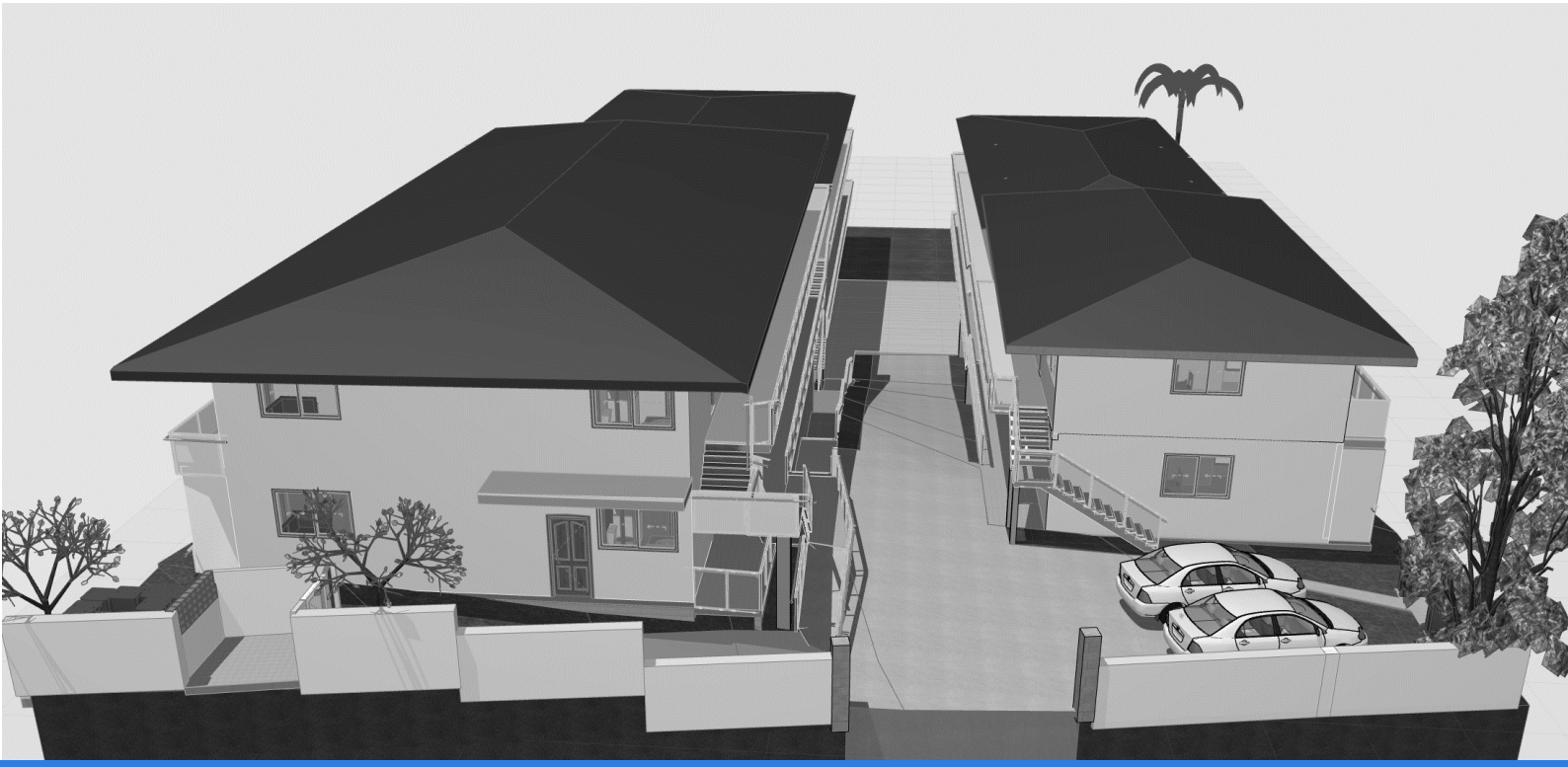

34 Fullers Road, Chatswood
Transport Impact Assessment

Prepared for:

Joanna Yang

23 October 2020

The Transport Planning Partnership

34 Fullers Road, Chatswood
Transport Impact Assessment

Client: Joanna Yang

Version: V02

Date: 23 October 2020

TTPP Reference: 16016

Quality Record

Version	Date	Prepared by	Reviewed by	Approved by	Signature
V01	20/10/20	Lalaine Malaluan	Wayne Johnson	Wayne Johnson	
V02	23/10/20	Lalaine Malaluan	Wayne Johnson	Wayne Johnson	

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APPENDICES

1 Introduction

The Transport Planning Partnership (TTPP) has prepared this transport impact assessment (TIA) report to accompany a Site Compatibility Certificate application to NSW Department of Planning, Industry, and Environment (DPIE) for the proposed infill affordable housing development at 34 Fullers Road, Chatswood.

The proposed development involves construction of four two-storey residential flat buildings comprising 30 one-bedroom units, 15 car parking spaces, one motorcycle space, three bicycle racks and three bicycle lockers. It is proposed that 50-percent of the residential units will be provided as affordable dwellings.

2 Existing Conditions

2.1 Site Description

The subject site is located at 34 Fullers Road, Chatswood and falls within the local government area of Willoughby City Council. The site is within R2 Low Density Residential Zone with site frontage along Fullers Road.

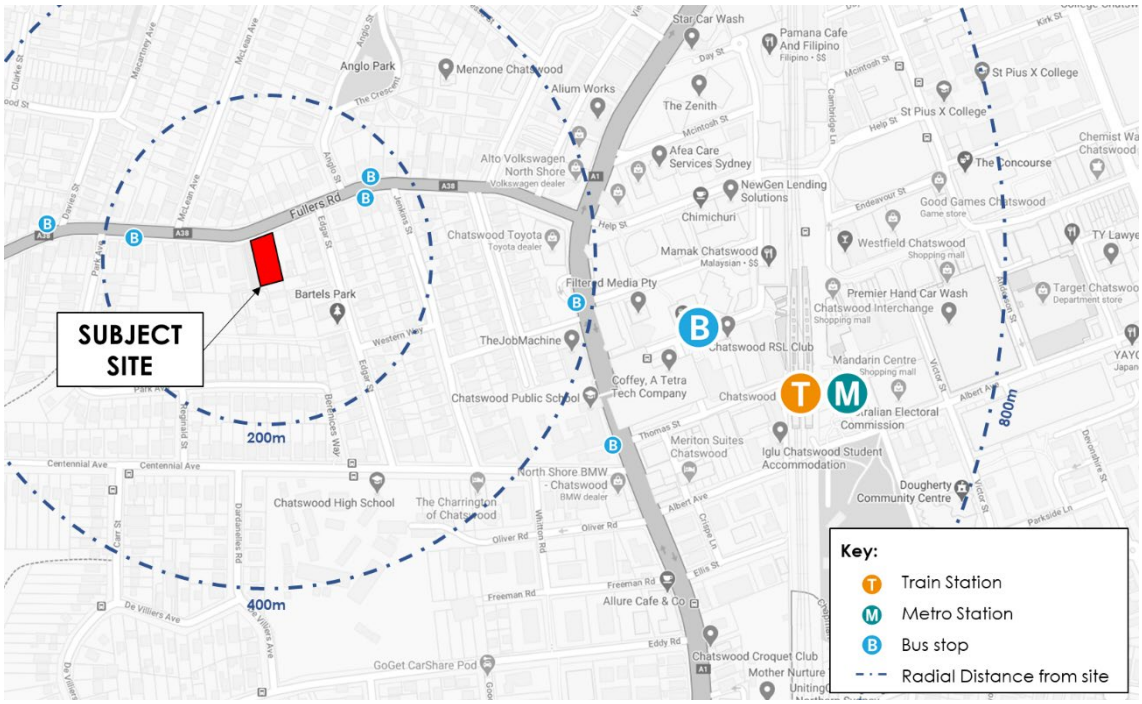
The site is currently occupied by a one-storey bed-and-breakfast accommodation with a driveway at the northeast boundary of the site.

Chatswood CBD, Chatswood Public School and Chatswood High School are located about 350m from the subject site. The site is located about 500m from Chatswood Bus Interchange and about 650m radial distance from Chatswood Train and Metro stations.

The subject site meets the State Environmental Planning Policy (SEPP) criteria for an infill affordable housing as it located within 800m of a railway station.

Figure 2.1 shows the location of the subject site and its surrounds.

Figure 2.1: Subject Site Location



Source: Google Maps Australia

2.2 Abutting Road Network

Fullers Road is a Roads and Maritime Services classified state road along the northern boundary of the subject site. Within the site vicinity, Fullers Road has two eastbound lanes and one westbound lane and has a posted speed limit of 50km/h. Travel lanes in either direction are separated by chevron pavement markings. Right turn bays are provided for traffic entering Edgar Street and McLean Avenue.

Edgar Street is a two-way, two-lane local road under the jurisdiction of Willoughby City Council. Restricted kerbside parking is provided on both sides of the road. The left turn from Edgar Street to Fullers Road is not permitted from 4:30pm to 7:00pm on weekdays. A speed limit of 50km/h applies to this road.

2.3 Public Transport Services

The subject site has good access to frequent public transport services. Chatswood Bus Interchange is located about 10-minute walk whilst Chatswood Train and Metro stations are about a 12-minute walk from the site.

2.3.1 Rail Services

Chatswood Station provides frequent train services for T1 North Shore, Northern, and Western Line, as well as the new Sydney Metro Norwest between Chatswood and Tallawong.

During peak hours, T1 trains traveling from Chatswood to Sydney CBD, northern and western suburbs arrive at the station approximately every two minutes. The Sydney Metro trains arrive every four minutes during peak hours and every 10-minutes outside of peak hours.

A map of the existing rail network is provided in Figure 2.2.

Figure 2.2: Existing Railway Network

Source: Transport for NSW (retrieved 02 May 2019)

2.3.2 Bus Services

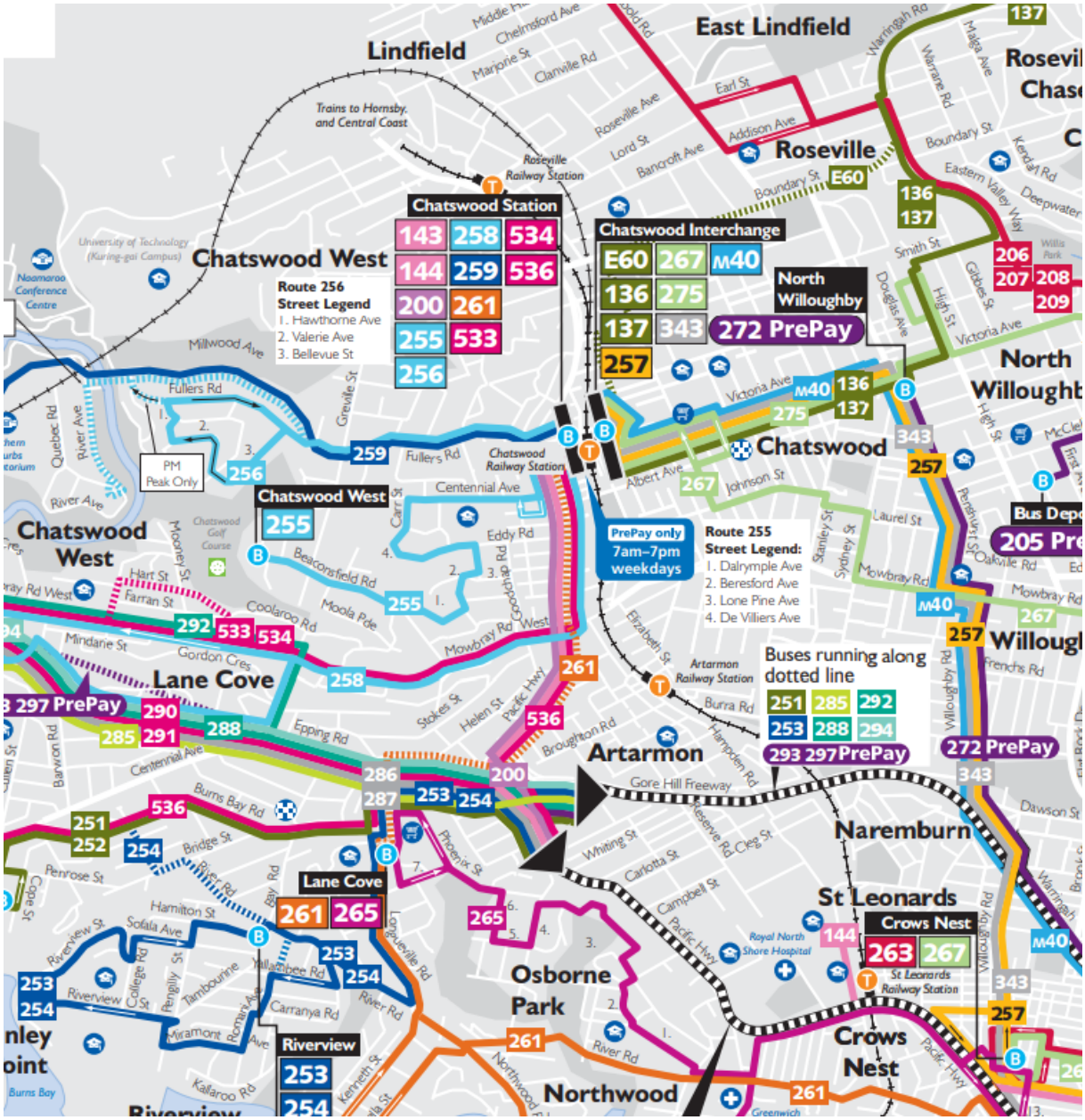
The closest bus stop is located along Fullers Road, about 130m from the subject site. This bus stop is served by Bus Services 256 and 259.

In addition, Chatswood Bus Interchange which is located about a 10-minute walk from the site provides connection to a wide range of bus services operating to/from areas of Sydney CBD, Northern Beaches, North Shore, Willoughby, Parramatta, Macquarie University, and

Bondi. Chatswood Interchange bus stands are located along Victoria Avenue, Railway Street and Orchard Road.

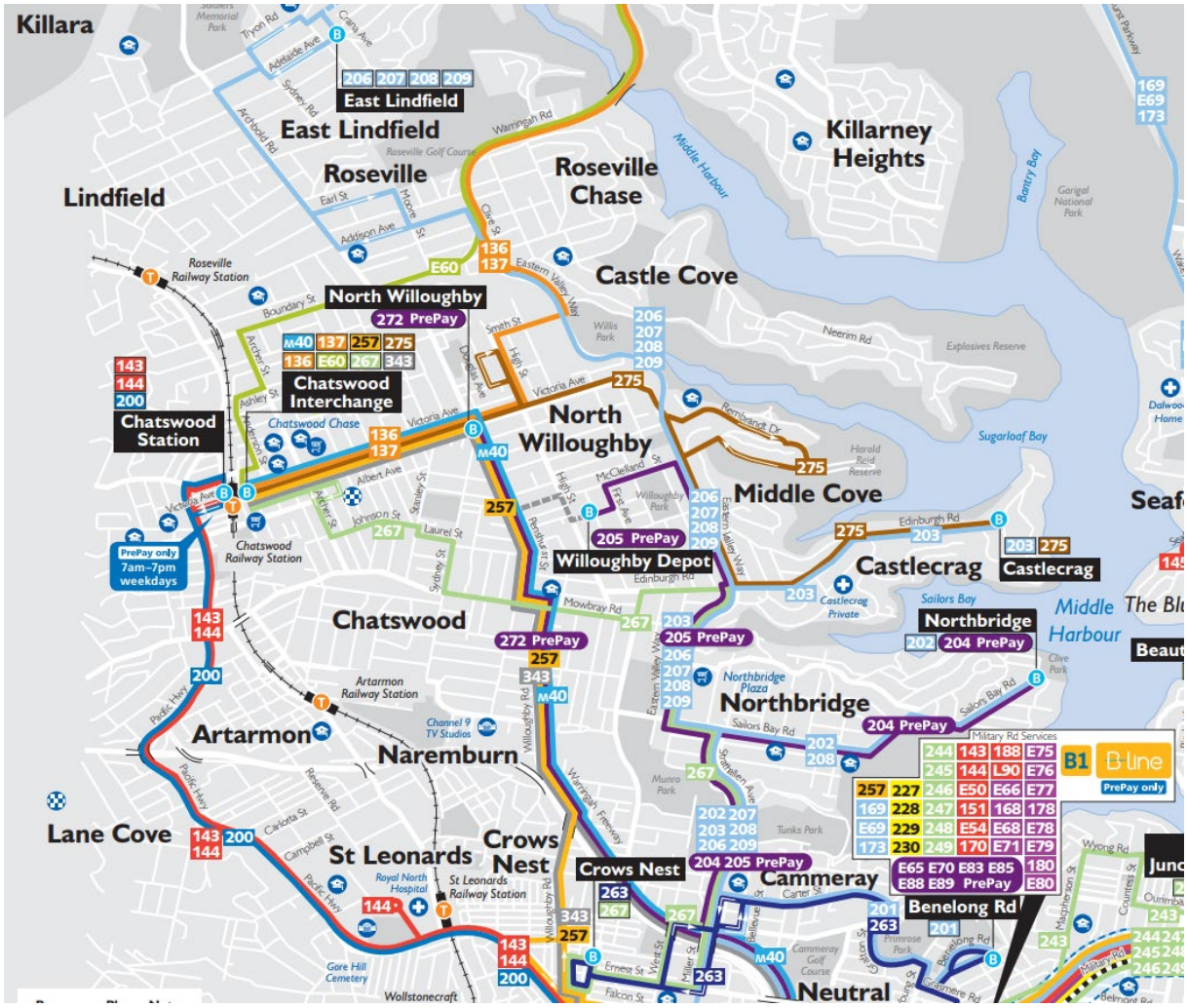
The existing bus network maps are presented in Figure 2.3 and Figure 2.4.

Figure 2.3: Existing Bus Network Map – North Shore and West Network Map



Source: Transport for NSW (State Transit), North Shore & West Bus Network Map

Figure 2.4: Existing Bus Network Map – Northern Beaches and Lower North Shore Network Map



Source: Transport for NSW (State Transit), Northern Beaches and Lower North Shore Bus Network Map

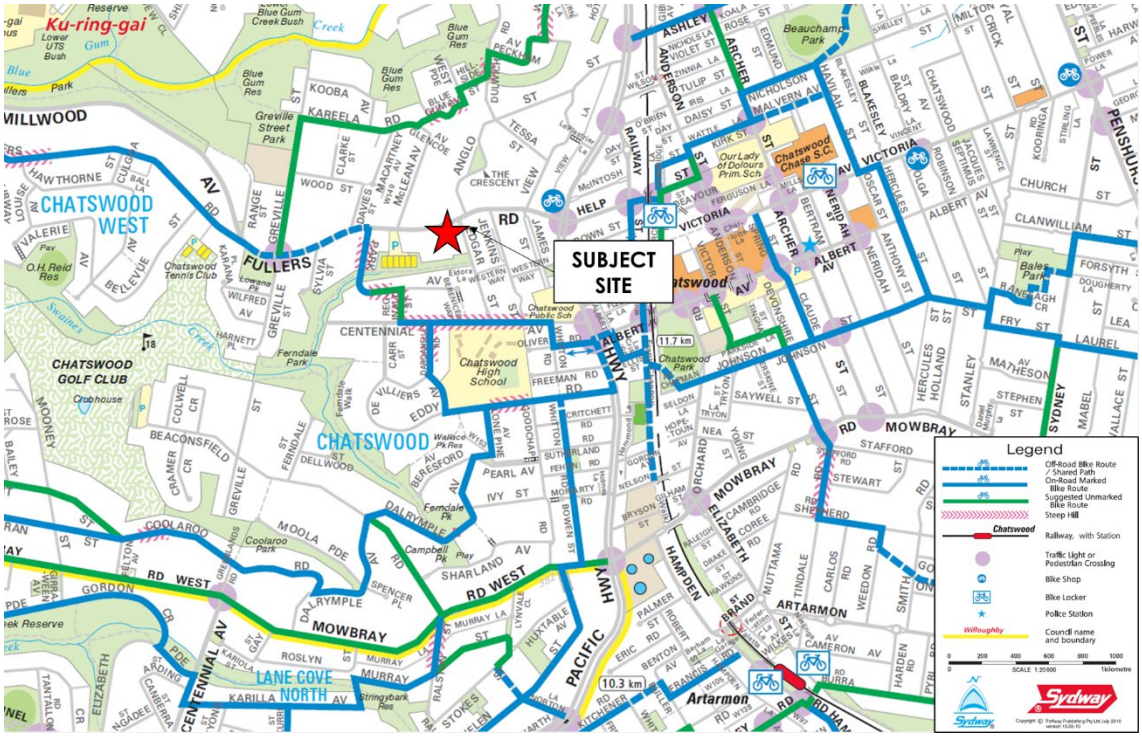
2.4 Pedestrian and Cycling Infrastructure

Paved footpaths along the roads surrounding the site provide good quality pedestrian access to surrounding areas.

Cycling facilities along Fullers Road are limited within the immediate vicinity of the site.

The existing bicycle network within the surrounding area is shown in Figure 2.5.

Figure 2.5: Cycling Network



Source: Northern Sydney Cycling Map

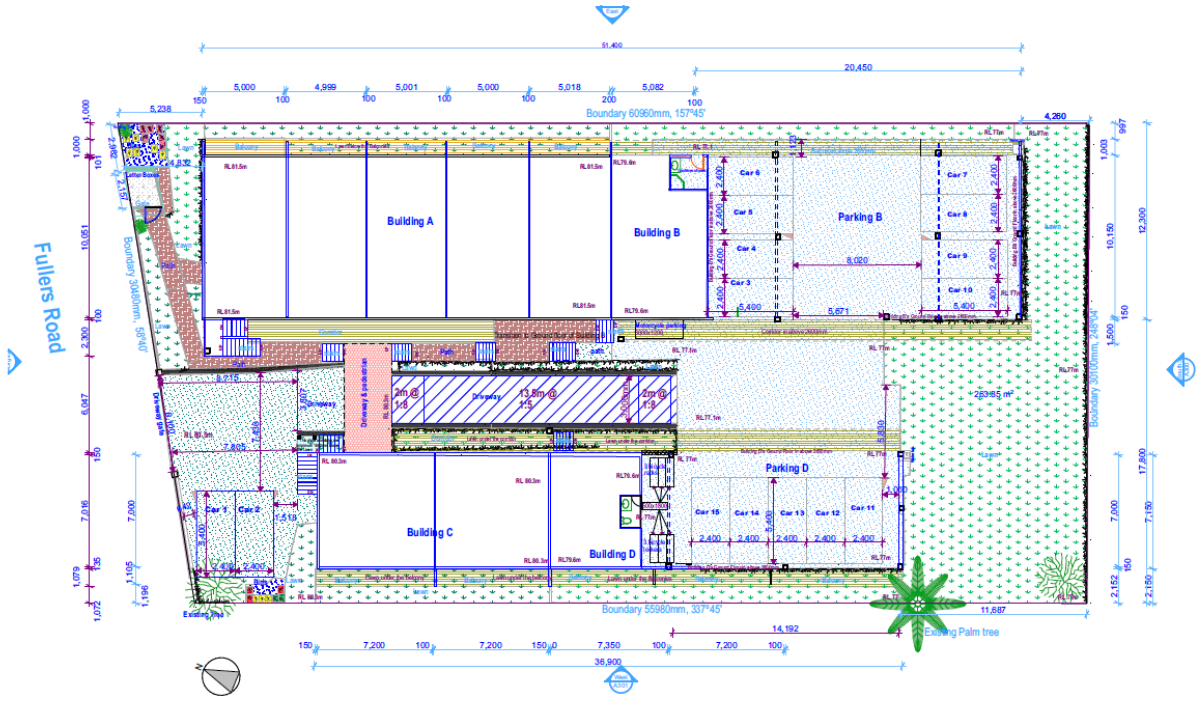
3 Proposed Development

The proposed development involves demolition of an existing building and construction of four two-storey buildings comprising 30 one-bedroom units. It is proposed that 50-percent of the residential units will be provided as affordable dwellings.

A total of 15 car parking spaces, one motorcycle space, three bicycle racks and three bicycle lockers will be provided on the ground floor of the site. Proposed access to the site is via a two-way driveway off Fullers Road. The driveway then continues to a one-lane, two-way access towards the rear parking area.

The proposed site layout plan is shown in Figure 3.1.

Figure 3.1: Proposed Site Layout



4 Parking Assessment

4.1 Car Parking Requirements

The car parking requirements as set out in the State Environmental Planning Policy Affordable Rental Housing 2009 (SEPP ARH) for infill affordable housing are as follows:

> *Clause 24.2.a. states that…*
>
> *… (i) in the case of a development application made by a social housing provider for development on land in an accessible area – at least 0.4 parking spaces are provided for each dwelling containing 1 bedroom, at least 0.5 parking spaces are provided for each dwelling containing 2 bedrooms and at least 1 parking space is provided for each dwelling containing 3 or more bedrooms, or*
>
> *(ii) in any other case – at least 0.5 parking spaces are provided for each dwelling containing 1 bedroom, at least 1 parking space is provided for each dwelling containing 2 bedrooms and at least 1.5 parking spaces are provided for each dwelling containing 3 or more bedrooms*

Based on the above, the proposed development comprising 30 1-bedroom units must not be refused if at least 15 car parking spaces were provided, however approval can be granted whether or not the development complies with the subclauses.

It is proposed to provide 15 car parking spaces on site which satisfies the SEPP requirements.

4.2 Motorcycle Parking Requirement

Council DCP requires one motorcycle parking to be provided per 25 car spaces.

One motorcycle parking space is proposed to be provided on site which satisfies the Willoughby City Council Development Control Plan (DCP) requirement.

4.3 Bicycle Parking Requirement

Bicycle lockers are required to be provided on residential developments at a rate of 1 bicycle locker per 10 units plus 1 plus one bicycle rack per 12 units as per DCP.

On this basis, the proposed development will require three bicycle lockers and three bicycle racks on site.

A total of three bicycle lockers and three bicycle racks is proposed to be provided on site which complies with the DCP requirement.

4.4 Car Park Design Compliance

Access to the proposed development will be via Fullers Road. The proposed driveway gate opening has a width of 6.1m. It opens to a parking area for two car spaces before it continues as a single-lane, two-way ramp with a kerb-to-kerb width of 3m towards the rear.

The ramp has a main grade of 1:5 (20%) with 2m transitions of 1:8 (12.5%) grade on both ends. The ramp provides access to the rear parking area.

All parking spaces are configured as 90-degree spaces. Parking spaces are provided as 2.4m wide and 5.4m long in accordance with AS2890.1 Class 1a parking spaces. Minimum aisle width is 7.43m which satisfies the AS2890.1 minimum requirement of 5.8m for Class 1a spaces.

Bicycle lockers and racks are also provided on the ground floor. The proposed dimensions of the bicycle parking facilities are adequate to accommodate standard bicycle spaces (i.e. 0.5m width and 1.8m long) and aisle widths (i.e. minimum 1.5m for bike racks and 2m for bike lockers) per AS2890.3:2015 requirements.

One motorcycle space is proposed on site with 1.2m width and 3m length in accordance with the DCP requirements.

Swept path assessment is presented in Appendix B.

Overall, the proposed parking layout comply with the requirements set out in AS2890.1:2004 and AS2890.3:2015.

5 Transport Assessment

Roads and Maritime Services provides traffic generation rates for different land uses in their Guide to Traffic Generating Developments (Guide) and in their technical direction TDT 2013/04a containing revised rates. It is noted that the Roads and Maritime Guide does not have any specific traffic generation rates for affordable housing developments.

It is noted that GTA Consultants prepared a *Trip Generation Survey, Medium Density Residential Dwellings* report (dated 08 August 2013) on behalf of Roads and Maritime which includes trip generation data of 17 sites across Sydney metropolitan and NSW regional areas.

Three of the surveyed 17 sites are low-rise apartments located in Sydney metropolitan area. For the purpose of this assessment, is has been assumed that the traffic generation of the proposed development would be comparable with the surveyed low-rise apartments in the Sydney area.

A summary of the obtained trip rates from these sites is presented in Table 5.1.

Table 5.1: Roads and Maritime Services Medium Density Residential Dwellings Trip Rate Summary

Site	17 and 19 Blaxland Avenue, Newington	67-71 Helen Street, Lane Cove North	21 Parkes Street, Harris Park	Average
No. of dwellings	54	12	10	
AM peak vehicle trips per dwelling	0.39	0.5	0.1	0.33
PM peak vehicle trips per dwelling	0.24	0.67	0.1	0.34

Reference: Trip Generation Survey, Medium Density Residential Dwellings (Roads and Maritime Services, August 2013)

By using the average trip rates presented above, the proposed development is anticipated to generate 10 vehicles per hour for both morning and evening peak periods.

The above traffic generation estimate is considered to be minimal and is not expected to have significant impact on the surrounding road network.

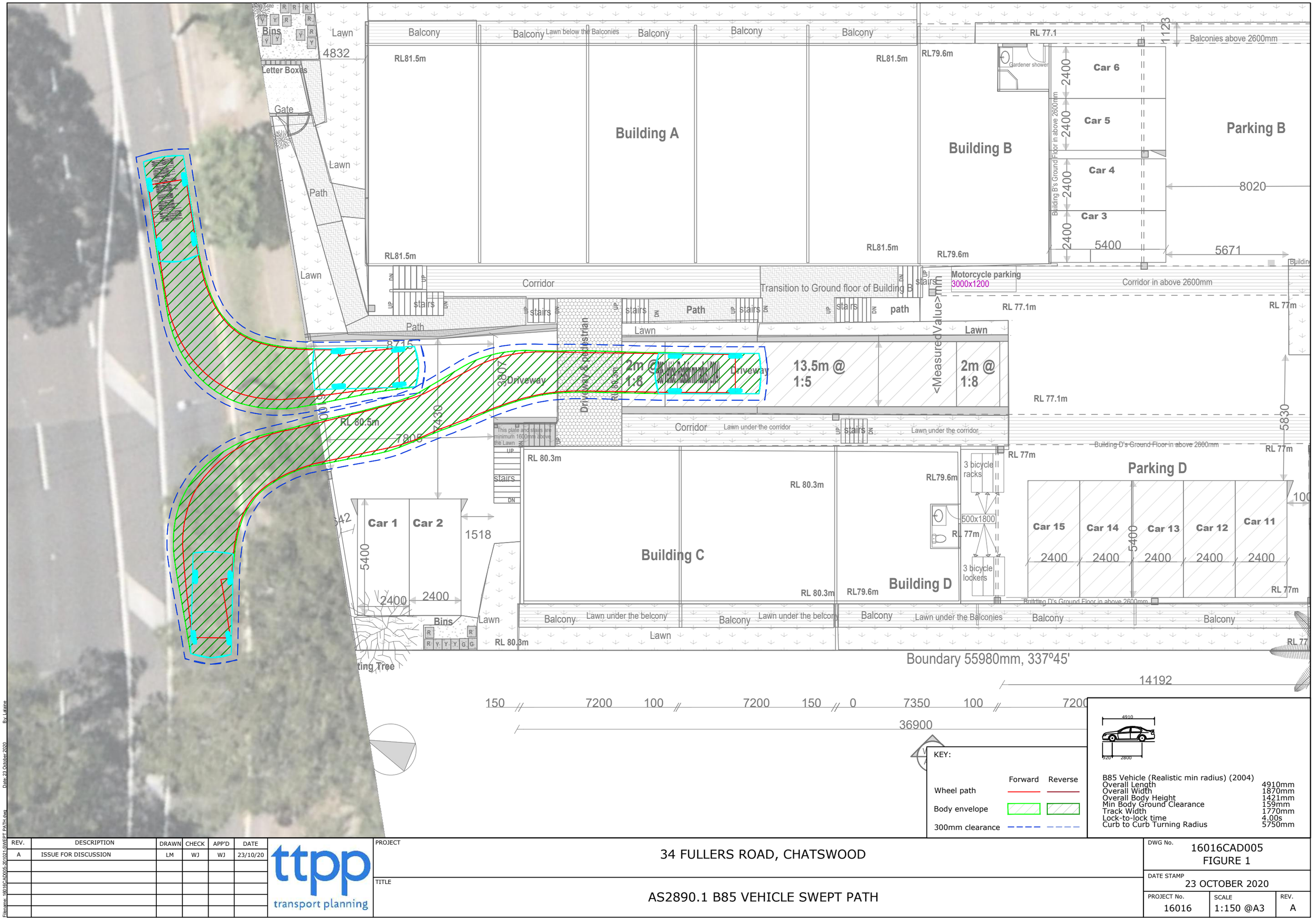
6 Conclusion

This report discusses the traffic and transport implications of the proposed affordable housing development at 34 Fullers Road, Chatswood. The key findings of the report presented below.

- A Site Compatibility Certificate application will be lodged to NSW Department of Planning, Industry, and Environment (DPIE) for the proposed construction of four two-storey residential flat buildings comprising 30 one-bedroom units.
- It is proposed that 50-percent of the residential units will be provided as affordable dwellings.
- The subject site meets the State Environmental Planning Policy (SEPP) criteria for an infill affordable housing as it located within 800m of a railway station and 50-percent of the total units are provided as affordable dwellings.
- A total of 15 car parking spaces, one motorcycle space, three bicycle lockers and three bicycle racks will be provided on the ground floor of the site.
- The proposed car parking supply meets the SEPP ARH requirements of 15 car parking spaces.
- The proposed motorcycle and bicycle parking provision satisfies the DCP requirements.
- Traffic generation of the proposed development has been estimated using the trip generation rates obtained from Roads and Maritime surveys for medium-density residential dwellings. Based on these rates, the proposed development is anticipated to generate 10 vehicles per hour during the morning and evening peak.
- The estimated trip generation is considered to be minimal and is not expected to have a significant impact on the surrounding road network.

Appendix A

Swept Paths



REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	LM	WJ	WJ	23/10/20

ttpp transport planning

PROJECT: 34 FULLERS ROAD, CHATSWOOD

TITLE: AS2890.1 B85 VEHICLE SWEPT PATH

DWG No. 16016CAD005 FIGURE 1

DATE STAMP 23 OCTOBER 2020

PROJECT No. 16016 | SCALE 1:150 @A3 | REV. A

Filename: 16016CAD005-201021-SWEPT PATH.dwg Date: 23 October 2020 By: Lalaine

VEHICLE ENTERING

VEHICLE EXITING

Bins
Lawn
4832
Balcony
Balcony
Lawn below the Balconies
RL81.5m
Letter Boxes
Gate
Lawn
Path
Lawn
Corridor
stairs
Path
8715
3807
Driveway
Driveway & pedestrian
RL 80.3m
2m @ 1:8
RL 80.5m
7430
7805
This plate and stairs are minimum 1600mm above the Lawn
stairs
RL 80.3m
Car 1
Car 2
1518
2400
2400
Bins
Lawn
Balcony
Lawn under the balcc
RL 80.3m
ting Tree
150
7200

KEY:

	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		

4910
920
2800

B85 Vehicle (Realistic min radius) (2004)

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

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	LM	WJ	WJ	23/10/20

ttpp transport planning

PROJECT: 34 FULLERS ROAD, CHATSWOOD

TITLE: AS2890.1 B85 VEHICLE SWEPT PATH (RECOMMENDED LAYOUT) FORWARD IN

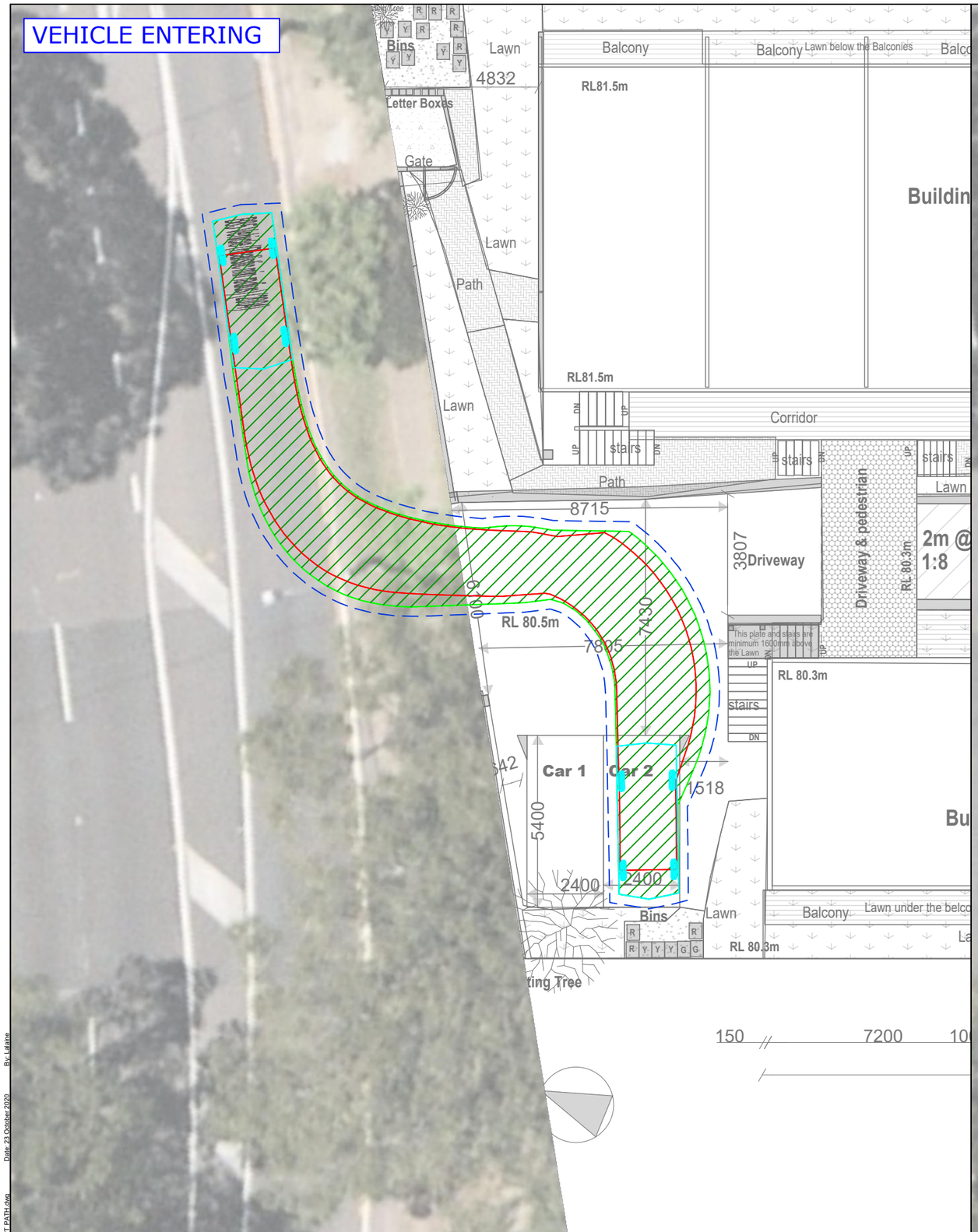
DWG No. 16016CAD005 FIGURE 2

DATE STAMP 23 OCTOBER 2020

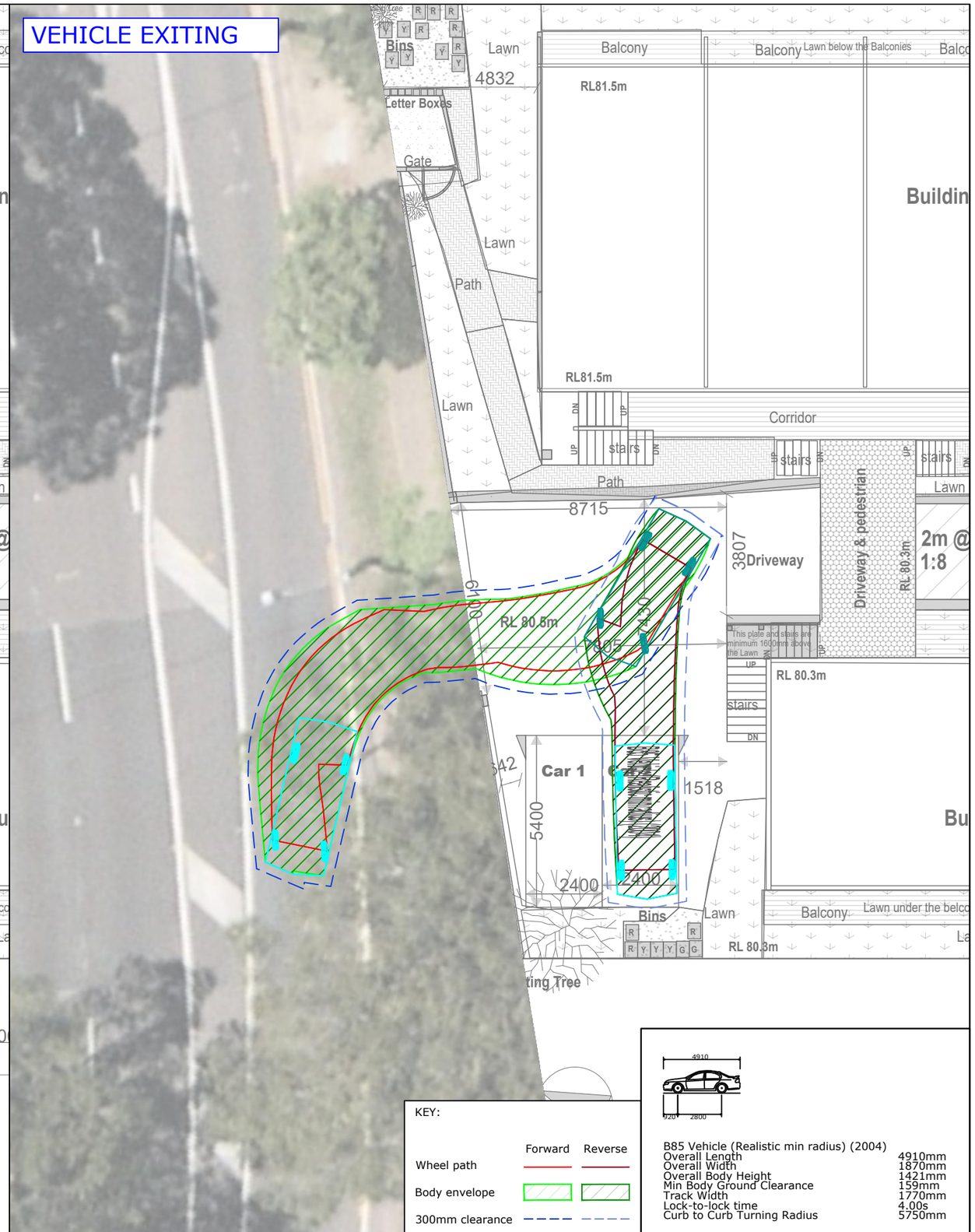
PROJECT No.	SCALE	REV.
16016	1:150 @A3	A

By: LaJane
Date: 23 October 2020
Filename: 16016CAD005-201021-SWEPT PATH.dwg

VEHICLE ENTERING



VEHICLE EXITING



KEY:

	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		

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REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	LM	WJ	WJ	23/10/20

ttpp transport planning

PROJECT: 34 FULLERS ROAD, CHATSWOOD

TITLE: AS2890.1 B85 VEHICLE SWEPT PATH (RECOMMENDED LAYOUT) FORWARD IN

DWG No. 16016CAD005 FIGURE 3

DATE STAMP 23 OCTOBER 2020

PROJECT No.	SCALE	REV.
16016	1:150 @A3	A

Filename: 16016CAD005-20121-SWEPT PATH.dwg Date: 23 October 2020 By: LaLaine

VEHICLE ENTERING

VEHICLE EXITING

RL 77.1
RL81.5m
RL79.6m
Gardener shower
Car 6
Car 5
Car 4
Car 3
2400
1123
Balconies above 2600mm
Building B
Parking B
Building B's Ground Floor in above 2600mm
8020
5400
5671
RL81.5m
RL79.6m
Building B's Ground Floor in above 2600mm
Transition to Ground floor of Building B
stairs
UP
DN
Motorcycle parking
3000x1200
Corridor in above 2600mm
path
RL 77.1m
RL 77m
Lawn
Driveway
13.5m @
1:5
2m @
1:8
<Measured Value>mm
Lawn under the corridor
5830
Building D's Ground Floor in above 2600mm
Water tap
Parking D
RL 80.3m
3 bicycle racks
500x1800
3 bicycle lockers
Car 15
Car 14
Car 13
Car 12
Car 11
1000
Building D
Balcony
Lawn under the belcony
Lawn under the Balconies
Boundary 55980mm, 337°45'
14192
7200
150
0
7350
100
36900
West
A301
Exist

KEY:

	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		

4910
920
2800

B85 Vehicle (Realistic min radius) (2004)

Overall Length	4910mm
Overall Width	1870mm
Overall Body Height	1421mm
Min Body Ground Clearance	159mm
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REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	LM	WJ	WJ	23/10/20

ttpp transport planning

PROJECT: 34 FULLERS ROAD, CHATSWOOD

TITLE: AS2890.1 B85 VEHICLE SWEPT PATH

DWG No. 16016CAD005 FIGURE 4

DATE STAMP 23 OCTOBER 2020

PROJECT No. 16016 | SCALE 1:150 @A3 | REV. A

By: LaHahe

Date: 23 October 2020

Filename: 16016CAD005-201021-SWEPT PATH.dwg

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