140-142 Ocean Street, Narrabeen
Traffic Impact Assessment Report

Prepared for:

Trio Industry Pty Ltd

10 February 2025

The Transport Planning Partnership

140-142 Ocean Street, Narrabeen
Traffic Impact Assessment Report

Client: Trio Industry Pty Ltd

Version: V01

Date: 10 February 2025

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Quality Record

Version	Date	Prepared by	Reviewed by	Approved by	Signature
V01	10/2/2025	Hang Tran, Clinton Cheung	Oasika Faiz	Ken Hollyoak	

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1 Introduction

1.1 Overview

Trio Industry Pty Ltd are preparing a Development Application (DA) for a three-storey apartment block at 140-142 Ocean Street, Narrabeen to be submitted to Northern Beaches Council (Council). The proposed DA involves combining the previously approved development site at 142 Ocean Street (DA 2021/1166) and the neighbouring plot at 140 Ocean Street.

TTPP have prepared this Traffic Impact Assessment (TIA) on behalf of the client to support the DA submission.

1.2 Report Structure

The remainder of the report is set out as follows:

- Chapter 2 discusses the existing conditions
- Chapter 3 provides a brief description of the proposed development
- Chapter 4 assesses the proposes on-site parking provision and internal layout
- Chapter 5 examines the traffic generation and its impact
- Chapter 6 presents the conclusions of the assessment.

2 Existing Conditions

2.1 Site Description

The site is located at 140-142 Ocean Street, Narrabeen within a well-established residential area in the Northern Beaches Council (Council) local government area (LGA). It is currently occupied by two (2) single residential dwellings. Both dwellings provide on-site car parking either via a car port and/or garage space. Vehicle access to the site is provided off Ocean Street via two separate driveways.

The location of the site is shown in Figure 2.1 and the surrounding land zoning is shown in Figure 2.2.

Figure 2.1: Locality Map

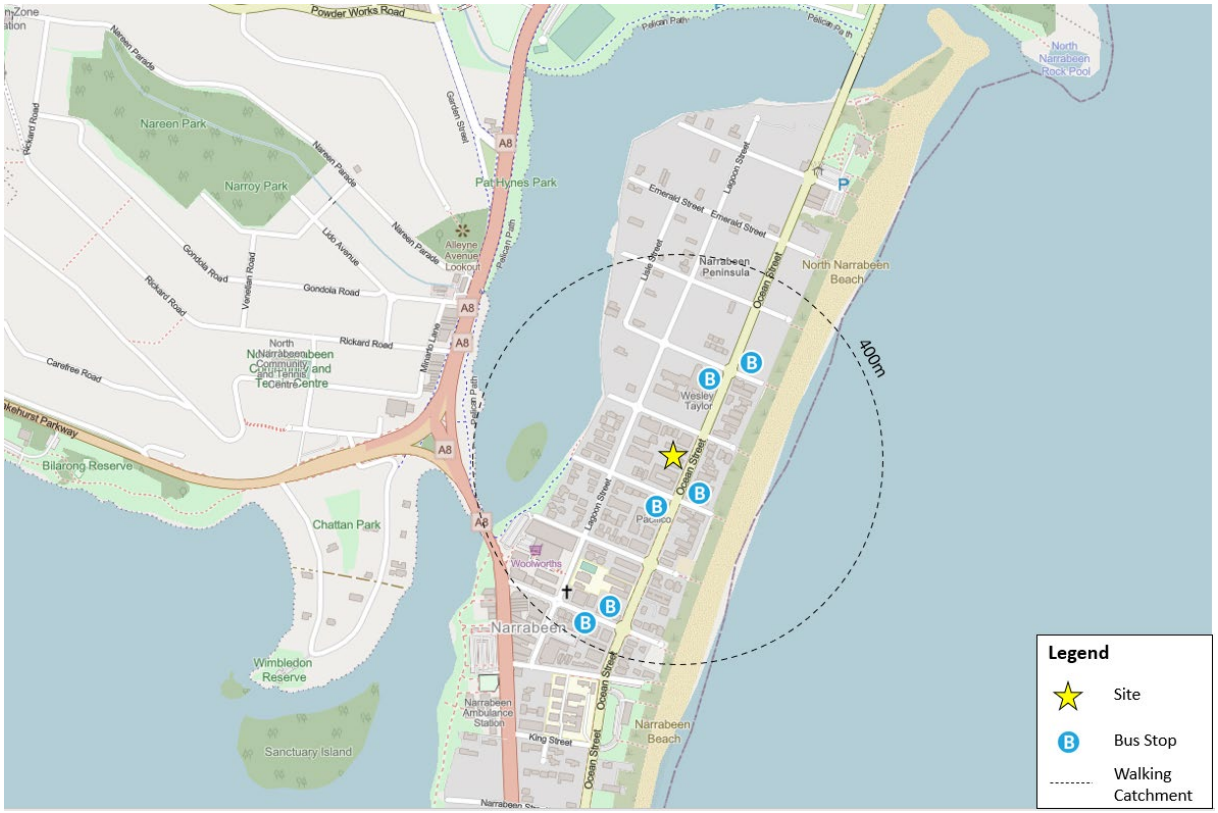


Figure 2.2: Surrounding Land Use

2.2 Surrounding Road Network

2.2.1 Ocean Street

Ocean Street is a local road located on the eastern frontage of the site. The road is configured in a north-south alignment and provides connections to Pittwater Road to the north and south. Traffic flow is restricted to two-way one lane in each direction with unrestricted kerbside parking permitted. The posted speed limit is 50km/h.

2.3 Public Transport Facilities

There are a number of public bus stops located along Ocean Street within a 400m radius of the subject site as shown in Figure 2.1.

The nearest bus stops are located 60 to 90m south of the site on Ocean Street which services Route 155, as well as special school bus services. Route 155 provides good connectivity between Bayview Garden Village and Frenchs Forest via Narrabeen.

A summary of the existing peak hour services and associated frequencies is shown in Table 2.1

Table 2.1: Existing Bus Services and Frequencies

Route #	Route Description	AM Peak (7am-9am) No. of Buses	PM Peak (4pm-6pm) No. of Buses
155	Bayview Garden Village to Frenchs Forest	7	4
	Bayview Garden Village to Frenchs Forest	4	4

Source: Transport for NSW

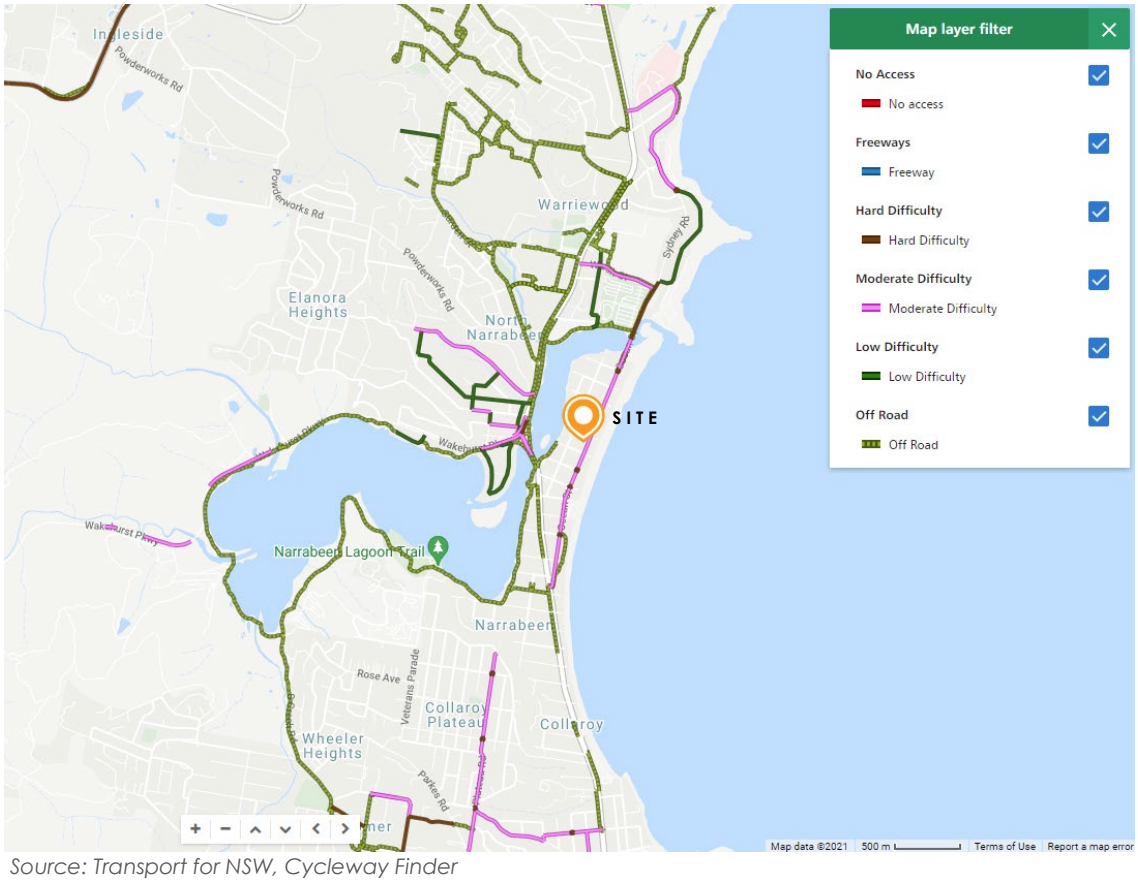
2.4 Pedestrian and Cyclist Infrastructure

Well established pedestrian and cycle paths are provided along the site frontage, including sealed pedestrian footpaths and separated on-road bicycle paths on both sides of Ocean Street.

Pedestrian crossing facilities are also provided within 200-metres from the site via pedestrian refuges at Octavia Street and Wellington Street roundabouts north and south of the site respectively.

The locations of existing cycleways within the immediate vicinity of the site are shown in Figure 2.3.

Figure 2.3: Existing Cycle Network



Source: Transport for NSW, Cycleway Finder

3 Proposed Development

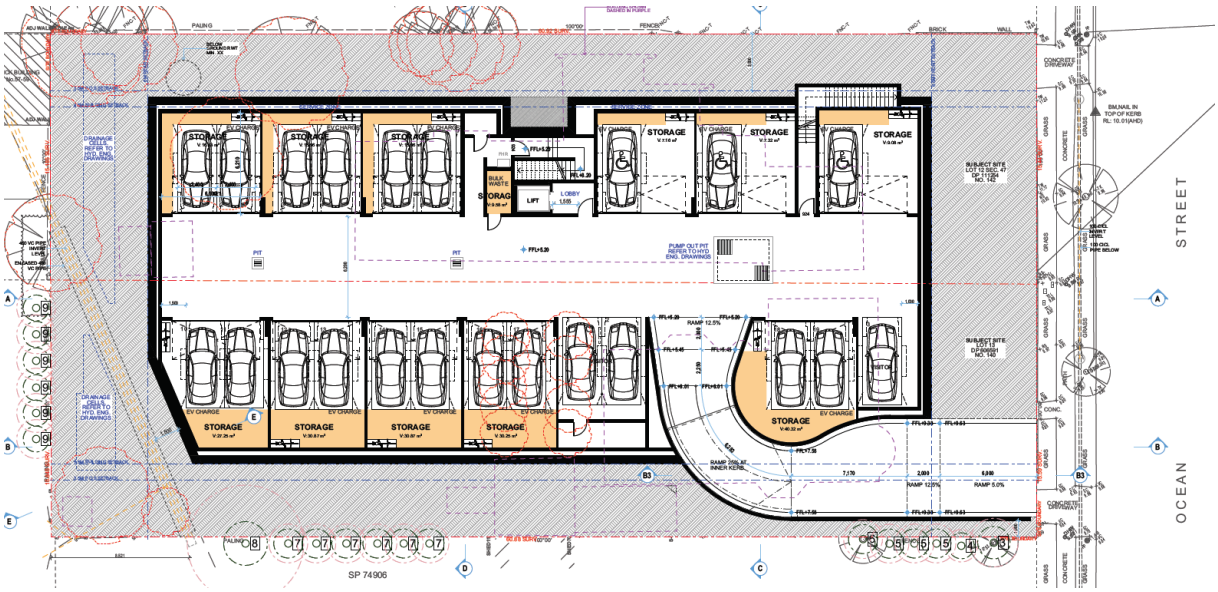
3.1 Proposal Description

The DA proposal involves the demolition of the existing on-site residential dwellings to construct a new three-storey residential development with eleven apartments and associated basement car parking containing 22 basement car parking spaces (including three visitor car parking spaces).

Vehicle and pedestrian access to the site is proposed off Ocean Street as per existing conditions.

The proposed layout plans are shown in Figure 3.1, with full architectural plans in Appendix A.

Figure 3.1: Site Layout



Source: PopovBass Architectural Plans (Revision 01 10.02.2025)

3.2 Vehicle Access Arrangements

Vehicle access to the site is proposed via a single 5.5m wide driveway off Ocean Street. An additional 0.3m clearance is provided on each side. The driveway is proposed to operate under a two-way arrangement for the extent of the driveway (i.e. about 6-metres) from the property boundary line.

The ramp to the basement car park will operate as one-lane, two-way.

3.3 Proposed Refuse Collection and Loading Facilities

It is proposed that all loading and unloading activities associated with the proposal will be conducted on-street on Ocean Street, including waste collection activities.

It is proposed that waste and recycling will be collected by Council's waste collection service per existing conditions.

Council's waste collection occurs once a week, generally on Fridays. Waste bins would be stored on-site within the waste bin storage room on the ground floor. On collection day, a resident or building manager would remove the bins from the storage area to the kerbside for kerbside waste collection. The resident / building manager would then relocate the bins back to the storage area. These arrangements are consistent with the surrounding residential properties in the area.

Based on typical residential servicing requirements, all other loading and unloading activities associated with the site are expected to be low, nor on a regular basis.

4 Parking Assessment

4.1 Car Parking Requirement

The parking assessment for the proposal has been assessed against the Warringah Development Control Plan 2011 (DCP). A summary of the car parking requirements and proposed provision is provided in Table 4.1.

Table 4.1: Car Parking Assessment

Parking Type	Unit Size	DCP Parking Rate	DCP Parking Requirements	Proposed Provision
Residential	1 x 2-bedroom dwelling	1.2 spaces per 2-bedroom dwelling	1.2 spaces	19 spaces
	10 x 3-bedroom dwellings	1.5 spaces per 3-bedroom dwelling	15.0 spaces	
	Total – 11 units		16.2 spaces	
Visitors		1 space per 5 units or part of dwellings	3 spaces (rounded from 2.2)	3 spaces
Total			**19 spaces (Rounded from 19.2)**	**22 spaces**

Table 4.1 indicates that the proposed development is required to provide 19 car parking spaces, of which 3 spaces are to be allocated for visitors.

It is proposed to provide a total 22 car parking spaces (19 residential and 3 visitor car parking spaces). The 19 residential car parking spaces are proposed to be designed as eight double garages and three adaptable garages within the basement car park and is compliant with Council's DCP requirement.

Therefore, the proposed parking provision is considered satisfactory. The car park and associated elements are proposed to comply with design requirements as set out in the Australian Standards.

4.2 Bicycle Parking Requirement

Councils Warringah DCP 2011 sets out bicycle parking requirements at a rate of 1 per dwelling for residents and 1 per 12 dwellings for visitors.

On this basis, the proposal would require 1 bicycle parking space for visitors, noting that residents would be able to use their lock-up garage to store their bicycle.

One visitor bicycle space is provided and is therefore compliant with DCP requirements.

4.3 Car Park Design Review

The car park layout, the access ramps, access ramp gradients, headroom clearance etc will be designed in accordance with AS2890.1, AS2890.2 and AS2890.6. A review of the following design elements has been undertaken:

- The ramp connecting the Ground Floor and Basement has a downward slope from the site boundary for the first 6m with the northern side of the driveway having a gradient of 5% (1:20) and a 6.7% downward grade at the southern side of the driveway. The RL of the ramp centreline measured at the site boundary has an RL difference of 5mm to the northern and southern side of the driveway. While the first 6m of the driveway measured from the site boundary does not strictly comply with AS2890.1 of 5% (1:20), the difference of 5mm is considered acceptable based on a vertical clearance test for a B99 vehicle.
- AS2890.1 requires a maximum grade of 5% for the first 6m from the property boundary. This is to enable exiting vehicles to be positioned on flat ground and ensure adequate sight lines to pedestrians. The exiting lane of the driveway complies with this requirement with a maximum grade of 5%. The entering lane with a grade of 6.7% will not affect sight lines for exiting vehicles.
- Following the 5% ramp transition the ramp continues with a maximum downward slope of up to 25%, followed by a bottom transition of 12.5%. The proposed ramp gradients comply with the maximum allowable grade and transition requirements stipulated in AS2890.1.
- The basement car park spaces will be designed in compliance with AS2890.1 for Class 1A residential parking facilities with dimensions of 2.4m wide by 5.4m long and 6.2m parking aisles.
- Parking spaces for adaptable units will be designed in accordance with AS2890.6 with a 2.4m width and 5.4m length, and adjacent shared area of the same dimensions to enable side ramp access.
- Apron widths for garages have been designed as 6.2m wide as per the requirements of AS2890.1. Each double garage has been designed with a minimum doorway width of 4.8m (i.e space width 2.4m times number of spaces (2)).
- A minimum clear head height of 2.2m will be provided for all circulation areas within the basement car park as required by AS2890.1. A clear head height of 2.5m is also provided above all the accessible parking spaces as required by AS2890.6.
- Dead-end aisles will be provided with the required 1.0m aisle extension in accordance with Figure 2.3 of AS2890.1.
- Appropriate splays will be provided in accordance with the requirements of Figure 3.3 of AS2890.1 at the access driveway.

4.4 Traffic Management Plan

The driveway is proposed to operate under a two-way arrangement for the first 6m extent of the driveway from the property boundary line. The ramp to the basement car park will operate as a one-lane, two-way roadway. Therefore, the 6m wide driveway will operate as a waiting area while the ramp is in use by a vehicle is exiting.

A traffic management system will be operated on-site to manage two-way vehicle access and the visitor parking demand.

Two-way flow along the ramp is to be managed by the following system:

- Red-green lights and sensors (in ground loops or beam sensors) will be installed at the top of the ramp while separate buttons would be equipped for each resident garage and visitor spaces.
- For vehicles entering the basement car park - When a car enters the site, a sensor at the top of the ramp will trigger the light at the bottom of the ramp to turn red indicating outbound vehicles to wait behind the stop line within the basement car park until no more inbound vehicles are on the ramp and the light at the bottom of the ramp turns green.
- For vehicles leaving the basement car park - Each resident garage will be equipped with a button which will trigger the traffic signal at ground floor to turn red (indicating that a vehicle is exiting). The red signal at the top of the driveway will turn on indicating inbound vehicles to wait at the waiting area on top of the ramp until the vehicle leaves the ramp and the light turns green. A traffic signal button will also be installed nearby the visitor car spaces and would operate as described.
- Priority will be given to the inbound vehicle movement so as to minimise the possibility of queuing onto Ocean Street. Therefore, the default traffic signal display for the inbound movement will be green and the default signal display for the outbound movement will be red.
- A "Stop Here on Red Signal" sign will be installed at the top and bottom of the ramp for each traffic direction. The system will assist vehicles with negotiating two-way access through the ramp by warning drivers of an approaching vehicle.

Based on the anticipated traffic generation of the site being low, it is not expected that these arrangements would result in any adverse traffic impact on the road network. Using the estimated flows and length of the "conflict area", the probability of a conflict on the driveway occurring is less than one per cent, which can be considered negligible.

5 Traffic Assessment

Transport for NSW (TfNSW) have recently released the latest *Guide to Transport Impact Assessment 2024* which came into effect from 4 November 2024. Trip generation rates have been sourced from this 2024 Guide.

The proposed development of 11 residential units is considered as medium density which is defined within the Guide as a building containing at least two but less than 20 dwellings.

Based on this, TfNSW suggests a weekday peak hour trip rate of 0.39 (AM) and 0.37 (PM) trips per dwelling per hour for medium density residential buildings. Using this metric, the proposed eleven residential units could generate up to four vehicle trips during the peak hour. This level of development traffic is considered low and could not be expected to generate any discernible traffic impacts from a traffic capacity perspective.

Furthermore, the existing two single dwellings would generate up to two vehicle trips during the peak hour based on TfNSW's low density residential trip rates of 0.68 (AM) and 0.77 (PM) trips per dwelling.

On this basis, the proposed development would generate a net increase of up to 2 trips during the peak hour which is considered negligible.

Therefore, from a traffic perspective the proposed development is acceptable.

6 Conclusion

The Transport Planning Partnership (TTPP) have prepared this Traffic Impact Assessment (TIA) report for the proposed demolition of existing dwellings and construction of a new 3-storey residential flat building of 11 residential units at 140-142 Ocean Street, Narrabeen.

Key findings in this traffic and transport assessment include:

- The proposed development generates a statutory parking requirement of 19 car spaces (16 residential and 3 visitor spaces) in accordance with the Council's Warringah DCP 2011.
- The development will provide a total of 22 car parking spaces (including 19 resident spaces and 3 visitor spaces) and is therefore compliant with Council's DCP requirements.
- The proposed parking layout is generally consistent with the dimensional requirements as set out in the Australian/New Zealand Standard for Off Street Car Parking (AS/NZS2890.1:2004 and AS/NZS2890.6:2009).
- The development is expected to generate a net traffic generation of up to two vehicle trips during the weekday peak hour which is considered to be imperceptible on the surrounding road network.

Overall, the traffic and parking aspects of the proposed development are considered to be satisfactory.

Appendix A

Architectural Plans

NEIGHBOUR SITE
SP2754 NO. 144
4 STOREY BRICK
BUILDING WITH
METAL ROOF

SP 2754

OUTLINE OF EXISTING BUILDING SHOWN DASHED IN PURPLE

ADJ WALL 32 CLEAR

SITE BOUNDARY

PALING

FNC-T

100°00'

60.92 SURV

FENCE

BRICK WALL

6.307 FRONT SETBACK

6M REAR SETBACK

BELOW GROUND RWT MIN. XX

BRICK BUILDING No.57-59

3.5M P.O.S SETBACK

4.5M BUILDING SETBACK

SERVICE ZONE

ADJ WALL

DRAINAGE CELLS, REFER TO HYD. ENG. DRAWINGS

15.185 SURV

FENCE

450 VC PIPE INVERT LEVEL

ENCASED 450 VC PIPE

EV CHARGE

STORAGE
V: 16.53 m³

STORAGE
V: 15.96 m³

STORAGE
V: 15.96 m³

6,210

2,400

2,400

6,100

FFL+5.20

FFL+8.20

FHR

BULK WASTE STORAGE
V: 9.58 m³

LIFT

LOBBY
1,555

STORAGE
V: 7.16 m³

STORAGE
V: 7.32 m³

STORAGE
V: 9.08 m³

924

SUBJECT SITE
LOT 12 SEC. 47
DP 111254
NO. 142

PIT

PIT

FFL+5.20

PUMP OUT PIT REFER TO HYD ENG. DRAWINGS

6,200

1,500

1,000

FFL+5.20

FFL+5.20

RAMP 12.5%

2,000

2,250

FFL+5.45

FFL+5.45

FFL+6.01

FFL+6.01

VISITOR

VISITOR

SUBJECT SITE
LOT 13
DP 606591
NO. 140

EV CHARGE

STORAGE
V: 27.25 m³

STORAGE
V: 30.87 m³

STORAGE
V: 30.87 m³

STORAGE
V: 30.25 m³

STORAGE
V: 40.32 m³

EV CHARGE

EV CHARGE

EV CHARGE

EV CHARGE

EV CHARGE

DRAINAGE CELLS, REFER TO HYD. ENG. DRAWINGS

1,500

4.5M BUILDING SETBACK

3.5M P.O.S SETBACK

18.41 SURV

FFL+9.38

FFL+9.63

FFL+7.58

RAMP 25% AT INNER KERB

7,170

2,000

RAMP 12.5%

6,000

RAMP 5.0%

FFL+7.58

FFL+9.38

FFL+9.63

15.59 SURV

PALING

60.88 SURV

100°00'

SHED1

SHED1

FENCE

8,521

SP 74906

DENOTES GREEN COLOUR WINDOWS SURVEYED BY "TJ SURVEYORS PTY LTD"

NEIGHBOUR SITE
SP74906
NO. 134-138
2 STOREY RENDERED
BUILDING WITH METAL ROOF

GRASS
PATH
GRASS
CONCRETE DRIVEWAY
GRASS
CONCRETE
GRASS
BM.NAIL IN TOP OF KERB RL: 10.01(AHD)
100 CICL INVERT LEVEL
100 CICL PIPE BELOW
PATH
GRASS
CONC.
GRASS
CONCRETE DRIVEWAY
GRASS
CONCRETE
GRASS

STREET

OCEAN

Rev	Date	Amendment	Drwn	Chck
M	4/02/25	For Coordination	CG	BB
L	3/02/25	For Coordination	CG	BB
H	20/01/25	For Coordination	CG	BB
G	17/12/24	For Coordination	CG	BB
F	16/12/24	For Coordination	CG	BB
E	13/11/24	For Coordination	CG	BB
D	1/11/24	For Coordination	CG	BB
C	29/10/24	For Coordination	CG	BB
B	24/10/24	For Coordination	CG	BB
A	24/09/24	For Coordination	CG	BB

Surveyor
C & A Suveyors

Structural Engineer
Capital Engineering Consultants

Hydraulic Engineer
Capital Engineering Consultants

Mechanical Engineer
Capital Engineering Consultants

Electrical Engineer
Purple Apple Access Pty Ltd

Landscape Architect
Jane Britt Design

PopovBass

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Client
Trio Industries Pty Ltd

Project
TRIO NARRABEEN APARTMENTS
140-142 Ocean Street Narrabeen Sydney NSW 2101

Status
DEVELOPMENT APPLICATION

Title
Basement Plan

Drawing No. 0649-DA104
Revision M
Scale 1:100 at A1 size
Date 4/02/25


NEIGHBOUR SITE
SP2754 NO. 144
4 STOREY BRICK
BUILDING WITH
METAL ROOF
SP 2754
BRICK BUILDING
No.57-59
OUTLINE OF EXISTING
BUILDING SHOWN
DASHED IN PURPLE
DRAINAGE CELLS BELOW, REFER TO HYD. ENG. DRAWINGS
LIVING / DINING
8.0 x 4.8m
38.40m²
MEDIA / BED 3
3.5 x 3.1m
10.85m²
BED 2
3.6 x 3.1m
11.16m²
BED 1
4.3 x 4.3m
18.44m²
BATH
WIR
ENSUITE
ACCESS 3BED_APT 05
A: 143.43 m²
FLEXI / BED 3
3.9 x 3.8m
14.86m²
KITCHEN
LND
3BED_APT 04
A: 154.18 m²
ENTRY
LIFT
BIKE PARK
BED 1
4.7 x 3.5m
16.49m²
BED 2
3.5 x 3.1m
10.83m²
FLEXI / BED 3
4.6 x 3.1m
14.31m²
KITCHEN
LIVING / DINING
8.2 x 5.0m
40.93m²
3BED_APT 01
A: 150.73 m²
BIN
SUBJECT SITE
LOT 12 SEC. 47
DP 111254
NO. 142
PRIVATE OPEN SPACE
7.6 x 7.1m
57.98m²
ACCESS 3BED_APT 02
A: 154.61 m²
LIVING
5.9 x 4.4m
25.90m²
PRIVATE OPEN SPACE
9.1 x 8.5m
61.39m²
SUBJECT SITE
LOT 13
DP 606591
NO. 140
LIVING / DINING
7.8 x 4.8m
37.55m²
KITCHEN
2BED+_APT 03
A: 132.96 m²
PREP
STUDY
LIVING / DINING
7.5 x 5.0m
37.39m²
BED 1
4.3 x 3.6m
15.50m²
BED 1
4.0 x 3.6m
14.40m²
BED 2
3.6 x 3.1m
11.16m²
BED 2
3.8 x 3.4m
12.92m²
BED 1
4.4 x 3.6m
16.05m²
BED 2
3.5 x 3.3m
11.56m²
FLEXI / BED 3
4.8 x 3.0m
14.44m²
DINING
KITCHEN
VOID
PRIVATE OPEN SPACE
15.2 x 4.1m
53.21m²
RAMP 25.0%
RAMP 12.5%
RAMP 5%
OCEAN STREET
BM,NAIL IN
TOP OF KERB
RL: 10.01(AHD)
APPROX. POSITION OF NEIGHBOURING TREES
SP 74906
APPROX. POSITION OF
NEIGHBOURING TREES 4 & 5
STREET TREES
RETAINED SRZ & TPZ
SHOWN AS PER
ARBORIST REPORT
DENOTES GREEN COLOUR
WINDOWS SURVEYED BY
"TJ SURVEYORS PTY LTD"
NEIGHBOUR SITE
SP74906
NO. 134-138
2 STOREY RENDERED
BUILDING WITH METAL ROOF

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Mechanical Engineer
Capital Engineering Consultants

Electrical Engineer
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Landscape Architect
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W popovbass.com.au

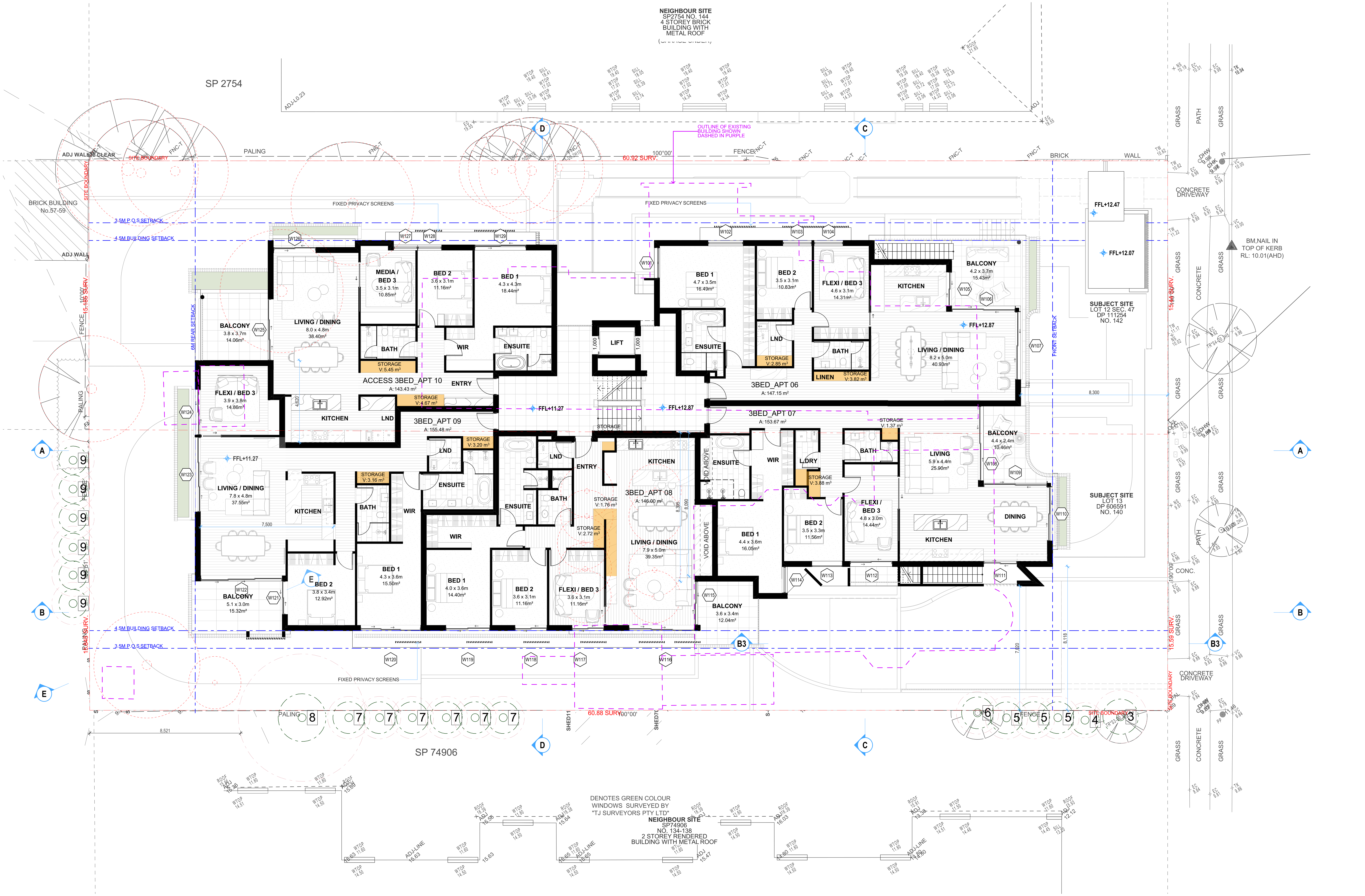
Client
Trio Industries Pty Ltd

Project
TRIO NARRABEEN APARTMENTS
140-142 Ocean Street Narrabeen Sydney NSW 2101

Status
DEVELOPMENT APPLICATION

Title
Ground Floor Plan

Drawing No. 0649-DA105
Revision M
Scale 1:100 at A1 size
Date 4/02/25



NEIGHBOUR SITE
SP2754 NO. 144
4 STOREY BRICK
BUILDING WITH
METAL ROOF
SP 2754
OUTLINE OF EXISTING
BUILDING SHOWN
DASHED IN PURPLE
60.92 SURV.
FIXED PRIVACY SCREENS
BRICK BUILDING
No.57-59
3.5M P.O.S SETBACK
4.5M BUILDING SETBACK
BALCONY
3.8 x 3.7m
14.06m²
LIVING / DINING
8.0 x 4.8m
38.40m²
MEDIA / BED 3
3.5 x 3.1m
10.85m²
BED 2
3.6 x 3.1m
11.16m²
BED 1
4.3 x 4.3m
18.44m²
BATH
WIR
ENSUITE
STORAGE
V:5.45 m³
ACCESS 3BED_APT 10
A: 143.43 m²
ENTRY
FLEXI / BED 3
3.9 x 3.8m
14.86m²
KITCHEN
LND
STORAGE
V:4.67 m³
3BED_APT 09
A: 155.48 m²
LIFT
STORAGE
FFL+11.27
FFL+12.87
BED 1
4.7 x 3.5m
16.49m²
BED 2
3.5 x 3.1m
10.83m²
FLEXI / BED 3
4.6 x 3.1m
14.31m²
KITCHEN
BALCONY
4.2 x 3.7m
15.43m²
ENSUITE
LND
STORAGE
V:2.85 m³
LINEN
STORAGE
V:3.82 m³
LIVING / DINING
8.2 x 5.0m
40.93m²
FFL+12.87
3BED_APT 06
A: 147.15 m²
3BED_APT 07
A: 153.67 m²
FFL+12.47
FFL+12.07
SUBJECT SITE
LOT 12 SEC. 47
DP 111254
NO. 142
BM,NAIL IN
TOP OF KERB
RL: 10.01(AHD)
FRONT SETBACK
LIVING / DINING
7.8 x 4.8m
37.55m²
KITCHEN
STORAGE
V:3.16 m³
BATH
WIR
ENSUITE
STORAGE
V:3.20 m³
LND
3BED_APT 08
A: 146.00 m²
KITCHEN
LIVING / DINING
7.9 x 5.0m
39.35m²
STORAGE
V:1.76 m³
STORAGE
V:2.72 m³
VOID ABOVE
BED 1
4.4 x 3.6m
16.05m²
BED 2
3.5 x 3.3m
11.56m²
FLEXI / BED 3
4.8 x 3.0m
14.44m²
L'DRY
STORAGE
V:3.88 m³
BATH
STORAGE
V:1.37 m³
BALCONY
4.4 x 2.4m
10.46m²
LIVING
5.9 x 4.4m
25.90m²
DINING
KITCHEN
SUBJECT SITE
LOT 13
DP 606591
NO. 140
BALCONY
5.1 x 3.0m
15.32m²
BED 2
3.8 x 3.4m
12.92m²
BED 1
4.3 x 3.6m
15.50m²
BED 1
4.0 x 3.6m
14.40m²
BED 2
3.6 x 3.1m
11.16m²
FLEXI / BED 3
3.6 x 3.1m
11.16m²
BALCONY
3.6 x 3.4m
12.04m²
60.88 SURV.
SP 74906
DENOTES GREEN COLOUR
WINDOWS SURVEYED BY
"TJ SURVEYORS PTY LTD"
NEIGHBOUR SITE
SP74906
NO. 134-138
2 STOREY RENDERED
BUILDING WITH METAL ROOF
CONCRETE DRIVEWAY
GRASS
PATH
CONCRETE

Rev	Date	Amendment	Drwn	Chck
M	4/02/25	For Coordination	CG	BB
L	3/02/25	For Coordination	CG	BB
K	29/01/25	For Coordination	CG	BB
J	28/01/25	For Coordination	CG	BB
G	17/12/24	For Coordination	CG	BB
F	16/12/24	For Coordination	CG	BB
D	13/11/24	For Coordination	CG	BB
C	29/10/24	For Coordination	CG	BB
B	24/10/24	For Coordination	CG	BB
A	24/09/24	For Coordination	CG	BB

Surveyor
C & A Suveyors

Structural Engineer
Capital Engineering Consultants

Hydraulic Engineer
Capital Engineering Consultants

Mechanical Engineer
Capital Engineering Consultants

Electrical Engineer
Purple Apple Access Pty Ltd

Landscape Architect
Jane Britt Design

PopovBass

PO Box 334
Surry Hills NSW 2010
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E info@popovbass.com.au
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Client
Trio Industries Pty Ltd

Project
TRIO NARRABEEN APARTMENTS
140-142 Ocean Street Narrabeen Sydney NSW 2101

Status
DEVELOPMENT APPLICATION

Title
Level 01 Plan

Drawing No.
0649-DA106

Revision
M

Scale
1:100 at A1 size

Date
4/02/25

NEIGHBOUR SITE
SP2754 NO. 144
4 STOREY BRICK
BUILDING WITH
METAL ROOF
SP 2754
OUTLINE OF EXISTING
BUILDING SHOWN
DASHED IN PURPLE
PALING
FENCE
BRICK
WALL
60.92 SURV.
SITE BOUNDARY
BRICK BUILDING
No.57-59
ADJ WALL
3.5M P.O.S SETBACK
4.5M BUILDING SETBACK
6M REAR SETBACK
6.5M FRONT SETBACK
FFL+15.17
PRIVATE ROOF
TERRACE
KITCHEN
LIFT
MECHANICAL PLANT
APT06
BALCONY
8.4 x 4.4m
FFL+16.22
FFL+16.75
VOID
LIVING
DINING
8.7 x 5.5m
47.37m²
FFL+14.47
FOYER
SERVICE
ACCESS
ENTRY
LND
STORAGE
V: 3.88 m³
STORAGE
V: 2.70 m³
STORAGE
V: 1.93 m³
ENS
3 BED_APT 11
A: 167.76 m²
BALCONY
16.9 x 3.6m
59.20m²
FLEXI / BED 3
3.9 x 3.7m
14.54m²
BATH
BATH
WIR
BED 2
3.6 x 3.4m
12.17m²
BED 1
4.4 x 3.6m
16.01m²
BALCONY
A: 1.49 m²
APT07
BALCONY
6.0 x 5.0m
29.75m²
SUBJECT SITE
LOT 12 SEC. 47
DP 111254
NO. 142
SUBJECT SITE
LOT 13
DP 606591
NO. 140
BM,NAIL IN
TOP OF KERB
RL: 10.01(AHD)
CONCRETE
DRIVEWAY
GRASS
PATH
CONCRETE
60.88 SURV.
SP 74906
DENOTES GREEN COLOUR
WINDOWS SURVEYED BY
"TJ SURVEYORS PTY LTD"
NEIGHBOUR SITE
SP74906
NO. 134-138
2 STOREY RENDERED
BUILDING WITH METAL ROOF

Rev	Date	Amendment	Drwn	Chck
M	4/02/25	For Coordination	CG	BB
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Client
Trio Industries Pty Ltd

Project
TRIO NARRABEEN APARTMENTS
140-142 Ocean Street Narrabeen Sydney NSW 2101

Status
DEVELOPMENT APPLICATION

Title
Level 02 Plan

Drawing No. 0649-DA107
Revision M
Scale 1:100 at A1 size
Date 4/02/25

Rev	Date	Amendment	Drwn	Chck
M	4/02/25	For Coordination	CG	BB
L	3/02/25	For Coordination	CG	BB
G	17/12/24	For Coordination	CG	BB
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Hydraulic Engineer
Capital Engineering Consultants

Mechanical Engineer
Capital Engineering Consultants

Electrical Engineer
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Landscape Architect
Jane Britt Design

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Client
Trio Industries Pty Ltd

Project
TRIO NARRABEEN APARTMENTS
140-142 Ocean Street Narrabeen Sydney NSW 2101

Status
DEVELOPMENT APPLICATION

Title
Roof Plan

Drawing No.
0649-DA108

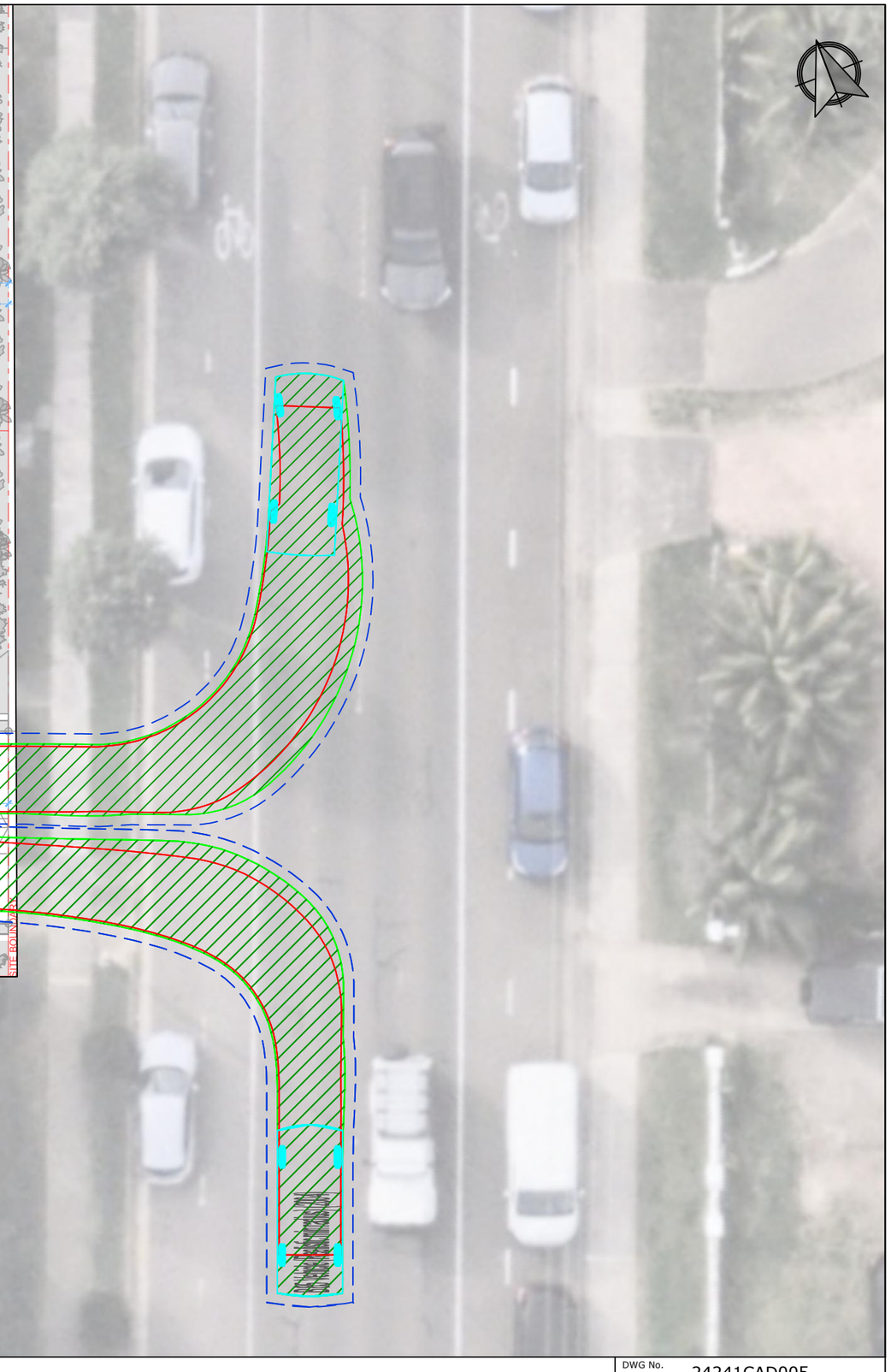
Revision
M

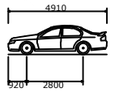
Scale
1:100 at A1 size

Date
4/02/25

Appendix B

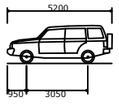
Swept Path Assessment





B85 Vehicle (Realistic min radius) (2004)

Overall Length	4910mm
Overall Width	1870mm
Overall Body Height	1421mm
Min Body Ground Clearance	159mm
Track Width	1770mm
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	5750mm



B99 Vehicle (Realistic min radius) (2004)

Overall Length	5200mm
Overall Width	1940mm
Overall Body Height	1878mm
Min Body Ground Clearance	272mm
Track Width	1840mm
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	6250mm

KEY:

	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	KR	OF	KH	04/02/25

ttpp transport planning

PROJECT

140-142 OCEAN STREET, NARRABEEN

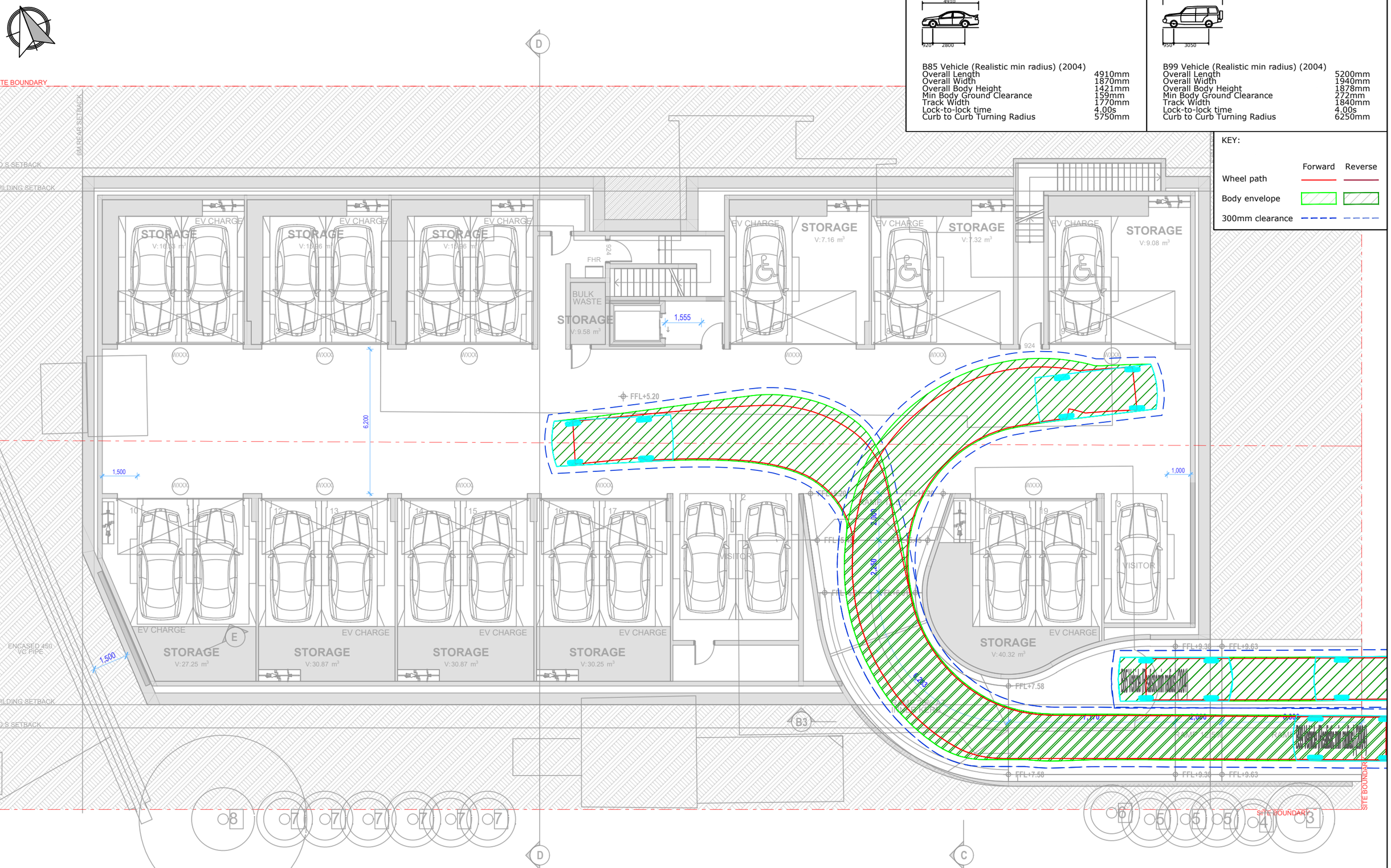
TITLE

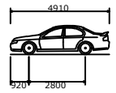
SWEPT PATH ANALYSIS - GROUND FLOOR
4.99M B85 VEHICLE AND 5.2M B99 VEHICLE

DWG No. 24241CAD005 FIGURE 3

DATE STAMP 04 FEBRUARY 2025

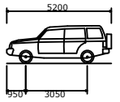
PROJECT No.	SCALE	REV.
24241	1:150 @A3	A





B85 Vehicle (Realistic min radius) (2004)

Overall Length	4910mm
Overall Width	1870mm
Overall Body Height	1421mm
Min Body Ground Clearance	159mm
Track Width	1770mm
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	5750mm



B99 Vehicle (Realistic min radius) (2004)

Overall Length	5200mm
Overall Width	1940mm
Overall Body Height	1878mm
Min Body Ground Clearance	272mm
Track Width	1840mm
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	6250mm

KEY:

	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	KR	OF	KH	04/02/25

ttpp transport planning

PROJECT

140-142 OCEAN STREET, NARRABEEN

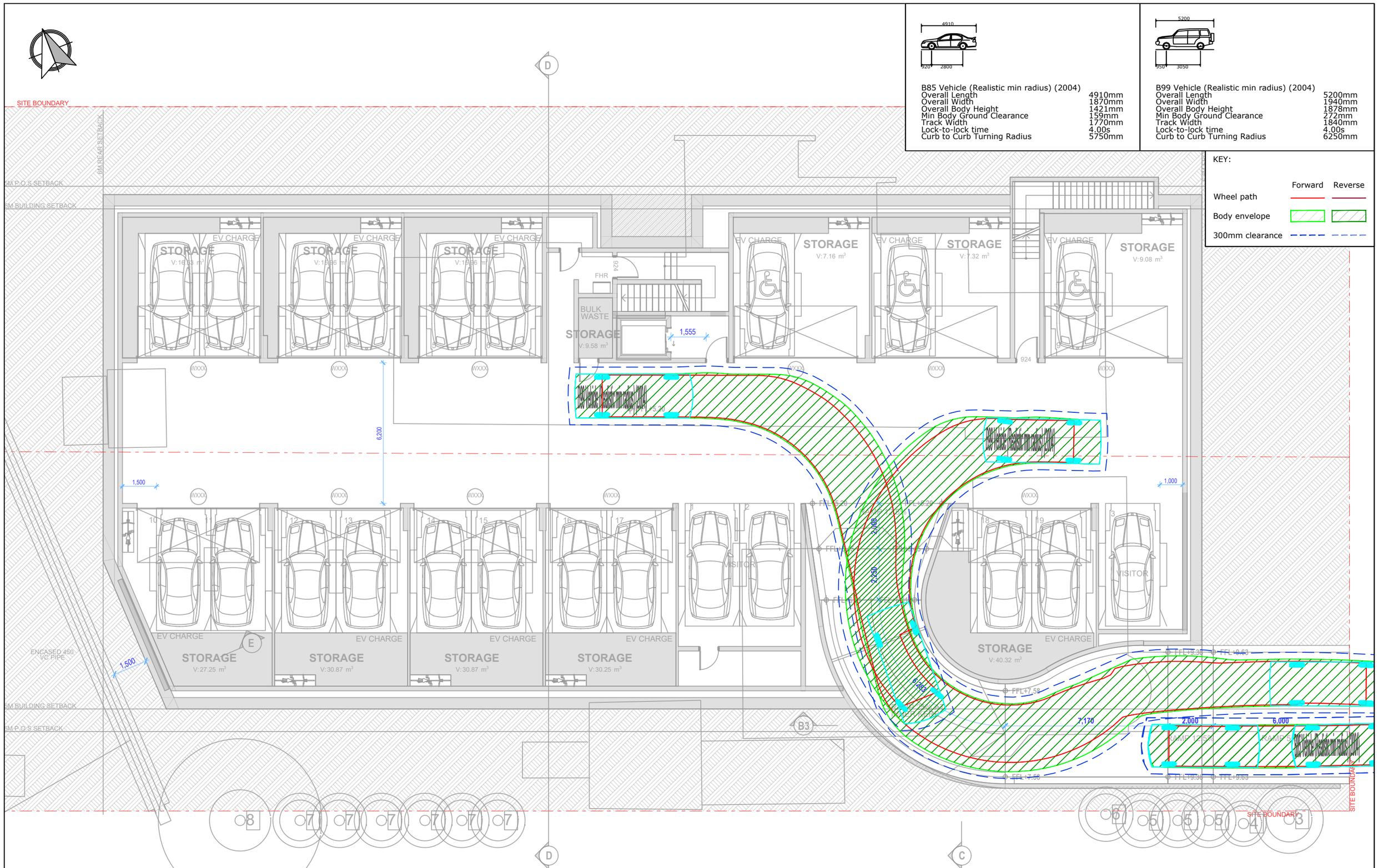
TITLE

SWEPT PATH ANALYSIS - BASEMENT LEVEL
5.2M B99 VEHICLE ENTERING & 4.9M B85 VEHICLE EXITING

DWG No. 24241CAD005
FIGURE 4

DATE STAMP 04 FEBRUARY 2025

PROJECT No.	SCALE	REV.
24241	1:150 @A3	A



4910

920 2800

B85 Vehicle (Realistic min radius) (2004)

Overall Length	4910mm
Overall Width	1870mm
Overall Body Height	1421mm
Min Body Ground Clearance	159mm
Track Width	1770mm
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	5750mm

5200

950 3050

B99 Vehicle (Realistic min radius) (2004)

Overall Length	5200mm
Overall Width	1940mm
Overall Body Height	1878mm
Min Body Ground Clearance	272mm
Track Width	1840mm
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	6250mm

KEY:

	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	KR	OF	KH	04/02/25

ttpp transport planning

PROJECT

140-142 OCEAN STREET, NARRABEEN

TITLE

SWEPT PATH ANALYSIS - BASEMENT LEVEL
5.2M B99 VEHICLE EXITING & 4.9M B85 VEHICLE ENTERING

DWG No. 24241CAD005 FIGURE 5

DATE STAMP 04 FEBRUARY 2025

PROJECT No. 24241

SCALE 1:150 @A3

REV. A

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