PROPOSED SHOP TOP HOUSING DEVELOPMENT

1-3 GONDOLA ROAD, NORTH NARRABEEN

TRAFFIC AND PARKING ASSESSMENT REPORT

8TH APRIL 2024

REF 22016

Prepared by

Terraffic Pty Ltd
Traffic and Parking Consultants

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1. INTRODUCTION

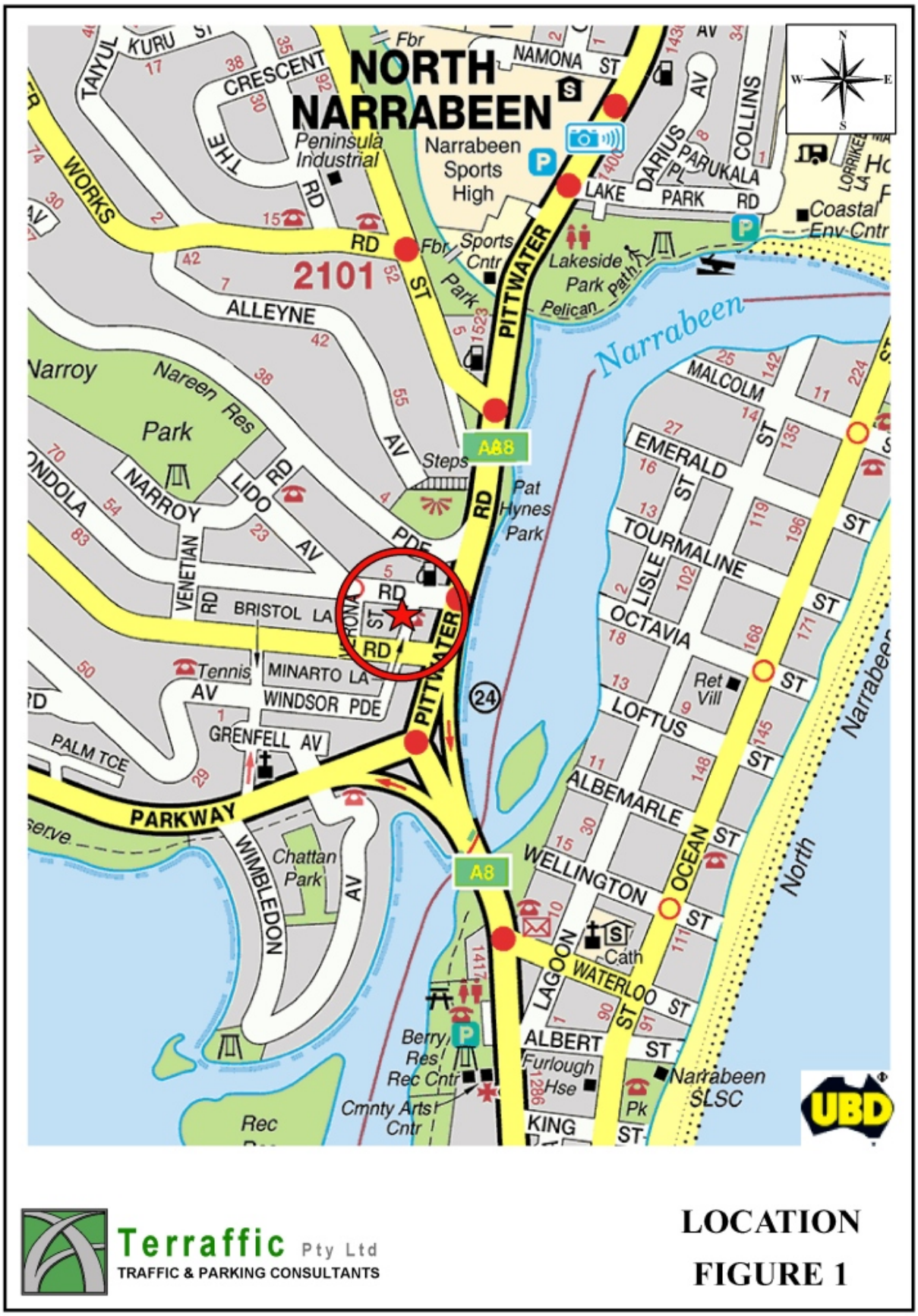
This report has been prepared to accompany a Development Application (DA) to Northern Beaches Council for a proposed shop top housing development on a consolidated site at 1-3 Gondola Road, North Narrabeen (Figures 1 and 2).

The development site is located on the south-western corner of the Gondola Road/Minarto Lane intersection. The site has an area of 1,289.3m^2 with frontages of 36.6m to Gondola Road and 39m to Minarto Lane. The subject site is zoned B2 Local Centre under the controls of the Pittwater Local Environmental Plan 2014.

Existing Site Development

As can be seen in the aerial photograph below, No1 Gondola Road is currently vacant. No3 Gondola Road comprises a 2 level commercial building with a floor area of approximately 555m^2. The existing building is served by 12 off-street parking spaces that gain vehicular access to Gondola Road via a 3.1m wide combined entry/exit driveway. The driveway widens internally to provide separate ramps to a ground level carpark and rooftop parking area.

Aerial photograph of the site



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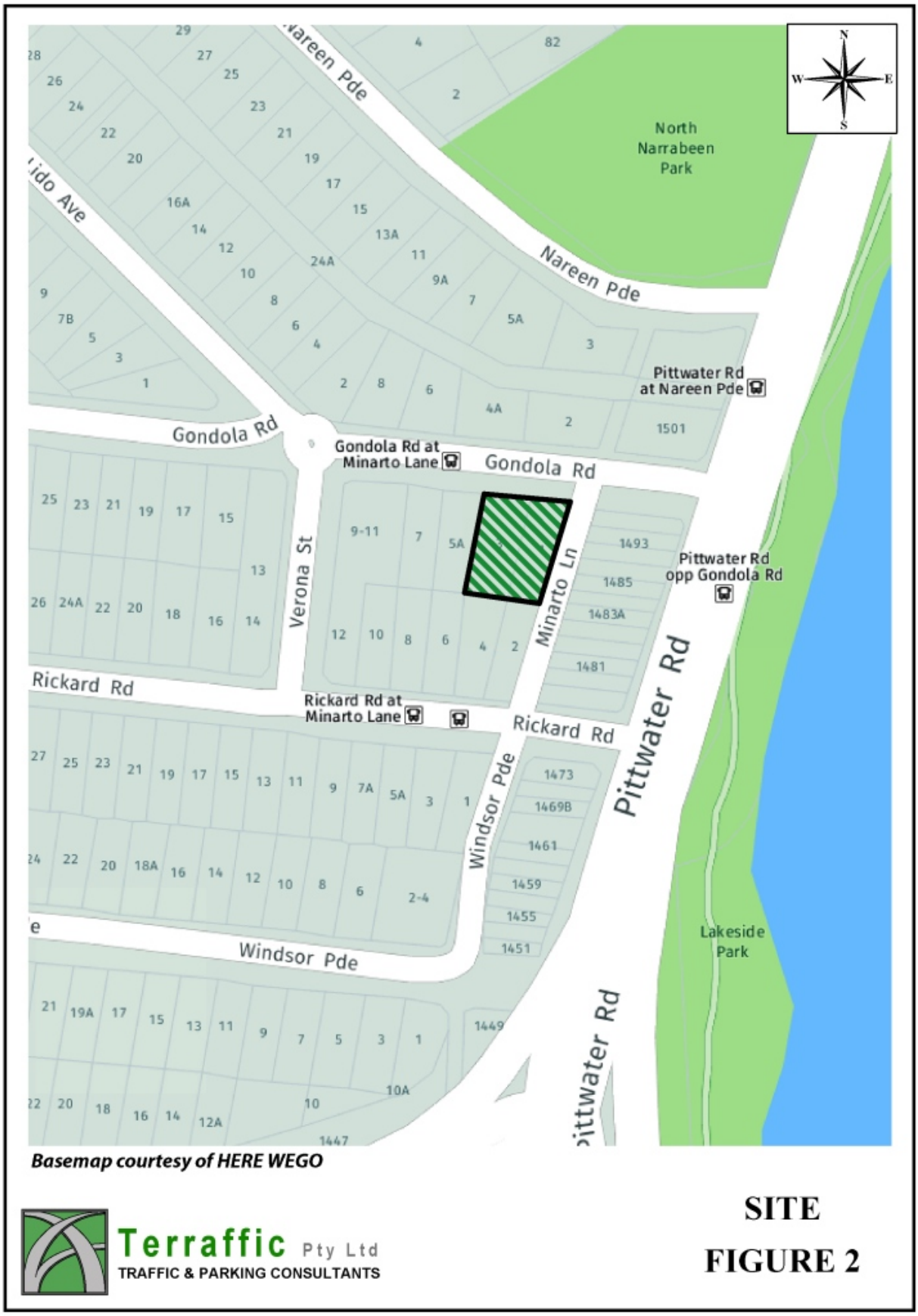
LOCATION

FIGURE 1


N
W
E
S
North
Narrabeen
Park
Nareen Pde
Pittwater Rd
at Nareen Pde
Gondola Rd
Gondola Rd at
Minarto Lane
Verona St
Minarto Ln
Pittwater Rd
opp Gondola Rd
Rickard Rd
Rickard Rd at
Minarto Lane
Windsor Pde
Pittwater Rd
Lakeside
Park
Basemap courtesy of HERE WEGO
Terraffic Pty Ltd
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SITE
FIGURE 2

Development Proposal

The proposed development comprises the construction of a shop top housing building comprising 2 commercial suites with a combined floor area of 396.49m^2 and 14 residential units comprising 6 x 2 bedroom units and 8 x 3 bedroom units (includes 3 adaptable units).

The development proposal is served by 38 off-street parking spaces comprising 25 resident spaces, 3 visitor spaces and 10 commercial tenant spaces. A loading bay is also proposed on the upper basement level that can be accessed by vans only. The loading bay will also contain car wash facilities for residents. The development will also be served by 2 motorcycle spaces in the lower basement and 10 bicycle racks located over both basement levels.

Vehicular access to the site is via a 5.5m wide combined entry/exit driveway off Minarto Lane. The driveway retains this width for 6m prior to reducing to a single lane ramp. The purpose of this 6m length is to accommodate a waiting car prior to entering. A single lane ramp will connect the basement parking levels. Convex mirrors will be installed to facilitate sight lines to oncoming traffic.

On the 1st February 2024, Council's Design + Sustainability Advisory Panel made the following recommendation regarding vehicular movements and car parking:

> *Access for vehicles is acceptable. Carparking allocation is to be revised to allow for ground level commercial floor area in the first 5m inside the building façade.*
> *Recommendations*
> 5. *Re-allocate car parking and if necessary reduce parking numbers to create an active ground floor frontage to Gondola Road.*

As can be seen, Council's DSAP Panel accepts a reduction in parking in order to activate the Gondola Road frontage.

Architectural plans of the development proposal prepared by Mackenzie Architects International are reproduced in Appendix A.

Public Transport Accessibility

The subject site has convenient access to the following bus service operated by Sydney Buses:

Route 182 Mona Vale to Narrabeen via Warriewood, North Narrabeen and Elanora Heights (operates daily)

Route 185 Mona Vale to Narrabeen via Warriewood and North Narrabeen (operates daily)

Route 190X Avalon to City Wynyard (Express Service) via Mona Vale, North Narrabeen, Narrabeen, Dee Why, Brookvale, Mosman, Neutral Bay and North Sydney Station (operates during weekday peaks)

Route 199 Palm Beach to Manly Wharf via Avalon, Newport, Mona Vale, North Narrabeen, Narrabeen, Dee Why and Brookvale (operates daily)

The bus stops for route 182 are located on Rickard Road while the bus stops for routes 185, 190X and 199 are located on Pittwater Road at Gondola Road. The bus stops for the B1 Line are located on Pittwater Road to the south of Waterloo Road in Narrabeen. This will represent a walk of approximately 720m (10 minutes) between the development site and the B1 bus stop.

The purpose of this report is to assess the traffic and parking implications of the proposed development.

2. PARKING ASSESSMENT

Pittwater Council Off-Street Parking Requirements

Table 1 in Section B6.3 of the Pittwater 21 DCP (effective 14 November 2015) specifies the following parking requirements for Shop-Top Housing:

1 bedroom dwellings	1 space per dwelling
2 or more bedroom dwellings	2 spaces per dwelling
Visitor parking	1 space per 3 dwellings
Business and Office Premises	2.5 spaces per 100m^2 GLA

Application of this requirement to the proposed development yields a minimum parking provision of 43 spaces calculated as follows:

6 x 2 bedroom units @ 2 spaces per dwelling	12.0 resident spaces
8 x 3 bedroom units @ 2 spaces per dwelling	16.0 resident spaces
Total Resident Parking	*28.0 resident spaces*
14 units @ 1 space per 3 units for visitors	4.7 visitor spaces (say 5 spaces)
Total residential requirement	*32.7 spaces (say 33 spaces)*
396.5m^2 commercial @ 2.5 spaces per 100m^2	9.9 tenant spaces (say 10 spaces)
Total requirement	**42.7 spaces (rounded to 43 spaces)**

The development proposal is served by 38 off-street parking spaces comprising 25 resident spaces, 3 visitor spaces and 10 commercial tenant spaces. The proposed parking provision represents a shortfall of 5 spaces comprising 3 resident spaces and 2 visitor spaces when calculated in accordance with the Council DCP.

SEPP 65 Off-Street Parking Requirements

An objective of the State Environmental Planning Policy No 65 - Design Quality of Residential Apartment Development (SEPP 65) and the Apartment Design Guide is to provide guidance on car parking in residential apartment developments. The SEPP recommends that parking should

be determined in relation to the availability, frequency and convenience of public transport, or proximity to a centre in regional areas.

In designated accessible Sydney locations and nominated centres in regional NSW, the Apartment Design Guide applies a minimum requirement that is the lesser of either the relevant rate set out in the *Guide to Traffic Generating Developments* (GTTGD) or the council car parking requirement for residential apartment development.

Part 3J Bicycle and car parking of the Apartment Design Guide sets out a range of objectives, design criteria and design guidance for car parking, car park design and facilities for other modes of transport in apartment developments. The guide introduces parking requirements for some sites in Metropolitan Sydney and nominated regional centres.

Objective 3J-1 states:

> *Car parking is provided based on proximity to public transport in metropolitan Sydney and centres in regional areas.*

The design criterion sets out measurable requirements for how this objective can be achieved in apartment developments, as follows:

> For development in the following locations:
>
> - On sites that are within 800m of a railway station or light rail stop in the Sydney Metropolitan Area

While the subject site is not located within 800m of a railway station or light rail stop, it is located within 720m of the B1 rapid bus line that connects Mona Vale to Wynyard Station through the Northern Beaches. The B1 line satisfies the intent of the ADG by providing a major trunk transit alternative for residents of the subject site.

Section 5 of the Roads and Maritime Services *"Guide to Traffic Generating Developments"* (October 2002) specifies the following parking requirements for medium density residential and commercial office developments:

1 bedroom units	1 space per unit
2 bedroom units	1.2 spaces per unit
3 bedroom units	1.5 spaces per unit
Visitor parking	1 space per 5 dwellings
Office	1 space per 40m^2 GFA

Application of this requirement to the proposed development yields a minimum parking provision of 32 spaces calculated as follows:

6 x 2 bedroom units @ 1.2 spaces per unit	7.2 resident spaces
8 x 3 bedroom units @ 1.5 spaces per unit	12.0 resident spaces
Total resident parking	*19.2 resident spaces (rounded to 19 spaces)*
14 units @ 1 space per 5 units for visitors	2.8 visitor spaces (rounded to 3 spaces)
Total residential requirement	*22.0 spaces*
397.6m^2 commercial @ 1 space per 40m^2	10.0 tenant spaces
Total requirement	**32.0 spaces**

The proposed development clearly exceeds the RMS Guidelines with the provision of 38 off-street parking spaces comprising 25 resident spaces, 3 visitor spaces and 10 commercial tenant spaces.

Furthermore, Council's DSAP Panel accepts a reduction in parking in order to activate the Gondola Road frontage. To that end, the provision of 38 spaces is considered acceptable for this development.

Carpark Compliance

The proposed carpark and access has been designed to generally satisfy the following requirements of the Australian Standard AS/NZS2890.1:2004 – *"Off-street Car Parking":*

- Parking spaces have a minimum length of 5.4m and width of 2.4m
- An additional 0.3m has been provided for spaces adjacent to a wall or obstruction
- 1.0m wide blind aisle extension has been provided
- The access/manoeuvring aisle has a minimum width of 5.8m
- The dual width section of the access driveway has a minimum width of 6.1m comprising a 5.5m roadway and 2 x 300mm wide kerbs

- The single width ramp has a minimum width of 3.6m comprising a 3.0m roadway and 2 x 300mm wide kerbs
- The maximum gradient of the access ramp does not exceed 25% (1 in 4)
- Ramp transitions do not exceed 12.5% (1 in 8) over 2.0m at crests
- Ramp transitions do not exceed 15% (1 in 6.7) over 2.0m at sags
- Pavement cross-falls do not exceed 5% (1 in 20) in any direction
- Pedestrian sight lines in accordance with Figure 3.3 of the Standard have been provided

The disabled parking spaces have been designed to comply with the Australian Standard AS/NZS2890.6:2009 – *"Off-street parking for people with disabilities"* as follows:

- A 5.4m long x 2.4m wide dedicated (non-shared) parking space
- An adjacent shared area that is also 5.4m long x 2.4m wide
- A minimum headroom of 2.5m above the disabled spaces
- Pavement cross-falls in disabled spaces do not exceed 2.5% (1 in 40) in any direction

For drainage purposes, the access driveway rises from the boundary (RL2.00) to a crest at RL4.40. The first 6m of the access driveway from the boundary has an upgrade of 10% as per the requirements in Clause 3.3(a) of the Standard. Furthermore, the 10% grade satisfies the maximum grade specified in Clause 3.3(c) for queuing areas.

Swept Path Analysis

The ability of the Australian Standard AS/NZS2890.1:2004 B99 Vehicle to circulate in the basement carpark was tested using the Autodesk Vehicle Tracking software and found to be satisfactory with the required clearances to walls and structure. The following B99 vehicle swept paths are reproduced in Appendix B:

1. The resident B99 vehicle departing the lower basement car park, driving up the ramp and pulling into a passing area located in the commercial carpark. This manoeuvre is only required if there is a resident entering the basement carpark and is within the linemarked waiting bay

2. The entering resident B99 vehicle leaves the waiting bay and drives onto the ramp to enter the basement carpark

3. The resident B99 vehicle reverses back from the passing area and departs the site. As can be seen, the B99 vehicle can comfortably pass another vehicle in a second linemarked waiting bay.

As can be seen on the swept paths, two (2) linemarked waiting bays are required on the Ground Floor (Upper basement level) to facilitate passing manoeuvres if necessary. A convex mirror will also be required at the top and bottom of the ramp providing access to the lower resident carpark.

Bicycle Parking

Section B6.3 of the Pittwater 21 DCP nominates that residential developments require secure bicycle storage at a rate of 1 bicycle rack per 3 dwellings. Application of this rate yields a minimum bicycle parking requirement of 5 bicycles calculated as follows:

14 units @ 1 bicycle space per 3 units	5 bike spaces

The DCP also specifies the following bicycle parking requirement for businesses:

> *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 the proposed commercial space is only 396.5m^2, the development will require a minimum of 4 bike racks for the commercial office space.

The proposed development satisfies both requirements with the provision of 10 bicycle racks with 4 racks located on the ground level for the commercial tenants and 6 racks in the lower basement for residents.

Motorcycle Parking

Section B6.3 of the Pittwater 21 DCP specifies that business/industrial development or additions, comprising of 200m² GFA or more, provision is to be made for motor cycle parking at a rate of 1 motor cycle parking space per 100 motor vehicle spaces.

The proposal comfortably satisfies the DCP requirement with the provision of 2 motorcycle spaces in the lower basement.

In the circumstances, it can be concluded that the proposed development has no unacceptable parking or queuing implications.

3. TRAFFIC ASSESSMENT

Road Hierarchy

The road hierarchy allocated to the road network in the vicinity of the site by the Roads and Maritime Services (RMS) is illustrated on Figure 3 and comprises the following:

State Roads	**Regional Roads**
Pittwater Road	Garden Street – Powderworks Road
Wakehurst Parkway	

As can be seen, Pittwater Road is a classified *State Road* performing an arterial road function. It typically carries 6 traffic lanes with traffic separated by a raised median island.

Gondola Road is an unclassified local road performing a collector road function. It connects Pittwater Road to the residential areas of Elanora Heights and North Narrabeen. It has a pavement width of approximately 10m with one hour restricted parking on both sides of the roadway between the site and Pittwater Road.

The existing traffic controls on the road network in the vicinity of the site are illustrated on Figure 4.

Projected Traffic Generation

An indication of the traffic generation potential of the existing and proposed development is provided by reference to the Roads and Maritime Services (RMS) "*Guide to Traffic Generating Developments"* (October 2002).

The traffic generation rates specified in the Guidelines are based on extensive surveys of a wide range of land uses throughout Sydney and regional NSW and nominate the following traffic generation rates applicable to the existing and proposed development on the site:

Medium density residential flat buildings	0.5 trips per dwelling – smaller units (2 bedrooms) 0.65 trips per dwelling – larger units (3+ bedrooms)
Commercial/office	2 trips per $100m^2$

Application of the RMS traffic generation rate to the **existing development** yields a traffic generation potential of approximately 11vtph during peak periods as follows:

$555m^2$ commercial @ 2vtph per $100m^2$	11vtph

Application of the RMS traffic generation rate to the **proposed development** yields a traffic generation potential of approximately 16vtph during peak periods as follows:

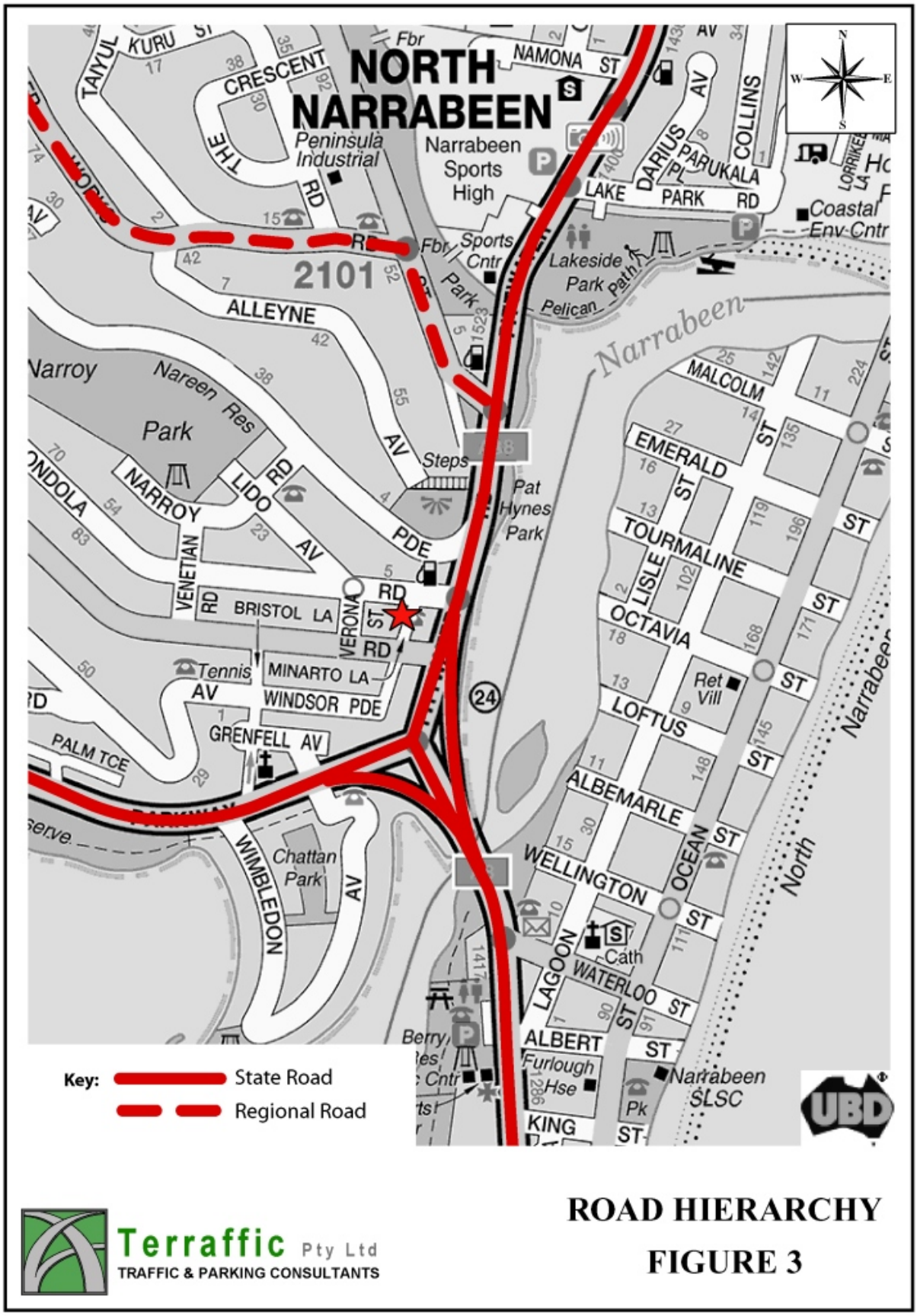
$396.5m^2$ commercial @ 2vtph per $100m^2$	8vtph
6 x 2 bedroom units @ 0.5vtph per unit	3vtph
8 x 3 bedroom units @ 0.65vtph per unit	5vtph
Total Development	**16vtph**

Based on the RMS Guidelines, the proposal will increase traffic flows on the road network by only 5 vehicle trips per hour during peak periods as follows:

Proposed shop top development	16vtph
Existing commercial development	11vtph
Additional traffic	**5vtph**

It will be readily appreciated that the additional traffic generated by the proposed development is very minor (5vtph) which will not have any noticeable or unacceptable effect on the road network serving the site in terms of road network capacity or traffic-related environmental effect.

In the circumstances, it can be concluded that the proposed development has no unacceptable traffic implications.



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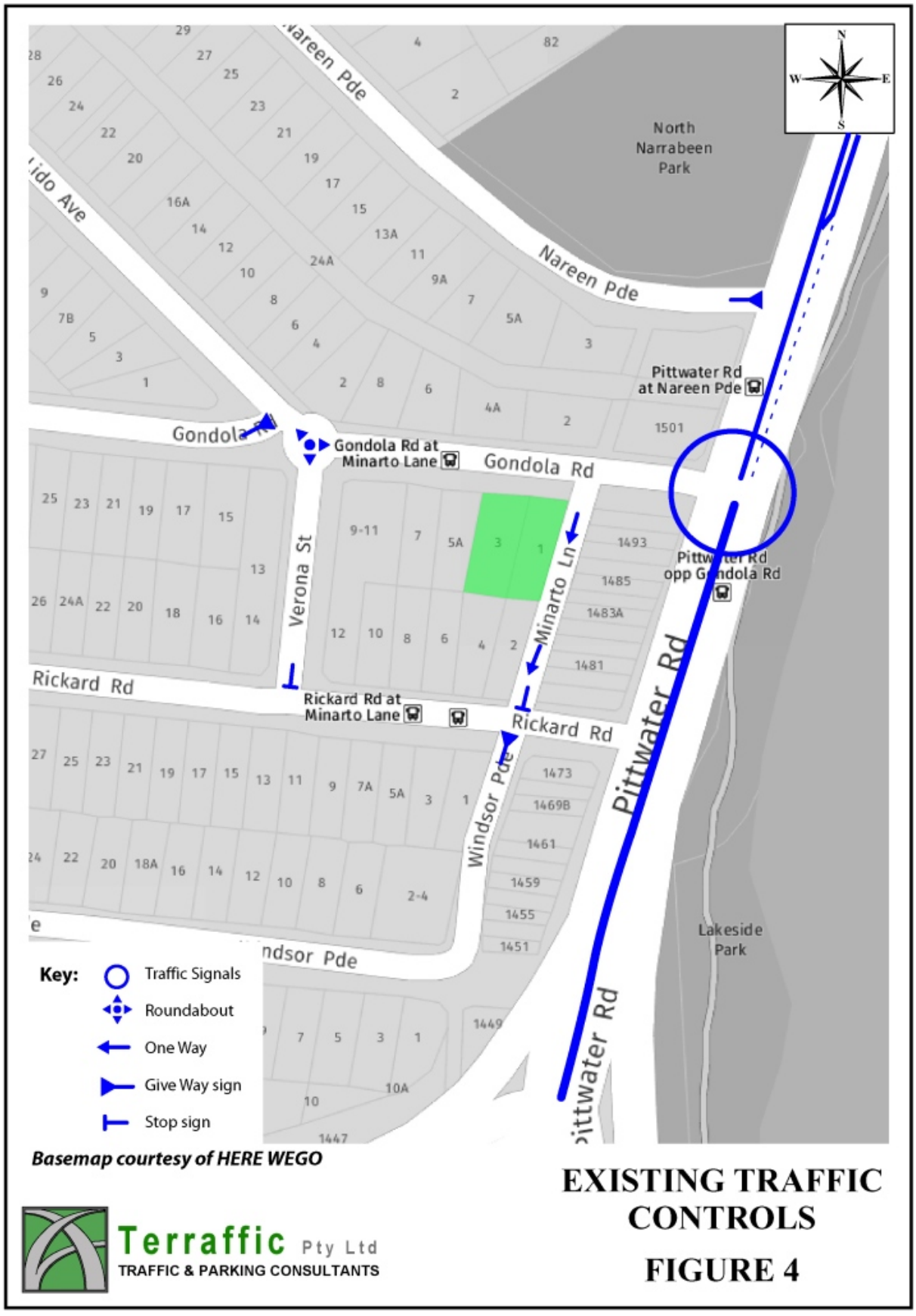
ROAD HIERARCHY

FIGURE 3


Nareen Pde
North Narrabeen Park
Pittwater Rd at Nareen Pde
Gondola Rd at Minarto Lane
Gondola Rd
Verona St
Minarto Ln
Rickard Rd at Minarto Lane
Rickard Rd
Windsor Pde
Pittwater Rd
Lakeside Park
Key:
Traffic Signals
Roundabout
One Way
Give Way sign
Stop sign
Basemap courtesy of HERE WEGO
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EXISTING TRAFFIC CONTROLS
FIGURE 4

APPENDIX A

PLANS OF THE PROPOSED DEVELOPMENT

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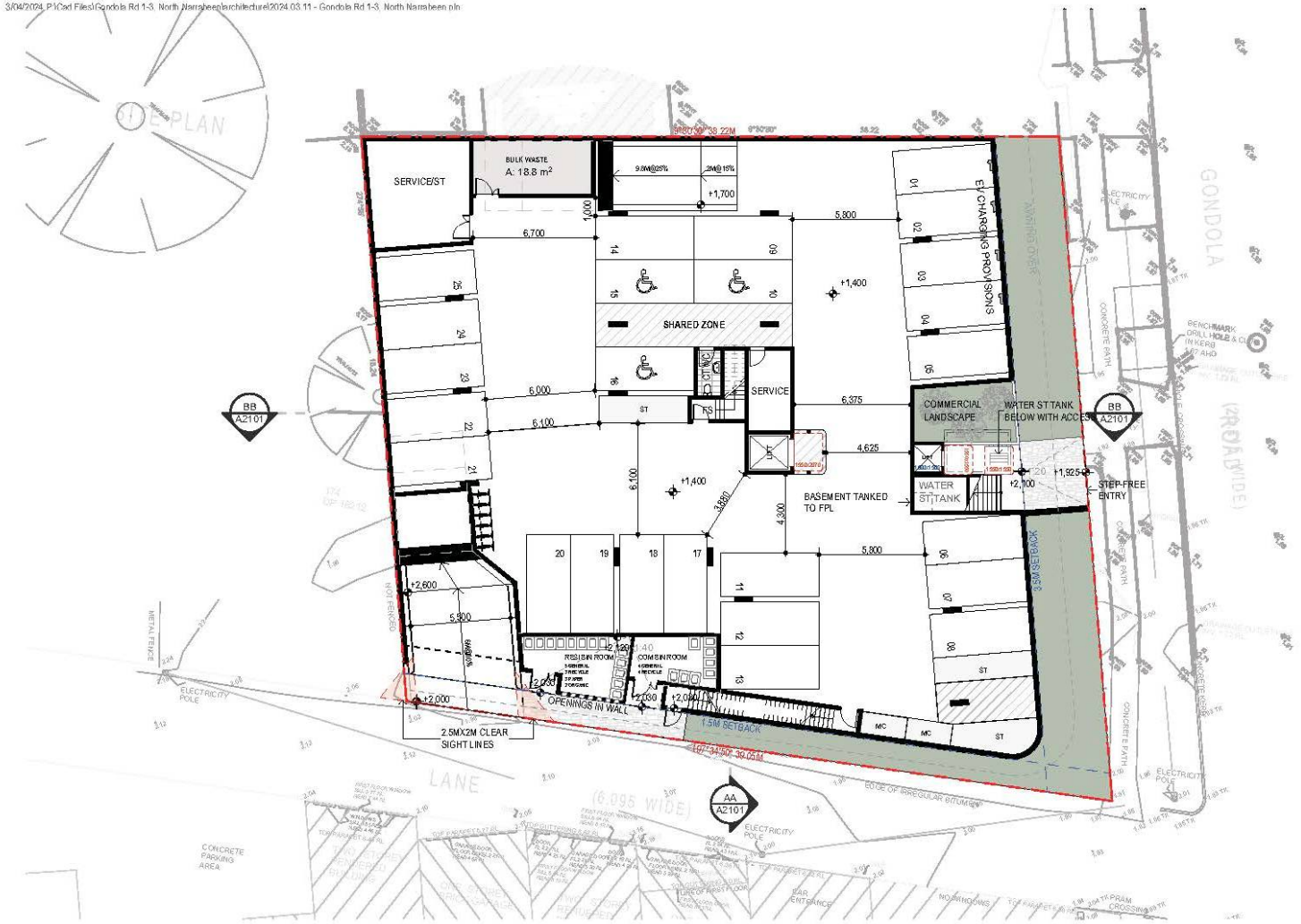

mackenzie architects international	736 PACIFIC HWY Gordon NSW 2072 Phone: (02) 9987 9966 Fax: (02) 9987 9977 www.mainternational.com.au info@mainternational.com.au	DO NOT SCALE DRAWINGS VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK	AMENDMENTS No. REVISION BY DATE A DA J.E 03.04.2024	PROJECT NORTH	MULTI RESIDENTIAL DEVELOPMENT PROJECT 1-3 Gondola Rd North Narrabeen 2101 PROJECT NO. 15/19	DRAWING BASEMENT PLAN DRAWN BY J.E CHECKED BY D.M SCALE 1:200@A3 DRAWING NO. A1001 ISSUE A	

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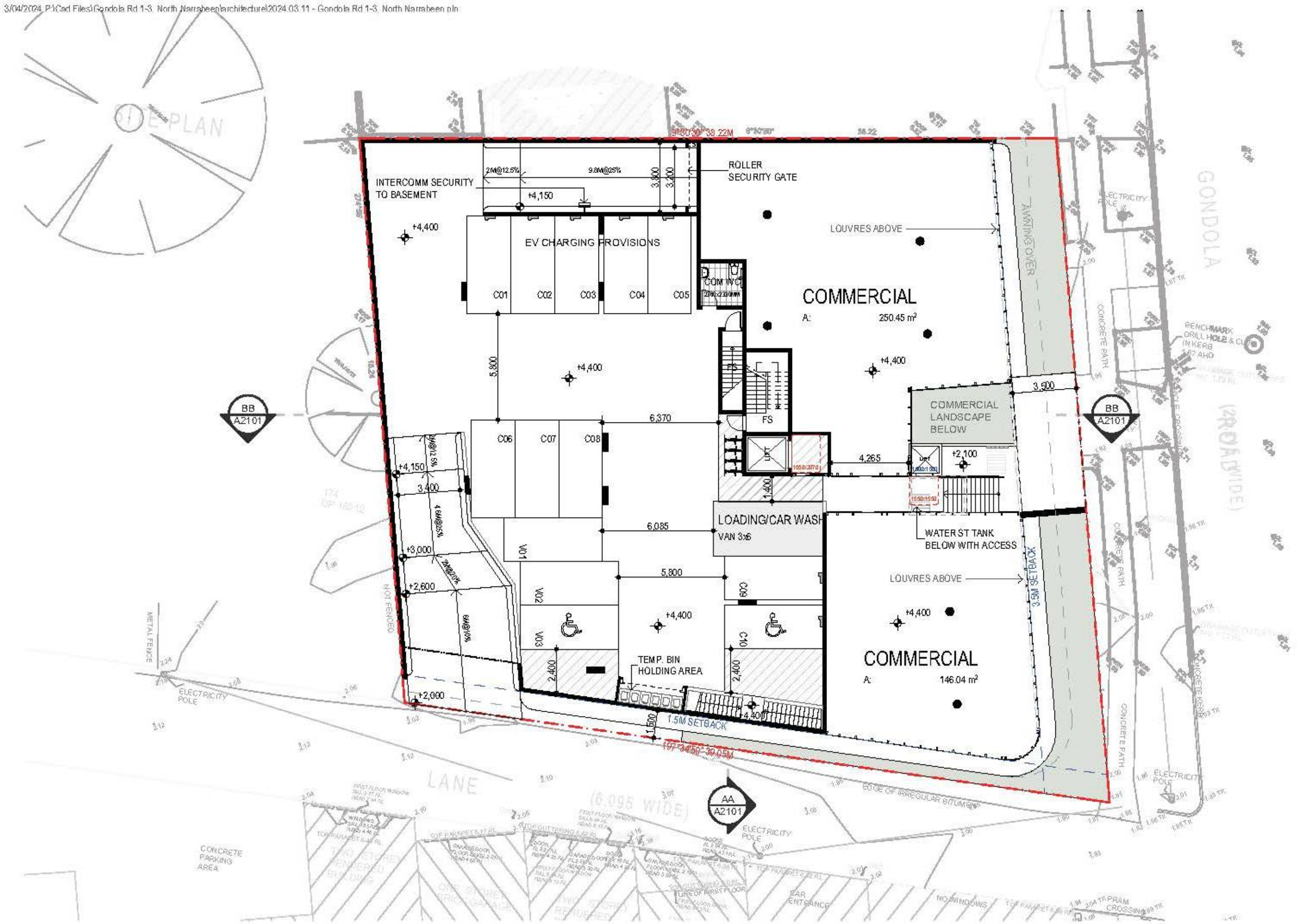

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VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK

No.	REVISION	BY	DATE
A	DA	J.E	03.04.2024

MULTI RESIDENTIAL DEVELOPMENT
1-3 Gondola Rd North
Narrabeen 2101
PROJECT NO. 15/19

GROUND FLOOR PLAN
DRAWN BY: J.E.
CHECKED BY: O.M
SCALE: 1:200@A3
DRAWING NO: A1002
ISSUE: A

TERRAFFIC PTY LTD

APPENDIX B

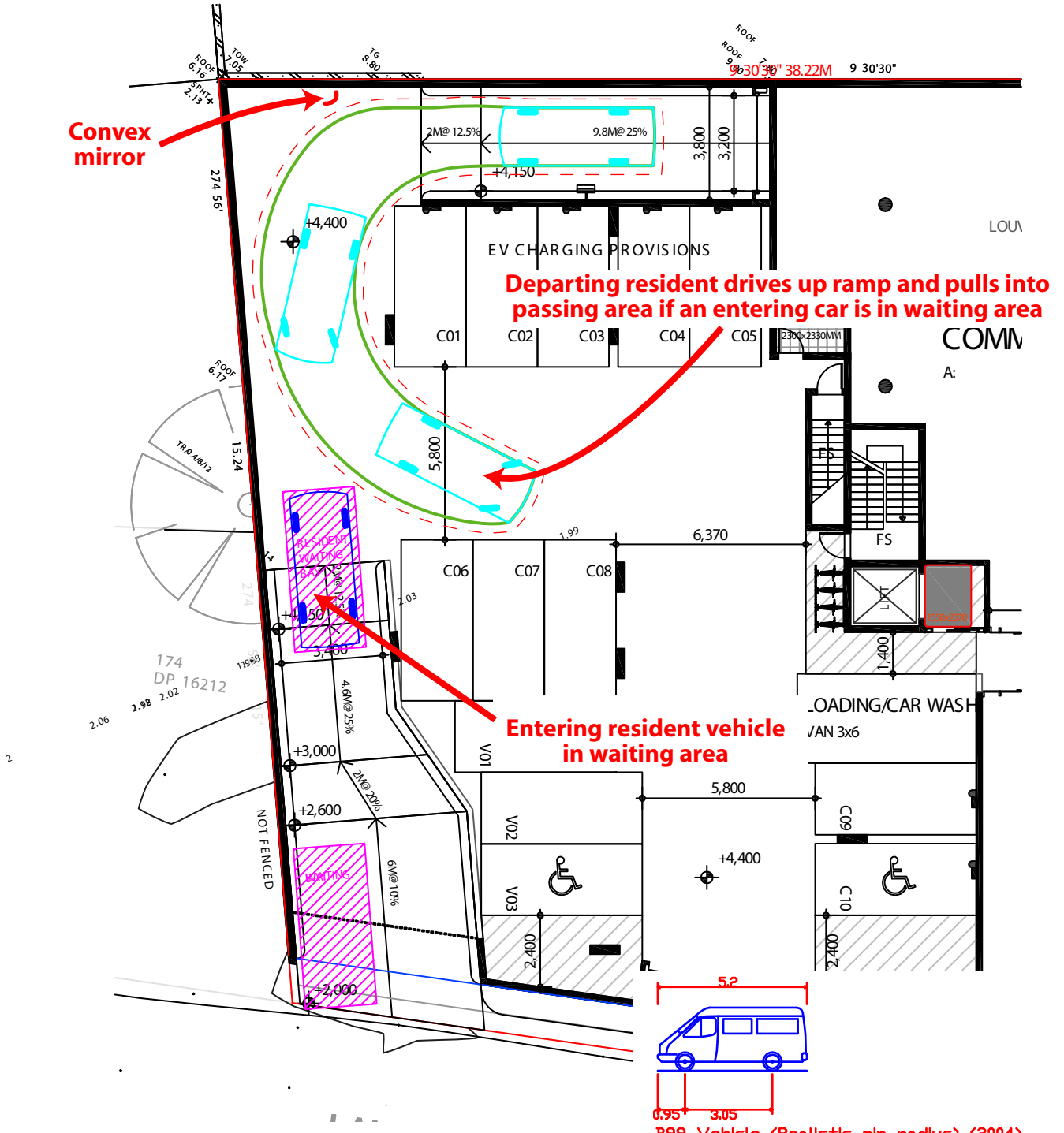
SWEPT PATH ANALYSIS

Path prepared using Autodesk Vehicle Tracking

0 2 4 6 8 10 20

METRES

SCALE 1:200



B99 Vehicle (Realistic min radius) (2004)

Overall Length	5.200m
Overall Width	1.940m
Overall Body Height	2.200m
Min Body Ground Clearance	0.312m
Track Width	1.840m
Lock to Lock Time	4.00s
Curb to Curb Turning Radius	6.250m

Forward Vehicle Path

Reverse Vehicle Path

300mm Clearance Path

Manoeuvring Path of Australian Standard AS/NZS2890.1:2004 B99 Vehicle Departing Lower Basement and Turning Into Passing Area

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Path prepared using
Autodesk Vehicle Tracking

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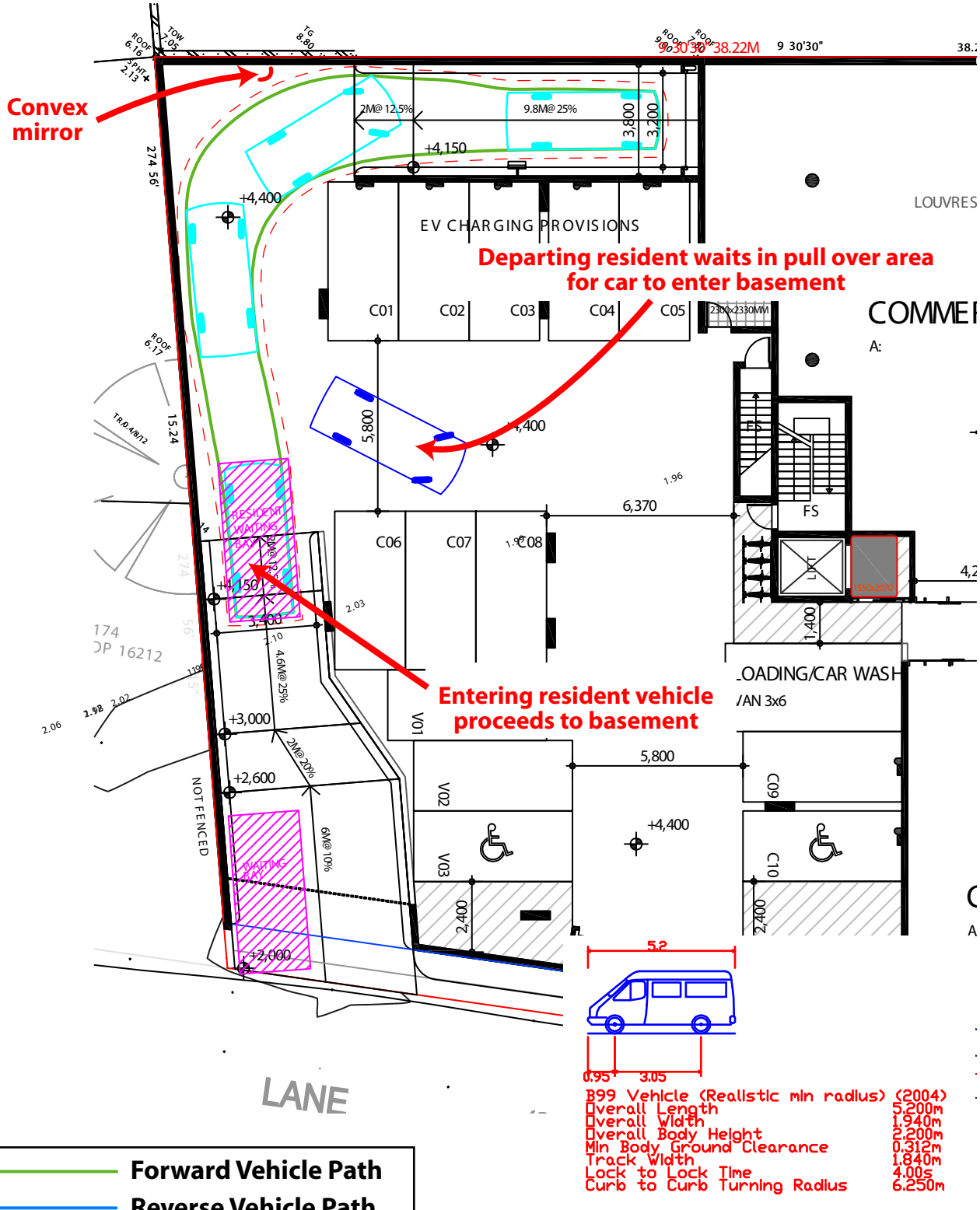
METRES
SCALE 1:200



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Forward Vehicle Path
Reverse Vehicle Path
300mm Clearance Path

Manoeuvring Path of Australian Standard AS/NZS2890.1:2004 B99 Vehicle Entering Basement

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Path prepared using
Autodesk Vehicle Tracking

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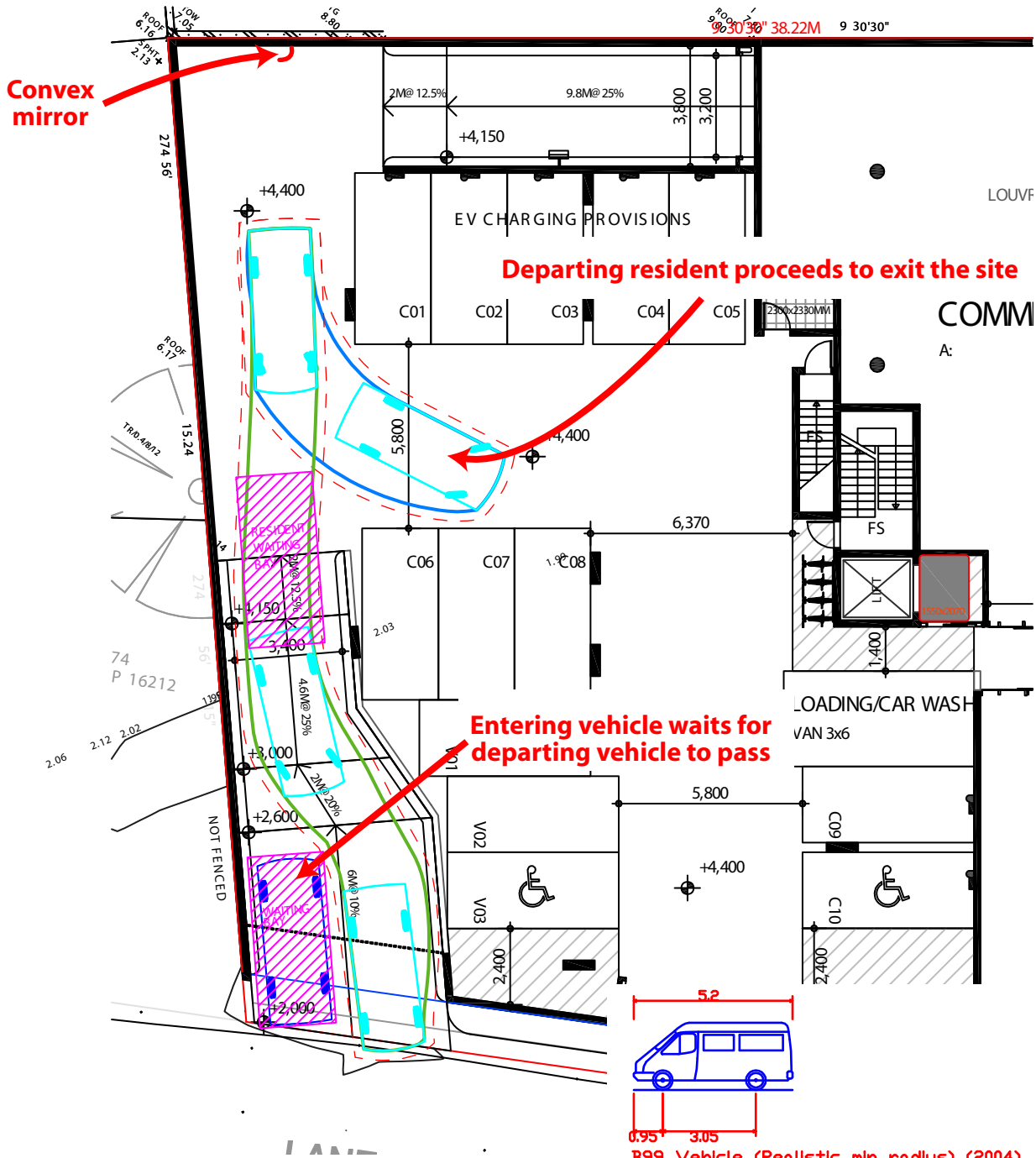
METRES
SCALE 1:200



Forward Vehicle Path
Reverse Vehicle Path
300mm Clearance Path

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Manoeuvring Path of Australian Standard AS/NZS2890.1:2004 B99 Vehicle Departing Site