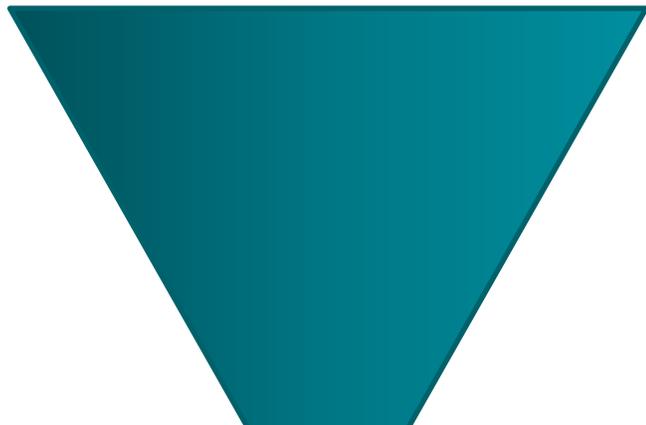
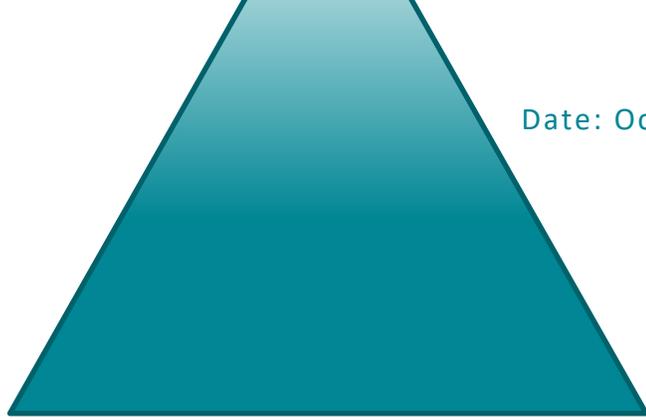




Planning Proposal For
Mixed Use Development
345 Pacific Highway, Lindfield

Traffic & Parking Assessment



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1.0 Introduction

This report has been prepared to accompany a Planning Proposal to Ku Ring Gai Council for an envisaged mixed-use development, at 345 Pacific Highway, Lindfield (Figure 1).

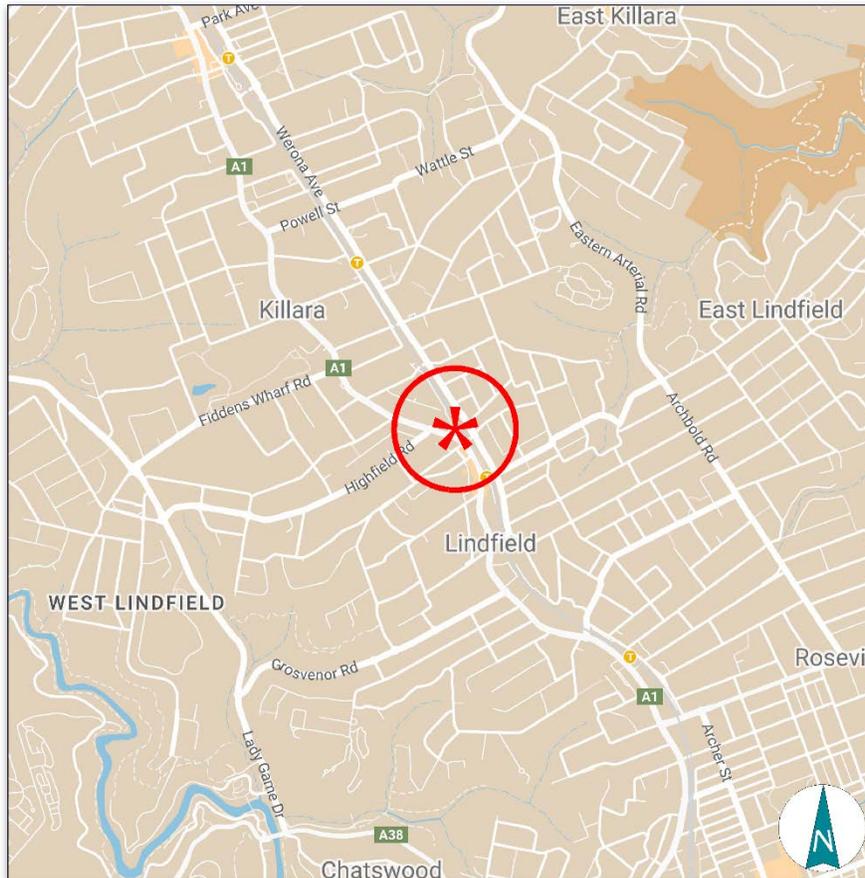


Figure 1 - Site Location

The Ku Ring Gai Local Environmental Plan 2023 amendments are proposed to rezone the site. In April 2023, State-wide changes to land use zones resulted in the site changing from B5 Business Development to E1 Local Centre. The proposed amendments to the Ku-ring-gai LEP look to increase the maximum building height from 11.5m to 55m.

The envisaged development, subject to the approval of the Planning Proposal, involves a new 15-level building comprising:

- 2,665m² of commercial floor space
- Approximately 100 residential apartments
- Multiple levels of basement parking

The purpose of this report is to:

- Describe the site, its context and the envisaged development scheme
- Describe the road network serving the site and the prevailing traffic conditions on that network
- Assess the potential traffic implications of the envisaged development
- Assess the adequacy and appropriateness of the envisaged parking provision
- Assess the envisaged vehicle access, internal circulation and servicing arrangements
- Provide an indicative Green Travel Plan

2.0 Planning Proposal

2.1 Site, Context & Existing Circumstances

The site (Figure 2) is Lot 1 in DP810773, which occupies a triangular-shaped area of some 2,695 m² with frontages to the eastern side of Pacific Highway and the southern side of Wolseley Road.



Figure 2 - Site Boundary

The site is located in the northern part of the Lindfield commercial shopping strip, extending along the Pacific Highway and across from Lindfield Railway Station. The site is bound by the railway line to the east, and there is a residential apartment building on the northern side of Wolseley Road, while the other surrounding users comprise:

- The residential uses that extend to the north
- The Lindfield Shopping Village to the southeast
- Lindfield Railway Station to the south

There is an existing 2 level commercial office building on the site with a basement car parking area serviced by an access provided at the cul-de-sac on Wolseley Road.

The building is currently occupied numerous office and medical uses listed below:

- McConnell Bourn
- Lindfield Dental Practice
- Douglass Hanly Moir Pathology
- BOSS, Back Office Shared Services Pty
- Peter Vickers Business Group
- Douglas Pathology
- Mary Rossi Travel Lindfield

2.2 Envisaged Development

It is envisaged to demolish the existing building and excavate part of the site to construct a new 15 level building comprising something similar to:

Apartments

24 x one-bedroom

61 x two-bedroom

14 x three-bedroom

Total: 99 Apartments

Commercial

2,665m²

A total of 225 parking spaces are envisaged to be provided in the basement levels along with loading bays accessed by a driveway on the frontage.

Details of the proposed development scheme are provided on the plans prepared by AJC Architects, which accompany the Planning Proposal and are reproduced in part in Appendix A.

3.0 Existing Road Network and Traffic Conditions

3.1 Road Network

The road network in the vicinity of the development site (Figure 3) comprises:

- Pacific Highway – a State Highway and arterial route providing the major link between Sydney and the F3 Freeway to Newcastle;
- Archibold Road - Eastern Arterial – a Regional Road and sub-arterial route running parallel and to the east of the highway connecting Warringah Road and Mona Vale Road;
- Lindfield Avenue – part of an extensive collector road route running along the eastern side of the railway line between Chatswood and Gordon;
- Tryon Road – a minor collector road running between Arterial Road and Lindfield Avenue;
- Grosvenor Road, Highfield Avenue and Provincial Road – collector roads extending to the west of the highway;
- Wolseley Road – a local access road connecting to Pacific Highway and Treatts Road but is closed in the section just north of the subject site.

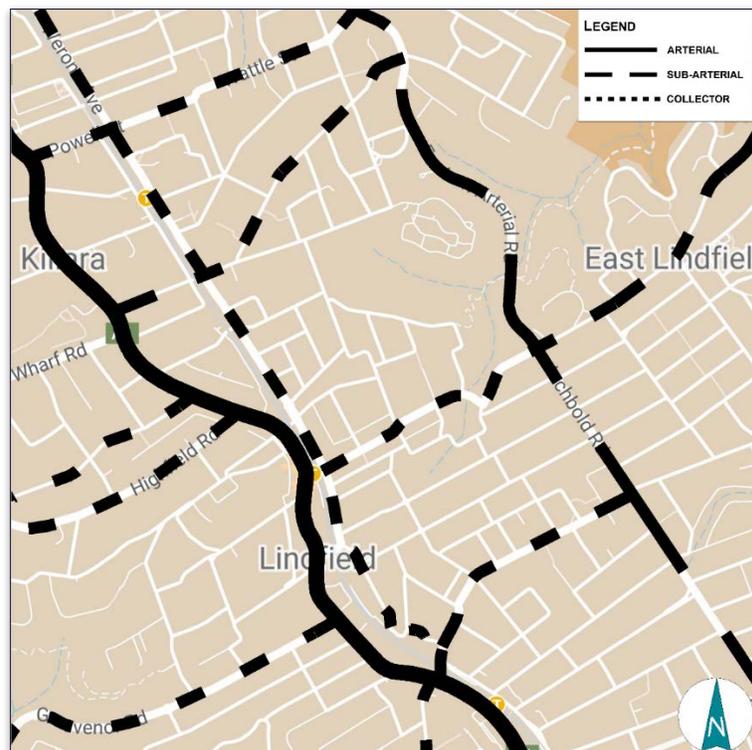


Figure 3 - Road Network

3.2 Traffic Controls

The existing traffic and parking controls in the vicinity of the site (Figure 4) include:

- traffic control signals at Pacific Highway and Balfour Street/Havilah Road intersection which provides for turning movements and pedestrian crossings;
- traffic control signals at the intersection of Pacific Highway and Grosvenor Road;
- the CLEARWAY and NO STOPPING restrictions along the Pacific Highway
- the central median island on Pacific Highway including across the Wolseley Road intersection restricting access movements to left turn IN/OUT only

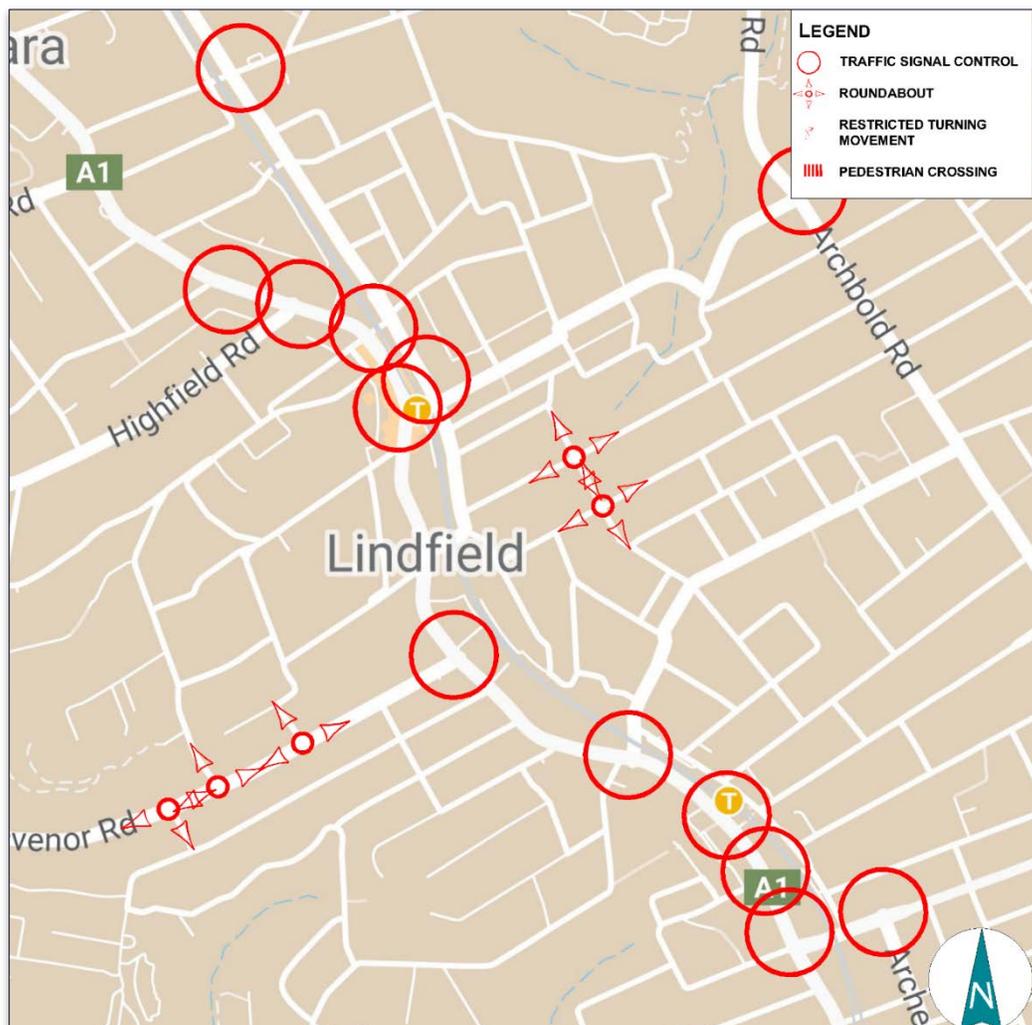


Figure 4 - Traffic Controls

3.3 Traffic Conditions

An indication of traffic conditions on the road system serving the site is provided by data published by TfNSW and surveys undertaken as part of this study. The TfNSW data¹ is expressed in terms of average annual daily traffic (AADT), indicating a total flow on Pacific Highway at Lindfield of some 58,000 vpd.

The prevailing peak traffic volumes on the southern section of Wolseley Road are quite minor and largely restricted to that generated by the frontage properties. Flexible access provisions are available along the Pacific Highway through the existing traffic signal-controlled intersections.

The operational performance of the intersections along the highway in the immediate vicinity of the site during the respective peak periods has been assessed in previous studies in the area. The results of these assessments are provided in the following:

	AM		PM	
	LOS	AVD	LOS	AVD
Pacific Highway and Highfield Street	A	4	A	3
Pacific Highway and Balfour Street	A	8	A	4

LOS - Level of Service; DS - Degree of Saturation; AVD - Average Vehicle Delay

The results of this assessment indicate that the intersections operate with a relatively satisfactory level of service.

¹ *Traffic Volume Data for Sydney Region
Roads and Traffic Authority*

3.4 Transport Services

3.4.1 Buses

Frequent bus services operate along the Pacific Highway, Lindfield Avenue and Lindfield Station. These bus routes include:

- Route 565 – Chatswood to Macquarie University
- Route 556 – Lindfield to East Killara
- Route 558 - Chatswood to Lindfield
- Route N90 – Hornsby to Town Hall via Chatswood (Night Service)

The Bus stations servicing these routes are easily accessible to mobility-constrained customers, with observations of the existing operation proving that the service has more than sufficient capacity to accommodate additional patrons.

Rail

The Lindfield Railway Station is located immediately to the south on the Main Northern Line and provides high-frequency services, particularly to Chatswood, North Sydney and the City connecting to the metropolitan transport system.

The Train Station is accommodating to disabilities, with elevators and lifts provided to access the platforms. The Station platforms have been observed during peak periods and have more than sufficient capacity for additional patrons.

It should be noted that the rail service is within 30 minutes from the North Sydney and Sydney CBD employment/strategic centres in satisfaction of the Greater Sydney Commission goal of 30-minute City travel time by public transport.

Accordingly, the site is conveniently located in relation to good public transport services. Details of the available public transport services are provided in Appendix B.

3.5 Sustainable Transport

3.5.1 Pedestrians

Pedestrian movements in the vicinity of the site are facilitated by paved footways along both sides of the Pacific Highway and surrounding streets, including traffic signal-controlled pedestrian crossings at immediate intersections and at the Lindfield Train Station access.

3.5.2 Cycling

Cyclist movements are facilitated by the existing on and off-road bike routes shown on the map provided by the Ku-ring-gai Council and reproduced in part in Figure 5.

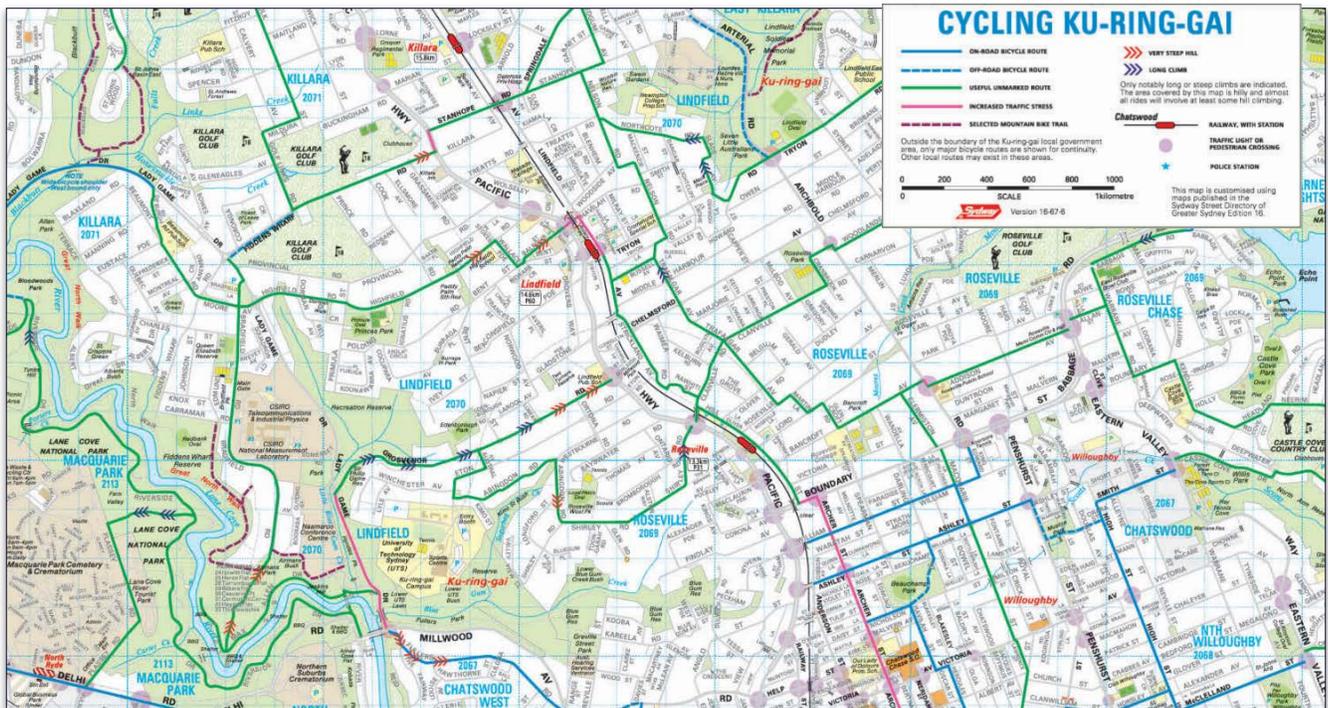


Figure 5 - Cycling Map

3.6 Site Liveability

The site benefits from access to many local services within 400m (5 minutes) of the site, including but not limited to the following:

- Lindfield Shopping Village is some 200m southeast of the site, comprising:
 - Supamart IGA Lindfield
 - Harris Farm Markets Lindfield
 - Lindocs Lindfield Medical and Dental Care
 - The Village Pharmacy Lindfield
- The numerous retail shops extend along the Pacific Highway between 50m-400m south of the site.
- The Holy Family Catholic Primary School is some 150m northwest of the site.
- The Catholic Parish of Lindfield is some 100m northwest of the site.
- Ibbitson Park, less than 100m north of the site
- Lindfile Tennis Club, some 400m south of the site
- Ecole Ballet and Dance Theatre, some 350m south of the site

4.0 Public Domain Strategy

4.1 Ku-ring-gai Council Plan

The Ku-ring-gai Council's Local Strategic Planning Statement (LSPS) 2020 is a guide for the updates to the Local Environmental Plan (LEP) and Development Control Plan (DCP). The Ku-ring-Gai Council intends to use the strategic plan to support the future character of certain key areas within the Council, including Lindfield. The site has been identified as a landmark site in The Lindfield Local Centre Structure Plan (Figure 6) for a proposed mixed-use development.

The plan also identifies numerous Green Grid Corridors, which include additional cycleways and pedestrian access links throughout the area, improving the green travel initiatives for the development (see section 7.0 for further details).

The Lindfield Public Domain Plan outlines the future development of a more pedestrian-focused area on Havilah Road southeast of the site. The widths will remain with the existing circumstance however, there is the proposed No Right Turn out of Havilah Road onto the Pacific Highway, as demonstrated in the extract reproduced in Figure 7. This provision will prevent excessive queue lengths along Havilah Road and improve the traffic flow in the area.

In coordination with the LSPS, it is understood that the Council may want to increase the width of Havilah Road in the future to accommodate increased traffic flow for vehicles and pedestrians. The site will provide an open area fronting Havilah Road to accommodate potential council land acquisition should this development be required in the future.

This carriageway, along with many others in the vicinity of the site, will have pedestrian-focused improvements, which is anticipated to encourage a modal shift away from single-use cars. This includes improved lighting along the road, with the underpass walls potentially incorporating artwork.

The Lindfield Public Domain Plan also provides plans for the upgrades of the verges along the Pacific Highway, including the additions of bins and seating provided in select locations as well as Bus Shelters to improve the bus service accessibility.

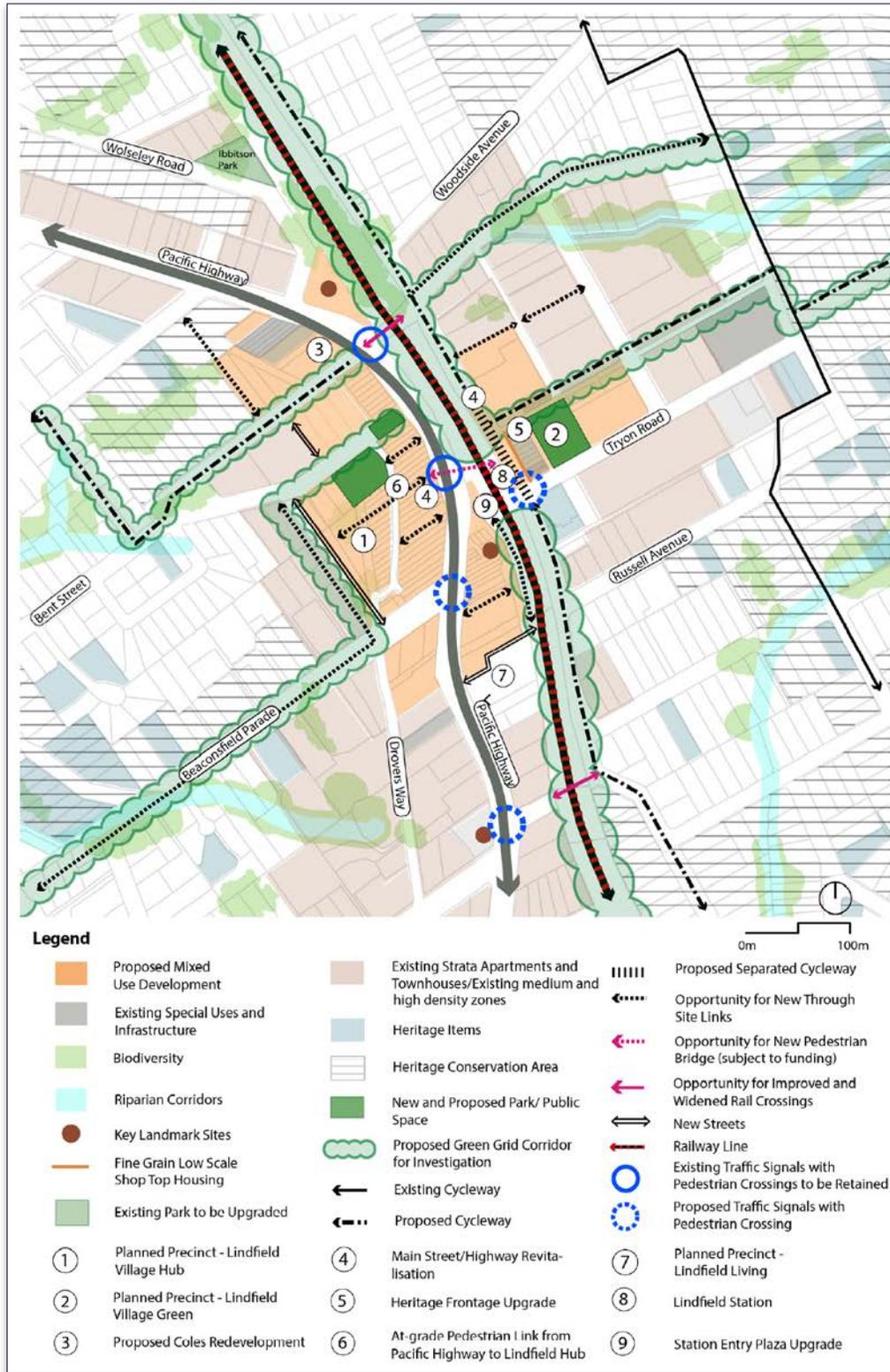


Figure 6 - Lindfield Local Centre Structure Plan

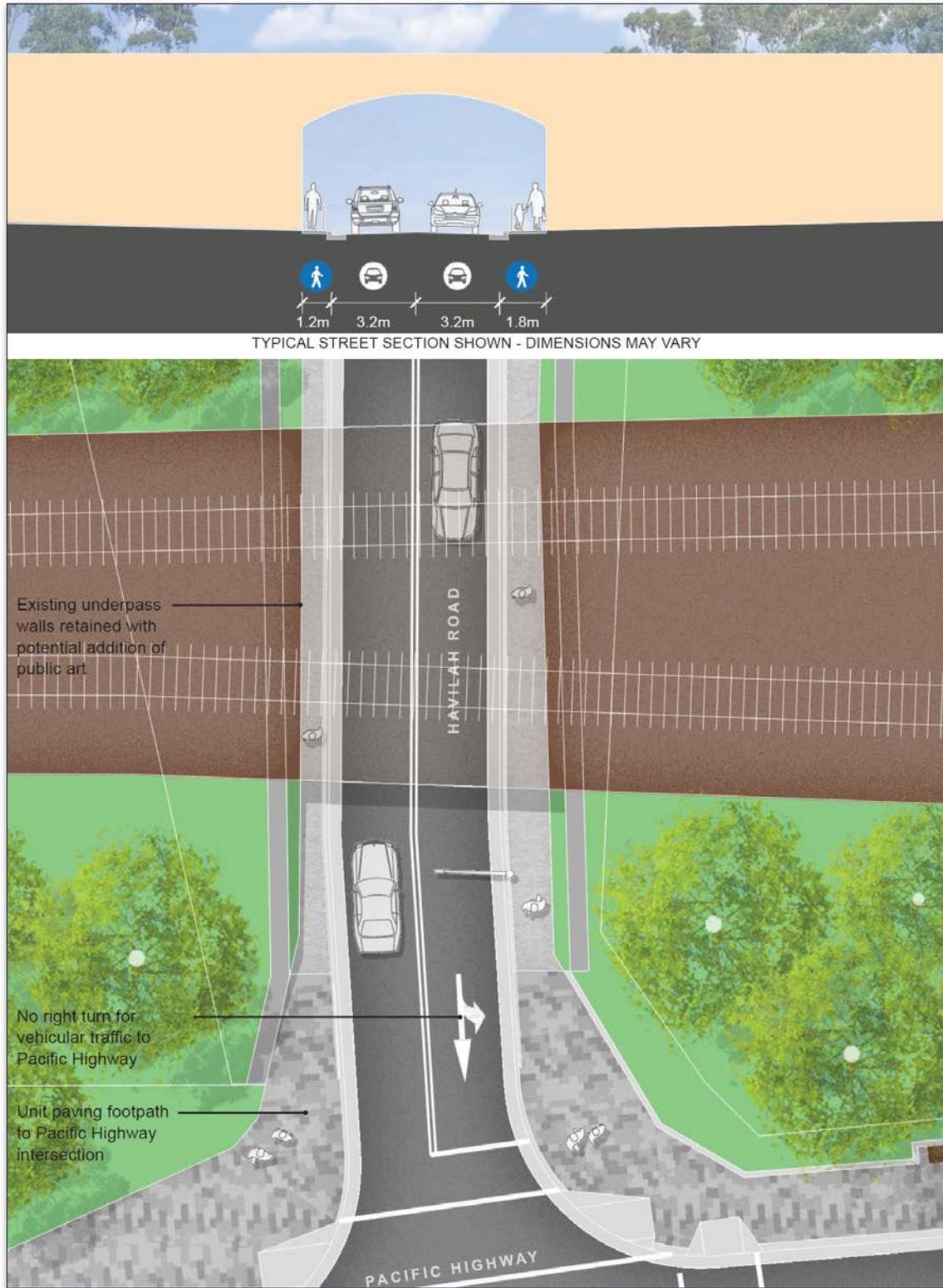


Figure 7 - Lindfield Public Domain Plan – Havilah Road

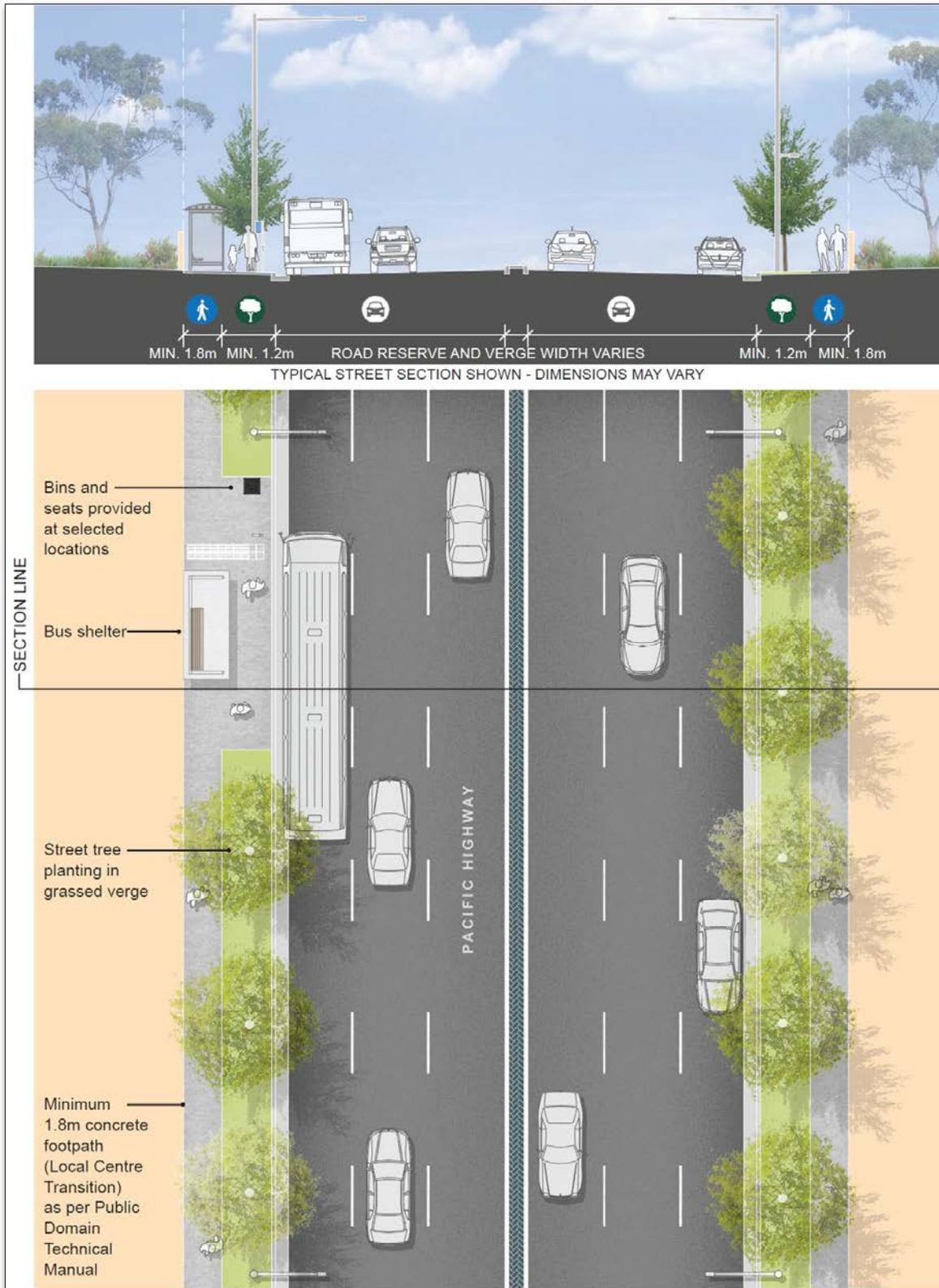


Figure 8 - Lindfield Public Domain Plan – Pacific Highway

4.2 TfNSW Correspondence & Plan

As per the council meeting minutes, this report is to provide:

"Evidence of state agency discussion (Transport for NSW), including existing and future TfNSW SP2 road widening and pinch points program requirements, potential additional development setbacks and any potential alteration/expansion of bus services along the corridor"

This discussion is essential as it determines the setback required to accommodate the increased right turn bay length along the Pacific Highway fronting the site.

Contact with TfNSW took place on 01 September 2023, and the comments of The Strategic Land Use Team in TfNSW are reproduced in Appendix F.

In response to TfNSW's comments, the development team acknowledges the ongoing investigations along the Pacific Highway and commits to aligning the development plans with any future upgrades in the area. Regarding Ku-Ring-Gai Council's plans for a Traffic Signals Upgrade, the plan provides for the provision of land acquisition should the Pacific Highway upgrades be required at a future date.

In response to TfNSW's request for SIDRA network modelling considering cumulative impacts, as there is no proposed increase in commercial floorspace, the existing analysis, which indicates a negligible impact of additional residential development on the road system, is an adequate traffic assessment (see section 5.2).

The team will also consider recommendations from the draft local housing strategy to enhance pedestrian facilities, such as wider footpaths and greenery, in the vicinity of the development. Efforts to reduce car usage have already been explored (see Section 7.0 Green Travel Plan), aligning with available public transportation options. Maintaining vehicular access through Wolseley Street during and after construction will be a priority for the project team.

The 565 Bus route that operates along the Pacific Highway has a bus stop some 50m west of the site frontage. TfNSW does not expect any uplift in service for the short and medium term however, they do identify that there is potential enhancement in future network reviews. The site has accommodated this potential enhancement with the provision of some fronting land available for acquisition should it be required.

A plan has been developed by the Council that currently has no status for the potential road widening along the Pacific Highway frontage to allow for an extended right turn bay, which would result in the reduction of frontage space of the proposed building. TTPA has had discussions with the Council prior to the planning proposal procedure to determine potential traffic implications, and this traffic issue was never raised. Nevertheless, the DA plans can have the flexibility to ensure that this road widening can be accommodated should Council and TfNSW require it.

In summary, the project team appreciates TfNSW's valuable input and is dedicated to addressing these points in the development proposal while actively collaborating with relevant authorities and stakeholders to support community and transportation goals.

4.3 Cycling

Cyclist movements are already facilitated by the existing on and off-road bike routes demonstrated in Section 3.5.2. Nevertheless, the Ku-ring-gai Council has a Bike Plan (2012) geared towards improving the existing cycling infrastructure, including additional carriageway line marking and bicycle route signage to enhance the comfort and accessibility of the proposed routes to promote cycling. The affected roads of these proposed routes are demonstrated in Figure 9.

Furthermore, the Ku-ring-gai Lindfield Public Domain Plan (2022) extends the Council's objectives in improving cycling infrastructure with the plan incorporating bicycle parking facilities along the public domain areas, including carriageways in the vicinity of the site.

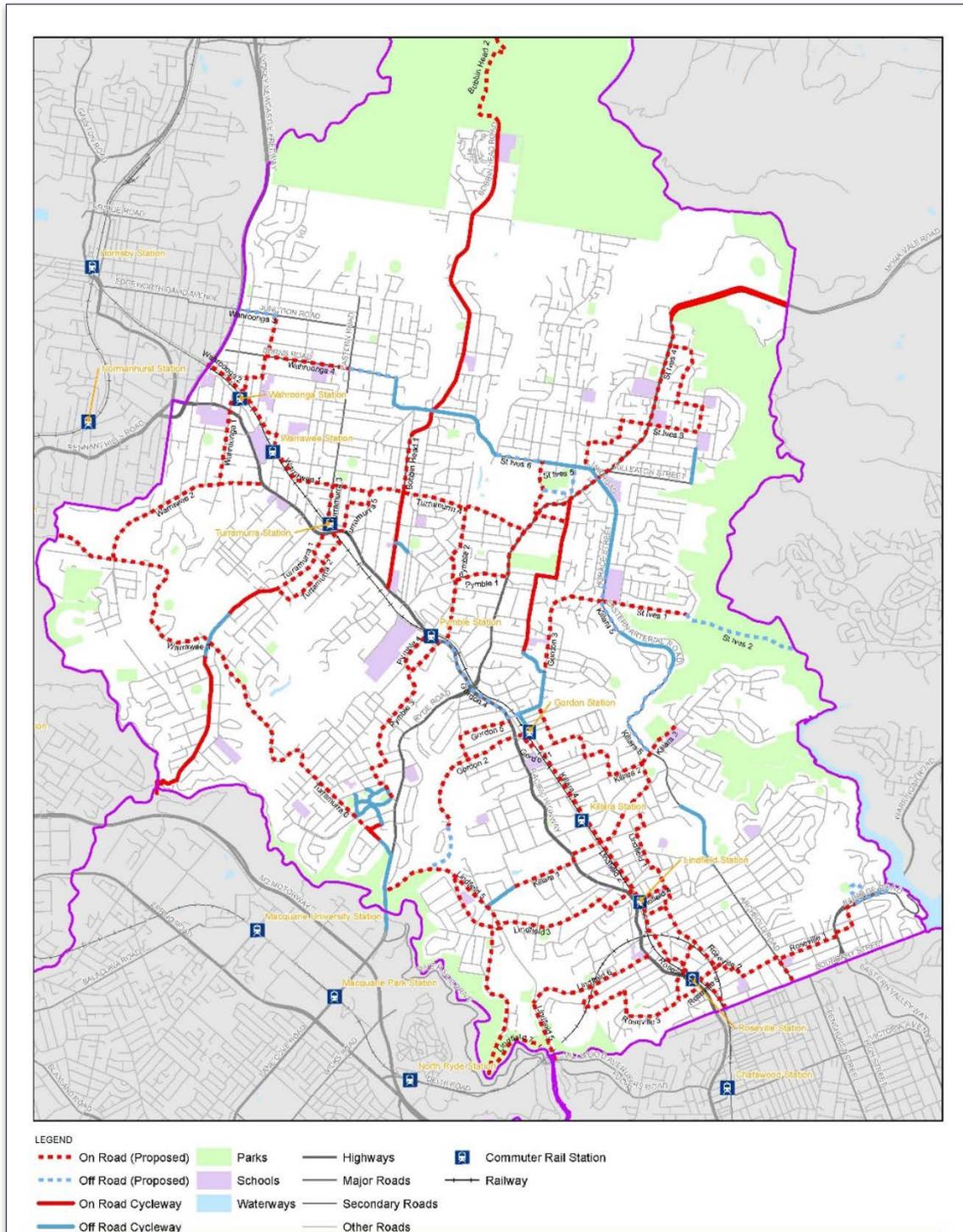


Figure 9 - Proposed Cycle Network

5.0 Parking & Traffic

5.1 Parking

The Ku-Ring-Gai Council specify minimum parking rates for cars, motorcycles and bicycles for a mixed-use development of this nature in the 2023 Development Control Plan. Details of their requirements and application for the envisaged development are provided in the following sections.

5.1.1 Car

Council's DCP specifies the following minimum and maximum parking provisions.

Residential	Minimum	Maximum
One Bed	0.6 space per unit	1 space per unit
Two Bed	0.9 spaces per unit	1.25 spaces per unit
Three Bed	1 space per unit	2 spaces per unit
Commercial		
Office and Business	1 space per 45m ² GFA	1 space per 33m ² GFA
Shops and Cafes	1 space per 33m ² GFA	1 space per 26m ² GFA

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

Residential	Minimum	Maximum
One Bed (24)	14.4	24
Two Bed (61)	54.9	76.25
Three Bed (14)	14	28
Commercial	60	103
TOTAL	143	231

Therefore, the envisaged 225 parking spaces provided on-site fall within the Ku-Ring-Gai Development Control Plan 2023 minimum and maximum rates and is therefore compliant.

Given the highly accessible public transport services, employment, shopping and entertainment facilities available in the vicinity of the site, it is considered that the proposed parking provision for the development elements will be adequate and appropriate.

5.1.2 Bicycles

	Occupants / Staff	Visitor / Customers
Residential Apartments	1 per 5 apartments	1 per 10 apartments
Retail and Commercial	1 per 600m ²	1 per 2,500m ²

Provision is proposed on Level 1 for bicycles as follows:

Residents	-	95 spaces (6 with EV charging)
Retail and Commercial	-	35 spaces

It is evident that there is more than sufficient bicycle parking available in satisfaction with the Councils DCP.

5.2 Traffic

The TfNSW Development Guidelines (TDT2013-4b) specify peak traffic generation rates for high-density residential apartments and commercial office floorspace as follows:

	AM	PM
Apartments (per apartment)	0.19 vtp	0.15 vtp
Commercial (per 100 m ²)	1.6 vtp	1.2 vtp

Application of this criteria to the envisaged development would indicate the following:

	AM	PM
99 Apts	19	15
2,665 m ² Comm	43	32

The site's existing 2,344m² of commercial floor space is assessed to generate the following peak traffic movements based on the Guidelines criteria.

	AM	PM
2,344 m ²	38 vtp	28 vtp

Therefore, the assessed additional traffic generation as a result of the envisaged development would be:

AM	PM
24 vtp	19 vtp

The anticipated development traffic would see an additional vehicle movement every 2-3 minutes during the peak periods. Vehicles can safely egress to the Pacific Highway (and will continue to be able to) due to the gaps provided in the southbound Pacific Highway traffic flows due to the signal operation at the Highfield Intersection. Therefore, the increase is negligible and will have no perceivable effects on the Pacific Highway and the surrounding road network.

6.0 Access, Internal Circulation & Servicing

6.1 Access

The proposed vehicle access arrangements will be located via two driveways on the southwestern boundary of the site with good sight distances available and complying with the design requirements of AS 2890.1 and AS2890.2 and will accommodate all vehicles requiring access to the site as indicated in the Appendix C turning path assessment.

6.2 Internal Circulation

The design of the car park, including access driveways, aisles, bays, grades, etc., will comply with the requirements of AS2890.1,2 and 6, with quite generous manoeuvring space available. Details of the turning path assessment are provided in Appendix C.

6.3 Servicing

Deliveries and refuse removal will be undertaken in the loading bays provided on the ground level. These bays will provide for trucks up to 12.5m Heavy Rigid Vehicles, including the Council's 6.8m small refuse truck.

Details of the swept path assessment are provided in Appendix C, indicating satisfactory provision.

7.0 Green Travel Plan

7.1 Objectives

A Green Travel Plan (GTP) is a package of measures to promote and encourage sustainable travel and provide increased travel choices for residents, visitors, patrons and staff by highlighting the health and environmental benefits and cost savings of adopting green travel initiatives. With this, the GTP is prepared with the objectives (over time) to:

- Reduce/discourage single-occupancy motor vehicle trips to and from the site
- Reduce the number of visitors and parking on nearby streets
- Promote public transport and carpooling
- Reduce congestion in the local area.

The preparation of GTP is a considered process that occurs under the leadership and guidance of an established Green Travel Coordinator and involves the following:

- Providing a clear context of existing transport circumstances via a site audit
- Developing and implementing a travel plan via the identification of contextual incentive schemes (preferential parking, carpooling schemes, etc.)
- Communicating the plan to promote awareness
- Monitoring the effectiveness of the plan via a formal evaluation process, i.e., travel surveys, etc.

7.2 Travel Planning

7.2.1 Existing Travel Circumstances

Assessment of Australian Bureau of Statistics 2016 data indicates the following current travel mode share for the Lindfield area:

Travel Mode	Place of Employment	Place of Residence
Train	16%	26%
Bus	1%	7%
Car, as driver	70%	56%
Car, as passenger	4%	5%
Motorbike/scooter	1%	1%
Bicycle	1%	1%
Walk	6%	3%
Other	1%	1%
Total	100%	100%

Based on the above, it is evident that residents and workers in the Lindfield area are very reliant on private vehicles (74%) to travel to/from their place of employment. However, because the subject site is located close to the railway station and bus services, the travel mode share would be somewhat different from that of the Lindfield zone.

7.2.2 Approach to Travel Planning

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

- Cost
- Comfort
- Convenience

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

7.2.3 Sustainable Travel Initiatives

Provision of End of Trip facilities

In line with the provision of bicycle spaces for residents, visitors, staff and patrons is the provision of appropriately equipped End of Trip (EoT) facilities. The development proposes the following bicycle facilities:

Bicycle spaces	95 Residential and 35 Commercial/Visitor
Lockers	14
Shower rooms	2
Charging Points	6

Provide an incentive for carpooling

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

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

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

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

- Setup of an online database
- Guaranteed ride-home or paid taxi/rideshare fare home

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

Provide an incentive for using public transport

The site currently has convenient access to bus and rail services operating along the Pacific Highway and at Lindfield Train Station, some 250m south of the site.

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

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

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

Increase walking and cycling to work

Whilst there will be a shared path link, common and effective measures such as a Ride to Work Day can raise awareness amongst staff. Likewise, initiatives such as a pedometer-based walking program coupled with Walk/Bicycle Buddy Scheme prove to be highly effective amongst residents and staff. The initiatives suggested above help promote an intangible social benefit of forming a neighbourhood network amongst residents and staff. In addition, cyclists will be provided with access to showers, change rooms and bicycle lockers to encourage cycling among staff, visitors and patrons.

Convenience of Information

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

7.2.4 Actions and Associated Timeframes

This section sets out the actions and associated timeframes to support the initiatives detailed in Section 6.2.

General & Communications Actions

Action	Timeline
Promotion including: <ul style="list-style-type: none"> ▪ Display boards or screens in prominent locations to show public transport maps and timetables. ▪ An events calendar – 3-4 events per year. Best in conjunction with state-wide events such as Ride to Work Day, World Environment Day, National Walk to Work Day, etc. 	Prior to occupation
A quarterly newsletter including; <ul style="list-style-type: none"> ▪ News, events and articles on the environment, health, and fitness. ▪ Remind staff that they don't always need to walk in the shoes they wear for work - these can be left at work and staff can come in trainers. ▪ Outline new initiatives and how staff can access them or get involved. ▪ Staff profiles – who is getting involved and reaping the rewards. ▪ Facts and figures from around Australia and overseas. ▪ Information regarding up-and-coming events. 	4 times a year

Walking

Action	Timeline
<ul style="list-style-type: none"> Produce a map showing safe walking routes to and from the site with times, not distances, to local facilities, such as shops and bus stops. 	Circulated to all new tenants prior to occupation, quarterly on the newsletter
<ul style="list-style-type: none"> Have some Walk to Work days encouraging staff to come by alternative means 	Quarterly

Cycling

Action	Timeline
<ul style="list-style-type: none"> Provide 95 bicycle spaces for residents and 35 bicycle spaces for staff and visitors in an easily accessible, well-lit, and secure (as required). 	Prior to Occupation
<ul style="list-style-type: none"> Ensure bike parking is clearly visible or provide signage to direct people to bike parking spaces. 	Prior to Occupation
<ul style="list-style-type: none"> Develop a 'bike buddy' scheme and Bicycle Users Group 	3 months post occupation
<ul style="list-style-type: none"> Supply a workplace toolkit - this can consist of puncture repair equipment, a bike pump, a spare lock, and lights 	Prior to Occupation
<ul style="list-style-type: none"> Participate in annual events such as 'Ride to Work Day' 	Annually

End of Trip Facilities

Action	Timeline
<ul style="list-style-type: none"> Provide 2 showers and changing rooms 	Prior to occupation
<ul style="list-style-type: none"> Provide 14 lockers for a change of clothes – ensure lockers are in close proximity to changing rooms 	Prior to occupation

Public Transport

Action	Timeline
<ul style="list-style-type: none"> Develop a map showing public transport routes 	Circulated to all new tenants prior to occupation

<ul style="list-style-type: none"> Put up a noticeboard or info screen with information and maps showing the main public transport routes to and from the site 	Prior to occupation
<ul style="list-style-type: none"> Place information on the website and newsletter 	Prior to occupation, quarterly on newsletter

Car Pooling

Action	Timeline
<ul style="list-style-type: none"> Set up a carpooling database with a guaranteed ride home for carpoolers 	Prior to occupation
<ul style="list-style-type: none"> Allocate priority parking spaces for carpoolers 	Prior to occupation

Incentive

Action	Timeline
<ul style="list-style-type: none"> Provide sustainable transport allowances for staff who surrender car parking permits 	To be reviewed when the car parking is fully occupied
<ul style="list-style-type: none"> Offer cash incentives for staff willing to give up car parking spaces 	

7.3 Management of the Plan

The Green Travel Coordinators will have the responsibility of implementing, communicating, and monitoring the effectiveness of the GTP. The coordinators will be appointed prior to occupation commencing.

The applicant will provide to Council the name and contact details of the Coordinators upon appointment.

The Body Corporate and Building Manager will commit to reviewing the GTP annually, including revising the mode share targets and developing strategies that encourage sustainable transport choices to the site. The review will be completed by the Travel Coordinators to also ensure its currency and that it is achieving the desired benefits.

7.3.1 Mode Share Targets

Assessment of the transport circumstances for the premises indicates the following desirable mode share targets can be achieved in relation to the site:

Travel Mode	Residence/Staff
Train	25%
Bus	10%
Car, as driver	40%
Car, as the passenger	7%
Motorbike/scooter	2%
Bicycle	10%
Walk	5%
Other	1%
Total	100%

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

7.3.2 Monitoring Milestones

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

It will also be necessary to provide feedback to ensure they can see sustainable transport's benefits.

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

Communications – Good communications are an essential part of the GTP. It will be necessary to explain the reason for adopting the plan, promote the benefits available and provide information about the alternatives to reliance on private car travel.

Commitment – GTPs involve changing established habits and providing the impetus for staff in new developments to choose a travel mode other than single-occupancy private car use. To achieve cooperation, it

is essential to promote positively the wider objectives and benefits of the plan. This commitment includes the provision of the necessary resources to implement the plan, beginning with the introduction of encouragement for changing travel modes upon occupation.

Consensus – It will be necessary to obtain broad support for the introduction of the plan.

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

7.3.3 Evaluation of Targets

It is therefore proposed that within 3 months of substantial occupation, a travel survey will be conducted. A travel questionnaire (see Appendix E) can be conducted. The first study provides a baseline for travel planning, while subsequent travel surveys would be reported annually to the TP to inform of any weakness or strength in the current travel plan. The travel plan should be refined based on the review to reflect changing circumstances.

Whilst these targets have been set, limited parking supply is available, and a range of measures have been provided in the travel plan to persuade participation in sustainable travel, it is impossible to guarantee that these modal split targets will be achieved.

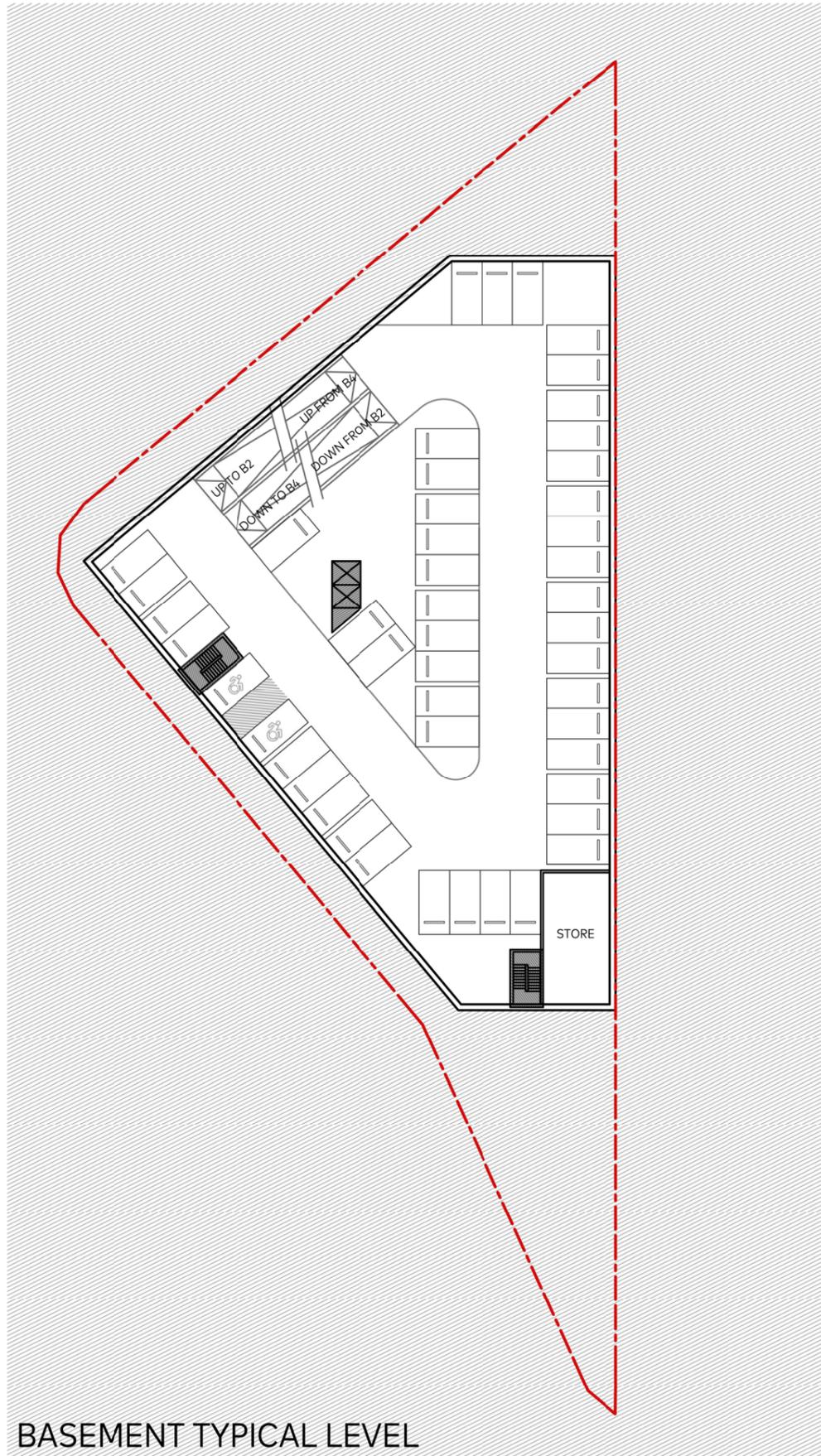
8.0 Conclusion

The Traffic and parking assessment provided in this report confirms that the envisaged development will:

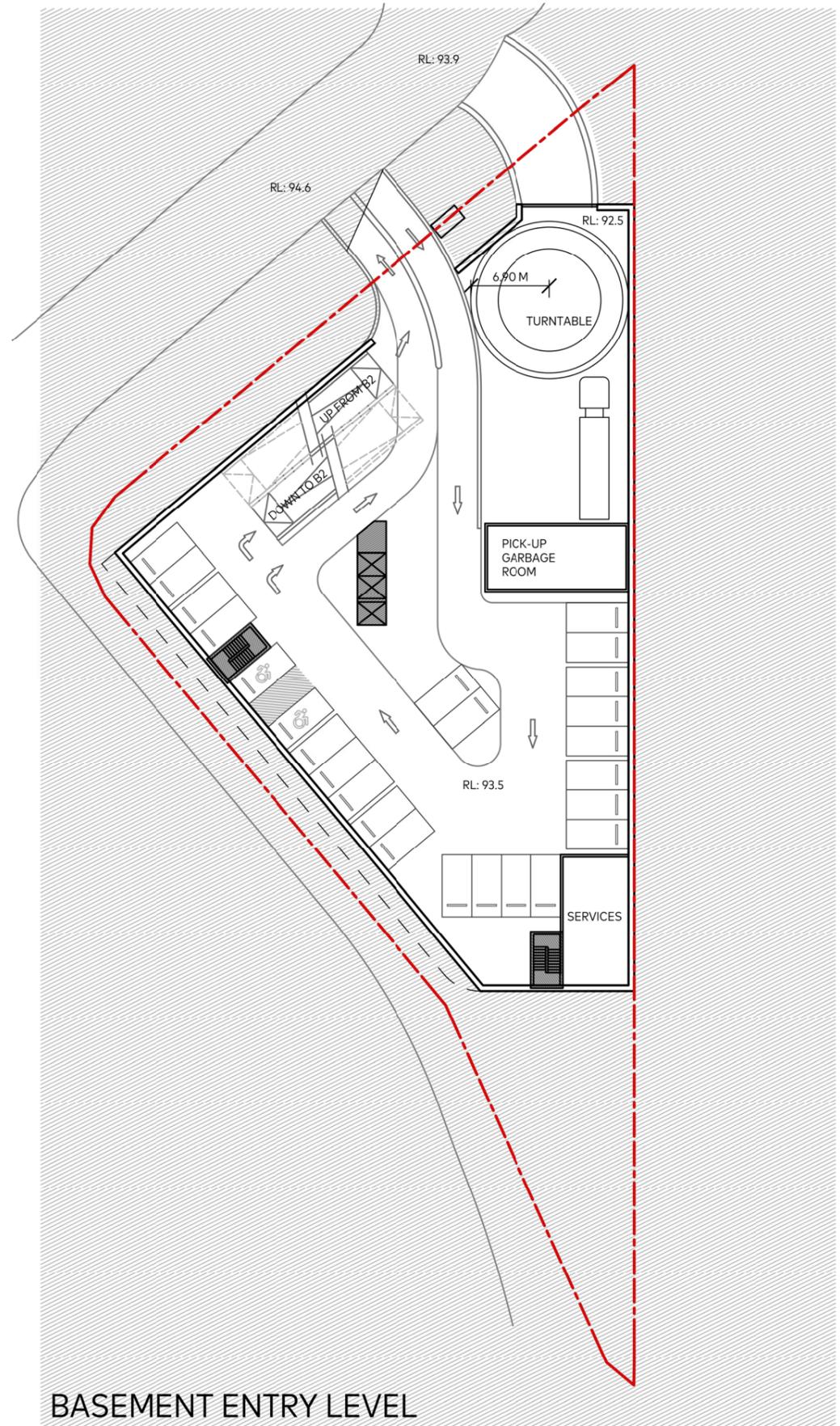
- Not present any unsatisfactory traffic capacity, safety or environmental-related implications
- Incorporate a suitable and appropriate parking provision consistent with the Ku-Ring-Gai Council's DCP and LSPS objectives.
- Incorporate suitable vehicle access, internal circulation and servicing arrangements.

Appendix A

Envisaged Plans



BASEMENT TYPICAL LEVEL



BASEMENT ENTRY LEVEL

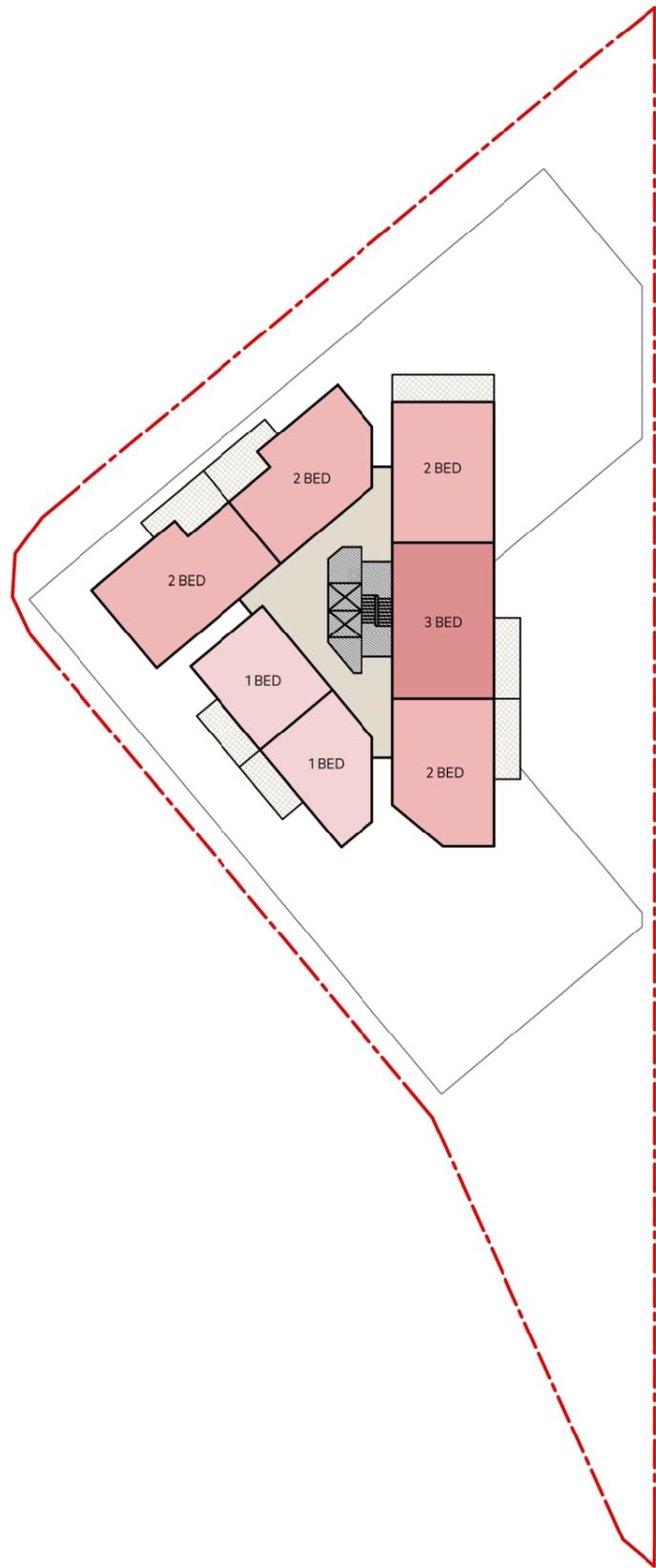
KEY

REV	DATE	DESCRIPTION	DN	AP
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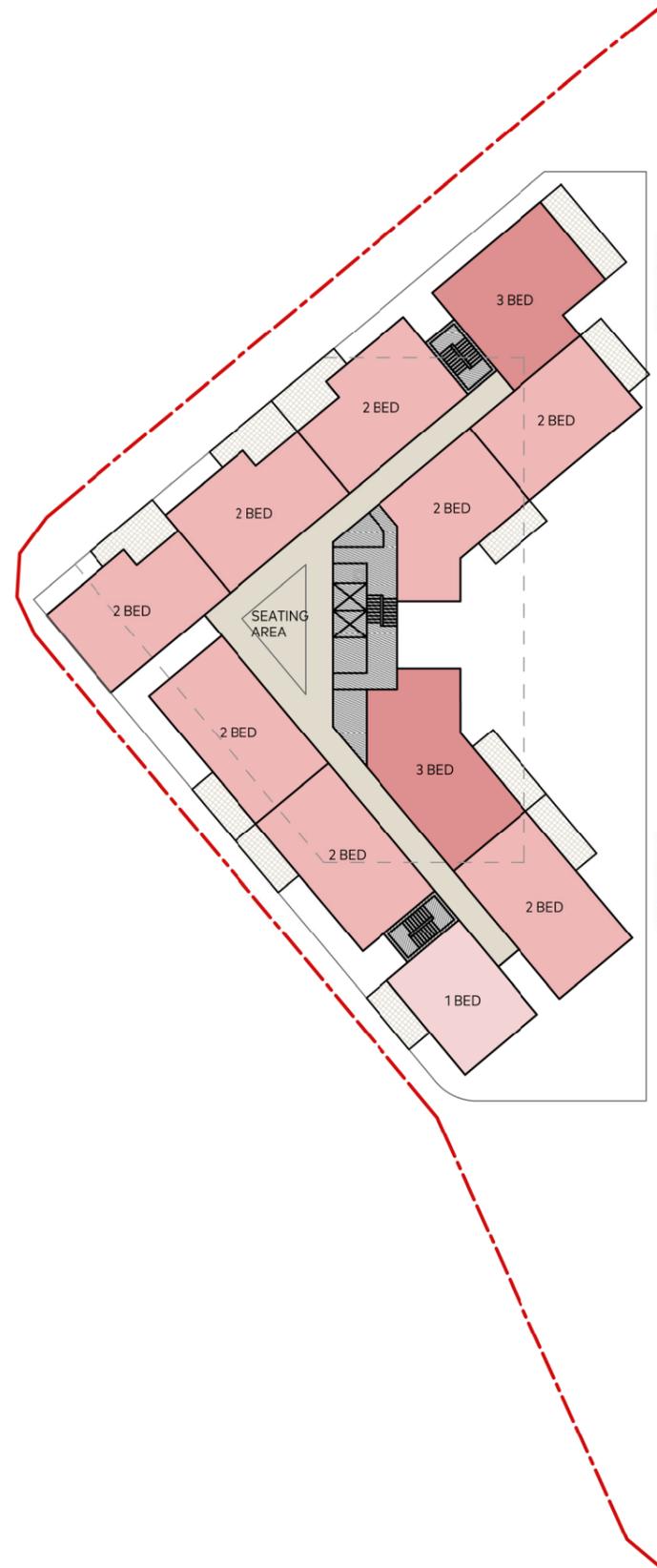
SHEET STATUS
 NOT FOR CONSTRUCTION

SHEET TITLE BASEMENTS 1 & 2	
SCALE 1:500 @ A3	

SHEET NUMBER SK0B1	REVISION C
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TYPICAL LEVEL

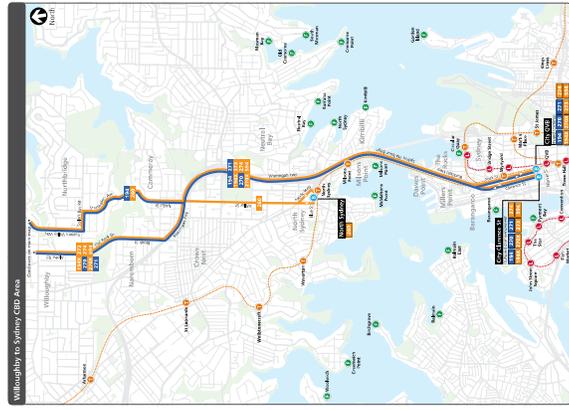
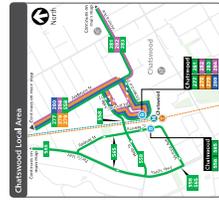
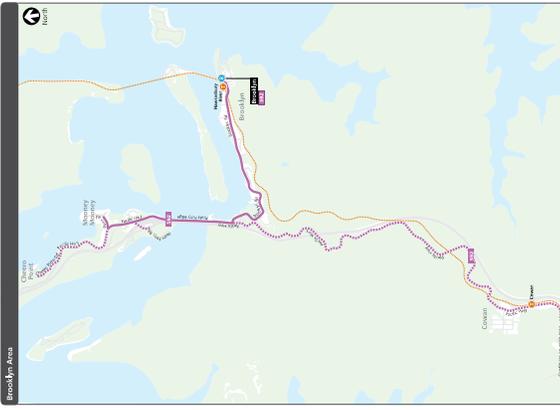
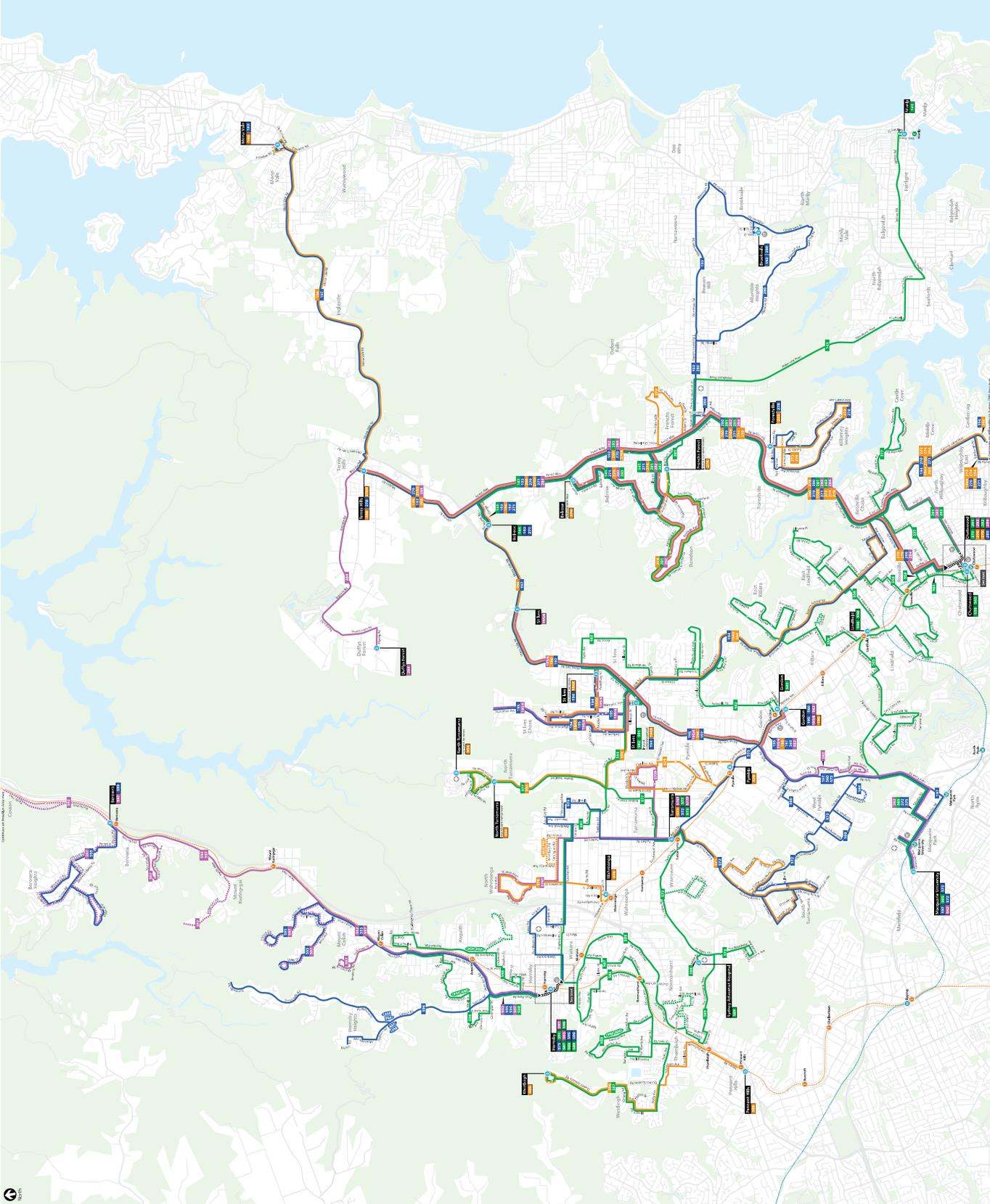


LEVEL 3

KEY

Appendix B

Public Transport Maps



Legend

- Blue line: 600 Series
- Green line: 600 Series
- Orange line: 600 Series
- Purple line: 600 Series
- Red line: 600 Series
- Yellow line: 600 Series
- Light blue line: 600 Series
- Light green line: 600 Series
- Light orange line: 600 Series
- Light purple line: 600 Series
- Light red line: 600 Series
- Light yellow line: 600 Series
- Light blue line: 600 Series
- Light green line: 600 Series
- Light orange line: 600 Series
- Light purple line: 600 Series
- Light red line: 600 Series
- Light yellow line: 600 Series

Frequency

- Hourly
- 30 minutes
- 15 minutes
- 10 minutes
- 5 minutes
- 10 minutes
- 15 minutes
- 30 minutes
- Hourly

Sydney rail network



M Metro **T** Trains



Sydney metro and train lines



Metro North West Line
Chatswood
Tallawong



T1 North Shore & Western Line
North Shore
Western
Richmond



T2 Inner West & Leppington Line
Inner West
Leppington
City



T3 Bankstown Line
Liverpool
Lidcombe
City



T4 Eastern Suburbs & Illawarra Line
Eastern Suburbs
Illawarra
Cronulla



T5 Cumberland Line
Leppington
Richmond



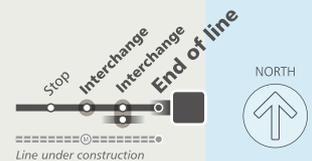
T7 Olympic Park Line
Olympic Park
Lidcombe



T8 Airport & South Line
Airport
South
City



T9 Northern Line
Northern
Gordon

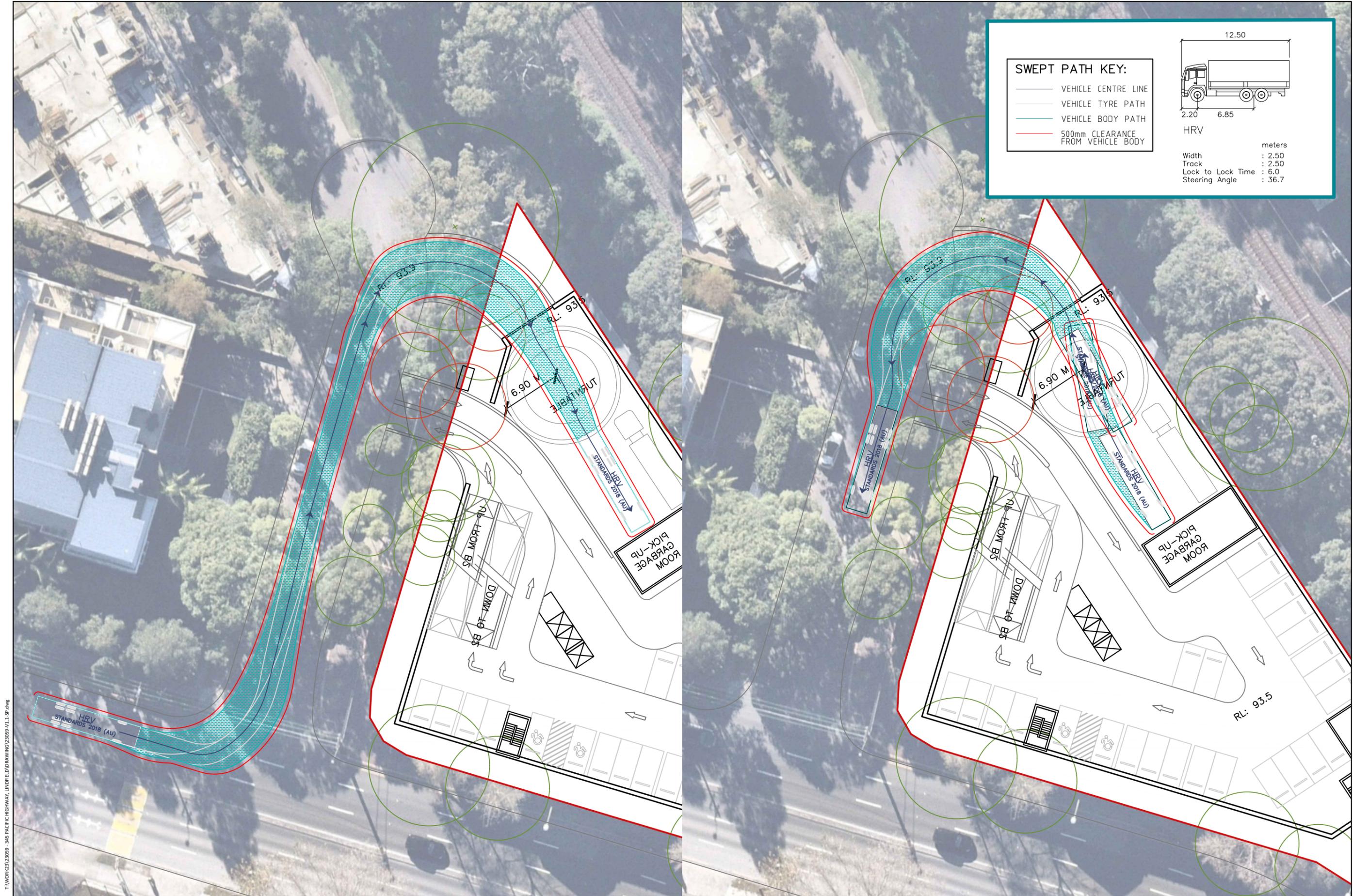


Check timetables and trip planners for train services and connections

Visit transportnsw.info

Appendix C

Swept Path Assessment



T:\WORK\23\23059 - 345 PACIFIC HIGHWAY, LINDFIELD\DRAWINGS\23059-V1.1-SP.dwg

Printed by Lachlan

345 PACIFIC HWY, LINDFIELD NSW 2070, AUSTRALIA
 SERVICE VEHICLE PARKING TEST
 SWEPT PATH ASSESSMENT
 DRAWING REF NO. 23059-V1.1-SP

SHEET NO. 01 OF 02

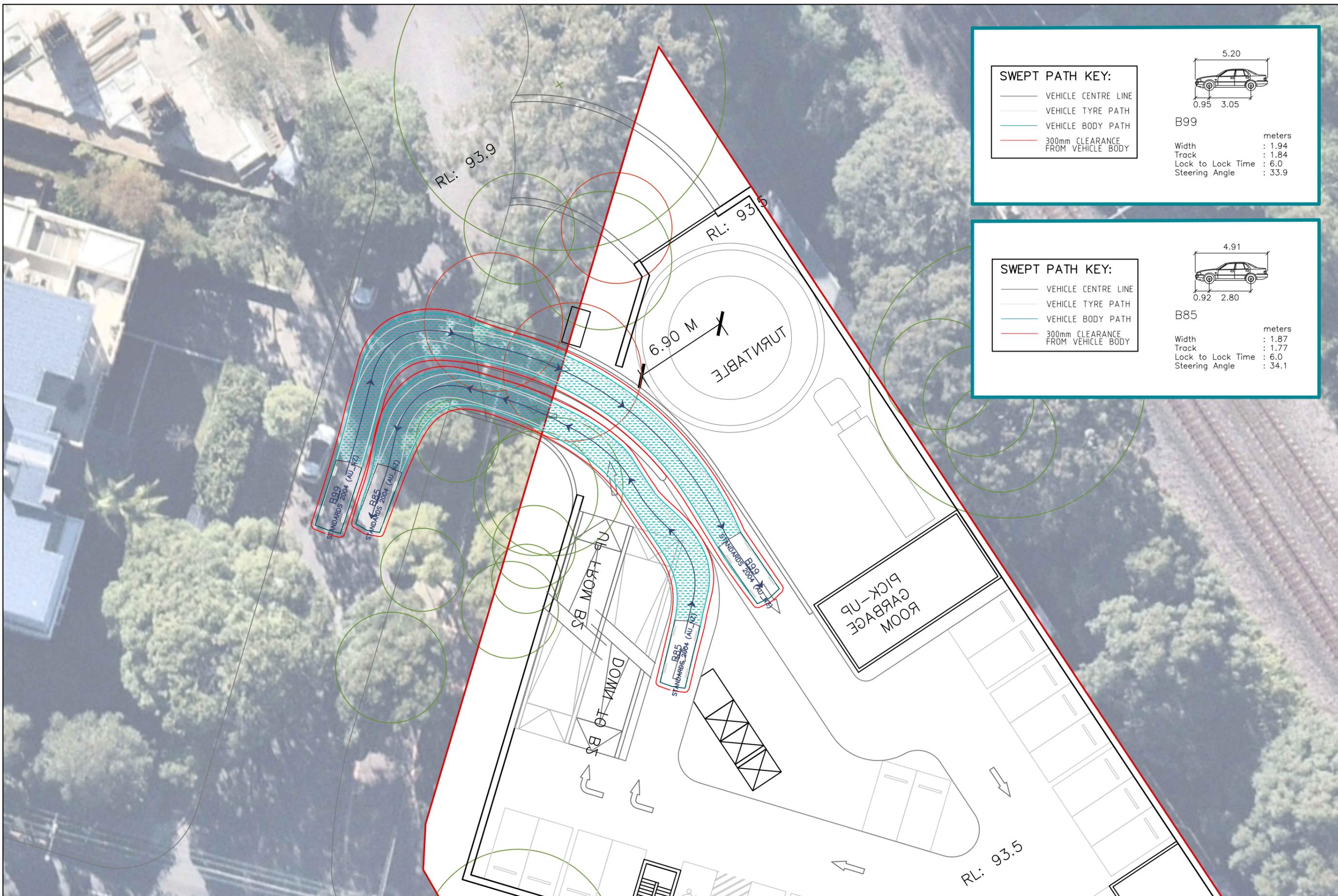
ISSUE DATE 17 August 2023

DESIGNED BY L. ELLSON
 SCALE A3 0 40 80 1:400



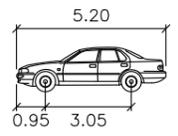
DISCLAIMER
 This drawing has been prepared using vehicle modelling computer software AutoTurn Pro V11.0 in conjunction with AutoCAD 2018. The vehicle used is based upon vehicle data provided by Austroads and incorporates a reasonable degree of tolerance. However, it is not possible to account for all vehicle types/characteristics and/or driver ability.

ttpa TRANSPORT AND TRAFFIC PLANNING ASSOCIATES
 Established 1994
 Address: Level 6, Suite 604, 10 Help Street, Chatswood NSW 2067
 P: (02) 9411 5660 E: info@tppa.com.au W: www.tppa.com.au



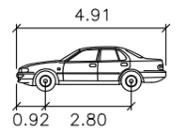
SWEPT PATH KEY:

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


B99
 meters
 Width : 1.94
 Track : 1.84
 Lock to Lock Time : 6.0
 Steering Angle : 33.9

SWEPT PATH KEY:

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

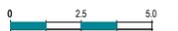

B85
 meters
 Width : 1.87
 Track : 1.77
 Lock to Lock Time : 6.0
 Steering Angle : 34.1

T:\WORK\23\23059 - 345 PACIFIC HIGHWAY, LINDFIELD\DRAWING\23059-V1.1-SP.dwg
 Printed by Lachlan

345 PACIFIC HWY, LINDFIELD NSW 2070, AUSTRALIA
SERVICE VEHICLE PARKING TEST
SWEPT PATH ASSESSMENT
 DRAWING REF NO. 23059-V1.1-SP

SHEET NO. 02 OF 02

ISSUE DATE 17 August 2023

DESIGNED BY L. ELLSON
 SCALE A3  1:250



DISCLAIMER
 This drawing has been prepared using vehicle modelling computer software AutoTurn Pro V11.0 in conjunction with AutoCAD 2018. The vehicle used is based upon vehicle data provided by Austroads and incorporates a reasonable degree of tolerance. However, it is not possible to account for all vehicle types/characteristics and/or driver ability.

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Appendix D

Transport Access Guide



Car: Car parking is provided on-site for residents, visitors, and staff to the development with access via Wolseley Road.

T

Rail: The closest rail station is Lindfield Railway Station on the Main Northern Line, adjoined to the west of the site, providing frequent metro services to the wider Sydney rail network.



Bicycle: Bicycle parking is provided within the development for residents, visitors, and staff.



End of Trip (EoT) facilities: EoT facilities are provided in the building.



Walking: The presence of paved sidewalks on both sides of Pacific Highway and nearby streets, makes pedestrian movement easy and safe. The site is just a short walk from the local shops of Lindfield.



Mobility Parking: Mobility parking spaces are provided within the site for tenants/visitors.



B

Bus: The development is well serviced by the bus network with the nearest bus stop located to the west on Pacific Highway.

Go to the Transport Info (www.transportnsw.info) websites for bus timetables and accessible bus services.



Use Google Maps which presents a map showing the route and any suggested alternate routes and travel options. The route(s) include the distance and estimated travel time. Go to <https://www.google.com.au/maps/>



Use trip planner to plan the most efficient routes/ public transport options by looking up times or check for travel alerts on their phone, tablet or computer. Go to <https://transportnsw.info/trip#/>



345 Pacific Highway, Lindfield

Transport Access Guide

How to get to
345 Pacific Highway, Lindfield

Contact Building Manager:

Address:
Name: ?
Phone: ?
Email: ?

August 2023

For further public transport information go to www.transportnsw.info or call 131 500

Appendix E

Survey

Transport and Traffic Planning Associates

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

Transport and Traffic Planning Associates

m. 12:00 – 12:59

n. 13:00 – 13:59

o. 14:00 – 14:59

p. 15:00 – 15:59

q. 16:00 – 16:59

r. 17:00 – 17:59

s. 18:00 – 18:59

t. 19:00 – 19:59

u. 20:00 – 20:59

v. 21:00 – 21:59

w. 22:00 – 22:59

x. 23:00 – 23:59

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

a) Walk or run

b) Bicycle

c) Bus

d) Train

e) Light rail

f) Ferry

g) Car (as driver/sole
occupancy)

h) Car (as driver with
passengers)

i) Car (as passenger)

j) Carpool

k) Motorbike or Moped

l) Taxi or rideshare (e.g.,
Uber)

7. Do you ever work from home?

a. Yes

b. No

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

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

a. Yes

b. No

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

a. Yes

b. No

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

a. Yes

b. No

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

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

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

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

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

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

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

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

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

- a) Yes – walking group (Email: _____)

Appendix F

TfNSW Comments

1 September 2023

TfNSW Reference: SYD23/00932/1

Belinda Barrie
Senior Associate
GYDE Consulting
Suit 2 – Level 2, 21 Bolton St
Newcastle NSW 2300

RE: PRE-PLANNING PROPOSAL – 345 Pacific Highway, Lindfield

Attention: Belinda Barrie

Dear Belinda

Transport for NSW (TfNSW) appreciates the opportunity to provide preliminary comments (pre-planning proposal) for the subject site at 345 Pacific Highway, Lindfield which was referred to us through your email dated 10 August 2023.

It is understood from the Pre-Planning Proposal Meeting Report (8 December 2021) provided to TfNSW that it is proposed to rezone the subject site to allow residential uses, increase the height, and floor space ratio (FSR) controls that apply. This is to allow a 15-storey mixed use development with an FSR of 4.6:1.

It is understood that if the proposal progresses to a Planning Proposal, further comments will be sought from TfNSW through a referral by the Council.

The Strategic Land Use Team in TfNSW has reviewed your email and based on the information provided our preliminary comments are as below:

- TfNSW is currently investigating opportunities to provide improvements along the Pacific Highway and the subject property is within an area under investigation for future upgrade. The investigations have not yet advanced to the stage to determine the option within the vicinity of the subject site. Impact on the property is shown in yellow in the image included in Attachment “A.”
- TfNSW is aware that Ku-Ring-Gai Council is currently developing a design to upgrade the Traffic Control Signals at the Pacific Highway / Balfour Street / Havilah Road intersection. The improvements are proposed in accordance with the Council’s DCP and Lindfield Public Domain Plan (Havilah Road). The investigations completed to date indicate that an area of the frontage of the subject land is likely to be required to accommodate Council’s proposal. TfNSW is working with Ku-Ring-Gai Council on the development of the proposal. It is recommended that the proponent continue to consult with Council and TfNSW to understand the potential impact on the subject site, and to determine an appropriate mechanism in the future planning proposal which could support these infrastructure improvements.
- A traffic impact assessment report should be provided including SIDRA network modelling indicating impacts of the proposed development of the site on the surrounding road network.

Traffic modelling should consider the cumulative impact of the other known planning proposals and developments in the area on the Pacific Highway and surrounding road network, and the need for upgrade or mitigation works including timing and funding (if required).

- It is noted that subject site is located adjacent to the precinct L1 Balfour St retail area, just south of Lindfield station. Consideration should be given to improve pedestrian and place function which aligns with the draft local housing strategy. This could be achieved by increasing the building setback, constructing wider foot paths, tree planting and by providing street furniture.
- Consideration should be given to implement measures to reducing the reliability on car usage for residential units / commercial and retail spaces in areas well serviced by public transport options such as the location of the subject site.
- Vehicular access to and from the property should be maintained through Wolseley Street during construction and after its completion.
- Currently bus route 565 operates along the Pacific Highway fronting the subject site, with bus stop located approximately 50m west of the subject site. No uplift in service is expected in the short and medium term for route 565 however further enhancements may be identified in future network reviews.

Please note that the comments provided above are of a preliminary nature. They are not to be interpreted as binding upon TfNSW and may change should the nature of the Planning Proposal change or further consultation with TfNSW is conditioned as part of any future Gateway Determination.

Should you have any further enquiries, Ash Tamhane – Land Use Planner would be pleased to take your call on 0468 658 454 or email: development.sydney@transport.nsw.gov.au

Yours sincerely,



Carina Gregory
Senior Manager Strategic Land Use (Eastern)
Land Use, Network & Place Planning

ATTACHMENT - A

Proposed road widening and impact on the subject property:

