



## **PROPOSED SHOP TOP HOUSING DEVELOPMENT**

**1-3 GONDOLA ROAD, NORTH NARRABEEN**

## **TRAFFIC AND PARKING ASSESSMENT REPORT**

**25<sup>TH</sup> OCTOBER 2024**

**REF 22016**

Prepared by

**Terraffic Pty Ltd**

Traffic and Parking Consultants



## **TABLE OF CONTENTS**

<b>1. INTRODUCTION .....</b>	<b>1</b>
<b>2. PARKING ASSESSMENT .....</b>	<b>6</b>
<b>3. TRAFFIC ASSESSMENT .....</b>	<b>11</b>

## **APPENDICES**

**APPENDIX A PLANS OF THE PROPOSED DEVELOPMENT**

**APPENDIX B SWEEP PATH ANALYSIS**

## **LIST OF ILLUSTRATIONS**

<b>FIGURE 1</b>	<b>LOCATION</b>
<b>FIGURE 2</b>	<b>SITE</b>
<b>FIGURE 3</b>	<b>ROAD HIERARCHY</b>
<b>FIGURE 4</b>	<b>EXISTING TRAFFIC CONTROLS</b>

### **Copyright and Disclaimer**

This report has been prepared for the sole purposes of the client and for the specific purpose for which it was prepared and may not be used for any other application or purpose. The purpose for which this report may be used and relied upon is limited for that which it was commissioned.

Apart from fair dealing for the purposes of private study, research, criticism or review as permitted under the Copyright Act, no part of this report, its attachments or appendices may be reproduced by any process without the written consent of Terra Traffic Pty Ltd. Copyright in the whole and every part of this document belongs to Terra Traffic Pty Ltd and may not be used, sold, transferred, copied or reproduced in whole or in part in any manner or form or in or on any media to any person without the prior written consent of Terra Traffic Pty Ltd.



## 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).

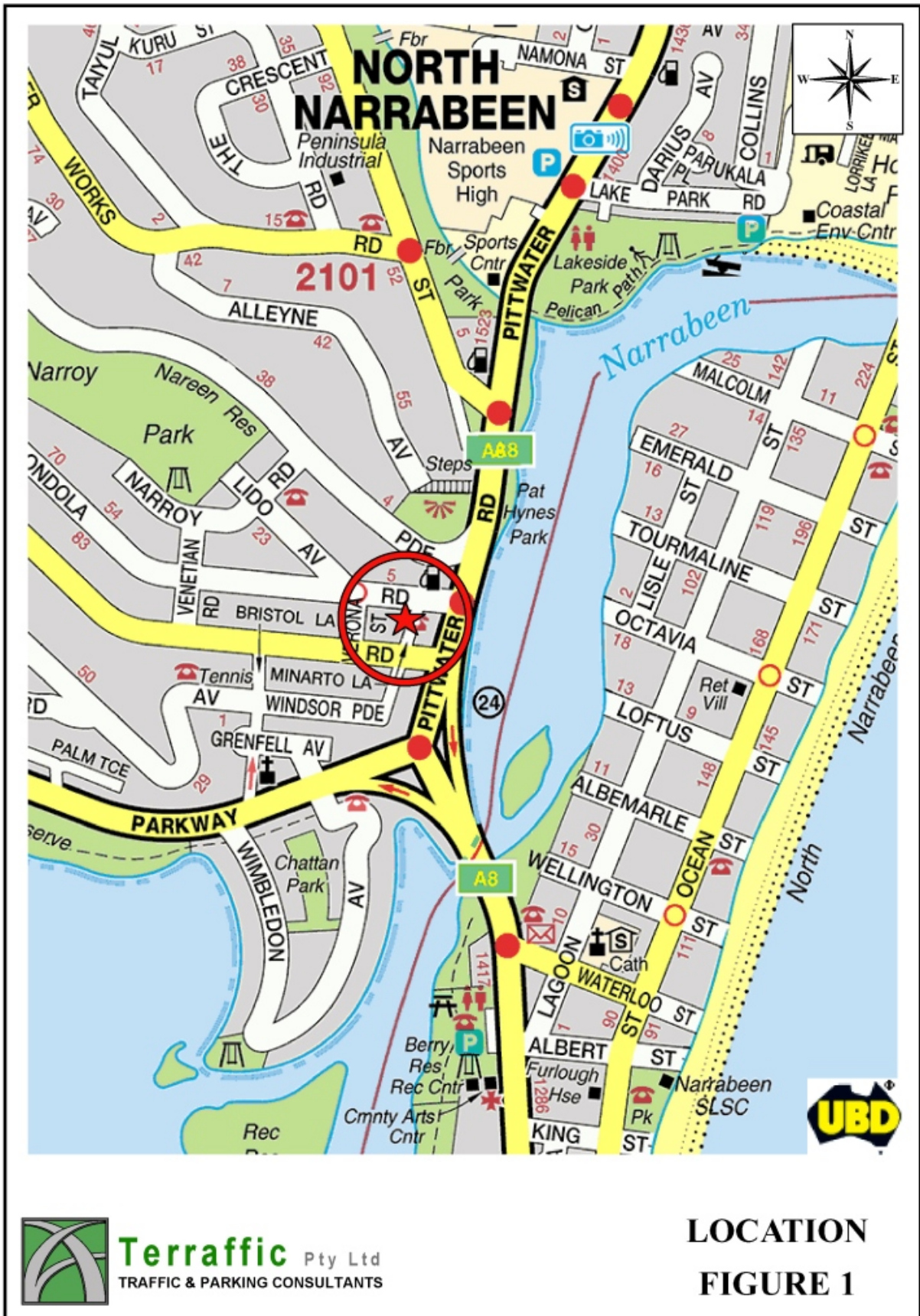
The development site is located on the south-western corner of the Gondola Road/Minarto Lane intersection. The site has an area of 1,289.3m<sup>2</sup> with frontages of 36.6m to Gondola Road and 39m to Minarto Lane. The subject site is zoned B2 Local Centre under the controls of the Pittwater Local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





**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 348.48m<sup>2</sup> and 12 residential units comprising 2 x 2 bedroom units and 10 x 3 bedroom units (includes 3 adaptable units).

The development proposal is served by a 2 level basement carpark containing a total of 35 off-street parking spaces comprising 23 resident spaces, 3 visitor spaces and 9 commercial tenant spaces. A loading bay is also proposed on the upper basement level that can be accessed by the Australian Standard B99 vehicle (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 to the upper basement level that contains the commercial and visitor parking. A single lane ramp will connect to the lower basement that will contain the 23 resident parking spaces. A traffic light system is proposed to control resident traffic with residents using a remote control to raise the security roller door on the ramp.

On the 1<sup>st</sup> 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 <sup>2</sup> GLA

Application of this requirement to the proposed development yields a minimum parking provision of 37 spaces calculated as follows:

2 x 2 bedroom units @ 2 spaces per dwelling	4.0 resident spaces
10 x 3 bedroom units @ 2 spaces per dwelling	20.0 resident spaces
<i>Total Resident Parking</i>	<i>24.0 resident spaces</i>
12 units @ 1 space per 3 units for visitors	4.0 visitor spaces
<i>Total residential requirement</i>	<i>28.0 spaces</i>
348.48m <sup>2</sup> commercial @ 2.5 spaces per 100m <sup>2</sup>	8.7 tenant spaces (9 spaces)
<b>Total requirement</b>	<b>36.7 spaces (37 spaces)</b>

The development proposal is served by 35 off-street parking spaces comprising 23 resident spaces, 3 visitor spaces and 9 commercial tenant spaces. The proposed parking provision represents a shortfall of 2 spaces comprising 1 resident space and 1 visitor space 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 <sup>2</sup> GFA

Application of this requirement to the proposed development yields a minimum parking provision of 29 spaces calculated as follows:

2 x 2 bedroom units @ 1.2 spaces per unit	2.4 resident spaces
10 x 3 bedroom units @ 1.5 spaces per unit	15.0 resident spaces
<i>Total resident parking</i>	<i>17.4 resident spaces (18 spaces)</i>
12 units @ 1 space per 5 units for visitors	2.4 visitor spaces (2 spaces)
<i>Total residential requirement</i>	<i>19.8 spaces (20 spaces)</i>
348.48m <sup>2</sup> commercial @ 1 space per 40m <sup>2</sup>	8.7 tenant spaces (9 spaces)
<b>Total requirement</b>	<b>28.5 spaces (29 spaces)</b>

The proposed development clearly exceeds the RMS Guidelines with the provision of 35 off-street parking spaces comprising 23 resident spaces, 3 visitor spaces and 9 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 35 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
- Small car spaces have a minimum length of 5.0m and width of 2.3m
- An additional 0.3m has been provided for spaces adjacent to a wall or obstruction
- 1.0m wide blind aisle extension has been provided where required
- 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.

### ***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. A resident B99 vehicle departing the lower basement car park and passing a waiting B99 located in the upper basement.
2. The B99 vehicle entering the lower basement carpark once a green light appears



---

### ***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 4 bicycles calculated as follows:

12 units @ 1 bicycle space per 3 units      4 bike spaces

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

*For Business/Industrial development or additions, comprising of 200m<sup>2</sup> GFA or more, secure enclosed bicycle storage facilities must be provided within the building at the rate of 1 bicycle rack per 1000m<sup>2</sup> GFA, or a minimum of 4 bicycle racks, whichever is the greater.*

As the proposed commercial space is only 348.48m<sup>2</sup>, 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 200m<sup>2</sup> 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 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**

Pittwater Road

Wakehurst Parkway

#### **Regional Roads**

Garden Street – Powderworks Road

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:



---

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

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 <sup>2</sup> commercial @ 2vtph per 100m <sup>2</sup>	11vtph
------------------------------------------------------------	--------

Application of the RMS traffic generation rate to the **proposed development** yields a traffic generation potential of approximately 15vtph during peak periods as follows:

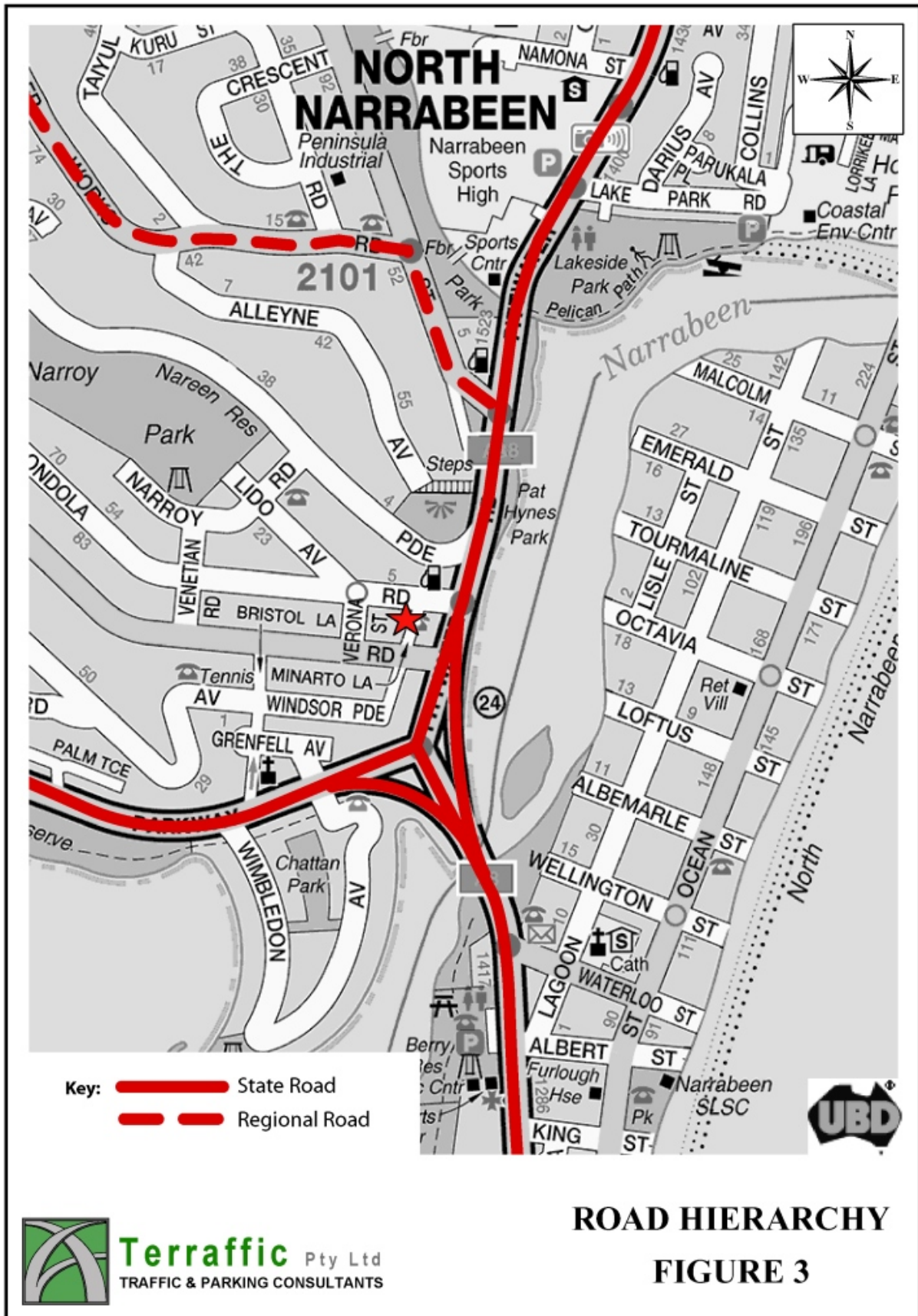
348.5m <sup>2</sup> commercial @ 2vtph per 100m <sup>2</sup>	7vtph
2 x 2 bedroom units @ 0.5vtph per unit	1vtph
10 x 3 bedroom units @ 0.65vtph per unit	7vtph
<b>Total Development</b>	<b>15vtph</b>

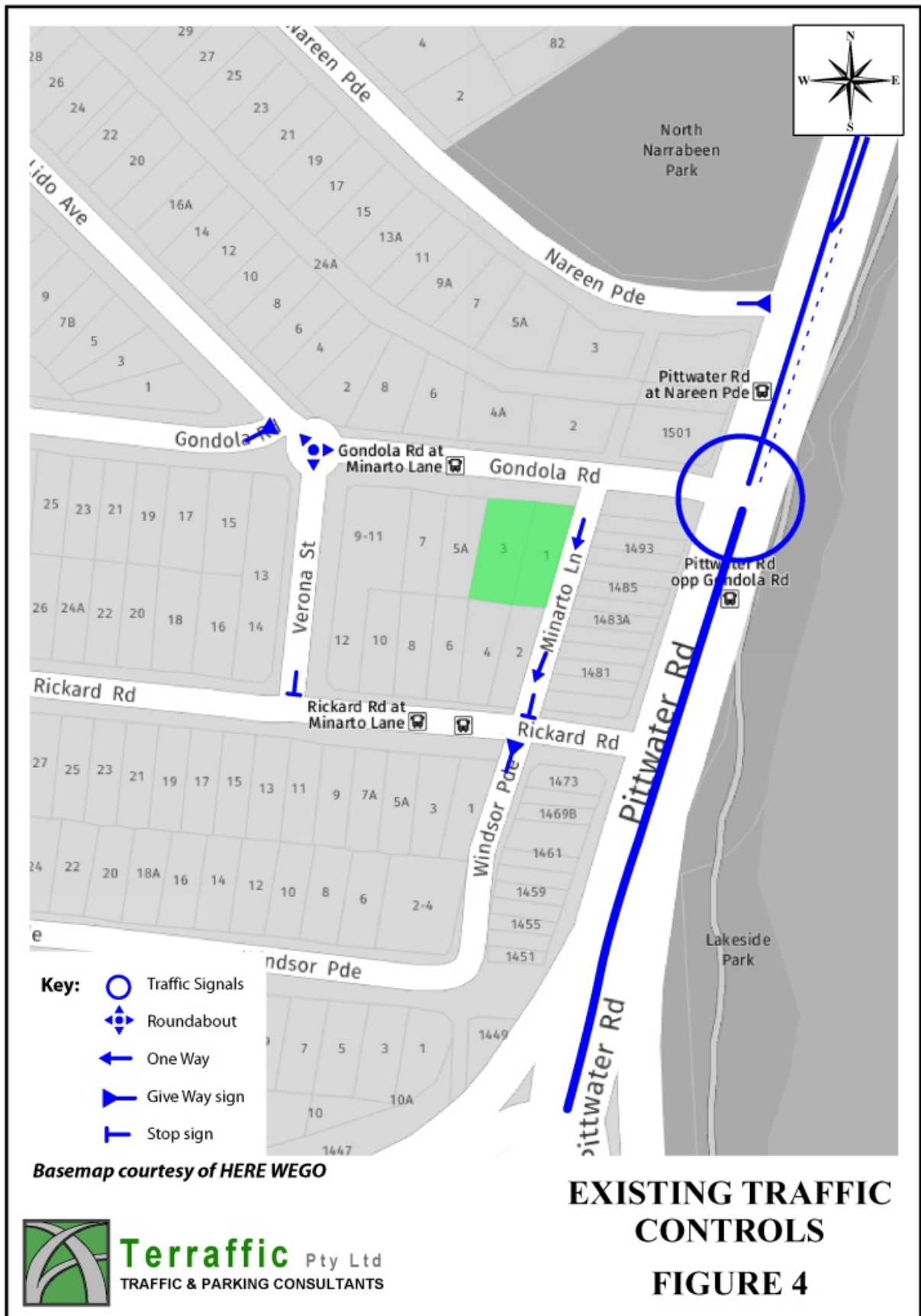
Based on the RMS Guidelines, the proposal will increase traffic flows on the road network by only 4 vehicle trips per hour during peak periods as follows:

Proposed shop top development	15vtph
Existing commercial development	11vtph
<b>Additional traffic</b>	<b>4vtph</b>

It will be readily appreciated that the additional traffic generated by the proposed development is very minor (4vtph) 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.







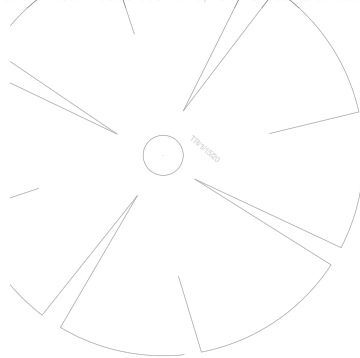


TERRAFFIC PTY LTD

---

**APPENDIX A**

**PLANS OF THE PROPOSED DEVELOPMENT**



**mackenzie  
architects  
international**

736 PACIFIC HWY  
Gordon NSW 2072  
Phone: (02) 9967 9966  
Fax: (02) 9967 9977  
www.mainternational.com.au  
info@mainternational.com.au

**DO NOT SCALE DRAWINGS**  
VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK

COPYRIGHT  
Mackenzie Architects International is the owner of the copyright subsisting in these drawings, plans, designs and specifications. They must not be used, reproduced or copied in whole or part without prior written consent of Mackenzie Architects International.

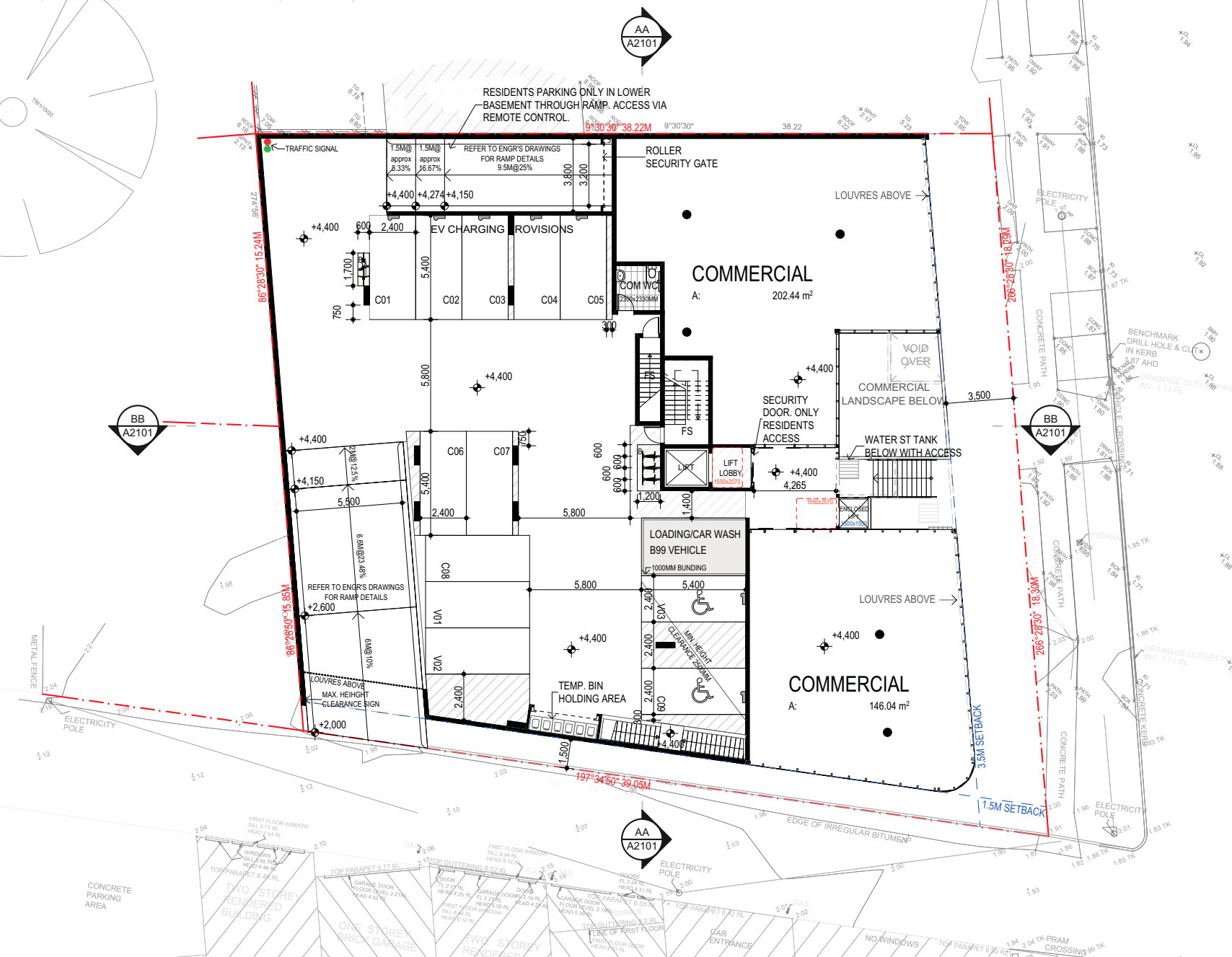
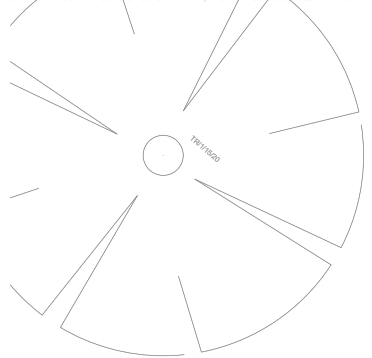
AMENDMENTS		BY	DATE
No.	REVISION		
A	DA	J.E	03.04.2024
B	REVISED DA	M.M	12.09.2024
C	REVISED DA	M.M	25.10.2024

PROJECT NORTH

**MULTI RESIDENTIAL DEVELOPMENT**  
PROJECT  
1-3 Gondola Rd North  
Narrabeen 2101

PROJECT NO.  
15/19

DRAWING: BASEMENT PLAN			
DRAWN BY M.M	SCALE 1:200@A3	DRAWING NO. <b>A1001</b>	ISSUE <b>C</b>
CHECKED BY D.M			



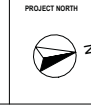
**mackenzie architects international**

736 PACIFIC HWY  
Gordon NSW 2072  
Phone: (02) 9967 9966  
Fax: (02) 9967 9977  
www.mainternational.com.au  
info@mainternational.com.au

**DO NOT SCALE DRAWINGS**  
VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK

Copyright Mackenzie Architects International is the owner of the copyright subsisting in these drawings, plans, designs and specifications. They must not be used, reproduced or copied in whole or part without prior written consent of Mackenzie Architects International.

AMENDMENTS		BY	DATE
No.	REVISION		
A	DA	J.E	03.04.2024
B	REVISED DA	M.M	12.09.2024
C	REVISED DA	M.M	25.10.2024



PROJECT NORTH  
PROJECT  
**1-3 Gondola Rd North  
Narrabeen 2101**  
PROJECT NO.  
**15/19**

**DRAWING: GROUND FLOOR PLAN**

DRAWN BY M.M	SCALE: 1:200@A3	DRAWING NO.: <b>A1002</b>	ISSUE: <b>C</b>
CHECKED BY D.M			

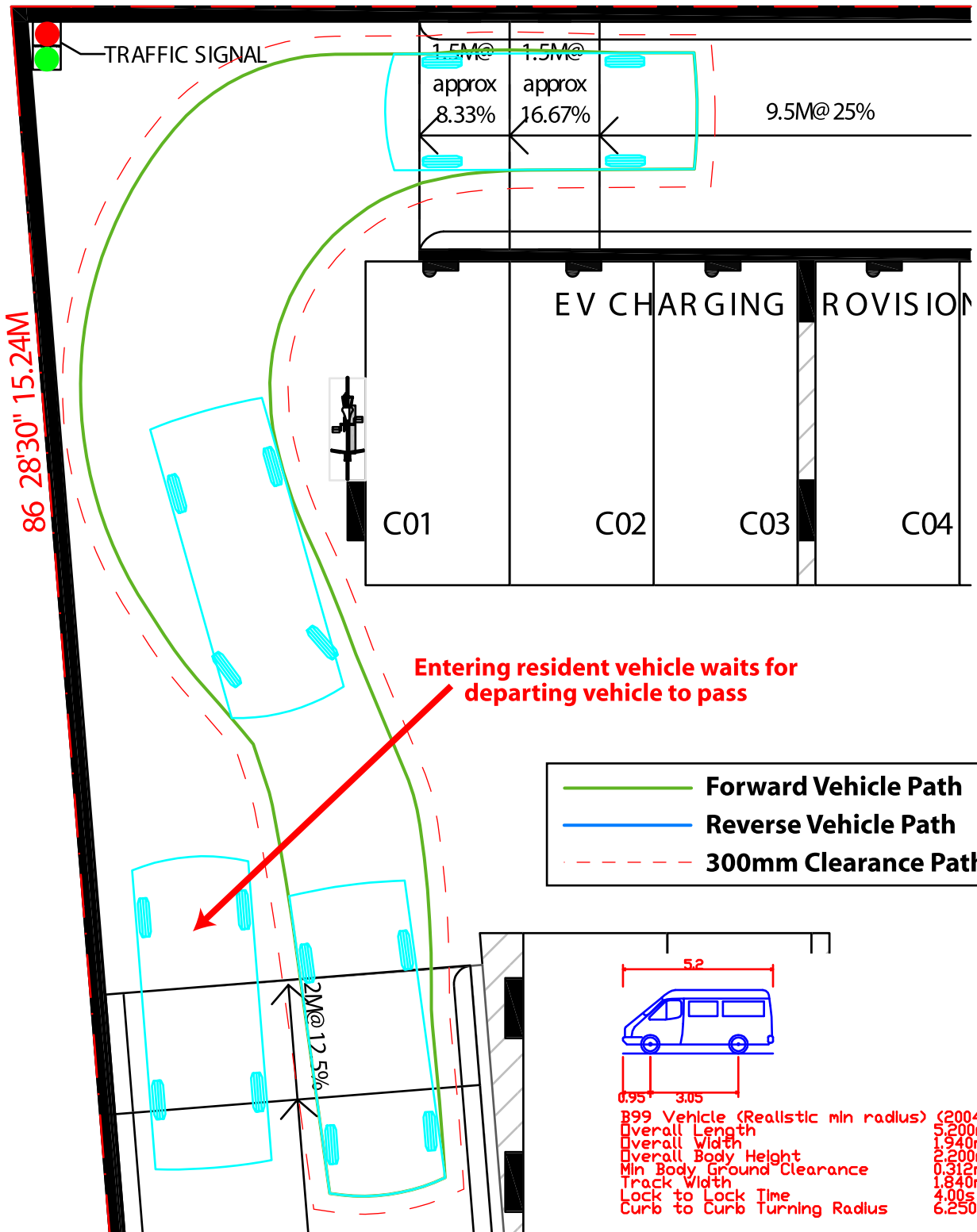
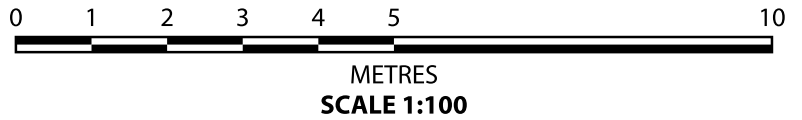


---

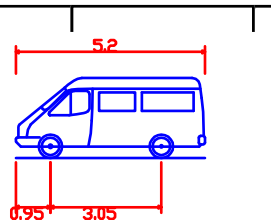
**APPENDIX B**

**SWEPT PATH ANALYSIS**

Path prepared using  
Autodesk Vehicle Tracking



- Forward Vehicle Path
- Reverse Vehicle Path
- - - 300mm Clearance Path



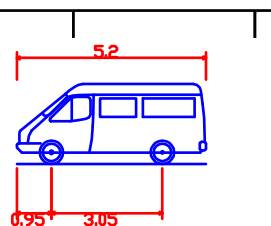
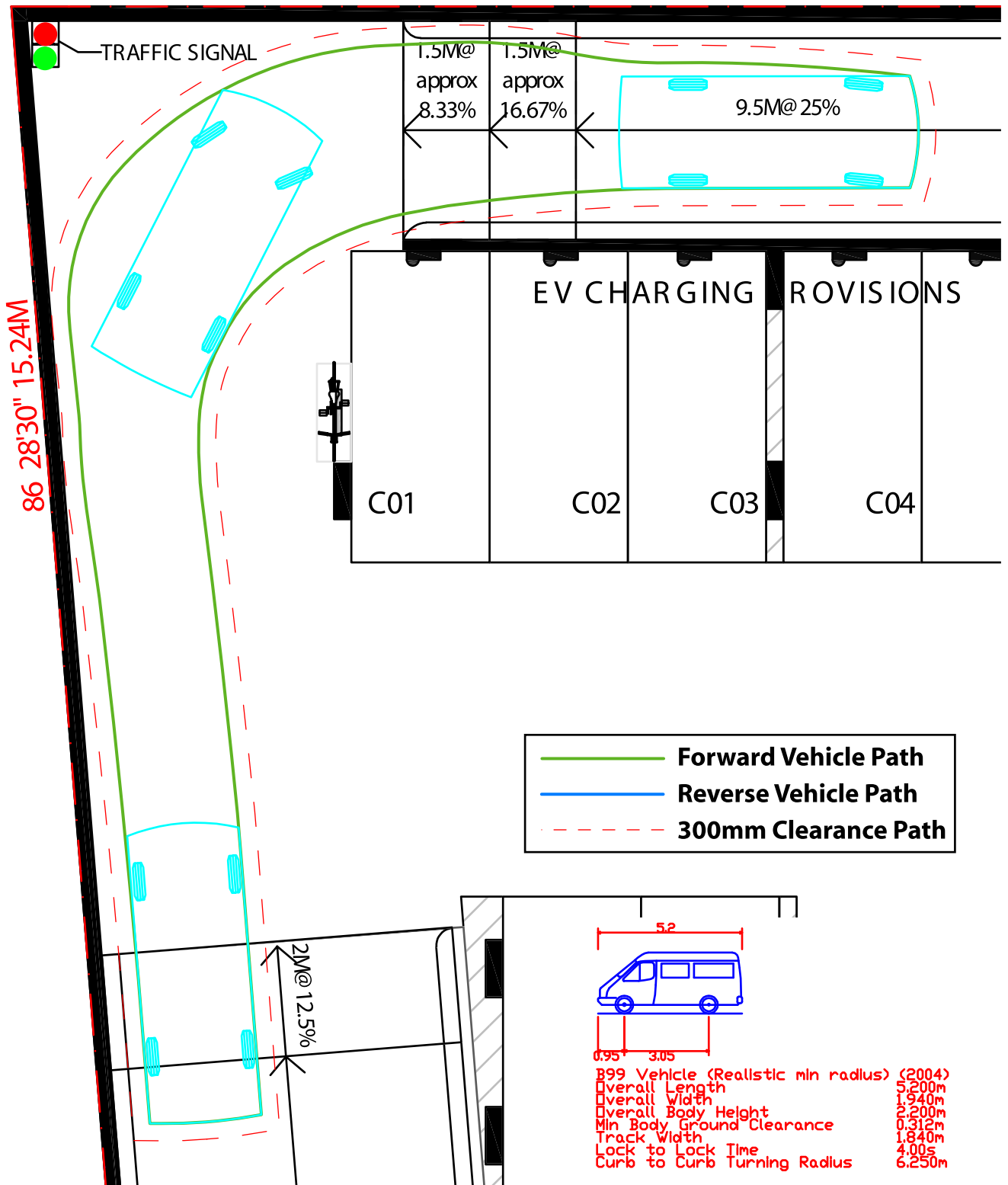
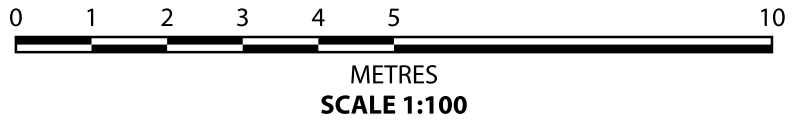
B99 Vehicle (Realistic min radius) (2004)  
 Overall Length 5.200m  
 Overall Width 1.940m  
 Overall Body Height 2.200m  
 Min Body Ground Clearance 0.312m  
 Track Width 1.840m  
 Lock to Lock Time 4.00s  
 Curb to Curb Turning Radius 6.250m

**Manoeuvring Path of Australian  
Standard AS/NZS2890.1:2004  
B99 Vehicle Departing  
Lower Basement**



**Terraffic** Pty Ltd  
TRAFFIC & PARKING CONSULTANTS

Path prepared using  
Autodesk Vehicle Tracking



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

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



**Terraflow** Pty Ltd  
TRAFFIC & PARKING CONSULTANTS