TRANSPORT IMPACT ASSESSMENT

59—63 Trafalgar Avenue & 1A—1B Valley Road, Lindfield

PREPARED FOR:
Castle Hill No. 8 Pty Ltd

REFERENCE:
24.095r01v05

DATE:
29/04/2026

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1. Introduction

1.1. Overview

PDC Consultants has been commissioned by Castle Hill No. 8 Pty Ltd to undertake a transport impact assessment (TIA) of State Significant Development Application (SSDA) for SSD-79276958 relating to a proposed residential development with infill affordable housing for the site at 59—63 Trafalgar Avenue & 1A—1B Valley Road, Lindfield. Specifically, the SSDA proposal consists of:

- 212 apartment units, including 43 affordable units.
- Basement parking with a total of around 317 car spaces.
- Vehicle access at the south of the site which connects to Trafalgar Avenue.

The site is located in the Ku-ring-gai Council (Council) local government area (LGA) and has therefore been assessed in accordance with the Ku-ring-gai Development Control Plan 2024 (KDCP) and Local Environmental Plan 2015. It has also been assessed in accordance with the State Environmental Planning Policy (Housing) 2021.

1.2. Planning Secretary's Environmental Assessment Requirements

This TIA has been prepared in accordance with the Planning Secretary's Environmental Assessment Requirements (SEARs) issued by the NSW Government on 16 January 2025. The key issue and assessment requirements for Transport are set out in Part 9 the SEARs and requires that a TIA be prepared in accordance with the Transport for NSW Guide to Transport Impact Assessment (GTIA).

1.3. DPHI & Council Comments

The Department of Planning, Housing and Infrastructure (DPHI) and Council made comments on the SSDA, including traffic and parking related comments, in letters dated 10 July 2025 and 3 June 2025, respectively. A separate letter of response (24.095r03v02) has been prepared by PDC to address these matters in more detail.

1.4. Structure of this Report

This report documents the findings of our investigations in relation to the anticipated traffic and parking impacts of the proposed development and should be read in the context of the Environmental Impact Statement (EIS), prepared separately. The remainder of this report is structured as follows:

- Section 2: Describes the site and existing traffic and parking conditions in the locality.
- Section 3: Describes the proposed development.
- Section 4: Assesses the parking requirements of the development.

- Section 5: Assesses the traffic impacts of the development.
- Section 6: Discusses the proposed access and internal design arrangements.
- Section 7: Presents the overall study conclusions.

1.5. References

In preparing this report, reference has been made to the following guidelines / standards:

- Ku-ring-gai Local Environmental Plan 2015 (KLEP).
- Ku-ring-gai Development Control Plan 2024 (KDCP).
- State Environmental Planning Policy (Transport & Infrastructure) 2021 (SEPP T&I 2021).
- State Environmental Planning Policy (Housing) 2021 (Housing SEPP).
- Transport for NSW Guide to Transport Impact Assessment 2024 (GTIA).
- NSW Apartment Design Guide (ADG).
- Integrated Public Transport Service Planning Guidelines, Sydney Metropolitan Area, 2013 (Integrated Public Transport Planning Guidelines 2013).
- Australian Standard AS 2890.1-2004, Part 1: Off-Street Car Parking (AS 2890.1).
- Australian Standard AS 2890.2-2018, Part 2: Off-Street Commercial Vehicle Facilities (AS 2890.2).
- Australian Standard AS 2890.3-2015, Part 3: Bicycle Parking (AS 2890.3).
- Australian Standard AS 2890.6-2022, Part 6: Off-Street Parking for People with Disabilities (AS 2890.6).

2. Existing Conditions

2.1. Location and Site

The site is located at 59—63 Trafalgar Avenue & 1A—1B Valley Road, Lindfield, being approximately 400 metres east of Lindfield Railway Station and 10 kilometres north-west of the Sydney CBD. More specifically, the site is comprised of five lots located to the southeast of the Trafalgar Avenue intersection with Russel Avenue and Russel Lane.

The site is an irregular polygonal shape with a total area of approximately 6,670 m2. It has three street frontages, being Trafalgar Avenue to the west, Russell Lane to the northwest, and Valley Road to the northeast. It also fronts a right of carriageway to its south which connects to Trafalgar Avenue. All other boundaries border neighbouring residential developments.

The site currently accommodates five detached dwellings and associated outbuildings and landscaping. Vehicle access is provided to each of the five existing dwellings via driveways to Valley Road, Russell Lane and Trafalgar Avenue. These dwellings each have capacity to store multiple vehicles via enclosed or external hardstand parking areas and driveways.

Figure 1 and **Figure 2** provide an appreciation of the site's location in both a local and broad context respectively.

2.2. Road Network

The road hierarchy in the vicinity of the site is shown by **Figure 2**, with the following roads considered noteworthy:

- **Pacific Highway**: forms part of the TfNSW Highway, HW 10, that generally runs in a north–south alignment between Sydney and the Central Coast. Near the site, it is subject to 60 km/h school speed zoning restrictions and has sections subject to 40 km/h School Zone restrictions. The carriageway is divided and accommodates three lanes of traffic in each direction. A range of clearway and parking restrictions apply which generally restrict kerbside parking during busy periods.

- **Trafalgar Avenue**: a local road that runs in a north-south direction between Russel Avenue at the north and Roseville Avenue at the south. Near the site, it is subject to 50 km/h speed zoning restrictions and accommodates a single lane of traffic in each direction. Kerbside parking is permitted on both sides of the with no time restrictions.

- **Russel Avenue**: a local road that runs in an east-west direction between Lindfield Avenue at the west and Trafalgar Avenue at the east, continuing eastwards briefly over a short distance as Russell Lane to its intersection with Tyron Lane. Near the site, it is subject to 50 km/h speed zoning restrictions and accommodates one lane of traffic in each direction. Kerbside parking is permitted on both sides of the with no time restrictions.

- **Valley Road**: a local road that runs in an east-west direction between Nelson Road in the west and Short Street in the east. Near the site, it is subject to 50 km/h speed zoning restrictions and accommodates one lane of traffic in each direction. Kerbside parking is permitted on both sides of the with no time restrictions.

Figure 1: Site Plan

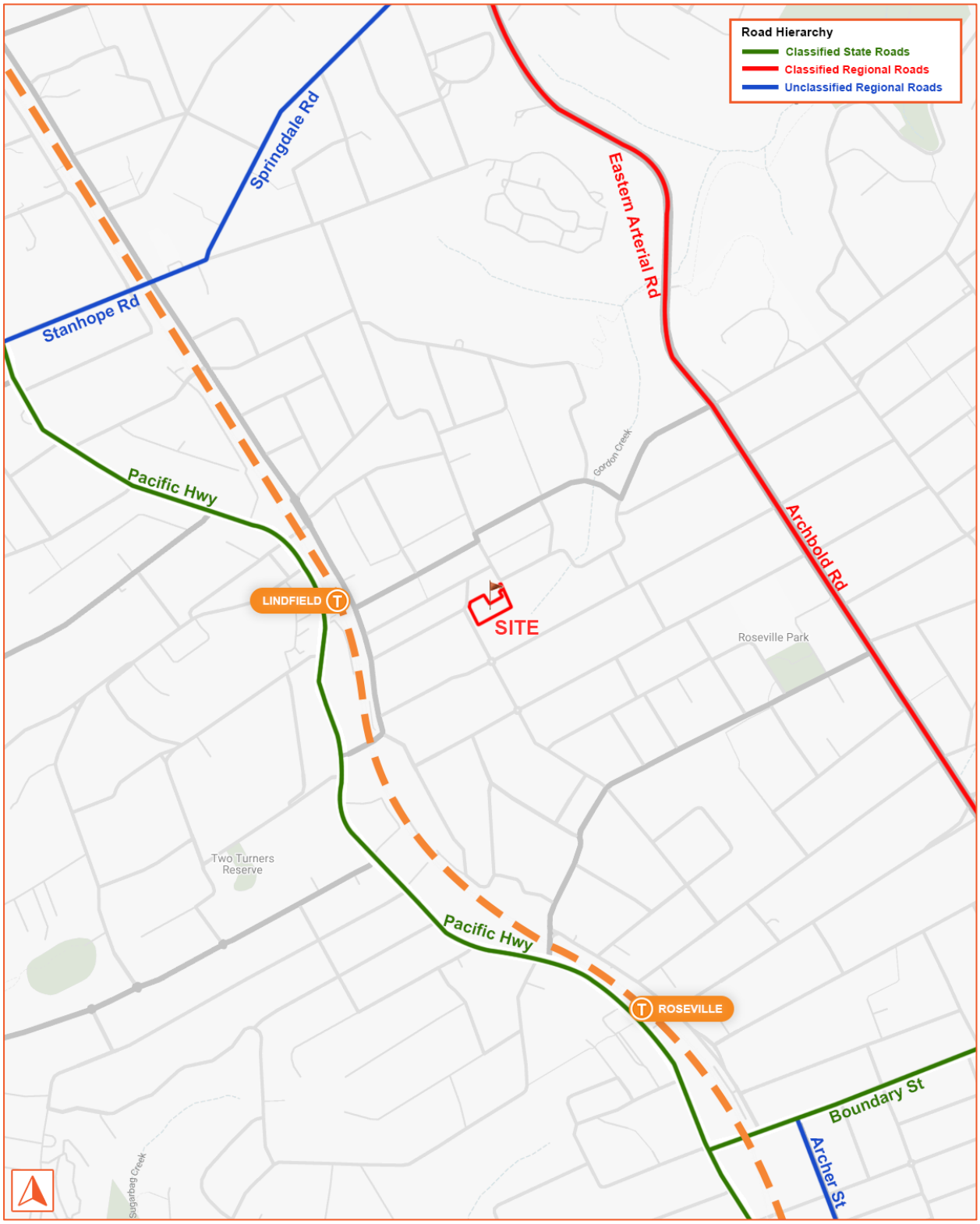


Figure 2: Location & Road Hierarchy Plan

2.3. Public Transport

2.3.1. Bus Services

The Integrated Public Transport Planning Guidelines 2013 states that the walking catchment for metropolitan bus services includes all areas within a 400-metre and 800-metre radius of a bus stop. As can be seen from **Figure 3**, the site is located within 400 metres of bus stops provided within the Lindfield town centre and on Middle Harbour Road and hence falls well within the walking catchment area. Several further services are available within an 800-metre radius. Accordingly, residents and visitors will have convenient access to public bus services for journeys to and from the site.

Table 1 shows the notable town centres that are accessible via the abovementioned bus services and the average service headways during peak and off-peak periods.

Table 1: Bus Services

ROUTE NO.	ROUTE	ROUTE DESCRIPTION	AVERAGE HEADWAY
194	St Ives to City QVB	Via East Killara, Middle Cove, Willoughby East, Cammeray, Lavender Bay, Barangaroo	Weekdays: 30 minutes Weekends: 30 minutes
194X	St Ives to City QVB (Express Service)	Via East Killara, Middle Cove, Willoughby East, Cammeray, Lavender Bay, Barangaroo	Weekdays: 9 services only Weekends: No services
206	East Lindfield to City Bridge St via Freeway	Via Middle Cove, Willoughby East, Cammeray, Lavender Bay, Dawes Point	Weekdays: 5 services only Weekends: No services
207	East Lindfield to City Bridge St via North Sydney	Via Middle Cove, Willoughby East, Cammeray, Lavender Bay, Dawes Point	Weekdays: 30 minutes Weekends: 30 minutes on Saturday / 1 hour on Sunday
208	East Lindfield to City Bridge St via Northbridge & North Sydney	Via Middle Cove, Willoughby East, Northbridge, Cammeray, Lavender Bay, Dawes Point	Weekdays: 6 services only Weekends: 10 services on Saturday / 5 services on Sunday
209	East Lindfield to Milsons Point via North Sydney	Via Middle Cove, Willoughby East, Cammeray, Lavender Bay	Weekdays: 7 services only Weekends: No Services
556	Lindfield to East Killara (Loop Service)	-	Weekdays: 1 hour Weekends: 1 hour
558	Chatswood to Lindfield	Via Roseville, East Lindfield	Weekdays: 1 hour Weekends: 2 hours
565	Chatswood to Macquarie University	Via Lindfield, Macquarie Park	Weekdays: 30 minutes Weekends: 1 hour
594	North Turramurra to City QVB	Via St Ives, Roseville Chase, Middle Cove, Willoughby East, Cammeray, Lavender Bay, Dawes Point	Weekdays: 1 service Weekends: No services
N90	Hornsby to City Town Hall via Chatswood (Night Service)	Via Wahroonga, Warrawee, Turramurra, Gordon, Killara, Roseville, Chatswood, Lavender Bay, Dawes Point	Weekdays: 4 services Weekends: 3 - 4 services

2.3.2. Rail Services

The Integrated Public Transport Planning Guidelines 2013 states that the walking catchment for metropolitan railway stations includes all areas within an 800-metre radius of a station. It can be seen from **Figure 3** that Lindfield Railway Station is located approximately 400 metres west of the site and hence falls within the typical walking catchment area. Accordingly, residents and visitors of the proposed development would be able to readily access the Sydney rail network.

Lindfield Railway Station is serviced by two railway lines, being the T1 North Shore and Western Line and T9 Northern Line. **Table 2** shows the notable town centres that are accessible along these lines and the average service headways during peak and off-peak periods.

Table 2: Rail Services

RAILWAY LINE	NOTABLE TOWN CENTRES ALONG LINE	AVERAGE HEADWAY
T1 North Shore and Western Line	Via Sydney CBD, Townhall, Wynyard, North Sydney, Chatswood, Lindfield, Gordon, Hornsby, Berowra	Weekdays: 5 - 15 minutes Weekends: 5 - 15 minutes
T9 Northern Line	Via Hornsby, Epping, Strathfield, Redfern & Sydney CBD	Weekdays: 5 - 15 minutes Weekends: 5 - 15 minutes

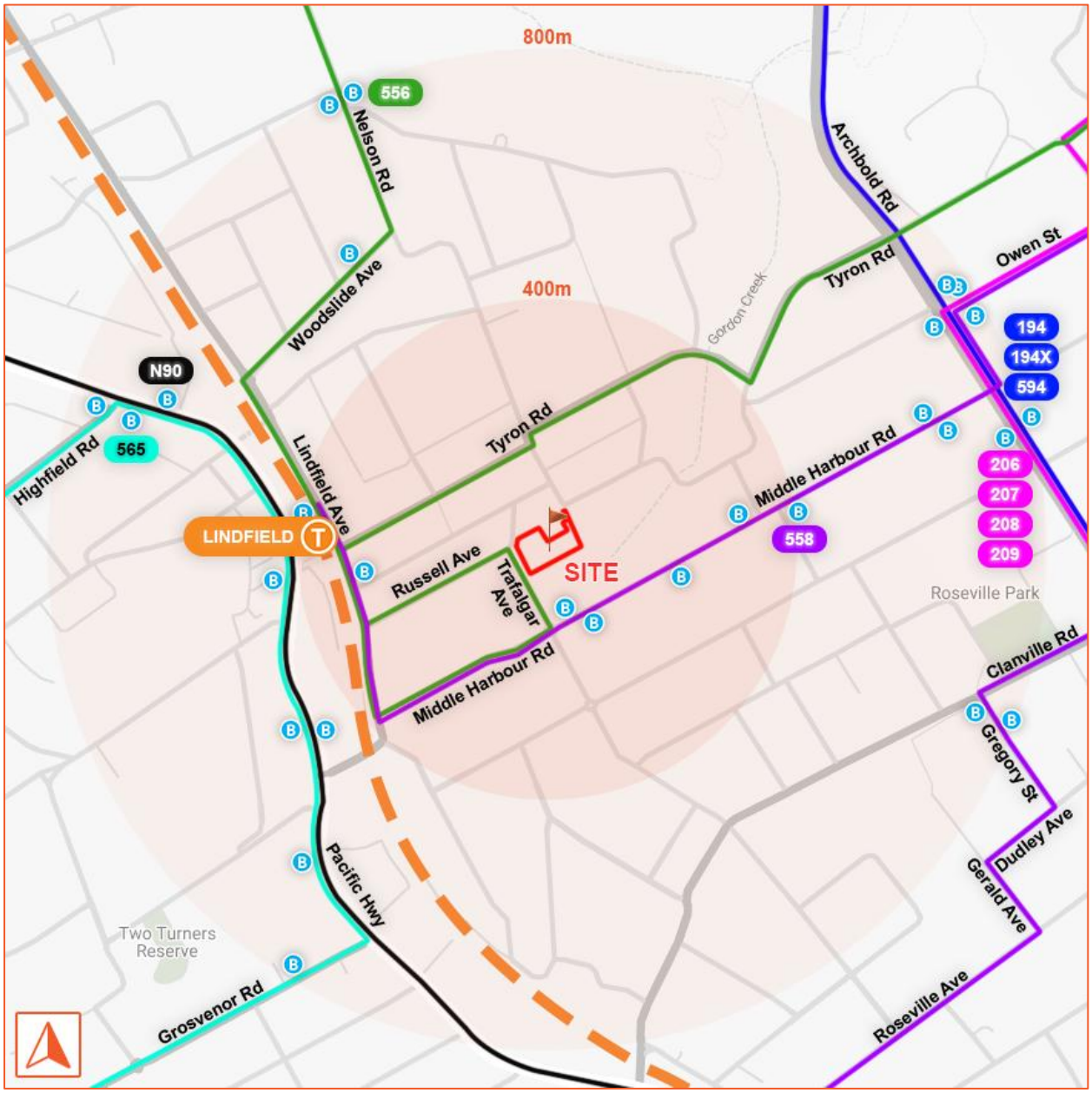


Figure 3: Public Transport Services

2.4. Active Transport

2.4.1. Cycle Network

Figure 4 illustrates the 10-minutes cycling catchment area and dedicated cycle routes near the site. It demonstrates that the site has excellent access to the local bicycle network, with on-road cycle paths provided along Trafalgar Avenue and Russell Lane. These on-road cycle paths provide a connection to the wider cycle path network.

Several key destinations can be accessed from the proposed development on a bicycle, including but not limited to, supermarkets and shopping centres, bulky goods retail stores, food and beverage premises, public transport services, educational establishments, and a range of recreational and outdoor facilities.

2.4.2. Walking Network

Figure 4 also illustrates the 10-minute walking catchment area. Occupants of the development have excellent access to a similar range of facilities to those available via bicycle, including large-scale supermarkets and shopping centres, food and beverage premises, public transport services, educational establishments, and recreational and outdoor facilities. The nearest bus stops to the site are within 400 metres of the site.

Pedestrian facilities around the site are moderately well-developed, though there are some gaps in provision. Footpaths are provided along both sides of Russell Avenue and Valley Road, but on the western side of Trafalgar Avenue and not the eastern side. Similarly, no footpaths are provided along the short and narrow Russell Lane. All nearby roads have a speed limit of 50 km/h and experience low traffic volumes, enhancing pedestrian safety and comfort in the area.

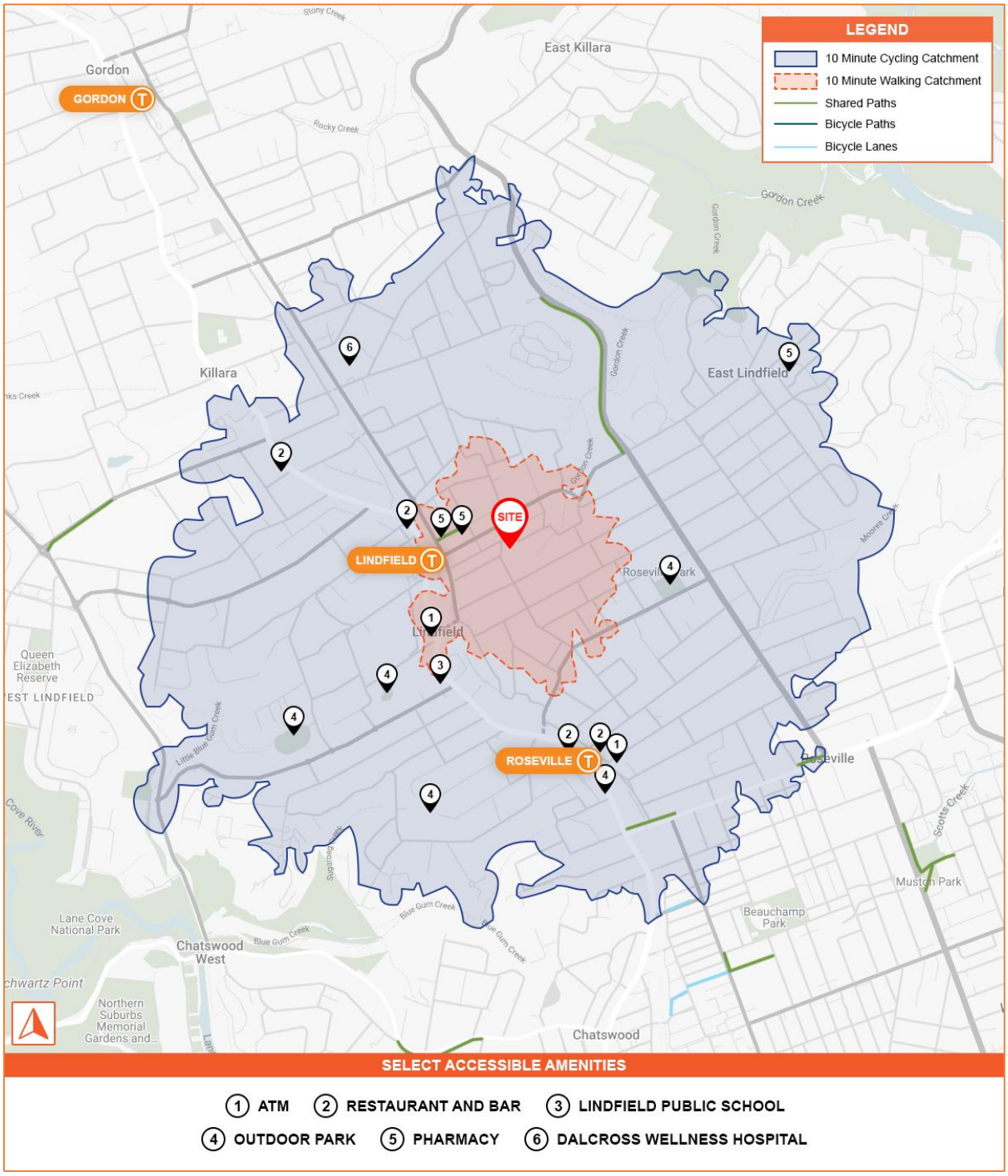


Figure 4: Active Transport Network

2.5. Crash History

An assessment of the crash history near the site has been conducted to identify any potential existing crash trends which might be affected by the proposed development. The analysis was conducted on data available from the NSW Centre for Road Safety for roads and intersections near the site. The details of reported crashes are available for the five-year period between 2019 to 2023. The information provided for each crash includes the crash type, location, year, conditions, and contributing factors.

There were no crashes near the site within the most recent five-year period. Broadening the search area further afield as illustrated by **Figure 5**, there was a total of seven crashes recorded, averaging just over one crash per year. Locations of these broader crashes are illustrated by **Figure 5** and further information is provided by **Table 3**.

Table 3: Crash History Summary

NO.	YEAR	INJURY	ROAD USER MOVEMENT CODE	RUM DESCRIPTION	LIGHTING
1	2021	Hospitalisation	73	Off rd rght => obj	Darkness
2	2019	Medical treatment	13	Right near	Daylight
3	2021	Minor injury	71	Off rd left => obj	Daylight
4	2020	Minor injury	10	Cross traffic	Daylight
5	2020	Minor injury	48	From footpath	Daylight
6	2022	Property damage only	71	Off rd left => obj	Darkness
7	2021	Property damage only	63	Vehicle door	Daylight

Based on the analysis of recent crashes in this broader study area, incidents include a variety of injury severities and property damage-only crashes, occurring under different conditions.

In 2021, one crash resulted in hospitalisation after a vehicle left the road to the right and collided with an object during darkness. A 2019 crash involved medical treatment following a right-near collision during daylight conditions. These crashes were both around 400 metres from the site.

Other crashes were off a lesser severity and again, occurred away from the site. From analysis of the data, there is not a discernible crash trend, be it in terms of a specific location or a type of crash, near the site or within the broader catchment illustrated by **Figure 5.**

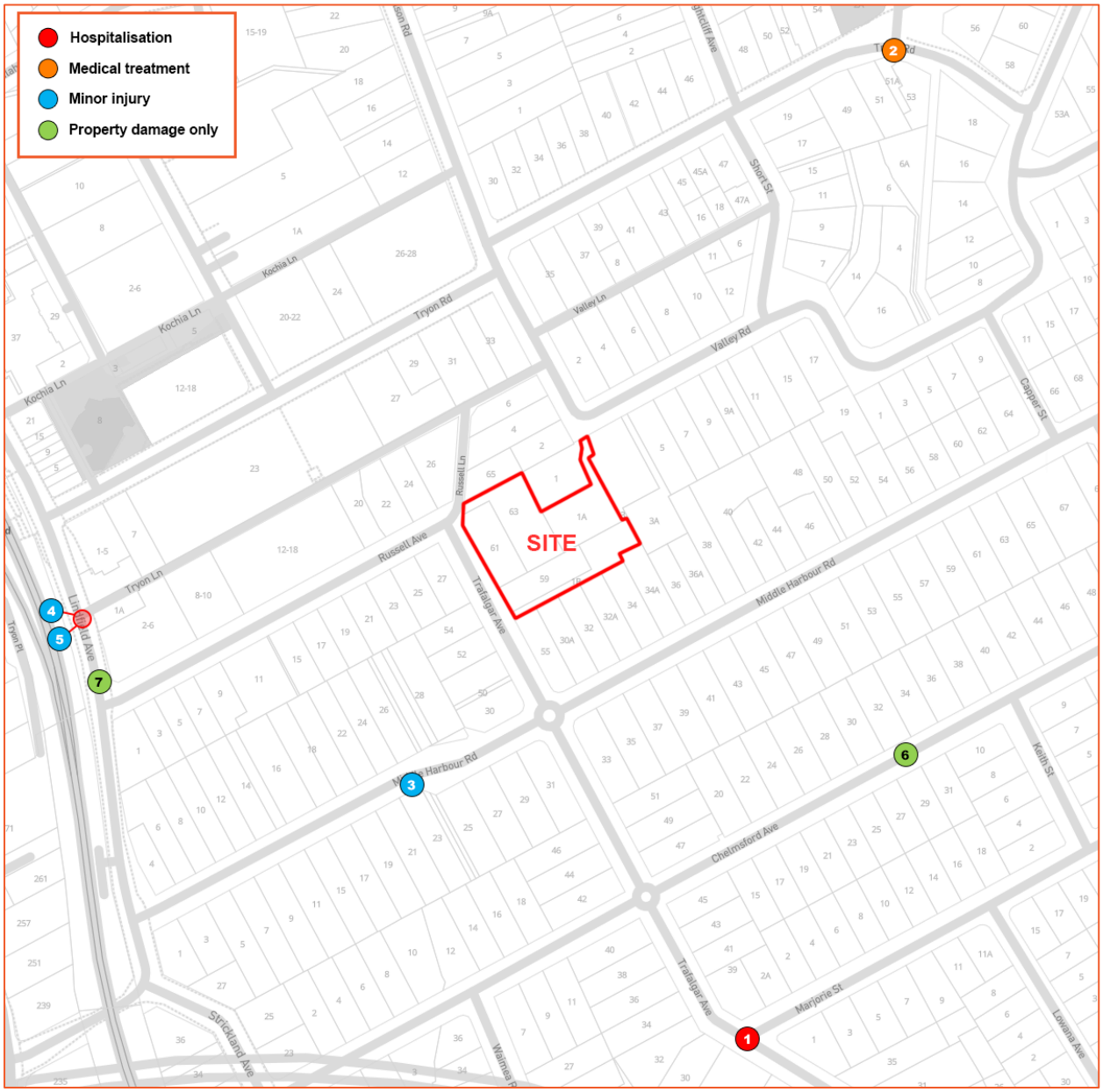


Figure 5: Crash History Map

2.6. Existing Traffic Generation

The site is currently occupied by five detached dwellings. The traffic generation of the existing dwellings has been estimated using the 'low density' residential dwellings rates specified in GTIA as follows:

- 0.68 trips / dwelling / hour during the AM peak period.
- 0.77 trips / dwelling / hour during the PM peak period.

A 20% inbound and 80% outbound split during the AM peak period is assumed, noting that most residents would leave for work in the weekday morning, and vice versa for the weekday PM peak period. The existing residential dwellings would therefore be expected to generate the following number of trips:

- 3 trips / hour (1 in, 2 out) during the AM peak period.
- 4 trips / hour (3 in, 1 out) during the PM peak period.

These existing trips would travel to and from the site via Trafalgar Avenue, Russell Lane, and Valley Road.

Notwithstanding, the most relevant use of existing traffic generation is to calculate the net difference resulting from the SSDA, which is discussed further in Section 5.

2.7. Existing Intersection Performance

Intersection turn count and queue length surveys were undertaken of the nearby two intersections of Russell Avenue / Lindfield Avenue and Trafalgar Avenue / Middle Harbour Road on Tuesday 11 February 2025 at 6:30–9:30am and 3:30–6:30pm, with these periods coinciding with the expected peak periods of the proposed development. The raw survey data is included in **Appendix A** for reference.

The results of the surveys were used to develop existing (base case) models for the weekday morning and evening peak periods. The software used was SIDRA Intersection, the most prevalent and widely recognised traffic modelling software used for traffic assessment in NSW.

SIDRA modelling outputs a range of performance measures, in particular:

- Degree of Saturation (DOS) – The DOS is used to measure the performance of intersections, where a value of 1.0 represents an intersection at theoretical capacity. As the performance of an intersection approaches DOS of 1.0, queue lengths and delays increase rapidly. It is usual to attempt to keep DOS to less than 0.9, with satisfactory intersection operation generally achieved with a DOS below 0.8.
- Average Vehicle Delay (AVD) – The AVD (or average delay per vehicle in seconds) for intersections also provides a measure of the operational performance of an intersection and is used to determine an intersection's Level of Service (see below). For signalised intersections, the AVD reported relates to the average of all vehicle movements through the intersection.
- Level of Service (LOS) – This is a comparative measure that provides an indication of the operating performance, based on AVD.

Table 4 provides a recommended baseline for assessment of intersection performance.

Table 4: Intersection Performance Criteria

LOS	AVD	TRAFFIC SIGNALS
A	Less than 14	Good operation
B	15 to 28	Good with acceptable delays and spare capacity
C	29 to 42	Satisfactory
D	43 to 56	Operating near capacity
E	57 to 70	At capacity, incidents will cause excessive delays.
F	More than 70	Unsatisfactory and requires additional capacity

A summary of the modelling results for the existing (base-case) models is provided in **Table 5**. Reference should also be made to the detailed SIDRA outputs provided in **Appendix B** which give additional information regarding intersection performance.

Table 5: Summary of SIDRA Modelling Results - Existing

INTERSECTION	SCENARIO	PERIOD	DOS	AVD	LOS
Trafalgar Avenue / Middle Harbour Road	Existing	AM	0.065	9.9 s	A
		PM	0.061	9.8 s	A
Russell Avenue / Lindfield Avenue	Existing	AM	0.074	10.2 s	A
		PM	0.075	11.0 s	A

From **Table 5**, it is evident that the intersection operates satisfactorily with LOS A during the AM and PM peak periods. In this regard, the modelling results suggest that the intersections are operating under capacity and would be able to readily accommodate additional vehicles movements.

3. Development Proposal

A detailed description of the proposed residential development for which approval is now sought, is outlined in the EIS prepared separately. Specifically, the SSDA proposal consists of:

- 212 apartment units, including 43 affordable units.
- Basement parking with a total of around 317 car spaces.
- Vehicle access at the south of the site which connects to Trafalgar Avenue.

The parking and traffic implications arising from the proposed development are discussed in Sections 4 and 5, respectively. A copy of the relevant architectural drawings, prepared by DKO, are included in Appendix C.

4. Parking Requirements

4.1. Car Parking

4.1.1. Residential

The Housing SEPP stipulates car parking rates for dwellings used for affordable housing and those not used for affordable housing within a particular development. These rates are such that, if complied with, the consent authority is prevented from requiring more onerous standards; in other words, they are effectively minimum car parking rates. Given the proposal is an SSD with an affordable housing component, it is understood that the parking requirements for the development are to be informed by the Housing SEPP and not those set out in KDCP or GTIA.

Clause 19(e) of the Housing SEPP documents the number of parking spaces for dwellings used for in-fill affordable housing and Clause 19(f) documents the number of parking spaces for dwellings not used for in-fill affordable housing. Separately, Clause 157 documents the number of parking spaces for dwellings used for in-fill affordable housing for transport oriented development (TOD) precincts, with the rates being identical to those of Clause 19(e). The Housing SEPP does not provide visitor car parking rates for either dwellings use as affordable housing or those not used for affordable housing.

Table 6 shows the minimum residential car parking requirements under the Housing SEPP and proposed provision in response.

Table 6: Car Parking Requirements and Provision

TYPE	UNITS	HOUSING SEPP PARKING RATE	MIN. HOUSING SEPP REQUIREMENT	PROPOSED PROVISION
Affordable – 1-bedroom	17	0.4 spaces / dwelling	191	317
Affordable – 2-bedroom	24	0.5 spaces / dwelling		
Affordable – 3-bedroom	2	1 space / dwelling		
Regular – 1-bedroom	39	0.5 spaces / dwelling		
Regular – 2-bedroom	88	1.0 spaces / dwelling		
Regular – 3-bedroom or more	42	1.5 spaces / dwelling		

It is evident from **Table 6** that the proposed development requires a minimum of 191 residential car parking spaces under the Housing SEPP. In response to this requirement, the development proposes a total of 317 car parking spaces. This provision exceeds the minimum requirement and demonstrates compliance with the relevant planning controls.

This provision is driven by the practical needs of affordable housing residents, who require vehicle access for daily tasks such as grocery shopping, family responsibilities, and weekend travel—needs that are comparable to those of any other household type. A reduced parking provision may lead to increased demand for on-street parking, placing strain on the surrounding road network.

The car parking spaces would be allocated as required by the Housing SEPP to ensure appropriate allocation of car spaces in accordance with the type and size of dwelling. This distribution reflects a considered approach to meeting the expected parking demands of future residents. Further, a portion of the proposed parking could be used for non-resident parking uses, such as visitor parking and car wash spaces. Overall, the proposed car parking provision is considered appropriate. It ensures that all parking needs will be accommodated within the site, thereby avoiding any reliance on on-street parking.

4.1.2. Visitor

The Housing SEPP does not stipulate a parking rate for visitor car parking spaces and accordingly, a provision of one space per 10 dwellings is considered appropriate and has been targeted. Based on this benchmark, the development proposes to provide around 21 visitor parking spaces, which is considered acceptable.

4.2. Accessible Car Parking

Housing SEPP does not stipulate any parking rate for accessible parking spaces, but accessible parking would be required under the relevant requirements of the Building Code Board as assessable by the project team's access consultant. The proposed car parking provision is high, and adequate provision would be made.

As a guide, Part 22 of KDCP suggests that accessible parking for land uses not identified in Section 22.5 be provided at a rate of 1% of the total number of spaces, which would result in a requirement for three to four accessible spaces at the subject site. Separately, Part 7B.1(11) of KDCP requires that at least one visitor car space is to be accessible.

The proposed development provides 29 accessible car parking spaces which is considered an acceptable level of provision.

4.3. Electric Vehicle Charging Points

Part 17B.1(15) of KDCP requires that "*All parking bays are to be EV ready with design and construction (provision for conduits, switchboards, electrical capacity etc) to enable installation of electric vehicle charging points that are linked to each individual dwelling electricity meter*".

The proposed development will make ensure provision for electric vehicle charging is made as required by KDCP.

4.4. Car Share

The Housing SEPP does not stipulate a rate for the provision of car share spaces. Accordingly, no car-share spaces are proposed, which is considered acceptable for this development.

4.5. Car Wash

The Housing SEPP does not stipulate a rate for the provision of car wash spaces, but Part 17B.1(12) of KDCP requires that one visitor parking bay is to be provided with a tap, to make provision for on-site car washing. This requirement will be made at the proposed development.

4.6. Motorcycle Parking

Neither the Housing SEPP nor KDCP stipulate a rate for the provision of motorcycle parking for high-density residential developments. Nevertheless, 22 motorcycle parking spaces are proposed and this is considered acceptable.

4.7. Bicycle Parking

The Housing SEPP does not stipulate a rate for the provision of bicycle parking for residential apartment dwellings and accordingly, a provision of one space per eight dwellings is considered appropriate. Based on this benchmark, the development proposes to provide a total of 28 bicycle parking spaces, which is considered acceptable.

4.8. Service Vehicle Parking & Waste Collection

Neither the Housing SEPP nor KDCP stipulate a rate for the provision of servicing and loading bays for residential apartment dwellings. Part 7B.1(13) of the KDCP requires that "*a clearly signposted parking bay for temporary parking of service and removalist vehicles is to be provided*" and gives dimensions for this bay approximate to those required for a 6.7-metre small rigid vehicle (SRV).

The proposed development includes two dedicated loading bays designed to accommodate 6.7-metre SRV. These service bays are provided at-grade and are accessible via the right of carriageway, thus trucks are not required to enter the basement parking areas for reduced interaction with occupants of the building. This provision is considered appropriate and acceptable, as it ensures that service and removalist vehicles can access the site efficiently without impacting internal circulation or on-street parking availability. A minimum vertical clearance of 2.6 metres or greater is available along the service vehicle access path and within the loading area. Swept paths demonstrating a 6.7-metre service vehicle entering and exiting the site are provided in **Appendix D.**

5. Traffic Impacts

5.1. Traffic Generation

GTIA recommends the following traffic generation rates for high density residential developments:

- 0.19 trips / dwelling / hour during the AM peak period.
- 0.15 trips / dwelling / hour during the PM peak period.

A 20% inbound and 80% outbound split during the AM peak period is assumed, noting that most residents would leave for work in the weekday morning, and vice versa for the weekday PM peak period.

The expected traffic generation of the proposed development under application of the above traffic generation rates is summarised below.

- 40 vehicle trips / hour (8 in, 32 out), during the AM peak period.
- 32 vehicle trips / hour (26 in, 6 out), during the PM peak period.

The above is not a net increase in traffic generation, as it does not take into consideration the generation of the existing residential dwellings. In this regard, the net increase in traffic generation resulting from the proposed development is expected to be as follows:

- 37 vehicle trips / hour (7 in, 30 out), during the AM peak period.
- 28 vehicle trips / hour (23 in, 5 out), during the PM peak period.

5.2. Traffic Distribution & Impacts

It is evident from the net trip generation calculations that the total number of additional vehicles on the road network resulting from the site would be modest, at around one vehicle every 90—130 seconds. These vehicles would quickly distribute over multiple different roads to travel to and from the local road network, as well as being in opposite (inbound and outbound) directions, further dispersing the impacts.

The site is expected to generate traffic predominantly oriented to and from the Pacific Highway. It was assumed that approximately 80% of development-generated trips to use travel to and from the Pacific Highway, this would equate to around 30 vehicle trips per hour in the AM peak and 22 vehicle trips per hour in the PM peak which might travel to or from the highway.

There are three readily accessible access points between the highway and the site, depending upon direction of travel: Lindfield Avenue, Strickland Avenue, and Clanville Road. Assuming an even distribution across the three results in approximately 7–10 additional vehicle trips per intersection per hour, or roughly one additional vehicle every 6 to 8 minutes. These would constitute vehicles travelling both in and outbound in opposite directions. Such a marginal increase is not expected to result in any notable change in operational performance across the external road network.

Of the trips which would pass through the two surveyed intersections, an assumed split of 50% northbound and 50% southbound —both to and from the site—has been adopted in assessing the 'with development' scenario during the AM and PM peak hours.

A summary of the modelling results is presented in **Table 7**, with the detailed SIDRA outputs provided in **Appendix B. Table 7** also provides a comparison against the existing intersection performances which have been extracted from **Table 5**.

Table 7: Summary of SIDRA Modelling Results –With Development

INTERSECTION	SCENARIO	PERIOD	DOS	AVD	LOS
Trafalgar Avenue / Middle Harbour Road	Existing	AM	0.065	9.9 s	A
		PM	0.061	9.8 s	A
	Existing + Development	AM	0.066	9.9 s	A
		PM	0.063	9.9 s	A
Russell Avenue / Lindfield Avenue	Existing	AM	0.074	10.2 s	A
		PM	0.075	11.0 s	A
	Existing + Development	AM	0.105	10.7 s	A
		PM	0.081	11.2 s	A

Table 7 demonstrates that the proposed development will have a minimal impact on the performance of the nearby intersections. Given the low level of impact observed, it can be reasonably concluded that traffic effects on intersections further afield will diminish due to trip distribution and dispersion. As such, a detailed assessment of traffic impacts on the broader road network is not considered necessary.

The projected increase in traffic generation can be comfortably accommodated by the existing road infrastructure, with no external upgrades required. Accordingly, the traffic impacts of the proposed development are considered acceptable.

5.3. Cumulative Traffic Impacts

There are a number of nearby sites that are the subject of approved or pending development proposals, which may have the potential to increase traffic movements on key roads surrounding the subject site. These sites, referred to as 'saved TOD sites', are physically separated from the subject site. Accordingly, any cumulative traffic impacts arising from these future developments are expected to be limited, particularly at the key intersections of Trafalgar Avenue / Middle Harbour Road and Russell Avenue / Lindfield Avenue.

In addition, surrounding sites within 400 metres of Lindfield Railway Station have the potential for future development under the provisions of Ku-ring-gai Council's alternative Transit Oriented Development (TOD) scenario. These controls permit increased building heights for sites within the Lindfield centre and, if developed, may contribute to increased traffic activity in the surrounding area.

Notwithstanding, the proposal is forecast to generate only 28 to 37 additional vehicle movements during the commuter peak hours. As such, the traffic impacts of the proposal, even when considered in the context of other

potential developments in the locality, are expected to be very minor. Traffic modelling undertaken as part of this study demonstrates that the additional trips associated with the proposal would have a minimal impact on the surrounding road network, with no change to intersection level of service or typical driver delays.

6. Design Aspects

6.1. Access

The development proposes its main car park and loading dock vehicle accesses at the southern boundary of the site and connects to Trafalgar Avenue to the west. There will be one combined vehicular access to the basement car park, and a second at-grade vehicular access to the loading dock.

With 317 car parking spaces of User Class 1A and a frontage to a right of way, the proposed development requires a Category 2 Driveway under Table 3.1 of AS 2890.1, being a combined entry and exit driveway of width 6.0 to 9.0 metres. The arrangements of the proposed loading dock access would be required to comply with the relevant requirements of AS 2890.2.

Swept path analysis has been undertaken which confirms compliance with AS 2890.1 and AS 2890.2, and that the proposed access arrangements operate safely and efficiently.

6.2. Internal Design

The proposed internal traffic circulation and parking arrangements should comply with the relevant requirements of AS 2890, including the proposed:

- Parking space dimensions, grades, aisle widths, and blind aisle extensions, in accordance with Clause 2.4 of AS 2890.1.
- Internal roadway widths and grades, in accordance with Clause 2.5 of AS 2890.1.
- Design vehicle envelope required for clearance to columns, walls, and obstructions, in accordance with Clause 5.2 of AS 2890.1.
- Headroom and ground clearances, in accordance with Clause 5.3 of AS 2890.1 and Clause 4.2 of AS 2890.2.
- Loading bay dimensions, in accordance with Clause 4.2 of AS 2890.2.
- Bicycle parking arrangements, in accordance with AS 2890.3.

Critical movements, including those of the proposed loading dock, have been assessed by swept path analysis where necessary, and the parking and circulation areas of the proposed development are considered satisfactory. Any minor amendments considered necessary (if any) can be dealt with prior to the release of a Construction Certificate.

It is noted that the design of the vehicle access and car parking arrangements as shown by the architectural drawings provided at Appendix C are considered appropriate for DA stage. Post-consent, it is likely that further refinement of the design will be required as more detail is incorporated into the drawings which will be assessed and resolved prior to the release of a Construction Certificate.

7. Conclusions

In summary:

- PDC Consultants has been commissioned by Castle Hill No. 8 Pty Ltd to undertake a TIA of an SSDA relating to a proposed residential development with infill affordable housing for the site at 59—63 Trafalgar Avenue & 1A—1B Valley Road, Lindfield. Specifically, the proposal consists of:
    - 212 apartment units, including 43 affordable units.
    - Basement parking with a total of around 317 car spaces.
    - Vehicle access via the south of the site which connects to Trafalgar Avenue.
- The traffic generation assessment confirms that the development will generate a net increase of 37 vehicle trips / hour during the AM peak period and 28 vehicle trips / hour during the PM peak period once the generation of the existing development is considered. This is considered acceptable as it will have negligible impact on the nearby intersection.
- The development is required to provide a minimum of 191 car spaces under the Housing SEPP. In response, 317 car parking spaces are provided. The proposed car parking provision is therefore considered acceptable.
- The proposed internal parking arrangements generally comply with the relevant requirements of AS 2890.1, AS 2890.2, AS 2890.3 and AS 2890.6. Any minor amendments considered necessary (if any) can be dealt with prior to the release of a Construction Certificate.

It is therefore concluded that the proposed development is supportable on traffic planning grounds.

Appendix A

Traffic Information Specialist

Location	Trafalgar Avenue	Duration	6:30	-	09:30
	Middle Harbour Road			-	
	Trafalgar Avenue		15:30	-	18:30
	Middle Harbour Road	Date	Tuesday 11 February 2025		
Suburb	LINDFIELD	Weather	-		

All Vehicles — Time Per 15 Mins

NORTHWEST — *Trafalgar Avenue*

Time	L Light	L Heavy	L Buses	L Σ	T Light	T Heavy	T Buses	T Σ	R Light	R Heavy	R Buses	R Σ	U Light	U Heavy	U Buses	U Σ	TOTAL	PEDS
6:30 - 6:45	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1	1
6:45 - 7:00	1	0	0	1	2	0	0	2	0	0	0	0	0	0	0	0	3	3
7:00 - 7:15	0	0	0	0	5	0	0	5	0	0	0	0	0	0	0	0	5	2
7:15 - 7:30	1	0	0	1	1	0	0	1	1	0	0	1	0	0	0	0	3	1
7:30 - 7:45	2	0	0	2	2	0	0	2	2	0	0	2	0	0	0	0	6	0
7:45 - 8:00	1	0	0	1	4	0	1	5	0	0	0	0	0	0	0	0	6	1
8:00 - 8:15	1	0	0	1	4	0	0	4	0	0	0	0	0	0	0	0	5	0
8:15 - 8:30	2	0	0	2	5	0	0	5	0	0	0	0	0	0	0	0	7	0
8:30 - 8:45	2	0	0	2	2	0	0	2	2	0	0	2	0	0	0	0	6	0
8:45 - 9:00	0	0	0	0	6	0	0	6	1	0	0	1	0	0	0	0	7	0
9:00 - 9:15	0	0	0	0	2	0	0	2	0	0	0	0	1	0	0	1	3	0
9:15 - 9:30	3	0	0	3	3	0	0	3	1	0	0	1	0	0	0	0	7	1
Period End	13	0	0	13	37	0	1	38	7	0	0	7	1	0	0	1	59	9
15:30 - 15:45	2	0	0	2	6	0	0	6	3	0	0	3	1	0	0	1	12	2
15:45 - 16:00	2	0	0	2	5	0	0	5	0	0	0	0	0	0	0	0	7	1
16:00 - 16:15	2	0	0	2	6	0	0	6	0	0	0	0	0	0	0	0	8	0
16:15 - 16:30	0	0	0	0	3	0	0	3	1	0	0	1	0	0	0	0	4	0
16:30 - 16:45	2	0	0	2	2	0	0	2	1	0	0	1	0	0	0	0	5	1
16:45 - 17:00	4	0	0	4	1	0	0	1	0	0	0	0	1	0	0	1	6	0
17:00 - 17:15	3	0	0	3	2	0	0	2	1	0	0	1	0	0	0	0	6	0
17:15 - 17:30	1	0	0	1	3	0	0	3	1	0	0	1	0	0	0	0	5	0
17:30 - 17:45	1	0	0	1	4	0	0	4	2	0	0	2	1	0	0	1	8	1
17:45 - 18:00	2	0	0	2	3	0	0	3	0	0	0	0	0	0	0	0	5	2
18:00 - 18:15	3	0	0	3	4	0	0	4	0	0	0	0	1	0	0	1	8	0
18:15 - 18:30	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	4	2
Period End	22	0	0	22	43	0	0	43	9	0	0	9	4	0	0	4	78	9

NORTHEAST — *Middle Harbour Road*

Time	L Light	L Heavy	L Buses	L Σ	T Light	T Heavy	T Buses	T Σ	R Light	R Heavy	R Buses	R Σ	U Light	U Heavy	U Buses	U Σ	TOTAL	PEDS	TOTAL Light	TOTAL Heavy	TOTAL Buses	TOTAL
6:30 - 6:45	1	0	0	1	10	1	0	11	0	0	0	0	0	0	0	0	12	1	20	2	0	22
6:45 - 7:00	1	0	0	1	10	1	0	11	0	0	0	0	1	0	0	1	13	3	28	1	0	29
7:00 - 7:15	2	0	0	2	10	0	1	11	2	0	0	2	0	0	0	0	15	0	39	1	1	42
7:15 - 7:30	2	0	0	2	15	0	0	15	2	0	0	2	0	0	0	0	19	3	50	0	0	50
7:30 - 7:45	2	0	0	2	19	1	0	20	2	0	0	2	0	0	0	0	24	2	64	2	2	68
7:45 - 8:00	5	1	0	6	17	0	0	17	1	0	0	1	0	0	0	0	24	1	57	2	1	60
8:00 - 8:15	9	0	0	9	14	0	0	14	4	0	0	4	0	0	0	0	27	0	66	1	1	68
8:15 - 8:30	4	0	0	4	20	0	0	20	2	0	0	2	0	0	0	0	26	0	64	1	1	66
8:30 - 8:45	3	0	0	3	14	1	1	16	0	0	0	0	0	0	0	0	19	0	55	1	0	57
8:45 - 9:00	4	0	0	4	12	0	0	12	3	0	0	3	0	0	0	0	19	3	57	2	0	59
9:00 - 9:15	8	0	0	8	12	0	0	12	4	0	0	4	0	0	0	0	24	0	50	1	0	51
9:15 - 9:30	2	0	0	2	11	0	0	11	0	0	0	0	0	0	0	0	13	0	37	0	0	37
Period End	43	1	0	44	164	4	2	170	20	0	0	20	1	0	0	1	235	13	587	14	6	609
15:30 - 15:45	2	0	0	2	21	0	0	21	0	0	0	0	1	0	0	1	24	1	65	0	0	65
15:45 - 16:00	3	0	0	3	25	0	2	27	1	0	0	1	0	0	0	0	31	0	64	0	0	66
16:00 - 16:15	5	0	0	5	18	0	0	18	1	0	0	1	0	0	0	0	24	0	49	0	0	49
16:15 - 16:30	2	0	0	2	18	1	0	19	2	0	0	2	0	0	0	0	23	1	49	1	0	50
16:30 - 16:45	3	0	0	3	28	0	0	28	0	0	0	0	0	0	0	0	31	0	57	0	0	57
16:45 - 17:00	3	0	0	3	20	1	1	22	1	0	0	1	1	0	0	1	27	0	53	1	0	55
17:00 - 17:15	4	0	0	4	18	1	0	19	2	0	0	2	0	0	0	0	25	0	59	1	0	60
17:15 - 17:30	6	0	0	6	18	0	0	18	1	0	0	1	0	0	0	0	25	0	54	0	0	54
17:30 - 17:45	4	0	0	4	22	0	0	22	0	0	0	0	1	0	0	1	27	0	68	0	0	68
17:45 - 18:00	3	0	0	3	21	0	1	22	2	0	0	2	0	0	0	0	27	0	71	0	0	72
18:00 - 18:15	4	0	0	4	15	0	0	15	1	0	0	1	1	0	0	1	21	1	46	0	0	46
18:15 - 18:30	1	0	0	1	18	0	0	18	5	0	0	5	0	0	0	0	24	0	55	0	1	56
Period End	40	0	0	40	242	3	4	249	16	0	0	16	4	0	0	4	309	3	690	3	1	698

All Vehicles — Time Per 15 Mins

SOUTHEAST — *Trafalgar Avenue*

Time	L Light	L Heavy	L Buses	L Σ	T Light	T Heavy	T Buses	T Σ	R Light	R Heavy	R Buses	R Σ	U Light	U Heavy	U Buses	U Σ	TOTAL	PEDS
6:30 - 6:45	1	0	0	1	3	0	0	3	0	0	0	0	0	0	0	0	4	0
6:45 - 7:00	5	0	0	5	3	0	0	3	0	0	0	0	0	0	0	0	8	1
7:00 - 7:15	0	0	0	0	6	0	0	6	1	0	0	1	0	0	0	0	7	0
7:15 - 7:30	1	0	0	1	10	0	0	10	1	0	0	1	0	0	0	0	12	0
7:30 - 7:45	5	0	1	6	18	0	0	18	1	0	0	1	0	0	1	1	26	0
7:45 - 8:00	5	0	0	5	13	0	0	13	0	0	0	0	0	0	0	0	18	0
8:00 - 8:15	4	0	0	4	12	0	1	13	0	0	0	0	0	0	0	0	17	0
8:15 - 8:30	5	0	0	5	13	0	1	14	1	0	0	1	0	0	0	0	20	0
8:30 - 8:45	2	0	0	2	13	0	0	13	1	0	0	1	1	0	0	1	17	0
8:45 - 9:00	3	0	0	3	4	0	0	4	2	1	0	3	0	0	0	0	10	0
9:00 - 9:15	3	0	0	3	8	0	0	8	1	1	0	2	0	0	0	0	13	0
9:15 - 9:30	0	0	0	0	5	0	0	5	1	0	0	1	0	0	0	0	6	0
Period End	34	0	1	35	108	0	2	110	9	2	0	11	1	0	1	2	158	1
15:30 - 15:45	6	0	0	6	14	0	0	14	0	0	0	0	0	0	0	0	20	0
15:45 - 16:00	5	0	0	5	11	0	0	11	0	0	0	0	0	0	0	0	16	0
16:00 - 16:15	5	0	0	5	5	0	0	5	1	0	0	1	1	0	0	1	12	0
16:15 - 16:30	3	0	0	3	14	0	0	14	0	0	0	0	0	0	0	0	17	0
16:30 - 16:45	5	0	0	5	11	0	0	11	0	0	0	0	0	0	0	0	16	0
16:45 - 17:00	2	0	0	2	9	0	0	9	0	0	0	0	0	0	0	0	11	0
17:00 - 17:15	3	0	0	3	9	0	0	9	2	0	0	2	0	0	0	0	14	0
17:15 - 17:30	1	0	0	1	10	0	0	10	4	0	0	4	1	0	0	1	16	0
17:30 - 17:45	4	0	0	4	11	0	0	11	2	0	0	2	0	0	0	0	17	0
17:45 - 18:00	9	0	0	9	13	0	0	13	2	0	0	2	0	0	0	0	24	0
18:00 - 18:15	1	0	0	1	5	0	0	5	1	0	0	1	0	0	0	0	7	0
18:15 - 18:30	3	0	0	3	8	0	0	8	2	0	0	2	0	0	0	0	13	0
Period End	47	0	0	47	120	0	0	120	14	0	0	14	2	0	0	2	183	0

SOUTHWEST — *Middle Harbour Road*

Time	L Light	L Heavy	L Buses	L Σ	T Light	T Heavy	T Buses	T Σ	R Light	R Heavy	R Buses	R Σ	U Light	U Heavy	U Buses	U Σ	TOTAL	PEDS	TOTAL Light	TOTAL Heavy	TOTAL Buses	TOTAL
6:30 - 6:45	0	0	0	0	3	1	0	4	1	0	0	1	0	0	0	0	5	1	20	2	0	22
6:45 - 7:00	0	0	0	0	4	0	0	4	1	0	0	1	0	0	0	0	5	2	28	1	0	29
7:00 - 7:15	4	0	0	4	7	1	1	9	2	0	0	2	0	0	0	0	15	3	39	1	1	42
7:15 - 7:30	1	0	0	1	13	0	0	13	2	0	0	2	0	0	0	0	16	0	50	0	0	50
7:30 - 7:45	1	0	0	1	10	0	0	10	0	1	0	1	0	0	0	0	12	6	64	2	2	68
7:45 - 8:00	1	0	0	1	6	1	0	7	3	0	0	3	1	0	0	1	12	0	57	2	1	60
8:00 - 8:15	2	0	0	2	10	1	0	11	5	0	0	5	1	0	0	1	19	1	66	1	1	68
8:15 - 8:30	1	0	0	1	9	1	0	10	2	0	0	2	0	0	0	0	13	1	64	1	1	66
8:30 - 8:45	3	0	0	3	8	0	0	8	4	0	0	4	0	0	0	0	15	1	55	1	0	57
8:45 - 9:00	1	0	0	1	17	1	0	18	4	0	0	4	0	0	0	0	23	1	57	2	0	59
9:00 - 9:15	0	0	0	0	9	0	0	9	2	0	0	2	0	0	0	0	11	2	50	1	0	51
9:15 - 9:30	1	0	0	1	7	0	0	7	2	0	0	2	1	0	0	1	11	3	37	0	0	37
Period End	15	0	0	15	103	6	1	110	28	1	0	29	3	0	0	3	157	21	587	14	6	609
15:30 - 15:45	0	0	0	0	7	0	0	7	2	0	0	2	0	0	0	0	9	0	65	0	0	65
15:45 - 16:00	0	0	0	0	8	0	0	8	3	0	0	3	1	0	0	1	12	0	64	0	0	66
16:00 - 16:15	0	0	0	0	3	0	0	3	2	0	0	2	0	0	0	0	5	0	49	0	0	49
16:15 - 16:30	1	0	0	1	5	0	0	5	0	0	0	0	0	0	0	0	6	0	49	1	0	50
16:30 - 16:45	1	0	0	1	3	0	0	3	1	0	0	1	0	0	0	0	5	3	57	0	0	57
16:45 - 17:00	1	0	0	1	8	0	0	8	1	0	0	1	1	0	0	1	11	0	53	1	0	55
17:00 - 17:15	1	0	0	1	10	0	0	10	2	0	0	2	2	0	0	2	15	2	59	1	0	60
17:15 - 17:30	1	0	0	1	4	0	0	4	3	0	0	3	0	0	0	0	8	1	54	0	0	54
17:30 - 17:45	1	0	0	1	12	0	0	12	2	0	0	2	1	0	0	1	16	1	68	0	0	68
17:45 - 18:00	0	0	0	0	14	0	0	14	1	0	0	1	1	0	0	1	16	0	71	0	0	72
18:00 - 18:15	1	0	0	1	9	0	0	9	0	0	0	0	0	0	0	0	10	4	46	0	0	46
18:15 - 18:30	3	0	0	3	10	0	1	11	1	0	0	1	0	0	0	0	15	0	55	0	1	56
Period End	10	0	0	10	93	0	1	94	18	0	0	18	6	0	0	6	128	11	690	3	1	698

Location	Trafalgar Avenue	Duration	6:30	-	09:30
	Middle Harbour Road			-	
	Trafalgar Avenue		15:30	-	18:30
	Middle Harbour Road	Date	Tuesday 11 February 2025		
Suburb	LINDFIELD	Weather	-		

All Vehicles — Time Per Hour

	NORTHWEST — Trafalgar Avenue																		NORTHEAST — Middle Harbour Road																							
	L				T				R				U						L				T				R				U											
	LIGHT	HEAVY	BUSES	Σ	LIGHT	HEAVY	BUSES	Σ	LIGHT	HEAVY	BUSES	Σ	LIGHT	HEAVY	BUSES	Σ	TOTAL	PEDS	LIGHT	HEAVY	BUSES	Σ	LIGHT	HEAVY	BUSES	Σ	LIGHT	HEAVY	BUSES	Σ	LIGHT	HEAVY	BUSES	Σ	TOTAL	PEDS	TOTAL LIGHT	TOTAL HEAVY	TOTAL BUSES	TOTAL
6:30 - 7:30	2	0	0	2	9	0	0	9	1	0	0	1	0	0	0	0	12	7	6	0	0	6	45	2	1	48	4	0	0	4	1	0	0	1	59	7	137	4	1	143
6:45 - 7:45	4	0	0	4	10	0	0	10	3	0	0	3	0	0	0	0	17	6	7	0	0	7	54	2	1	57	6	0	0	6	1	0	0	1	71	8	181	4	3	189
7:00 - 8:00	4	0	0	4	12	0	1	13	3	0	0	3	0	0	0	0	20	4	11	1	0	12	61	1	1	63	7	0	0	7	0	0	0	0	82	6	210	5	4	220
7:15 - 8:15	5	0	0	5	11	0	1	12	3	0	0	3	0	0	0	0	20	2	18	1	0	19	65	1	0	66	9	0	0	9	0	0	0	0	94	6	237	5	4	246
7:30 - 8:30	6	0	0	6	15	0	1	16	2	0	0	2	0	0	0	0	24	1	20	1	0	21	70	1	0	71	9	0	0	9	0	0	0	0	101	3	251	6	5	262
7:45 - 8:45	6	0	0	6	15	0	1	16	2	0	0	2	0	0	0	0	24	1	21	1	0	22	65	1	1	67	7	0	0	7	0	0	0	0	96	1	242	5	3	251
8:00 - 9:00	5	0	0	5	17	0	0	17	3	0	0	3	0	0	0	0	25	0	20	0	0	20	60	1	1	62	9	0	0	9	0	0	0	0	91	3	242	5	2	250
8:15 - 9:15	4	0	0	4	15	0	0	15	3	0	0	3	1	0	0	1	23	0	19	0	0	19	58	1	1	60	9	0	0	9	0	0	0	0	88	3	226	5	1	233
8:30 - 9:30	5	0	0	5	13	0	0	13	4	0	0	4	1	0	0	1	23	1	17	0	0	17	49	1	1	51	7	0	0	7	0	0	0	0	75	3	199	4	0	204
Period End																																								
15:30 - 16:30	6	0	0	6	20	0	0	20	4	0	0	4	1	0	0	1	31	3	12	0	0	12	82	1	2	85	4	0	0	4	1	0	0	1	102	2	227	1	0	230
15:45 - 16:45	6	0	0	6	16	0	0	16	2	0	0	2	0	0	0	0	24	2	13	0	0	13	89	1	2	92	4	0	0	4	0	0	0	0	109	1	219	1	0	222
16:00 - 17:00	8	0	0	8	12	0	0	12	2	0	0	2	1	0	0	1	23	1	13	0	0	13	84	2	1	87	4	0	0	4	1	0	0	1	105	1	208	2	0	211
16:15 - 17:15	9	0	0	9	8	0	0	8	3	0	0	3	1	0	0	1	21	1	12	0	0	12	84	3	1	88	5	0	0	5	1	0	0	1	106	1	218	3	0	222
16:30 - 17:30	10	0	0	10	8	0	0	8	3	0	0	3	1	0	0	1	22	1	16	0	0	16	84	2	1	87	4	0	0	4	1	0	0	1	108	0	223	2	0	226
16:45 - 17:45	9	0	0	9	10	0	0	10	4	0	0	4	2	0	0	2	25	1	17	0	0	17	78	2	1	81	4	0	0	4	2	0	0	2	104	0	234	2	0	237
17:00 - 18:00	7	0	0	7	12	0	0	12	4	0	0	4	1	0	0	1	24	3	17	0	0	17	79	1	1	81	5	0	0	5	1	0	0	1	104	0	252	1	0	254
17:15 - 18:15	7	0	0	7	14	0	0	14	3	0	0	3	2	0	0	2	26	3	17	0	0	17	76	0	1	77	4	0	0	4	2	0	0	2	100	1	239	0	0	240
17:30 - 18:30	6	0	0	6	15	0	0	15	2	0	0	2	2	0	0	2	25	5	12	0	0	12	76	0	1	77	8	0	0	8	2	0	0	2	99	1	240	0	1	242
Period End																																								

All Vehicles — Time Per Hour

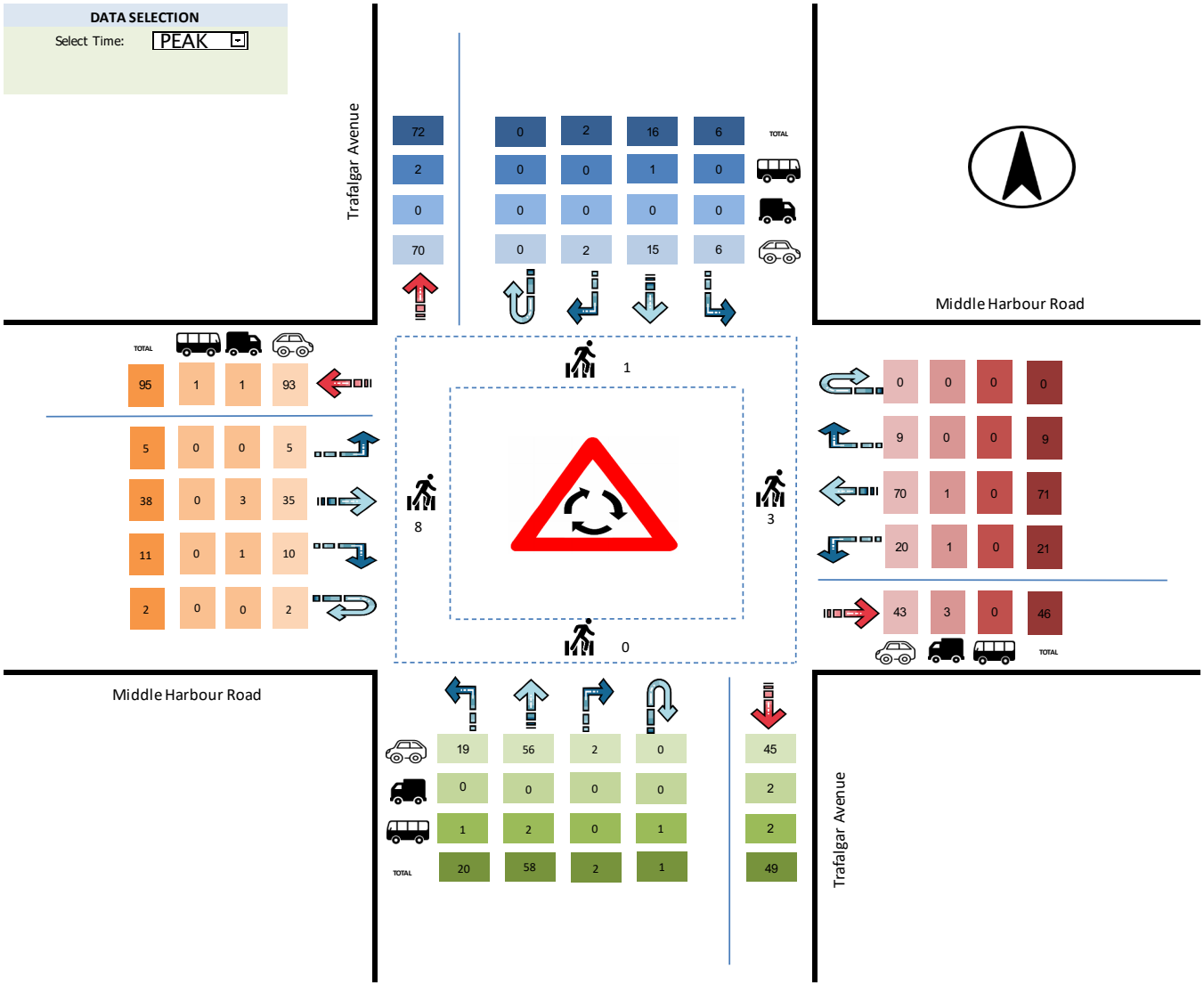
	SOUTHEAST — Trafalgar Avenue																		SOUTHWEST — Middle Harbour Road																							
	L				T				R				U						L				T				R				U											
	LIGHT	HEAVY	BUSES	Σ	LIGHT	HEAVY	BUSES	Σ	LIGHT	HEAVY	BUSES	Σ	LIGHT	HEAVY	BUSES	Σ	TOTAL	PEDS	LIGHT	HEAVY	BUSES	Σ	LIGHT	HEAVY	BUSES	Σ	LIGHT	HEAVY	BUSES	Σ	LIGHT	HEAVY	BUSES	Σ	TOTAL	PEDS	TOTAL LIGHT	TOTAL HEAVY	TOTAL BUSES	TOTAL
6:30 - 7:30	7	0	0	7	22	0	0	22	2	0	0	2	0	0	0	0	31	1	5	0	0	5	27	2	1	30	6	0	0	6	0	0	0	0	41	6	137	4	1	143
6:45 - 7:45	11	0	1	12	37	0	0	37	3	0	0	3	0	0	1	1	53	1	6	0	0	6	34	1	1	36	5	1	0	6	0	0	0	0	48	11	181	4	3	189
7:00 - 8:00	11	0	1	12	47	0	0	47	3	0	0	3	0	0	1	1	63	0	7	0	0	7	36	2	1	39	7	1	0	8	1	0	0	1	55	9	210	5	4	220
7:15 - 8:15	15	0	1	16	53	0	1	54	2	0	0	2	0	0	1	1	73	0	5	0	0	5	39	2	0	41	10	1	0	11	2	0	0	2	59	7	237	5	4	246
7:30 - 8:30	19	0	1	20	56	0	2	58	2	0	0	2	0	0	1	1	81	0	5	0	0	5	35	3	0	38	10	1	0	11	2	0	0	2	56	8	251	6	5	262
7:45 - 8:45	16	0	0	16	51	0	2	53	2	0	0	2	1	0	0	1	72	0	7	0	0	7	33	3	0	36	14	0	0	14	2	0	0	2	59	3	242	5	3	251
8:00 - 9:00	14	0	0	14	42	0	2	44	4	1	0	5	1	0	0	1	64	0	7	0	0	7	44	3	0	47	15	0	0	15	1	0	0	1	70	4	242	5	2	250
8:15 - 9:15	13	0	0	13	38	0	1	39	5	2	0	7	1	0	0	1	60	0	5	0	0	5	43	2	0	45	12	0	0	12	0	0	0	0	62	5	226	5	1	233
8:30 - 9:30	8	0	0	8	30	0	0	30	5	2	0	7	1	0	0	1	46	0	5	0	0	5	41	1	0	42	12	0	0	12	1	0	0	1	60	7	199	4	0	204
Period End																																								
15:30 - 16:30	19	0	0	19	44	0	0	44	1	0	0	1	1	0	0	1	65	0	1	0	0	1	23	0	0	23	7	0	0	7	1	0	0	1	32	0	227	1	0	230
15:45 - 16:45	18	0	0	18	41	0	0	41	1	0	0	1	1	0	0	1	61	0	2	0	0	2	19	0	0	19	6	0	0	6	1	0	0	1	28	3	219	1	0	222
16:00 - 17:00	15	0	0	15	39	0	0	39	1	0	0	1	1	0	0	1	56	0	3	0	0	3	19	0	0	19	4	0	0	4	1	0	0	1	27	3	208	2	0	211
16:15 - 17:15	13	0	0	13	43	0	0	43	2	0	0	2	0	0	0	0	58	0	4	0	0	4	26	0	0	26	4	0	0	4	3	0	0	3	37	5	218	3	0	222
16:30 - 17:30	11	0	0	11	39	0	0	39	6	0	0	6	1	0	0	1	57	0	4	0	0	4	25	0	0	25	7	0	0	7	3	0	0	3	39	6	223	2	0	226
16:45 - 17:45	10	0	0	10	39	0	0	39	8	0	0	8	1	0	0	1	58	0	4	0	0	4	34	0	0	34	8	0	0	8	4	0	0	4	50	4	234	2	0	237
17:00 - 18:00	17	0	0	17	43	0	0	43	10	0	0	10	1	0	0	1	71	0	3	0	0	3	40	0	0	40	8	0	0	8	4	0	0	4	55	4	252	1	0	254
17:15 - 18:15	15	0	0	15	39	0	0	39	9	0	0	9	1	0	0	1	64	0	3	0	0	3	39	0	0	39	6	0	0	6	2	0	0	2	50	6	239	0	0	240
17:30 - 18:30	17	0	0	17	37	0	0	37	7	0	0	7	0	0	0	0	61	0	5	0	0	5	45	0	1	46	4	0	0	4	2	0	0	2	57	5	240	0	1	242
Period End																																								

Location	Trafalgar Avenue	Duration	6:30	-	09:30
	Middle Harbour Road			-	
	Trafalgar Avenue		15:30	-	18:30
	Middle Harbour Road	Date	Tuesday 11 February 2025		
Suburb	LINDFIELD	Weather	-		

DATA SELECTION

Select Time: PEAK

TIME RANGE		
PEAK	-	AM
PEAK		
7:30	-	8:30



Traffic Information Specialist

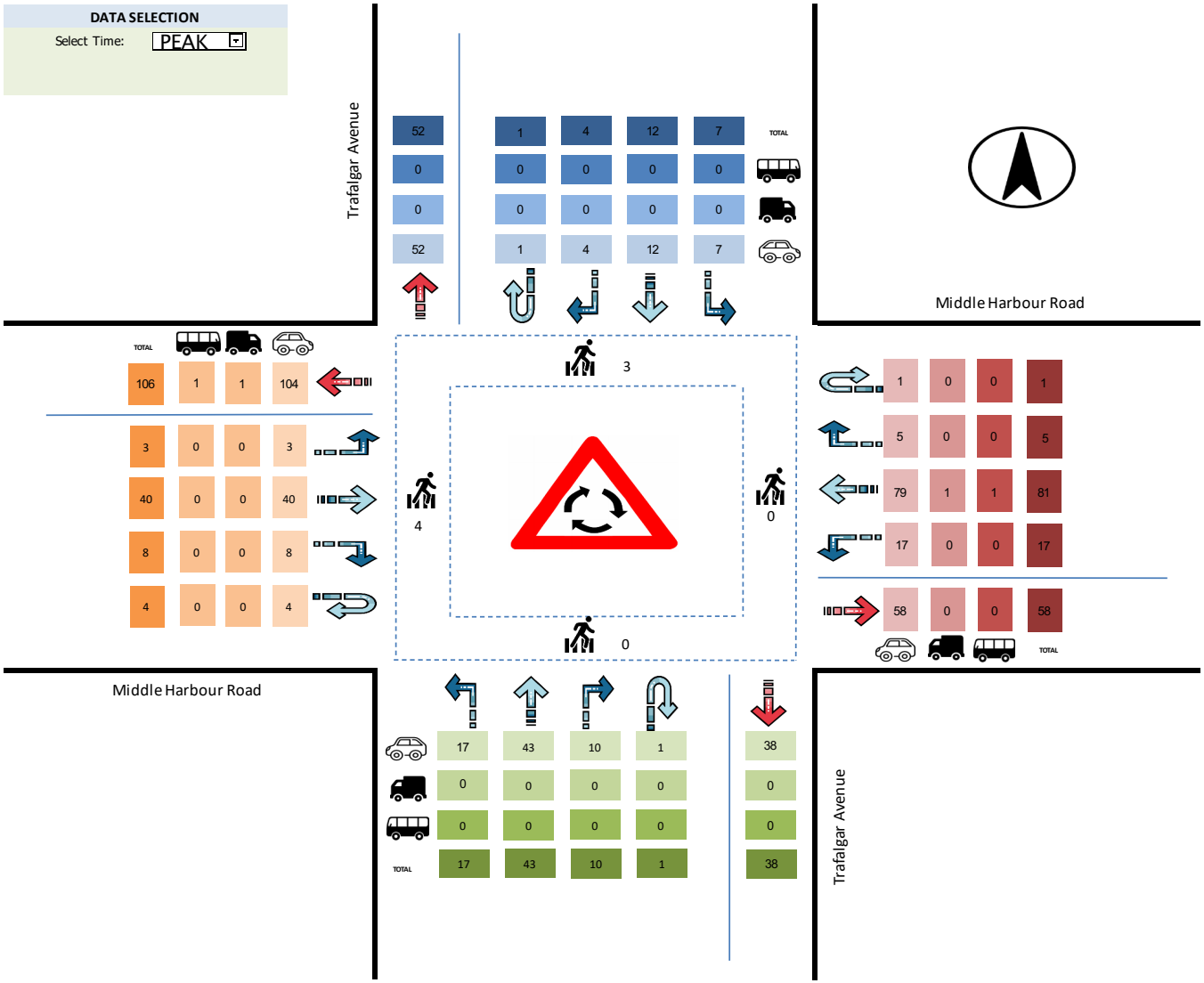
ABN: 42 613 389 923

Email info@tistraffic.com.au

Location	Trafalgar Avenue	Duration	6:30	-	09:30
	Middle Harbour Road			-	
	Trafalgar Avenue		15:30	-	18:30
	Middle Harbour Road	Date	Tuesday 11 February 2025		
Suburb	LINDFIELD	Weather	-		

DATA SELECTION
Select Time: PEAK

TIME RANGE		
PEAK	-	PM
PEAK		
17:00	-	18:00



Traffic Information Specialist

ABN: 42 613 389 923

Email info@tistraffic.com.au

Traffic Information Specialist

Location	Lindfield Avenue	Duration	6:30	-	09:30
	Russell Avenue			-	
	Lindfield Avenue		15:30	-	18:30
	-	Date	Tuesday 11 February 2025		
Suburb	LINDFIELD	Weather	-		

All Vehicles Time Per 15 Mins	NORTH *Lindfield Avenue*														EAST *Russell Avenue*																	
	L				T				R						L				T				R						TOTAL			
	LIGHT	HEAVY	BUSES	Σ	LIGHT	HEAVY	BUSES	Σ	LIGHT	HEAVY	BUSES	Σ	TOTAL	PEDS	LIGHT	HEAVY	BUSES	Σ	LIGHT	HEAVY	BUSES	Σ	LIGHT	HEAVY	BUSES	Σ	TOTAL	PEDS	LIGHT	HEAVY	BUSES	TOTAL
6:30 - 6:45	3	0	0	3	22	0	0	22					25	2	1	0	0	1					3	0	0	3	4	1	52	3	0	55
6:45 - 7:00	4	0	0	4	28	1	0	29					33	5	1	0	0	1					2	0	0	2	3	3	76	3	0	79
7:00 - 7:15	10	0	0	10	38	2	1	41					51	0	0	0	0	0					8	0	0	8	8	2	92	3	3	98
7:15 - 7:30	6	0	0	6	65	1	1	67					73	3	2	0	0	2					7	0	0	7	9	3	126	1	2	129
7:30 - 7:45	12	0	0	12	56	3	0	59					71	1	1	0	0	1					13	0	0	13	14	3	168	3	1	172
7:45 - 8:00	10	0	0	10	60	0	1	61					71	6	1	0	0	1					7	0	0	7	8	5	147	2	3	152
8:00 - 8:15	8	0	0	8	79	0	1	80					88	9	0	0	0	0					6	0	0	6	6	5	148	1	2	151
8:15 - 8:30	12	0	0	12	93	0	0	93					105	4	2	0	0	2					6	0	2	8	10	9	165	0	2	169
8:30 - 8:45	8	0	0	8	89	1	0	90					98	3	5	0	0	5					4	0	0	4	9	10	158	3	1	162
8:45 - 9:00	9	0	0	9	87	0	1	88					97	2	2	0	0	2					3	0	1	4	6	1	153	1	2	157
9:00 - 9:15	6	0	0	6	66	0	1	67					73	2	1	0	0	1					10	0	0	10	11	0	125	0	2	127
9:15 - 9:30	12	0	0	12	62	0	0	62					74	1	2	0	0	2					3	0	0	3	5	7	121	0	0	121
Period End	100	0	0	100	745	8	6	759					859	38	18	0	0	18					72	0	3	75	93	49	1531	20	18	1572
15:30 - 15:45	14	0	0	14	53	0	0	53					67	1	0	0	0	0					7	0	0	7	7	1	161	0	0	161
15:45 - 16:00	12	0	0	12	66	0	1	67					79	2	1	0	0	1					13	0	0	13	14	5	192	0	3	195
16:00 - 16:15	16	0	0	16	57	0	1	58					74	0	0	0	0	0					7	0	0	7	7	0	166	0	2	168
16:15 - 16:30	3	0	0	3	45	0	2	47					50	2	2	0	0	2					9	0	0	9	11	2	147	1	2	150
16:30 - 16:45	8	0	0	8	61	0	2	61					69	1	1	0	0	1					7	0	0	5	6	0	182	0	3	179
16:45 - 17:00	13	0	0	13	62	1	0	63					76	4	4	0	0	4					11	0	0	11	15	0	186	2	0	188
17:00 - 17:15	7	0	0	7	66	0	1	67					74	1	1	0	0	1					5	0	0	5	6	4	174	0	2	176
17:15 - 17:30	21	0	0	21	46	1	0	47					68	1	1	0	0	1					6	0	0	6	7	0	150	1	0	151
17:30 - 17:45	11	0	0	11	62	0	0	62					73	6	1	0	0	1					10	0	0	10	11	4	168	0	0	168
17:45 - 18:00	5	0	0	5	46	0	0	46					51	2	2	0	0	0					12	0	0	12	12	2	151	0	0	149
18:00 - 18:15	9	0	0	9	49	1	0	50					59	1	1	0	0	1					6	0	0	6	7	6	141	1	1	143
18:15 - 18:30	8	0	0	8	40	0	1	41					49	0	2	0	0	2					6	0	0	6	8	5	133	0	1	134
Period End	127	0	0	127	653	3	8	662					789	21	16	0	0	14					99	0	0	97	111	29	1951	5	14	1962

All Vehicles Time Per 15 Mins	SOUTH *Lindfield Avenue*														WEST -																	
	L				T				R						L				T				R						TOTAL			
	LIGHT	HEAVY	BUSES	Σ	LIGHT	HEAVY	BUSES	Σ	LIGHT	HEAVY	BUSES	Σ	TOTAL	PEDS	LIGHT	HEAVY	BUSES	Σ	LIGHT	HEAVY	BUSES	Σ	LIGHT	HEAVY	BUSES	Σ	TOTAL	PEDS	LIGHT	HEAVY	BUSES	TOTAL
6:30 - 6:45					23	3	0	26	0	0	0	0	26	0															52	3	0	55
6:45 - 7:00					39	2	0	41	2	0	0	2	43	1															76	3	0	79
7:00 - 7:15					36	1	2	39	0	0	0	0	39	1															92	3	3	98
7:15 - 7:30					45	0	1	46	1	0	0	1	47	0															126	1	2	129
7:30 - 7:45					85	0	1	86	1	0	0	1	87	1															168	3	1	172
7:45 - 8:00					64	2	2	68	5	0	0	5	73	1															147	2	3	152
8:00 - 8:15					55	1	1	57	0	0	0	0	57	2															148	1	2	151
8:15 - 8:30					49	0	2	51	3	0	0	3	54	0															165	0	2	169
8:30 - 8:45					50	2	1	53	2	0	0	2	55	0															158	3	1	162
8:45 - 9:00					49	1	1	51	3	0	0	3	54	1															153	1	2	157
9:00 - 9:15					41	0	1	42	1	0	0	1	43	1															125	0	2	127
9:15 - 9:30					40	0	0	40	2	0	0	2	42	2															121	0	0	121
Period End					576	12	12	600	20	0	0	20	620	10															1531	20	18	1572
15:30 - 15:45					85	0	0	85	2	0	0	2	87	0															161	0	0	161
15:45 - 16:00					94	0	2	96	6	0	0	6	102	0															192	0	3	195
16:00 - 16:15					84	0	1	85	2	0	0	2	87	1															166	0	2	168
16:15 - 16:30					88	1	0	89	0	0	0	0	89	0															147	1	2	150
16:30 - 16:45					105	0	1	104	0	0	0	0	104	1															182	0	3	179
16:45 - 17:00					93	1	0	94	3	0	0	3	97	1															186	2	0	188
17:00 - 17:15					93	0	1	94	2	0	0	2	96	0															174	0	2	176
17:15 - 17:30					74	0	0	74	2	0	0	2	76	1															150	1	0	151
17:30 - 17:45					82	0	0	82	2	0	0	2	84	5															168	0	0	168
17:45 - 18:00					84	0	0	84	2	0	0	2	86	0															151	0	0	149
18:00 - 18:15					73	0	1	74	3	0	0	3	77	2															141	1	1	143
18:15 - 18:30					77	0	0	77	0	0	0	0	77	1															133	0	1	134
Period End					1032	2	6	1038	24	0	0	24	1062	12															1951	5	14	1962

Location	Lindfield Avenue	Duration	6:30	-	09:30
	Russell Avenue			-	
	Lindfield Avenue		15:30	-	18:30
	-	Date	Tuesday 11 February 2025		
Suburb	LINDFIELD	Weather	-		

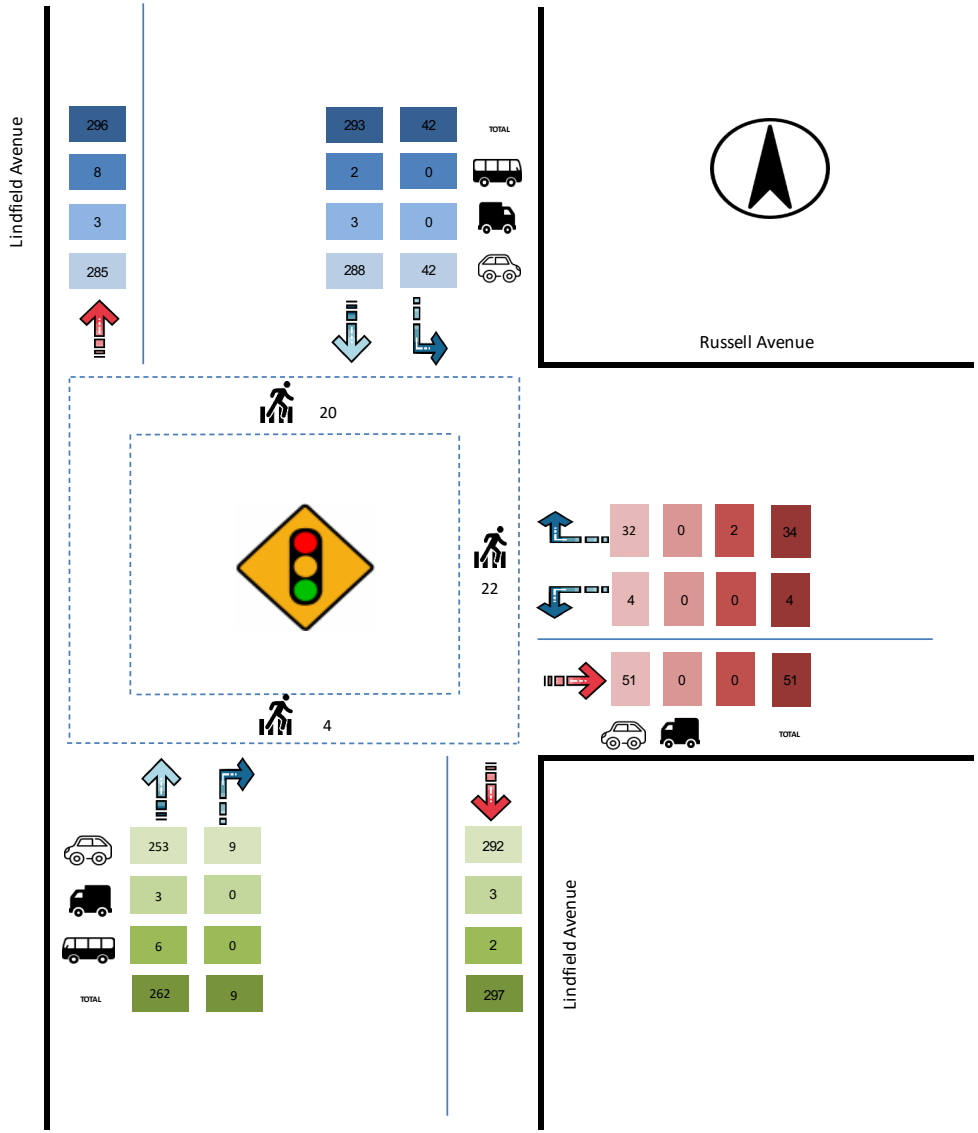
All Vehicles Time Per Hour	NORTH Lindfield Avenue														EAST Russell Avenue														TOTAL			
	L				T				R						L				T				R									
	LIGHT	HEAVY	BUSES	Σ	LIGHT	HEAVY	BUSES	Σ	LIGHT	HEAVY	BUSES	Σ	TOTAL	PEDS	LIGHT	HEAVY	BUSES	Σ	LIGHT	HEAVY	BUSES	Σ	LIGHT	HEAVY	BUSES	Σ	TOTAL	PEDS	LIGHT	HEAVY	BUSES	TOTAL
6:30 - 7:30	23	0	0	23	153	4	2	159					182	10	4	0	0	4					20	0	0	20	24	9	346	10	5	361
6:45 - 7:45	32	0	0	32	187	7	2	196					228	9	4	0	0	4					30	0	0	30	34	11	462	10	6	478
7:00 - 8:00	38	0	0	38	219	6	3	228					266	10	4	0	0	4					35	0	0	35	39	13	533	9	9	551
7:15 - 8:15	36	0	0	36	260	4	3	267					303	19	4	0	0	4					33	0	0	33	37	16	589	7	8	604
7:30 - 8:30	42	0	0	42	288	3	2	293					335	20	4	0	0	4					32	0	2	34	38	22	628	6	8	644
7:45 - 8:45	38	0	0	38	321	1	2	324					362	22	8	0	0	8					23	0	2	25	33	29	618	6	8	634
8:00 - 9:00	37	0	0	37	348	1	2	351					388	18	9	0	0	9					19	0	3	22	31	25	624	5	7	639
8:15 - 9:15	35	0	0	35	335	1	2	338					373	11	10	0	0	10					23	0	3	26	36	20	601	4	7	615
8:30 - 9:30	35	0	0	35	304	1	2	307					342	8	10	0	0	10					20	0	1	21	31	18	557	4	5	567
Period End																																
15:30 - 16:30	45	0	0	45	221	0	4	225					270	5	3	0	0	3					36	0	0	36	39	8	666	1	7	674
15:45 - 16:45	39	0	0	39	229	0	6	233					272	5	4	0	0	4					36	0	0	34	38	7	687	1	10	692
16:00 - 17:00	40	0	0	40	225	1	5	229					269	7	7	0	0	7					34	0	0	32	39	2	681	3	7	685
16:15 - 17:15	31	0	0	31	234	1	5	238					269	8	8	0	0	8					32	0	0	30	38	6	689	3	7	693
16:30 - 17:30	49	0	0	49	235	2	3	238					287	7	7	0	0	7					29	0	0	27	34	4	692	3	5	694
16:45 - 17:45	52	0	0	52	236	2	1	239					291	12	7	0	0	7					32	0	0	32	39	8	678	3	2	683
17:00 - 18:00	44	0	0	44	220	1	1	222					266	10	5	0	0	3					33	0	0	33	36	10	643	1	2	644
17:15 - 18:15	46	0	0	46	203	2	0	205					251	10	5	0	0	3					34	0	0	34	37	12	610	2	1	611
17:30 - 18:30	33	0	0	33	197	1	1	199					232	9	6	0	0	4					34	0	0	34	38	17	593	1	2	594
Period End																																

All Vehicles Time Per Hour	SOUTH Lindfield Avenue														WEST -																	
	L				T				R						L				T				R									
	LIGHT	HEAVY	BUSES	Σ	LIGHT	HEAVY	BUSES	Σ	LIGHT	HEAVY	BUSES	Σ	TOTAL	PEDS	LIGHT	HEAVY	BUSES	Σ	LIGHT	HEAVY	BUSES	Σ	LIGHT	HEAVY	BUSES	Σ	TOTAL	PEDS	LIGHT	HEAVY	BUSES	TOTAL
6:30 - 7:30					143	6	3	152	3	0	0	3	155	2															346	10	5	361
6:45 - 7:45					205	3	4	212	4	0	0	4	216	3															462	10	6	478
7:00 - 8:00					230	3	6	239	7	0	0	7	246	3															533	9	9	551
7:15 - 8:15					249	3	5	257	7	0	0	7	264	4															589	7	8	604
7:30 - 8:30					253	3	6	262	9	0	0	9	271	4															628	6	8	644
7:45 - 8:45					218	5	6	229	10	0	0	10	239	3															618	6	8	634
8:00 - 9:00					203	4	5	212	8	0	0	8	220	3															624	5	7	639
8:15 - 9:15					189	3	5	197	9	0	0	9	206	2															601	4	7	615
8:30 - 9:30					180	3	3	186	8	0	0	8	194	4															557	4	5	567
Period End																																
15:30 - 16:30					351	1	3	355	10	0	0	10	365	1															666	1	7	674
15:45 - 16:45					371	1	4	374	8	0	0	8	382	2															687	1	10	692
16:00 - 17:00					370	2	2	372	5	0	0	5	377	3															681	3	7	685
16:15 - 17:15					379	2	2	381	5	0	0	5	386	2															689	3	7	693
16:30 - 17:30					365	1	2	366	7	0	0	7	373	3															692	3	5	694
16:45 - 17:45					342	1	1	344	9	0	0	9	353	7															678	3	2	683
17:00 - 18:00					333	0	1	334	8	0	0	8	342	6															643	1	2	644
17:15 - 18:15					313	0	1	314	9	0	0	9	323	8															610	2	1	611
17:30 - 18:30					316	0	1	317	7	0	0	7	324	8															593	1	2	594
Period End																																

Location	Lindfield Avenue	Duration	6:30	-	09:30
	Russell Avenue			-	
	Lindfield Avenue		15:30	-	18:30
	-	Date	Tuesday 11 February 2025		
Suburb	LINDFIELD	Weather	-		

DATA SELECTION
Select Time: PEAK

TIME RANGE		
PEAK	-	AM
PEAK		
7:30	-	8:30

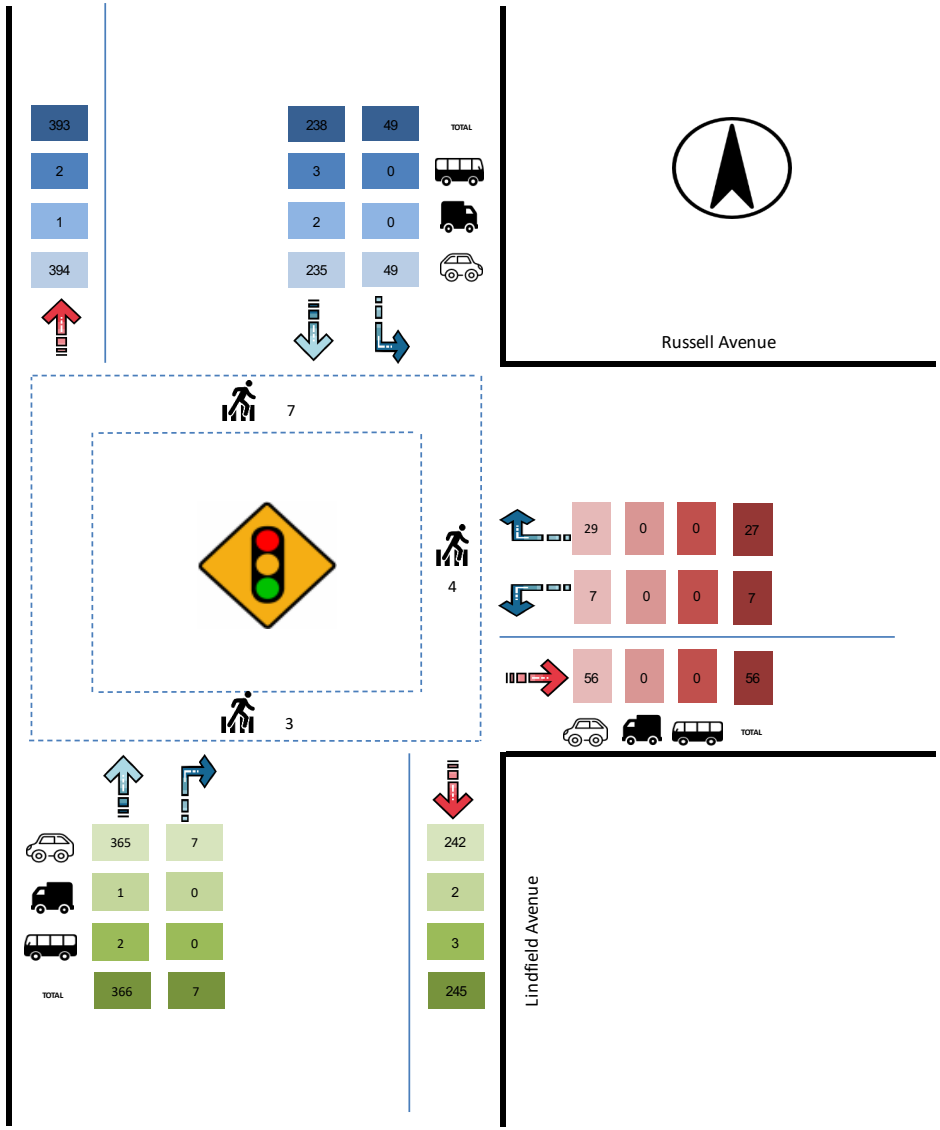


Traffic Information Specialist
ABN: 42 613 389 923
Email info@tistraffic.com.au

Location	Lindfield Avenue	Duration	6:30	-	09:30
	Russell Avenue			-	
	Lindfield Avenue		15:30	-	18:30
	-	Date	Tuesday 11 February 2025		
Suburb	LINDFIELD	Weather	-		

DATA SELECTION
Select Time: PEAK

TIME RANGE		
PEAK	-	PM
PEAK		
16:30	-	17:30



Traffic Information Specialist
ABN: 42 613 389 923
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Appendix B

MOVEMENT SUMMARY

Site: 101 [Lindfield Avenue / Russel Avenue (Site Folder: AM existing)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Lindfield Avenue															
2	T1	All MCs	276	3.4	276	3.4	0.077	0.1	LOS A	0.1	0.7	0.04	0.04	0.04	49.8
3	R2	All MCs	9	0.0	9	0.0	0.077	6.2	LOS A	0.1	0.7	0.08	0.09	0.08	48.2
Approach			285	3.3	285	3.3	0.077	0.3	NA	0.1	0.7	0.04	0.04	0.04	49.7
East: Russel Avenue															
4	L2	All MCs	4	0.0	4	0.0	0.074	5.1	LOS A	0.3	1.9	0.56	0.71	0.56	43.2
6	R2	All MCs	34	0.0	34	0.0	0.074	10.2	LOS A	0.3	1.9	0.56	0.71	0.56	43.1
Approach			38	0.0	38	0.0	0.074	9.7	LOS A	0.3	1.9	0.56	0.71	0.56	43.1
North: Lindfield Avenue															
7	L2	All MCs	44	0.0	44	0.0	0.093	4.6	LOS A	0.0	0.0	0.00	0.14	0.00	48.0
8	T1	All MCs	314	1.7	314	1.7	0.093	0.0	LOS A	0.0	0.0	0.00	0.06	0.00	49.6
Approach			358	1.5	358	1.5	0.093	0.6	NA	0.0	0.0	0.00	0.07	0.00	49.4
All Vehicles			681	2.2	681	2.2	0.093	1.0	NA	0.3	1.9	0.05	0.09	0.05	49.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: 101 [Trafalgar Avenue / Middle Harbour Road (Site Folder: AM existing)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Trafalgar Avenue															
1	L2	All MCs	21	5.0	21	5.0	0.086	4.6	LOS A	0.4	3.0	0.26	0.46	0.26	45.7
2	T1	All MCs	61	3.4	61	3.4	0.086	4.3	LOS A	0.4	3.0	0.26	0.46	0.26	46.0
3	R2	All MCs	2	0.0	2	0.0	0.086	7.3	LOS A	0.4	3.0	0.26	0.46	0.26	45.5
3u	U	All MCs	1	0.0	1	0.0	0.086	8.7	LOS A	0.4	3.0	0.26	0.46	0.26	45.5
Approach			85	3.7	85	3.7	0.086	4.5	LOS A	0.4	3.0	0.26	0.46	0.26	45.9
East: Middle Harbour Road															
4	L2	All MCs	22	4.8	22	4.8	0.099	5.4	LOS A	0.5	3.5	0.16	0.51	0.16	52.3
5	T1	All MCs	75	1.4	75	1.4	0.099	5.1	LOS A	0.5	3.5	0.16	0.51	0.16	53.0
6	R2	All MCs	9	0.0	9	0.0	0.099	8.0	LOS A	0.5	3.5	0.16	0.51	0.16	52.4
6u	U	All MCs	1	0.0	1	0.0	0.099	9.5	LOS A	0.5	3.5	0.16	0.51	0.16	52.4
Approach			107	2.0	107	2.0	0.099	5.5	LOS A	0.5	3.5	0.16	0.51	0.16	52.8
North: Trafalgar Avenue															
7	L2	All MCs	6	0.0	6	0.0	0.027	5.3	LOS A	0.1	0.9	0.21	0.51	0.21	52.4
8	T1	All MCs	17	6.3	17	6.3	0.027	5.3	LOS A	0.1	0.9	0.21	0.51	0.21	52.6
9	R2	All MCs	2	0.0	2	0.0	0.027	8.1	LOS A	0.1	0.9	0.21	0.51	0.21	52.1
9u	U	All MCs	1	0.0	1	0.0	0.027	9.7	LOS A	0.1	0.9	0.21	0.51	0.21	52.2
Approach			26	4.0	26	4.0	0.027	5.7	LOS A	0.1	0.9	0.21	0.51	0.21	52.5
West: Middle Harbour Road															
10	L2	All MCs	5	0.0	5	0.0	0.065	5.3	LOS A	0.3	2.3	0.25	0.53	0.25	52.3
11	T1	All MCs	40	7.9	40	7.9	0.065	5.4	LOS A	0.3	2.3	0.25	0.53	0.25	52.4
12	R2	All MCs	12	9.1	12	9.1	0.065	8.5	LOS A	0.3	2.3	0.25	0.53	0.25	51.5
12u	U	All MCs	2	0.0	2	0.0	0.065	9.9	LOS A	0.3	2.3	0.25	0.53	0.25	51.9
Approach			59	7.1	59	7.1	0.065	6.2	LOS A	0.3	2.3	0.25	0.53	0.25	52.2
All Vehicles			278	3.8	278	3.8	0.099	5.3	LOS A	0.5	3.5	0.22	0.50	0.22	50.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 101 [Lindfield Avenue / Russel Avenue (Site Folder: PM existing)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Lindfield Avenue															
2	T1	All MCs	387	0.8	387	0.8	0.103	0.1	LOS A	0.1	0.5	0.02	0.02	0.02	49.9
3	R2	All MCs	7	0.0	7	0.0	0.103	5.9	LOS A	0.1	0.5	0.04	0.05	0.04	48.4
Approach			395	0.8	395	0.8	0.103	0.2	NA	0.1	0.5	0.02	0.02	0.02	49.8
East: Russel Avenue															
4	L2	All MCs	7	0.0	7	0.0	0.075	4.9	LOS A	0.3	1.9	0.54	0.65	0.54	43.1
6	R2	All MCs	31	0.0	31	0.0	0.075	11.0	LOS A	0.3	1.9	0.54	0.65	0.54	43.0
Approach			38	0.0	38	0.0	0.075	9.8	LOS A	0.3	1.9	0.54	0.65	0.54	43.0
North: Lindfield Avenue															
7	L2	All MCs	52	0.0	52	0.0	0.080	4.6	LOS A	0.0	0.0	0.00	0.19	0.00	47.7
8	T1	All MCs	253	2.1	253	2.1	0.080	0.0	LOS A	0.0	0.0	0.00	0.07	0.00	49.5
Approach			304	1.7	304	1.7	0.080	0.8	NA	0.0	0.0	0.00	0.09	0.00	49.2
All Vehicles			737	1.1	737	1.1	0.103	0.9	NA	0.3	1.9	0.04	0.08	0.04	49.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: 101 [Trafalgar Avenue / Middle Harbour Road (Site Folder: PM existing)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Trafalgar Avenue															
1	L2	All MCs	18	0.0	18	0.0	0.074	4.6	LOS A	0.4	2.5	0.27	0.49	0.27	45.6
2	T1	All MCs	45	0.0	45	0.0	0.074	4.3	LOS A	0.4	2.5	0.27	0.49	0.27	45.9
3	R2	All MCs	11	0.0	11	0.0	0.074	7.4	LOS A	0.4	2.5	0.27	0.49	0.27	45.4
3u	U	All MCs	1	0.0	1	0.0	0.074	8.8	LOS A	0.4	2.5	0.27	0.49	0.27	45.3
Approach			75	0.0	75	0.0	0.074	4.9	LOS A	0.4	2.5	0.27	0.49	0.27	45.7
East: Middle Harbour Road															
4	L2	All MCs	18	0.0	18	0.0	0.098	5.3	LOS A	0.5	3.4	0.15	0.50	0.15	52.6
5	T1	All MCs	84	1.3	84	1.3	0.098	5.1	LOS A	0.5	3.4	0.15	0.50	0.15	53.1
6	R2	All MCs	5	0.0	5	0.0	0.098	8.0	LOS A	0.5	3.4	0.15	0.50	0.15	52.5
6u	U	All MCs	1	0.0	1	0.0	0.098	9.5	LOS A	0.5	3.4	0.15	0.50	0.15	52.5
Approach			108	1.0	108	1.0	0.098	5.3	LOS A	0.5	3.4	0.15	0.50	0.15	53.0
North: Trafalgar Avenue															
7	L2	All MCs	7	0.0	7	0.0	0.026	5.4	LOS A	0.1	0.8	0.22	0.53	0.22	52.3
8	T1	All MCs	13	0.0	13	0.0	0.026	5.3	LOS A	0.1	0.8	0.22	0.53	0.22	52.6
9	R2	All MCs	4	0.0	4	0.0	0.026	8.2	LOS A	0.1	0.8	0.22	0.53	0.22	52.0
9u	U	All MCs	1	0.0	1	0.0	0.026	9.7	LOS A	0.1	0.8	0.22	0.53	0.22	52.0
Approach			25	0.0	25	0.0	0.026	6.0	LOS A	0.1	0.8	0.22	0.53	0.22	52.4
West: Middle Harbour Road															
10	L2	All MCs	3	0.0	3	0.0	0.061	5.2	LOS A	0.3	2.1	0.23	0.53	0.23	52.4
11	T1	All MCs	42	0.0	42	0.0	0.061	5.2	LOS A	0.3	2.1	0.23	0.53	0.23	52.7
12	R2	All MCs	8	0.0	8	0.0	0.061	8.2	LOS A	0.3	2.1	0.23	0.53	0.23	52.0
12u	U	All MCs	4	0.0	4	0.0	0.061	9.8	LOS A	0.3	2.1	0.23	0.53	0.23	52.0
Approach			58	0.0	58	0.0	0.061	6.0	LOS A	0.3	2.1	0.23	0.53	0.23	52.5
All Vehicles			266	0.4	266	0.4	0.098	5.4	LOS A	0.5	3.4	0.21	0.50	0.21	50.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 101 [Lindfield Avenue / Russel Avenue - Copy (Site Folder: AM proposed)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Lindfield Avenue															
2	T1	All MCs	276	3.4	276	3.4	0.078	0.1	LOS A	0.1	0.8	0.04	0.05	0.04	49.8
3	R2	All MCs	11	0.0	11	0.0	0.078	6.3	LOS A	0.1	0.8	0.09	0.10	0.09	48.6
Approach			286	3.3	286	3.3	0.078	0.3	NA	0.1	0.8	0.04	0.05	0.04	49.7
East: Russel Avenue															
4	L2	All MCs	6	0.0	6	0.0	0.107	5.4	LOS A	0.4	2.8	0.57	0.73	0.57	45.1
6	R2	All MCs	48	0.0	48	0.0	0.107	10.7	LOS A	0.4	2.8	0.57	0.73	0.57	45.0
Approach			55	0.0	55	0.0	0.107	10.1	LOS A	0.4	2.8	0.57	0.73	0.57	45.0
North: Lindfield Avenue															
7	L2	All MCs	47	0.0	47	0.0	0.094	4.6	LOS A	0.0	0.0	0.00	0.15	0.00	48.1
8	T1	All MCs	314	1.7	314	1.7	0.094	0.0	LOS A	0.0	0.0	0.00	0.06	0.00	49.7
Approach			361	1.5	361	1.5	0.094	0.6	NA	0.0	0.0	0.00	0.07	0.00	49.5
All Vehicles			702	2.1	702	2.1	0.107	1.3	NA	0.4	2.8	0.06	0.11	0.06	49.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: 101 [Trafalgar Avenue / Middle Harbour Road - Copy (Site Folder: AM proposed)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Trafalgar Avenue															
1	L2	All MCs	21	5.0	21	5.0	0.088	4.6	LOS A	0.4	3.1	0.27	0.46	0.27	45.8
2	T1	All MCs	63	3.3	63	3.3	0.088	4.3	LOS A	0.4	3.1	0.27	0.46	0.27	46.2
3	R2	All MCs	2	0.0	2	0.0	0.088	7.3	LOS A	0.4	3.1	0.27	0.46	0.27	45.6
3u	U	All MCs	1	0.0	1	0.0	0.088	8.7	LOS A	0.4	3.1	0.27	0.46	0.27	45.6
Approach			87	3.6	87	3.6	0.088	4.5	LOS A	0.4	3.1	0.27	0.46	0.27	46.1
East: Middle Harbour Road															
4	L2	All MCs	22	4.8	22	4.8	0.102	5.5	LOS A	0.5	3.6	0.19	0.51	0.19	52.2
5	T1	All MCs	75	1.4	75	1.4	0.102	5.2	LOS A	0.5	3.6	0.19	0.51	0.19	52.9
6	R2	All MCs	9	0.0	9	0.0	0.102	8.1	LOS A	0.5	3.6	0.19	0.51	0.19	52.3
6u	U	All MCs	1	0.0	1	0.0	0.102	9.6	LOS A	0.5	3.6	0.19	0.51	0.19	52.3
Approach			107	2.0	107	2.0	0.102	5.6	LOS A	0.5	3.6	0.19	0.51	0.19	52.7
North: Trafalgar Avenue															
7	L2	All MCs	12	0.0	12	0.0	0.044	5.3	LOS A	0.2	1.5	0.21	0.51	0.21	52.5
8	T1	All MCs	27	3.8	27	3.8	0.044	5.3	LOS A	0.2	1.5	0.21	0.51	0.21	52.7
9	R2	All MCs	3	0.0	3	0.0	0.044	8.1	LOS A	0.2	1.5	0.21	0.51	0.21	52.2
9u	U	All MCs	1	0.0	1	0.0	0.044	9.7	LOS A	0.2	1.5	0.21	0.51	0.21	52.2
Approach			43	2.4	43	2.4	0.044	5.6	LOS A	0.2	1.5	0.21	0.51	0.21	52.6
West: Middle Harbour Road															
10	L2	All MCs	6	0.0	6	0.0	0.066	5.3	LOS A	0.3	2.4	0.26	0.53	0.26	52.3
11	T1	All MCs	40	7.9	40	7.9	0.066	5.4	LOS A	0.3	2.4	0.26	0.53	0.26	52.4
12	R2	All MCs	12	9.1	12	9.1	0.066	8.5	LOS A	0.3	2.4	0.26	0.53	0.26	51.5
12u	U	All MCs	2	0.0	2	0.0	0.066	9.9	LOS A	0.3	2.4	0.26	0.53	0.26	51.9
Approach			60	7.0	60	7.0	0.066	6.2	LOS A	0.3	2.4	0.26	0.53	0.26	52.2
All Vehicles			298	3.5	298	3.5	0.102	5.4	LOS A	0.5	3.6	0.23	0.50	0.23	50.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 101 [Lindfield Avenue / Russel Avenue - Copy (Site Folder: PM propsoed)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Lindfield Avenue															
2	T1	All MCs	387	0.8	387	0.8	0.104	0.1	LOS A	0.1	0.7	0.03	0.03	0.03	49.9
3	R2	All MCs	9	0.0	9	0.0	0.104	6.2	LOS A	0.1	0.7	0.06	0.06	0.06	49.3
Approach			397	0.8	397	0.8	0.104	0.2	NA	0.1	0.7	0.03	0.03	0.03	49.8
East: Russel Avenue															
4	L2	All MCs	8	0.0	8	0.0	0.084	5.0	LOS A	0.3	2.1	0.54	0.65	0.54	43.8
6	R2	All MCs	34	0.0	34	0.0	0.084	11.3	LOS A	0.3	2.1	0.54	0.65	0.54	43.6
Approach			42	0.0	42	0.0	0.084	10.0	LOS A	0.3	2.1	0.54	0.65	0.54	43.6
North: Lindfield Avenue															
7	L2	All MCs	65	0.0	65	0.0	0.083	4.7	LOS A	0.0	0.0	0.00	0.24	0.00	48.1
8	T1	All MCs	253	2.1	253	2.1	0.083	0.0	LOS A	0.0	0.0	0.00	0.09	0.00	49.7
Approach			318	1.7	318	1.7	0.083	1.0	NA	0.0	0.0	0.00	0.12	0.00	49.4
All Vehicles			757	1.1	757	1.1	0.104	1.1	NA	0.3	2.1	0.04	0.10	0.04	49.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: 101 [Trafalgar Avenue / Middle Harbour Road - Copy (Site Folder: PM propsoed)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

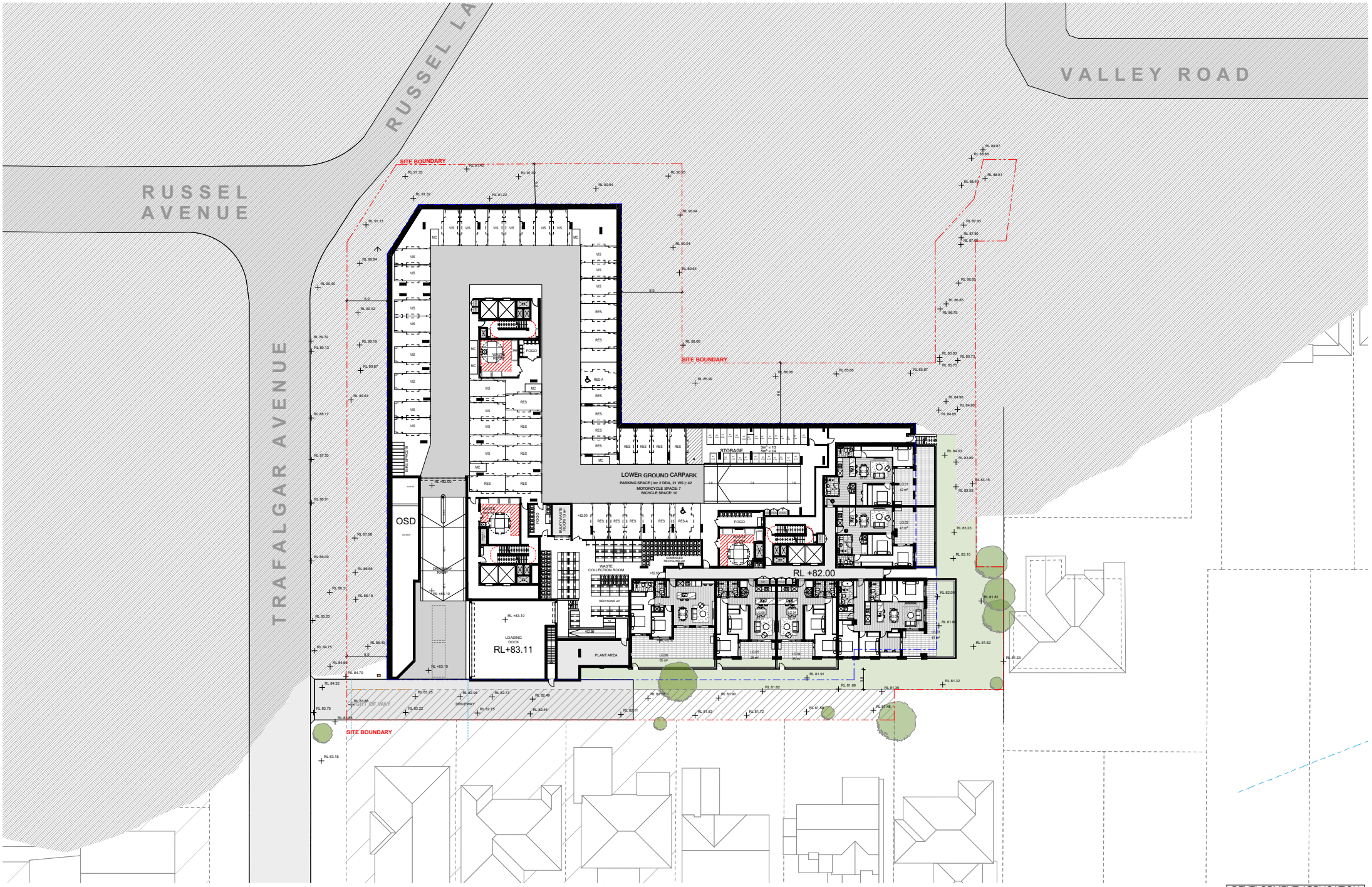
New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Trafalgar Avenue															
1	L2	All MCs	18	0.0	18	0.0	0.089	4.6	LOS A	0.4	3.0	0.28	0.49	0.28	46.2
2	T1	All MCs	60	0.0	60	0.0	0.089	4.6	LOS A	0.4	3.0	0.28	0.49	0.28	47.4
3	R2	All MCs	11	0.0	11	0.0	0.089	7.4	LOS A	0.4	3.0	0.28	0.49	0.28	45.9
3u	U	All MCs	1	0.0	1	0.0	0.089	8.8	LOS A	0.4	3.0	0.28	0.49	0.28	45.9
Approach			89	0.0	89	0.0	0.089	5.0	LOS A	0.4	3.0	0.28	0.49	0.28	46.9
East: Middle Harbour Road															
4	L2	All MCs	18	0.0	18	0.0	0.099	5.3	LOS A	0.5	3.5	0.15	0.50	0.15	52.6
5	T1	All MCs	84	1.3	84	1.3	0.099	5.1	LOS A	0.5	3.5	0.15	0.50	0.15	53.1
6	R2	All MCs	6	0.0	6	0.0	0.099	8.0	LOS A	0.5	3.5	0.15	0.50	0.15	52.4
6u	U	All MCs	1	0.0	1	0.0	0.099	9.5	LOS A	0.5	3.5	0.15	0.50	0.15	52.4
Approach			109	1.0	109	1.0	0.099	5.3	LOS A	0.5	3.5	0.15	0.50	0.15	53.0
North: Trafalgar Avenue															
7	L2	All MCs	8	0.0	8	0.0	0.029	5.4	LOS A	0.1	0.9	0.22	0.53	0.22	52.3
8	T1	All MCs	15	0.0	15	0.0	0.029	5.3	LOS A	0.1	0.9	0.22	0.53	0.22	52.7
9	R2	All MCs	4	0.0	4	0.0	0.029	8.2	LOS A	0.1	0.9	0.22	0.53	0.22	52.0
9u	U	All MCs	1	0.0	1	0.0	0.029	9.8	LOS A	0.1	0.9	0.22	0.53	0.22	52.0
Approach			28	0.0	28	0.0	0.029	5.9	LOS A	0.1	0.9	0.22	0.53	0.22	52.4
West: Middle Harbour Road															
10	L2	All MCs	4	0.0	4	0.0	0.063	5.3	LOS A	0.3	2.1	0.26	0.53	0.26	52.3
11	T1	All MCs	42	0.0	42	0.0	0.063	5.3	LOS A	0.3	2.1	0.26	0.53	0.26	52.6
12	R2	All MCs	8	0.0	8	0.0	0.063	8.4	LOS A	0.3	2.1	0.26	0.53	0.26	51.9
12u	U	All MCs	4	0.0	4	0.0	0.063	9.9	LOS A	0.3	2.1	0.26	0.53	0.26	51.9
Approach			59	0.0	59	0.0	0.063	6.1	LOS A	0.3	2.1	0.26	0.53	0.26	52.5
All Vehicles			286	0.4	286	0.4	0.099	5.4	LOS A	0.5	3.5	0.22	0.51	0.22	50.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Appendix C



DEVELOPMENT APPLICATION

Rev	Date	By	Chk	Description
A	17/04/2025	DT	GK	Issue for SSDA Submission
B	6/11/2025	JW, DT	DF	Rfs Issue

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- All works to be in accordance with authority & statutory approvals.
- Refer to site survey for all information relating to existing site conditions.
- All Boundary information to be confirmed by registered surveyor before commencing any work.
- Refer to Arborist Report and Landscape Documentation for all information relating to trees and their retention/removal, and all landscape works.
- Drawings to be read in conjunction with all Specifications and Schedules; all specialist consultant documentation; BASIX, NatHERS, Section J Certificates.
- Minor changes to building form & configuration may be required after Development Consent.
- Do not scale from drawing; figured dimensions only to be used.
- Building Contractor to verify all dimensions before commencing work.

0 1.25 2.5 5 13m
Scale 1:250 @ A1

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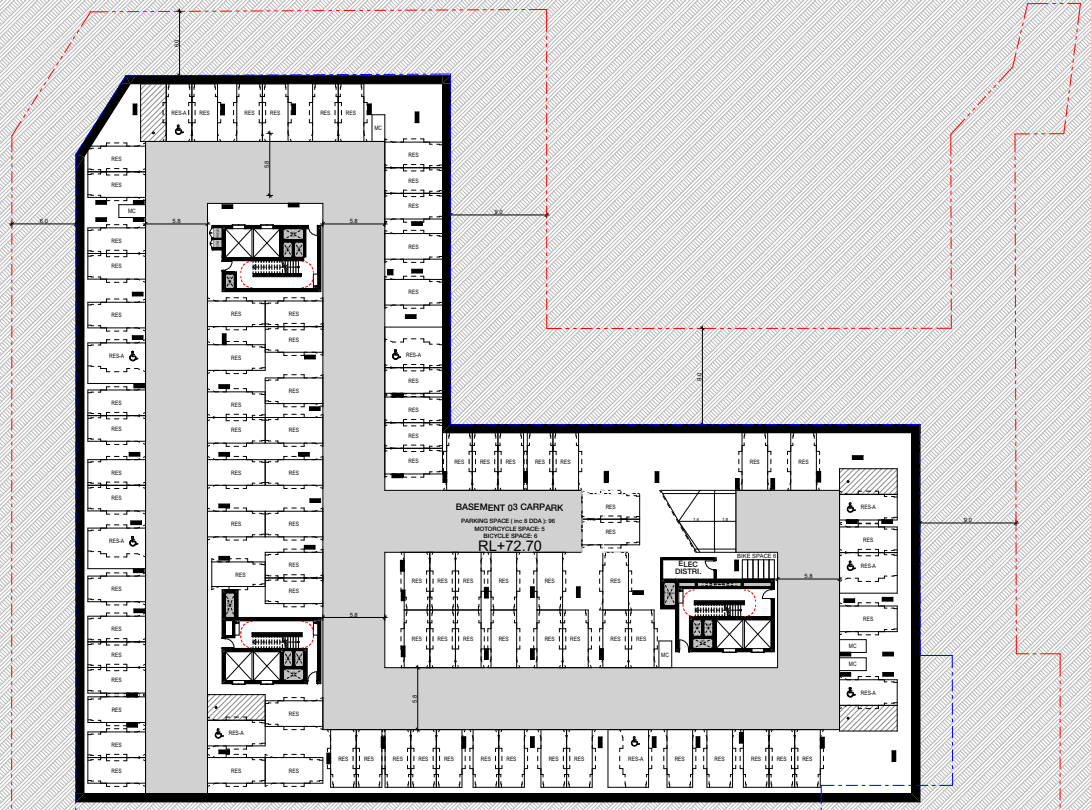
Project Name	Trafalgar Avenue
Project Number	13688
Project Address	59-63 Trafalgar Av & 1A-1B Valley Road Lindfield NSW 2070
Country	Dharug

Drawing Name
Lower Ground Floor

Drawing Scale 1:250, 1:1.25 @ A1
Drawing No. DA203
Revision B



DEVELOPMENT APPLICATION

Rev	Date	By	Chk	Description
A	6/11/2025	JAI, DT	DF	Rfa Issue

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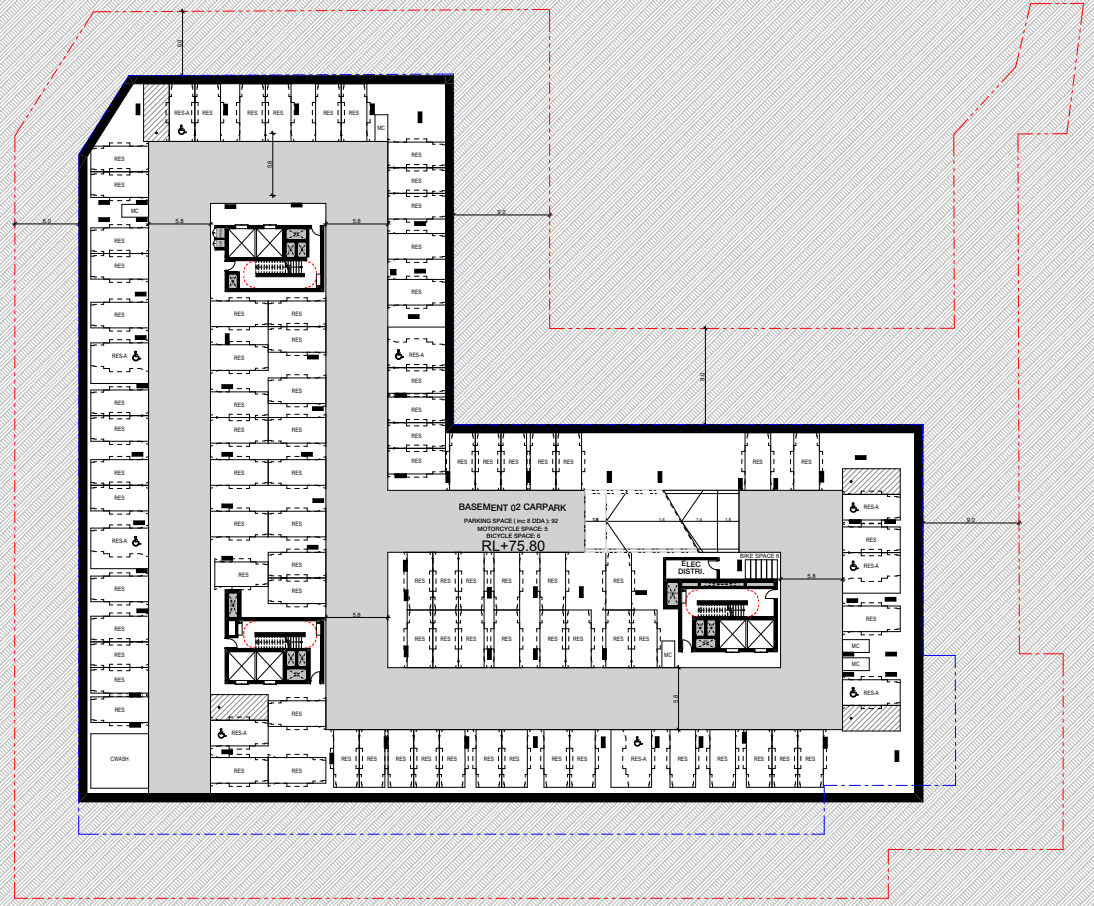
Project Name	Trafalgar Avenue
Project Number	13688
Project Address	59-63 Trafalgar Av & 1A-1B Valley Road Lindfield NSW 2070
Country	Dharug

Drawing Name
Basement 3

Drawing Scale 1:250 @ A1

Drawing No.
DA200

Revision
A



DEVELOPMENT APPLICATION

Rev	Date	By	Chk	Description
A	17/04/2025	DT	GK	Issue for SSDA Submission
B	6/11/2025	JW, DT	DF	Rfs Issue

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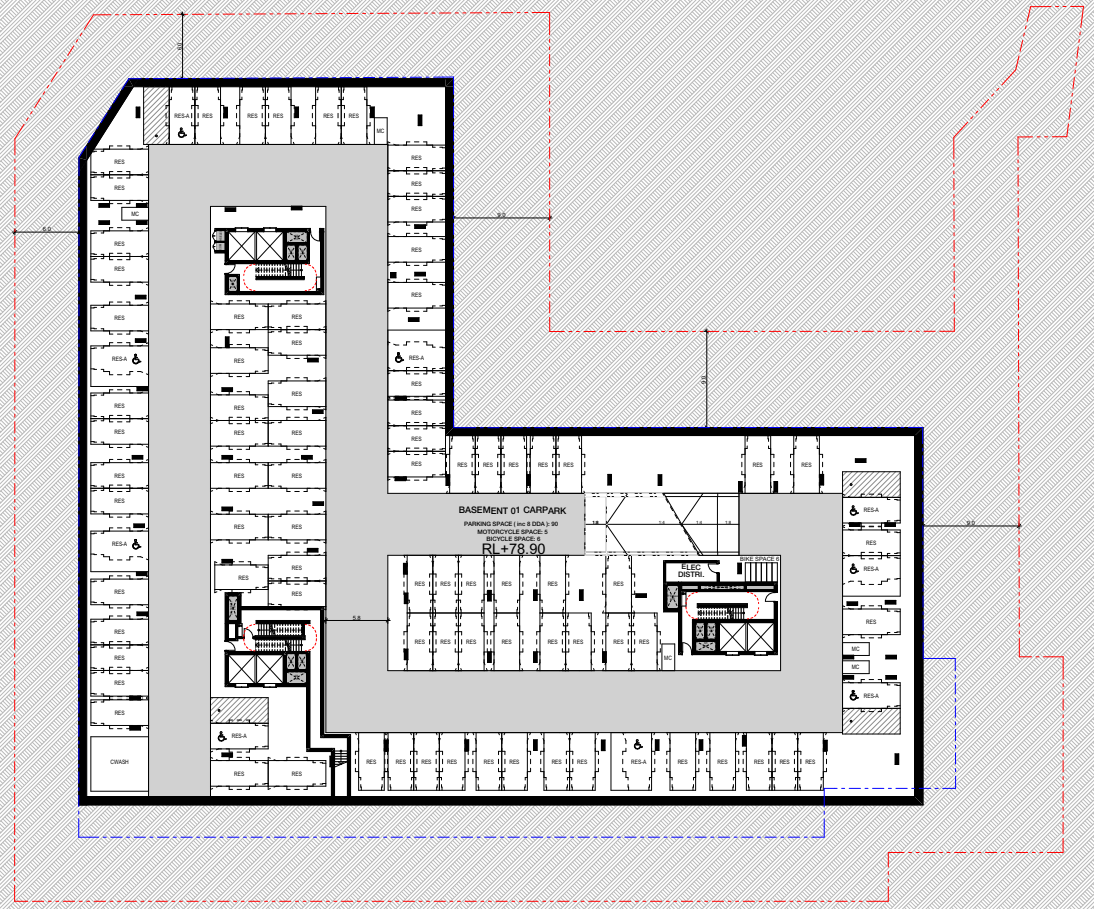
Project Name	Trafalgar Avenue
Project Number	13688
Project Address	59-63 Trafalgar Av & 1A-1B Valley Road Lindfield NSW 2070
Country	Dharug

Drawing Name
Basement 2

Drawing Scale 1:250 @ A1

Drawing No. DA201

Revision B



DEVELOPMENT APPLICATION

Rev	Date	By	Chk	Description
A	17/04/2025	DT	GK	Issue for SSDA Submission
B	6/11/2025	JW, DT	DF	Rfs Issue

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Project Name	Trafalgar Avenue
Project Number	13688
Project Address	59-63 Trafalgar Av & 1A-1B Valley Road Lindfield NSW 2070
Country	Dharug

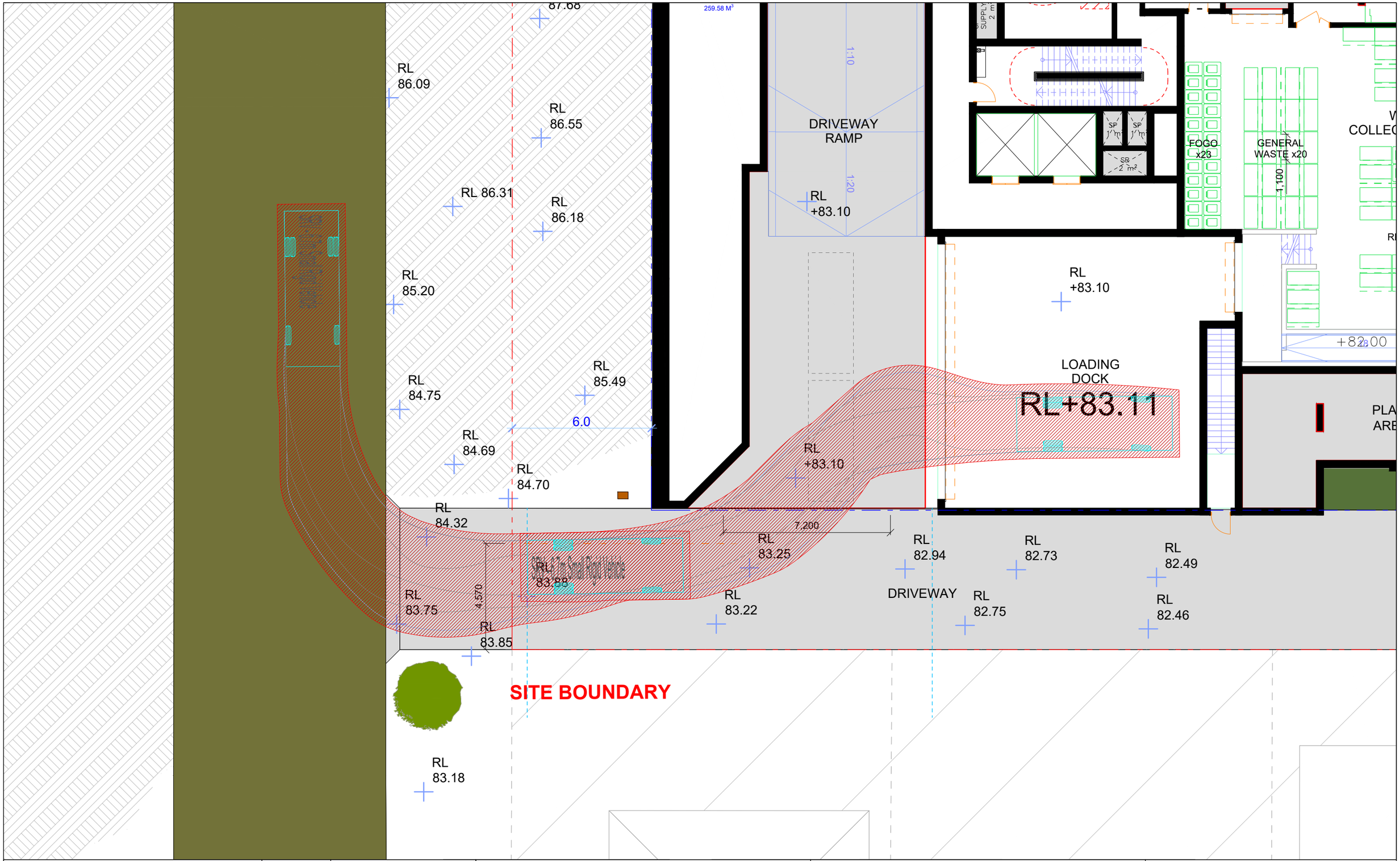
Drawing Name
Basement 1

Drawing Scale 1:250 @ A1

Drawing No. DA202

Revision B

Appendix D



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					Date 29/04/2026
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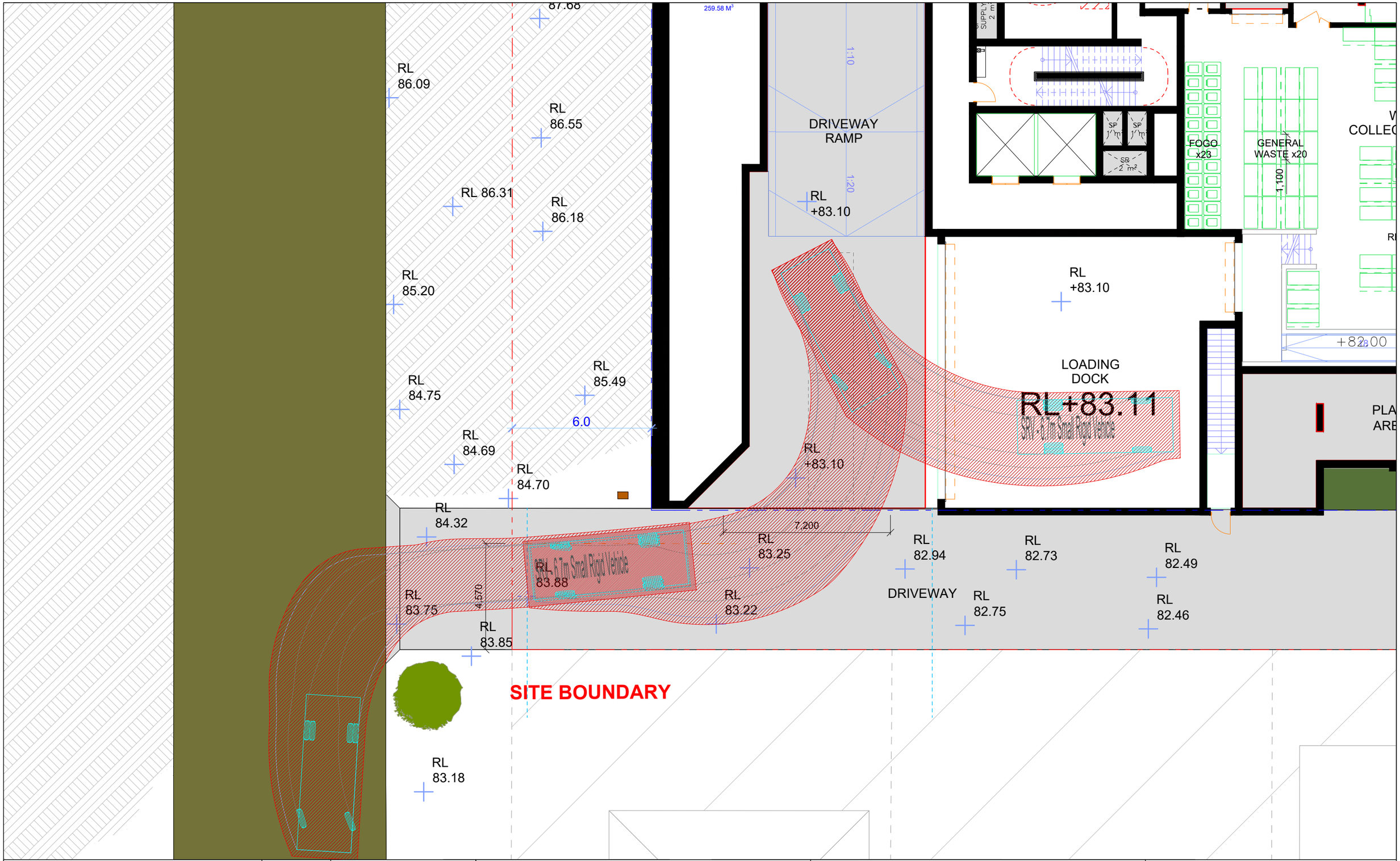

Drawing Prepared By	North	Swept Path Key	Project	Drawing Title	Drawing No. / Revision No.
pdc CONSULTANTS	N	Vehicle Wheel Path Vehicle Body Envelope 300mm Vehicle Clearance	59--63 Trafalgar Avenue & 1A--1B Valley Road, Lindfield	Lower Ground Floor 6.7m SRV Exit the loading dock	002 / -
			Project No 24.095	Sheet Status NOT FOR CONSTRUCTION	Drawn By WJ
					Date 29/04/2026
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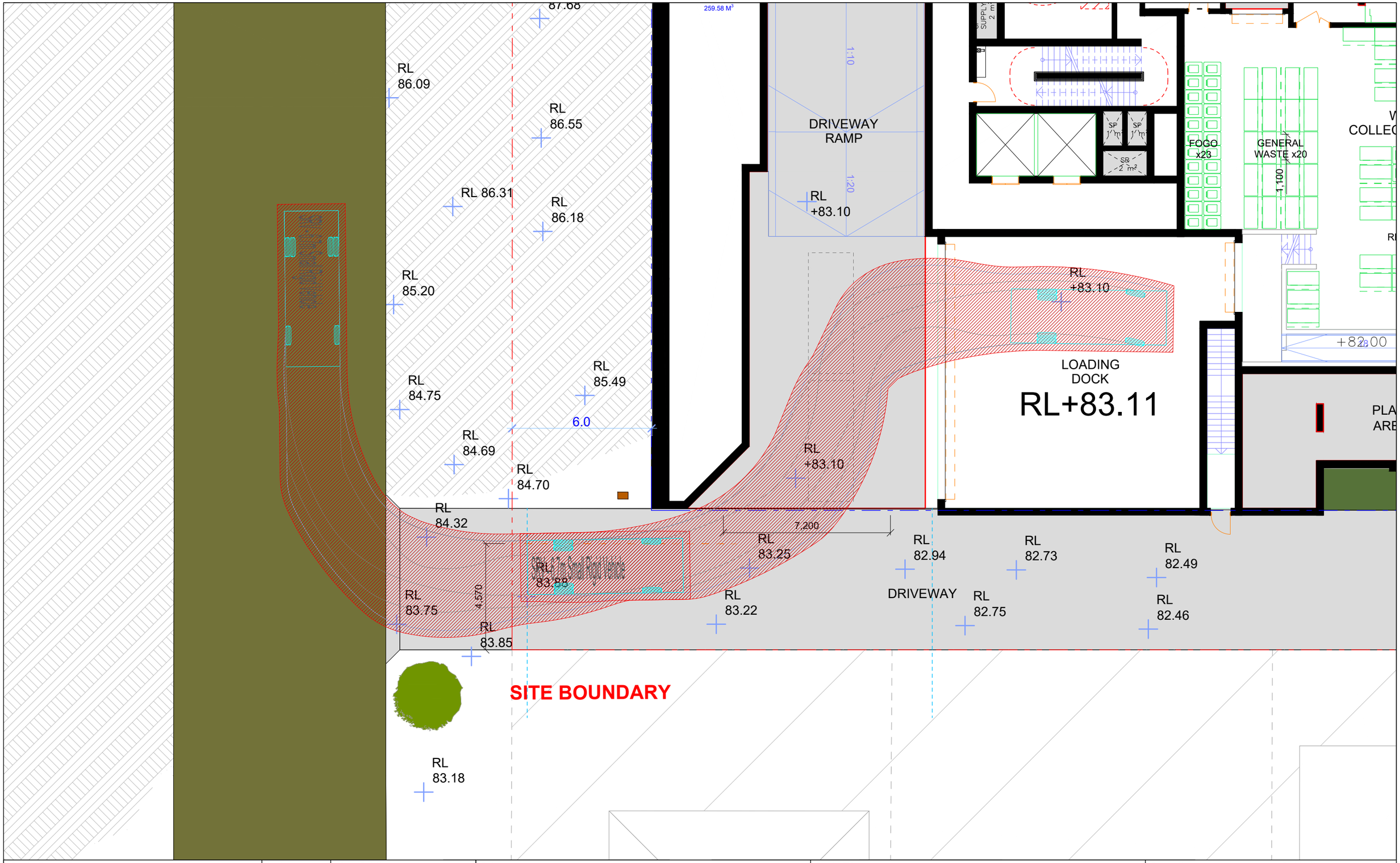

Drawing Prepared By	North	Swept Path Key	Project	Drawing Title	Drawing No. / Revision No.
pdc CONSULTANTS	N	Vehicle Wheel Path Vehicle Body Envelope 300mm Vehicle Clearance	59--63 Trafalgar Avenue & 1A--1B Valley Road, Lindfield	Lower Ground Floor 6.7m SRV Enter the loading dock	003 / -
			Project No 24.095	Sheet Status NOT FOR CONSTRUCTION	Drawn By WJ / Date 29/04/2026
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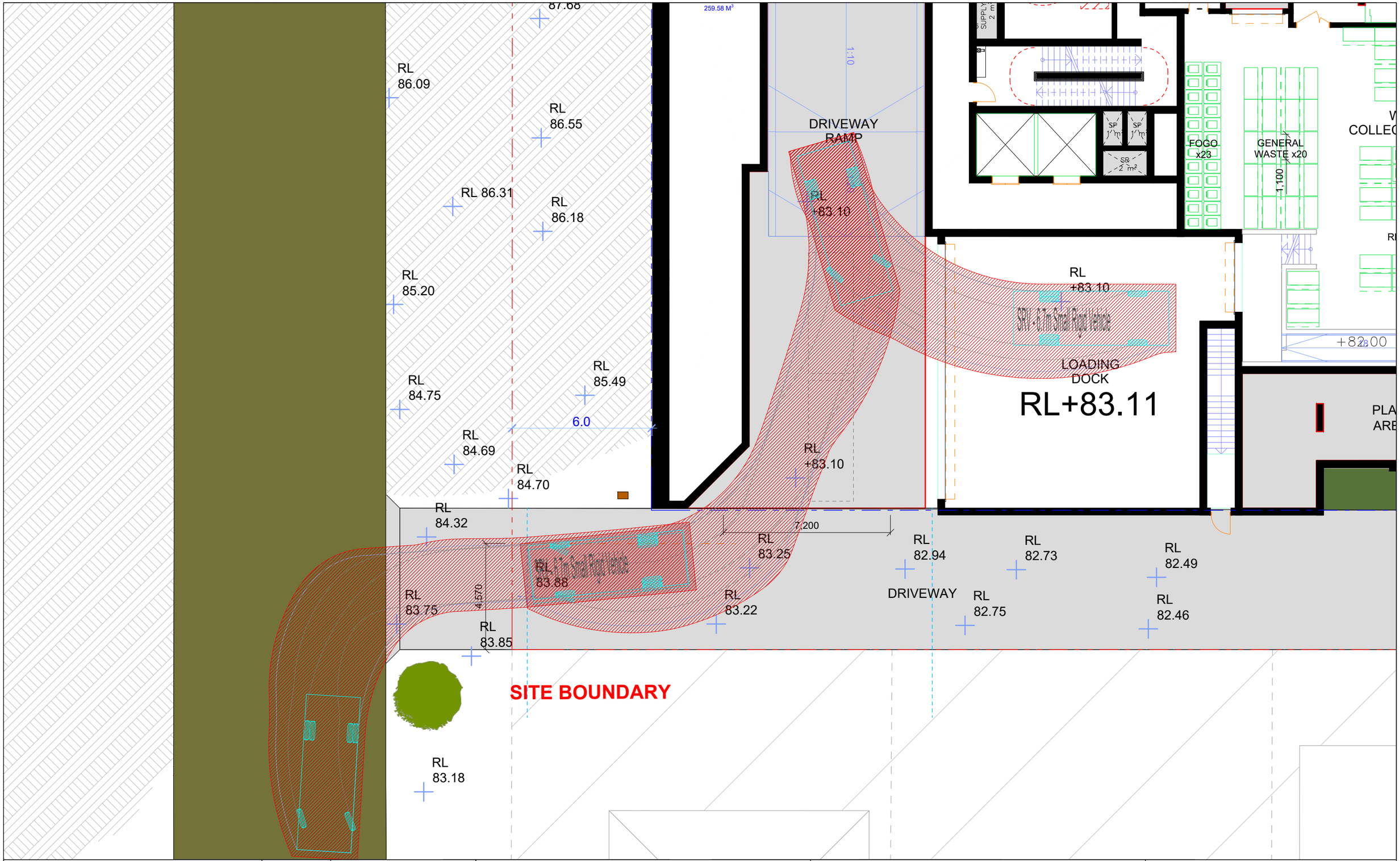

Drawing Prepared By	North	Swept Path Key	Project	Drawing Title	Drawing No. / Revision No.
pdc CONSULTANTS	N	Vehicle Wheel Path Vehicle Body Envelope 300mm Vehicle Clearance	59--63 Trafalgar Avenue & 1A--1B Valley Road, Lindfield	Lower Ground Floor 6.7m SRV Exit the loading dock	004 / - Drawn By: WJ Date: 29/04/2026
			Project No 24.095	Sheet Status NOT FOR CONSTRUCTION	Scale 1:150 @ A3 0m 1 2 3 4 5 6

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