Genesis Traffic

Transport Impact Assessment

105 Forest Road & 1A Hill Street, Hurstville

Proposed Mixed-Use Development

25139

Prepared for

Mosman Constructions NSW

25 September 2025

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1 Introduction

1.1 Background

This Traffic Impact Assessment (TIA) has been prepared by Gensis Traffic to accompany a State Significant Development Application which seeks development consent for a Proposed Mixed-Use Development at 105 Forest Road & 1A Hill Street, Hurstville (Figure 1-1).

Figure 1-1 Site Context

Source: Mecone (Modified by Genesis Traffic)

This report addresses the following item required by the Secretary's Environmental Assessment Requirements (SEARs).

9. Transport

- *Provide a Transport Impact Assessment (TIA) in accordance with the processes and methodology recommended in the Guide to Transport Impact Assessment (GITA) published by TfNSW.*
- *If the construction of the development would cause interruptions to regular pedestrian and transport routes (including public transport, active transport or general traffic), a preliminary Construction Traffic (or Transport) Management Plan (CTMP) should be prepared as part of the TIA to mitigate any such impacts*

1.2 Scope of Assessment

The assessment considers a range of traffic, transport, and parking-related matters in conjunction with the TfNSW Guide to Traffic Generating Development and the SEARs criteria. The report is structured in the following manner:

Section 1 Introduction

Section 2 Proposal Description

Section 3 Existing Site & Traffic Circumstances

Section 4 Parking Assessment

Section 5 Access & Circulation Design Assessment

Section 6 Traffic Assessment

Section 7 Preliminary Construction Traffic Management Planning

Section 8 TfNSW Consultation

Section 9 Conclusion

1.3 Reference Documents

Reference has been made to the following documents when preparing this report:

- Australian Standard Part 1: Off-street Car Parking (AS2890.1:2004)
- Australian Standard Part 2: Off-street Commercial Vehicle Facilities (AS2890.2:2018)
- Australian Standard Part 3: Bicycle Parking (AS2890.3:2015)
- Australian Standard Part 6: Off-street Parking for People with Disabilities (AS2890.6:2022)
- Development Control Plan (Georges River Council)
- Guide to Transport Impact Assessment, NSW Government, 2024
- State Environmental Planning Policy (Housing) 2021, NSW
- Traffic and Parking Impact Assessment for subject site (Report No.: 3/17), Ref No. 1122/2/17, Lyle Marshall & Partners, March 2017

2 Development Scheme

2.1 Approved Development

An existing consent approved on 7 August 2017 (MOD2017/0033) applies to the site. The consent was granted for a mixed-use commercial/residential development.

The approved scheme is summarised below:

- A total of 126 apartments in the following composition:
  - 1 x studio apartment
  - 38 x one-bedroom apartments
  - 62 x two-bedroom apartments
  - 25 x three-bedroom apartments
- Non-residential land uses (retail and commercial) with a total floor space of 815m^2 GFA
- 196 on-site car parking spaces, in the following composition:
  - 380 x residents
  - 41 x visitors
  - 58 x commercial / retail owner / tenant
  - 2 x car share
  - 5 x accessible spaces
- 3 loading bays in the following composition:
  - 2 bays for 8.8m Medium Rigid Vehicle (MRV)
  - 1 bay for 6.4m Small Rigid Vehicle (SRV)

Vehicle access to the carpark will be provided via Hill Street.

Details of the approved scheme are provided in **Attachment 1**.

2.2 Proposed Development

The proposal seeks approval for a revised development outcome involving additional residential apartments.

Table 2-1 below identifies of the revised composition.

Table 2-1 Development Yield

Component	Details
Residential	60 x one-bed apartments 95 x two-bed apartments 32 x three-bed apartments **Total: 187 x apartments**
Commercial/Retail	882.9m^2 GFA
Parking	273 x car spaces 3 x loading bays
Access	Vehicular access to basement car park via Hill Street (as per approved)

Details of the proposal are indicated in the architectural plans prepared by Design Workshop Australia which accompany the submission and are reproduced in part in **Attachment 2**.

3 Existing Conditions

3.1 Site and Surrounding Context

The development site (Figure 3-1) is legally known as Lot A and B in DP421265, located at 105 Forest Road & 1A Hill Street, Hurstville. The site is an irregular shaped allotment with a site area of 2,634m² and has street frontages to Forest Road and Hill Street.

Figure 3-1 Site Aerial

Source: Metromap and Google Map (Modified by Genesis Traffic)

The site is currently under construction, with vehicle access points located along Forest Road and Hill Street.

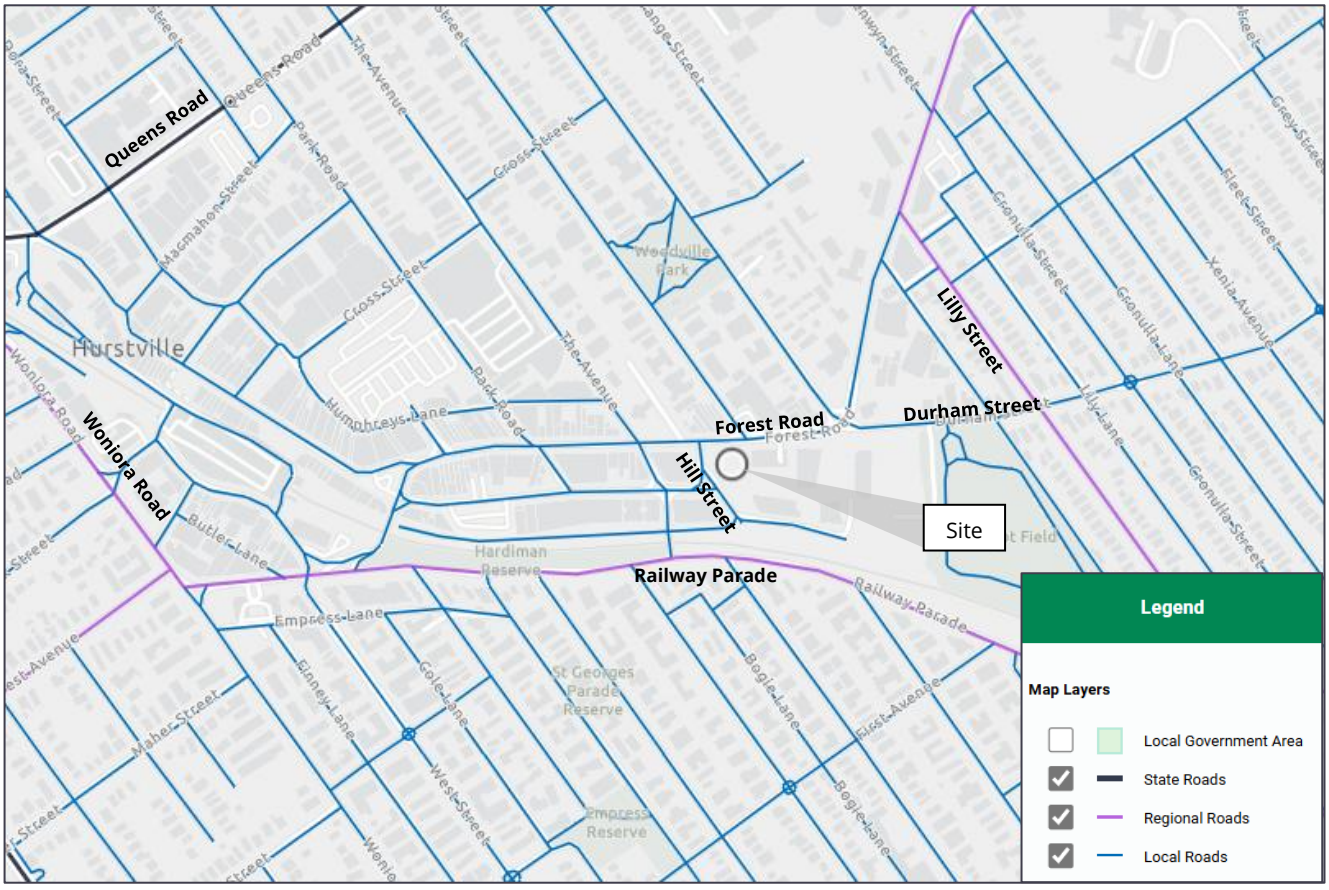
The adjoining and surrounding land uses include:

- Hurstville Train Station to the west and Allawah Train Station to the east
- Meade Park to the south
- Residential development and retail premises along Forest Street

3.2 Road Network

The existing road network serving the site area (Figure 3-2) are detailed in Table 3-1:

Figure 3-2 Road Network



Source: TfNSW (modified by Genesis Traffic)

Table 3-1 Surrounding Road Network

Road Name	Description
Forest Road	· Local Road · Speed limit 60 km/h · 2 lanes in each direction · No Stopping restriction along both sides of the street
Hill Street	· Local Road · 1 lane in each direction · Unrestricted on-street parking along both sides of the street
Railway Parade	· Regional Road · Speed limit 50 km/h

	· 2 lanes in each direction · Unrestricted on-street parking along both sides of the street
Lilly Street	· Regional Road · Speed limit 60 km/h · 1 lane in each direction · Unrestricted on-street parking along both sides of the street
Woniora Road	· Regional Road · Speed limit 60 km/h · 1 lane in each direction · Unrestricted on-street parking along both sides of the street
Queens Road	· State Road · Speed limit 60 km/h · 2 lanes in each direction · Clearway restriction between 6am – 10am Monday to Friday along north side of the street · Clearway restriction between 3pm – 7pm Monday to Friday along south side of the street
Durham Street	· Local Road · Speed limit 50 km/h · 2 lanes in each direction · Mix of No Stopping restrictions and Time Restricted (1P) on-street parking along both sides of the street

3.3 Traffic Controls

The traffic controls on the road system in the vicinity of the site comprise (Table 3-2):

Table 3-2 Surrounding Traffic Controls

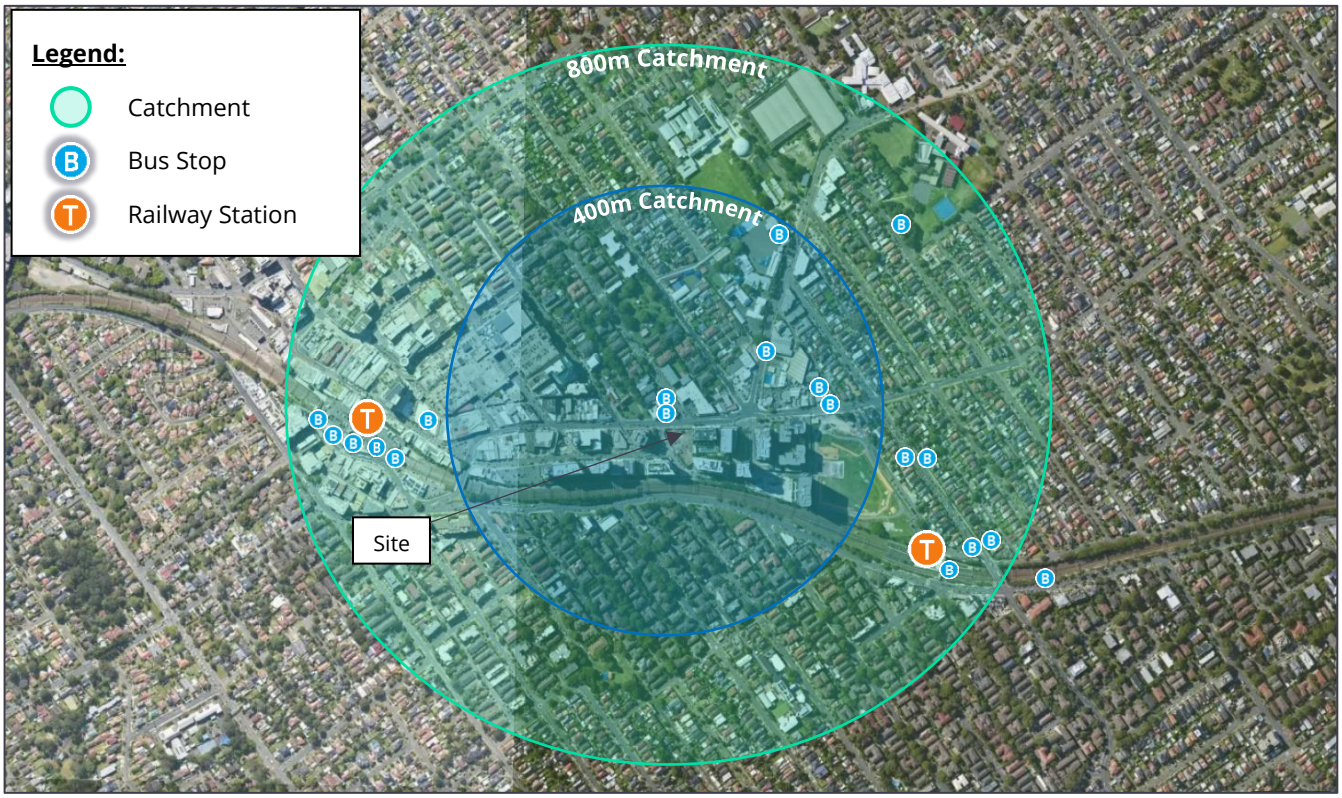
Traffic Control	Location
Traffic Signal	· Intersections of: o Forest Road and Durham Street o Forest Road and Lily Street o Lily Street and Durham Street o Woniora Road and Railway Parade
Give-way / Stop Control	· Intersections of: o Hill Street and Treacy Street

No Right Turn	· From Hill Street to Forest Road
School Zone	· Along parts of o Forest Road o Durham Street o Lily Street
Pedestrian Crossing	· Along parts of o Hill Street o Railway Parade

3.4 Existing Public Transport Infrastructure

The NSW Guidelines to Walking & Cycling (2004) nominates a comfortable walking distance as being between 400m and 800m. Accordingly, the available public transport services within 400m and 800m catchments are shown in Figure 3-3.

Figure 3-3 Local Public Transport



Source: Metromap (Modified by Genesis Traffic)

3.4.1 Train Services

Hurstville Railway Station is located approximately 550m of the site (Figure 3-3) and provides access to the Sydney Central Business District (CBD) via the Sydney Train/Metro rail network. Table 3-3 documents the available train service information.

Table 3-3 Train Service Provision

Train Line	Route	Peak Frequency (Trips per hour)	
		AM Peak	PM Peak
T4	Waterfall or Cronulla to Bondi Junction	11	6
Eastern Suburbs & Illawarra Line	Bondi Junction to Waterfall or Cronulla	13	4

3.4.2 Bus Services

The subject site is conveniently situated within walking distance of high-frequency bus services operating in the locality. The nearest bus stop is located along the site frontage on Forest Road. The locations of local bus stops are identified in Figure 3-3 and the available bus services are outlined in Table 3-4.

Table 3-4 Bus Services Provision

Bus Line	Bus Route	Peak Frequency
410	Macquarie Park to Hurstville	7 trips per hour
450	Strathfield to Hurstville	5 trips per hour
452	Beverly Hills to Rockdale	4 trips per hour
455	Kingsgrove to St George Hospital	3 trips per hour
490	Hurstville to Drummoyne	3 trips per hour
491	Hurstville to Five Dock	3 trips per hour
940	Bankstown to Hurstville via Riverwood	3 trips per hour
941	Bankstown to Hurstville via Greenacre	2 trips per hour
943	Lugarno to Hurstville	3 trips per hour
945	Hurstville to Bankstown via Mortdale	4 trips per hour
947	Kogarah to Hurstville via Dolls Point	3 trips per hour
953	Hurstville to Connells Point (Loop Service)	5 trips per hour
958	Kogarah to Hurstville via Carss Park	4 trips per hour

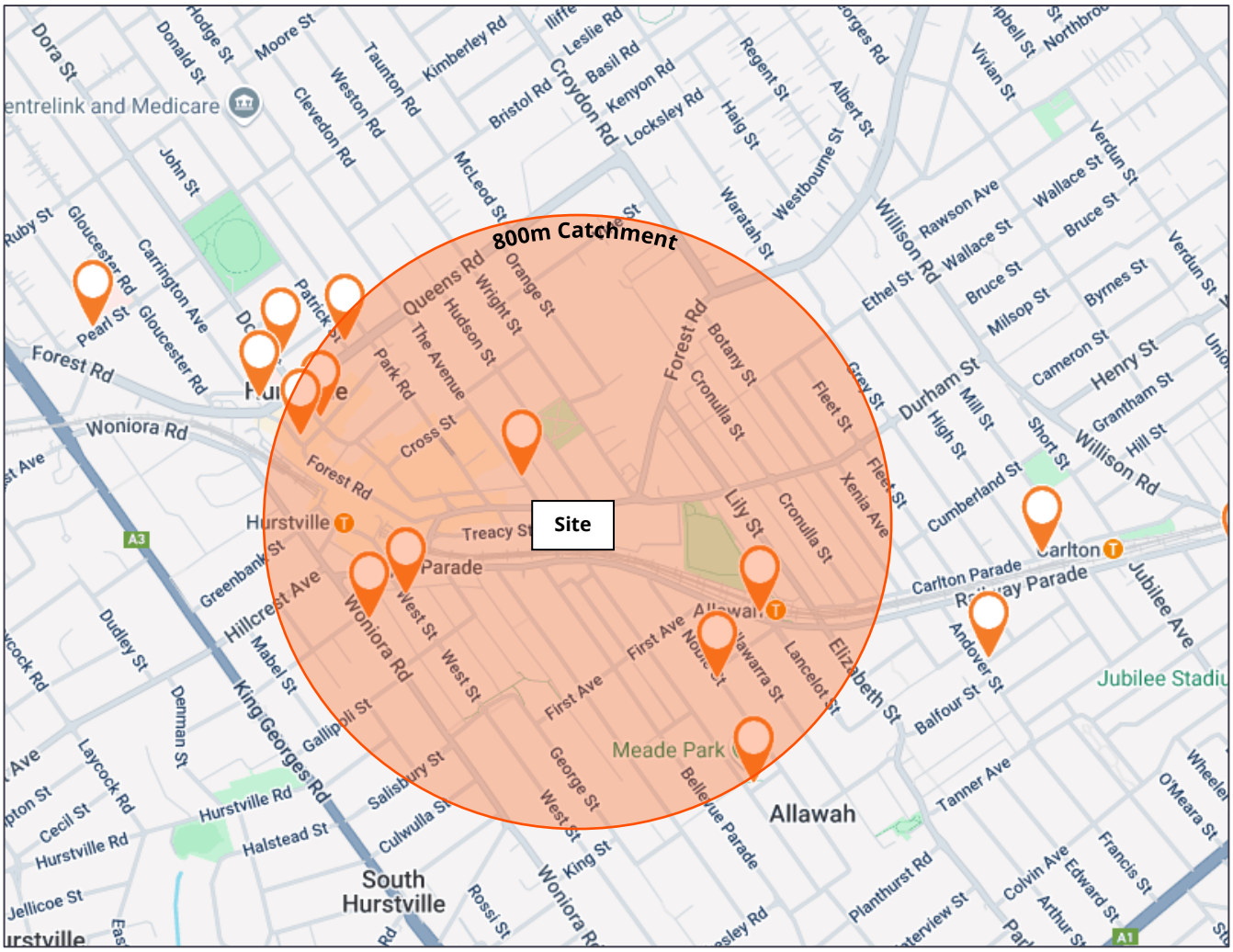
3.4.3 Car Share

Car share is a relatively established alternative mode of travel by which members join a car ownership club, choose a rate plan, and pay an annual fee. The fees cover fuel, insurance, maintenance, and cleaning. The vehicles are mostly comprised of sedans and hatchbacks but also include SUVs, station wagons, trays, and utility vans. Each vehicle has a home location, referred to as a "pod", either in a parking lot or on a street, typically in a highly populated urban neighbourhood. Members reserve a car via the internet or telephone and use a key card to access the vehicle.

Similar councils (e.g., City of Canada Bay Council) have reported that "each share car replaces between 8 and 23 private car parking spaces, depending on the location of the development".

GoGet, a pioneering car share company in Australia, has a substantial number of vehicles positioned in the city and also in close proximity to the site. GoGet' pods' location within the immediate vicinity of the site is shown in the extract below (Figure 3-4).

Figure 3-4 GoGet Locations



Source: GoGet (modified by Genesis Traffic)

Based on the above, GoGet currently operates 9 GoGet pods within a catchment of approximately 800m from the site. The nearest pod is located 200m from the site along The Avenue frontage.

3.5 Existing Active Transport Infrastructure

3.5.1 Bicycle Routes

The bicycle paths map (Figure 3-5) shows the existing cycling infrastructure in the vicinity of the site. The site has limited cycling infrastructures in the surrounding area. Thus, it is expected that cycling would not typically be a suitable alternative mode of transport for its occupants.

Figure 3-5 Cycling Paths in site locality

Source: TfNSW Cycleway Finder

3.5.2 Pedestrians

Formal pedestrian footpaths are available near the site. These footpaths have adequate lighting/illumination. In addition, there are appropriate pedestrian crossings for occupants to use when approaching/departing the local public transport services.

3.6 Crash History

Transport for NSW (TfNSW) provides a history of recorded crash data between 2019 and 2023 (data for 2024 is not available at the time of this assessment). The data reveal the following number of crashes within 5 years near the site (Figure 3-6 and Table 3-5).

Figure 3-6 Locations of the Recorded Crashes

Source: TfNSW

Table 3-5 Crash Data Record

Location	Year of Crash	RUM Code	RUM Description	Number Killed	Number Injured	Degree of Cash
Forest Road	2020	0	Pedestrian nearside	-	1	Serious injury
	2023	34	Lane change right	-	1	Moderate injury
Forest Road / Durham Street	2023	16	Left near	-	1	Minor/Other Injury
	2023	21	Right through	-	-	Non-casualty (towaway)
Hudson Street	2020	0	Pedestrian nearside	-	1	Serious injury
Jack Brabham Drive	2021	71	Off road left to object	-	1	Moderate injury

The data recorded 6 crashes in the site's vicinity in the most recent 5-year period, 2 incidents involved a serious injury.

The record shows 2 incidents involved pedestrians, and no incidents involving cyclists were recorded over the 5-year period.

3.7 Existing Traffic Conditions

Traffic surveys were commissioned as part of this assessment to record the AM peak and PM peak traffic flows at the following intersections:

- Forest Road and Hill Street
- Forest Road and The Avenue
- Forest Road and Alfred Street

The traffic survey data is reproduced in **Attachment 3**.

The existing intersection operation has been assessed using SIDRA traffic modelling program. SIDRA is a micro-analytical tool for individual and network intersection modelling based on collected traffic survey data. SIDRA provides a few performance indicators, as follows:

- Degree of Saturation – the total usage of the intersection expressed as a factor of 1, with 1 representing 100% use/saturation.
- Average Delay – the average delay encountered by all vehicles passing through the intersection.
- 95% Queue Length (Q95) – is defined to be the queue length in metres that has only a 5% probability of being exceeded during the analysis period. It transforms the average delays into measurable distance units.
- Level of Service (LOS) – this is a categorisation of average delay, intended for simple reference. The RMS adopts the following bands (Table 3-6)

Table 3-6 Intersection Performance – Levels of Service

Level of Service	Average Delay (s/veh)	Traffic Signals, Roundabout	Give Way & Stop Signs
A	< 14	Good operation	Good operation
B	15 to 28	Good with acceptable delays & spare capacity	Acceptable delays & Spare capacity
C	29 to 42	Satisfactory	Satisfactory but accident study required
D	43 to 56	Operating near capacity	Near capacity & accident study required
E	57 to 70	At capacity. At signals, incidents would cause excessive delays. Roundabouts require other control mode	At capacity and requires other mode of control

F	> 70	Extra capacity required	Extreme delay, major treatment required

An indication of the prevailing traffic operations at the following intersections is provided in the SIDRA assessment (Table 3-7).

Table 3-7 Existing Intersection Traffic Circumstance

Intersection	AM Peak			PM Peak		
	LOS	**AVD**	**DOS**	**LOS**	**AVD**	**DOS**
Forest Road and Hill Street	A	7.3s	0.258	A	9.0s	0.298
Forest Road and The Avenue	B	24.9s	0.448	B	25.4s	0.564
Forest Road and Alfred Street	B	27.5s	0.671	B	25.9s	0.537

Details of SIDRA results are reproduced in **Attachment 4**.

The assessment found the local road network operating with ample spare capacity under existing traffic demand (including the site's existing traffic movements).

4 Parking Assessment

4.1 Car Parking Requirement

Residential

Reference is made to the Housing SEPP and DCP. Relevant car parking rates are provided below.

Table 4-1 Car Parking Rates from Housing SEPP

Land Use	SEPP (Housing) 2021	DCP
Residential Flat	Affordable Units One-Bed: 0.4 spaces per unit Two-Bed: 0.5 spaces per unit Three-Bed: 1.0 space per unit Market Units One-Bed: 0.5 spaces per unit Two-Bed: 1.0 space per unit Three-Bed: 1.5 spaces per unit	One-Bed: 1.0 space per unit Two-Bed: 1.0 space per unit Three-Bed: 2.0 spaces per unit

Applying the above criteria to the proposal would indicate the following requirement (Table 4-2).

Table 4-2 Required Car Parking Spaces

Criteria			Units	Minimum Requirement	
SEPP	Affordable Units	Studio / One-Bed	2	0.8 (1)	**160 spaces**
		Two-Bed	18	9	
		Three-Bed	10	10	
	Market Units	Studio / One-Bed	58	29	
		Two-Bed	77	77	
		Three-Bed or more	22	34	
DCP		Studio / One-Bed	60	60	**219 spaces**
		Two-Bed	95	95	
		Three-Bed or more	32	64	

Accordingly, the minimum parking requirement is 160 spaces under the SEPP, and 219 spaces under the DCP. The provision of 219 car spaces complies with both criteria.

Residential Visitor

SEPP (Housing) 2021 does not specify any visitor parking rates; however, the DCP requires visitor parking at a rate of 1 space per 5 units. Applying this rate will generate a requirement of 38 car spaces.

Accordingly, the provision of 38 visitor spaces complies with the DCP criteria.

Commercial / Retail

The DCP provides a parking rate of 1 space per 60m^2 for retail premises. Applying this rate to the retail floor area will generate a requirement of 15 car spaces.

The provision of 15 car spaces meets the DCP requirement.

Overall Provision

Accordingly, it is proposed to provide a total of **273 car** spaces in the basement, being:

- 219 x resident
- 38 x visitor
- 15 x retail
- 1 x car wash bay

4.2 Bicycle Parking and End of Trip Facility Requirement

The applicable bicycle parking rates (Table 4-3) are provided in Part 3 of the DCP.

Table 4-3 Bicycle Parking Rates

Land Use	Element	Parking Rates
Residential	Resident	1 space per 3 dwellings
	Visitor	1 space per 10 dwellings
Commercial		1 space per 5 car parking spaces

Application of the above DCP rates to the proposal indicates the following bicycle parking requirements (Table 4-4).

Table 4-4 Required Bicycle Storage/Parking Spaces

Land Use		Unit/Car Spaces	Requirement
Residential Flat	Resident	187 units	63
	Visitor		19

Commercial/Retail	15 car spaces	3
Total		**85 spaces**

It is proposed to provide 88 bicycle spaces in the following composition:

- 63 x Resident
- 20 x Visitor
- 5 x Commercial/Retail

4.3 Loading and Servicing Requirement & Arrangement

The approved loading arrangement will be retained. The largest service vehicle that will continue to serve the site is an 8.8m long Medium Rigid Vehicle (MRV). Three (3) loading bays will be provided on Ground Level: 2 for MRV and 1 for SRV.

5 Access and Circulation Design

5.1 Access

The approved access driveway on Hill Street will be retained.

5.2 Traffic Signal Operation

The approved traffic signal operation to manage the truck departure will also be retained to address conflict movements between departing trucks and cars. The anticipated management principles will involve the installation of detection systems—including buttons, signals, and stop lines — to identify the departure of trucks. The system will trigger a red signal at Ground Level to temporarily halt approaching and departing traffic.

A Loading Dock Management Plan is expected to be prepared during the detailed design development process to outline the operations of this system.

5.3 Design Assessment and Internal Circulation

A detailed review of the car park has been undertaken (**Attachment 5**) to assess its conformance with the relevant AS2890 design criteria. The assessment found the proposed car parking facility generally consistent with that which is approved formerly. The additional car parking level conforms with the AS2890.1:2004 design criteria.

5.4 Loading and Servicing Circulation

The proposed loading arrangement, which complies with the requirements of AS2890.2:2018, is consistent with the original approved scheme. The designated service vehicle(s) can enter and exit the site and loading area in a satisfactory manner (refer to Section 5.5: Swept Path Analysis).

5.5 Swept Path Analysis

All critical vehicle movements in the proposed car parking facility have been assessed using Autoturn. Details of the assessment outcome, which demonstrate a satisfactory design provision, are provided in **Attachment 5**.

6 Traffic Assessment

6.1 Development Traffic Generation

Residential

The Guide to Transport Impact Assessment (2024) provides trip generation rates for high-density residential apartment blocks in Sydney Metropolitan areas. The relevant trip rates are as follows:

- 0.19 vehicle trips per hour (vtph) per unit during the AM peak hour
- 0.15 vehicle trips per hour (vtph) per unit during the PM peak hour

Application of these trip rates to the proposed residential units would indicate a peak hour traffic generation outcome in Table 6-1.

Table 6-1 Traffic Generation During Peak Hour

Period	Total	In	Out
AM peak	36 vtph	7 vtph	29 vtph
PM peak	29 vtph	23 vtph	6 vtph

Retail/Commercial

The Guide to Transport Impact Assessment (2024) does not provide any rate for commercial. The assessment refers to the Roads and Maritime Services Guide to Traffic Generating Developments (RMSGTTD) 2002 which provides an evening commercial peak traffic generation rate of 2 vtph per 100m^2 GFA. Application of this rate to the proposed commercial floor space would indicate a peak hour traffic generation outcome of 18 vtph.

6.2 Overall Traffic Generation

The expected overall net traffic generation outcome is tabulated in Table 6-2.

Table 6-2 Net Peak Hour Traffic Generation

	AM Peak (vtph)		PM Peak (vtph)	
Period	In	Out	In	Out
Residential	7	29	23	6
Retail	9	9	9	9
Net Traffic	**16**	**38**	**32**	**15**

6.3 Development Trip Distribution

The 2021 Journey to Work Data provides insights into the commuting patterns in the Hurstville area, outlining the LGA where residents work and where workers in the area reside (Table 6-3).

Table 6-3 2021 Journey to Work Data

Residents' Place of Work (POW)		Workers' Place of Residence (POR)	
LGA	**Proportion**	**LGA**	**Proportion**
Georges River	24.2%	Georges River	39.2%
Sydney	23.8%	Sutherland Shire	15.8%
Bayside	8.4%	Canterbury-Bankstown	10.6%
Canterbury-Bankstown	7.4%	Bayside	9.8%
Sutherland Shire	6.9%	Liverpool	2.7%
Inner West	3.3%	Inner West	2.1%
No usual address	3.3%	Sydney	1.9%
Parramatta	2.7%	Campbelltown	1.9%
Randwick	2.4%	Wollongong	1.8%
North Sydney	2.2%	Randwick	1.3%
Other	15.4%	Other	12.9%

Source: Profile id

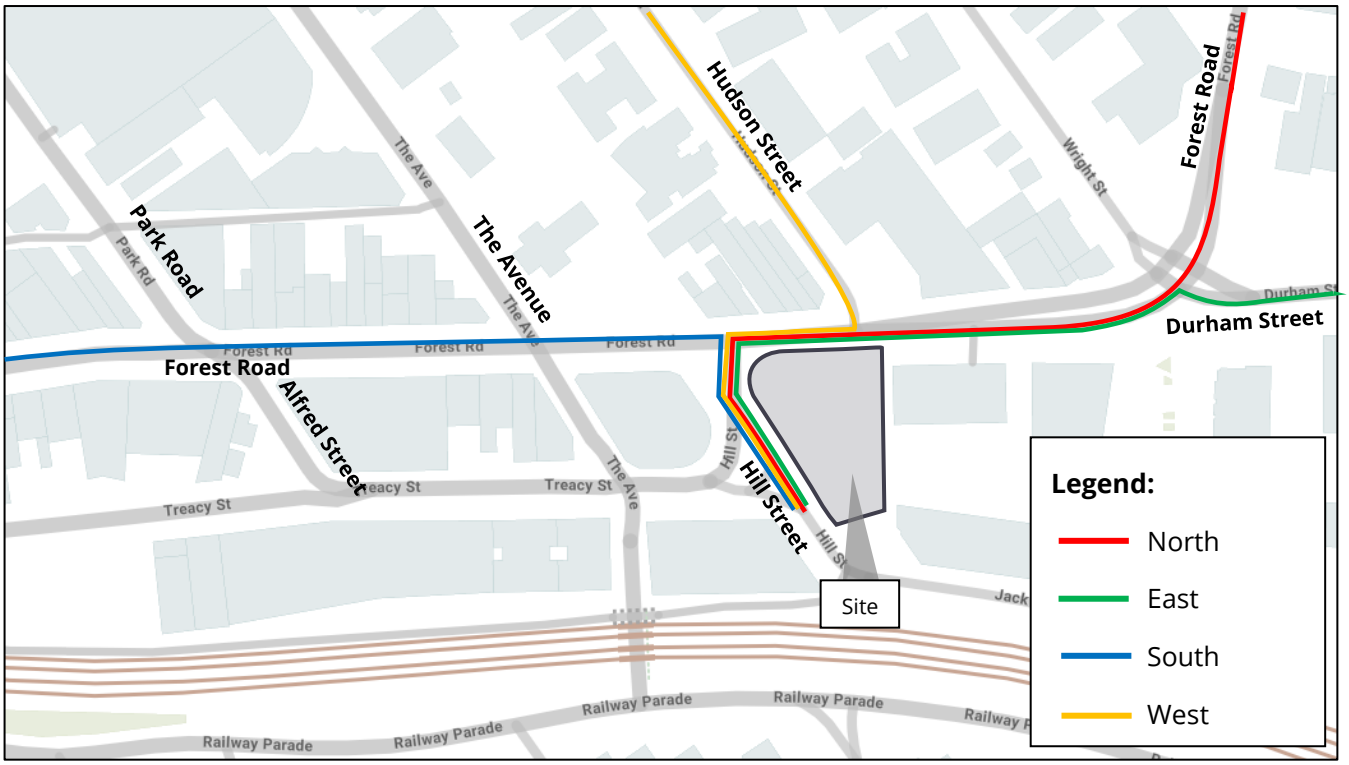
Accordingly, the proportion of each direction is tabulated in Table 6-4.

Table 6-4 Proportion of Inbound and Outbound Traffic

Direction	Proportion	
	Residential	Commercial/Retail
North	60%	25%
East	10%	25%
South	10%	25%
West	20%	25%

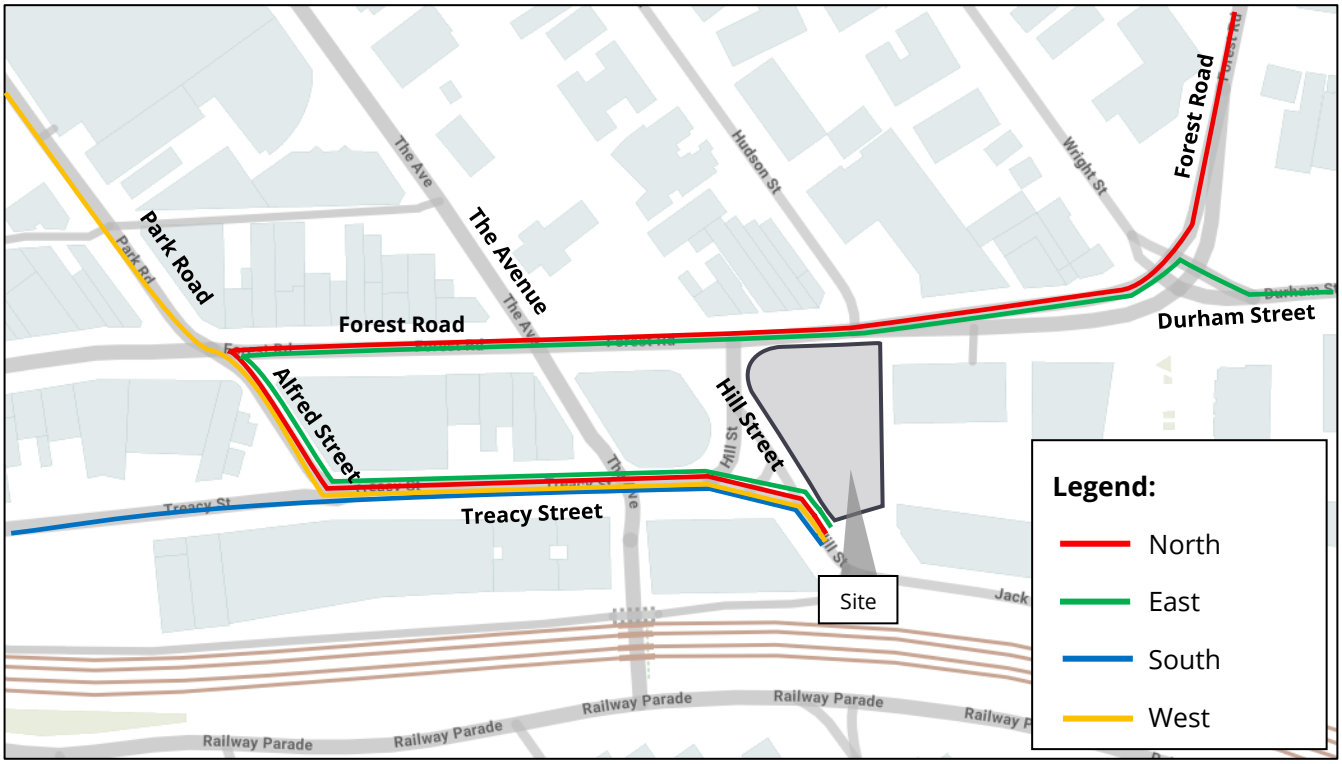
The nominal route choices from/to each direction are illustrated in Figure 6-1 and

Figure 6-1 Approach Route Distribution



Source: Mecone (modified by Genesis Traffic)

Figure 6-2 Depart Route Distribution



Source: Mecone (modified by Genesis Traffic)

On this basis, the development generated traffic movement in each direction are illustrated in Figure 6-3 and Figure 6-4.

Figure 6-3 Inbound and Outbound Traffic during AM Peak

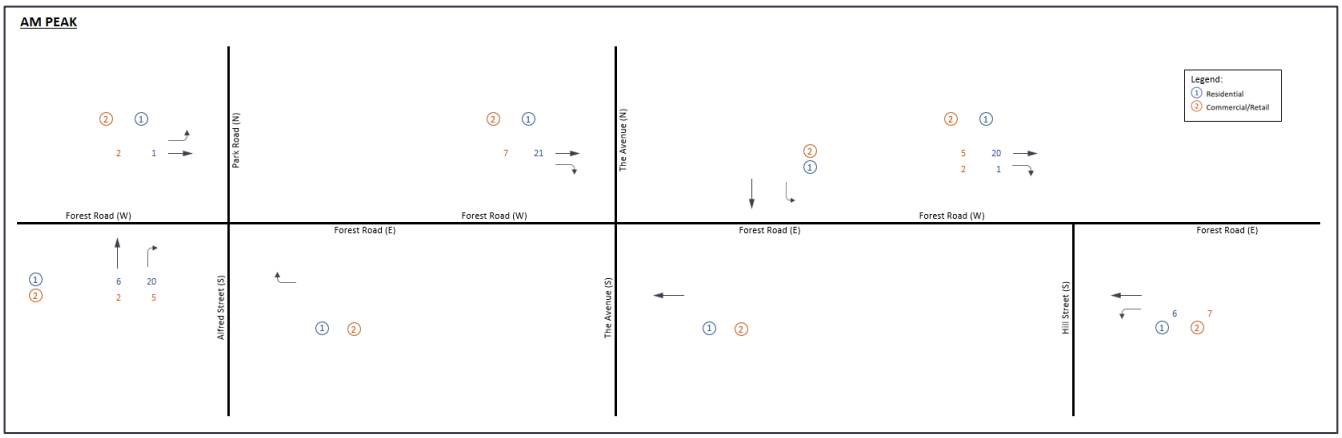
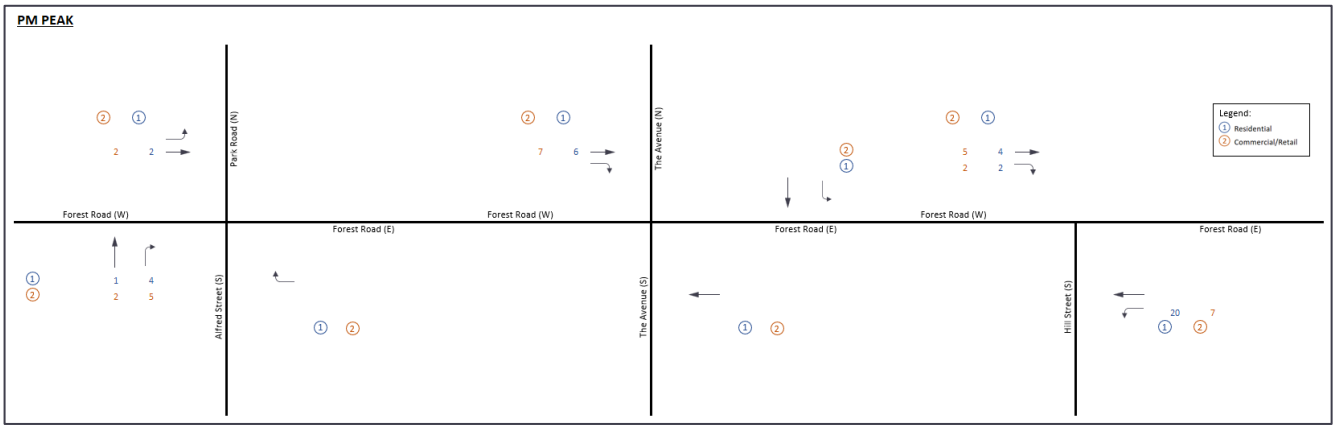


Figure 6-4 Inbound and Outbound Traffic during PM Peak



Source: Genesis Traffic

The projected development traffic are then added onto the background traffic and reanalysed using SIDRA. The assessment considers the existing state and post development state to provide an objective comparison in terms of traffic generation impact on the network. The assessed model outcome is summarised in Table 6-5.

Table 6-5 Existing and Post-Development SIDRA Assessment Outcome

Intersection	AM Peak			PM Peak		
	LOS	AVD	DOS	LOS	AVD	DOS
Pre-development						
Forest Road and Hill Street	A (WRT)	7.3s (WRT)	0.258 (WRT)	A (WRT)	9.0s (WRT)	0.298 (ELT)

Forest Road and The Avenue	B	24.9s	0.448	B	25.4s	0.564
Forest Road and Alfred Street	B	27.5s	0.671	B	25.9s	0.537
Post Development						
Forest Road and Hill Street	A (WRT)	7.5s (WRT)	0.267 (WRT)	A (WRT)	9.4s (WRT)	0.313 (ELT)
Forest Road and The Avenue	B	25.0s	0.457	B	25.5s	0.568
Forest Road and Alfred Street	B	28.2s	0.689	B	26.1s	0.545

Abbreviation:
WRT = West Right Turn
ELT = East Left Turn

The SIDRA output is reproduced in **Attachment 4**.

The assessment found the existing road network operate with ample spare capacity and the existing level of service will be maintained following the addition of the subject development.

On this basis, the assessment concludes that the development would not adversely impact the existing road network operation. Therefore, no infrastructure upgrades are required.

6.4 Cumulative Impact Assessment

There are no recently approved major developments surrounding the site. However, this will be subject to further consultation with TfNSW or Council.

7 Preliminary Construction Traffic Management Plan

This Preliminary Construction Traffic Management Plan (CTMP) presents the proposed construction activities associated with the proposal. It is noted, however, that detailed CTMP cannot be produced without the involvement of a builder and consideration of all final design selections. The Preliminary CTMP is intended to provide a framework within which future CTMP can be prepared.

7.1 Scope of Works

The scope of this Preliminary CTMP includes the following:

- Provides details of construction programs detailing the anticipated construction duration, construction truck movement and number of workers
- Identify heavy vehicle routes to and from the site that have the minimal impact on the surrounding local road network
- Identify heavy vehicle access points to and from the site
- Identify any major construction activities of other developments in the surrounding area
- Identity temporary on-street parking for construction workers
- Assess potential impacts on existing traffic, pedestrian, and bicycle networks

7.2 Overview of Construction Works

7.2.1 Construction Program

Table 7-1 indicates a preliminary phasing outline of each construction stage, including estimated duration, volumes and the approximate number of workers per day. These estimations may be subject to change following the appointment of a contractor.

Table 7-1 Works Program (estimate)

Phase	Program	Estimated Period (Weeks)	Estimated Trips per Day	Estimated No. of Workers per Day
1	Site Establishment	2	2-3	10
2	Demolition	4	7-10	10-12
3	Excavation / Earthworks	20	10-15	10-12
4	Construction / Concrete Pouring	52	10-15 (20-30 during pours)	40-50
5	Fitout	20	5-10	20-30

7.2.2 Construction Hours

The proposed work hours will accord with the consent details; however, it is expected that construction activities will be limited to the following period (Table 7-2):

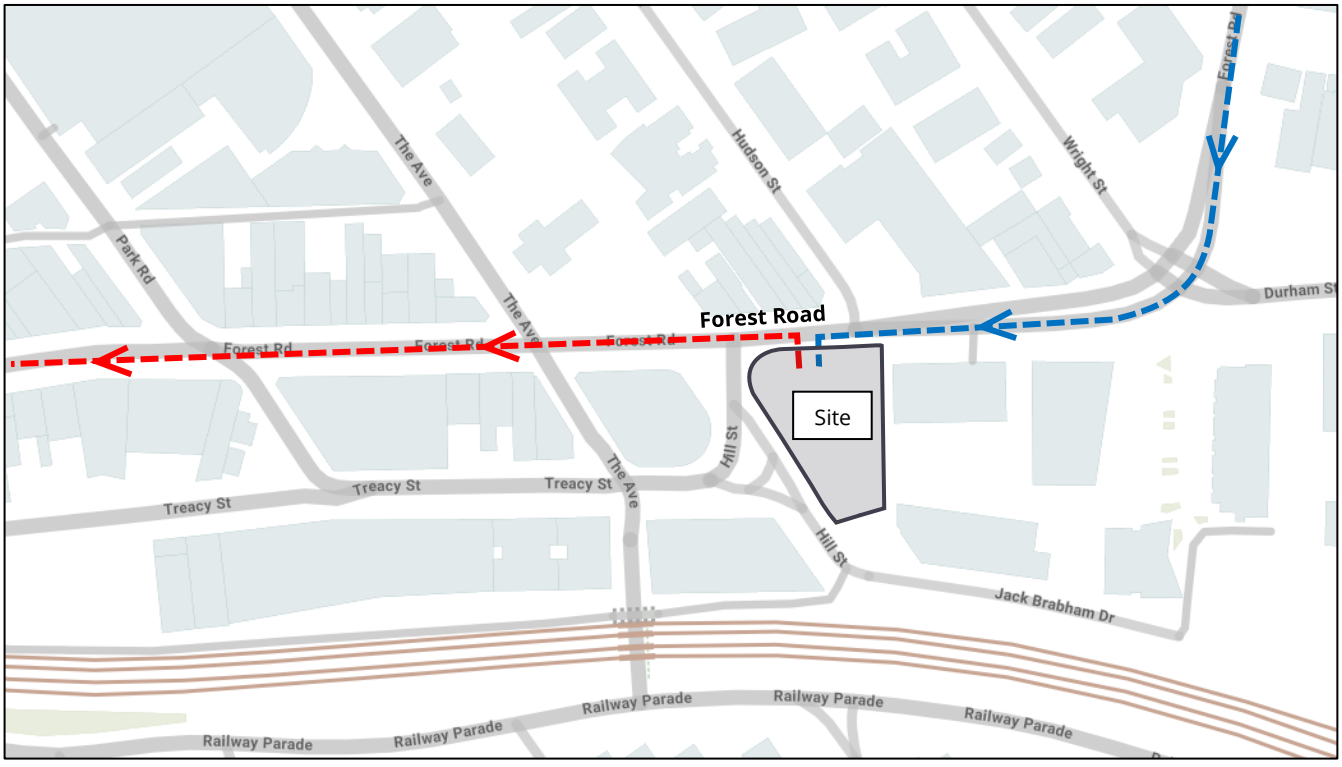
Table 7-2 Permitted Work Hours

Day(s)	Permitted Work Hours
Mondays to Friday	7.00am to 6.00pm
Saturday	8.00am to 1.00pm
Sunday and Public Holidays	No Work

7.2.3 Construction Vehicle Route

Truck movements associated with the construction processes will approach and depart the site using the existing vehicular access via Forest Road, as illustrated in Figure 7-1. No queuing of heavy vehicles is to occur on the surrounding streets unless previously approved by the Council or TfNSW.

Figure 7-1 Truck Route



Source: Mecone (modified by Genesis Traffic)

During the course of construction, all trucks will approach and depart the site in a forward direction. In the event where construction vehicles are unable to manoeuvre from/to the site, a Works Zone will be established along the site frontage. Vehicles will approach, stand within the Works Zone and depart forwards. All necessary oversized mobile crane/truck access will be subject to a separate permit issued by

the Council before the planned event. If reversing is necessary, vehicle movements should be undertaken under the supervision of accredited traffic controllers.

7.2.4 Emergency Vehicle Access

All site access points will be gated and manned by traffic personnel during work hours. Emergency vehicles will be able to access the site via all construction access points. Contact details of the site-nominated supervisor must be displayed prominently adjacent to each site gate.

7.2.5 Materials Handling

All materials must be loaded/off-loaded and stored within the site boundary at all times. During the excavation of the site, the excavated materials will be loaded/unloaded on site. No materials are to be stored outside the site boundary at any time.

7.2.6 Traffic Guidance Scheme

The Traffic Guidance Scheme (TGS) will be developed in due course. TGSs shall be developed in accordance with the TfNSW Traffic Control at Work Sites Technical Manual. The control of traffic at work sites must be undertaken with reference to Workcover requirements and the contractor's Constructions Workplace Health and Safety Manuals.

7.2.7 Construction Worker Parking

There will be no on-site car parking available for workers during the earlier construction stage. Once the internal driveway and basement car park are built (and when construction activity is most intensive), workers can park in the basement.

Given the proximity of the site to high-frequency public transport services, all workers will be encouraged at all times to utilise the highly accessible public transport system which exists in the vicinity of the site or to carpool wherever possible.

A tool drop-off and storage facility will be provided within the site. This would allow tradespeople to drop-off and store their tools and machinery, allowing them to use public transport to travel to/ from the site daily.

Workers will also be informed of appropriate tool/equipment drop-off and storage arrangements made within site sheds and amenities provided on-site. Bus and train schedules will be provided to all workers during site induction to demonstrate alternative modes of transport available.

7.2.8 Site Induction

All workers and visitors employed on the site by the appointed contractor (including sub-contractors) will be required to undergo a formal 'site induction' process and all inductions will be performed specifically to each trade according to SafeWork OH & S requirements.

The induction will include details of approved access routes to and from the construction site for site staff and delivery vehicles, parking arrangements, as well as standard environmental, WHS, driver protocols and emergency procedures. The agreed work hours must be included as part of this induction.

7.3 Construction Impact

7.3.1 Public Notification & Communication

The nominated contractor shall prepare notification letters to advise the following neighbouring properties of the proposed construction works and timing thereof. A minimum notice period of 14 days shall be applicable for all external communications.

The nominated contractor shall also engage with the surrounding building teams at the time of construction to establish the extent of truck delivery movements with an aim to minimise overlapping movements on the same routes.

The following addresses will be notified by letterbox drop prior to the start of works, providing information relating to the project schedule:

Adjacent to the site	103 Forest Road 1 Jack Brabham Drive
Opposite the site	107, 124, 130-140 Forest Road 1 Treacy Street

7.3.2 Road Serviceability

The nominated contractor will be responsible for ensuring that the road pavement, kerb, gutter and footpath along each road frontage shall remain in clean and serviceable states during the course of the construction at no cost to Council.

7.3.3 Impact on Public Transport Services

The nominated heavy vehicle haulage routes will largely be limited to State Roads and Regional Roads which are designed to accommodate heavy vehicle movements. As such, there will be no adverse impact on existing public transport services.

While the nominated truck routes will overlap with bus routes during the construction period, it is not expected that estimated truck movements would have no material effect on the existing bus services.

7.3.4 Impact on Emergency Vehicle Access

Site personnel will be on-site regularly with contact details prominently displayed and visible from the road frontage. Access to the site and neighbouring sites by emergency vehicles would not be affected by the construction activities. There will be no adverse impact on emergency vehicle access to the site or other neighbouring properties as a result of the proposed activities.

7.3.5 Impact on Road Network

The nominated heavy vehicle haulage routes will largely be limited to State Roads and Regional Roads which are designed to accommodate heavy vehicle movements to minimise the impact on immediate local road network. As such, it is not expected to have an adverse impact onto the surrounding road users including cyclists.

7.3.6 Impact on Pedestrians

To ensure the pedestrian's safety, temporary fencings will be established along the construction site perimeter to cordon off the site from pedestrian movements along the site frontages and neighbouring properties where applicable. All construction-related traffic movements along the frontages will occur under the supervision of on-site trained personnel, with trucks escorted between the site access and associated frontage to ensure pedestrian safety.

8 TfNSW Consultation

In satisfaction of the SEARs requirement, a package of the proposed development's information is issued to the TfNSW via its official development portal Development.Sydney@transport.nsw.gov.au on 17 September 2025.

Details of the consultation package and correspondence are provided in **Attachment 6**.

9 Conclusion

The traffic and parking assessment undertaken for the Proposed Mixed-Use Development at 105 Forest Road & 1A Hill Street, Hurstville has concluded that:

- the traffic generation of the proposed development will not present any adverse traffic implications. Therefore, the surrounding road infrastructure does not require any upgrades.
- the proposed parking provision generally complies with the SEPP (Housing) 2021 and Council's DCP criteria and will adequately serve the development.
- the proposed access, internal circulation and parking arrangements will be appropriate to AS design criteria.

Attachment 1

Approved Plan

FOREST ROAD

HILL STREET

ST 114 ST 115 ST 116 ST 117 ST 118 ST 119 ST 120 ST 121 ST 122 ST 123 ST 124 ST 125 ST 126

150mm HIGH KERB

150mm HIGH KERB

1100mm HIGH WALL

1100mm HIGH WALL

RAMP 1:10

RAMP 1:5

47.00 47.20 49.20 49.00 47.00 49.00

5400 6100 5400

LIFT 01

LOBBY 01
RL 47.000

BASEMENT LEVEL 04A
RL 47.000

LOBBY 02
RL 47.00

LIFT 02 LIFT 03

FILING TO STRUCTURE ENGINEER DETAIL

FILING TO STRUCTURE ENGINEER DETAIL

FIRE HYDRANT & WATER STORAGE TANK

4430 8800 4750 3950 8600 5840

A B C D E F G

1 2 3 4 5 6 7 8

6750 8950 7000 7900 7900 7900 7900 7900 7900 7000 350

4A 3A 2A 1A 1B L K J I H G F E

3000 6400 6000 1080 1920 8180 7900 7900 8000 8100 8200

DEVELOPMENT PLANS

These are the plans referred to in

Development Consent MOD2017/0033

Endorsement Date: 7 August, 2017

Subject to attached conditions

RESIDENTIAL PARKING	20 SPACES
TOTAL	20 SPACES

GEORGES RIVER COUNCIL

NOTES:
1. ALL ACCESSIBLE AND SHARE SPACES REQUIRE MIN. 2.5M CLEAR HEIGHT THROUGHOUT TO AS. 2890.6
2. LIFTS REQUIRE
   - ACCESSIBLE FLOOR DIMENSIONS MIN. 1400W x 1600D CLAUSE E3.6
   - STRETCHER FACILITY 2000mm DEEP TO CLAUSE E3.2
3. FIRE STAIRS DESIGNED TO SATISFY CLAUSE 11.1 (f) & (g) OF AS. 1426.1 - 2009
4. HAND RAILS MUST COMPLY WITH D2.17 (a) (v1) AND CLAUSE 12 OF AS. 1428-1-2009

TRUE NORTH

SHEET TITLE
BASEMENT 4 FLOOR PLAN

GEORGE EL KHOURI ARCHITECTS

GEORGE EL KHOURI
R.A.I.A
B.Arch. B.Env.Des.
Lic. Builder
Arch. Reg. No. 4643

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ISSUE	AMENDMENT	DATE	DRAWN
A	S96 SUBMISSION	14-03-2017	CD/GEK
B	UPDATED WATER MAIN, SHOWN STORAGES	19-06-2017	CD/GEK

PROPOSED S96 MIXED DEVELOPMENT
AT 1A HILL STREET, HURSTVILLE

DATE	SCALE
MAR 2017	1:00@A3

SHEET No.	JOB No.	ISSUE
S96 101	2016-03	B

FOREST ROAD

HILL STREET

ST 56 ST 57 ST 58 ST 59 ST 60 ST 61 ST 62 ST 63 ST 64 ST 65 ST 66 ST 67 ST 68 ST 69 ST 70 ST 71 ST 72 ST 73 ST 74 ST 75 ST 76 ST 77 ST 78 ST 79 ST 80 ST 81 ST 82 ST 83 ST 84 ST 85 ST 86 ST 87 ST 88 ST 89 ST 90 ST 91 ST 92 ST 93 ST 94 ST 95 ST 96 ST 97 ST 98 ST 99 ST 100 ST 101 ST 102 ST 103 ST 104 ST 105 ST 106 ST 107 ST 108 ST 109 ST 110 ST 111 ST 112 ST 113

LIFT 01
LOBBY 01
RL 50.00

BASEMENT LEVEL 03A
RL 50.000

BASEMENT LEVEL 03B
RL 49.000

LOBBY 02
RL 50.00

LIFT 02 LIFT 03

STORAGE
RL 49.000

STORAGE
RL 49.150

LIFT 04 LIFT 05
LOBBY 05
RL 50.000

FIRE HYDRANT & WATER STORAGE TANK

150mm HIGH KERB
1100mm HIGH WALL
RAMP 1:10
RAMP 1:5
RAMP 1:5
RAMP 1:10
RAMP 1:8.5
50.00 50.20 48.80 49.00
FINISH MENTION TO GARAGE

PLING TO STRUCTURE ENGINEER DETAIL

5400 6100 5400 5400 6500 5400 5400 6000 7900 6100 8200 8100 7900 8400 2000 8600 1080 1920

4430 8800 4750 3950 8600 5840

1 2 3 4 5 6 7 8
A B C D E F G H I J K L
1A 1B 2A 3A 4A

DEVELOPMENT PLANS

These are the plans referred to in

Development Consent MOD2017/0033

Endorsement Date: 7 August, 2017

Subject to attached conditions

RESIDENTIAL PARKING 59 SPACES

TOTAL 59 SPACES

GEORGES RIVER COUNCIL

NOTES:
1. ALL ACCESSIBLE AND SHARE SPACES REQUIRE MIN. 2.5M CLEAR HEIGHT THROUGHOUT TO AS. 2890.6
2. LIFTS REQUIRE
   - ACCESSIBLE FLOOR DIMENSIONS MIN. 1400W x 1600D CLAUSE E3.6
   - STRETCHER FACILITY 2000mm DEEP TO CLAUSE E3.2
3. FIRE STAIRS DESIGNED TO SATISFY CLAUSE 11.1 (f) & (g) OF AS. 1426.1 - 2009
4. HAND RAILS MUST COMPLY WITH D2.17 (a) (v1) AND CLAUSE 12 OF AS. 1428-1-2009

SHEET TITLE
BASEMENT 3 FLOOR PLAN

GEORGE EL KHOURI ARCHITECTS

GEORGE EL KHOURI
R.A.I.A
B.Arch. B.Env.Des.
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Arch. Reg. No. 4643

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A	S96 SUBMISSION	14-03-2017	CD/GEK
B	UPDATED WATER MAIN, SHOWN STORAGES	19-06-2017	CD/GEK

PROPOSED S96 MIXED DEVELOPMENT
AT 1A HILL STREET, HURSTVILLE

DATE	SCALE	
MAR 2017	1:00@A3	
SHEET No.	JOB No.	ISSUE
S96 102	2016-03	B

FOREST ROAD

HILL STREET

ST 01 ST 02 ST 03 ST 04 ST 05 ST 06 ST 07 ST 08 ST 09 ST 10 ST 11 ST 12 ST 13 ST 14 ST 15 ST 16 ST 17 ST 18 ST 19 ST 20 ST 21 ST 22 ST 23 ST 24 ST 25 ST 26 ST 27 ST 28 ST 29 ST 30 ST 31 ST 32 ST 33 ST 34 ST 35 ST 36 ST 37 ST 38 ST 39 ST 40 ST 41 ST 42 ST 43 ST 44 ST 45 ST 46 ST 47 ST 48 ST 49 ST 50 ST 51 ST 52 ST 53 ST 54 ST 55

LIFT 01 LOBBY 01 RL 53.000

LIFT 02 LIFT 03 LOBBY 02 RL 53.00

LIFT 04 LIFT 05 LOBBY 03 RL 52.000

STORAGE RL 52.000

STORAGE RL 52.150

CAR WASH BAY

FIRE HYDRANT & WATER STORAGE TANK

FIRE STAIRS

FIRE PUMP ROOM

FRESH AIR INTAKE TO CARPARK

BASEMENT LEVEL 02A RL 53.000

BASEMENT LEVEL 02B RL 52.000

BASEMENT LEVEL 02B RL 52.000

150mm HIGH KERB

1100mm HIGH WALL

RAMP 1:10 RAMP 1:5 RAMP 1:5 RAMP 1:40 RAMP 1:8.4

53.00 53.20 51.80 52.00 53.00 52.00

FILING TO STRUCTURE ENGINEER DETAIL

5400 6100 5400 5400 6500 5400 5400 6000 6000 6000

FOREST ROAD

HILL STREET

RAMP 02

150mm HIGH KERB

1100mm HIGH WALL

RAMP 1:5

RAMP 1:10

RAMP 1:8

53.20 54.30 55.00 55.30 55.55 55.90 55.30

42 BICYCLE SPACES
RL 55.150

LINE OF RAMP OVER

GREASE TRAP OVER

RL 55.150

LIFT 01

LOBBY 01
RL 55.00

GARBAGE ROOM
B1-1

BASEMENT LEVEL 01A
RL 55.600

BASEMENT LEVEL 01B
RL 55.000

COMMERCIAL PARKING

VISITOR PARKING

5400 6100 5400 5400 6500 5400

55.90 55.00

ENTRY DOOR FROM BASEMENT LEVEL 1 WITH 24/7 E KEY LOCK FOR VEHICLE ACCESS TO BRING EQUIPMENT FOR WORK AS REQUIRED

MANHOLE HATCH FROM ABOVE AT STREET LEVEL

STORAGE

LOBBY 02
RL 55.80

LIFT 02 LIFT 03

GARBAGE ROOM
B1-2

STORAGE

FILING TO STRUCTURE ENGINEER DETAIL

WATER MAIN LOCATION

VOID CHAMBER

FILING TO STRUCTURE ENGINEER DETAIL

TYPICAL TEMPORARY STEEL SUPPORT TO WATER MAIN LINE TO ALLOW EXCAVATION AND POUR OF FLOOR SLAB TO ENGINEER'S DETAILS

2500 2500 2500 3200

℄ OF PIPE

FIRE HYDRANT & WATER STORAGE TANK

LIFT 04 LIFT 05

LOBBY 03
RL 55.000

GARBAGE ROOM
B1-3

6400 6000 6180 7900 7900 6000 6200 6100

4430 6800 3200 4750 3950 6600 5840

A B C D E F G H I J K L

1 2 3 4 5 6 7 8

4A 3A 2A 1A 1B

SHEET TITLE
BASEMENT 1 FLOOR PLAN

DEVELOPMENT PLANS

These are the plans referred to in

Development Consent MOD2017/0033

Endorsement Date: 7 August 2017

Subject to attached conditions

RESIDENTIAL PARKING	14 SPACES
COMMERCIAL PARKING	23 SPACES
VISITOR PARKING	18 SPACES
TOTAL	55 SPACES

NOTES:
1. ALL ACCESSIBLE AND SHARE SPACES REQUIRE MIN. 2.5M CLEAR HEIGHT THROUGHOUT TO AS. 2890.6
2. LIFTS REQUIRE
   - ACCESSIBLE FLOOR DIMENSIONS MIN. 1400W x 1600D CLAUSE E3.6
   - STRETCHER FACILITY 2000mm DEEP TO CLAUSE E3.2
3. FIRE STAIRS DESIGNED TO SATISFY CLAUSE 11.1 (f) & (g) OF AS. 1426.1 - 2009
4. HAND RAILS MUST COMPLY WITH D2.17 (a) (v1) AND CLAUSE 12 OF AS. 1428-1-2009

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ISSUE	AMENDMENT	DATE	DRAWN
A	DEVELOPMENT APPLICATION	14-03-2017	CD/GEK
B	UPDATED WATER MAIN	19-06-2017	CD/GEK

GEORGES RIVER COUNCIL

PROPOSED S96 MIXED DEVELOPMENT
AT 1A HILL STREET, HURSTVILLE

DATE	SCALE
MAR 2017	1:00@A3

SHEET No.	JOB No.	ISSUE
S96 104	2016-03	B

UG.01
COMMERICAL / RETAIL
RL 58.600

LOBBY 01
RL 58.590

LIFT 01

MAILBOXES

UG.02
COMMERICAL / RETAIL
RL 58.600

BOOSTER VALVE ROOM

LOADING ZONE
STRUCTURAL INPUT REQUIRED TO LOADING ZONE AREA

MRV LOADING BAY
MRV LOADING BAY
SRV LOADING BAY

LOADING DOCK
RL 60.200

O.S.D TANK ABOVE. REFER TO CIVIL ENGINEERS DETAILS

GARBAGE ROOM
RL 58.513

COMM. ROOM
RL 60.200

HYDRANT PUMP ROOM
RL 60.200

SWITCH ROOM
RL 60.200

STORE
RL 60.200

MALE WC
RL 60.200

FEMALE WC
RL 60.200

DISS WC
RL 60.200

SUBSTATION
RL 60.050

LOBBY 03
RL 60.200

UG.05
COMMERICAL / RETAIL
RL 60.200

UG.04
COMMERICAL / RETAIL
RL 60.200

LOBBY 02
RL 60.200

LIFT 02
LIFT 03

UG.03
COMMERICAL / RETAIL
RL 58.800

CONCRETE

GARDEN

GREASE TRAP BELOW

DOTTED SECURITY ROLLER SHUTTER

DOTTED AWNING ABOVE

BENCH MARK ON T.O.K
R.L. 60.26

REMOVED EXISTING BUS SHELTER AND REPLACE SEATING ROLE

MANHOLE LOCATION WITH STEP IRONS FOR ENTRY / EXIT TO WATER MAIN PIPE

WATER MAIN LOCATION

CONCRETE DRIVEWAY

FOREST ROAD

HILL STREET

TRUE NORTH

SHEET TITLE
GROUND FLOOR PLAN

DEVELOPMENT PLANS

These are the plans referred to in

Development Consent MOD2017/0033

Endorsement Date: 7 August 2017

Subject to attached conditions

LEGEND

DOTTED LINE OF APPROVED DA

GEORGES RIVER COUNCIL

NOTES:
1. ALL ACCESSIBLE AND SHARE SPACES REQUIRE MIN. 2.5M CLEAR HEIGHT THROUGHOUT TO AS. 2890.6
2. LIFTS REQUIRE
   - ACCESSIBLE FLOOR DIMENSIONS MIN. 1400W x 1600D CLAUSE E3.6
   - STRETCHER FACILITY 2000mm DEEP TO CLAUSE E3.2
3. FIRE STAIRS DESIGNED TO SATISFY CLAUSE 11.1 (f) & (g) OF AS. 1426.1 - 2009
4. HAND RAILS MUST COMPLY WITH D2.17 (a) (v1) AND CLAUSE 12 OF AS. 1428-1-2009
5. TURNING SPACE MIN. 1540 x 2070 AT EACH END OF CORRIDOR
6. ALL LOBBY & RETAIL ACCESS ENTRY TO HAVE LEVEL ACCESS
7. ALL DOORS ON GROUND FLOOR 850mm CLEAR WIDTH PLUS CIRCULATION SPACE BOTH SIDES TO COMPLY AS. 1428.1-2009

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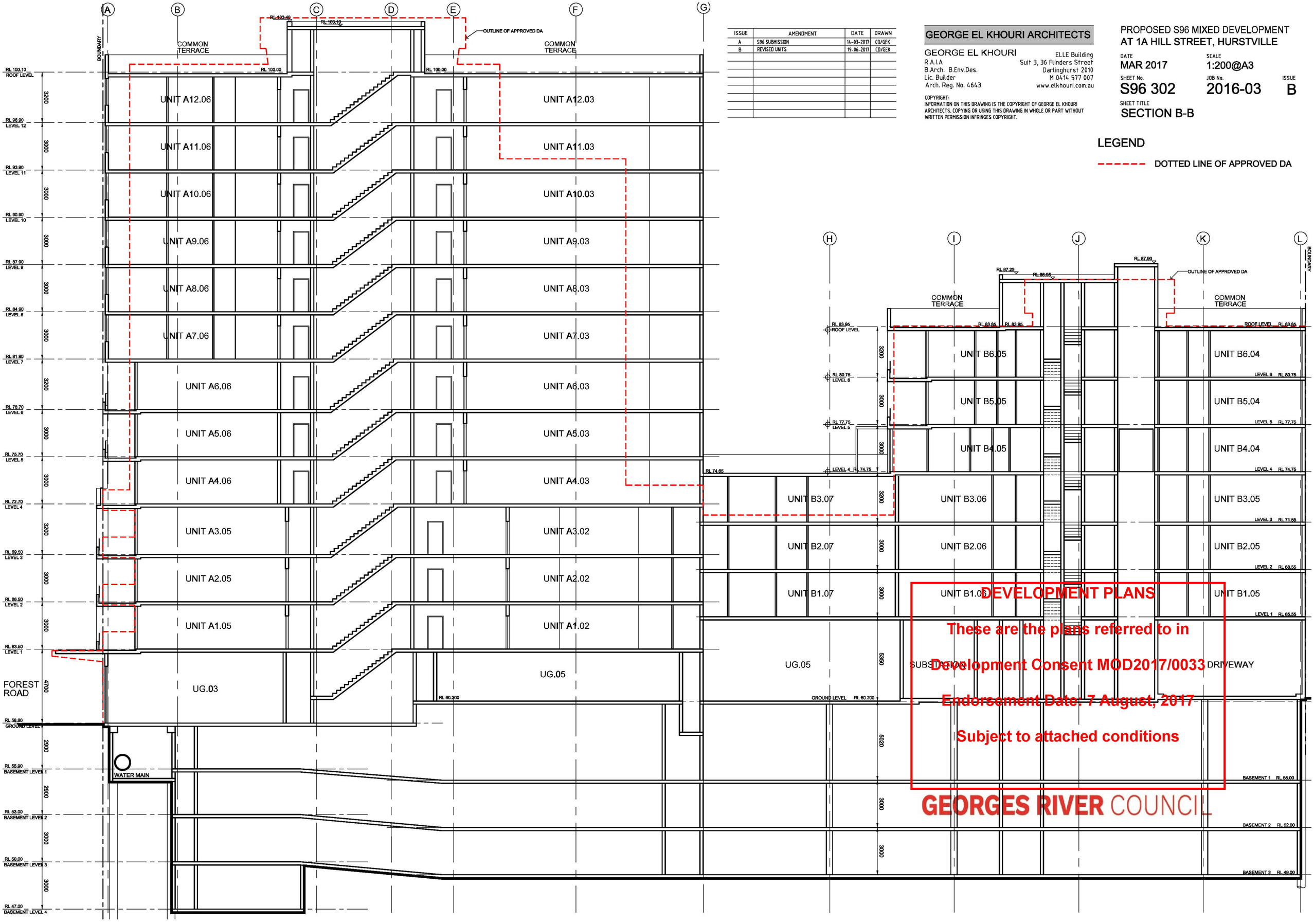
B	UPDATED WATER MAIN & AWNING	19-06-2017	CD/GEK

PROPOSED S96 MIXED DEVELOPMENT
AT 1A HILL STREET, HURSTVILLE

DATE	SCALE
MAR 2017	1:200@A3

SHEET No.	JOB No.	ISSUE
S96 105	2016-03	B



ISSUE	AMENDMENT	DATE	DRAWN
A	S96 SUBMISSION	14-03-2017	CD/GEK
B	REVISED UNITS	19-06-2017	CD/GEK

GEORGE EL KHOURI ARCHITECTS

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PROPOSED S96 MIXED DEVELOPMENT
AT 1A HILL STREET, HURSTVILLE

DATE: MAR 2017
SCALE: 1:200@A3
SHEET No.: S96 302
JOB No.: 2016-03
ISSUE: B
SHEET TITLE: SECTION B-B

LEGEND

DOTTED LINE OF APPROVED DA

DEVELOPMENT PLANS
These are the plans referred to in
Development Consent MOD2017/0033
Endorsement Date: 7 August, 2017
Subject to attached conditions
GEORGES RIVER COUNCIL

ISSUE	AMENDMENT	DATE	DRAWN
A	S96 SUBMISSION	14-03-2017	CD/GEK
B	REVISED UNITS	19-06-2017	CD/GEK

GEORGE EL KHOURI ARCHITECTS

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PROPOSED S96 MIXED DEVELOPMENT
AT 1A HILL STREET, HURSTVILLE

DATE
MAR 2017

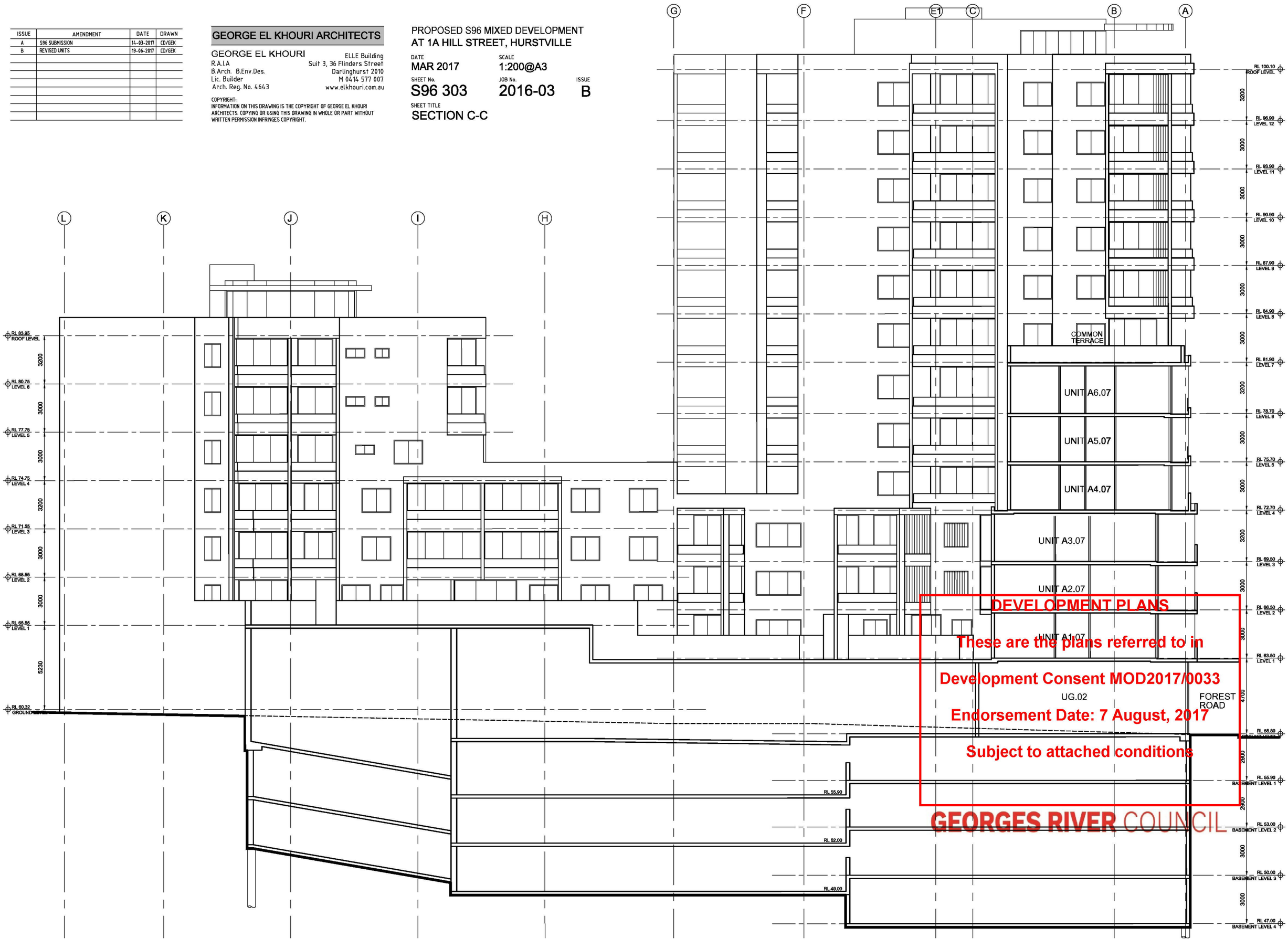
SCALE
1:200@A3

SHEET No.
S96 303

JOB No.
2016-03

ISSUE
B

SHEET TITLE
SECTION C-C

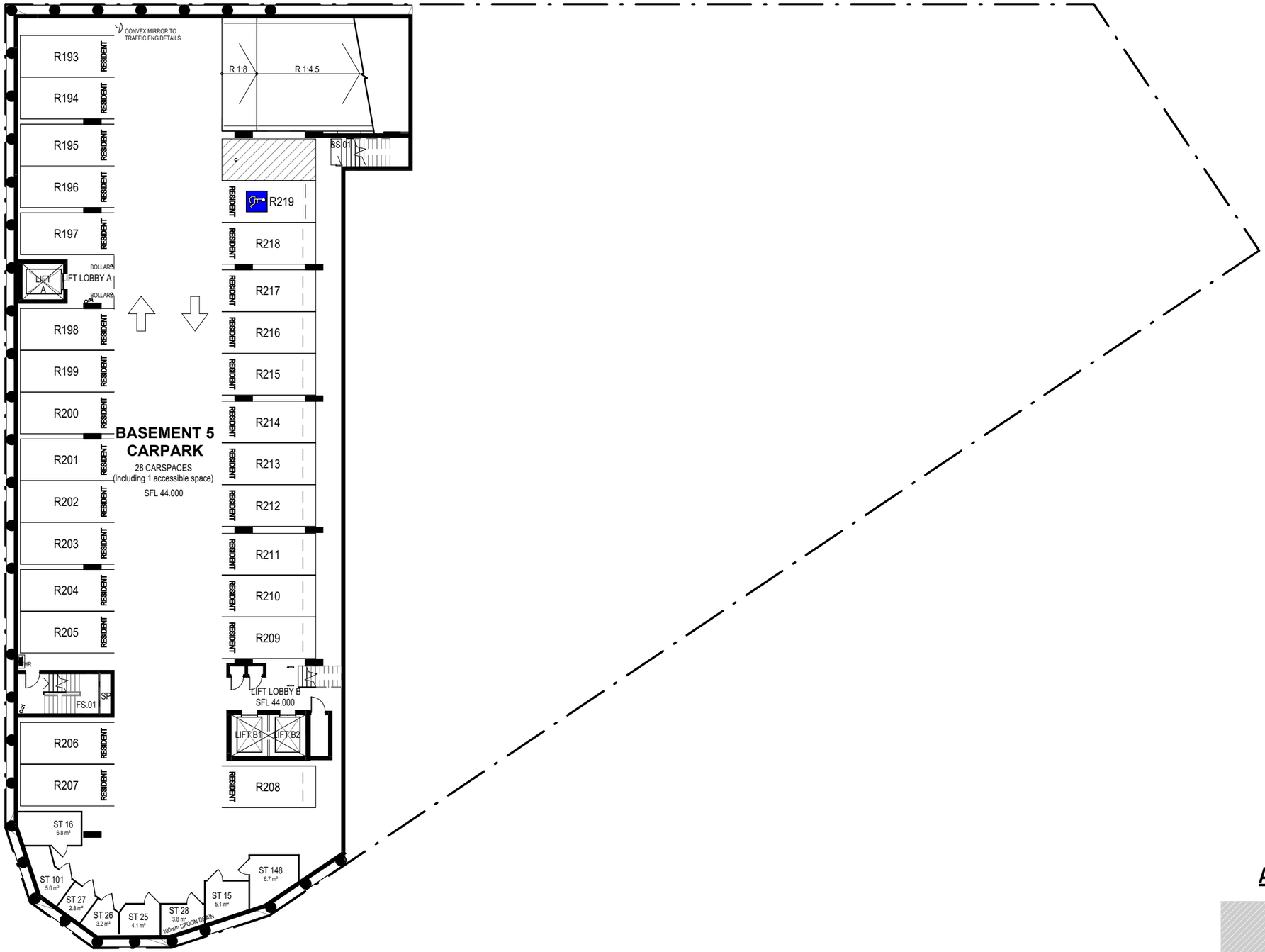


DEVELOPMENT PLANS
These are the plans referred to in
Development Consent MOD2017/0033
Endorsement Date: 7 August, 2017
Subject to attached conditions

GEORGES RIVER COUNCIL

Attachment 2

Proposed Plan



BASEMENT LEVEL 5

1 : 250

APPROVED DESIGN KEY

APPROVED DESIGN / PORTION OF DESIGN UNCHANGED

DISCLAIMER

Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client.
Drawings are not are not suitable for purchase of property.
All parking and ramps to traffic engineers details. (Subject to Approval)

SHDA

REF.	DATE	AMENDMENT
H	01.09.2025	SHDA LODGEMENT

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Email: info@designworkshop.com.au
Web: www.designworkshop.com.au

Sydney
Level 10, 6 Mount
Olympus Boulevard,
Wolli Creek NSW 2205
Nominated Architect:
Robert Gizzi (Reg. 8286)

CLIENT: TQMDC
LOTUS, HURSTVILLE

ADDRESS: 105 FOREST RD & 1A HILL ST, HURSTVILLE

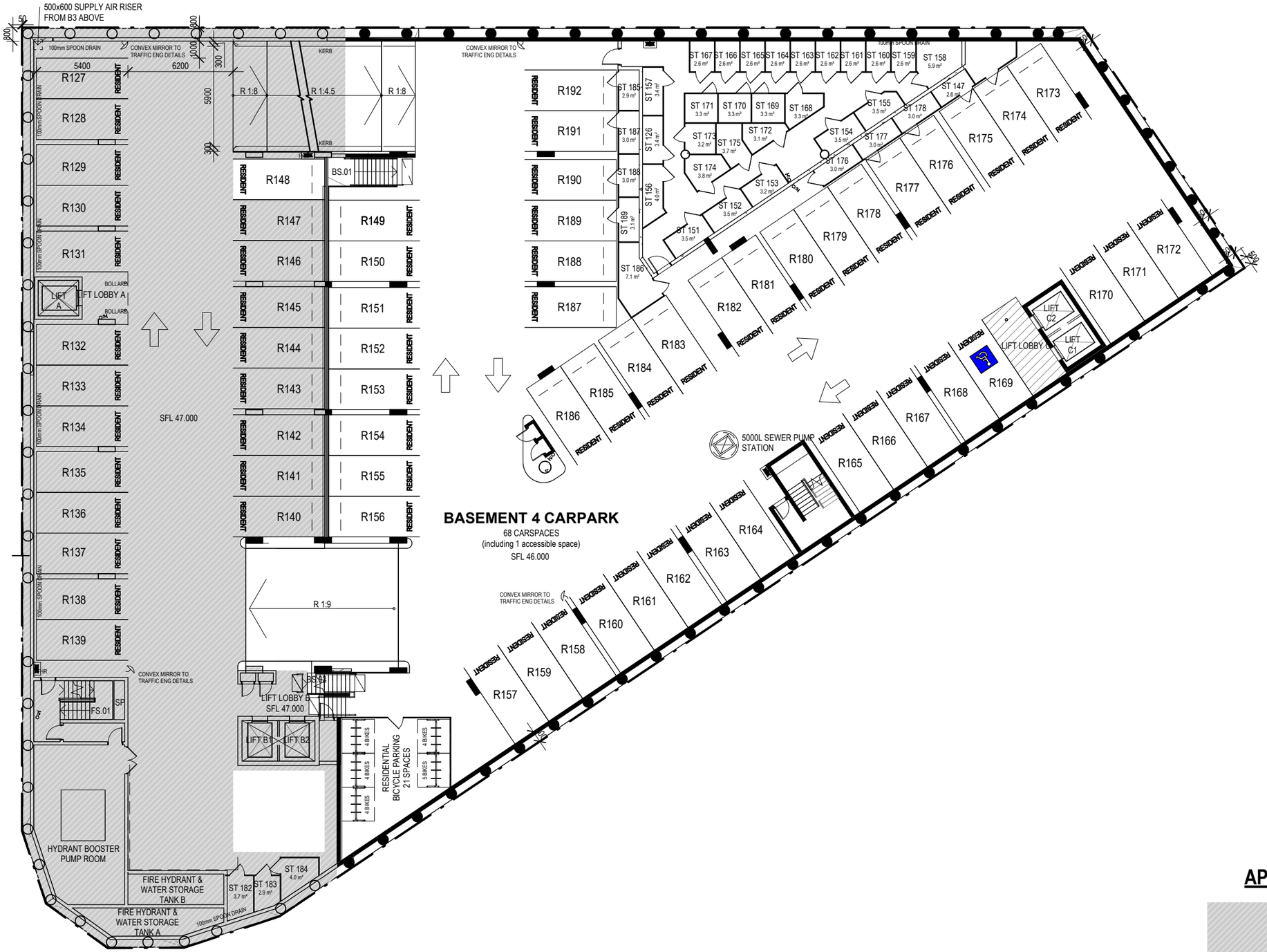
DRAWING NAME: BASEMENT 5 FLOOR PLAN

SCALE BAR: 0 2.5 5 7.5 10 12.5m

ISSUE DATE: 01.09.2025
DRAWN: SL/NT
SCALE: 1:250
QA: RG

PROJECT No. 2867
DWG No. 1.01
Rev. H

A3



BASEMENT 4 CARPARK

68 CARSPACES
(including 1 accessible space)
SFL 46.000

APPROVED DESIGN KEY

APPROVED DESIGN / PORTION OF DESIGN UNCHANGED

BASEMENT LEVEL 4

1 : 250

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H	01.09.2025	SHDA LODGEMENT

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Nominated Architect:
Robert Gizzi (Reg. 8286)

CLIENT: TQMDC
LOTUS, HURSTVILLE

ADDRESS: 105 FOREST RD & 1A HILL ST, HURSTVILLE

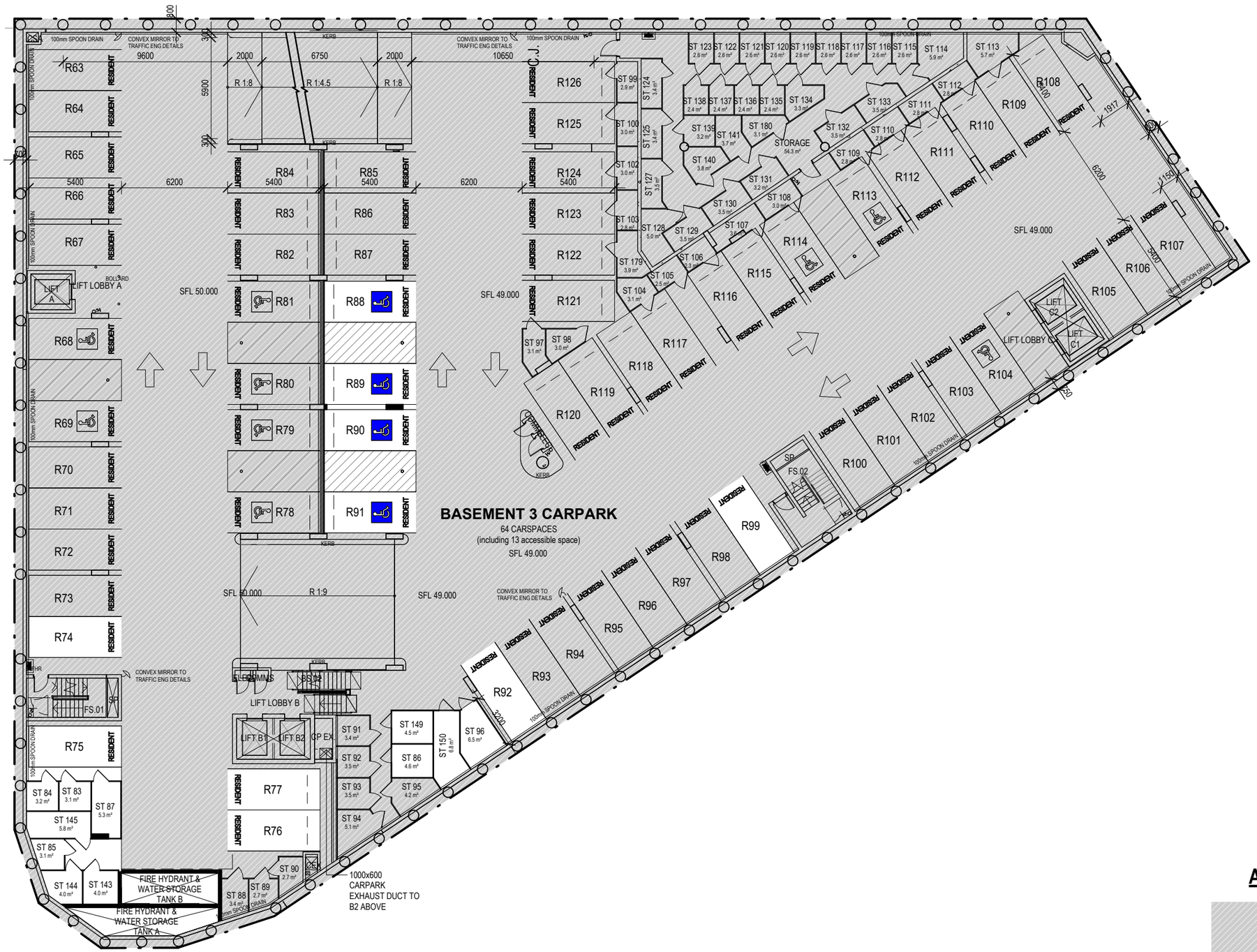
DRAWING NAME: BASEMENT 4 FLOOR PLAN

SCALE BAR: 0 2.5 5 7.5 10 12.5m

ISSUE DATE: 01.09.2025
DRAWN: SL/NT
SCALE: 1:250
QA: RG

PROJECT No. 2867
DWG No. 1.02
Rev. H

A3


BASEMENT 3 CARPARK
64 CARSPACES
(including 13 accessible space)
SFL 49.000
SFL 50.000
SFL 49.000
SFL 50.000
R 1:9
R 1:8
R 1:4.5
R 1:8
9600
2000
6750
2000
10650
5900
300
5400
6200
5400
6200
5400
LIFT LOBBY A
LIFT LOBBY B
LIFT LOBBY C
LIFT A
LIFT B1
LIFT B2
LIFT C1
LIFT C2
STORAGE
54.3 m²
FS.01
FS.02
SP
SP
SP

APPROVED DESIGN KEY

APPROVED DESIGN / PORTION OF DESIGN UNCHANGED

BASEMENT LEVEL 2

1 : 250

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SHDA

REF.	DATE	AMENDMENT
H	01.09.2025	SHDA LODGEMENT

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Nominated Architect:
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CLIENT: TQMDC
LOTUS, HURSTVILLE

ADDRESS: 105 FOREST RD & 1A HILL ST, HURSTVILLE

DRAWING NAME: BASEMENT 2 FLOOR PLAN

SCALE BAR: 0 2.5 5 7.5 10 12.5m

ISSUE DATE: 01.09.2025
DRAWN: SL/NT
SCALE: 1:250
QA: RG

PROJECT No. 2867
DWG No. 1.04
Rev. H

A3

BASEMENT LEVEL 1

1 : 250

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REF.	DATE	AMENDMENT
H	01.09.2025	SHDA LODGEMENT

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Nominated Architect:
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CLIENT: TQMDC
LOTUS, HURSTVILLE

ADDRESS: 105 FOREST RD & 1A HILL ST, HURSTVILLE

DRAWING NAME: BASEMENT 1 FLOOR PLAN

SCALE BAR: 0 2.5 5 7.5 10 12.5m

ISSUE DATE: 01.09.2025
DRAWN: SL/NT
SCALE: 1:250
QA: RG

PROJECT No. 2867
DWG No. 1.05
Rev. H

A3

FOREST ROAD

HILL STREET

REMOVE EXISTING BUS SHELTER AND RELOCATE SEATING

GROUND FLOOR

1 : 250

APPROVED DESIGN KEY

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REF.	DATE	AMENDMENT
H	01.09.2025	SHDA LODGEMENT

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Nominated Architect:
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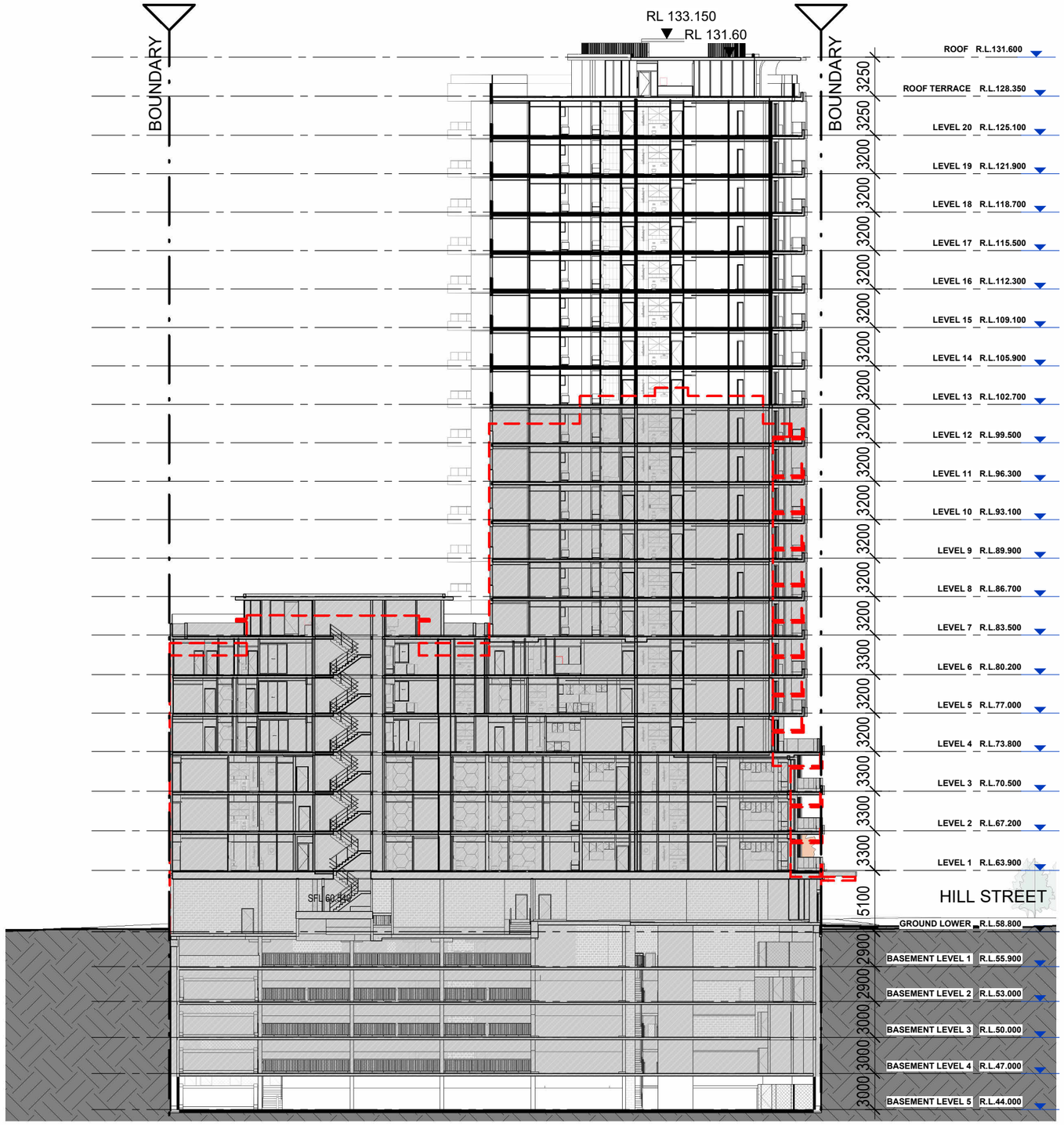
CLIENT:	TQMDC LOTUS, HURSTVILLE
ADDRESS:	105 FOREST RD & 1A HILL ST, HURSTVILLE
DRAWING NAME:	GROUND FLOOR PLAN

SCALE BAR: 0 2.5 5 7.5 10 12.5m

ISSUE DATE:	01.09.2025
DRAWN:	SL/NT
SCALE:	1:250
QA:	RG
PROJECT No.	2867
DWG No.	1.06
Rev.	H

A3



S4.55(3) - SECTION A-A

1 : 400

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REF.	DATE	AMENDMENT
H	01.09.2025	SHDA LODGEMENT

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CLIENT: TQMDC
LOTUS, HURSTVILLE

ADDRESS: 105 FOREST RD & 1A HILL ST, HURSTVILLE

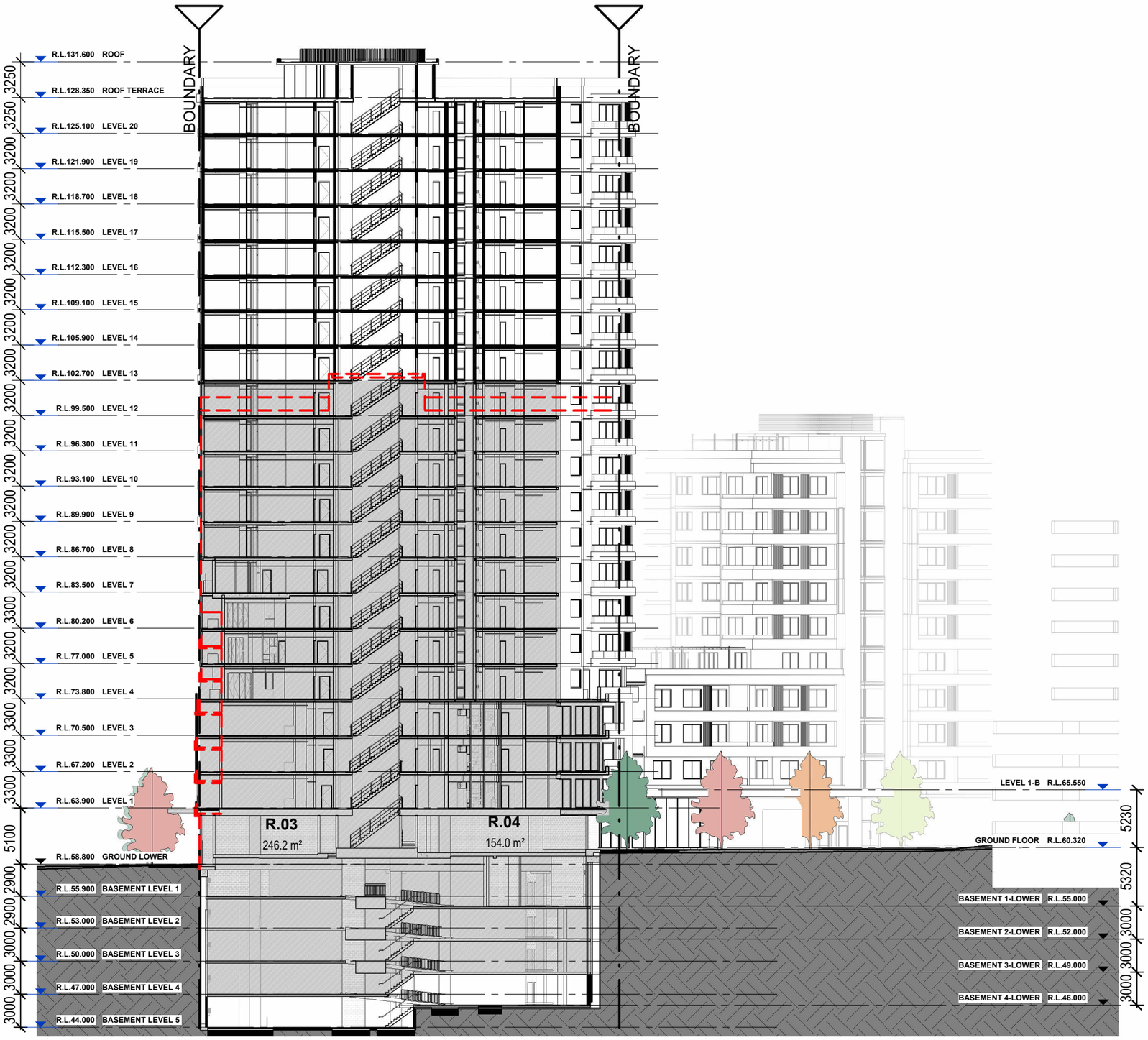
DRAWING NAME: SECTION A-A

SCALE BAR: 0 10 20m

ISSUE DATE: 01.09.2025
DRAWN: SL/NT
SCALE: 1:400
QA: RG

PROJECT No. 2867
DWG No. 3.04
Rev. H

A3



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APPROVED DESIGN / PORTION OF DESIGN UNCHANGED

S4.55(3) - SECTION B-B

1 : 400

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SHDA

REF.	DATE	AMENDMENT
H	01.09.2025	SHDA LODGEMENT

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CLIENT: TQMDC
LOTUS, HURSTVILLE

ADDRESS: 105 FOREST RD & 1A HILL ST, HURSTVILLE

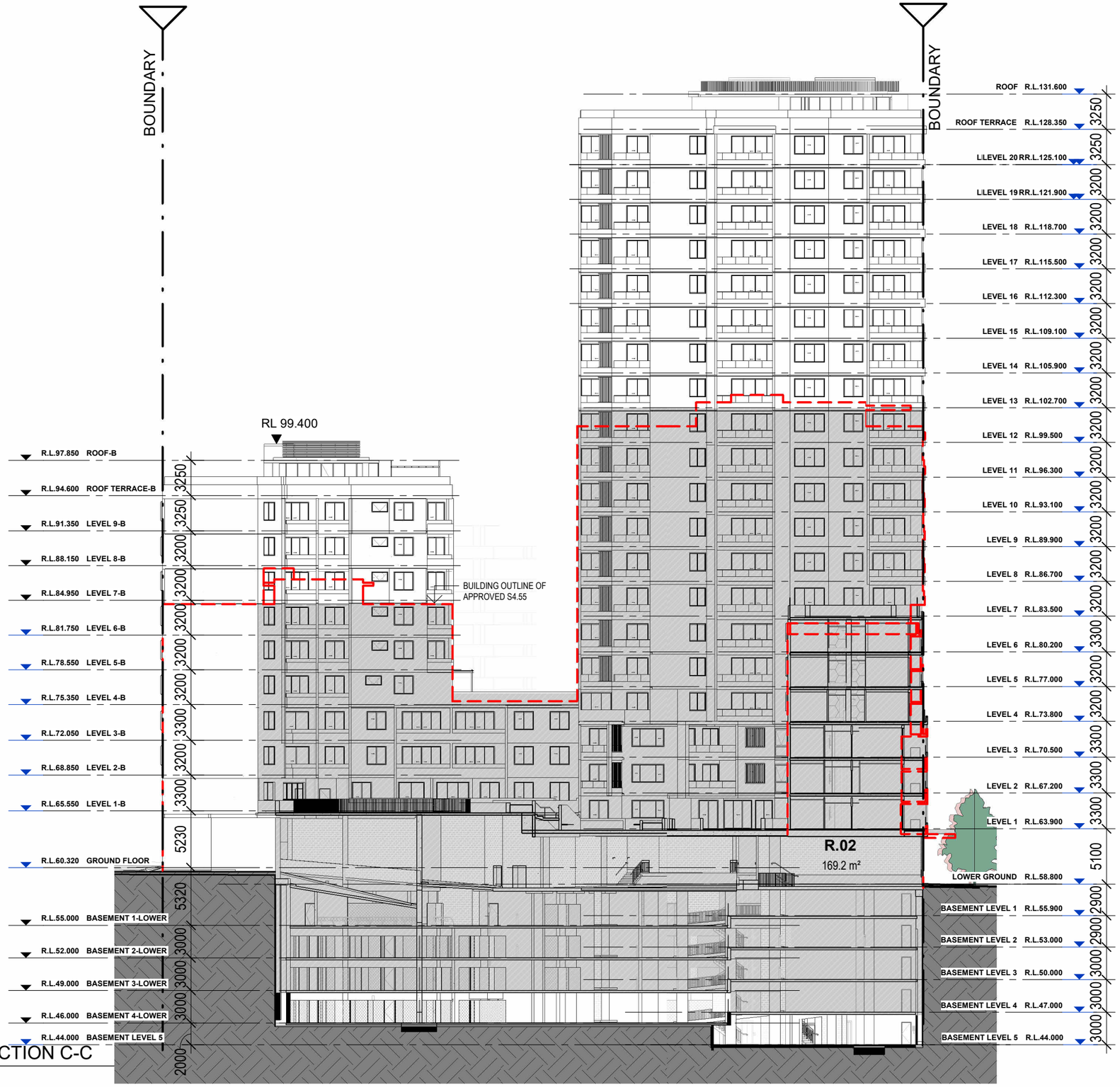
DRAWING NAME: SECTION B-B

SCALE BAR: 0 10 20m

ISSUE DATE: 01.09.2025
DRAWN: SL/NT
SCALE: 1:400
QA: RG

PROJECT No. 2867
DWG No. 3.05
Rev. H

A3



S4.55(3) - SECTION C-C

1 : 400

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SHDA

REF.	DATE	AMENDMENT
H	01.09.2025	SHDA LODGEMENT

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Nominated Architect:
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CLIENT: TQMDC
LOTUS, HURSTVILLE

ADDRESS: 105 FOREST RD & 1A HILL ST, HURSTVILLE

DRAWING NAME: SECTION C-C

SCALE BAR: 0 10 20m

ISSUE DATE: 01.09.2025
DRAWN: SL/NT
SCALE: 1:400
QA: RG

PROJECT No. 2867
DWG No. 3.06
Rev. H

A3

Attachment 3

Traffic Survey

Location	-	Duration	7:00	-	09:00
	Forest Road			-	
	Hill Street		16:00	-	18:00
	Forest Road	Date	Tuesday, 22 July 2025		
Suburb	HURSTVILLE	Weather	Dry		

All Vehicles Time Per 15 Mins		NORTH -										EAST *Forest Road*											
		L			T			R				L			T			R				TOTAL	
		LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	TOTAL	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	TOTAL	LIGHT	HEAVY	TOTAL
7:00	7:15											32	2	**34**	8	4	**12**				**46**	131	14	**145**
7:15	7:30											33	2	**35**	7	4	**11**				**46**	158	10	**168**
7:30	7:45											46	0	**46**	11	2	**13**				**59**	211	9	**220**
7:45	8:00											49	1	**50**	14	3	**17**				**67**	228	15	**243**
8:00	8:15											72	1	**73**	27	3	**30**				**103**	322	8	**330**
8:15	8:30											90	0	**90**	31	2	**33**				**123**	357	13	**370**
8:30	8:45											114	0	**114**	40	5	**45**				**159**	367	10	**377**
8:45	9:00											119	1	**120**	37	0	**37**				**157**	341	5	**346**
Period End												**555**	**7**	**562**	**175**	**23**	**198**				**760**	**2115**	**84**	**2199**
16:00	16:15											121	7	**128**	42	0	**42**				**170**	359	10	**369**
16:15	16:30											121	3	**124**	38	1	**39**				**163**	351	8	**359**
16:30	16:45											112	1	**113**	32	3	**35**				**148**	339	8	**347**
16:45	17:00											117	4	**121**	42	0	**42**				**163**	342	6	**348**
17:00	17:15											121	1	**122**	50	3	**53**				**175**	401	9	**410**
17:15	17:30											127	1	**128**	45	0	**45**				**173**	363	4	**367**
17:30	17:45											134	3	**137**	31	3	**34**				**171**	347	8	**355**
17:45	18:00											130	3	**133**	35	0	**35**				**168**	347	7	**354**
Period End												**983**	**23**	**1006**	**315**	**10**	**325**				**1331**	**2849**	**60**	**2909**

All Vehicles Time Per 15 Mins		SOUTH *Hill Street*										WEST *Forest Road*											
		L			T			R				L			T			R				TOTAL	
		LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	TOTAL	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	TOTAL	LIGHT	HEAVY	TOTAL
7:00	7:15														85	8	**93**	6	0	**6**	**99**	131	14	**145**
7:15	7:30														112	4	**116**	6	0	**6**	**122**	158	10	**168**
7:30	7:45														148	7	**155**	6	0	**6**	**161**	211	9	**220**
7:45	8:00														162	11	**173**	3	0	**3**	**176**	228	15	**243**
8:00	8:15														215	4	**219**	8	0	**8**	**227**	322	8	**330**
8:15	8:30														227	11	**238**	9	0	**9**	**247**	357	13	**370**
8:30	8:45														199	5	**204**	14	0	**14**	**218**	367	10	**377**
8:45	9:00														174	4	**178**	11	0	**11**	**189**	341	5	**346**
Period End															**1322**	**54**	**1376**	**63**	**0**	**63**	**1439**	**2115**	**84**	**2199**
16:00	16:15														182	3	**185**	14	0	**14**	**199**	359	10	**369**
16:15	16:30														180	4	**184**	12	0	**12**	**196**	351	8	**359**
16:30	16:45														183	4	**187**	12	0	**12**	**199**	339	8	**347**
16:45	17:00														176	2	**178**	7	0	**7**	**185**	342	6	**348**
17:00	17:15														212	4	**216**	18	1	**19**	**235**	401	9	**410**
17:15	17:30														178	3	**181**	13	0	**13**	**194**	363	4	**367**
17:30	17:45														174	2	**176**	8	0	**8**	**184**	347	8	**355**
17:45	18:00														166	4	**170**	16	0	**16**	**186**	347	7	**354**
Period End															**1451**	**26**	**1477**	**100**	**1**	**101**	**1578**	**2849**	**60**	**2909**

Location	-	**Duration**	7:00	-	09:00
	Forest Road			-	
	Hill Street		16:00	-	18:00
	Forest Road	**Date**	Tuesday, 22 July 2025		
Suburb	HURSTVILLE	**Weather**	Dry		

All Vehicles Time Per Hour	NORTH -										EAST Forest Road										TOTAL	
	L			T			R				L			T			R					
	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	TOTAL	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	TOTAL	LIGHT	HEAVY	TOTAL
7:00 - 8:00											160	5	**165**	40	13	**53**				**218**	728	48	**776**
7:15 - 8:15											200	4	**204**	59	12	**71**				**275**	919	42	**961**
7:30 - 8:30											257	2	**259**	83	10	**93**				**352**	1118	45	**1163**
7:45 - 8:45											325	2	**327**	112	13	**125**				**452**	1274	46	**1320**
8:00 - 9:00											395	2	**397**	135	10	**145**				**542**	1387	36	**1423**
Period End																							
16:00 - 17:00											471	15	**486**	154	4	**158**				**644**	1391	32	**1423**
16:15 - 17:15											471	9	**480**	162	7	**169**				**649**	1433	31	**1464**
16:30 - 17:30											477	7	**484**	169	6	**175**				**659**	1445	27	**1472**
16:45 - 17:45											499	9	**508**	168	6	**174**				**682**	1453	27	**1480**
17:00 - 18:00											512	8	**520**	161	6	**167**				**687**	1458	28	**1486**
Period End																							

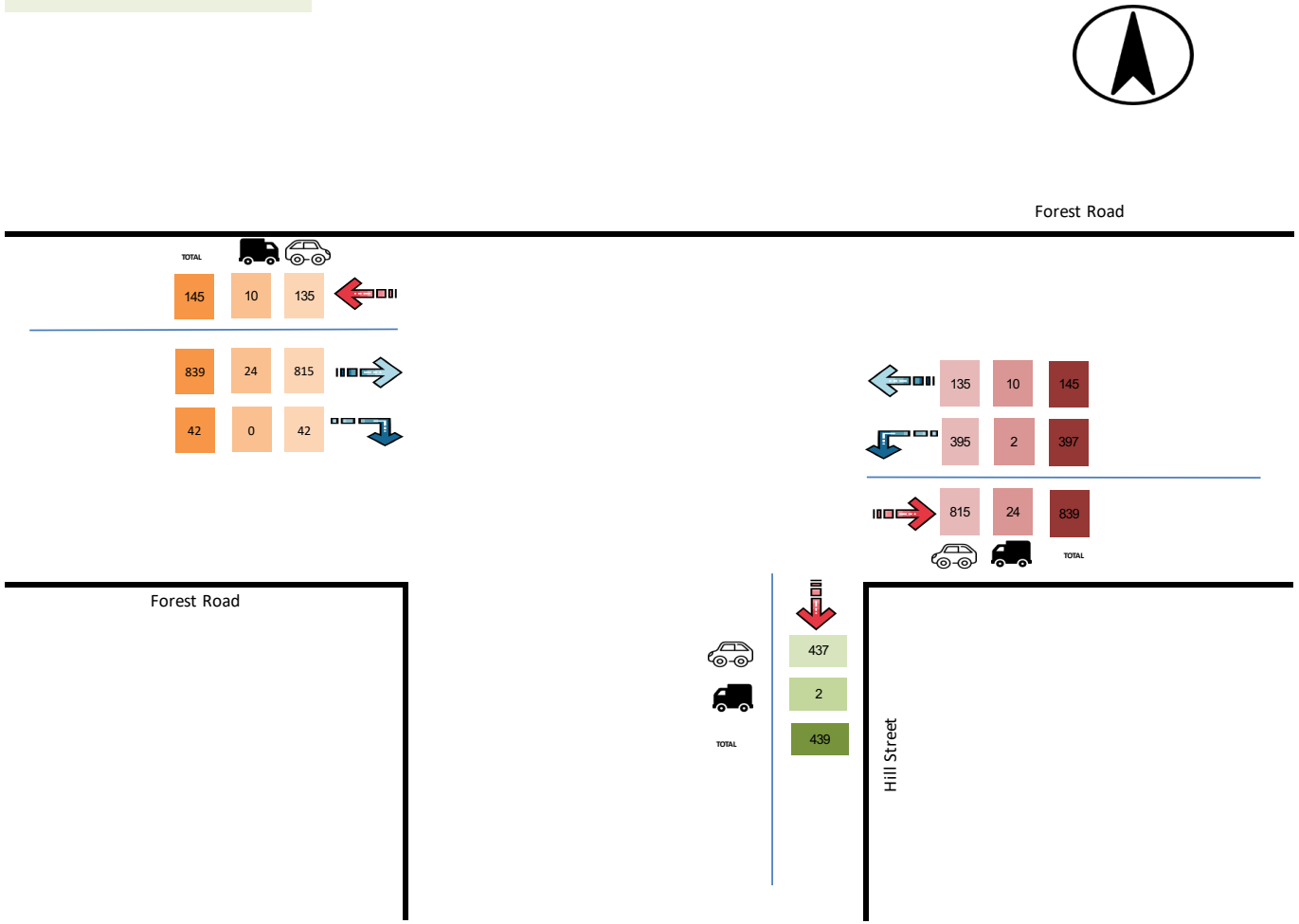
All Vehicles Time Per Hour	SOUTH Hill Street										WEST Forest Road										TOTAL	
	L			T			R				L			T			R					
	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	TOTAL	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	TOTAL	LIGHT	HEAVY	TOTAL
7:00 - 8:00														507	30	**537**	21	0	**21**	**558**	728	48	**776**
7:15 - 8:15														637	26	**663**	23	0	**23**	**686**	919	42	**961**
7:30 - 8:30														752	33	**785**	26	0	**26**	**811**	1118	45	**1163**
7:45 - 8:45														803	31	**834**	34	0	**34**	**868**	1274	46	**1320**
8:00 - 9:00														815	24	**839**	42	0	**42**	**881**	1387	36	**1423**
Period End																							
16:00 - 17:00														721	13	**734**	45	0	**45**	**779**	1391	32	**1423**
16:15 - 17:15														751	14	**765**	49	1	**50**	**815**	1433	31	**1464**
16:30 - 17:30														749	13	**762**	50	1	**51**	**813**	1445	27	**1472**
16:45 - 17:45														740	11	**751**	46	1	**47**	**798**	1453	27	**1480**
17:00 - 18:00														730	13	**743**	55	1	**56**	**799**	1458	28	**1486**
Period End																							

Location	-		**Duration**	**7:00**	-	**09:00**
	Forest Road				-	
	Hill Street			**16:00**	-	**18:00**
	Forest Road		**Date**	**Tuesday, 22 July 2025**		
Suburb	**HURSTVILLE**		**Weather**	**Dry**		

DATA SELECTION

Select Time: PEAK

TIME RANGE		
PEAK	-	**AM**
PEAK		
8:00	-	**9:00**



Traffic Information Specialist

ABN: 42 613 389 923

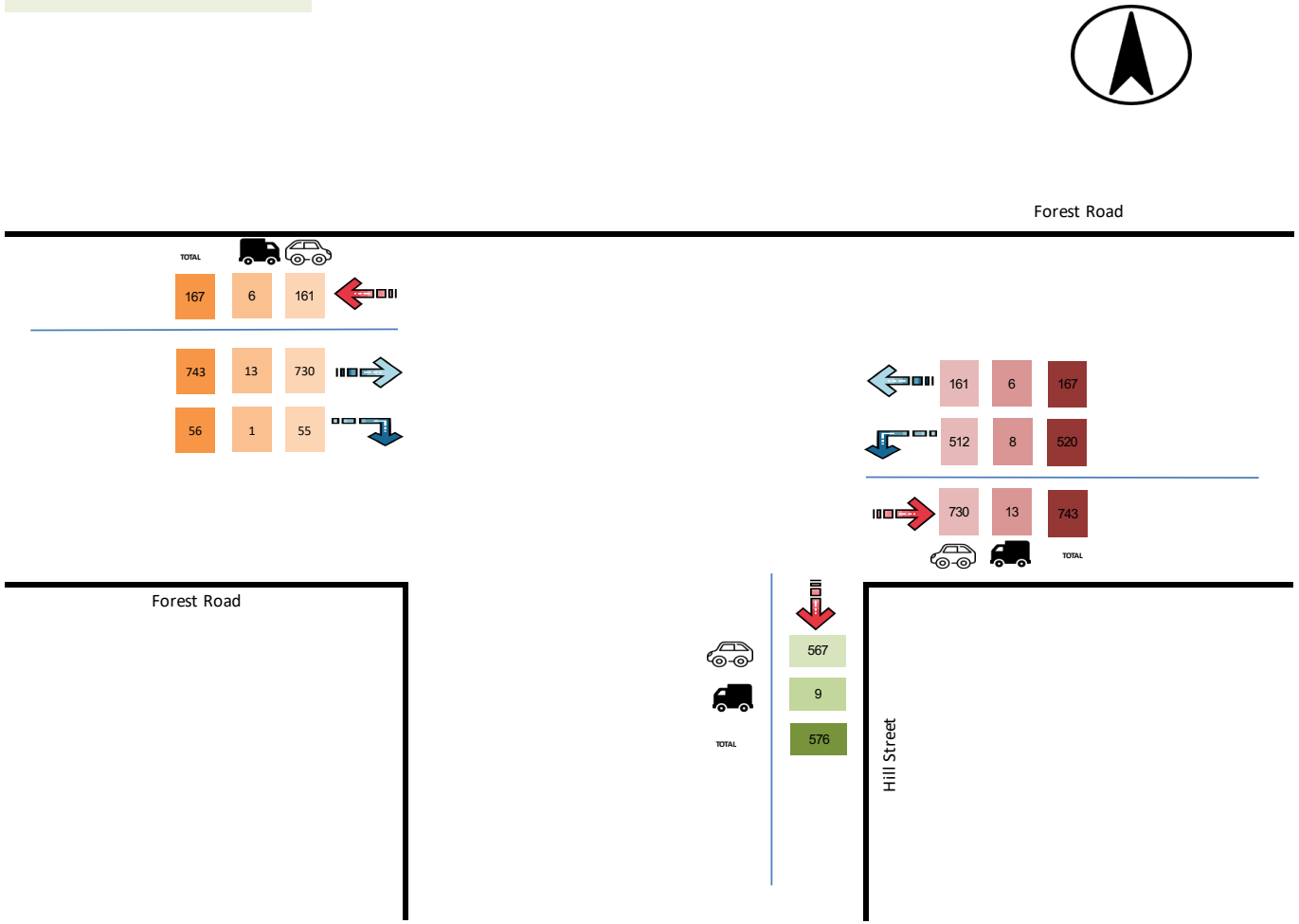
Email info@tistraffic.com.au

Location	-		**Duration**	**7:00**	-	**09:00**
	Forest Road				-	
	Hill Street			**16:00**	-	**18:00**
	Forest Road		**Date**	**Tuesday, 22 July 2025**		
Suburb	**HURSTVILLE**		**Weather**	**Dry**		

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

Location	Park Road	Duration	7:00	-	09:00
	Forest Road			-	
	Alfred Street		16:00	-	18:00
	Forest Road	Date	Tuesday, 22 July 2025		
Suburb	HURSTVILLE	Weather	Dry		

All Vehicles Time Per 15 Mins	NORTH Park Road										EAST Forest Road											
	L			T			R				L			T			R				TOTAL	
	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	TOTAL	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	TOTAL	LIGHT	HEAVY	TOTAL
7:00 - 7:15																	6	4	10	10	134	19	153
7:15 - 7:30																	7	4	11	11	167	12	179
7:30 - 7:45																	11	2	13	13	209	23	232
7:45 - 8:00																	15	2	17	17	282	19	301
8:00 - 8:15																	22	3	25	25	363	16	379
8:15 - 8:30																	28	2	30	30	349	27	376
8:30 - 8:45																	30	4	34	34	353	18	371
8:45 - 9:00																	35	2	37	37	363	17	380
Period End																	**154**	**23**	**177**	**177**	**2220**	**151**	**2371**
16:00 - 16:15																	41	1	42	42	346	14	360
16:15 - 16:30																	38	1	39	39	301	18	319
16:30 - 16:45																	31	2	33	33	260	15	275
16:45 - 17:00																	45	1	46	46	292	18	310
17:00 - 17:15																	43	3	46	46	305	14	319
17:15 - 17:30																	49	0	49	49	303	16	319
17:30 - 17:45																	27	2	29	29	280	11	291
17:45 - 18:00																	34	0	34	34	291	14	305
Period End																	**308**	**10**	**318**	**318**	**2378**	**120**	**2498**

All Vehicles Time Per 15 Mins	SOUTH Alfred Street										WEST Forest Road											
	L			T			R				L			T			R				TOTAL	
	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	TOTAL	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	TOTAL	LIGHT	HEAVY	TOTAL
7:00 - 7:15				24	0	**24**	11	0	**11**	**35**	32	9	**41**	61	6	**67**				**108**	134	19	**153**
7:15 - 7:30				29	1	**30**	3	0	**3**	**33**	28	4	**32**	100	3	**103**				**135**	167	12	**179**
7:30 - 7:45				34	2	**36**	17	0	**17**	**53**	43	11	**54**	104	8	**112**				**166**	209	23	**232**
7:45 - 8:00				58	1	**59**	14	2	**16**	**75**	64	7	**71**	131	7	**138**				**209**	282	19	**301**
8:00 - 8:15				72	2	**74**	22	1	**23**	**97**	82	9	**91**	165	1	**166**				**257**	363	16	**379**
8:15 - 8:30				57	1	**58**	18	1	**19**	**77**	77	12	**89**	169	11	**180**				**269**	349	27	**376**
8:30 - 8:45				106	2	**108**	29	0	**29**	**137**	64	8	**72**	124	4	**128**				**200**	353	18	**371**
8:45 - 9:00				102	1	**103**	26	0	**26**	**129**	79	8	**87**	121	6	**127**				**214**	363	17	**380**
Period End				**482**	**10**	**492**	**140**	**4**	**144**	**636**	**469**	**68**	**537**	**975**	**46**	**1021**				**1558**	**2220**	**151**	**2371**
16:00 - 16:15				78	4	**82**	13	1	**14**	**96**	72	6	**78**	142	2	**144**				**222**	346	14	**360**
16:15 - 16:30				61	1	**62**	10	1	**11**	**73**	74	11	**85**	118	4	**122**				**207**	301	18	**319**
16:30 - 16:45				62	2	**64**	13	0	**13**	**77**	49	9	**58**	105	2	**107**				**165**	260	15	**275**
16:45 - 17:00				74	1	**75**	15	0	**15**	**90**	58	12	**70**	100	4	**104**				**174**	292	18	**310**
17:00 - 17:15				64	1	**65**	18	0	**18**	**83**	67	6	**73**	113	4	**117**				**190**	305	14	**319**
17:15 - 17:30				73	1	**74**	12	0	**12**	**86**	41	12	**53**	128	3	**131**				**184**	303	16	**319**
17:30 - 17:45				57	1	**58**	4	0	**4**	**62**	68	6	**74**	124	2	**126**				**200**	280	11	**291**
17:45 - 18:00				66	1	**67**	10	1	**11**	**78**	56	9	**65**	125	3	**128**				**193**	291	14	**305**
Period End				**535**	**12**	**547**	**95**	**3**	**98**	**645**	**485**	**71**	**556**	**955**	**24**	**979**				**1535**	**2378**	**120**	**2498**

Location	**Park Road**		**Duration**	**7:00**	**-**	**09:00**
	Forest Road				**-**	
	Alfred Street			**16:00**	**-**	**18:00**
	Forest Road		**Date**	**Tuesday, 22 July 2025**		
Suburb	**HURSTVILLE**		**Weather**	**Dry**		

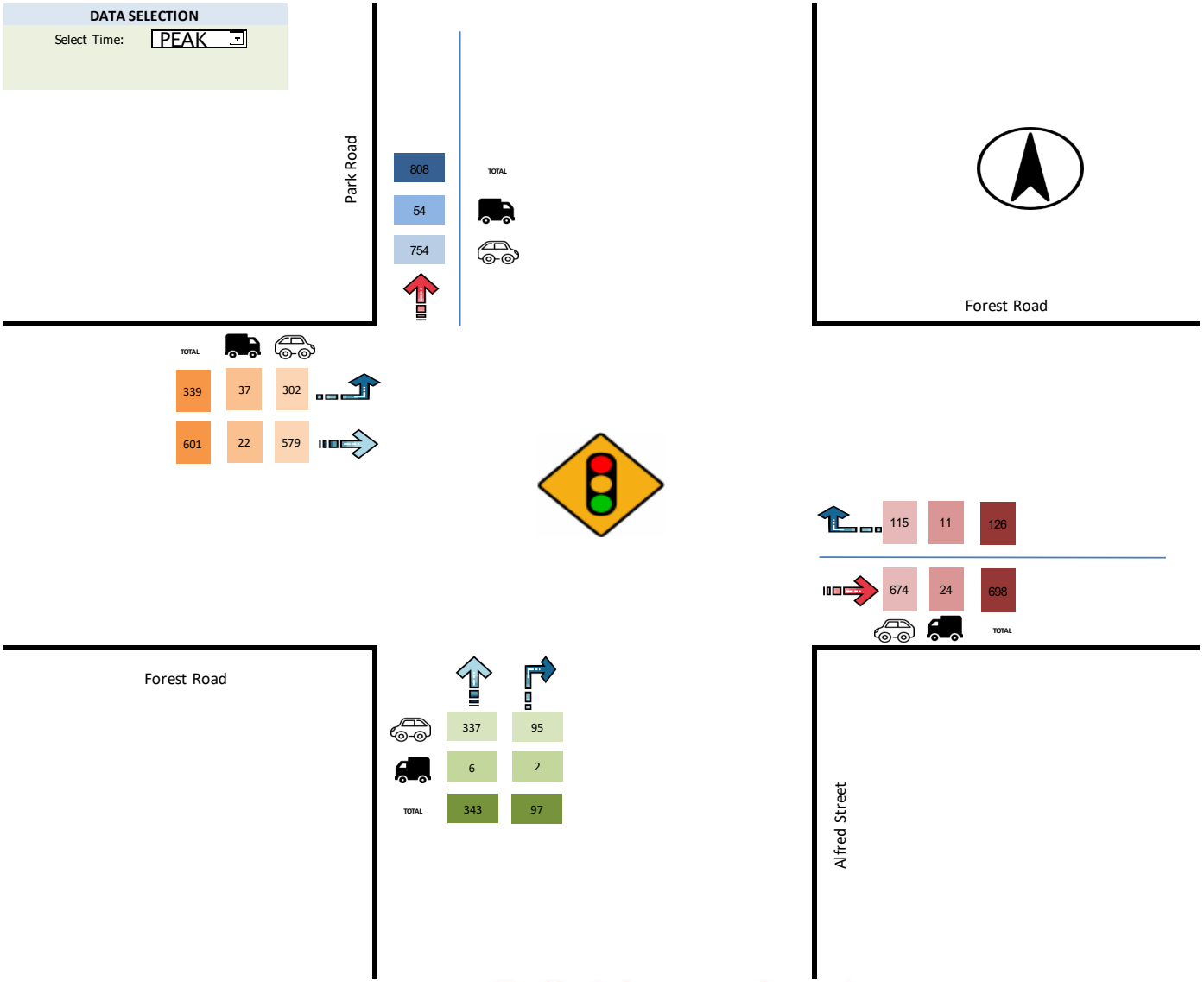
All Vehicles Time Per Hour	**NORTH** *Park Road*										**EAST** *Forest Road*											
	L			T			R				L			T			R				TOTAL	
	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	TOTAL	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	TOTAL	LIGHT	HEAVY	TOTAL
7:00 - 8:00																	39	12	**51**	**51**	792	73	**865**
7:15 - 8:15																	55	11	**66**	**66**	1021	70	**1091**
7:30 - 8:30																	76	9	**85**	**85**	1203	85	**1288**
7:45 - 8:45																	95	11	**106**	**106**	1347	80	**1427**
8:00 - 9:00																	115	11	**126**	**126**	1428	78	**1506**
Period End																							
16:00 - 17:00																	155	5	**160**	**160**	1199	65	**1264**
16:15 - 17:15																	157	7	**164**	**164**	1158	65	**1223**
16:30 - 17:30																	168	6	**174**	**174**	1160	63	**1223**
16:45 - 17:45																	164	6	**170**	**170**	1180	59	**1239**
17:00 - 18:00																	153	5	**158**	**158**	1179	55	**1234**
Period End																							

All Vehicles Time Per Hour	**SOUTH** *Alfred Street*										**WEST** *Forest Road*											
	L			T			R				L			T			R				TOTAL	
	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	TOTAL	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	TOTAL	LIGHT	HEAVY	TOTAL
7:00 - 8:00				145	4	**149**	45	2	**47**	**196**	167	31	**198**	396	24	**420**				**618**	792	73	**865**
7:15 - 8:15				193	6	**199**	56	3	**59**	**258**	217	31	**248**	500	19	**519**				**767**	1021	70	**1091**
7:30 - 8:30				221	6	**227**	71	4	**75**	**302**	266	39	**305**	569	27	**596**				**901**	1203	85	**1288**
7:45 - 8:45				293	6	**299**	83	4	**87**	**386**	287	36	**323**	589	23	**612**				**935**	1347	80	**1427**
8:00 - 9:00				337	6	**343**	95	2	**97**	**440**	302	37	**339**	579	22	**601**				**940**	1428	78	**1506**
Period End																							
16:00 - 17:00				275	8	**283**	51	2	**53**	**336**	253	38	**291**	465	12	**477**				**768**	1199	65	**1264**
16:15 - 17:15				261	5	**266**	56	1	**57**	**323**	248	38	**286**	436	14	**450**				**736**	1158	65	**1223**
16:30 - 17:30				273	5	**278**	58	0	**58**	**336**	215	39	**254**	446	13	**459**				**713**	1160	63	**1223**
16:45 - 17:45				268	4	**272**	49	0	**49**	**321**	234	36	**270**	465	13	**478**				**748**	1180	59	**1239**
17:00 - 18:00				260	4	**264**	44	1	**45**	**309**	232	33	**265**	490	12	**502**				**767**	1179	55	**1234**
Period End																							

Location	**Park Road**	**Duration**	**7:00**	**-**	**09:00**
	Forest Road			**-**	
	Alfred Street		**16:00**	**-**	**18:00**
	Forest Road	**Date**	**Tuesday, 22 July 2025**		
Suburb	**HURSTVILLE**	**Weather**	**Dry**		

DATA SELECTION	
Select Time:	PEAK

TIME RANGE		
PEAK	**-**	**AM**
PEAK		
8:00	**-**	**9:00**



Traffic Information Specialist

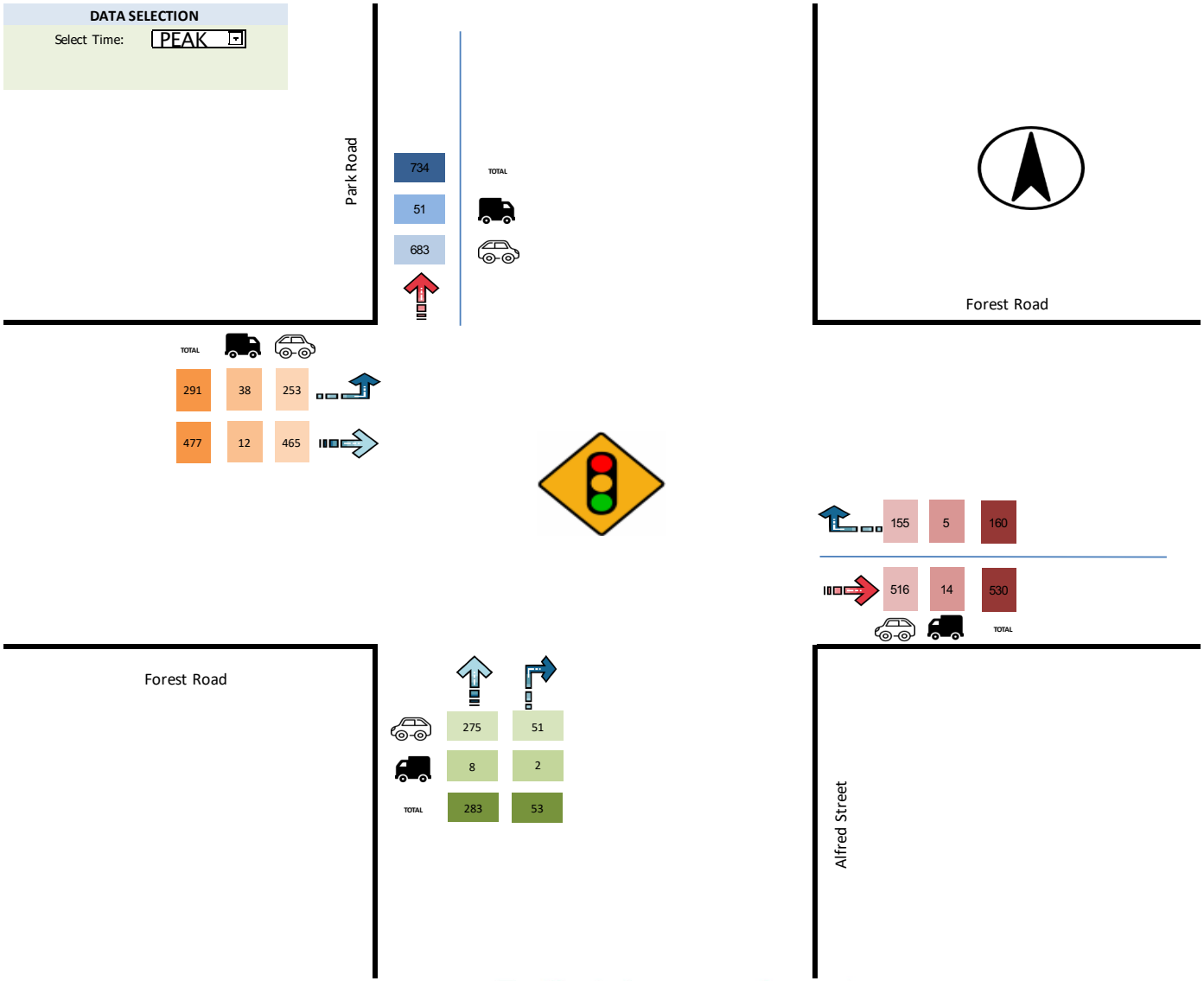
ABN: 42 613 389 923

Email info@tistraffic.com.au

Location	**Park Road**	**Duration**	**7:00**	**-**	**09:00**
	Forest Road			**-**	
	Alfred Street		**16:00**	**-**	**18:00**
	Forest Road	**Date**	**Tuesday, 22 July 2025**		
Suburb	**HURSTVILLE**	**Weather**	**Dry**		

DATA SELECTION	
Select Time:	PEAK

TIME RANGE		
PEAK	**-**	**PM**
PEAK		
16:00	**-**	**17:00**



Traffic Information Specialist

ABN: 42 613 389 923

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Location	The Avenue		**Duration**	7:00 - 09:00	
	Forest Road			-	
	The Avenue			16:00 - 18:00	
	Forest Road		**Date**	Tuesday, 22 July 2025	
Suburb	HURSTVILLE		**Weather**	Dry	

All Vehicles Time Per 15 Mins	NORTH *The Avenue*										EAST *Forest Road*											
	L			T			R				L			T			R				TOTAL	
	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	TOTAL	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	TOTAL	LIGHT	HEAVY	TOTAL
7:00 - 7:15	18	1	**19**	15	2	**17**				**36**				7	4	**11**				**11**	114	12	**126**
7:15 - 7:30	25	1	**26**	25	0	**25**				**51**				6	4	**10**				**10**	161	7	**168**
7:30 - 7:45	31	0	**31**	32	0	**32**				**63**				12	2	**14**				**14**	192	10	**202**
7:45 - 8:00	27	2	**29**	30	1	**31**				**60**				17	2	**19**				**19**	225	12	**237**
8:00 - 8:15	47	2	**49**	68	1	**69**				**118**				24	2	**26**				**26**	315	9	**324**
8:15 - 8:30	65	1	**66**	62	3	**65**				**131**				30	2	**32**				**32**	351	18	**369**
8:30 - 8:45	79	2	**81**	97	0	**97**				**178**				29	4	**33**				**33**	355	10	**365**
8:45 - 9:00	53	1	**54**	79	3	**82**				**136**				37	1	**38**				**38**	325	11	**336**
Period End	**345**	**10**	**355**	**408**	**10**	**418**				**773**				**162**	**21**	**183**				**183**	**2038**	**89**	**2127**
16:00 - 16:15	100	2	**102**	87	0	**87**				**189**				38	0	**38**				**38**	384	7	**391**
16:15 - 16:30	104	0	**104**	102	0	**102**				**206**				35	1	**36**				**36**	367	5	**372**
16:30 - 16:45	108	1	**109**	88	0	**88**				**197**				33	2	**35**				**35**	362	7	**369**
16:45 - 17:00	88	0	**88**	94	0	**94**				**182**				46	1	**47**				**47**	350	5	**355**
17:00 - 17:15	149	1	**150**	90	2	**92**				**242**				48	3	**51**				**51**	408	10	**418**
17:15 - 17:30	98	0	**98**	94	0	**94**				**192**				44	0	**44**				**44**	371	3	**374**
17:30 - 17:45	93	1	**94**	109	0	**109**				**203**				28	3	**31**				**31**	373	6	**379**
17:45 - 18:00	87	0	**87**	85	0	**85**				**172**				36	0	**36**				**36**	342	3	**345**
Period End	**827**	**5**	**832**	**749**	**2**	**751**				**1583**				**308**	**10**	**318**				**318**	**2957**	**46**	**3003**

All Vehicles Time Per 15 Mins	SOUTH *The Avenue*										WEST *Forest Road*											
	L			T			R				L			T			R				TOTAL	
	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	TOTAL	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	TOTAL	LIGHT	HEAVY	TOTAL
7:00 - 7:15														69	5	**74**	5	0	**5**	**79**	114	12	**126**
7:15 - 7:30														98	2	**100**	7	0	**7**	**107**	161	7	**168**
7:30 - 7:45														111	7	**118**	6	1	**7**	**125**	192	10	**202**
7:45 - 8:00														143	7	**150**	8	0	**8**	**158**	225	12	**237**
8:00 - 8:15														169	4	**173**	7	0	**7**	**180**	315	9	**324**
8:15 - 8:30														184	9	**193**	10	3	**13**	**206**	351	18	**369**
8:30 - 8:45														138	3	**141**	12	1	**13**	**154**	355	10	**365**
8:45 - 9:00														143	5	**148**	13	1	**14**	**162**	325	11	**336**
Period End														**1055**	**42**	**1097**	**68**	**6**	**74**	**1171**	**2038**	**89**	**2127**
16:00 - 16:15														101	4	**105**	58	1	**59**	**164**	384	7	**391**
16:15 - 16:30														87	4	**91**	39	0	**39**	**130**	367	5	**372**
16:30 - 16:45														98	4	**102**	35	0	**35**	**137**	362	7	**369**
16:45 - 17:00														95	2	**97**	27	2	**29**	**126**	350	5	**355**
17:00 - 17:15														94	4	**98**	27	0	**27**	**125**	408	10	**418**
17:15 - 17:30														105	3	**108**	30	0	**30**	**138**	371	3	**374**
17:30 - 17:45														98	1	**99**	45	1	**46**	**145**	373	6	**379**
17:45 - 18:00														93	3	**96**	41	0	**41**	**137**	342	3	**345**
Period End														**771**	**25**	**796**	**302**	**4**	**306**	**1102**	**2957**	**46**	**3003**

Location	The Avenue	**Duration**	7:00	-	09:00
	Forest Road			-	
	The Avenue		16:00	-	18:00
	Forest Road	**Date**	Tuesday, 22 July 2025		
Suburb	HURSTVILLE	**Weather**	Dry		

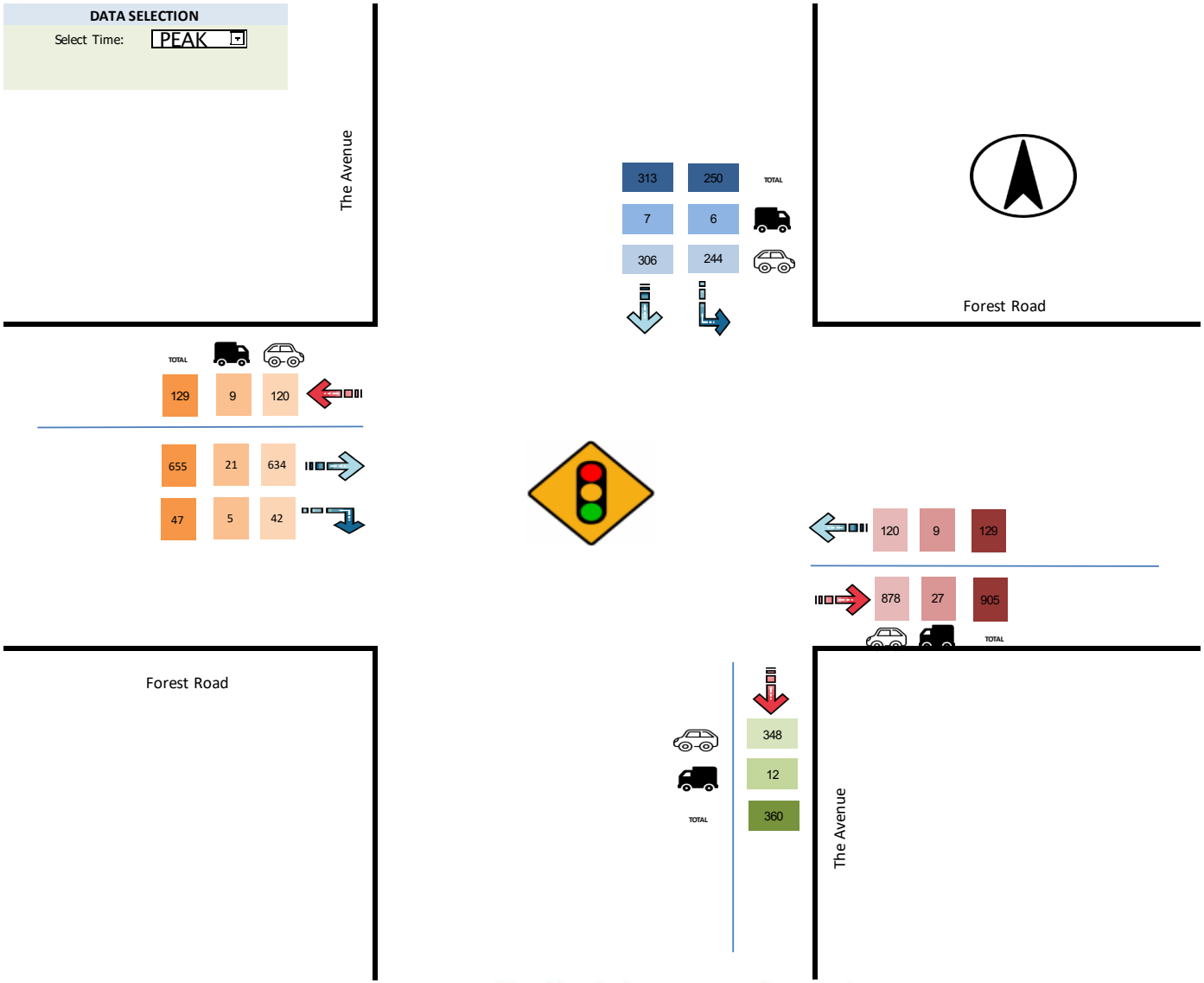
All Vehicles Time Per Hour	NORTH *The Avenue*										EAST *Forest Road*												
	L			T			R				L			T			R					TOTAL	
	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	TOTAL	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	TOTAL	LIGHT	HEAVY	TOTAL
7:00 - 8:00	101	4	**105**	102	3	**105**				**210**				42	12	**54**				**54**	692	41	**733**
7:15 - 8:15	130	5	**135**	155	2	**157**				**292**				59	10	**69**				**69**	893	38	**931**
7:30 - 8:30	170	5	**175**	192	5	**197**				**372**				83	8	**91**				**91**	1083	49	**1132**
7:45 - 8:45	218	7	**225**	257	5	**262**				**487**				100	10	**110**				**110**	1246	49	**1295**
8:00 - 9:00	244	6	**250**	306	7	**313**				**563**				120	9	**129**				**129**	1346	48	**1394**
Period End																							
16:00 - 17:00	400	3	**403**	371	0	**371**				**774**				152	4	**156**				**156**	1463	24	**1487**
16:15 - 17:15	449	2	**451**	374	2	**376**				**827**				162	7	**169**				**169**	1487	27	**1514**
16:30 - 17:30	443	2	**445**	366	2	**368**				**813**				171	6	**177**				**177**	1491	25	**1516**
16:45 - 17:45	428	2	**430**	387	2	**389**				**819**				166	7	**173**				**173**	1502	24	**1526**
17:00 - 18:00	427	2	**429**	378	2	**380**				**809**				156	6	**162**				**162**	1494	22	**1516**
Period End																							

All Vehicles Time Per Hour	SOUTH *The Avenue*										WEST *Forest Road*												
	L			T			R				L			T			R					TOTAL	
	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	TOTAL	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	TOTAL	LIGHT	HEAVY	TOTAL
7:00 - 8:00														421	21	**442**	26	1	**27**	**469**	692	41	**733**
7:15 - 8:15														521	20	**541**	28	1	**29**	**570**	893	38	**931**
7:30 - 8:30														607	27	**634**	31	4	**35**	**669**	1083	49	**1132**
7:45 - 8:45														634	23	**657**	37	4	**41**	**698**	1246	49	**1295**
8:00 - 9:00														634	21	**655**	42	5	**47**	**702**	1346	48	**1394**
Period End																							
16:00 - 17:00														381	14	**395**	159	3	**162**	**557**	1463	24	**1487**
16:15 - 17:15														374	14	**388**	128	2	**130**	**518**	1487	27	**1514**
16:30 - 17:30														392	13	**405**	119	2	**121**	**526**	1491	25	**1516**
16:45 - 17:45														392	10	**402**	129	3	**132**	**534**	1502	24	**1526**
17:00 - 18:00														390	11	**401**	143	1	**144**	**545**	1494	22	**1516**
Period End																							

Location	**The Avenue**	**Duration**	**7:00**	**-**	**09:00**
	Forest Road			**-**	
	The Avenue		**16:00**	**-**	**18:00**
	Forest Road	**Date**	**Tuesday, 22 July 2025**		
Suburb	**HURSTVILLE**	**Weather**	**Dry**		

DATA SELECTION	
Select Time:	PEAK

TIME RANGE		
PEAK	**-**	**AM**
PEAK		
8:00	**-**	**9:00**



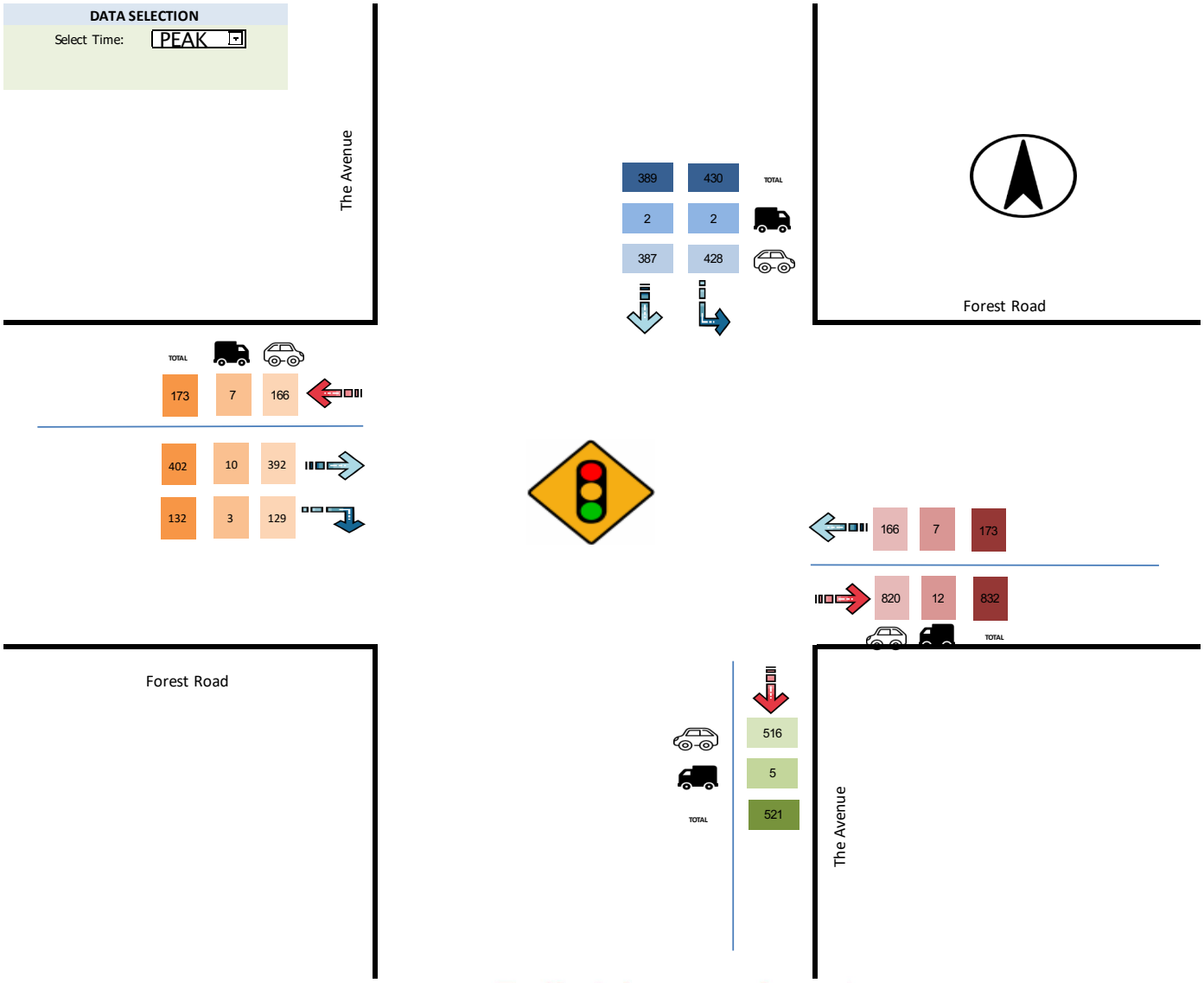
Traffic Information Specialist
ABN: 42 613 389 923
Email info@tistraffic.com.au

Location	**The Avenue**	**Duration**	**7:00**	**-**	**09:00**
	Forest Road			**-**	
	The Avenue		**16:00**	**-**	**18:00**
	Forest Road	**Date**	**Tuesday, 22 July 2025**		
Suburb	**HURSTVILLE**	**Weather**	**Dry**		

DATA SELECTION

Select Time: PEAK

TIME RANGE		
PEAK	**-**	**PM**
PEAK		
16:45	**-**	**17:45**



Traffic Information Specialist

ABN: 42 613 389 923

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Attachment 4

SIDRA Results

MOVEMENT SUMMARY

Site: [01] Forest Road | Hill Street (2025 AM)
Network: [1] AM (2025)
Output produced by SIDRA INTERSECTION Version: 10.0.3.210

AM Peak 8:00am - 9:00am
Site Category: 2025
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

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	Aver. Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
East: Forest Road (E)															
4	L2	All MCs	418	0.5	418	0.5	0.226	5.6	LOS A	0.0	0.0	0.00	0.58	0.00	52.8
5	T1	All MCs	142	7.4	142	7.4	0.076	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
Approach			560	2.3	560	2.3	0.226	4.2	NA	0.0	0.0	0.00	0.43	0.00	53.7
West: Forest Road (W)															
11	T1	All MCs	883	2.9	883	2.9	0.258	0.3	LOS A	0.2	1.6	0.07	0.08	0.07	55.0
12	R2	All MCs	43	0.0	43	0.0	0.258	7.3	LOS A	0.2	1.6	0.15	0.18	0.15	46.6
Approach			926	2.7	926	2.7	0.258	0.6	NA	0.2	1.6	0.07	0.08	0.07	54.5
All Vehicles			1486	2.5	1486	2.5	0.258	2.0	NA	0.2	1.6	0.04	0.21	0.04	54.1

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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: [02] Forest Road | The Avenue (2025 AM)
Network: [1] AM (2025)
Output produced by SIDRA INTERSECTION Version: 10.0.3.210

AM Peak 8:00am - 9:00am
Site Category: 2025
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 70.0 seconds (Network Practical Cycle Time)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

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	Aver. Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
East: Forest Road (E)															
5	T1	All MCs	136	7.0	136	7.0	*0.390	41.9	LOS C	2.2	16.1	0.92	0.71	0.92	6.5
Approach			136	7.0	136	7.0	0.390	41.9	LOS C	2.2	16.1	0.92	0.71	0.92	4.7
North: The Avenue (N)															
7	L2	All MCs	263	2.4	263	2.4	*0.448	26.2	LOS B	4.5	31.8	0.84	0.80	0.84	30.4
8	T1	All MCs	329	2.2	329	2.2	0.333	24.1	LOS B	2.7	19.2	0.80	0.66	0.80	42.7
Approach			593	2.3	593	2.3	0.448	25.0	LOS B	4.5	31.8	0.82	0.72	0.82	37.1
West: Forest Road (W)															
11	T1	All MCs	689	3.2	689	3.2	0.446	19.4	LOS B	7.7	55.4	0.94	0.68	0.94	13.4
12	R2	All MCs	49	10.6	49	10.6	*0.446	54.4	LOS D	6.1	44.3	0.99	0.76	0.99	32.8
Approach			739	3.7	739	3.7	0.446	21.7	LOS B	7.7	55.4	0.94	0.69	0.94	16.2
All Vehicles			1467	3.4	1467	3.4	0.448	24.9	LOS B	7.7	55.4	0.89	0.70	0.89	27.8

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.
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 Green.
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.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: The Avenue (S)											
P1	Full	53	29.3	LOS C	0.1	0.1	0.92	0.92	183.2	200.0	1.09
East: Forest Road (E)											
P2	Full	53	29.3	LOS C	0.1	0.1	0.92	0.92	183.2	200.0	1.09
North: The Avenue (N)											
P3	Full	53	29.3	LOS C	0.1	0.1	0.92	0.92	183.2	200.0	1.09
West: Forest Road (W)											
P4	Full	53	29.3	LOS C	0.1	0.1	0.92	0.92	183.2	200.0	1.09

All Pedestrians	211	29.3	LOS C	0.1	0.1	0.92	0.92	183.2	200.0	1.09

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

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MOVEMENT SUMMARY

Site: [03] Forest Road | Alfred Street (2025 AM)
Network: [1] AM (2025)
Output produced by SIDRA INTERSECTION Version: 10.0.3.210

AM Peak 8:00am - 9:00am
Site Category: 2025
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 70.0 seconds (Network Practical Cycle Time)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

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	Aver. Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Alfred Street (S)															
2	T1	All MCs	361	1.7	361	1.7	*0.671	30.8	LOS C	4.9	34.6	0.98	0.85	1.05	39.6
3	R2	All MCs	102	2.1	102	2.1	0.671	36.3	LOS C	4.8	33.9	0.98	0.85	1.05	29.0
Approach			463	1.8	463	1.8	0.671	32.0	LOS C	4.9	34.6	0.98	0.85	1.05	37.9
East: Forest Road (E)															
6	R2	All MCs	133	8.7	133	8.7	*0.259	39.9	LOS C	1.4	10.8	1.00	0.78	1.00	27.4
Approach			133	8.7	133	8.7	0.259	39.9	LOS C	1.4	10.8	1.00	0.78	1.00	27.4
West: Forest Road (W)															
10	L2	All MCs	357	10.9	357	10.9	*0.668	31.8	LOS C	6.3	48.5	0.87	0.83	0.89	40.2
11	T1	All MCs	633	3.7	633	3.7	0.452	19.2	LOS B	5.4	39.2	0.77	0.66	0.77	35.6
Approach			989	6.3	989	6.3	0.668	23.8	LOS B	6.3	48.5	0.80	0.72	0.81	35.4
All Vehicles			1585	5.2	1585	5.2	0.671	27.5	LOS B	6.3	48.5	0.87	0.76	0.90	35.5

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.
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 Green.
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.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Alfred Street (S)											
P1	Full	53	29.3	LOS C	0.1	0.1	0.92	0.92	183.2	200.0	1.09
East: Forest Road (E)											
P2	Full	53	29.3	LOS C	0.1	0.1	0.92	0.92	183.2	200.0	1.09
North: Park Road (N)											
P3	Full	53	29.3	LOS C	0.1	0.1	0.92	0.92	183.2	200.0	1.09
West: Forest Road (W)											
P4	Full	53	29.3	LOS C	0.1	0.1	0.92	0.92	183.2	200.0	1.09

All Pedestrians	211	29.3	LOS C	0.1	0.1	0.92	0.92	183.2	200.0	1.09

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

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MOVEMENT SUMMARY

Site: [01 (2)] Forest Road | Hill Street (2025 PM)
Network: [2] PM (2025)
Output produced by SIDRA INTERSECTION Version: 10.0.3.210

PM Peak 17:00pm - 18:00pm
Site Category: 2025
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

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	Aver. Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
East: Forest Road (E)															
4	L2	All MCs	547	1.5	547	1.5	0.298	5.6	LOS A	0.0	0.0	0.00	0.57	0.00	52.7
5	T1	All MCs	176	3.6	176	3.6	0.092	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
Approach			723	2.0	723	2.0	0.298	4.3	NA	0.0	0.0	0.00	0.44	0.00	53.6
West: Forest Road (W)															
11	T1	All MCs	782	1.7	782	1.7	0.249	0.7	LOS A	0.4	2.6	0.12	0.14	0.12	54.5
12	R2	All MCs	59	1.8	59	1.8	0.249	9.0	LOS A	0.4	2.6	0.30	0.36	0.30	44.6
Approach			841	1.8	841	1.8	0.249	1.3	NA	0.4	2.6	0.13	0.16	0.13	53.7
All Vehicles			1564	1.9	1564	1.9	0.298	2.7	NA	0.4	2.6	0.07	0.28	0.07	53.6

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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: [02 (2)] Forest Road | The Avenue (2025 PM)
Network: [2] PM (2025)
Output produced by SIDRA INTERSECTION Version: 10.0.3.210

PM Peak 16:45pm - 17:45pm
Site Category: 2025
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 70.0 seconds (Network Practical Cycle Time)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

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	Aver. Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
East: Forest Road (E)															
5	T1	All MCs	182	4.0	182	4.0	*0.526	46.1	LOS D	3.0	21.6	0.94	0.74	0.94	6.5
Approach			182	4.0	182	4.0	0.526	46.1	LOS D	3.0	21.6	0.94	0.74	0.94	4.4
North: The Avenue (N)															
7	L2	All MCs	453	0.5	453	0.5	*0.564	21.7	LOS B	7.2	50.4	0.80	0.81	0.80	32.8
8	T1	All MCs	409	0.5	409	0.5	0.313	17.6	LOS B	2.8	20.0	0.69	0.58	0.69	45.0
Approach			862	0.5	862	0.5	0.564	19.8	LOS B	7.2	50.4	0.75	0.70	0.75	38.7
West: Forest Road (W)															
11	T1	All MCs	423	2.5	423	2.5	0.555	22.3	LOS B	7.8	55.6	0.93	0.78	0.93	12.8
12	R2	All MCs	139	2.3	139	2.3	*0.555	42.1	LOS C	3.1	22.2	1.00	0.83	1.00	26.9
Approach			562	2.4	562	2.4	0.555	27.2	LOS B	7.8	55.6	0.95	0.79	0.95	19.4
All Vehicles			1606	1.6	1606	1.6	0.564	25.4	LOS B	7.8	55.6	0.84	0.74	0.84	30.3

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.
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 Green.
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.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: The Avenue (S)											
P1	Full	53	29.3	LOS C	0.1	0.1	0.92	0.92	183.2	200.0	1.09
East: Forest Road (E)											
P2	Full	53	29.3	LOS C	0.1	0.1	0.92	0.92	183.2	200.0	1.09
North: The Avenue (N)											
P3	Full	53	29.3	LOS C	0.1	0.1	0.92	0.92	183.2	200.0	1.09
West: Forest Road (W)											
P4	Full	53	29.3	LOS C	0.1	0.1	0.92	0.92	183.2	200.0	1.09

All Pedestrians	211	29.3	LOS C	0.1	0.1	0.92	0.92	183.2	200.0	1.09

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

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MOVEMENT SUMMARY

Site: [03 (2)] Forest Road | Alfred Street (2025 PM)
Network: [2] PM (2025)
Output produced by SIDRA INTERSECTION Version: 10.0.3.210

PM Peak 16:00pm - 17:00pm
Site Category: 2025
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 70.0 seconds (Network Practical Cycle Time)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

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	Aver. Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Alfred Street (S)															
2	T1	All MCs	298	2.8	298	2.8	* 0.537	29.6	LOS C	3.6	25.5	0.96	0.78	0.96	39.5
3	R2	All MCs	56	3.8	56	3.8	0.537	35.2	LOS C	3.5	25.1	0.96	0.78	0.96	29.2
Approach			354	3.0	354	3.0	0.537	30.5	LOS C	3.6	25.5	0.96	0.78	0.96	38.3
East: Forest Road (E)															
6	R2	All MCs	168	3.1	168	3.1	* 0.317	40.2	LOS C	1.8	13.1	1.00	0.80	1.00	27.4
Approach			168	3.1	168	3.1	0.317	40.2	LOS C	1.8	13.1	1.00	0.80	1.00	27.4
West: Forest Road (W)															
10	L2	All MCs	306	13.1	306	13.1	* 0.537	27.3	LOS B	4.9	38.2	0.80	0.80	0.80	40.3
11	T1	All MCs	502	2.5	502	2.5	0.317	17.0	LOS B	3.6	25.8	0.71	0.60	0.71	35.8
Approach			808	6.5	808	6.5	0.537	20.9	LOS B	4.9	38.2	0.74	0.67	0.74	36.3
All Vehicles			1331	5.1	1331	5.1	0.537	25.9	LOS B	4.9	38.2	0.83	0.72	0.83	35.8

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.
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 Green.
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.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Alfred Street (S)											
P1	Full	53	29.3	LOS C	0.1	0.1	0.92	0.92	183.2	200.0	1.09
East: Forest Road (E)											
P2	Full	53	29.3	LOS C	0.1	0.1	0.92	0.92	183.2	200.0	1.09
North: Park Road (N)											
P3	Full	53	29.3	LOS C	0.1	0.1	0.92	0.92	183.2	200.0	1.09
West: Forest Road (W)											
P4	Full	53	29.3	LOS C	0.1	0.1	0.92	0.92	183.2	200.0	1.09

All Pedestrians	211	29.3	LOS C	0.1	0.1	0.92	0.92	183.2	200.0	1.09

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

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MOVEMENT SUMMARY

Site: [01 (4)] Forest Road | Hill Street (2025 AM w dev)
Network: [3] AM (2025 w dev)
Output produced by SIDRA INTERSECTION Version: 10.0.3.210

AM Peak 8:00am - 9:00am
Site Category: 2025
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

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	Aver. Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
East: Forest Road (E)															
4	L2	All MCs	432	0.5	432	0.5	0.233	5.6	LOS A	0.0	0.0	0.00	0.58	0.00	52.8
5	T1	All MCs	142	7.4	142	7.4	0.076	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
Approach			574	2.2	574	2.2	0.233	4.2	NA	0.0	0.0	0.00	0.43	0.00	53.7
West: Forest Road (W)															
11	T1	All MCs	909	2.8	909	2.8	0.267	0.3	LOS A	0.2	1.7	0.07	0.08	0.07	54.9
12	R2	All MCs	46	0.0	46	0.0	0.267	7.5	LOS A	0.2	1.7	0.16	0.19	0.16	46.5
Approach			956	2.6	956	2.6	0.267	0.7	NA	0.2	1.7	0.07	0.09	0.07	54.4
All Vehicles			1529	2.5	1529	2.5	0.267	2.0	NA	0.2	1.7	0.05	0.22	0.05	54.1

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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: [02 (4)] Forest Road | The Avenue (2025 AM w dev)
Network: [3] AM (2025 w dev)
Output produced by SIDRA INTERSECTION Version: 10.0.3.210

AM Peak 8:00am - 9:00am
Site Category: 2025
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 70.0 seconds (Network Practical Cycle Time)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

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	Aver. Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
East: Forest Road (E)															
5	T1	All MCs	136	7.0	136	7.0	*0.390	41.9	LOS C	2.2	16.1	0.92	0.71	0.92	6.5
Approach			136	7.0	136	7.0	0.390	41.9	LOS C	2.2	16.1	0.92	0.71	0.92	4.7
North: The Avenue (N)															
7	L2	All MCs	263	2.4	263	2.4	*0.457	26.6	LOS B	4.5	32.1	0.85	0.80	0.85	30.3
8	T1	All MCs	329	2.2	329	2.2	0.342	24.7	LOS B	2.7	19.4	0.81	0.66	0.81	42.5
Approach			593	2.3	593	2.3	0.457	25.6	LOS B	4.5	32.1	0.83	0.72	0.83	36.9
West: Forest Road (W)															
11	T1	All MCs	719	3.1	719	3.1	0.455	19.2	LOS B	7.9	56.7	0.94	0.68	0.94	13.5
12	R2	All MCs	49	10.6	49	10.6	*0.455	55.1	LOS D	6.4	46.6	1.00	0.75	1.00	32.9
Approach			768	3.6	768	3.6	0.455	21.5	LOS B	7.9	56.7	0.94	0.68	0.94	16.2
All Vehicles			1497	3.4	1497	3.4	0.457	25.0	LOS B	7.9	56.7	0.90	0.70	0.90	27.6

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.
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 Green.
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.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: The Avenue (S)											
P1	Full	53	29.3	LOS C	0.1	0.1	0.92	0.92	183.2	200.0	1.09
East: Forest Road (E)											
P2	Full	53	29.3	LOS C	0.1	0.1	0.92	0.92	183.2	200.0	1.09
North: The Avenue (N)											
P3	Full	53	29.3	LOS C	0.1	0.1	0.92	0.92	183.2	200.0	1.09
West: Forest Road (W)											
P4	Full	53	29.3	LOS C	0.1	0.1	0.92	0.92	183.2	200.0	1.09

All Pedestrians	211	29.3	LOS C	0.1	0.1	0.92	0.92	183.2	200.0	1.09

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

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MOVEMENT SUMMARY

Site: [03 (4)] Forest Road | Alfred Street (2025 AM w dev)
Network: [3] AM (2025 w dev)
Output produced by SIDRA INTERSECTION Version: 10.0.3.210

AM Peak 8:00am - 9:00am
Site Category: 2025
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 70.0 seconds (Network Practical Cycle Time)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

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	Aver. Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Alfred Street (S)															
2	T1	All MCs	369	1.7	369	1.7	*0.689	30.6	LOS C	5.3	37.3	0.98	0.86	1.06	39.8
3	R2	All MCs	128	1.6	128	1.6	0.689	36.2	LOS C	5.1	36.5	0.98	0.86	1.07	29.0
Approach			498	1.7	498	1.7	0.689	32.1	LOS C	5.3	37.3	0.98	0.86	1.06	37.7
East: Forest Road (E)															
6	R2	All MCs	133	8.7	133	8.7	*0.259	39.9	LOS C	1.4	10.8	1.00	0.78	1.00	27.4
Approach			133	8.7	133	8.7	0.259	39.9	LOS C	1.4	10.8	1.00	0.78	1.00	27.4
West: Forest Road (W)															
10	L2	All MCs	357	10.9	357	10.9	*0.688	33.3	LOS C	6.6	50.2	0.88	0.85	0.92	40.0
11	T1	All MCs	636	3.6	636	3.6	0.469	19.9	LOS B	5.6	40.7	0.78	0.67	0.78	35.4
Approach			993	6.3	993	6.3	0.688	24.7	LOS B	6.6	50.2	0.82	0.73	0.83	35.1
All Vehicles			1623	5.1	1623	5.1	0.689	28.2	LOS B	6.6	50.2	0.88	0.78	0.92	35.3

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.
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 Green.
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.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Alfred Street (S)											
P1	Full	53	29.3	LOS C	0.1	0.1	0.92	0.92	183.2	200.0	1.09
East: Forest Road (E)											
P2	Full	53	29.3	LOS C	0.1	0.1	0.92	0.92	183.2	200.0	1.09
North: Park Road (N)											
P3	Full	53	29.3	LOS C	0.1	0.1	0.92	0.92	183.2	200.0	1.09
West: Forest Road (W)											
P4	Full	53	29.3	LOS C	0.1	0.1	0.92	0.92	183.2	200.0	1.09

All Pedestrians	211	29.3	LOS C	0.1	0.1	0.92	0.92	183.2	200.0	1.09

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

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MOVEMENT SUMMARY

Site: [01 (3)] Forest Road | Hill Street (2025 PM w dev)
Network: [4] PM (2025 w dev)
Output produced by SIDRA INTERSECTION Version: 10.0.3.210

PM Peak 17:00pm - 18:00pm
Site Category: 2025
Give-Way (Two-Way)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

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	Aver. Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
East: Forest Road (E)															
4	L2	All MCs	576	1.5	576	1.5	0.313	5.6	LOS A	0.0	0.0	0.00	0.57	0.00	52.7
5	T1	All MCs	176	3.6	176	3.6	0.092	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
Approach			752	2.0	752	2.0	0.313	4.3	NA	0.0	0.0	0.00	0.44	0.00	53.6
West: Forest Road (W)															
11	T1	All MCs	792	1.7	792	1.7	0.257	0.8	LOS A	0.4	2.9	0.13	0.15	0.13	54.4
12	R2	All MCs	63	1.7	63	1.7	0.257	9.4	LOS A	0.4	2.9	0.34	0.40	0.34	44.3
Approach			855	1.7	855	1.7	0.257	1.5	NA	0.4	2.9	0.14	0.17	0.14	53.5
All Vehicles			1606	1.8	1606	1.8	0.313	2.8	NA	0.4	2.9	0.08	0.30	0.08	53.6

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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: [02 (3)] Forest Road | The Avenue (2025 PM w dev)
Network: [4] PM (2025 w dev)
Output produced by SIDRA INTERSECTION Version: 10.0.3.210

PM Peak 16:45pm - 17:45pm
Site Category: 2025
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 70.0 seconds (Network Practical Cycle Time)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

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	Aver. Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
East: Forest Road (E)															
5	T1	All MCs	182	4.0	182	4.0	*0.526	46.1	LOS D	3.0	21.6	0.94	0.74	0.94	6.5
Approach			182	4.0	182	4.0	0.526	46.1	LOS D	3.0	21.6	0.94	0.74	0.94	4.4
North: The Avenue (N)															
7	L2	All MCs	453	0.5	453	0.5	*0.568	21.9	LOS B	7.2	50.7	0.81	0.82	0.81	32.7
8	T1	All MCs	409	0.5	409	0.5	0.317	17.9	LOS B	2.9	20.2	0.70	0.58	0.70	44.9
Approach			862	0.5	862	0.5	0.568	20.0	LOS B	7.2	50.7	0.76	0.70	0.76	38.6
West: Forest Road (W)															
11	T1	All MCs	437	2.4	437	2.4	0.560	22.3	LOS B	7.9	56.7	0.94	0.78	0.94	12.7
12	R2	All MCs	139	2.3	139	2.3	*0.560	42.8	LOS D	3.2	23.1	1.00	0.83	1.00	27.1
Approach			576	2.4	576	2.4	0.560	27.3	LOS B	7.9	56.7	0.95	0.79	0.95	19.2
All Vehicles			1620	1.6	1620	1.6	0.568	25.5	LOS B	7.9	56.7	0.85	0.74	0.85	30.2

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.
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 Green.
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.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: The Avenue (S)											
P1	Full	53	29.3	LOS C	0.1	0.1	0.92	0.92	183.2	200.0	1.09
East: Forest Road (E)											
P2	Full	53	29.3	LOS C	0.1	0.1	0.92	0.92	183.2	200.0	1.09
North: The Avenue (N)											
P3	Full	53	29.3	LOS C	0.1	0.1	0.92	0.92	183.2	200.0	1.09
West: Forest Road (W)											
P4	Full	53	29.3	LOS C	0.1	0.1	0.92	0.92	183.2	200.0	1.09

All Pedestrians	211	29.3	LOS C	0.1	0.1	0.92	0.92	183.2	200.0	1.09

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

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MOVEMENT SUMMARY

Site: [03 (3)] Forest Road | Alfred Street (2025 PM w dev)
Network: [4] PM (2025 w dev)
Output produced by SIDRA INTERSECTION Version: 10.0.3.210

PM Peak 16:00pm - 17:00pm
Site Category: 2025
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 70.0 seconds (Network Practical Cycle Time)
Network Scenario: 1 | Local Volumes **Site Scenario: 1 | Local Volumes**

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	Aver. Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Alfred Street (S)															
2	T1	All MCs	300	2.8	300	2.8	* 0.544	29.5	LOS C	3.7	26.3	0.96	0.78	0.96	39.6
3	R2	All MCs	65	3.2	65	3.2	0.544	35.0	LOS C	3.6	25.8	0.96	0.79	0.96	29.1
Approach			365	2.9	365	2.9	0.544	30.5	LOS C	3.7	26.3	0.96	0.78	0.96	38.2
East: Forest Road (E)															
6	R2	All MCs	168	3.1	168	3.1	* 0.317	40.2	LOS C	1.8	13.1	1.00	0.80	1.00	27.4
Approach			168	3.1	168	3.1	0.317	40.2	LOS C	1.8	13.1	1.00	0.80	1.00	27.4
West: Forest Road (W)															
10	L2	All MCs	306	13.1	306	13.1	* 0.545	27.6	LOS B	4.9	38.5	0.80	0.80	0.80	40.2
11	T1	All MCs	506	2.5	506	2.5	0.326	17.2	LOS B	3.7	26.6	0.71	0.60	0.71	35.8
Approach			813	6.5	813	6.5	0.545	21.1	LOS B	4.9	38.5	0.75	0.68	0.75	36.2
All Vehicles			1346	5.1	1346	5.1	0.545	26.1	LOS B	4.9	38.5	0.84	0.72	0.84	35.7

Site Level of Service (LOS) Method: Delay (NSW). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.
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 Green.
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.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Qued	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Alfred Street (S)											
P1	Full	53	29.3	LOS C	0.1	0.1	0.92	0.92	183.2	200.0	1.09
East: Forest Road (E)											
P2	Full	53	29.3	LOS C	0.1	0.1	0.92	0.92	183.2	200.0	1.09
North: Park Road (N)											
P3	Full	53	29.3	LOS C	0.1	0.1	0.92	0.92	183.2	200.0	1.09
West: Forest Road (W)											
P4	Full	53	29.3	LOS C	0.1	0.1	0.92	0.92	183.2	200.0	1.09

All Pedestrians	211	29.3	LOS C	0.1	0.1	0.92	0.92	183.2	200.0	1.09

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

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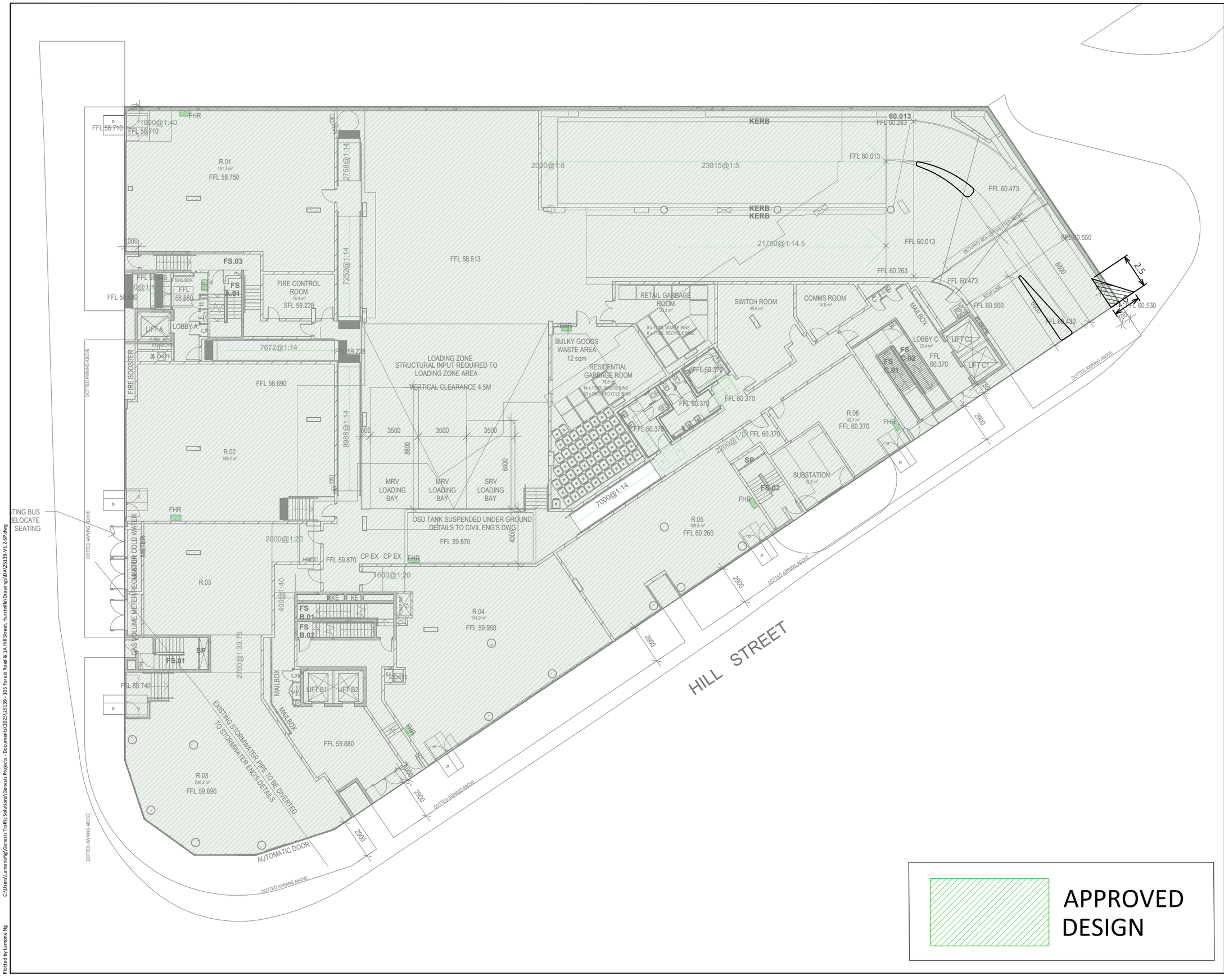
Attachment 5

Turning Path Assessment



APPROVED DESIGN

Genesis Traffic

PROJECT

105 FOREST ROAD & 1A HILL STREET, HURSTVILLE

TITLE

COMPLIANCE CHECK

GROUND LEVEL

SCALE A3 1:250

0 2.5 5.0

DESIGNED BY	REVIEWED BY
B.BUI / L.NG	B.LO

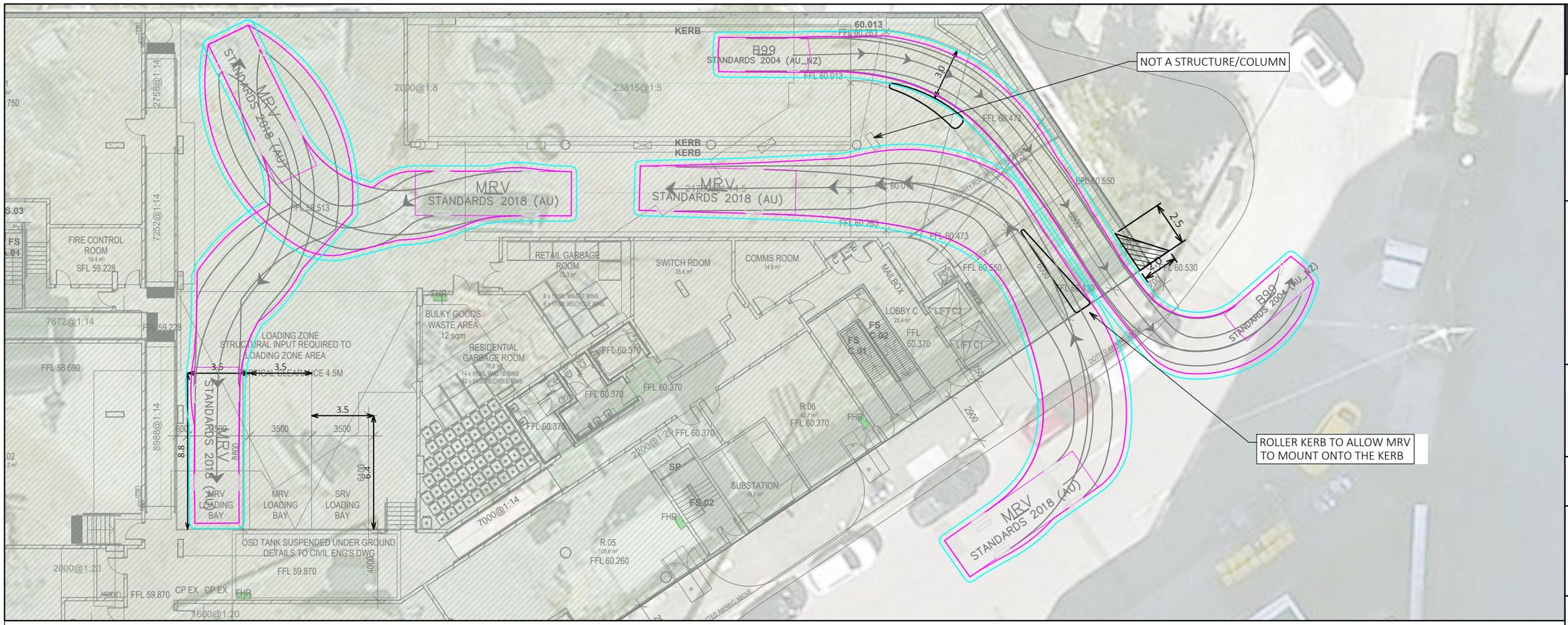
DRAWING REFERENCE (SOURCE):
G:\2025\25139 - 105 FOREST ROAD & 1A HILL STREET, HURSTVILLE\DRAWINGS\DA\20250917

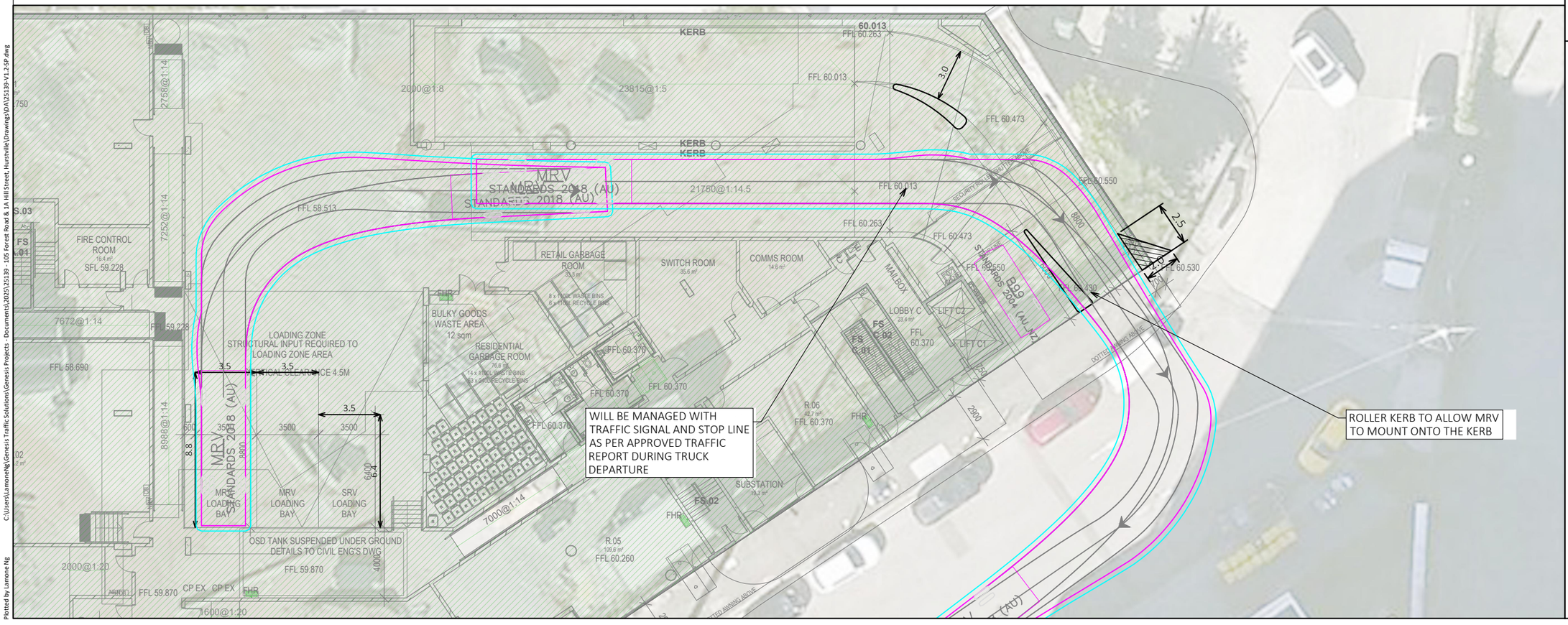
ISSUE DATE	17 September 2025
SHEET NO.	01 OF 09
DRAWING REF NO.	25139-V1.2-SP

LEGENDS/NOTES

- MAXIMUM CHANGE IN GRADE FOR CARS SHOULD BE 1:8 OVER 2m
- MINIMUM HEIGHT CLEARANCE OF 2.2m (TO SERVICES AND STRUCTURE) SHOULD BE PROVIDED ABOVE CIRCULATION AISLES AND PARKING SPACES
- MINIMUM HEIGHT CLEARANCE OF 2.5m (TO SERVICES AND STRUCTURE) SHOULD BE PROVIDED ABOVE ACCESSIBLE PARKING SPACES
- MINIMUM HEIGHT CLEARANCE OF 4.5m (TO SERVICES AND STRUCTURE) SHOULD BE PROVIDED ABOVE SERVICE VEHICLE ACCESS ROADWAYS AND LOADING DOCKS
- HEIGHT CLEARANCE ABOVE A SAG CHANGE IN GRADES SHOULD BE MEASURED IN ACCORDANCE WITH FIGURE 5.3 AS2890.1:2004
- ANY VERTICAL DROPS EXCEEDING 0.6m IN HEIGHT SHOULD BE PROTECTED BY STRUCTURAL WALL/BARRIER

Plotted by Lamone Ng C:\Users\LamoneNg\Genesis Traffic Solutions\Genesis Projects - Document\2025\25139 - 105 Forest Road & 1A Hill Street, Hurstville\Drawings\DA\25139-V1.2-SP.dwg





Genesis Traffic

PROJECT

105 FOREST ROAD & 1A HILL STREET, HURSTVILLE

TITLE

SWEPT PATH ASSESSMENT

8.8m MRV ENTERING AND EXITING

GROUND FLOOR

SCALE A3 1:250

0 2.5 5.0

DESIGNED BY	REVIEWED BY
B.BUI / L.NG	B.LO

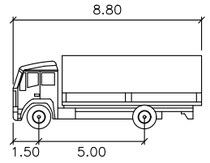
DRAWING REFERENCE (SOURCE):
G:\2025\25139 - 105 FOREST ROAD & 1A HILL STREET, HURSTVILLE\DRAWINGS\DA\20250917

ISSUE DATE	17 September 2025
SHEET NO.	02 OF 09
DRAWING REF NO.	25139-V1.2-SP

LEGENDS/NOTES

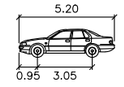
SWEPT PATH KEY:

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



MRV

	meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 34.0



B99

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

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Plotted by Lamone Ng

Genesis Traffic

PROJECT

105 FOREST ROAD & 1A HILL STREET, HURSTVILLE

TITLE

COMPLIANCE CHECK

BASEMENT 1

SCALE A3 1:250

0 2.5 5.0

DESIGNED BY	REVIEWED BY
B.BUI / L.NG	B.LO

DRAWING REFERENCE (SOURCE):
G:\2025\25139 - 105 FOREST ROAD & 1A HILL STREET, HURSTVILLE\DRAWINGS\DA\20250917

ISSUE DATE	17 September 2025
SHEET NO.	03 OF 09
DRAWING REF NO.	25139-V1.2-SP

LEGENDS/NOTES

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- MINIMUM HEIGHT CLEARANCE OF 2.2m (TO SERVICES AND STRUCTURE) SHOULD BE PROVIDED ABOVE CIRCULATION AISLES AND PARKING SPACES
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- HEIGHT CLEARANCE ABOVE A SAG CHANGE IN GRADES SHOULD BE MEASURED IN ACCORDANCE WITH FIGURE 5.3 AS2890.1:2004
- ANY VERTICAL DROPS EXCEEDING 0.6m IN HEIGHT SHOULD BE PROTECTED BY STRUCTURAL WALL/BARRIER

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APPROVED DESIGN

Genesis Traffic

PROJECT

105 FOREST ROAD & 1A HILL STREET, HURSTVILLE

TITLE

COMPLIANCE CHECK

BASEMENT 2

SCALE A3 1:250

0 2.5 5.0

DESIGNED BY	REVIEWED BY
B.BUI / L.NG	B.LO

DRAWING REFERENCE (SOURCE):
G:\2025\25139 - 105 FOREST ROAD & 1A HILL STREET, HURSTVILLE\DRAWINGS\DA\20250917

ISSUE DATE	17 September 2025
SHEET NO.	04 OF 09
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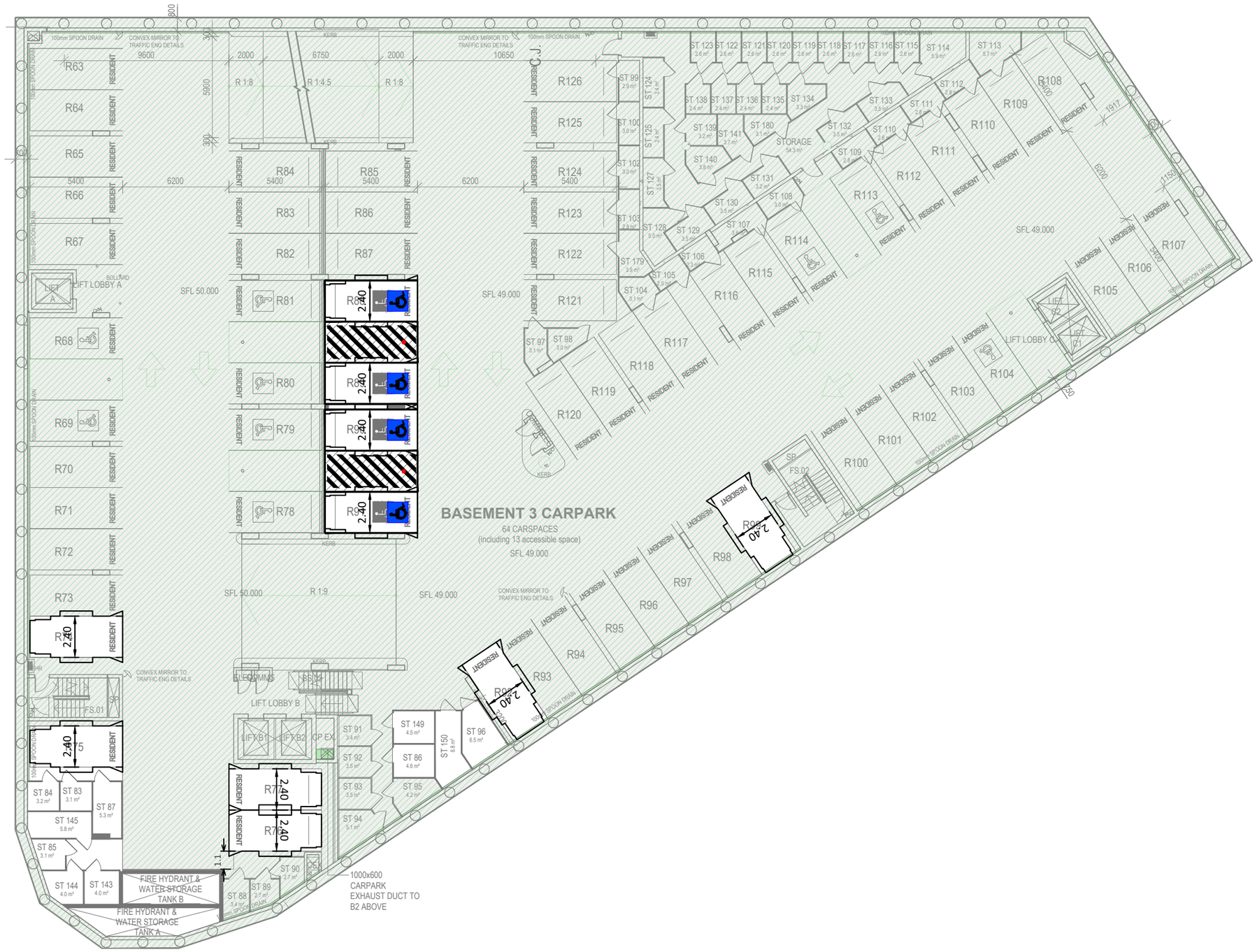

APPROVED DESIGN

Genesis Traffic

PROJECT
105 FOREST ROAD & 1A HILL STREET, HURSTVILLE

TITLE
COMPLIANCE CHECK

BASEMENT 3

SCALE A3 1:250

DESIGNED BY B.BUI / L.NG

REVIEWED BY B.LO

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ISSUE DATE 17 September 2025

SHEET NO. 05 OF 09

DRAWING REF NO. 25139-V1.2-SP

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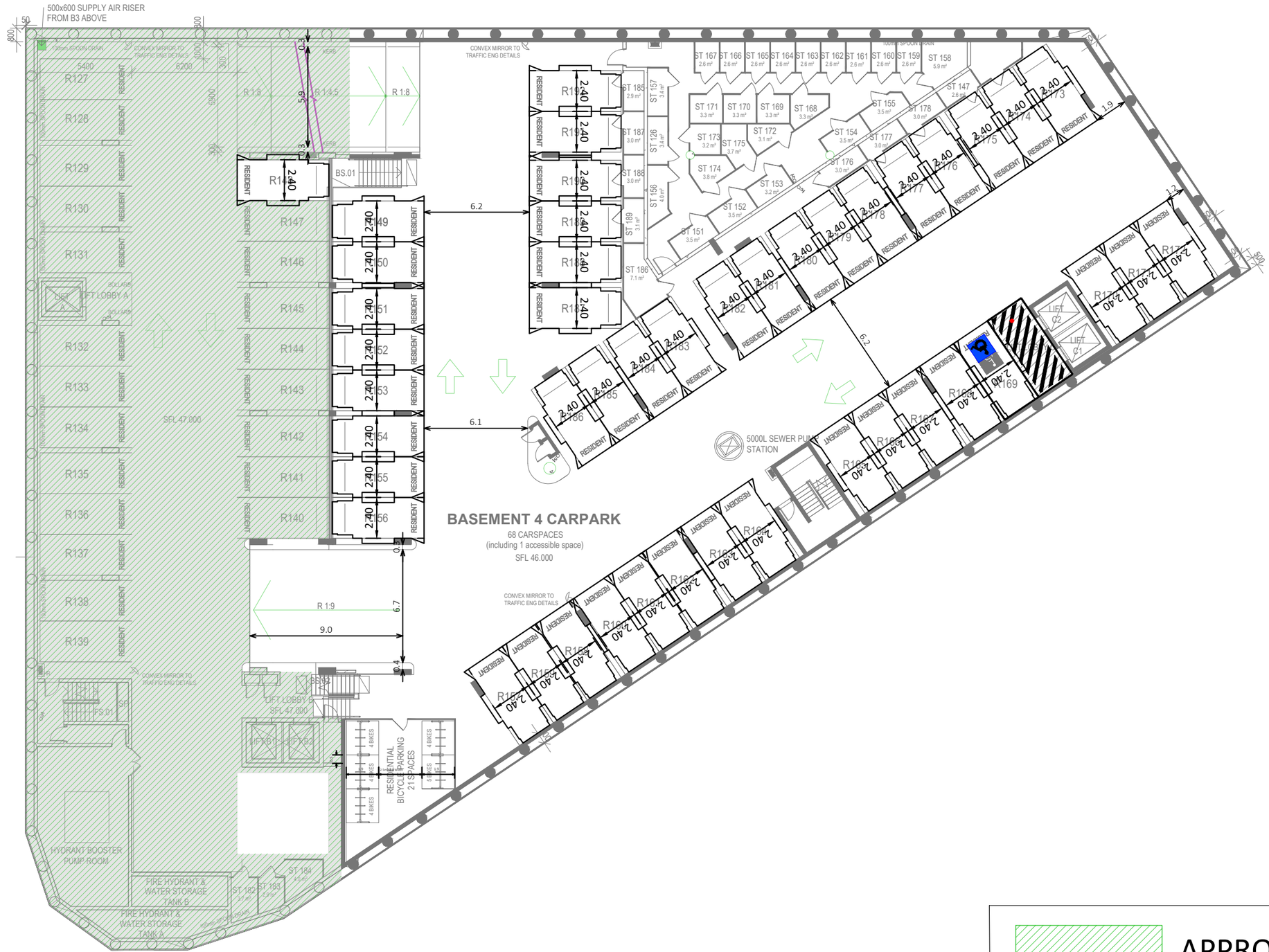
500x600 SUPPLY AIR RISER FROM B3 ABOVE
CONVEX MIRROR TO TRAFFIC ENG DETAILS
BS.01
6.2
6.1
5000L SEWER PUMP STATION
BASEMENT 4 CARPARK
68 CARSPACES
(including 1 accessible space)
SFL 46.000
CONVEX MIRROR TO TRAFFIC ENG DETAILS
R 1:9
6.7
9.0
BS.02
LIFT LOBBY
SFL 47.000
FS.01
HYDRANT BOOSTER PUMP ROOM
FIRE HYDRANT & WATER STORAGE TANK B
FIRE HYDRANT & WATER STORAGE TANK A
RESIDENTIAL BICYCLE PARKING 21 SPACES
LIFT LOBBY A
SFL 47.000
SFL 47.000
LIFT 1
LIFT 2
LIFT 3
LIFT 4
LIFT 5
LIFT 6
LIFT 7
LIFT 8
LIFT 9
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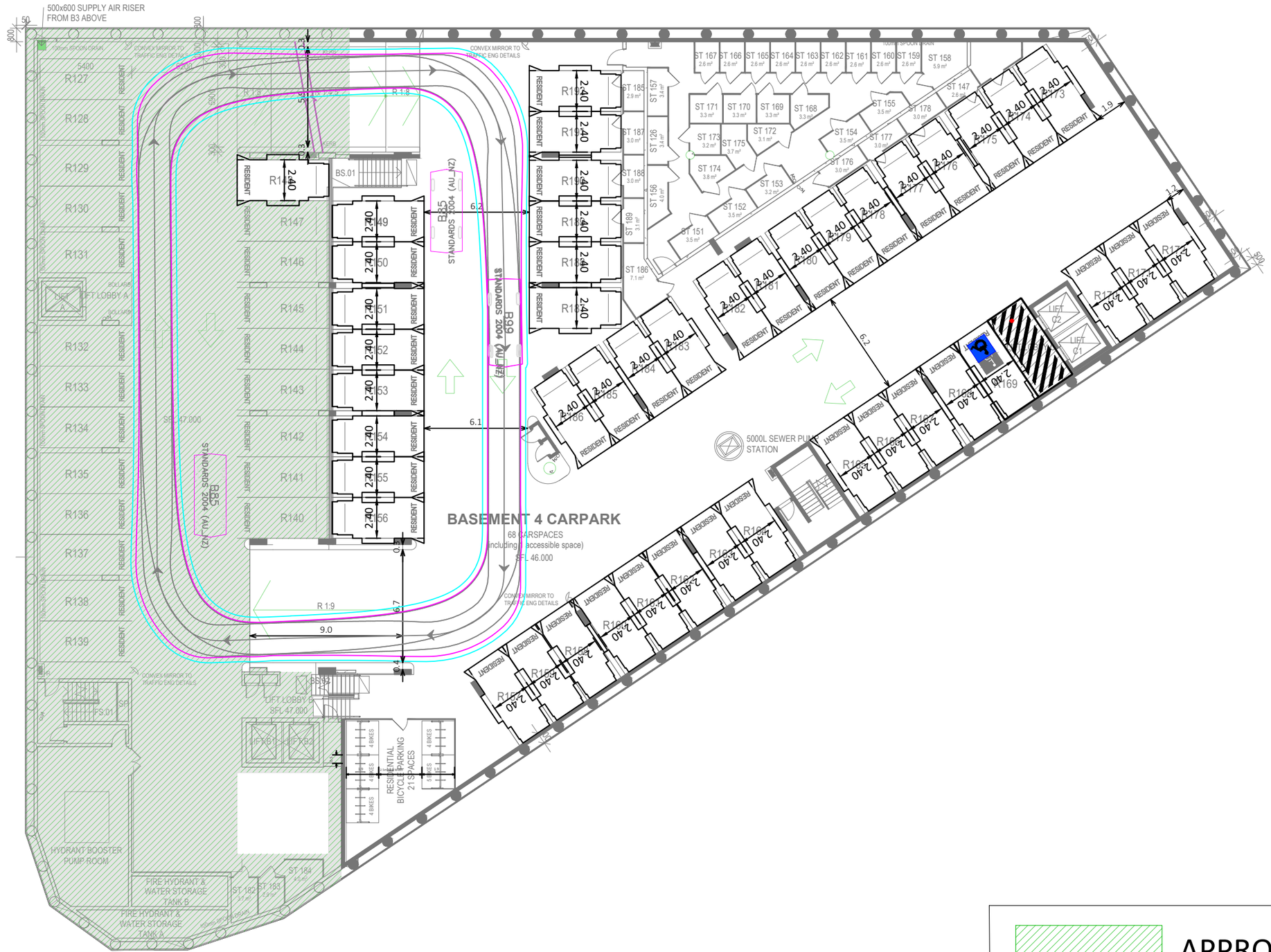
LIFT



APPROVED DESIGN

Genesis Traffic

PROJECT

105 FOREST ROAD & 1A HILL STREET, HURSTVILLE

TITLE

SWEPT PATH ASSESSMENT

B85 AND B99 PASSING

BASEMENT 4

SCALE A3 1:250

0 2.5 5.0

DESIGNED BY	REVIEWED BY
B.BUI / L.NG	B.LO

DRAWING REFERENCE (SOURCE):
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ISSUE DATE	17 September 2025
SHEET NO.	07 OF 09
DRAWING REF NO.	25139-V1.2-SP

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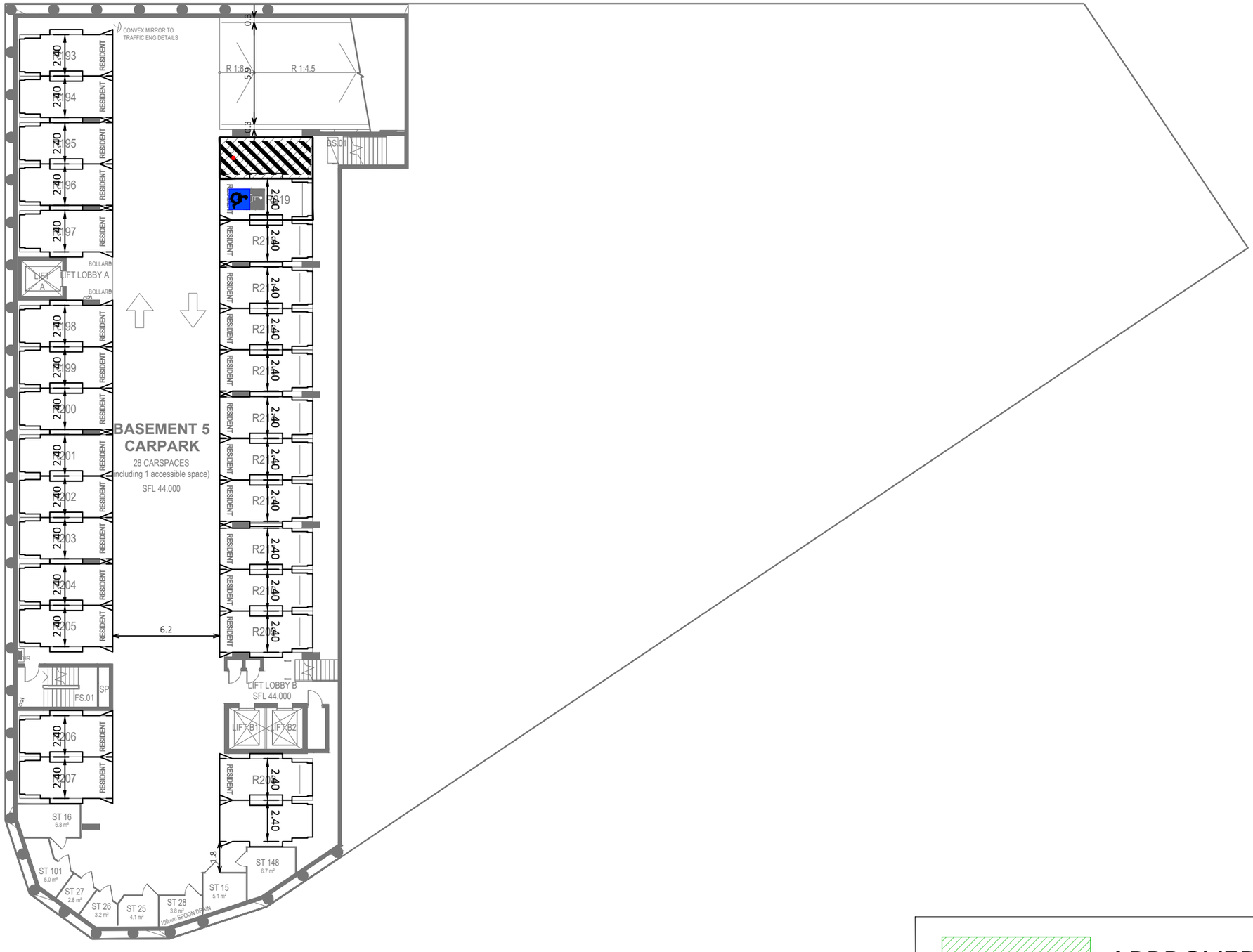

APPROVED DESIGN

Genesis Traffic

PROJECT
105 FOREST ROAD & 1A HILL STREET, HURSTVILLE

TITLE
COMPLIANCE CHECK

BASEMENT 5

SCALE A3 1:250
0 2.5 5.0

DESIGNED BY	REVIEWED BY
B.BUI / L.NG	B.LO

DRAWING REFERENCE (SOURCE):
G:\2025\25139 - 105 FOREST ROAD & 1A HILL STREET, HURSTVILLE\DRAWINGS\DA\20250917

ISSUE DATE	17 September 2025
SHEET NO.	08 OF 09
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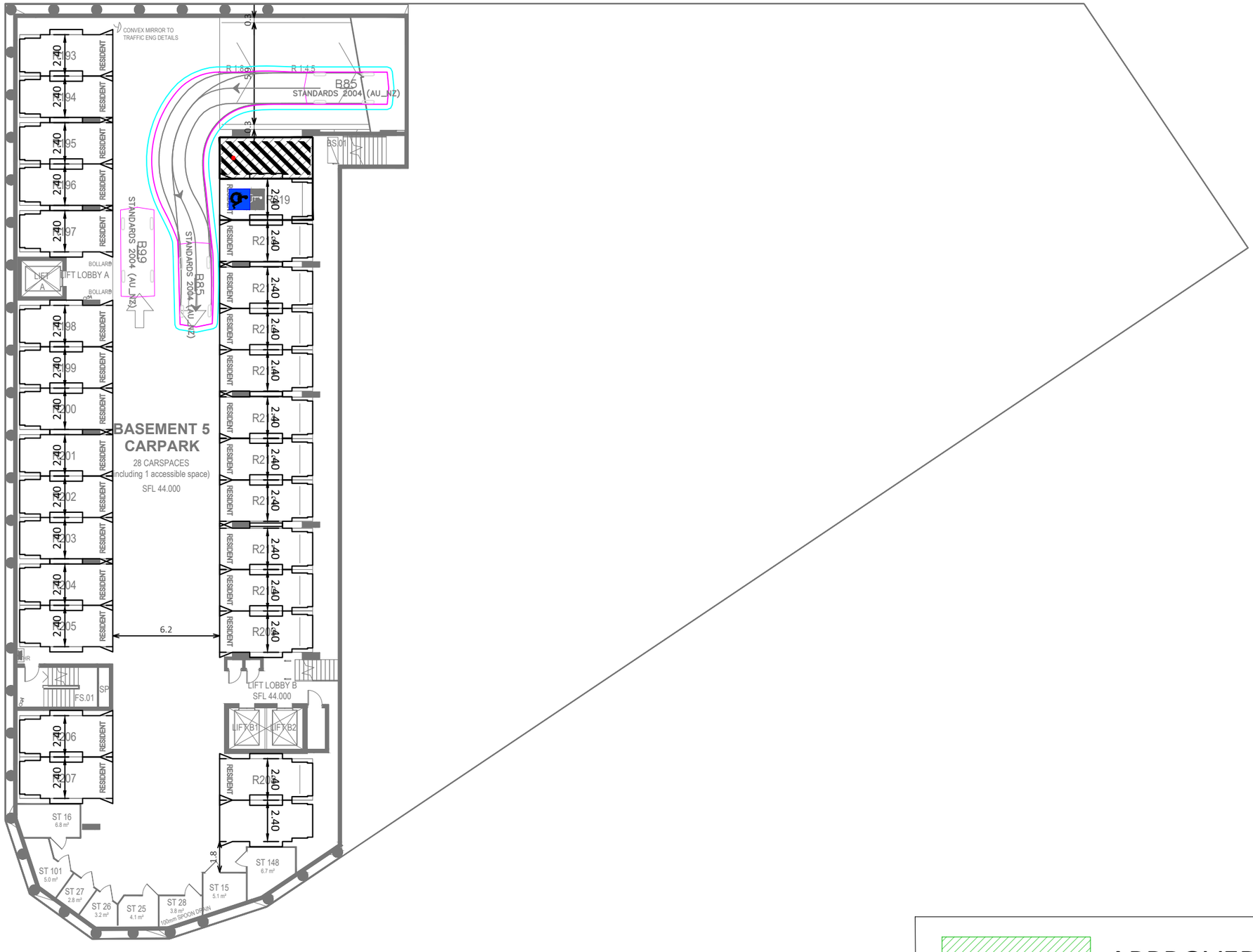

APPROVED DESIGN

Genesis Traffic

PROJECT
105 FOREST ROAD & 1A HILL STREET, HURSTVILLE

TITLE
SWEPT PATH ASSESSMENT

B85 AND B99 PASSING

BASEMENT 5

SCALE A3 1:250

0 2.5 5.0

DESIGNED BY	REVIEWED BY
B.BUI / L.NG	B.LO

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Attachment 6

TfNSW Consultation

Documents/Correspondence

Lamone Ng

From: Lamone Ng
Sent: Wednesday, 17 September 2025 1:49 PM
To: Development.Sydney@transport.nsw.gov.au
Subject: Proposed Mixed Use Development - 105 Forest Road & 1A Hill Street, Hurstville

Dear colleague,

I am writing to address the subject matter above, which pertains to a proposed mixed-use development at 105 Forest Road & 1A Hill Street, Hurstville, comprising:

Component	Details
Residential	187 apartments
Retail	GFA of 882.9m^2
Parking	276 car spaces
Access	Hill Street

It is noted that the site is subject to an existing approved consent (MOD2017/0033).

This communication is part of the consultation process required by the SSDA SEARs.

As part of the submission, Genesis Traffic has prepared a Traffic Impact Assessment (TIA) for this proposal, available in the link below.
25139 - 105 Forest Road & 1A Hill Street, Hurstville - SSDA TIA - Issue 2 (Final) - 17092025.pdf

TfNSW's feedback is highly appreciated as part of the engagement process. Should you wish to speak with us, please don't hesitate to contact us at 7255 8198. Alternatively, I await your advice via email.

Thank you.

Kind Regards,

Lamone Ng
Senior Consultant
T 02 7255 8198
E lamone@genesistraffic.com.au