Revised Traffic & Parking Assessment Report

DA2022/1985

27 Waine Street, Freshwater

Proposed Residential Apartment Development

Ref 22108

24th June 2023

CJP CONSULTING ENGINEERS

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Document Control

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Project Address	27 Waine Street, Freshwater			
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Final	31.10.22	Final	C. Palmer	C. Palmer
Final V2	24.06.23	Design mods following RFI	C. Palmer	C. Palmer

Table of Contents

1. Introduction

1.1 Project Summary

CJP has been engaged by Pyco at Greenslopes Pty Ltd to prepare a Revised Traffic & Parking Assessment Report (TPAR) in support of an amended Development Application (DA2022/1985) to Northern Beaches Council, involving a new residential development to be located at 27 Waine Street, Freshwater.

The proposed development has been amended in response to a formal letter received from Council, dated 16 March 2023, containing a number of matters relating to building height, number of storeys privacy, landscaping, built form, adaptable units and sustainability. It is pertinent to note that there were no traffic or parking comments provided in that letter. Furthermore, the Traffic Engineer Referral Response, dated 28 February 2023, supported the original proposal, subject to conditions.

In summary, the original DA involved the demolition of the existing dwelling house on the site and the construction of a new residential apartment building, comprising a total of 6 x three bedroom apartments.

Off-street parking in the original DA was proposed for 12 cars within a new basement parking area, accessed via Waine Street.

The amended DA again involves the demolition of the existing dwelling house on the site and the construction of a new residential apartment building, however, now comprises a total of 4 x three bedroom apartments.

Off-street parking in the amended DA is proposed for 9 cars within a similar basement footprint as the original DA. Vehicular access to the site is proposed via a new two-way driveway off Waine Street in the same form and location as the original DA which Council's Traffic Department reviewed and supported.

Plans of the amended DA have been prepared by FUSE Architects and are reproduced in Appendix A.

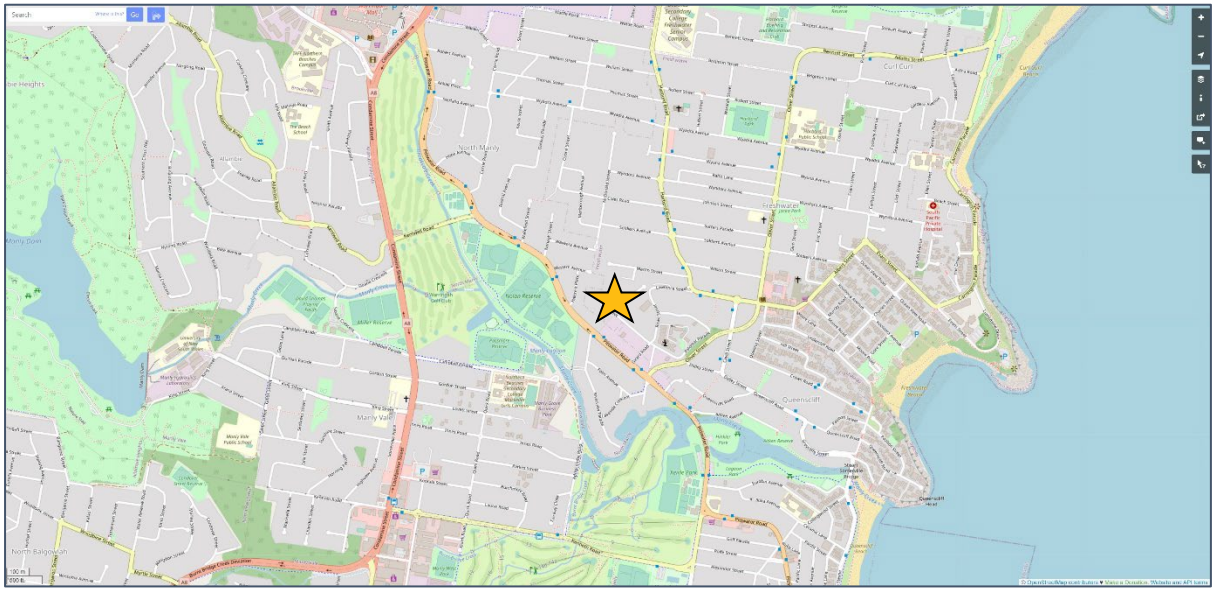


Figure 1.1 – Site Location (Source: Open Street Map)

Based on State Environmental Policy (Transport & Infrastructure) 2021, Schedule 3 – Traffic Generating Development, referral to Transport for NSW is not required.

1.2 Assessment Tasks

The purpose of this Revised TPAR is to assess the traffic, parking, access, transport and servicing characteristics of the DA, and the associated impacts of the proposal on the surrounding road network, parking and transport environment. This can be briefly summarised below:

- Description of the existing site and its location
- Existing traffic conditions
- Public and active transport infrastructure
- Traffic generation potential of the proposal and its impacts on the surrounding road network
- Off-street parking/servicing/access requirements and provisions
- Design of access driveway and parking area layout

1.3 Relevant Planning Controls

The site lies within the Northern Beaches Council (Council) Local Government Area (LGA), such that the relevant Council planning controls and strategies referenced in this Revised TPAR include:

- Warringah Local Environmental Plan 2011 (WLEP 2011)
- Warringah Development Control Plan 2011 (WDCP 2011)

1.4 Traffic, Transport & Parking Guidelines & Standards

In preparing this Revised TPAR, references are also made to the following site access, traffic and parking guidelines:

- Roads & Maritime Service's Guide to Traffic Generating Developments 2002 (RMS Guide)
- Roads & Maritime Service's Technical Direction Updated Traffic Surveys 2013 (TDT)
- State Environmental Planning Policy (Transport & Infrastructure) 2021
- State Environmental Planning Policy 65: Design Quality of Residential Apartment Development (SEPP 65)
- Apartment Design Guide 2015 (ADG)
- Australian Standards 2890.1:2004 – Off-Street Car Parking (AS2890.1)
- Australian Standards 2890.3:2015 – Bicycle Parking (AS2890.3)
- Australian Standards 2890.6:2009 – Off-Street Parking for People with Disabilities (AS2890.6)
- NSW Government's Planning Guidelines for Walking & Cycling (December 2004)

2. Existing Conditions

2.1 Site Location & Description

The development site is located on the eastern side of Waine Street, on the inside of the bend in the road. The site has street frontages of approximately 62m m in length to Waine Street and occupies a total area of approximately 556m^2. A copy of the survey plan, prepared by East Coast Positioning, is reproduced below.

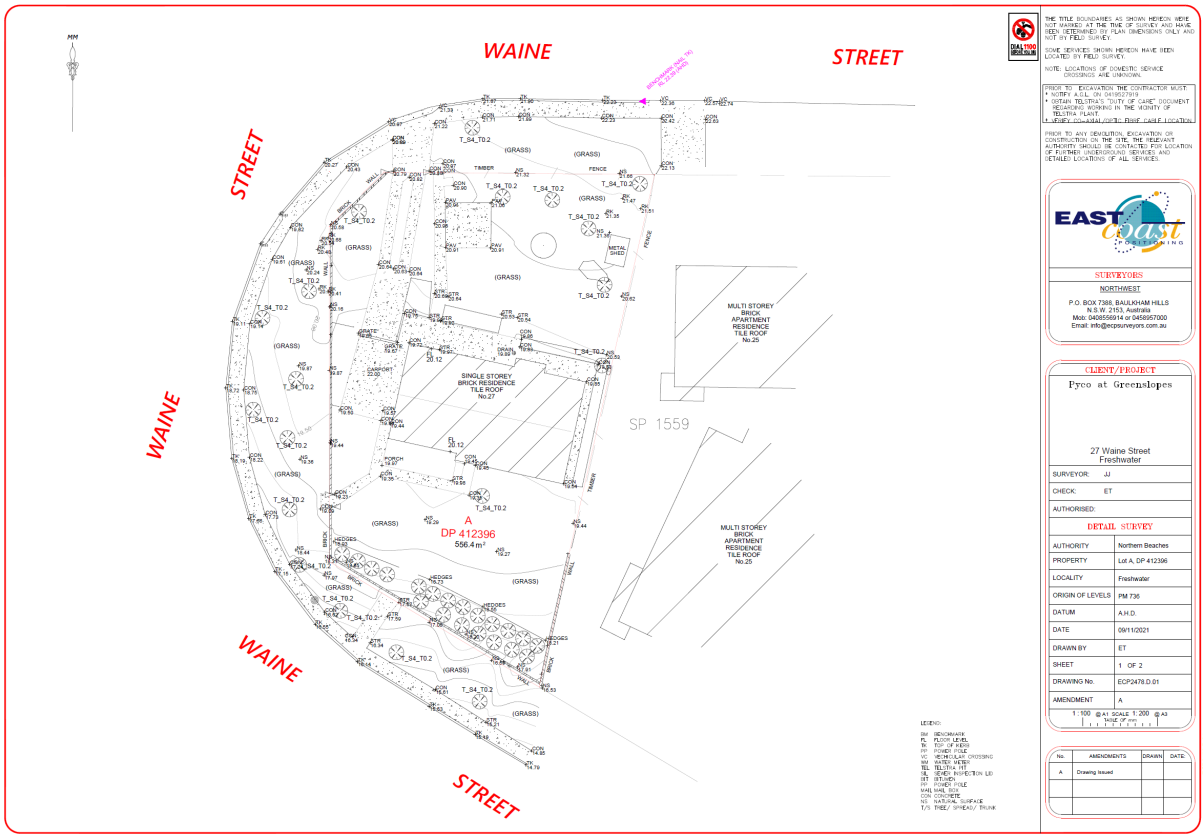


Figure 2.1 – Survey plan (Source: East Coast Positioning)

The site is currently occupied by a single-storey free-standing residential dwelling house with off-street parking.

Vehicular access to the site is currently provided via a single driveway crossover located at the northern end of the Waine Street site frontage.

A recent aerial image of the site and its surroundings is reproduced on the following page, along with a series of Streetview images.

Figure 2.2 – Aerial map (Source: Nearmap)

Figure 2.3 – Streetview image of Waine Street, looking west (Source: Google Maps)

Figure 2.4 – Streetview image of Waine Street, looking east (Source: Google Maps)

Figure 2.5 – Streetview image of Waine Street, looking south-east (Source: Google Maps)

Figure 2.6 – Drone image of Waine Street, looking east (Source: www.realestate.com.au)

The site is zoned R3 Medium Density Residential, as indicated in the map on the following page, and the proposed residential apartment building is permissible in the zone, subject to development consent.

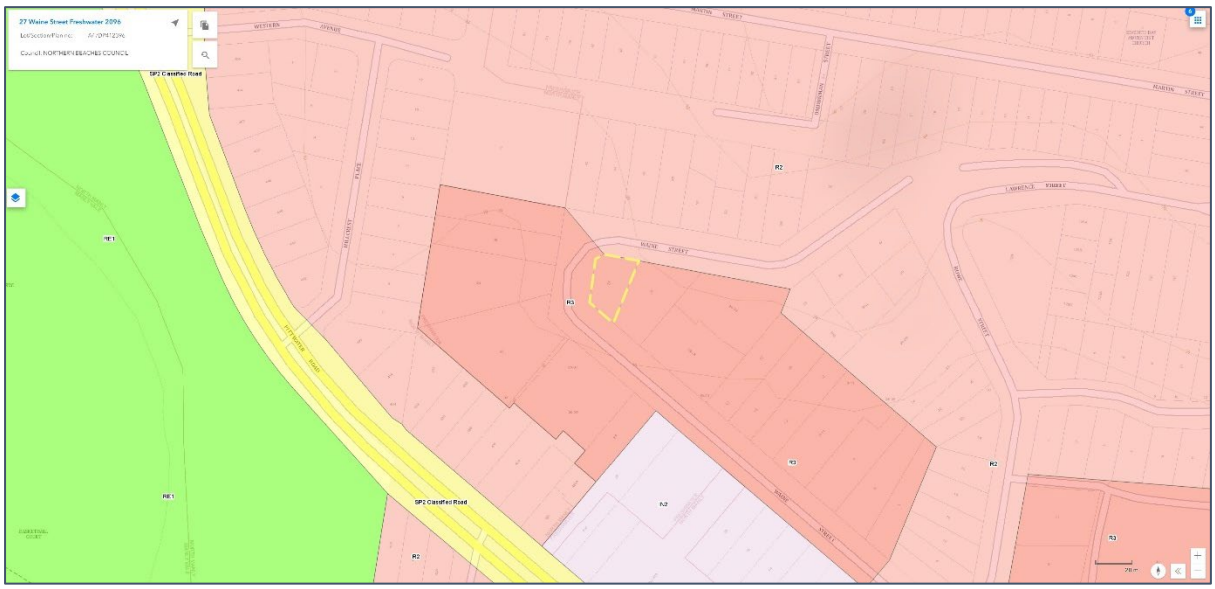


Figure 2.7 – Zoning map (Source: ePlanning Spatial Viewer)

2.2 Road Network

The Transport for NSW (TfNSW) road hierarchy comprises the following road classifications:

- State Roads: Freeways, Motorways and Primary Arterial Roads (TfNSW managed)
- Regional Roads: Secondary or Sub-Arterial (Council managed, partly funded by the State)
- Local Roads: Collector and Local Access Roads (Council managed)

The road hierarchy in the vicinity of the site is shown in the figure on the following page, whilst the key roads and intersections are summarised as follows:

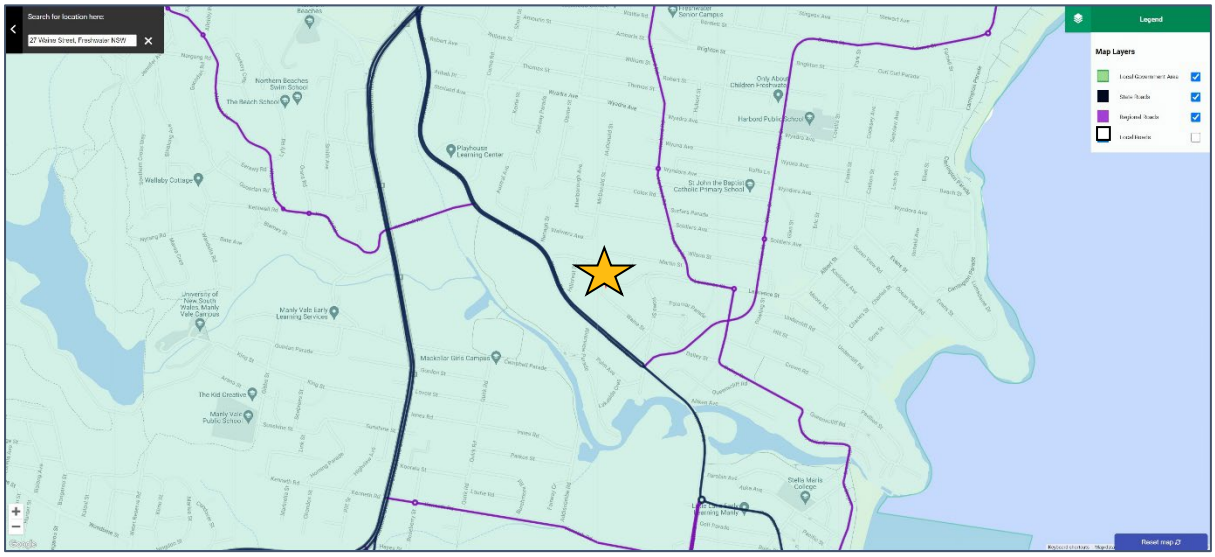


Figure 2.8– Road Hierarchy (Source: Transport for NSW)

- Manly Road/Burnt Bridge Creek Deviation/Condamine Street are classified as State Roads which provide the major north-south road link in the Lower Northern Beaches area, linking The Spit to Brookvale. It typically carries three traffic lanes in each direction in the vicinity of the site, with turning lanes provided at key intersections and Bus Lanes/Clearway lanes during peak periods.

- Pittwater Road is also classified as a State Road which provides another key north-south road link through the Northern Beaches, linking Manly to Church Point. It carries one to two traffic lanes in each direction, with kerbside parking generally permitted for motor vehicles only.

- Waine Street is a local road which provides pedestrian and vehicular access to frontage properties. It extends between Girard Street and Lawrence Street, however, includes a landscaped road closure, such that there is no vehicular through connection between the two ends, other than Council maintenance vehicles. Kerbside parking is generally permitted on both sides of the road, however is not permitted on the inside of the bend outside the site frontage.

2.3 Public Transport

The nearby public transport services are shown in the figure below. The nearest bi-directional bus stop is located approximately 400m walking distance south-east of the site on Pittwater Road, which is serviced by the 199 service. The 199 operates regular services Monday-Saturday between Manly Wharf & Palm Beach via Pittwater Road & Barrenjoey Road.

An additional bus stop is located on Lawrence Street, approximately 500m walking distance east of the site, which is serviced by the 166 service. The 166 also operates regular services Monday-Saturday between Manly Wharf & Frenchs Forest via Beacon Hill, Dee Why & Freshwater.

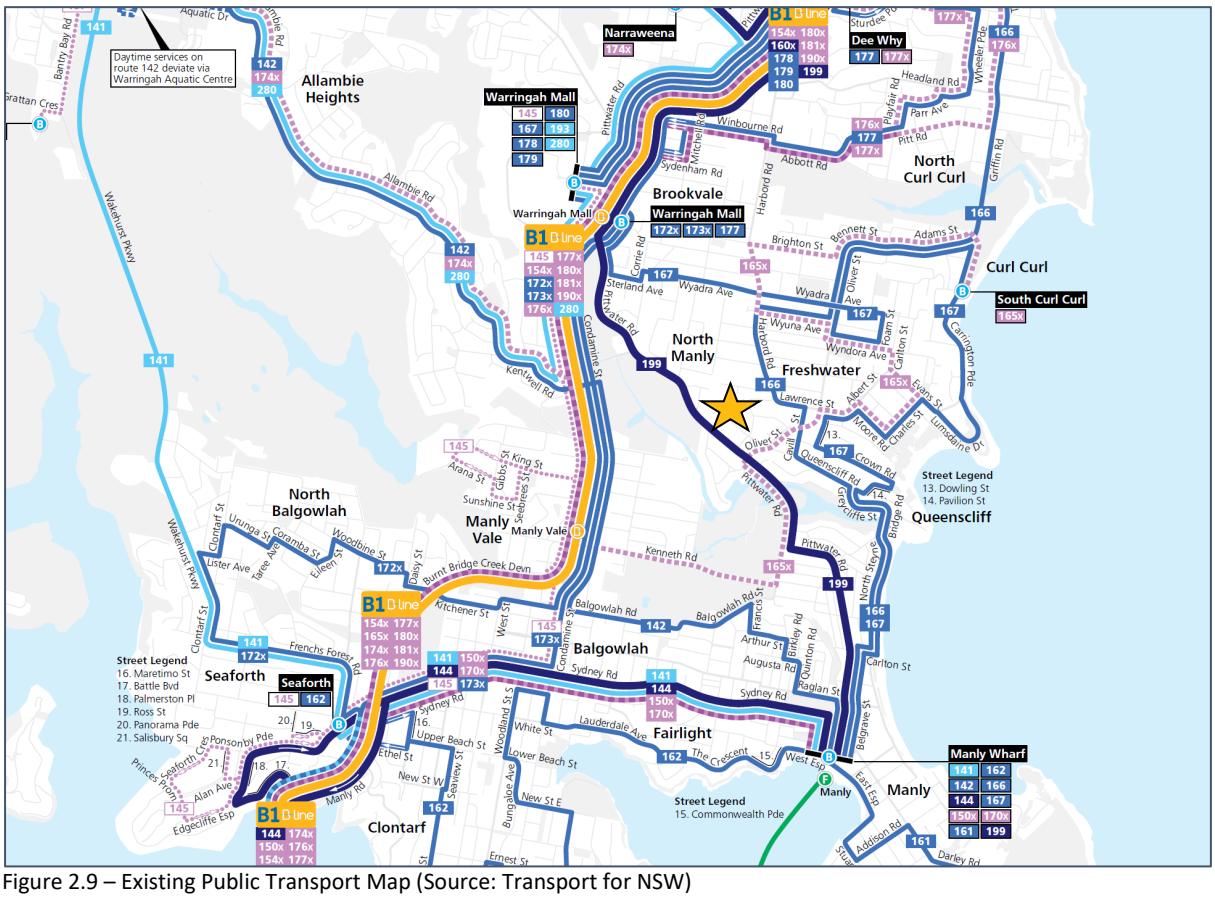


Figure 2.9 – Existing Public Transport Map (Source: Transport for NSW)

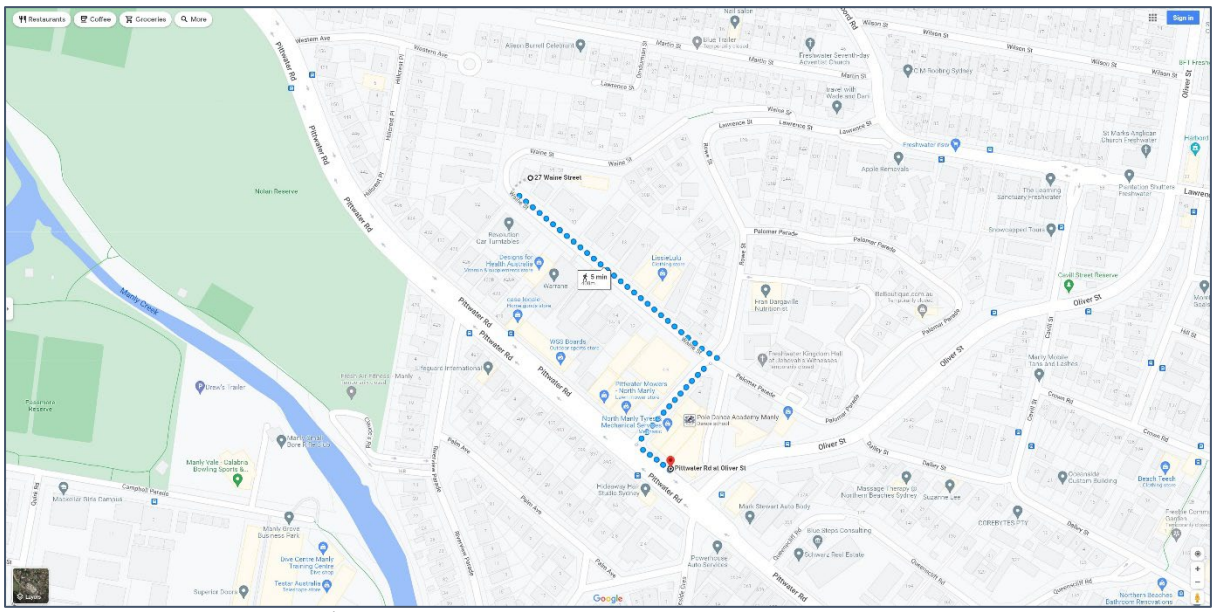


Figure 2.10 – Walking distance to/from nearest Pittwater Road bus stop (Source: Transport for NSW)

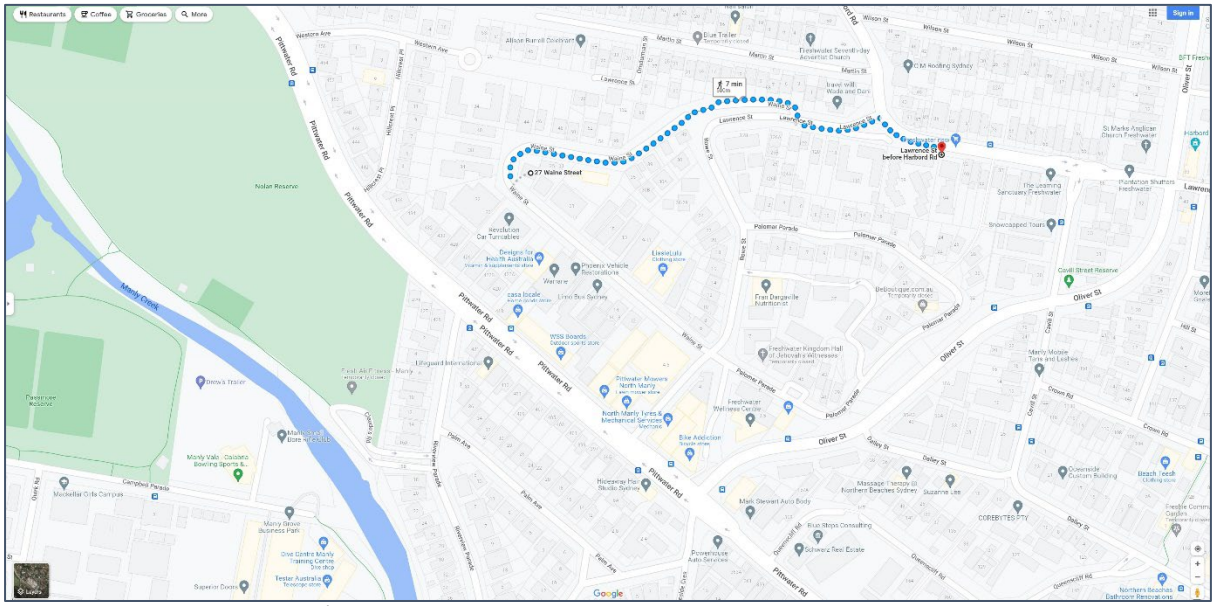


Figure 2.11– Walking distance to/from nearest Lawrence Street bus stop (Source: Transport for NSW)

Research suggests that proximity to bus services influence the travel mode choice for areas within 400m walking distance (approximately 5 minutes) of a bus stop. As such, the proposed development has potential for future residents to utilise buses for their commute to/from work, to run errands or social events.

In addition to the public transport services available in the vicinity of the site, there is also a good level of pedestrian connectivity, including safe and convenient footpaths to the abovementioned bus stops. All existing footpaths in the surrounding area are of good quality, with appropriate widths and pram ramps provided at most intersections.

The *Planning Guidelines for Walking and Cycling* identify a number of city-scale design principles that can assist the creation of walkable and cyclable cities and neighbourhoods. These principles emphasise urban renewal and the creation of compact, mixed use, accessible centres around public transport stops. At the neighbourhood scale, design principles can be reinforced through the creation of local and accessible centres and neighbourhoods with connected street patterns and road design which aim to reinforce local walking and cycling networks.

In particular, the *Guidelines* note that increased population density is an important element in creating a walkable and cyclable city. A compact development brings activities close together, making them more accessible by foot or by bicycle, without the need to use a car. Increased population density also enhances the viability of public transport services.

2.4 Existing Surrounding Traffic Controls

The existing traffic controls in the surrounding area comprise:

- traffic signals at the Pittwater Road, Oliver Street & Lakeside Crescent intersection
- a 60km/h speed limit along Pittwater Road
- a 50km/h speed limit along all other local roads in the area
- a break in the central median island in Pittwater Road which allows all turning movements into and out of Girard Street
- Give Way restrictions in Waine Street & Rowe Street where they intersect with Girard Street

2.5 Existing Surrounding Parking Restrictions

The existing on-street parking restrictions in the surrounding area comprise:

- No Stopping restrictions along the inside bend of Waine Street, along the majority of the site frontage
- generally unrestricted parking elsewhere along both sides of Waine Street

3. Proposed Revised Development

3.1 Development Description

The proposed revised development involves the demolition of the existing dwelling house on the site and the construction of a new residential apartment building, comprising a total of 4 x three bedroom units.

3.2 Parking Arrangements

Off-street parking is proposed for 9 cars within a new basement parking area in accordance with Council's numerical requirements, comprising 8 residential spaces (including 1 accessible space) and 1 visitor space. The previous car stackers proposed in the original DA have been deleted.

In addition, 1 motorcycle space and 5 bicycle spaces are also proposed within the basement parking area.

3.3 Waste Collection

Waste collection is to be undertaken by Council's contractor from the kerbside area outside the Waine Street site frontage, with bins to be lined up along the kerb on "bin night" for collection the following day. Once emptied, bins will be moved back to the bin storage room within the basement as soon as possible.

3.4 Vehicular Access

Vehicular access to the site and basement parking area is proposed to be provided via a new 6.1m wide entry/exit driveway located at southern end of the Waine Street site frontage – i.e. the lowest point of the site. Beyond the initial 6.1m wide section of the driveway, it narrows into a 3.6m wide single-lane/two-way design that will be configured with a traffic signal, with the "passive" signal set to green at the street level, thereby giving priority to entering vehicles.

It is pertinent to note in this regard, that the proposed vehicular access driveway design is consistent with the original DA which Council's Traffic Team reviewed and supported. Notwithstanding, the level of the basement has been raised 1,050mm as the car stackers are no longer proposed and the additional head clearance no longer required.

4. Traffic Impact Assessment

The traffic implications of development proposals primarily concern the *nett change* in the traffic generation potential of a site compared to its existing and/or approved uses, and its impact on the operational performance of the surrounding road network, particularly during the weekday morning and afternoon road network peak periods.

An indication of the traffic generation potential of the existing and proposed uses on the site is provided by reference to the following documents:

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

4.1 Existing Development Traffic Generation

The existing development on the site is defined by the RMS Guide as a "dwelling house".

The site is currently occupied by a single dwelling house, therefore based on the RMS trip generation rate, the existing development on the site has a traffic generation potential of 1 vehicle trip during the weekday morning and afternoon peak hour (vph).

4.2 Proposed Development Traffic Generation

The proposed development on the site is defined by the RMS Guide as a "medium density" residential development, that is, "a building containing at least 2 but less than 20 dwellings".

The proposal involves the construction of a new residential apartment building on the site. Based on the RMS trip generation rates, the proposed development has a traffic generation potential of 3 vehicle trips during the weekday morning and afternoon peak hour, as set out in the table below.

Table 4.1 – Proposed Peak Traffic Generation

Land Use	Period	Vehicle Trip Rate	No. of Units	Proposed Peak Trips*
3 bedroom unit	AM & PM Peak Hour	0.65 trips/unit	4	2.6 peak trips
Total				**2.6 peak trips**

* entry/exit combined

4.3 Traffic Impact

As noted above, the traffic implications of development proposals primarily concern the *nett change* in the traffic generation potential of a site compared to its existing and/or approved uses.

Based on the RMS trip generation rates and the above tables, the proposed development is expected to result in a *nett increase* of approximately 2 trips during the weekday AM & PM peak periods, as set out in the table on the following page.

Table 4.2 – Nett Peak Traffic Generation

Period	Proposed Peak Trips	Existing Peak Trips	Nett Peak Trips
AM & PM Peak Hour	2.6 vph	1.0 vph	+1.6 vph

These peak period traffic volumes are statistically insignificant and represent, on average, 1 additional vehicle trip every 20 minutes during the weekday peak periods. These additional trips fall within typical daily fluctuations of the local road network and will have minimal impacts on the surrounding road network.

Accordingly, the road network operation is expected to remain at the same level of service and is therefore supportable on traffic grounds.

5. Access & Parking Assessment

5.1 Applicable Car Parking Rates

The off-street car parking rates applicable to the amended development proposal are specified in the Warringah DCP 2011 (Amendment 21), Appendix 1 Car Parking Requirements, as set out below.

Multi-dwelling housing, Residential flat buildings, Serviced apartments (including holiday flats), Shop-top housing (residential component)	General: • 1 space per 1 bedroom dwelling • 1.2 spaces per 2 bedroom dwelling • 1.5 spaces per 3 bedroom dwelling • 1 visitor space per 5 units or part of dwellings

(Source: Warringah DCP 2011, Appendix 1)

5.2 Car Parking Requirements

Based on the amended proposal for 4 x three bedroom apartments, the proposed development requires the provision of 7 car parking spaces, as set out in the table below.

Table 5.1 – Off-Street Car Parking Requirement (WDCP 2011)

Land Use	Minimum Parking Rate	No. of Units	Minimum Requirement
3 bedroom unit	1.5 spaces/unit	4	6.0 spaces
Visitors	1 space/5 units	4	0.8 spaces
Total			**6.8 spaces**

5.3 Accessible Parking

Residential accessible parking is required for each adaptable apartment. The required number of adaptable apartments in a residential development is provided in Section D18 Clause 9 of Council's WDCP 2011, which states, *where a development comprises at least 5 dwellings, 10% (rounded up to the next whole number) of dwellings shall be capable of being adapted (Class C) under AS4299.*

Based on the amended proposal for 4 apartments, the proposed development does not strictly require the provision of an adaptable apartment, which in turn, does not strictly require an accessible car parking space.

Notwithstanding, the amended development proposal does make provision for 1 adaptable apartment and 1 accessible car parking space within the basement parking area in close proximity to the lift.

5.4 Proposed Car Parking Provisions

The proposed development makes provision for a total of 9 off-street car parking spaces within the basement, comprising 8 residential spaces (including 1 accessible space) and 1 visitor space, thereby satisfying Council's WDCP 2011 requirements.

5.5 Bicycle Parking

The off-street bicycle parking requirements applicable to the development proposal are specified in the Warringah DCP 2011, Section C3(A) Bicycle Parking & End-of-Trip Facilities, as set out below.

MINIMUM BICYCLE PARKING REQUIREMENTS		
Land Use	Column 1 High–Medium Security Level*	Column 2 High–Low Security Level**
Residential Accommodation containing 3 or more dwellings (excluding group homes; boarding houses; hostels; seniors housing)	1 per dwelling	Visitors: 1 per 12 dwellings

(Source: Warringah DCP 2011, Section C3(A))

Accordingly, based on the amended proposal for 4 apartments, the proposed development requires the provision of 4 residential bicycle spaces and 1 visitor bicycle space.

That requirement is satisfied by the proposed provision of 5 bicycle spaces within the basement parking area, thereby satisfying Council's WDCP 2011 requirements.

6. Design Assessment

6.1 Applicable Design Standards

The following design standards have been used as the basis for compliance with respect to the revised vehicular access and parking requirements:

- Australian Standards 2890.1:2004 – Off-Street Car Parking (AS2890.1)
- Australian Standards 2890.3:2015 – Bicycle Parking (AS2890.3)
- Australian Standards 2890.6:2009 – Off-Street Parking for People with Disabilities (AS2890.6)

Whilst the revised vehicular access and parking area has been designed in accordance with the above Australian Standards, it is expected that a condition of consent would be imposed requiring reconfirmation of compliance at the Construction Certificate stage (CC). Any minor amendments required to the current DA design can therefore be addressed at the CC stage.

6.2 Vehicular Access & Circulation Design

The following key compliances are noted with respect to the revised vehicular access design and circulation system:

- 6.1m wide two-way driveway in accordance with "Category 1" requirements, before tapering into a 3.6m wide single-lane ramp with traffic signals at both ends to control flow
- driveway located outside of the 6m "prohibited" tangent points of an intersection
- first 6m of the ramp from the back of the footpath @ max 5% (1:20)
- 2.5m x 2.0m pedestrian sight triangles on the exit side of the driveway at the top back-of-footpath, rather than the boundary, given the unique steep gradient of the nature strip
- 5.8m wide aisle
- minimum 1m "aisle extension" at the end of the dead-end parking aisle
- minimum 2.2m overhead clearance provided throughout the vehicular circulation system
- traffic signals at the top and bottom of the ramp, displaying the green lantern to entering traffic at all times, unless triggered by a vehicle existing the basement.

Further to the above, the revised vehicular access and internal circulation arrangements have been designed to accommodate the swept turning path requirements of the B99 design vehicle as specified in *AS2890.1,* allowing them to circulate into/out of the basement parking area without difficulty, pass another vehicle, and to enter and exit the site in a forward direction at all times.

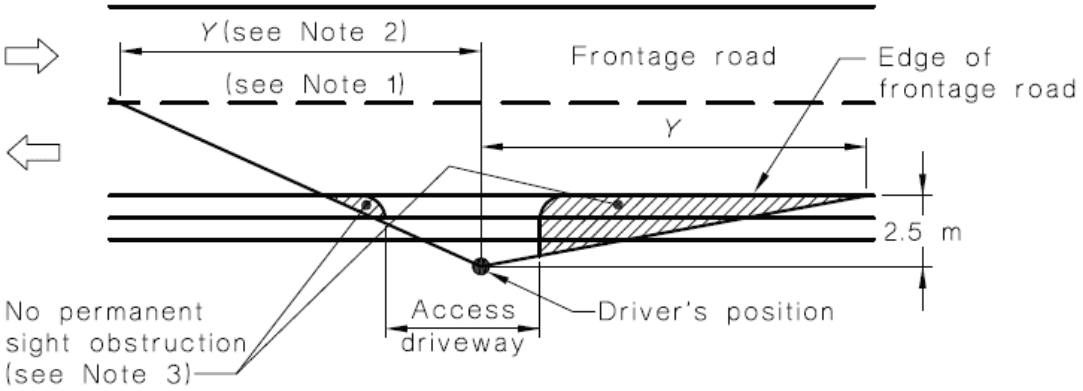
In addition, a series of swept turn paths of a B85 design vehicle have also been prepared which demonstrate how the cars access a sample of car spaces without difficulty. Swept turn path diagrams are reproduced in Appendix B.

6.3 Sight Distance Requirements

There are a number of criteria for assessing sight distance at access driveways. In particular, vehicle speed is a key factor in determining the required sight distance requirements. In this regard, it is noted that Waine Street has a legal speed limit of 50km/h. Notwithstanding, where the subject site is located on the inside bend of Waine Street, vehicle speeds are much lower.

A number of field tests indicates that the prevailing speed of vehicles heading south around the bend in Waine Street is approximately 30km/h.

The driver sight distance/visibility requirements at the proposed site access driveway are specified in *Figure 3.2 Site Distance Requirements at Access Driveways* of *AS2890.1:2004*, with the relevant extract reproduced below.



Frontage road speed limit (km/h)	Distance (Y) along frontage road (m)		
	Access driveways other than domestic		
	Desirable 5 sec gap	Minimum Safe Stopping Distance	Domestic property access (3 dwellings or less)
30	41*	25*	20*
40	55	35	30
50	69	45	40
60	83	65	55
70	97	85	70
80	111	105	95

* extrapolated figure

Whilst the legal speed limit in Waine Street is 50km/h, it is entirely unsafe to travel at that speed around the bend past the site frontage. In fact, even 40km/h could be considered dangerous around the bend.

As noted in the foregoing, a number of field tests indicates that the prevailing speed of vehicles heading south around the bend in Waine Street is approximately 30km/h. Accordingly, based on a 30km/h vehicle speed, the minimum safe stopping distance requirement is 25m.

It is pertinent to note, that given Waine Street is essentially a dead-end road, all turning movements into and out of the site will be right-in/left-out. Field measurements undertaken on site indicates that the location of the proposed site access driveway achieves a sight distance of approximately 30m to the north. Whist this is less than the desirable 5 second gap distance of 41m, it is greater than the domestic property access distance of 20m, noting that a "domestic property" is 3 dwellings or less – i.e. the proposal is just one dwelling more than a domestic property.

As the proposed development comprises just 4 apartments, 8 residential car spaces and 1 visitor car space, the location of the new driveway and its design configuration with a passing bay, is considered acceptable.

As noted in the foregoing, Council's Traffic Team have assessed the design in their assessment of the original DA and provided support.

Consideration could be given to the installation of a convex mirror opposite the driveway and facing to the north, in order to increase the visibility, as well as trimming/removing several trees within the Council verge. It is noted however, that any works proposed outside the site boundary requires approval from other Council departments, namely, the Local Traffic Committee for a mirror and the Assets/Landscape Department for the trimming/removal of any street trees.

6.4 Parking Design

The following key compliances are noted with respect to the parking area design:

- 5.4m long x 2.4m wide car parking spaces, in accordance with User Class 1A requirements
- 5.4m long x 2.4m wide accessible car parking space *plus* adjacent shared zone in accordance with AS2890.6, noting the shared zone is located within the circulation roadway which is acceptable under AS2890.6. Notwithstanding, there is no requirement to provide an adaptable unit or accessible parking space under WDCP 2011
- additional 300mm width for parking spaces located against walls
- 2.5m overhead clearance provided above the accessible parking space and adjacent shared area
- minimum 2.2m overhead clearance elsewhere throughout the car park circulation area
- columns in parking areas generally located ~750mm back from the edge of the parking aisle
- no obstructions within the "design envelope" of any car parking spaces
- bicycle parking spaces designed in accordance with AS2890.3
- motorcycle parking space designed in accordance with AS2890.1
- all vehicles are able to enter and exit the site in a forward direction at all times

7. Conclusion

In summary, the proposed revised development involves the demolition of the existing dwelling house on the site and the construction of a new residential apartment development, comprising a total of 4 x three bedroom units.

Off-street car, motorcycle and bicycle parking is proposed within a new basement parking area, in accordance with Council's WDCP 2011 numerical requirements.

Based on the findings contained within this report, the following conclusions are made:

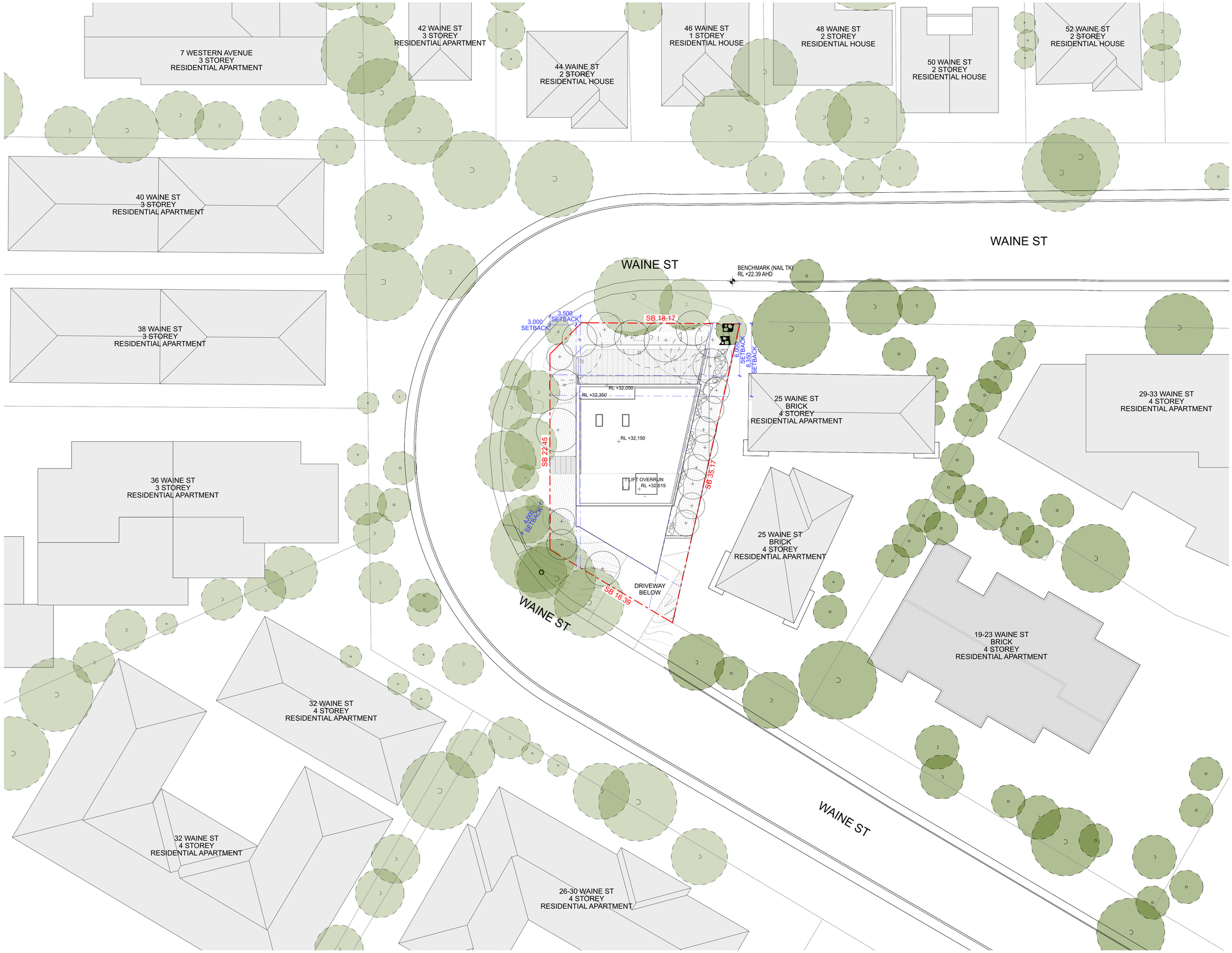
- the site is located within 400m walking distance to the 199 bus service and 500m walking distance to the 166 bus service, both of which provide access to Manly Wharf ferry services
- the proposed development is expected to result in a *nett increase* of just 2 vehicle trips during the weekday morning and afternoon peak periods
- the proposed *nett increase* in traffic is minimal will clearly not result in any unacceptable traffic or environmental capacity implications to the surrounding road network
- the proposed development makes provision for 9 car parking spaces, comprising 8 residential spaces (including 1 accessible space) and 1 visitor space, in accordance with Council's WDCP 2011 requirements
- the proposed development also makes provision for 5 bicycle spaces and 1 motorcycle space, in accordance with Council's WDCP 2011 requirements
- the proposed vehicular access and parking area design complies with the relevant requirements of the AS2890 series

In light of the foregoing assessment, it is therefore concluded that the proposed revised development is again supportable on vehicular access, traffic, parking and servicing grounds and will not result in any unacceptable implications.

CJP | CONSULTING ENGINEERS

Appendix A

Proposed Architectural Plans



2 SITE PLAN
1:200

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file: 2152_FRESHWATER1.2
print date and time: Monday, 19 June 2023 @ 2:10 pm

CHANGE	DESCRIPTION
P3A	PACKAGE AMENDED

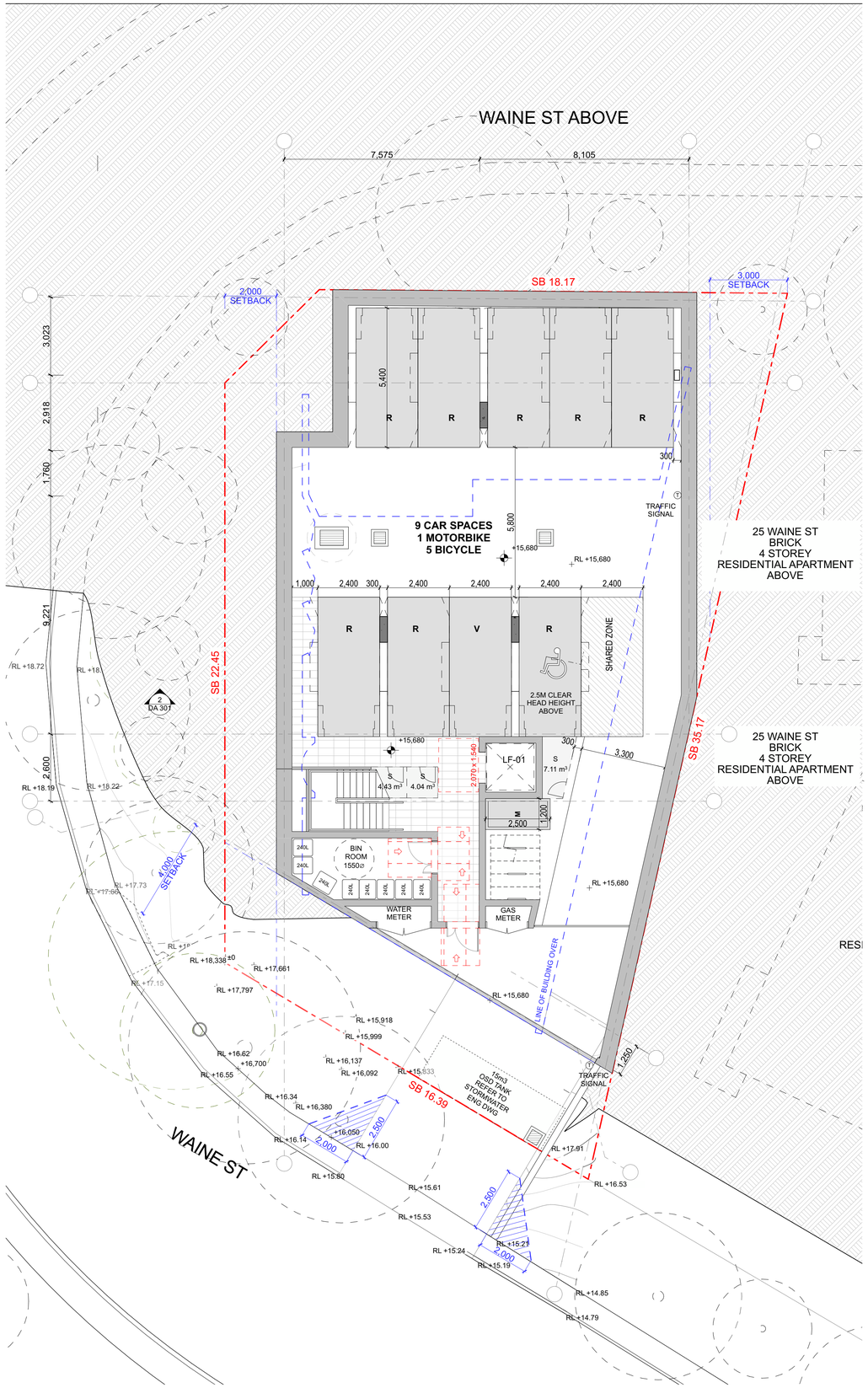
REVISION ID	AMENDMENT	DATE
P2	ISSUE FOR DA	16/9/22
P3	AMENDED DRAWINGS FOLLOWING COUNCIL COMMENTS	16/6/23

ARCHITECT
FUSE—ARCHITECTS
ARCHITECTURE | URBAN DESIGN | INTERIOR DESIGN
STUDIO 64
61 MARLBOROUGH STREET
SURRY HILLS NSW 2010
MAIL@FUSEARCHITECTURE.COM.AU
ABN 81 612 046 643
NOMINATED ARCHITECT RACHID ANDARY NSW ARB 8627

CLIENT
PYCO AT GREENSLOPES PTY LTD
CAN: 636899836

N
0 5 10 20m

PROJECT
FRESHWATER
SITE ADDRESS
27 WAINE STREET, FRESHWATER, NSW 2096
JOB NO
2152
CHECKED AA
DRAWN SK
DATE 10/1/22
SCALE 1:200 @ A1 A3@50%
PROJECT STATUS
DEVELOPMENT APPLICATION
DRAWING TITLE
SITE PLAN
SHEET NO. DA 004
REVISION. P3



1 BASEMENT
1:100

2 GROUND PLAN
1:100

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print date and time: Tuesday, 20 June 2023 @ 10:07 am

UNIT TYPES

- 3 BED APARTMENT
- R — RESIDENTIAL CARSPACE
- V — VISITORS CARSPACE
- A — ADAPTABLE / ACCESSIBLE CARSPACE
- SHARED ZONE
- B — BOLLARD
- S — STORAGE CAGES
- SR — STORAGE ROOM
- DEEP SOIL ZONE - ADG 7% = 39m²
- A — ADAPTABLE APARTMENT
- EASEMENT - TO BE EXTINGUISHED
- EXISTING TREES

CHANGE	DESCRIPTION
P3A	UNIT LAYOUT REDESIGNED

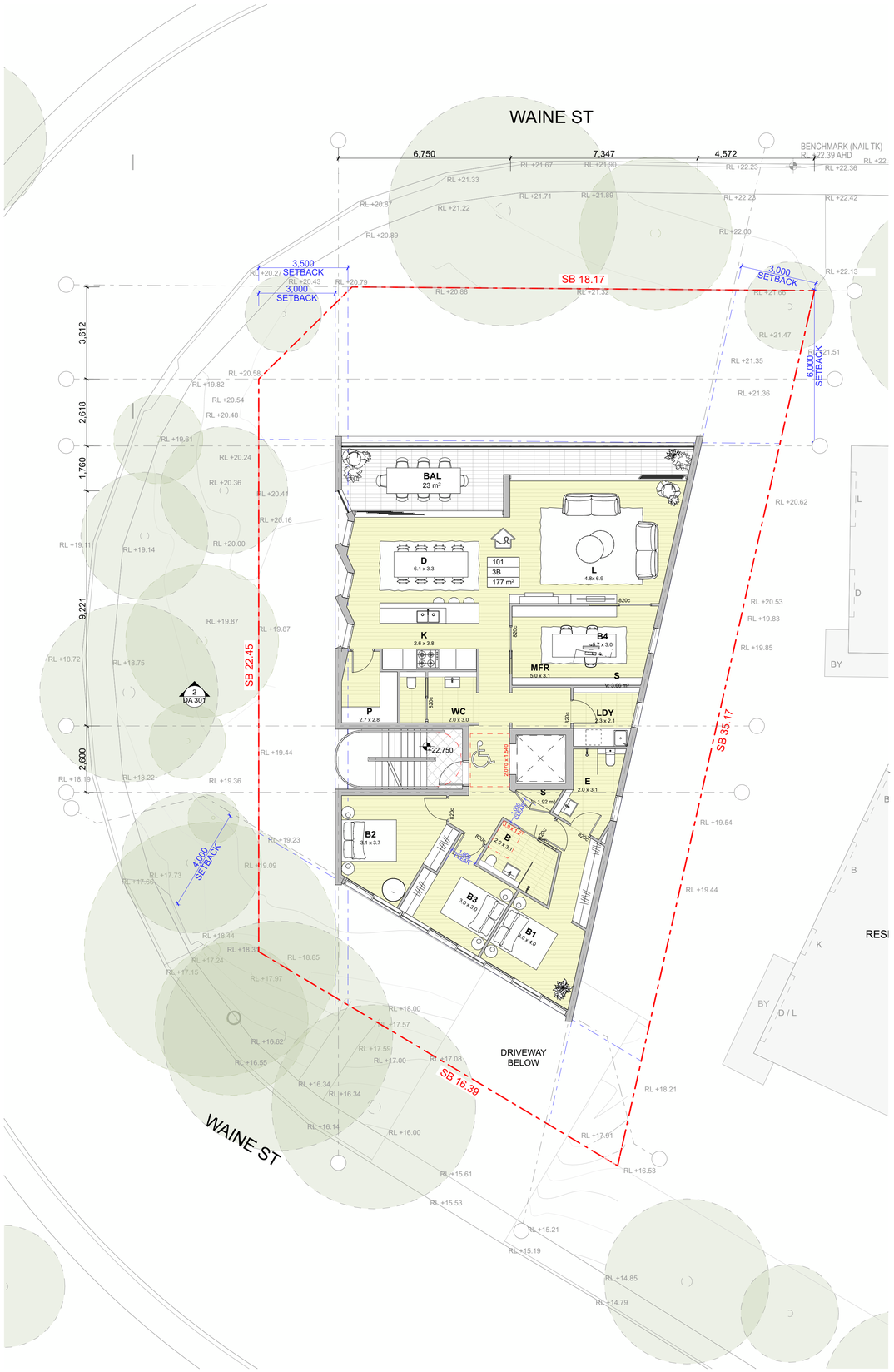
REVISION ID	AMENDMENT	DATE
P1	ISSUE FOR PRE-DA	20/1/22
P2	ISSUE FOR DA	12/8/22
P3	AMENDED DRAWINGS FOLLOWING COUNCIL COMMENTS	14/6/23

ARCHITECT
FUSE—ARCHITECTS
ARCHITECTURE | URBAN DESIGN | INTERIOR DESIGN
STUDIO 64
61 MARLBOROUGH STREET
SURRY HILLS NSW 2010
MAIL@FUSEARCHITECTURE.COM.AU
ABN 81 612 046 643
NOMINATED ARCHITECT RACHID ANDARY NSW ARB 8627

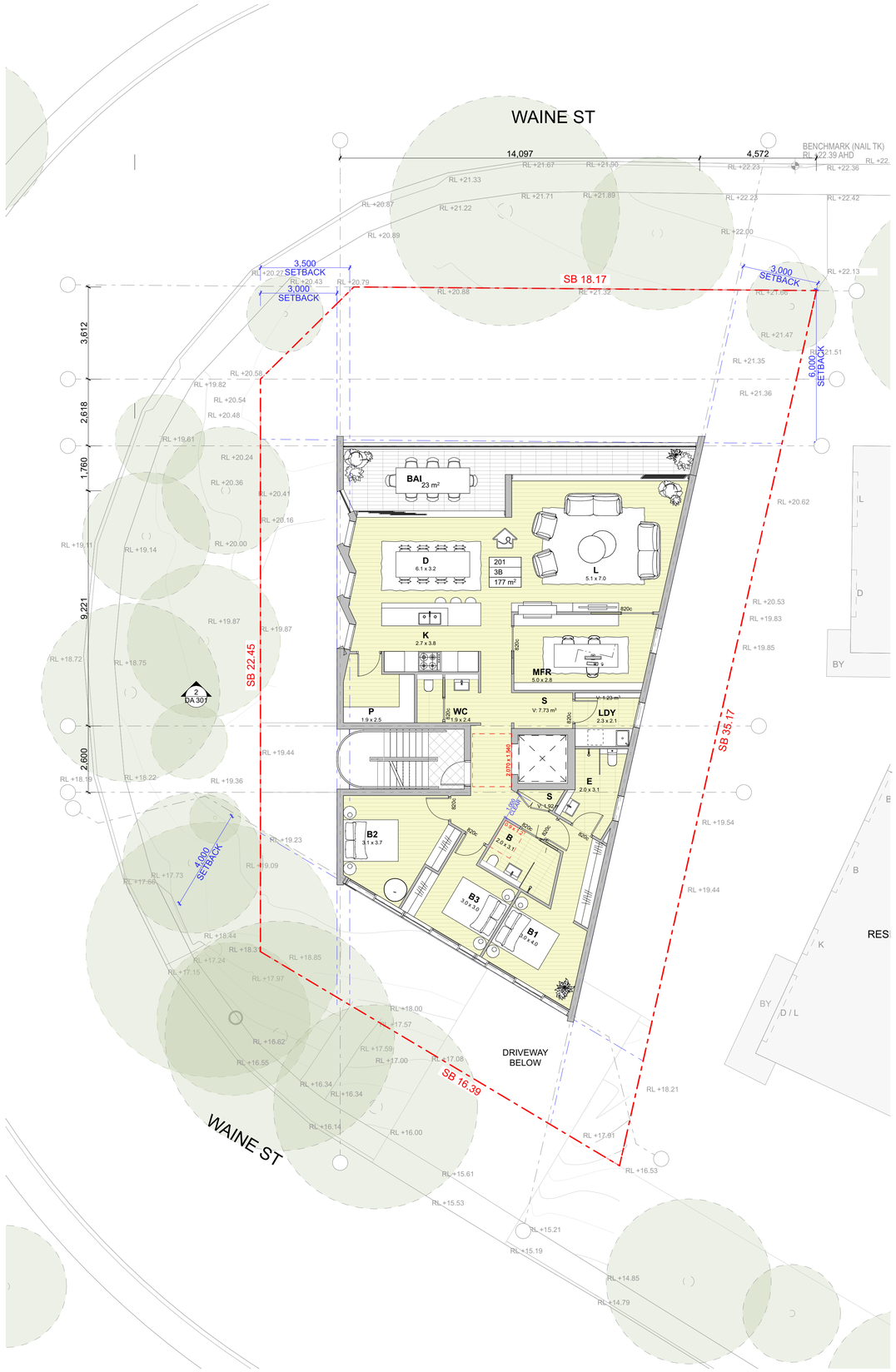
CLIENT
PYCO AT GREENSLOPES PTY LTD
CAN: 636898836

N
0 1 2 5m

PROJECT
FRESHWATER
SITE ADDRESS
27 WAINE STREET, FRESHWATER, NSW 2096
JOB NO
2152
CHECKED: AA
DRAWN: SK
DATE: 10/1/22
SCALE: 1:100 @ A1 A3@50%
PROJECT STATUS
DEVELOPMENT APPLICATION
DRAWING TITLE
BASEMENT & GROUND FLOOR PLAN
SHEET NO. DA 101
REVISION. P3



1 LEVEL 01 PLAN
1:100



2 LEVEL 02 PLAN
1:100

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•DRAWINGS ARE NOT TO BE SCALED.
•USE ONLY FIGURED DIMENSIONS.
•REFER TO CONSULTANT DOCUMENTATION FOR FURTHER INFORMATION.

file: 2152_FRESHWATER1.2
print date and time: Monday, 19 June 2023 @ 2:10 pm

UNIT TYPES

- 3 BED APARTMENT
- R — RESIDENTIAL CARSPACE
- V — VISITORS CARSPACE
- A — ADAPTABLE / ACCESSIBLE CARSPACE
- SHARED ZONE
- B — BOLLARD
- S — STORAGE CAGES
- SR — STORAGE ROOM
- DEEP SOIL ZONE - ADG 7% = 39m²
- A — ADAPTABLE APARTMENT
- EASEMENT - TO BE EXTINGUISHED
- EXISTING TREES

CHANGE	DESCRIPTION
P3A	UNIT LAYOUT REDESIGNED

REVISION ID	AMENDMENT	DATE
P1	ISSUE FOR PRE-DA	20/1/22
P2	ISSUE FOR DA	12/8/22
P3	AMENDED DRAWINGS FOLLOWING COUNCIL COMMENTS	14/6/23

ARCHITECT
FUSE ARCHITECTS
ARCHITECTURE | URBAN DESIGN | INTERIOR DESIGN
STUDIO 64
61 MARLBOROUGH STREET
SURRY HILLS NSW 2010
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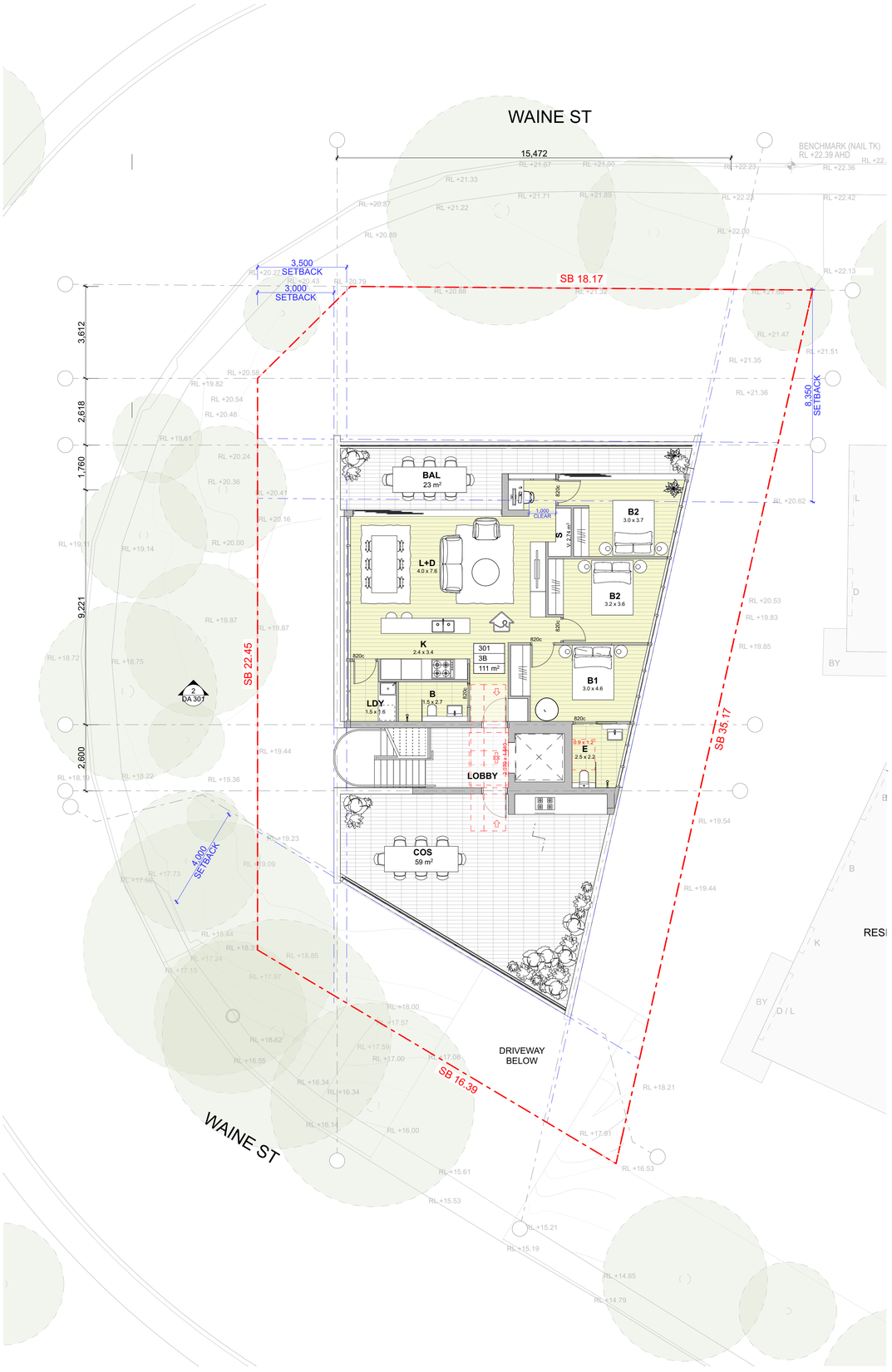
ABN 81 612 046 643
NOMINATED ARCHITECT RACHID ANDARY NSW ARB 8627

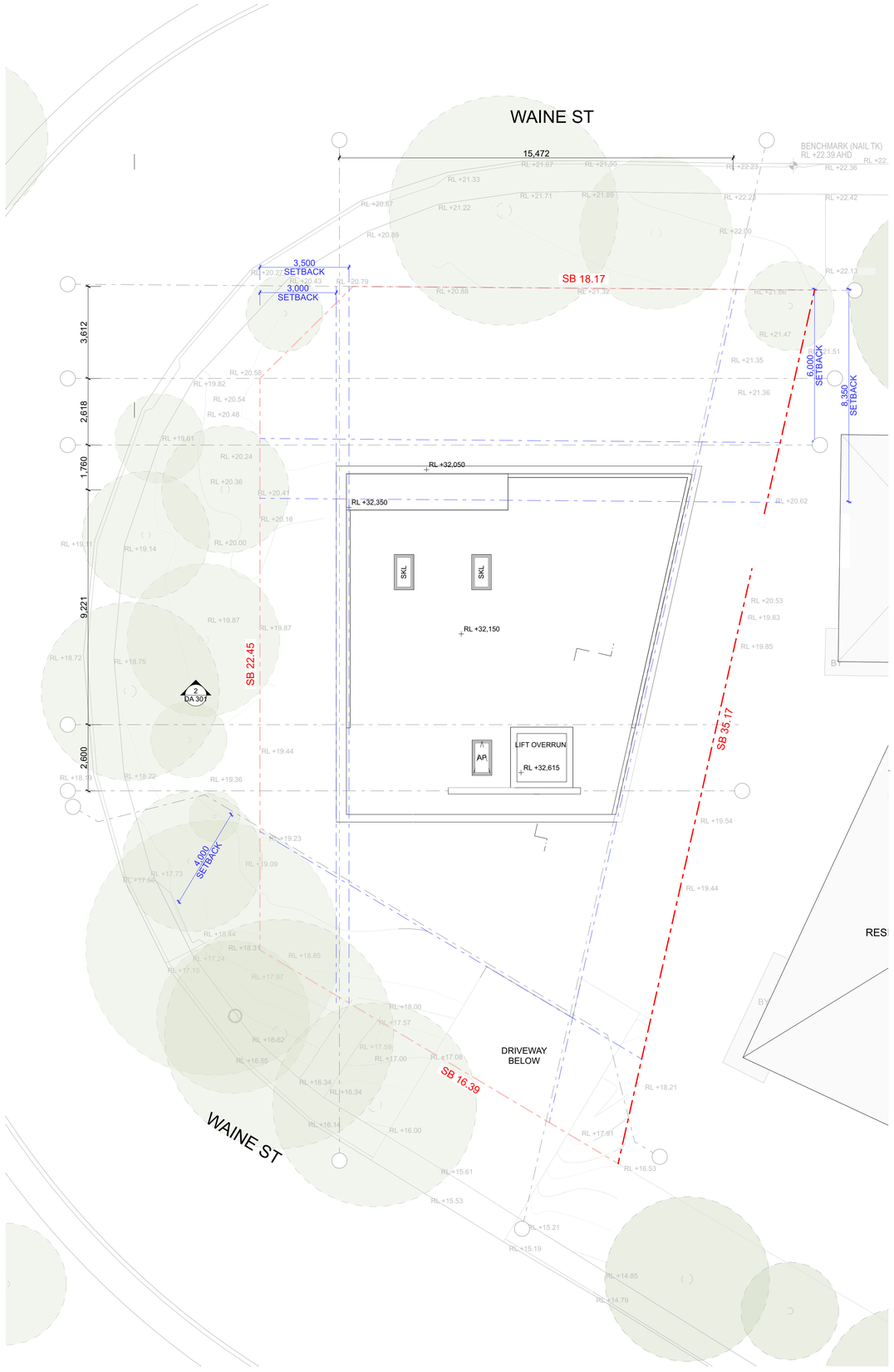
CLIENT
PYCO AT GREENSLOPES PTY LTD
CAN: 638898836

N
0 1 2 5m

PROJECT
FRESHWATER
SITE ADDRESS
27 WAINE STREET, FRESHWATER, NSW 2096
JOB NO
2152
CHECKED: AA
DRAWN: SK
DATE: 10/1/22
SCALE: 1:100 @ A1 A3@50%
PROJECT STATUS
DEVELOPMENT APPLICATION
DRAWING TITLE
LEVEL 01 & 02 FLOOR PLANS
SHEET NO. DA 102
REVISION. P3



1 LEVEL 03 PLAN
1:100



2 ROOF PLAN
1:100

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file: 2152_FRESHWATER1.2
print date and time: Monday, 19 June 2023 @ 2:10 pm

UNIT TYPES

- 3 BED APARTMENT
- R — RESIDENTIAL CARSPACE
- V — VISITORS CARSPACE
- A — ADAPTABLE / ACCESSIBLE CARSPACE
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- S — STORAGE CAGES
- SR — STORAGE ROOM
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- A — ADAPTABLE APARTMENT
- EASEMENT - TO BE EXTINGUISHED
- EXISTING TREES

CHANGE	DESCRIPTION
P3A	UNIT LAYOUT REDESIGNED

REVISION ID	AMENDMENT	DATE
P1	ISSUE FOR PRE-DA	20/1/22
P2	ISSUE FOR DA	12/8/22
P3	AMENDED DRAWINGS FOLLOWING COUNCIL COMMENTS	14/6/23

ARCHITECT
FUSE—ARCHITECTS
ARCHITECTURE | URBAN DESIGN | INTERIOR DESIGN
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SURRY HILLS NSW 2010
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ABN 81 612 046 643
NOMINATED ARCHITECT RACHID ANDARY NSW ARB 8627

CLIENT
PYCO AT GREENSLOPES PTY LTD
CAN: 636898836

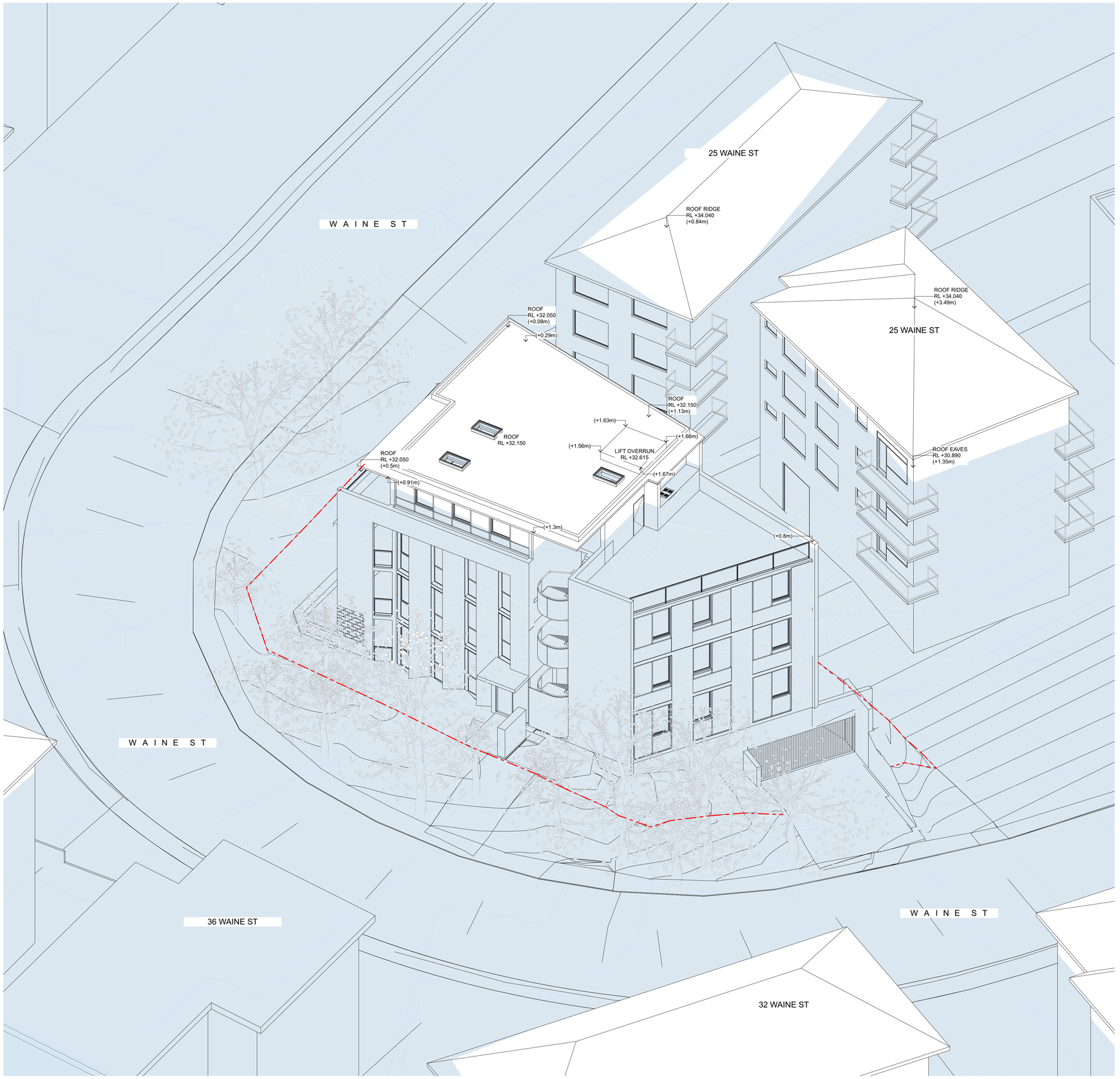
N
0 1 2 5m

PROJECT
FRESHWATER
SITE ADDRESS
27 WAINE STREET, FRESHWATER, NSW 2096
JOB NO
2152

CHECKED	DRAWN
AA	SK
DATE	SCALE
10/1/22	1:100 @ A1 A3@50%

PROJECT STATUS
DEVELOPMENT APPLICATION
DRAWING TITLE
LEVEL 03 & ROOF PLANS

SHEET NO.	REVISION.
DA 103	P3



1 HEIGHT DIAGRAM

file: 2152_FRESHWATER1.2
print date and time: Monday, 19 June 2023 @ 2:13 pm

CHANGE	DESCRIPTION
P3A	PACKAGE AMENDED

REVISION ID	AMENDMENT	DATE
P2	ISSUE FOR DA	16/9/22
P3	AMENDED DRAWINGS FOLLOWING COUNCIL COMMENTS	16/6/23

ARCHITECT
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61 MARLBOROUGH STREET
SURRY HILLS NSW 2010
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ABN 81 612 046 643
NOMINATED ARCHITECT RACHID ANDARY NSW ARB 8627

CLIENT
PYCO AT GREENSLOPES PTY LTD
CAN: 636898836

N
0 4 10 20m

PROJECT
FRESHWATER
SITE ADDRESS
27 WAINE STREET, FRESHWATER, NSW 2096
JOB NO
2152
CHECKED: AA
DRAWN: SK
DATE: 10/1/22
SCALE: @ A1 A3@50%
PROJECT STATUS
DEVELOPMENT APPLICATION
DRAWING TITLE
HEIGHT DIAGRAM
SHEET NO. DA 420
REVISION. P3

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Appendix B

Swept Turn Paths

ENTRY

EXIT

GENERAL NOTES

1. CJP IS RESPONSIBLE FOR VEHICLE SWEPT PATH DIAGRAMS AND/OR DRAWING MARK-UPS ONLY. BASE DRAWING IS PREPARED BY OTHERS.
2. VEHICLE SWEPT PATH DIAGRAMS PREPARED USING COMPUTER GENERATED TURNING PATH SOFTWARE AND ASSOCIATED CAD DRAWING PLATFORMS. VEHICLE DATA BASED UP ON RELEVANT AUSTRALIAN STANDARDS
3. AS 2890.1:2004 (PARKING FACILITIES - OFF STREET CAR PARKING FACILITIES). THESE STANDARDS EMBODY A DEGREE OF TOLERANCE, HOWEVER THE VEHICLE CHARACTERISTICS IN THESE STANDARDS REPRESENT A SUITABLE DESIGN VEHICLE AND DO NOT ACCOUNT FOR ALL VARIATIONS IN VEHICLES DIMENSIONS/SPECIFICATIONS AND/OR DRIVER ABILITY AND BEHAVIOURS

3 CAR SPACES
1 MOTORBIKE
1 BICYCLE

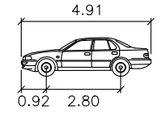
9 CAR SPACES
1 MOTORBIKE
5 BICYCLE

25 WAINE ST
BRICK
4 STOREY
RESIDENTIAL APARTMENT
ABOVE

WAINE ST

SWEPT PATH KEY:

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 300mm CLEARANCE FROM VEHICLE BODY



B85

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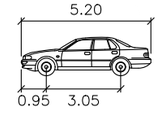
Track	: 1.77
Lock to Lock Time	: 6.0
Steering Angle	: 34.1



B99

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Width	: 1.94
Track	: 1.84
Lock to Lock Time	: 6.0
Steering Angle	: 33.9

Plotted by Administrator

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PRELIMINARY PLAN
FOR DISCUSSION PURPOSES ONLY SUBJECT TO CHANGE WITHOUT NOTIFICATION

WARNING
THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY
THE EXACT LOCATIONS SHALL BE PROVEN ON SITE.
ALL EXISTING SERVICES SHOWN ARE NOT GUARANTEED.

27 WAINE STREET, FRESHWATER
CAR PARK COMPLIANCE REVIEW
SWEPT PATH ASSESSMENT

SCALE 0 2.0 4.0 1:200 @ A3

DRAWING NO. 22108-D01-V3 | SHEET NO. 02 OF 06

ISSUE DATE 21 June 2023 | DRAWN BY Z.CHEN | REVIEWED BY C.PALMER

ENTRY

EXIT

WAINE ST ABOVE

SB 18.17

SB 22.45

SB 35.17

SB 16.39

9 CAR SPACES
1 MOTORBIKE
5 BICYCLE

25 WAINE ST
BRICK
4 STOREY
RESIDENTIAL APARTMENT
ABOVE

25 WAINE ST
BRICK
4 STOREY
RESIDENTIAL APARTMENT

BENCHMARK (NAIL TK)
RL +22.39 AHD

TRAFFIC SIGNAL

BIN ROOM 1550Ø

WATER METER

GAS METER

2.5M CLEAR HEAD HEIGHT ABOVE

LINE OF BUILDING OVER

WAINE ST

B85 STANDARDS 2004 (AU/NZ)

GENERAL NOTES

1. CJP IS RESPONSIBLE FOR VEHICLE SWEPT PATH DIAGRAMS AND/OR DRAWING MARK-UPS ONLY. BASE DRAWING IS PREPARED BY OTHERS.
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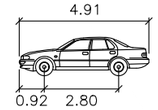
SWEPT PATH KEY:

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 300mm CLEARANCE FROM VEHICLE BODY



B85

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Width	: 1.87
Track	: 1.77
Lock to Lock Time	: 6.0
Steering Angle	: 34.1

Plotted by Administrator

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PRELIMINARY PLAN

FOR DISCUSSION PURPOSES ONLY SUBJECT TO CHANGE WITHOUT NOTIFICATION

WARNING

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27 WAINE STREET, FRESHWATER
CAR PARK COMPLIANCE REVIEW
SWEPT PATH ASSESSMENT

N

SCALE 0 2.0 4.0 1:200 @ A3

DRAWING NO. 22108-D01-V3

SHEET NO. 03 OF 06

ISSUE DATE 21 June 2023

DRAWN BY Z.CHEN

REVIEWED BY C.PALMER

ENTRY

EXIT

WAINE ST ABOVE

BENCHMARK (NAIL TK)
RL +22.39 AHD

SB 18.17

9 CAR SPACES
1 MOTORBIKE
5 BICYCLE

25 WAINE ST
BRICK
4 STOREY
RESIDENTIAL APARTMENT
ABOVE

25 WAINE ST
BRICK
4 STOREY
RESIDENTIAL APARTMENT

SB 22.45

SB 35.17

SB 16.39

B85 STANDARDS 2004 (AU_NZ)

TRAFFIC SIGNAL

2.5M CLEAR HEAD HEIGHT ABOVE

BIN ROOM 1550Ø

WATER METER

GAS METER

LINE OF BUILDING OVER

WAINE ST

GENERAL NOTES

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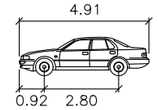
SWEPT PATH KEY:

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 300mm CLEARANCE FROM VEHICLE BODY



B85

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Width	: 1.87
Track	: 1.77
Lock to Lock Time	: 6.0
Steering Angle	: 34.1

Plotted by Administrator

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PRELIMINARY PLAN
FOR DISCUSSION PURPOSES ONLY SUBJECT TO CHANGE WITHOUT NOTIFICATION

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27 WAINE STREET, FRESHWATER
CAR PARK COMPLIANCE REVIEW
SWEPT PATH ASSESSMENT

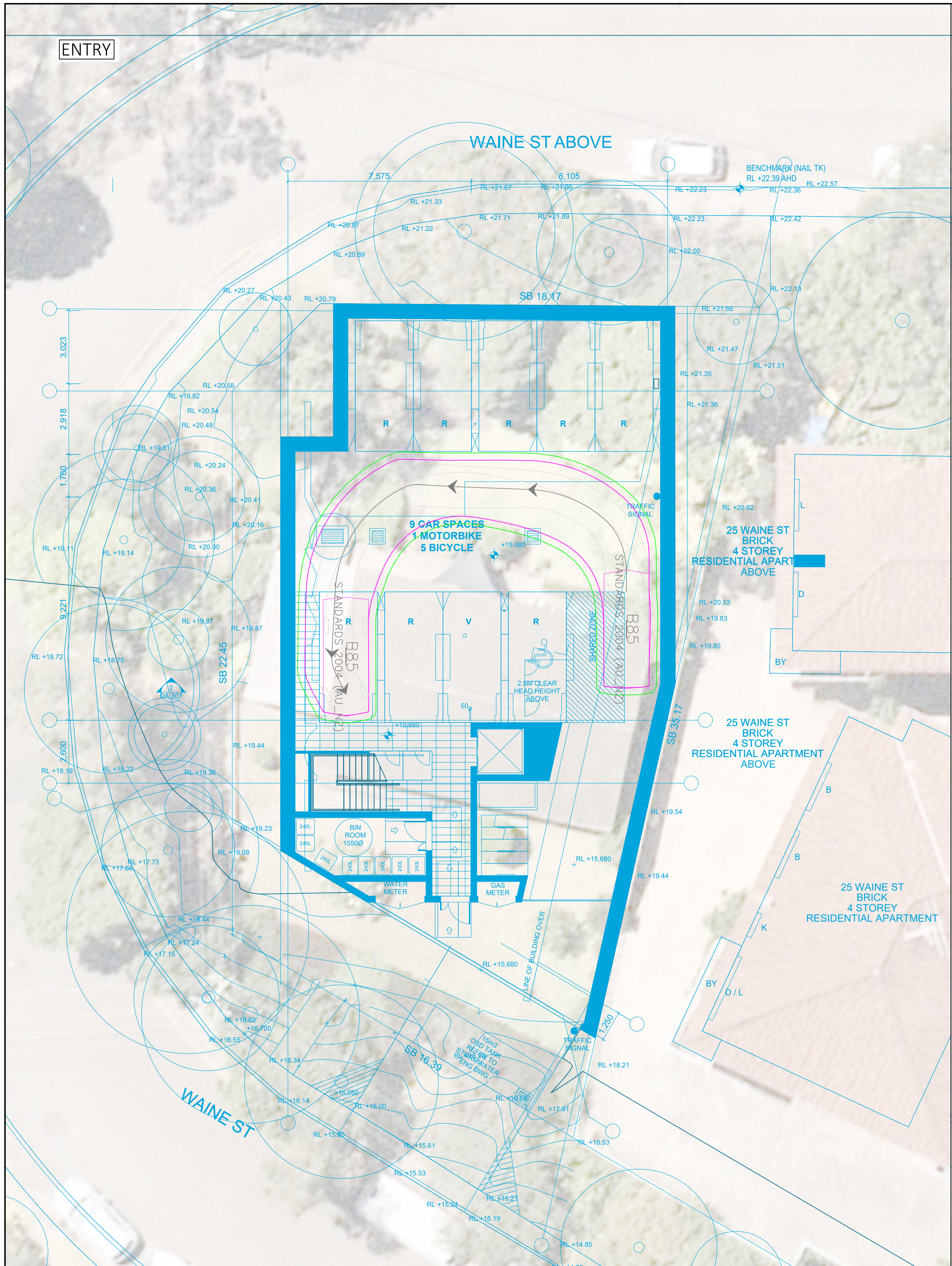
N

SCALE 0 2.0 4.0 1:200 @ A3

DRAWING NO. 22108-D01-V3 | SHEET NO. 04 OF 06

ISSUE DATE 21 June 2023 | DRAWN BY Z.CHEN | REVIEWED BY C.PALMER

ENTRY



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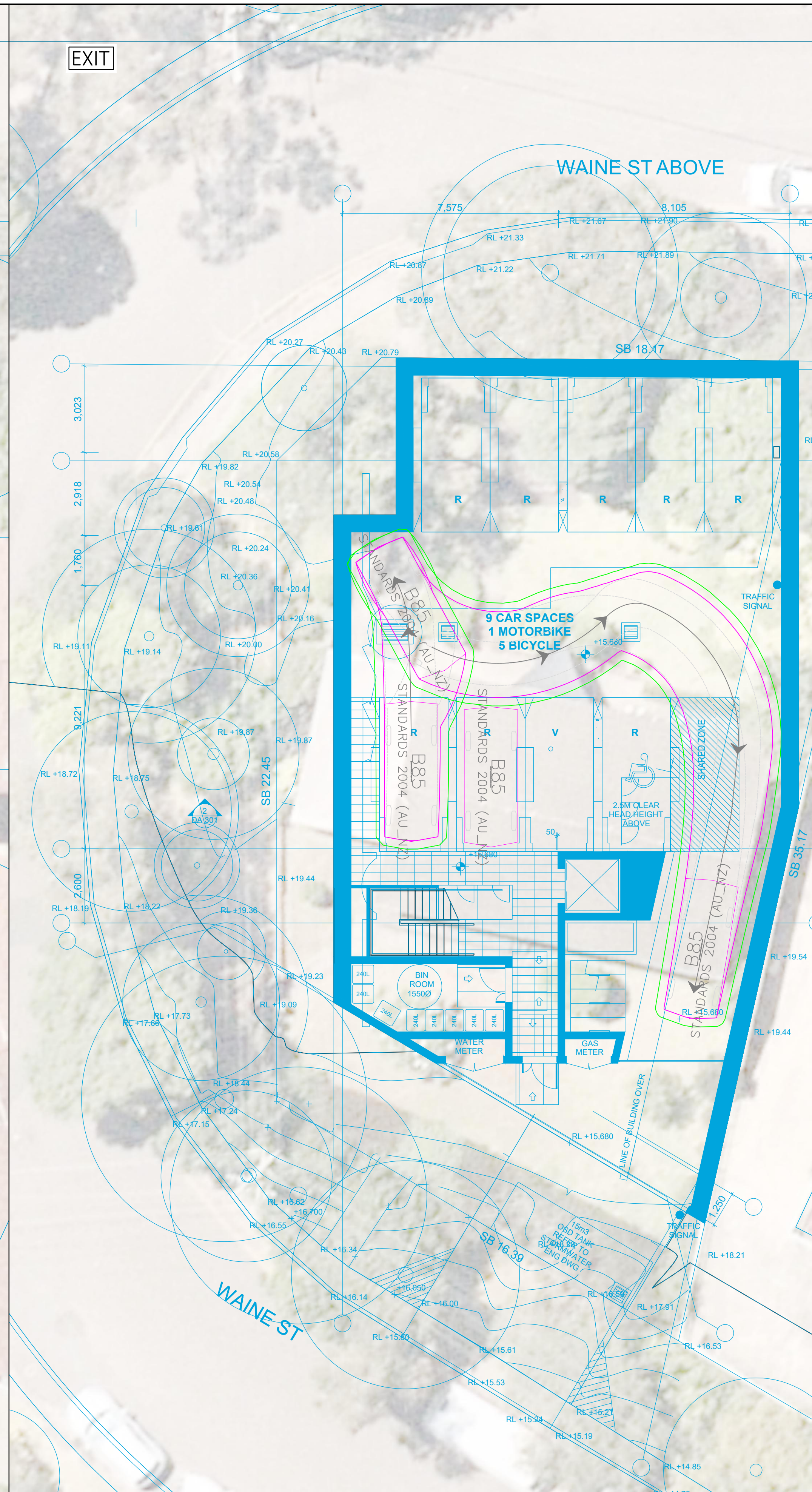

GENERAL NOTES

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SWEPT PATH KEY:

- VEHICLE CENTRE LINE
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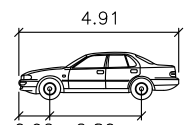
- VEHICLE BODY PATH
- 300mm CLEARANCE FROM VEHICLE BODY



B85

	meters
Width	: 1.87
Track	: 1.77
Lock to Lock Time	: 6.0
Steering Angle	: 34.1

Plotted by Administrator

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27 WAINE STREET, FRESHWATER
CAR PARK COMPLIANCE REVIEW
SWEPT PATH ASSESSMENT

N

SCALE 0 2.0 4.0 1:200 @ A3

DRAWING NO. 22108-D01-V3

SHEET NO. 05 OF 06

ISSUE DATE 21 June 2023

DRAWN BY Z.CHEN

REVIEWED BY C.PALMER

ENTRY

EXIT

WAINE ST ABOVE

SB 18.17

SB 22.45

SB 35.17

SB 16.39

9 CAR SPACES
1 MOTORBIKE
5 BICYCLE

B85 STANDARDS 2004

TRAFFIC SIGNAL

25 WAINE ST
BRICK
4 STOREY
RESIDENTIAL APART
ABOVE

25 WAINE ST
BRICK
4 STOREY
RESIDENTIAL APARTMENT

BENCHMARK (NAIL TK)
RL +22.39 AHD

BIN ROOM 1550Ø

WATER METER

GAS METER

LINE OF BUILDING OVER

WAINE ST

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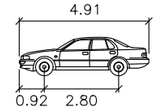

B85

	meters
Width	: 1.87
Track	: 1.77
Lock to Lock Time	: 6.0
Steering Angle	: 34.1

Plotted by Administrator

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27 WAINE STREET, FRESHWATER
CAR PARK COMPLIANCE REVIEW
SWEPT PATH ASSESSMENT

N

SCALE 0 2.0 4.0 1:200 @ A3

DRAWING NO. 22108-D01-V3 | SHEET NO. 06 OF 06

ISSUE DATE 21 June 2023 | DRAWN BY Z.CHEN | REVIEWED BY C.PALMER