PROPOSED SHOP TOP HOUSING DEVELOPMENT

1749-1753 PITTWATER ROAD, MONA VALE

TRAFFIC AND PARKING ASSESSMENT REPORT

17TH DECEMBER 2024

REF 24064

Prepared by

Terraffic Pty Ltd
Traffic and Parking Consultants

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LIST OF ILLUSTRATIONS

1. INTRODUCTION

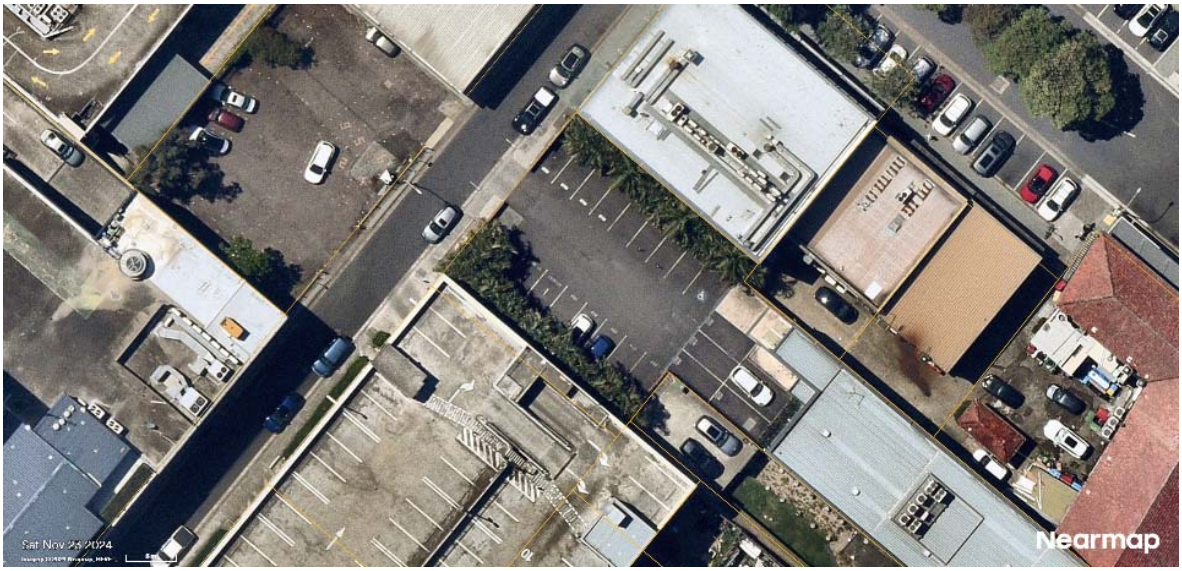
This report has been prepared to accompany a Development Application (DA) to Northern Beaches Council for a proposed shop top housing development on a consolidated site at 1749-1753 Pittwater Road, Mona Vale (Figures 1 and 2).

The development site is located on the western side of Pittwater Road approximately 30m south of Waratah Street. The site has an area of 1,524.8m^2 with frontages of 18.73m to Pittwater Road and 21.195m to Bungan Lane at the rear of the site.

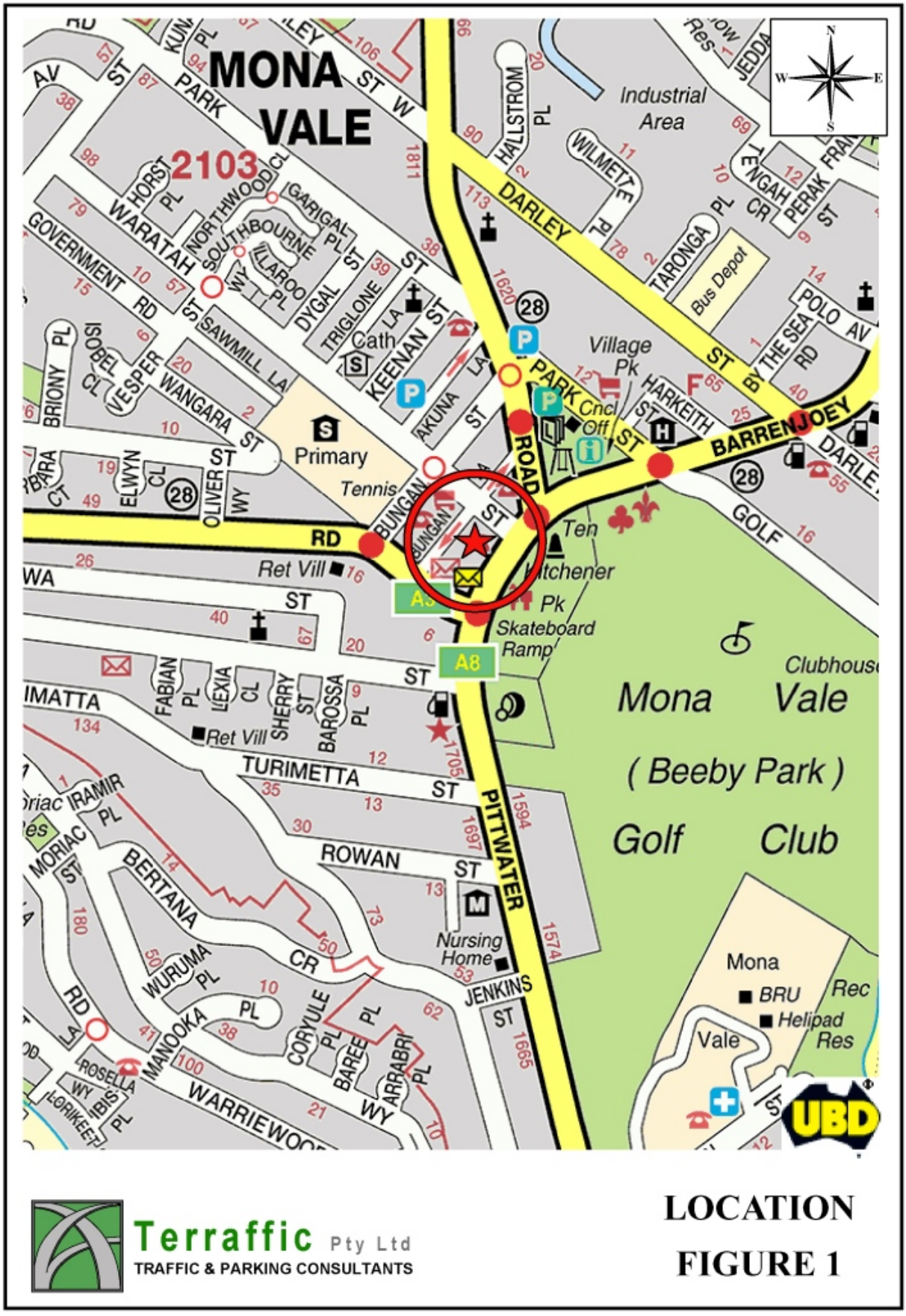
The existing site development comprises:

1749 Pittwater Road — a 2 level commercial building fronting Pittwater Road with a floor area of approximately 300m^2. The building is served by a 2 space at-grade carpark at the rear of the site that gains vehicular access via a Right of Carriageway over the adjoining Council carpark.

1753 Pittwater Road — a 2 level commercial building fronting Pittwater Road with a floor area of approximately 900m^2. The building is served by a 22 space at-grade carpark at the rear of the site that gains vehicular access to Bungan Lane via a 4.0m wide combined entry/exit driveway.



Aerial photograph of existing carparking arrangements



Terraffic Pty Ltd
TRAFFIC & PARKING CONSULTANTS

LOCATION
FIGURE 1


N
W
E
S
WARATAH STREET
BUNGAN STREET
PITTWATER ROAD
WARATAH STREET
BUNGAN STREET
BARRENJOEY ROAD
BUNGAN LANE
PITTWATER ROAD
MONA VALE ROAD
Terraffic Pty Ltd
TRAFFIC & PARKING CONSULTANTS
SITE
FIGURE 2

Development Proposal

The proposed development comprises the demolition of the existing site development and construction of a shop top housing development comprising 4 retail shops and 36 apartments as follows:

4 x commercial/retail shops	450m^2
Residential (36 units)	12 x 1 bedroom units
	13 x 2 bedroom units
	11 x 3 bedroom units

The development proposal will be served by an 88 space basement carpark comprising 61 resident spaces, 12 resident visitor spaces and 15 retail/commercial tenant spaces. The site will also contain parking for 29 bicycles and 8 motorcycles in the secure basement. A loading bay capable of accommodating delivery vans is also proposed in the basement carpark.

Vehicular access to the proposed basement is via an existing 3m-5m wide easement through the adjoining Council carpark. A plan of the Right of Carriageway (ROW) is reproduced in the following pages. Access to and from the basement will be as follows:

Vehicle Entry

- Vehicles will enter the basement via the Council carpark entry driveway off Bungan Lane. They will then head towards the Lower Ground Level (RL8.50) before turning left into the subject site. The existing 4.3m wide opening is to be widened to 6.3m to facilitate two way traffic flow.

Vehicle Departure

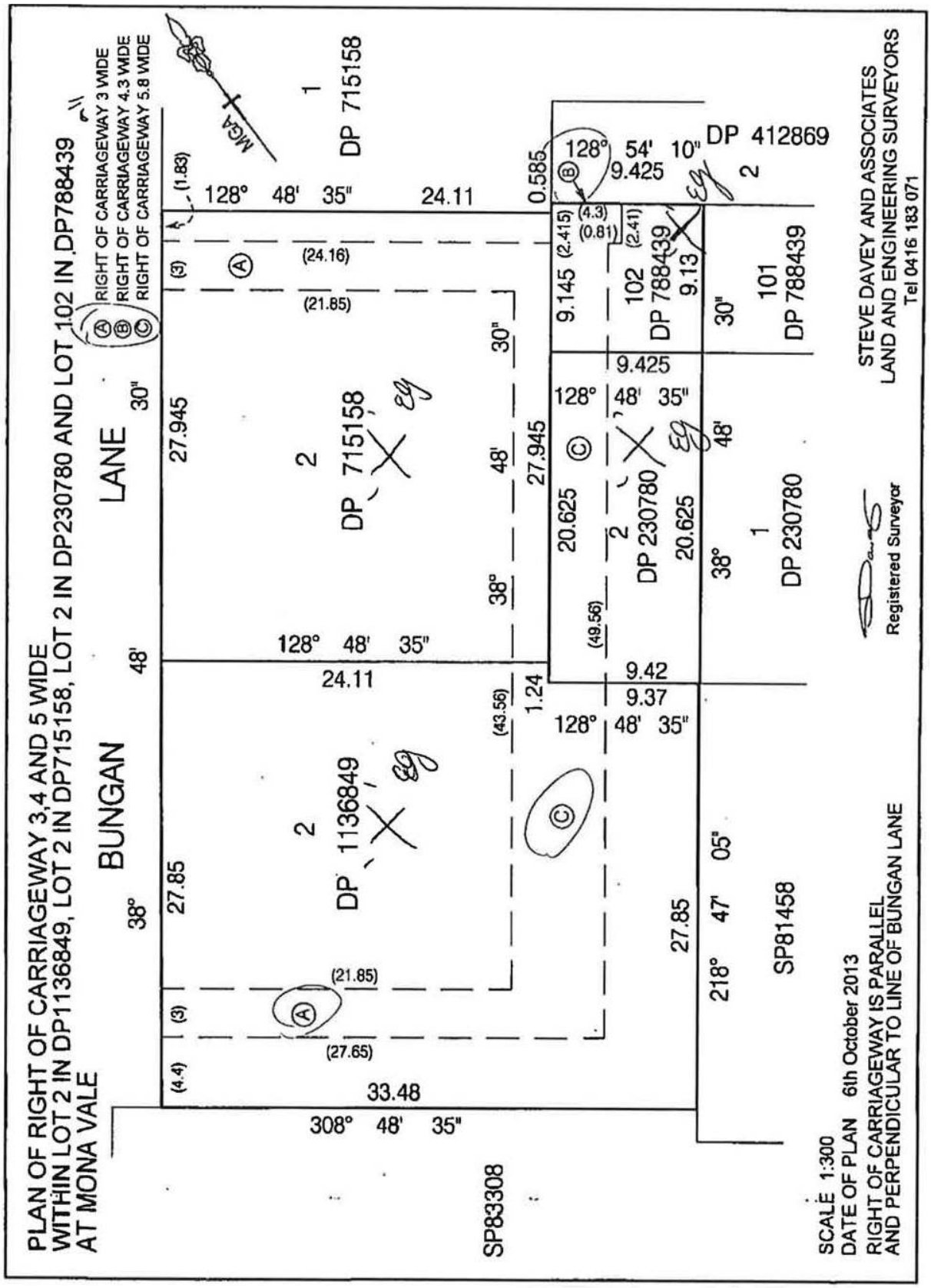
- When departing the site, the vehicles will head through the Council carpark to the exit driveway on Bungan Lane.

The proposed access from the Council carpark will be secure therefore restricting retail shoppers from parking on-site. The retail parking provision will therefore be reserved for tenants only.

Bungan Lane Entry Driveway

Photograph of the entry ramp to the access opening to 1749 Pittwater Road

Photograph of the access opening to 1749 Pittwater Road


PLAN OF RIGHT OF CARRIAGEWAY 3,4 AND 5 WIDE
WITHIN LOT 2 IN DP1136849, LOT 2 IN DP715158, LOT 2 IN DP230780 AND LOT 102 IN DP788439
AT MONA VALE
RIGHT OF CARRIAGEWAY 3 WIDE
RIGHT OF CARRIAGEWAY 4.3 WIDE
RIGHT OF CARRIAGEWAY 5.8 WIDE
BUNGAN LANE
DP 1136849
DP 715158
DP 230780
DP 788439
DP 412869
SP81458
SP83308
STEVE DAVEY AND ASSOCIATES
LAND AND ENGINEERING SURVEYORS
Tel 0416 183 071
Registered Surveyor
SCALE 1:300
DATE OF PLAN 6th October 2013
RIGHT OF CARRIAGEWAY IS PARALLEL
AND PERPENDICULAR TO LINE OF BUNGAN LANE

Public Transport Accessibility

The subject site has convenient access to the following bus services that operate through Mona Vale:

Route B1	B-Line Mona Vale to City Wynyard via Narrabeen, Dee Why, Brookvale, Mosman and Neutral Bay (operates daily)
Route 155	Bayview Garden Village to Narrabeen and Frenchs Forest via Mona Vale (operates daily)
Route 156	McCarrs Creek to Mona Vale via Church Point and Bayview (operates daily)
Route 182	Mona Vale to Narrabeen via Warriewood and Elanora Heights (operates daily)
Route 185	Mona Vale to Narrabeen via Warriewood Valley (operates daily)
Route 190X	North Avalon to City Wynyard (Express Service) via Newport, Mona Vale and Narrabeen (operates daily)
Route 199	Palm Beach to Manly Wharf via Avalon, Newport, Mona Vale, Narrabeen and Brookvale (operates daily)

Architectural plans of the development proposal prepared by Gartner Trovato Architects are reproduced in Appendix A.

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
Retail	1 space per 30m^2

Application of this requirement to the proposed development yields a minimum parking provision of 87 spaces calculated as follows:

12 x 1 bedroom units @ 1 space per dwelling	12.0 resident spaces
24 x 2 or more bedroom units @ 2 spaces per dwelling	48.0 resident spaces
Total resident parking	*60.0 resident spaces*
36 units @ 1 space per 3 units for visitors	12.0 visitor spaces
450m^2 retail @ 1 space per 30m^2	15.0 retail spaces
Total requirement	**87.0 spaces**

The proposed development satisfies the DCP with the provision of 88 off-street parking spaces comprising 61 resident spaces, 12 visitor spaces and 15 retail tenant spaces.

As noted in the foregoing, the proposed access from the Council carpark will be secure therefore restricting access by retail shoppers. The 15 retail parking spaces proposed in the basement will therefore be reserved for tenants only.

RMS Guidelines Resident Off-Street Parking Requirements

Section 5 of the Roads and Maritime Services *"Guide to Traffic Generating Developments"* (October 2002) specifies the following parking requirements for high density residential developments in Metropolitan Sub-Regional Centres:

1 bedroom units	0.6 space per unit
2 bedroom units	0.9 spaces per unit
3 bedroom units	1.4 spaces per unit
Visitor parking	1 space per 5 dwellings

Application of this requirement to the proposed development yields a minimum parking provision of 42 spaces calculated as follows:

12 x 1 bedroom units @ 0.6 space per unit	7.2 resident spaces
13 x 2 bedroom units @ 0.9 spaces per unit	11.7 resident spaces
11 x 3 bedroom units @ 1.4 spaces per unit	15.4 resident spaces
Total resident parking	*34.3 resident spaces (say 35 spaces)*
36 units @ 1 space per 5 units for visitors	7.2 visitor spaces (say 7 spaces)
Total residential requirement	**41.5 spaces (say 42 spaces)**

The proposal makes provision of 73 residential parking spaces comprising 61 resident spaces and 12 visitor spaces. This parking provision represents an oversupply of 31 parking spaces comprising 26 resident spaces and 5 visitor spaces.

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 dead-end aisle extensions have been provided
- The access/manoeuvring aisle has a minimum width of 5.8m
- The single width access driveway 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
- Pavement cross-falls do not exceed 5% (1 in 20) in any direction
- A minimum headroom clearance of 2.2m has been provided throughout the proposal

The disabled parking spaces have been designed to comply with the Australian Standard AS/NZS2890.6:2022 – *"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

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.

While the traffic generation of the residential component is very minor (8vtph during peak periods), linemarked WAITING BAYS and convex mirrors can be installed in the basement to further facilitate passing manoeuvres if deemed necessary by Council.

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 12 bicycles calculated as follows:

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

The DCP also notes that businesses require 1 bicycle space per 1000m^2 when the floor area is 200m^2 or more. As the proposed retail space is only 450m^2, provision has been made for 1 bicycle parking for the retail component.

The proposal clearly exceeds the DCP requirement with the provision of 29 bicycle racks in the secure basement carpark.

Motorcycle Parking

Section B6.3 of the Pittwater 21 DCP nominates that businesses require 1 motorcycle space per 100 motor vehicle spaces when the floor area is 200m^2 or more. As the proposal only provides

15 retail parking spaces, it is not necessary to provided parking for motorcycles. Notwithstanding, provision has been made for 8 motorcycle parking spaces for residents, tenants and visitors.

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	**Regional Roads**
Barrenjoey Road	Darley Street
Pittwater Road	
Mona Vale 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.

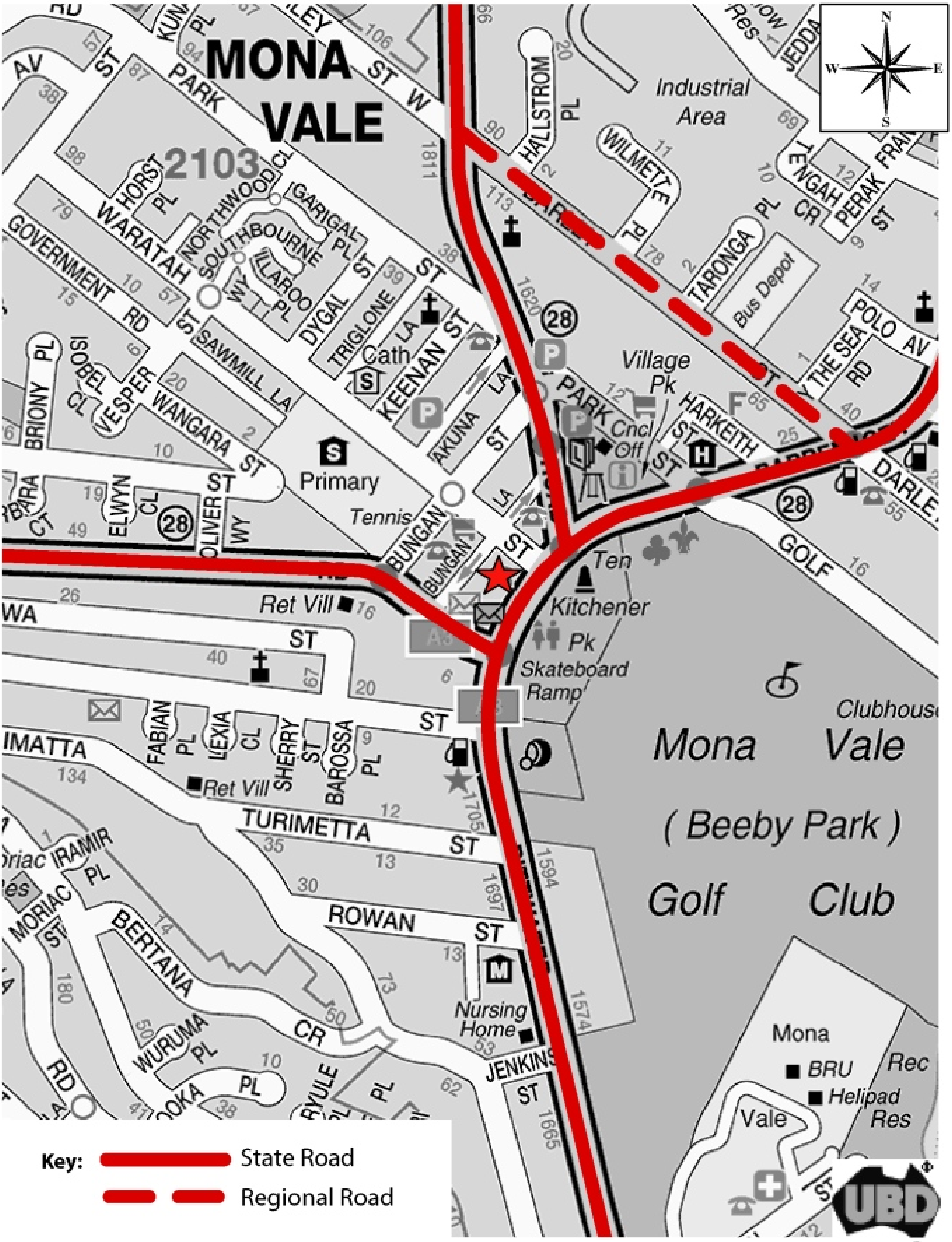
Bungan Lane is an unclassified local road with a primary function of providing access to properties along its length, including the subject site and the neighbouring public carpark. Bungan Lane operates on a one-way basis from Waratah Street to Mona Vale Road. It has a pavement width of 6m with one hour restricted parking permitted along the eastern side of the laneway.

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

Existing Traffic Conditions

An indication of the existing traffic conditions on the road network in the vicinity of the site is provided by peak period traffic surveys undertaken on Bungan Lane at the access driveways to the existing site carpark and the Council carpark between 7.00-9.00am and 4.00-6.00pm on Tuesday 26th November 2024.

The results of the traffic surveys are reproduced in full in Appendix B and reveal that:



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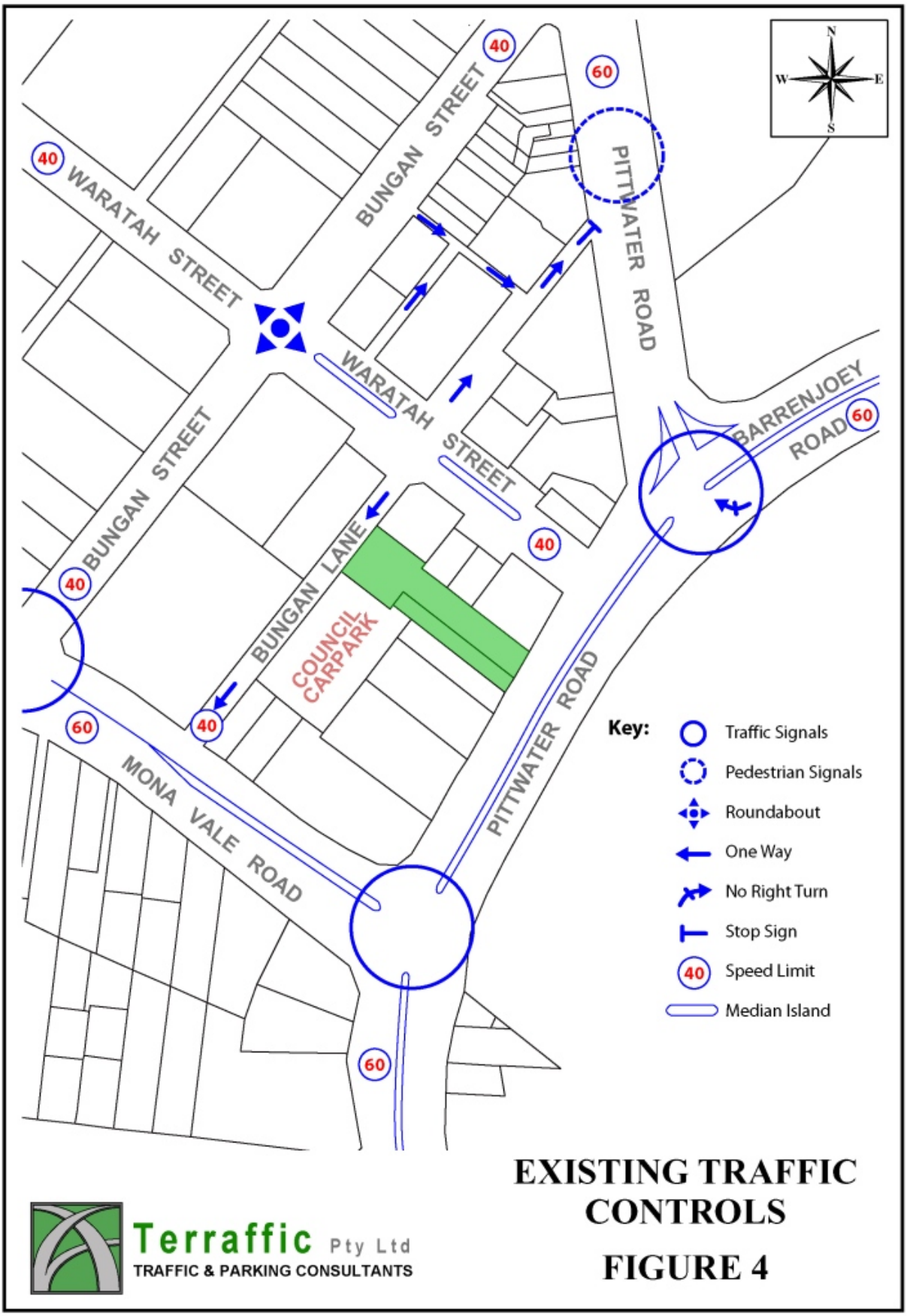
ROAD HIERARCHY

FIGURE 3


N
W
E
S
40
60
WARATAH STREET
BUNGAN STREET
PITTWATER ROAD
WARATAH STREET
BUNGAN STREET
BARRENJOEY ROAD
BUNGAN LANE
COUNCIL CARPARK
MONA VALE ROAD
PITTWATER ROAD
Key:
Traffic Signals
Pedestrian Signals
Roundabout
One Way
No Right Turn
Stop Sign
Speed Limit
Median Island
Terraffic Pty Ltd
TRAFFIC & PARKING CONSULTANTS
EXISTING TRAFFIC CONTROLS
FIGURE 4

- the morning peak period on Bungan Lane occurs between 8.00-9.00am. At that time, the one-way southbound traffic flow was 282 vehicles per hour (vph). At that time the existing carpark only generated 6vph with 4 entering the carpark and 2 departing.

- the morning peak period for the Council Carpark occurs between 8.30-9.30am. At that time, the carpark generated 186vph comprising 150 entering vehicles and 36 exiting vehicles

- the afternoon peak period on Bungan Lane occurs between 3.45-4.45pm. At that time, the one-way southbound traffic flow was 117vph. At that time the existing carpark only generated 7vph with 1 vehicle entering the carpark and 6 departing.

- the afternoon peak period for the site carpark occurs between 3.30-4.30pm when it generated 10vph with 4 vehicles entering the carpark and 6 departing

- the afternoon peak period for the Council Carpark occurs between 4.30-5.30pm. At that time, the carpark generated 198vph comprising 43 entering vehicles and 155 exiting vehicles

Projected Traffic Generation of the Existing and Proposed Site Development

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:

High density residential flat buildings	0.29 trips per dwelling
Commercial/office	2 trips per 100m^2

This assessment will adopt the commercial traffic generation rate rather than the rate for specialty shops (5.6 trips per 100m^2) as the parking spaces provided in the basement for this use will be allocated to tenants only.

Application of the RMS traffic generation rates to the **existing site development** yields a traffic generation potential of approximately 24vtph during peak periods as follows:

1200m^2 commercial @ 2vtph per 100m^2	24vtph

It should be noted that the survey of the existing carpark reveals peak period flows of only 6vph in the morning and 10vph in the afternoon. The surveyed traffic flows are as a result of the shop vacancies currently on the site.

Application of the RMS traffic generation rate to the **proposed site development** yields a traffic generation potential of approximately 18vtph during peak periods as follows:

490m^2 commercial @ 2vtph per 100m^2	10vtph
36 units @ 0.29vtph per unit	8vtph
Total Development	**18vtph**

As can be seen, the proposed development has the potential to generate less traffic than the existing site development should it be fully occupied as follows:

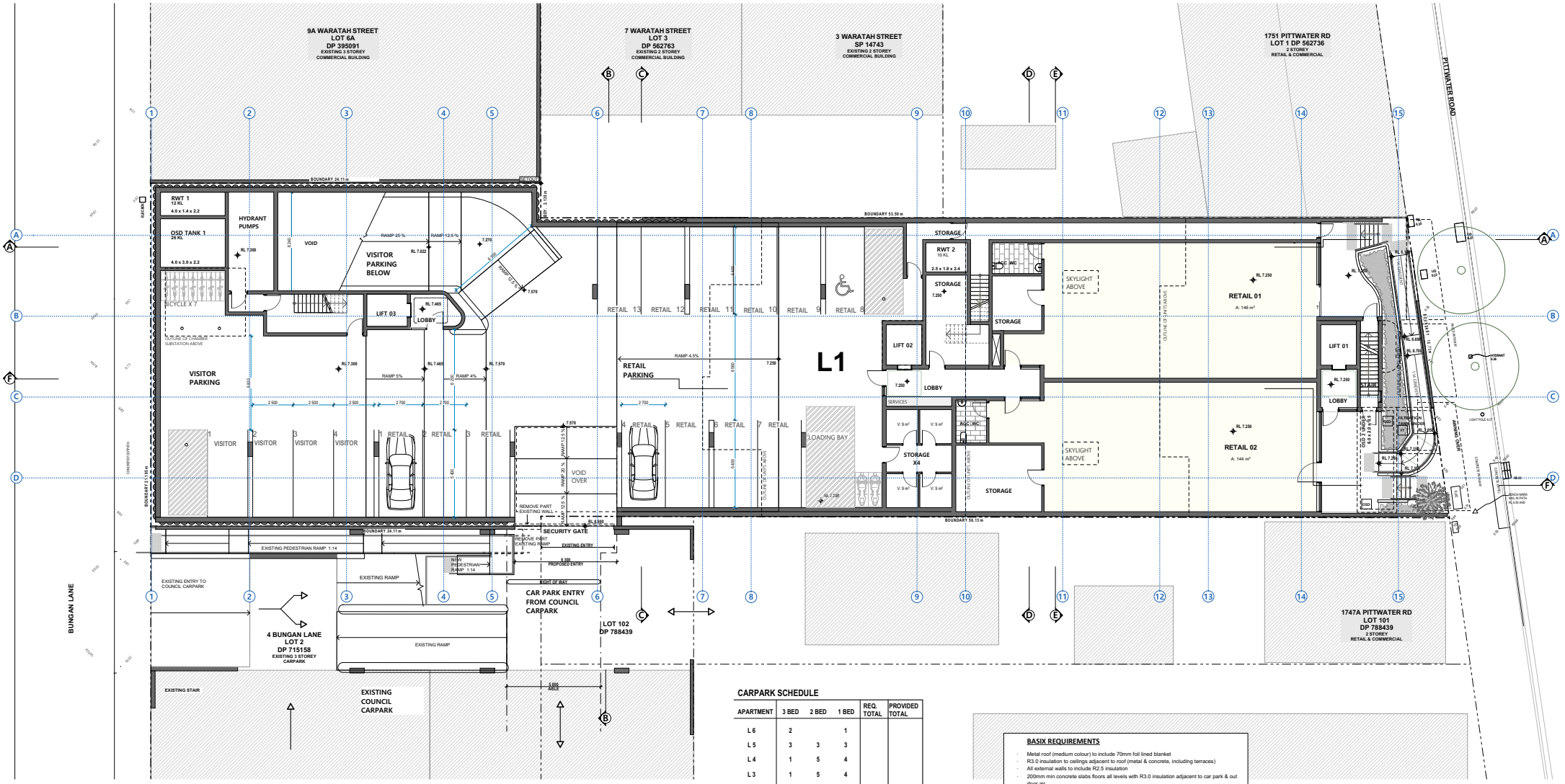
Traffic generating potential of existing site development	24vtph
Traffic generating potential of proposed site development	18vtph
Reduction in traffic flow	**6vtph**

In situations where the traffic generating potential of an existing site development exceeds the potential of a proposed development, it can be readily appreciated that the proposed development 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.

APPENDIX A

PLANS OF THE PROPOSED DEVELOPMENT



CARPARK SCHEDULE

APARTMENT	3 BED	2 BED	1 BED	REQ. TOTAL	PROVIDED TOTAL
L 6	2		1		
L 5	3	3	3		
L 4	1	5	4		
L 3	1	5	4		
L 2	4				
TOTAL 36	11	13	12		
RESIDENT PARKING	@ 2.0 22	@ 2.0 26	@ 1.0 12	60	57
VISITOR	@ 1 / 3 APARTMENTS			12	12
RETAIL	@ 1 / 30 m² (450 m²)			15	16
TOTAL CARS				87	85
MOTORBIKE	@ 1 / 100 CAR SPACES			1	12
BICYCLE	@ 1 / 3 APARMENTS 12	RETAIL MIN. 4		16	30

BASIX REQUIREMENTS

- Metal roof (medium colour) to include 70mm foil lined blanket
- R3.0 insulation to ceilings adjacent to roof (metal & concrete, including terraces)
- All external walls to include R2.5 insulation
- 200mm min concrete slabs floors all levels with R3.0 insulation adjacent to car park & out door air
- Louvre windows Breezway U=6.0 SHGC=0.67 +/-5%
- All other windows of units 5-8,13,15-17,19-23 & 25-27 standard aluminium frames/SG U=6.7 SHGC=0.7 +/-10%
- All other windows of units 9-12,14,18,24,28-30 & 35 standard aluminium frames DG U=4.8 SHGC=0.59 +/-10%
- All other windows of units 1,3,4,31,34 & 36 thermally broken frames/DG U=3.6 SHGC=0.54 +/-10%
- All other windows of units 2,32 & 33 thermally broken frames/DG U=3.1 SHGC=0.49 +/-10%
- External louvre/blinds to W608,609 & 611
- All horizontal screens shown on plans to be operable
- All exhaust fans sealed
- All recessed downlights sealed and to allow for uninterrupted ceiling insulation
- Ceiling fans (min 1200mm diameter) to living & all bedrooms of units 6,10-14,16,20-27 & 29-36 and to media room of units 32-34 & 36

GARTNERTROVATO ARCHITECTS

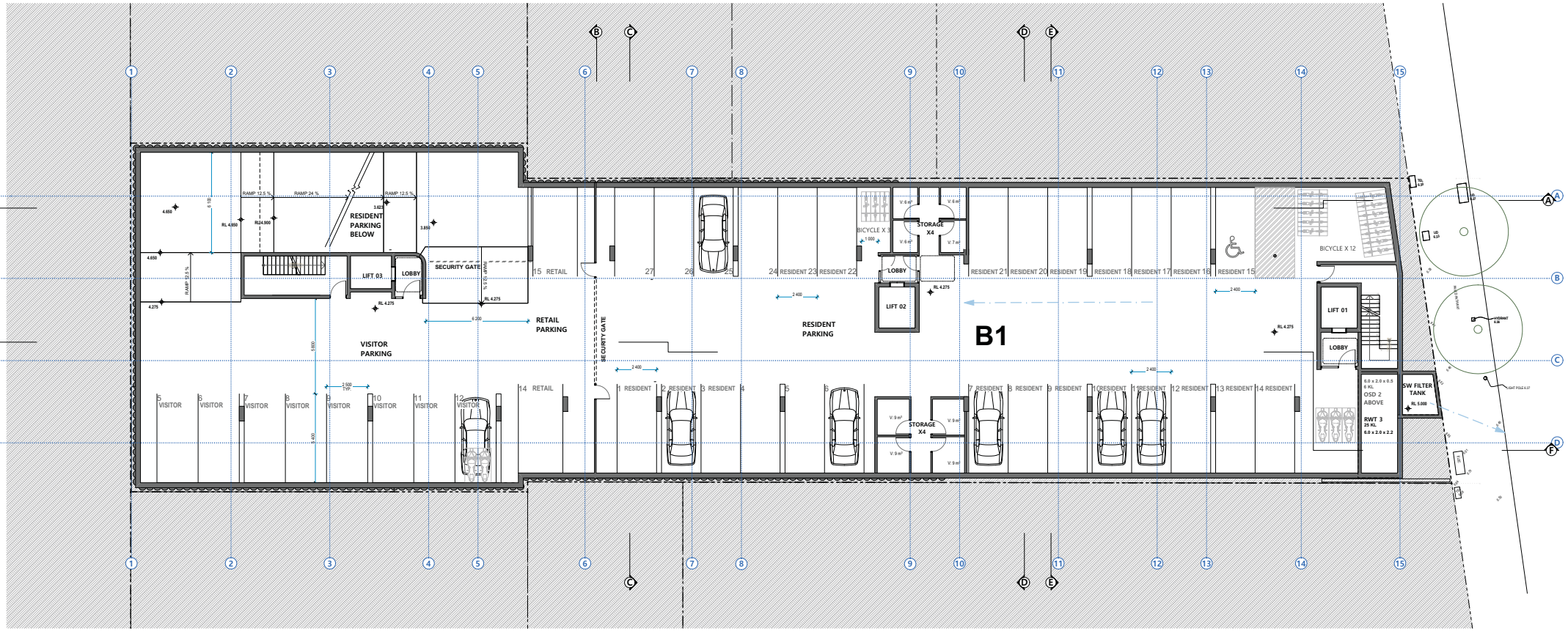
Issue Date	Rev	Description
NOV 2024	A	ISSUE FOR DA

PROJECT
PROPOSED SHOP TOP HOUSING
1748-1753 PITTWATER RD
MONA VALE NSW

LOT 1 DP 715158 + LOT 2 DP 412869

DRAWING TITLE
LEVEL 1 - PITTWATER ROAD GROUND

SCALE 1:100 @ A1 | DRAWN BY SG / GH | DATE 17/12/2024
PROJECT NO. 2401 | DRAWING NO. A 04 | REVISION A



CARPARK SCHEDULE

APARTMENT	3 BED	2 BED	1 BED	REQ. TOTAL	PROVIDED TOTAL
L 6	2		1		
L 5	3	3	3		
L 4	1	5	4		
L 3	1	5	4		
L 2	4				
TOTAL 36	11	13	12		
RESIDENT PARKING	@ 2.0 22	@ 2.0 26	@ 1.0 12	60	57
VISITOR	@ 1 / 3 APARTMENTS			12	12
RETAIL	@ 1 / 30 m² (450 m²)			15	16
TOTAL CARS				87	85
MOTORBIKE	@ 1 / 100 CAR SPACES			1	12
BICYCLE	@ 1 / 3 APARMENTS 12	RETAIL MIN. 4		16	30

GARTNERTROVATO ARCHITECTS

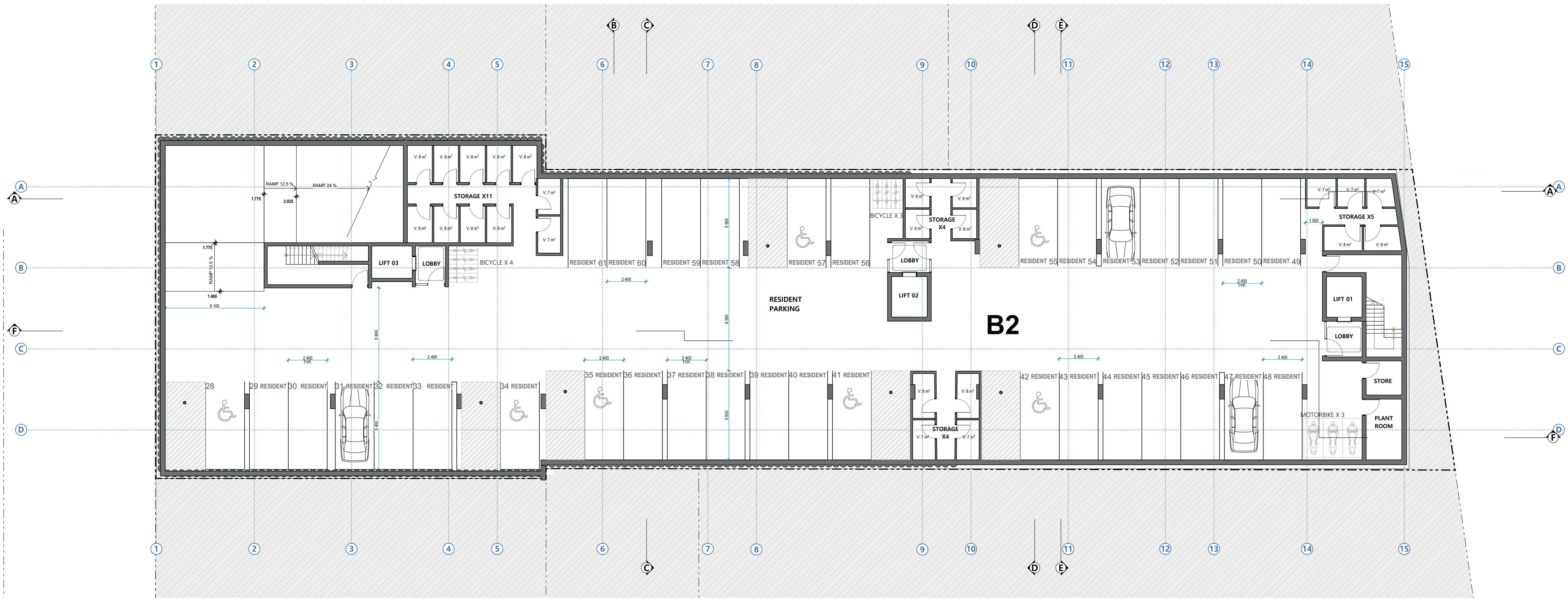
Issue Date	Rev.	Description
NOV 2024	A	ISSUE FOR DA

PROJECT
PROPOSED SHOP TOP HOUSING
1 TAB-1753 PITTWATER RD
MONA VALE NSW

LOT 1 DP 715158 + LOT 2 DP 412869

DRAWING TITLE
BASEMENT 1

SCALE	DRAWN BY	DATE
1:100 @ B1	SG / GH	19/12/2024
PROJECT NO.	DRAWING NO.	REVISION
2401	A 03	A



CARPARK SCHEDULE

APARTMENT	3 BED	2 BED	1 BED	REQ. TOTAL	PROVIDED TOTAL
L 6	2		1		
L 5	3	3	3		
L 4	1	5	4		
L 3	1	5	4		
L 2	4				
TOTAL 36	11	13	12		
RESIDENT PARKING	@ 2.0 22	@ 2.0 26	@ 1.0 12	60	57
VISITOR	@ 1 / 3 APARTMENTS			12	12
RETAIL	@ 1 / 30 m² (450 m²)			15	16
TOTAL CARS				87	85
MOTORBIKE	@ 1 / 100 CAR SPACES			1	12
BICYCLE	@ 1 / 3 APARMENTS 12	RETAIL MIN. 4		16	30

GARTNERTROVATO

Issue Date	Rev	Description
NOV 2024	A	ISSUE FOR DA

PROJECT
PROPOSED SHOP TOP HOUSING
1749-1753 PITTWATER RD
MONA VALE NSW

LOT 1 DP 715158 + LOT 2 DP 412869

DRAWING TITLE
BASEMENT 2

SCALE 1:100 @ B1
DRAWN BY SG / DH
DATE 16/12/2024
PROJECT NO. 2401
DRAWING NO. A 02
REVISION A

APPENDIX B

TRAFFIC COUNT DATA

TRANS TRAFFIC SURVEY
trafficsurvey.com.au

TURNING MOVEMENT SURVEY

Turning Movement Counts on Bungan Ln, Mona Vale

GPS *-33.677907, 151.302576*

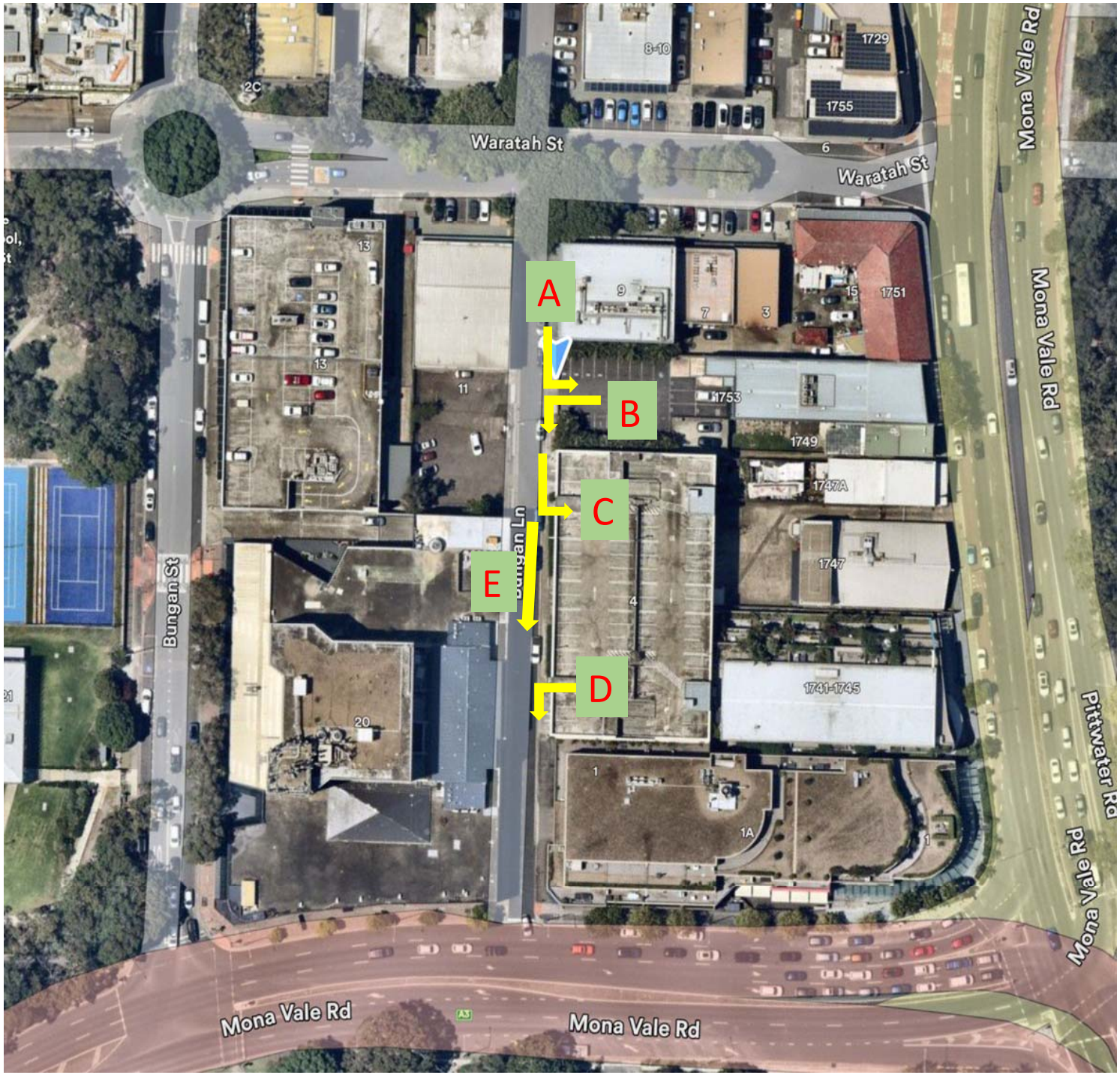
Date:	Tue 26-11-24
Weather:	Fine
Suburban:	Mona Vale
Customer:	Terraffic

Survey Period	AM:	7:00 AM-10:00 AM
	PM:	12:00 AM-3:00 AM

All Vehicles

Time		A		B		C		D		E	
Period Start	Period End	Lights	Heavies	Lights	Heavies	Lights	Heavies	Lights	Heavies	Lights	Heavies
7:00	7:15	0	0	1	0	11	0	4	0	28	0
7:15	7:30	0	0	3	0	12	0	2	0	31	0
7:30	7:45	1	0	0	0	25	0	7	0	36	1
7:45	8:00	0	0	0	0	17	0	6	0	50	1
8:00	8:15	2	0	0	0	30	0	5	0	56	0
8:15	8:30	1	0	1	0	33	0	3	0	64	1
8:30	8:45	1	0	1	0	41	0	8	0	71	0
8:45	9:00	0	0	0	0	50	0	5	0	90	0
9:00	9:15	1	0	0	0	28	0	8	0	50	1
9:15	9:30	0	0	0	0	31	0	15	0	50	0
9:30	9:45	2	0	3	0	32	0	9	0	51	0
9:45	10:00	0	0	0	0	25	0	14	0	45	0
15:00	15:15	1	0	1	0	17	0	23	0	31	0
15:15	15:30	0	0	0	0	10	0	20	0	23	1
15:30	15:45	3	0	1	0	7	0	19	0	27	0
15:45	16:00	0	0	3	0	22	0	22	0	33	0
16:00	16:15	0	0	1	0	9	0	17	0	30	0
16:15	16:30	1	0	1	0	16	0	14	0	22	0
16:30	16:45	0	0	1	0	18	0	37	0	32	0
16:45	17:00	2	0	0	0	7	0	35	0	22	0
17:00	17:15	1	0	3	0	10	0	35	0	27	0
17:15	17:30	0	0	0	0	8	0	48	0	23	0
17:30	17:45	0	0	2	0	7	0	23	0	19	0
17:45	18:00	1	0	0	0	13	0	22	0	33	0

Bungan Lane Peak Hour Thru Flows	Site Carpark Peak Hour Flows			Council Carpark Peak Hour Flows		
	Entry	Exit	Total	Entry	Exit	Total
147	1	4	5	65	19	84
175	3	3	6	84	20	104
209	4	1	5	105	21	126
243	4	2	6	121	22	143
282	4	2	6	154	21	175
277	3	2	5	152	24	176
262	2	1	3	150	36	186
242	3	3	6	141	37	178
197	3	3	6	116	46	162
115	4	5	9	56	84	140
114	3	5	8	48	78	126
112	4	6	10	54	72	126
117	1	6	7	65	90	155
106	3	3	6	50	103	153
103	4	5	9	51	121	172
104	3	4	7	43	155	198
91	3	5	8	32	141	173
102	2	5	7	38	128	166


A
B
C
D
E
Waratah St
Waratah St
Mona Vale Rd
Mona Vale Rd
Mona Vale Rd
Mona Vale Rd
Mona Vale Rd
Pittwater Rd
Bungan St
Bungan Ln
1729
1755
1751
1753
1749
1747A
1747
1741-1745
2C
8-10
6
13
11
9
7
3
15
4
20
1
1A