DA-452/2021
Proposed Mixed Use Development

280-292 Lakemba Street & 62-70 King Georges Road, Wiley Park

REVISED TRAFFIC AND PARKING ASSESSMENT REPORT

14 October 2021

Ref 21188

VARGA TRAFFIC PLANNING Pty Ltd
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1. INTRODUCTION

This revised report has been prepared to accompany an amended development application (DA-452/2021) to Council for a mixed use development proposal to be located at 280-292 Lakemba Street and 62-70 King Georges Road, Wiley Park (Figures 1 and 2).

It should be noted that a similar scheme was previously proposed as part of DA-484/2017. After several years and many iterations following requests from both Council and RMS (now TfNSW), the proposal finally made it to the *South Sydney Planning Panel* in December 2020 (Panel Reference – 2018SSH001). Due to a relatively small number of outstanding design issues however, and the Panel's inability to grant deferred commencement approval, the Panel refused the application.

This new development application again involves the demolition of the existing buildings on the site to facilitate the construction of a new mixed use residential/retail building, comprising a supermarket and specialty stores on the lower levels, with residential apartments on the levels above.

Off-street parking is to be provided in a new three-level basement car parking area in accordance with Council and *State Environmental Planning Policy No.65- Design Quality of Residential Apartment Development (SEPP 65)* requirements. Vehicular access to the car parking area is to be provided via a new entry/exit driveway located off a new public laneway extending from Lakemba Street, within the northern setback of the site.

Council have undertaken their initial assessment of DA-452/2021 and provided a formal written Request for Further Information, dated 9 September 2021. The new scheme, as amended, attempts to address the small number of outstanding design issues, including the following relevant items:

- travel routes of vehicles accessing the site and their impact on selected signalised intersections and surrounding local streets
- profile width of the existing central median island in Lakemba Street which is to be extended

- specifies that the "retail food premises" are proposed to be "restaurant" food & drink premises
- driveway access width
- loading/servicing/waste collection arrangements
- design of new Lakemba Street and public laneway intersection
- sight lines at the property boundary
- basement parking layout

In accordance with previous and recent discussions held with Council and TfNSW, the proposed new design incorporates the following:

- a new public laneway that will run along the eastern boundary of the site, extending from Lakemba Street, and ultimately provide future vehicular access to the adjoining site located at 76 King Georges Road when/if it is eventually redeveloped. The laneway will comprise a carriageway width of 6.5m *plus* a 1.8m wide footpath, in accordance with Council's requirements,

- a road widening dedication along the Lakemba Street site frontage in order to provide an *additional* westbound traffic lane (dedicated left-turn only slip-lane) on approach to the King Georges Road traffic signals,

- incorporation of the concept TCS design which has an 'Agreement in Principle' by the RMS,

- extension of the existing central median in Lakemba Street across the new laneway (as requested in RMS's letter dated 21 February 2018), thereby restricting all turning movements into/out of the laneway to left-in/left-out only

- follow-up correspondence for the extension of existing central median island and its required profile width, confirming existing profile is satisfactory and no objections from TfNSW (TfNSW letter dated 30 April 2021),

- some 40 *less* apartments & 434m^2 *less* retail compared to the 2018 scheme that RMS granted their concurrence on, therefore Council's Co-ordinator Planning East has confirmed that there is no need to undertake revised traffic surveys

- the proposed new laneway & Lakemba Street intersection & has been modelling as a network with the previously approved King Georges Road & Lakemba Street intersection

- the intersection of Lakemba Street and the new laneway will take the form of a driveway crossover with layback design, rather than a standard intersection design

- vehicular access to the proposed basement car parking area has been designed to access off the proposed new laneway, in accordance with a "Category 3" driveway design,

- vehicular access to the subject site's loading dock is also proposed via the new laneway,

- inclusion of a mechanical turntable within the loading dock, now with two loading bays, thereby allowing all service vehicles to enter & exit the loading dock and the site in a forward direction at all times.

The purpose of this revised report is to assess the traffic and parking implications of the amended development proposal and to that end this report:

- describes the site and provides details of the previous and current development proposals

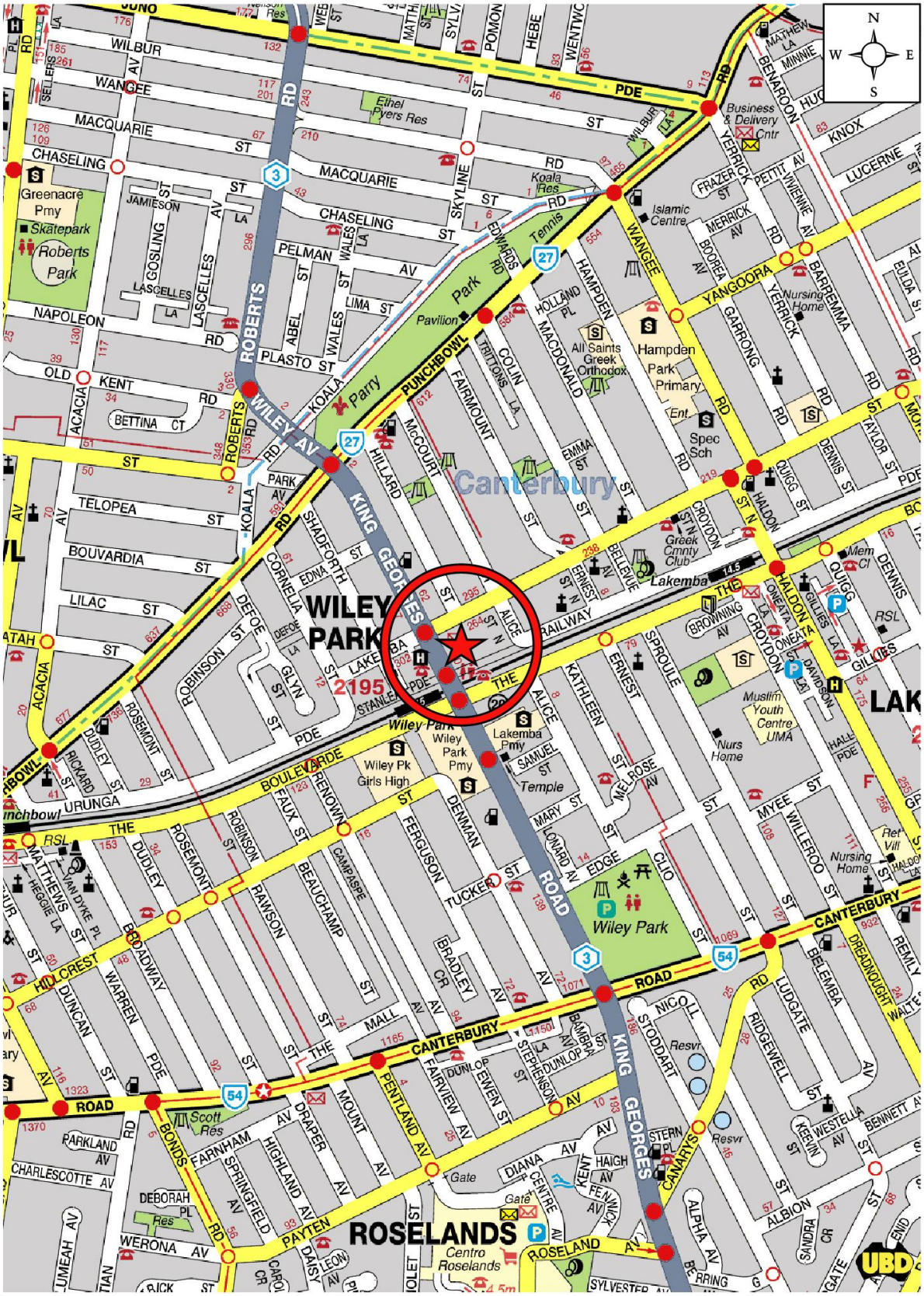
- reviews the road network and public transport services in the vicinity of the site

- estimates the traffic generation potential of the development proposal and assigns that traffic to the adjacent road network

- assesses the traffic implications of the development proposal in terms of road network capacity

- reviews the geometric design features of the proposed parking and loading facilities for compliance with the relevant codes and standards

- assesses the adequacy and suitability of the quantum of off-street parking and loading provided on the site.



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LOCATION
FIGURE 1

Road Closure/Unformed Road

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SITE
FIGURE 2

2. PROPOSED DEVELOPMENT

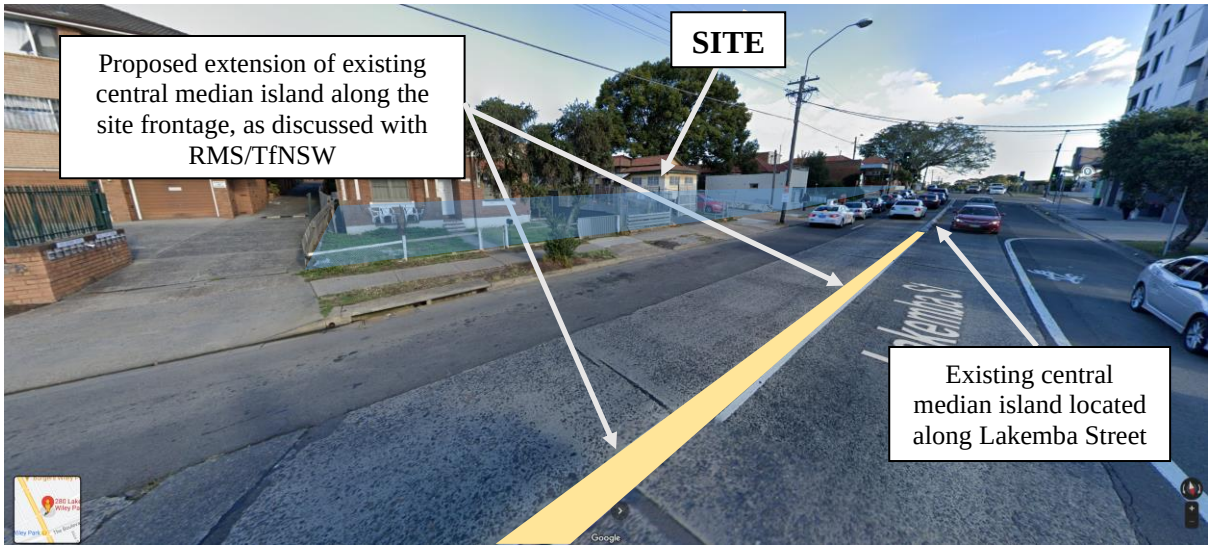
Site

The subject site is located on the south-eastern corner of the King Georges Road and Lakemba Street intersection. The site has street frontages of approximately 88m in length to King Georges Road, approximately 67m in length to Lakemba Street and occupies an area of approximately 5,851m².

The site lies within the Wiley Park Local Centre, is zoned *B2 Local Centre* and is situated approximately 100m walking distance north of Wiley Park Railway Station.

The site is currently occupied by three dwelling houses fronting Lakemba Street plus a number of commercial buildings fronting King Georges Road. Off-street parking is currently provided for most of the properties, with vehicular access provided via a single driveway off King Georges Road plus five driveways off Lakemba Street.

A recent aerial image of the site and its surroundings reproduced below whilst a series of *Streetview* images along the King Georges Road and Lakemba Street are reproduced on the following page.



Site viewed at the western end of the Lakemba Street site frontage

Site viewed at the eastern corner of the Lakemba Street and King Georges Road intersection

Site viewed at the southern end of the King Georges Road site frontage

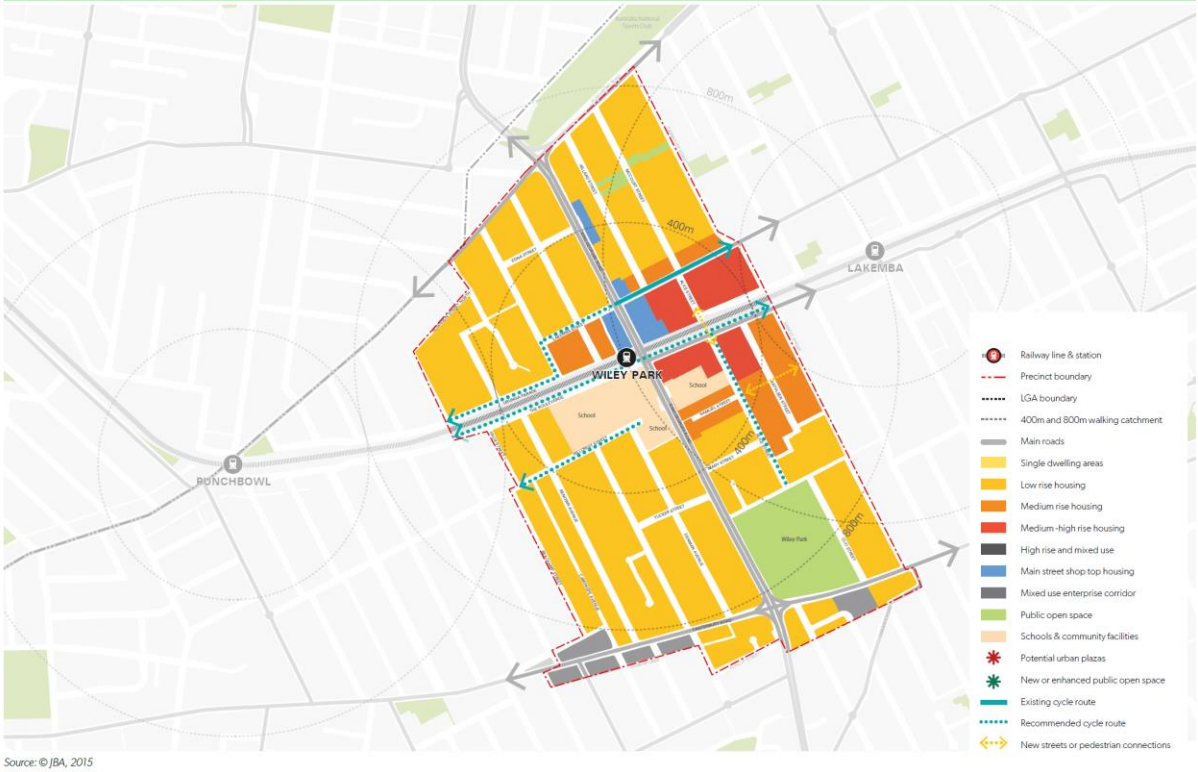
Wiley Park Station Precinct

The site lies within the Wiley Park Station precinct outlined within the *Draft Sydenham to Bankstown Urban Renewal Corridor Strategy*. The Sydenham to Bankstown Corridor Strategy provides a planned approach to growth, with infrastructure delivery and development co-ordinated along the corridor and plans for new homes and jobs over the next 20 years and builds on the objectives outlined within the Sydney Metro City and Southwest Project. The vision for the Wiley Park Station Precinct is:

- a great place for families with a range of new and existing housing, good access to schools and improved public open space;
- new and improved pedestrian and cycle access to Lakemba and Punchbowl will be facilitated by the revitalisation of The Boulevarde;
- new high quality showroom developments on King Georges Road will provide an alternative focus more suited to heavy vehicular traffic; and
- a new linear park along the train line will provide a new and interesting place for leisure and recreation.

A draft land use strategy map of the Wiley Park Station Precinct is reproduced below.

FIGURE 6: DRAFT LAND USE STRATEGY (OCTOBER 2015)



Source: © JBA, 2015

The subject site is identified within Area A of the renewal areas, with the strategic intent of the land use as follows:

- providing a transition of building heights to create an attractive skyline;
- encouraging slender buildings with good separation for light and air
- promoting high quality design through incorporating design excellence processes; and
- where appropriate, incorporating active street edges and commercial uses for employment opportunities.

Proposed Infrastructure Road Upgrades

As noted in the foregoing, the site is located within the Wiley Park Station Precinct of the *Draft Sydenham to Bankstown Urban Renewal Corridor Strategy* Plan.

A diagram of the infrastructure projects located within the precinct is reproduced below.

In particular, the infrastructure upgrades identified to support growth in the Wiley Park Station Precinct in the vicinity of the site is listed below:

Measure		Responsibility	Justification
Public Transport			
T2	Upgrade bus stop shelters along King Georges Road	Transport for NSW	
Walking and Cycling			
P5	Upgrade pedestrian footpath and cycleway along Lakemba Street	Council	Improving cycle connections to the station will encourage public transport use

In addition, RMS have also provided an agreement 'in-principle' under Section 87 of the *Roads Act 1993* for the concept TCS design modification to the traffic signals at the intersection of Lakemba Street and King Georges Road (TCS Site 809).

The existing Traffic Control Signal (TCS) plan as well as the previously approved concept TCS design is reproduced in Appendix A and B, respectively.

The approved 'in-principle' upgrade works at the traffic signals will allow the provision of a dedicated left turn lane for westbound traffic in Lakemba Street approaching King Georges Road. The left turn bay is proposed for the length of the development site frontage along Lakemba Street, transitioning to tie-in with the existing kerbline at the eastern extremity of the site.

Additionally, a dedicated right turn lane will be provided on the Lakemba Street approach to King Georges Road.

Previously Submitted Schemes (DA-484/2017)

As noted in the foregoing, a similar scheme was previously proposed as part of DA-484/2017. After several years and many iterations following requests from both Council and RMS (now TfNSW), the proposal finally made it to the *South Sydney Planning Panel* in December 2020 (Panel Reference – 2018SSH001). Due to a relatively small number of outstanding design issues however, and the Panel's inability to grant deferred commencement approval, the Panel refused the application.

Key development data of the previously submitted schemes within DA-484/2017 are set out in the table below:

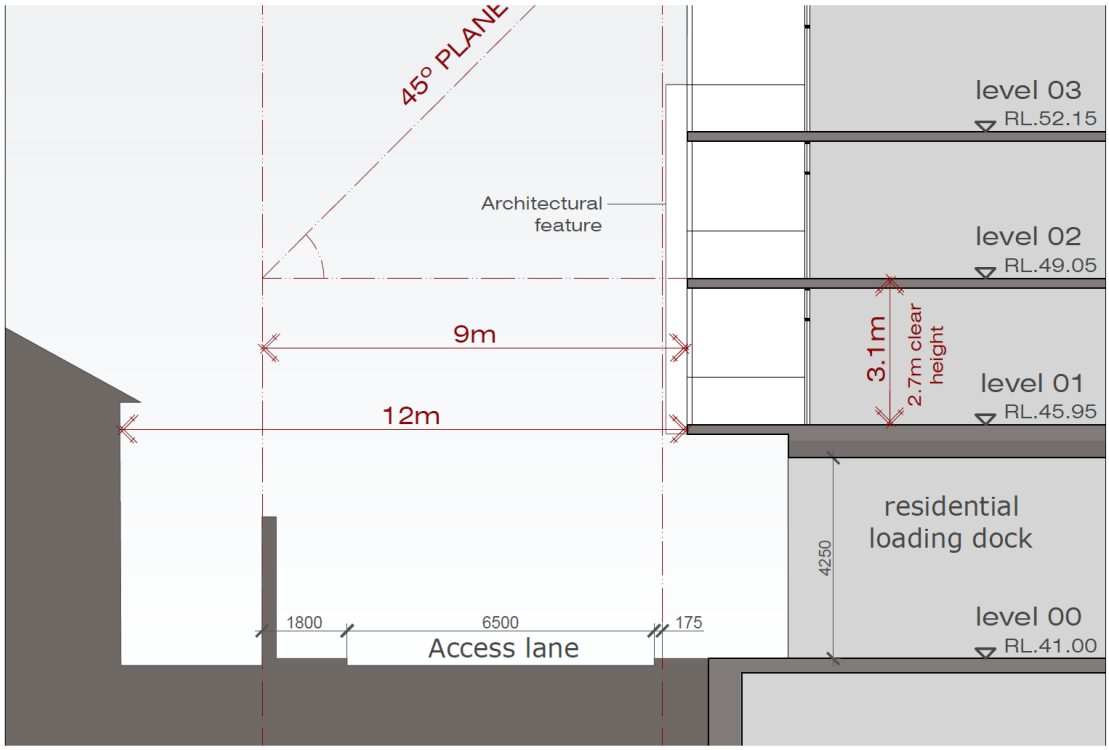
		Original Scheme (2017)	Revised Scheme (2018)	Revised Scheme (late-2020)
Residential	**Studio apartments:**	-	-	14 apartments
	1 bedroom apartments:	72 apartments	68 apartments	45 apartments
	2 bedroom apartments:	100 apartments	77 apartments	85 apartments
	3 bedroom apartments:	38 apartments	37 apartments	6 apartments
	TOTAL APARTMENTS:	**210 apartments**	**182 apartments**	**150 apartments**
Retail	**Retail shops:**	1,660 m^2	1,122 m^2	1,307 m^2
	Supermarket:	1,529 m^2	1,400 m^2	1,130 m^2
	TOTAL FLOOR AREA:	**3,189 m^2**	**2,522 m^2**	**2,437m^2**

Most recently, off-street parking in the 2020 scheme was proposed for a total of 251 cars within a three-level basement car parking area. Vehicular access was proposed via a new entry/exit driveway located off the new public laneway, as requested by Council. All redundant driveway crossovers will be closed and restored to kerb and gutter.

Loading/servicing for the Dec-2020 scheme was proposed to be undertaken by a variety of commercial vehicles ranging from courier vans and utilities up to and including 12.5m long heavy rigid trucks. A dedicated loading dock with a mechanical turntable was to be located on Level 00, adjacent to the garbage holding area and goods lift, capable of accommodating 12.5m long HRV trucks, thereby allowing all service vehicles to enter & exit the loading dock in a forward direction *at all times*. Vehicular access to the loading bay was to be provided via the abovementioned proposed new public laneway off Lakemba Street.

In this regard, it is noted that the new public laneway comprises a road reservation width of 6.5m and a dedicated pedestrian footpath area of 1.8m wide. Furthermore, the intersection of Lakemba Street and the new laneway will take the form of a driveway crossover with layback design, rather than a standard intersection design, in accordance with Council's requirements.

A screenshot of the proposed public laneway submitted in the 2020 scheme is reproduced below.



This arrangement would allow the car park and loading dock of the proposed development as well as permitting vehicular access to the rear of the adjacent public housing site located at 76 King Georges Road, in the event they are redeveloped in the future. Providing the new laneway ensures that adjacent public housing site will not require vehicular access directly off King Georges Road.

The previous scheme also made provision for a new 3m dedication that was to be used to accommodate a new dedicated left-turn only westbound traffic lane extending along the entire Lakemba Street site frontage on approach to the King Georges Road traffic signals, as per RMS's request. The new kerbside traffic lane was to be restricted to left-turn movements *only* for westbound traffic turning onto King Georges Road.

Detailed traffic modelling was also undertaken and the RMS provided an agreement 'in-principle' for the modification to the traffic signals at the intersection of Lakemba Street and King Georges Road (TCS Site 809).

The existing 250mm wide central island dividing the two-way traffic flows along Lakemba Street (east of King Georges Road), directly outside the site was also *approved* to be extended along the entire Lakemba Street site frontage, thereby restricting all turning movements into/out of the development *and* the future laneway to left-in/left-out movements only, as requested by the RMS (written correspondence is reproduced in Appendix C).

In this regard, the profile width of the central island was recently discussed with Council as it was one of their previous comments that remained unaddressed. Council noted that whatever profile width TfNSW require, Council would accept. Accordingly, a subsequent recent enquiry was also made to TfNSW seeking confirmation the extension of the island using the existing width remained acceptable. That email correspondence, including their confirmation, is reproduced in Appendix C.

Proposed Amended Development

The proposed amended development again involves the demolition of the existing buildings on the site to facilitate the construction of a new "shop top" development comprising four separate buildings. The proposed development will consist of a supermarket on basement level 1, a range of specialty stores and restaurant/cafés on the ground floor level (Level 00), and residential apartments on the levels above. Key development data is set out in the table below.

Proposed Amended 2021 Scheme

Residential	**Studio apartments:**	18 apartments
	1 bedroom apartments:	40 apartments
	2 bedroom apartments:	80 apartments
	3 bedroom apartments:	4 apartments
	TOTAL APARTMENTS:	**142 apartments**
Retail	**Supermarket:**	1,019 m^2
	Retail shops:	824 m^2
	Retail food premises:	245 m^2
	TOTAL FLOOR AREA:	**2,088 m^2**

By way of comparison, the latest scheme has a *reduction* in overall non-residential floor area of approximately 349m² as well as a *reduction* of 8 apartments when compared to the late-2020 scheme.

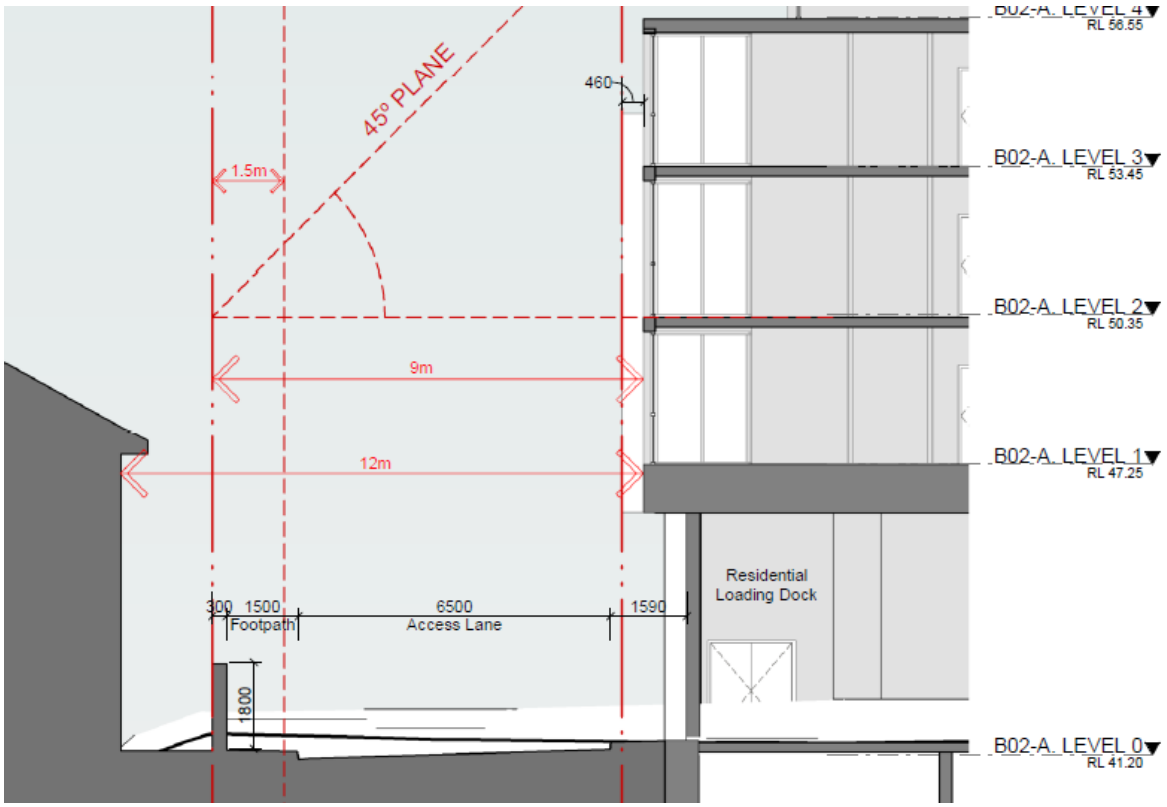
Furthermore, and somewhat critically, when compared to the previously submitted 2018 scheme (which was reviewed and *approved* by RMS), the current scheme represents a *reduction* of an overall retail/supermarket floor area of approximately 434m² as well as a *reduction* of 40 apartments, as detailed in Chapter 3.

Off-street street parking in the new development proposal is now proposed for a total of 241 cars in a new three-level basement parking area, separated into residential and non-residential parking areas, in accordance with Council and *SEPP 65* requirements.

Vehicular access to the car parking facilities is again proposed to be provided via a new entry/exit driveway located off the new public laneway, as requested by Council, and designed to "Category 3" requirements. The new public laneway has also been amended to be designed as a new driveway off Lakemba Street. All redundant driveway crossovers will be closed and restored to kerb and gutter.

Loading/servicing for the proposed development is again expected to be undertaken by a variety of commercial vehicles ranging from courier vans and utilities up to and including 12.5m long heavy rigid trucks. In this regard, the amended scheme now proposes two loading bays capable of accommodating 12.5m long HRV trucks, along with a mechanical turntable, thereby allowing all service vehicles to enter & exit the loading dock in a forward direction *at all times*. Vehicular access to the loading bay is to be provided via the abovementioned proposed new public laneway off Lakemba Street.

The existing 250mm wide central island dividing the two-way traffic flows along Lakemba Street (east of King Georges Road), directly outside the site will be extended along the entire Lakemba Street frontage, thereby restriction all turning movements into/out of the development *and* the future laneway to left-in/left-out movements only, in accordance with RMS/TfNSW and Council's requirements. A screenshot of the revised future public laneway as per Council's recommendation is reproduced on the following page.



A new 3m wide land dedication will again be provided in order to accommodate a new dedicated left-turn only slip lane extending along the entire Lakemba Street site frontage on approach to the King Georges Road traffic signals, which also remains *unchanged*.

Plans of the proposed development have been prepared by *Marchese Partners International Pty Ltd* and are reproduced in Appendix D.

3. TRAFFIC ASSESSMENT

Road Hierarchy

The road hierarchy allocated to the road network in the vicinity of the site by the Roads and Maritime Services is illustrated on Figure 3.

King Georges Road is classified by the RMS as a *State Road* and provides the key north-south road link in the area, linking Wiley Park to Blakehurst. It typically carries three traffic lanes in each direction in the vicinity of the site, with opposing traffic flows separated by a central median island. Turning lanes are provided at key locations.

Canterbury Road is also classified by the RMS as a *State Road* and provides the key east-west road link in the area, linking Revesby and Hurlstone Park. It typically carries two traffic lanes in each direction. Clearway restrictions apply along both sides of the road during commuter peak periods.

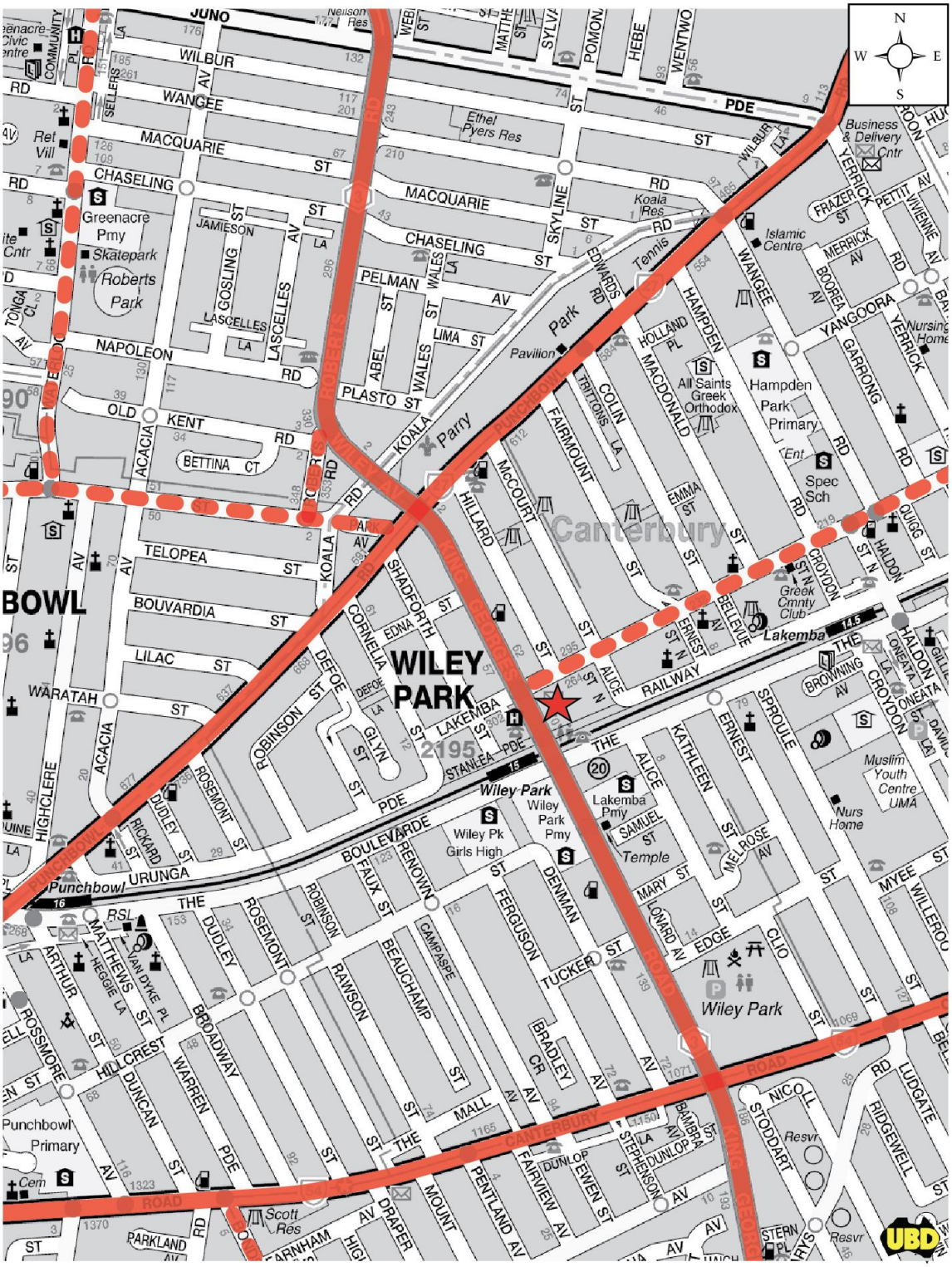
Punchbowl Road is also classified by the RMS as a *State Road* and provides another key east-west road link in the area, linking Punchbowl to Belfield. It typically carries two traffic lanes in each direction with additional lanes provided at key locations.

Lakemba Street is classified by the RMS as a *Regional Road* which performs the function of an east-west *collector route* through the local area. It typically carries one traffic lane in each direction in the vicinity of the site, with kerbside parking generally permitted.

Existing Traffic Controls

The existing traffic controls which apply to the road network in the vicinity of the site are illustrated on Figure 4. Key features of those traffic controls are:

- a 60 km/h SPEED LIMIT which applies to King Georges Road in the vicinity of the site



Key:

State Road

Regional Road

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ROAD HIERARCHY
FIGURE 3


N
W
E
S
PARK AVE
PUNCHBOWL RD
SHADFORTH ST
KING GEORGES RD
ONLY
HILLARD ST
McCOURT ST
FAIRMOUNT ST
EDNA
ST
60
50
CORNELIA
LAKEMBA
ALICE ST NORTH
RAILWAY PDE
GLYN ST
SHADFORTH ST
PDE
THE BOULEVARDE
ALICE ST
WILEY PARK STATION
STANLEA
KING
GEORGES RD
DEFOE ST
URUNGA PDE
THE BOULEVARDE
RENOWN
FAUX ST
HILLCREST
AVE
FERGUSON AVE
DENMAN AVE
MARY ST
Key:
Give Way Sign
Stop Sign
Roundabout
Traffic Signal
Pedestrian Crossing
Right-Turn Bay
School Zone
No Right-Turn
Speed Hump
Signalised Pedestrian Crossing
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EXISTING TRAFFIC CONTROLS
FIGURE 4

- a 50 km/h SPEED LIMIT which applies to Lakemba Street and all other local roads in the surrounding area

- 40 km/h SCHOOL ZONE SPEED LIMITS in the vicinity of Wiley Park Public School, Wiley Park Girls' High School and also Lakemba Public School

- TRAFFIC SIGNALS in King Georges Road where it intersects with Lakemba Street and also The Boulevarde

- a SIGNALISED PEDESTRIAN CROSSING located along King Georges Road, directly outside the site

- GIVE WAY SIGNS located on McCourt Street and Alice Street North where they intersect with Lakemba Street

- a RIGHT TURN HOLDING BAY located on King Georges Road for northbound traffic turning into Lakemba Street

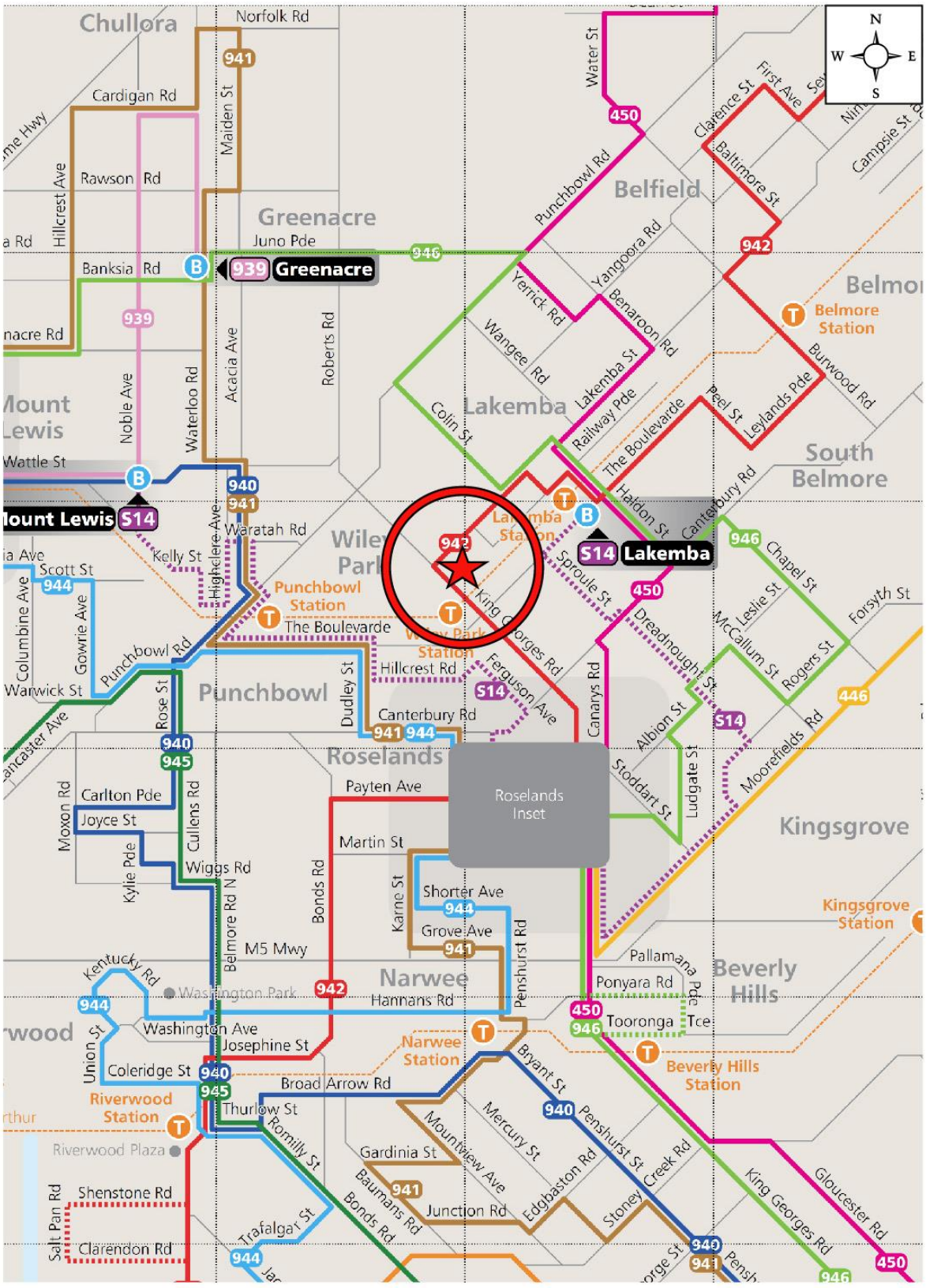
- a NO RIGHT TURN restriction for southbound on King Georges Road turning onto Lakemba Street

- a CENTRAL MEDIAN ISLAND along Lakemba Street across No.299 King Georges Road's site access driveway, directly opposite the site, which restricts their turning movements to left-in/left-out only.

Existing Public Transport Services

The existing public transport services located in close proximity to the site are illustrated on Figure 5.

Wiley Park Railway Station is located approximately 100 m walking distance south of the site which lies on the Bankstown Line, operating between the City and Liverpool. Train services operate out of Wiley Park Railway Station every 5-10 minutes during peak periods and every 10-15 minutes during off-peak periods.



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EXISTING PUBLIC TRANSPORT SERVICES
FIGURE 5

There are also two bus services which operate in the vicinity of the site, including directly outside the site along King Georges Road, as follows:

- Route 942 which operates 7 days per week between Lugarno and Campsie via Belfield, Belmore, Lakemba, Wiley Park, Roselands, Riverwood and Peakhurst

- Route 946 which also operates 7 days per week between Hurstville and Bankstown via Beverly Hills, Roselands, Lakemba, Greenacre and Bankstown.

The abovementioned bus services can also be used to interchange with connecting train services at numerous railway stations in the south and western Sydney area including Hurstville, Campsie, Belmore, Lakemba, Riverwood and Bankstown.

As noted in the foregoing, the site lies within the Wiley Park Local Centre which is expected to undergo significant redevelopment in the coming years. As such it is anticipated that in addition to the supermarket and shops within the subject development, there will be a range of other shops and services in future developments within easy walking distance of the site.

On the above basis, it is clear that the site is considered to be highly accessible to essential services and public transport options.

Existing Traffic Conditions

An indication of the existing traffic conditions on the road network in the vicinity of the site is provided by peak period traffic surveys undertaken as part of the original traffic study. The traffic surveys were undertaken at the Lakemba Street and King Georges Road intersection on Thursday 24th August, 2017. The results of the traffic surveys are reproduced in full in Appendix E and reveal that:

- two-way traffic flows in King Georges Road past the site frontage are typically in the order of 4,500 vehicles per hour (vph) during the *morning* network peak period, increasing to approximately 5,100 vph during the *afternoon* network peak period

- two-way traffic flows in Lakemba Street past the site frontage are significantly lower, typically in the order of 400 vph during the *morning* network peak period, increasing to approximately 900 vph during the *afternoon* network peak period.

As noted in the foregoing, the currently proposed scheme is *less intensive* than the 2018 scheme that RMS granted their concurrence on by some 40 apartments & 434m^2 retail, therefore it is considered there is no need to undertake revised traffic surveys. This was confirmed in writing by Council's Co-ordinator Planning East on the 28th September 2021, following a meeting with Council staff and the Applicant's design team.

Projected Traffic Generation

An indication of the traffic generation potential of the development proposal is provided by reference to the Roads and Maritime Services publication *Guide to Traffic Generating Developments, Section 3 - Landuse Traffic Generation (October 2002)* and the updated traffic generation rates in the recently published RMS *Technical Direction (TDT 2013/04a)* document.

The *TDT 2013/04a* document specifies that it replaces those sections of the RMS *Guidelines* indicated, and that it must be followed when RMS is undertaken trip generation and/or parking demand assessments.

The RMS *Guidelines* and the updated *TDT 2013/04a* are based on extensive surveys of a wide range of land uses and nominate the following traffic generation rates which are applicable to the proposed development:

High Density Residential Flat Dwellings

AM: 0.19 peak hour vehicle trips per unit

PM: 0.15 peak hour vehicle trips per unit

Shopping Centres (0-10,000m^2)

AM: 78A(SM) + 23A(SS) morning peak hour vehicle trips per 1,000m^2 GLFA (50% of PM)

PM: 155A(SM) + 46A(SS) evening peak hour vehicle trips per 1,000m^2 GLFA

Where A(SM) = supermarket floor area & A(SS) = specialty store floor area

Application of the above traffic generation rates to the various components of the revised development proposal yields a traffic generation potential of 131 vph during the AM peak period and 228 vph during the PM peak period, as set out below.

Projected Future Traffic Generation of Proposed Development of the Revised 2021 Scheme

	AM	PM
Residential (142 apartments):	27 vph	21 vph
Retail shops, restaurants/cafés & supermarket (2,088m^2):	104 vph	207 vph
TOTAL TRAFFIC GENERATION POTENTIAL:	**131 vph**	**228 vph**

That projected future level of traffic generation potential should however, be offset or *discounted* by the volume of traffic which could reasonably be expected to be generated by the 2018 scheme (which was reviewed and endorsed by RMS), in order to determine the *nett increase (or decrease)* in traffic generation potential expected to occur as a consequence of the development proposal.

Application of the above traffic generation rates to the 2018 scheme outlined in Chapter 2 of this report yields a traffic generation potential of 169 vph during the AM peak period and 296 vph during the PM peak period, as set out below:

Projected Traffic Generation Potential of the Previously Submitted Scheme in 2018

	AM	PM
Residential (182 apartments):	35 vph	27 vph
Retail shops & supermarket (2,522m^2):	134 vph	269 vph
TOTAL TRAFFIC GENERATION POTENTIAL:	**169 vph**	**296 vph**

Accordingly, when compared to the RMS *approved* traffic generation potential of the 2018-scheme, it is likely that the proposed development will result in a *nett reduction* in the traffic generation potential of the site by approximately 38 vph during the weekday AM peak period and approximately 68 vph during the weekday PM peak period, as set out below:

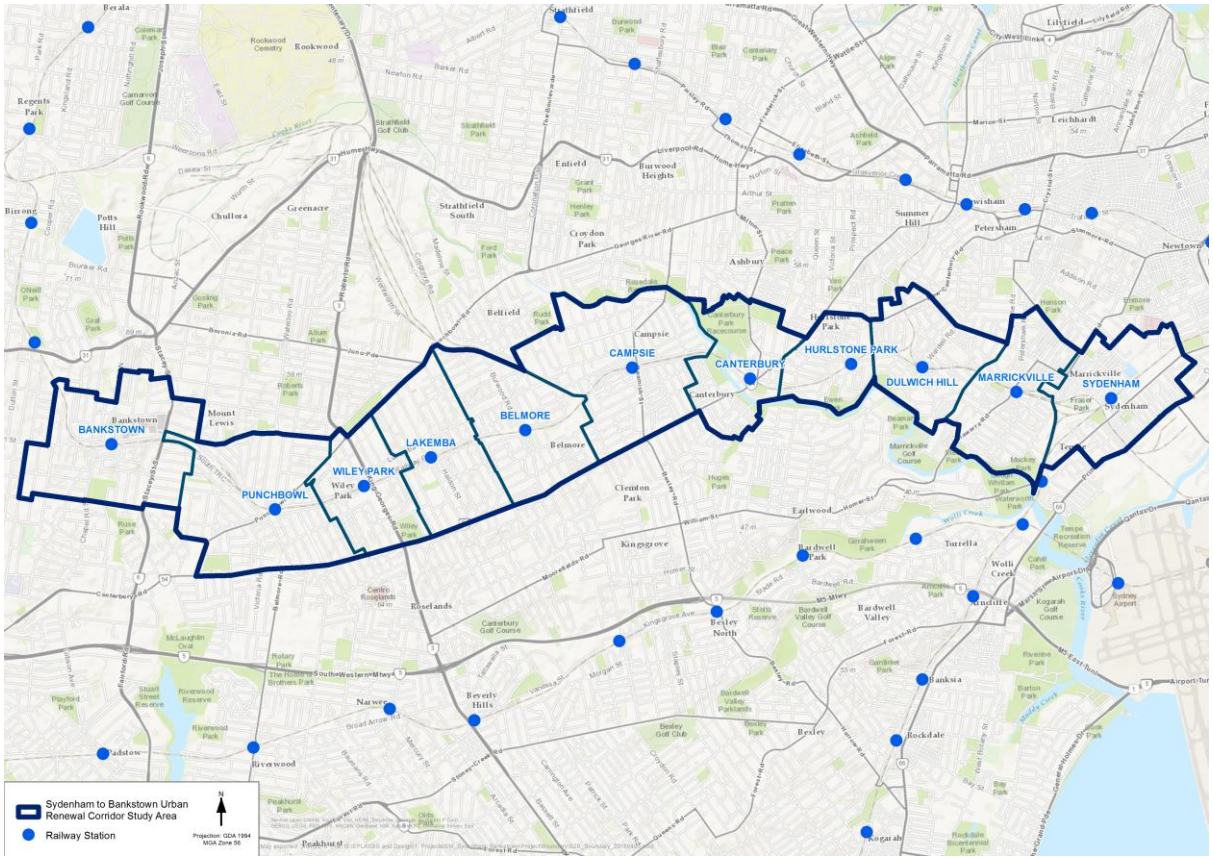
Nett Reduction in Traffic Flows as a Consequence of the Revised 2021 Scheme

	AM	PM
Projected future traffic generation (revised 2021 scheme):	131 vph	228 vph
Less RMS-approved traffic generation (2018 scheme):	-169 vph	-296 vph
NETT REDUCTION IN TRAFFIC GENERATION POTENTIAL:	**-38 vph**	**-68 vph**

It is therefore clear that the proposed development will not have any unacceptable traffic implications in terms of road network capacity, nor will any further road or infrastructure upgrades be required, over and above the agreed upgrades.

Forecasting Travel Demands & Trip Distribution

The site is located within the Wiley Park Station Precinct of the *Draft Sydenham to Bankstown Urban Renewal Corridor Strategy* Plan which is expected to undergo significant redevelopment in the coming years, with the Sydney Metro City and South West project being a catalyst for urban renewal and transformation.



In this regard, adjoining suburbs located along the corridor includes the Punchbowl Station Precinct, located west and Lakemba Station Precinct located to the east.

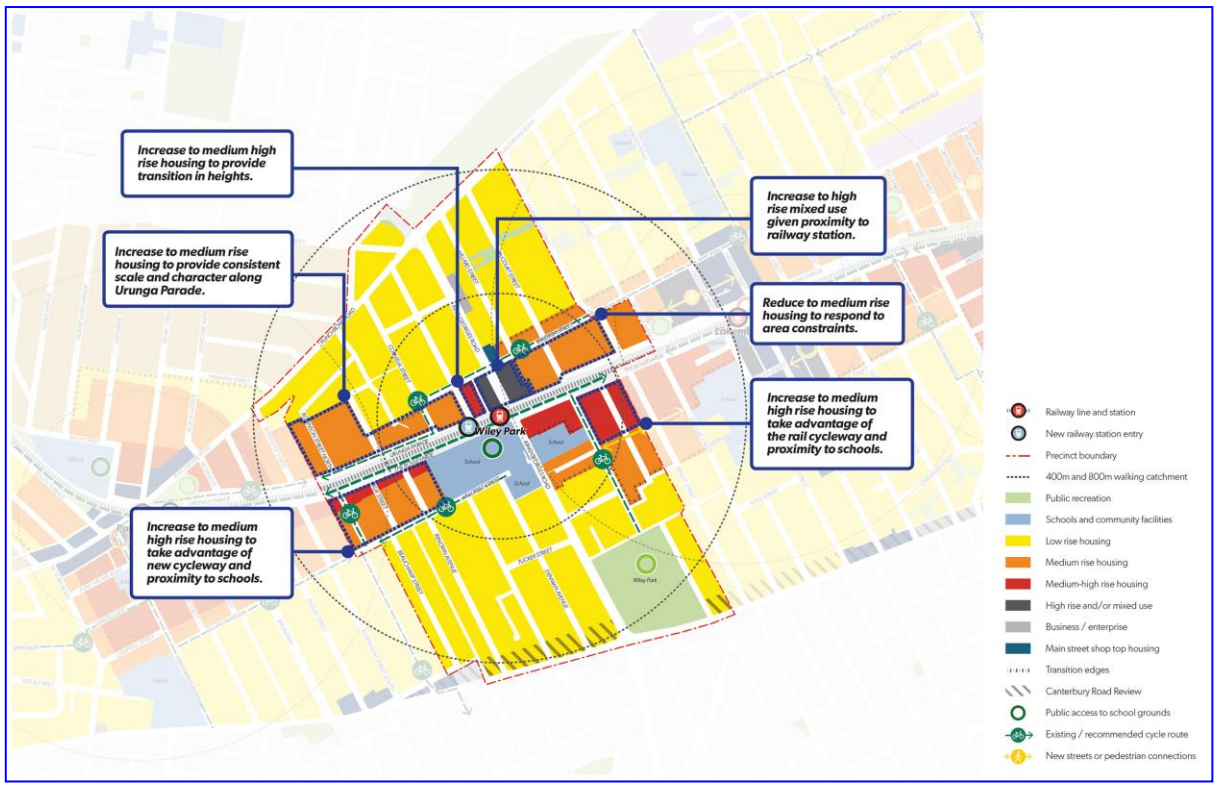
The strategy will enhance the precincts by valuing neighbourhood character, renewing town centres, providing improved open spaces and community services and facilities. One of the key priorities in the vision for these station precincts is to:

"retain the scale and character of popular local shopping areas and encourage revitalisation of quieter shopping areas."

As noted in the foregoing, it is anticipated that in addition to the supermarket and shops within the subject development, there will be a range of other shops and services in future developments within easy walking distance of the site.

As such, it is anticipated that customers visiting the supermarket and specialty stores within the subject development would be local clientele, largely living or working within the Wiley Park Precinct area, including within the development itself.

A map has been reproduced below which shows the Wiley Park Station precinct boundary and the key zoning changes that have been made, which also includes a 400m and 800m radius walking catchment to the Wiley Park Railway Station within approximately 100m walking distance of the site.



As can be seen from the Wiley Park Station Precinct map, increased housing development is generally supported along The Boulevarde, south of the railway line, with schools located in the vicinity of King Georges Road. Whilst, north of the railway line, medium rise housing is generally permissible along Lakemba Street and Urunga Parade.

The majority of traffic associated with the proposed development is attributed to the retail and supermarket components, however the site's prime location within the centre of the Wiley Park Station Precinct will likely result in a much higher percentage of foot traffic rather than vehicular traffic. Notwithstanding, there will be a degree of "passing trade" customers who may drive past the site on their daily commute to/from work and stop into the site. It is pertinent to note however, that "passing trade" generally occurs when access into and out of a development is quick and easy and not requiring a large detour. If a large detour is required, the person will likely not stop into the site in preference for a nearby alternative.

In terms of trip distribution, drivers approaching the site from the greater south would likely take Haldon Street via Canterbury Road, then left onto Lakemba Street and left into the site. Drivers approaching the site from the greater north would likely take Wangee Road via Punchbowl Road, then right onto Lakemba Street and left into the site. Drivers approaching the site from the west would likely take The Boulevarde, then left onto Haldon Street, left onto Lakemba Street and left into the site. Lastly, drivers approaching from the east will take Lakemba Street, then left into the site.

Conversely, drivers departing the site to the north, south and west will simply turn left out of the site and turn at, or drive straight across, King Georges Road. Drivers departing the site to the east, will turn left out of the site, then left or right onto King Georges Road before likely heading back to either Punchbowl Road, The Boulevarde or Canterbury Road.

Council have noted that motorists may make a U-turn at the end of the existing median island, potentially be using private driveways. Alternatively, motorists may loop around the nearby local streets of Alice Street/Railway Parade/Ernest Street or U-turn at local intersections of Hillard Street, McCourt Street or Alice Street.

It is pertinent to note however that the adjoining suburbs of Punchbowl and Lakemba are also undergoing urban revitalisation, including their own respective retail shopping areas within their town centres. Accordingly, it is therefore expected that the proposed supermarket and specialty stores on the subject site will cater primarily for residents and employees living and working in the immediate surrounding area, many of whom will walk to the site. The majority of associated traffic from further afield will likely be residents living within the development, of which their associated traffic is relatively minimal.

Furthermore, the traffic volumes along Lakemba Street, in addition to the road/intersection geometry, makes performing U-turn manoeuvres and/or circulating "around the block" uninviting. In reality, if a development site is difficult to access, customers will shop elsewhere, including the nearby Punchbowl and Lakemba town centres.

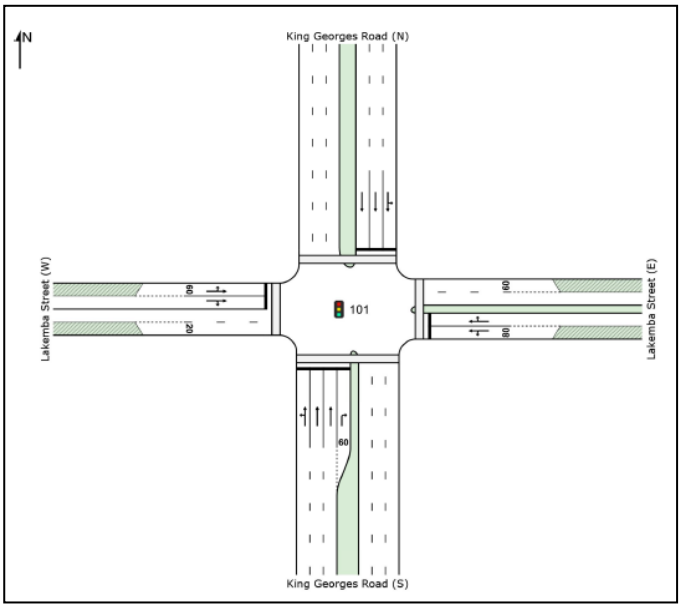
On the above basis, it is expected that any impact on the surrounding local road network associated with the proposed development will be minimal, given the majority of customers of the proposed supermarket and specialty stores within the subject development are expected to be local residents and employees.

Traffic Implications - Road Network Capacity

The traffic implications of development proposals primarily concern the effects that any *additional* traffic flows may have on the operational performance of the nearby road network. Those effects can be assessed using the SIDRA program which is widely used by the RMS and many LGA's for this purpose. Criteria for evaluating the results of the analysis are reproduced in the following pages.

Intersection Operation

The existing intersection layout adopted in the SIDRA 7 analysis of the King Georges Road and Lakemba Street intersection, and approved by RMS, is shown in the figure below.

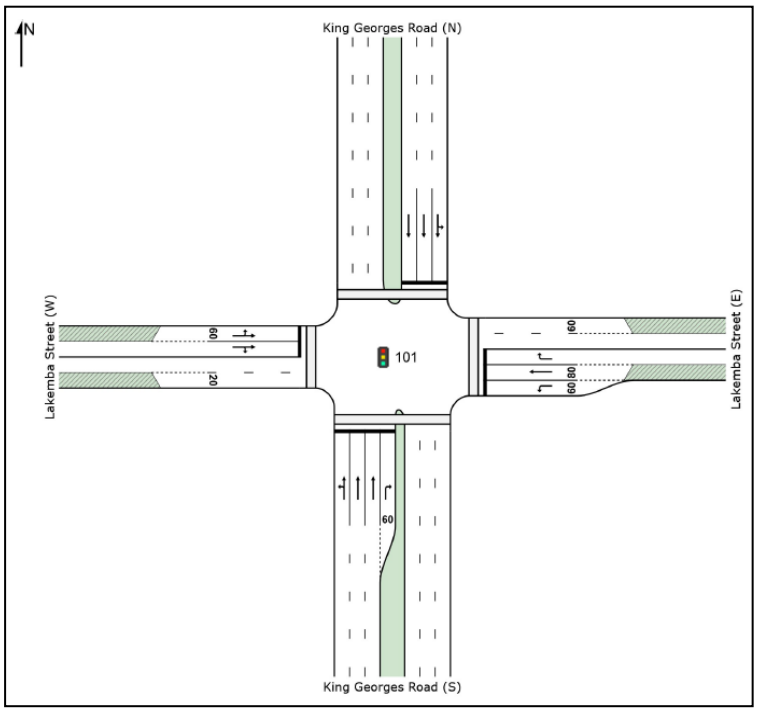


Existing King Georges Road & Lakemba Street intersection

As the existing intersection was typically operating near capacity during the weekday afternoon commuter peak period, Council and the RMS had requested a study as part of the previously submitted scheme in 2018 on potential traffic improvement measures for the future upgrade of the abovementioned intersection. Key development data of the 2018 scheme is set out in the table below.

	Previously submitted 2018 scheme (RMS-approved)	
Residential	**1 bedroom apartments:**	68 apartments
	2 bedroom apartments:	77 apartments
	3 bedroom apartments:	37 apartments
	TOTAL APARTMENTS:	**182 apartments**
Retail	**Retail shops:**	1,122 m^2
	Supermarket:	1,400 m^2
	TOTAL FLOOR AREA:	**2,522 m^2**

RMS have provided an agreement 'in-principle' under Section 87 of the *Roads Act 1993* for the modification to the traffic signal at the intersection of Lakemba Street and King Georges Road (TCS Site 809). This includes the introduction of an additional left-turn only westbound lane as well as a dedicated right turn lane on approach to King Georges Road, as indicated in the figure below, consistent with the *Concept TCS Design* reproduced in Appendix B.



Concept King Georges Road & Lakemba Street intersection layout provided with an 'Agreement in Principle' by the RMS

Accordingly, the results of the SIDRA 7 analysis of the existing traffic conditions, along with the projected traffic demands expected to be generated by the previously submitted scheme in 2018 have been modelled, with the SIDRA "movement summaries" reproduced in Appendix F and summarised on the **Table 3.1** on the following page, revealing that:

- the *existing* King Georges Road and Lakemba Street intersection currently operates at *Level of Service "B"* under the existing AM traffic demands, with total average vehicle delays in the order of 16 seconds/vehicle, and at *Level of Service "E"* under the existing PM traffic demands, with total average vehicle delays in the order of 57 seconds/vehicle

- under the projected future traffic demands expected to be generated by the 2018 scheme, the *existing* intersection layout was expected to continue to operate at *Level of Service "B"* during the AM peak period, with increases in average vehicle delays in the order of 5 seconds/vehicle, and at *Level of Service "F"* during the PM peak period, with increases in average vehicle delays in the order of 36 seconds/vehicle

- under the projected future traffic demands expected to be generated by the 2018 scheme, the proposed upgraded intersection with dedicated left-turn lane was expected to operate at *Level of Service "A"* during the AM peak period, with average vehicle delays in the order of 12 seconds/vehicle, and at *Level of Service "C"* during the PM peak period, with average vehicle delays in the order of 34 seconds per vehicle.

Furthermore, the SIDRA 7 results of the 2018 scheme confirmed that the 95th percentile queue lengths would *not* extend into the existing traffic signals located to the north and south of Lakemba Street.

On the above basis, it is clear that the proposed addition of a dedicated left-turn westbound lane in Lakemba Street on approach to the King Georges Road traffic signals will drastically *improve* the efficiency of the intersection, particularly during the PM peak period, even with the additional traffic that was expected to be generated by the previously submitted scheme in late-2018.

TABLE 3.1 - RESULTS OF SIDRA ANALYSIS OF KING GEORGES ROAD & LAKEMBA STREET (RMS-APPROVED 2018 SCHEME)							
Key Indicators		**Existing Traffic Demand (No Upgrade)**		**Projected Development Traffic Demand (No Upgrade)**		**Projected Development Traffic Demand (Upgrade)**	
		AM	**PM**	**AM**	**PM**	**AM**	**PM**
Level of Service		B	E	B	F	A	C
Degree of Saturation		0.648	1.637	0.709	1.876	0.603	0.920
Average Vehicle Delay (secs/veh)							
King Georges Road (south)	L	16.0	17.2	20.9	19.6	14.1	15.9
	T	9.9	11.1	14.6	13.8	8.5	10.3
	R	19.7	48.5	24.8	47.7	25.2	61.3
Lakemba Street (east)	L	36.6	38.8	32.7	35.8	51.0	33.7
	T	53.0	514.6	56.1	678.2	44.3	42.1
	R	57.5	627.1	63.7	838.4	58.8	74.5
King Georges Road (north)	L	22.6	44.9	27.9	78.8	13.7	49.5
	T	17.1	39.3	22.3	73.2	8.2	43.9
Lakemba Street (west)	L	48.4	45.1	41.7	40.7	50.1	45.1
	T	48.1	41.1	39.9	36.1	49.1	43.5
	R	59.9	67.1	63.8	65.6	57.7	53.3
TOTAL AVERAGE VEHICLE DELAY		**16.4**	**57.1**	**21.2**	**93.5**	**12.7**	**33.6**

Notwithstanding the above, Council have requested that the proposed new laneway intersection is "network" modelled with the King Georges Road & Lakemba Street intersection, rather than separate standalone intersections. Accordingly, this exercise has been undertaken using the updated SIDRA 9 NETWORK program using the currently proposed 2021 scheme volumes. The results of that analysis are summarised in **Table 3.2 & Table 3.3** on the following pages.

TABLE 3.2 - RESULTS OF SIDRA ANALYSIS OF KING GEORGES ROAD & LAKEMBA STREET (PROPOSED 2021 REVISED SCHEME)			
Key Indicators		**Projected Development Traffic Demand (With Upgrade)**	
		AM	**PM**
Level of Service		A	C
Degree of Saturation		0.597	0.905
Average Vehicle Delay (secs/veh)			
King Georges Road (south)	L T R	13.2 7.6 28.3	15.7 9.9 61.1
Lakemba Street (east)	L T R	41.3 46.2 57.3	34.2 43.0 72.0
King Georges Road (north)	L T	19.5 13.7	45.2 39.3
Lakemba Street (west)	L T R	51.9 49.9 56.6	46.1 44.8 54.3
TOTAL AVERAGE VEHICLE DELAY		**14.3**	**31.1**

TABLE 3.3 - RESULTS OF SIDRA ANALYSIS OF LAKEMBA STREET & PROPOSED NEW LANEWAY			
Key Indicators		**Projected Development Traffic Demand**	
		AM	**PM**
Level of Service		A	A
Degree of Saturation		0.062	0.186
Average Vehicle Delay (secs/veh)			
Proposed New Laneway (south)	L	6.9	7.6
Lakemba Street (east)	L T	4.6 0.0	4.6 0.1
TOTAL AVERAGE VEHICLE DELAY		**2.5**	**1.9**

In the circumstances, it is clear that both the 2018 scheme (which had a higher traffic generation potential and approved by the RMS) and the proposed amended 2021 scheme, will not have any unacceptable traffic implications in terms of road network capacity, assuming that the proposed upgrade of the intersection is implemented.

Criteria for Interpreting Results of Sidra Analysis

1. Level of Service (LOS)

LOS	Traffic Signals and Roundabouts	Give Way and Stop Signs
'A'	Good operation.	Good operation.
'B'	Good with acceptable delays and spare capacity.	Acceptable delays and spare capacity.
'C'	Satisfactory.	Satisfactory but accident study required.
'D'	Operating near capacity.	Near capacity and accident study required.
'E'	At capacity; at signals incidents will cause excessive delays. Roundabouts require other control mode.	At capacity and requires other control mode.
'F'	Unsatisfactory and requires additional capacity.	Unsatisfactory and requires other control mode.

2. Average Vehicle Delay (AVD)

The AVD provides a measure of the operational performance of an intersection as indicated on the table below which relates AVD to LOS. The AVD's listed in the table should be taken as a guide only as longer delays could be tolerated in some locations (i.e. inner-city conditions) and on some roads (i.e. minor side street intersecting with a major arterial route).

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

3. Degree of Saturation (DS)

The DS is another measure of the operational performance of individual intersections.

For intersections controlled by traffic signals[1] both queue length and delay increase rapidly as DS approaches 1, and it is usual to attempt to keep DS to less than 0.9. Values of DS in the order of 0.7 generally represent satisfactory intersection operation. When DS exceeds 0.9 queues can be anticipated.

For intersections controlled by a roundabout or GIVE WAY or STOP signs, satisfactory intersection operation is indicated by a DS of 0.8 or less.

[1] *The values of DS for intersections under traffic signal control are only valid for cycle length of 120 secs.*

4. PARKING IMPLICATIONS

Existing Kerbside Parking Restrictions

The existing kerbside parking restrictions which apply to the road network in the vicinity of the site are illustrated on Figure 6. Key features of those parking restrictions are:

- CLEARWAY restrictions along both sides of the King Georges Road during weekday commuter peak periods

- NO STOPPING / NO PARKING restrictions in the vicinity of the Lakemba Street and King Georges Road intersection

- NO PARKING restrictions along the southern side of Lakemba Street, between King Georges Road and Alice Street during weekday commuter peak periods

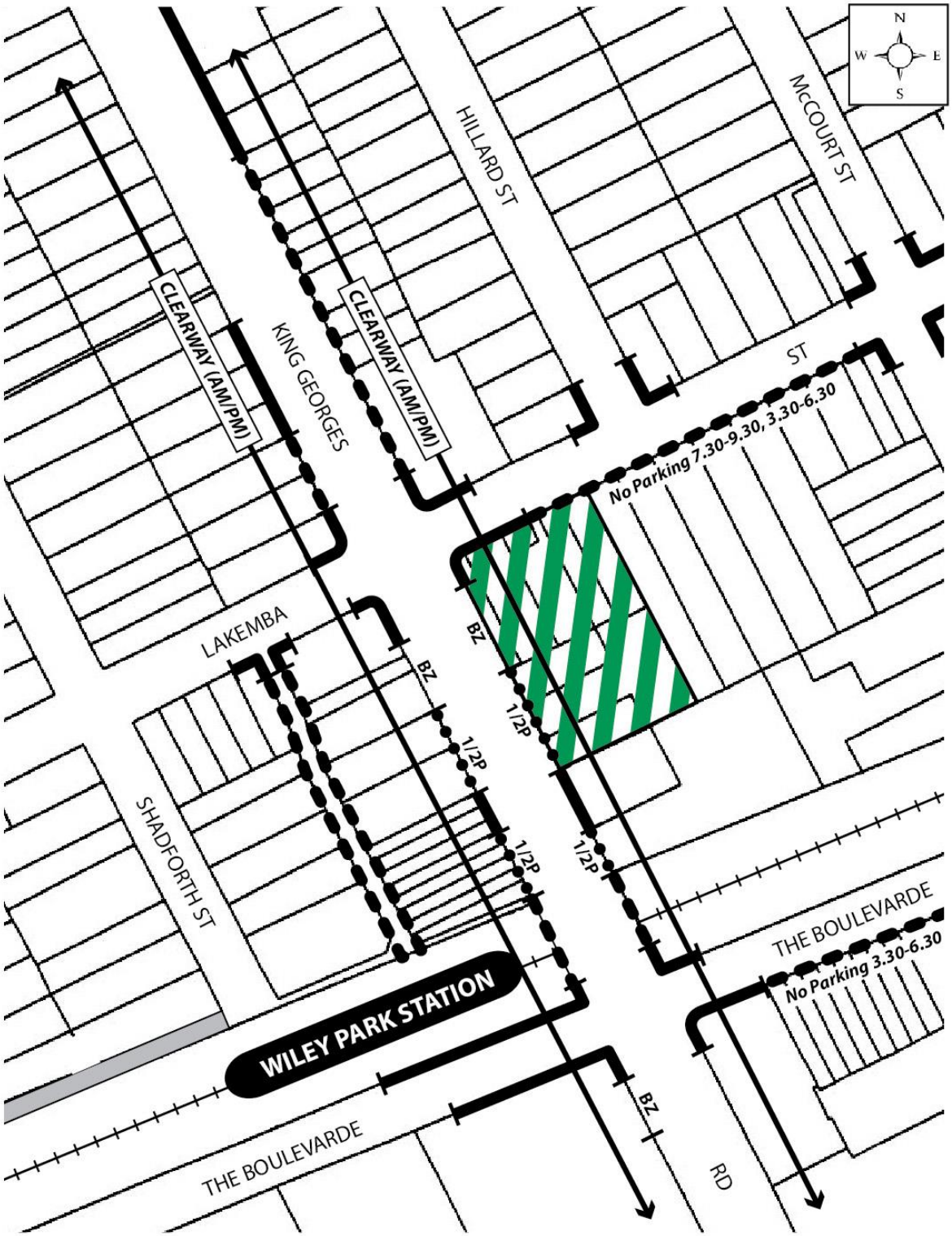
- ½ HOUR PARKING restrictions along both sides of King Georges Road in the vicinity of the site, *outside* of commuter peak periods, including along the site frontage

- generally UNRESTRICTED kerbside parking elsewhere along both sides of Lakemba Street

- BUS ZONES located at regular intervals along both sides of King Georges Road, including directly outside the site, and also along Lakemba Street.

Off-Street Car Parking Provisions

The off-street parking rates applicable to the development proposal are specified in Council's *Canterbury Development Control Plan 2012, Section B1.3 Parking Provision Rates* document in the following terms:


N
W
E
S
HILLARD ST
McCOURT ST
ST
CLEARWAY (AM/PM)
CLEARWAY (AM/PM)
KING GEORGES
No Parking 7.30-9.30, 3.30-6.30
BZ
1/2P
LAKEMBA
BZ
1/2P
1/2P
1/2P
SHADFORTH ST
THE BOULEVARDE
No Parking 3.30-6.30
WILEY PARK STATION
BZ
THE BOULEVARDE
RD
Key:
No Stopping
No Parking
Restricted Parking
BZ Bus Zone
VARGA TRAFFIC PLANNING Pty Ltd
Traffic and Parking Consultants
EXISTING PARKING RESTRICTIONS
FIGURE 6

Shop Top Housing (B2 Zones – Centres with good public transport)

Studio apartments:	0.5 spaces per dwelling
1, 2 or 3 bedroom apartments:	1 space per dwelling
Visitors:	0.15 spaces per dwelling

*Any development containing 10 dwellings or more is to provide at least one car wash bay which cannot be shared with a visitor bay

Shop, Business and Retail Premises (B2 Zones – Centres with good public transport)

1 space per 27m^2 GFA (> 1,000m^2)

Restaurants

1 space per 30m^2 GFA (120m^2 - 1000m^2)

Application of the above *DCP 2012* car parking rates to the various components of the amended development proposal, yields an off-street parking requirement of 231 spaces, as follows:

DCP 2012 – PARKING REQUIREMENTS

		Minimum
Parking Provisions	**Residents (142 apartments):**	133 spaces
	Visitors:	21 spaces
	Car wash:	1 space
	Sub-Total:	**155 spaces**
	Retail shops & supermarket (1,843m^2):	68 spaces
	Restaurants/cafés (245m^2):	8 spaces
	Sub-Total:	**76 spaces**
	TOTAL:	**231 spaces**

Notwithstanding, the subject site is located approximately 100 metres of Wiley Park Railway Station and therefore the development is also subject to the parking requirements specified in the *State Environmental Planning Policy No 65 – Design Quality of Residential Flat Development (Amendment No 3), 2015* in the following terms:

30 Standards that cannot be used to refuse development consent or modification of development consent

(1) If an application for the modification of a development consent or a development application for the carrying out of development to which this Policy applies satisfies the following design criteria, the consent authority must not refuse the application because of those matters:

a) if the car parking for the building will be equal to, or greater than, the recommended minimum amount of car parking specified in Part 3J of the Apartment Design Guide.

Reference is therefore made to the *Apartment Design Guide 2015, Section 3J – Bicycle and Car Parking* document which nominates the following car parking requirements:

Objective 3J-1

Car parking is provided based on proximity to public transport in metropolitan Sydney and centres in regional areas

For development in the following locations:

- on sites that are within 800 metres of a railway station or light rail stop in the Sydney Metropolitan Area; or
- on land zoned, and sites within 400 metres of land zoned, B3 Commercial Core, B4 Mixed Use or equivalent in a nominated regional centre

the minimum car parking requirements for residents and visitors is set out in the Guide to Traffic Generating Developments, or the car parking requirement prescribed by the relevant council, whichever is less.

The car parking needs for a development must be provided off street.

Comparison therefore needs to be drawn between the off-street car parking requirements for residential flat buildings outlined in the Council's *DCP 2012* and also the RMS *Guidelines* to determine the *lesser* requirement. The relevant car parking rates outlined in the RMS *Guidelines* are reproduced below:

RMS Guidelines – High Density Residential Flat Buildings in Sub-Regional Centres

0.6 spaces per 1 bedroom unit

0.9 spaces per 2 bedroom unit

1.4 spaces per 3 bedroom unit

1 space per 5 units for visitor parking

The RMS *Guidelines* does not nominate an off-street car parking rate for studio apartments, therefore for the purposes of this assessment, a rate of *0.3 spaces per studio* has been adopted.

Accordingly, the *minimum* off-street car parking requirement applicable to the residential component of the development is 135 spaces, comprising 107 residential spaces and 28 visitor spaces, as set out below:

	DCP 2012	**RMS Guidelines**
Residents:	133 spaces	107 spaces
Visitors:	21 spaces	28 spaces
Total:	**154 spaces**	**135 spaces**
Lesser Car Parking Requirement: 135 spaces		

The total minimum off-street parking requirement applicable to the proposed development is therefore 212 spaces, as set out in the table below.

		CAR PARKING		
PARKING TYPE	QUANTITY / AREA	RATE	REQUIRED SPACES	PROPOSED SPACES
STUDIO	18	0.3 / unit	5.4	0
1 BED	40	0.6 / unit	24.0	32
2 BED	80	0.9 / unit	72.0	80
3 BED	4	1.4 / unit	5.6	8
RESIDENTIAL SUBTOTAL	**142**		**107.0**	**120**
RESIDENTIAL VISITORS		1 / 5 units	**28.4**	**29**
SUPERMARKET	1,019.0	1 / 27m²	37.7	
RETAIL	823.8	1 / 27m²	30.5	
RESTAURANT	245.4	1 / 30m²	8.2	
STAFF				
COMMERCIAL SUBTOTAL			**76.4**	**92**
TOTAL			**211.8**	**241**

As noted above, the proposed development makes provision for a total of 241 off-street car parking spaces, comprising 120 residential spaces, 29 visitor spaces and 92 retail spaces, *plus* a dedicated car wash bay, thereby satisfying the relevant Council's *DCP* and *SEPP 65* requirements for the various components of the development proposal.

The geometric design layout of the car parking facilities have been designed to comply with the relevant requirements specified in the Standards Australia publication *Parking Facilities Part 1 - Off-Street Car Parking AS2890.1* and *Parking Facilities Part 6 - Off-Street Parking for People with Disabilities AS2890.6* in respect of parking bay dimensions, ramp gradients and aisle widths.

In particular, the proposed driveway, where the new laneway meets the basement access ramp, has been amended to provide a width of 11m, in accordance with a "Category 3" driveway design, as per Table 3.2 of *AS2890.1*.

TABLE 3.2

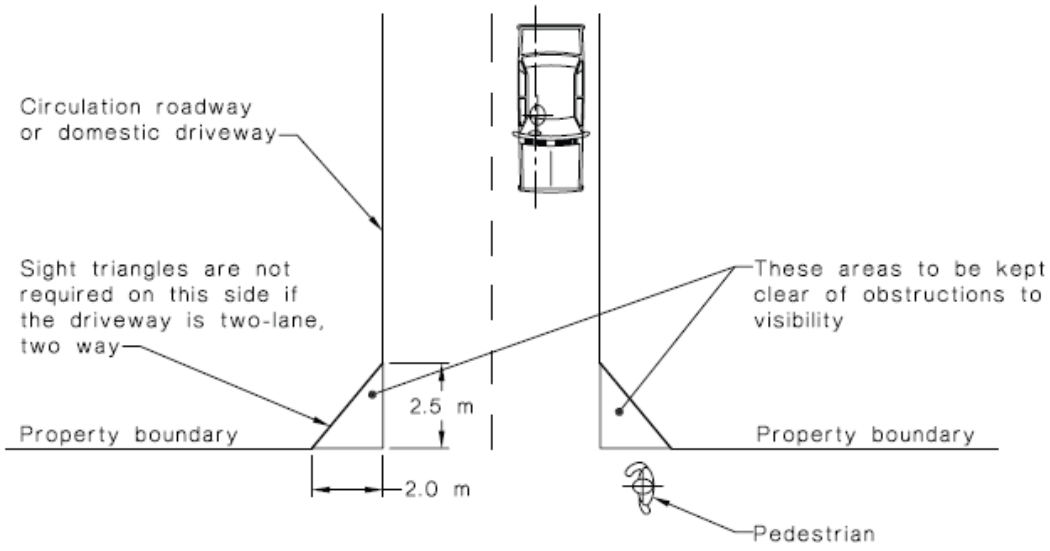
ACCESS DRIVEWAY WIDTHS

metres

Category	Entry width	Exit width	Separation of driveways
1	3.0 to 5.5	(Combined) (see Note)	N/A
2	6.0 to 9.0	(Combined) (see Note)	N/A
3	6.0	4.0 to 6.0	1 to 3
4	6.0 to 8.0	6.0 to 8.0	1 to 3
5	To be provided as an intersection, not an access driveway, see Clause 3.1.1.		

NOTE: Driveways are normally combined, but if separate, both entry and exit widths should be 3.0 m min.

Furthermore, sight triangles have also been provided where the new laneway meets the basement access ramp as well as where the new laneway meets Lakemba Street, as per Figure 3.3 of *AS2890.1*.



DIMENSIONS IN METRES

FIGURE 3.3 MINIMUM SIGHT LINES FOR PEDESTRIAN SAFETY

The revised vehicular access arrangements have been designed to accommodate the swept turning path requirements of the B99 design vehicle as specified in *AS2890.1*, allowing them to enter and exit the basement levels in a forward direction at all times, as requested by Council and as demonstrated by the attached swept turning path diagrams.

Off-Street Bicycle & Motorcycle Parking Provisions

The off-street bicycle and motorcycle parking rates applicable to the development proposal are also specified in the *Canterbury DCP 2012, Section B1.3 Parking Provision Rates* document. The proposed development requires the provision of 52 bicycle spaces and zero motorcycle spaces, as set out in the table below.

		BICYCLES			MOTORCYCLES		
PARKING TYPE	QUANTITY / AREA	RATE	REQUIRED SPACES	PROPOSED SPACES	RATE	REQUIRED SPACES	PROPOSED SPACES
STUDIO	18						
1 BED	40						
2 BED	80						
3 BED	4				N / A	N / A	
RESIDENTIAL SUBTOTAL	**142**	1 / 5 units	**28.4**	**32**	N / A	N / A	**5**
RESIDENTIAL VISITORS		1 / 10 units	**14.2**	**16**	N / A	N / A	
SUPERMARKET	1,019.0						
RETAIL	823.8	1 / 500m² GFA over 1,000m²	2.2				
RESTAURANT	245.4						
STAFF		1 / 300m² GFA	7.0		N / A	N / A	
COMMERCIAL SUBTOTAL			**9.1**	**19**	N / A	N / A	**19**
TOTAL			**51.7**	**67**	N / A	N / A	**24**

The proposed development makes provision for a total of 67 bicycle spaces and 24 motorcycle spaces, thereby *comfortably* satisfying Council's *CDCP 2012* bicycle and motorcycle parking requirements.

Loading/Servicing Provisions

Loading/servicing for the proposed development is expected to be undertaken by a variety of commercial vehicles ranging from courier vans and utilities up to and including 12.5m long heavy rigid trucks. A dedicated loading dock is proposed to be located on Level 00, adjacent to the garbage holding areas, which includes two loading bays and a mechanical turntable.

The turntable will allow all service vehicles to enter and exit the loading dock in a forward direction at all times. Vehicular access to the loading bay is to be provided via the new public laneway off Lakemba Street. A detailed Loading Dock Management Plan has been prepared and is provided under separate cover.

In this regard, it is noted that the future building footprint is located *entirely* within the property boundary and *does not* overhang the proposed public laneway (as indicated on the architectural plans), thereby allowing an *unobstructed* overhead clearance for all vehicles at all times, as requested by Council.

The geometric design layout of the proposed loading facilities has been designed to comply with the relevant requirements specified in the Standards Australia publication *Parking Facilities Part 2: Off-Street Commercial Vehicle Facilities AS2890.2* in respect of loading dock dimensions, overhead clearances and service area requirements for HRV trucks.

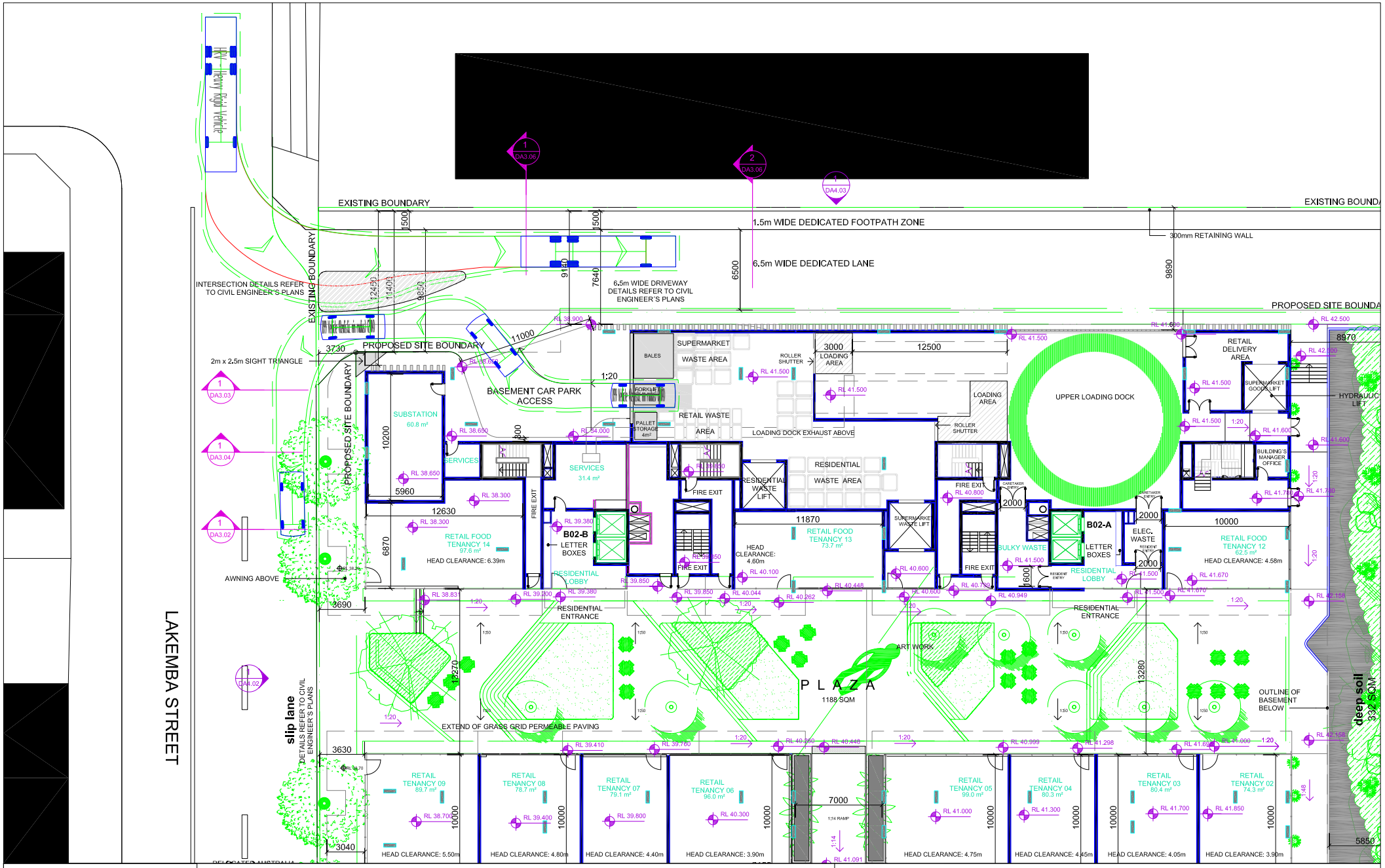
Conclusion

The foregoing assessment has found that the proposed (approved) upgrade of the adjacent intersection of King Georges Road and Lakemba Street will improve the capacity of the intersection, overall *Level of Service* and average vehicle delays, even with the proposed development's traffic.

The proposed new laneway will provide access to the site, including service vehicles servicing the site, as well as provide rear vehicular access to the adjacent public housing site located at 76 King Georges Road in the event they are redeveloped in the future, ensuring that it will not require vehicular access directly off King Georges Road.

Furthermore, the proposed development satisfies Council's off-street parking and loading requirements and complies with Australian Standards.

In the circumstances it is therefore concluded that the proposed development will not have any unacceptable traffic, parking, servicing or access implications.



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Phone +61 2 9904 3224
PO Box 1868
Neutral Bay, NSW 2089
www.vargatraffic.com.au
Sydney, Australia

PROJECT
MIXED USE DEVELOPMENT

DRAWING TITLE
12.5M HRV TRUCK TURNING PATH
Entering Site Access Driveway

ADDRESS
280-292 Lakemba Street & 62-70 King Georges Road, Wiley Park

1:400 @ A4

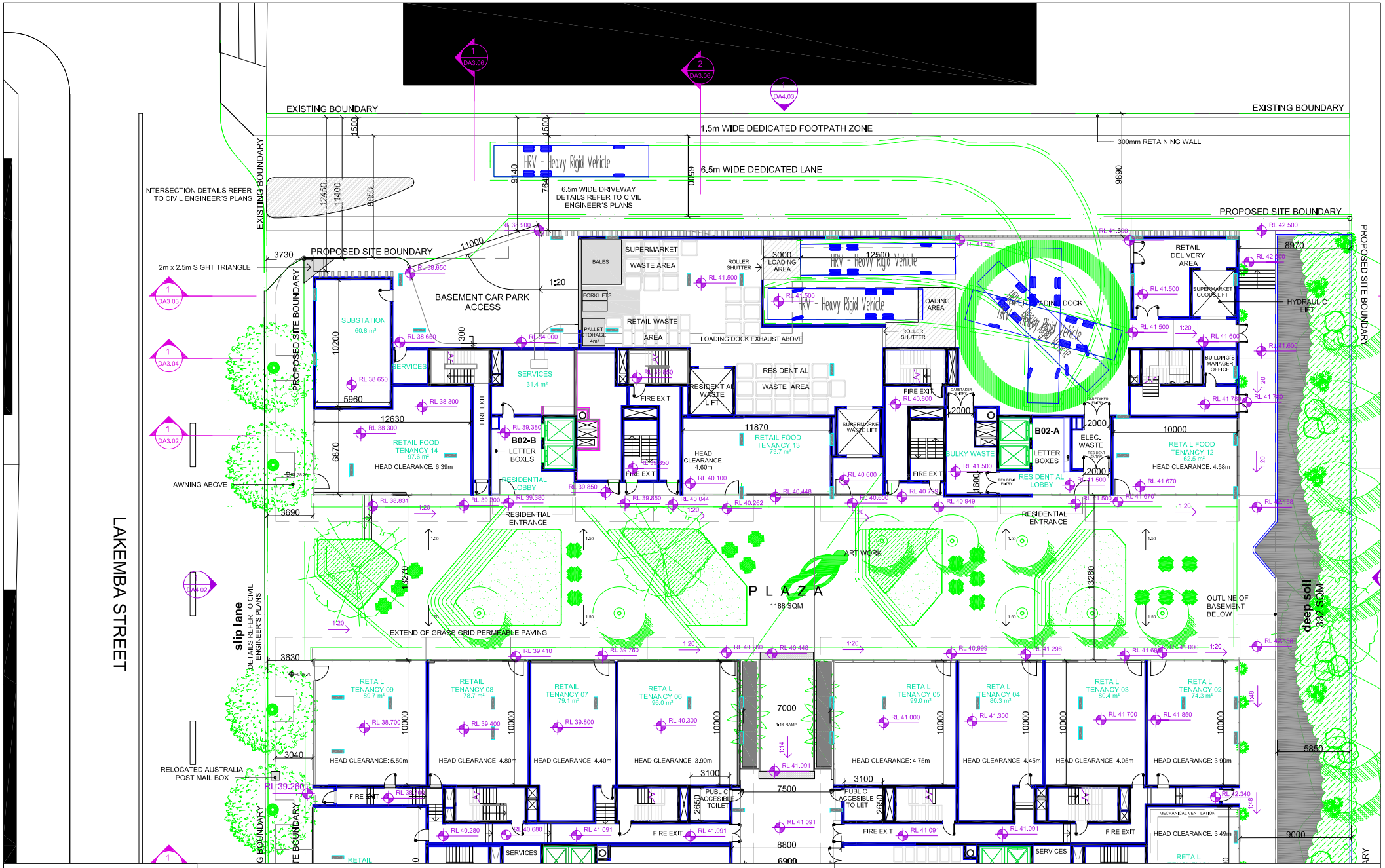
PROJECT NO.
21188

DATE DRAWN
2021-10-14

REVIEWED
CHRIS PALMER

PREPARED
DONALD LEE

VARGA TRAFFIC PLANNING Pty Ltd
Transport, Traffic and Parking Consultants



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Phone +61 2 9904 3224
PO Box 1868
Neutral Bay, NSW 2089
www.vargatraffic.com.au
Sydney, Australia

PROJECT
MIXED USE DEVELOPMENT

N

DRAWING TITLE
12.5M HRV TRUCK TURNING PATH
Entering Loading Dock

ADDRESS
280-292 Lakemba Street & 62-70 King Georges Road, Wiley Park

1:400 @ A4

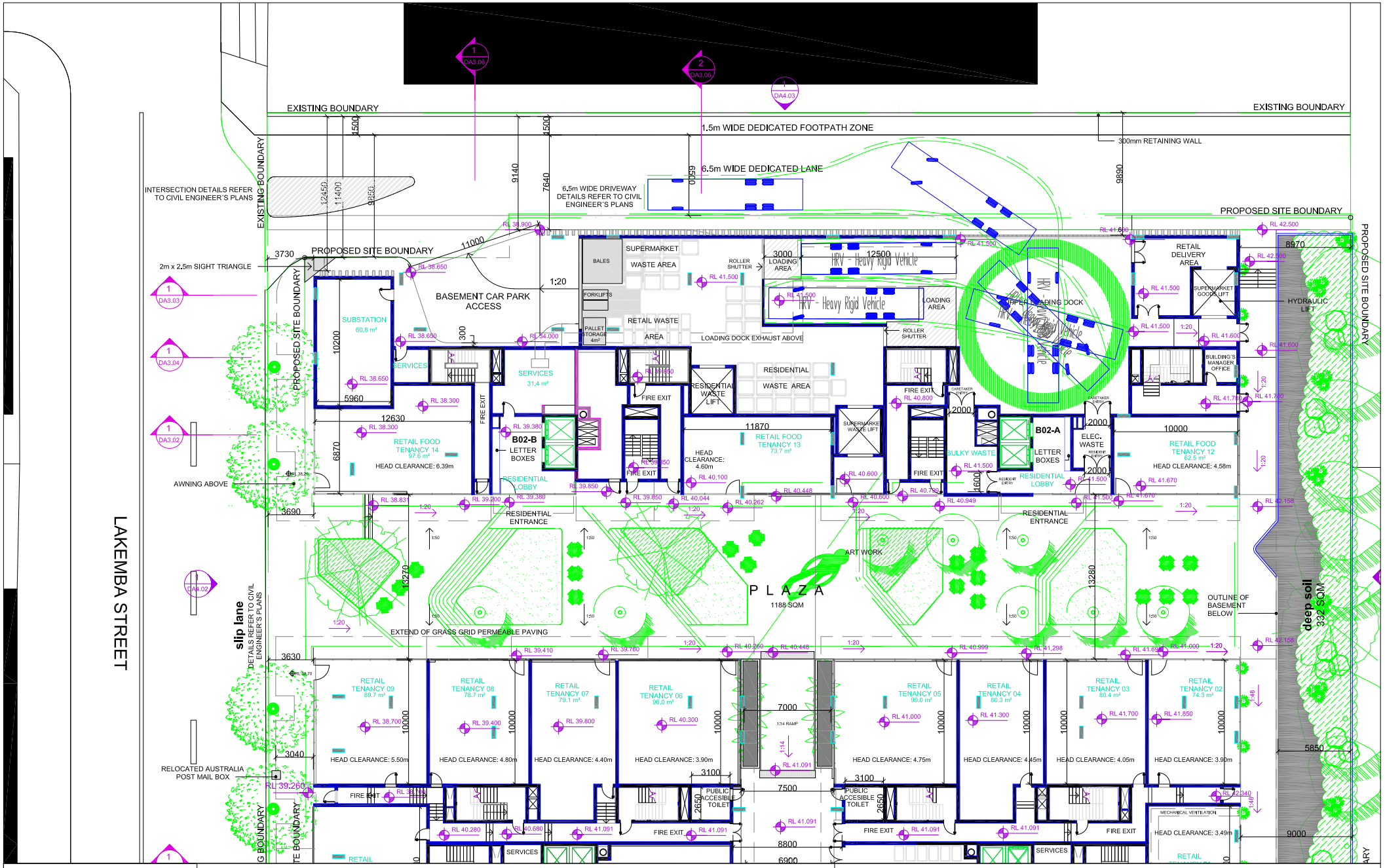
PROJECT NO.
21188

DATE DRAWN
2021-10-14

REVIEWED
CHRIS PALMER

PREPARED
DONALD LEE

VARGA TRAFFIC PLANNING Pty Ltd
Transport, Traffic and Parking Consultants



VARGA TRAFFIC PLANNING Pty Ltd
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Suite 6, Level 1
20 Young Street
Neutral Bay, NSW 2089
Phone +61 2 9904 3224
PO Box 1868
Neutral Bay, NSW 2089
www.vargatraffic.com.au
Sydney, Australia

PROJECT
MIXED USE DEVELOPMENT

DRAWING TITLE
12.5M HRV TRUCK TURNING PATH
Exiting Loading Dock

ADDRESS
280-292 Lakemba Street & 62-70 King Georges Road, Wiley Park

1:400 @ A4

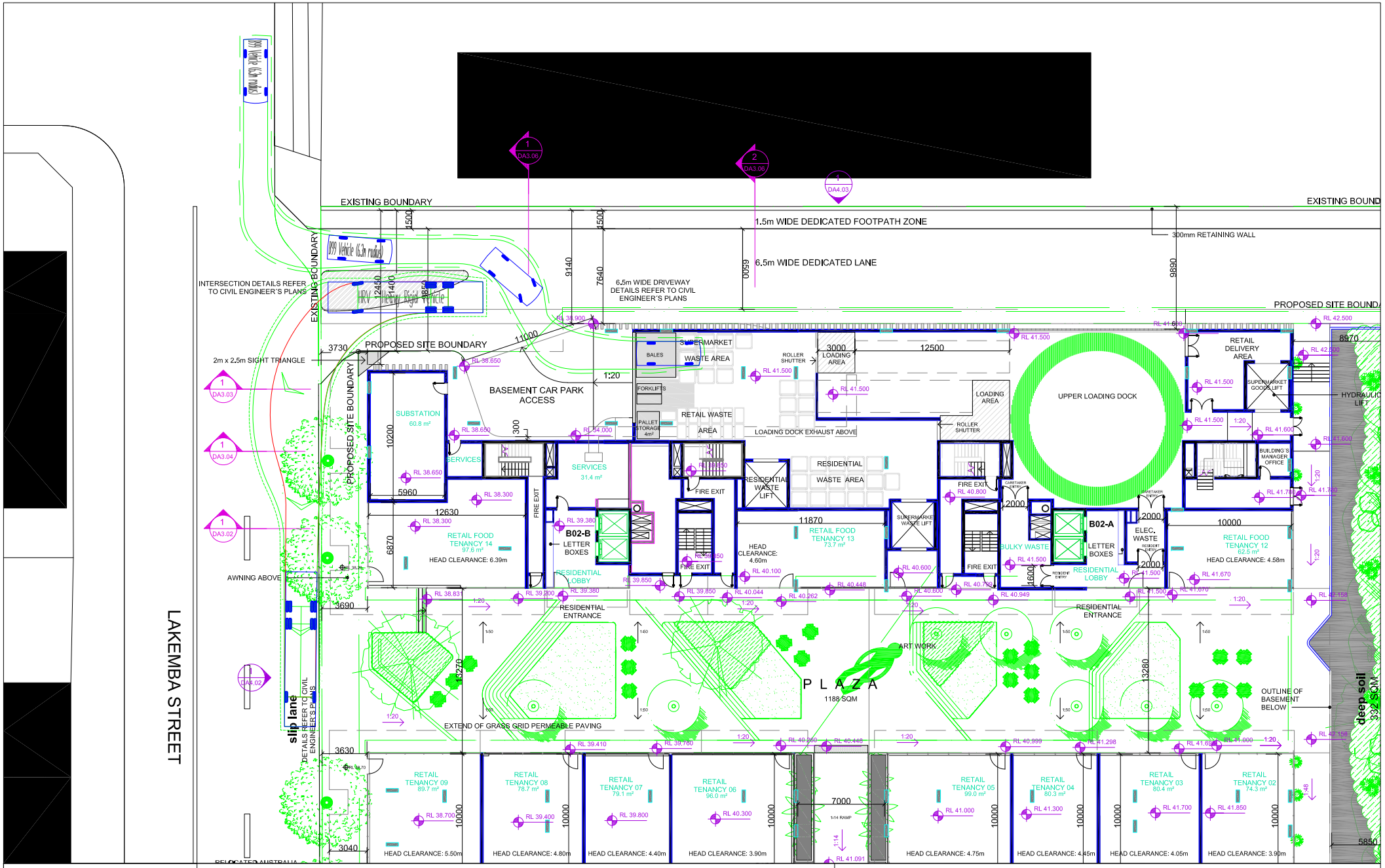
PROJECT NO.
21188

DATE DRAWN
2021-10-14

REVIEWED
CHRIS PALMER

PREPARED
DONALD LEE

VARGA TRAFFIC PLANNING Pty Ltd
Transport, Traffic and Parking Consultants



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PO Box 1868
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www.vargatraffic.com.au
Sydney, Australia

PROJECT
MIXED USE DEVELOPMENT

N

DRAWING TITLE
12.5M HRV TRUCK TURNING PATH
Exiting Site Access Driveway

1:400 @ A4

ADDRESS
280-292 Lakemba Street & 62-70 King Georges Road, Wiley Park

PROJECT NO.
21188

DATE DRAWN
2021-10-14

REVIEWED
CHRIS PALMER

PREPARED
DONALD LEE

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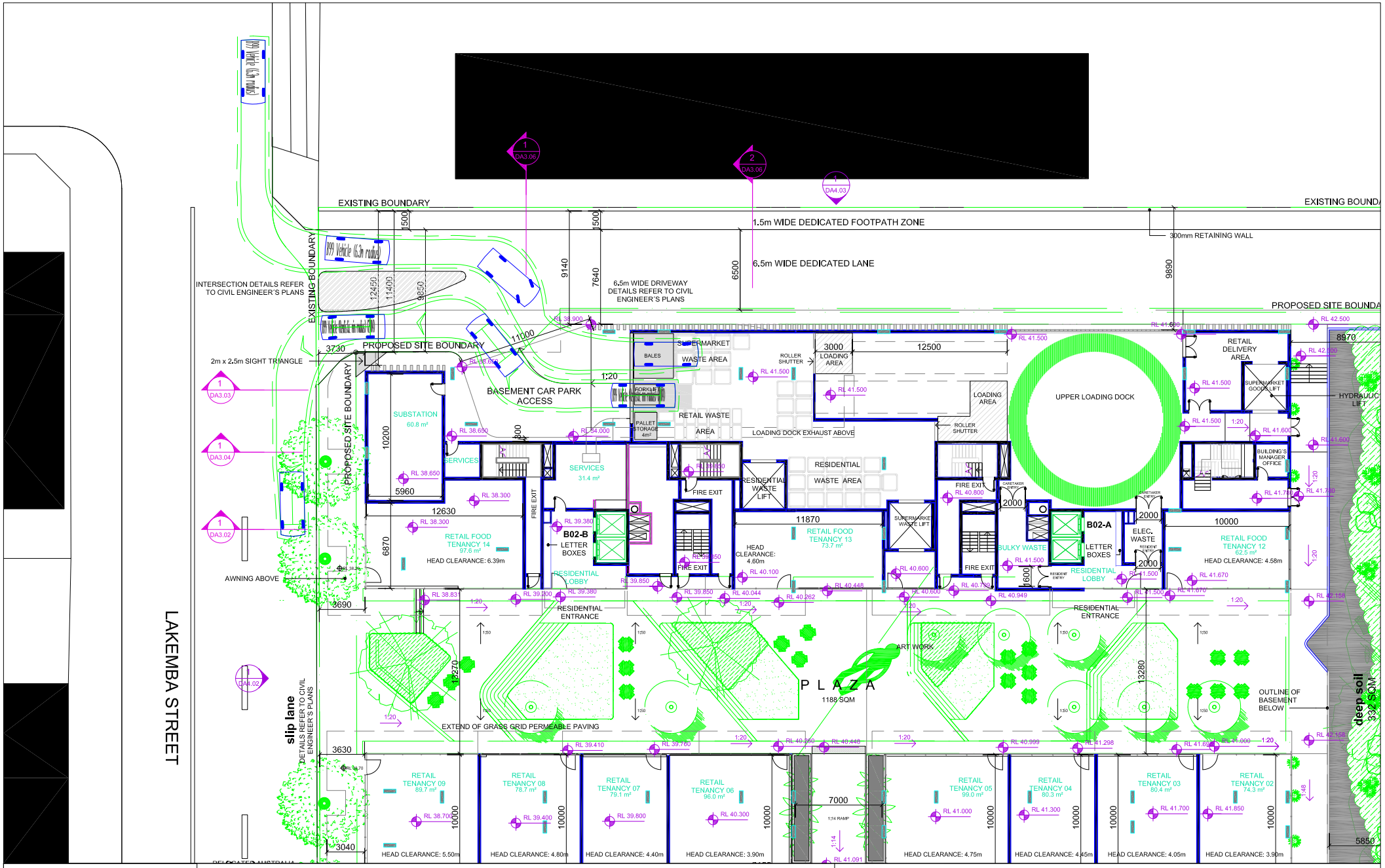

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PO Box 1868
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www.vargatraffic.com.au
Sydney, Australia

PROJECT
MIXED USE DEVELOPMENT

DRAWING TITLE
B99 VEHICLE TURNING PATHS
Entering / Exiting Basement Parking Area

1:400 @ A4

ADDRESS
280-292 Lakemba Street & 62-70 King Georges Road, Wiley Park

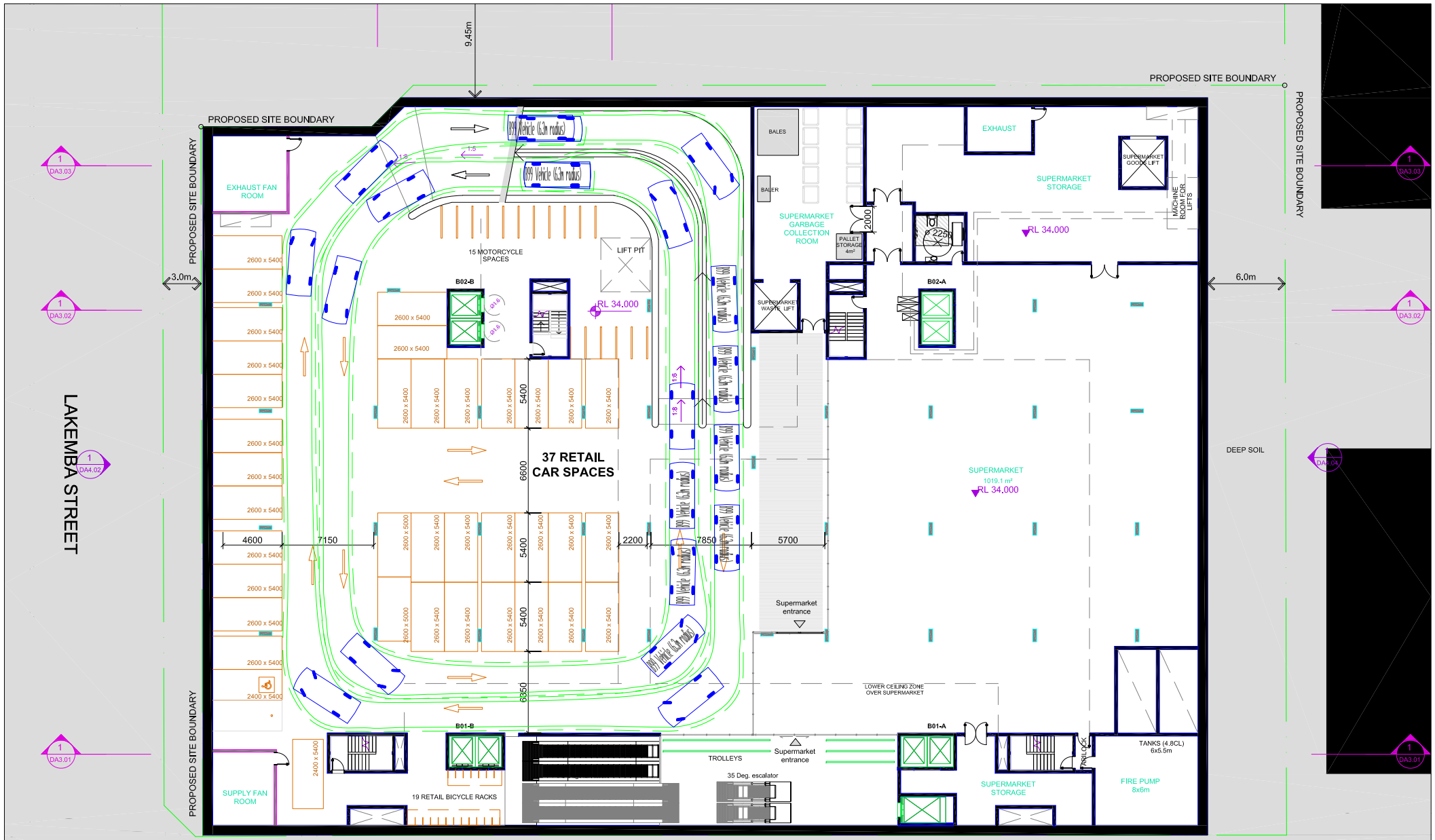
PROJECT NO.
21188

DATE DRAWN
2021-10-14

REVIEWED
CHRIS PALMER

PREPARED
DONALD LEE

VARGA TRAFFIC PLANNING Pty Ltd
Transport, Traffic and Parking Consultants



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20 Young Street
Neutral Bay, NSW 2089

Phone: +61 2 9904 3224
PO Box 1868
Neutral Bay, NSW 2089
www.vargatraffic.com.au
Sydney, Australia

PROJECT
MIXED USE DEVELOPMENT

N

DRAWING TITLE
B99 VEHICLE TURNING PATHS - BASEMENT 1
Entering / Exiting Basement

1:400 @ A4

ADDRESS
280-292 Lakemba Street & 62-70 King Georges Road, Wiley Park

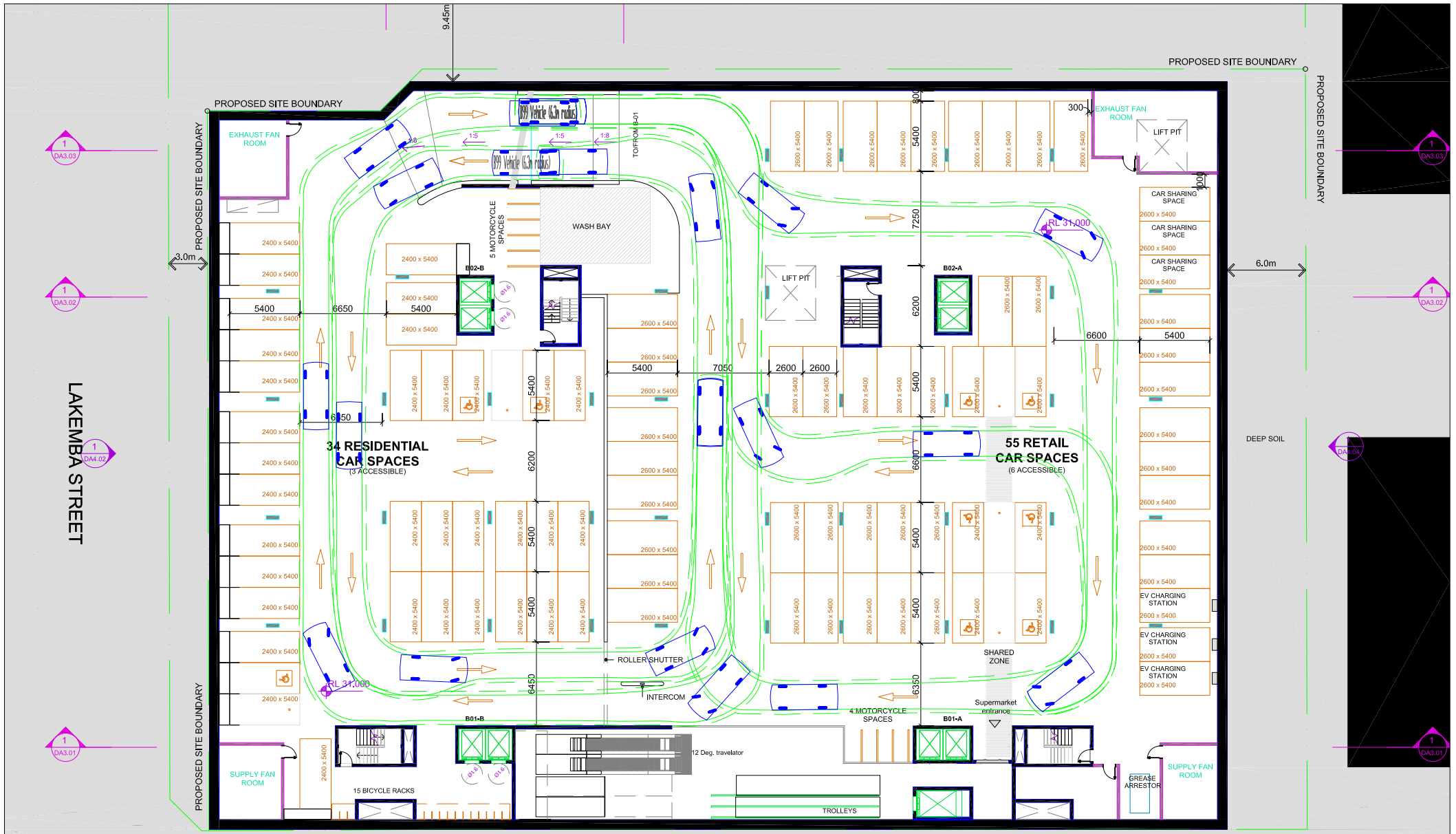
PROJECT NO.
21188

DATE DRAWN
2021-10-14

REVIEWED
CHRIS PALMER

PREPARED
DONALD LEE

VARGA TRAFFIC PLANNING Pty Ltd
Transport, Traffic and Parking Consultants



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Neutral Bay, NSW 2089

Phone +61 2 9904 3224
PO Box 1868
Neutral Bay, NSW 2089
www.vargatraffic.com.au
Sydney, Australia

PROJECT
MIXED USE DEVELOPMENT

DRAWING TITLE
B99 VEHICLE TURNING PATHS - BASEMENT 2
Entering / Exiting Basement Car Park

1:400 @ A4

ADDRESS
280-292 Lakemba Street & 62-70 King Georges Road, Wiley Park

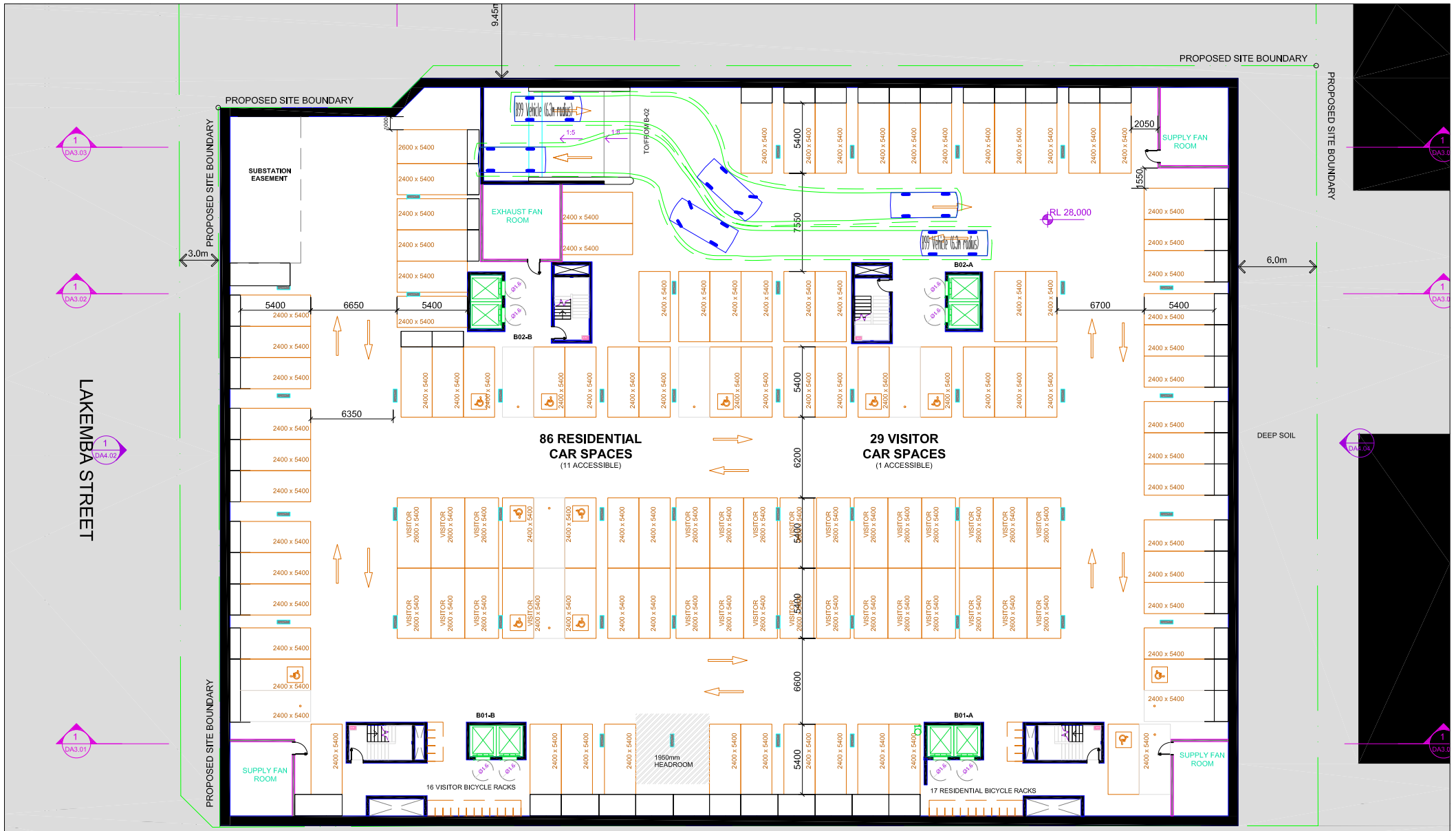
PROJECT NO.
21188

DATE DRAWN
2021-10-14

REVIEWED
CHRIS PALMER

PREPARED
DONALD LEE

VARGA TRAFFIC PLANNING Pty Ltd
Transport, Traffic and Parking Consultants



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Neutral Bay, NSW 2089

Phone +61 2 9904 3224
PO Box 1868
Neutral Bay, NSW 2089
www.vargatraffic.com.au
Sydney, Australia

PROJECT
MIXED USE DEVELOPMENT

N

DRAWING TITLE
B99 VEHICLE TURNING PATHS - BASEMENT 3
Entering / Exiting Basement

1:400 @ A4

ADDRESS
280-292 Lakemba Street & 62-70 King Georges Road, Wiley Park

PROJECT NO.
21188

DATE DRAWN
2021-10-14

REVIEWED
CHRIS PALMER

PREPARED
DONALD LEE

VARGA TRAFFIC PLANNING Pty Ltd
Transport, Traffic and Parking Consultants

APPENDIX A

EXISTING TRAFFIC SIGNAL PLAN

(TCS Site 807)

DRAWN BY CADD
DO NOT AMEND MANUALLY

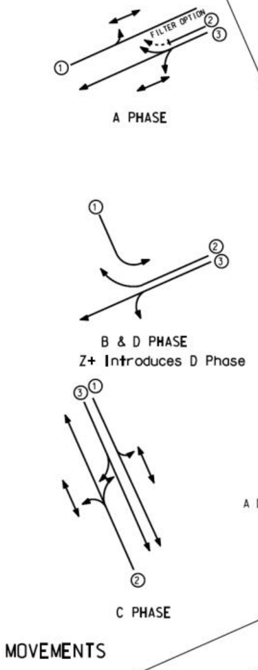
0315.078.VV.0809

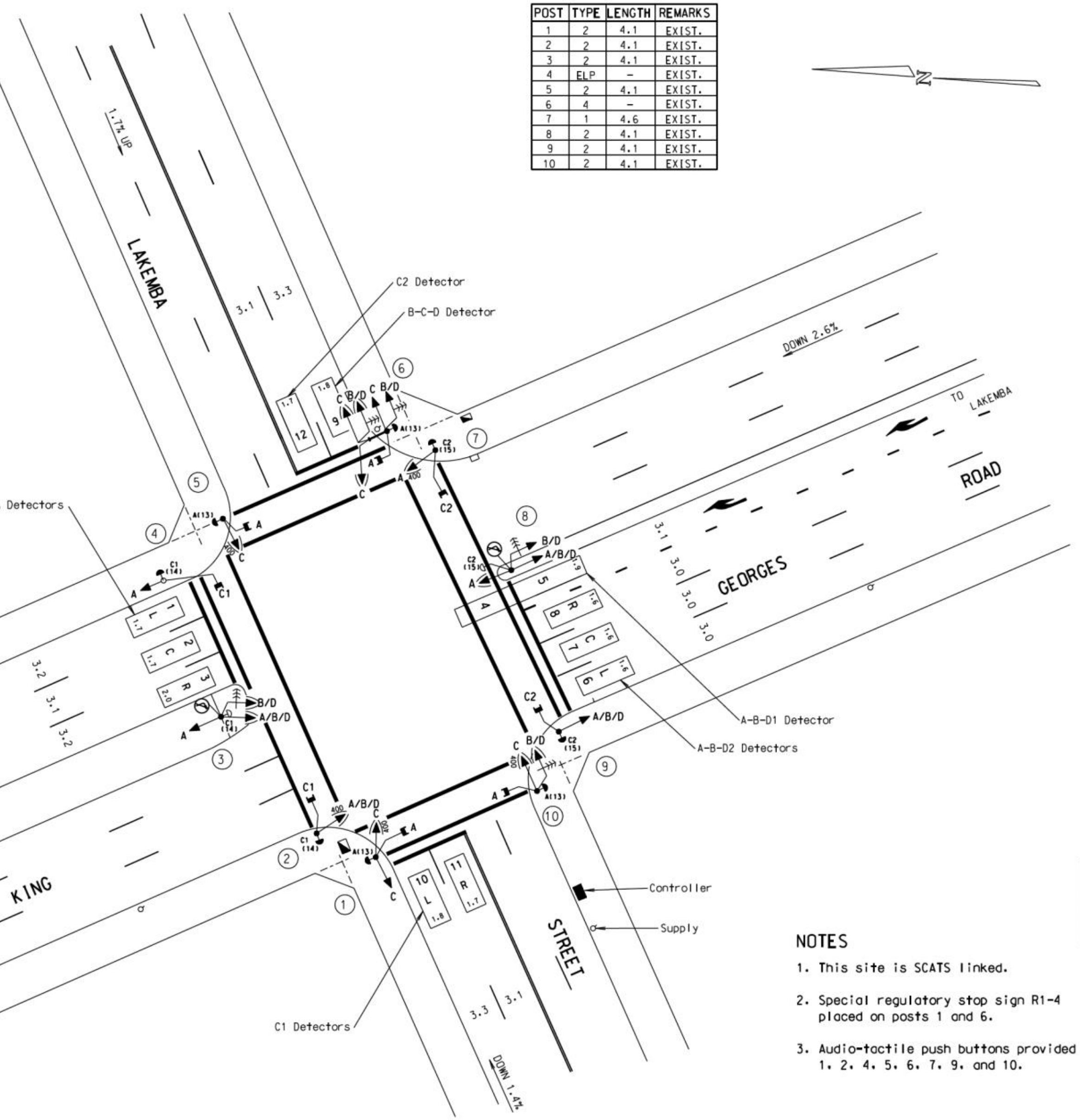
DATE IN SERVICE: 15/11/1973

RTA

POST CHART

POST	TYPE	LENGTH	REMARKS
1	2	4.1	EXIST.
2	2	4.1	EXIST.
3	2	4.1	EXIST.
4	ELP	-	EXIST.
5	2	4.1	EXIST.
6	4	-	EXIST.
7	1	4.6	EXIST.
8	2	4.1	EXIST.
9	2	4.1	EXIST.
10	2	4.1	EXIST.





DETECTOR SPECIFICATION

Detector	Specifications					
A	FN	A(L)	A(E1)			
	SG/PS	$\overline{A}$	A			
	DS	—	—			
A-B-D1 Depart. & Approach	FN	B(PR)	D(PR)			
	SG/PS	A	A			
	DS	Z-	Z-.Z+			
A-B-D1 Approach	FN	A(L).B(L)	D(L)	B(L)	D(L)	
	SG/PS	$\overline{A/B/D}$	$\overline{A/B/D}$	$\overline{B/D}$	$\overline{B/D}$	
	DS	Z-	Z-.Z+	$\overline{Z}$-	Z-.Z+	
cont. A-B-D1 Approach	FN	A(E2)			B(E2)	D(E2)
	SG/PS	A			B	D
	DS	Z-.$\overline{A-B-D1(PR)}$.$\overline{B(NEXT)}$.$\overline{D(NEXT)}$			$\overline{D(NEXT)}$	$\overline{B(NEXT)}$
A-B-D2	FN	A(L)	A(E3)		B(E3)	
	SG/PS	$\overline{A/B/D}$	A		B	
	DS	—	$\overline{B(NEXT)}$.$\overline{D(NEXT)}$		$\overline{A(NEXT)}$.$\overline{D(NEXT)}$	
cont. A-B-D2	FN	D(E3)				
	SG/PS	D				
	DS	$\overline{A(NEXT)}$.$\overline{B(NEXT)}$				
B-C-D	FN	C(PR)	B(E1)			
	SG/PS	$\overline{C}$	B			
	DS	—	$\overline{C(NEXT)}$.$\overline{D(NEXT)}$.$\overline{B-C-D(PR)}$			
cont. B-C-D	FN	C(E1)	D(E1)			
	SG/PS	C	D			
	DS	—	$\overline{B(NEXT)}$.$\overline{C(NEXT)}$.$\overline{B-C-D(PR)}$			
C1	FN	C(L)	C(E2)			
	SG/PS	$\overline{C}$	C			
	DS	—	—			
C2	FN	C(L)	C(E3)			
	SG/PS	$\overline{C}$	C			
	DS	—	—			
A P.B.	FN	A(PB)	C(L)			
	SG/PS	$\overline{A(WALK)}$	A.$\overline{A(WALK)}$			
	DS	—	$\overline{B}$.$\overline{C}$			
C1 P.B.	FN	C(PB)	A(L)			
	SG/PS	$\overline{C(WALK)}$	C.$\overline{C1(WLK)}$			
	DS	—	$\overline{A}$.$\overline{B}$			
C2 P.B.	FN	C(PB)	A(L)			
	SG/PS	$\overline{C(WALK)}$	C.$\overline{C2(WLK)}$			
	DS	—	$\overline{A}$.$\overline{B}$			

SPECIAL SIGNAL GROUP DISPLAY SEQUENCE

SIGNAL GROUP	TABLE TYPE	REMARKS
B/D (RT)	39	Timed R.A. protection for 'A' pedestrians. Z- allows filtering.
B/D (LT)	95	Timed R.A. protection for 'C2' pedestrians.
C1 + C2	Ped.	Call & operate independently with respect to timing.

NOTES

1. This site is SCATS linked.
2. Special regulatory stop sign R1-4 placed on posts 1 and 6.
3. Audio-tactile push buttons provided on posts 1, 2, 4, 5, 6, 7, 9, and 10.

ISSUE	
B ORIGINAL ISSUE	J.I.EDCR 30 7-5-93
	PLAN UPDATED L.J. 28-6-93
	ISSUE C JI SW469 5/10/94 ADDED: AUDIO TACTILES POSTS 1 AND 10. K.I. 15/3/95
	'D' ISSUE POSTS POSITIONS ALTERED. POST TYPES ON 4, 5 & 7 CHANGED K.D. 15-05-02
	'E' ISSUE JI SC1060 09/11/2004 ADDED: AUDIO-TACTILE PBS TO POSTS 2, 4, 5, 6, 7, AND 9. P.O. 29/09/2014
	'F' ISSUE 09/04/2015 LED UPGRADE. LANTERNS ON POST 6 WERE 300mm AMEND SSGDS & DET SPEC TABLES TO SUIT ADAPTIVE. IH LC

PUBLIC UTILITY LEGEND	
HYDRANT	□
STOP VALVE	▲
GAS VALVE	#
SEWER MANHOLE	⊕
TELECOM PIT	◪
ELECT LIGHT POLE	ơ
POWER POLE	○
STAY POLE	⊘
TELEPHONE BOX	⊡
TELECOM PILLAR	◕

REFERENCE PLANS	
SYMBOLS/ABBS.	VD003-6
STD POSIT	VD001-5
DET SCHED EXP	VD018-10
PRES. DETECT	VC005-17
SSG DIS. SEQ.	VD018-8
CABLE INSTALL	SHEET 17
CABLE CHART	SHEET 15
SURVEYOR : J.H.GILLIES	
DATE : 1972	

U.B.D. Ref. MAP 272 M-2
I.S.G. CO-ORDS E: 306138 N: 1245111
DESIGNED L.JOHNS
CHECKED J ZOETENDYK
J.ZOETENDYK SITE CHECKED
F.D.REID RECOMMENDED

APPROVED
J.MCKERRAL ENGINEER-IN-CHIEF
29-1-80 DATE

Roads and Traffic Authority, N.S.W
MUNICIPALITY OF CANTERBURY
M.R.315 KING GEORGES ROAD &
LAKEMBA STREET
WILEY PARK
DESIGN LAYOUT
TCS No 809

REGION: SYDNEY
BRANCH: CONSULTANT SERVICES
LOGIN: N/A
CADD DRAWING FILE: VV0809_16F.dgn
SCALE (1:200)
ISSUE F
FILE 78TS925
SUPERSEDES SHEET/ISSUE 16/E
REGN. 0315.078.VV.0809
SHEET 16

APPENDIX B

CONCEPT TCS DESIGN "AGREEMENT IN PRINCIPLE"

Transport
Roads & Maritime
Services

1 May 2019

Our Reference: SYD18/0027/06

Chris Palmer
Varga Traffic Planning
PO Box 1868
NEUTRAL BAY 2089

Dear Mr. Palmer,

PROPOSED MODIFIED TRAFFIC CONTROL SIGNAL (TCS) SITE
280-300 LAKEMBA STREET AND 64-70 KING GEORGES ROAD, WILEY PARK

Reference is made to your email dated 26 March 2019 to Roads and Maritime (Roads and Maritime) seeking approval to undertake works in accordance with Section 87 and Section 138 of the *Roads Act 1993* for the proposed modification to the traffic signals at the intersection of Lakemba Street and King Georges Road (TCS Site 809).

Roads and Maritime has reviewed the submitted information and provides agreement 'in-principle' under Section 87 of the *Roads Act 1993,* subject to a detailed design review and Roads and Maritime approval of the proposed traffic signal plan and as well as the developer agreeing to the following conditions:

1. The proposed design and adjustment at TCS site 809 shall be designed to meet Roads and Maritime requirements. The TCS plans shall be drawn by a suitably qualified person and endorsed by a suitably qualified practitioner.

   The submitted design shall be in accordance with Austroads Guide to Road Design in association with relevant Roads and Maritime supplements (available on www.rms.nsw.gov.au). The certified copies of the TCS design and civil design plans shall be submitted to Roads and Maritime for consideration and approval prior to the release of a Construction Certificate and commencement of road works. Please send all documentation to development.sydney@rms.nsw.gov.au.

   Roads and Maritime fees for administration, plan checking, civil works inspections and project management shall be paid by the developer prior to the commencement of works.

   The developer will be required to enter into a Works Authorisation Deed (WAD) for the abovementioned works.

2. The developer shall be responsible for all public utility adjustment/relocation works, necessitated by the above work and as required by the various public utility authorities and/or their agents. The detailed design plans submitted must show all existing public utilities impacted by the proposed works and their adjustments,

3. A Road Occupancy Licence (ROL) should be obtained from Transport Management Centre for any works that may impact on traffic flows on King Georges Road during construction activities. A ROL can be obtained through https://myrta.com/oplinc2/pages/security/oplincLogin.jsf

If you have any further inquiries in relation to this development application please contact Narelle Gonzales, Development Assessment Officer, on 0409 541 879 or by email at: development.sydney@rms.nsw.gov.au.

Yours sincerely,

Brendan Pegg
Senior Land Use Planner
South East Precinct, Sydney Division

Transport Roads & Maritime Services

TCS Design "Agreement in Principle"

Site Details		
TCS Site #	**Street 1**	**Street 2:**
809	King Georges Road	Lakemba Street
Street 3	**Suburb**	**LGA Name**
	Wiley Park	Canterbury Bankstown Council
Maintenance Group	**Electoral Boundary**	**LGA Code**
LTJV	Bankstown	

Project Details		
Program	**Region**	**Precinct**
Development Application DA484/2017, SYD18/00027	Sydney	South East
Client	**Client Contact**	**Contact Email**
Varga Traffic Planning Pty Ltd Chris Palmer	9904 3224	chris@vtp.net.au

Proposed scope of works

Provision of a dedicated left turn lane (65m from the existing stop line) for westbound traffic in Lakemba Street approaching King Georges Road. Additionally, a dedicated right turn lane will be provided on this approach.
For this some of the works will include (but are not limited to):

- New type 2 post and primary mast arm (type 5XL) in Lakemba Street eastern leg.
- Realignment of the pedestrian crossing on the eastern leg of Lakemba Street.
- Install new primary mast arm (type 5XL) on the southern leg of King Georges Road to provide appropriate lantern visibility.
- Install new median posts (type 2 and 13) on the southern leg of King Georges Road. The type 2 post will carry right turn lanterns only as the width of the median is not sufficient for 6 aspect lanterns.
- Realignment of the pedestrian crossing over the southern leg of King Georges Road.
- Trimming of the median and pedestrian fence on the southern leg in King Georges Road.
- Post 4 has been retained as an ELP however, may be replaced with a standard TCS post, depending on the extent of electrical utility relocation.
- Relocation of overhead electrical utilities in the vicinity of the road widening in Lakemba Street.
- Installation of new drainage pits and pipes.

Recommended

Network Operations Team Leader

Print name: **Harry Campara**

Signature 

Date 02/04/2019

Comments: No objections to proposed changes at TCS 809 to increase capacity for the eastern approach of Lakemba Street, which includes changes described in the proposed scope of works and as per the submitted concept design layout. More detailed comments on the proposed traffic signal design will be provided during the formal RMS design review process.

Approved

Network and Safety Services Manager

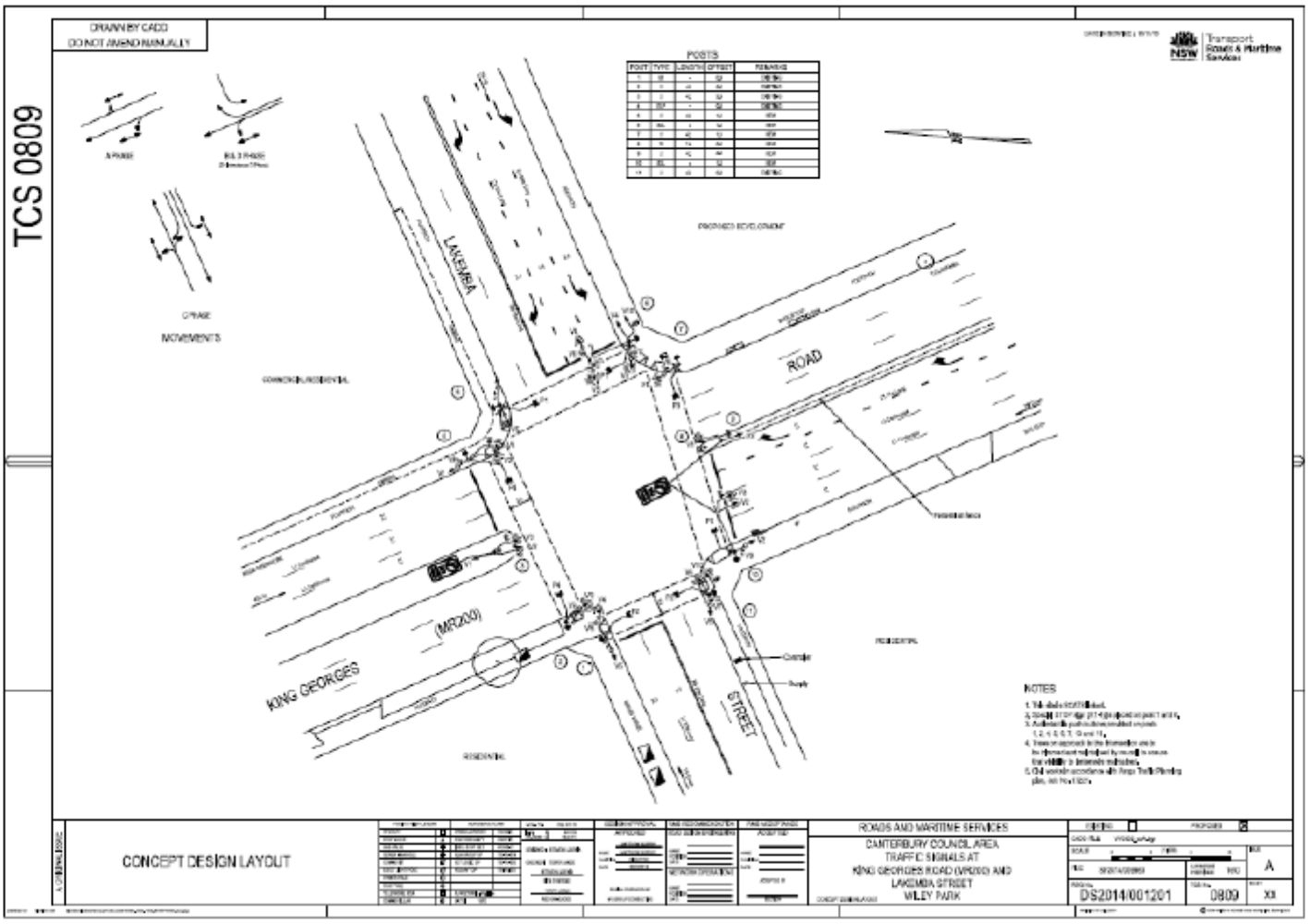
Print name: **Nicolas Kocoski**

16/4/19

Comments:

Disclaimer:

TCS 0809


DRAWN BY CADD
DO NOT AMEND MANUALLY
POSTS
LAKEMBA
ROAD
KING GEORGES
(MR209)
STREET
NOTES
CONCEPT DESIGN LAYOUT
ROADS AND MARITIME SERVICES
CANTERBURY COUNCIL AREA
TRAFFIC SIGNALS AT
KING GEORGES ROAD (MR209) AND
LAKEMBA STREET
WILEY PARK
DS2014/001201
0809
A
XX

APPENDIX C

RMS's / TfNSW LETTERS

APPENDIX D

ARCHITECTURAL PLANS

APARTMENT MIX			CROSS VENT		SOLAR ACCESS	
TYPE	NUMBER	%	NUMBER	%	NUMBER (2h)	%
1B	40	**28%**	18	**12.68**	29	**20.42**
2B	80	**56%**	56	**39.44**	56	**39.44**
3B	4	**3%**	4	**2.82**	4	**2.82**
ST	18	**13%**	8	**5.63**	15	**10.56**
TOTAL	142		86	60.56	104	73.24

PROPOSED LANDSCAPE	**2077.1 m²**	**42.5%**
LEVEL 0	**1699.0 m²**	
LEVEL ROOF	**378.2 m²**	
PROPOSED DEEP SOIL AREA	**332.6 m²**	**6.8%**
COMMUNAL ROOMS	**47.2 m²**	**1.0%**
SHARED COMMUNAL OPEN SPACE	**1191.2 m²**	**24.4%**
PRIVATE COMMUNAL OPEN SPACE	**553.6 m²**	**11.3%**
TOTAL COMMUNAL OPEN SPACE (SHARED + PRIVATE)	**1744.8m2**	**35.7%**

		CAR PARKING			BICYCLES			MOTORCYCLES		
PARKING TYPE	QUANTITY / AREA	RATE	REQUIRED SPACES	PROPOSED SPACES	RATE	REQUIRED SPACES	PROPOSED SPACES	RATE	REQUIRED SPACES	PROPOSED SPACES
STUDIO	18	0.3 / unit	5.4	0						
1 BED	40	0.6 / unit	24.0	32						
2 BED	80	0.9 / unit	72.0	80						
3 BED	4	1.4 / unit	5.6	8				N / A	N / A	
RESIDENTIAL SUBTOTAL	**142**		**107.0**	**120**	1 / 5 units	**28.4**	**32**	N / A	N / A	**5**
RESIDENTIAL VISITORS		1 / 5 units	**28.4**	**29**	1 / 10 units	**14.2**	**16**	N / A	N / A	
SUPERMARKET	1,019.0	1 / 27m²	37.7		1 / 500m² GFA over 1,000m²	2.2				
RETAIL	823.8	1 / 27m²	30.5							
RESTAURANT	245.4	1 / 30m²	8.2							
STAFF					1 / 300m² GFA	7.0		N / A	N / A	
COMMERCIAL SUBTOTAL			**76.4**	**92**		**9.1**	**19**	N / A	N / A	**19**
TOTAL			**211.8**	**241**		**51.7**	**67**	N / A	N / A	**24**

IMPORTANT NOTES:
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PRELIMINARY

NOT FOR CONSTRUCTION

REVISION	DATE	DESCRIPTION	BY
A	2021.10.14	DA SUBMISSION	LP

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www.marchesepartners.com
Sydney · Brisbane · Melbourne · Adelaide
Kuala Lumpur · Christchurch · London · Madrid
ABN 20 098 552 151

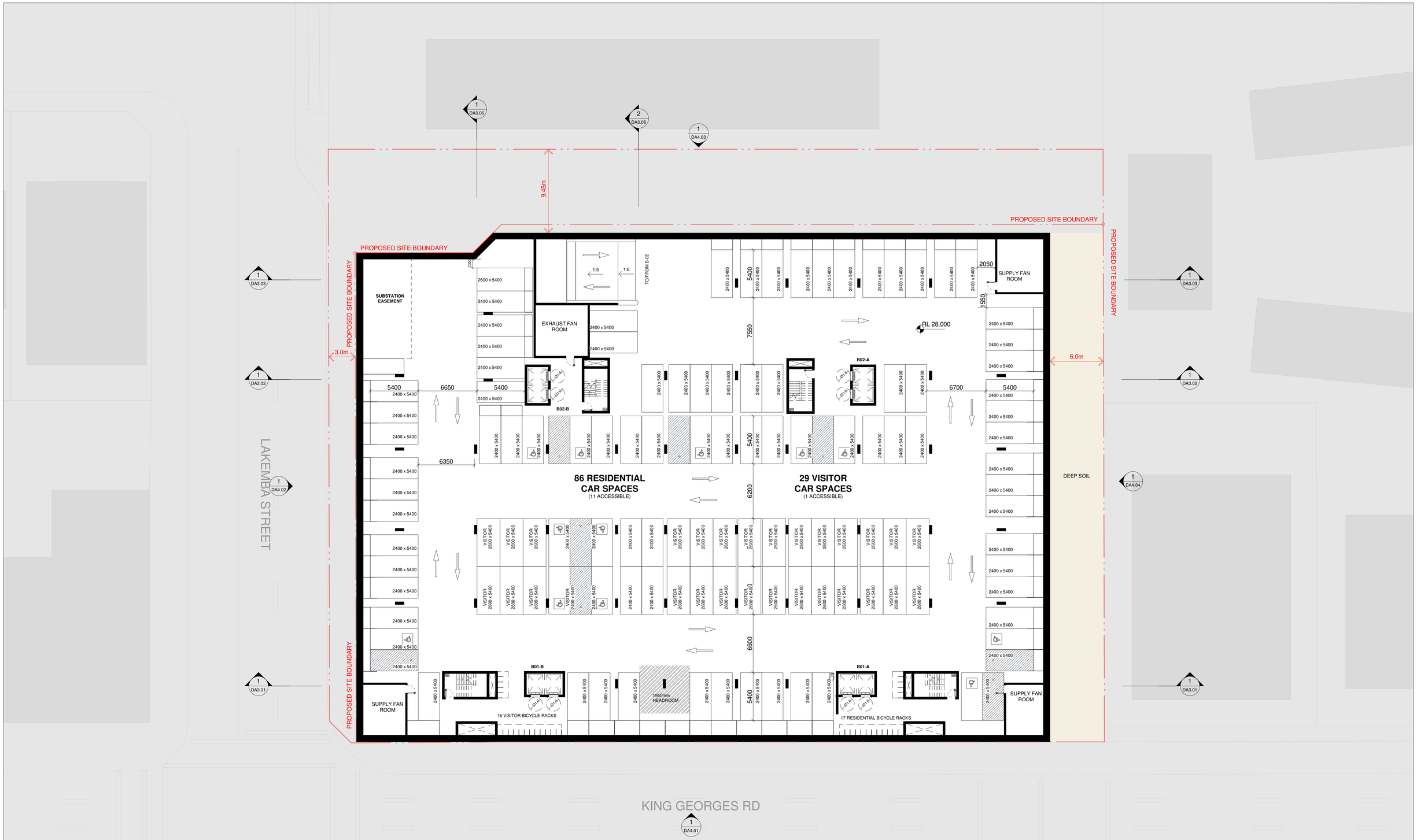
CLIENT
LAKEMBA STREET DEVELOPMENTS P/L

DRAWING TITLE
DEVELOPMENT DATA

PROJECT
280-300 LAKEMBA ST & 64-70 KING GEORGES RD WILEY PARK, NSW
WILEY PARK, NSW 2195

SCALE	DATE	DRAWN	CHECKED
	12/05/2021	Author	Checker

JOB	DRAWING	REVISION
15063	DA0.01	A



INTERNAL DIMENSIONS AS PER LEVEL 01 FLOOR PLAN

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C	2021.05.12	DA SUBMISSION	MH
D	2021.10.14	DA SUBMISSION	LP

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ABN 20 098 552 151

0 5 10

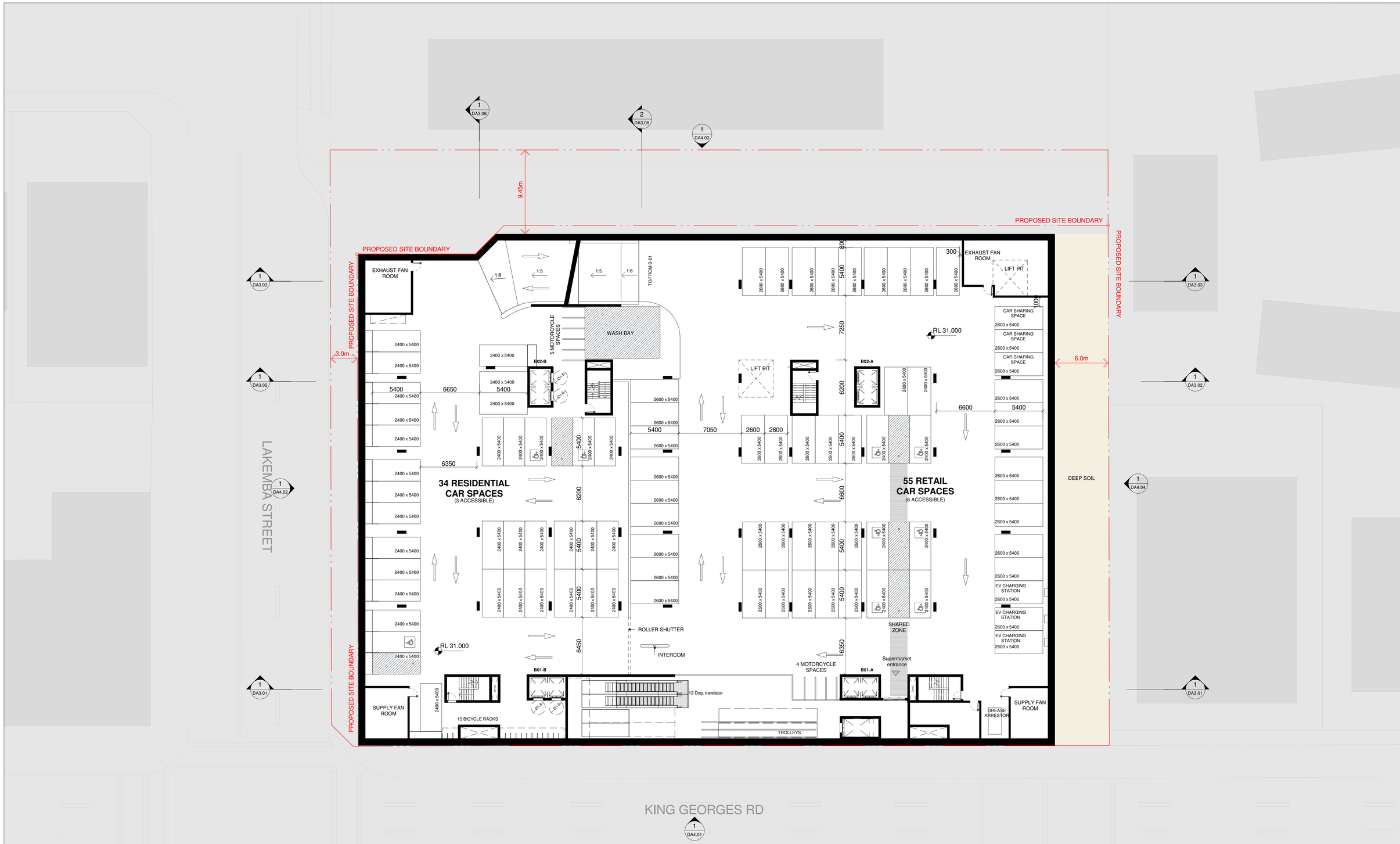
CLIENT
LAKEMBA STREET DEVELOPMENTS P/L

PROJECT
280-300 LAKEMBA ST & 64-70 KING GEORGES RD WILEY PARK, NSW
WILEY PARK, NSW 2195

DRAWING TITLE
PLAN LEVEL B3

SCALE	DATE	DRAWN	CHECKED
1:200 @A1 1:400 @A3	12/05/2021	MH	PS

JOB	DRAWING	REVISION
15063	DA2.01	D



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C	2021.05.12	DA SUBMISSION	MH
D	2021.10.14	DA SUBMISSION	LP

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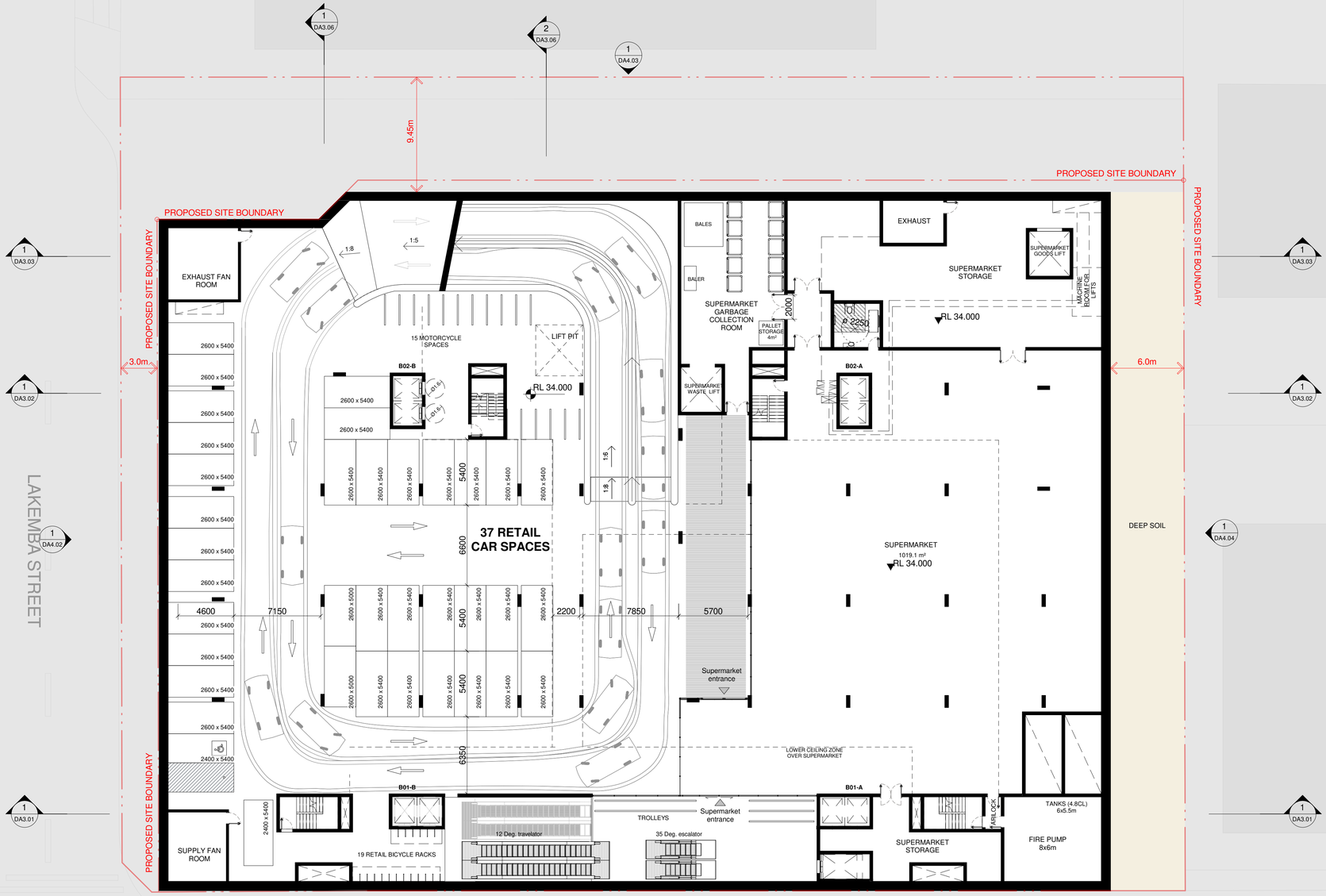
PROJECT
280-300 LAKEMBA ST & 64-70 KING GEORGES RD WILEY PARK, NSW
WILEY PARK, NSW 2195

DRAWING TITLE
PLAN LEVEL B2

SCALE	DATE	DRAWN	CHECKED
1:200 @A1 1:400 @A3	12/05/2021	MH	PS

JOB	DRAWING	REVISION
15063	DA2.02	D



INTERNAL DIMENSIONS AS PER LEVEL 01 FLOOR PLAN

IMPORTANT NOTES:
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A	2021.03.30	DRAFT FOR COORDINATION	MH
B	2021.04.30	FOR COORDINATION	MH
C	2021.05.12	DA SUBMISSION	MH
D	2021.10.14	DA SUBMISSION	LP

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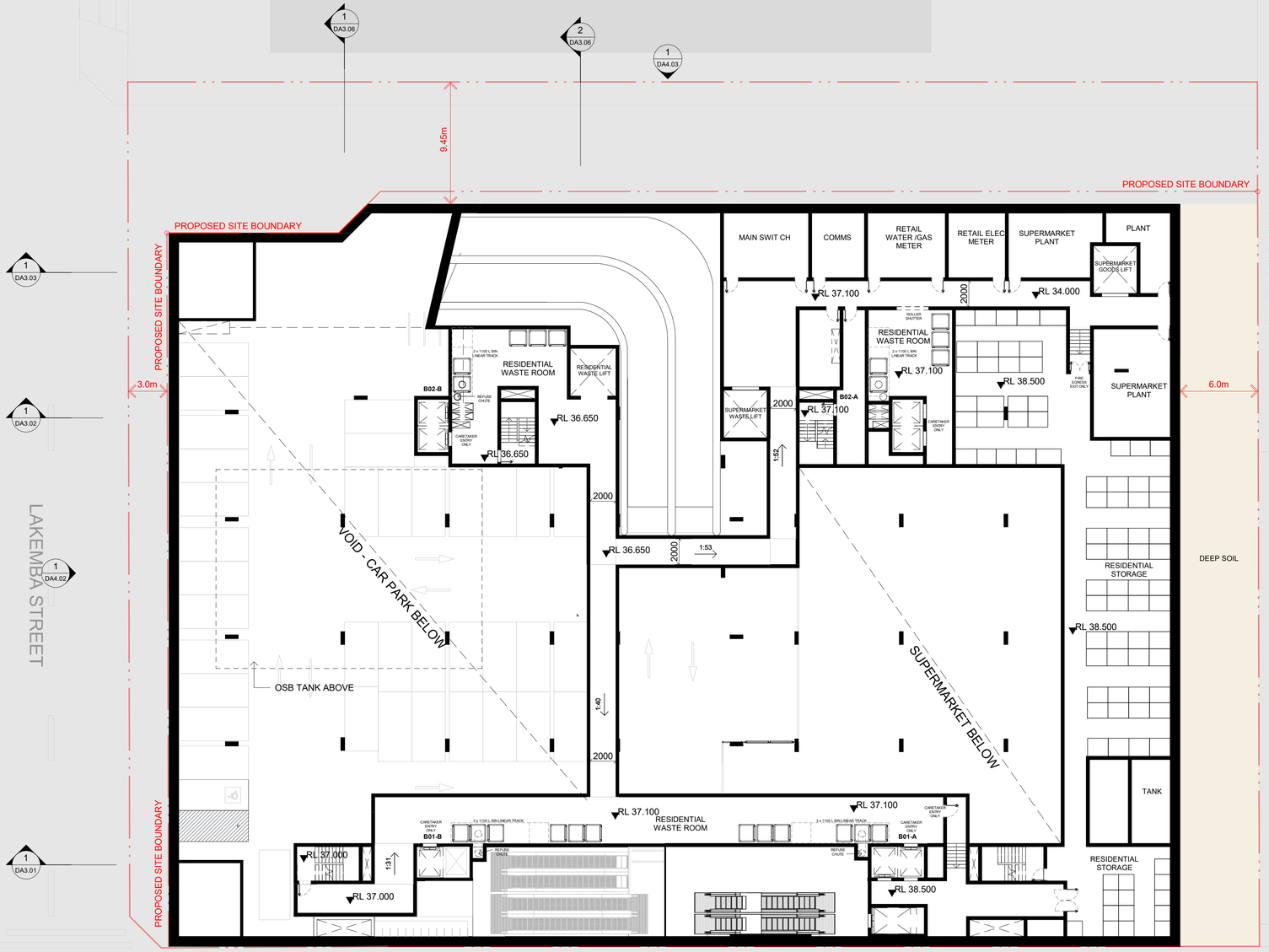
DRAWING TITLE
PLAN LEVEL B1

PROJECT
280-300 LAKEMBA ST & 64-70 KING GEORGES RD WILEY PARK, NSW
WILEY PARK, NSW 2195

SCALE	DATE	DRAWN	CHECKED
1:200 @A1 1:400 @A3	12/05/2021	MH	PS

JOB	DRAWING	REVISION
15063	DA2.03	D



INTERNAL DIMENSIONS AS PER LEVEL 01 FLOOR PLAN

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DRAWING TITLE
PLAN LEVEL B0

PROJECT
280-300 LAKEMBA ST & 64-70 KING GEORGES RD WILEY PARK, NSW
WILEY PARK, NSW 2195

SCALE	DATE	DRAWN	CHECKED
1:200 @A1 1:400 @A3	12/05/2021	MH	PS

JOB	DRAWING	REVISION
15063	DA2.04	D

EXISTING BOUNDARY
1.5m WIDE DEDICATED FOOTPATH ZONE
300mm RETAINING WALL
6.5m WIDE DEDICATED LANE
6.5m WIDE DRIVEWAY DETAILS REFER TO CIVIL ENGINEER`S PLANS
INTERSECTION DETAILS REFER TO CIVIL ENGINEER`S PLANS
PROPOSED SITE BOUNDARY
2m x 2.5m SIGHT TRIANGLE
FUTURE CONNECTION TO ADJOINING NEIGHBORHOODS
LAKEMBA STREET
KING GEORGES RD
slip lane
DETAILS REFER TO CIVIL ENGINEER'S PLANS
BASEMENT CAR PARK ACCESS
SUBSTATION 60.8 m²
SUPERMARKET WASTE AREA
ROLLER SHUTTER
LOADING AREA
UPPER LOADING DOCK
RETAIL DELIVERY AREA
SUPERMARKET GOODS LIFT
HYDRAULIC LIFT
BUILDING MANAGER OFFICE
RETAIL WASTE AREA
RESIDENTIAL WASTE LIFT
SUPERMARKET WASTE LIFT
SERVICES
FIRE EXIT
RETAIL FOOD TENANCY 14 97.6 m² HEAD CLEARANCE: 6.39m
RETAIL FOOD TENANCY 13 73.7 m²
RETAIL FOOD TENANCY 12 62.5 m² HEAD CLEARANCE: 4.58m
B02-A
B02-B
LETTER BOXES
ELEC. WASTE
BULKY WASTE
RESIDENTIAL LOBBY
RESIDENTIAL ENTRANCE
SUPERMARKET ENTRANCE
AWNING ABOVE
ART WORK
P L A Z A
1188 SQM
OUTLINE OF BASEMENT BELOW
deep soil 332 SQM
EXTEND OF GRASS GRID PERMEABLE PAVING
RETAIL TENANCY 09 89.7 m²
RETAIL TENANCY 08 78.7 m²
RETAIL TENANCY 07 79.1 m²
RETAIL TENANCY 06 96.0 m²
RETAIL TENANCY 05 99.0 m²
RETAIL TENANCY 04 80.3 m²
RETAIL TENANCY 03 80.4 m²
RETAIL TENANCY 02 74.3 m²
RETAIL TENANCY 01 73.1 m²
RETAIL TENANCY 10 89.5 m²
RETAIL TENANCY 11 74.0 m²
RELOCATED AUSTRALIA POST MAIL BOX
PUBLIC ACCESIBLE TOILET
MECHANICAL VENTILATION
RETAIL WASTE
VOID
B01-A
B01-B
PROPOSED STREET TREE LOCATION REFER TO LANDSCAPE ARCHITECT`S PLAN FOR SPREAD & SPECIES
INTERNAL DIMENSIONS AS PER LEVEL 01 FLOOR PLAN

NOTE: FOR THE LANDSCAPE DETAILED DESIGN, PLEASE REFER TO LANDSCAPE ARCHITECT DOCUMENTATION

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DRAWING TITLE
PLAN LEVEL 00

PROJECT
280-300 LAKEMBA ST & 64-70 KING GEORGES RD WILEY PARK, NSW
WILEY PARK, NSW 2195

SCALE	DATE	DRAWN	CHECKED
1:200 @A1 1:400 @A3	12/05/2021	MH	PS
JOB	DRAWING		REVISION
15063	DA2.05		D

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PROJECT
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DRAWING TITLE
PLAN LEVEL 01

SCALE	DATE	DRAWN	CHECKED
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JOB	DRAWING		REVISION
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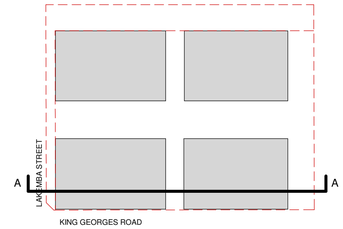

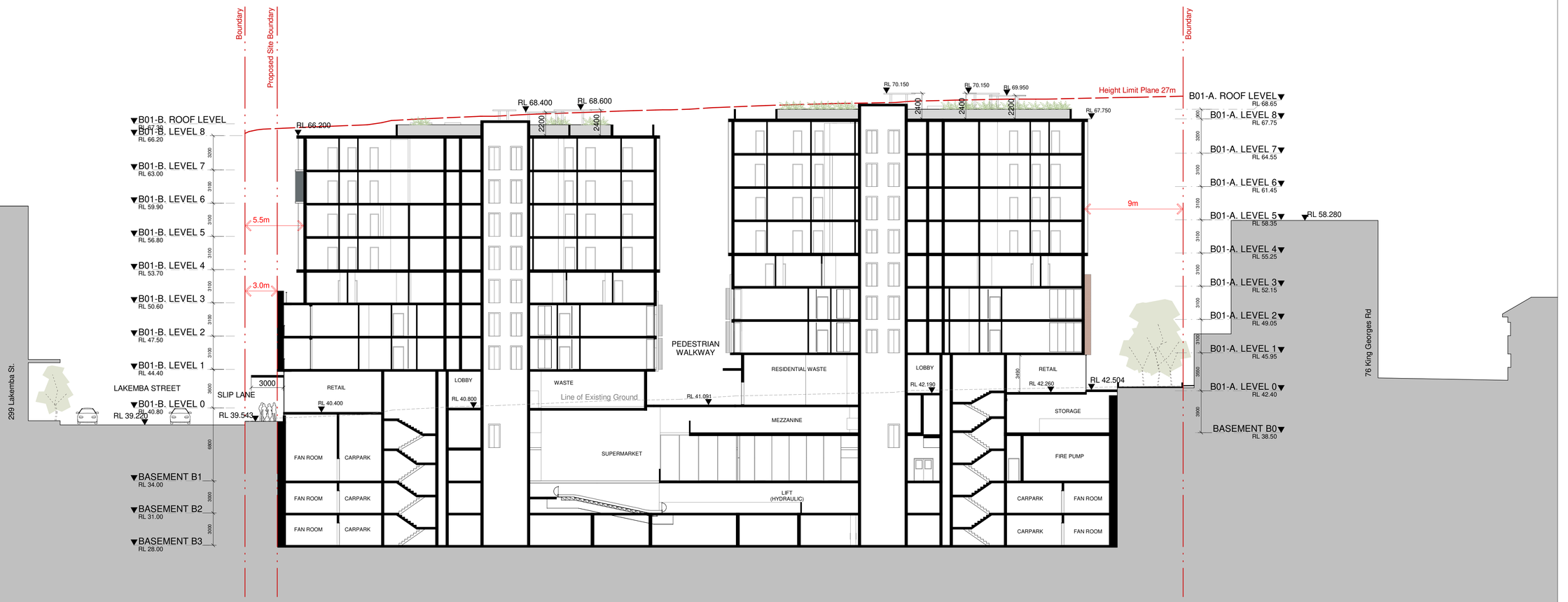

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DRAWING TITLE
SECTION A-A

SCALE	DATE	DRAWN	CHECKED
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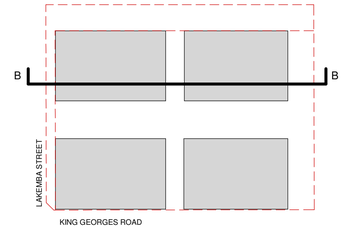
JOB	DRAWING		REVISION
15063	DA3.01		D



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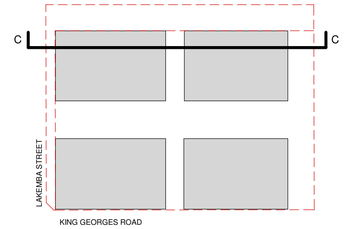
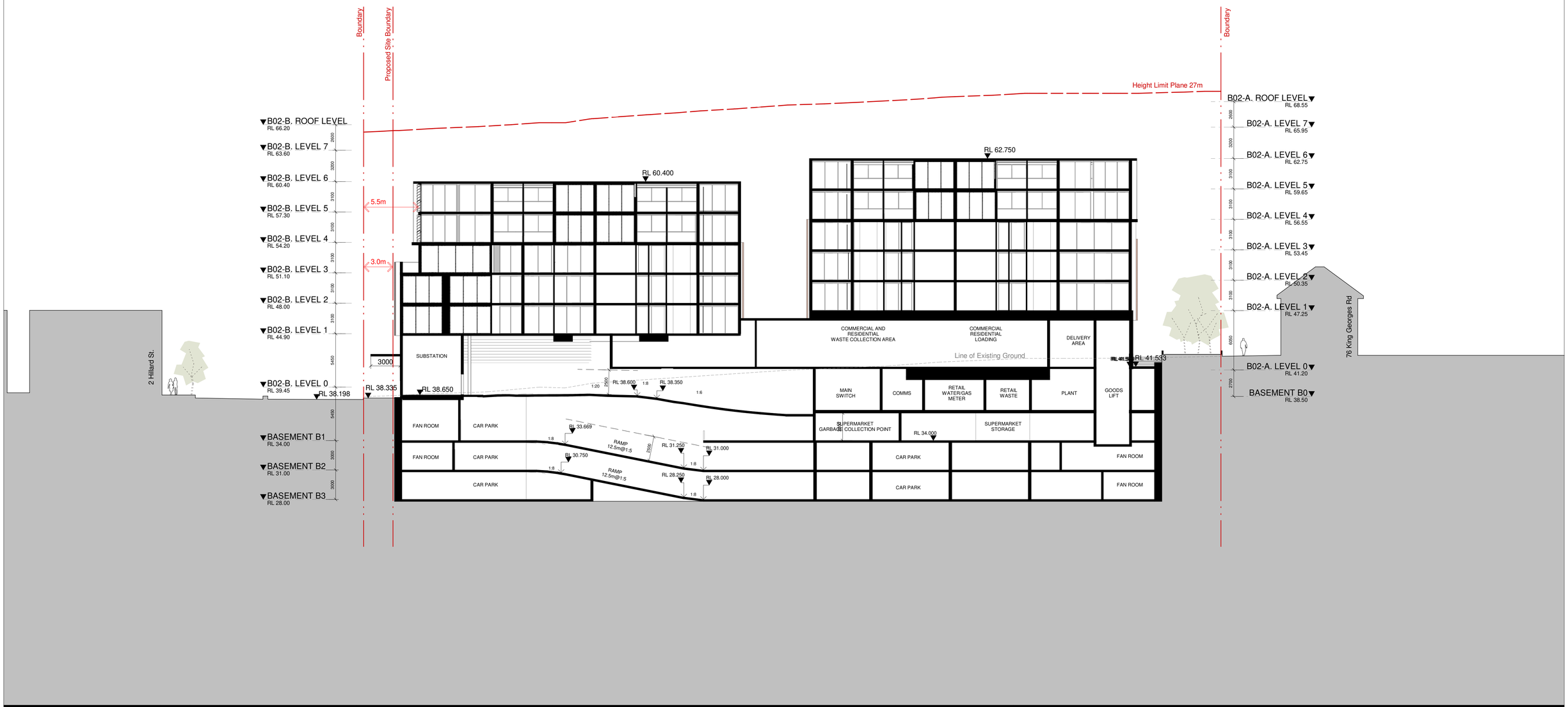
DRAWING TITLE
SECTION B-B

PROJECT
280-300 LAKEMBA ST & 64-70 KING GEORGES RD WILEY PARK, NSW
WILEY PARK, NSW 2195

SCALE	DATE	DRAWN	CHECKED
1:200 @A1 1:400 @A3	12/05/2021	MH	PS

JOB	DRAWING	REVISION
15063	DA3.02	D





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DRAWING TITLE
SECTION C-C

SCALE	DATE	DRAWN	CHECKED
1:200 @A1 1:400 @A3	12/05/2021	MH	PS

JOB	DRAWING	REVISION
15063	DA3.03	D

NOTE:
- FOR GLAZING TREATMENT REFER TO ACOUSTIC REPORT.
- ALL OPERABLE WINDOWS AND DOORS INCORPORATE FULL PERIMETER ACOUSTIC SEALS.
- FACADE AND ROOF SOUND INSULATION COMPLIES WITH THE MINIMUN RATINGS REQUIRED.

WINDOWS LEGEND

- SD_SLIDING DOOR
- SW_SLIDING WINDOW
- FW_FIXED WINDOW
- L_LOUVERS FOR PASSIVE VENTILATION IN FRONT OF FULL HEIGHT CASEMENT WINDOWS
- CW_CASEMENT WINDOW
- HW_HIGH WINDOW
- AW_AWNING WINDOW

REVISION	DATE	DESCRIPTION	BY
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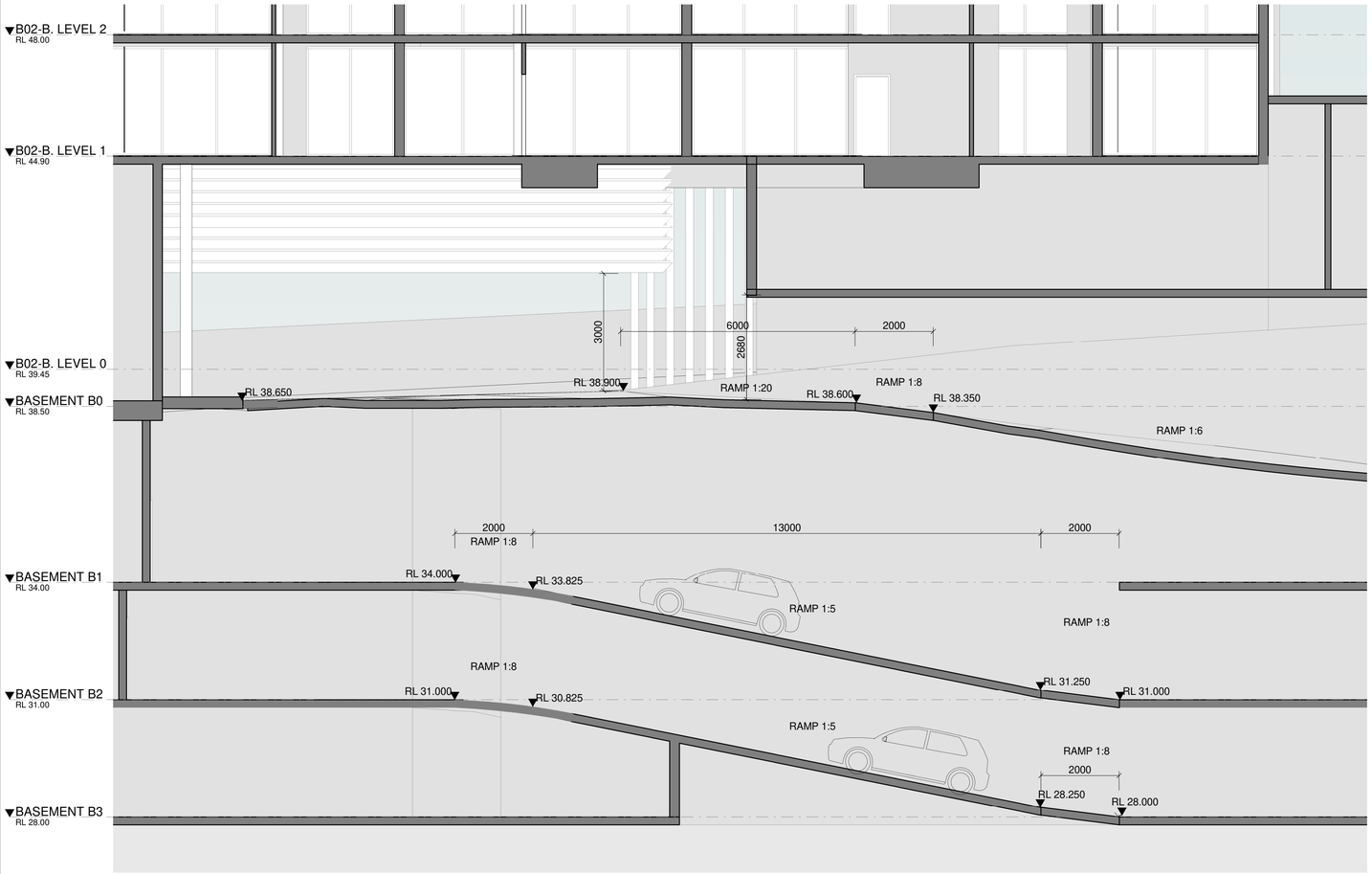
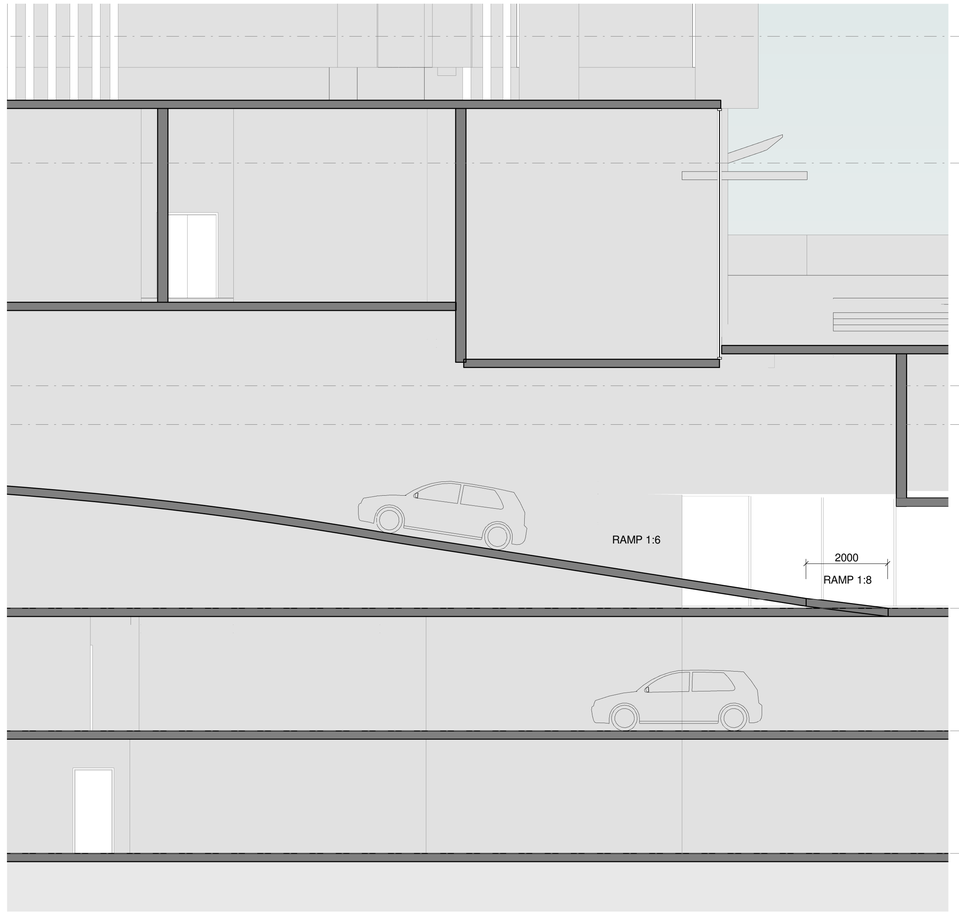
DRAWING TITLE
ELEVATION NORTH-EAST

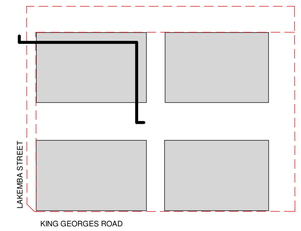
PROJECT
280-300 LAKEMBA ST & 64-70 KING GEORGES RD WILEY PARK, NSW
WILEY PARK, NSW 2195

SCALE	DATE	DRAWN	CHECKED
1:200 @A1 1:400 @A3	12/05/2021	MH	PS

JOB	DRAWING	REVISION
15063	DA4.03	D







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DRAWING TITLE
COUNCIL RFI - RAMP SECTION

PROJECT
280-300 LAKEMBA ST & 64-70 KING GEORGES RD WILEY PARK, NSW
WILEY PARK, NSW 2195

SCALE	DATE	DRAWN	CHECKED
1:75 @A1 1:150 @A3	12/05/2021	MH	PS

JOB	DRAWING	REVISION
15063	DA10.03	B

APPENDIX E

TRAFFIC SURVEY DATA

R.O.A.R. DATA

Reliable, Original & Authentic Results

Ph.88196847, Fax 88196849, Mob.0418-239019

Client : Varga Traffic Planning
Job No/Name : 6559 Wiley Park Lakemba St Counts
Day/Date : Thursday 24th August 2017

Lights	NORTH			WEST			SOUTH			EAST			
	King Georges Rd			*Lakemba St*			*King Georges Rd*			*Lakemba St*			
Time Per	L	T	R	L	T	R	L	T	R	L	T	R	TOT
0630 - 0645	18	487	0	4	36	26	3	477	12	16	9	17	**1105**
0645 - 0700	17	470	0	3	29	17	2	614	13	19	5	5	**1194**
0700 - 0715	11	468	0	7	46	18	3	590	13	15	15	10	**1196**
0715 - 0730	21	479	0	3	20	16	2	510	16	24	12	10	**1113**
0730 - 0745	16	409	0	4	33	15	2	366	18	15	8	11	**897**
0745 - 0800	17	520	0	3	36	19	3	348	35	18	12	10	**1021**
0800 - 0815	32	604	0	5	37	24	3	392	42	31	25	20	**1215**
0815 - 0830	19	379	0	2	50	19	7	277	33	40	24	19	**869**
0830 - 0845	38	552	0	4	32	31	6	431	27	32	25	18	**1196**
0845 - 0900	23	415	0	6	38	22	6	380	34	44	22	16	**1006**
0900 - 0915	15	334	0	2	33	16	10	386	33	34	23	20	**906**
0915 - 0930	24	405	0	4	22	17	5	363	32	27	9	18	**926**
Period End	**251**	**5522**	**0**	**47**	**412**	**240**	**52**	**5134**	**308**	**315**	**189**	**174**	**12644**

Lights	NORTH			WEST			SOUTH			EAST			
	King Georges Rd			*Lakemba St*			*King Georges Rd*			*Lakemba St*			
Peak Time	L	T	R	L	T	R	L	T	R	L	T	R	TOT
0630 - 0730	67	1904	0	17	131	77	10	2191	54	74	41	42	**4608**
0645 - 0745	65	1826	0	17	128	66	9	2080	60	73	40	36	**4400**
0700 - 0800	65	1876	0	17	135	68	10	1814	82	72	47	41	**4227**
0715 - 0815	86	2012	0	15	126	74	10	1616	111	88	57	51	**4246**
0730 - 0830	84	1912	0	14	156	77	15	1383	128	104	69	60	**4002**
0745 - 0845	106	2055	0	14	155	93	19	1448	137	121	86	67	**4301**
0800 - 0900	112	1950	0	17	157	96	22	1480	136	147	96	73	**4286**
0815 - 0915	95	1680	0	14	153	88	29	1474	127	150	94	73	**3977**
0830 - 0930	100	1706	0	16	125	86	27	1560	126	137	79	72	**4034**
PEAK HOUR	**67**	**1904**	**0**	**17**	**131**	**77**	**10**	**2191**	**54**	**74**	**41**	**42**	**4608**

Heavies	NORTH			WEST			SOUTH			EAST			
	King Georges Rd			*Lakemba St*			*King Georges Rd*			*Lakemba St*			
Time Per	L	T	R	L	T	R	L	T	R	L	T	R	TOT
0630 - 0645	1	44	0	0	0	0	0	27	0	0	0	0	**72**
0645 - 0700	0	37	0	0	0	0	0	24	1	1	0	0	**63**
0700 - 0715	0	32	0	0	0	0	0	20	0	1	0	0	**53**
0715 - 0730	0	30	0	0	0	0	0	31	1	1	0	0	**63**
0730 - 0745	0	25	0	0	0	0	0	22	0	1	0	0	**48**
0745 - 0800	0	37	0	0	0	0	0	25	2	0	0	0	**64**
0800 - 0815	0	26	0	0	0	0	0	22	0	3	0	0	**51**
0815 - 0830	0	21	0	0	0	0	0	23	1	0	0	0	**45**
0830 - 0845	0	42	0	0	0	0	0	30	0	1	0	0	**73**
0845 - 0900	0	39	0	0	0	0	0	29	1	0	0	0	**69**
0900 - 0915	0	27	0	0	0	0	0	37	1	1	0	0	**66**
0915 - 0930	1	40	0	0	0	0	0	39	0	0	0	1	**81**
Period End	**2**	**400**	**0**	**0**	**0**	**0**	**0**	**329**	**7**	**9**	**0**	**1**	**748**

Heavies	NORTH			WEST			SOUTH			EAST			
	King Georges Rd			*Lakemba St*			*King Georges Rd*			*Lakemba St*			
Peak Per	L	T	R	L	T	R	L	T	R	L	T	R	TOT
0630 - 0730	1	143	0	0	0	0	0	102	2	3	0	0	**251**
0645 - 0745	0	124	0	0	0	0	0	97	2	4	0	0	**227**
0700 - 0800	0	124	0	0	0	0	0	98	3	3	0	0	**228**
0715 - 0815	0	118	0	0	0	0	0	100	3	5	0	0	**226**
0730 - 0830	0	109	0	0	0	0	0	92	3	4	0	0	**208**
0745 - 0845	0	126	0	0	0	0	0	100	3	4	0	0	**233**
0800 - 0900	0	128	0	0	0	0	0	104	2	4	0	0	**238**
0815 - 0915	0	129	0	0	0	0	0	119	3	2	0	0	**253**
0830 - 0930	1	148	0	0	0	0	0	135	2	2	0	1	**289**
PEAK HOUR	**1**	**143**	**0**	**0**	**0**	**0**	**0**	**102**	**2**	**3**	**0**	**0**	**251**

Combined	NORTH			WEST			SOUTH			EAST			
	King Georges Rd			*Lakemba St*			*King Georges Rd*			*Lakemba St*			
Time Per	L	T	R	L	T	R	L	T	R	L	T	R	TOT
0630 - 0645	19	531	0	4	36	26	3	504	12	16	9	17	**1177**
0645 - 0700	17	507	0	3	29	17	2	638	14	20	5	5	**1257**
0700 - 0715	11	500	0	7	46	18	3	610	13	16	15	10	**1249**
0715 - 0730	21	509	0	3	20	16	2	541	17	25	12	10	**1176**
0730 - 0745	16	434	0	4	33	15	2	388	18	16	8	11	**945**
0745 - 0800	17	557	0	3	36	19	3	373	37	18	12	10	**1085**
0800 - 0815	32	630	0	5	37	24	3	414	42	34	25	20	**1266**
0815 - 0830	19	400	0	2	50	19	7	300	34	40	24	19	**914**
0830 - 0845	38	594	0	4	32	31	6	461	27	33	25	18	**1269**
0845 - 0900	23	454	0	6	38	22	6	409	35	44	22	16	**1075**
0900 - 0915	15	361	0	2	33	16	10	423	34	35	23	20	**972**
0915 - 0930	25	445	0	4	22	17	5	402	32	27	9	19	**1007**
Period End	**253**	**5922**	**0**	**47**	**412**	**240**	**52**	**5463**	**315**	**324**	**189**	**175**	**13392**

Combined	NORTH			WEST			SOUTH			EAST			
	King Georges Rd			*Lakemba St*			*King Georges Rd*			*Lakemba St*			
Peak Per	L	T	R	L	T	R	L	T	R	L	T	R	TOT
0630 - 0730	68	2047	0	17	131	77	10	2293	56	77	41	42	**4859**
0645 - 0745	65	1950	0	17	128	66	9	2177	62	77	40	36	**4627**
0700 - 0800	65	2000	0	17	135	68	10	1912	85	75	47	41	**4455**
0715 - 0815	86	2130	0	15	126	74	10	1716	114	93	57	51	**4472**
0730 - 0830	84	2021	0	14	156	77	15	1475	131	108	69	60	**4210**
0745 - 0845	106	2181	0	14	155	93	19	1548	140	125	86	67	**4534**
0800 - 0900	112	2078	0	17	157	96	22	1584	138	151	96	73	**4524**
0815 - 0915	95	1809	0	14	153	88	29	1593	130	152	94	73	**4230**
0830 - 0930	101	1854	0	16	125	86	27	1695	128	139	79	73	**4323**
PEAK HOUR	**68**	**2047**	**0**	**17**	**131**	**77**	**10**	**2293**	**56**	**77**	**41**	**42**	**4859**

R.O.A.R DATA

Reliable, Original & Authentic Results

Ph.88196847, Fax 88196849, Mob.0418-239019

Client	: Varga Traffic Pl
Job No/Name	: 6559 Wiley Park Lakemba St Counts
Day/Date	: Thursday 24th August 2017

Peds	NORTH	WEST	SOUTH	EAST	
	King Georges Rd	*Lakemba St*	*King Georges Rd*	*Lakemba St*	
Time Per	UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED	TOT
0630 - 0645	0	0	0	0	**0**
0645 - 0700	0	2	2	0	**4**
0700 - 0715	1	0	2	2	**5**
0715 - 0730	0	1	3	0	**4**
0730 - 0745	0	2	3	1	**6**
0745 - 0800	1	7	3	15	**26**
0800 - 0815	3	13	10	3	**29**
0815 - 0830	4	7	3	4	**18**
0830 - 0845	1	9	2	4	**16**
0845 - 0900	0	11	2	20	**33**
0900 - 0915	0	7	6	4	**17**
0915 - 0930	0	3	2	5	**10**
Period End	**10**	**62**	**38**	**58**	**168**

Peds	NORTH	WEST	SOUTH	EAST	
	King Georges Rd	*Lakemba St*	*King Georges Rd*	*Lakemba St*	
Peak Per	UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED	TOT
0630 - 0730	1	3	7	2	**13**
0645 - 0745	1	5	10	3	**19**
0700 - 0800	2	10	11	18	**41**
0715 - 0815	4	23	19	19	**65**
0730 - 0830	8	29	19	23	**79**
0745 - 0845	9	36	18	26	**89**
0800 - 0900	8	40	17	31	**96**
0815 - 0915	5	34	13	32	**84**
0830 - 0930	1	30	12	33	**76**
PEAK HR	**1**	**3**	**7**	**2**	**13**

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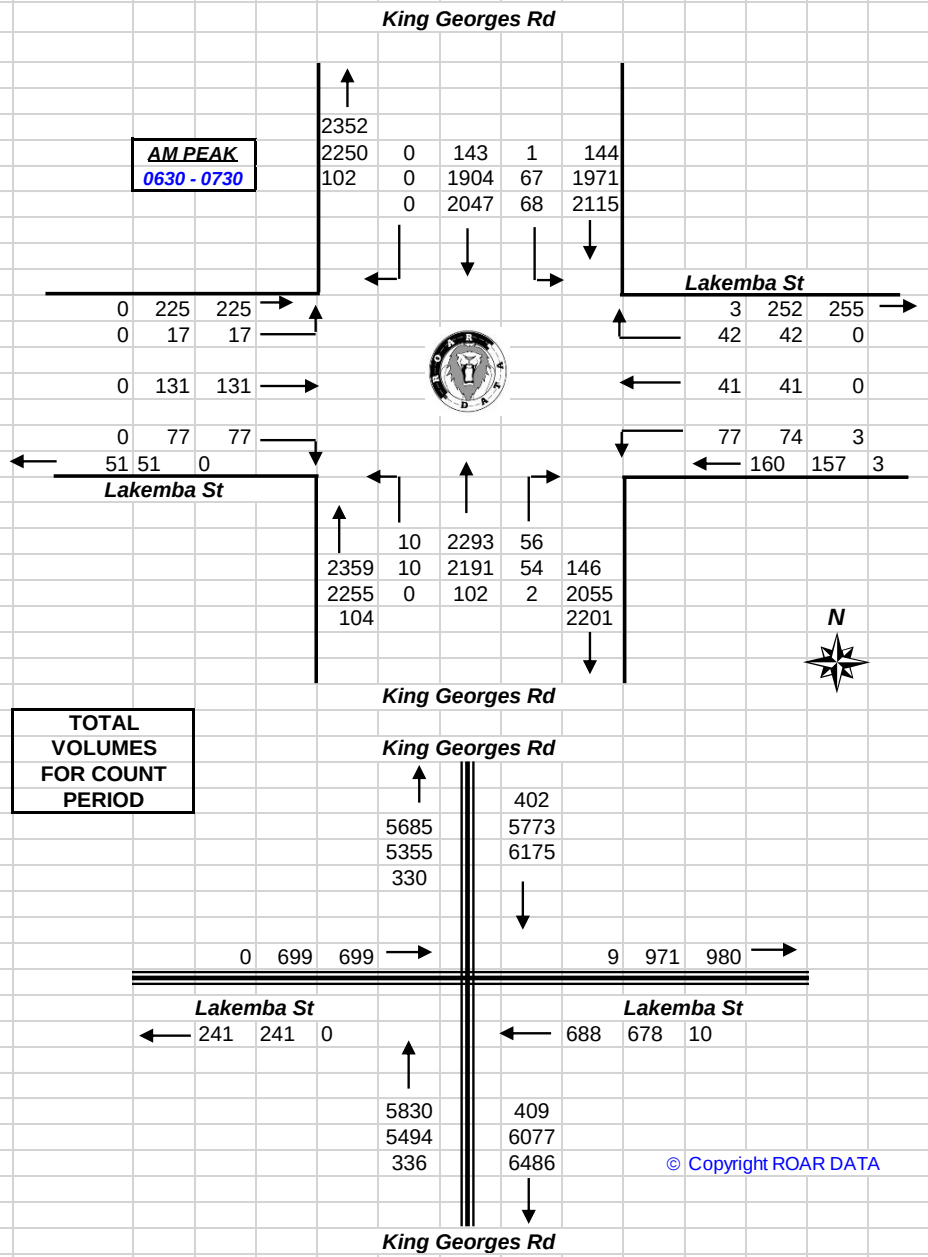

R.O.A.R. DATA

Reliable, Original & Authentic Results

Ph.88196847, Fax 88196849, Mob.0418-239019

Client	: Varga Traffic Planning
Job No/Name	: 6559 Wiley Park Lakemba St Counts
Day/Date	: Thursday 24th August 2017

Lights

	NORTH			WEST			SOUTH			EAST			
	King Georges Rd			*Lakemba St*			*King Georges Rd*			*Lakemba St*			
Time Per	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**TOT**
1530 - 1545	22	606	0	4	29	11	12	415	31	51	40	30	**1251**
1545 - 1600	31	596	0	3	36	11	12	466	45	60	28	32	**1320**
1600 - 1615	21	608	0	2	30	11	14	470	40	68	41	37	**1342**
1615 - 1630	19	629	0	4	22	20	19	441	37	69	35	39	**1334**
1630 - 1645	29	701	0	6	30	18	12	460	54	46	24	34	**1414**
1645 - 1700	30	626	0	4	25	19	9	514	46	50	32	40	**1395**
1700 - 1715	23	616	0	5	16	17	13	482	28	55	26	45	**1326**
1715 - 1730	32	574	0	4	19	11	11	465	49	44	32	34	**1275**
1730 - 1745	31	608	0	4	15	7	18	452	33	44	24	35	**1271**
1745 - 1800	28	561	0	3	16	9	10	448	34	50	31	35	**1225**
1800 - 1815	23	604	0	5	19	18	17	520	33	39	29	30	**1337**
1815 - 1830	20	513	0	4	17	16	15	475	30	43	19	29	**1181**
Period End	**309**	**7242**	**0**	**48**	**274**	**168**	**162**	**5608**	**460**	**619**	**361**	**420**	**15671**

Lights

	NORTH			WEST			SOUTH			EAST			
	King Georges Rd			*Lakemba St*			*King Georges Rd*			*Lakemba St*			
Peak Time	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**TOT**
1530 - 1630	93	2439	0	13	117	53	57	1792	153	248	144	138	**5247**
1545 - 1645	100	2534	0	15	118	60	57	1837	176	243	128	142	**5410**
1600 - 1700	99	2564	0	16	107	68	54	1885	177	233	132	150	**5485**
1615 - 1715	101	2572	0	19	93	74	53	1897	165	220	117	158	**5469**
1630 - 1730	114	2517	0	19	90	65	45	1921	177	195	114	153	**5410**
1645 - 1745	116	2424	0	17	75	54	51	1913	156	193	114	154	**5267**
1700 - 1800	114	2359	0	16	66	44	52	1847	144	193	113	149	**5097**
1715 - 1815	114	2347	0	16	69	45	56	1885	149	177	116	134	**5108**
1730 - 1830	102	2286	0	16	67	50	60	1895	130	176	103	129	**5014**
PEAK HOUR	**99**	**2564**	**0**	**16**	**107**	**68**	**54**	**1885**	**177**	**233**	**132**	**150**	**5485**

Heavies

	NORTH			WEST			SOUTH			EAST			
	King Georges Rd			*Lakemba St*			*King Georges Rd*			*Lakemba St*			
Time Per	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**TOT**
1530 - 1545	0	23	0	0	0	0	0	26	0	2	0	0	**51**
1545 - 1600	0	16	0	0	0	0	0	20	2	3	0	0	**41**
1600 - 1615	0	16	0	0	0	0	0	20	0	2	0	2	**40**
1615 - 1630	0	18	0	0	0	0	0	18	1	0	0	0	**37**
1630 - 1645	0	16	0	0	0	0	1	18	0	1	0	0	**36**
1645 - 1700	0	18	0	0	0	0	0	14	0	0	0	0	**32**
1700 - 1715	0	8	0	1	0	0	0	15	0	1	0	0	**25**
1715 - 1730	0	13	0	0	0	0	0	17	0	0	0	0	**30**
1730 - 1745	0	15	0	0	0	0	0	11	0	0	0	0	**26**
1745 - 1800	0	9	0	0	0	0	0	15	1	1	0	0	**26**
1800 - 1815	0	19	0	0	0	0	0	12	0	1	0	0	**32**
1815 - 1830	0	16	0	0	0	0	0	10	0	0	0	0	**26**
Period End	**0**	**187**	**0**	**1**	**0**	**0**	**1**	**196**	**4**	**11**	**0**	**2**	**402**

Heavies

	NORTH			WEST			SOUTH			EAST			
	King Georges Rd			*Lakemba St*			*King Georges Rd*			*Lakemba St*			
Peak Per	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**TOT**
1530 - 1630	0	73	0	0	0	0	0	84	3	7	0	2	**169**
1545 - 1645	0	66	0	0	0	0	1	76	3	6	0	2	**154**
1600 - 1700	0	68	0	0	0	0	1	70	1	3	0	2	**145**
1615 - 1715	0	60	0	1	0	0	1	65	1	2	0	0	**130**
1630 - 1730	0	55	0	1	0	0	1	64	0	2	0	0	**123**
1645 - 1745	0	54	0	1	0	0	0	57	0	1	0	0	**113**
1700 - 1800	0	45	0	1	0	0	0	58	1	2	0	0	**107**
1715 - 1815	0	56	0	0	0	0	0	55	1	2	0	0	**114**
1730 - 1830	0	59	0	0	0	0	0	48	1	2	0	0	**110**
PEAK HOUR	**0**	**68**	**0**	**0**	**0**	**0**	**1**	**70**	**1**	**3**	**0**	**2**	**145**

Combined

	NORTH			WEST			SOUTH			EAST			
	King Georges Rd			*Lakemba St*			*King Georges Rd*			*Lakemba St*			
Time Per	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**TOT**
1530 - 1545	22	629	0	4	29	11	12	441	31	53	40	30	**1302**
1545 - 1600	31	612	0	3	36	11	12	486	47	63	28	32	**1361**
1600 - 1615	21	624	0	2	30	11	14	490	40	70	41	39	**1382**
1615 - 1630	19	647	0	4	22	20	19	459	38	69	35	39	**1371**
1630 - 1645	29	717	0	6	30	18	13	478	54	47	24	34	**1450**
1645 - 1700	30	644	0	4	25	19	9	528	46	50	32	40	**1427**
1700 - 1715	23	624	0	6	16	17	13	497	28	56	26	45	**1351**
1715 - 1730	32	587	0	4	19	11	11	482	49	44	32	34	**1305**
1730 - 1745	31	623	0	4	15	7	18	463	33	44	24	35	**1297**
1745 - 1800	28	570	0	3	16	9	10	463	35	51	31	35	**1251**
1800 - 1815	23	623	0	5	19	18	17	532	33	40	29	30	**1369**
1815 - 1830	20	529	0	4	17	16	15	485	30	43	19	29	**1207**
Period End	**309**	**7429**	**0**	**49**	**274**	**168**	**163**	**5804**	**464**	**630**	**361**	**422**	**16073**

Combined

	NORTH			WEST			SOUTH			EAST			
	King Georges Rd			*Lakemba St*			*King Georges Rd*			*Lakemba St*			
Peak Per	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**L**	**T**	**R**	**TOT**
1530 - 1630	93	2512	0	13	117	53	57	1876	156	255	144	140	**5416**
1545 - 1645	100	2600	0	15	118	60	58	1913	179	249	128	144	**5564**
1600 - 1700	99	2632	0	16	107	68	55	1955	178	236	132	152	**5630**
1615 - 1715	101	2632	0	20	93	74	54	1962	166	222	117	158	**5599**
1630 - 1730	114	2572	0	20	90	65	46	1985	177	197	114	153	**5533**
1645 - 1745	116	2478	0	18	75	54	51	1970	156	194	114	154	**5380**
1700 - 1800	114	2404	0	17	66	44	52	1905	145	195	113	149	**5204**
1715 - 1815	114	2403	0	16	69	45	56	1940	150	179	116	134	**5222**
1730 - 1830	102	2345	0	16	67	50	60	1943	131	178	103	129	**5124**
PEAK HOUR	**99**	**2632**	**0**	**16**	**107**	**68**	**55**	**1955**	**178**	**236**	**132**	**152**	**5630**

R.O.A.R DATA

Reliable, Original & Authentic Results

Ph.88196847, Fax 88196849, Mob.0418-239019

Client	: Varga Traffic F
Job No/Name	: 6559 Wiley Park Lakemba St Counts
Day/Date	: Thursday 24th August 2017

Peds	NORTH	WEST	SOUTH	EAST	
	King Georges Rd	*Lakemba St*	*King Georges Rd*	*Lakemba St*	
Time Per	UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED	TOT
1530 - 1545	6	11	3	9	**29**
1545 - 1600	4	8	3	18	**33**
1600 - 1615	0	3	8	13	**24**
1615 - 1630	0	5	2	16	**23**
1630 - 1645	2	2	0	7	**11**
1645 - 1700	5	4	7	10	**26**
1700 - 1715	5	7	4	11	**27**
1715 - 1730	1	2	7	8	**18**
1730 - 1745	3	9	1	3	**16**
1745 - 1800	2	3	7	2	**14**
1800 - 1815	3	6	7	8	**24**
1815 - 1830	0	3	5	2	**10**
Period End	**31**	**63**	**54**	**107**	**255**

Peds	NORTH	WEST	SOUTH	EAST	
	King Georges Rd	*Lakemba St*	*King Georges Rd*	*Lakemba St*	
Peak Per	UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED	TOT
1530 - 1630	10	27	16	56	**109**
1545 - 1645	6	18	13	54	**91**
1600 - 1700	7	14	17	46	**84**
1615 - 1715	12	18	13	44	**87**
1630 - 1730	13	15	18	36	**82**
1645 - 1745	14	22	19	32	**87**
1700 - 1800	11	21	19	24	**75**
1715 - 1815	9	20	22	21	**72**
1730 - 1830	8	21	20	15	**64**
PEAK HR	**7**	**14**	**17**	**46**	**84**

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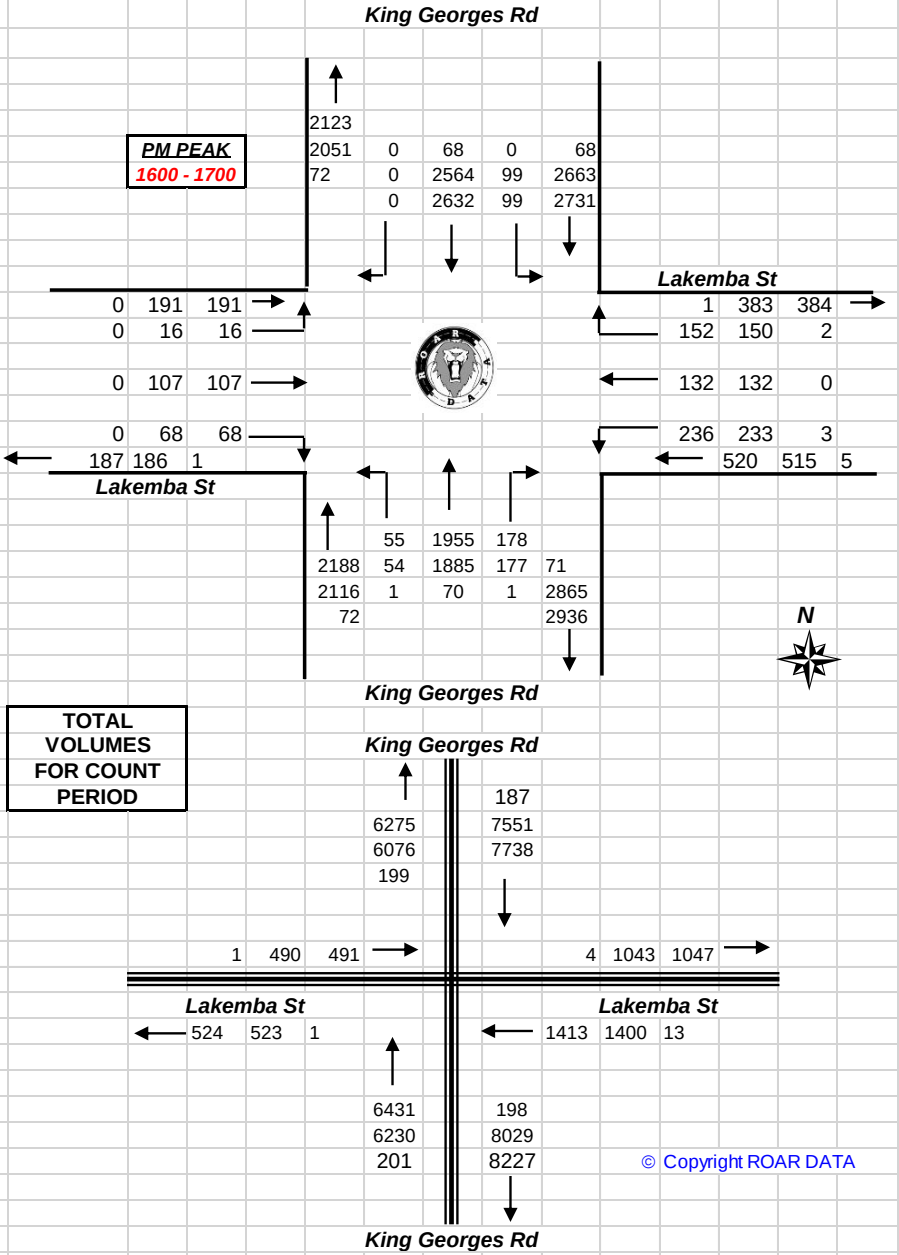


TOTAL VOLUMES FOR COUNT PERIOD

R.O.A.R. DATA

Reliable, Original & Authentic Results

Ph.88196847, Fax 88196849, Mob.0418-239019

Client	: Varga Traffic Planning
Job No/Name	: 6559 Wiley Park Lakemba St Counts
Day/Date	: Thursday 24th August 2017

Intersection Details

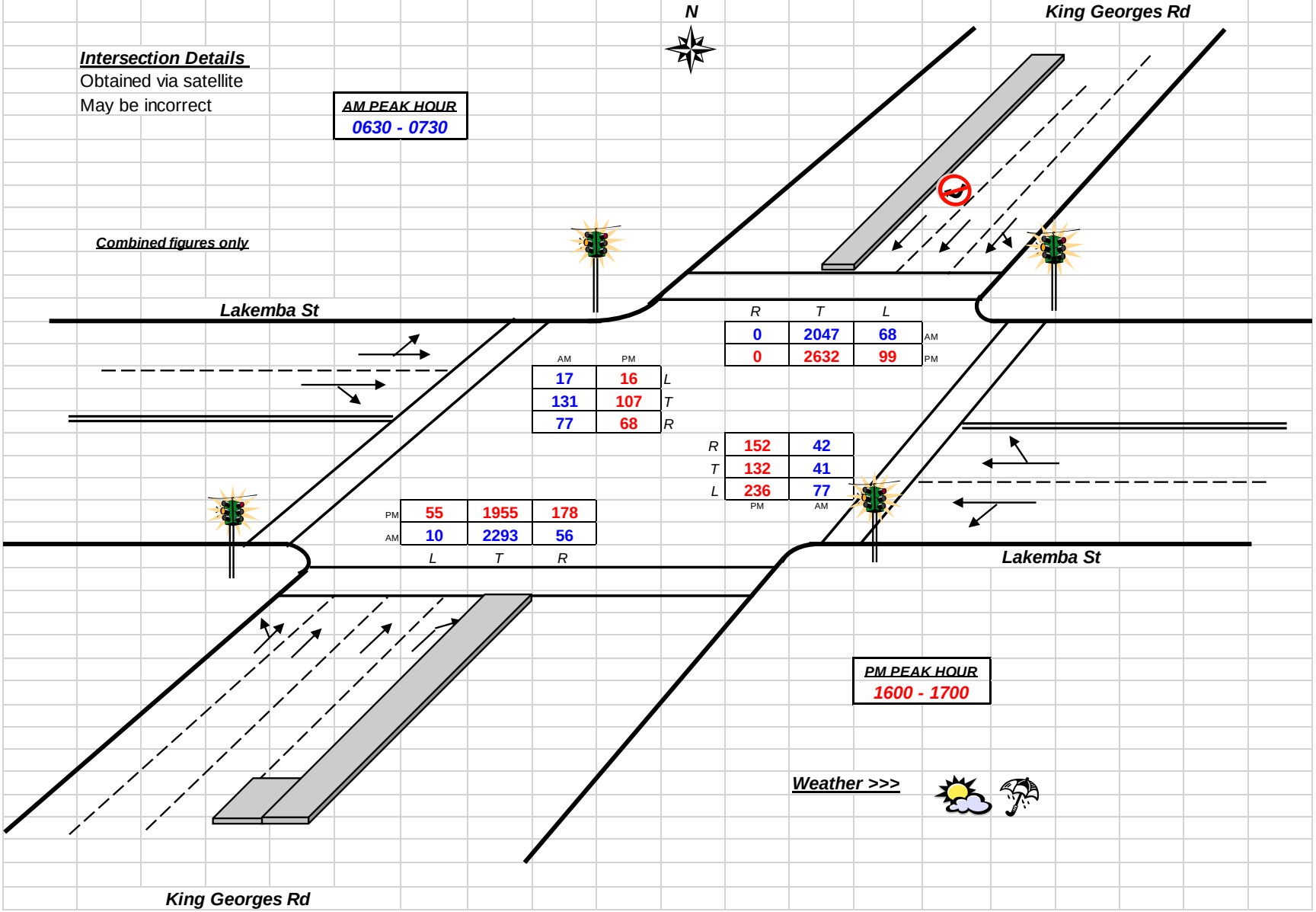
Obtained via satellite

May be incorrect

AM PEAK HOUR

0630 - 0730

Combined figures only



	AM	PM
L	17	16
T	131	107
R	77	68

	R	T	L	
	0	2047	68	AM
	0	2632	99	PM

PM	55	1955	178
AM	10	2293	56
	L	T	R

R	152	42	
T	132	41	
L	236	77	
	PM	AM	

PM PEAK HOUR

1600 - 1700

Weather >>>

APPENDIX F

RMS-APPROVED
2018 SIDRA MOVEMENT SUMMARIES

MOVEMENT SUMMARY

Site: 101 [Proposed PM Existing Layout]

KGR_LAKP

Signals - Fixed Time Isolated Cycle Time = 120 seconds (User-Given Cycle Time)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: King Georges Road (S)											
1	L2	55	1.8	0.582	19.6	LOS B	23.4	168.7	0.64	0.60	42.8
2	T1	1955	3.6	0.582	13.8	LOS A	23.5	169.4	0.63	0.58	44.0
3	R2	178	0.6	0.757	47.7	LOS D	6.9	48.2	1.00	0.89	27.2
Approach		2188	3.3	0.757	16.7	LOS B	23.5	169.4	0.66	0.60	41.7
East: Lakemba Street (E)											
4	L2	292	1.0	0.466	35.8	LOS C	14.4	101.9	0.82	0.79	28.7
5	T1	160	0.0	1.876	678.2	LOS F	86.4	607.7	0.96	2.52	4.7
6	R2	208	1.0	1.876	838.4	LOS F	86.4	607.7	1.00	2.94	3.8
Approach		660	0.8	1.876	444.5	LOS F	86.4	607.7	0.91	1.89	5.9
North: King Georges Road (N)											
7	L2	99	0.0	0.983	78.8	LOS F	74.7	533.4	1.00	1.21	26.2
8	T1	2632	2.6	0.983	73.2	LOS F	74.9	536.2	1.00	1.22	20.5
Approach		2731	2.5	0.983	73.4	LOS F	74.9	536.2	1.00	1.22	20.8
West: Lakemba Street (W)											
10	L2	16	0.0	0.231	40.7	LOS C	5.6	38.9	0.82	0.67	32.7
11	T1	107	0.0	0.231	36.1	LOS C	5.6	38.9	0.82	0.67	33.4
12	R2	68	0.0	0.575	65.6	LOS E	4.1	29.0	1.00	0.80	21.4
Approach		191	0.0	0.575	47.0	LOS D	5.6	38.9	0.88	0.72	29.0
All Vehicles		5770	2.5	1.876	93.5	LOS F	86.4	607.7	0.86	1.04	17.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	47.8	LOS E	0.2	0.2	0.89	0.89
P2	East Full Crossing	50	21.6	LOS C	0.1	0.1	0.60	0.60
P3	North Full Crossing	50	46.9	LOS E	0.2	0.2	0.89	0.89
P4	West Full Crossing	50	21.6	LOS C	0.1	0.1	0.60	0.60
All Pedestrians		200	34.5	LOS D			0.75	0.75

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.

MOVEMENT SUMMARY

Site: 101 [Proposed AM Existing Layout]

KGR_LAKP
Signals - Fixed Time Isolated Cycle Time = 120 seconds (User-Given Cycle Time)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: King Georges Road (S)											
1	L2	10	0.0	0.701	20.9	LOS B	31.9	231.9	0.72	0.66	42.2
2	T1	2293	4.4	0.701	14.6	LOS B	31.9	232.0	0.68	0.63	43.4
3	R2	56	3.6	0.316	24.8	LOS B	1.4	10.4	0.81	0.75	36.4
Approach		2359	4.4	0.701	14.9	LOS B	31.9	232.0	0.68	0.63	43.2
East: Lakemba Street (E)											
4	L2	106	2.8	0.174	32.7	LOS C	4.4	31.7	0.72	0.72	29.7
5	T1	56	0.0	0.701	56.1	LOS D	7.3	51.4	0.97	0.85	27.8
6	R2	71	0.0	0.701	63.7	LOS E	7.3	51.4	1.00	0.86	26.6
Approach		233	1.3	0.701	47.7	LOS D	7.3	51.4	0.87	0.80	28.0
North: King Georges Road (N)											
7	L2	68	1.5	0.709	27.9	LOS B	30.6	225.8	0.81	0.75	42.2
8	T1	2047	7.0	0.709	22.3	LOS B	30.6	227.1	0.81	0.74	37.7
Approach		2115	6.8	0.709	22.5	LOS B	30.6	227.1	0.81	0.74	37.9
West: Lakemba Street (W)											
10	L2	17	0.0	0.256	41.7	LOS C	6.1	42.5	0.83	0.68	32.4
11	T1	131	0.0	0.619	39.9	LOS C	6.1	42.5	0.85	0.70	32.2
12	R2	77	0.0	0.619	63.8	LOS E	5.6	38.9	1.00	0.81	21.9
Approach		225	0.0	0.619	48.2	LOS D	6.1	42.5	0.90	0.74	28.7
All Vehicles		4932	5.1	0.709	21.2	LOS B	31.9	232.0	0.76	0.69	38.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	48.7	LOS E	0.2	0.2	0.90	0.90
P2	East Full Crossing	50	18.2	LOS B	0.1	0.1	0.55	0.55
P3	North Full Crossing	50	47.8	LOS E	0.2	0.2	0.89	0.89
P4	West Full Crossing	50	18.2	LOS B	0.1	0.1	0.55	0.55
All Pedestrians		200	33.2	LOS D			0.72	0.72

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.

MOVEMENT SUMMARY

Site: 101 [Proposed PM Existing Layout]

KGR_LAKP

Signals - Fixed Time Isolated Cycle Time = 120 seconds (User-Given Cycle Time)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: King Georges Road (S)											
1	L2	55	1.8	0.582	19.6	LOS B	23.4	168.7	0.64	0.60	42.8
2	T1	1955	3.6	0.582	13.8	LOS A	23.5	169.4	0.63	0.58	44.0
3	R2	178	0.6	0.757	47.7	LOS D	6.9	48.2	1.00	0.89	27.2
Approach		2188	3.3	0.757	16.7	LOS B	23.5	169.4	0.66	0.60	41.7
East: Lakemba Street (E)											
4	L2	292	1.0	0.466	35.8	LOS C	14.4	101.9	0.82	0.79	28.7
5	T1	160	0.0	1.876	678.2	LOS F	86.4	607.7	0.96	2.52	4.7
6	R2	208	1.0	1.876	838.4	LOS F	86.4	607.7	1.00	2.94	3.8
Approach		660	0.8	1.876	444.5	LOS F	86.4	607.7	0.91	1.89	5.9
North: King Georges Road (N)											
7	L2	99	0.0	0.983	78.8	LOS F	74.7	533.4	1.00	1.21	26.2
8	T1	2632	2.6	0.983	73.2	LOS F	74.9	536.2	1.00	1.22	20.5
Approach		2731	2.5	0.983	73.4	LOS F	74.9	536.2	1.00	1.22	20.8
West: Lakemba Street (W)											
10	L2	16	0.0	0.231	40.7	LOS C	5.6	38.9	0.82	0.67	32.7
11	T1	107	0.0	0.231	36.1	LOS C	5.6	38.9	0.82	0.67	33.4
12	R2	68	0.0	0.575	65.6	LOS E	4.1	29.0	1.00	0.80	21.4
Approach		191	0.0	0.575	47.0	LOS D	5.6	38.9	0.88	0.72	29.0
All Vehicles		5770	2.5	1.876	93.5	LOS F	86.4	607.7	0.86	1.04	17.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians

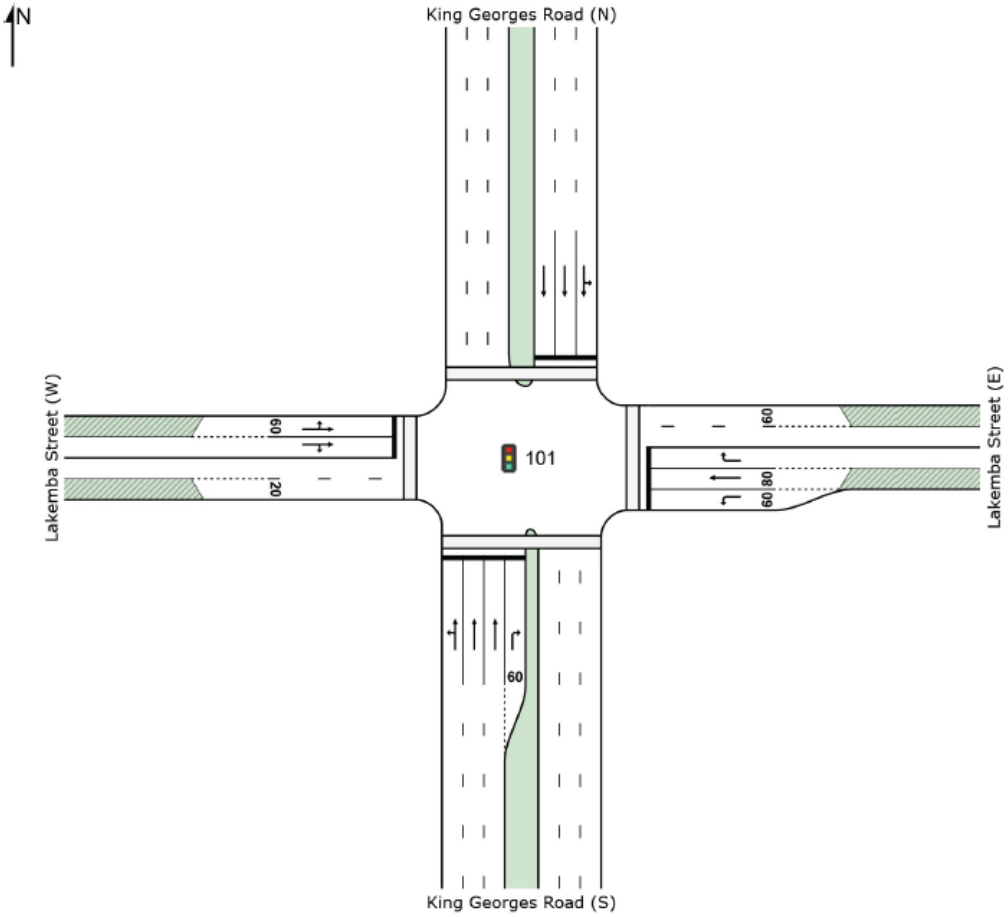
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	47.8	LOS E	0.2	0.2	0.89	0.89
P2	East Full Crossing	50	21.6	LOS C	0.1	0.1	0.60	0.60
P3	North Full Crossing	50	46.9	LOS E	0.2	0.2	0.89	0.89
P4	West Full Crossing	50	21.6	LOS C	0.1	0.1	0.60	0.60
All Pedestrians		200	34.5	LOS D			0.75	0.75

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.

SITE LAYOUT

Site: 101 [Proposed AM Separate LTR]

KGR_LAKP
Signals - Fixed Time Isolated



MOVEMENT SUMMARY

Site: 101 [Proposed AM Separate LTR]

KGR_LAKP
Signals - Fixed Time Isolated Cycle Time = 120 seconds (User-Given Cycle Time)
Variable Sequence Analysis applied. The results are given for the selected output sequence.

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: King Georges Road (S)											
1	L2	10	0.0	0.565	14.1	LOS A	21.0	152.3	0.52	0.48	47.9
2	T1	2293	4.4	0.565	8.5	LOS A	21.0	152.4	0.52	0.48	49.1
3	R2	56	3.6	0.487	25.2	LOS B	2.2	15.9	0.65	0.75	36.4
Approach		2359	4.4	0.565	9.0	LOS A	21.0	152.4	0.52	0.48	48.6
East: Lakemba Street (E)											
4	L2	110	2.7	0.329	51.0	LOS D	5.7	40.6	0.91	0.77	24.2
5	T1	48	0.0	0.134	44.3	LOS D	2.4	16.5	0.87	0.66	31.3
6	R2	75	0.0	0.413	58.8	LOS E	4.2	29.5	0.97	0.77	27.2
Approach		233	1.3	0.413	52.2	LOS D	5.7	40.6	0.92	0.75	26.8
North: King Georges Road (N)											
7	L2	68	1.5	0.528	13.7	LOS A	18.4	136.0	0.49	0.48	50.9
8	T1	2047	7.0	0.528	8.2	LOS A	18.4	136.8	0.49	0.46	49.3
Approach		2115	6.8	0.528	8.3	LOS A	18.4	136.8	0.49	0.46	49.4
West: Lakemba Street (W)											
10	L2	17	0.0	0.249	50.1	LOS D	4.5	31.2	0.90	0.72	30.0
11	T1	131	0.0	0.603	49.0	LOS D	7.8	54.3	0.94	0.76	29.6
12	R2	77	0.0	0.603	57.7	LOS E	7.8	54.3	0.98	0.80	23.5
Approach		225	0.0	0.603	52.0	LOS D	7.8	54.3	0.95	0.77	27.8
All Vehicles		4932	5.1	0.603	12.7	LOS A	21.0	152.4	0.55	0.50	44.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	54.3	LOS E	0.2	0.2	0.95	0.95
P2	East Full Crossing	50	9.2	LOS A	0.1	0.1	0.39	0.39
P3	North Full Crossing	50	54.3	LOS E	0.2	0.2	0.95	0.95
P4	West Full Crossing	50	8.1	LOS A	0.1	0.1	0.37	0.37
All Pedestrians		200	31.5	LOS D			0.67	0.67

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.

MOVEMENT SUMMARY

Site: 101 [Proposed PM Separate LTR]

KGR_LAKP
Signals - Fixed Time Isolated Cycle Time = 120 seconds (User-Given Cycle Time)
Variable Sequence Analysis applied. The results are given for the selected output sequence.

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: King Georges Road (S)											
1	L2	55	1.8	0.521	15.9	LOS B	19.2	138.7	0.54	0.52	45.9
2	T1	1955	3.6	0.521	10.3	LOS A	19.3	139.3	0.54	0.50	47.1
3	R2	178	0.6	0.664	61.3	LOS E	10.1	71.2	1.00	0.98	23.7
Approach		2188	3.3	0.664	14.6	LOS B	19.3	139.3	0.58	0.54	43.4
East: Lakemba Street (E)											
4	L2	299	1.0	0.423	33.7	LOS C	12.8	90.3	0.79	0.79	29.3
5	T1	146	0.0	0.333	42.1	LOS C	7.2	50.3	0.88	0.72	31.9
6	R2	215	0.9	0.902	74.5	LOS F	15.0	105.5	1.00	1.04	24.2
Approach		660	0.8	0.902	48.8	LOS D	15.0	105.5	0.88	0.85	27.7
North: King Georges Road (N)											
7	L2	99	0.0	0.920	49.5	LOS D	59.1	422.2	1.00	1.04	33.6
8	T1	2632	2.6	0.920	43.9	LOS D	59.3	424.3	1.00	1.05	27.9
Approach		2731	2.5	0.920	44.1	LOS D	59.3	424.3	1.00	1.05	28.2
West: Lakemba Street (W)											
10	L2	16	0.0	0.195	45.1	LOS D	4.0	28.2	0.85	0.68	31.3
11	T1	107	0.0	0.472	43.5	LOS D	5.8	40.3	0.88	0.72	31.0
12	R2	68	0.0	0.472	53.3	LOS D	5.8	40.3	0.94	0.78	24.4
Approach		191	0.0	0.472	47.2	LOS D	5.8	40.3	0.90	0.74	28.9
All Vehicles		5770	2.5	0.920	33.6	LOS C	59.3	424.3	0.82	0.82	32.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	53.3	LOS E	0.2	0.2	0.94	0.94
P2	East Full Crossing	50	21.0	LOS C	0.1	0.1	0.59	0.59
P3	North Full Crossing	50	52.4	LOS E	0.2	0.2	0.94	0.94
P4	West Full Crossing	50	19.3	LOS B	0.1	0.1	0.57	0.57
All Pedestrians		200	36.5	LOS D			0.76	0.76

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.

APPENDIX G

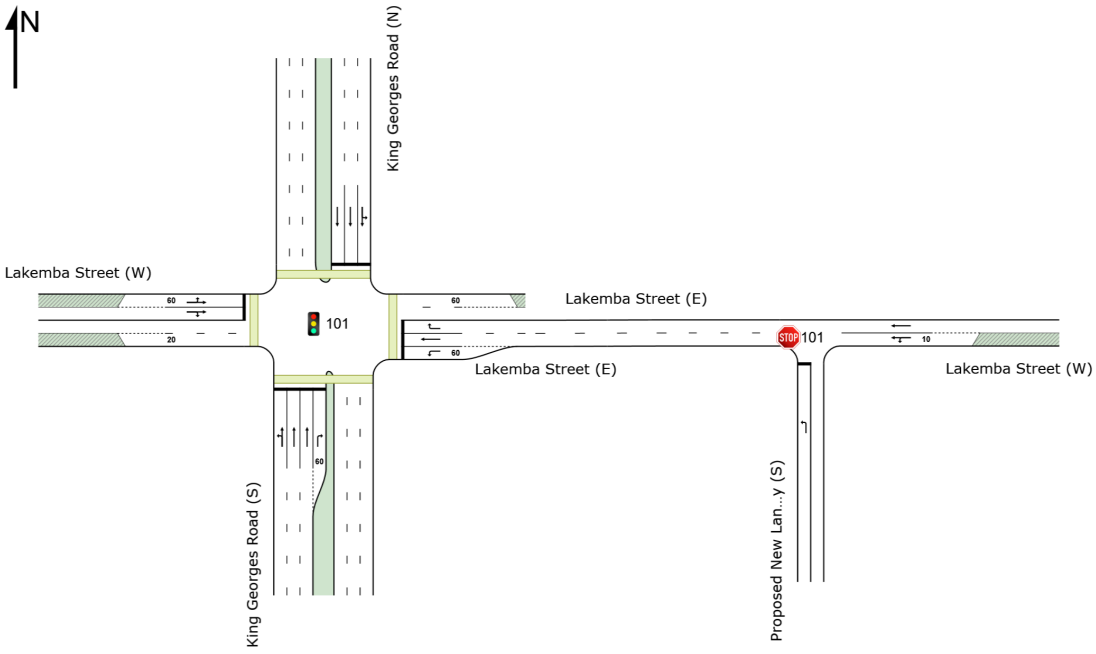
2021 SIDRA MOVEMENT SUMMARIES

NETWORK LAYOUT

Network: N101 [Proposed Network AM (Network Folder: General)]

New Network
Network Category: (None)

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



SITES IN NETWORK		
Site ID	**CCG ID**	**Site Name**
101	NA	Proposed AM Separate LTR
101	NA	Proposed AM

Organisation: VARGA TRAFFIC PLANNING | Licence: PLUS / 1PC | Created: Thursday, 14 October 2021 10:12:40 AM
Project: Z:\DATA\Data\Jobs01\Jobs\21work\21188_LakembaStKingGeorgesRdWileyPark\SIDRA\211014\Proposed Network.sip9

MOVEMENT SUMMARY

Site: 101 [Proposed AM Separate LTR (Site Folder: General)]

Network: N101 [Proposed Network AM (Network Folder: General)]

King Georges Road & Lakemba Street Intersection
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: King Georges Road (S)														
1	L2	10	0.0	10	0.0	0.564	13.2	LOS A	20.4	148.3	0.49	0.46	0.49	48.7
2	T1	2293	4.4	2293	4.4	0.564	7.6	LOS A	20.4	148.4	0.49	0.45	0.49	50.1
3	R2	56	3.6	56	3.6	* 0.307	28.3	LOS B	2.4	17.1	0.74	0.77	0.74	20.5
Approach		2359	4.4	2359	4.4	0.564	8.1	LOS A	20.4	148.4	0.49	0.46	0.49	49.4
East: Lakemba Street (E)														
4	L2	103	2.9	103	2.9	0.212	41.3	LOS C	4.7	33.6	0.82	0.75	0.82	15.4
5	T1	46	0.0	46	0.0	0.142	46.2	LOS D	2.3	16.2	0.89	0.67	0.89	24.4
6	R2	68	0.0	68	0.0	0.350	57.3	LOS E	3.8	26.3	0.95	0.76	0.95	20.6
Approach		217	1.4	217	1.4	0.350	47.4	LOS D	4.7	33.6	0.87	0.74	0.87	19.6
North: King Georges Road (N)														
7	L2	68	1.5	68	1.5	0.597	19.5	LOS B	23.9	176.5	0.64	0.60	0.64	33.6
8	T1	2047	7.0	2047	7.0	* 0.597	13.7	LOS A	23.9	177.6	0.64	0.59	0.64	44.0
Approach		2115	6.8	2115	6.8	0.597	13.9	LOS A	23.9	177.6	0.64	0.59	0.64	43.7
West: Lakemba Street (W)														
10	L2	17	0.0	17	0.0	0.245	51.9	LOS D	4.0	28.3	0.91	0.72	0.91	29.6
11	T1	131	0.0	131	0.0	* 0.593	49.9	LOS D	8.2	57.4	0.95	0.76	0.95	23.0
12	R2	77	0.0	77	0.0	0.593	56.6	LOS E	8.2	57.4	0.98	0.80	0.98	23.7
Approach		225	0.0	225	0.0	0.593	52.4	LOS D	8.2	57.4	0.95	0.77	0.95	23.8
All Vehicles		4916	5.1	4916	5.1	0.597	14.3	LOS A	23.9	177.6	0.59	0.54	0.59	42.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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 (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* 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. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: King Georges Road (S)											
P1	Full	50	54.3	LOS E	0.2	0.2	0.95	0.95	90.5	47.1	0.52
East: Lakemba Street (E)											
P2	Full	50	13.6	LOS B	0.1	0.1	0.48	0.48	43.2	38.5	0.89
North: King Georges Road (N)											
P3	Full	50	54.3	LOS E	0.2	0.2	0.95	0.95	89.5	45.8	0.51
West: Lakemba Street (W)											

P4 Full	50	12.2	LOS B	0.1	0.1	0.45	0.45	39.3	35.2	0.90
All Pedestrians	200	33.6	LOS D	0.2	0.2	0.71	0.71	65.6	41.7	0.63

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.

MOVEMENT SUMMARY

Site: 101 [Proposed PM Separate LTR (Site Folder: General)]

Network: N101 [Proposed Network PM (Network Folder: General)]

King Georges Road & Lakemba Street Intersection
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: King Georges Road (S)														
1	L2	55	1.8	55	1.8	0.551	15.7	LOS B	20.8	150.2	0.55	0.52	0.55	46.0
2	T1	1955	3.6	1955	3.6	0.551	9.9	LOS A	20.9	150.8	0.53	0.49	0.53	47.6
3	R2	178	0.6	178	0.6	* 0.665	61.1	LOS E	10.2	71.6	1.00	0.99	1.03	12.0
Approach		2188	3.3	2188	3.3	0.665	14.2	LOS A	20.9	150.8	0.57	0.53	0.57	43.0
East: Lakemba Street (E)														
4	L2	285	1.1	285	1.1	0.412	34.2	LOS C	12.3	86.6	0.79	0.79	0.79	17.5
5	T1	142	0.0	142	0.0	0.336	43.0	LOS D	7.1	49.4	0.89	0.72	0.89	25.3
6	R2	201	1.0	201	1.0	* 0.883	72.0	LOS F	13.6	96.1	1.00	1.01	1.36	18.0
Approach		628	0.8	628	0.8	0.883	48.3	LOS D	13.6	96.1	0.88	0.84	0.99	19.6
North: King Georges Road (N)														
7	L2	99	0.0	99	0.0	0.905	45.2	LOS D	56.1	400.6	0.98	1.00	1.11	23.6
8	T1	2632	2.6	2632	2.6	* 0.905	39.3	LOS C	56.3	402.6	0.98	1.01	1.11	29.6
Approach		2731	2.5	2731	2.5	0.905	39.5	LOS C	56.3	402.6	0.98	1.01	1.11	29.3
West: Lakemba Street (W)														
10	L2	16	0.0	16	0.0	0.201	46.1	LOS D	4.0	28.3	0.86	0.69	0.86	31.1
11	T1	107	0.0	107	0.0	0.487	44.8	LOS D	5.9	41.0	0.89	0.72	0.89	24.4
12	R2	68	0.0	68	0.0	0.487	54.3	LOS D	5.9	41.0	0.95	0.78	0.95	24.1
Approach		191	0.0	191	0.0	0.487	48.3	LOS D	5.9	41.0	0.91	0.74	0.91	24.9
All Vehicles		5738	2.5	5738	2.5	0.905	31.1	LOS C	56.3	402.6	0.81	0.80	0.89	31.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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 (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* 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. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: King Georges Road (S)											
P1	Full	50	54.3	LOS E	0.2	0.2	0.95	0.95	90.5	47.1	0.52
East: Lakemba Street (E)											
P2	Full	50	20.5	LOS C	0.1	0.1	0.58	0.58	50.1	38.5	0.77
North: King Georges Road (N)											
P3	Full	50	53.3	LOS E	0.2	0.2	0.94	0.94	88.5	45.8	0.52
West: Lakemba Street (W)											

P4 Full	50	18.7	LOS B	0.1	0.1	0.56	0.56	45.8	35.2	0.77
All Pedestrians	200	36.7	LOS D	0.2	0.2	0.76	0.76	68.7	41.7	0.61

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.

MOVEMENT SUMMARY

Site: 101 [Proposed AM (Site Folder: General)]

Network: N101 [Proposed Network AM (Network Folder: General)]

Lakemba Street & Proposed New Laneway
Site Category: (None)
Stop (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Proposed New Laneway (S)														
1	L2	57	1.8	57	1.8	0.041	6.9	LOS A	0.2	1.2	0.12	0.92	0.12	20.7
Approach		57	1.8	57	1.8	0.041	6.9	LOS A	0.2	1.2	0.12	0.92	0.12	20.7
East: Lakemba Street (W)														
4	L2	74	1.4	74	1.4	0.062	4.6	LOS A	0.0	0.0	0.00	0.34	0.00	44.7
5	T1	160	1.9	160	1.9	0.062	0.0	LOS A	0.0	0.0	0.00	0.09	0.00	49.0
Approach		234	1.7	234	1.7	0.062	1.5	NA	0.0	0.0	0.00	0.17	0.00	47.4
All Vehicles		291	1.7	291	1.7	0.062	2.5	NA	0.2	1.2	0.02	0.32	0.02	45.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 101 [Proposed PM (Site Folder: General)]

Network: N101 [Proposed Network PM (Network Folder: General)]

Lakemba Street & Proposed New Laneway
Site Category: (None)
Stop (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Proposed New Laneway (S)														
1	L2	108	0.9	108	0.9	0.100	7.6	LOS A	0.4	2.7	0.33	0.88	0.33	20.3
Approach		108	0.9	108	0.9	0.100	7.6	LOS A	0.4	2.7	0.33	0.88	0.33	20.3
East: Lakemba Street (W)														
4	L2	120	0.8	120	0.8	0.186	4.6	LOS A	0.0	0.0	0.00	0.19	0.00	46.0
5	T1	520	1.0	520	1.0	0.186	0.1	LOS A	0.0	0.0	0.00	0.08	0.00	49.0
Approach		640	0.9	640	0.9	0.186	0.9	NA	0.0	0.0	0.00	0.10	0.00	48.4
All Vehicles		748	0.9	748	0.9	0.186	1.9	NA	0.4	2.7	0.05	0.21	0.05	47.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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