

Opal Bayview Proposed Residential Care Facility 36-42 Cabbage Tree Road, Bayview

Traffic and Parking Assessment

Ref: 24244

Date: November 2025

Issue: E

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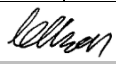
Executive Summary

This State Significant Development Application (SSDA) seeks approval for the redevelopment of a disused aged care building for a new Residential Care Facility (RCF) to be known as Opal Healthcare Bayview. The Opal Healthcare Bayview site will be split from the existing Aveo BGRL site via a Torrens title subdivision and will comprise a 3-storey RCF comprising 177 beds and basement parking.

The assessment provided in this report concludes that the proposal will:

- *not result in any adverse traffic implications*
- *be suitably located in relation to public transport and other services*
- *have a suitable and appropriate parking provision*
- *have appropriate vehicle access, internal circulation and servicing provisions*
- *be able to be constructed without any adverse implications for pedestrians/cyclists, public transport services or the surrounding road network*

The application is SSD-77240466 and the SEARS which relate to Transport are responded to in the following:

Declaration		
Qualified Professional	Lachlan Ellson	
Qualifications	BE(Civil)	
The undersigned declares that this (report name) has been prepared in response to the following SEARs requirements issued for the Project on 18 th February, 2025 for SSD-77240466:		
SEARs item no.	SEARS Issue and Assessment Requirement	Relevant Section of this Report that addresses SEARs Requirement
9	<p><i>Provide a Transport Impact Assessment (TIA) in accordance with the processes and methodology recommended in the Guide to Transport Impact Assessment (GITA) published by TfNSW.</i></p> <ul style="list-style-type: none"> - <i>If the construction of the development would cause interruptions to regular pedestrian and transport routes (including public transport, active transport or general traffic), a preliminary Construction Traffic (or Transport) Management Plan (CTMP) should be prepared as part of the TIA to mitigate any such impacts..</i> 	
Dated	1.10.2025	Signed: 

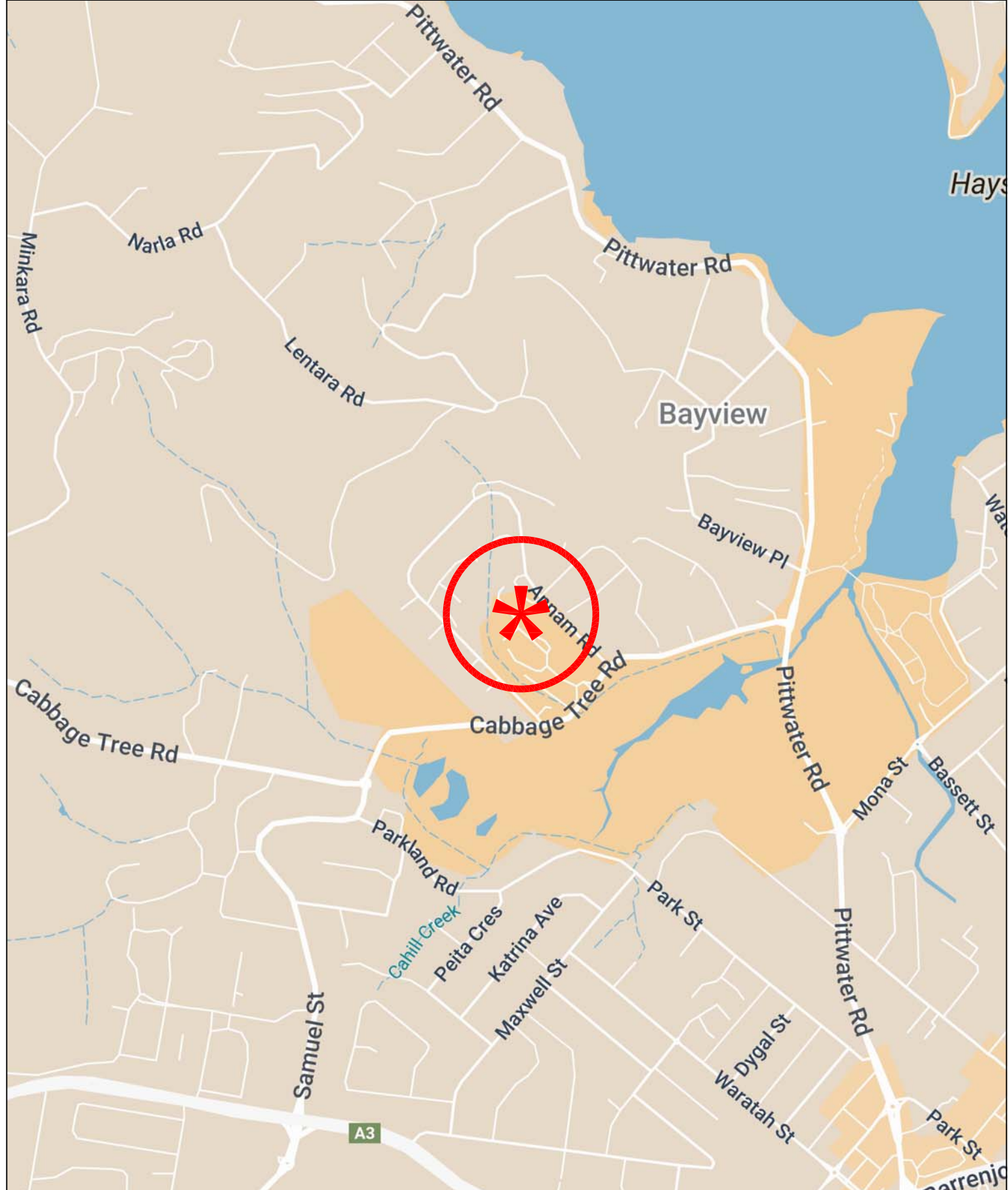
1.0 Introduction

This State Significant Development Application (SSDA) seeks approval for the redevelopment of a disused aged care building for a new Residential Care Facility (RCF) to be known as Opal Healthcare Bayview. The Opal Healthcare Bayview site located at 36-42 Cabbage Tree Road, Bayview (Figure 1) will be split from the existing Aveo BGRL site via a Torrens title subdivision and will comprise a 3-storey RCF comprising 177 beds and basement parking.

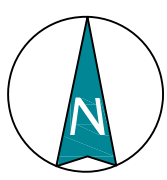
The increased 'aging population' in the Metropolitan Area is creating a need to provide additional retirement and aged care facilities. The long-established Aveo complex is located in a long-established seniors housing site which presents an ideal location for the provision of a new contemporary residential care facility replacing a vacant nursing home (circa 74 beds) and a vacant serviced apartment building (38 beds).

The proposed development will comprise the following:

- Demolition of the existing aged care building and driveway on the site;
- Construction of a three-storey residential aged care facility, accommodating:
 - o 177 beds,
 - o Basement parking,
 - o Ground floor ancillary facilities;
- Construction of a community room, to be located on the Aveo Bayview Gardens Retirement Living (Aveo BGRL) site;
- Construction of a new driveway, to be located on the Aveo BGRL site;
- Torrens Title subdivision of the Opal Healthcare Bayview site from Aveo BGRL;
- Associated amenities and landscaping works;
- Augmentation of, and connection to, existing utilities as required.



LEGEND



LOCATION

FIG 1

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The purpose of this report is to:

- ❖ describe the site, its context and the proposed development scheme
- ❖ describe the road network serving the site and the prevailing traffic conditions
- ❖ assess the adequacy of the proposed parking provision
- ❖ assess the potential traffic implications
- ❖ assess the suitability of the proposed vehicle access, internal circulation and servicing arrangements.
- ❖ respond to the SEARS as well as any Authority requirements

2.0 Proposed Development Scheme

2.1 Site, Context and Existing Circumstances

The Opal Bayview site (Figure 2) is a subdivided part of the existing Aveo BGRL site being Lot 121 in DP789400 which occupies a large irregular shaped area with frontages to the Cabbage Tree Road and Annam Road being just to the west of Pittwater Road.

The Opal site occupies an irregular shaped area of some 6,063m² with frontage to the northern leg of Annam Road just to the east of Cabbage Tree Road and the existing Opal Healthcare Bayview site comprises 2 existing 2-storey brick buildings comprising:

- A vacant nursing home (circa 74 beds),
- A vacant serviced apartment building (38 beds)
- An at-grade car parking with access driveways on Annam Road

Details of the existing development are provided on the survey plan reproduced overleaf.

2.2 Proposed Development

It is proposed to demolish the existing building elements and excavate the central part of the site providing level platforms for the new building and hardstand areas. A new 3 storey building with basement parking will be constructed comprising:

- ❖ 177 beds
- ❖ 66 staff (max. daytime shift)
- ❖ Allied Health Care (Wellness Centre with wellness and health consulting rooms) which is ancillary to the RCF & will only be utilised by residents

Transport and Traffic Planning Associates

- ❖ Associated facilities including kitchen and laundry facilities, dining rooms, lounge rooms, activity areas, meeting rooms, staff facilities and a café for residents and visitors
- ❖ 68 basement parking spaces (including 16 for Aveo) plus 4 at-grade spaces provided at the roundabout off Annam Road.
- ❖ New vehicle access driveway located on the Aveo portion of the site just to the east of the Utingu Place intersection for the basement parking and loading dock and the existing adjacent driveway which will provide access for the porte cochere in the ground level frontage area which will provide for set-down/pick-up of residents by carriers and the courtesy bus.
- ❖ Landscaping and purpose designed courtyards
- ❖ Alterations to the Aveo community centre facility to enable construction of the RCF and ensure its ongoing functionality and compliance.

Details of the proposed development are provided on plans prepared by Calderflower Architects which accompany the Development Application and are reproduced in part in Appendix A.

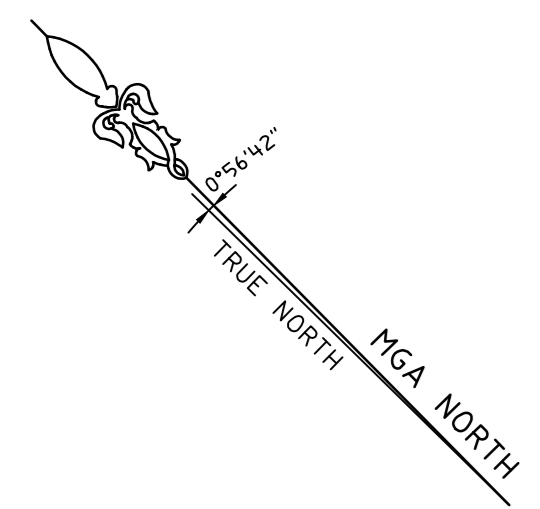


LEGEND



SITE

FIG 2



LEGEND: (SEE NOTES 1)

C	COMMUNICATIONS LINES (UNDERGROUND) QUALITY
E	ELECTRICITY LINES (UNDERGROUND) QUALITY
S	SEWER LINES (UNDERGROUND) QUALITY
SW	STORMWATER LINES (UNDERGROUND) QUALITY
T	TELSTRA LINES (UNDERGROUND) QUALITY
U	UNKNOWN SERVICE (UNDERGROUND) QUALITY
W	WATER LINES (UNDERGROUND) QUALITY
WH	FIRE SERVICE LINES (UNDERGROUND) QUALITY

NOTES 1

- THE PURPOSE OF THIS PLAN IS FOR DESIGN ONLY. CURRENT PLANS ISSUED BY SERVICE PROVIDERS THROUGH 'BEFORE YOU DIG AUSTRALIA' ARE STILL REQUIRED. CONTRACTORS AND SUBCONTRACTORS WILL NEED TO EXERCISE THEIR OWN DUTY OF CARE AND SHOULD MAKE THEIR OWN BEFORE YOU DIG AUSTRALIA ENQUIRY BEFORE EXCAVATION/CONSTRUCTION. YOU MUST ENSURE 'BEFORE YOU DIG AUSTRALIA' ARE CURRENT AS THEY HAVE VARYING EXPIRATION DATES, AND MAY REQUIRE RE-ISSUE OTHERWISE THE INFORMATION ON THIS PLAN MAY NO LONGER BE CURRENT.
- WARNING: UNKNOWN SERVICES MAY EXIST THAT COULD NOT BE ELECTRONICALLY DETECTED. THE DIAGRAMS OF THE SERVICE PROVIDER MAY NOT DETECT ALL ASSETS WITH THEIR NETWORK AND SERVICE PROVIDERS MAY SHARE CONDUITS AND/OR TRENCHES AT THIS LOCATION.
- WARNING: SINGLE MARKED LINES MAY REPRESENT MULTIPLE CONDUITS, PIPES OR CABLES AT THIS LOCATION. THE RECORDING OF DEPTH AND POSITION OF UTILITIES CANNOT BE GUARANTEED AS CORRECT. WE RECOMMEND NON DESTRUCTIVE DIGGING/PISTONING TO EXPOSE SERVICES FOR ACCURATE IDENTIFICATION AND DEPTH.

LEGEND:

CPIT = COMMUNICATIONS PIT
CSL = COMMUNICATIONS SURFACE LEVEL
DRAIN = DRAIN
EPIL = ELECTRICITY PILLAR
ESL = ELECTRICITY SURFACE LEVEL
FHY = FIRE HYDRANT
SSL = SEWER SURFACE LEVEL
SWSL = STORMWATER SURFACE LEVEL
TPT = TELSTRA PIT
TSL = TELSTRA SURFACE LEVEL
USL = UNKNOWN SERVICE SURFACE LEVEL
WH = WATER METER
WSL = WATER SURFACE LEVEL

LEGEND:

EOT = END OF TRACE
FH = FIRE
FOD = FULL OF DEBRIS
GPR = GROUND PENETRATING RADAR
HPG = HIGH PRESSURE GAS
NO SIG = NO SIGNAL
REDUN = REDUNDANT
UTO = UNABLE TO OPEN
UTL = UNABLE TO LIFT
UTT = UNABLE TO TRACE

CODE	DEPTH	PIPE	DIAMETER	PIPE	
RL	QUALITY	LOCATION	NOTE		
109.78	SSL	1.31	Ø	Ø100	EOT

SUBSURFACE UTILITY INFORMATION

DL-0 IS THE LOWEST OF THE FOUR QUALITY LEVELS STIPULATED IN ASS488. IT IS AN INDICATIVE POSITION COMPILED FROM EXISTING RECORDS, CROSSLY SITE INSPECTION AND/OR VISUAL EVIDENCE.

DL-1 IS THE NEXT LEVEL UP FROM DL-0. ASS488 STATES THAT DL-1 IS A SURFACE FEATURE CORRELATION OR AN INTERPRETATION OF THE APPROXIMATE LOCATIONS AND ATTRIBUTES OF A SURFACE FEATURE USING A COMBINATION OF EXISTING RECORDS (ANECDOITAL EVIDENCE) SOME BROOM TECHNIQUES AND A SITE SURVEY OF VISIBLE EVIDENCE.

DL-2 ELECTRONICALLY TRACED AS PER ASS488 DIRECT CONNECTION, INDUCTION, FLEXITRACE/SOONIE, FLEXIBOOST/SOONIE WITH AN ESTIMATED POSITIONAL TOLERANCE OF +/-500MM IN PLAN, +/-500MM IN DEPTH (HIGH CONFIDENCE LEVEL).

DL-3 IS THE HIGHEST QUALITY LEVEL AS PER ASS488 AND CONSISTS OF THE POSITIVE IDENTIFICATION OF THE ATTRIBUTE AND LOCATION OF A SUBSURFACE UTILITY AT A POINT TO AN ABSOLUTE SPATIAL POSITION IN THREE DIMENSIONS. THIS CAN BE ACHIEVED AT OPENED PITS AND THE POTHOLE WHERE THE UTILITY IS EXPOSED.

DL-4 ELECTRONICALLY LOCATED WITH GROUND PENETRATING RADAR OR OTHER ELECTRONIC LOCATING TECHNIQUES NOT COMPLIANT WITH ASS488 ESTIMATED POSITIONAL TOLERANCE IS +/-500MM IN PLAN, +/-500MM IN DEPTH (HIGH CONFIDENCE LEVEL).

DL-5 ELECTRONICALLY LOCATED BUT WITH REDUCED CONFIDENCE IN PLAN POSITION/DEPTH (MEDIUM CONFIDENCE LEVEL).

DL-6 ELECTRONICALLY LOCATED WITH LOW CONFIDENCE LEVEL IN PLAN POSITION/DEPTH (LOW CONFIDENCE LEVEL).

TITLE INDICATES THAT LOT 7 IN D.P.260157 IS SUBJECT TO:

- RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
- K20000P CAVIAT BY THE REGISTRAR GENERAL FORBIDDING UNAUTHORISED DEALINGS WITH PUBLIC RESERVES.
- M80030W RIGHT OF CARRIAGEWAY APPURTENANT TO THE PART(S) OF THE LAND SHOWN SO BENEFITTED IN THE TITLE DIAGRAM AFFECTING THE PART OF LOT 63 IN DP30488 (REMOTE TO SITE NOT INVESTIGATED).
- DP24776 EASEMENT TO DRAIN WATER AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM (REMOTE TO WORKS NOT INVESTIGATED)
- LAND EXCLUDES MINERALS RESERVED BY CROWN GRANT OF 7192 M2

TITLE INDICATES THAT LOT 121 IN D.P.789400 IS SUBJECT TO:

- RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
- LAND EXCLUDES MINERALS OF THE PART DESIGNATED (A) IN THE TITLE DIAGRAM
- AF70795 THE LAND ABOVE DESCRIBED IS USED AS A RETIREMENT VILLAGE UNDER THE RETIREMENT VILLAGES ACT 1999 KNOWN AS AVEE BAYVIEW GARDENS RETIREMENT VILLAGE
- AT73764W RETIREMENT VILLAGE NOW KNOWN AS BAYVIEW GARDENS RETIREMENT LIVING WITH PLAN ANNEXED SHOWING UNITS 1 TO 328
- 718786 MEMORANDUM WITH PLAN ANNEXED SHOWING UNITS 1 TO 328
- AC280233 MEMORANDUM WITH PLAN ANNEXED SHOWING UNITS 1-41, 43-64, 66-82, 82A, 83-82, 85-85A, 85-82, 201, 203, 205-207, 209-216, 218, 220-223, 225-232, 234, 237-245, 247, 249, 251-326, GARAGES G1-G38, CARPORTS C1-C39, C41-C46, C49-C10, C11A, C11B, C12, C13, C15-C15S & C167-C165
- AE39781 MEMORANDUM WITH PLAN ANNEXED SHOWING VARIOUS LEASE PREMISES, FOR DETAILS SEE MEMORANDUM AE39781
- AR85553 MEMORANDUM WITH PLAN ANNEXED SHOWING UNITS 1-41, 43-50, 52-56, 58-82, 82A, 83-82, 85-85A, 85-82, 251-358, SERVICED APARTMENTS 201, 203, 205-207, 209-216, 218, 220-223, 225-232, 234, 235, 237-245, 247, 249, CAR SPACE 17, CARPORTS 59, 100, 109, GARAGES 18 AND 78
- M80030W RIGHT OF CARRIAGEWAY 6.95 METRES WIDE APPURTENANT TO THE PART(S) OF THE LAND SHOWN SO BENEFITTED IN THE TITLE DIAGRAM (REMOTE TO AREA OF SURVEY)
- DP24776 RESTRICTIONS ON THE USE OF LAND AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM.
- BR 1948 NO 589 VARIATION S21602 VARIATION (NOT INVESTIGATED)
- DP24776 EASEMENT TO DRAIN WATER AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM (REMOTE TO AREA OF SURVEY)
- DP24776 EASEMENT FOR SUPPORT AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM (REMOTE TO AREA OF SURVEY)
- NP9955 COVENANT AFFECTING THE PART SHOWN SO BURDENED IN THE TITLE DIAGRAM (NOT INVESTIGATED)
- NP9955 COVENANT AFFECTING THE PART SHOWN SO BURDENED IN THE TITLE DIAGRAM (NOT INVESTIGATED)
- NP9955 COVENANT AFFECTING THE PART SHOWN SO BURDENED IN THE TITLE DIAGRAM (NOT INVESTIGATED)
- NP9957 COVENANT AFFECTING THE PART SHOWN SO BURDENED IN THE TITLE DIAGRAM (NOT INVESTIGATED)
- DP24776 EASEMENT TO DRAIN WATER 3.05 METRES WIDE AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM (REMOTE TO AREA OF SURVEY)
- DP26046 EASEMENT TO DRAIN WATER 3.05 METRES WIDE AND VARIABLE AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM (REMOTE TO AREA OF SURVEY)
- DP26046 DRAINAGE EASEMENT 1.5 METRES WIDE AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM (REMOTE TO AREA OF SURVEY)
- DP26046 RESTRICTIONS ON THE USE OF LAND AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM (NOT INVESTIGATED)
- DP26046 EASEMENT TO DRAIN WATER AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM (REMOTE TO AREA OF SURVEY)
- DP26046 EASEMENT FOR ELECTRICITY AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM
- DP26046 EASEMENT FOR DRAINAGE AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM
- DP26046 DRAINAGE EASEMENT APPURTENANT TO THE PART(S) OF THE LAND SHOWN SO BENEFITTED IN THE TITLE DIAGRAM (REMOTE TO AREA OF SURVEY)
- DP26046 RESTRICTIONS ON THE USE OF LAND AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM (NOT INVESTIGATED)
- DP26046 EASEMENT TO DRAIN WATER AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM (REMOTE TO AREA OF SURVEY)
- DP26046 EASEMENT FOR ELECTRICITY AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM (REMOTE TO AREA OF SURVEY)
- DP26046 RESTRICTIONS ON THE USE OF LAND AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM (NOT INVESTIGATED)
- AC78620 POSITIVE COVENANT (NOT INVESTIGATED)

NOTES:

- A BASIC BOUNDARY SURVEY HAS BEEN UNDERTAKEN SUITABLE FOR COUNCIL DA SUBMISSION (TITLE DIMENSIONING ONLY) - BOUNDARY DEFINITION IS SUBJECT TO FURTHER SURVEY.
- IF CONSTRUCTION ON OR NEAR BOUNDARIES IS REQUIRED IT IS RECOMMENDED THAT THE BOUNDARIES OF THE LAND BE MARKED.
- THE SURVEY IS FOR DESIGN PURPOSES OF THE SUBJECT LAND ONLY. THIS PLAN MUST NOT BE USED FOR ANY OTHER MATTER, PURPOSE OR CONSTRUCTION SETOUT.
- TREE SIZES ARE ESTIMATES ONLY.
- THIS PLAN HAS BEEN PREPARED FOR THE EXCLUSIVE USE OF OPAL HEALTHCARE
- RELATIONSHIP OF IMPROVEMENTS TO BOUNDARIES IS DIAGRAMMATIC ONLY. WHERE OBJECTS ARE CRITICAL, THEY SHOULD BE CONFIRMED BY FURTHER SURVEY.
- EXCEPT WHERE SHOWN BY DIMENSION LOCATION OF DETAIL WITH RESPECT TO BOUNDARIES IS INDICATIVE ONLY.
- SEWER MAIN PLOTTED FROM SYDNEY WATER SEWER DIAGRAM. LOCATION SHOULD BE MARKED ON SITE IF CRITICAL.
- CRITICAL SPOT LEVELS SHOULD BE CONFIRMED WITH SURVEYOR.
- CONTOURS SHOWN DEPICT THE TOPOGRAPHY. THEY DO NOT REPRESENT THE SPOT LEVEL AT ANY PARTICULAR POINT. ONLY SPOT LEVELS SHOULD BE USED FOR CALCULATIONS OF QUANTITIES WITH CAUTION.
- CONTOUR INTERVAL - 0.5 METRE - SPOT LEVELS SHOULD BE ADOPTED.
- POSITION OF ROUGE LINES ARE DIAGRAMMATIC ONLY (NOT TO SCALE)
- THE INFORMATION IS ONLY TO BE USED AT A SCALE ACCURACY OF 1:500
- DO NOT SCALE OFF THIS PLAN. FIGURED DIMENSIONS TO BE TAKEN IN PREFERENCE TO ALL DIMENSIONS.
- COPYRIGHT © CMS SURVEYORS 2024.
- NO PART OF THIS SURVEY MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM OR TRANSMITTED IN ANY FORM, WITHOUT THE WRITTEN PERMISSION OF THE COPYRIGHT OWNER EXCEPT AS PERMITTED BY THE COPYRIGHT ACT 1968.
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- THIS NOTE MUST NOT BE ERASED.

LEGEND:

AC = AIR CONDITIONER
BL = BALCONY
BIT = BITUMEN
BB = BOTTOM OF BANK
BS = BOTTOM OF STEP
BW = BOTTOM WALL
BLD = EXTERNAL BUILDING
CL = CENTERLINE
CH = CHIMNEY
COL = COLUMN
COM = COMMUNICATIONS PIT
CON = CONCRETE
DD = DISH DRAIN
DS = DOOR SILL LEVEL
DRN = DRAIN
EPL = ELECTRICITY PILLAR
FCE = FENCE
FL = FLOOR LEVEL
GDN = GARDEN
GRT = GRATE
GF = GUTTER LEVEL
HYD = HYDRANT
HW = HEADWALL
IL = INVERT LEVEL
LP = LIGHT POLE
LM = LINE MARKING
LIN = LINTEL
LID = MISCELLANEOUS PIT LID
NS = NATURAL SURFACE
PAT = PATIO
PAV = PAVING
PIT = TOP OF PIT
POST = POST POLE
PP = POWER POLE
RF = TOP OF ROOF
RR = ROOF RIDGE
SIP = SEWER INSPECTION PIT
SMH = SEWER MAN HOLE
SMHS = SEWER MAN HOLE SQUARE
SVE = SEWER VENT
SGN = SIGN
STR = STAIRS
SSM = STATE SURVEY MARK
STN = SURVEY STATION
SVL = STOP VALVE
TP = TAP
TIL = TILE
TB = TOP OF BANK
TG = TOP OF GUTTER
TKB = TOP OF KERB
TS = TOP STEPS
TW = TOP WALL
TR = TREE
TRL = TREE LINE
VC = VEHICLE CROSSING
WP = WATER PIT
WV = WATER VALVE
WU = WATER UNDERGROUND

TREE
● TRUNK DIAMETER
○ HEIGHT
○ SPREAD DIAMETER
OR
○ TREE
○ SPREAD, HEIGHT, DIAMETER

7	EXTRA DETAIL ADDED	20/09/24
6	PARTIAL DETAIL UPDATE	01/05/24
5	ADD MORE UNDERGROUND SERVICES	18/12/23
4	ADD FLOOR & CEILING LEVELS	30/11/23
3	ADD DOORS/ WINDOWS & UNDERGROUND SERVICES	17/11/23
2	EXTRA DETAIL STAGE 2	16/03/17
1	FIRST ISSUE	21/12/16



HORIZONTAL DATUM:
COORDINATE SYSTEM: MGA 2020 (GROUND)
MARKS ADOPTED: SSM 24846 & PM 46388

VERTICAL DATUM:
DATUM: AUSTRALIAN HEIGHT DATUM (AHD)
S.M. ADOPTED: SSM 24846
R.L. 1.925 (ORDER LB)
SOURCE: S.C.I.M.S. (27/10/23)

CLIENT:
BOKOR ARCHITECTURE + INTERIORS

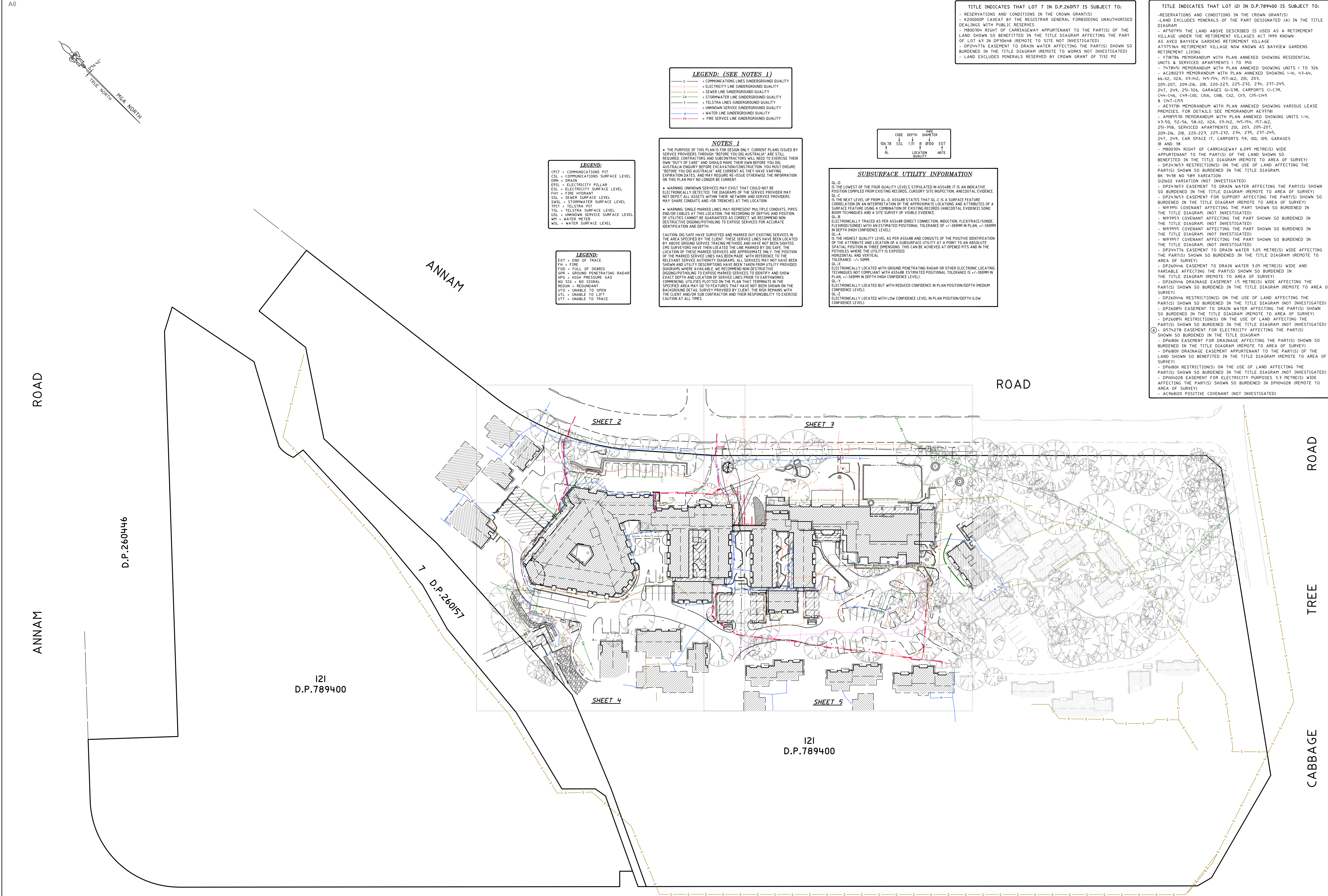
LGA: NORTHERN BEACHES

**SURVEY PLAN SHOWING
DETAIL & LEVELS
OVER PART OF LOT 121 IN DP789400
& PART LOT 6 IN DP260157
No.36-42 CABBAGE TREE ROAD,
BAYVIEW, NSW, 2104**

CMS SURVEYORS PTY LTD
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PO Box 463 Dee Why, NSW, 2090
290A South Creek Road, Dee Why, NSW, 2099
(02) 9971 4802
info@cmsurveyors.com.au
www.cmsurveyors.com.au

SURVEYED	DRAWN	CHECKED	APPROVED
TOCH	GPYC	TC	DR/LJM
SURVEY INSTRUCTION	SCALE	DATE OF SURVEY	
15880E	1:500@A0	1-17/11/23, 29/04/24, 07/09/24	
DRAWING NAME	15880Edetail	SHEET	ISSUE
CAD FILE	15880Edetail 7.dwg	1 OF 5	7

Note:
THE INTEGRITY OF ALL EXISTING SURVEY INFORMATION IN THIS PLAN THAT IS SHOWN HEREIN AS GREY SCALE COLOUR HAS NOT BEEN SURVEYED OR INVESTIGATED BY CMS SURVEYORS PTY LIMITED AS PART OF THIS SURVEY.



ROAD
ANNAM

ROAD
CABBAGE TREE

D.P.260157

121
D.P.789400

121
D.P.789400

ROAD

ANNAM

3.0 Road Network and Traffic Conditions

3.1 Road Network

The road network serving the site (Figure 3) comprises:

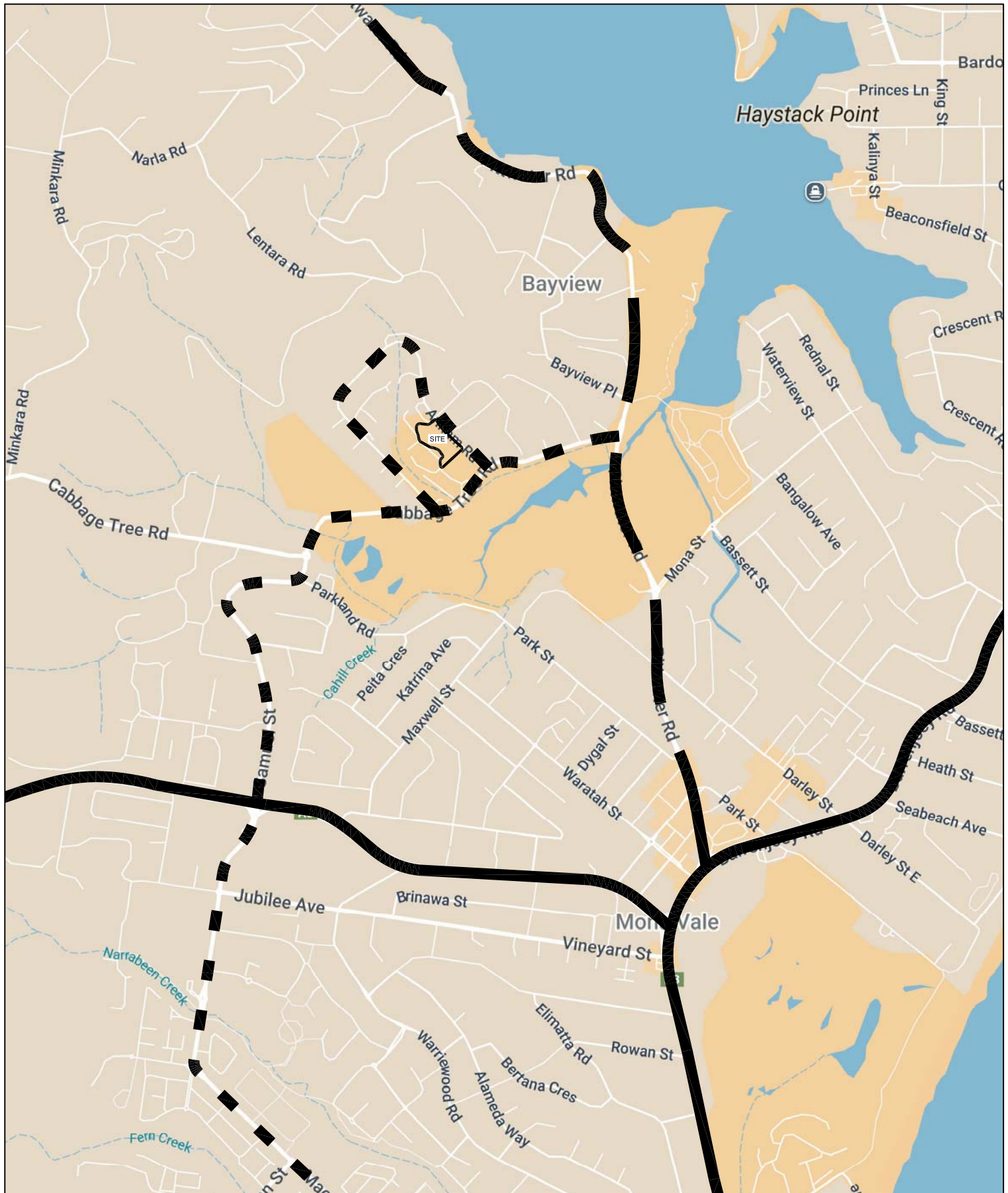
- ❖ *Pittwater Road / Barrenjoey Road* – a State Road and Arterial Route providing a north / south link between Mona Vale and the Spit Bridge
- ❖ *Pittwater Road north of Mona Vale* – a sub-arterial route providing a link between Mona Vale and Church Point
- ❖ *Mona Vale Road* – a State Road and arterial route which provides an east/ west connection between Mona Vale and the Pacific Highway at Gordon
- ❖ *Cabbage Tree Road / Samuel Street* – a collector route linking between Pittwater Road and Mona Vale Road
- ❖ *Annam Road* – a local road crescent connecting to Cabbage Tree Road (the site only has an access and frontage to Annam Road)

Cabbage Tree Road and Annam Road in the vicinity of the site have 1 traffic lane in each direction and are relatively straight and level.




3.2 Traffic Controls

The existing traffic controls in the vicinity of the site (Figure 4) comprise:

- ❖ the roundabout at the intersection of Cabbage Tree Road and Samuel Street
- ❖ the traffic signals at the intersection of Mona Vale Road, Samuel Street and Ponderosa Parade
- ❖ the 50 kmph speed restriction on Cabbage Tree Road and raised threshold with a section of central median island adjacent to the northern Annam Road intersection



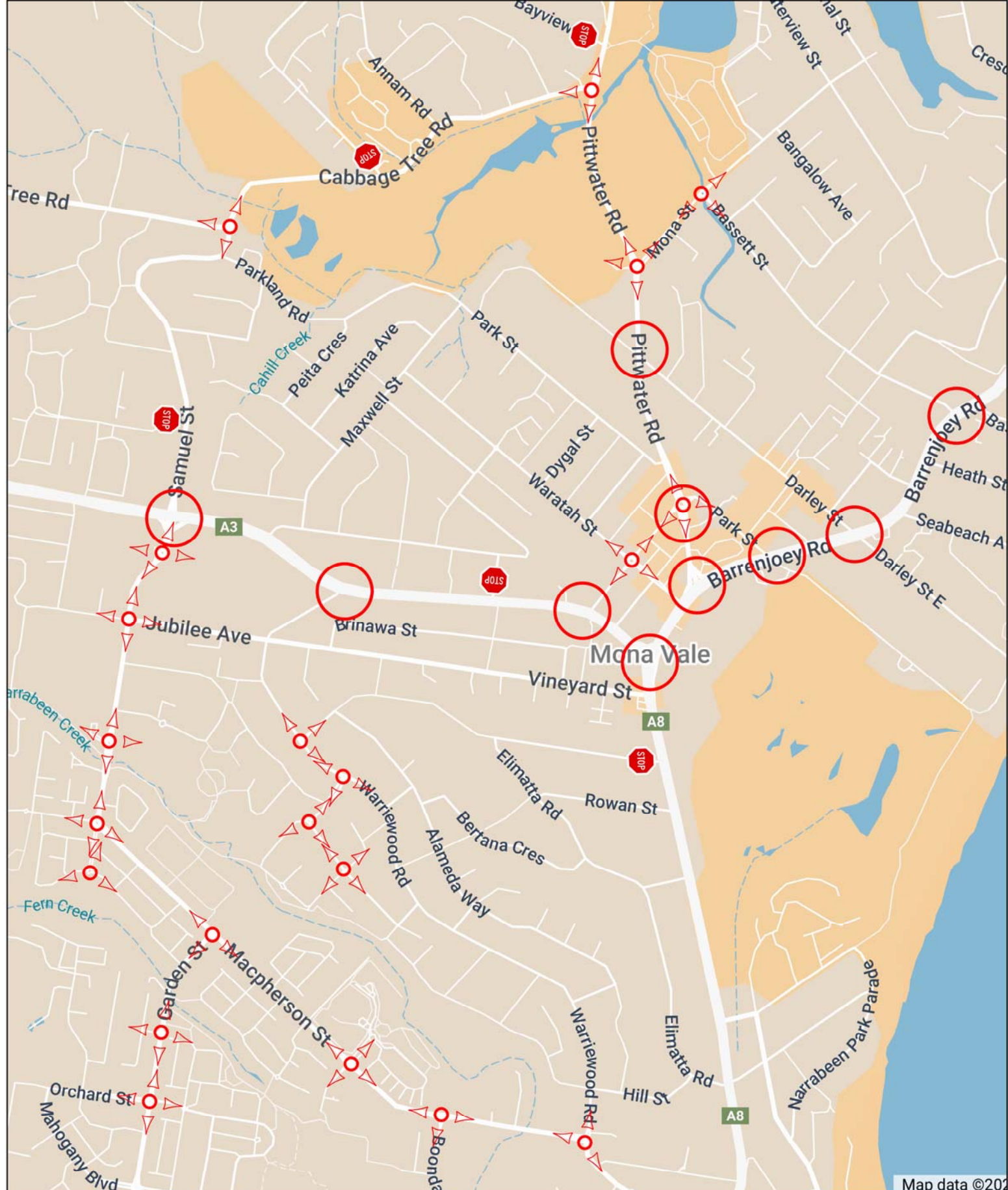
LEGEND

-  ARTERIAL
-  SUB-ARTERIAL
-  COLLECTOR






ROAD NETWORK

FIG 3



Map data ©2021

LEGEND

-  TRAFFIC SIGNAL CONTROL
-  ROUNDABOUT
-  RESTRICTED TURNING MOVEMENT



TRAFFIC CONTROLS

FIG 4

- ❖ the traffic control signals at the intersections of:
 - Pittwater Road and Barrenjoey Road
 - Mona Vale Road and Pittwater Road
- ❖ the STOP sign control in Cabbage Tree Road at Pittwater Road
- ❖ the 60 kmph speed restriction in both Pittwater Road and Darley Street East
- ❖ the Bus Zones along the Cabbage Tree Road route

3.3 Traffic Conditions

An indication of the prevailing traffic conditions in the vicinity of the site is provided by recent surveys carried out as part of this study. The results of these surveys at the eastern Cabbage Tree Road/Annam Road intersection are provided in Appendix B and summarised in the following:

	AM Peak	PM Peak
Cabbage Tree Road		
Eastbound	279	305
Left turn	9	15
Westbound	336	344
Right Turn	18	29
Annam Road		
Right Turn	21	11
Left Turn	31	22

The results of SIDRA traffic modelling for the intersection are provided in Appendix C and summarised in the following while the SIDRA criteria is reproduced overleaf:

	AM	PM
LOS	A	A
AVD	12.8	12.0

Criteria for Interpreting Results of SIDRA Analysis

1. Level of Service (LOS)

LOS	Traffic Signals and Roundabouts	Give Way and Stop Signs
'A'	Good	Good
'B'	Good with acceptable delays and spare capacity	Acceptable delays and spare capacity
'C'	Satisfactory	Satisfactory but accident study required
'D'	Operating near capacity	Near capacity and Accident Study required
'E'	At capacity; at signals incidents will cause excessive delays. Roundabouts require other control mode	At capacity and requires other control mode
'F'	Unsatisfactory and requires additional capacity	Unsatisfactory and requires other control mode

2. Average Vehicle Delay (AVD)

The AVD provides a measure of the operational performance of an intersection as indicated on the table below, which relates AVD to LOS. The AVD's listed in the table should be taken as a guide only as longer delays could be tolerated in some locations (ie inner city conditions) and on some roads (ie minor side street intersecting with a major arterial route).

Level of Service	Average Delay per Vehicle (secs/veh)	Traffic Signals, Roundabouts	Give Way and Stop Signs
A	Less than 14	Good operation	Good operation
B	15 to 28	Good with acceptable delays and spare capacity	Acceptable delays and spare capacity
C	29 to 42	Satisfactory	Satisfactory but accident study required
D	43 to 56	Operating near capacity	Near capacity and accident study required
E	57 to 70	At capacity; at signals incidents will cause excessive delays. Roundabouts require other control mode	At capacity and requires other control mode

3. Degree of Saturation (DS)

The DS is another measure of the operational performance of individual intersections.

For intersections controlled by **traffic signals** both queue length and delay increase rapidly as DS approaches 1, and it is usual to attempt to keep DS to less than 0.9. Values of DS in the order of 0.7 generally represent satisfactory intersection operation. When DS exceeds 0.9 queues can be anticipated.

For intersections controlled by a **roundabout or GIVE WAY or STOP signs**, satisfactory intersection operation is indicated by a DS of 0.8 or less.

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It is apparent that traffic conditions at this intersection are quite satisfactory and there are no unsatisfactory delays or conflict circumstances.

Traffic conditions in the area are also generally quite satisfactory and access movements in particular are assisted by the traffic signals at the Mona Vale Road/Samuel Street/Ponderosa Parade and the roundabout at the Pittwater Road/Cabbage Tree Road intersections.

3.4 Transport Services

The Route 155 bus service operates between the Bayview Garden Village running along Cabbage Tree Road, connecting through Narrabeen to Frenchs Forest with links to other bus services providing connections to Manly, Chatswood, North Sydney, the City and the Metropolitan Transport System (see details overleaf).

The Route 155 service stops in Annam Road at the BGV site frontage.

4.0 Parking

An indication of the appropriate parking provision for the proposed development is provided by the SEPP Guidelines as follows:

SEPP Housing (Residential Care Facilities)

1 space per 15 beds

1 space per 2 staff

1 space for ambulance

Application of this criteria to the proposed development would indicate the following provision:

177 beds	12 visitor spaces
66 staff	33 staff spaces
Total:	45 spaces plus ambulance

It is proposed to provide a total of 56 parking spaces including 5 accessible spaces in compliance with AS2890.6 plus provision for an ambulance in compliance with the SEPP requirements. It is also proposed to provide 4 bicycle parking spaces.

The GFA of the Aveo Community centre is not affected by the alterations and additions, therefore there are no changes to the parking requirement and traffic generation.

An ambulance bay is provided and the Opal courtesy mini bus will set down/pick up in the porte cochere while parking for the mini bus will be provided in the loading dock area.

5.0 Traffic and Transport

5.1 Traffic

The TfNSW Guide to Transport Impact Assessment (2024) specifies a traffic generation rate for Housing for seniors as follows:

Site Peak	PM Peak
0.30 vtpH	0.17 vtpH

Application of these rates to the existing development of 112 beds indicates the following:

Site Peak	PM Peak
33.6 vtpH	19.0 vtpH

Application of these rates to the proposed development of 177 beds would indicate the following:

Site Peak	PM Peak
53.1 vtpH	30.1 vtpH

This indicates that the proposed development will have an increase of 19.5 vtpH in the site peak hour and 11.1vtpH in the PM peak hour. This traffic generation is equivalent to an additional vehicle movement every 3 minutes (Not a traffic generating development as stated in the T&I SEPP Section 2.122, Schedule 3) during the peak periods, which in the scheme of the surround road network is negligible and will not cause any concern for queuing or delays at the surround intersections.

Furthermore, the Cabbage Tree Road/Annam Road intersection operates quite satisfactorily at the present time, and it is apparent therefore that the proposed development will not have any adverse traffic implications on the surrounding road network particularly when regard is given to the former RACF and assisted living uses on the site.

5.2 Transport

The Route 155 bus services operates along Cabbage Tree Road with bus stops located within easy walking distance of the site on Annam Road. Opal will also provide a mini bus service for residents and staff and this service will be more flexible than a standard on-route service in regard to time, frequency and destination.

6.0 Access, Internal Circulation and Servicing

Access

Vehicle access will involve 2 combined ingress/egress driveways on Annam Road towards the centre of the frontage. The design of these driveways complies with the requirements of AS2890.1 & 2 with good sight distances also complying with the AS 2890.1 design criteria.

Internal Circulation

The design of the car park areas complies with the requirements of AS2890.1 & 6 and there will be satisfactory provision for access, manoeuvring and turning. Details of the turning path assessment for the parking area and porte cochere are provided in Appendix D.

Servicing

Opal has a range of vehicles involved in delivery, refuse collection etc and details of these indicating that the longest vehicle is 9.8m are provided overleaf.

Deliveries and refuse removal will be undertaken using the proposed basement loading bay while small service vehicles (service personnel, cleaners etc.) will also be able to use the visitor parking spaces.

Details of turning path assessment for vehicles accessing the loading bay are provided in Appendix D indicating satisfactory provision for turning and manoeuvring of the largest vehicle.

DELIVERIES					
Delivery Type	Frequency	Delivery Hrs	Vehicle Type	Vehicle size	Delivery hrs Flexible
Bread	Daily	3am -5am	Small 2 tonne van	Estimated 3.1m l x 1.3m w 2.2m height clearance	No. See comment below
Fresh Fruit & Vegetables	3 days a week	Within standard business hrs	Small 2 tonne van	Estimated 3.1m l x 1.3m w 2.2m height clearance	Yes
Fresh Meat	3 days a week	Within standard business hrs	Small 3 tonne van	Estimated 3.1m l x 1.3m w 2.2m height clearance	Yes
BID food (dry store goods etc.)	2 days a week	Within standard business hrs	3 tonne truck	Estimated 3.7m l x 2.4m w 3.2m height clearance	Yes
Medical Consumables	Twice a month	Within standard business hrs	8-10 palette truck	Estimated 7.3m long x 3.5m h (8 palette) 8.5m l x 3.7m h (10 palette) Note: additional 20mm minimum allowance needed for height clearance of empty vehicle	Yes
Bunzl Consumables (toilet paper, continence aids etc.)	Twice a month	Within standard business hrs	8-12 palette truck	Estimated 7.3m long x 3.5m h (8 palette) 8.5m l x 3.7m h (10 palette) 9.7m l x 3.9m h (12 palette) Note: additional 20mm minimum allowance needed for overall clearance of empty vehicle	Yes
WASTE PICK UP – Standard Opal 144 bed home					
Pick Up Type	Frequency	Pick Up Hrs	Vehicle Type		Pick Up hrs Flexible
General Waste	2 to 3 times a week	Early morning. Within standard business hrs may be negotiable	Rear lift truck	9.8m l x 3.4m h (working & travelling height) 18m diameter turning circle	Somewhat flexible depending on location
Cardboard	Once a week	Early morning.	Rear lift truck	9.8m l x 3.4m h (working & travelling height)	Somewhat flexible depending on location

		Within standard business hrs may be negotiable		18m diameter turning circle	
Medical	Once a fortnight	Early morning. Within standard business hrs may be negotiable	Rear lift truck	9.8m l x 3.4m h (working & travelling height) 18m diameter turning circle	Somewhat flexible depending on location
GREASE TRAP PUMP OUT					
Pick-up type	Frequency	Pump out Time	Vehicle Type	Vehicle Size	Notes
Grease trap pump out	Once every 12 weeks	Up to 1hr	Truck – small 2200 Litres	5.2m l x 2.2m w x 2.0m h (minimum clearance 2.2m)	General Opal grease trap capacity approx. 2100 litres
Grease trap pump out	Once every 12 weeks	Up to 1hr	Truck – large	9.0m l x 4.0m h. 25m diameter turning circle	
RESIDENT BUS					
Storage Location	Frequency of use	Access areas	Vehicle Type	Vehicle Size	Notes
Dedicated undercover car bay	Various. Permanent access to bus required	Access required under porte cochere for undercover pickup if not other undercover option is available	Mini bus	7.0m l x 2.0m w x 2.9m h 15.3m diameter turning circle 3.55 tonne	Confirm details with Opal for each facility
AMBULANCE					
Type	Notes on type	Turning Circle	Clearance height under canopy	Vehicle size	Notes
Standard Ambulance	Sizes noted reflect the maximum figures across all varieties	15.3 m turning circle diameter	3.8m	6.5m l x 2.4m w x 3.2m h awning clearance 5.2 m length clearance required to rear of vehicle for loading / unloading	Height includes roof mounted aerial Width includes external mirrors
Bariatric Ambulance	Sizes noted reflect the maximum figures across bariatric & bariatric specialist varieties	15.6 m turning circle diameter	3.8m	7.3m l x 2.6m w x 3.2m h awning clearance 5.2 m length clearance required to rear of vehicle for loading / unloading	Height includes roof mounted aerial Width includes external mirrors

Bread

- The only delivery that must be outside of standard business hrs is daily bread delivery.
- Even if the DA conditions technically don't allow early morning deliveries, all bakers bake overnight and deliver by around 5am. So this is not flexible.
- In those cases vehicles can deliver from the street to avoid pulling into delivery bays that may have closer proximity to neighbouring properties
- Bread deliveries use small vans, not trucks, so pose no additional noise than a standard vehicle

Waste

- Usually early morning, but we can negotiate restricted hrs between 8:30am and 5pm depending on location. Remote areas are likely to be less flexible as they may pick up multiple venues in one route over a greater distance.
- General waste Frequency is flexible depending on the truck size. Preferred maximum is 3 times weekly

7.0 Travel Demand Management

7.1 Introduction

Transport is a necessary part of life which has effects that can be managed. There is a current major focus on improving transport services as well as cycling facilities and provisions for pedestrians. As well as delivering better environmental outcomes, providing a range of travel choices with a focus on walking, cycling and public transport will have major public health benefits.

Travel Demand Management will ensure that the transport infrastructure and services are utilised to the fullest extent to achieve a sustainable outcome.

Travel Demand Management (TDM) is a package of measures aimed at promoting and encouraging sustainable travel and reducing reliance on private cars. It will make apparent, encourage, and support staff/visitors to travel in a more sustainable way. TDM can provide both:

- ❖ measures which encourage reduced car use
- ❖ measures which encourage or support sustainable travel, reduce the need to travel or make travelling more efficient.

“Active transport” includes travel by foot, bicycle, and other non-motorised vehicles. Use of public transport is also included in the definition as it often involves some walking or cycling to pick up to and from drop-off points.

7.2 Objectives

The aim of TDM is to bring about better transport arrangements for the staff, residents, patients, and visitors for the life of the development. The key objectives of TDM are to encourage:

- ❖ reduce the proportion of single-occupant car travel by staff, residents, patients, and visitors to and from the site

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- ❖ increase the mode share of public transport, walking and cycling (active transport)
- ❖ where a private vehicle is to be used, encourage more efficient use. Such smarter travel use can include not travelling by single-occupancy cars in peak hours, not using cars for short-distance trips when alternative public transport is available.

The introduction of TDM will:

- ❖ advise the wider travel choices
- ❖ help identify transport means which will result in them being healthier, fitter and more productive
- ❖ provide equal opportunities by supporting those without access to a car
- ❖ aim to reduce congestion and provide easily identifiable transport means, improving relations with neighbours and enabling deliveries and essential journeys to move more freely

It is the objective TDM to encourage sustainable transport means which could result in the following benefits:

- ❖ higher mode share targets
- ❖ greenhouse gas emission reductions and carbon footprint minimisation
- ❖ healthy living (those working, living, being treated and visiting the Site)
- ❖ social equity and reduction in social exclusion
- ❖ improve knowledge and contributes to learning

7.3 Considerations

The location of the site, in terms of its proximity to sustainable transport, is an important consideration for the development to capitalise upon and to enhance these links. TDM will put in place measures to influence the travel patterns of those people visiting, residing or working on the site with a view to encouraging a modal shift away from cars. The measures provided in TDM and their success can inform the travel plans for subsequent developments within the Precinct.

7.4 Approach to Travel Planning

A multitude of research and past experiences have consistently confirmed the 3 fundamental aspects that are key to travel mode behavioural change:

- ❖ Cost
- ❖ Comfort
- ❖ Convenience

Consideration should be given to the following initiatives, which are intended to equip the building complexes with improved green travel options in order to achieve the objectives of TDM.

7.5 Sustainable Travel Initiatives

Provide an incentive for carpooling

Due to the site's locality and nature, it is expected that the staff associated with the proposed development will be largely reliant on cars. As such, it is recommended that a proportion of the on-site car parking spaces nearest to the main entry be allocated towards staff participating a carpooling scheme.

A carpooling scheme is most effective when promoted and implemented in conjunction with the realisation of cost savings for participants.

Based on such measures, the initiative will cultivate a habit amongst participants and aids the longevity of the scheme.

A common downfall of a carpool initiative is the lack of confidence in the availability of a ride home. Thus, the effectiveness of a scheme of this nature, when not actively managed, diminishes rapidly.

Common strategies to overcome this involve capitalising on advanced data mining capabilities, which make possible supplementary initiatives such as the following to reinforce the effectiveness and longevity of carpooling:

- Setup of an online database which is accessed via the organisation's website/application
- Guaranteed ride-home or paid taxi/rideshare fare home

The effective implementation of carpool schemes will be reliant on adequate enforcement and monitoring by the coordinator via CCTV and in-person audit.

Provide an incentive for using public transport

The site currently has convenient access to bus Route 155 with a bus stop in Annam Road at the site frontage. The carpooling arrangement, as described in the preceding section, could complement the uptake of bus travel, i.e., colleagues picking up/setting down one another at the bus stop prior to going to work/home.

Generally, the uptake of public transport services can be achieved through a series of improvements which are geared towards raising the convenience and comfort levels of active transport options while raising the costs of driving.

The Transport Access Guide (TAG) (as provided in Attachment 1) provides useful schematic information on the best way to commute to/from the site. The TAG will be published on Opal's website and made available to the staff & visitors to raise awareness of alternative transport modes.

It is recommended that Opal periodically update the website to ensure that information remains current.

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A notice board with maps can be provided in common areas to inform users of the public transport routes and departure times and estimated walking times to the closest bus stops and weather conditions.

Increase walking and cycling to work

Common and effective measures such as a Ride to Work Day can raise awareness amongst staff. Likewise, initiatives such as a pedometer-based walking program coupled with Walk/Bicycle Buddy Scheme prove to be highly effective amongst staff. Initiatives suggested above help promote an intangible social benefit of forming a neighbourhood network amongst staff. In addition, staff cyclists will have access to showers, change rooms and lockers to encourage cycling.

Convenience of Information

New pamphlets and leaflets detailing the above green travel initiatives incorporating the TAG can be distributed to staff via email on a quarterly basis to capture any updates to the available facilities or services. Staff and visitors can be provided with an induction package which incorporates the TAG while ongoing initiatives may be circulated in the form of email newsletters.

Events and Challenges

The implementation of events and challenges throughout the year incentivise sustainable travel practices in a fun and engaging way. These events and challenges may include car free days, step challenges and points challenges. Such events and challenges foster a sense of community founded on a sustainable transport culture.

7.6 Implementation Plan

This section sets out the actions and associated timeframes to support the initiatives detailed in the foregoing:

General & Communications Actions

Action	Timeline	Responsibility
<p>Promotion including:</p> <ul style="list-style-type: none"> • Display boards in prominent locations to show public transport maps • An events calendar – 3-4 events per year. Best in conjunction with state-wide events such as Ride to Work/ Day, World Environment Day, National Walk to Work Day, etc. 	<p>Prior to occupation</p>	<p>Opal</p>
<p>A quarterly newsletter including;</p> <ul style="list-style-type: none"> • News, events and articles on the environment, health, and fitness • Remind staff that they don't always need to walk in the shoes they wear for work - these can be left at work and staff can come in trainers • Outline new initiatives and how staff can access them or get involved • Staff profiles – who is getting involved and reaping the rewards • Facts and figures from around Australia and overseas • Information regarding up-and-coming events • Information around the numerous health and financial benefits of participating in more sustainable transport options. Including better work life balance, reduced transport costs, reduced sick days due to ill health and improved workplace culture and morale. 	<p>4 times a year</p>	<p>Opal</p>

Walking

Action	Timeline	Responsibility
Produce a map for staff and visitors showing safe walking routes to and from the site with times and distances, to surrounding local facilities (i.e., shops, bus stops)	Prior to occupation, quarterly on the newsletter	Opal
Have some Walk to Work days encouraging staff to come by alternative means.	Quarterly	Opal

End of Trip Facilities

Action	Timeline	Responsibility
Provide 4 bicycle parking spaces for staff	Prior to occupation	Opal
Normal change/shower rooms and personal lockers will be available for staff	Prior to occupation	Opal

Public Transport

Action	Timeline	Responsibility
Develop a map showing public transport routes.	Circulated to all new staff prior to occupation	Opal
Put up a noticeboard with information and maps showing the main public transport routes to and from the Site.	Prior to occupation	Opal
Supply a free shuttle bus service accessing key transport nodes and town centres	Operating upon occupation	Opal

Car Pooling and Carshare

Action	Timeline	Responsibility
Allocate priority parking spaces for car-poolers. These spaces will be line marked to differentiate from general parking and will be monitored by onsite security.	Prior to occupation	Opal

Events and Challenges

Action	Timeline	Responsibility
Implementation of events and challenges throughout the year such as Ride to Work Day, World Environment Day, National Walk to Work-Day, car free days, step challenges and points challenges, etc.	Throughout the year	Opal

7.7 Other Site-Specific Measures

Opal is committed to encourage more sustainable travel use via the following initiatives:

- ❖ Appoint a Travel Plan Coordinator (TPC) to ensure the successful implementation and monitoring of the TDM. It is proposed that:
 - the TDM will be well supported by Opal senior management
 - a steering group / committee is created with relevant external and internal stakeholders such as employees, patients, and visitors to inform future targets with the ongoing monitoring and revision of the TDM five years post-occupancy.
 - implement a strategy for the TDM to ensure that sustainable mode share targets are met
- ❖ Create a site-specific TDM website and an introduction to TDM, setting out its purpose and objectives
- ❖ Provision of fully serviced end of trip facilities
- ❖ Provision of workplace toolkits, including puncture repair equipment and bicycle pumps and a bicycle repair station
- ❖ Provision of good quality, accurate and useful directional signages to promote walking and cycling is essential and it is proposed that this is provided by stating times to destination in minutes taken as well as distances in half kilometres. In addition, the signage will promote links to local services

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- ❖ Provide an access pack to all staff, residents and visitors, including the Transport Access Guide and information on sustainable travel facilities and initiatives. The welcome pack will not only include the TAG and tickets, which would give detailed information about how to travel to and from the site by means other than the car but also an information sheet explaining how to use the facilities/incentives provided
- ❖ The TAG is based upon facilities that will be initially available at the site and will need to be updated as the proposed infrastructure changes in the area take place
- ❖ Provide a walking and cycling map including estimates of time taken to local destinations
- ❖ Provision of newsletter or email with links to public transport travel information, Live NSW traffic and public transport conditions to ensure that travel information is always up to date
- ❖ Provide interactive timetables on-site to promote public transport usage
- ❖ Allow for access to umbrellas and ponchos in case of wet weather
- ❖ Provide public transport information boards to make staff/visitors more aware of the alternative transport options available. The format of such information boards would be based upon the travel access guide, although further investigations into the provision of real-time information systems will also be explored
- ❖ A half-yearly newsletter will also be provided to every staff for up to two years after occupation bringing the latest news on sustainable travel initiatives in the area.

These measures would form the framework of TDM and with this framework in place, the plan is to be managed as described in Section 7.

7.8 Management of the Plan

It is proposed that the TDM will be subject to ongoing monitoring to ensure that it is achieving the desired benefits or to modify it if required. It is not possible at this stage to

state what additional modifications might be made as this will be dependent upon the particular circumstances arising from time to time.

7.9 Monitoring

It will be important to monitor TDM to ensure that travel mode targets are met and the maximum benefits are gained.

A final TDM Coordinator for the development will be nominated by the management of Opal when occupation commences. This Coordinator will have responsibility for implementing the Travel Plan and its ongoing monitoring and review, including the delivery of actions and associated mode share targets.

Travel surveys will be undertaken, and the main focus of the surveys will be to establish the travel patterns, including the mode share of trips to and from the site. Travel surveys (See Attachment 2) would be conducted annually and when future transport upgrades have taken place. This information will also help inform TDM of subsequent changes and upgrades.

The Transport for NSW Open Data hub combined with traffic volume counts within the road network on-site can be utilised to help monitor and measure increases in staff switching from private vehicles to public transport and reductions in traffic volumes during peak hours.

It will be important to understand people's reasons for travelling the way they do, any barriers to changing their behaviour, and their propensity to change. This will enable the most effective initiatives to be identified, and conversely, less effective initiatives can be modified or replaced to ensure the best outcomes are achieved.

It will also be necessary to provide feedback to visitors/staff to ensure that they can see the benefits of sustainable transport.

There are several key elements to the development and implementation of a successful TDM. These include:

- **Communications** – Good communications are an essential part of the TDM. It will be necessary to explain the reason for adopting the plan, promote the benefits available and provide information about the alternatives to reliance on private car travel.
- **Commitment** – TDM involves changing established habits and providing the impetus for people in new developments to choose a travel mode other than private car use. To achieve co-operation, it is essential to promote positively the wider objectives and benefits of the plan. This commitment includes the provision of the necessary resources to implement the plan, beginning with the introduction of encouragement for changing travel modes upon occupation.
- **Consensus** – It will be necessary to obtain broad support for the introduction of the plan.

Once the plan has been adopted, it will be essential to maintain interest in the scheme and any new initiative in the plan will need to be publicised and marketed. Accordingly, it is proposed to produce a half-yearly leaflet for visitors/staff to inform them of sustainable travel initiatives.

7.10 Monitoring Milestones

Monitoring the plan will be an essential process in consolidating the travel patterns and publicising the positive outcomes of the plan.

It is therefore proposed that within 3 months of occupation of the new facilities, a travel survey will be conducted. The results of the travel survey will indicate the desirable travel mode outcome. In this way, the coordinator will be able to examine the success of the TDM and make appropriate recommendations.

7.11 Evaluation of Targets

It is therefore proposed that within 3 months of substantial occupation, a travel survey will be conducted. Travel questionnaires can be conducted for staff, residents and

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patients/visitors (examples below) through online self-completion methods.

The first study provides a baseline for travel planning, while subsequent travel surveys would be reported annually to inform any weakness or strength in the current travel plan. Based on the review, the travel plan would be refined to reflect changing circumstances.

7.12 Existing Travel Circumstances

Assessment of the ABS zone data indicates the following current travel mode share for the Bayview area:

	Staff
Car, as driver	53%
Car, as passenger	3.0%
Motorcycle	1.0%
Bus	6.0%
Train	31.0%
Walked only	5.0%
Other	1.0%

Based on the above, it is evident that staff who work in the area are very reliant on private vehicles (57%) to travel to/from their place of employment, due to the limited number of public transport services.

7.13 Modal Share Targets

Assessment of the transport circumstances for the premises indicates the following desirable mode share targets (will be achieved in 3 years).

Staff

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Car, as driver	40%
Car, as passenger	3%
Motorcycle	1%
Bus	15%
Train	35%
Walked only	5%
Other	1%

A range of measures and actions have been recommended for implementation in the travel plan to ensure the mode share targets are both aspirational and achievable. Whilst it may not be possible to guarantee that the modal split targets for sustainable travel modes will be achieved, the travel coordinator will not revise the mode share targets in favour of car driver or car passenger use.

Surveys undertaken within 3 months of occupation will be able to assess whether these targets have been met.

The measures proposed will be taken up by the purchaser as a matter of free choice and this modal choice is beyond the management of Opal. The survey results will, however, give an indication of the more popular measures, which can then be concentrated upon in TDM.

Attachment 1

Transport Access Guide





Opal Bayview



Travel Access Guide



Your Travel Choices

This Travel Access Guide outlines the many travel choices available for you to travel to and from home / work.



Plan ahead

Planning ahead is key. The [Trip Planner](#) on Transport info and public transport apps like [Opal Travel](#), [TripView](#) or [Citymapper](#) provide real-time service updates, detailed service information, walking and cycling distances and accessibility details.

Find a real-time [public transport app](#) that suits you.

Use the [Trip Planner](#) to plan your public transport journey.



Prioritise public transport

Bus stops and rail stations are located within a short walk.

Not only does public transport offer a comfortable alternative to driving, but it also allows you to focus on other activities.

Regularly catching public transport can contribute to your daily physical activity, helping you lead a healthier lifestyle.



Walk or ride your bike for all or some of your journey

Walking or riding your bike as part of your daily commute is a great way to improve and maintain your physical health and mental well-being. It keeps you active without needing a gym membership and gives you some me-time in your busy day.

Handy information about local bike routes and free resources including cycling maps are available on the [Cycleway Finder](#) or [Northern Sydney Cycling Guide and Map](#) website.



Consider working flexibly

Flexible working arrangements can improve work-life balance, health, and productivity. It includes any work arrangement that changes the traditional 9 to 5 schedule, such as working from home or working non-peak hours.

These arrangements are subject to business requirements and manager approval. Check our flexible working policies and procedures for more information.



Use flexible working to travel outside the peak

Travelling outside peak times can help you save time and reduce stress by avoiding rush hour traffic. It can also give you the opportunity to complete other tasks before or after work.

Save money on transportation by travelling before or after peak hours. It's also more comfortable and efficient.



Paying for your public transport fare is easier than ever

Use an Opal Card, contactless card or linked device to access Opal benefits. Remember to use the same card or linked device for all your trips to access benefits.

Visit the [Opal](#) website to find out more about fares for Opal and contactless payments.

Getting to Opal Bayview

With the nearest bus stop located on the Annam Road site frontage, Opal Bayview has convenient access to public and active transport networks.



Bus services in the vicinity are provided by the Busways Route 155 which runs along Cabbage Tree Road with links to the surrounding suburbs and the Sydney CBD.

Service routes and timetables for the available services are available on the Trip Planner at transportnsw.info/.



Club Ryde Road provides easily accessible paths for pedestrians and cyclists via the shared paths in the vicinity of the site.

If you cycle, run or walk, **Opal Bayview** is equipped with End of Trip (EoT) facilities.

There are ? secure bike racks with ? secure lockers and ? change rooms available including showers.

For detailed information on travelling to and from **Opal Bayview** use [Trip Planner](#).



Find a travel planning app that works for you



[Opal Travel](#)

Top up your Opal card and see your weekly travel reward information wherever you are. You can also plan a trip to and from anywhere in NSW with Opal fare estimates.



[Citymapper](#)

This app shows your best travel options by comparing driving, walking and cycling with real-time public transport information.



[Transport Info](#)

Visit Transport Info to plan your journey and find your nearest public transport connection.



Carpooling

By sharing rides with others, you not only reduce your personal commuting costs but also contribute to easing traffic congestion and lowering carbon emissions.

To arrange for carpooling, get in touch with the Travel Plan coordinator on Page 4 for contact information.

Building Facilities and Information




End of Trip (EoT) facilities

If you cycle, run or walk Club Ryde, you can access shared EoT facilities. Facilities include:

- ? Secure bike racks and ? lockers
- ? Change rooms
- ? Showers

All showers and changing facilities are located with convenient access to the lobby and Lifts.

Travel Plan Coordinator (TPC)

Name:	TBC
Locations:	TBC
Office hours:	TBC
Contact:	 - TBC
	 - TBC
	 - TBC

Cycling Map and information on local cycling routes.

Detailed Cycling Map
[Sydney Cycling Map](#)

Planning your bike trip

Transport's [Trip Planner](#) has new options to allow you to plan your bike riding route based on your skill level and preferences in three easy steps.

1. Enter your starting point.
2. Enter your destination.
3. Choose your preferred type of trip based on your skill level or preference.

Easier: Ideal for new cyclists, young riders or those who would prefer an easier route by avoiding hills and busy roads where possible.

Moderate: Best suited to intermediate cyclists who don't mind the occasional hill and are comfortable riding on some roads.

More direct: For experienced cyclists who want to minimise travel time, can handle steeper hills and navigate busy roads.

Planning a mixed-mode trip

You can also use the trip planner to plan a mixed trip, using both your bike and public transport in combination. For example, if you want to cycle for the first part of your journey from your home to a train station, then by train to the office.

Visit [Trip Planner](#) now or read our guide for more information.

For more information visit:

Transport for NSW travel planning website
[Transportnsw info](#) or call 131500

Bike map

[Cycleway Finder](#)
[Bicycle NSW](#)

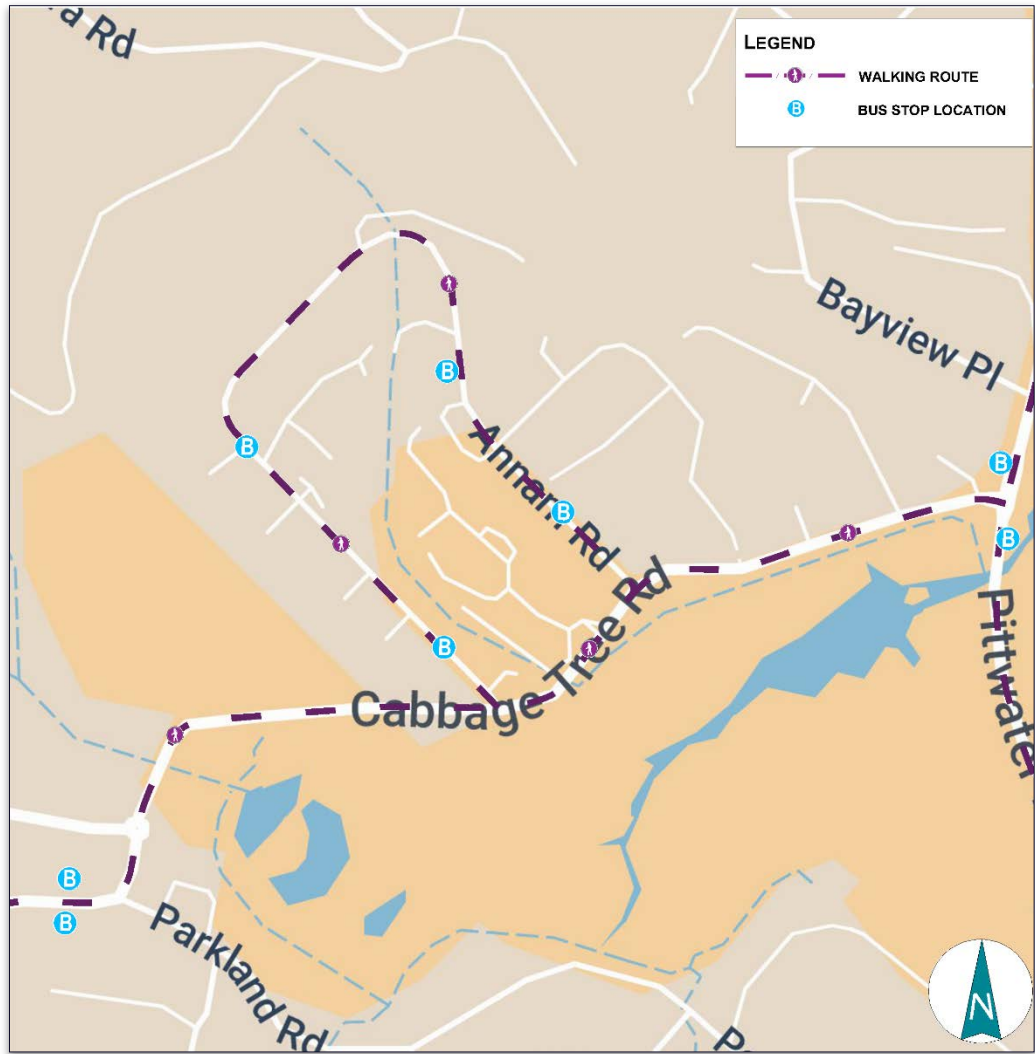


Figure 1 - Transport Network Map

Attachment 2

Staff Travel Survey Example



Transport and Traffic Planning Associates

1. What is your age in years?
 - a) 16 – 17
 - b) 18 – 24
 - c) 25 – 34
 - d) 35 – 44
 - e) 45 – 54
 - f) 55 – 64
 - g) Over 65
2. What postcode do you live in? _____
3. In an average week, on how many days do you commute to work?
 - a. One
 - b. Two
 - c. Three
 - d. Four
 - e. Five
 - f. More than five
 - g. I predominately work from home or remotely
4. What time do you typically arrive at work?
 - a. 00:00 – 00:59
 - b. 01:00 – 01:59
 - c. 02:00 – 02:59
 - d. 03:00 – 03:59
 - e. 04:00 – 04:59
 - f. 05:00 – 05:59
 - g. 06:00 – 06:59
 - h. 07:00 – 07:59
 - i. 08:00 – 08:59
 - j. 09:00 – 09:59
 - k. 10:00 – 10:59
 - l. 11:00 – 11:59
 - m. 12:00 – 12:59
 - n. 13:00 – 13:59
 - o. 14:00 – 14:59
 - p. 15:00 – 15:59
 - q. 16:00 – 16:59
 - r. 17:00 – 17:59
 - s. 18:00 – 18:59
 - t. 19:00 – 19:59
 - u. 20:00 – 20:59
 - v. 21:00 – 21:59
 - w. 22:00 – 22:59
 - x. 23:00 – 23:59
5. What time do you usually travel home?
 - a. 00:00 – 00:59
 - b. 01:00 – 01:59
 - c. 02:00 – 02:59
 - d. 03:00 – 03:59
 - e. 04:00 – 04:59
 - f. 05:00 – 05:59
 - g. 06:00 – 06:59
 - h. 07:00 – 07:59
 - i. 08:00 – 08:59
 - j. 09:00 – 09:59
 - k. 10:00 – 10:59
 - l. 11:00 – 11:59

Transport and Traffic Planning Associates

- | | |
|------------------|------------------|
| m. 12:00 – 12:59 | s. 18:00 – 18:59 |
| n. 13:00 – 13:59 | t. 19:00 – 19:59 |
| o. 14:00 – 14:59 | u. 20:00 – 20:59 |
| p. 15:00 – 15:59 | v. 21:00 – 21:59 |
| q. 16:00 – 16:59 | w. 22:00 – 22:59 |
| r. 17:00 – 17:59 | x. 23:00 – 23:59 |

6. What is your main mode of transport when travelling to and from work? Please choose the mode that you use for the greatest distance.

- | | |
|-----------------------------------|------------------------------------|
| a) Walk or run | h) Car (as driver with passengers) |
| b) Bicycle | i) Car (as passenger) |
| c) Bus | j) Carpool |
| d) Train | k) Motorbike or Moped |
| e) Light rail | l) Taxi or rideshare (e.g., Uber) |
| f) Ferry | |
| g) Car (as driver/sole occupancy) | |

7. Do you ever work from home?

- | | |
|--------|-------|
| a. Yes | b. No |
|--------|-------|

8. On average, how many times do you work from home in one month? _____

9. Do you have a disability or impairment that has an impact on how you travel?

- | | |
|--------|-------|
| a. Yes | b. No |
|--------|-------|

10. Do you have childcare commitments that have an impact on how you travel?

- | | |
|--------|-------|
| a. Yes | b. No |
|--------|-------|

11. Are you entitled to a free parking space at your place of work?

- | | |
|--------|-------|
| a. Yes | b. No |
|--------|-------|

How likely is it that you will do the following to make your journey more comfortable and reliable?

12. Choose another mode to travel to work, e.g., switching from driving to public transport or from public transport to walking or cycling.

- Very likely
- Likely
- Neutral

Transport and Traffic Planning Associates

- d. Unlikely
- e. Very unlikely
- f. Not possible

13. Change the timing of the journeys you make to avoid the busiest periods, if possible, given your work conditions.

- a. Very likely
- b. Likely
- c. Neutral
- d. Unlikely
- e. Very unlikely
- f. Not possible

14. Reduce the number of times you travel to work e.g., working from home, if possible, given your work conditions.

- a. Very likely
- b. Likely
- c. Neutral
- d. Unlikely
- e. Very unlikely
- f. Not possible

15. Do you have any general comments on how you currently travel or how you would like to travel?

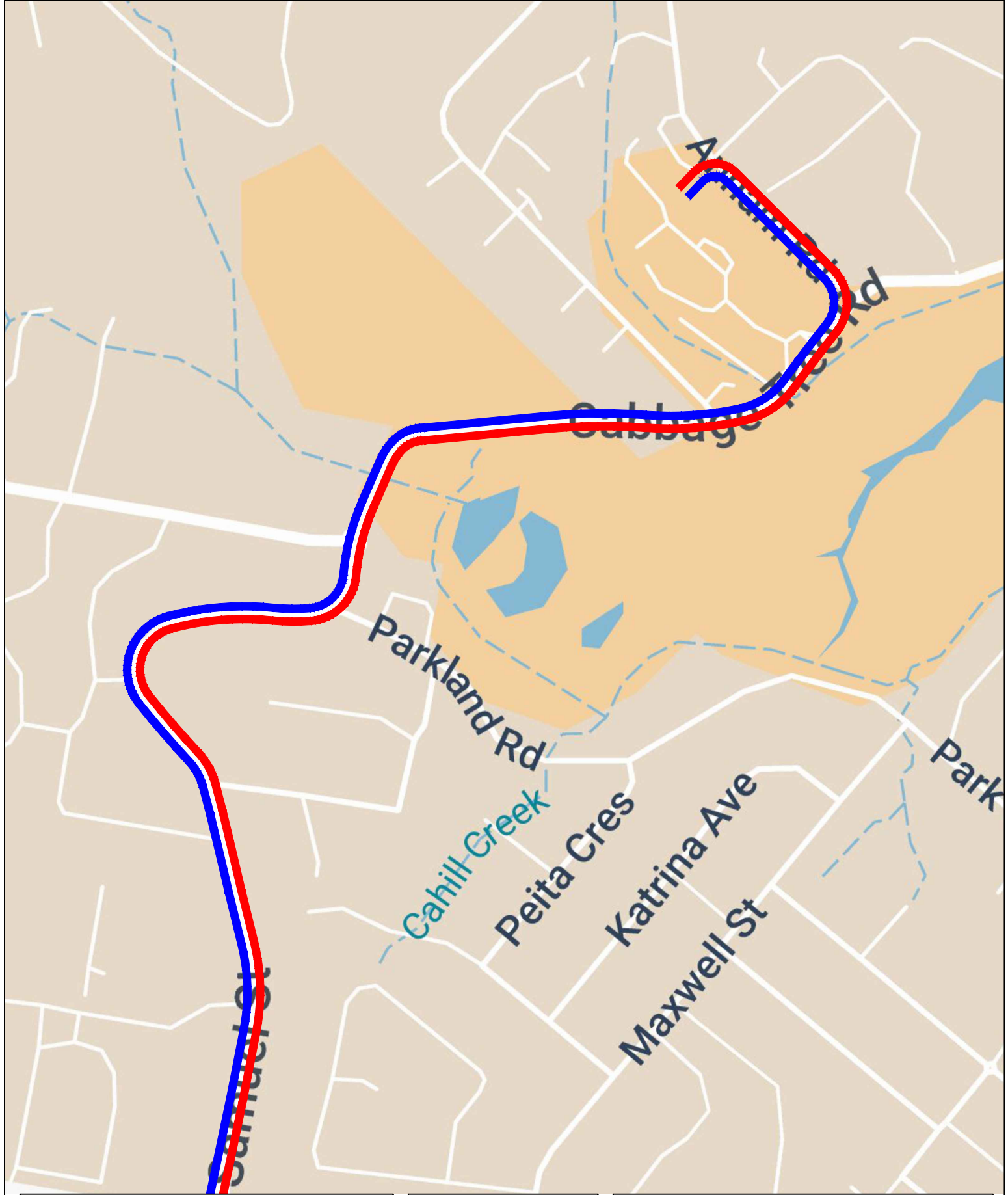
16. To facilitate walk/cycle groups and/or carpooling may we share your contact details with a colleague that live/work/study near you?

- a) Yes – walking group (Email: _____)
- b) Yes – cycling group (Email: _____)
- c) Yes – carpool driver (Email: _____)
- d) Yes – carpool passenger (Email: _____)

8.0 Indicative Preliminary Construction Traffic Management Plan

A detailed Traffic Management Plan will be prepared for the Construction Certificate documentation process. However, the envisaged principals of this plan will be as follows:

- ❖ vehicle access will be via the existing driveway on Annam Road frontage
- ❖ no on-street WORKS ZONE
- ❖ some worker parking to be provided on site particularly when the basement car park is available
- ❖ all materials will be stored on-site
- ❖ truck routes will be restricted to those illustrated on Figure 5. Vehicles will not be permitted to use the Aveo site access roads.
- ❖ permit to be obtained for any temporary use of a mobile crane
- ❖ traffic controller/s to be engaged to assist truck access movements as necessary
- ❖ Type A fencing to be installed along site boundary with access gates
- ❖ working hours will be as per Consent Condition
- ❖ the envisaged time frames for construction are:
 - demolition 3 weeks
 - excavation 4 weeks
 - construction 50 weeks
 - fitout 10 weeks
- ❖ secure storage will be provided for worker tools and materials in order to encourage travel by the available public transport services or to car pool.



LEGEND

-  ARRIVAL
-  DEPARTURE



TRUCK ROUTES

FIG 5

9.0 Issues

The following issue has been raised:

“Confirm if the traffic generation from the additional Aveo spaces have been included in the traffic impact assessment. The parking assessment in the TIA should demonstrate that the community centre meets the parking requirements and explain if the spaces provided are additional to existing compliant parking spaces or if they are required to achieve compliance.”

The 16 Aveo parking spaces to be accommodated represent a “like for like” replacement of the existing Aveo spaces on the site. There are no additional spaces, and their traffic generation is included in the traffic surveys undertaken. The quantum of Aveo spaces for the existing Community Centre use (16) comply with the requirement of the Consent for their element.

10.0 Conclusion

The traffic, transport and parking assessment for the proposed Opal Aged Care facility at Bayview confirms that the development will:

- ❖ not present any unsatisfactory traffic implications
- ❖ incorporate a suitable and appropriate parking provision for the nature of the development
- ❖ incorporate suitable vehicle access, internal circulation and servicing arrangements

Appendix A

Development Plans



- LEGEND**
- REFER TO LANDSCAPE DOCUMENTATION FOR TREE RETENTION PLAN
- RESIDENT SUU
 - COMMON SPACES
 - VERTICAL CIRCULATION/LIFTS/STAIRS
 - BOH
 - FOH
 - STAFF AREAS
 - UTILITY
 - CIRCULATION
 - SCULLERY



LEVEL 1
 SCALE: 1:200
 0 5.0M 10.0M

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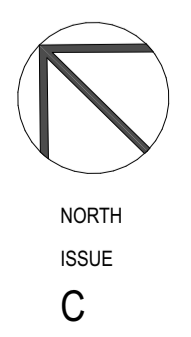
CLIENT:
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DRAWING REVISIONS	REV	DATE	DESCRIPTION	ISSUE	DRAWN	APPRO
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		24/9/2025	SSDA ISSUE FOR GS	B	CFA	BW
		24/9/2025	SSDA DRAFT	A	CFA	PJ

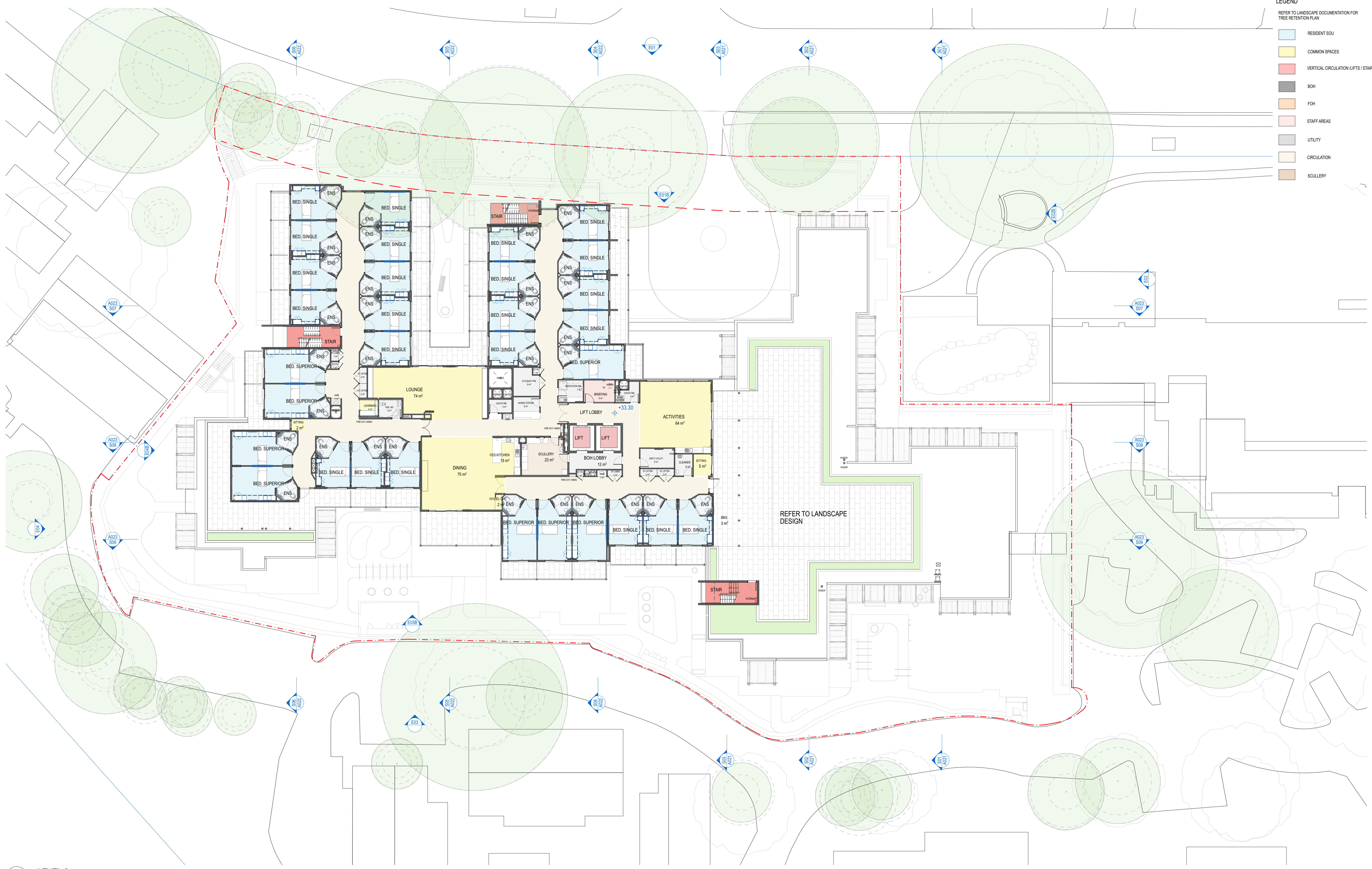
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 ANNAM ROAD BAYVIEW, NSW 2104
 DRAWING TITLE:
FLOOR PLAN-LEVEL 1

SCALE: REFER DRAWING TITLES
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 DATE PRINTED: 21/10/2025
 ORIGINAL PAPER SIZE: A1
 DRAWING NO. A103



- LEGEND**
- REFER TO LANDSCAPE DOCUMENTATION FOR TREE RETENTION PLAN
- RESIDENT SOU
 - COMMON SPACES
 - VERTICAL CIRCULATION/LIFTS/STAIRS
 - BOH
 - FOH
 - STAFF AREAS
 - UTILITY
 - CIRCULATION
 - SCULLERY



01 LEVEL 2
 A104 SCALE: 1:200
 0 5.0M 10.0M

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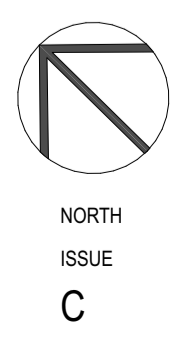
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	24/9/2025	19/2/2025	SSDA ISSUE FOR GS	B	CFA	BW
	24/9/2025	19/2/2025	SSDA DRAFT	A	CFA	PJ

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 ANNAM ROAD BAYVIEW, NSW 2104
 DRAWING TITLE:
FLOOR PLAN-LEVEL 2

SCALE: REFER DRAWING TITLES
 PROJECT NO. 24110
 DATE PRINTED: 21/10/2025
 ORIGINAL PAPER SIZE: A1
 DRAWING NO. A104





- LEGEND**
- REFER TO LANDSCAPE DOCUMENTATION FOR TREE RETENTION PLAN
- RESIDENT SOU
 - COMMON SPACES
 - VERTICAL CIRCULATION (LIFTS / STAIRS)
 - BOH
 - FOH
 - STAFF AREAS
 - UTILITY
 - CIRCULATION
 - SCULLERY
 - AVEO PARKING AND COMMUNITY CENTRE TO BE RECONSTRUCTED

01 BASEMENT
 SCALE: 1:200
 0 5.0M 10.0M

ARCHITECT:
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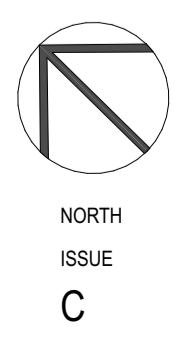


REV	DATE	DESCRIPTION	ISSUE	DRAWN	APPRO
20/10/2025	20/10/2025	ISSUE FOR SDDA	C	CFA	LC
24/9/2025	24/9/2025	SSDA ISSUE FOR GS	B	CFA	BW
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 ANNAM ROAD BAYVIEW, NSW 2104
 DRAWING TITLE:
FLOOR PLAN- BASEMENT

SCALE: REFER DRAWING TITLES
 PROJECT NO. 24110
 DATE PRINTED: 21/10/2025
 ORIGINAL PAPER SIZE: A1
 DRAWING NO. A100





- LEGEND**
- REFER TO LANDSCAPE DOCUMENTATION FOR TREE RETENTION PLAN
 - RESIDENT SOU
 - COMMON SPACES
 - VERTICAL CIRCULATION/LIFTS/STAIRS
 - BOH
 - FOH
 - STAFF AREAS
 - UTILITY
 - CIRCULATION
 - SCULLERY

01 LOWER GROUND FLOOR
 A101 SCALE: 1:200
 0 5.0M 10.0M

ARCHITECT:
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	24/9/2025	19/02/25	SSDA DRAFT	A	CFA	PJ

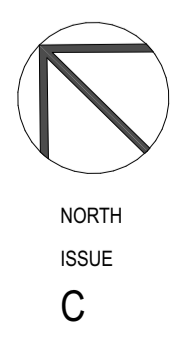
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PROJECT:
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 ANNAM ROAD BAYVIEW, NSW 2104

DRAWING TITLE:
FLOOR PLAN-LOWER GROUND FLOOR

SCALE: REFER DRAWING TITLES
 PROJECT NO. 24110
 DATE PRINTED: 21/10/2025
 ORIGINAL PAPER SIZE: A1
 DRAWING NO. A101





- LEGEND**
- REFER TO LANDSCAPE DOCUMENTATION FOR TREE RETENTION PLAN
- RESIDENT SUU
 - COMMON SPACES
 - VERTICAL CIRCULATION/LIFTS/STAIRS
 - BOH
 - FOH
 - STAFF AREAS
 - UTILITY
 - CIRCULATION
 - SCULLERY

01 GROUND FLOOR
 SCALE: 1:200
 0 5.0M 10.0M

ARCHITECT:
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24/9/2025	19/02/25	SDDA DRAFT	A	CFA	PJ

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DRAWING TITLE:
FLOOR PLAN-GROUND FLOOR

SCALE: REFER DRAWING TITLES
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Appendix B

Traffic Survey Results



TURNING MOVEMENT SURVEY
Intersection of Cabbage Tree Rd and Annam Rd, Bayview

GPS: -33.067344, 151.296939

Date: Wed 06/08/25
 Weather: Overcast
 Suburban: Bayview
 Customer: TTPA

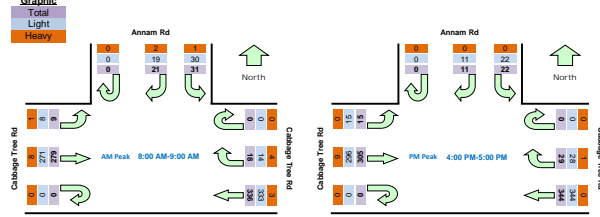
North: Annam Rd
 East: Cabbage Tree Rd
 South: N/A
 West: Cabbage Tree Rd

Survey: AM: 7:00 AM-9:00 AM
 PM: 3:00 PM-5:00 PM
 Traffic: AM: 8:00 AM-9:00 AM
 Peak: PM: 4:00 PM-5:00 PM

Time		North Approach Annam Rd			1st Approach Cabbage Tree			1st Approach Cabbage Tree			Hourly Total	
Period Start	Period End	U	R	L	U	R	WB	U	EB	L	Hour	Peak
7:00	7:15	0	4	3	0	1	79	0	49	1	533	
7:15	7:30	0	3	6	0	1	67	0	36	2	561	
7:30	7:45	0	5	5	0	4	84	0	46	0	608	
7:45	8:00	0	3	6	0	4	72	0	52	0	665	
8:00	8:15	0	6	10	0	5	74	0	68	2	694	Peak
8:15	8:30	0	7	7	0	4	77	0	65	2		
8:30	8:45	0	4	9	0	4	103	0	80	1		
8:45	9:00	0	4	5	0	5	82	0	66	4		
15:00	15:15	0	5	2	1	6	91	0	60	4	629	
15:15	15:30	0	6	4	0	3	92	0	52	1	617	
15:30	15:45	0	3	3	0	5	72	0	65	6	646	
15:45	16:00	0	1	5	0	7	78	0	55	2	688	
16:00	16:15	0	1	5	0	3	76	0	69	3	726	Peak
16:15	16:30	0	3	6	0	9	88	0	80	1	725	
16:30	16:45	0	5	7	0	7	94	0	76	7	686	
16:45	17:00	0	2	4	0	10	86	0	80	4	617	
17:00	17:15	0	2	6	0	8	68	0	63	9	551	
17:15	17:30	0	1	3	0	2	61	0	77	4		
17:30	17:45	0	1	6	0	3	49	0	65	3		
17:45	18:00	0	0	4	0	10	48	0	57	1		

Peak Time		North Approach Annam Rd			1st Approach Cabbage Tree			1st Approach Cabbage Tree			Peak	
Period Start	Period End	U	R	L	U	R	WB	U	EB	L	total	Peak
8:00	9:00	0	21	31	0	18	336	0	279	5	654	
16:00	17:00	0	11	22	0	29	344	0	305	15	726	

Note: Site sketch is for illustrating traffic flows. Direction is indicative only, drawing is not to scale and not an exact streets configuration.



Time		North Approach Annam Rd			1st Approach Cabbage Tree			1st Approach Cabbage Tree			Hourly Total	
Period Start	Period End	U	R	L	U	R	WB	U	EB	L	Hour	Peak
7:00	7:15	0	4	3	0	1	76	0	44	1		
7:15	7:30	0	3	6	0	1	67	0	36	2		
7:30	7:45	0	5	5	0	4	81	0	45	0		
7:45	8:00	0	3	6	0	4	72	0	50	0		
8:00	8:15	0	6	9	0	4	73	0	63	1		
8:15	8:30	0	7	7	0	2	75	0	65	2		
8:30	8:45	0	3	9	0	3	103	0	78	1		
8:45	9:00	0	3	5	0	5	82	0	65	4		
15:00	15:15	0	4	2	1	5	91	0	58	2		
15:15	15:30	0	5	4	0	3	91	0	52	1		
15:30	15:45	0	2	3	0	5	67	0	65	6		
15:45	16:00	0	1	5	0	6	76	0	54	2		
16:00	16:15	0	1	5	0	3	76	0	64	3		
16:15	16:30	0	3	6	0	9	88	0	78	1		
16:30	16:45	0	5	7	0	6	94	0	74	7		
16:45	17:00	0	2	4	0	10	86	0	80	4		
17:00	17:15	0	2	6	0	8	67	0	62	8		
17:15	17:30	0	1	3	0	2	60	0	77	4		
17:30	17:45	0	1	6	0	3	49	0	64	3		
17:45	18:00	0	0	4	0	10	48	0	57	1		

Peak Time		North Approach Annam Rd			1st Approach Cabbage Tree			1st Approach Cabbage Tree			Peak	
Period Start	Period End	U	R	L	U	R	WB	U	EB	L	total	Peak
8:00	9:00	0	19	30	0	14	333	0	271	6	675	
16:00	17:00	0	11	22	0	28	344	0	296	15	716	

Time		North Approach Annam Rd			1st Approach Cabbage Tree			1st Approach Cabbage Tree			Hourly Total	
Period Start	Period End	U	R	L	U	R	WB	U	EB	L	Hour	Peak
7:00	7:15	0	0	0	0	0	3	0	5	0		
7:15	7:30	0	0	0	0	0	0	0	0	0		
7:30	7:45	0	0	0	0	0	3	0	1	0		
7:45	8:00	0	0	0	0	0	0	0	2	0		
8:00	8:15	0	0	1	0	1	1	0	5	1		
8:15	8:30	0	0	0	0	2	2	0	0	0		
8:30	8:45	0	1	0	0	1	0	0	2	0		
8:45	9:00	0	1	0	0	0	0	0	1	0		
15:00	15:15	0	1	0	0	1	0	0	2	2		
15:15	15:30	0	1	0	0	0	1	0	0	0		
15:30	15:45	0	1	0	0	0	5	0	0	0		
15:45	16:00	0	0	0	0	1	2	0	1	0		
16:00	16:15	0	0	0	0	0	0	0	5	0		
16:15	16:30	0	0	0	0	0	0	0	2	0		
16:30	16:45	0	0	0	0	1	0	0	2	0		
16:45	17:00	0	0	0	0	0	0	0	0	0		
17:00	17:15	0	0	0	0	0	1	0	1	1		
17:15	17:30	0	0	0	0	0	1	0	0	0		
17:30	17:45	0	0	0	0	0	0	0	1	0		
17:45	18:00	0	0	0	0	0	0	0	0	0		

Peak Time		North Approach Annam Rd			1st Approach Cabbage Tree			1st Approach Cabbage Tree			Peak	
Period Start	Period End	U	R	L	U	R	WB	U	EB	L	total	Peak
8:00	9:00	0	2	1	0	4	3	0	8	1	19	
16:00	17:00	0	0	0	0	1	0	0	9	0	10	

Appendix C

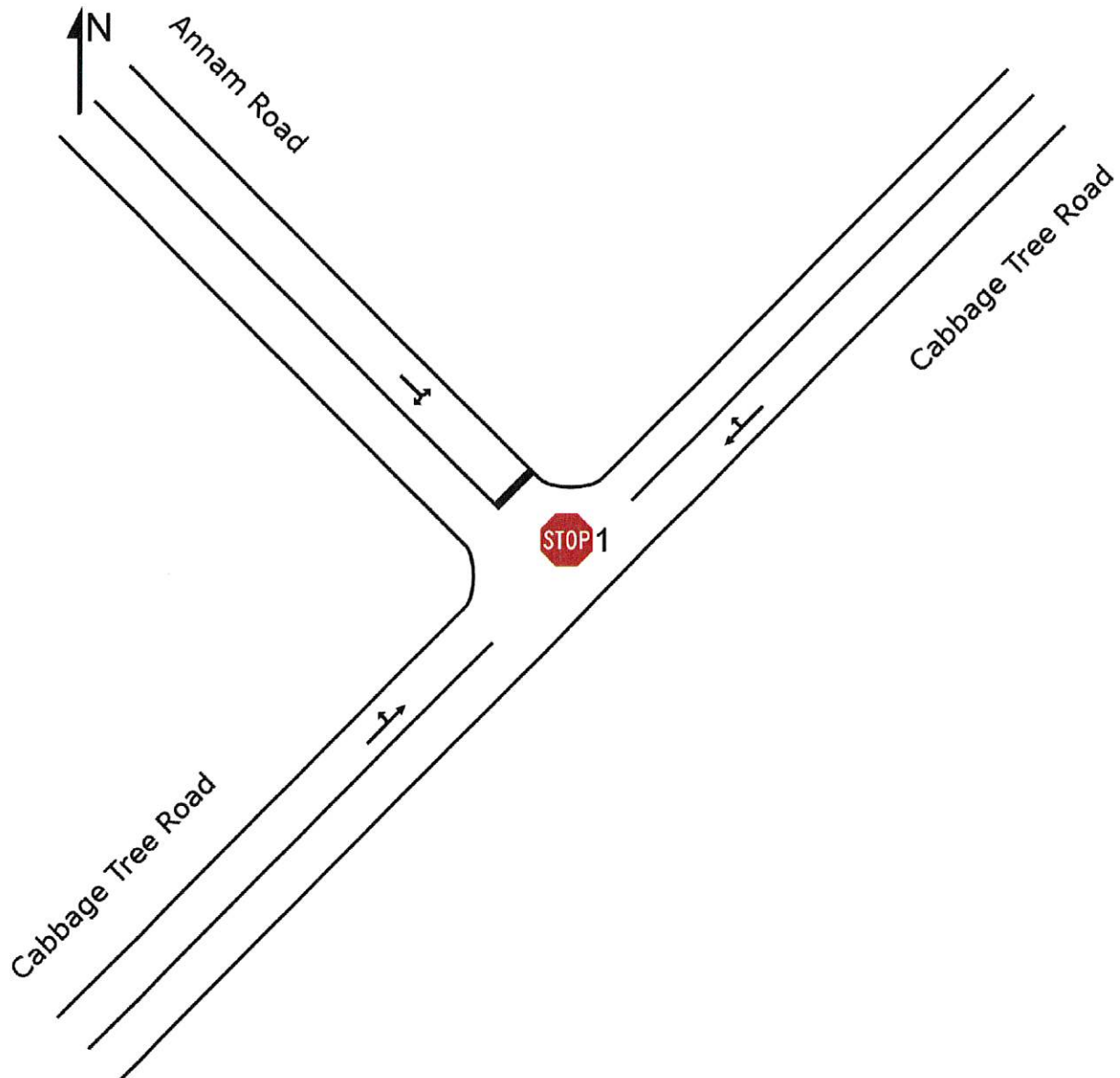
SIDRA Results

SITE LAYOUT

 Site: [1] Cabbage Tree Rd & Annam Rd (Existing)

36-42 Cabbage Tree Road, Bayview
Site Category: Opal Bayview
Stop (Two-Way)
Site Scenario: 3 | Existing PM Peak

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



MOVEMENT SUMMARY

STOP Site: [1] Cabbage Tree Rd & Annam Rd (Existing)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

36-42 Cabbage Tree Road, Bayview
 Site Category: Opal Bayview
 Stop (Two-Way)
 Site Scenario: 2 | Existing AM Peak

Vehicle Movement Performance															
Mov ID	Turn Class	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed
			[Total HV]	[Total HV]	[Total HV]	[Total HV]	v/c	sec		[Veh.]	[Dist]				km/h
			veh/h	%	veh/h	%				veh	m				
NorthEast: Cabbage Tree Road															
5	T1	All MCs	354	0.9	354	0.9	0.194	0.1	LOS A	0.2	1.4	0.06	0.07	0.06	49.7
6	R2	All MCs	19	22.2	19	22.2	0.194	6.4	LOS A	0.2	1.4	0.06	0.07	0.06	48.8
Approach			373	2.0	373	2.0	0.194	0.5	NA	0.2	1.4	0.06	0.07	0.06	49.6
NorthWest: Annam Road															
7	L2	All MCs	33	3.2	33	3.2	0.077	8.9	LOS A	0.3	1.9	0.47	0.90	0.47	46.0
9	R2	All MCs	22	9.5	22	9.5	0.077	12.8	LOS A	0.3	1.9	0.47	0.90	0.47	45.6
Approach			55	5.8	55	5.8	0.077	10.5	LOS A	0.3	1.9	0.47	0.90	0.47	45.9
SouthWest: Cabbage Tree Road															
10	L2	All MCs	9	11.1	9	11.1	0.153	4.7	LOS A	0.0	0.0	0.00	0.02	0.00	49.0
11	T1	All MCs	294	2.9	294	2.9	0.153	0.0	LOS A	0.0	0.0	0.00	0.02	0.00	49.9
Approach			303	3.1	303	3.1	0.153	0.2	NA	0.0	0.0	0.00	0.02	0.00	49.8
All Vehicles			731	2.7	731	2.7	0.194	1.1	NA	0.3	1.9	0.07	0.11	0.07	49.2

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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Project: T:\WORK24\24244 - OPAL BAYVIEW - From 267-2023\MODEL\MODEL 29AUG25.sipx

MOVEMENT SUMMARY

STOP Site: [1] Cabbage Tree Rd & Annam Rd (Existing)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

36-42 Cabbage Tree Road, Bayview
 Site Category: Opal Bayview
 Stop (Two-Way)
 Site Scenario: 3 | Existing PM Peak

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed
			[Total HV]	[Total HV]	[Total HV]	[Total HV]	v/c	sec		[Veh.]	[Dist]				km/h
			veh/h	%	veh/h	%				veh	m				
NorthEast: Cabbage Tree Road															
5	T1	All MCs	362	0.0	362	0.0	0.204	0.2	LOS A	0.3	2.0	0.09	0.10	0.09	49.5
6	R2	All MCs	31	3.4	31	3.4	0.204	6.0	LOS A	0.3	2.0	0.09	0.10	0.09	48.9
Approach			393	0.3	393	0.3	0.204	0.6	NA	0.3	2.0	0.09	0.10	0.09	49.4
NorthWest: Annam Road															
7	L2	All MCs	23	0.0	23	0.0	0.045	8.8	LOS A	0.2	1.1	0.46	0.88	0.46	46.2
9	R2	All MCs	12	0.0	12	0.0	0.045	12.0	LOS A	0.2	1.1	0.46	0.88	0.46	45.8
Approach			35	0.0	35	0.0	0.045	9.9	LOS A	0.2	1.1	0.46	0.88	0.46	46.1
SouthWest: Cabbage Tree Road															
10	L2	All MCs	16	0.0	16	0.0	0.170	4.6	LOS A	0.0	0.0	0.00	0.03	0.00	49.1
11	T1	All MCs	321	3.0	321	3.0	0.170	0.0	LOS A	0.0	0.0	0.00	0.03	0.00	49.8
Approach			337	2.8	337	2.8	0.170	0.3	NA	0.0	0.0	0.00	0.03	0.00	49.7
All Vehicles			764	1.4	764	1.4	0.204	0.9	NA	0.3	2.0	0.07	0.10	0.07	49.3

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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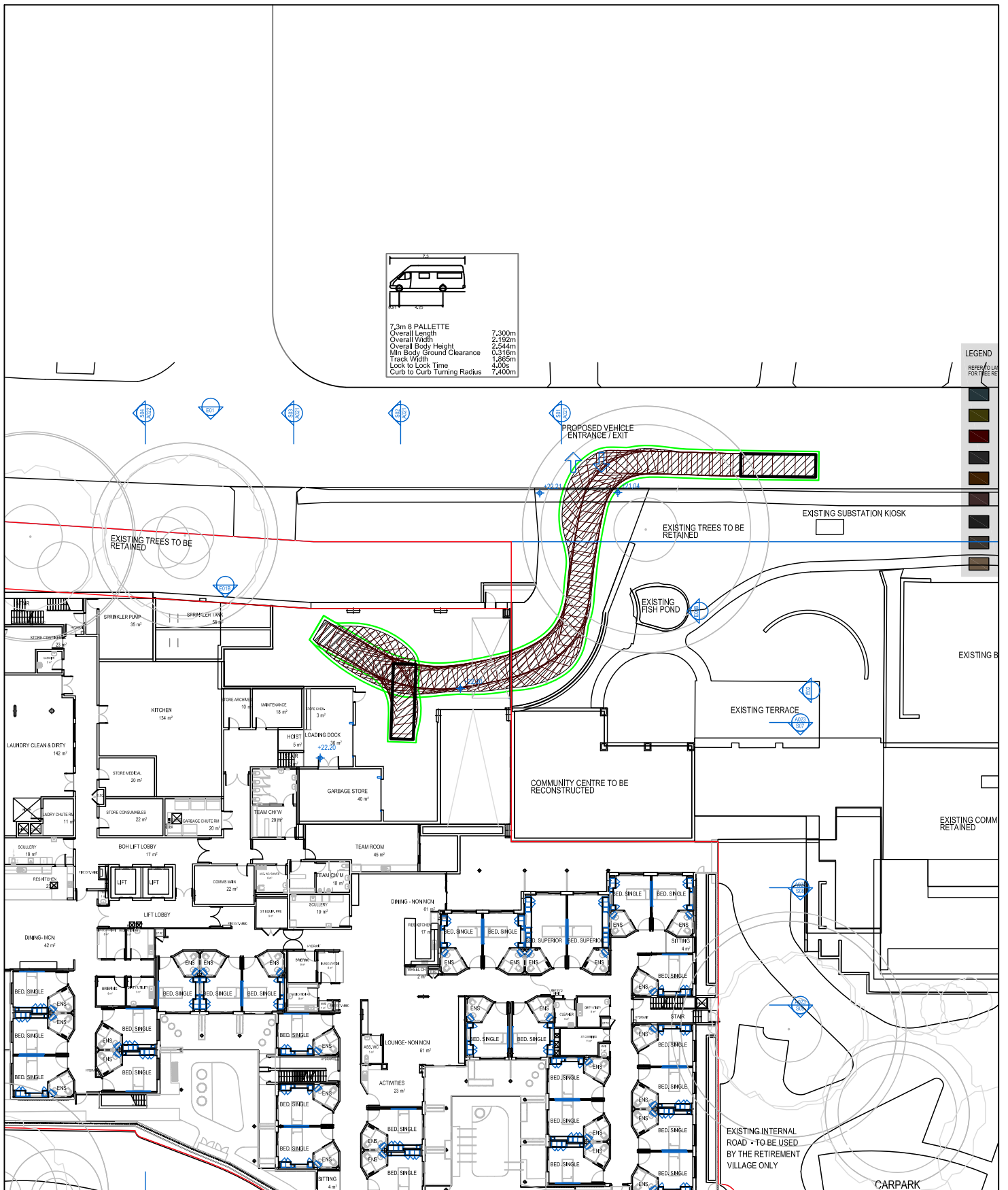
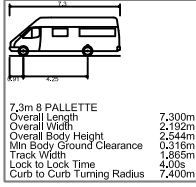
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Project: T:\WORK24\24244 - OPAL BAYVIEW - From 267-2023\MODEL\MODEL 29AUG25.sipx

Appendix D

Turning Path Assessment





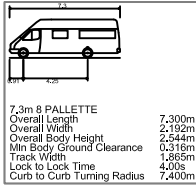
NOTE

This drawing has been prepared using vehicle modelling computer software AutoTrack V5.00a in conjunction with AutoCAD 2013. The vehicle used is based upon vehicle data provided by Austroads and incorporates a reasonable degree of tolerance. However, it is not possible to account for all vehicle types/characteristics and/or driver ability.

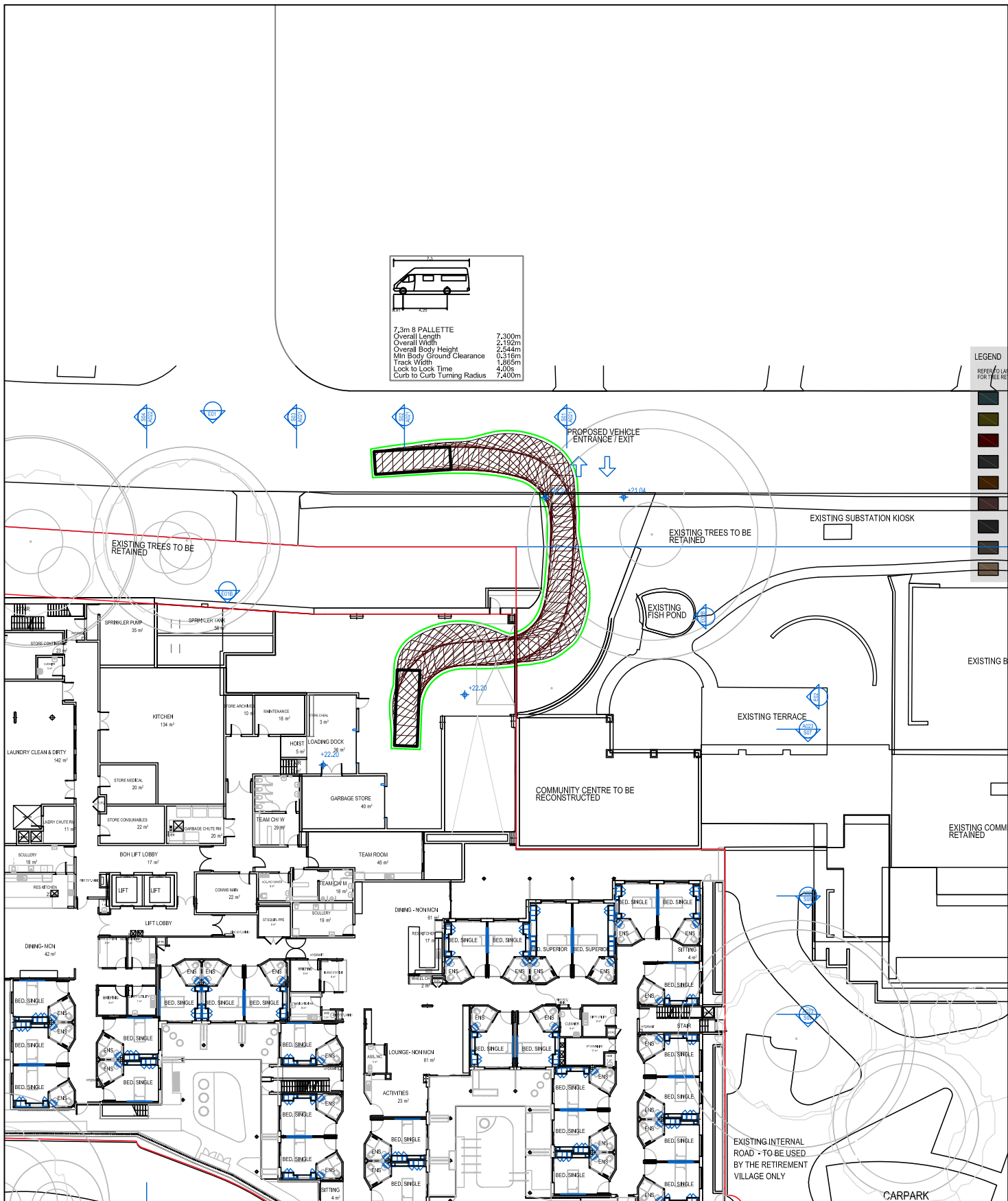


SWEPT PATH ANALYSIS OF A 7.3m (8 PALLETTE) RIGID VEHICLE ENTERING THE SITE

SP 1

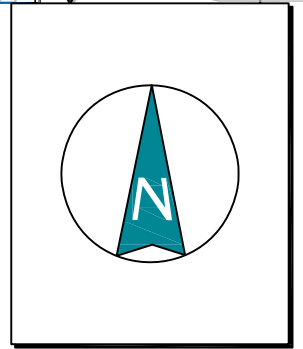


LEGEND
 REFERENCE TO LA...
 FOR TREE RE...



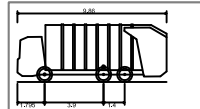
NOTE

This drawing has been prepared using vehicle modelling computer software AutoTrack V5.00a in conjunction with AutoCAD 2013. The vehicle used is based upon vehicle data provided by Austroads and incorporates a reasonable degree of tolerance. However, it is not possible to account for all vehicle types/characteristics and/or driver ability.



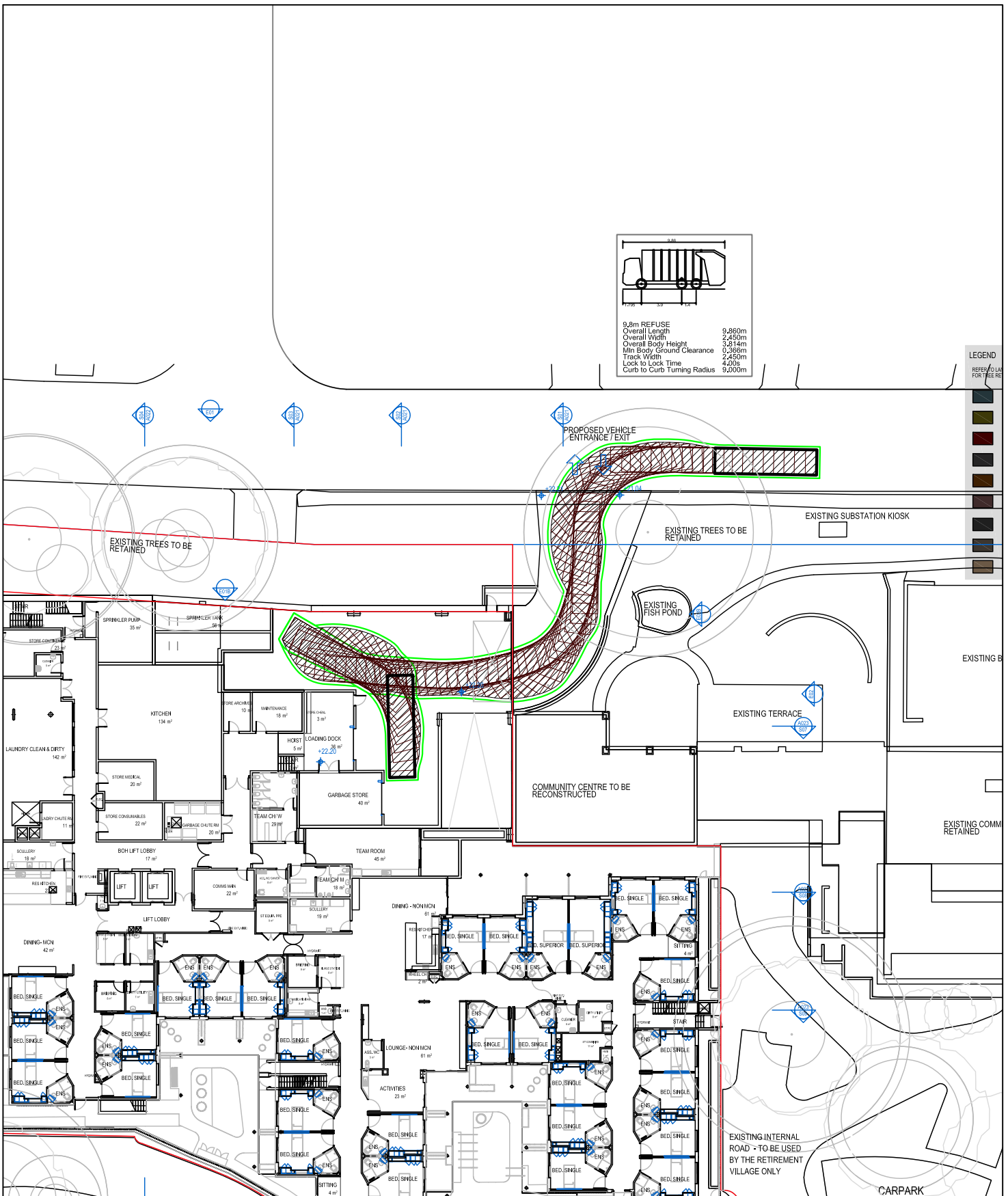
**SWEPT PATH ANALYSIS
 OF A 7.3m (8 PALETTE) RIGID
 VEHICLE EXITING THE SITE**

SP 2



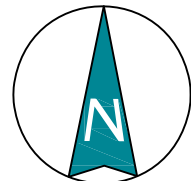
9.8m REFUSE
 Overall Length 9.860m
 Overall Width 2.450m
 Overall Body Height 3.814m
 Min Body Ground Clearance 0.366m
 Track Width 2.450m
 Lock to Lock Time 4.00s
 Curb to Curb Turning Radius 9.000m

LEGEND
 REFERENCE TO LA
 FOR TREE RE

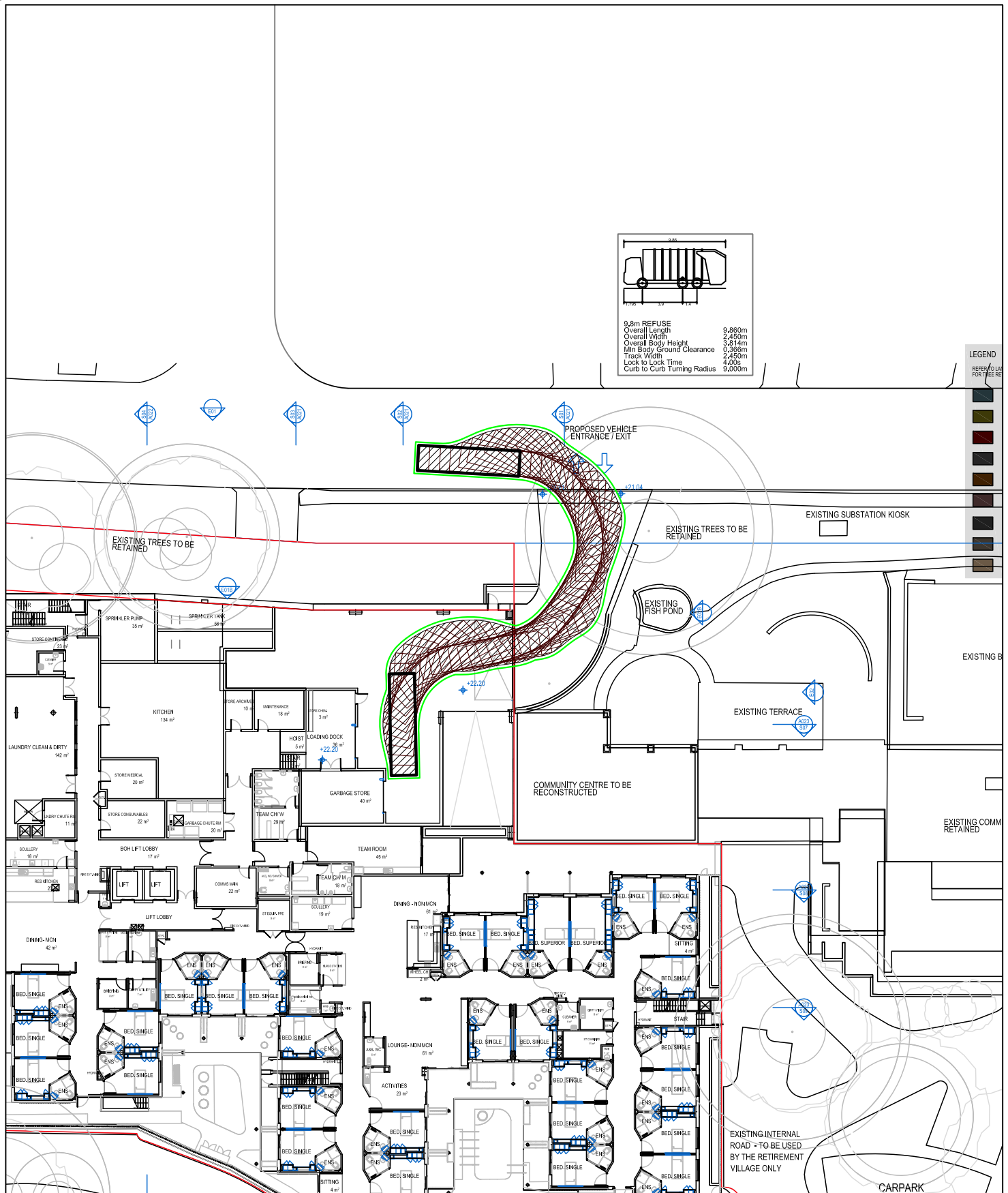


NOTE

This drawing has been prepared using vehicle modelling computer software AutoTrack V5.00a in conjunction with AutoCAD 2013. The vehicle used is based upon vehicle data provided by Austroads and incorporates a reasonable degree of tolerance. However, it is not possible to account for all vehicle types/characteristics and/or driver ability.

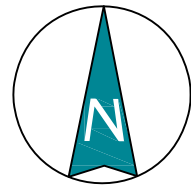


**SWEPT PATH ANALYSIS
 OF A 9.8m REFUSE
 VEHICLE ENTERING THE SITE**

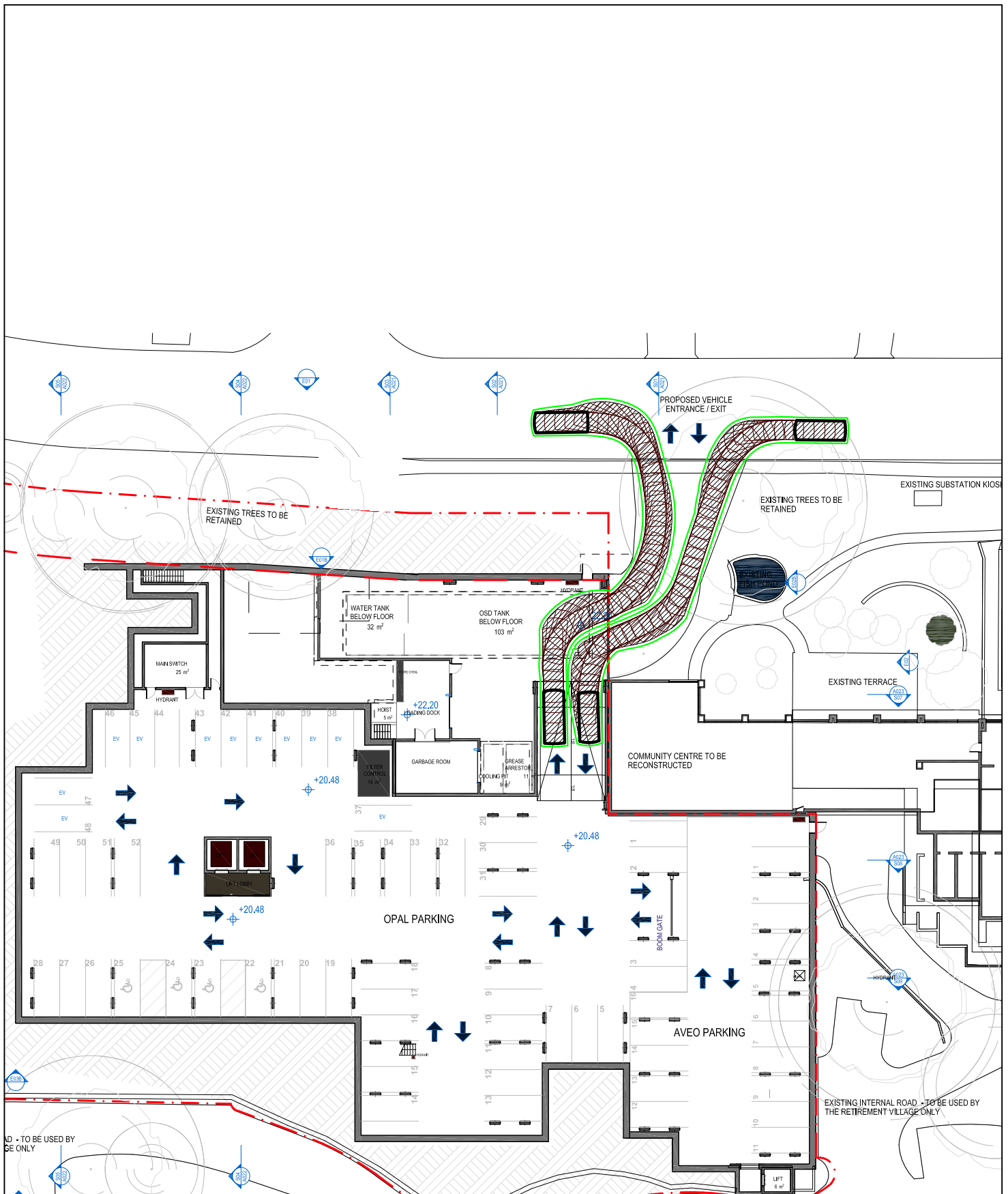


NOTE

This drawing has been prepared using vehicle modelling computer software AutoTrack V5.00a in conjunction with AutoCAD 2013. The vehicle used is based upon vehicle data provided by Austroads and incorporates a reasonable degree of tolerance. However, it is not possible to account for all vehicle types/characteristics and/or driver ability.

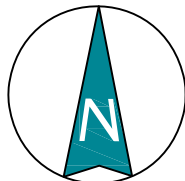


**SWEPT PATH ANALYSIS
 OF A 9.8m REFUSE
 VEHICLE EXITING THE SITE**



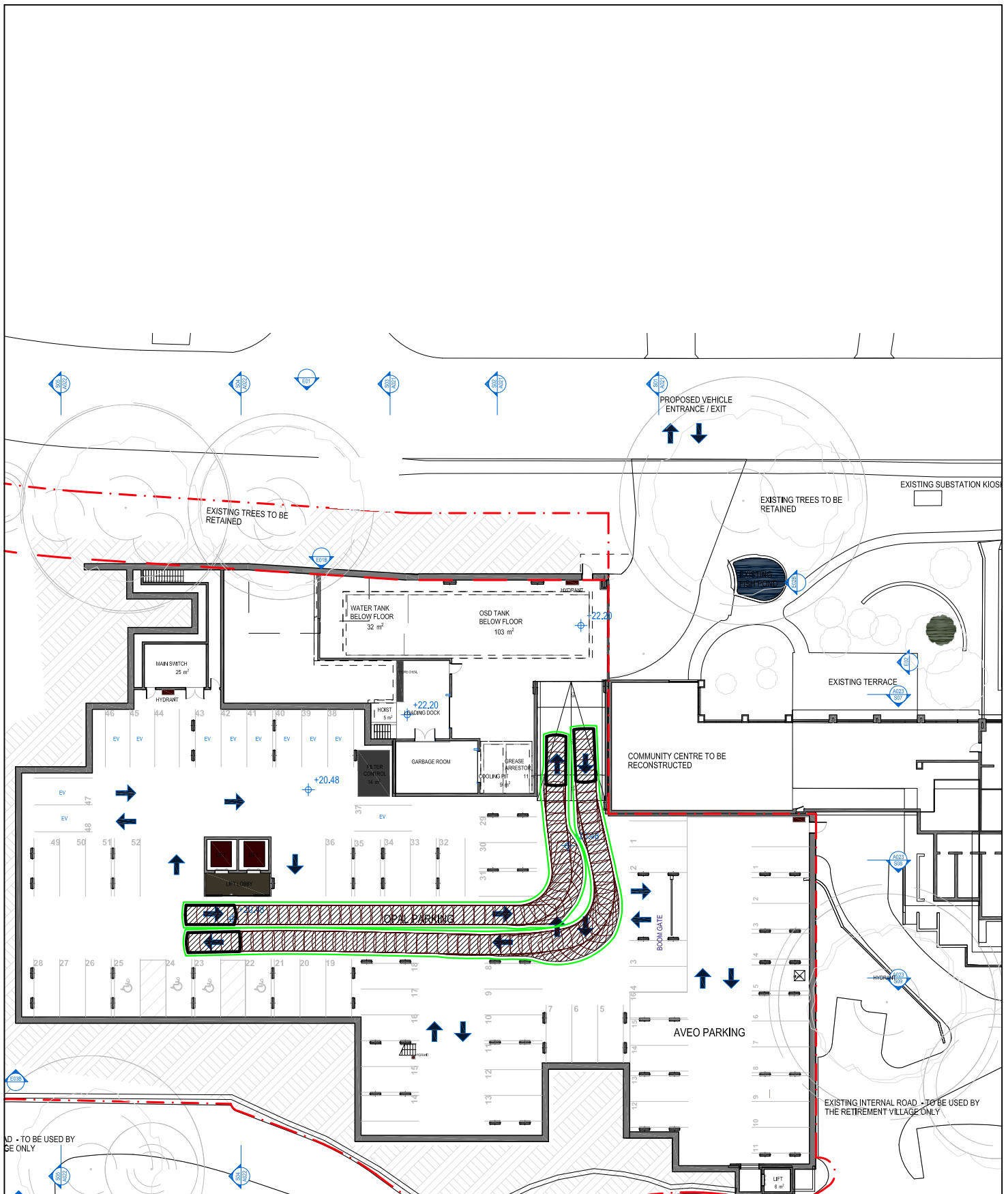
NOTE

This drawing has been prepared using vehicle modelling computer software AutoTrack V5.00a in conjunction with AutoCAD 2013. The vehicle used is based upon vehicle data provided by Austroads and incorporates a reasonable degree of tolerance. However, it is not possible to account for all vehicle types/characteristics and/or driver ability.



**SWEPT PATH ANALYSIS
OF A 99th PERCENTILE
VEHICLE ENTERING AND AN
85th PERCENTILE VEHICLE
EXITING THE SITE**

SP 6



NOTE

This drawing has been prepared using vehicle modelling computer software AutoTrack V5.00a in conjunction with AutoCAD 2013. The vehicle used is based upon vehicle data provided by Austroads and incorporates a reasonable degree of tolerance. However, it is not possible to account for all vehicle types/characteristics and/or driver ability.



**SWEPT PATH ANALYSIS
OF A 99th AND AN 85th
PERCENTILE VEHICLE
CIRCULATING THE BASEMENT**

SP 7