13 November 2020

ptc.

Sally Bassett
Uniting Pty Ltd
Level 4, 222 Pitt Street
Sydney
NSW 2000

Dear Sally

1. 15 Fig Tree Street, Lane Cove – St Columba's Uniting – Response to Council RFI

ptc. has been engaged by Uniting to provide traffic consultant advice in relation to Council's request for additional information for 15 Fig Tree Street, Lane Cove.

This letter has been prepared to address the comments in relation to the car parking design and vehicular access raised by Lane Cove Municipal Council with reference to the following architectural plans, prepared by Morrison Design Partnership Architects (Attachment 1)

- Drawing No. DA101, Level -01 – Basement Floor Plan, Revision: DA02, Dated: 11.11.2020
- Drawing No. DA102, Level 00 – Ground Floor Plan, Revision: DA04, Dated: 10.11.2020

1.1 Council Comments

The comments raised by Council are outlined below. The responses are outlined in Section 1.2 and 1.3 respectively and should be read in conjunction with the swept path assessment prepared by **ptc.** (see Attachment 2).

1. *The development provides access for MRVs however, the ramp and access are not designed in accordance with AS2890.2. The swept paths for a MRV indicates that there is not enough room for a MRV and B99 vehicle to pass through simultaneously. The access and ramp need to be designed and/or managed to allow for the above-mentioned vehicles to pass simultaneously.*
2. *Dimensions and swept paths for ambulance bay under porte cochere are not provided. Section 6.1 of traffic report states that the porte cochere will have 2 waiting bays, one for ambulance and the other for shuttle bus pick up. While swept paths for B99 vehicles have been provided, additional information such as dimensions of the waiting bay and swept paths for bus and ambulance in/out of existing access is to be provided.*

Raising the staff numbers was discussed within a meeting between the client and the Lane Cove Council which is discussed in Section 1.4.

1.2 Loading Dock Management Plan

A swept path assessment was undertaken using a typical Medium Rigid Vehicle (MRV) and a typical B99 vehicle to determine whether two-way traffic flow can be accommodated by the proposed ramp design.

The assessment indicates that the ramp is unable to accommodate the two-way traffic flow. However, due to site limitations, the ramp cannot be widened.

Therefore, a Loading Dock Management Plan is proposed to effectively manage the ingress and egress movement of the medium rigid vehicle and provide traffic management measures for vehicles entering and exiting the proposed car park.

The management system will be controlled by a traffic light system. Traffic lights with loop systems will be placed at the basement entry (00 ground level) and within the basement for both the carpark and the loading bay (-01 basement level). Priority will be given to users entering the basement to avoid unnecessary queuing on Fig Tree Street. If the loop system is activated from the carpark the entry light will change red allowing time for a vehicle to egress the building. Similarly, the loading dock will undergo the same scenario. In all situations the traffic light system will be calibrated to allow enough time for a vehicle to exit the building before it reverts to its default phase.

To prevent further conflict Uniting's delivery and waste service contractors will use the loading bay during off-peak hours of 5:00-7:00am and between 10am-3pm. This will further prevent conflicts on Fig Tree Street and within the site.

1.3 Porte Cochere

The design of the Porte Cochere has been amended to allow for the passing of a Bariatric Ambulance and a Toyota Coaster Minibus to access the Porte Cochere while allowing a B99 vehicle to pass. The two waiting bays have been redesigned to allow vehicles to ingress and egress the spaces while the ambulance/ minibus bay is in use.

The updated swept path analysis for the Porte Cochere is shown in Attachment 2.

1.4 Staff Number Revision

The amount of working staff has also been increased due to updated information from the client. The revised number of staff is now 56, therefore requiring 28 spaces. The provided parking numbers do not need to be changed as the new requirement does not exceed it. Table 1 summarises the new parking requirements.

Table 1 – Car Parking Requirement and Provision

Number of beds/ staff		SEPP Parking Rate (min)	Parking Requirement (min)	Provided
122 beds	@	1 space / 10 beds	13	**45**
20 beds	@	1 space / 15 beds	2	
56 staff	@	1 space / 2 staff	28	
Total			**43**	

2. Conclusion

ptc. has assessed the proposal in light of Council's comments and based on the traffic management proposed above, we conclude that the development is deemed to meet the intent of AS2890.1:2004 and AS2890.2:2018.

If you have any enquiries relating to parking or traffic matter, please contact our office on (02) 8920 0800.

Regards,

Jeremey.M

Jeremey Myaskovetskiy

Traffic Engineer

for

Steve Wellman

Senior Traffic Engineer

Document Control: Prepared by *JM* on *13 November 2020*. Reviewed by *SW* on *13 November 2020*.

© Copyright; **ptc.**

Attachment 1 Architectural Plans

LEGEND

- AMENITIES
- BOH
- COMMUNAL
- EXTERNAL
- GENERAL
- HOUSEHOLD 1
- HOUSEHOLD 2
- HOUSEHOLD 3
- HOUSEHOLD 4
- HOUSEHOLD 5
- MULTI-PURPOSE
- NONE
- SPECIALTY
- STAFF FACILITIES

BEDROOMS

LEVEL	CAREHOUSE	BED COUNT
GROUND FLOOR	HOUSEHOLD 1	20
LEVEL 01	HOUSEHOLD 2	20
LEVEL 01	HOUSEHOLD 3	20
LEVEL 02	HOUSEHOLD 4	20
LEVEL 02	HOUSEHOLD 5	20
TOTAL BEDS		100

NOTE

THIS BUILDING INCORPORATES A FIRE SPRINKLER SYSTEM THROUGHOUT IN ACCORDANCE WITH THE REQUIREMENTS OF CLAUSE 55 OF THE STATE ENVIRONMENTAL PLANNING POLICY (HOUSING FOR SENIORS OR PEOPLE WITH A DISABILITY) 2004 AND PART E1.5 OF THE BUILDING CODE OF AUSTRALIA 2019.

architecture
interior design
project management
NSW ARB REG ARCHITECT: G. OLLERTON #7621
ACN: 001 595 268 ABN: 44 001 595 268 morrisondesign@mdpa.com.au
Suite 302 69 Christie Street St. Leonards NSW 2065 | 02 99665566 | www.mdpa.com.au

CLIENT
Uniting

PROJECT
UNITING St COLUMBA'S
11-15 FIG TREE STREET, LANE COVE
LOT 2 DP184731
LOTS A, B, C & D DP385033
LOTS 1, 2 & 3 DP339444

© Copyright
These drawings and designs and the copyright thereof are the property of Morrison Design Partnership Pty. Ltd. and must not be used retained or copied without the written permission of Morrison Design Partnership Pty. Ltd. ACN 001 595 288.
BIM 360://3108 - Uniting St Columba Lane Cove/3108 - Uniting St Columbia CENTRAL(V20).rvt

DRAWING TITLE
LEVEL 00 -GROUND FLOOR PLAN

N

REV	DATE	AMENDMENT	INITIALS	CHECK
DA01	2020-08-11	DA ISSUE	MM	
DA02	2020-08-24	DA ISSUE	MM	
DA03	2020-09-04	DA ISSUE	MM	
DA04	2020-11-10	REV DA ISSUE - Boundaries, Trees, Entry Driveway altered	MM	

PROJECT NO.	DRAWING NO.	REVISION
3108	DA102	DA04
SCALE	As indicated @ A1	
DRAWN		
PROJECT PRINCIPLE	G.OLLERTON	
DATE	27.10.2016	

Morrison Design Partnership
ARCHITECTS
Since 1969

D FLOOR PLAN - GROUND FLOOR

SCALE 1 : 200

1:200 — 0 2 4 6 8 10 m

LEGEND

- AMENITIES
- BOH
- COMMUNAL
- EXTERNAL
- GENERAL
- HOUSEHOLD 1
- HOUSEHOLD 2
- HOUSEHOLD 3
- HOUSEHOLD 4
- HOUSEHOLD 5
- MULTI-PURPOSE
- NONE
- SPECIALTY
- STAFF FACILITIES

BEDROOMS

LEVEL	CAREHOUSE	BED COUNT
GROUND FLOOR	HOUSEHOLD 1	20
LEVEL 01	HOUSEHOLD 2	20
LEVEL 01	HOUSEHOLD 3	20
LEVEL 02	HOUSEHOLD 4	20
LEVEL 02	HOUSEHOLD 5	20
TOTAL BEDS		100

NOTE

THIS BUILDING INCORPORATES A FIRE SPRINKLER SYSTEM THROUGHOUT IN ACCORDANCE WITH THE REQUIREMENTS OF CLAUSE 55 OF THE STATE ENVIRONMENTAL PLANNING POLICY (HOUSING FOR SENIORS OR PEOPLE WITH A DISABILITY) 2004 AND PART E1.5 OF THE BUILDING CODE OF AUSTRALIA 2019.

architecture
interior design
project management
NSW ARB REG ARCHITECT: G. OLLERTON #7621
ACN: 001 595 268 ABN: 44 001 595 268 morrisondesign@mdpa.com.au
Suite 302 69 Christie Street St. Leonards NSW 2065 | 02 99665566 | www.mdpa.com.au

CLIENT
Uniting

PROJECT
UNITING St COLUMBA'S
11-15 FIG TREE STREET, LANE COVE
LOT 2 DP184731
LOTS A, B, C & D DP385033
LOTS 1, 2 & 3 DP339444

© Copyright
These drawings and designs and the copyright thereof are the property of Morrison Design Partnership Pty. Ltd. and must not be used retained or copied without the written permission of Morrison Design Partnership Pty. Ltd. ACN 001 595 288.
BIM 360://3108 - Uniting St Columba Lane Cove/3108 - Uniting St Columbia CENTRAL(V20).rvt

DRAWING TITLE
LEVEL 00 -GROUND FLOOR PLAN

N

REV	DATE	AMENDMENT	INITIALS	CHECK
DA01	2020-08-11	DA ISSUE	MM	
DA02	2020-08-24	DA ISSUE	MM	
DA03	2020-09-04	DA ISSUE	MM	
DA04	2020-11-10	REV DA ISSUE - Boundaries, Trees, Entry Driveway altered	MM	

PROJECT NO.	DRAWING NO.	REVISION
3108	DA102	DA04
SCALE	As indicated @ A1	
DRAWN		
PROJECT PRINCIPLE	G.OLLERTON	
DATE	27.10.2016	

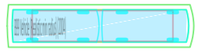
Morrison Design Partnership
ARCHITECTS
Since 1969

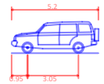
Attachment 2 Swept Path Assessment

comments

A3

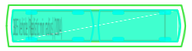
VEHICLE PROFILES

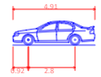




B99 Vehicle (Realistic min radius) (2004)

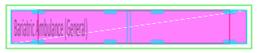
Overall Length	5.200m
Overall Width	1.940m
Overall Body Height	1.878m
Min Body Ground Clearance	0.272m
Track Width	1.840m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	6.250m

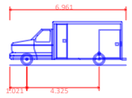




B85 Vehicle (Realistic min radius) (2004)

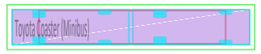
Overall Length	4.910m
Overall Width	1.870m
Overall Body Height	1.421m
Min Body Ground Clearance	0.159m
Track Width	1.770m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	5.750m

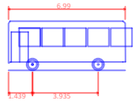




Bariatric Ambulance (General)

Overall Length	6.961m
Overall Width	1.993m
Overall Body Height	2.600m
Min Body Ground Clearance	0.307m
Track Width	1.993m
Lock to lock time	4.00s
Wall to Wall Turning Radius	7.650m





Toyota Coaster (Minibus)

Overall Length	6.990m
Overall Width	2.095m
Overall Body Height	2.945m
Min Body Ground Clearance	0.437m
Track Width	1.990m
Lock to lock time	5.00s
Wall to Wall Turning Radius	7.200m

ptc.

Suite 502, 1 James Place
North Sydney NSW 2060

t +61 2 8920 0800

ptcconsultants.co

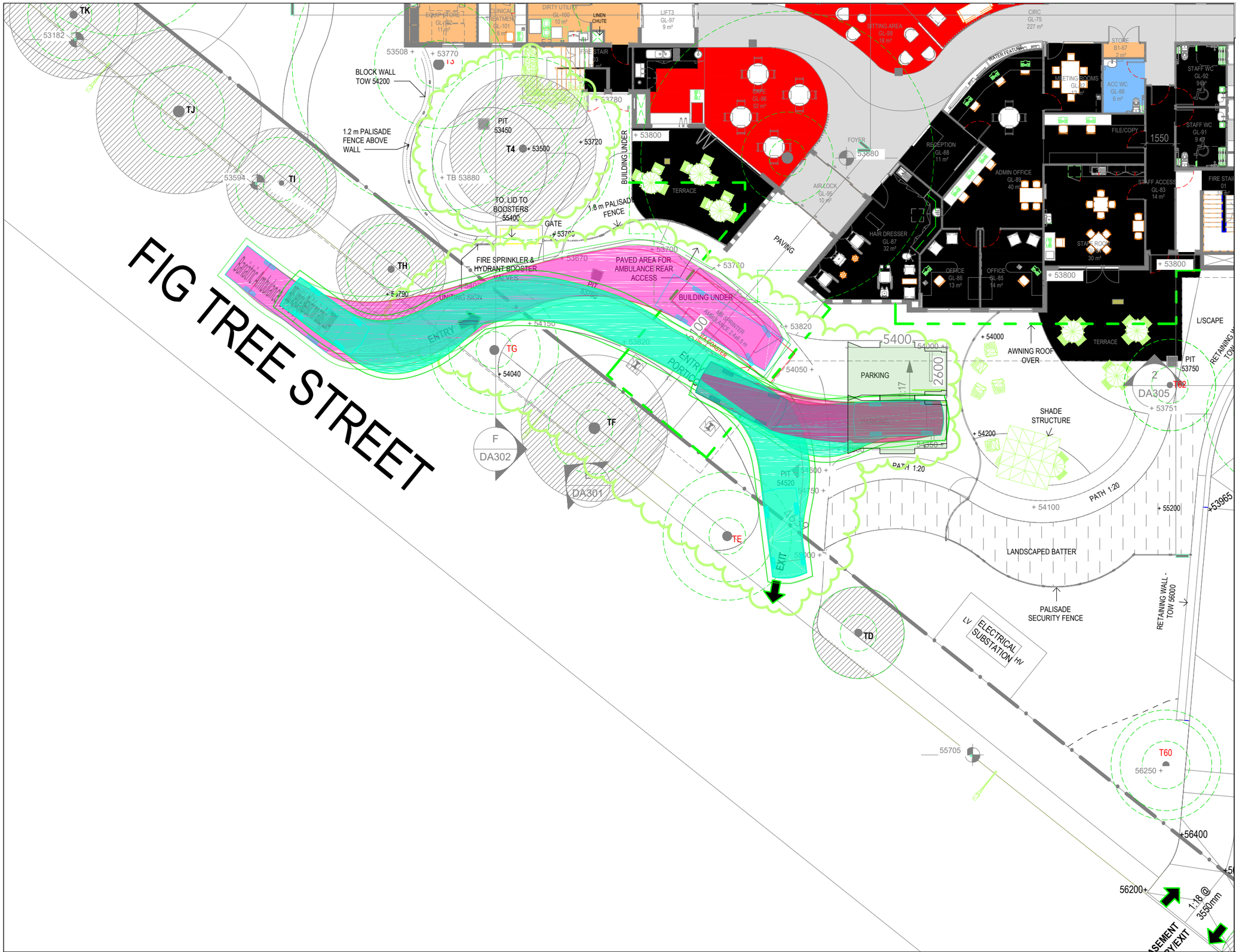
rev	date	comment / description	drawn	reviewed
4	13.11.2020	For Information	JM	SW
3	11.11.2020	For Information	JM	DS
2	11.11.2020	For Information	JM	SW
1	05.11.2020	For Information	JM	SW

project
Uniting St Columba's Lane Cove

drawing title
Swept Path Analysis Porte Cochere - Ambulance

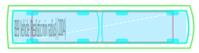
client	Uniting
drawing #	ptc-001
project #	2735
scale	1 : 200

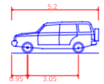
rev 4



comments A3

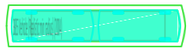
VEHICLE PROFILES

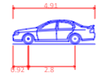




B99 Vehicle (Realistic min radius) (2004)

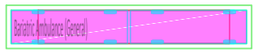
Overall Length	5.200m
Overall Width	1.940m
Overall Body Height	1.878m
Min Body Ground Clearance	0.272m
Track Width	1.840m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	6.250m

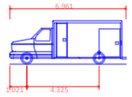




B85 Vehicle (Realistic min radius) (2004)

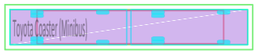
Overall Length	4.910m
Overall Width	1.870m
Overall Body Height	1.421m
Min Body Ground Clearance	0.159m
Track Width	1.770m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	5.750m

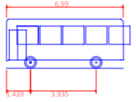




Bariatric Ambulance (General)

Overall Length	6.961m
Overall Width	1.993m
Overall Body Height	2.600m
Min Body Ground Clearance	0.307m
Track Width	1.993m
Lock to lock time	4.00s
Wall to Wall Turning Radius	7.650m





Toyota Coaster (Minibus)

Overall Length	6.990m
Overall Width	2.095m
Overall Body Height	2.945m
Min Body Ground Clearance	0.437m
Track Width	1.990m
Lock to lock time	5.00s
Wall to Wall Turning Radius	7.200m

ptc.

Suite 502, 1 James Place
North Sydney NSW 2060

t +61 2 8920 0800

ptcconsultants.co

rev	date	comment / description	drawn	reviewed
4	13.11.2020	For Information	JM	SW
3	11.11.2020	For Information	JM	DS
2	11.11.2020	For Information	JM	SW
1	05.11.2020	For Information	JM	SW

project
Uniting St Columba's Lane Cove

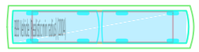
drawing title
Swept Path Analysis Porte Cochere - Ambulance / Waiting Bay

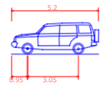
client	Uniting
drawing #	ptc-002
project #	2735
scale	1 : 200

rev 4

comments A3

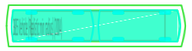
VEHICLE PROFILES

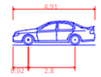




B99 Vehicle (Realistic min radius) (2004)

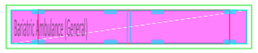
Overall Length	5.200m
Overall Width	1.940m
Overall Body Height	1.878m
Min Body Ground Clearance	0.272m
Track Width	1.840m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	6.250m

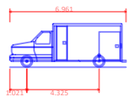




B85 Vehicle (Realistic min radius) (2004)

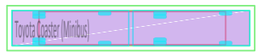
Overall Length	4.910m
Overall Width	1.870m
Overall Body Height	1.421m
Min Body Ground Clearance	0.159m
Track Width	1.770m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	5.750m

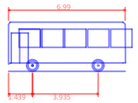




Bariatric Ambulance (General)

Overall Length	6.961m
Overall Width	1.993m
Overall Body Height	2.600m
Min Body Ground Clearance	0.307m
Track Width	1.993m
Lock to lock time	4.00s
Wall to Wall Turning Radius	7.650m





Toyota Coaster (Minibus)

Overall Length	6.990m
Overall Width	2.095m
Overall Body Height	2.945m
Min Body Ground Clearance	0.437m
Track Width	1.990m
Lock to lock time	5.00s
Wall to Wall Turning Radius	7.200m

ptc.

Suite 502, 1 James Place
North Sydney NSW 2060

t +61 2 8920 0800

ptcconsultants.co

rev	date	comment / description	drawn	reviewed
4	13.11.2020	For Information	JM	SW
3	11.11.2020	For Information	JM	DS
2	11.11.2020	For Information	JM	SW
1	05.11.2020	For Information	JM	SW

project
Uniting St Columba's Lane Cove

drawing title
Swept Path Analysis Porte Cochere - Ambulance / Waiting Bay

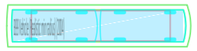
client	Uniting
drawing #	ptc-003
project #	2735
scale	1 : 200

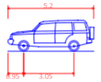
rev 4

comments

A3

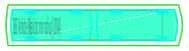
VEHICLE PROFILES





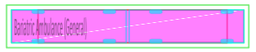
B99 Vehicle (Realistic min radius) (2004)

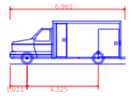
Overall Length	5.200m
Overall Width	1.940m
Overall Body Height	1.878m
Min Body Ground Clearance	0.272m
Track Width	1.840m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	6.250m



B85 Vehicle (Realistic min radius) (2004)

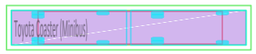
Overall Length	4.910m
Overall Width	1.870m
Overall Body Height	1.421m
Min Body Ground Clearance	0.159m
Track Width	1.770m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	5.750m

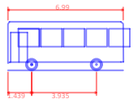




Bariatric Ambulance (General)

Overall Length	6.961m
Overall Width	1.993m
Overall Body Height	2.600m
Min Body Ground Clearance	0.307m
Track Width	1.993m
Lock to lock time	4.00s
Wall to Wall Turning Radius	7.650m





Toyota Coaster (Minibus)

Overall Length	6.990m
Overall Width	2.095m
Overall Body Height	2.945m
Min Body Ground Clearance	0.437m
Track Width	1.990m
Lock to lock time	5.00s
Wall to Wall Turning Radius	7.200m

ptc.

Suite 502, 1 James Place
North Sydney NSW 2060

t +61 2 8920 0800

ptcconsultants.co

rev	date	comment / description	drawn	reviewed
4	13.11.2020	For Information	JM	SW
3	11.11.2020	For Information	JM	DS
2	11.11.2020	For Information	JM	SW
1	05.11.2020	For Information	JM	SW

project
Uniting St Columba's Lane Cove

drawing title
Swept Path Analysis Porte Cochere - Toyota Coaster

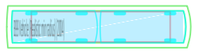
client	Uniting
drawing #	ptc-004
project #	2735
scale	1 : 200

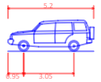
rev 4

comments

A3

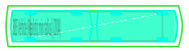
VEHICLE PROFILES





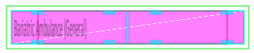
B99 Vehicle (Realistic min radius) (2004)

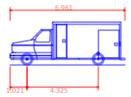
Overall Length	5.200m
Overall Width	1.940m
Overall Body Height	1.878m
Min Body Ground Clearance	0.272m
Track Width	1.840m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	6.250m



B85 Vehicle (Realistic min radius) (2004)

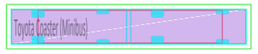
Overall Length	4.910m
Overall Width	1.870m
Overall Body Height	1.421m
Min Body Ground Clearance	0.159m
Track Width	1.770m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	5.750m

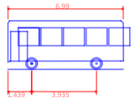




Bariatric Ambulance (General)

Overall Length	6.961m
Overall Width	1.993m
Overall Body Height	2.600m
Min Body Ground Clearance	0.307m
Track Width	1.993m
Lock to lock time	4.00s
Wall to Wall Turning Radius	7.650m





Toyota Coaster (Minibus)

Overall Length	6.990m
Overall Width	2.095m
Overall Body Height	2.945m
Min Body Ground Clearance	0.437m
Track Width	1.990m
Lock to lock time	5.00s
Wall to Wall Turning Radius	7.200m

ptc.

Suite 502, 1 James Place
North Sydney NSW 2060

t +61 2 8920 0800

ptcconsultants.co

rev	date	comment / description	drawn	reviewed
4	13.11.2020	For Information	JM	SW
3	11.11.2020	For Information	JM	DS
2	11.11.2020	For Information	JM	SW
1	05.11.2020	For Information	JM	SW

project

Uniting St Columba's Lane Cove

drawing title

Swept Path Analysis Porte Cochere - Toyota Coaster / Waiting Bays

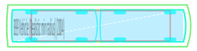
client	Uniting
drawing #	ptc-005
project #	2735
scale	1 : 200

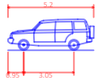
rev 4

comments

A3

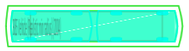
VEHICLE PROFILES





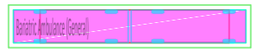
B99 Vehicle (Realistic min radius) (2004)

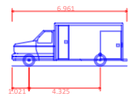
Overall Length	5.200m
Overall Width	1.940m
Overall Body Height	1.878m
Min Body Ground Clearance	0.272m
Track Width	1.840m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	6.250m



B85 Vehicle (Realistic min radius) (2004)

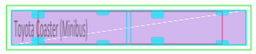
Overall Length	4.910m
Overall Width	1.870m
Overall Body Height	1.421m
Min Body Ground Clearance	0.159m
Track Width	1.770m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	5.750m

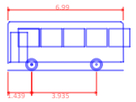




Bariatric Ambulance (General)

Overall Length	6.961m
Overall Width	1.993m
Overall Body Height	2.600m
Min Body Ground Clearance	0.307m
Track Width	1.993m
Lock to lock time	4.00s
Wall to Wall Turning Radius	7.650m





Toyota Coaster (Minibus)

Overall Length	6.990m
Overall Width	2.095m
Overall Body Height	2.945m
Min Body Ground Clearance	0.437m
Track Width	1.990m
Lock to lock time	5.00s
Wall to Wall Turning Radius	7.200m

ptc.

Suite 502, 1 James Place
North Sydney NSW 2060

t +61 2 8920 0800

ptcconsultants.co

rev	date	comment / description	drawn	reviewed
4	13.11.2020	For Information	JM	SW
3	11.11.2020	For Information	JM	DS
2	11.11.2020	For Information	JM	SW
1	05.11.2020	For Information	JM	SW

project

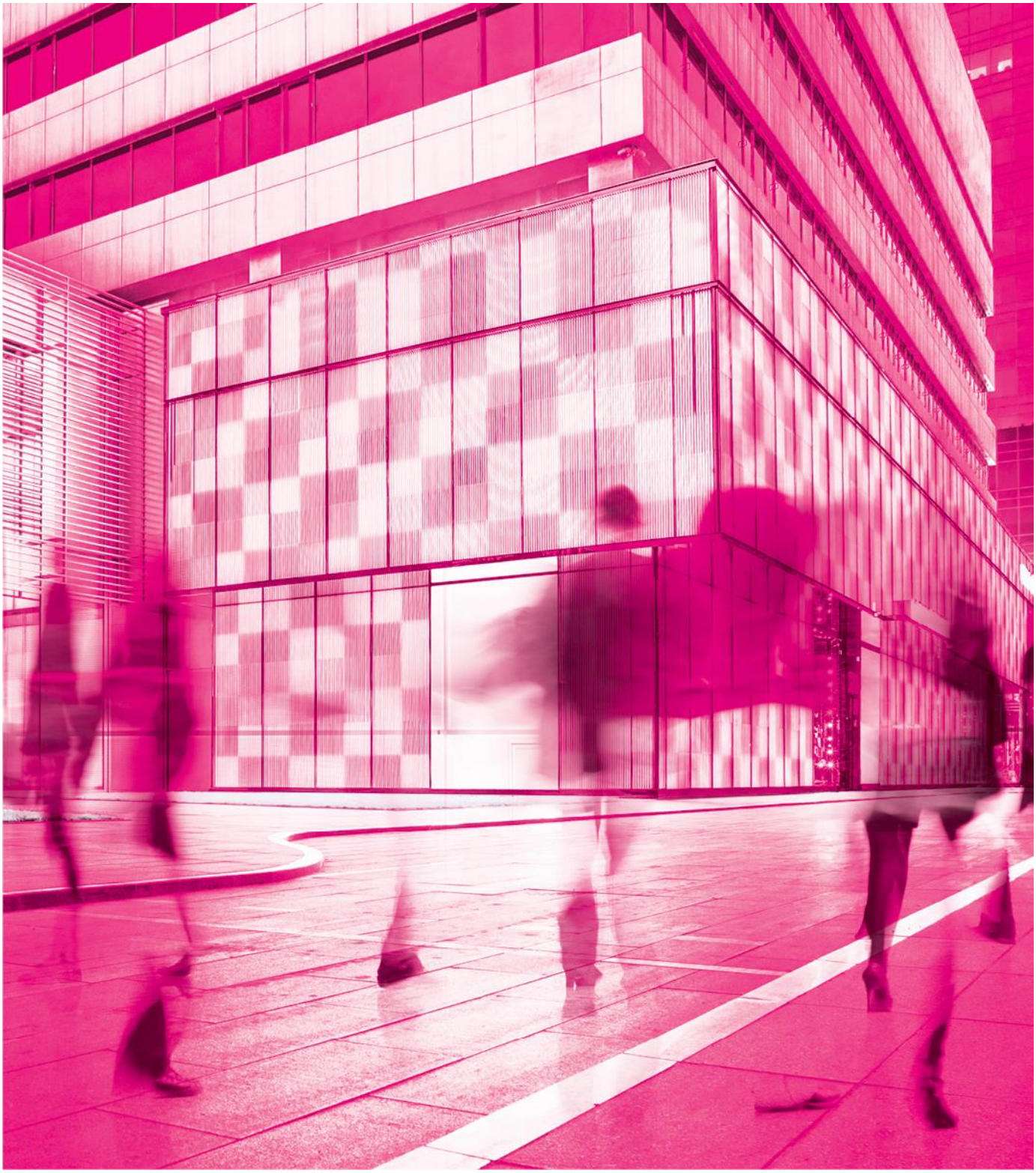
Uniting St Columba's Lane Cove

drawing title

Swept Path Analysis Porte Cochere - Toyota Coaster / Waiting Bays

client	Uniting
drawing #	ptc-006
project #	2735
scale	1 : 200

rev 4



Traffic Impact Assessment;

St Columba's Expansion

For Uniting
07 September 2020

parking;
traffic;
civil design;
wayfinding;

ptc.

ptc.

Document Control

St Columba's Expansion, Traffic Impact Assessment

Issue	Date	Issue Details	Author	Reviewed	For the attention of
1	10/12/19	Draft Issue	SC/EL	SW	Sally Bassett
2	05/08/2020	Draft Issue	JM	DS	Sally Bassett
3	21.08.2020	Final Issue	JM	DS	Sally Bassett
4	25/08/2020	Final Issue	SC	DS	Sally Bassett
5	07/09/2020	Final Issue	JM	SW	Sally Bassett

Contact

Steve Wellman
+61 2 8920 0800
+61 421 810 979
steve.wellman@ptcconsultants.co

COMMERCIAL IN CONFIDENCE

The information contained in this document, including any intellectual property rights arising from designs developed and documents created, is confidential and proprietary to ptc.

This document may only be used by the person/organisation to whom it is addressed for the stated purpose for which it is provided and must not be imparted to or reproduced, in whole or in part, by any third person without the prior written approval of a ptc. authorised representative. ptc. reserves all legal rights and remedies in relation to any infringement of its rights in respect of its intellectual property and/or confidential information.

© 2019

ptc.
Suite 502, 1 James Place
North Sydney NSW 2060
info@ptcconsultants.co
t + 61 2 8920 0800
ptcconsultants.co

Contents

1. Introduction 1

1.1 Project Summary 1
1.2 Purpose of this Report 2

2. Background Information 3

2.1 Site Context 3
2.2 Development Site 4
2.3 Development Proposal 5

3. Existing Transport Facilities 6

3.1 Road Hierarchy 6
3.2 Public Transport 9
3.2.1 Bus Services 10
3.3 Active Transport 11
3.3.1 Walking 12
3.3.2 Cycling 12

4. Parking Provision 14

4.1 Planning Policy 14
4.2 Car Parking Requirements 14
4.2.1 Accessible Car Parking Requirements 14
4.3 Bicycle Parking Requirements 15
4.4 Motorcycle Parking Requirements 15
4.5 Service Parking Requirements 16
4.6 Emergency Parking Requirements 16

5. Traffic Impact Assessment 17

5.1 Existing Traffic Generation 17
5.2 Proposed Traffic Generation 18
5.3 Existing Traffic Volumes and Distribution 18
5.3.1 Existing Peak Hour Traffic Volumes 19
5.4 Development Traffic Distribution 21
5.5 SIDRA Analysis 22

6. Access & Car Park Assessment 24

6.1 Vehicular Access and Circulation 24
6.1.1 Driveway Location and Ramp 24
6.2 Sight Distance 24
6.3 Service Vehicles 24
6.4 Car Park Arrangement 25
6.4.1 Typical Requirements 25
6.4.2 Accessible Parking 25
6.4.3 Bicycle Parking 25
6.4.4 Motorcycle Parking 25

7. Conclusion 26

© Copyright; **ptc.**

Attachment 1	SIDRA Analysis	27
Attachment 2	Architectural Plans	28
Attachment 3	Parking Assessment	29

Figure 1 – Site Location 1
Figure 2 – Local Land Use Map (Source: NSW ePlanning Spatial Viewer) 3
Figure 3 – Development Site 4
Figure 4 – Road Hierarchy (RMS Road Hierarchy Review) 6
Figure 5 – Centennial Avenue (Westbound towards Fig Tree Street) 7
Figure 6 – Fig Tree Street (Eastbound towards Burns Bay Road) 8
Figure 7 – Epping Road (Westbound from Munro Street) 8
Figure 8 – Penrose Street (Eastbound from Burns Bay Road) 9
Figure 9 – Surrounding Public Transport 9
Figure 10 – 800m radius of the subject site 12
Figure 11 – Surrounding cycle paths (Source: Ku-ring-gai Cycleways Map) 13
Figure 12 - Locations of intersection survey 19
Figure 13 – Existing AM Peak Hour Traffic Volume 20
Figure 14 – Existing PM Peak Hour Traffic Volume 20
Figure 15 - AM peak inbound trips 21
Figure 16 - PM peak outbound trips 22

Table 1 – Development Proposal Scope 5
Table 2 – Road Network Classificantion, Centennial Avenue 7
Table 3 – Road Network Classificantion, Fig Tree Street 7
Table 4 – Road Network Classificantion, Epping Road 8
Table 5 – Road Network Classificantion, Penrose Street 8
Table 6 – Bus Services Frequency 10
Table 7 – Car Parking Requirement and Provision 14
Table 8 – Accessible Parking Requirement and Provision 15
Table 9 – Bicycle Parking Requirement and Provision 15
Table 10 – Motorcycle Parking Requirement and Provision 15
Table 11 – Summary of Existing Traffic Generation 17
Table 12 – Development Trip Generation 18
Table 13 - Total Traffic Generation 18
Table 14 – Level of Service Criteria 22
Table 15 – SIDRA modelling results for pre and post-development 23

© Copyright; **ptc.**

1. Introduction

1.1 Project Summary

ptc. has been engaged by Uniting to prepare a Traffic and Parking Assessment to accompany a Development Application to Lane Cove Council for the expansion of an existing 42-bed residential aged-care facility (RACF), at 15 Fig Tree Street, Lane Cove (corner of Fig Tree Street and Centennial Avenue).

The location of the site is shown in Figure 1.

Figure 1 – Site Location

© Copyright; ptc.

1.2 Purpose of this Report

This report presents the following considerations in relation to the Traffic and Parking assessment of the proposal:

Section 2	A description of the project;
Section 3	A description of the road network serving the development property, and existing traffic volumes through key local intersections;
Section 4	Determination of the traffic activity associated with the development proposal, and the adequacy of the surrounding road network;
Section 5	Assessment of the proposed parking provision in the context of the relevant planning control requirements; and
Section 6	Assessment of the proposed car park, vehicular access and internal circulation arrangements in relation to compliance with the relevant standards, and Council policies.

© Copyright; ptc.

2. Background Information

2.1 Site Context

The site of the proposal lies within a Medium Density Residential Zone (R2), situated west of Lane Cove town centre. The local land use surrounding the subject site is shown in Figure 2.

Key features surrounding the site include:

- To the east lies a Neighbourhood Centre (B1), and further east, Lane Cove Local Centre (B2);
- To the north-east lies Public Recreation (RE1);
- To the north-west lies Light Industrial (IN2); and
- To the west lies more Public Recreation (RE1) and Environmental Conservation (E2).

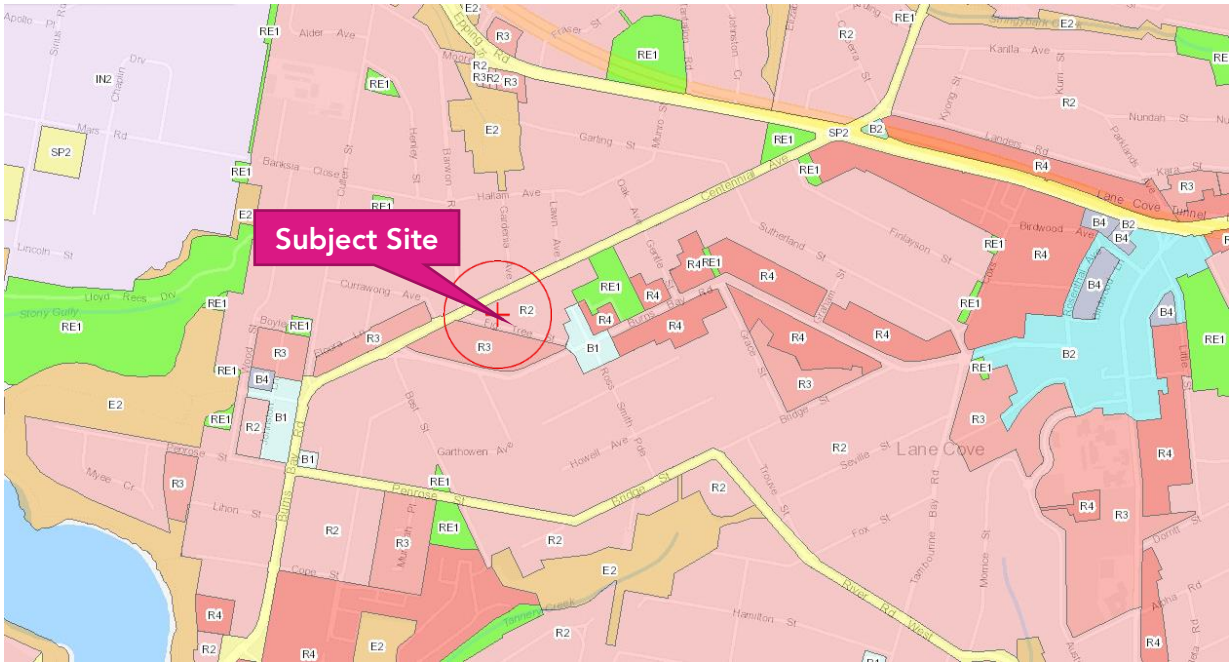


Figure 2 – Local Land Use Map (Source: NSW ePlanning Spatial Viewer)

© Copyright; ptc.

2.2 Development Site

The proposal relates to the following sites:

- DP184731 – LOT 2 (existing);
- Lot A DP385033 – LOT A, B (existing), C & D (expansion);
- DP339444 – LOT 1, 2 & 3 (expansion);
- DP346581 – LOT B (expansion);
- DP336859 – LOT C (expansion); and
- DP555562 – LOT 33 (expansion).

Figure 3 shows the extent of the site's boundaries.

Figure 3 – Development Site

© Copyright; ptc.

2.3 Development Proposal

The development proposal involves the expansion of a residential aged-care facility (RACF), with the yield as summarised in Table 1.

Table 1 – Development Proposal Scope

Component	Number of beds
Existing beds	42
Proposed beds (additional)	100
Total	**142**

The site will be developed across 11 lots with a site area of 8,004m^2. The development involves a total GFA of 7992m^2. There will be 142 beds within the facility of which 20 will be allocated to dementia patients.

The site includes an existing basement carpark with 10 spaces. An additional 33 car spaces are proposed within a new basement carpark for staff, residents and visitors, which includes a loading dock and bus bay. The two basement car parks will have separate driveways located along Fig Tree Street.

There will also be a porte cochere with access from Fig Tree Street for an ambulance and minibus set down area and two short stay set down spaces.

© Copyright; ptc.

3. Existing Transport Facilities

3.1 Road Hierarchy

The NSW administrative road hierarchy comprises the following road classifications, which align with the generic road hierarchy as follows:

State Roads - Freeways and Primary Arterials (RMS Managed)

Regional Roads - Secondary or sub arterials (Council Managed, partly funded by the State)

Local Roads - Collector and local access roads (Council Managed)

Figure 4 below, shows the classification of the surrounding roads.

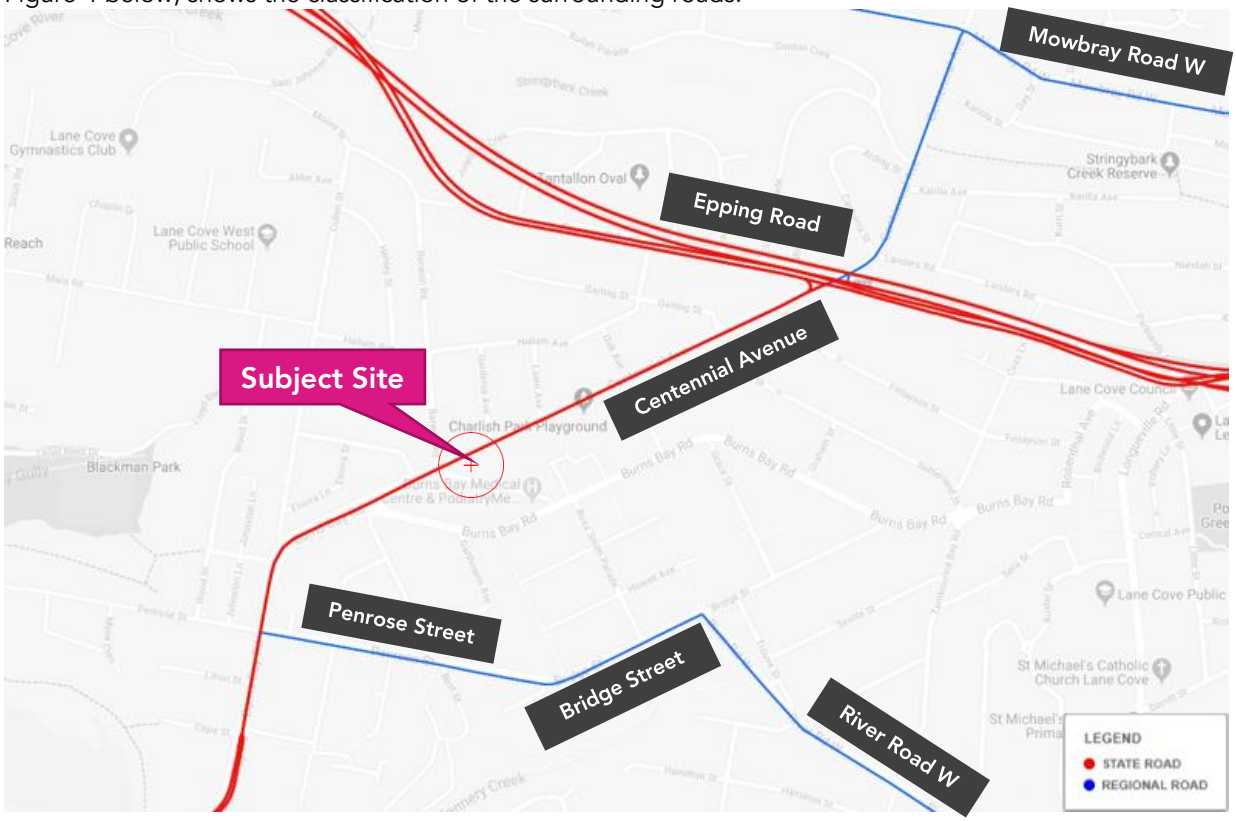


Figure 4 – Road Hierarchy (RMS Road Hierarchy Review)

© Copyright; ptc.

Table 2 – Road Network Classificantion, Centennial Avenue

Centennial Avenue	
Road Classification	State Road
Alignment	North-East – South-West
Number of Lanes	2 lanes in each direction
Carriageway Type	Undivided
Carriageway Width	11m
Speed Limit	60km/h
School Zone	No
Parking Controls	No Stopping on both sides in the immediate vicinity of site
Forms Site Frontage	Yes

Figure 5 – Centennial Avenue (Westbound towards Fig Tree Street)

Table 3 – Road Network Classificantion, Fig Tree Street

Fig Tree Street	
Road Classification	Local Road
Alignment	North-West – South-East
Number of Lanes	1 lane in each direction with parking lanes on either side of the carriageway
Carriageway Type	Undivided
Carriageway Width	10.5m
Speed Limit	50km/h
School Zone	No
Parking Controls	Unrestricted parking on both sides
Forms Site Frontage	Yes

© Copyright; ptc.

Figure 6 – Fig Tree Street (Eastbound towards Burns Bay Road)

Table 4 – Road Network Classificantion, Epping Road

Epping Road	
Road Classification	State Road
Alignment	East – West
Number of Lanes	1 lane with a bus lane in each direction
Carriageway Type	Divided
Carriageway Width	14m
Speed Limit	60km/h
School Zone	No
Parking Controls	No parking
Forms Site Frontage	No

Figure 7 – Epping Road (Westbound from Munro Street)

Table 5 – Road Network Classificantion, Penrose Street

Penrose Street	
Road Classification	Local Road (west of Burns Bay Road)/ Regional Road (east of Burns Bay Road)
Alignment	East – West
Number of Lanes	2 lanes in each direction

© Copyright; ptc.

Carriageway Type	Undivided
Carriageway Width	12m
Speed Limit	50km/h
School Zone	No
Parking Controls	Unrestricted parking on both sides
Forms Site Frontage	No

Figure 8 – Penrose Street (Eastbound from Burns Bay Road)

3.2 Public Transport

The site is well serviced by bus services along Burn bay Road and Epping Road. This is shown in Figure 9

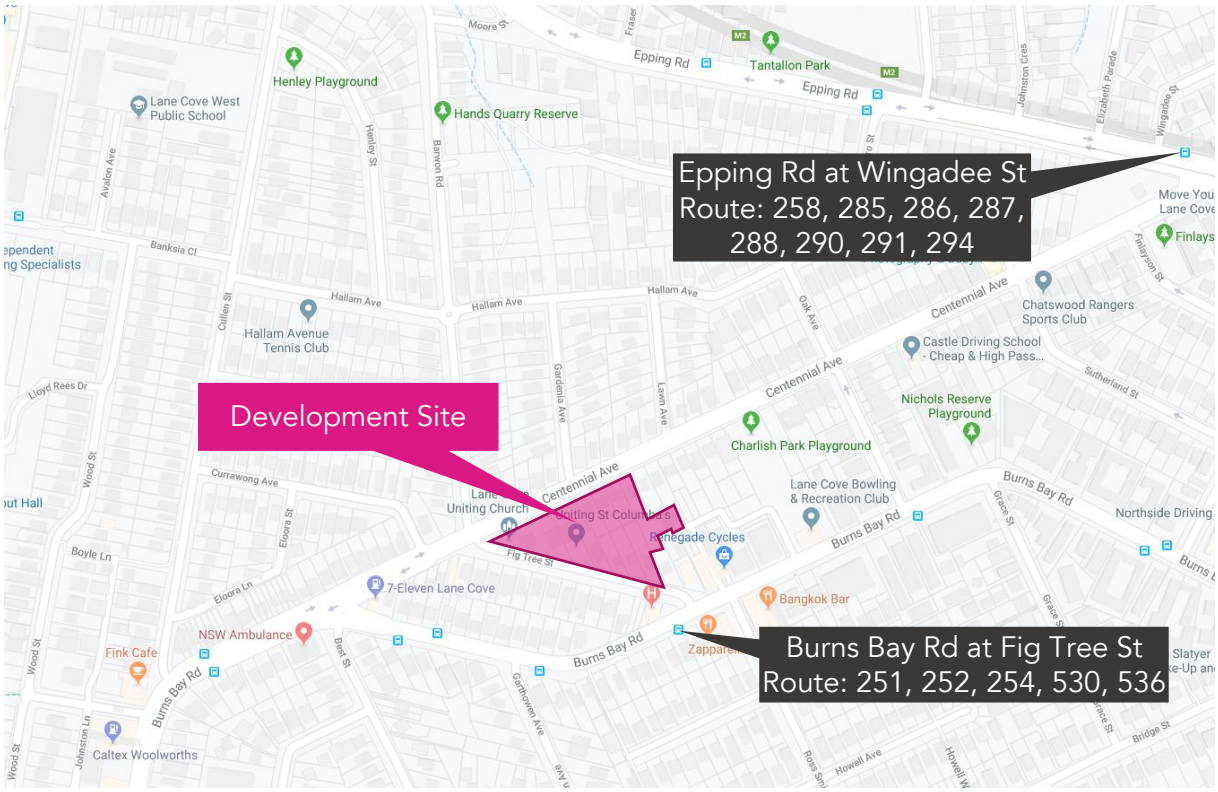


Figure 9 – Surrounding Public Transport

© Copyright; ptc.

3.2.1 Bus Services

The closest bus stop is located 70 metres away on Burns Bay Road. In addition, the bus corridor on Epping Road is located 750m away (within walking distance). The frequency of bus services is summarised in Table 6.

Table 6 – Bus Services Frequency

Route	Frequency (approx.)	Coverage	Stop Location
251	Only operate every 10 minutes towards City from 6:16am to 9:46am and every 15 minutes outbound from 4:08pm to 7:38pm Mon-Fri	Lane Cove West to City Wynyard via Freeway	70m
252	Every 30 minutes from 5:40am to 12:02am Mon-Fri Every 30 minutes from 7:14am to 12:27am on weekends	Gladesville to City King Street Wharf via North Sydney	70m
254	Every 30 minutes during peak hours and hourly during the off peaks from 7:32am to 11:37pm Mon-Fri Hourly from 7:38am to 11:37pm on weekends	Riverview to McMahons Point	70m
258	Only operate two services towards Lane Cove West on 6:27am and on 8:00am as well as two services towards Chatswood on 4:10pm and on 5:05pm Mon-Fri	Chatswood to Lane Cove West	750m
285	Only operate every 15 minutes from 6:22am to 9:15am and from 4:07pm to 6:52pm Mon-Fri	Lane Cove West to City Wynyard via Freeway	750m
286	Only operate every 20 minutes from 6:20am to 7:51am towards Milsons Point and every 30 minutes from 3:20pm to 6:32pm towards Denistone East Mon-Fri	Denistone East to Milsons Point via St Leonards & North Sydney	750m
287	Only operate every 20 minutes from 6:21am to 7:57am towards Milsons Point and every 30 minutes from 4:47pm to 6:12pm towards Ryde Mon-Fri	Ryde to Milsons Point via St Leonards & North Sydney	750m
288	Every 15 minutes from 5:48am to 12:47am Mon-Fri Every 15 minutes from 5:34am to 11:30pm on weekends	Epping to City Erskine St	750m
290	Only operate every 30 minutes from 4:35am to 6:00am Mon-Fri and additional hourly service from 12:05am to 3:20am on weekends	Epping to City Erskine St via Macquarie University & North Sydney	750m

© Copyright; ptc.

291	Every 30 minutes during peak and hourly during off-peaks from 6:28am to 11:02pm Mon-Fri Hourly from 7:08am to 11:02pm on weekends	Epping to McMahons Point	750m
294	Only operate every 15 minutes from 6:42am to 9:32am two way and from 4:02pm to 7:02pm towards Wynyard Mon-Fri	Macquarie University to City Wynyard	750m
530	Every 30 minutes from 6:00am to 11:10pm Mon-Fri Every 30 minutes from 6:10am to 11:13pm on weekends	Burwood to Chatswood	70m
536	Only operate every 20 minutes from 5:32am to 9:05am and from 3:10pm to 6:55pm Mon-Fri	Gladesville to Chatswood via Hunters Hill	70m

The bus services provide an excellent connection to the nearby suburbs.

3.3 Active Transport

In addition to public transport, the locality has been assessed for its active transport potential. When defining accessibility, the NSW Guidelines to Walking & Cycling (2004) suggest that 400m-800m is a comfortable walking distance. The 800 m catchment is shown in Figure 10.

© Copyright; ptc.

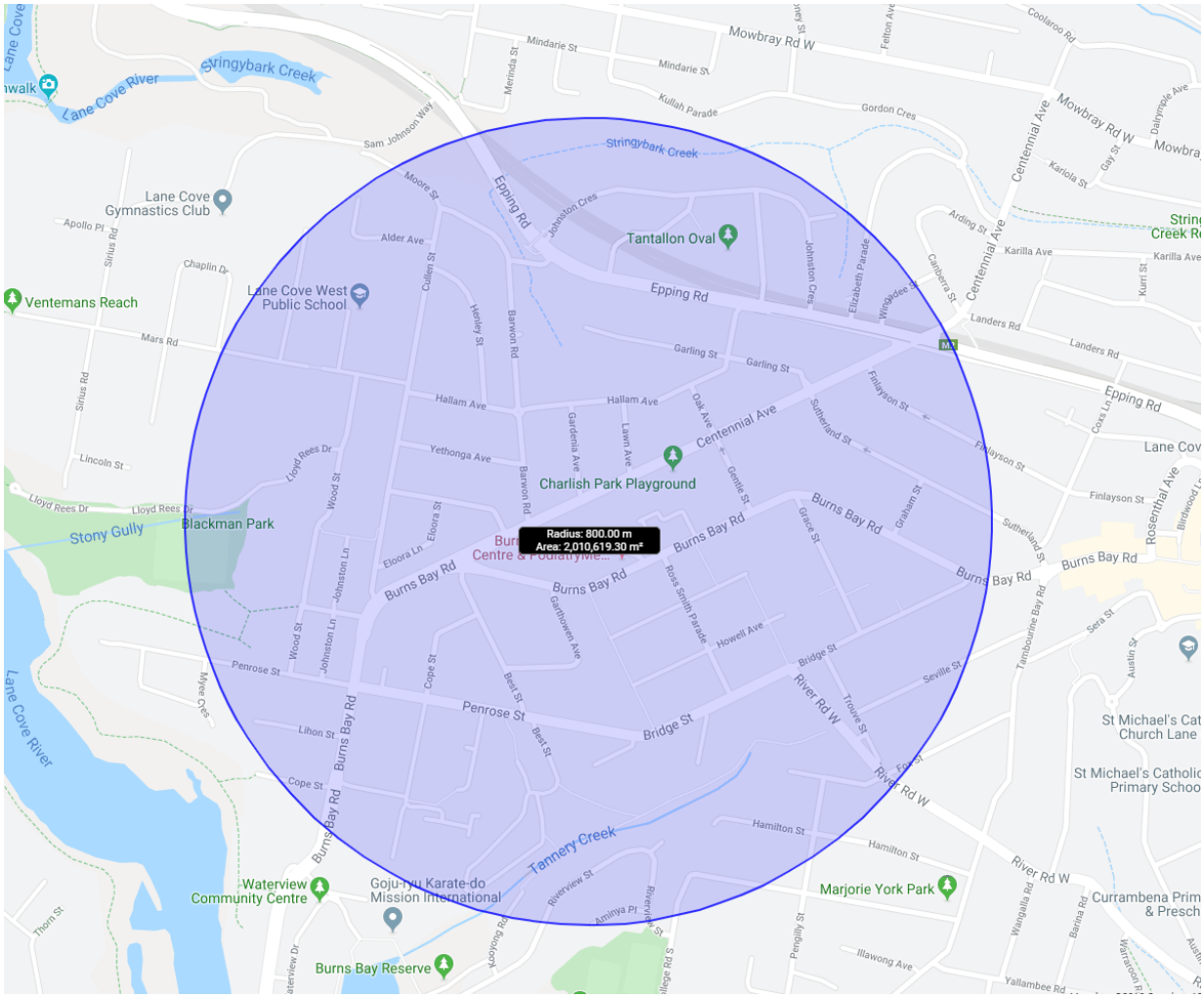


Figure 10 – 800m radius of the subject site

3.3.1 Walking

In terms of public infrastructure, the local road network offers a high level of amenity and safety for pedestrians, providing footpaths on either side of most roadways, pedestrian crossings, supporting signage and appropriate lighting throughout the locality.

3.3.2 Cycling

The subject site is located in proximity of a well-connected bicycle network (750m to Epping Road which is a major bicycle route). Figure 11 presents a screenshot of the cycle map published by Council. This will encourage and promote cycling as an alternative mode of transport for its occupants which is a healthy, low cost and environmentally friendly method of travel.

© Copyright; ptc.

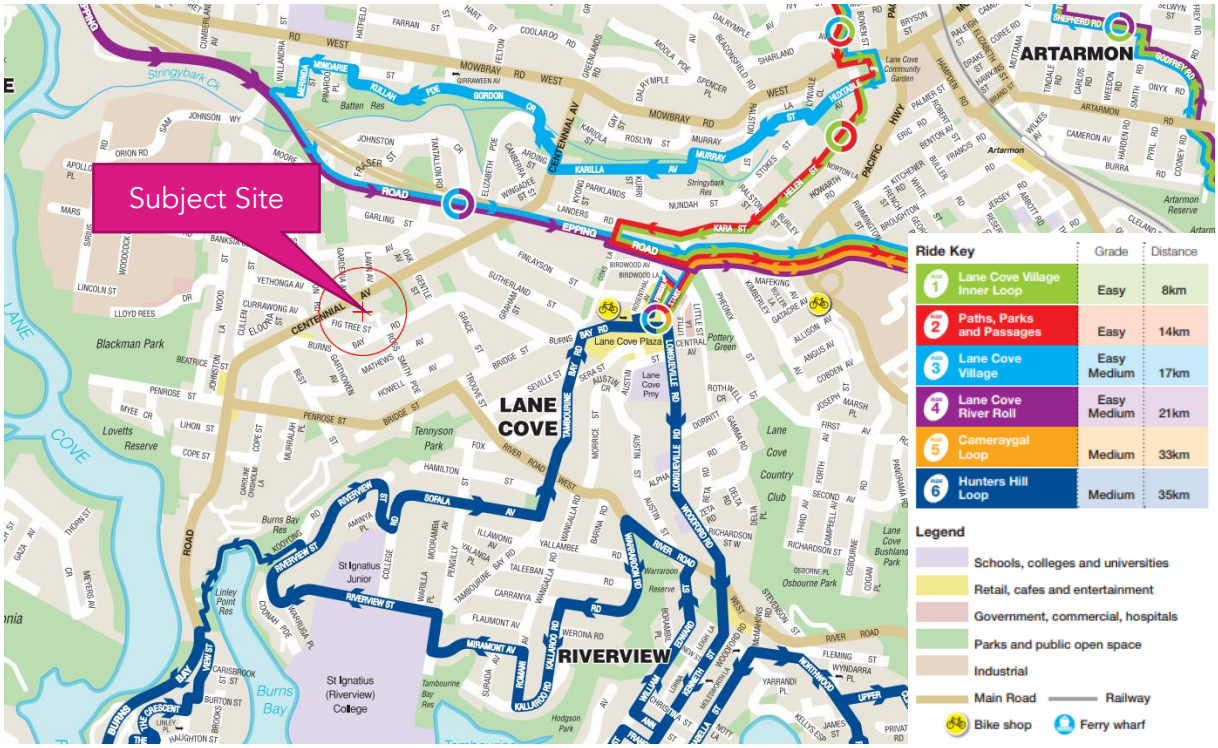


Figure 11 – Surrounding cycle paths (Source: Ku-ring-gai Cycleways Map)

© Copyright; ptc.

4. Parking Provision

4.1 Planning Policy

The proposed parking and servicing requirements of the development have been reviewed with reference to the following planning policies:

- State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004; and
- Lane Cove Development Control Plan (DCP) 2010 (amendment – July 2016).

4.2 Car Parking Requirements

The Lane Cove DCP refers to the State Environmental Planning Policy (SEPP) parking rates for special land uses. The development is to expend the nursing home facility to incorporate 100 new beds and as such, the minimum parking provision rates in the SEPP (Housing for Seniors or People with a Disability) 2004 have been adopted for the residential aged-care component, as follows:

Residents and visitors:

- 1 parking space for each 10 beds in the residential care facility (or 1 parking space for each 15 beds if the facility provides care only for persons with dementia); and
- 1 parking space for each 2 persons to be employed in connection with the development and on duty at any one time; and

The calculated rates which apply to the subject site are shown in Table 7.

Table 7 – Car Parking Requirement and Provision

Number of beds / staff		SEPP Parking Rate (min)	Parking Requirement (min)	Provided
122 beds	@	1 space / 10 beds	13	45
20 beds	@	1 space / 15 beds	2	
38 staff	@	1 space / 2 staff	19	
Total			34	

The development proposes 35 new parking spaces in addition to the 10 existing car spaces for residents, visitors and staff, exceeding the minimum required provision stipulated in the SEPP.

4.2.1 Accessible Car Parking Requirements

Accessible parking requirements are calculated based on the Building Code of Australia (BCA), as follows:

- BCA (Class 9C Aged Care Building): 1 accessible space per 100 car parking spaces

© Copyright; ptc.

Table 8 – Accessible Parking Requirement and Provision

Component		BCA Parking Rate (min)	Parking Requirement (min)	Provided
RACF	@	1 space / 100 car parking spaces	1	1
Total			1	

4.3 Bicycle Parking Requirements

As stipulated in the DCP, the bicycle parking requirements have been calculated in accordance with the NSW Planning Guidelines for Walking and Cycling. The requirements are summarised in Table 9 below.

Table 9 – Bicycle Parking Requirement and Provision

User Group	No. of dwellings/staff	Parking Rate (min)	Parking Requirement (min)	Provided
Resident/staff	140	3-5% of Dwellings	5	10
Visitors		3-5% of Dwellings	5	
Total			10	

4.4 Motorcycle Parking Requirements

Lane Cove Council DCP specifies the motorcycle parking requirements as follows:

- 1 motorcycle space per 15 car spaces for all types of development

The requirements are calculated in Table 10 below.

Table 10 – Motorcycle Parking Requirement and Provision

User Group	No. of Car Spaces	Parking Rate (min)	Parking Requirement (min)	Provided
Resident/staff	45	1 space / 15 car spaces	3	3
Total			3	

© Copyright; ptc.

4.5 Service Parking Requirements

Section 2.10 of the Lane Cove DCP stipulates the following requirements for service vehicle provisions:

- Parking areas shall be provided and designed to allow for access and loading by Council's waste collection contractor;
- All parking areas for delivery and service vehicles must be designed in accordance with AS2890.2:2002 Parking facilities – Off-street commercial vehicle facilities. On site delivery and service areas for residential flat buildings must be large enough to accommodate removal trucks.
- Developers should refer to Part Q – Waste Management & Minimisation for relevant dimensions and requirements.

4.6 Emergency Parking Requirements

The SEPP (Housing for Seniors or People with a Disability) 2004 requires 1 parking space suitable for an ambulance to be provided at a RACF. The ambulance space will be located at the building entry under a covered porte cochere.

© Copyright; ptc.

5. Traffic Impact Assessment

Generally, the traffic activity associated with a particular type of land use can be determined through a number of approaches. For the purposes of this assessment, the traffic activity related to the existing land use for the existing and post-development traffic generation is determined with reference to the following documents:

- RMS Guide to Traffic Generating Developments 2002 (RMS Guide); and
- RMS Technical Direction 2013/04a (TDT).

The technical direction contains the most recent RMS survey data for various land uses.

5.1 Existing Traffic Generation

The site is currently comprised of a residential aged care facility with a total of 42 dwellings and a church. The rates from the RMS Guide and the TDT have been adopted to estimate the traffic generated by the existing establishment. The rates have been summarised below:

- Housing for Aged and Disabled Persons:
    - 0.1-0.2 trips per dwelling in the evening peak hour (RMS Guide)
    - 0.4 peak hour vehicle trips per dwelling (TDT)

The TDT provides a more recent survey of traffic generation rates, however the survey data is broken down and shows that nursing homes with similar attributes and location observe trip generation closer to 0.2 trips per dwelling. Hence, for this report a generation rate of 0.2 will be used.

It should also be noted that the proposed expansion of the age care facility does not involve the church, i.e. there will not be any changes to the traffic generation as a result of the church and is therefore omitted in this study.

Table 11 summarises the proposed generated trips according to the abovementioned rates.

Table 11 – Summary of Existing Traffic Generation

Peak Hour	Number of Dwellings	Trip Generation Rate	Generated Trips
AM	42	0.2 trips per dwelling	9
PM		0.2 trips per dwelling	9

© Copyright; ptc.

5.2 Proposed Traffic Generation

The proposal for the development will cater for 100 new beds each within its own dwelling. Using the same methodology for the existing traffic generation rate mentioned in the section above, the proposed traffic generation is presented in Table 12 below.

Table 12 – Development Trip Generation

Peak Hour	Number of Dwellings	Trip Generation Rate	Generated Trips
AM	100	0.2 trips per dwelling	20
PM		0.2 trips per dwelling	20

The total trip generation created by the development can be calculated by adding the existing traffic generation and the proposed. Table 13 outlines the total amount of traffic generation.

Table 13 - Total Traffic Generation

	AM Peak	PM Peak
Existing Peak Hour Trips	9	9
Development Peak Hour Trips	20	20
Peak Hour Trips	**29**	**29**

5.3 Existing Traffic Volumes and Distribution

Surveys were conducted to assess the current traffic volumes of the two intersections on either side of Fig Tree Street. The surveys were conducted on Thursday, 13th February 2020, between 7:00-9:00am and 4:00pm-6:00pm at the following intersections:

- Centennial Ave / Barwon St / Fig Tree St
- Burns Bay Rd / Fig Tree St

The intersection survey locations are shown in Figure 12.

© Copyright; ptc.

Figure 12 - Locations of intersection survey

5.3.1 Existing Peak Hour Traffic Volumes

The peak hour for the overall traffic network was determined by summing all intersection movements within the network for each hour. The hour which has the highest total for both the morning and afternoon will be considered the AM and PM peak respectively. The two peak periods which were evaluated are:

- Morning Peak Period: 8:00am to 9:00am
- Afternoon Peak Period: 4:45pm to 5:45pm

It should be noted that the morning peak period lies on the final hour which was surveyed which suggests that there could be busier hour which follows.

The traffic volumes for the AM and PM peak hours are shown in Figure 13 and Figure 14 respectively.

© Copyright; ptc.

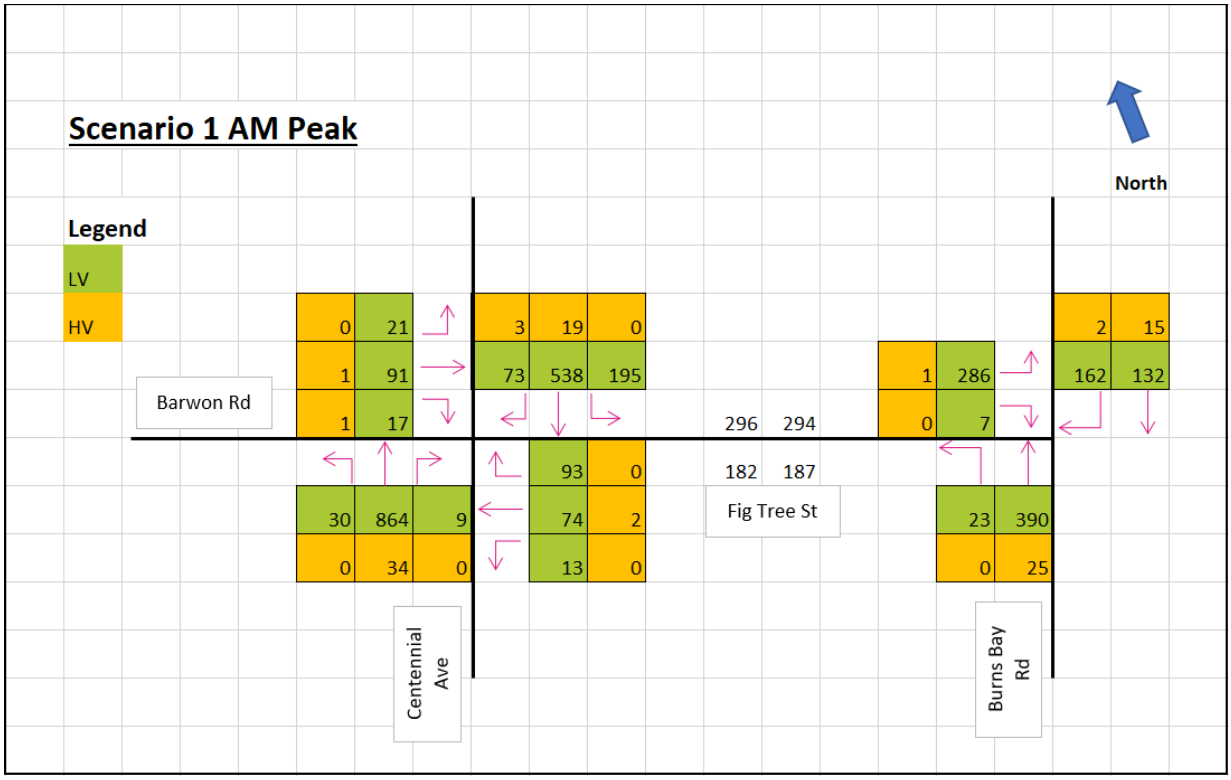


Figure 13 – Existing AM Peak Hour Traffic Volume

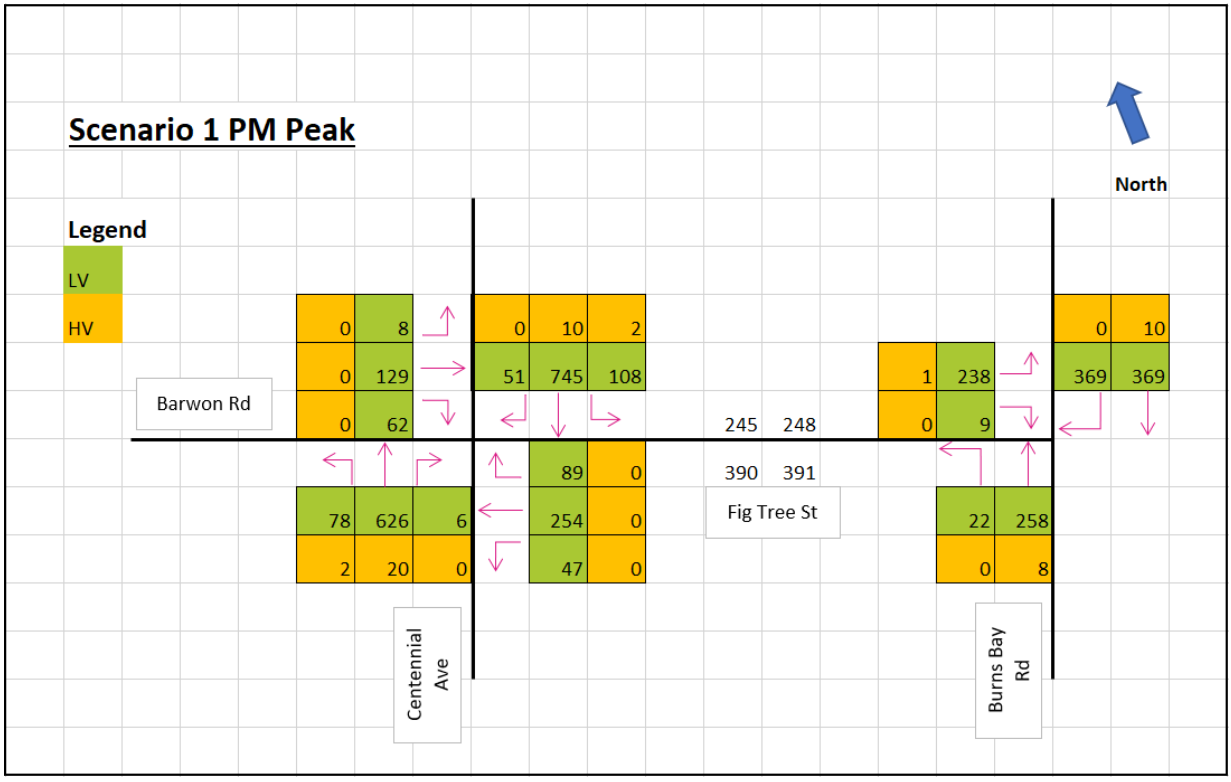


Figure 14 – Existing PM Peak Hour Traffic Volume

© Copyright; ptc.

5.4 Development Traffic Distribution

The following assumptions were made to determine the assignment of the additional trips generated by the proposed development:

- The proposed development will remain as housing for seniors and hence can be viewed as a place of residence and work. It can be assumed that there will be a 70% outbound and 30% inbound split in the AM peak and vice versa for the PM peak. Staff will arrive both in the AM and PM depending on working hours while the residents will generally leave in the morning and arrive in the afternoon. Visitors would be distributed over the course of the day and leaving within the hour of arrival generally.
- The site will also experience a small number of heavy vehicles (HV) for deliveries. The inbound and outbound split were considered as 50% each. This is due to HV vehicles arriving and leaving within the same hour. It is also assumed that HVs will enter and exit Fig Tree Street via Centennial Avenue.
- The Australian Bureau of Statistics (ABS) 2016 Census – Method of Travel to Work data was used to assess the directional split in the AM and PM peaks. Through the assessment of quickest routes for all Sydney regions which have significant vehicle trips (>10 trips) to the Lane Cove – Greenwich region a directional split was established. The directional split for both the AM inbound and PM outbound trip is shown in Figure 15 and Figure 16 respectively.

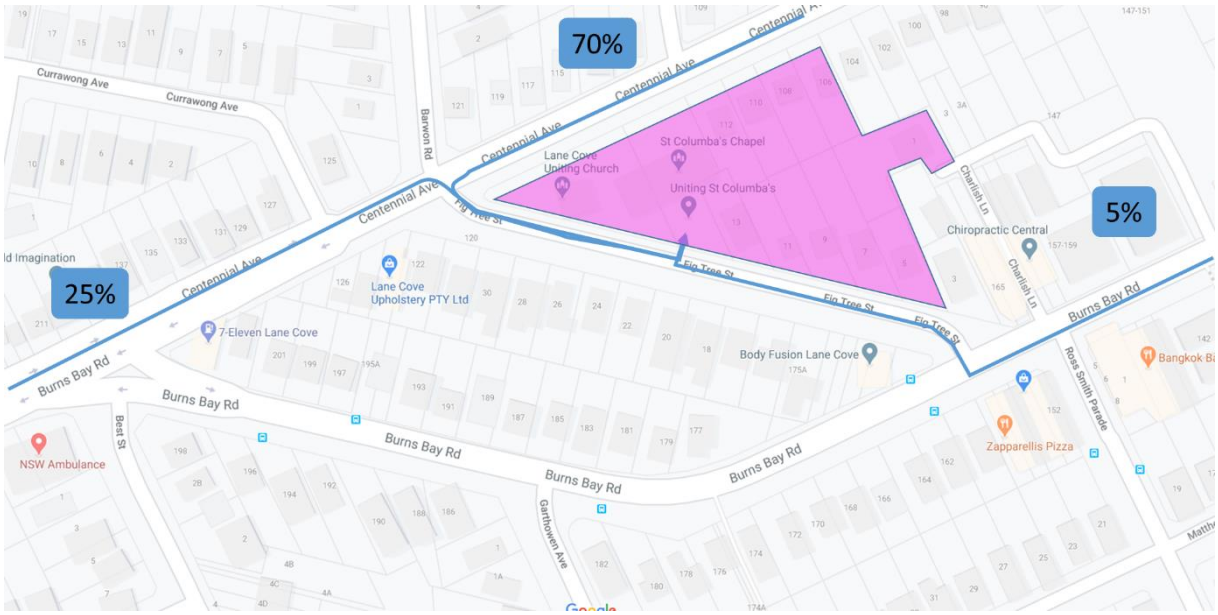


Figure 15 - AM peak inbound trips

© Copyright; ptc.

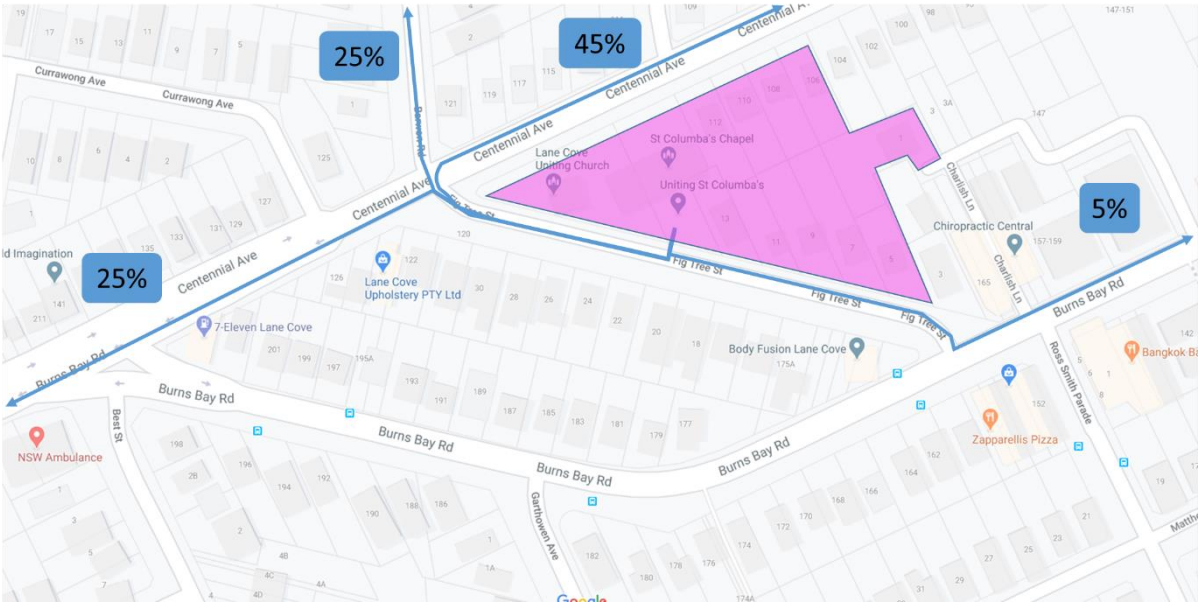


Figure 16 - PM peak outbound trips

5.5 SIDRA Analysis

In order to confirm the current operation of the intersection, an assessment has been undertaken using the SIDRA Intersection 8 modelling software, which presents a range of performance indicators (Level of Service, Average Delay, etc.).

Typically, there are four performance indicators used to summarise the performance of an intersection, being:

- Degree of Saturation – The total usage of the intersection expressed as a factor of 1 with 1 representing 100% use/saturation. (e.g. 0.8=80% saturation)
- Average Delay – The average delay encountered by all vehicles passing through the intersection. It is often important to review the average delay of each approach as a side road could have a long delay time, while the large free flowing major traffic will provide an overall low average delay.
- 95% Queue lengths (Q95) – is defined to be the queue length in metres that has only a 5-percent probability of being exceeded during the analysis time period. It transforms the average delay into measurable distance units.
- Level of Service (LoS) – This is a categorization of average delay, intended for simple reference. The RMS adopts the following bands:

The LoS criteria is shown in Table 14.

Table 14 – Level of Service Criteria

Level of Service	Average Delay (secs/veh)	Traffic Signals, Roundabout	Give Way & Stop Signs
A	<14	Good operation	
B	15 to 28	Good with acceptable delays & spare capacity	Acceptable delays & spare capacity

© Copyright; ptc.

C	29 to 42	Satisfactory	Satisfactory, but accident study required
D	43 to 56	Operating near capacity	Near capacity & accident study required
E	57 to 70	At capacity. At signals, incidents would cause excessive delays. Roundabouts require other control mode	At capacity, requires other control mode
F	>70	Extra capacity required	Extreme delay, major treatment required

The following intersections where analysed using SIDRA based on survey data collected on Thursday, 13th February 2020:

- Centennial Ave / Barwon St / Fig Tree St
- Burns Bay Rd / Fig Tree St

A summary of the modelling results for the existing and proposed post development traffic conditions are presented in Table 15.The full movement summary of the outputs from SIDRA along with the intersection layouts used are provided in Attachment 1.

Table 15 – SIDRA modelling results for pre and post-development

Intersection	Time	Period	Level of Service	Highest Average Delay (s)	Highest Degree of Saturation (%)	Longest 95% Queue Length (veh)
Centennial Ave / Barwon St / Fig Tree St	AM Peak	Existing	B	15.8	0.630	13 (12.1)
		Development	B	16.4	0.656	13 (12.6)
	PM Peak	Existing	B	26.1	0.784	20 (20.0)
		Development	B	27.1	0.797	21 (21.0)
Burns Bay Rd / Fig Tree St*	AM Peak	Existing	B	19.1	0.365	2 (1.9)
		Development	B	19.2	0.366	2 (2.0)
	PM Peak	Existing	B	26.3	0.288	2 (1.5)
		Development	B	26.4	0.289	2 (1.5)

* For priority and roundabout intersections, the average delay of the worst movement is used to determine the LOS

The SIDRA analysis of the two intersection sites indicates they are performing generally well. The additional trip generation due to the proposed development will only have minor impacts on the performance of the sites. Even with the development both sites during both the AM and PM peak remain within their original LoS B. There are only slight insignificant increases to all other performance indicators. Hence, it is anticipated that the traffic impact at both intersections due to the development will be negligible.

© Copyright; ptc.

6. Access & Car Park Assessment

The following section presents an assessment of the proposed development with reference to the requirements of AS2890.1:2004 (Off-street car parking), AS2890.2:2018 (Off-street commercial vehicle facilities), AS2890.3:2015 (Bicycle parking) and AS2890.6-2009 (Off-street parking for people with disabilities) as well as industry best practice. This section is to be read in conjunction with the architectural plans provided by Morrison Design Partnership (Attachment 2) and the car park assessment undertaken by ptc. (Attachment 3).

The proposed car park is to be used as both residential and staff parking. Therefore, it has been designed as a Class 1A parking facility. There are two car spaces located adjacent to the ambulance waiting bay which have been designed as Class 3A parking.

6.1 Vehicular Access and Circulation

The development will include a basement level carpark which will contain 33 new 90-degree car spaces inclusive of one accessible space. The access to the proposed basement carpark is separate to the existing carpark on Fig Tree St. The new car park will also have a loading bay for deliveries and waste collection. There will also be a porte cochere dedicated to ambulance and shuttle bus set down and pick up. The porte cochere will also have 2 waiting bays.

As a class A1 facility, the aisle width must be a minimum of 5.8m adjacent to all parking spaces, as well as a width minimum of 5.5m for all other internal 2-way roads.

6.1.1 Driveway Location and Ramp

A 6-metre access driveway is proposed on Fig Tree Street. A swept path assessment has been undertaken to demonstrate two-way access in and out of the site and the vertical clearance for the largest anticipated vehicle (medium rigid vehicle) utilising the ramp. The design assessment is shown in Attachment 3.

6.2 Sight Distance

The sight distance requirements are outlined in Section 3.2 of AS2890.1 and are prescribed based on the posted speed limit or 85th percentile vehicle speeds along the frontage road.

Fig Tree Street has a posted speed limit of 50km/h, which requires a desirable visibility distance of 69 meters and a minimum distance of 45 meters. The proposed driveway is located on a straight section of the road providing sufficient sight distance.

The carpark also enables vehicles to enter and exit in a forward direction, minimising potential conflict points and maintaining the overall safety of the road network.

6.3 Service Vehicles

The site has been designed to accommodate Uniting's waste service contractor vehicle which requires a vertical clearance of 3.5m with an additional 300mm clearance. The vertical clearance assessment is shown in Attachment 3.

A swept path analysis in Attachment 3 shows that the area provided is sufficient for an MRV to undertake a 3-point turn within the site allowing the vehicle to enter and exit in a forward direction.

© Copyright; ptc.

6.4 Car Park Arrangement

6.4.1 Typical Requirements

The car park access and parking arrangements have been assessed against the requirements of AS2890.1:2004, with reference to Class 1A (residential/employee) facilities. The development is to provide the following dimensions for the parking spaces (90° angle parking):

- Car Spaces: 2.4m x 5.4m
- Aisle Width: 5.8m (minimum)

All Class 1A parking spaces provided meet the minimum requirements stated in the Australian standards.

The development is to provide the following dimensions for the two spaces which are classified as Class 3A parking facilities:

- Car Spaces: 2.6m x 5.4m
- Aisle Width: 6.6m (minimum)

The two spaces have been assessed on a performance basis and are shown that they are fit for purpose in Attachment 3.

6.4.2 Accessible Parking

All accessible parking spaces have been individually assessed against the requirements of AS2890.6. Accessible parking spaces are to be designed based on the following dimensions:

- Accessible Space: 2.4m x 5.4m
- Adjacent Shared Bay: 2.4m x 5.4m (with a bollard)

All shared bays and accessible spaces shall be installed in accordance with AS2890.6, including the installation of bollards and relevant pavement marking. A minimum height clearance of 2.5m is to be maintained above all accessible and shared bays.

6.4.3 Bicycle Parking

Approved bicycle parking devices (BPD's) shall be installed as per the following requirements of AS2890.3:2015:

- Horizontal Parking: 1800mm x 500mm
- Access Aisle: 1500mm

The proposed development shall provide 10 bicycle spaces which adheres to the above requirements.

6.4.4 Motorcycle Parking

Approved bicycle parking devices (BPD's) shall be installed as per the following requirements of AS2890.3:2015:

- Horizontal Parking: 2400mm x 1200mm

It should be noted that the three motorcycle spaces will be provided in the existing car park.

© Copyright; ptc.

7. Conclusion

ptc. has been engaged by Uniting to prepare a Traffic and Parking Assessment to accompany a Development Application to Lane Cove Council for the expansion of an existing 42-bed residential aged-care facility (RACF), at 15 Fig Tree Street, Lane Cove (corner of Fig Tree Street and Centennial Avenue).

The site has great private vehicle access through state roads including both Centennial Avenue and Epping Road. This also enables excellent bus services for people travelling to and from the aged care facility. There is, however, a lack of nearby train facilities for those wishing to travel to more distant suburbs. The active transport catchments cover a significant portion of nearby local residential area. The Lane Cove town centre including many restaurants, shops and other amenities can be found just outside of the 800-meter walking catchment allowing easy access for residents and staff.

There are a proposed 33 on-site car spaces for the new development of which 14 spaces will be for residents and 29 will be for staff and visitors. The existing carpark which includes 10 existing car spaces also includes all 3 of the required motorcycle spaces and 10 bike spaces. The new car park will include 33 spaces which will incorporate the required accessible space along with a loading bay for Medium Rigid Vehicle (MRV) access. There will also be provision for an ambulance parking located at the main entrance under a covered portico. The parking allocation and site access has been assessed accordingly to the AS2890 series, Lane Cove Development Control Plans and through relevant swept path analysis.

In regard to traffic generation, using SIDRA analysis both the Centennial Avenue / Fig Tree Street and Burns Bay Road / Fig Tree Street intersections perform at a Level of Service (LoS) B. Hence, they are performing generally well with minimal delay due to being over-capacity. The trip generation caused by the proposed development will only have minor impacts on the performance of the sites. Even with the development both sites during both the AM and PM peak remain within their original LoS B. There are only slight insignificant increases to all other performance indicators. Hence, it is anticipated that the traffic impact at both intersections due to the development will be negligible.

Ultimately, the proposed development is highly unlikely to results in any impacts to existing local parking and traffic conditions, and that the car park design satisfies the relevant Australian Standards

© Copyright; ptc.

Attachment 1 SIDRA Analysis

© Copyright; ptc.

MOVEMENT SUMMARY

Site: TCS2287 [1_Fig Treet St/ Centennial Ave (AM_BASE)]

Survey Date: 13/02/20
AM Peak: 8:00-9:00
PM Peak: 5:45-6:45
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 140 seconds (Site User-Given Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Centennial Ave (S)												
1	L2	32	0.0	0.587	11.4	LOS A	11.1	80.4	0.36	0.34	0.36	49.5
2	T1	945	3.8	0.587	6.1	LOS A	11.1	80.4	0.36	0.34	0.36	54.4
3	R2	9	0.0	0.587	11.8	LOS A	10.8	78.1	0.37	0.33	0.37	49.2
Approach		986	3.6	0.587	6.3	LOS A	11.1	80.4	0.36	0.34	0.36	54.2
East: Fig Tree St (E)												
4	L2	14	0.0	0.308	57.1	LOS E	5.4	38.6	0.93	0.75	1.03	26.2
5	T1	80	2.6	0.308	52.6	LOS D	5.4	38.6	0.93	0.75	1.03	25.1
6	R2	98	0.0	0.619	72.1	LOS F	6.7	47.0	1.00	0.81	1.03	22.0
Approach		192	1.1	0.619	62.9	LOS E	6.7	47.0	0.96	0.78	1.03	23.5
North: Centennial Ave (N)												
7	L2	205	0.0	0.630	11.6	LOS A	12.1	86.3	0.37	0.47	0.37	47.6
8	T1	586	3.4	0.630	7.4	LOS A	12.1	86.3	0.40	0.48	0.40	52.1
9	R2	80	3.9	0.630	14.7	LOS B	9.5	68.3	0.45	0.48	0.45	46.5
Approach		872	2.7	0.630	9.0	LOS A	12.1	86.3	0.40	0.48	0.40	50.6
West: Barwon Rd												
10	L2	22	0.0	0.514	64.6	LOS E	8.8	62.6	0.97	0.79	0.97	28.1
11	T1	97	1.1	0.514	60.1	LOS E	8.8	62.6	0.97	0.79	0.97	23.3
12	R2	19	5.6	0.514	64.7	LOS E	8.8	62.6	0.97	0.79	0.97	27.9
Approach		138	1.5	0.514	61.4	LOS E	8.8	62.6	0.97	0.79	0.97	24.9
All Vehicles		2187	2.9	0.630	15.8	LOS B	12.1	86.3	0.47	0.46	0.47	45.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate
P2	East Full Crossing	3	6.0	LOS A	0.0	0.0	0.29	0.29
P3	North Full Crossing	17	58.6	LOS E	0.1	0.1	0.91	0.91
P4	West Full Crossing	1	5.4	LOS A	0.0	0.0	0.28	0.28
All Pedestrians		21	48.0	LOS E			0.79	0.79

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

SIDRA INTERSECTION 8.0 | Copyright © 2000-2019 Akcelik and Associates Pty Ltd | sidrasolutions.com
Organisation: PARKING AND TRAFFIC CONSULTANTS | Processed: Tuesday, 4 August 2020 5:16:35 PM
Project: Z:\PCI - PROJECT WORK FILES\NSW\UNITING - St Columba's Lane Cove\3. DA Stage\3. Modelling & Surveys\200214_Spreadsheet Model - St Columba's.sip8

MOVEMENT SUMMARY

Site: 101 [2_Fig Tree St/ Burns Bay Rd (AM_BASE)]

Survey Date: 13/02/20
AM Peak: 8:00-9:00
PM Peak: 5:45-6:45
Site Category: (None)
Stop (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Burns Bay Rd (S)												
1	L2	24	0.0	0.246	4.6	LOS A	0.0	0.0	0.00	0.03	0.00	49.1
2	T1	437	6.0	0.246	0.0	LOS A	0.0	0.0	0.00	0.03	0.00	49.8
Approach		461	5.7	0.246	0.3	NA	0.0	0.0	0.00	0.03	0.00	49.8
North: Burns Bay (N)												
8	T1	141	1.5	0.073	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	50.0
9	R2	186	8.5	0.178	6.9	LOS A	0.8	6.0	0.53	0.71	0.53	43.1
Approach		327	5.5	0.178	3.9	NA	0.8	6.0	0.30	0.40	0.30	46.4
West: Fig Tree St (W)												
10	L2	302	0.3	0.365	10.8	LOS A	1.9	13.6	0.58	1.02	0.69	41.8
12	R2	7	0.0	0.365	19.1	LOS B	1.9	13.6	0.58	1.02	0.69	41.3
Approach		309	0.3	0.365	11.0	LOS A	1.9	13.6	0.58	1.02	0.69	41.8
All Vehicles		1098	4.1	0.365	4.4	NA	1.9	13.6	0.25	0.42	0.29	46.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

SIDRA INTERSECTION 8.0 | Copyright © 2000-2019 Akcelik and Associates Pty Ltd | sidrasolutions.com

MOVEMENT SUMMARY

Site: TCS2287 [3_Fig Treet St/ Centennial Ave (PM_BASE)]

Survey Date: 13/02/20
AM Peak: 8:00-9:00
PM Peak: 5:45-6:45
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 140 seconds (Site User-Given Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Centennial Ave (S)												
1	L2	84	2.5	0.548	18.0	LOS B	12.4	88.9	0.50	0.50	0.50	45.0
2	T1	680	3.1	0.548	12.8	LOS A	12.4	88.9	0.50	0.47	0.50	49.2
3	R2	6	0.0	0.548	18.7	LOS B	11.6	83.6	0.51	0.45	0.51	43.6
Approach		771	3.0	0.548	13.4	LOS A	12.4	88.9	0.50	0.47	0.50	48.6
East: Fig Tree St (E)												
4	L2	49	0.0	0.711	51.7	LOS D	18.2	127.7	0.92	0.81	1.09	27.6
5	T1	267	0.0	0.711	47.1	LOS D	18.2	127.7	0.92	0.81	1.09	26.5
6	R2	94	0.0	0.275	54.3	LOS D	5.4	37.6	0.88	0.77	0.88	25.8
Approach		411	0.0	0.711	49.3	LOS D	18.2	127.7	0.91	0.80	1.04	26.4
North: Centennial Ave (N)												
7	L2	116	1.8	0.784	19.8	LOS B	20.0	141.4	0.56	0.56	0.56	42.2
8	T1	795	1.3	0.784	17.1	LOS B	20.0	141.4	0.57	0.57	0.60	46.2
9	R2	54	0.0	0.784	26.6	LOS B	16.0	113.4	0.59	0.59	0.64	40.7
Approach		964	1.3	0.784	18.0	LOS B	20.0	141.4	0.57	0.57	0.60	45.5
West: Barwon Rd												
10	L2	8	0.0	0.753	67.1	LOS E	14.3	100.2	1.00	0.90	1.09	27.5
11	T1	136	0.0	0.753	62.5	LOS E	14.3	100.2	1.00	0.90	1.09	22.8
12	R2	65	0.0	0.753	67.1	LOS E	14.3	100.2	1.00	0.90	1.09	27.4
Approach		209	0.0	0.753	64.1	LOS E	14.3	100.2	1.00	0.90	1.09	24.6
All Vehicles		2355	1.5	0.784	26.1	LOS B	20.0	141.4	0.65	0.61	0.69	39.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate
P2	East Full Crossing	3	12.0	LOS B	0.0	0.0	0.41	0.41
P3	North Full Crossing	17	44.0	LOS E	0.1	0.1	0.79	0.79
P4	West Full Crossing	1	11.2	LOS B	0.0	0.0	0.40	0.40
All Pedestrians		21	37.6	LOS D			0.72	0.72

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

SIDRA INTERSECTION 8.0 | Copyright © 2000-2019 Akcelik and Associates Pty Ltd | sidrasolutions.com
Organisation: PARKING AND TRAFFIC CONSULTANTS | Processed: Tuesday, 4 August 2020 5:16:36 PM
Project: Z:\PCI - PROJECT WORK FILES\NSW\UNITING - St Columba's Lane Cove\3. DA Stage\3. Modelling & Surveys\200214_Spreadsheet Model - St Columba's.sip8

MOVEMENT SUMMARY

Site: 101 [4_Fig Tree St/ Burns Bay Rd (PM_BASE)]

Survey Date: 13/02/20
AM Peak: 8:00-9:00
PM Peak: 5:45-6:45
Site Category: (None)
Stop (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Burns Bay Rd (S)												
1	L2	23	0.0	0.159	4.6	LOS A	0.0	0.0	0.00	0.04	0.00	49.0
2	T1	280	3.0	0.159	0.0	LOS A	0.0	0.0	0.00	0.04	0.00	49.7
Approach		303	2.8	0.159	0.4	NA	0.0	0.0	0.00	0.04	0.00	49.7
North: Burns Bay (N)												
8	T1	399	2.6	0.208	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	50.0
9	R2	388	0.0	0.288	5.9	LOS A	1.5	10.4	0.46	0.64	0.46	43.7
Approach		787	1.3	0.288	2.9	NA	1.5	10.4	0.23	0.31	0.23	47.2
West: Fig Tree St (W)												
10	L2	252	0.4	0.276	8.9	LOS A	1.2	8.5	0.45	0.90	0.45	42.6
12	R2	9	0.0	0.276	26.3	LOS B	1.2	8.5	0.45	0.90	0.45	42.1
Approach		261	0.4	0.276	9.6	LOS A	1.2	8.5	0.45	0.90	0.45	42.6
All Vehicles		1352	1.5	0.288	3.6	NA	1.5	10.4	0.22	0.37	0.22	46.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

SIDRA INTERSECTION 8.0 | Copyright © 2000-2019 Akcelik and Associates Pty Ltd | sidrasolutions.com

MOVEMENT SUMMARY

Site: TCS2287 [5_Fig Treet St/ Centennial Ave (AM_BASE+DEV)]

Survey Date: 13/02/20
AM Peak: 8:00-9:00
PM Peak: 5:45-6:45
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 140 seconds (Site User-Given Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Centennial Ave (S)												
1	L2	32	0.0	0.607	11.8	LOS A	11.6	83.9	0.37	0.35	0.37	49.2
2	T1	945	3.8	0.607	6.4	LOS A	11.6	83.9	0.37	0.35	0.37	54.0
3	R2	13	8.3	0.607	12.3	LOS A	11.2	80.8	0.38	0.35	0.38	48.6
Approach		989	3.7	0.607	6.7	LOS A	11.6	83.9	0.37	0.35	0.37	53.8
East: Fig Tree St (E)												
4	L2	19	5.6	0.312	54.8	LOS D	5.6	40.1	0.92	0.75	1.02	26.7
5	T1	80	2.6	0.312	50.2	LOS D	5.6	40.1	0.92	0.75	1.02	25.6
6	R2	109	1.0	0.656	71.9	LOS F	7.5	53.2	1.00	0.82	1.06	22.0
Approach		208	2.0	0.656	62.0	LOS E	7.5	53.2	0.96	0.79	1.04	23.7
North: Centennial Ave (N)												
7	L2	211	0.5	0.649	12.0	LOS A	12.6	90.1	0.38	0.48	0.38	47.2
8	T1	586	3.4	0.649	7.8	LOS A	12.6	90.1	0.42	0.49	0.42	51.8
9	R2	80	3.9	0.649	15.2	LOS B	9.7	70.3	0.46	0.49	0.46	46.3
Approach		877	2.8	0.649	9.5	LOS A	12.6	90.1	0.41	0.49	0.41	50.3
West: Barwon Rd												
10	L2	22	0.0	0.492	63.5	LOS E	8.7	62.0	0.96	0.79	0.96	28.3
11	T1	97	1.1	0.492	59.0	LOS E	8.7	62.0	0.96	0.79	0.96	23.6
12	R2	19	5.6	0.492	63.6	LOS E	8.7	62.0	0.96	0.79	0.96	28.2
Approach		138	1.5	0.492	60.3	LOS E	8.7	62.0	0.96	0.79	0.96	25.1
All Vehicles		2213	3.0	0.656	16.4	LOS B	12.6	90.1	0.48	0.47	0.49	45.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate
P2	East Full Crossing	3	6.3	LOS A	0.0	0.0	0.30	0.30
P3	North Full Crossing	17	57.6	LOS E	0.1	0.1	0.91	0.91
P4	West Full Crossing	1	5.7	LOS A	0.0	0.0	0.29	0.29
All Pedestrians		21	47.3	LOS E			0.79	0.79

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

SIDRA INTERSECTION 8.0 | Copyright © 2000-2019 Akcelik and Associates Pty Ltd | sidrasolutions.com
Organisation: PARKING AND TRAFFIC CONSULTANTS | Processed: Tuesday, 4 August 2020 5:16:35 PM
Project: Z:\PCI - PROJECT WORK FILES\NSW\UNITING - St Columba's Lane Cove\3. DA Stage\3. Modelling & Surveys\200214_Spreadsheet Model - St Columba's.sip8

MOVEMENT SUMMARY

Site: TCS2287 [7_Fig Treet St/ Centennial Ave (PM_BASE+DEV)]

Survey Date: 13/02/20
AM Peak: 8:00-9:00
PM Peak: 5:45-6:45
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 140 seconds (Site User-Given Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Centennial Ave (S)												
1	L2	84	2.5	0.572	18.1	LOS B	13.3	95.1	0.51	0.50	0.51	44.9
2	T1	680	3.1	0.572	13.4	LOS A	13.3	95.1	0.52	0.49	0.52	48.8
3	R2	12	9.1	0.572	19.9	LOS B	11.5	83.1	0.53	0.47	0.53	42.7
Approach		776	3.1	0.572	14.0	LOS A	13.3	95.1	0.51	0.49	0.51	48.2
East: Fig Tree St (E)												
4	L2	53	2.0	0.726	52.3	LOS D	18.8	131.7	0.92	0.83	1.10	27.4
5	T1	269	0.0	0.726	47.7	LOS D	18.8	131.7	0.92	0.83	1.10	26.3
6	R2	98	1.1	0.291	55.3	LOS D	5.7	40.1	0.89	0.77	0.89	25.5
Approach		420	0.5	0.726	50.0	LOS D	18.8	131.7	0.91	0.81	1.05	26.2
North: Centennial Ave (N)												
7	L2	123	2.6	0.797	20.9	LOS B	21.0	148.7	0.57	0.57	0.58	41.4
8	T1	795	1.3	0.797	18.5	LOS B	21.0	148.7	0.58	0.59	0.61	45.4
9	R2	54	0.0	0.797	28.3	LOS B	16.6	117.2	0.59	0.61	0.66	39.9
Approach		972	1.4	0.797	19.4	LOS B	21.0	148.7	0.58	0.59	0.61	44.7
West: Barwon Rd												
10	L2	8	0.0	0.769	67.9	LOS E	14.8	103.3	1.00	0.91	1.10	27.3
11	T1	140	0.0	0.769	63.3	LOS E	14.8	103.3	1.00	0.91	1.10	22.6
12	R2	65	0.0	0.769	67.9	LOS E	14.8	103.3	1.00	0.91	1.10	27.3
Approach		214	0.0	0.769	64.9	LOS E	14.8	103.3	1.00	0.91	1.10	24.4
All Vehicles		2381	1.7	0.797	27.1	LOS B	21.0	148.7	0.65	0.62	0.70	39.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate
P2	East Full Crossing	3	12.0	LOS B	0.0	0.0	0.41	0.41
P3	North Full Crossing	17	44.0	LOS E	0.1	0.1	0.79	0.79
P4	West Full Crossing	1	11.2	LOS B	0.0	0.0	0.40	0.40
All Pedestrians		21	37.6	LOS D			0.72	0.72

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

SIDRA INTERSECTION 8.0 | Copyright © 2000-2019 Akcelik and Associates Pty Ltd | sidrasolutions.com
Organisation: PARKING AND TRAFFIC CONSULTANTS | Processed: Tuesday, 4 August 2020 5:16:36 PM
Project: Z:\PCI - PROJECT WORK FILES\NSW\UNITING - St Columba's Lane Cove\3. DA Stage\3. Modelling & Surveys\200214_Spreadsheet Model - St Columba's.sip8

MOVEMENT SUMMARY

Site: 101 [6_Fig Tree St/ Burns Bay Rd (AM_BASE+DEV)]

Survey Date: 13/02/20
AM Peak: 8:00-9:00
PM Peak: 5:45-6:45
Site Category: (None)
Stop (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Burns Bay Rd (S)												
1	L2	24	0.0	0.246	4.6	LOS A	0.0	0.0	0.00	0.03	0.00	49.1
2	T1	437	6.0	0.246	0.0	LOS A	0.0	0.0	0.00	0.03	0.00	49.8
Approach		461	5.7	0.246	0.3	NA	0.0	0.0	0.00	0.03	0.00	49.8
North: Burns Bay (N)												
8	T1	141	1.5	0.073	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	50.0
9	R2	187	8.4	0.179	6.9	LOS A	0.8	6.0	0.53	0.71	0.53	43.1
Approach		328	5.4	0.179	3.9	NA	0.8	6.0	0.30	0.41	0.30	46.4
West: Fig Tree St (W)												
10	L2	303	0.3	0.366	10.8	LOS A	2.0	13.7	0.58	1.02	0.70	41.8
12	R2	7	0.0	0.366	19.2	LOS B	2.0	13.7	0.58	1.02	0.70	41.3
Approach		311	0.3	0.366	11.0	LOS A	2.0	13.7	0.58	1.02	0.70	41.8
All Vehicles		1100	4.1	0.366	4.4	NA	2.0	13.7	0.25	0.42	0.29	46.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

SIDRA INTERSECTION 8.0 | Copyright © 2000-2019 Akcelik and Associates Pty Ltd | sidrasolutions.com

MOVEMENT SUMMARY

Site: 101 [8_Fig Tree St/ Burns Bay Rd (PM_BASE+DEV)]

Survey Date: 13/02/20
AM Peak: 8:00-9:00
PM Peak: 5:45-6:45
Site Category: (None)
Stop (Two-Way)

Movement Performance - Vehicles

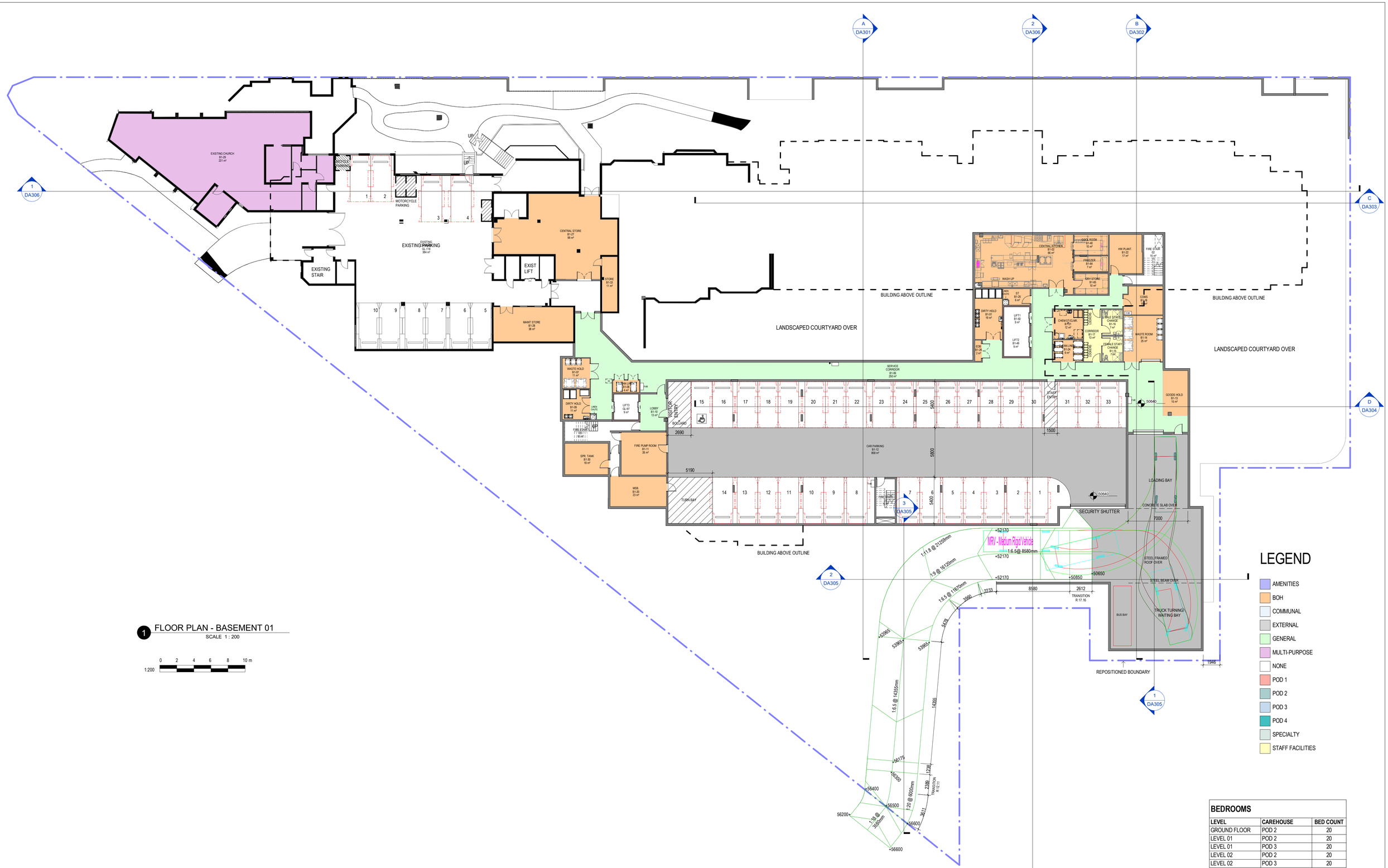
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Burns Bay Rd (S)												
1	L2	23	0.0	0.159	4.6	LOS A	0.0	0.0	0.00	0.04	0.00	49.0
2	T1	280	3.0	0.159	0.0	LOS A	0.0	0.0	0.00	0.04	0.00	49.7
Approach		303	2.8	0.159	0.4	NA	0.0	0.0	0.00	0.04	0.00	49.7
North: Burns Bay (N)												
8	T1	399	2.6	0.208	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	50.0
9	R2	389	0.0	0.289	5.9	LOS A	1.5	10.4	0.46	0.64	0.46	43.7
Approach		788	1.3	0.289	2.9	NA	1.5	10.4	0.23	0.31	0.23	47.2
West: Fig Tree St (W)												
10	L2	253	0.4	0.277	8.9	LOS A	1.2	8.5	0.45	0.90	0.45	42.6
12	R2	9	0.0	0.277	26.4	LOS B	1.2	8.5	0.45	0.90	0.45	42.1
Approach		262	0.4	0.277	9.6	LOS A	1.2	8.5	0.45	0.90	0.45	42.6
All Vehicles		1354	1.5	0.289	3.6	NA	1.5	10.4	0.22	0.37	0.22	46.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

SIDRA INTERSECTION 8.0 | Copyright © 2000-2019 Akcelik and Associates Pty Ltd | sidrasolutions.com

Attachment 2 Architectural Plans

© Copyright; ptc.



1 FLOOR PLAN - BASEMENT 01

SCALE 1 : 200

1:200 0 2 4 6 8 10 m

LEGEND

- AMENITIES
- BOH
- COMMUNAL
- EXTERNAL
- GENERAL
- MULTI-PURPOSE
- NONE
- POD 1
- POD 2
- POD 3
- POD 4
- SPECIALTY
- STAFF FACILITIES

BEDROOMS

LEVEL	CAREHOUSE	BED COUNT
GROUND FLOOR	POD 2	20
LEVEL 01	POD 2	20
LEVEL 01	POD 3	20
LEVEL 02	POD 2	20
LEVEL 02	POD 3	20
TOTAL BEDS		100

architecture
interior design
project management

NSW ARB REG ARCHITECT: G. OLLERTON #7621
ACN: 001 595 268 ABN: 44 001 595 268 morrisondesign@mdpa.com.au
Suite 302.69 Christie Street St. Leonards NSW 2065 | 02 99665566 | www.mdpa.com.au

CLIENT

Uniting

PROJECT

UNITING St COLUMBA'S

11-15 FIG TREE STREET, LANE COVE
LOT 2 DP184731
LOTS A, B, C & D DP385033
LOTS 1, 2 & 3 DP339444

© Copyright
These drawings and designs and the copyright thereof are the property of **Morrison Design Partnership Pty. Ltd.** and must not be used retained or copied without the written permission of Morrison Design Partnership Pty. Ltd. ACN 001 595 268

BIM 360://3108 - Uniting St Columba Lane Cove/3108 - Uniting St Columbia CENTRAL(V20).rvt

DRAWING TITLE

LEVEL -01 - BASEMENT FLOOR PLAN

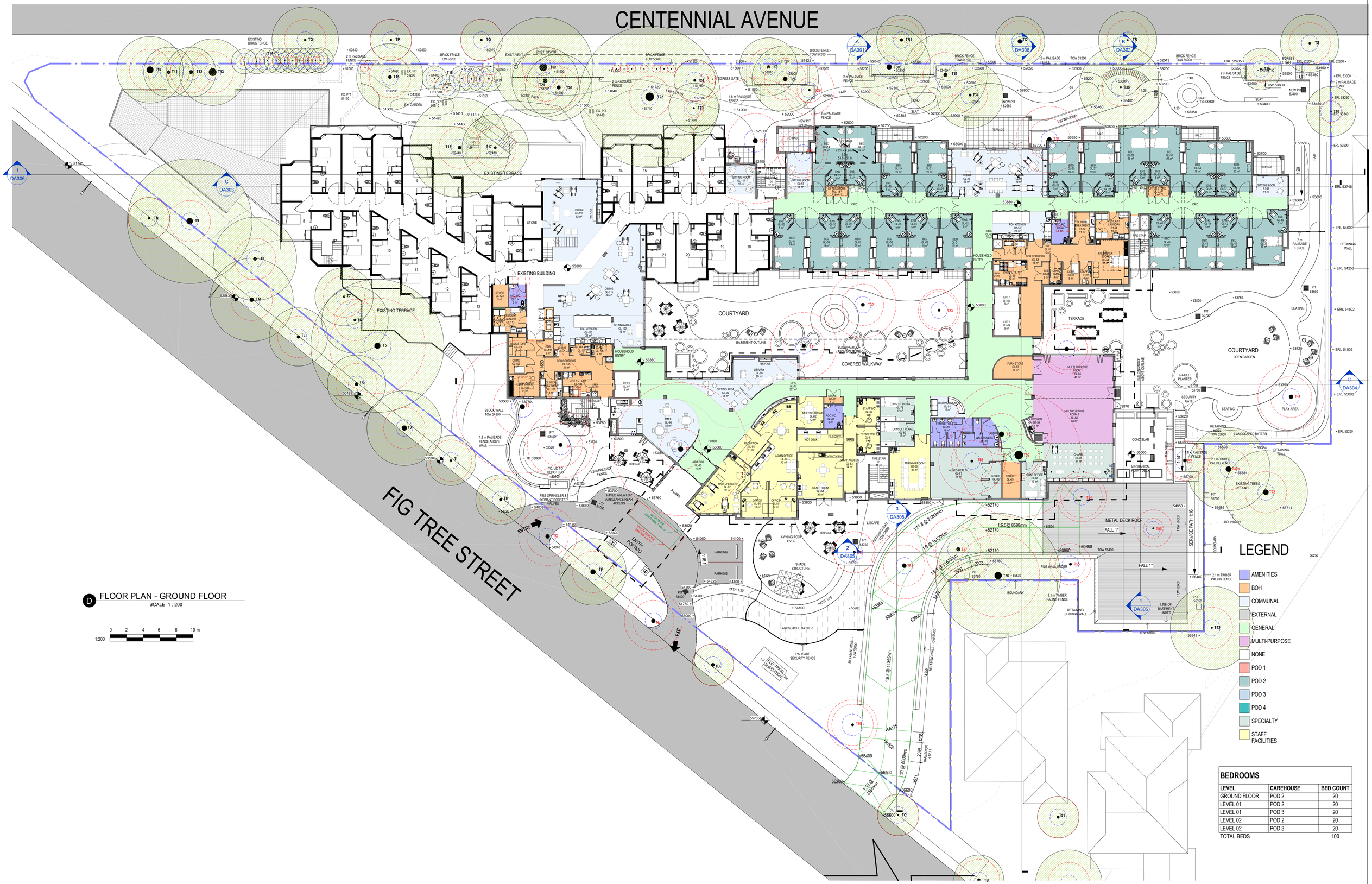
N

REV	DATE	AMENDMENT	INITIALS	CHECK
DA01	2020-08-11	DA ISSUE	MM	

PROJECT NO.	DRAWING NO.	REVISION
3108	DA101	DA01

SCALE	1 : 200 @ A1
DRAWN	
PROJECT PRINCIPLE	G.OLLERTON
DATE	27.10.2016

Morrison Design Partnership ARCHITECTS Since 1969



D FLOOR PLAN - GROUND FLOOR
SCALE 1 : 200

1:200 0 2 4 6 8 10 m

BEDROOMS

LEVEL	CAREHOUSE	BED COUNT
GROUND FLOOR	POD 2	20
LEVEL 01	POD 2	20
LEVEL 01	POD 3	20
LEVEL 02	POD 2	20
LEVEL 02	POD 3	20
TOTAL BEDS		100

architecture
interior design
project management

NSW ARB REG ARCHITECT: G. OLLERTON #7621
ACN: 001 595 268 ABN: 44 001 595 268 morrisondesign@mdpa.com.au
Suite 302 69 Christie Street St. Leonards NSW 2065 |02 99665566| www.mdpa.com.au

CLIENT
Uniting

PROJECT
UNITING St COLUMBA'S
11-15 FIG TREE STREET, LANE COVE
LOT 2 DP184731
LOTS A, B, C & D DP385033
LOTS 1, 2 & 3 DP339444

DRAWING TITLE
LEVEL 00 -GROUND FLOOR PLAN

N

REV	DATE	AMENDMENT	INITIALS	CHECK
DA01	2020-08-11	DA ISSUE	MM	

PROJECT NO.	DRAWING NO.	REVISION
3108	DA102	DA01
SCALE	1 : 200 @ A1	
DRAWN		
PROJECT PRINCIPLE	G.OLLERTON	
DATE	27.10.2016	

Morrison Design Partnership ARCHITECTS Since 1969

© Copyright
These drawings and designs and the copyright thereof are the property of **Morrison Design Partnership Pty. Ltd.** and must not be used retained or copied without the written permission of Morrison Design Partnership Pty. Ltd. ACN 001 595 268.

BIM 360://3108 - Uniting St Columba Lane Cove/3108 - Uniting St Columbia CENTRAL(V20).rvt

Attachment 3 Parking Assessment

© Copyright; ptc.

comments

A3

TYPICAL

Please note the following compliance requirements:

Height Clearance: **2.2m** (min) throughout all areas of the car park accessible to vehicles and bicycles.
2.5m above accessible and shared bays

Sight Splays: Visibility splays in the form of a **2.5m x 2m** right-angled triangle to be provided (AS2890.1). Ensure design avoids visual obstructions in sight splay (i.e. dense landscaping, tall fencing/walls etc.)

Parking Spaces: The parking envelopes shown, must be kept clear of all physical obstructions, including height clearance reductions. Ensure that grades within the parking module do not exceed 1:20 (1:40 for accessible bays).

Accessible Spaces: To be designed in accordance with AS2890.6. i.e, standard parking space with adjacent shared bay (2.4m x 5.4m), to be installed as per AS2890.6 requirements (bollard and markings).

Motorcycle Parking: Motorcycle bays to be designed as a 2.5m x 1.2m envelope (AS2890.1).

Bicycle Parking: Bicycle spaces are to allow for a envelope of 500mm by 1800mm, with an aisle width of 2000mm for locker storage, or 1500mm for racks.

Control Measures: Please note recommended control measures, including line markings, signage, bollards, convex mirrors, lights etc.

Car parking provision requirements are to be in accordance with SEPP (Housing for Seniors or People with a Disability) 2004.

- **1 x parking space suitable for an ambulance is to be provided**

Car parking requirements are *tbc* and require confirmation of the following:

- **Number of RACF beds (existing & additional); and**
- **Number of staff (existing & additional).**

LEGEND

- AMENITIES
- BOH
- COMMUNAL
- EXTERNAL
- GENERAL
- MULTI-PURPOSE
- NONE
- POD 1
- POD 2
- POD 3
- POD 4
- SPECIALTY
- STAFF FACILITIES

ptc.

Suite 502, 1 James Place
North Sydney NSW 2060

t +61 2 8920 0800

ptcconsultants.co

rev	date	comment / description	drawn	reviewed
7	21.08.2020	for review	JM	DS
6	05.08.2020	for review	JM	DS
5	01.07.20	for review	JM	DS
4	18.03.20	for review	JM	SW
3	24.02.20	for review	JM	DS
2	21.02.20	for information	JM	DS
1	29.11.19	for information	SC	DS

project
Uniting St Columba's Lane Cove

drawing title
Swept Path Analysis - Entry and Exit

client	Uniting
drawing #	ptc-001
project #	2735
scale	1 : 250

rev 7

TRAFFIC MANAGEMENT PLAN TO BE PUT IN PLACE. TRUCK IN RIGHT HAND BAY CAN ONLY EXIT WHEN LEFT HAND BAY IS VACANT.

LEGEND

- AMENITIES
- BOH
- COMMUNAL
- EXTERNAL
- GENERAL
- MULTI-PURPOSE
- NONE
- POD 1
- POD 2
- POD 3
- POD 4
- SPECIALTY
- STAFF FACILITIES

comments

A3

TYPICAL

Please note the following compliance requirements:

Height Clearance: **2.2m** (min) throughout all areas of the car park accessible to vehicles and bicycles.
2.5m above accessible and shared bays

Sight Splays: Visibility splays in the form of a **2.5m x 2m** right-angled triangle to be provided (AS2890.1). Ensure design avoids visual obstructions in sight splay (i.e. dense landscaping, tall fencing/walls etc.)

Parking Spaces: The parking envelopes shown, must be kept clear of all physical obstructions, including height clearance reductions. Ensure that grades within the parking module do not exceed 1:20 (1:40 for accessible bays).

Accessible Spaces: To be designed in accordance with AS2890.6. i.e, standard parking space with adjacent shared bay (2.4m x 5.4m), to be installed as per AS2890.6 requirements (bollard and markings).

Motorcycle Parking: Motorcycle bays to be designed as a 2.5m x 1.2m envelope (AS2890.1).

Bicycle Parking: Bicycle spaces are to allow for a envelope of 500mm by 1800mm, with an aisle width of 2000mm for locker storage, or 1500mm for racks.

Control Measures: Please note recommended control measures, including line markings, signage, bollards, convex mirrors, lights etc.

Car parking provision requirements are to be in accordance with SEPP (Housing for Seniors or People with a Disability) 2004.

- **1 x parking space suitable for an ambulance is to be provided**

Car parking requirements are *tbc* and require confirmation of the following:

- **Number of RACF beds (existing & additional); and**
- **Number of staff (existing & additional).**

ptc.

Suite 502, 1 James Place
North Sydney NSW 2060

t +61 2 8920 0800

ptcconsultants.co

rev	date	comment / description	drawn	reviewed
7	21.08.2020	for review	JM	DS
6	05.08.2020	for review	JM	DS
5	01.07.20	for review	JM	DS
4	18.03.20	for review	JM	SW
3	24.02.20	For Review	JM	DS
2	21.02.20	For Information	JM	DS
1	29.11.19	For Information	SC	DS

project
Uniting St Columba's Lane Cove

drawing title
Swept Path Analysis MRV Exit

client	Uniting
drawing #	ptc-002
project #	2735
scale	1 : 200

rev 7

comments

A3

TYPICAL

Please note the following compliance requirements:

Height Clearance: **2.2m** (min) throughout all areas of the car park accessible to vehicles and bicycles.
2.5m above accessible and shared bays

Sight Splays: Visibility splays in the form of a **2.5m x 2m** right-angled triangle to be provided (AS2890.1). Ensure design avoids visual obstructions in sight splay (i.e. dense landscaping, tall fencing/walls etc.)

Parking Spaces: The parking envelopes shown, must be kept clear of all physical obstructions, including height clearance reductions. Ensure that grades within the parking module do not exceed 1:20 (1:40 for accessible bays).

Accessible Spaces: To be designed in accordance with AS2890.6. i.e, standard parking space with adjacent shared bay (2.4m x 5.4m), to be installed as per AS2890.6 requirements (bollard and markings).

Motorcycle Parking: Motorcycle bays to be designed as a 2.5m x 1.2m envelope (AS2890.1).

Bicycle Parking: Bicycle spaces are to allow for a envelope of 500mm by 1800mm, with an aisle width of 2000mm for locker storage, or 1500mm for racks.

Control Measures: Please note recommended control measures, including line markings, signage, bollards, convex mirrors, lights etc.

Car parking provision requirements are to be in accordance with SEPP (Housing for Seniors or People with a Disability) 2004.

- **1 x parking space suitable for an ambulance is to be provided**

Car parking requirements are *tbc* and require confirmation of the following:

- **Number of RACF beds (existing & additional); and**
- **Number of staff (existing & additional).**

ptc.

Suite 502, 1 James Place
North Sydney NSW 2060

t +61 2 8920 0800

ptcconsultants.co

rev	date	comment / description	drawn	reviewed
7	21.08.2020	for review	JM	DS
6	05.08.2020	for review	JM	DS
5	01.07.20	for review	JM	DS
4	18.03.20	for review	JM	SW
3	24.02.20	For Review	JM	DS
2	21.02.20	For Information	JM	DS
1	29.11.19	For Information	SC	DS

project
Uniting St Columba's Lane Cove

drawing title
Swept Path Analysis MRV Exit

client	Uniting
drawing #	ptc-003
project #	2735
scale	1 : 200

rev 7

comments

A3

TYPICAL

Please note the following compliance requirements:

Height Clearance: **2.2m** (min) throughout all areas of the car park accessible to vehicles and bicycles.
2.5m above accessible and shared bays

Sight Splays: Visibility splays in the form of a **2.5m x 2m** right-angled triangle to be provided (AS2890.1). Ensure design avoids visual obstructions in sight splay (i.e. dense landscaping, tall fencing/walls etc.)

Parking Spaces: The parking envelopes shown, must be kept clear of all physical obstructions, including height clearance reductions. Ensure that grades within the parking module do not exceed 1:20 (1:40 for accessible bays).

Accessible Spaces: To be designed in accordance with AS2890.6. i.e, standard parking space with adjacent shared bay (2.4m x 5.4m), to be installed as per AS2890.6 requirements (bollard and markings).

Motorcycle Parking:
Motorcycle bays to be designed as a 2.5m x 1.2m envelope (AS2890.1).

Bicycle Parking: Bicycle spaces are to allow for a envelope of 500mm by 1800mm, with an aisle width of 2000mm for locker storage, or 1500mm for racks.

Control Measures: Please note recommended control measures, including line markings, signage, bollards, convex mirrors, lights etc.

Car parking provision requirements are to be in accordance with SEPP (Housing for Seniors or People with a Disability) 2004.

- **1 x parking space suitable for an ambulance is to be provided**

Car parking requirements are *tbc* and require confirmation of the following:

- **Number of RACF beds (existing & additional); and**
- **Number of staff (existing & additional).**

ptc.

Suite 502, 1 James Place
North Sydney NSW 2060

t +61 2 8920 0800

ptcconsultants.co

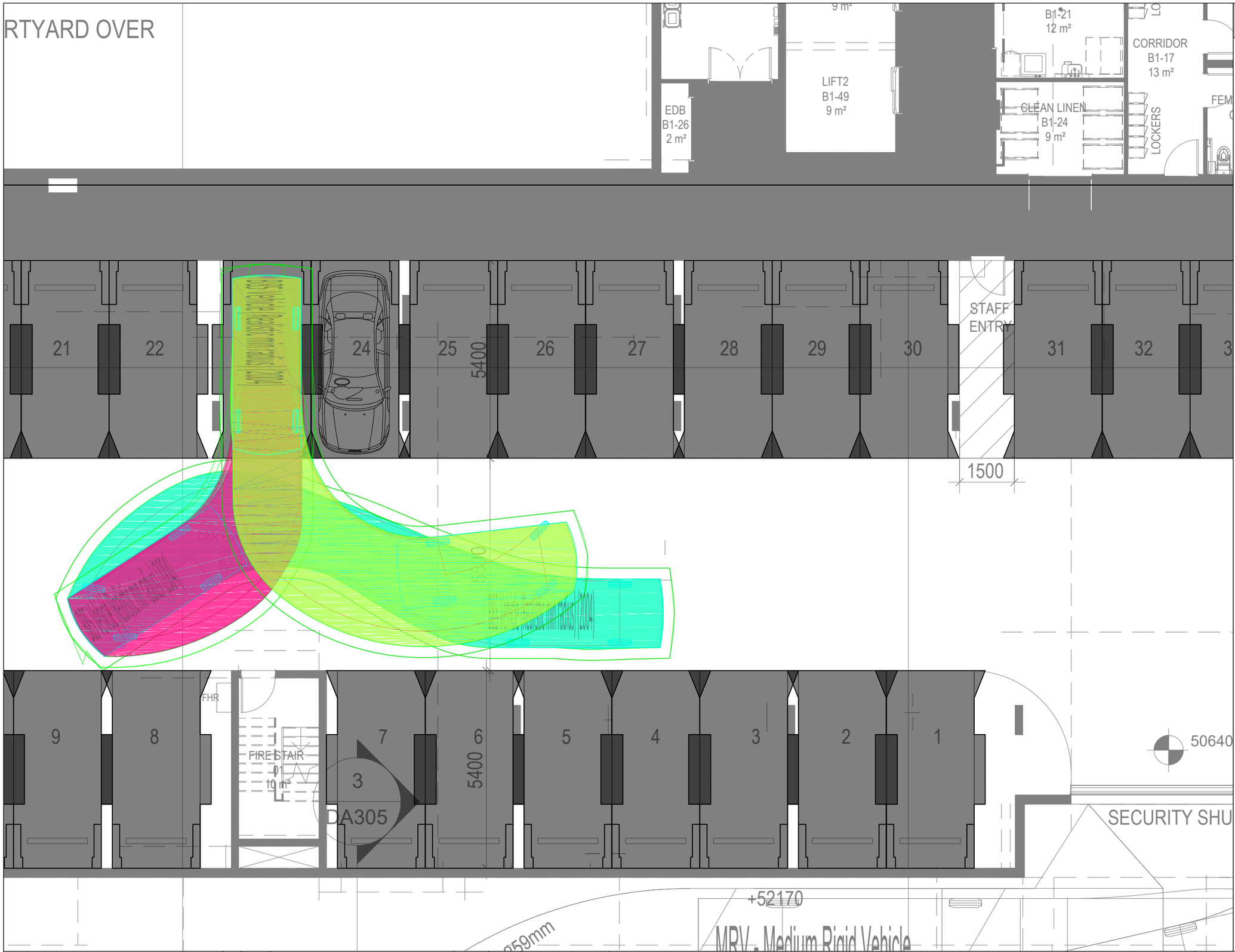
rev	date	comment / description	drawn	reviewed
7	21.08.2020	for review	JM	DS
6	05.08.2020	for review	JM	DS
5	01.07.20	for review	JM	DS
4	18.03.20	for review	JM	SW
3	24.02.20	For Review	JM	KB
2	21.02.20	For Information	JM	DS
1	29.11.19	For Information	SC	DS

project
Uniting St Columba's Lane Cove

drawing title
Swept Path Analysis B85 Opposing Wall 1

client	Uniting
drawing #	ptc-004
project #	2735
scale	1 : 100

rev 7



comments

A3

TYPICAL

Please note the following compliance requirements:

Height Clearance: **2.2m** (min) throughout all areas of the car park accessible to vehicles and bicycles.
2.5m above accessible and shared bays

Sight Splays: Visibility splays in the form of a **2.5m x 2m** right-angled triangle to be provided (AS2890.1). Ensure design avoids visual obstructions in sight splay (i.e. dense landscaping, tall fencing/walls etc.)

Parking Spaces: The parking envelopes shown, must be kept clear of all physical obstructions, including height clearance reductions. Ensure that grades within the parking module do not exceed 1:20 (1:40 for accessible bays).

Accessible Spaces: To be designed in accordance with AS2890.6. i.e, standard parking space with adjacent shared bay (2.4m x 5.4m), to be installed as per AS2890.6 requirements (bollard and markings).

Motorcycle Parking:
Motorcycle bays to be designed as a 2.5m x 1.2m envelope (AS2890.1).

Bicycle Parking: Bicycle spaces are to allow for a envelope of 500mm by 1800mm, with an aisle width of 2000mm for locker storage, or 1500mm for racks.

Control Measures: Please note recommended control measures, including line markings, signage, bollards, convex mirrors, lights etc.

Car parking provision requirements are to be in accordance with SEPP (Housing for Seniors or People with a Disability) 2004.

- **1 x parking space suitable for an ambulance is to be provided**

Car parking requirements are *tbc* and require confirmation of the following:

- **Number of RACF beds (existing & additional); and**
- **Number of staff (existing & additional).**

ptc.

Suite 502, 1 James Place
North Sydney NSW 2060

t +61 2 8920 0800

ptcconsultants.co

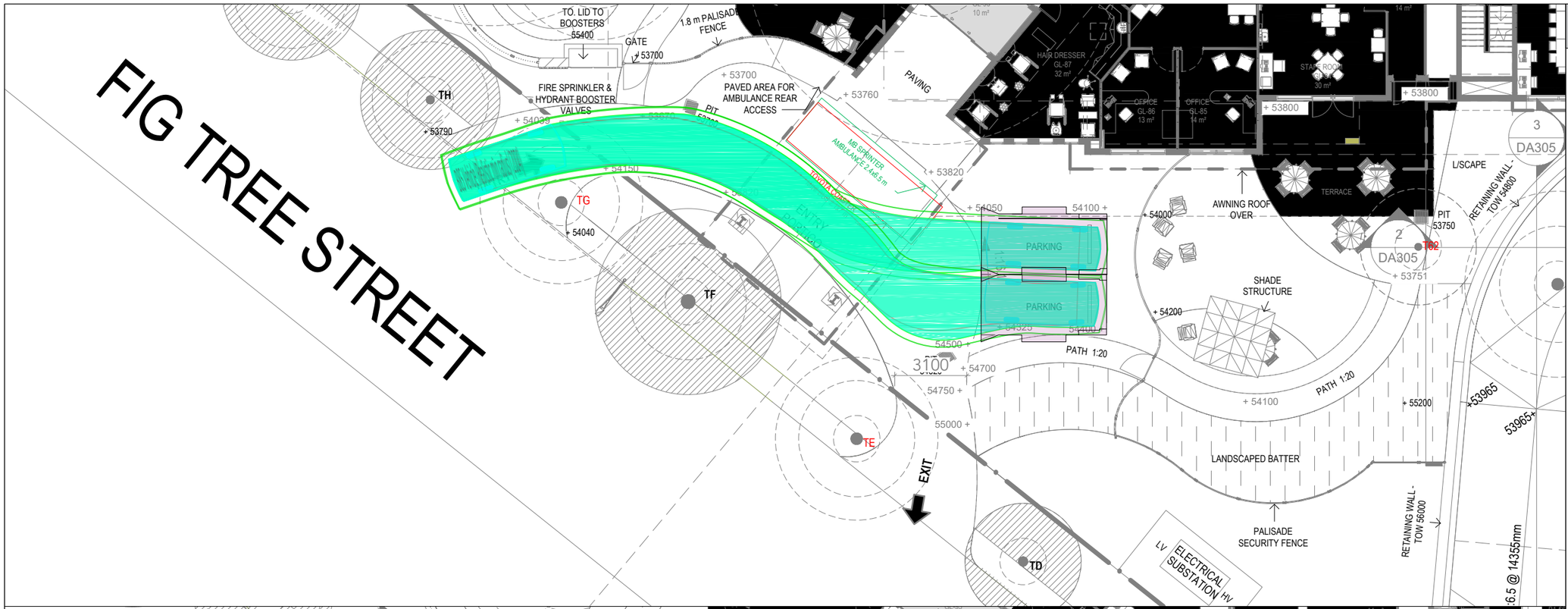
rev	date	comment / description	drawn	reviewed
7	21.08.2020	for review	JM	DS
6	05.08.2020	for review	JM	DS
5	01.07.20	for review	JM	DS
4	18.03.20	For Review	JM	SW
3	24.02.20	For Review	JM	DS
2	21.02.20	For Information	JM	DS
1	29.11.19	For Information	SC	DS

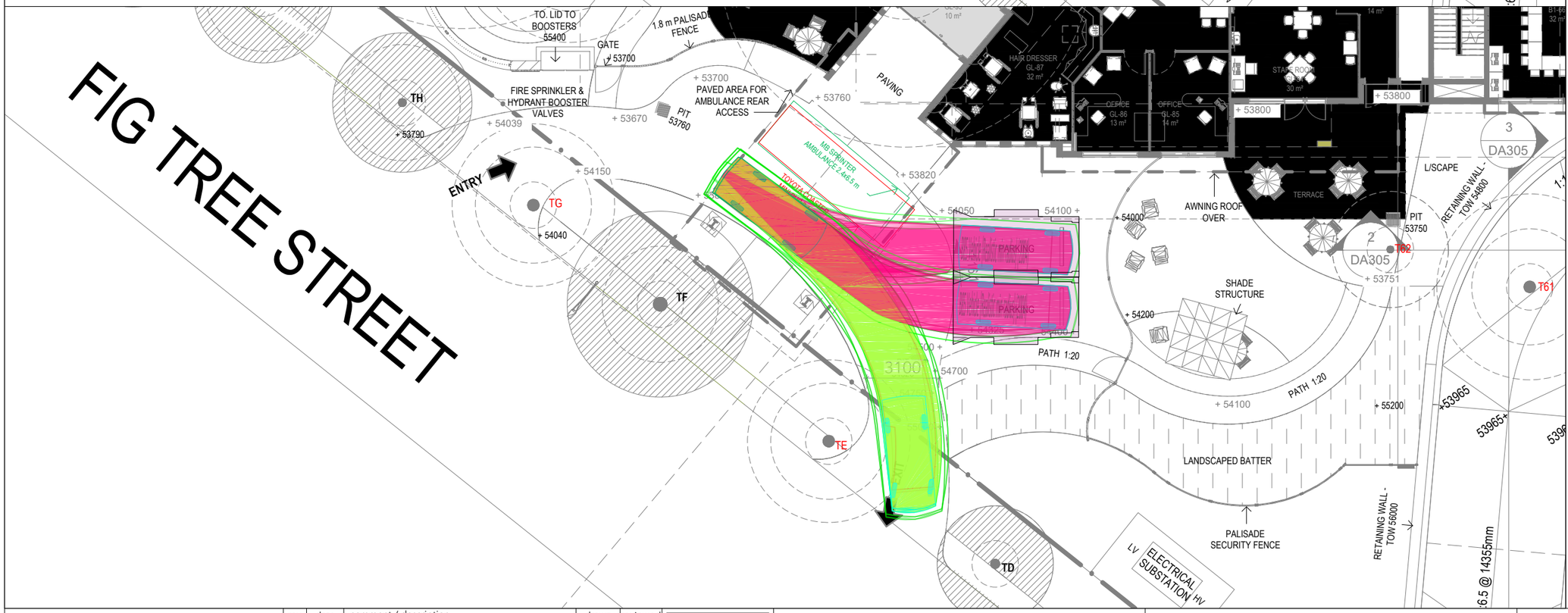
project
Uniting St Columba's Lane Cove

drawing title
Swept Path Analysis B85 Opposing Wall 2

client	Uniting
drawing #	ptc-005
project #	2735
scale	1 : 100

rev 7





comments

A3

TYPICAL

Please note the following compliance requirements:

Height Clearance: **2.2m** (min) throughout all areas of the car park accessible to vehicles and bicycles.
2.5m above accessible and shared bays

Sight Splays: Visibility splays in the form of a **2.5m x 2m** right-angled triangle to be provided (AS2890.1). Ensure design avoids visual obstructions in sight splay (i.e. dense landscaping, tall fencing/walls etc.)

Parking Spaces: The parking envelopes shown, must be kept clear of all physical obstructions, including height clearance reductions. Ensure that grades within the parking module do not exceed 1:20 (1:40 for accessible bays).

Accessible Spaces: To be designed in accordance with AS2890.6. i.e, standard parking space with adjacent shared bay (2.4m x 5.4m), to be installed as per AS2890.6 requirements (bollard and markings).

Motorcycle Parking: Motorcycle bays to be designed as a 2.5m x 1.2m envelope (AS2890.1).

Bicycle Parking: Bicycle spaces are to allow for a envelope of 500mm by 1800mm, with an aisle width of 2000mm for locker storage, or 1500mm for racks.

Control Measures: Please note recommended control measures, including line markings, signage, bollards, convex mirrors, lights etc.

Car parking provision requirements are to be in accordance with SEPP (Housing for Seniors or People with a Disability) 2004.

- **1 x parking space suitable for an ambulance is to be provided**

Car parking requirements are *tbc* and require confirmation of the following:

- **Number of RACF beds (existing & additional); and**
- **Number of staff (existing & additional).**

ptc.

Suite 502, 1 James Place
North Sydney NSW 2060

t +61 2 8920 0800

ptcconsultants.co

rev	date	comment / description	drawn	reviewed
7	21.08.2020	for review	JM	DS
6	05.08.2020	for review	JM	DS
5	01.07.20	for review	JM	DS
4	18.03.20	for Review	JM	SW
3	24.02.20	For Review	JM	DS
2	21.02.20	For Information	JM	DS
1	29.11.19	For Information	SC	DS

project
Uniting St Columba's Lane Cove

drawing title
Swept Path Analysis Porte Cochere

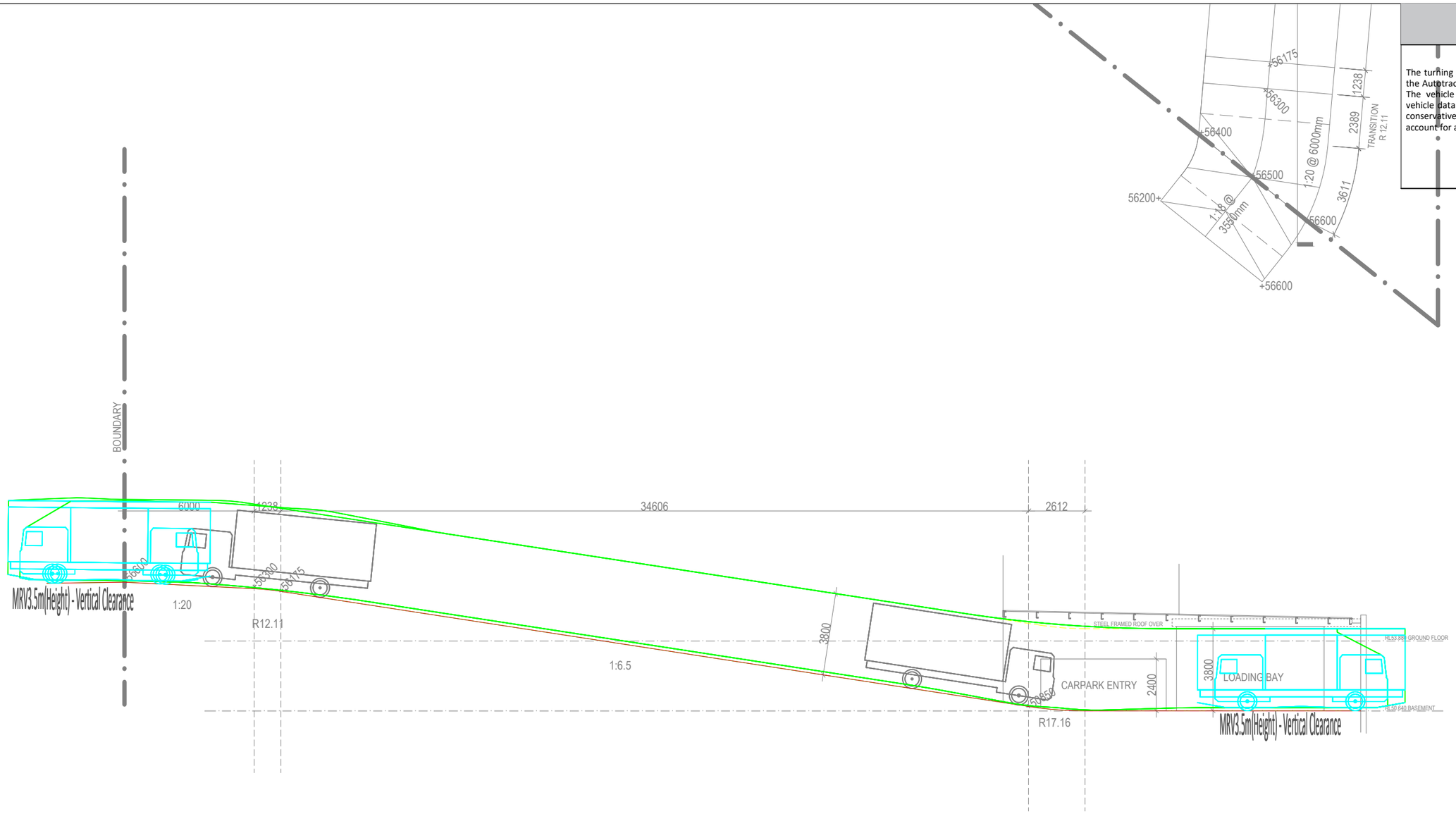
client	Uniting
drawing #	ptc-006
project #	2735
scale	1 : 200

rev 7

comments

A3

The turning paths illustrated in this drawing have been prepared using the Autotrack vehicle modelling software in conjunction with AutoCAD. The vehicle model was prepared by Analytico Pty Ltd based upon vehicle data provided by Austroads. While this modelling represents a conservative assessment of the vehicles ability, it is not possible to account for all vehicle types/characteristics or driver ability.



ptc.

Suite 502, 1 James Place
North Sydney NSW 2060

t +61 2 8920 0800

ptcconsultants.co

rev	date	comment / description	drawn	reviewed
7	21.08.2020	for review	JM	DS
6	05.08.2020	for review	JM	DS
5	01.07.20	for review	JM	DS
4	18.03.20	for review	JM	SW
3	24.02.20	For Review	JM	DS
2	21.02.20	For Information	JM	DS
1	29.11.19	For Information	SC	DS

project

Uniting St Columba's Lane Cove

drawing title

Vertical Clearance Analysis for an MRV Travelling Up and Down the Ramp

client	Uniting
drawing #	ptc-007
project #	2735
scale	1 : 250

rev 7