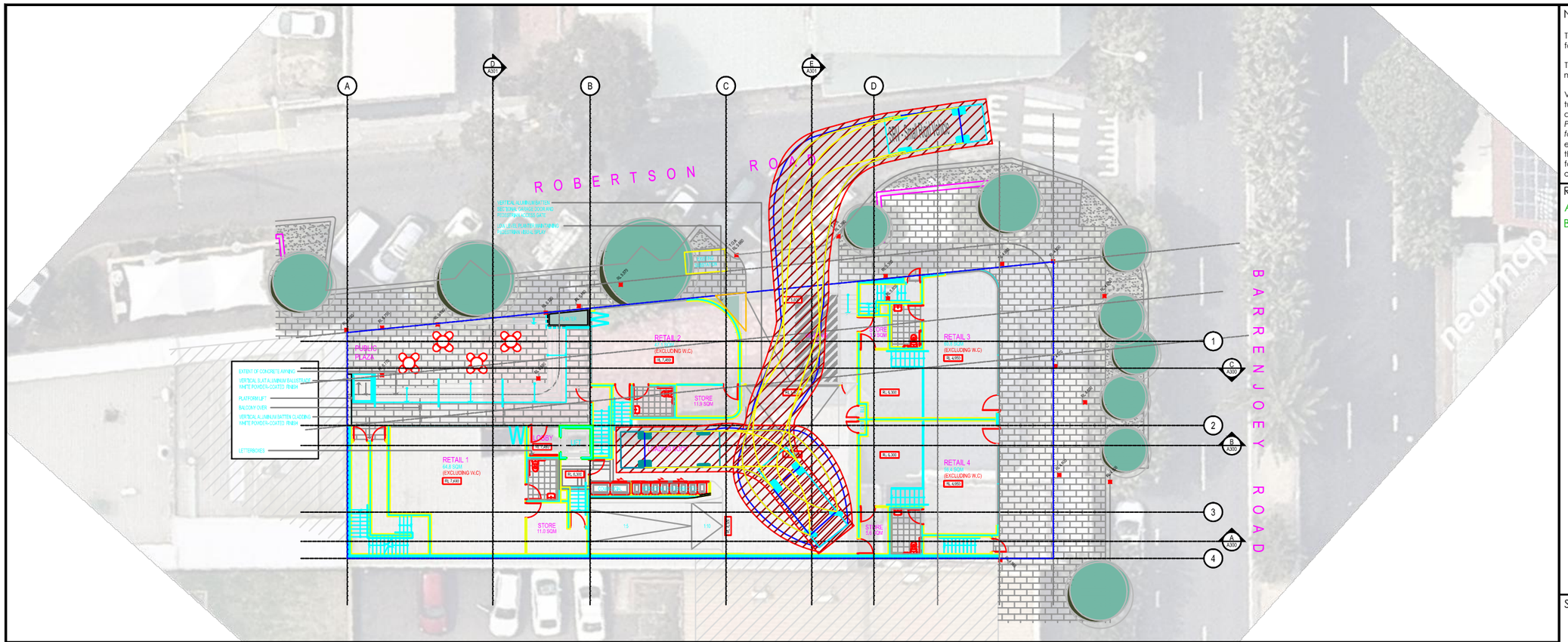
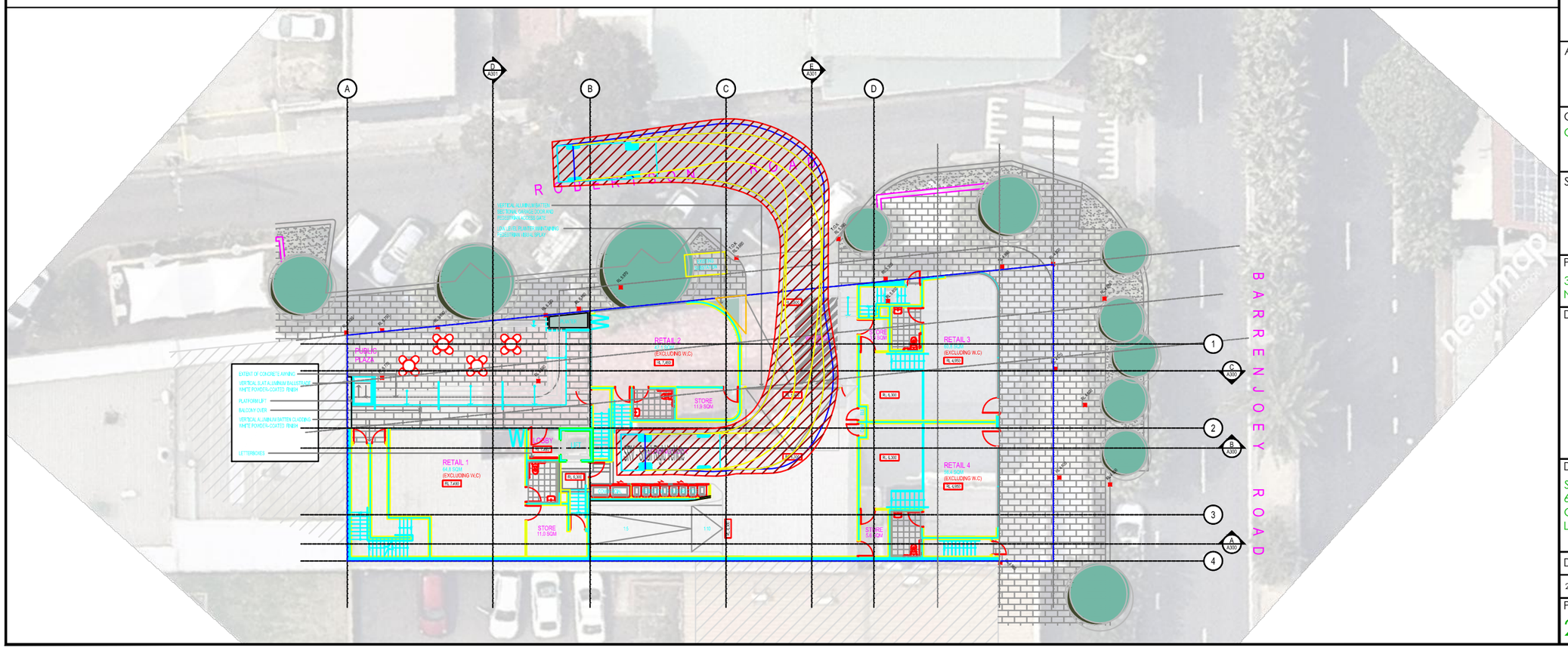
ATTACHMENT 2

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	SW	07-08-20
B	Updated Plans [200812]	SW	13-08-20

Swept Path Legend

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

Architect

Client
Gold Star Holdings Pty Ltd

Scale / Plan Orientation

0 3 6 9 12m
1:300 @ A3

Project Description
349 Barrenjoey Road,
Newport, NSW

Drawing Prepared By

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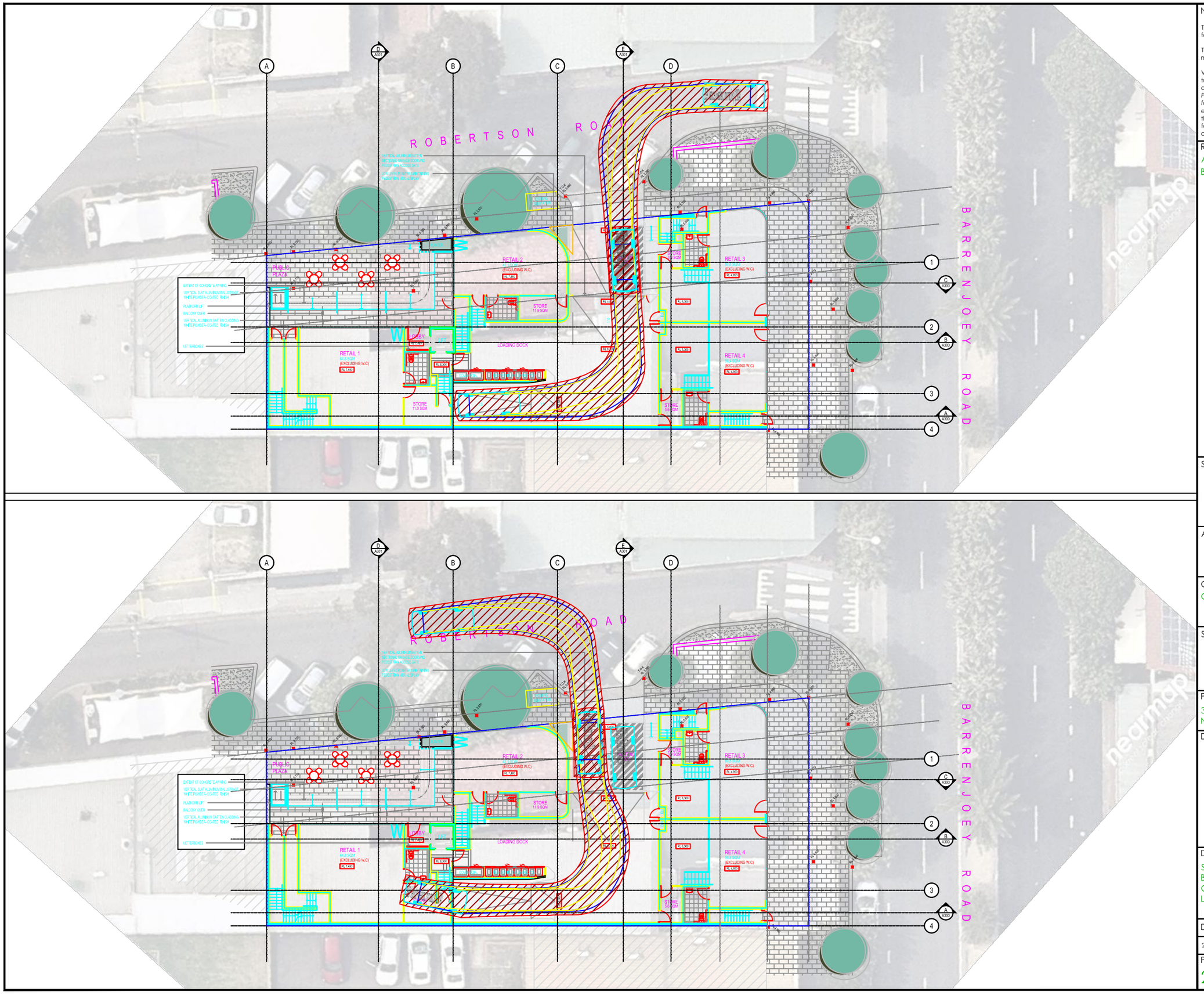
Drawing Title
Swept Path Analysis
6.4m Small Rigid Vehicle
Ground Floor
Left: Entry Movement Right: Exit Movement

Drawn:	Checked:	Date:
SW	VD	07-08-20

20.229d04v01 TRAFFIX [200812 Plans] Design Review.dwg

Project No.	Drawing Phase	Drawing No.	Rev.
20.229	DA	TX.01	B



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Scale / Plan Orientation

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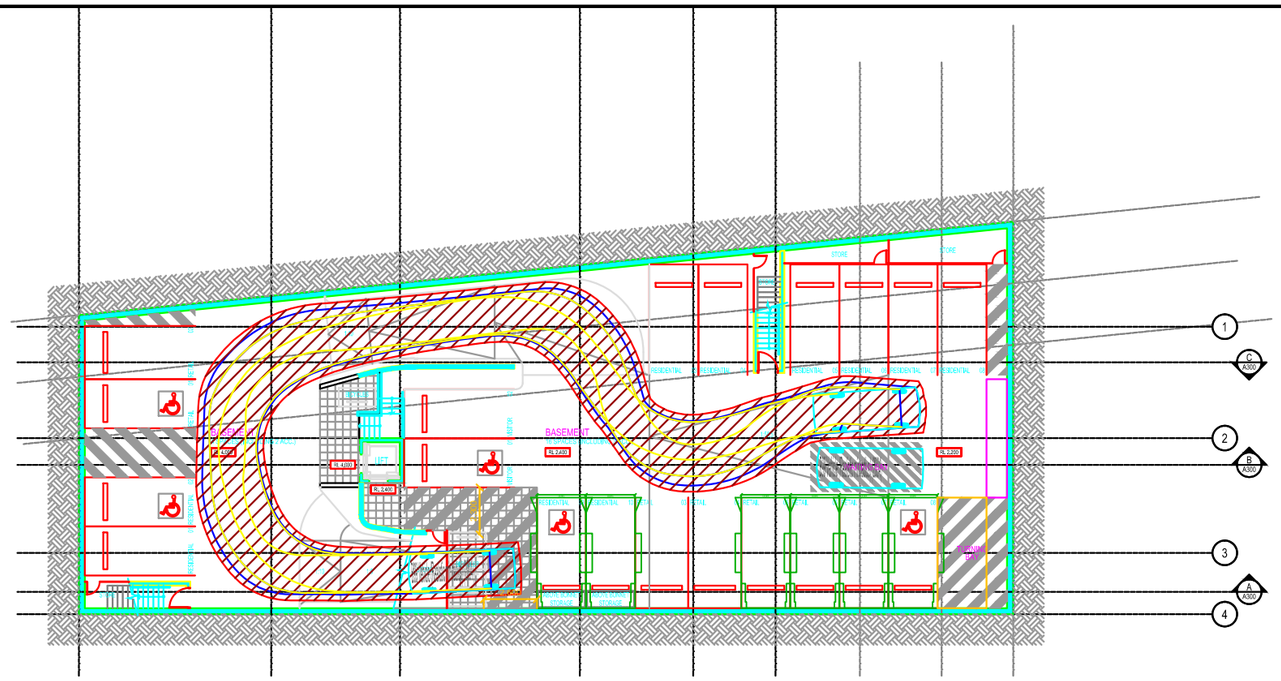
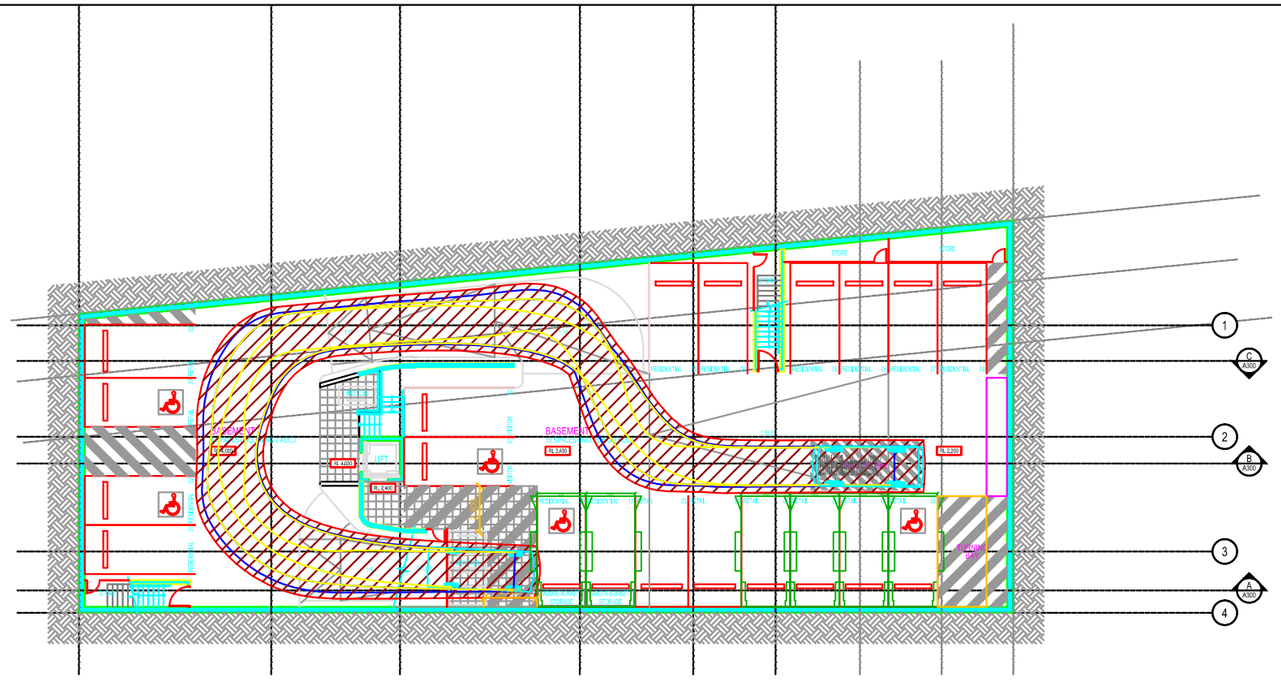
Drawing Title
Swept Path Analysis
B99 Vehicle
Ground Floor
Left: Entry Movement Right: Exit Movement

Drawn:	Checked:	Date:
SW	VD	07-08-20

20.229d04v01 TRAFFIX [200812 Plans] Design Review.dwg

Project No.	Drawing Phase	Drawing No.	Rev.
20.229	DA	TX.02	B





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Swept Path Legend

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Scale / Plan Orientation
0 3 6 9 12m
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Drawing Title
Swept Path Analysis
B99 Vehicle
Basement Floor
Left: Entry Movement Right: Exit Movement

Drawn:	Checked:	Date:
SW	VD	07-08-20

20.229d04v01 TRAFFIX [200812 Plans] Design Review.dwg

Project No.	Drawing Phase	Drawing No.	Rev.
20.229	DA	TX.03	B