

Transport Impact Assessment

20 Kelso Crescent, Moorebank

Proposed Multi Storey Warehouse Development

GT23016

Prepared for
Mapletree

14 September 2023



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1 Introduction

1.1 Background

This Traffic Impact Assessment has been prepared to accompany a State Significant Development Application (SSDA) for a proposed industrial development on a site at 20 Kelso Crescent, Moorebank (Figure 1-1).

Figure 1-1 Site



Source: Mecone (edited by Genesis Traffic)

The proposal involves a multi-storey warehouse development with ancillary administrative offices comprising a total Gross Floor Area (GFA) of 34,410m². Car parking will be accommodated in the form of a hardstand and undercroft containing 180 spaces with an appropriate quantum of DDA-compliant spaces. Vehicle access points will be located on Kelso Crescent and Seton Road. Vast hardstand areas and loading facilities will be provided onsite accommodating the intended design vehicle - 19m semi-trailers.

1.2 Scope of Assessment

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



Section 1	Introduction
Section 2	SEARs & Summary of Response
Section 3	Existing Site & Traffic Circumstances
Section 4	Proposal Description
Section 5	Parking Assessment
Section 6	Access & Circulation Design Assessment
Section 7	Operational Arrangement
Section 8	Traffic Assessment
Section 9	Preliminary Construction Traffic Management Planning
Section 10	Green Travel Planning
Section 11	TfNSW Consultation Evidence
Section 12	Conclusion

1.3 Reference Documents

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

- AS2890.1:2004
- AS2890.2:2018
- AS2890.3:2015
- AS2890.6:2009
- Liverpool Development Control Plan (2008)
- Liverpool City Council Bike Plan (2018)
- TfNSW (RTA) Guide to Traffic Generating Developments, RTA, 2002
- TfNSW (RMS) Technical Direction, TDT 2013/04a
- RMS Trip Generation Surveys Analysis Report – Business Park & Industrial Parks, TEF Consulting, December 2012
- Architectural plans prepared by Nettleton Tribe
- Employment data provided by Mapletree
- Traffic and survey data collected as part of this assessment.



2 Response to SEARs

The NSW Department of Planning and Environment issued site-specific assessment criteria known as the Secretary's Environmental Assessment Requirements (SEARs).

The relevant traffic, transport, and accessibility criteria that the assessment must consider are reproduced in Table 2-1. The corresponding assessment outcome is identified in the adjoining column 'Response Reference'.

Table 2-1 Response to SEARs

Issue and Assessment Requirements	Response Reference
6.0 Traffic, Transport and Accessibility Provide a transport and accessibility impact assessment, which includes:	
6.1 Details of all traffic types and volumes likely to be generated during construction and operation, including a description of key access and haul routes	Section 8.1 Section 9.4
6.2 An assessment of the predicted impacts of this traffic on road safety and the capacity of the road network, including consideration of cumulative traffic impacts at key intersections (using industry standard modelling).	Road Safety Section 3.4, Section 8.4 Existing Capacity Section 3.5 Development Traffic Impact Section 8
6.3 Plans demonstrating how all vehicles likely to be generated during construction and operation and awaiting loading, unloading, or servicing can be accommodated on the site to avoid queuing in the street network	Operational Traffic Management Section 7.4 Construction Traffic Management Section 9.4.4
6.4 Details and plans of any proposed internal road network, loading dock provision and servicing, on-site parking provisions, and sufficient pedestrian and cyclist facilities, in accordance with the relevant Australian Standards.	Section 5
6.5 Swept path analysis for the largest vehicle requiring access to the development.	Section 6 & Attachment 4
6.6 Details of road upgrades, infrastructure works, or new roads or access points required for the development if necessary.	Section 6 & Section 8
6.7 Provide a Construction Traffic Management Plan detailing predicted construction vehicle movements, routes, access and parking arrangements, coordination with other	Section 9



construction occurring in the area, and how impacts on existing traffic, pedestrian and bicycle networks would be managed and mitigated.

6.8

Provide a Green Travel Plan or equivalent

Section 10

3 Existing Conditions

3.1 Site and Surrounding Context

The development site (Figure 3-1) is a consolidation of Lot 2 DP 521146 and Lot C DP 327378, located at 20 Kelso Crescent, Moorebank. The site occupies an irregularly shaped area of some 3.5 hectares (35,200m²) and has frontages to Kelso Crescent on the northern part and Seton Road on the southern part.

Figure 3-1 Site Context



Source: Metromap

Long-established brick and masonry manufacturing factory 'Adbri Masonry' occupies the site at present, comprising an approximate building GFA of 5,970m² plus associated vast open storage and processing areas. Existing vehicle access points are located at Kelso Crescent and Seton Road and approximately 21 formalised/delineated parking spaces are provided onsite.



3.2 Road Network

The road network serving the site's vicinity (Figure 3-2) comprises:

Figure 3-2 Road Network



Source: TfNSW

- **Newbridge Road:** The A34 is a State Road that connects Milperra Road (east) to Terminus Street (west). It has a posted speed limit of 60 km/h. The road consists of two (2) traffic lanes on both sides.
- **Heathcote Road:** The A6 is a State Road that connects Newbridge Road (north) to the Princes Highway (southeast) at Heathcote. It has a posted speed limit of 60 km/h. The road consists of three (3) traffic lanes on both sides.
- **Kelso Crescent:** An east-west local road carrying one (1) traffic lane in each direction. On-street parking is available on both sides.
- **Iraking Avenue:** A north-south local road that connects to Kelso Crescent to the north and Seton Road to the south. The road consists of one (1) traffic lane in each direction and on-street parking is available on both sides.
- **Seton Road:** A local road that connects Iraking Avenue to the north and Heathcote to the south. It has a signposted speed limit of 50 km/h and consists of one (1) traffic lane in each direction. On-street parking is permitted on both sides.



3.3 Traffic Controls

The traffic controls on the road system in the vicinity of the site comprise:

- Traffic control signals at the intersection of
 - Newbridge Road and Heathcote Road
 - Newbridge Road and Epsom Road
 - Heathcote Road and Seton Road
- Stop Control at the intersection of Newbridge Road and Kelso Crescent (including the right turn storage bay from Newbridge Road to Kelso Crescent and No U-Turn at Newbridge Road)
- Give Way priority control at the intersection of Kelso Crescent (east-west) and Kelso Crescent (north-south)

3.4 Crash History

Transport for NSW (TfNSW) provides a history of recorded crash data between 2017 and 2021 (data for 2022 and 2023 are not available at the time of this assessment). This data is reviewed to better understand the existing road safety levels near the site and the potential implications of any increase in traffic volumes.

The data reveal the following number of crashes near the site (Table 3-1).

Table 3-1 Crash Data Record (*Source: TfNSW*)

Location	Date of Crash	Type	RUM Code	Severity/Injury
Newbridge Road @ Kelso Crescent	2019	Two westbound vehicles rear end collision on Newbridge Rd	30	Moderate
	2019	Left turn from Kelso Cr collided by a westbound vehicle on Newbridge Rd	13	Minor
	2020	Lane crossing collision (same direction but not identified)	39	Moderate
	2020	Right turn from Kelso Cr collided by an eastbound vehicle on Newbridge Rd	11	Moderate
	2021	Right turn from Kelso Cr collided by an eastbound vehicle on Newbridge Rd	12	Minor
Kelso Crescent (east of site)	2021	Ped – walking with traffic	4	Moderate



Seton Road @ Iraking Avenue	2018	Off Road to the left (hitting object)	71	Minor
	2020	Off Road to the right (hitting object)	73	Moderate
Heathcote Road @ Seton Road	2017	Right turning vehicle from Heathcote Rd to Seton Rd collided from rear	32	Minor
	2019	Right turning vehicle from Heathcote Rd to Seton Rd collided from rear	32	Serious

The data recorded 10 crashes in the site's vicinity in the most recent 5-year period, all but one incident involved a serious injury. The assessment notes one to two crashes in the local road system surrounding the site over the five-year period. Five crashes were recorded at the intersection of Newbridge Road and Kelso Road. Of these, one involved a left-turning vehicle from Kelso Crescent, while another two turned right from Kelso Crescent, highlighting a potential difficulty for turning vehicles at this intersection. Further south, two rear-end crashes involving right-turning traffic from Heathcote Road to Seton Road were recorded in the same period.

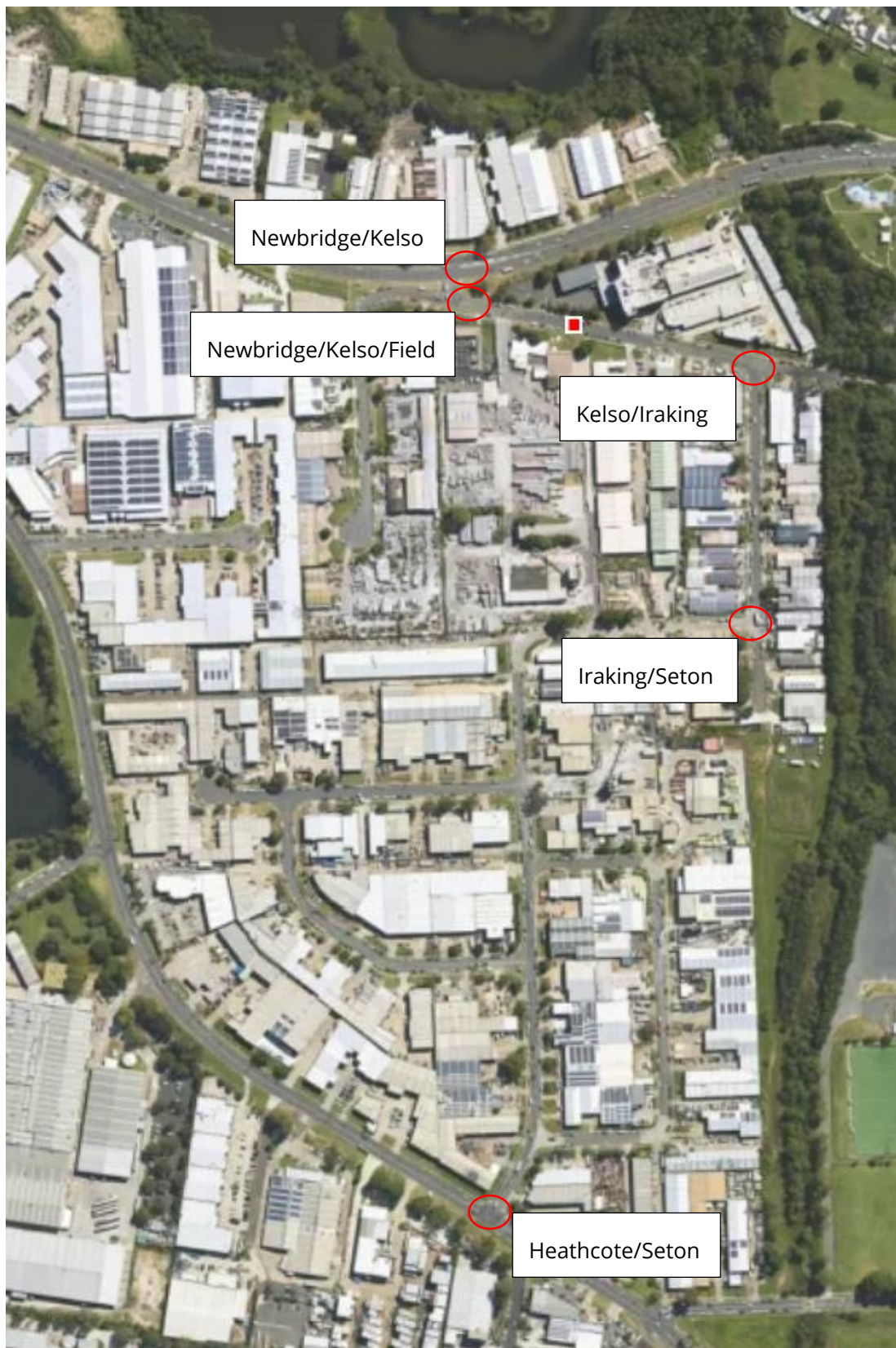
The recorded crashes are not highly repetitive in occurrence; there is insufficient evidence at this stage to indicate a critical safety deficiency at these assessed locations.

3.5 Existing Traffic Conditions

Intersection movement counts were commissioned as part of this assessment to record the background traffic volumes in the local road network (**Attachment 1**). The traffic survey was conducted in July 2023 at the following intersections (Figure 3-3) during the road network AM and PM peak periods:

- Newbridge Road & Kelso Crescent & Field Close
- Kelso Crescent & Iraking Avenue
- Seton Road & Iraking Avenue
- Heathcote Road & Seton Road

Figure 3-3 Surveyed Intersections



Source: Metromap



It is noted that Kelso Crescent is subject to peak hour mid-block traffic flow of approximately 218 and 165 vehicles per hour (two-way) during the AM and PM peak periods, while Seton Road carries 800 and 1,114 vehicles per hour in the AM and PM peaks.

The RMS Guide to Traffic Generating Developments (2002) – Table 4.3 indicates a mid-block capacity for urban roads with interrupted flow of 900 vehicles per hour per lane, each way, giving a two-way capacity of 1,800 vehicles per hour. The surveyed two-way peak flows on both roadways are within their capacity threshold.

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

- Degree of Saturation – the total usage of the intersection expressed as a factor of 1, with 1 representing 100% use/saturation.
- Average Delay – the average delay encountered by all vehicles passing through the intersection.
- 95% Queue Length (Q95) – is defined to be the queue length in metres that has only a 5% probability of being exceeded during the analysis period. It transforms the average delays into measurable distance units.
- Level of Service (LOS) – this is a categorisation of average delay, intended for simple reference. The RMS adopts the following bands (Table 3-2)

Table 3-2 Intersection Performance – Levels of Service

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



F	> 70	Extra capacity required	Extreme delay, major treatment required
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The SIDRA model results for each surveyed intersection are provided in **Attachment 2** and summarised in Table 3-3.

Table 3-3 Existing Network Operation

Intersection	AM Peak		PM Peak	
	LOS	AVD	LOS	AVD
Newbridge Rd/Kelso Cr	C (SRT)	33	B (SRT)	26.7
Kelso Cr/Field Close	A (ERT)	5.2	A (ERT)	4.8
Kelso Cr/Iraking Ave	A (SRT)	5.3	A (SRT)	5.1
Iraking Ave/Seton Rd	A (WRT)	5.3	A (WRT)	5.2
Heathcote Rd/Seton Rd	A	6.1	B	14.6

Note: (WRT) denotes the worst operating movement - Abbreviation:

WRT = West Approach Right Turn

ERT = East Approach Right Turn

SRT = South Approach Right Turn

NLT = North Approach Right Turn

NUT = North Approach U- Turn

The assessment outcome reveals ample spare capacity under existing traffic demand during the AM and PM peak periods.

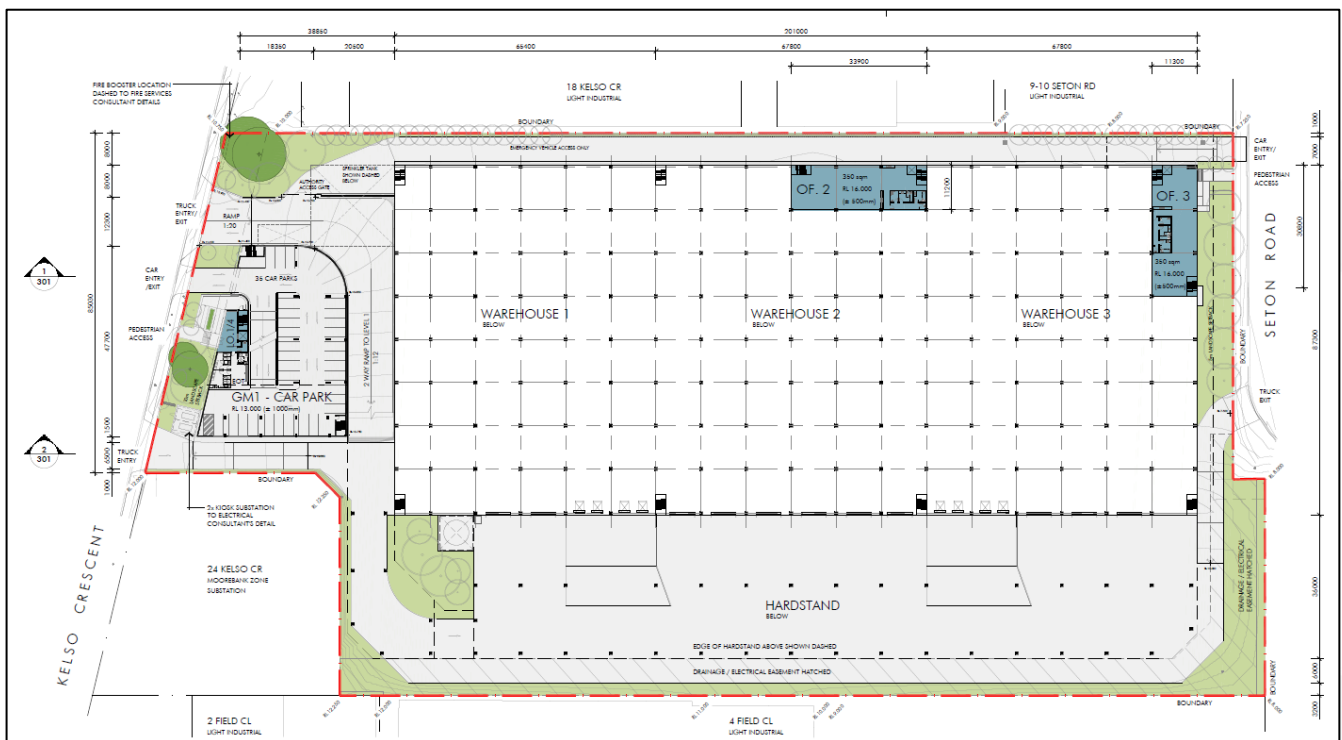
4 Proposed Development

The proposal is to demolish the existing buildings on the site, undertake minor earthworks to provide a level building platform, and construct a two-storey warehouse building complex in the following composition:

- 5 x warehouse units (total GLA = 34,690m², GFA = 31,300m²)
- Office space (GFA – 2,400m)
- 180 car parking spaces

The existing vehicle crossovers will be demolished and reinstated with kerb and gutter. A total of five driveways will be constructed to serve the new development (Figure 4-1).

Figure 4-1 Proposal Context



Source: Nettleton Tribe

Details of the proposal are indicated in the architectural plans prepared by Nettleton Tribe, reproduced in part in **Attachment 3**.



5 Parking Assessment

5.1 Car Parking Requirement

The appropriate car parking quantum is assessed on the following basis:

5.1.1 Liverpool DCP (2008)

The relevant DCP car parking rates are set out in Table 5-1.

Table 5-1 DCP Car Parking Rates

Development Type	Parking Rates
Industry warehouse (>1,000m² GFA)	1 space per 250m ² GFA
Office	1 space per 35m ² GLA

5.1.2 RMS Guide to Traffic Generating Developments (2002)

By comparison, the RMS Guide recommends a lower warehouse parking requirement of 1 space per 300m² GFA. For offices, the RMS Guide requires 1 space per 40m² GFA.

5.1.3 Requirement

Application of the DCP and RMS rates to the proposal would indicate the following parking requirements (Table 5-2).

Table 5-2 Number of Required Car Parking Spaces

Element	DCP	RMS
Warehouse (GFA - 31,300 m²)	125 spaces	104 spaces
Office Premise (GLA - 2,400 m²)	69 spaces	60 spaces
Total	194 spaces	164 spaces

5.1.4 Proposed Parking Provision

The assessment recommends providing 180 parking spaces, achieving a suitable balance between the DCP and RMS requirements. This quantum exceeds Mapletree's onsite employment projection of approximately 174 individuals. Notwithstanding, the Green Travel Plan outlined in Section 10 will impact how occupants travel to and from the premises once the building is occupied. This plan emphasises the use of sustainable transportation methods, further reducing onsite parking demand, and is consistent with the Council's long term transport planning principles.



5.2 Bicycle Storage/Parking Requirement

The Liverpool DCP specifies the following rates for onsite bicycle storage facilities:

Table 5-3 Bicycle Parking Rates

Development Type	Parking Rates
Warehouse	1 per 10 staff/1 per 10 car spaces
Office Premise	1 space per 200m ² GFA (staff) 1 space per 750m ² GFA (visitors)

In addition to the above, the DCP also requires the following to be supplemented onsite as part of the End of Trip Facility:

- 1 change/shower room provided per 10 employee bicycle space
- 1 locker provided for each employee bicycle space

Application of the DCP rates to the proposal would indicate the following requirements (Table 5-4).

Table 5-4 Number of Required Car Parking Spaces

Element	Bicycle (employee)	Bicycle (visitor)
Warehouse (174 employees)	18 spaces	-
Office Premise (2,400 m²)	12 spaces	3 spaces
Total	30 spaces	3 spaces

Based on the above, the corresponding requirements for EOTF are:

- 3 shower/change rooms
- 30 lockers

The proposal will include the following provision to comply with the above criteria:

- 30 bicycle storage spaces for employees
- 3 bicycle parking for visitors
- 4 shower/change rooms (2 males, 2 females)
- 30 lockers.

The assessment notes that the EOTF will be located on the northern and southern parts of the premises to optimise convenience and accessibility by users.



6 Access & Circulation Design

6.1 Site Access

The site will involve five (5) new access driveways:

- Three on Kelso Crescent
- Two on Seton Road

All proposed access driveways have been designed to accord with the AS2890.1 and AS2890.2 requirements. Detailed geometrical assessment of the driveways is summarised in Table 6-1. Details of swept path analysis demonstrating a satisfactory provision for the largest design vehicle (19m semi-trailer) intended to access the site are provided in **Attachment 4**.

6.2 Design Assessment

A detailed review of the parking access and arrangement has been undertaken to assess its conformance with the AS2890.1 and AS2890.2 design criteria.

The assessment findings (Table 6-1) confirm the design provisions are adequate and meet the relevant design standards.

Table 6-1 Design Assessment Summary

Features	Requirement	Provision	Compliance	Notes
Access for Car Parking (AS2890.1:2004) – Category 2				
Access Width	6m-9m combined	Provided	Yes	
Location (Category 3)	6m from any intersection tangent	Exceeds minimum requirement	Yes	
Sight Distance (60km/h)	Min 45m (50 k m/h)	Provided	Yes	
Sight Splays (Pedestrian)	2.5m x 2.0m	Provided	Yes	
Access for 19m long Semi Trailer (AS2890.2:2018)				
Access Driveway	12.5m (two-way on minor road)	14.5m (two-way) 9m (one-way)	Yes	
Ramp Grade	Max 15.4% (1 in 6.5)	1 in 12	Yes	
Rates of Change of Grades	Max 6.25% (1 in 16)	< 1 in 20	Yes	
Transitions	10m	10m	Yes	
Width (Single Lane)	3.5m	>3.5m	Yes	



Sight Distance (50km/h)	Min 83m	Provided	Yes	
Vertical Clearance	4.5m	6m	Yes	
Driveway / Ramp (AS2890.1:2004)				
Ramp Grade	Max 25% (1 in 4)	1 in 11	Yes	
Transitions	2.0m	5.3m	Yes	
Width	5.5m	6.1m	Yes	
Gradient for First 6m of driveway	Max 5% (1 in 20)	N/A	Yes	
Parking Modules (AS2890.1:2004) – User Class 1A				
Space Length	5.4m	5.5m	Yes	
Space Width	2.4m	2.5m	Yes	
Aisle Width	5.8m	6.2m	Yes	
Height Clearance	2.2m	3.17m	Yes	
Gradient	Max 5% (1 in 20)	N/A	Yes	

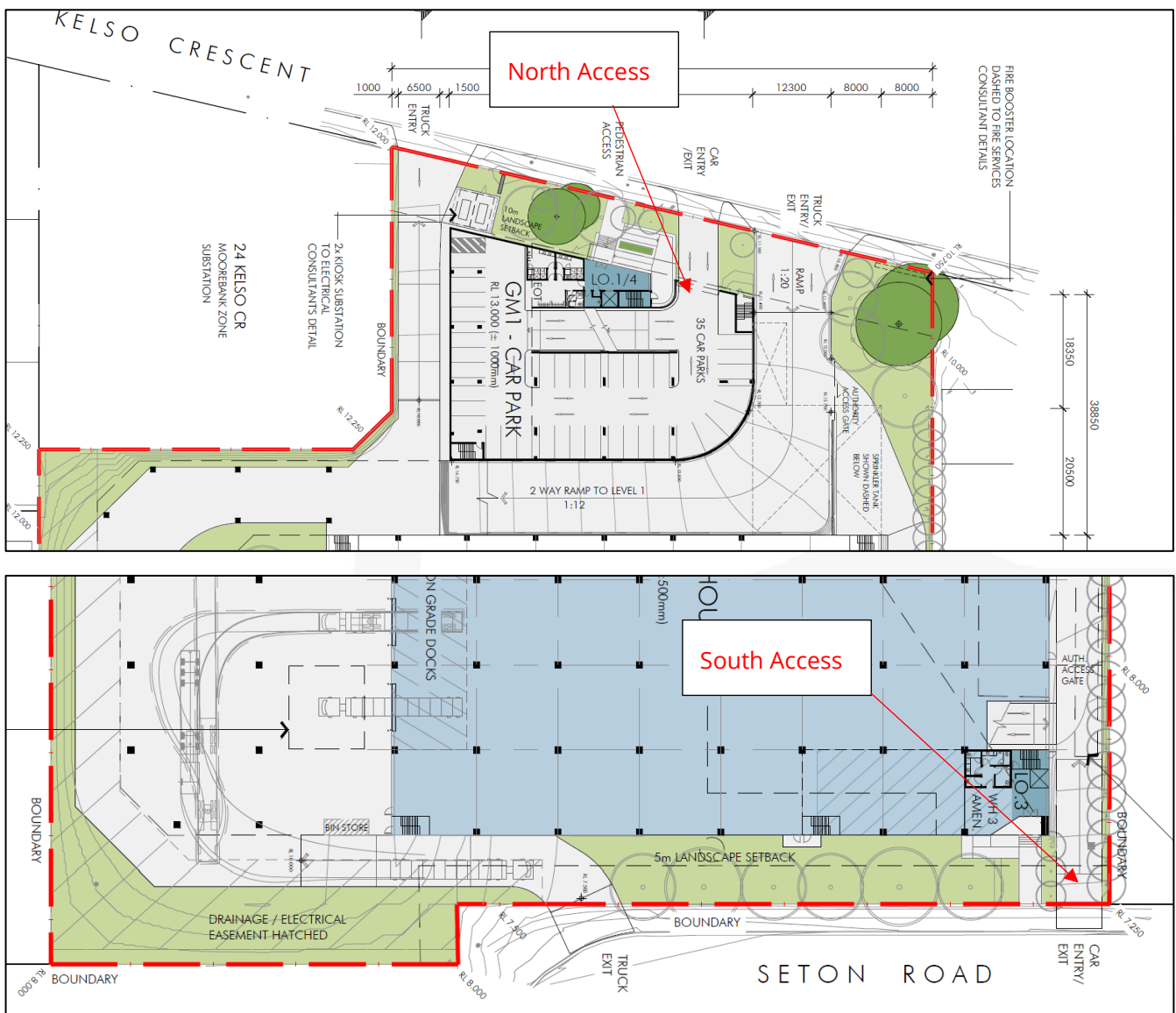
7 Operational Arrangement

A detailed and tenancy-specific Operational Traffic Management Plan (OTMP) will be prepared prior to the building's occupation. However, the following outlines the principles of site access, circulation, and approach/departure route management that will be generally consistent regardless of tenancy types.

7.1 Car Park Access & Circulation

All light vehicles associated with the car park will access the car park via the northern access at Kelso Crescent and southern access at Seton Road. Drivers will proceed to the car park and exit via the same driveways (Figure 7-1).

Figure 7-1 Car Park Access Points



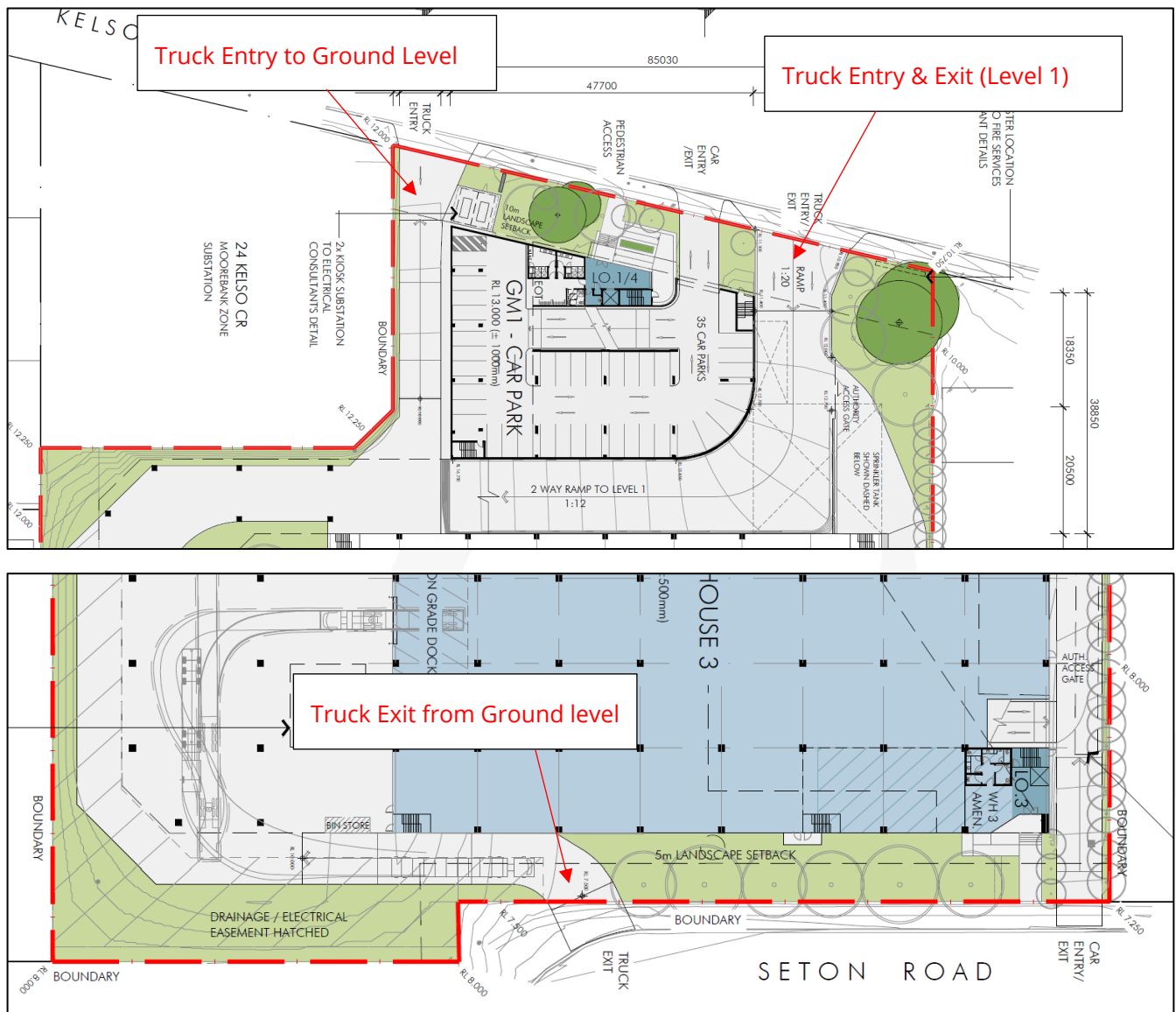
Source: Nettleton Tribe

7.2 Truck Access

Truck access to the site involves:

- Kelso Crescent – entry only
- Kelso Crescent – entry & exit to Level 1 Warehouses
- Seton Road – exit only

Figure 7-2 Truck Access Points



Source: Nettleton Tribe



7.3 Truck Circulation

All trucks will be capable of entering and exiting the site in a forward direction. Internally, trucks will undertake up to one reverse manoeuvre to align with the loading docks and depart forwards.

A swept path analysis has been undertaken to demonstrate the intended vehicle circulation movements in the facility. These swept path diagrams are provided in **Attachment 4**.

7.4 Queue Storage Provision

Part 3.4 of the AS2890.1:2004 provides a guideline for determining adequate queue storage for inbound vehicles to a car park with access control points, e.g., boom gate, roller shutter, card reader, etc.

While there will be gates installed near the site boundary, it is noted that the proposed car parking facilities will not be subject to physical access control, because the site gates will be left open during business hours. Therefore, when the premises are open, vehicles/trucks can flow freely between the frontage roads and the car park ramps. Appendix D of the AS2890.1 reveals 600 vehicles per hour per lane to be the capacity of a free-flowing car park entry point. In the context of this proposal, Table 8-4 indicates a peak inbound traffic load of 89 cars (including 20 trucks) per hour distributed over four (4) entry points. This demand is equivalent to approximately 3% of the available capacity. The assessment confirms traffic generation of this magnitude will not result in any perceptible queueing effect on the public road network.

7.5 Truck Routes

The envisaged approach and departure routes that have regard to the restrictions published in the National Heavy Vehicle Registry (NHVR) are indicated in Figure 7-3 and Figure 7-4.

The assessment projects that a large proportion of the heavy vehicle traffic generation will be between the site and Port Botany (75%). As such, it is anticipated that a large proportion of these movements will head south towards Heathcote Road via the Seton Road exit.



Figure 7-3 NHVR Nominal Truck Route to/from East (e.g., Port Botany)

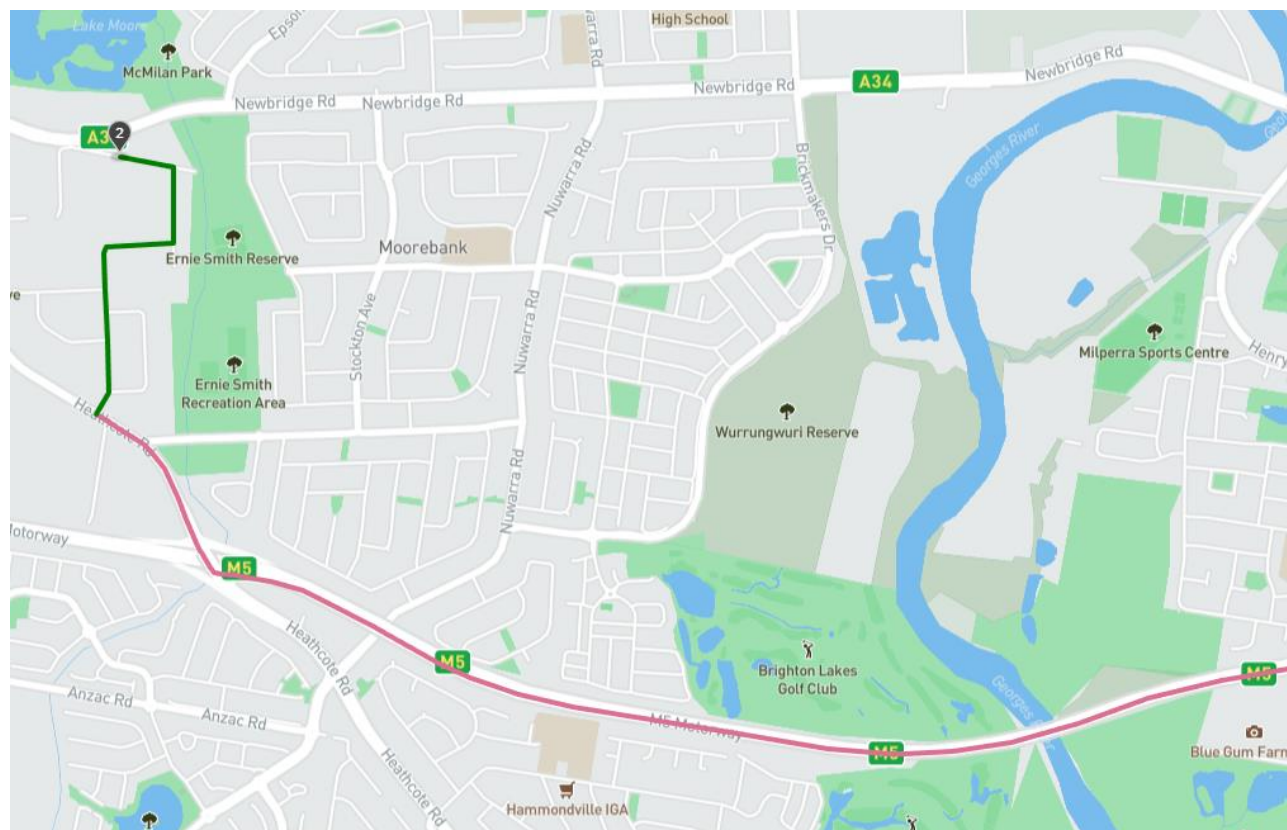
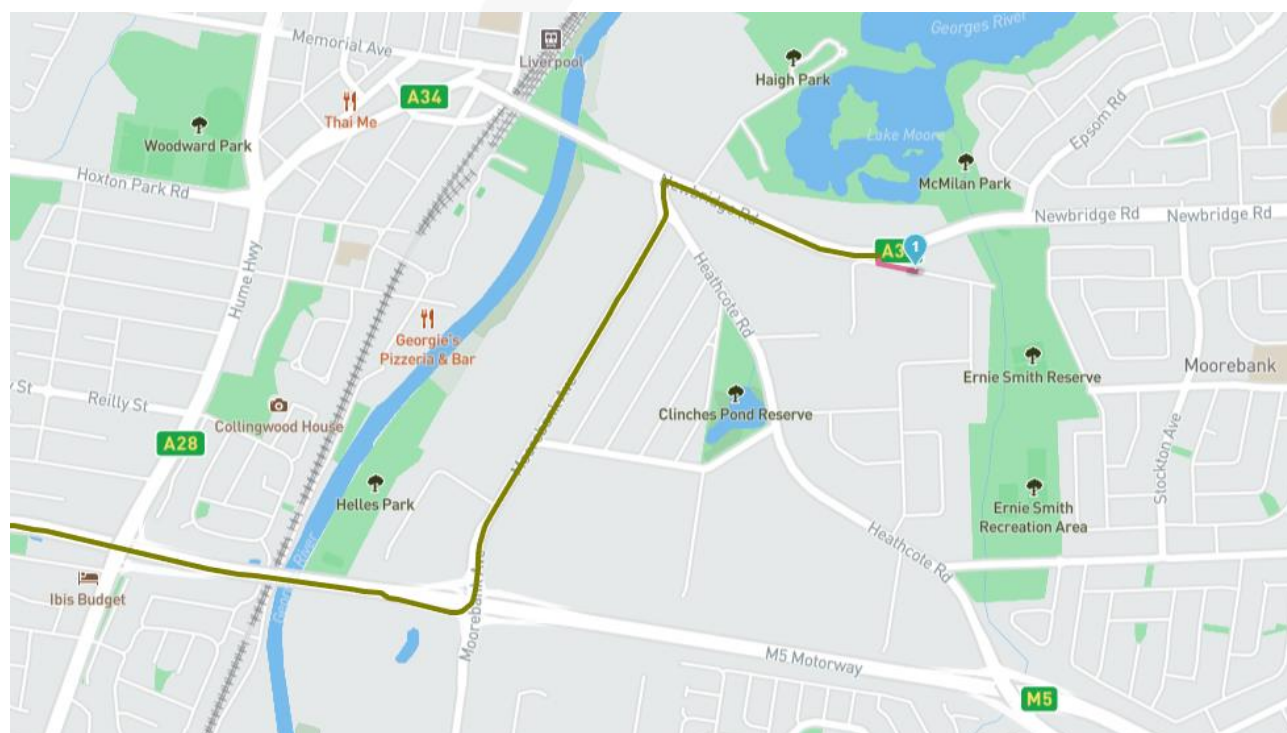


Figure 7-4 NHVR Nominal Truck Route to/from East (e.g., Penrith, Blue Mountains & beyond)





8 Traffic Assessment

8.1 Traffic Generation

The TfNSW commissioned an updated study into the traffic generation characteristics of business parks and industrial estates in 2012. The Study resulted in the publication of Technical Direction TDT 2013/04a¹. The published trip generation rates in the Technical Direction are as follows:

- 0.52 vtpm per 100m² GFA during the morning peak hour
- 0.56 vtpm per 100m² GFA during the evening peak hour

The rates are the average of four (4) business parks and industrial estates in the Sydney metropolitan area. These developments vary in scale, composition, and nature, as indicated in (Table 8-1) below.

Table 8-1 RMS Surveyed Sites

Site	Location	GFA (m ²)	No. of Warehouses	No. of Offices ²	Proportion of Commercial vehicles
1	Erskine Park	693,605	27	1	28.3%
2	Helensburgh	406,600	0	9	4.2%
3	Eastern Creek	1,605	20	0	25.9%
4	Riverwood	29,983	15	1	12.6%
5	Proposal	71,783	12	0	

Site 2 - Helensburgh site is a commercial office complex that does not have a warehouse component in it. This is further confirmed by the data's recorded commercial (heavy) vehicle proportions, which indicates a significantly lower truck activity onsite. On this basis, the assessment concludes that Sites 1, 3, and 4 are more comparable to the proposal. Their corresponding road network peak traffic generation rates are tabulated in Table 8-2.

Table 8-2 Road Network Peak Hour and Total Daily Traffic Generation Rates

Site	Location	AM Peak (vtpm per 100m ²)	PM Peak (vtpm per 100m ²)	Daily (total vehicle trips per 100m ²)
1	Erskine Park	0.13	0.14	1.89
3	Eastern Creek	0.17	0.17	2.31
4	Riverwood	0.43	0.23	3.72
	Average	0.24	0.18	2.64

¹ NSW Government Roads and Maritime Services 2013, Guide to Traffic Generating Developments: Updated traffic surveys

² Office is referred to as an independent office suite that is not ancillary to a warehouse.



Reference is also made to an approved and comparable warehouse development³ at 60 Wallgrove Road, Eastern Creek. That proposal involves a total GFA of 123,865m² including 5,930m² of ancillary office space. The underpinning traffic impact assessment drew a similar comparison with the RMS' surveyed sites. It concluded a lower traffic generation basis of **0.16 vtpm per 100m²** and **0.18 vtpm per 100m²** in the AM and PM peaks, respectively.

Notwithstanding, the assessment will adopt the higher rates of **0.24** and **0.18 vtpm per 100m²** to provide a more conservative outcome. The calculated traffic generation outcome is summarised in Table 8-3.

Table 8-3 Total Trip Generation During Peak Hour

Period	AM peak (0.24 vtpm per 100m ²)	PM peak (0.18 vtpm per 100m ²)	Daily (2.64 vehicle trips per 100m ²)
Proposal (34,410m² GFA)	+ 83 vtpm	+ 62 vtpm	+ 908 vehicle trips

In relation to the proportion of commercial vehicles (trucks) to light vehicles, Table 8-1 indicates the average proportion of commercial vehicle movements for sites 1, 3 and 4 to be 23%. Applying this to the overall traffic generation outcome reveals the following traffic generation composition (Table 8-4).

Table 8-4 Proportion of Cars vs Trucks

Period	AM peak (vtpm)	PM peak (vtpm)	Daily (vehicle trips)
Total	89	67	979
Cars (77%)	69	52	754
Trucks (23%)	20	15	225

8.2 Traffic Distribution

The distribution of development traffic across the road network has regard to the Australian Bureau of Statistics (ABS) Journey to Work Data (2021). An extract of the JTW data indicating residents who work in the Liverpool LGA is reproduced in Table 8-5.

³ Reference: SSD 6962, Planning Portal NSW



Table 8-5 Origin/Destination Proportion of Local Employees

Usual LGA of Residence	Direction of Travel	Sample Size	Proportion
Liverpool	West	25,601	38%
Campbelltown	South	7,400	11%
Fairfield	North	6,793	10%
Camden	South	4,297	6%
Canterbury-Bankstown	East	4,062	6%
Blacktown	North	2,295	3%
Sutherland Shire	East	2,143	3%
Cumberland	North	1,931	3%
Others	-	12,973	20%
Total		67,495	100%

On this basis, the directional distribution is summarised in Table 8-6. For simplicity, the 20% attributed to 'Others' in the statistical data (last row) will be evenly distributed across the four directions of travel.

Table 8-6 Proportion of Inbound and Outbound Traffic

Direction	Proportion
North	16% + 5% others (21%)
East	9% + 5% others (14%)
South	17% + 5% others (22%)
West	38% + 5% others (43%)

The resulting traffic movements to/ from each direction are then calculated as follows (Table 8-7):

Table 8-7 Directional Traffic Generation & Distribution (Cars)

Cars		AM Peak		PM Peak		Daily
		In (80%)	Out (20%)	In (20%)	Out (80%)	
Direction	Total Trips	71	18	13	54	754
	Proportion					
North	21%	15	4	2	12	158
East	14%	10	2	2	8	106
South	22%	16	4	3	12	166
West	43%	30	8	6	22	324

Based on the above assessment, the development traffic is added onto the existing traffic movements on the local road network. A review of route choice using 'Google Travel Planning' indicates the north and east bound occupants will likely approach/depart the site via Newbridge Road (i.e., turning left in the AM and turning right from Kelso Crescent in the PM). South and West bound occupants are also likely to use



Newbridge Road; however, they will be turning right to Kelso Crescent from Newbridge Road in the AM and turning left from Kelso Crescent to Newbridge Road in the PM.

It is assumed that 75% of the truck movements will be to/from the east, using the Seton Road-Heathcote Road route as indicated in Figure 7-3. The remainder will be travelling via Newbridge Road as indicated in Figure 7-4.

8.3 Post-Development Traffic Assessment

SIDRA modelling is used to quantify the extent of the development impact on the existing road network. The outcome of the assessment (**Attachment 2**) is tabulated in Table 8-8 below.

As required by the TfNSW in its consultation advice⁴, a sensitivity analysis evaluating the five (5) and ten (10) year horizons will also be undertaken in this assessment. The annual background traffic growth projection is taken to be 1.5% reflecting a relatively established land use circumstance in the immediate surrounding.

On this basis, the following assessment outcome compares the base case (without development) and post-development in 2023, 2028, and 2033:

Table 8-8 Existing vs Post-development Network Operation – **Base Year 2023**

Intersection	AM Peak		PM Peak	
	LOS	AVD (s)	LOS	AVD (s)
Existing				
Newbridge Rd/Kelso Cr	C (SRT)	33.0	B (SRT)	26.7
Kelso Cr/Field Close	A (ERT)	5.1	A (ERT)	4.8
Kelso Cr/Iraking Ave	A (SRT)	5.2	A (SRT)	5.1
Iraking Ave/Seton Rd	A (WRT)	5.3	A (WRT)	5.2
Heathcote Rd/Seton Rd	A	6.1	B	14.6
Post-Development				
Newbridge Rd/Kelso Cr	C (SRT)	33.2	C (SRT)	29.9
Kelso Cr/Field Close	A (ERT)	5.2	A (ERT)	4.8
Kelso Cr/Iraking Ave	A (SRT)	5.2	A (SRT)	5.1
Iraking Ave/Seton Rd	A (WRT)	5.1	A (WRT)	5.2
Heathcote Rd/Seton Rd	B	6.4	B	15.0

Table 8-9 Existing vs Post-development Network Operation – **Year 2028**

Intersection	AM Peak		PM Peak	
	LOS	AVD (s)	LOS	AVD (s)
Existing				

⁴ Further details outlined in Section 11 of this report.



Newbridge Rd/Kelso Cr	D (SRT)	49.3	C (SRT)	32.8
Kelso Cr/Field Close	A (ERT)	5.1	A (ERT)	4.8
Kelso Cr/Iraking Ave	A (SRT)	5.2	A (SRT)	5.2
Iraking Ave/Seton Rd	A (WRT)	5.3	A (WRT)	5.2
Heathcote Rd/Seton Rd	A	6.2	B	15.5
Post-Development				
Newbridge Rd/Kelso Cr	D (SRT)	49.7	C (SRT)	38.0
Kelso Cr/Field Close	A (ERT)	5.2	A (ERT)	4.9
Kelso Cr/Iraking Ave	A (SRT)	5.3	A (SRT)	5.1
Iraking Ave/Seton Rd	A (WRT)	5.1	A (WRT)	5.3
Heathcote Rd/Seton Rd	B	6.5	B	16.2

Table 8-10 Existing vs Post-development Network Operation – Year 2033

Intersection	AM Peak		PM Peak	
	LOS	AVD (s)	LOS	AVD (s)
Existing				
Newbridge Rd/Kelso Cr	F (SRT)	100.3	D (SRT)	47.3
Kelso Cr/Field Close	A (ERT)	5.2	A (ERT)	4.9
Kelso Cr/Iraking Ave	A (SRT)	5.3	A (SRT)	5.2
Iraking Ave/Seton Rd	A (WRT)	5.4	A (WRT)	5.3
Heathcote Rd/Seton Rd	A	6.3	B	17.3
Post-Development				
Newbridge Rd/Kelso Cr	F (SRT)	101.9	E (SRT)	60.0
Kelso Cr/Field Close	A (ERT)	5.2	A (ERT)	4.9
Kelso Cr/Iraking Ave	A (SRT)	5.3	A (SRT)	5.2
Iraking Ave/Seton Rd	A (WRT)	5.1	A (WRT)	5.3
Heathcote Rd/Seton Rd	B	6.6	B	18.4

Abbreviation

WRT = West Approach Right Turn

ERT = East Approach Right Turn

SRT = South Approach Right Turn

NLT = North Approach Right Turn

In each assessed scenario, the assessment found that the projected traffic load resulting from the proposal will generally retain the design years' road network's levels of service. The assessment determines on this basis that the proposed traffic generation is acceptable in the context of the local road network.



However, as the background traffic grow further in the future years, the right-turn movement from Kelso Crescent to Newbridge Road at the Newbridge Road/Kelso Crescent intersection is expected to fail in the AM peak by 2033, with and without the proposed development. The road authority may consider prohibiting the right-turn movement in due course to alleviate this isolated capacity issue or consider upgrading the intersection to a full signal control intersection. In addition, the assessment also notes that the Seton Road approach at the signal intersection of Heathcote Road and Seton Road is subject to long wait times during the peak periods (~ 60-70s). This is a typical event in SCATS controlled corridors (i.e. Heathcote Road) because signal phasings are automatically set to prioritise primary traffic throughput. As a result of this, the secondary approach (i.e. Seton Road) turning movements, while having spare capacities during the peak periods, operate with a LOS E and F. The assessment notes however that the development traffic movements do not unduly impact the approach's operation. It does acknowledge that adequate green time may be allocated to the Seton Road approach if required to lessen traffic wait times, particularly as the Heathcote Road corridor operates with ample spare capacity and LOS A generally.

8.3.1 Additional Relevant Traffic Impact Consideration

While the assessment results confirm an acceptable development traffic impact on the local road network, it's important to acknowledge the current operations on the site, which involve a masonry and brick manufacturing factory. These ongoing activities currently contribute to a certain level of traffic. However, it's worth noting that these traffic movements will cease once the factory operations are discontinued. Therefore, it is reasonable to subtract the existing traffic movements from the projected development traffic.

According to the RMS guidelines, factory facilities typically generate a rate of 1 vehicle movement per 100m². Applying this rate to the existing some 6,000m² (GFA) indicates an ongoing traffic output of around 60 vehicle movements per hour during peak periods. Comparing this with the anticipated traffic generation outlined in Table 8-3, it becomes evident that the proposed development will result in a relatively minor increase in traffic. Specifically, during the PM peak hours, there would only be approximately 20 additional vehicle movements compared to the current on-site activity. The traffic impact during the AM peak hours is expected to remain largely consistent with the existing state.

8.4 Road Safety Impact

An assessment of the road crash history in Section 3.4 of this report reveals no apparent physical safety deficiency on the local road network.

8.5 Cumulative Impact

An enquiry using the Liverpool Council's E-Planning portal reveals no recent Development Application lodged and approved in the site's vicinity. Nevertheless, the assessment notes a number of development schemes that are either under documentation or assessment. They are detailed briefly as follows:

- A proposed paper trade processing resource recovery facility at 49 Heathcote Road (SSD 46042458). At this stage, the extent of traffic generation for the proposal is unknown; however, it is worth noting that



an existing industrial warehouse already occupies the site. Therefore, the assessment does not anticipate any notable additional traffic beyond what currently exists on-site."

- A proposed warehouse and distribution centre at 23 Iraking Avenue, Moorebank (DA 942/2022). The planning documents for the proposal indicate an estimated 2 to 3 vehicle movements per day.
- A proposed modification to DA 388/1986, involving an increase in operating capacity for concrete production from 43,000 cubic metres to 150,000 cubic metres at an existing facility/plant at 26 Seton Road, Moorebank. The relevant planning documents project no additional traffic movements during peak hours, although they do acknowledge a potential increase of approximately 18 truck movements per hour during nighttime.

The assessment notes that the nearby potential traffic-generating developments mentioned above are not of substantial nature and do not warrant further assessment. However, it is acknowledged that TfNSW requires the consideration of approved developments only when conducting cumulative assessments.





9 Preliminary Construction Traffic Management Plan

This preliminary Construction Traffic Management Plan (CTMP) presents the proposed construction activities associated with the proposal. In addition, it has regard to the relevant SEARs as follows:

"Secretary's Environmental Assessment Requirement 6.2: Provide a Construction Traffic Management Plan detailing predicted construction vehicle movements, routes, access and parking arrangements, coordination with other construction occurring in the area, and how impacts on existing traffic, pedestrian and bicycle networks would be managed and mitigated."

It is noted however that a detailed CTMP cannot be produced without the involvement of a builder and consideration of all final design selections. The preliminary CTMP is intended to provide a framework within which a future CTMP can be prepared.

9.1 Construction Program

9.1.1 Construction Staging/Phasing

Table 9-1 indicates a preliminary phasing outline of each construction stage, including estimated vehicle types and volumes and the approximate number of daily workers. These estimations may be subject to change following the appointment of a contractor.

Table 9-1 Estimated Works Program

Phase	Estimated Period	No. of Trucks per day	Avg. No. of Trucks per hour	No. of Workers per day
Demolition	6 months	5-10	1	15
Site Establishment	1 month	1-5	0.5	10
Construction	18 months	10-30* (see Note 1)	1-3	50-60
Fitout	6 months	5-8	0.5	50-60

Note 1: Construction peak traffic movement occurs during the concrete pour for a brief period.

9.1.2 Construction Hours

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

Table 9-2):

Table 9-2 Expected Work Hours

Days	Hours
Monday to Friday	7.00am to 6.00pm
Saturday	8.00am to 1.00pm



Sunday/Public Holiday	No work
------------------------------	---------

9.2 Construction Personnel

All personnel dealing with traffic control, being either contractors or sub-contractors, must hold the following current accreditation (as relevant):

- WHS&E general induction certificate (white card)
- RMS Traffic Controller (for traffic control, performing stop/slow control)
- RMS Implement Traffic Control Plans (for implementation of signage)
- RMS Prepare a Work Zone Traffic Management Plan (TMP) for the design of Traffic Management Plan (TMP) and Traffic Control Plans
- All staff must be inducted onsite before the commencement of work.

9.3 Construction Traffic Management

9.3.1 Site Access & Circulation

Construction vehicles are expected to use the existing vehicle driveways to access the site. In addition, all vehicles associated with the works are expected to be able to turn around internally, enabling forward direction entry and exit at the site boundaries.

9.3.2 Emergency vehicle Access

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

9.3.3 Onsite Parking

Construction workers may park in the existing hard-stand car park on the site.

Construction vehicles are expected to use the existing vehicle driveways at Kelso Crescent and Seton Road to access the site.

9.3.4 Vehicle Management

Vehicle movements will occur within the prescribed working hours. Delivery and removal trucks are to have a staggered arrival schedule and occur outside peak hours where possible. The following construction traffic management shall be implemented onsite during construction:



- No queuing of heavy vehicles is to occur on the surrounding streets unless approved by the Council.
- Truck loading and unloading activities are to occur within the Works Zone or within the site.
- All construction deliveries are to occur during the approved working hours only.

Any vehicles arriving after the worksite has reached maximum capacity will be expected to reschedule their delivery and depart, although it is anticipated that enough queueing space will be available within the site.

Where possible, all loading and unloading of construction vehicles will occur within the site boundaries. If this is not possible, traffic controllers will be stationed so that other road users can still move safely and efficiently around the construction activities.

9.3.5 Construction Vehicle Routes

Construction vehicles are anticipated to travel to/from the site via Heathcote Road and Newbridge Road.

9.4 Traffic Impacts

9.4.1 Impact on Public Transport Services

The nominated heavy vehicle haulage routes will largely be limited to arterial and/or sub-arterial roads which are designed to accommodate heavy vehicle movements. The anticipated truck activity will be relatively low (in comparison to the post-development circumstance), and there will be no adverse impact on existing public transport services.

9.4.2 Impact on Pedestrians

During the construction activity, pedestrian movements along the frontage footpaths will remain accessible. Onsite trained personnel will supervise pedestrian movements along the site frontages during the construction process.

9.4.3 Impact on Emergency Vehicle Access

Site personnel will be onsite regularly with contact details prominently displayed. Emergency vehicles' access to the site and neighbouring sites must not be impeded/affected by the construction storage/activities.

9.4.4 On-Street Queue Impact

The number of peak construction vehicle movements of 3 trucks per hour (as projected in Table 9-1) indicates an average traffic load of one truck every some 20 minutes. The construction site will be vast and circulation space ample during the entire construction process. Notwithstanding, it is recommended that all traffic controllers should ensure site access gates are open upon being notified of approaching trucks to minimise entry delays.

9.4.5 Road Serviceability

The nominated contractor will ensure that the road pavement, kerb, and gutter along each road frontage shall remain in clean and serviceable states during the construction at no cost to Council.



9.4.6 Materials Handling

All materials will be loaded and unloaded within the site and stored within designated areas within secured areas. No materials are to be stored outside the site boundary at any time.

9.4.7 Public Notification & Communication

The nominated contractor would prepare notification letters, under the approval of the Council, that would be delivered to nearby properties to advise of the construction works and timing thereof prior to any site works. A minimum notice period of 14 days shall be applicable for all external communications.

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

To be able to notify motorists of roadwork and when traffic controllers are present, traffic control advance-warning signage (in accordance with TfNSW guidelines and Australian Standards) is to be used and in place. Signage size is to be size "A" and is to be monitored throughout the works to ensure visibility.

All contractors will be made aware of this Construction Traffic Management Plan and relevant Traffic Control Plans, and their responsibility to adhere to these plans through induction.



10 Green Travel Plan

10.1 Definition

A GTP is a document that outlines how the development intends to make travel to and from the site safer and more sustainable for all occupants. The GTP addresses the local traffic issues around the site and encourages active, safe, and sustainable travel methods, such as walking, cycling, scooting, public transport, or car-sharing. A GTP is a document that is monitored and reviewed annually.

10.2 Purpose

The development of a Green Travel Plan is widely accepted as one of the best ways to increase active travel. A successful Green Travel Plan offers many benefits for the community, including:

- Improving social interaction by walking and/or cycling with others
- Improving safety around the site by reducing traffic and local road congestion
- Improving the environment by reducing air pollution from private vehicles
- Creating opportunities for healthier lifestyles and more vibrant, cohesive, and accessible communities

Informed occupants with a better understanding of active and sustainable modes of transport will follow a healthy and active lifestyle. This will create a generation of workforce who will care about the environment and prioritise location and lifestyle over car ownership.

An effective GTP can offer many benefits, such as reduced parking demand, fewer congestion on public road networks, and health and environmental benefits, which generally result in a healthier and more productive workforce.

10.3 Process

Understanding Existing Travel Patterns and Infrastructure: Background information is collected about the existing site, such as:

- Existing travel patterns
- Local public transport facilities
- Walking routes
- Cycling facilities

Setting Achievable Targets: With reference to the existing conditions, a range of targets should be developed to meet the aims of the plan. The targets would involve:



- reducing private vehicle mode share
- reducing the vehicle kilometres travelled.

Developing Actions: A range of actions have been developed to facilitate meeting the targets. For each action, a measurable outcome has been identified.

Monitoring and Revision: It is intended that this plan is updated every 12 months with the targets and actions reviewed.

10.4 Responsibilities

The implementation of this GTP will require a formal Travel Plan Coordinator who will have responsibility for further developing, implementing, and monitoring the GTP after the project handover.

10.5 Site Audit

10.5.1 Walking

Established footpaths are available on both the Kelso Crescent and Seton Road frontages.

10.5.2 On-street Parking

Ample unrestricted on-street parking spaces are available along Kelso Crescent and Seton Road. The assessment highlights that heavy vehicles are permitted to park along Kelso Road between 7pm and 6am seven days a week.

Notwithstanding, it is not suggested that the proposal will rely on existing on-street parking. The assessment confirms that the proposed car parking provision is in keeping with the industry standard and consistent with the anticipated activity generated by the commercial operations.

10.5.3 Public Transport Services

Liverpool Railway Station is situated 1.4 km to the west in the Liverpool CBD. It is directly accessible via Newbridge Road and Kelso Crescent. It can be accessed by foot (20 minutes) via existing footpaths or by bus no. (M90 and 903) on a combined frequency of approximately eight (8) services per hour during the peak periods. The nearest bus stop is located approximately 190m (2-minute walk) from the site (Table 10-1).

Table 10-1 Nearest Bus Stop (M90, 903)



Source: Google Transit

10.5.4 Journey to Work – Existing Travel Mode Share

Table 8-5 reveals some 40% of residents who work in the Liverpool LGA in fact live in the local LGA. The Liverpool City Council's Bike Plan (2018) reveals the following travel mode share amongst its local residents:

Table 10-2 Journey to Work – Travel Mode Share Summary

Method of travel to work	Place of Work Mode Share (%)
Private Vehicle (car, truck, motorbike)	80% (6% passenger)
Public transport (train, taxi, bus, ferry, tram)	13%
Active transport (bicycle, walking)	2%

* 'Other mode & Mode Not Stated' not included in the above table

The above information indicates a relatively low uptake of public transport usage. Given that the majority of the workforce in the LGA works in the local area, opportunities exist for developers to promote the use of active transport mode. This is commonly implemented through a combination of constraining car parking supply and supplemented by appropriate quantum of bicycle EOTF.



10.6 Mode Share Targets

Mode share targets for the development's occupants have been projected using the existing mode share as a base and shifting it towards more sustainable travel modes. The mode share targets are shown Table 10-3.

Table 10-3 Journey to Work – Travel Mode Share Target (12 months post-occupation)

Method of travel to work	Place of Work Mode Share Target (%) 12 months
Private Vehicle (car, truck, motorbike)	70%
Public transport (train, taxi, bus, ferry, tram)	20%
Active transport (bicycle, walking)	10%

10.7 Proposed Action Items

10.7.1 Private Vehicles

Car parking supply should be constrained to encourage alternative travel modes. Employees can be encouraged to carpool for their trips to and from the site. This will achieve the desired effect of reducing trips and easing congestion wherever possible. The following strategies are developed but it is noted that the nominated travel coordinator can further refine this:

- Database which houses addresses/postcodes of staff who drive to and from the site. This can inform the organisation of carpooling groups.
- Provide SMS / contact protocols for staff to organise carpooling and drop-off/pick-up times.
- Nominated Travel Coordinator to regularly monitor the effectiveness/uptake of carpooling to ensure that the needs of the participating workforce can be achieved and does not “fall down” due to one person's non- involvement/commitment.
- Nominate dedicated car-pooling car parks within the available car parking spaces.

10.7.2 Public Transport

A range of bus routes provides access to the site via the bus stops on Newbridge Road. The proximity of these existing bus provisions is likely to be ample for the site's workforce.

However, to encourage public transport the following measures will be considered:

- A comprehensive map of the available public transport network, timetables and private bus services could be prepared showing the nearby bus stops and train station with appropriate walking routes.



- Employers could also consider the subsidy/provision of Opal Cards as part of their workforce's salary package to facilitate travel for staff.

10.7.3 Active Transport

A barrier to promoting cycling as a preferred mode is the lack of quality end-of-trip facilities. It is understood that the proposal also incorporates bicycle parking with the end of trip facilities to encourage to cycle to and from the site. The proposed end of trip facilities includes 30 bike racks for employees, 3 bicycle racks for visitors, 30 lockers and 4 change/shower facilities.

10.7.4 Transport Access Guide

Occupants often face difficulties in using sustainable travel modes due to a simple lack of awareness of their travel options. If these options can be presented in an easy-to-understand format, they may be more likely to change their travel behaviours. A brochure has been developed (known as a Transport Access Guide, or 'TAG') which provides information on bus routes and active transport facilities near the site. The TAG can easily be given to staff and visitors (including as part of the induction pack) and will be uploaded to the premises website to provide information for visitors.

10.8 Actions and Responsibilities

The key strategy and framework action table are summarised in Table 10-4. It must be noted that the below details will be updated as required. However, it is emphasised that the availability of the suggested strategies is a key factor in influencing travel patterns.

The implementation of this GTP will require a formal Travel Plan Coordinator who will have responsibility for further developing, implementing, and monitoring the GTP.

Table 10-4 Framework Action Table

Item	Action	Responsibility
Private car	Carpooling registration form to establish a car-pooling system to reduce single occupancy.	Travel Plan Coordinator
Public Transport	Consider providing Opal card incentives to staff as part of salary package.	Travel Plan Coordinator
	Display Transport Access Guide onsite and publish on website	Travel Plan Coordinator
Active Transport	Advertisement and take-up of Walk to Work Day	Travel Plan Coordinator
	Advertisement and information of availability of bicycle parking and EOTF	Travel Plan Coordinator



10.9 Monitoring and Review

10.9.1 Purpose

Ongoing monitoring and review are crucial to the GTP's success as it assesses whether the initiatives have been successful in meeting the objectives and targets. In addition, monitoring will provide the opportunity for introducing new incentives or ways to change the travel decisions being made by the workforce to achieve positive outcomes on traffic congestion, road safety, and the environment.

10.9.2 Data Collection

To monitor the effectiveness (or otherwise) of the GTP and target mode shares, it is recommended that travel mode surveys be undertaken either as an online platform (requiring participant responses). The interval of the review surveys must allow for sufficient behaviour change and ensure the survey is clear of public holidays or significant events that may alter behaviour.

The survey is to capture the occupants' travel mode share to ensure sufficient details are collected to inform the decision-making process.

A sample travel mode survey is provided below:

Q1: What is your post code? ____

Q2: How do you usually travel to work? (Select one)

- *Walk / run*
- *Bicycle*
- *Bus*
- *Train*
- *Combination bus and train*
- *Drive a car*
- *Passenger in a car*
- *Other (explain)_____*

Q3: What time do you usually leave for work in the morning?

Q4: Other than travelling to work, what is your main mode of transport around Sydney? (Select one)

- *Walk / run*
- *Bicycle*
- *Bus*



- *Train*
- *Combination bus and train*
- *Drive a car*
- *Passenger in a car*
- *Other (explain)_____*

Q5: To facilitate transport programs, can we share your contact details with green travel champions?

- *Yes – I'll walk (if Yes, please provide your email here:_____)*
- *Yes – I'm a cyclist (if Yes, please provide your email here:_____)*
- *Yes – I'm a public transport passenger (if Yes, please provide your email here:_____)*
- *No*

10.9.3 Frequency

The review surveys will be undertaken within no earlier than 3 months of the action items being adopted and then regularly at yearly intervals.



11 TfNSW Consultation

In satisfaction of the SEARs requirement, a package of the proposed development's information is issued to the TfNSW via its official development portal Development.Sydney@transport.nsw.gov.au on 7 August 2023.

Details of the consultation package and correspondence are provided in **Attachment 5**.





12 Conclusion

The Transport Impact Assessment undertaken for the proposed industrial warehouse development at 20 Kelso Crescent, Moorebank has concluded that:

- The traffic generation of the proposed development will not present any adverse traffic implications on the local road network
- The proposed parking provision will be consistent with the RMS Guidelines while the parking provision will be in keeping with the Council's DCP
- The proposed access, internal circulation and parking arrangements will be appropriate to AS design criteria
- The documented Green Travel Plan will provide a guiding framework to manage the travel mode of the building's future occupants
- The preliminary construction traffic management plan will provide a suitable and adequate basis on which the detailed construction traffic strategy may be developed following development consent and contract nomination.





Attachment 1

Traffic Survey Data



Location -
Newbridge Road
Kelso Crescent
Newbridge Road
 Suburb MOOREBANK

Duration 7:00 - 9:00
16:00 - 18:00
-
 Day/Date Wednesday, 21 June 2023
 Weather -

All Vehicles Time Per 15 Mins	NORTH									EAST								
	-									Newbridge Road								
	L			I			R			L			I			R		
	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ
7:00 - 7:15										29	4	33	221	29	250			
7:15 - 7:30										16	7	23	240	25	265			
7:30 - 7:45										18	2	20	232	17	249			
7:45 - 8:00										17	5	22	314	23	337			
8:00 - 8:15										21	3	24	267	35	302			
8:15 - 8:30										15	1	16	244	43	287			
8:30 - 8:45										19	4	23	258	34	292			
8:45 - 9:00										15	5	20	243	25	268			
Period End										150	31	181	2019	231	2250			
16:00 - 16:15										15	1	16	454	27	481			
16:15 - 16:30										19	1	20	457	29	486			
16:30 - 16:45										22	3	25	448	26	474			
16:45 - 17:00										23	0	23	449	19	468			
17:00 - 17:15										23	1	24	433	20	453			
17:15 - 17:30										14	1	15	469	27	496			
17:30 - 17:45										17	0	17	449	13	462			
17:45 - 18:00										14	3	17	514	17	531			
Period End										147	10	157	3673	178	3851			

All Vehicles Time Per 15 Mins	SOUTH									WEST								
	Kelso Crescent									Newbridge Road								
	L			I			R			L			I			R		
	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ
7:00 - 7:15	10	3	13				9	3	12				466	31	497	21	0	21
7:15 - 7:30	4	6	10				6	1	7				511	24	535	24	1	25
7:30 - 7:45	10	2	12				2	2	4				448	38	486	21	1	22
7:45 - 8:00	11	5	16				9	2	11				428	37	465	22	2	24
8:00 - 8:15	21	2	23				5	7	12				384	33	417	20	2	22
8:15 - 8:30	13	1	14				6	2	8				388	36	424	12	1	13
8:30 - 8:45	19	2	21				8	4	12				367	35	402	24	1	25
8:45 - 9:00	11	3	14				12	4	16				370	41	411	25	4	29
Period End	99	24	123				57	25	82				3362	275	3637	169	12	181
16:00 - 16:15	23	0	23				25	1	26				366	19	385	16	0	16
16:15 - 16:30	23	4	27				17	1	18				354	18	372	26	1	27
16:30 - 16:45	33	2	35				18	0	18				342	17	359	21	0	21
16:45 - 17:00	28	0	28				9	0	9				360	13	373	20	1	21
17:00 - 17:15	30	0	30				24	0	24				386	12	398	24	0	24
17:15 - 17:30	12	2	14				6	2	8				359	14	373	17	2	19
17:30 - 17:45	11	1	12				20	0	20				421	14	435	16	1	17
17:45 - 18:00	14	0	14				14	0	14				367	10	377	17	1	18
Period End	174	9	183				133	4	137				2955	117	3072	157	6	163

Location -
Newbridge Road
Kelso Crescent
Newbridge Road
 Suburb MOOREBANK

Duration 7:00 - 9:00
16:00 - 18:00
 Day/Date Wednesday, 21 June 2023
 Weather -

All Vehicles Time Per Hour	NORTH								EAST								TOTAL	
	-								Newbridge Road									
	L		I		R				L		I		R				TOTAL	
	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	TOTAL	LIGHT	HEAVY
7:00 - 8:00										80	18	98	1007	94	1101	1199	3089	270
7:15 - 8:15										72	17	89	1053	100	1153	1242	3051	282
7:30 - 8:30										71	11	82	1057	118	1175	1257	2928	302
7:45 - 8:45										72	13	85	1083	135	1218	1303	2892	320
8:00 - 9:00										70	13	83	1012	137	1149	1232	2767	328
Period End																		
16:00 - 17:00										79	5	84	1808	101	1909	1993	3568	183
16:15 - 17:15										87	5	92	1787	94	1881	1973	3589	168
16:30 - 17:30										82	5	87	1799	92	1891	1978	3570	162
16:45 - 17:45										77	2	79	1800	79	1879	1958	3620	143
17:00 - 18:00										68	5	73	1865	77	1942	2015	3671	141
Period End																		

All Vehicles Time Per Hour	SOUTH								WEST								TOTAL	
	Kelso Crescent								Newbridge Road									
	L		I		R				L		I		R				TOTAL	
	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	TOTAL	LIGHT	HEAVY
7:00 - 8:00	35	16	51				26	8	34	85			1853	130	1983	2075	3089	270
7:15 - 8:15	46	15	61				22	12	34	95			1771	132	1903	1996	3051	282
7:30 - 8:30	55	10	65				22	13	35	100			1648	144	1792	1873	2928	302
7:45 - 8:45	64	10	74				28	15	43	117			1567	141	1708	1792	2892	320
8:00 - 9:00	64	8	72				31	17	48	120			1509	145	1654	1743	2767	328
Period End																		
16:00 - 17:00	107	6	113				69	2	71	184			1422	67	1489	1574	3568	183
16:15 - 17:15	114	6	120				68	1	69	189			1442	60	1502	1595	3589	168
16:30 - 17:30	103	4	107				57	2	59	166			1447	56	1503	1588	3570	162
16:45 - 17:45	81	3	84				59	2	61	145			1526	53	1579	1660	3620	143
17:00 - 18:00	67	3	70				64	2	66	136			1533	50	1583	1661	3671	141
Period End																		

Location Newbridge Road
Kelso Crescent
-
Field Close
 Suburb MOOREBANK

Duration 7:00 - 9:00
16:00 - 18:00
-
 Day/Date Wednesday, 21 June 2023
 Weather -

All Vehicles Time Per 15 Mins	NORTH Newbridge Road							EAST Kelso Crescent															
	L			T			R			TOTAL	L			T			R			TOTAL	TOTAL		TOTAL
	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ		LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ		LIGHT	HEAVY	
7:00 - 7:15	41	5	46				5	0	5	51				3	0	3	16	6	22	25	67	11	78
7:15 - 7:30	35	4	39				5	0	5	44				0	0	0	9	6	15	15	52	11	63
7:30 - 7:45	31	3	34				4	0	4	38				0	0	0	10	4	14	14	47	7	54
7:45 - 8:00	34	7	41				5	1	6	47				6	0	6	16	6	22	28	63	15	78
8:00 - 8:15	27	4	31				8	1	9	40				2	0	2	21	8	29	31	61	14	75
8:15 - 8:30	17	2	19				5	1	6	25				4	1	5	15	3	18	23	47	8	55
8:30 - 8:45	33	3	36				6	2	8	44				6	0	6	21	5	26	32	73	11	84
8:45 - 9:00	36	7	43				3	1	4	47				5	1	6	17	6	23	29	67	16	83
Period End	254	35	289				41	6	47	336				26	2	28	125	44	169	197	477	93	570
16:00 - 16:15	24	1	25				3	0	3	28				2	0	2	31	1	32	34	78	2	80
16:15 - 16:30	35	0	35				6	0	6	41				5	0	5	19	4	23	28	85	5	90
16:30 - 16:45	27	4	31				5	0	5	36				9	0	9	28	2	30	39	87	6	93
16:45 - 17:00	33	1	34				4	0	4	38				2	0	2	30	0	30	32	85	1	86
17:00 - 17:15	31	1	32				2	0	2	34				3	0	3	32	0	32	35	77	1	78
17:15 - 17:30	22	2	24				3	0	3	27				1	0	1	16	3	19	20	48	5	53
17:30 - 17:45	27	0	27				7	0	7	34				4	0	4	24	0	24	28	73	0	73
17:45 - 18:00	21	3	24				10	1	11	35				5	0	5	18	0	18	23	70	5	75
Period End	220	12	232				40	1	41	273				31	0	31	198	10	208	239	603	25	628

All Vehicles Time Per 15 Mins	SOUTH -									WEST Field Close														
	L			T			R			TOTAL	L			T			R			TOTAL	TOTAL			TOTAL
	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ		LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ		LIGHT	HEAVY	Σ	
7:00 - 7:15											1	0	1	1	0	1				2	67	11	78	
7:15 - 7:30											1	1	2	2	0	2				4	52	11	63	
7:30 - 7:45											1	0	1	1	0	1				2	47	7	54	
7:45 - 8:00											1	1	2	1	0	1				3	63	15	78	
8:00 - 8:15											2	1	3	3	1	0	1			4	61	14	75	
8:15 - 8:30											1	0	1	5	1	6				7	47	8	55	
8:30 - 8:45											5	1	6	2	0	2				8	73	11	84	
8:45 - 9:00											3	0	3	3	1	4				7	67	16	83	
Period End											15	4	19	16	2	18				37	477	93	570	
16:00 - 16:15											13	0	13	5	0	5				18	78	2	80	
16:15 - 16:30											13	1	14	7	0	7				21	85	5	90	
16:30 - 16:45											15	0	15	3	0	3				18	87	6	93	
16:45 - 17:00											9	0	9	7	0	7				16	85	1	86	
17:00 - 17:15											6	0	6	3	0	3				9	77	1	78	
17:15 - 17:30											4	0	4	2	0	2				6	48	5	53	
17:30 - 17:45											5	0	5	6	0	6				11	73	0	73	
17:45 - 18:00											10	0	10	6	1	7				17	70	5	75	
Period End											75	1	76	39	1	40				116	603	25	628	

Location Newbridge Road
Kelso Crescent
-
Field Close
Suburb MOOREBANK

Duration 7:00 - 9:00
16:00 - 18:00
Day/Date Wednesday, 21 June 2023
Weather -

All Vehicles Time Per Hour	NORTH Newbridge Road								EAST Kelso Crescent														
	L			T			R			TOTAL	L			T			R			TOTAL	TOTAL		TOTAL
	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ		LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ		LIGHT	HEAVY	
7:00 - 8:00	141	19	160				19	1	20	180				9	0	9	51	22	73	82	229	44	273
7:15 - 8:15	127	18	145				22	2	24	169				8	0	8	56	24	80	88	223	47	270
7:30 - 8:30	109	16	125				22	3	25	150				12	1	13	62	21	83	96	218	44	262
7:45 - 8:45	111	16	127				24	5	29	156				18	1	19	73	22	95	114	244	48	292
8:00 - 9:00	113	16	129				22	5	27	156				17	2	19	74	22	96	115	248	49	297
Period End																							
16:00 - 17:00	119	6	125				18	0	18	143				18	0	18	108	7	115	133	335	14	349
16:15 - 17:15	126	6	132				17	0	17	149				19	0	19	109	6	115	134	334	13	347
16:30 - 17:30	113	8	121				14	0	14	135				15	0	15	106	5	111	126	297	13	310
16:45 - 17:45	113	4	117				16	0	16	133				10	0	10	102	3	105	115	283	7	290
17:00 - 18:00	101	6	107				22	1	23	130				13	0	13	90	3	93	106	268	11	279
Period End																							

All Vehicles Time Per Hour	SOUTH -								WEST Field Close														
	L			T			R			TOTAL	L			T			R			TOTAL	TOTAL		TOTAL
	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ		LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ		LIGHT	HEAVY	
7:00 - 8:00										4	2	6	5	0	5				11	229	44	273	
7:15 - 8:15										5	3	8	5	0	5				13	223	47	270	
7:30 - 8:30										5	2	7	8	1	9				16	218	44	262	
7:45 - 8:45										9	3	12	9	1	10				22	244	48	292	
8:00 - 9:00										11	2	13	11	2	13				26	248	49	297	
Period End																							
16:00 - 17:00										50	1	51	22	0	22				73	335	14	349	
16:15 - 17:15										43	1	44	20	0	20				64	334	13	347	
16:30 - 17:30										34	0	34	15	0	15				49	297	13	310	
16:45 - 17:45										24	0	24	18	0	18				42	283	7	290	
17:00 - 18:00										25	0	25	17	1	18				43	268	11	279	
Period End																							

Location -
Kelso Crescent
Iraking Avenue
Kelso Crescent
 Suburb MOOREBANK

Duration 7:00 - 9:00
16:00 - 18:00
-
 Day/Date Wednesday, 21 June 2023
 Weather -

All Vehicles Time Per 15 Mins	NORTH									EAST														
	-									Kelso Crescent														
	L			T			R			TOTAL	L			T			R			TOTAL	TOTAL			TOTAL
	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ		LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ		LIGHT	HEAVY	Σ	
7:00 - 7:15											1	0	1	2	0	2				3	54	9	63	
7:15 - 7:30											0	1	1	0	0	0				1	46	10	56	
7:30 - 7:45											0	0	0	1	0	1				1	39	6	45	
7:45 - 8:00											1	0	1	1	1	2				3	47	12	59	
8:00 - 8:15											1	0	1	2	1	3				4	54	11	65	
8:15 - 8:30											1	0	1	0	0	0				1	42	6	48	
8:30 - 8:45											2	0	2	2	0	2				4	54	7	61	
8:45 - 9:00											3	0	3	1	0	1				4	52	12	64	
Period End											9	1	10	9	2	11				21	388	73	461	
16:00 - 16:15											1	0	1	2	0	2				3	59	3	62	
16:15 - 16:30											2	0	2	1	0	1				3	64	6	70	
16:30 - 16:45											0	0	0	1	0	1				1	59	8	67	
16:45 - 17:00											0	0	0	1	0	1				1	50	0	50	
17:00 - 17:15											3	0	3	4	0	4				7	57	2	59	
17:15 - 17:30											2	0	2	2	0	2				4	36	2	38	
17:30 - 17:45											0	0	0	1	0	1				1	40	3	43	
17:45 - 18:00											0	0	0	2	0	2				2	27	3	30	
Period End											8	0	8	14	0	14				22	392	27	419	

All Vehicles Time Per 15 Mins	SOUTH								WEST														
	Iraking Avenue								Kelso Crescent														
	L			T			R			TOTAL	L			T			R			TOTAL	TOTAL		TOTAL
LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT		HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT		HEAVY		
7:00 - 7:15	15	5	20				2	0	2	22				3	0	3	31	4	35	38	54	9	63
7:15 - 7:30	13	4	17				0	0	0	17				3	1	4	30	4	34	38	46	10	56
7:30 - 7:45	10	3	13				0	0	0	13				3	0	3	25	3	28	31	39	6	45
7:45 - 8:00	20	4	24				0	0	0	24				5	1	6	20	6	26	32	47	12	59
8:00 - 8:15	22	6	28				4	0	4	32				5	1	6	20	3	23	29	54	11	65
8:15 - 8:30	20	4	24				1	0	1	25				1	0	1	19	2	21	22	42	6	48
8:30 - 8:45	26	3	29				3	1	4	33				2	0	2	19	3	22	24	54	7	61
8:45 - 9:00	24	7	31				0	0	0	31				7	0	7	17	5	22	29	52	12	64
Period End	150	36	186				10	1	11	197				29	3	32	181	30	211	243	388	73	461
16:00 - 16:15	28	1	29				0	0	0	29				0	0	0	28	2	30	30	59	3	62
16:15 - 16:30	20	5	25				0	0	0	25				2	0	2	39	1	40	42	64	6	70
16:30 - 16:45	31	2	33				0	0	0	33				0	0	0	27	6	33	33	59	8	67
16:45 - 17:00	17	0	17				0	0	0	17				0	0	0	32	0	32	32	50	0	50
17:00 - 17:15	24	0	24				0	0	0	24				0	0	0	26	2	28	28	57	2	59
17:15 - 17:30	14	2	16				0	0	0	16				1	0	1	17	0	17	18	36	2	38
17:30 - 17:45	19	1	20				0	0	0	20				0	0	0	20	2	22	22	40	3	43
17:45 - 18:00	12	0	12				0	0	0	12				0	0	0	13	3	16	16	27	3	30
Period End	165	11	176				0	0	0	176				3	0	3	202	16	218	221	392	27	419

Location -
Kelso Crescent
Iraking Avenue
Kelso Crescent
 Suburb MOOREBANK

Duration 7:00 - 9:00
16:00 - 18:00
 Day/Date Wednesday, 21 June 2023
 Weather -

All Vehicles Time Per Hour	NORTH							EAST							TOTAL	
	-							Kelso Crescent								
	L		T		R		TOTAL	L		T		R		TOTAL	TOTAL	
	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ		LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ		LIGHT	HEAVY
7:00 - 8:00								2	1	3	4	1	5	8	186	37
7:15 - 8:15								2	1	3	4	2	6	9	186	39
7:30 - 8:30								3	0	3	4	2	6	9	182	35
7:45 - 8:45								5	0	5	5	2	7	12	197	36
8:00 - 9:00								7	0	7	5	1	6	13	202	36
Period End																
16:00 - 17:00								3	0	3	5	0	5	8	232	17
16:15 - 17:15								5	0	5	7	0	7	12	230	16
16:30 - 17:30								5	0	5	8	0	8	13	202	12
16:45 - 17:45								5	0	5	8	0	8	13	183	7
17:00 - 18:00								5	0	5	9	0	9	14	160	10
Period End																

All Vehicles Time Per Hour	SOUTH							WEST							TOTAL	
	Iraking Avenue							Kelso Crescent								
	L		T		R		TOTAL	L		T		R		TOTAL	TOTAL	
	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ		LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ		LIGHT	HEAVY
7:00 - 8:00	58	16	74				76				14	2	16	139	186	37
7:15 - 8:15	65	17	82				86				16	3	19	130	186	39
7:30 - 8:30	72	17	89				94				14	2	16	114	182	35
7:45 - 8:45	88	17	105				114				13	2	15	107	197	36
8:00 - 9:00	92	20	112				121				15	1	16	104	202	36
Period End																
16:00 - 17:00	96	8	104				104				2	0	2	137	232	17
16:15 - 17:15	92	7	99				99				2	0	2	135	230	16
16:30 - 17:30	86	4	90				90				1	0	1	111	202	12
16:45 - 17:45	74	3	77				77				1	0	1	100	183	7
17:00 - 18:00	69	3	72				72				1	0	1	84	160	10
Period End																

Location Iraking Avenue
-
Iraking Avenue
Seton Road
 Suburb MOOREBANK

Duration 7:00 - 9:00
16:00 - 18:00
-
 Day/Date Wednesday, 21 June 2023
 Weather -

All Vehicles Time Per 15 Mins	NORTH Iraking Avenue									EAST -													
	L			T			R			TOTAL	L			T			R			TOTAL	TOTAL		TOTAL
	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ		LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ		LIGHT	HEAVY	
7:00 - 7:15				4	0	4	22	4	26	30											45	9	54
7:15 - 7:30				2	0	2	29	3	32	34											47	8	55
7:30 - 7:45				2	0	2	25	3	28	30											39	5	44
7:45 - 8:00				3	0	3	15	4	19	22											42	9	51
8:00 - 8:15				3	0	3	21	4	25	28											48	8	56
8:15 - 8:30				4	1	5	18	1	19	24											50	7	57
8:30 - 8:45				3	0	3	18	4	22	25											48	9	57
8:45 - 9:00				2	0	2	14	6	20	22											46	12	58
Period End				23	1	24	162	29	191	215											365	67	432
16:00 - 16:15				0	1	1	27	1	28	29											61	3	64
16:15 - 16:30				3	0	3	42	1	43	46											70	4	74
16:30 - 16:45				1	0	1	27	3	30	31											52	5	57
16:45 - 17:00				1	0	1	35	0	35	36											55	0	55
17:00 - 17:15				1	0	1	29	1	30	31											46	1	47
17:15 - 17:30				0	0	0	22	1	23	23											35	3	38
17:30 - 17:45				0	0	0	20	1	21	21											38	2	40
17:45 - 18:00				1	0	1	11	3	14	15											21	3	24
Period End				7	1	8	213	11	224	232											378	21	399

All Vehicles Time Per 15 Mins	SOUTH Iraking Avenue									WEST Seton Road												TOTAL			TOTAL
	L			T			R			TOTAL	L			T			R			TOTAL					
	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ		LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ		LIGHT	HEAVY			
7:00 - 7:15	0	0	0	0	0	0				0	17	5	22				2	0	2	24	45	9	54		
7:15 - 7:30	0	2	2	3	0	3				5	13	3	16				0	0	0	16	47	8	55		
7:30 - 7:45	2	0	2	1	0	1				3	7	2	9				2	0	2	11	39	5	44		
7:45 - 8:00	0	0	0	2	0	2				2	22	3	25				0	2	2	27	42	9	51		
8:00 - 8:15	1	0	1	2	0	2				3	21	4	25				0	0	0	25	48	8	56		
8:15 - 8:30	0	0	0	4	1	5				5	23	4	27				1	0	1	28	50	7	57		
8:30 - 8:45	1	1	2	1	0	1				3	23	3	26				2	1	3	29	48	9	57		
8:45 - 9:00	3	0	3	1	0	1				4	25	6	31				1	0	1	32	46	12	58		
Period End	7	3	10	14	1	15				25	151	30	181				8	3	11	192	365	67	432		
16:00 - 16:15	6	0	6	6	0	6				12	22	1	23				0	0	0	23	61	3	64		
16:15 - 16:30	3	0	3	1	0	1				4	21	3	24				0	0	0	24	70	4	74		
16:30 - 16:45	1	0	1	1	0	1				2	21	2	23				1	0	1	24	52	5	57		
16:45 - 17:00	1	0	1	2	0	2				3	16	0	16				0	0	0	16	55	0	55		
17:00 - 17:15	0	0	0	1	0	1				1	15	0	15				0	0	0	15	46	1	47		
17:15 - 17:30	0	0	0	0	0	0				0	13	2	15				0	0	0	15	35	3	38		
17:30 - 17:45	0	0	0	1	0	1				1	17	1	18				0	0	0	18	38	2	40		
17:45 - 18:00	1	0	1	0	0	0				1	8	0	8				0	0	0	8	21	3	24		
Period End	12	0	12	12	0	12				24	133	9	142				1	0	1	143	378	21	399		

Location Iraking Avenue
-
Iraking Avenue
Seton Road
Suburb MOOREBANK

Duration 7:00 - 9:00
16:00 - 18:00
Day/Date Wednesday, 21 June 2023
Weather -

All Vehicles Time Per Hour	NORTH Iraking Avenue										EAST -															
	L			T			R			TOTAL	L			T			R			TOTAL	TOTAL		TOTAL			
	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ		LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ		LIGHT	HEAVY				
7:00 - 8:00				11	0	11	91	14	105	116											173	31	204			
7:15 - 8:15				10	0	10	90	14	104	114											176	30	206			
7:30 - 8:30				12	1	13	79	12	91	104											179	29	208			
7:45 - 8:45				13	1	14	72	13	85	99											188	33	221			
8:00 - 9:00				12	1	13	71	15	86	99											192	36	228			
Period End																										
16:00 - 17:00				5	1	6	131	5	136	142											238	12	250			
16:15 - 17:15				6	0	6	133	5	138	144											223	10	233			
16:30 - 17:30				3	0	3	113	5	118	121											188	9	197			
16:45 - 17:45				2	0	2	106	3	109	111											174	6	180			
17:00 - 18:00				2	0	2	82	6	88	90											140	9	149			
Period End																										

All Vehicles Time Per Hour		SOUTH Iraking Avenue										WEST Seton Road													
		L			T			R			TOTAL	L			T			R			TOTAL	TOTAL			TOTAL
		LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ		LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ		LIGHT	HEAVY	Σ	
7:00 - 8:00		2	2	4	6	0	6				10	59	13	72				4	2	6	78	173	31	204	
7:15 - 8:15		3	2	5	8	0	8				13	63	12	75				2	2	4	79	176	30	206	
7:30 - 8:30		3	0	3	9	1	10				13	73	13	86				3	2	5	91	179	29	208	
7:45 - 8:45		2	1	3	9	1	10				13	89	14	103				3	3	6	109	188	33	221	
8:00 - 9:00		5	1	6	8	1	9				15	92	17	109				4	1	5	114	192	36	228	
Period End																									
16:00 - 17:00		11	0	11	10	0	10				21	80	6	86				1	0	1	87	238	12	250	
16:15 - 17:15		5	0	5	5	0	5				10	73	5	78				1	0	1	79	223	10	233	
16:30 - 17:30		2	0	2	4	0	4				6	65	4	69				1	0	1	70	188	9	197	
16:45 - 17:45		1	0	1	4	0	4				5	61	3	64				0	0	0	64	174	6	180	
17:00 - 18:00		1	0	1	2	0	2				3	53	3	56				0	0	0	56	140	9	149	
Period End																									

Location Seton Road
Heatcote Road
-
Heatcote Road
Suburb MOOREBANK

Duration 7:00 - 9:00
16:00 - 18:00
-
Day/Date Wednesday, 21 June 2023
Weather -

All Vehicles Time Per 15 Mins	NORTH Seton Road								EAST Heatcote Road												TOTAL			TOTAL
	L			T			R			TOTAL	L			T			R			TOTAL				
	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ		TOTAL	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY		Σ	TOTAL	LIGHT	HEAVY
7:00 - 7:15	14	4	18				6	2	8	26				113	11	124	45	8	53	177	271	36	307	
7:15 - 7:30	21	4	25				11	3	14	39				132	10	142	39	3	42	184	345	31	376	
7:30 - 7:45	18	2	20				5	4	9	29				148	10	158	31	2	33	191	329	27	356	
7:45 - 8:00	18	4	22				5	3	8	30				166	8	174	34	9	43	217	374	35	409	
8:00 - 8:15	8	1	9				5	3	8	17				162	13	175	54	7	61	236	390	31	421	
8:15 - 8:30	21	6	27				18	5	23	50				174	12	186	37	3	40	226	405	40	445	
8:30 - 8:45	8	3	11				9	4	13	24				157	12	169	43	4	47	216	373	37	410	
8:45 - 9:00	20	2	22				8	8	16	38				151	9	160	37	9	46	206	337	33	370	
Period End	128	26	154				67	32	99	253				1203	85	1288	320	45	365	1653	2824	270	3094	
16:00 - 16:15	44	1	45				43	2	45	90				114	10	124	20	1	21	145	392	19	411	
16:15 - 16:30	55	1	56				35	1	36	92				113	8	121	23	8	31	152	394	20	414	
16:30 - 16:45	51	3	54				31	2	33	87				107	7	114	38	3	41	155	421	18	439	
16:45 - 17:00	48	0	48				29	0	29	77				93	8	101	20	0	20	121	389	14	403	
17:00 - 17:15	48	2	50				26	0	26	76				107	6	113	19	2	21	134	429	13	442	
17:15 - 17:30	44	1	45				19	0	19	64				94	6	100	16	1	17	117	357	12	369	
17:30 - 17:45	51	1	52				21	1	22	74				116	3	119	28	1	29	148	419	6	425	
17:45 - 18:00	28	0	28				6	2	8	36				97	6	103	20	2	22	125	312	13	325	
Period End	369	9	378				210	8	218	596				841	54	895	184	18	202	1097	3113	115	3228	

All Vehicles Time Per 15 Mins	SOUTH -										WEST Heatcote Road															
	L			T			R			TOTAL	L			T			R			TOTAL	TOTAL			TOTAL		
	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ		LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ		LIGHT	HEAVY	Σ			
7:00 - 7:15											86	11	97	7	0	7				104	271	36	307			
7:15 - 7:30											128	11	139	14	0	14				153	345	31	376			
7:30 - 7:45											117	9	126	10	0	10				136	329	27	356			
7:45 - 8:00											135	8	143	16	3	19				162	374	35	409			
8:00 - 8:15											146	5	151	15	2	17				168	390	31	421			
8:15 - 8:30											145	12	157	10	2	12				169	405	40	445			
8:30 - 8:45											148	12	160	8	2	10				170	373	37	410			
8:45 - 9:00											109	4	113	12	1	13				126	337	33	370			
Period End											1014	72	1086	92	10	102				1188	2824	270	3094			
16:00 - 16:15											166	5	171	5	0	5				176	392	19	411			
16:15 - 16:30											159	2	161	9	0	9				170	394	20	414			
16:30 - 16:45											188	3	191	6	0	6				197	421	18	439			
16:45 - 17:00											194	5	199	5	1	6				205	389	14	403			
17:00 - 17:15											224	1	225	5	2	7				232	429	13	442			
17:15 - 17:30											184	4	188	0	0	0				188	357	12	369			
17:30 - 17:45											199	0	199	4	0	4				203	419	6	425			
17:45 - 18:00											160	3	163	1	0	1				164	312	13	325			
Period End											1474	23	1497	35	3	38				1535	3113	115	3228			

Location Seton Road
Heatcote Road
-
Heatcote Road
Suburb MOOREBANK

Duration 7:00 - 9:00
16:00 - 18:00
Day/Date Wednesday, 21 June 2023
Weather -

All Vehicles Time Per Hour	NORTH Seton Road							EAST Heatcote Road										TOTAL			TOTAL
	L			T			R			TOTAL	L			T			R				
	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	TOTAL	LIGHT	HEAVY		Σ	LIGHT	HEAVY	Σ	TOTAL	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ
7:00 - 8:00	71	14	85				124				559	39	598	149	22	171	769	1319	129	1448	
7:15 - 8:15	65	11	76				115				608	41	649	158	21	179	828	1438	124	1562	
7:30 - 8:30	65	13	78				126				650	43	693	156	21	177	870	1498	133	1631	
7:45 - 8:45	55	14	69				121				659	45	704	168	23	191	895	1542	143	1685	
8:00 - 9:00	57	12	69				129				644	46	690	171	23	194	884	1505	141	1646	
Period End																					
16:00 - 17:00	198	5	203				346				427	33	460	101	12	113	573	1596	71	1667	
16:15 - 17:15	202	6	208				332				420	29	449	100	13	113	562	1633	65	1698	
16:30 - 17:30	191	6	197				304				401	27	428	93	6	99	527	1596	57	1653	
16:45 - 17:45	191	4	195				291				410	23	433	83	4	87	520	1594	45	1639	
17:00 - 18:00	171	4	175				250				414	21	435	83	6	89	524	1517	44	1561	
Period End																					

All Vehicles Time Per Hour	SOUTH -									WEST Heatcote Road										TOTAL		
	L			T			R			TOTAL		L			T			R				
	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ			LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY	Σ	LIGHT	HEAVY
7:00 - 8:00										466	39	505	47	3	50		555	1319	129	1448		
7:15 - 8:15										526	33	559	55	5	60		619	1438	124	1562		
7:30 - 8:30										543	34	577	51	7	58		635	1498	133	1631		
7:45 - 8:45										574	37	611	49	9	58		669	1542	143	1685		
8:00 - 9:00										548	33	581	45	7	52		633	1505	141	1646		
Period End																						
16:00 - 17:00										707	15	722	25	1	26		748	1596	71	1667		
16:15 - 17:15										765	11	776	25	3	28		804	1633	65	1698		
16:30 - 17:30										790	13	803	16	3	19		822	1596	57	1653		
16:45 - 17:45										801	10	811	14	3	17		828	1594	45	1639		
17:00 - 18:00										767	8	775	10	2	12		787	1517	44	1561		
Period End																						



Attachment 2

SIDRA Model Output



MOVEMENT SUMMARY

 **Site: 101 [Newbridge Road (Site Folder: No Dev AM Peak - 2023)]**

Three-way intersection with 6-lane major road (Stop control)
Site Category: Existing Design
Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: Minor Road														
1	L2	51	16	54	31.4	0.275	6.6	LOS A	1.4	12.1	0.67	0.90	0.69	36.0
2	R2	47	8	49	17.0	0.275	33.0	LOS C	1.4	12.1	0.67	0.90	0.69	33.5
Approach		98	24	103	24.5	0.275	19.2	LOS B	1.4	12.1	0.67	0.90	0.69	34.9
East: Newbridge Road (E)														
3	L2	98	18	103	18.4	0.230	5.8	LOS A	0.0	0.0	0.00	0.15	0.00	54.9
4	T1	1101	94	1159	8.5	0.230	0.1	LOS A	0.0	0.0	0.00	0.04	0.00	59.5
Approach		1199	112	1262	9.3	0.230	0.5	NA	0.0	0.0	0.00	0.05	0.00	59.3
West: Newbridge Road (W)														
5	T1	1983	130	2087	6.6	0.558	0.3	LOS A	0.0	0.0	0.00	0.00	0.00	59.5
6	R2	92	4	97	4.3	0.260	14.1	LOS A	0.8	5.9	0.67	0.87	0.71	40.7
Approach		2075	134	2184	6.5	0.558	0.9	NA	0.8	5.9	0.03	0.04	0.03	58.8
All Vehicles		3372	270	3549	8.0	0.558	1.3	NA	1.4	12.1	0.04	0.07	0.04	58.3

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.
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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

▼ Site: 102 [Kelso Crescent | Field Close (Site Folder: No Dev AM Peak - 2023)]

New Site
Site Category: Existing Design
Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
East: Kelso Crescent														
5	T1	9	0	9	0.0	0.069	3.3	LOS A	0.2	1.4	0.14	0.54	0.14	45.5
6	R2	73	22	77	30.1	0.069	5.1	LOS A	0.2	1.4	0.14	0.54	0.14	38.6
Approach		82	22	86	26.8	0.069	4.9	LOS A	0.2	1.4	0.14	0.54	0.14	40.2
North: Minor Road														
7	L2	160	19	168	11.9	0.110	2.2	LOS A	0.0	0.0	0.00	0.47	0.00	43.4
9	R2	20	1	21	5.0	0.110	2.0	LOS A	0.0	0.0	0.00	0.47	0.00	45.5
Approach		180	20	189	11.1	0.110	2.1	NA	0.0	0.0	0.00	0.47	0.00	43.7
West: Field Close														
10	L2	6	2	6	33.3	0.007	4.9	LOS A	0.0	0.1	0.16	0.45	0.16	33.1
11	T1	5	0	5	0.0	0.007	3.7	LOS A	0.0	0.1	0.16	0.45	0.16	45.8
Approach		11	2	12	18.2	0.007	4.3	LOS A	0.0	0.1	0.16	0.45	0.16	39.1
All Vehicles		273	44	287	16.1	0.110	3.1	NA	0.2	1.4	0.05	0.49	0.05	42.2

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.
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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

▼ Site: 103 [Kelso Crescent | Iraking Avenue (Site Folder: No Dev AM Peak - 2023)]

New Site
Site Category: Existing Design
Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: RoadName														
1	L2	112	20	118	17.9	0.070	4.7	LOS A	0.3	2.6	0.03	0.52	0.03	46.3
3	R2	9	1	9	11.1	0.070	5.2	LOS A	0.3	2.6	0.03	0.52	0.03	46.0
Approach		121	21	127	17.4	0.070	4.8	LOS A	0.3	2.6	0.03	0.52	0.03	46.3
East: RoadName														
4	L2	7	0	7	0.0	0.008	4.6	LOS A	0.0	0.0	0.00	0.29	0.00	47.8
5	T1	6	1	6	16.7	0.008	0.0	LOS A	0.0	0.0	0.00	0.29	0.00	48.2
Approach		13	1	14	7.7	0.008	2.5	NA	0.0	0.0	0.00	0.29	0.00	48.0
West: RoadName														
11	T1	16	1	17	6.3	0.052	0.0	LOS A	0.3	2.2	0.07	0.45	0.07	47.4
12	R2	88	13	93	14.8	0.052	4.7	LOS A	0.3	2.2	0.07	0.45	0.07	46.2
Approach		104	14	109	13.5	0.052	4.0	NA	0.3	2.2	0.07	0.45	0.07	46.4
All Vehicles		238	36	251	15.1	0.070	4.3	NA	0.3	2.6	0.04	0.48	0.04	46.4

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.
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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

▼ Site: 104 [Iraking Avenue | Seton Road (Site Folder: No Dev AM Peak - 2023)]

New Site
Site Category: Existing Design
Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: Iraking Avenue (S)														
1	L2	6	1	6	16.7	0.009	4.7	LOS A	0.0	0.0	0.00	0.21	0.00	48.4
2	T1	9	1	9	11.1	0.009	0.0	LOS A	0.0	0.0	0.00	0.21	0.00	48.4
Approach		15	2	16	13.3	0.009	1.9	NA	0.0	0.0	0.00	0.21	0.00	48.4
North: Iraking Avenue (N)														
8	T1	13	1	14	7.7	0.050	0.0	LOS A	0.3	2.2	0.08	0.46	0.08	46.3
9	R2	86	15	91	17.4	0.050	4.8	LOS A	0.3	2.2	0.08	0.46	0.08	45.9
Approach		99	16	104	16.2	0.050	4.1	NA	0.3	2.2	0.08	0.46	0.08	45.9
West: Seton Road														
10	L2	109	17	115	15.6	0.064	4.7	LOS A	0.3	2.4	0.04	0.51	0.04	46.1
12	R2	5	1	5	20.0	0.064	5.3	LOS A	0.3	2.4	0.04	0.51	0.04	46.5
Approach		114	18	120	15.8	0.064	4.8	LOS A	0.3	2.4	0.04	0.51	0.04	46.1
All Vehicles		228	36	240	15.8	0.064	4.3	NA	0.3	2.4	0.05	0.47	0.05	46.2

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.
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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

 **Site: 105 [Heathcote Road | Seton Road (Site Folder: No Dev AM Peak - 2023)]**

New Site
Site Category: Existing Design
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 138 seconds (Site User-Given Phase Times)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
East: Heathcote Road (E)														
5	T1	704	45	741	6.4	0.497	0.9	LOS A	1.5	10.9	0.04	0.14	0.04	58.7
6	R2	191	23	201	12.0	* 0.497	6.1	LOS A	1.5	10.9	0.04	0.22	0.04	51.7
Approach		895	68	942	7.6	0.497	2.0	LOS A	1.5	10.9	0.04	0.15	0.04	56.8
North: Seton Road														
7	L2	69	14	73	20.3	0.229	56.3	LOS D	4.1	34.1	0.88	0.75	0.88	31.5
9	R2	52	15	55	28.8	* 0.409	72.0	LOS F	3.7	31.9	0.99	0.76	0.99	28.1
Approach		121	29	127	24.0	0.409	63.0	LOS E	4.1	34.1	0.93	0.76	0.93	30.0
West: Heathcote Road (W)														
10	L2	58	9	61	15.5	0.263	6.2	LOS A	0.6	4.5	0.03	0.13	0.03	52.2
11	T1	611	37	643	6.1	* 0.266	0.9	LOS A	0.6	4.7	0.03	0.07	0.03	59.1
Approach		669	46	704	6.9	0.266	1.3	LOS A	0.6	4.7	0.03	0.08	0.03	58.3
All Vehicles		1685	143	1774	8.5	0.497	6.1	LOS A	4.1	34.1	0.10	0.17	0.10	53.3

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.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
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	Input Vol.	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	ped/h	sec		[Ped ped	Dist] m			sec	m	m/sec
East: Heathcote Road (E)												
P2	Full	50	53	63.3	LOS F	0.2	0.2	0.96	0.96	228.8	215.2	0.94
North: Seton Road												
P3	Full	50	53	63.3	LOS F	0.2	0.2	0.96	0.96	226.3	211.9	0.94
West: Heathcote Road (W)												
P4	Full	50	53	63.3	LOS F	0.2	0.2	0.96	0.96	228.8	215.2	0.94
All Pedestrians		0	158	63.3	LOS F	0.2	0.2	0.96	0.96	228.0	214.1	0.94

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 [Newbridge Road (Site Folder: No Dev AM Peak - 2028)]**

Three-way intersection with 6-lane major road (Stop control)
Site Category: Existing Design
Stop (Two-Way)
Design Life Analysis (Final Year): Results for 5 years

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: Minor Road														
1	L2	51	16	58	31.4	0.396	13.6	LOS A	2.4	20.4	0.72	1.00	0.97	29.6
2	R2	47	8	53	17.0	0.396	49.3	LOS D ¹¹	2.4	20.4	0.72	1.00	0.97	26.9
Approach		98	24	111	24.5	0.396	30.7	LOS C	2.4	20.4	0.72	1.00	0.97	28.4
East: Newbridge Road (E)														
3	L2	98	18	111	18.4	0.247	5.8	LOS A	0.0	0.0	0.00	0.15	0.00	54.9
4	T1	1101	94	1246	8.5	0.247	0.1	LOS A	0.0	0.0	0.00	0.04	0.00	59.5
Approach		1199	112	1357	9.3	0.247	0.5	NA	0.0	0.0	0.00	0.05	0.00	59.3
West: Newbridge Road (W)														
5	T1	1983	130	2244	6.6	0.600	0.3	LOS A	0.0	0.0	0.00	0.00	0.00	59.4
6	R2	92	4	104	4.3	0.294	15.1	LOS B	0.9	6.8	0.70	0.89	0.77	39.8
Approach		2075	134	2348	6.5	0.600	1.0	NA	0.9	6.8	0.03	0.04	0.03	58.6
All Vehicles		3372	270	3816	8.0	0.600	1.7	NA	2.4	20.4	0.04	0.07	0.05	57.9

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.
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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

¹¹ Level of Service is worse than the Level of Service Target specified in the Parameter Settings dialog.

MOVEMENT SUMMARY

▼ Site: 102 [Kelso Crescent | Field Close (Site Folder: No Dev AM Peak - 2028)]

New Site
Site Category: Existing Design
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 5 years

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
East: Kelso Crescent														
5	T1	9	0	10	0.0	0.074	3.3	LOS A	0.2	1.6	0.15	0.54	0.15	45.5
6	R2	73	22	83	30.1	0.074	5.1	LOS A	0.2	1.6	0.15	0.54	0.15	38.6
Approach		82	22	93	26.8	0.074	4.9	LOS A	0.2	1.6	0.15	0.54	0.15	40.1
North: Minor Road														
7	L2	160	19	181	11.9	0.118	2.2	LOS A	0.0	0.0	0.00	0.47	0.00	43.4
9	R2	20	1	23	5.0	0.118	2.0	LOS A	0.0	0.0	0.00	0.47	0.00	45.5
Approach		180	20	204	11.1	0.118	2.1	NA	0.0	0.0	0.00	0.47	0.00	43.7
West: Field Close														
10	L2	6	2	7	33.3	0.007	4.9	LOS A	0.0	0.1	0.17	0.45	0.17	33.1
11	T1	5	0	6	0.0	0.007	3.7	LOS A	0.0	0.1	0.17	0.45	0.17	45.8
Approach		11	2	12	18.2	0.007	4.3	LOS A	0.0	0.1	0.17	0.45	0.17	39.1
All Vehicles		273	44	309	16.1	0.118	3.1	NA	0.2	1.6	0.05	0.49	0.05	42.2

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.
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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 103 [Kelso Crescent | Iraking Avenue (Site Folder: No Dev AM Peak - 2028)]

New Site
Site Category: Existing Design
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 5 years

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: RoadName														
1	L2	112	20	127	17.9	0.075	4.7	LOS A	0.4	2.9	0.03	0.52	0.03	46.3
3	R2	9	1	10	11.1	0.075	5.2	LOS A	0.4	2.9	0.03	0.52	0.03	45.9
Approach		121	21	137	17.4	0.075	4.8	LOS A	0.4	2.9	0.03	0.52	0.03	46.3
East: RoadName														
4	L2	7	0	8	0.0	0.008	4.6	LOS A	0.0	0.0	0.00	0.29	0.00	47.8
5	T1	6	1	7	16.7	0.008	0.0	LOS A	0.0	0.0	0.00	0.29	0.00	48.2
Approach		13	1	15	7.7	0.008	2.5	NA	0.0	0.0	0.00	0.29	0.00	48.0
West: RoadName														
11	T1	16	1	18	6.3	0.056	0.0	LOS A	0.3	2.4	0.07	0.45	0.07	47.4
12	R2	88	13	100	14.8	0.056	4.7	LOS A	0.3	2.4	0.07	0.45	0.07	46.2
Approach		104	14	118	13.5	0.056	4.0	NA	0.3	2.4	0.07	0.45	0.07	46.4
All Vehicles		238	36	269	15.1	0.075	4.3	NA	0.4	2.9	0.05	0.48	0.05	46.4

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.
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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

▼ Site: 104 [Iraking Avenue | Seton Road (Site Folder: No Dev AM Peak - 2028)]

New Site
Site Category: Existing Design
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 5 years

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: Iraking Avenue (S)														
1	L2	6	1	7	16.7	0.010	4.7	LOS A	0.0	0.0	0.00	0.21	0.00	48.4
2	T1	9	1	10	11.1	0.010	0.0	LOS A	0.0	0.0	0.00	0.21	0.00	48.4
Approach		15	2	17	13.3	0.010	1.9	NA	0.0	0.0	0.00	0.21	0.00	48.4
North: Iraking Avenue (N)														
8	T1	13	1	15	7.7	0.054	0.0	LOS A	0.3	2.3	0.08	0.46	0.08	46.3
9	R2	86	15	97	17.4	0.054	4.8	LOS A	0.3	2.3	0.08	0.46	0.08	45.9
Approach		99	16	112	16.2	0.054	4.2	NA	0.3	2.3	0.08	0.46	0.08	45.9
West: Seton Road														
10	L2	109	17	123	15.6	0.069	4.7	LOS A	0.3	2.6	0.04	0.51	0.04	46.1
12	R2	5	1	6	20.0	0.069	5.3	LOS A	0.3	2.6	0.04	0.51	0.04	46.5
Approach		114	18	129	15.8	0.069	4.8	LOS A	0.3	2.6	0.04	0.51	0.04	46.1
All Vehicles		228	36	258	15.8	0.069	4.3	NA	0.3	2.6	0.06	0.47	0.06	46.2

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.
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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

 Site: 105 [Heathcote Road | Seton Road (Site Folder: No Dev AM Peak - 2028)]

New Site
Site Category: Existing Design
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 138 seconds (Site User-Given Phase Times)
Design Life Analysis (Final Year): Results for 5 years

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
East: Heathcote Road (E)														
5	T1	704	45	797	6.4	0.538	1.0	LOS A	1.7	12.7	0.04	0.14	0.04	58.7
6	R2	191	23	216	12.0	* 0.538	6.1	LOS A	1.7	12.7	0.05	0.22	0.05	51.7
Approach		895	68	1013	7.6	0.538	2.1	LOS A	1.7	12.7	0.04	0.16	0.04	56.8
North: Seton Road														
7	L2	69	14	78	20.3	0.246	56.6	LOS E ¹¹	4.5	36.8	0.89	0.76	0.89	31.5
9	R2	52	15	59	28.8	* 0.439	72.3	LOS F ¹¹	3.9	34.4	0.99	0.76	0.99	28.0
Approach		121	29	137	24.0	0.439	63.3	LOS E ¹¹	4.5	36.8	0.93	0.76	0.93	29.9
West: Heathcote Road (W)														
10	L2	58	9	66	15.5	0.283	6.2	LOS A	0.7	4.9	0.03	0.13	0.03	52.2
11	T1	611	37	691	6.1	* 0.286	0.9	LOS A	0.7	5.2	0.03	0.07	0.03	59.1
Approach		669	46	757	6.9	0.286	1.4	LOS A	0.7	5.2	0.03	0.08	0.03	58.3
All Vehicles		1685	143	1907	8.5	0.538	6.2	LOS A	4.5	36.8	0.10	0.17	0.10	53.3

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.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

¹¹ Level of Service is worse than the Level of Service Target specified in the Parameter Settings dialog.
* Critical Movement (Signal Timing)

Pedestrian Movement Performance												
Mov ID	Crossing	Input Vol.	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	ped/h	sec		[Ped ped	Dist] m			sec	m	m/sec
East: Heathcote Road (E)												
P2	Full	50	58	63.3	LOS F ¹²	0.2	0.2	0.96	0.96	228.8	215.2	0.94
North: Seton Road												
P3	Full	50	58	63.3	LOS F ¹²	0.2	0.2	0.96	0.96	226.3	211.9	0.94
West: Heathcote Road (W)												
P4	Full	50	58	63.3	LOS F ¹²	0.2	0.2	0.96	0.96	228.8	215.2	0.94
All Pedestrians		0	174	63.3	LOS F ¹²	0.2	0.2	0.96	0.96	228.0	214.1	0.94

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.

12 Level of Service is worse than the Pedestrian Level of Service Target specified in the Parameter Settings dialog.

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MOVEMENT SUMMARY

 **Site: 101 [Newbridge Road (Site Folder: No Dev AM Peak - 2033)]**

Three-way intersection with 6-lane major road (Stop control)
Site Category: Existing Design
Stop (Two-Way)
Design Life Analysis (Final Year): Results for 10 years

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: Minor Road														
1	L2	51	16	62	31.4	0.660	45.9	LOS D ¹¹	4.8	40.7	0.78	1.21	1.57	18.0
2	R2	47	8	57	17.0	0.660	100.3	LOS F ¹¹	4.8	40.7	0.78	1.21	1.57	15.6
Approach		98	24	119	24.5	0.660	72.0	LOS F ¹¹	4.8	40.7	0.78	1.21	1.57	16.9
East: Newbridge Road (E)														
3	L2	98	18	119	18.4	0.265	5.8	LOS A	0.0	0.0	0.00	0.15	0.00	54.9
4	T1	1101	94	1333	8.5	0.265	0.1	LOS A	0.0	0.0	0.00	0.04	0.00	59.5
Approach		1199	112	1451	9.3	0.265	0.5	NA	0.0	0.0	0.00	0.05	0.00	59.3
West: Newbridge Road (W)														
5	T1	1983	130	2400	6.6	0.642	0.4	LOS A	0.0	0.0	0.00	0.00	0.00	59.3
6	R2	92	4	111	4.3	0.331	16.2	LOS B	1.1	7.9	0.73	0.91	0.82	38.9
Approach		2075	134	2512	6.5	0.642	1.1	NA	1.1	7.9	0.03	0.04	0.04	58.5
All Vehicles		3372	270	4082	8.0	0.660	3.0	NA	4.8	40.7	0.04	0.08	0.07	56.5

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.
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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

¹¹ Level of Service is worse than the Level of Service Target specified in the Parameter Settings dialog.

MOVEMENT SUMMARY

▼ Site: 102 [Kelso Crescent | Field Close (Site Folder: No Dev AM Peak - 2033)]

New Site
Site Category: Existing Design
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 10 years

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
East: Kelso Crescent														
5	T1	9	0	11	0.0	0.080	3.3	LOS A	0.2	1.7	0.16	0.54	0.16	45.5
6	R2	73	22	88	30.1	0.080	5.2	LOS A	0.2	1.7	0.16	0.54	0.16	38.5
Approach		82	22	99	26.8	0.080	5.0	LOS A	0.2	1.7	0.16	0.54	0.16	40.1
North: Minor Road														
7	L2	160	19	194	11.9	0.127	2.2	LOS A	0.0	0.0	0.00	0.47	0.00	43.4
9	R2	20	1	24	5.0	0.127	2.0	LOS A	0.0	0.0	0.00	0.47	0.00	45.5
Approach		180	20	218	11.1	0.127	2.1	NA	0.0	0.0	0.00	0.47	0.00	43.7
West: Field Close														
10	L2	6	2	7	33.3	0.008	4.9	LOS A	0.0	0.2	0.18	0.45	0.18	33.0
11	T1	5	0	6	0.0	0.008	3.7	LOS A	0.0	0.2	0.18	0.45	0.18	45.8
Approach		11	2	13	18.2	0.008	4.3	LOS A	0.0	0.2	0.18	0.45	0.18	39.0
All Vehicles		273	44	330	16.1	0.127	3.1	NA	0.2	1.7	0.05	0.49	0.05	42.2

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.
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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

▼ Site: 103 [Kelso Crescent | Iraking Avenue (Site Folder: No Dev AM Peak - 2033)]

New Site
Site Category: Existing Design
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 10 years

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: RoadName														
1	L2	112	20	136	17.9	0.080	4.7	LOS A	0.4	3.1	0.03	0.52	0.03	46.3
3	R2	9	1	11	11.1	0.080	5.3	LOS A	0.4	3.1	0.03	0.52	0.03	45.9
Approach		121	21	146	17.4	0.080	4.8	LOS A	0.4	3.1	0.03	0.52	0.03	46.3
East: RoadName														
4	L2	7	0	8	0.0	0.009	4.6	LOS A	0.0	0.0	0.00	0.29	0.00	47.8
5	T1	6	1	7	16.7	0.009	0.0	LOS A	0.0	0.0	0.00	0.29	0.00	48.2
Approach		13	1	16	7.7	0.009	2.5	NA	0.0	0.0	0.00	0.29	0.00	48.0
West: RoadName														
11	T1	16	1	19	6.3	0.060	0.0	LOS A	0.3	2.5	0.08	0.45	0.08	47.3
12	R2	88	13	107	14.8	0.060	4.7	LOS A	0.3	2.5	0.08	0.45	0.08	46.2
Approach		104	14	126	13.5	0.060	4.0	NA	0.3	2.5	0.08	0.45	0.08	46.4
All Vehicles		238	36	288	15.1	0.080	4.3	NA	0.4	3.1	0.05	0.48	0.05	46.4

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.
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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

▼ Site: 104 [Iraking Avenue | Seton Road (Site Folder: No Dev AM Peak - 2033)]

New Site
Site Category: Existing Design
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 10 years

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: Iraking Avenue (S)														
1	L2	6	1	7	16.7	0.010	4.7	LOS A	0.0	0.0	0.00	0.21	0.00	48.4
2	T1	9	1	11	11.1	0.010	0.0	LOS A	0.0	0.0	0.00	0.21	0.00	48.4
Approach		15	2	18	13.3	0.010	1.9	NA	0.0	0.0	0.00	0.21	0.00	48.4
North: Iraking Avenue (N)														
8	T1	13	1	16	7.7	0.057	0.0	LOS A	0.3	2.5	0.08	0.46	0.08	46.3
9	R2	86	15	104	17.4	0.057	4.8	LOS A	0.3	2.5	0.08	0.46	0.08	45.9
Approach		99	16	120	16.2	0.057	4.2	NA	0.3	2.5	0.08	0.46	0.08	45.9
West: Seton Road														
10	L2	109	17	132	15.6	0.074	4.7	LOS A	0.4	2.8	0.05	0.51	0.05	46.1
12	R2	5	1	6	20.0	0.074	5.4	LOS A	0.4	2.8	0.05	0.51	0.05	46.5
Approach		114	18	138	15.8	0.074	4.8	LOS A	0.4	2.8	0.05	0.51	0.05	46.1
All Vehicles		228	36	276	15.8	0.074	4.3	NA	0.4	2.8	0.06	0.47	0.06	46.1

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.
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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

 **Site: 105 [Heathcote Road | Seton Road (Site Folder: No Dev AM Peak - 2033)]**

New Site

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 138 seconds (Site User-Given Phase Times)

Design Life Analysis (Final Year): Results for 10 years

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
East: Heathcote Road (E)														
5	T1	704	45	852	6.4	0.580	1.1	LOS A	2.0	14.9	0.04	0.14	0.04	58.6
6	R2	191	23	231	12.0	* 0.580	6.2	LOS A	2.0	14.9	0.05	0.23	0.05	51.7
Approach		895	68	1083	7.6	0.580	2.2	LOS A	2.0	14.9	0.04	0.16	0.04	56.8
North: Seton Road														
7	L2	69	14	84	20.3	0.263	56.9	LOS E ¹¹	4.8	39.5	0.89	0.76	0.89	31.5
9	R2	52	15	63	28.8	* 0.470	72.5	LOS F ¹¹	4.2	36.9	0.99	0.77	0.99	28.0
Approach		121	29	146	24.0	0.470	63.6	LOS E ¹¹	4.8	39.5	0.93	0.76	0.93	29.9
West: Heathcote Road (W)														
10	L2	58	9	70	15.5	0.302	6.2	LOS A	0.7	5.4	0.03	0.13	0.03	52.1
11	T1	611	37	740	6.1	* 0.306	1.0	LOS A	0.8	5.7	0.03	0.07	0.03	59.1
Approach		669	46	810	6.9	0.306	1.4	LOS A	0.8	5.7	0.03	0.08	0.03	58.3
All Vehicles		1685	143	2040	8.5	0.580	6.3	LOS A	4.8	39.5	0.10	0.17	0.10	53.3

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.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

¹¹ Level of Service is worse than the Level of Service Target specified in the Parameter Settings dialog.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance												
Mov ID	Crossing	Input Vol.	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	ped/h	sec		[Ped ped	Dist] m			sec	m	m/sec
East: Heathcote Road (E)												
P2	Full	50	63	63.3	LOS F ¹²	0.2	0.2	0.96	0.96	228.8	215.2	0.94
North: Seton Road												
P3	Full	50	63	63.3	LOS F ¹²	0.2	0.2	0.96	0.96	226.3	211.9	0.94
West: Heathcote Road (W)												
P4	Full	50	63	63.3	LOS F ¹²	0.2	0.2	0.96	0.96	228.8	215.2	0.94
All Pedestrians		0	189	63.3	LOS F ¹²	0.2	0.2	0.96	0.96	228.0	214.1	0.94

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.

12 Level of Service is worse than the Pedestrian Level of Service Target specified in the Parameter Settings dialog.

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MOVEMENT SUMMARY

 **Site: 101 [Newbridge Road (Site Folder: No Dev PM Peak - 2023)]**

Three-way intersection with 6-lane major road (Stop control)
Site Category: Existing Design
Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: Minor Road														
1	L2	70	3	74	4.3	0.304	8.2	LOS A	1.8	13.0	0.77	0.94	0.87	38.4
2	R2	66	2	69	3.0	0.304	26.7	LOS B	1.8	13.0	0.77	0.94	0.87	35.6
Approach		136	5	143	3.7	0.304	17.2	LOS B	1.8	13.0	0.77	0.94	0.87	37.2
East: Newbridge Road (E)														
3	L2	73	5	77	6.8	0.373	5.7	LOS A	0.0	0.0	0.00	0.06	0.00	56.3
4	T1	1942	77	2044	4.0	0.373	0.1	LOS A	0.0	0.0	0.00	0.02	0.00	59.6
Approach		2015	82	2121	4.1	0.373	0.3	NA	0.0	0.0	0.00	0.02	0.00	59.5
West: Newbridge Road (W)														
5	T1	1583	50	1666	3.2	0.440	0.2	LOS A	0.0	0.0	0.00	0.00	0.00	59.7
6	R2	78	4	82	5.1	0.331	21.2	LOS B	1.0	7.3	0.83	0.95	0.92	35.3
Approach		1661	54	1748	3.3	0.440	1.2	NA	1.0	7.3	0.04	0.04	0.04	58.6
All Vehicles		3812	141	4013	3.7	0.440	1.3	NA	1.8	13.0	0.04	0.06	0.05	58.4

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.
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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

▼ Site: 102 [Kelso Crescent | Field Close (Site Folder: No Dev PM Peak - 2023)]

New Site
Site Category: Existing Design
Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
East: Kelso Crescent														
5	T1	13	0	14	0.0	0.078	3.3	LOS A	0.2	1.4	0.13	0.54	0.13	45.5
6	R2	93	3	98	3.2	0.078	4.8	LOS A	0.2	1.4	0.13	0.54	0.13	38.7
Approach		106	3	112	2.8	0.078	4.6	LOS A	0.2	1.4	0.13	0.54	0.13	40.4
North: Minor Road														
7	L2	107	6	113	5.6	0.077	2.2	LOS A	0.0	0.0	0.00	0.47	0.00	43.7
9	R2	23	1	24	4.3	0.077	2.0	LOS A	0.0	0.0	0.00	0.47	0.00	45.5
Approach		130	7	137	5.4	0.077	2.1	NA	0.0	0.0	0.00	0.47	0.00	44.2
West: Field Close														
10	L2	25	0	26	0.0	0.025	4.6	LOS A	0.1	0.5	0.14	0.46	0.14	36.6
11	T1	18	1	19	5.6	0.025	3.6	LOS A	0.1	0.5	0.14	0.46	0.14	45.7
Approach		43	1	45	2.3	0.025	4.2	LOS A	0.1	0.5	0.14	0.46	0.14	40.8
All Vehicles		279	11	294	3.9	0.078	3.4	NA	0.2	1.4	0.07	0.49	0.07	41.9

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.
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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

▼ Site: 103 [Kelso Crescent | Iraking Avenue (Site Folder: No Dev PM Peak - 2023)]

New Site
Site Category: Existing Design
Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: RoadName														
1	L2	104	8	109	7.7	0.055	4.6	LOS A	0.3	2.0	0.03	0.51	0.03	46.4
3	R2	1	0	1	0.0	0.055	5.1	LOS A	0.3	2.0	0.03	0.51	0.03	46.1
Approach		105	8	111	7.6	0.055	4.6	LOS A	0.3	2.0	0.03	0.51	0.03	46.4
East: RoadName														
4	L2	3	0	3	0.0	0.004	4.6	LOS A	0.0	0.0	0.00	0.20	0.00	48.4
5	T1	5	0	5	0.0	0.004	0.0	LOS A	0.0	0.0	0.00	0.20	0.00	48.9
Approach		8	0	8	0.0	0.004	1.7	NA	0.0	0.0	0.00	0.20	0.00	48.7
West: RoadName														
11	T1	2	0	2	0.0	0.063	0.0	LOS A	0.4	2.7	0.05	0.53	0.05	47.0
12	R2	135	9	142	6.7	0.063	4.6	LOS A	0.4	2.7	0.05	0.53	0.05	46.0
Approach		137	9	144	6.6	0.063	4.6	NA	0.4	2.7	0.05	0.53	0.05	46.0
All Vehicles		250	17	263	6.8	0.063	4.5	NA	0.4	2.7	0.04	0.51	0.04	46.3

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.
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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

▼ Site: 104 [Iraking Avenue | Seton Road (Site Folder: No Dev PM Peak - 2023)]

New Site
Site Category: Existing Design
Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: Iraking Avenue (S)														
1	L2	11	0	12	0.0	0.012	4.6	LOS A	0.0	0.0	0.00	0.28	0.00	48.3
2	T1	10	0	11	0.0	0.012	0.0	LOS A	0.0	0.0	0.00	0.28	0.00	47.8
Approach		21	0	22	0.0	0.012	2.4	NA	0.0	0.0	0.00	0.28	0.00	48.1
North: Iraking Avenue (N)														
8	T1	6	1	6	16.7	0.065	0.0	LOS A	0.4	2.7	0.09	0.51	0.09	45.9
9	R2	136	5	143	3.7	0.065	4.6	LOS A	0.4	2.7	0.09	0.51	0.09	45.8
Approach		142	6	149	4.2	0.065	4.5	NA	0.4	2.7	0.09	0.51	0.09	45.8
West: Seton Road														
10	L2	86	6	91	7.0	0.046	4.6	LOS A	0.2	1.6	0.05	0.51	0.05	46.2
12	R2	1	0	1	0.0	0.046	5.2	LOS A	0.2	1.6	0.05	0.51	0.05	46.7
Approach		87	6	92	6.9	0.046	4.7	LOS A	0.2	1.6	0.05	0.51	0.05	46.2
All Vehicles		250	12	263	4.8	0.065	4.3	NA	0.4	2.7	0.07	0.49	0.07	46.1

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.
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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

 **Site: 105 [Heathcote Road | Seton Road (Site Folder: No Dev PM Peak - 2023)]**

New Site
Site Category: Existing Design
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 138 seconds (Site User-Given Phase Times)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
East: Heathcote Road (E)														
5	T1	449	29	473	6.5	0.315	0.7	LOS A	0.7	5.0	0.03	0.12	0.03	58.8
6	R2	113	13	119	11.5	* 0.315	6.0	LOS A	0.7	5.0	0.03	0.20	0.03	51.8
Approach		562	42	592	7.5	0.315	1.8	LOS A	0.7	5.0	0.03	0.14	0.03	57.0
North: Seton Road														
7	L2	208	6	219	2.9	0.686	61.8	LOS E	13.7	98.4	0.97	0.83	0.99	30.7
9	R2	124	3	131	2.4	* 0.822	78.9	LOS F	9.5	67.7	1.00	0.91	1.25	27.1
Approach		332	9	349	2.7	0.822	68.2	LOS E	13.7	98.4	0.98	0.86	1.08	29.2
West: Heathcote Road (W)														
10	L2	28	3	29	10.7	0.305	6.2	LOS A	0.8	5.5	0.03	0.07	0.03	52.5
11	T1	776	11	817	1.4	* 0.308	1.3	LOS A	0.8	5.7	0.03	0.05	0.03	59.3
Approach		804	14	846	1.7	0.308	1.5	LOS A	0.8	5.7	0.03	0.05	0.03	59.0
All Vehicles		1698	65	1787	3.8	0.822	14.6	LOS B	13.7	98.4	0.22	0.24	0.24	47.6

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.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
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	Input Vol.	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	ped/h	sec		[Ped ped	Dist] m			sec	m	m/sec
East: Heathcote Road (E)												
P2	Full	50	53	63.3	LOS F	0.2	0.2	0.96	0.96	228.8	215.2	0.94
North: Seton Road												
P3	Full	50	53	63.3	LOS F	0.2	0.2	0.96	0.96	226.3	211.9	0.94
West: Heathcote Road (W)												
P4	Full	50	53	63.3	LOS F	0.2	0.2	0.96	0.96	228.8	215.2	0.94
All Pedestrians		0	158	63.3	LOS F	0.2	0.2	0.96	0.96	228.0	214.1	0.94

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 [Newbridge Road (Site Folder: No Dev PM Peak - 2028)]**

Three-way intersection with 6-lane major road (Stop control)
Site Category: Existing Design
Stop (Two-Way)
Design Life Analysis (Final Year): Results for 5 years

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: Minor Road														
1	L2	70	3	79	4.3	0.369	10.9	LOS A	2.4	17.5	0.80	1.00	1.04	35.4
2	R2	66	2	75	3.0	0.369	32.8	LOS C	2.4	17.5	0.80	1.00	1.04	32.4
Approach		136	5	154	3.7	0.369	21.5	LOS B	2.4	17.5	0.80	1.00	1.04	34.0
East: Newbridge Road (E)														
3	L2	73	5	83	6.8	0.401	5.7	LOS A	0.0	0.0	0.00	0.06	0.00	56.2
4	T1	1942	77	2198	4.0	0.401	0.1	LOS A	0.0	0.0	0.00	0.02	0.00	59.5
Approach		2015	82	2280	4.1	0.401	0.3	NA	0.0	0.0	0.00	0.02	0.00	59.5
West: Newbridge Road (W)														
5	T1	1583	50	1791	3.2	0.469	0.2	LOS A	0.0	0.0	0.00	0.00	0.00	59.6
6	R2	78	4	88	5.1	0.378	23.1	LOS B	1.2	8.5	0.85	0.97	0.97	34.1
Approach		1661	54	1880	3.3	0.469	1.3	NA	1.2	8.5	0.04	0.05	0.05	58.4
All Vehicles		3812	141	4314	3.7	0.469	1.5	NA	2.4	17.5	0.05	0.07	0.06	58.2

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.
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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

▼ Site: 102 [Kelso Crescent | Field Close (Site Folder: No Dev PM Peak - 2028)]

New Site
Site Category: Existing Design
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 5 years

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
East: Kelso Crescent														
5	T1	13	0	15	0.0	0.085	3.3	LOS A	0.2	1.5	0.14	0.54	0.14	45.5
6	R2	93	3	105	3.2	0.085	4.8	LOS A	0.2	1.5	0.14	0.54	0.14	38.7
Approach		106	3	120	2.8	0.085	4.6	LOS A	0.2	1.5	0.14	0.54	0.14	40.4
North: Minor Road														
7	L2	107	6	121	5.6	0.082	2.2	LOS A	0.0	0.0	0.00	0.47	0.00	43.7
9	R2	23	1	26	4.3	0.082	2.0	LOS A	0.0	0.0	0.00	0.47	0.00	45.5
Approach		130	7	147	5.4	0.082	2.1	NA	0.0	0.0	0.00	0.47	0.00	44.2
West: Field Close														
10	L2	25	0	28	0.0	0.027	4.6	LOS A	0.1	0.5	0.14	0.46	0.14	36.6
11	T1	18	1	20	5.6	0.027	3.7	LOS A	0.1	0.5	0.14	0.46	0.14	45.7
Approach		43	1	49	2.3	0.027	4.2	LOS A	0.1	0.5	0.14	0.46	0.14	40.8
All Vehicles		279	11	316	3.9	0.085	3.4	NA	0.2	1.5	0.08	0.49	0.08	41.9

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.
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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

▼ Site: 103 [Kelso Crescent | Iraking Avenue (Site Folder: No Dev PM Peak - 2028)]

New Site
Site Category: Existing Design
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 5 years

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: RoadName														
1	L2	104	8	118	7.7	0.059	4.6	LOS A	0.3	2.1	0.03	0.51	0.03	46.4
3	R2	1	0	1	0.0	0.059	5.2	LOS A	0.3	2.1	0.03	0.51	0.03	46.1
Approach		105	8	119	7.6	0.059	4.6	LOS A	0.3	2.1	0.03	0.51	0.03	46.4
East: RoadName														
4	L2	3	0	3	0.0	0.005	4.6	LOS A	0.0	0.0	0.00	0.20	0.00	48.4
5	T1	5	0	6	0.0	0.005	0.0	LOS A	0.0	0.0	0.00	0.20	0.00	48.9
Approach		8	0	9	0.0	0.005	1.7	NA	0.0	0.0	0.00	0.20	0.00	48.7
West: RoadName														
11	T1	2	0	2	0.0	0.068	0.0	LOS A	0.4	2.9	0.05	0.53	0.05	47.0
12	R2	135	9	153	6.7	0.068	4.6	LOS A	0.4	2.9	0.05	0.53	0.05	46.0
Approach		137	9	155	6.6	0.068	4.6	NA	0.4	2.9	0.05	0.53	0.05	46.0
All Vehicles		250	17	283	6.8	0.068	4.5	NA	0.4	2.9	0.04	0.51	0.04	46.3

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.
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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

▼ Site: 104 [Iraking Avenue | Seton Road (Site Folder: No Dev PM Peak - 2028)]

New Site
Site Category: Existing Design
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 5 years

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: Iraking Avenue (S)														
1	L2	11	0	12	0.0	0.013	4.6	LOS A	0.0	0.0	0.00	0.28	0.00	48.3
2	T1	10	0	11	0.0	0.013	0.0	LOS A	0.0	0.0	0.00	0.28	0.00	47.8
Approach		21	0	24	0.0	0.013	2.4	NA	0.0	0.0	0.00	0.28	0.00	48.1
North: Iraking Avenue (N)														
8	T1	6	1	7	16.7	0.070	0.1	LOS A	0.4	2.9	0.09	0.50	0.09	45.9
9	R2	136	5	154	3.7	0.070	4.6	LOS A	0.4	2.9	0.09	0.50	0.09	45.8
Approach		142	6	161	4.2	0.070	4.5	NA	0.4	2.9	0.09	0.50	0.09	45.8
West: Seton Road														
10	L2	86	6	97	7.0	0.049	4.6	LOS A	0.2	1.7	0.05	0.51	0.05	46.2
12	R2	1	0	1	0.0	0.049	5.2	LOS A	0.2	1.7	0.05	0.51	0.05	46.7
Approach		87	6	98	6.9	0.049	4.7	LOS A	0.2	1.7	0.05	0.51	0.05	46.2
All Vehicles		250	12	283	4.8	0.070	4.4	NA	0.4	2.9	0.07	0.49	0.07	46.1

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.
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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

 **Site: 105 [Heathcote Road | Seton Road (Site Folder: No Dev PM Peak - 2028)]**

New Site
Site Category: Existing Design
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 138 seconds (Site User-Given Phase Times)
Design Life Analysis (Final Year): Results for 5 years

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
East: Heathcote Road (E)														
5	T1	449	29	508	6.5	0.342	0.7	LOS A	0.7	5.6	0.03	0.12	0.03	58.8
6	R2	113	13	128	11.5	* 0.342	6.0	LOS A	0.7	5.6	0.03	0.20	0.03	51.8
Approach		562	42	636	7.5	0.342	1.8	LOS A	0.7	5.6	0.03	0.14	0.03	57.0
North: Seton Road														
7	L2	208	6	235	2.9	0.778	65.8	LOS E ¹¹	15.5	111.1	0.98	0.88	1.09	29.9
9	R2	124	3	140	2.4	* 0.884	83.8	LOS F ¹¹	10.6	75.8	1.00	0.96	1.37	26.3
Approach		332	9	376	2.7	0.884	72.5	LOS F ¹¹	15.5	111.1	0.99	0.91	1.19	28.5
West: Heathcote Road (W)														
10	L2	28	3	32	10.7	0.328	6.2	LOS A	0.9	6.1	0.03	0.07	0.03	52.5
11	T1	776	11	878	1.4	* 0.331	1.4	LOS A	0.9	6.3	0.03	0.05	0.03	59.3
Approach		804	14	910	1.7	0.331	1.6	LOS A	0.9	6.3	0.03	0.05	0.03	59.0
All Vehicles		1698	65	1921	3.8	0.884	15.5	LOS B	15.5	111.1	0.22	0.25	0.26	47.1

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.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

¹¹ Level of Service is worse than the Level of Service Target specified in the Parameter Settings dialog.
* Critical Movement (Signal Timing)

Pedestrian Movement Performance												
Mov ID	Crossing	Input Vol.	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	ped/h	sec		[Ped ped	Dist] m			sec	m	m/sec
East: Heathcote Road (E)												
P2	Full	50	58	63.3	LOS F ¹²	0.2	0.2	0.96	0.96	228.8	215.2	0.94
North: Seton Road												
P3	Full	50	58	63.3	LOS F ¹²	0.2	0.2	0.96	0.96	226.3	211.9	0.94
West: Heathcote Road (W)												
P4	Full	50	58	63.3	LOS F ¹²	0.2	0.2	0.96	0.96	228.8	215.2	0.94
All Pedestrians		0	174	63.3	LOS F ¹²	0.2	0.2	0.96	0.96	228.0	214.1	0.94

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.

12 Level of Service is worse than the Pedestrian Level of Service Target specified in the Parameter Settings dialog.

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MOVEMENT SUMMARY

 **Site: 101 [Newbridge Road (Site Folder: No Dev PM Peak - 2033)]**

Three-way intersection with 6-lane major road (Stop control)
Site Category: Existing Design
Stop (Two-Way)
Design Life Analysis (Final Year): Results for 10 years

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: Minor Road														
1	L2	70	3	85	4.3	0.508	18.7	LOS B	3.6	26.0	0.83	1.12	1.34	29.4
2	R2	66	2	80	3.0	0.508	47.3	LOS D ¹¹	3.6	26.0	0.83	1.12	1.34	26.3
Approach		136	5	165	3.7	0.508	32.6	LOS C	3.6	26.0	0.83	1.12	1.34	27.9
East: Newbridge Road (E)														
3	L2	73	5	88	6.8	0.429	5.7	LOS A	0.0	0.0	0.00	0.06	0.00	56.2
4	T1	1942	77	2351	4.0	0.429	0.1	LOS A	0.0	0.0	0.00	0.02	0.00	59.5
Approach		2015	82	2439	4.1	0.429	0.3	NA	0.0	0.0	0.00	0.02	0.00	59.4
West: Newbridge Road (W)														
5	T1	1583	50	1916	3.2	0.502	0.2	LOS A	0.0	0.0	0.00	0.00	0.00	59.6
6	R2	78	4	94	5.1	0.428	24.9	LOS B	1.3	9.8	0.88	0.98	1.02	33.0
Approach		1661	54	2011	3.3	0.502	1.4	NA	1.3	9.8	0.04	0.05	0.05	58.3
All Vehicles		3812	141	4615	3.7	0.508	1.9	NA	3.6	26.0	0.05	0.07	0.07	57.7

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.
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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

¹¹ Level of Service is worse than the Level of Service Target specified in the Parameter Settings dialog.

MOVEMENT SUMMARY

▼ Site: 102 [Kelso Crescent | Field Close (Site Folder: No Dev PM Peak - 2033)]

New Site
Site Category: Existing Design
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 10 years

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
East: Kelso Crescent														
5	T1	13	0	16	0.0	0.091	3.3	LOS A	0.2	1.6	0.15	0.54	0.15	45.5
6	R2	93	3	113	3.2	0.091	4.9	LOS A	0.2	1.6	0.15	0.54	0.15	38.6
Approach		106	3	128	2.8	0.091	4.7	LOS A	0.2	1.6	0.15	0.54	0.15	40.3
North: Minor Road														
7	L2	107	6	130	5.6	0.088	2.2	LOS A	0.0	0.0	0.00	0.47	0.00	43.7
9	R2	23	1	28	4.3	0.088	2.0	LOS A	0.0	0.0	0.00	0.47	0.00	45.5
Approach		130	7	157	5.4	0.088	2.1	NA	0.0	0.0	0.00	0.47	0.00	44.2
West: Field Close														
10	L2	25	0	30	0.0	0.029	4.6	LOS A	0.1	0.5	0.15	0.45	0.15	36.6
11	T1	18	1	22	5.6	0.029	3.7	LOS A	0.1	0.5	0.15	0.45	0.15	45.6
Approach		43	1	52	2.3	0.029	4.2	LOS A	0.1	0.5	0.15	0.45	0.15	40.7
All Vehicles		279	11	338	3.9	0.091	3.4	NA	0.2	1.6	0.08	0.49	0.08	41.9

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.
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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

▼ Site: 103 [Kelso Crescent | Iraking Avenue (Site Folder: No Dev PM Peak - 2033)]

New Site
Site Category: Existing Design
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 10 years

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: RoadName														
1	L2	104	8	126	7.7	0.063	4.6	LOS A	0.3	2.3	0.03	0.51	0.03	46.4
3	R2	1	0	1	0.0	0.063	5.2	LOS A	0.3	2.3	0.03	0.51	0.03	46.1
Approach		105	8	127	7.6	0.063	4.7	LOS A	0.3	2.3	0.03	0.51	0.03	46.4
East: RoadName														
4	L2	3	0	4	0.0	0.005	4.6	LOS A	0.0	0.0	0.00	0.20	0.00	48.4
5	T1	5	0	6	0.0	0.005	0.0	LOS A	0.0	0.0	0.00	0.20	0.00	48.9
Approach		8	0	10	0.0	0.005	1.7	NA	0.0	0.0	0.00	0.20	0.00	48.7
West: RoadName														
11	T1	2	0	2	0.0	0.072	0.0	LOS A	0.4	3.1	0.05	0.53	0.05	47.0
12	R2	135	9	163	6.7	0.072	4.6	LOS A	0.4	3.1	0.05	0.53	0.05	46.0
Approach		137	9	166	6.6	0.072	4.6	NA	0.4	3.1	0.05	0.53	0.05	46.0
All Vehicles		250	17	303	6.8	0.072	4.5	NA	0.4	3.1	0.04	0.51	0.04	46.3

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.
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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

▼ Site: 104 [Iraking Avenue | Seton Road (Site Folder: No Dev PM Peak - 2033)]

New Site
Site Category: Existing Design
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 10 years

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: Iraking Avenue (S)														
1	L2	11	0	13	0.0	0.013	4.6	LOS A	0.0	0.0	0.00	0.28	0.00	48.3
2	T1	10	0	12	0.0	0.013	0.0	LOS A	0.0	0.0	0.00	0.28	0.00	47.8
Approach		21	0	25	0.0	0.013	2.4	NA	0.0	0.0	0.00	0.28	0.00	48.1
North: Iraking Avenue (N)														
8	T1	6	1	7	16.7	0.075	0.1	LOS A	0.4	3.1	0.10	0.50	0.10	45.8
9	R2	136	5	165	3.7	0.075	4.7	LOS A	0.4	3.1	0.10	0.50	0.10	45.8
Approach		142	6	172	4.2	0.075	4.5	NA	0.4	3.1	0.10	0.50	0.10	45.8
West: Seton Road														
10	L2	86	6	104	7.0	0.052	4.7	LOS A	0.3	1.9	0.05	0.51	0.05	46.2
12	R2	1	0	1	0.0	0.052	5.3	LOS A	0.3	1.9	0.05	0.51	0.05	46.7
Approach		87	6	105	6.9	0.052	4.7	LOS A	0.3	1.9	0.05	0.51	0.05	46.2
All Vehicles		250	12	303	4.8	0.075	4.4	NA	0.4	3.1	0.07	0.49	0.07	46.1

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.
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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

 Site: 105 [Heathcote Road | Seton Road (Site Folder: No Dev PM Peak - 2033)]

New Site

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 138 seconds (Site User-Given Phase Times)

Design Life Analysis (Final Year): Results for 10 years

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
East: Heathcote Road (E)														
5	T1	449	29	544	6.5	0.368	0.8	LOS A	0.8	6.2	0.03	0.13	0.03	58.8
6	R2	113	13	137	11.5	* 0.368	6.0	LOS A	0.8	6.2	0.03	0.20	0.03	51.8
Approach		562	42	680	7.5	0.368	1.9	LOS A	0.8	6.2	0.03	0.14	0.03	57.0
North: Seton Road														
7	L2	208	6	252	2.9	0.862	73.2	LOS F ¹¹	17.9	128.1	0.99	0.95	1.22	28.6
9	R2	124	3	150	2.4	* 0.946	94.6	LOS F ¹¹	12.2	87.5	1.00	1.04	1.53	24.7
Approach		332	9	402	2.7	0.946	81.2	LOS F ¹¹	17.9	128.1	0.99	0.98	1.34	27.0
West: Heathcote Road (W)														
10	L2	28	3	34	10.7	0.351	6.2	LOS A	1.0	6.8	0.03	0.07	0.03	52.5
11	T1	776	11	939	1.4	* 0.354	1.6	LOS A	1.0	7.0	0.03	0.05	0.03	59.3
Approach		804	14	973	1.7	0.354	1.8	LOS A	1.0	7.0	0.03	0.05	0.03	59.0
All Vehicles		1698	65	2055	3.8	0.946	17.3	LOS B	17.9	128.1	0.22	0.26	0.29	46.2

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.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

¹¹ Level of Service is worse than the Level of Service Target specified in the Parameter Settings dialog.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance												
Mov ID	Crossing	Input Vol.	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
						[Ped ped	Dist] m					
		ped/h	ped/h	sec						sec	m	m/sec
East: Heathcote Road (E)												
P2	Full	50	63	63.3	LOS F ¹²	0.2	0.2	0.96	0.96	228.8	215.2	0.94
North: Seton Road												
P3	Full	50	63	63.3	LOS F ¹²	0.2	0.2	0.96	0.96	226.3	211.9	0.94
West: Heathcote Road (W)												
P4	Full	50	63	63.3	LOS F ¹²	0.2	0.2	0.96	0.96	228.8	215.2	0.94
All Pedestrians		0	189	63.3	LOS F ¹²	0.2	0.2	0.96	0.96	228.0	214.1	0.94

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.

12 Level of Service is worse than the Pedestrian Level of Service Target specified in the Parameter Settings dialog.

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MOVEMENT SUMMARY

 **Site: 101 [Newbridge Road (Site Folder: Post Dev AM Peak - 2023)]**

Three-way intersection with 6-lane major road (Stop control)
Site Category: Existing Design
Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: Minor Road														
1	L2	53	18	56	34.0	0.278	6.7	LOS A	1.5	12.5	0.66	0.91	0.69	36.0
2	R2	47	8	49	17.0	0.278	33.2	LOS C	1.5	12.5	0.66	0.91	0.69	33.6
Approach		100	26	105	26.0	0.278	19.2	LOS B	1.5	12.5	0.66	0.91	0.69	34.9
East: Newbridge Road (E)														
3	L2	98	18	103	18.4	0.230	5.8	LOS A	0.0	0.0	0.00	0.15	0.00	54.9
4	T1	1101	94	1159	8.5	0.230	0.1	LOS A	0.0	0.0	0.00	0.04	0.00	59.5
Approach		1199	112	1262	9.3	0.230	0.5	NA	0.0	0.0	0.00	0.05	0.00	59.3
West: Newbridge Road (W)														
5	T1	1983	130	2087	6.6	0.558	0.3	LOS A	0.0	0.0	0.00	0.00	0.00	59.5
6	R2	94	6	99	6.4	0.271	14.4	LOS A	0.9	6.3	0.68	0.88	0.72	40.4
Approach		2077	136	2186	6.5	0.558	0.9	NA	0.9	6.3	0.03	0.04	0.03	58.7
All Vehicles		3376	274	3554	8.1	0.558	1.3	NA	1.5	12.5	0.04	0.07	0.04	58.3

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.
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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

▼ Site: 102 [Kelso Crescent | Field Close (Site Folder: Post Dev AM Peak - 2023)]

New Site
Site Category: Existing Design
Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
East: Kelso Crescent														
5	T1	9	0	9	0.0	0.087	3.4	LOS A	0.2	1.8	0.17	0.55	0.17	45.4
6	R2	93	24	98	25.8	0.087	5.2	LOS A	0.2	1.8	0.17	0.55	0.17	38.4
Approach		102	24	107	23.5	0.087	5.0	LOS A	0.2	1.8	0.17	0.55	0.17	39.7
North: Minor Road														
7	L2	233	21	245	9.0	0.152	2.2	LOS A	0.0	0.0	0.00	0.47	0.00	43.5
9	R2	20	1	21	5.0	0.152	2.0	LOS A	0.0	0.0	0.00	0.47	0.00	45.5
Approach		253	22	266	8.7	0.152	2.1	NA	0.0	0.0	0.00	0.47	0.00	43.7
West: Field Close														
10	L2	6	2	6	33.3	0.007	4.9	LOS A	0.0	0.1	0.20	0.45	0.20	33.0
11	T1	5	0	5	0.0	0.007	3.9	LOS A	0.0	0.1	0.20	0.45	0.20	45.7
Approach		11	2	12	18.2	0.007	4.4	LOS A	0.0	0.1	0.20	0.45	0.20	39.0
All Vehicles		366	48	385	13.1	0.152	3.0	NA	0.2	1.8	0.05	0.49	0.05	42.2

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.
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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

▼ Site: 103 [Kelso Crescent | Iraking Avenue (Site Folder: Post Dev AM Peak - 2023)]

New Site
Site Category: Existing Design
Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: RoadName														
1	L2	120	28	126	23.3	0.076	4.8	LOS A	0.4	3.0	0.03	0.52	0.03	46.2
3	R2	9	1	9	11.1	0.076	5.2	LOS A	0.4	3.0	0.03	0.52	0.03	46.0
Approach		129	29	136	22.5	0.076	4.8	LOS A	0.4	3.0	0.03	0.52	0.03	46.2
East: RoadName														
4	L2	7	0	7	0.0	0.008	4.6	LOS A	0.0	0.0	0.00	0.29	0.00	47.8
5	T1	6	1	6	16.7	0.008	0.0	LOS A	0.0	0.0	0.00	0.29	0.00	48.2
Approach		13	1	14	7.7	0.008	2.5	NA	0.0	0.0	0.00	0.29	0.00	48.0
West: RoadName														
11	T1	16	1	17	6.3	0.058	0.0	LOS A	0.3	2.6	0.07	0.46	0.07	47.4
12	R2	96	21	101	21.9	0.058	4.8	LOS A	0.3	2.6	0.07	0.46	0.07	46.1
Approach		112	22	118	19.6	0.058	4.1	NA	0.3	2.6	0.07	0.46	0.07	46.3
All Vehicles		254	52	267	20.5	0.076	4.4	NA	0.4	3.0	0.05	0.48	0.05	46.3

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.
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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

▼ Site: 104 [Iraking Avenue | Seton Road (Site Folder: Post Dev AM Peak - 2023)]

New Site
Site Category: Existing Design
Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: Iraking Avenue (S)														
1	L2	6	1	6	16.7	0.009	4.7	LOS A	0.0	0.0	0.00	0.21	0.00	48.4
2	T1	9	1	9	11.1	0.009	0.0	LOS A	0.0	0.0	0.00	0.21	0.00	48.4
Approach		15	2	16	13.3	0.009	1.9	NA	0.0	0.0	0.00	0.21	0.00	48.4
North: Iraking Avenue (N)														
8	T1	13	1	14	7.7	0.055	0.0	LOS A	0.3	2.5	0.08	0.47	0.08	46.3
9	R2	94	23	99	24.5	0.055	4.8	LOS A	0.3	2.5	0.08	0.47	0.08	45.7
Approach		107	24	113	22.4	0.055	4.3	NA	0.3	2.5	0.08	0.47	0.08	45.8
West: Seton Road														
10	L2	117	25	123	21.4	0.066	4.8	LOS A	0.3	2.7	0.05	0.51	0.05	46.0
12	R2	1	0	1	0.0	0.066	5.1	LOS A	0.3	2.7	0.05	0.51	0.05	46.7
Approach		118	25	124	21.2	0.066	4.8	LOS A	0.3	2.7	0.05	0.51	0.05	46.0
All Vehicles		240	51	253	21.3	0.066	4.4	NA	0.3	2.7	0.06	0.47	0.06	46.0

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.
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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

 Site: 105 [Heathcote Road | Seton Road (Site Folder: Post Dev AM Peak - 2023)]

New Site

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 138 seconds (Site User-Given Phase Times)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %	v/c	sec		[Veh. veh	Dist] m				km/h
East: Heathcote Road (E)														
5	T1	704	45	741	6.4	0.506	0.9	LOS A	1.5	11.3	0.04	0.14	0.04	58.7
6	R2	199	31	209	15.6	* 0.506	6.2	LOS A	1.5	11.3	0.04	0.23	0.04	51.7
Approach		903	76	951	8.4	0.506	2.1	LOS A	1.5	11.3	0.04	0.16	0.04	56.7
North: Seton Road														
7	L2	77	22	81	28.6	0.269	56.9	LOS E	4.7	40.8	0.89	0.76	0.89	31.3
9	R2	52	15	55	28.8	* 0.409	72.0	LOS F	3.7	31.9	0.99	0.76	0.99	28.1
Approach		129	37	136	28.7	0.409	63.0	LOS E	4.7	40.8	0.93	0.76	0.93	29.9
West: Heathcote Road (W)														
10	L2	58	9	61	15.5	0.263	6.2	LOS A	0.6	4.5	0.03	0.13	0.03	52.2
11	T1	611	37	643	6.1	* 0.266	0.9	LOS A	0.6	4.7	0.03	0.07	0.03	59.1
Approach		669	46	704	6.9	0.266	1.3	LOS A	0.6	4.7	0.03	0.08	0.03	58.3
All Vehicles		1701	159	1791	9.3	0.506	6.4	LOS A	4.7	40.8	0.10	0.17	0.10	53.1

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.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

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	Input Vol.	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	ped/h	sec		[Ped ped	Dist] m			sec	m	m/sec
East: Heathcote Road (E)												
P2	Full	50	53	63.3	LOS F	0.2	0.2	0.96	0.96	228.8	215.2	0.94
North: Seton Road												
P3	Full	50	53	63.3	LOS F	0.2	0.2	0.96	0.96	226.3	211.9	0.94
West: Heathcote Road (W)												
P4	Full	50	53	63.3	LOS F	0.2	0.2	0.96	0.96	228.8	215.2	0.94
All Pedestrians		0	158	63.3	LOS F	0.2	0.2	0.96	0.96	228.0	214.1	0.94

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 [Newbridge Road (Site Folder: Post Dev AM Peak - 2028)]**

Three-way intersection with 6-lane major road (Stop control)
Site Category: Existing Design
Stop (Two-Way)
Design Life Analysis (Final Year): Results for 5 years

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: Minor Road														
1	L2	53	18	60	34.0	0.400	13.8	LOS A	2.5	21.1	0.71	1.00	0.98	29.6
2	R2	47	8	53	17.0	0.400	49.7	LOS D ¹¹	2.5	21.1	0.71	1.00	0.98	26.9
Approach		100	26	113	26.0	0.400	30.6	LOS C	2.5	21.1	0.71	1.00	0.98	28.4
East: Newbridge Road (E)														
3	L2	98	18	111	18.4	0.247	5.8	LOS A	0.0	0.0	0.00	0.15	0.00	54.9
4	T1	1101	94	1246	8.5	0.247	0.1	LOS A	0.0	0.0	0.00	0.04	0.00	59.5
Approach		1199	112	1357	9.3	0.247	0.5	NA	0.0	0.0	0.00	0.05	0.00	59.3
West: Newbridge Road (W)														
5	T1	1983	130	2244	6.6	0.600	0.3	LOS A	0.0	0.0	0.00	0.00	0.00	59.4
6	R2	94	6	106	6.4	0.306	15.5	LOS B	1.0	7.3	0.71	0.90	0.78	39.6
Approach		2077	136	2350	6.5	0.600	1.0	NA	1.0	7.3	0.03	0.04	0.04	58.6
All Vehicles		3376	274	3820	8.1	0.600	1.7	NA	2.5	21.1	0.04	0.07	0.05	57.8

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.
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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

¹¹ Level of Service is worse than the Level of Service Target specified in the Parameter Settings dialog.

MOVEMENT SUMMARY

▼ Site: 102 [Kelso Crescent | Field Close (Site Folder: Post Dev AM Peak - 2028)]

New Site
Site Category: Existing Design
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 5 years

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
East: Kelso Crescent														
5	T1	9	0	10	0.0	0.094	3.4	LOS A	0.2	2.0	0.18	0.55	0.18	45.4
6	R2	93	24	105	25.8	0.094	5.2	LOS A	0.2	2.0	0.18	0.55	0.18	38.4
Approach		102	24	115	23.5	0.094	5.0	LOS A	0.2	2.0	0.18	0.55	0.18	39.7
North: Minor Road														
7	L2	233	21	264	9.0	0.164	2.2	LOS A	0.0	0.0	0.00	0.47	0.00	43.5
9	R2	20	1	23	5.0	0.164	2.0	LOS A	0.0	0.0	0.00	0.47	0.00	45.5
Approach		253	22	286	8.7	0.164	2.1	NA	0.0	0.0	0.00	0.47	0.00	43.7
West: Field Close														
10	L2	6	2	7	33.3	0.007	4.9	LOS A	0.0	0.1	0.21	0.45	0.21	33.0
11	T1	5	0	6	0.0	0.007	3.9	LOS A	0.0	0.1	0.21	0.45	0.21	45.7
Approach		11	2	12	18.2	0.007	4.4	LOS A	0.0	0.1	0.21	0.45	0.21	39.0
All Vehicles		366	48	414	13.1	0.164	3.0	NA	0.2	2.0	0.06	0.49	0.06	42.2

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.
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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 103 [Kelso Crescent | Iraking Avenue (Site Folder: Post Dev AM Peak - 2028)]

New Site
Site Category: Existing Design
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 5 years

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: RoadName														
1	L2	120	28	136	23.3	0.082	4.8	LOS A	0.4	3.3	0.03	0.51	0.03	46.2
3	R2	9	1	10	11.1	0.082	5.3	LOS A	0.4	3.3	0.03	0.51	0.03	45.9
Approach		129	29	146	22.5	0.082	4.8	LOS A	0.4	3.3	0.03	0.51	0.03	46.2
East: RoadName														
4	L2	7	0	8	0.0	0.008	4.6	LOS A	0.0	0.0	0.00	0.29	0.00	47.8
5	T1	6	1	7	16.7	0.008	0.0	LOS A	0.0	0.0	0.00	0.29	0.00	48.2
Approach		13	1	15	7.7	0.008	2.5	NA	0.0	0.0	0.00	0.29	0.00	48.0
West: RoadName														
11	T1	16	1	18	6.3	0.062	0.0	LOS A	0.3	2.8	0.07	0.46	0.07	47.4
12	R2	96	21	109	21.9	0.062	4.8	LOS A	0.3	2.8	0.07	0.46	0.07	46.1
Approach		112	22	127	19.6	0.062	4.1	NA	0.3	2.8	0.07	0.46	0.07	46.3
All Vehicles		254	52	287	20.5	0.082	4.4	NA	0.4	3.3	0.05	0.48	0.05	46.3

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.
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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

▼ Site: 104 [Iraking Avenue | Seton Road (Site Folder: Post Dev AM Peak - 2028)]

New Site
Site Category: Existing Design
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 5 years

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: Iraking Avenue (S)														
1	L2	6	1	7	16.7	0.010	4.7	LOS A	0.0	0.0	0.00	0.21	0.00	48.4
2	T1	9	1	10	11.1	0.010	0.0	LOS A	0.0	0.0	0.00	0.21	0.00	48.4
Approach		15	2	17	13.3	0.010	1.9	NA	0.0	0.0	0.00	0.21	0.00	48.4
North: Iraking Avenue (N)														
8	T1	13	1	15	7.7	0.060	0.0	LOS A	0.3	2.7	0.08	0.47	0.08	46.3
9	R2	94	23	106	24.5	0.060	4.8	LOS A	0.3	2.7	0.08	0.47	0.08	45.7
Approach		107	24	121	22.4	0.060	4.3	NA	0.3	2.7	0.08	0.47	0.08	45.8
West: Seton Road														
10	L2	117	25	132	21.4	0.071	4.8	LOS A	0.3	2.9	0.05	0.51	0.05	46.0
12	R2	1	0	1	0.0	0.071	5.1	LOS A	0.3	2.9	0.05	0.51	0.05	46.7
Approach		118	25	134	21.2	0.071	4.8	LOS A	0.3	2.9	0.05	0.51	0.05	46.0
All Vehicles		240	51	272	21.3	0.071	4.4	NA	0.3	2.9	0.06	0.47	0.06	46.0

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.
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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

 **Site: 105 [Heathcote Road | Seton Road (Site Folder: Post Dev AM Peak - 2028)]**

New Site

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 138 seconds (Site User-Given Phase Times)

Design Life Analysis (Final Year): Results for 5 years

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
East: Heathcote Road (E)														
5	T1	704	45	797	6.4	0.548	1.0	LOSA	1.7	13.2	0.04	0.14	0.04	58.7
6	R2	199	31	225	15.6	* 0.548	6.2	LOSA	1.7	13.2	0.05	0.23	0.05	51.6
Approach		903	76	1022	8.4	0.548	2.2	LOSA	1.7	13.2	0.04	0.16	0.04	56.7
North: Seton Road														
7	L2	77	22	87	28.6	0.289	57.3	LOS E ¹¹	5.1	44.1	0.90	0.77	0.90	31.3
9	R2	52	15	59	28.8	* 0.439	72.3	LOS F ¹¹	3.9	34.4	0.99	0.76	0.99	28.0
Approach		129	37	146	28.7	0.439	63.3	LOS E ¹¹	5.1	44.1	0.93	0.77	0.93	29.9
West: Heathcote Road (W)														
10	L2	58	9	66	15.5	0.283	6.2	LOSA	0.7	4.9	0.03	0.13	0.03	52.2
11	T1	611	37	691	6.1	* 0.286	0.9	LOSA	0.7	5.2	0.03	0.07	0.03	59.1
Approach		669	46	757	6.9	0.286	1.4	LOSA	0.7	5.2	0.03	0.08	0.03	58.3
All Vehicles		1701	159	1925	9.3	0.548	6.5	LOSA	5.1	44.1	0.10	0.17	0.10	53.1

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.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

¹¹ Level of Service is worse than the Level of Service Target specified in the Parameter Settings dialog.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance												
Mov ID	Crossing	Input Vol.	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	ped/h	sec		[Ped ped	Dist] m			sec	m	m/sec
East: Heathcote Road (E)												
P2	Full	50	58	63.3	LOS F ¹²	0.2	0.2	0.96	0.96	228.8	215.2	0.94
North: Seton Road												
P3	Full	50	58	63.3	LOS F ¹²	0.2	0.2	0.96	0.96	226.3	211.9	0.94
West: Heathcote Road (W)												
P4	Full	50	58	63.3	LOS F ¹²	0.2	0.2	0.96	0.96	228.8	215.2	0.94
All Pedestrians		0	174	63.3	LOS F ¹²	0.2	0.2	0.96	0.96	228.0	214.1	0.94

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.

12 Level of Service is worse than the Pedestrian Level of Service Target specified in the Parameter Settings dialog.

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MOVEMENT SUMMARY

 **Site: 101 [Newbridge Road (Site Folder: Post Dev AM Peak - 2033)]**

Three-way intersection with 6-lane major road (Stop control)
Site Category: Existing Design
Stop (Two-Way)
Design Life Analysis (Final Year): Results for 10 years

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: Minor Road														
1	L2	53	18	64	34.0	0.668	47.0	LOS D ¹¹	5.0	42.5	0.77	1.22	1.60	17.9
2	R2	47	8	57	17.0	0.668	101.9	LOS F ¹¹	5.0	42.5	0.77	1.22	1.60	15.5
Approach		100	26	121	26.0	0.668	72.8	LOS F ¹¹	5.0	42.5	0.77	1.22	1.60	16.8
East: Newbridge Road (E)														
3	L2	98	18	119	18.4	0.265	5.8	LOS A	0.0	0.0	0.00	0.15	0.00	54.9
4	T1	1101	94	1333	8.5	0.265	0.1	LOS A	0.0	0.0	0.00	0.04	0.00	59.5
Approach		1199	112	1451	9.3	0.265	0.5	NA	0.0	0.0	0.00	0.05	0.00	59.3
West: Newbridge Road (W)														
5	T1	1983	130	2400	6.6	0.642	0.4	LOS A	0.0	0.0	0.00	0.00	0.00	59.3
6	R2	94	6	114	6.4	0.345	16.6	LOS B	1.1	8.4	0.74	0.92	0.84	38.6
Approach		2077	136	2514	6.5	0.642	1.1	NA	1.1	8.4	0.03	0.04	0.04	58.4
All Vehicles		3376	274	4087	8.1	0.668	3.0	NA	5.0	42.5	0.04	0.08	0.07	56.4

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.
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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

¹¹ Level of Service is worse than the Level of Service Target specified in the Parameter Settings dialog.

MOVEMENT SUMMARY

▼ Site: 102 [Kelso Crescent | Field Close (Site Folder: Post Dev AM Peak - 2033)]

New Site
Site Category: Existing Design
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 10 years

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
East: Kelso Crescent														
5	T1	9	0	11	0.0	0.101	3.4	LOS A	0.3	2.1	0.19	0.56	0.19	45.3
6	R2	93	24	113	25.8	0.101	5.2	LOS A	0.3	2.1	0.19	0.56	0.19	38.3
Approach		102	24	123	23.5	0.101	5.1	LOS A	0.3	2.1	0.19	0.56	0.19	39.6
North: Minor Road														
7	L2	233	21	282	9.0	0.175	2.2	LOS A	0.0	0.0	0.00	0.47	0.00	43.5
9	R2	20	1	24	5.0	0.175	2.0	LOS A	0.0	0.0	0.00	0.47	0.00	45.5
Approach		253	22	306	8.7	0.175	2.1	NA	0.0	0.0	0.00	0.47	0.00	43.7
West: Field Close														
10	L2	6	2	7	33.3	0.008	4.9	LOS A	0.0	0.2	0.22	0.45	0.22	33.0
11	T1	5	0	6	0.0	0.008	4.0	LOS A	0.0	0.2	0.22	0.45	0.22	45.7
Approach		11	2	13	18.2	0.008	4.5	LOS A	0.0	0.2	0.22	0.45	0.22	38.9
All Vehicles		366	48	443	13.1	0.175	3.0	NA	0.3	2.1	0.06	0.49	0.06	42.2

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.
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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 103 [Kelso Crescent | Iraking Avenue (Site Folder: Post Dev AM Peak - 2033)]

New Site
Site Category: Existing Design
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 10 years

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: RoadName														
1	L2	120	28	145	23.3	0.087	4.8	LOS A	0.4	3.5	0.03	0.51	0.03	46.2
3	R2	9	1	11	11.1	0.087	5.3	LOS A	0.4	3.5	0.03	0.51	0.03	45.9
Approach		129	29	156	22.5	0.087	4.8	LOS A	0.4	3.5	0.03	0.51	0.03	46.2
East: RoadName														
4	L2	7	0	8	0.0	0.009	4.6	LOS A	0.0	0.0	0.00	0.29	0.00	47.8
5	T1	6	1	7	16.7	0.009	0.0	LOS A	0.0	0.0	0.00	0.29	0.00	48.2
Approach		13	1	16	7.7	0.009	2.5	NA	0.0	0.0	0.00	0.29	0.00	48.0
West: RoadName														
11	T1	16	1	19	6.3	0.066	0.0	LOS A	0.4	3.0	0.08	0.46	0.08	47.3
12	R2	96	21	116	21.9	0.066	4.8	LOS A	0.4	3.0	0.08	0.46	0.08	46.1
Approach		112	22	136	19.6	0.066	4.1	NA	0.4	3.0	0.08	0.46	0.08	46.3
All Vehicles		254	52	307	20.5	0.087	4.4	NA	0.4	3.5	0.05	0.48	0.05	46.3

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.
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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

▼ Site: 104 [Iraking Avenue | Seton Road (Site Folder: Post Dev AM Peak - 2033)]

New Site
Site Category: Existing Design
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 10 years

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: Iraking Avenue (S)														
1	L2	6	1	7	16.7	0.010	4.7	LOS A	0.0	0.0	0.00	0.21	0.00	48.4
2	T1	9	1	11	11.1	0.010	0.0	LOS A	0.0	0.0	0.00	0.21	0.00	48.4
Approach		15	2	18	13.3	0.010	1.9	NA	0.0	0.0	0.00	0.21	0.00	48.4
North: Iraking Avenue (N)														
8	T1	13	1	16	7.7	0.064	0.1	LOS A	0.4	2.9	0.09	0.47	0.09	46.3
9	R2	94	23	114	24.5	0.064	4.8	LOS A	0.4	2.9	0.09	0.47	0.09	45.7
Approach		107	24	130	22.4	0.064	4.3	NA	0.4	2.9	0.09	0.47	0.09	45.8
West: Seton Road														
10	L2	117	25	142	21.4	0.076	4.8	LOS A	0.4	3.1	0.05	0.50	0.05	46.0
12	R2	1	0	1	0.0	0.076	5.1	LOS A	0.4	3.1	0.05	0.50	0.05	46.7
Approach		118	25	143	21.2	0.076	4.8	LOS A	0.4	3.1	0.05	0.50	0.05	46.0
All Vehicles		240	51	291	21.3	0.076	4.4	NA	0.4	3.1	0.07	0.47	0.07	46.0

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.
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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

 Site: 105 [Heathcote Road | Seton Road (Site Folder: Post Dev AM Peak - 2033)]

New Site

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 138 seconds (Site User-Given Phase Times)

Design Life Analysis (Final Year): Results for 10 years

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
East: Heathcote Road (E)														
5	T1	704	45	852	6.4	0.591	1.1	LOS A	2.0	15.5	0.04	0.14	0.04	58.7
6	R2	199	31	241	15.6	* 0.591	6.2	LOS A	2.0	15.5	0.05	0.23	0.05	51.6
Approach		903	76	1093	8.4	0.591	2.3	LOS A	2.0	15.5	0.04	0.16	0.04	56.7
North: Seton Road														
7	L2	77	22	93	28.6	0.309	57.6	LOS E ¹¹	5.4	47.4	0.90	0.77	0.90	31.2
9	R2	52	15	63	28.8	* 0.470	72.5	LOS F ¹¹	4.2	36.9	0.99	0.77	0.99	28.0
Approach		129	37	156	28.7	0.470	63.6	LOS E ¹¹	5.4	47.4	0.94	0.77	0.94	29.8
West: Heathcote Road (W)														
10	L2	58	9	70	15.5	0.302	6.2	LOS A	0.7	5.4	0.03	0.13	0.03	52.1
11	T1	611	37	740	6.1	* 0.306	1.0	LOS A	0.8	5.7	0.03	0.07	0.03	59.1
Approach		669	46	810	6.9	0.306	1.5	LOS A	0.8	5.7	0.03	0.08	0.03	58.3
All Vehicles		1701	159	2059	9.3	0.591	6.6	LOS A	5.4	47.4	0.11	0.17	0.11	53.0

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.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

¹¹ Level of Service is worse than the Level of Service Target specified in the Parameter Settings dialog.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance												
Mov ID	Crossing	Input Vol.	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	ped/h	sec		[Ped ped	Dist] m			sec	m	m/sec
East: Heathcote Road (E)												
P2	Full	50	63	63.3	LOS F ¹²	0.2	0.2	0.96	0.96	228.8	215.2	0.94
North: Seton Road												
P3	Full	50	63	63.3	LOS F ¹²	0.2	0.2	0.96	0.96	226.3	211.9	0.94
West: Heathcote Road (W)												
P4	Full	50	63	63.3	LOS F ¹²	0.2	0.2	0.96	0.96	228.8	215.2	0.94
All Pedestrians		0	189	63.3	LOS F ¹²	0.2	0.2	0.96	0.96	228.0	214.1	0.94

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.

12 Level of Service is worse than the Pedestrian Level of Service Target specified in the Parameter Settings dialog.

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MOVEMENT SUMMARY

 **Site: 101 [Newbridge Road (Site Folder: Post Dev PM Peak - 2023)]**

Three-way intersection with 6-lane major road (Stop control)
Site Category: Existing Design
Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: Minor Road														
1	L2	106	5	112	4.7	0.404	10.7	LOS A	3.0	21.9	0.77	1.02	1.07	36.8
2	R2	86	2	91	2.3	0.404	29.9	LOS C	3.0	21.9	0.77	1.02	1.07	33.9
Approach		192	7	202	3.6	0.404	19.3	LOS B	3.0	21.9	0.77	1.02	1.07	35.6
East: Newbridge Road (E)														
3	L2	77	5	81	6.5	0.374	5.7	LOS A	0.0	0.0	0.00	0.07	0.00	56.2
4	T1	1942	77	2044	4.0	0.374	0.1	LOS A	0.0	0.0	0.00	0.02	0.00	59.5
Approach		2019	82	2125	4.1	0.374	0.3	NA	0.0	0.0	0.00	0.02	0.00	59.5
West: Newbridge Road (W)														
5	T1	1583	50	1666	3.2	0.438	0.2	LOS A	0.0	0.0	0.00	0.00	0.00	59.7
6	R2	89	6	94	6.7	0.385	22.2	LOS B	1.2	8.9	0.84	0.96	0.96	34.7
Approach		1672	56	1760	3.3	0.438	1.3	NA	1.2	8.9	0.04	0.05	0.05	58.3
All Vehicles		3883	145	4087	3.7	0.438	1.7	NA	3.0	21.9	0.06	0.08	0.08	57.9

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.
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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

▼ Site: 102 [Kelso Crescent | Field Close (Site Folder: Post Dev PM Peak - 2023)]

New Site
Site Category: Existing Design
Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
East: Kelso Crescent														
5	T1	13	0	14	0.0	0.122	3.3	LOS A	0.3	2.2	0.15	0.54	0.15	45.4
6	R2	149	5	157	3.4	0.122	4.8	LOS A	0.3	2.2	0.15	0.54	0.15	38.6
Approach		162	5	171	3.1	0.122	4.7	LOS A	0.3	2.2	0.15	0.54	0.15	39.7
North: Minor Road														
7	L2	122	8	128	6.6	0.086	2.2	LOS A	0.0	0.0	0.00	0.47	0.00	43.6
9	R2	23	1	24	4.3	0.086	2.0	LOS A	0.0	0.0	0.00	0.47	0.00	45.5
Approach		145	9	153	6.2	0.086	2.1	NA	0.0	0.0	0.00	0.47	0.00	44.1
West: Field Close														
10	L2	25	0	26	0.0	0.025	4.6	LOS A	0.1	0.5	0.15	0.45	0.15	36.6
11	T1	18	1	19	5.6	0.025	3.7	LOS A	0.1	0.5	0.15	0.45	0.15	45.7
Approach		43	1	45	2.3	0.025	4.2	LOS A	0.1	0.5	0.15	0.45	0.15	40.8
All Vehicles		350	15	368	4.3	0.122	3.6	NA	0.3	2.2	0.09	0.50	0.09	41.5

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.
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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

▼ Site: 103 [Kelso Crescent | Iraking Avenue (Site Folder: Post Dev PM Peak - 2023)]

New Site
Site Category: Existing Design
Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: RoadName														
1	L2	96	14	101	14.6	0.052	4.7	LOS A	0.3	2.0	0.03	0.51	0.03	46.3
3	R2	1	0	1	0.0	0.052	5.1	LOS A	0.3	2.0	0.03	0.51	0.03	46.1
Approach		97	14	102	14.4	0.052	4.7	LOS A	0.3	2.0	0.03	0.51	0.03	46.3
East: RoadName														
4	L2	3	1	3	33.3	0.005	4.9	LOS A	0.0	0.0	0.00	0.20	0.00	48.0
5	T1	5	1	5	20.0	0.005	0.0	LOS A	0.0	0.0	0.00	0.20	0.00	49.0
Approach		8	2	8	25.0	0.005	1.8	NA	0.0	0.0	0.00	0.20	0.00	48.6
West: RoadName														
11	T1	2	2	2	100.0	0.060	0.0	LOS A	0.3	2.7	0.05	0.53	0.05	47.0
12	R2	126	15	133	11.9	0.060	4.7	LOS A	0.3	2.7	0.05	0.53	0.05	45.9
Approach		128	17	135	13.3	0.060	4.6	NA	0.3	2.7	0.05	0.53	0.05	45.9
All Vehicles		233	33	245	14.2	0.060	4.6	NA	0.3	2.7	0.04	0.51	0.04	46.2

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.
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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 104 [Iraking Avenue | Seton Road (Site Folder: Post Dev PM Peak - 2023)]

New Site
Site Category: Existing Design
Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: Iraking Avenue (S)														
1	L2	11	0	12	0.0	0.012	4.6	LOS A	0.0	0.0	0.00	0.28	0.00	48.3
2	T1	10	0	11	0.0	0.012	0.0	LOS A	0.0	0.0	0.00	0.28	0.00	47.8
Approach		21	0	22	0.0	0.012	2.4	NA	0.0	0.0	0.00	0.28	0.00	48.1
North: Iraking Avenue (N)														
8	T1	6	1	6	16.7	0.069	0.1	LOS A	0.4	3.0	0.09	0.51	0.09	45.9
9	R2	142	11	149	7.7	0.069	4.7	LOS A	0.4	3.0	0.09	0.51	0.09	45.7
Approach		148	12	156	8.1	0.069	4.5	NA	0.4	3.0	0.09	0.51	0.09	45.7
West: Seton Road														
10	L2	92	12	97	13.0	0.050	4.7	LOS A	0.2	1.9	0.05	0.51	0.05	46.1
12	R2	1	0	1	0.0	0.050	5.2	LOS A	0.2	1.9	0.05	0.51	0.05	46.7
Approach		93	12	98	12.9	0.050	4.7	LOS A	0.2	1.9	0.05	0.51	0.05	46.1
All Vehicles		262	24	276	9.2	0.069	4.4	NA	0.4	3.0	0.07	0.49	0.07	46.1

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.
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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

 **Site: 105 [Heathcote Road | Seton Road (Site Folder: Post Dev PM Peak - 2023)]**

New Site

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 138 seconds (Site User-Given Phase Times)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
East: Heathcote Road (E)														
5	T1	449	29	473	6.5	0.322	0.7	LOS A	0.7	5.2	0.03	0.13	0.03	58.8
6	R2	119	19	125	16.0	* 0.322	6.1	LOS A	0.7	5.2	0.03	0.21	0.03	51.8
Approach		568	48	598	8.5	0.322	1.8	LOS A	0.7	5.2	0.03	0.14	0.03	56.9
North: Seton Road														
7	L2	214	12	225	5.6	0.745	64.0	LOS E	14.5	106.7	0.98	0.86	1.05	30.2
9	R2	124	3	131	2.4	* 0.822	78.9	LOS F	9.5	67.7	1.00	0.91	1.25	27.1
Approach		338	15	356	4.4	0.822	69.5	LOS E	14.5	106.7	0.98	0.88	1.12	29.0
West: Heathcote Road (W)														
10	L2	28	3	29	10.7	0.305	6.2	LOS A	0.8	5.5	0.03	0.07	0.03	52.5
11	T1	776	11	817	1.4	* 0.308	1.3	LOS A	0.8	5.7	0.03	0.05	0.03	59.3
Approach		804	14	846	1.7	0.308	1.5	LOS A	0.8	5.7	0.03	0.05	0.03	59.0
All Vehicles		1710	77	1800	4.5	0.822	15.0	LOS B	14.5	106.7	0.22	0.24	0.25	47.3

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.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

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	Input Vol.	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	ped/h	sec		[Ped ped	Dist] m			sec	m	m/sec
East: Heathcote Road (E)												
P2	Full	50	53	63.3	LOS F	0.2	0.2	0.96	0.96	228.8	215.2	0.94
North: Seton Road												
P3	Full	50	53	63.3	LOS F	0.2	0.2	0.96	0.96	226.3	211.9	0.94
West: Heathcote Road (W)												
P4	Full	50	53	63.3	LOS F	0.2	0.2	0.96	0.96	228.8	215.2	0.94
All Pedestrians		0	158	63.3	LOS F	0.2	0.2	0.96	0.96	228.0	214.1	0.94

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 [Newbridge Road (Site Folder: Post Dev PM Peak - 2028)]**

Three-way intersection with 6-lane major road (Stop control)
Site Category: Existing Design
Stop (Two-Way)
Design Life Analysis (Final Year): Results for 5 years

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: Minor Road														
1	L2	106	5	120	4.7	0.492	15.0	LOS B	4.1	29.9	0.81	1.12	1.33	33.0
2	R2	86	2	97	2.3	0.492	38.0	LOS C	4.1	29.9	0.81	1.12	1.33	30.0
Approach		192	7	217	3.6	0.492	25.3	LOS B	4.1	29.9	0.81	1.12	1.33	31.8
East: Newbridge Road (E)														
3	L2	77	5	87	6.5	0.402	5.7	LOS A	0.0	0.0	0.00	0.07	0.00	56.2
4	T1	1942	77	2198	4.0	0.402	0.1	LOS A	0.0	0.0	0.00	0.02	0.00	59.5
Approach		2019	82	2285	4.1	0.402	0.3	NA	0.0	0.0	0.00	0.02	0.00	59.5
West: Newbridge Road (W)														
5	T1	1583	50	1791	3.2	0.469	0.2	LOS A	0.0	0.0	0.00	0.00	0.00	59.6
6	R2	89	6	101	6.7	0.440	24.3	LOS B	1.4	10.4	0.87	0.98	1.02	33.4
Approach		1672	56	1892	3.3	0.469	1.5	NA	1.4	10.4	0.05	0.05	0.05	58.2
All Vehicles		3883	145	4394	3.7	0.492	2.1	NA	4.1	29.9	0.06	0.09	0.09	57.5

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.
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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

▼ Site: 102 [Kelso Crescent | Field Close (Site Folder: Post Dev PM Peak - 2028)]

New Site
Site Category: Existing Design
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 5 years

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
East: Kelso Crescent														
5	T1	13	0	15	0.0	0.132	3.3	LOS A	0.3	2.4	0.15	0.55	0.15	45.4
6	R2	149	5	169	3.4	0.132	4.9	LOS A	0.3	2.4	0.15	0.55	0.15	38.5
Approach		162	5	183	3.1	0.132	4.7	LOS A	0.3	2.4	0.15	0.55	0.15	39.7
North: Minor Road														
7	L2	122	8	138	6.6	0.092	2.2	LOS A	0.0	0.0	0.00	0.47	0.00	43.6
9	R2	23	1	26	4.3	0.092	2.0	LOS A	0.0	0.0	0.00	0.47	0.00	45.5
Approach		145	9	164	6.2	0.092	2.1	NA	0.0	0.0	0.00	0.47	0.00	44.1
West: Field Close														
10	L2	25	0	28	0.0	0.027	4.6	LOS A	0.1	0.5	0.15	0.45	0.15	36.6
11	T1	18	1	20	5.6	0.027	3.7	LOS A	0.1	0.5	0.15	0.45	0.15	45.6
Approach		43	1	49	2.3	0.027	4.2	LOS A	0.1	0.5	0.15	0.45	0.15	40.7
All Vehicles		350	15	396	4.3	0.132	3.6	NA	0.3	2.4	0.09	0.50	0.09	41.5

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.
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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 103 [Kelso Crescent | Iraking Avenue (Site Folder: Post Dev PM Peak - 2028)]

New Site
Site Category: Existing Design
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 5 years

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: RoadName														
1	L2	96	14	109	14.6	0.056	4.7	LOS A	0.3	2.1	0.03	0.51	0.03	46.3
3	R2	1	0	1	0.0	0.056	5.1	LOS A	0.3	2.1	0.03	0.51	0.03	46.1
Approach		97	14	110	14.4	0.056	4.7	LOS A	0.3	2.1	0.03	0.51	0.03	46.3
East: RoadName														
4	L2	3	1	3	33.3	0.006	4.9	LOS A	0.0	0.0	0.00	0.20	0.00	48.0
5	T1	5	1	6	20.0	0.006	0.0	LOS A	0.0	0.0	0.00	0.20	0.00	49.0
Approach		8	2	9	25.0	0.006	1.8	NA	0.0	0.0	0.00	0.20	0.00	48.6
West: RoadName														
11	T1	2	2	2	100.0	0.065	0.0	LOS A	0.4	2.9	0.06	0.53	0.06	47.0
12	R2	126	15	143	11.9	0.065	4.7	LOS A	0.4	2.9	0.06	0.53	0.06	45.9
Approach		128	17	145	13.3	0.065	4.6	NA	0.4	2.9	0.06	0.53	0.06	45.9
All Vehicles		233	33	264	14.2	0.065	4.6	NA	0.4	2.9	0.05	0.51	0.05	46.2

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.
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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

▼ Site: 104 [Iraking Avenue | Seton Road (Site Folder: Post Dev PM Peak - 2028)]

New Site
Site Category: Existing Design
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 5 years

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: Iraking Avenue (S)														
1	L2	11	0	12	0.0	0.013	4.6	LOS A	0.0	0.0	0.00	0.28	0.00	48.3
2	T1	10	0	11	0.0	0.013	0.0	LOS A	0.0	0.0	0.00	0.28	0.00	47.8
Approach		21	0	24	0.0	0.013	2.4	NA	0.0	0.0	0.00	0.28	0.00	48.1
North: Iraking Avenue (N)														
8	T1	6	1	7	16.7	0.075	0.1	LOS A	0.4	3.2	0.09	0.51	0.09	45.8
9	R2	142	11	161	7.7	0.075	4.7	LOS A	0.4	3.2	0.09	0.51	0.09	45.7
Approach		148	12	167	8.1	0.075	4.5	NA	0.4	3.2	0.09	0.51	0.09	45.7
West: Seton Road														
10	L2	92	12	104	13.0	0.054	4.7	LOS A	0.3	2.0	0.05	0.51	0.05	46.1
12	R2	1	0	1	0.0	0.054	5.3	LOS A	0.3	2.0	0.05	0.51	0.05	46.7
Approach		93	12	105	12.9	0.054	4.7	LOS A	0.3	2.0	0.05	0.51	0.05	46.1
All Vehicles		262	24	296	9.2	0.075	4.4	NA	0.4	3.2	0.07	0.49	0.07	46.0

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.
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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

 **Site: 105 [Heathcote Road | Seton Road (Site Folder: Post Dev PM Peak - 2028)]**

New Site

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 138 seconds (Site User-Given Phase Times)

Design Life Analysis (Final Year): Results for 5 years

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
East: Heathcote Road (E)														
5	T1	449	29	508	6.5	0.350	0.8	LOS A	0.8	5.8	0.03	0.13	0.03	58.8
6	R2	119	19	135	16.0	* 0.350	6.1	LOS A	0.8	5.8	0.03	0.21	0.03	51.8
Approach		568	48	643	8.5	0.350	1.9	LOS A	0.8	5.8	0.03	0.15	0.03	56.9
North: Seton Road														
7	L2	214	12	242	5.6	0.830	69.7	LOS E ¹¹	16.6	122.1	0.99	0.92	1.17	29.1
9	R2	124	3	140	2.4	* 0.884	83.8	LOS F ¹¹	10.6	75.8	1.00	0.96	1.37	26.3
Approach		338	15	382	4.4	0.884	74.9	LOS F ¹¹	16.6	122.1	0.99	0.94	1.24	28.0
West: Heathcote Road (W)														
10	L2	28	3	32	10.7	0.328	6.2	LOS A	0.9	6.1	0.03	0.07	0.03	52.5
11	T1	776	11	878	1.4	* 0.331	1.5	LOS A	0.9	6.3	0.03	0.05	0.03	59.3
Approach		804	14	910	1.7	0.331	1.6	LOS A	0.9	6.3	0.03	0.05	0.03	59.0
All Vehicles		1710	77	1935	4.5	0.884	16.2	LOS B	16.6	122.1	0.22	0.26	0.27	46.7

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.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

¹¹ Level of Service is worse than the Level of Service Target specified in the Parameter Settings dialog.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance												
Mov ID	Crossing	Input Vol.	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	ped/h	sec		[Ped ped	Dist] m			sec	m	m/sec
East: Heathcote Road (E)												
P2	Full	50	58	63.3	LOS F ¹²	0.2	0.2	0.96	0.96	228.8	215.2	0.94
North: Seton Road												
P3	Full	50	58	63.3	LOS F ¹²	0.2	0.2	0.96	0.96	226.3	211.9	0.94
West: Heathcote Road (W)												
P4	Full	50	58	63.3	LOS F ¹²	0.2	0.2	0.96	0.96	228.8	215.2	0.94
All Pedestrians		0	174	63.3	LOS F ¹²	0.2	0.2	0.96	0.96	228.0	214.1	0.94

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.

12 Level of Service is worse than the Pedestrian Level of Service Target specified in the Parameter Settings dialog.

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MOVEMENT SUMMARY

 **Site: 101 [Newbridge Road (Site Folder: Post Dev PM Peak - 2033)]**

Three-way intersection with 6-lane major road (Stop control)
Site Category: Existing Design
Stop (Two-Way)
Design Life Analysis (Final Year): Results for 10 years

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: Minor Road														
1	L2	106	5	128	4.7	0.677	29.8	LOS C	6.7	48.4	0.84	1.35	1.91	25.2
2	R2	86	2	104	2.3	0.677	60.0	LOS E ¹¹	6.7	48.4	0.84	1.35	1.91	22.2
Approach		192	7	232	3.6	0.677	43.3	LOS D ¹¹	6.7	48.4	0.84	1.35	1.91	23.9
East: Newbridge Road (E)														
3	L2	77	5	93	6.5	0.430	5.7	LOS A	0.0	0.0	0.00	0.07	0.00	56.1
4	T1	1942	77	2351	4.0	0.430	0.1	LOS A	0.0	0.0	0.00	0.02	0.00	59.5
Approach		2019	82	2444	4.1	0.430	0.3	NA	0.0	0.0	0.00	0.02	0.00	59.4
West: Newbridge Road (W)														
5	T1	1583	50	1916	3.2	0.502	0.2	LOS A	0.0	0.0	0.00	0.00	0.00	59.6
6	R2	89	6	108	6.7	0.498	26.4	LOS B	1.6	12.0	0.89	1.00	1.08	32.2
Approach		1672	56	2024	3.3	0.502	1.6	NA	1.6	12.0	0.05	0.05	0.06	58.0
All Vehicles		3883	145	4700	3.7	0.677	3.0	NA	6.7	48.4	0.06	0.10	0.12	56.5

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.
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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

¹¹ Level of Service is worse than the Level of Service Target specified in the Parameter Settings dialog.

MOVEMENT SUMMARY

▼ Site: 102 [Kelso Crescent | Field Close (Site Folder: Post Dev PM Peak - 2033)]

New Site
Site Category: Existing Design
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 10 years

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
East: Kelso Crescent														
5	T1	13	0	16	0.0	0.142	3.3	LOS A	0.4	2.6	0.16	0.55	0.16	45.4
6	R2	149	5	180	3.4	0.142	4.9	LOS A	0.4	2.6	0.16	0.55	0.16	38.5
Approach		162	5	196	3.1	0.142	4.8	LOS A	0.4	2.6	0.16	0.55	0.16	39.6
North: Minor Road														
7	L2	122	8	148	6.6	0.099	2.2	LOS A	0.0	0.0	0.00	0.47	0.00	43.6
9	R2	23	1	28	4.3	0.099	2.0	LOS A	0.0	0.0	0.00	0.47	0.00	45.5
Approach		145	9	176	6.2	0.099	2.1	NA	0.0	0.0	0.00	0.47	0.00	44.1
West: Field Close														
10	L2	25	0	30	0.0	0.029	4.6	LOS A	0.1	0.5	0.16	0.45	0.16	36.5
11	T1	18	1	22	5.6	0.029	3.7	LOS A	0.1	0.5	0.16	0.45	0.16	45.6
Approach		43	1	52	2.3	0.029	4.2	LOS A	0.1	0.5	0.16	0.45	0.16	40.7
All Vehicles		350	15	424	4.3	0.142	3.6	NA	0.4	2.6	0.09	0.50	0.09	41.4

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.
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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 103 [Kelso Crescent | Iraking Avenue (Site Folder: Post Dev PM Peak - 2033)]

New Site
Site Category: Existing Design
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 10 years

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: RoadName														
1	L2	96	14	116	14.6	0.060	4.7	LOS A	0.3	2.3	0.04	0.51	0.04	46.3
3	R2	1	0	1	0.0	0.060	5.2	LOS A	0.3	2.3	0.04	0.51	0.04	46.1
Approach		97	14	117	14.4	0.060	4.7	LOS A	0.3	2.3	0.04	0.51	0.04	46.3
East: RoadName														
4	L2	3	1	4	33.3	0.006	4.9	LOS A	0.0	0.0	0.00	0.20	0.00	48.0
5	T1	5	1	6	20.0	0.006	0.0	LOS A	0.0	0.0	0.00	0.20	0.00	49.0
Approach		8	2	10	25.0	0.006	1.8	NA	0.0	0.0	0.00	0.20	0.00	48.6
West: RoadName														
11	T1	2	2	2	100.0	0.069	0.0	LOS A	0.4	3.1	0.06	0.53	0.06	47.0
12	R2	126	15	153	11.9	0.069	4.7	LOS A	0.4	3.1	0.06	0.53	0.06	45.9
Approach		128	17	155	13.3	0.069	4.6	NA	0.4	3.1	0.06	0.53	0.06	45.9
All Vehicles		233	33	282	14.2	0.069	4.6	NA	0.4	3.1	0.05	0.51	0.05	46.2

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.
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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

▼ Site: 104 [Iraking Avenue | Seton Road (Site Folder: Post Dev PM Peak - 2033)]

New Site
Site Category: Existing Design
Give-Way (Two-Way)
Design Life Analysis (Final Year): Results for 10 years

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: Iraking Avenue (S)														
1	L2	11	0	13	0.0	0.013	4.6	LOS A	0.0	0.0	0.00	0.28	0.00	48.3
2	T1	10	0	12	0.0	0.013	0.0	LOS A	0.0	0.0	0.00	0.28	0.00	47.8
Approach		21	0	25	0.0	0.013	2.4	NA	0.0	0.0	0.00	0.28	0.00	48.1
North: Iraking Avenue (N)														
8	T1	6	1	7	16.7	0.080	0.1	LOS A	0.5	3.4	0.10	0.50	0.10	45.8
9	R2	142	11	172	7.7	0.080	4.7	LOS A	0.5	3.4	0.10	0.50	0.10	45.7
Approach		148	12	179	8.1	0.080	4.5	NA	0.5	3.4	0.10	0.50	0.10	45.7
West: Seton Road														
10	L2	92	12	111	13.0	0.058	4.7	LOS A	0.3	2.2	0.05	0.51	0.05	46.1
12	R2	1	0	1	0.0	0.058	5.3	LOS A	0.3	2.2	0.05	0.51	0.05	46.7
Approach		93	12	113	12.9	0.058	4.7	LOS A	0.3	2.2	0.05	0.51	0.05	46.1
All Vehicles		262	24	317	9.2	0.080	4.4	NA	0.5	3.4	0.07	0.49	0.07	46.0

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.
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).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

 Site: 105 [Heathcote Road | Seton Road (Site Folder: Post Dev PM Peak - 2033)]

New Site

Site Category: Existing Design

Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 138 seconds (Site User-Given Phase Times)

Design Life Analysis (Final Year): Results for 10 years

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
East: Heathcote Road (E)														
5	T1	449	29	544	6.5	0.377	0.8	LOS A	0.8	6.4	0.03	0.13	0.03	58.8
6	R2	119	19	144	16.0	* 0.377	6.1	LOS A	0.8	6.4	0.03	0.21	0.03	51.7
Approach		568	48	688	8.5	0.377	1.9	LOS A	0.8	6.4	0.03	0.15	0.03	56.9
North: Seton Road														
7	L2	214	12	259	5.6	0.902	80.0	LOS F ¹¹	19.5	142.9	1.00	0.99	1.32	27.4
9	R2	124	3	150	2.4	* 0.946	94.6	LOS F ¹¹	12.2	87.5	1.00	1.04	1.53	24.7
Approach		338	15	409	4.4	0.946	85.3	LOS F ¹¹	19.5	142.9	1.00	1.01	1.40	26.3
West: Heathcote Road (W)														
10	L2	28	3	34	10.7	0.351	6.2	LOS A	1.0	6.8	0.03	0.07	0.03	52.5
11	T1	776	11	939	1.4	* 0.354	1.6	LOS A	1.0	7.0	0.03	0.05	0.03	59.3
Approach		804	14	973	1.7	0.354	1.8	LOS A	1.0	7.0	0.03	0.05	0.03	59.0
All Vehicles		1710	77	2070	4.5	0.946	18.4	LOS B	19.5	142.9	0.22	0.27	0.30	45.6

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.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: SIDRA Standard.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

¹¹ Level of Service is worse than the Level of Service Target specified in the Parameter Settings dialog.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance												
Mov ID	Crossing	Input Vol.	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	ped/h	sec		[Ped ped	Dist] m			sec	m	m/sec
East: Heathcote Road (E)												
P2	Full	50	63	63.3	LOS F ¹²	0.2	0.2	0.96	0.96	228.8	215.2	0.94
North: Seton Road												
P3	Full	50	63	63.3	LOS F ¹²	0.2	0.2	0.96	0.96	226.3	211.9	0.94
West: Heathcote Road (W)												
P4	Full	50	63	63.3	LOS F ¹²	0.2	0.2	0.96	0.96	228.8	215.2	0.94
All Pedestrians		0	189	63.3	LOS F ¹²	0.2	0.2	0.96	0.96	228.0	214.1	0.94

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.

12 Level of Service is worse than the Pedestrian Level of Service Target specified in the Parameter Settings dialog.

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Organisation: GENESIS TRAFFIC | Licence: NETWORK / 1PC | Processed: Thursday, 7 September 2023 2:33:13 PM
Project: G:\2023\23016 - 20 Kelso Crescent, Moorebank\Model\20 Kelso Crescent, Moorebank 07092023.sip9



Attachment 3

Architectural Plans





Development Summary	
5-Sep-23	
SSDA Submission	
	(sqm)
TOTAL SITE AREA	35,190
TOTAL GROSS LETTABLE AREA (GLA)	
	37,800
TOTAL GROSS FLOOR AREA (GFA)*	
	34,410
SITE COVERAGE (FSR)	
	107%
FLOOR AREA SUMMARY	
Warehouse 1 (sqm)	5,700
Office 1 (sqm)	500
Lobby 1	155
Warehouse 2 (sqm)	5,820
Mezz. Office 2 (sqm)	350
Lobby 2	100
Warehouse 3 (sqm)	5,820
Mezz. Office 3 (sqm)	350
Lobby 3	100
Warehouse 4 (sqm)	11,530
Office 4a (sqm)	500
Lobby 4a	155
Mezz. Office 4b (sqm)	350
Lobby 4b	100
Warehouse 5 (sqm)	5,820
Mezz. Office 5 (sqm)	350
Lobby 5	100
TOTALS	
TOTAL WAREHOUSE GLA	34,690
TOTAL OFFICE GLA	2,400
TOTAL LOBBY	710
TOTAL GLA	
	37,800
TOTAL HEAVY DUTY PAVING AREA	
	19,750
TOTAL LIGHT DUTY PAVING AREA	
	7,300
TOTAL LANDSCAPE AREA	
	3,560
LANDSCAPE SITE COVERAGE %	
	10.1%
TOTAL CAR PARKS REQUIRED	
	180
TOTAL CAR PARKS PROVIDED	
	180
NOTE:	
1. Gross Lettable Area (GLA) as defined by PCA Method of Measurement	
2. Gross Floor Area (GFA) indicative only. Equal to total GLA less total internal Loading Area.	
3. Minimum 10% landscape area required to comply with Liverpool City Council DCP	
4. Minimum required car parking quantities to be confirmed with planner. Concept ratios based on:	
- 1 per 300m2 Warehouse GFA	
- 1 per 40m2 Office GFA	

1 SITE PLAN
SCALE 1:1500 @ A1

Client

maple^{tree}

Project Name
MARVEL MOOREBANK

Project Address
20 KELSO CRES., MOOREBANK NSW 2170

Drawing Title:
SITE PLAN

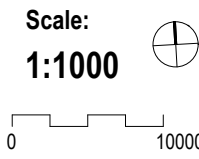
Date:
5.09.2023

Sheet Size:
A1

Scale:
1:1000

Drawing Number:
12865_DA-101

Issue:
[C]



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1
301

2
301

3
301

1
301

2
301

3
301

LEGEND

WAREHOUSE

OFFICE

HARDSTAND

CAR PARK

SERVICES

OUTDOOR REC. AREA

1

BASEMENT FLOOR

SCALE 1:500 @ A1

Rev 05, 2023 - 7.1 (pm) 11/12/2023 Project Marvel Moorebank/CAD/12865_Da-111.dwg

Client

maple*tree*

Project Name

MARVEL MOOREBANK

Project Address

20 KELSO CRES., MOOREBANK NSW 2170

Drawing Title:

BASEMENT FLOOR PLAN

Date:05.09.2023

Sheet Size:A1

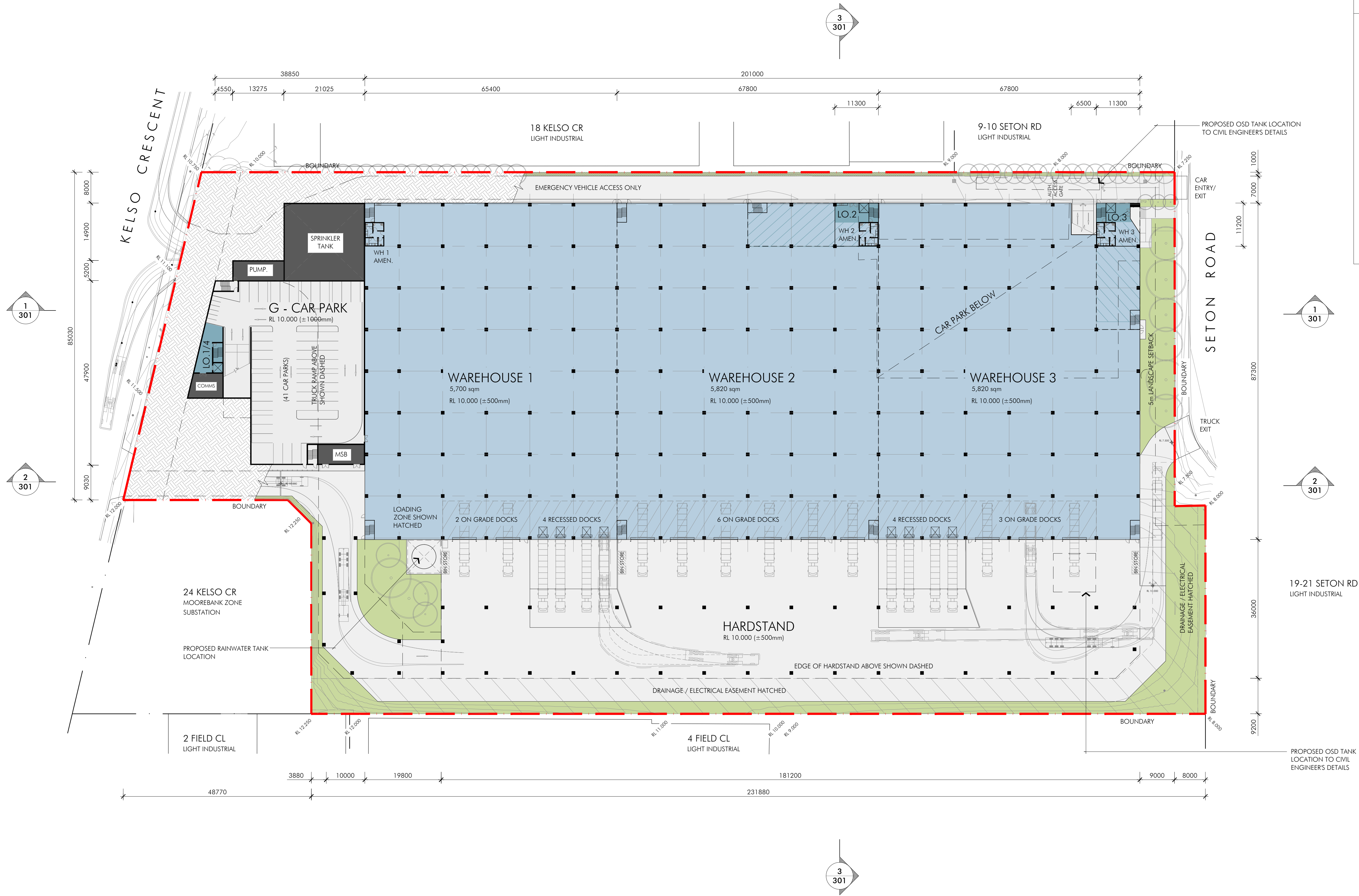
Scale:1:500

Drawing Number:12865_DA-111

Issue:[C]

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LEGEND

WAREHOUSE

OFFICE

HARDSTAND

CAR PARK

SERVICES

OUTDOOR REC. AREA

1

GROUND FLOOR

SCALE 1:500 @ A1

Project Name

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Project Address

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Drawing Title:

GROUND FLOOR PLAN

Date:

05.09.2023

Sheet Size:

A1

Scale:

1:500

Drawing Number:

12865_DA-112

Issue:

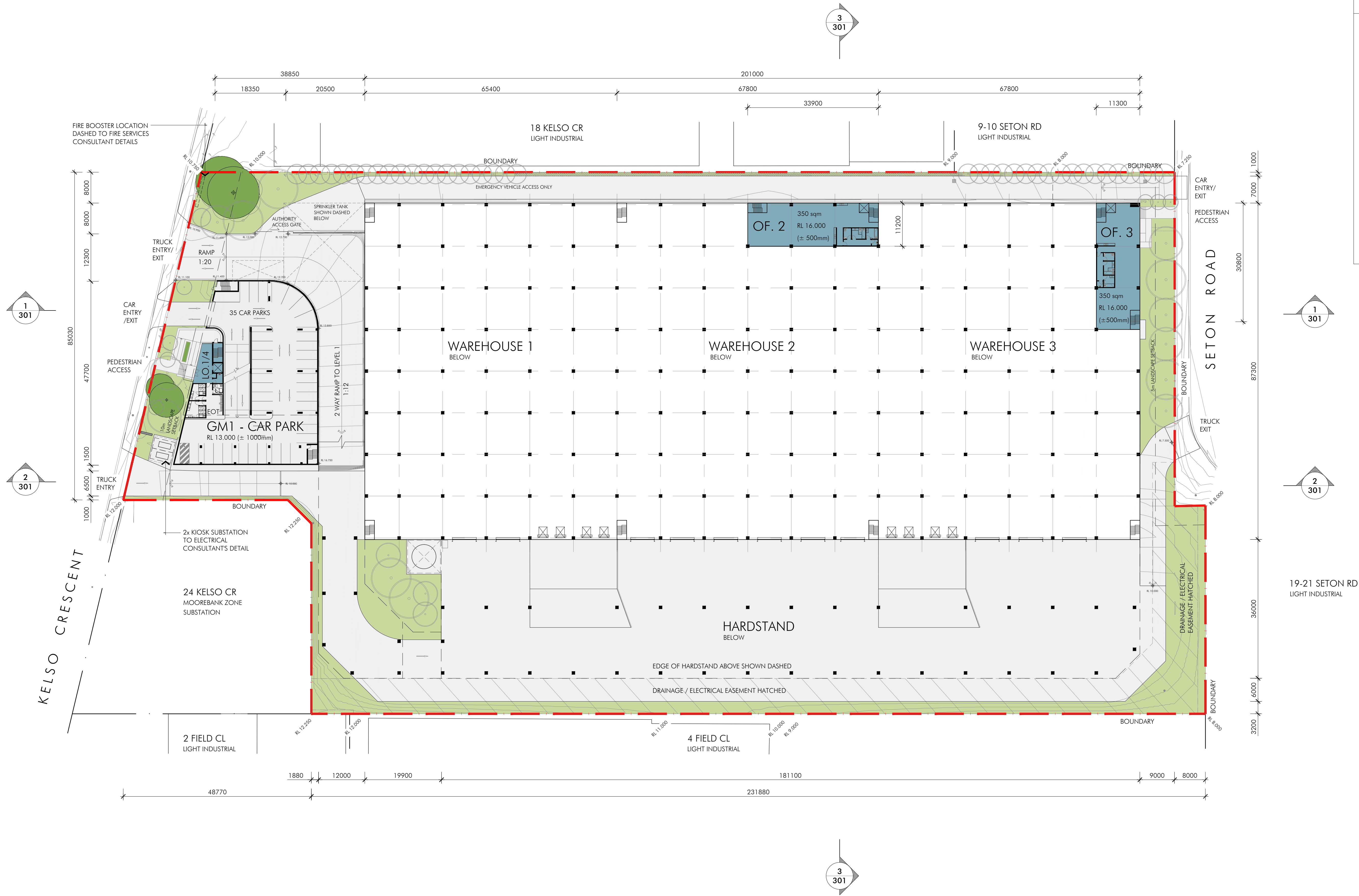
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mapleiree

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Plot 05, 2023 - 8.35km N/A 12865 Project Marvel Moorebank3 CAD12865.dwg 1:12.dwg



LEGEND

- WAREHOUSE
- OFFICE
- HARDSTAND
- CAR PARK
- SERVICES
- OUTDOOR REC. AREA

1
GROUND FLOOR MEZZANINE
SCALE 1:500 @ A1

Project Name
MARVEL MOOREBANK

Project Address
20 KELSO CRES., MOOREBANK NSW 2170

Drawing Title:
GROUND FLOOR MEZ. PLAN

Date:
05.09.2023

Sheet Size:
A1

Scale:
1:500

Drawing Number:
12865_DA-113

Issue:
[C]

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Plot 20, 2023 - 8.48km x 11.12865 Project Marvel Moorebank CAD12865 DA-114.dwg

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Project Name

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Project Address

20 KELSO CRES., MOOREBANK NSW 2170

Drawing Title:

LEVEL 1 FLOOR PLAN

Date:

05.09.2023

Sheet Size:

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Scale:

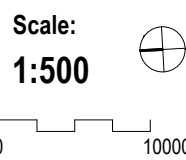
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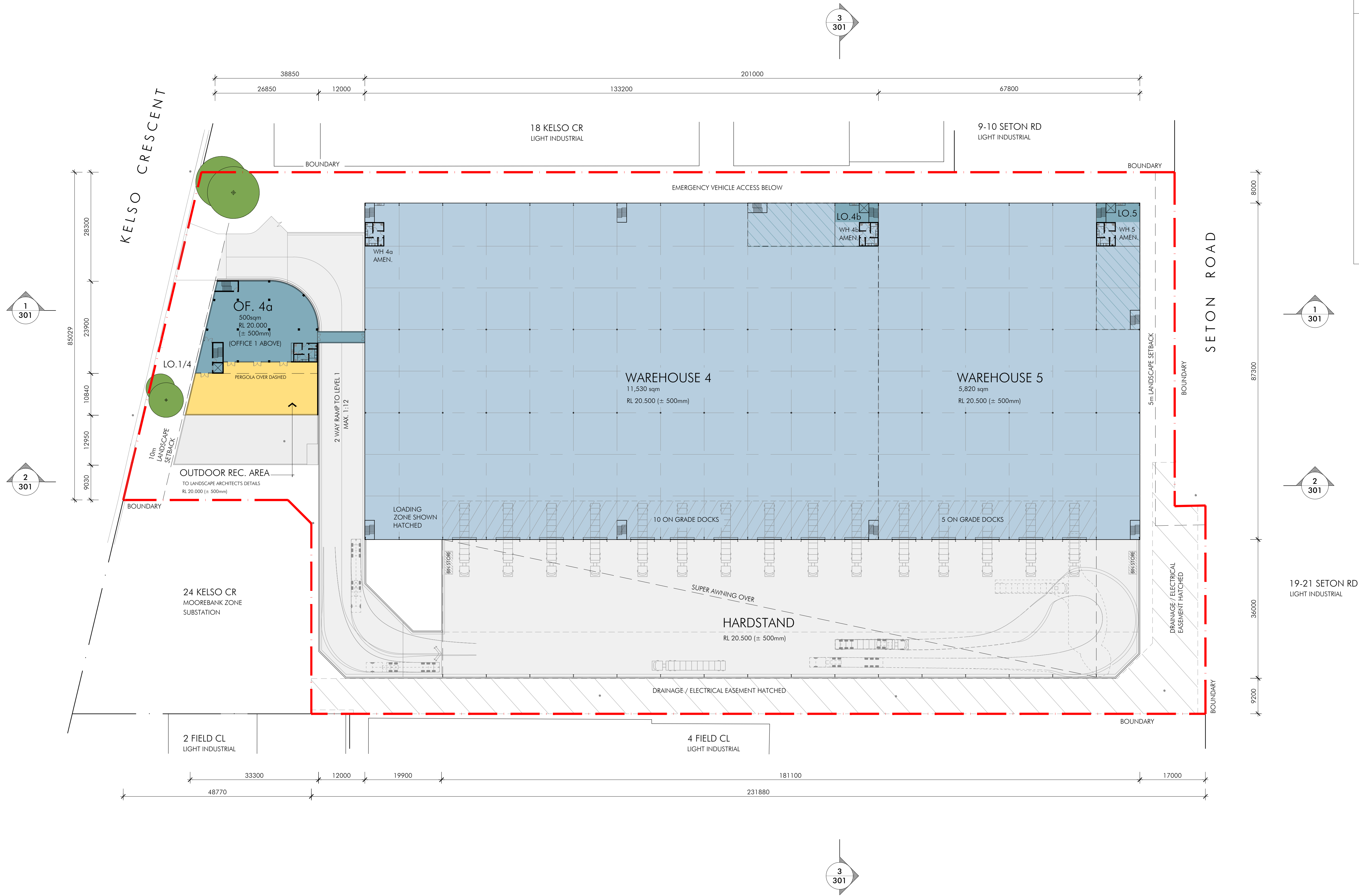
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LEGEND

- WAREHOUSE
- OFFICE
- HARDSTAND
- CAR PARK
- SERVICES
- OUTDOOR REC. AREA

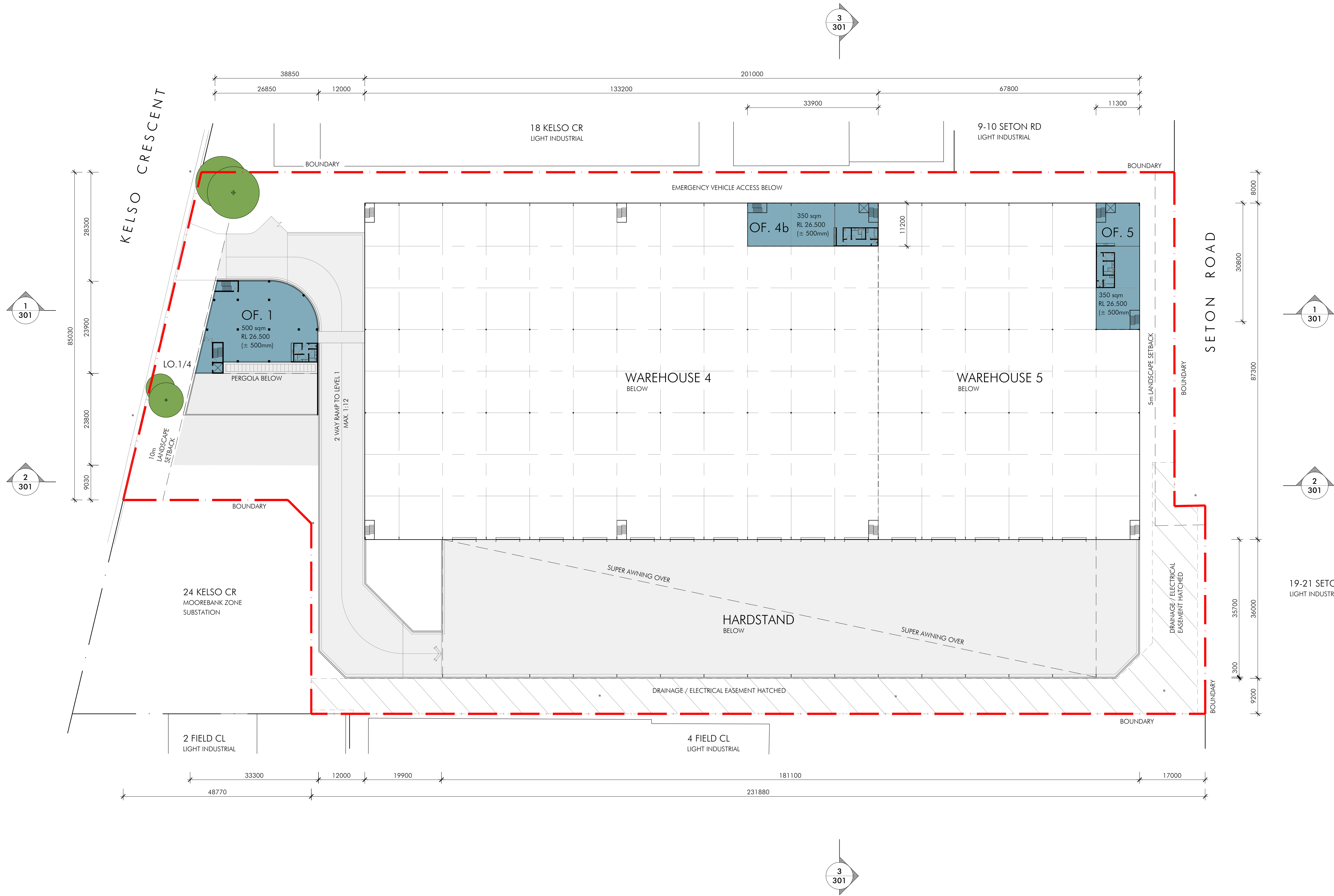


1

LEVEL 1

SCALE 1:500 @ A1

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LEGEND

WAREHOUSE

OFFICE

HARDSTAND

CAR PARK

SERVICES

OUTDOOR REC. AREA

1

LEVEL 1 MEZZANINE

SCALE 1:500 @ A1

Client

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Project Name

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Project Address

20 KELSO CRES., MOOREBANK NSW 2170

Drawing Title:

LEVEL 1 MEZ. FLOOR PLAN

Date:

5.09.2023

Sheet Size:

A1

Scale:

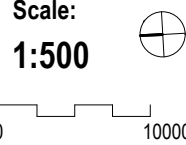
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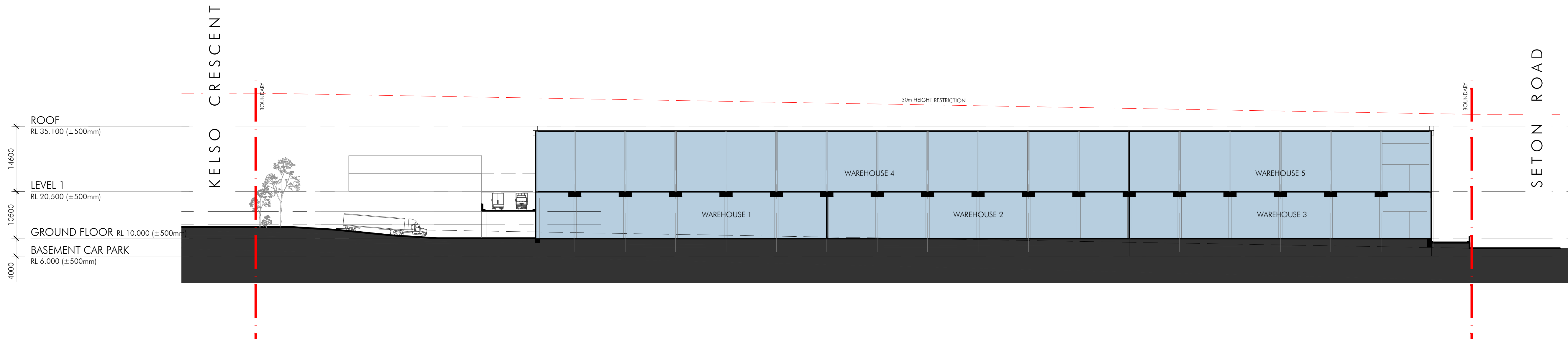
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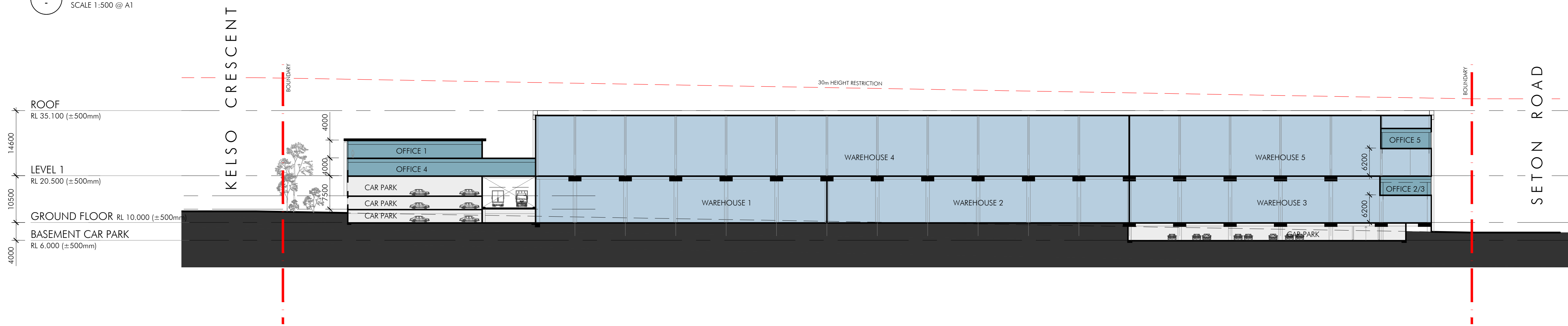


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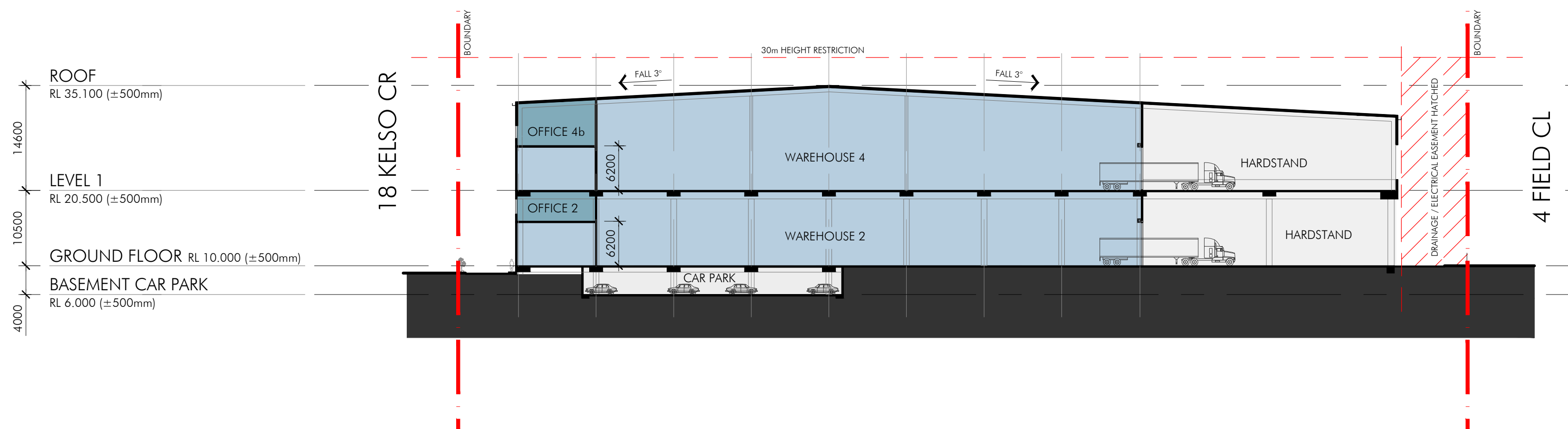
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1 SECTION 1
SCALE 1:500 @ A1



2 SECTION 2
SCALE 1:500 @ A1



3 SECTION 3
SCALE 1:500 @ A1

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Project Address
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Drawing Title:
BUILDING SECTIONS

Date: **5.09.2023** Sheet Size: **A1** Scale: **1:500**

Drawing Number: **12865_DA-301** Issue: **[C]**

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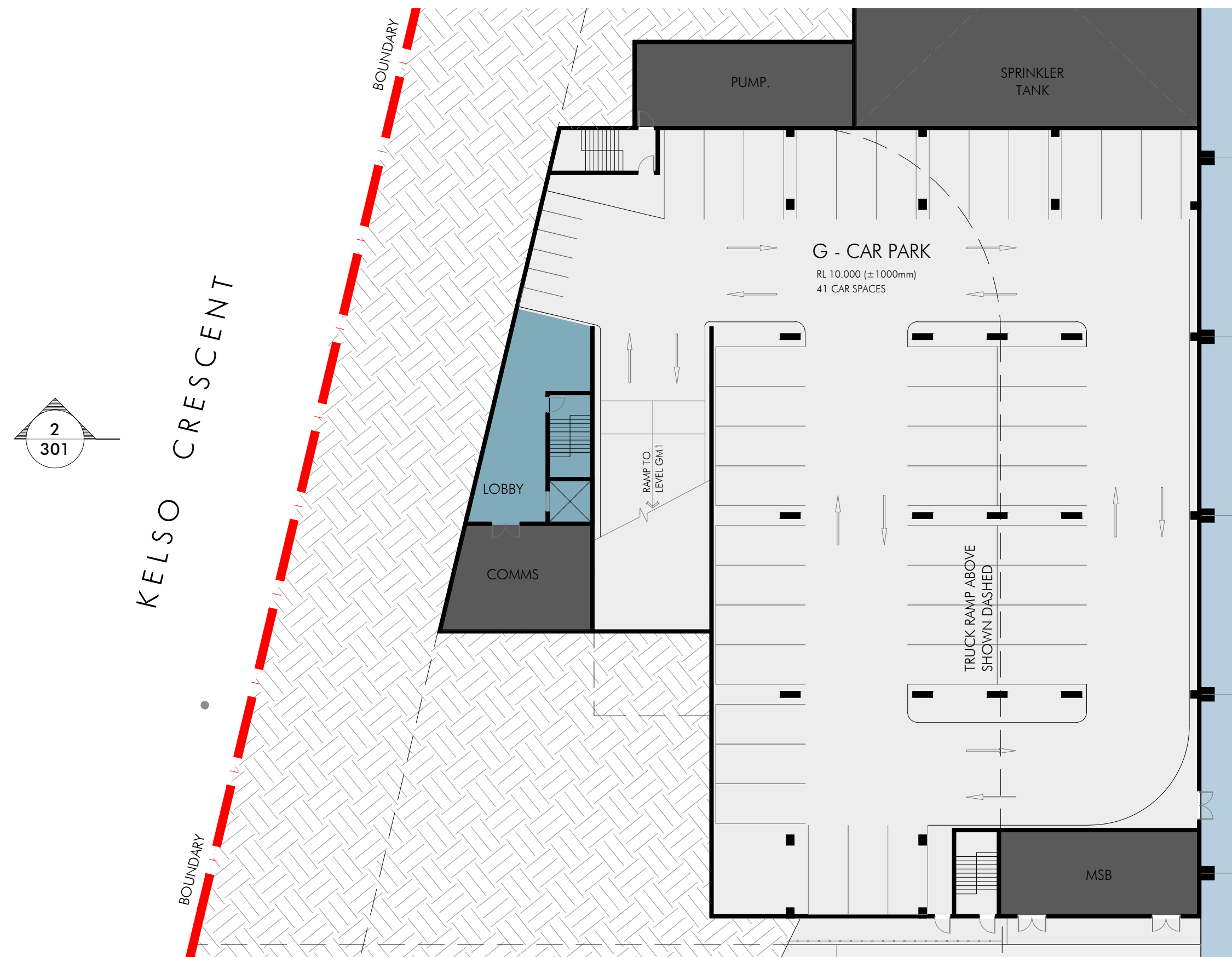
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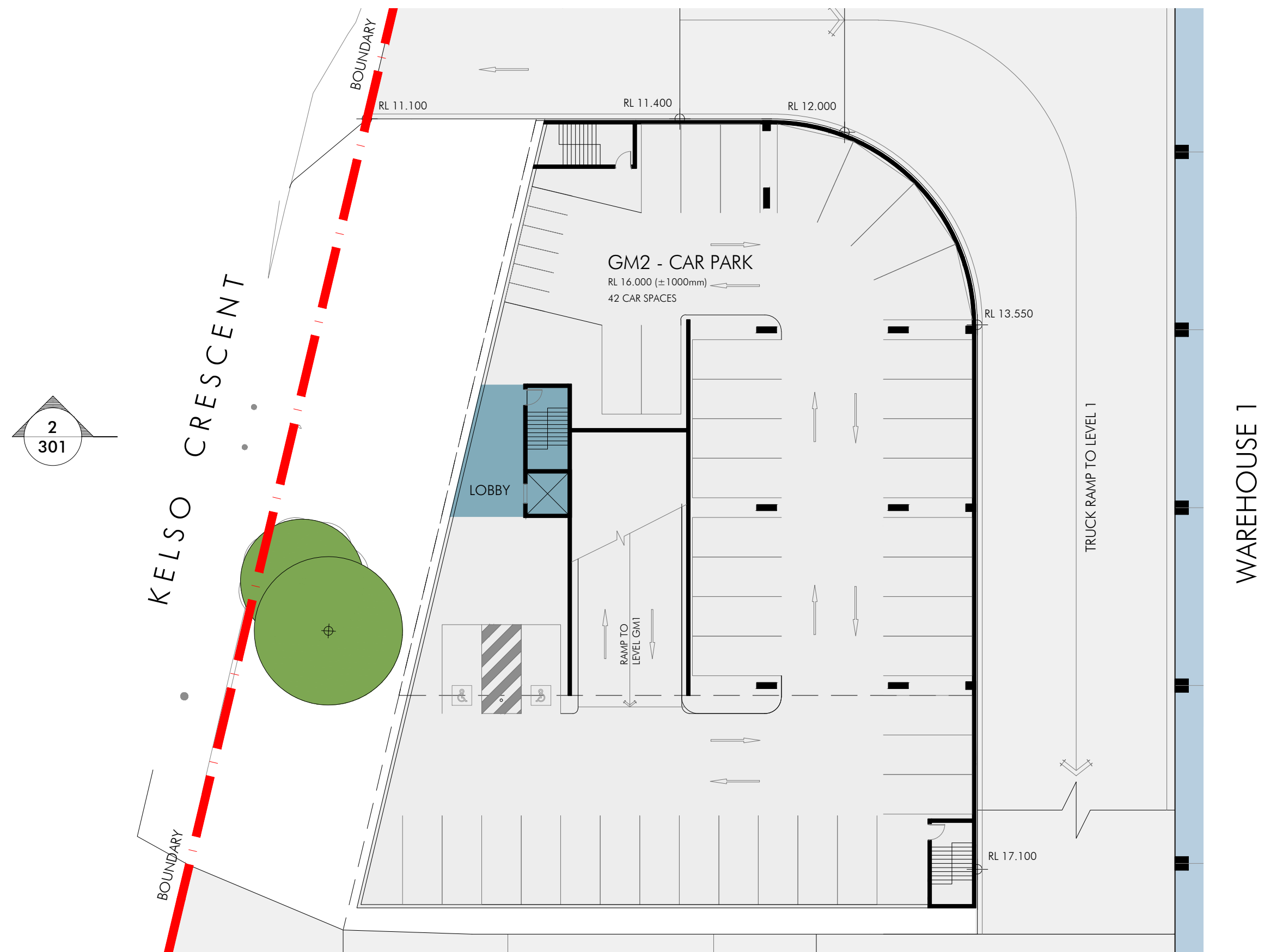
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GROUND FLOOR - MEZZANINE 1
SCALE 1:250 @ A1



4
LEVEL 1
SCALE 1:250 @ A1



1
GROUND FLOOR
SCALE 1:250 @ A1



3
GROUND FLOOR - MEZZANINE 2
SCALE 1:250 @ A1

LEGEND	
	WAREHOUSE
	OFFICE
	HARDSTAND
	CAR PARK
	SERVICES
	OUTDOOR REC. AREA

Rev 05, 2023 - 7.45pm 11/12/2023 Project Marvel Moorebank CAD12865_DA-501.dwg

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Project Name
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Project Address
20 KELSO CRES., MOOREBANK NSW 2170

Drawing Title:
KELSO CR. CAR PARK LAYOUT

Date:
05.09.2023

Sheet Size:
A1

Scale:
1:250

Drawing Number:
12865_DA-501

Issue:
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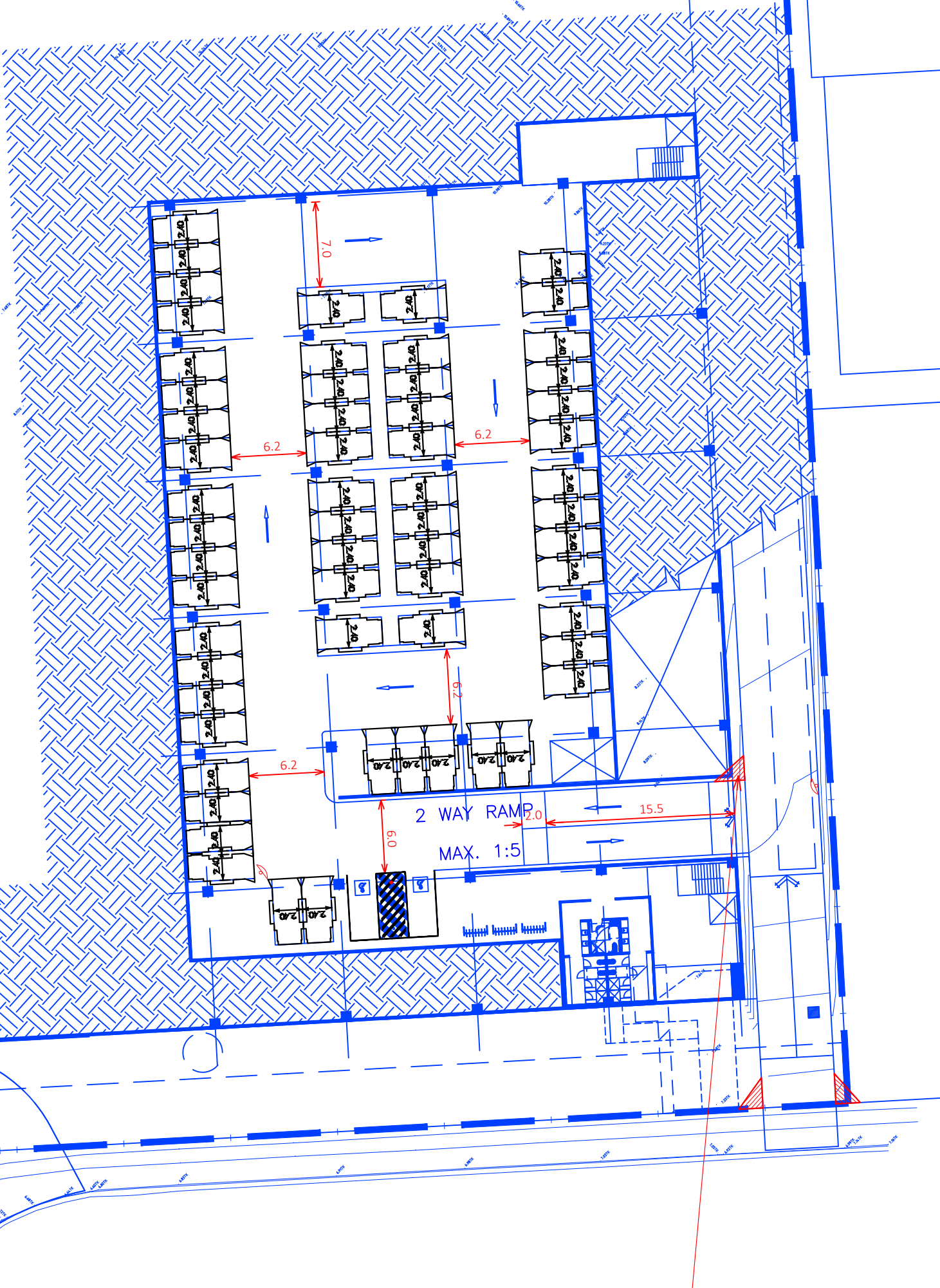
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Attachment 4

Turning Path Assessment





20 KELSO CRESCENT, MOOREBANK
BASEMENT LEVEL
SWEEP PATH ASSESSMENT

DRAWING REF NO. 23016-V1.6-SP SHEET NO. 01 OF 15 ISSUE DATE 8 September 2023

DESIGNED BY
N.BORJA / L.NG
REVIEWED BY
B.LO

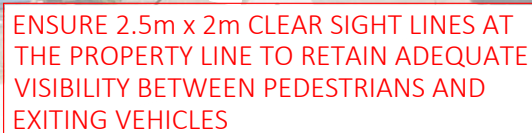
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PRELIMINARY PLAN
FOR DISCUSSION PURPOSES
ONLY SUBJECT TO CHANGE
WITHOUT NOTIFICATION

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



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DRAWING REF NO.23016-V1.6-SP

SHEET NO. 02 OF 15

ISSUE DATE 8 September 2023

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SCALE 0 10.0 20.0 1:1000

WARNING

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20 KELSO CRESCENT, MOOREBANK
GROUND MEZZANINE FLOOR
CAR PARK DESIGN ASSESSMENT

DRAWING REF NO. 23016-V1.6-SP

SHEET NO. 03 OF 15

ISSUE DATE 8 September 2023

DESIGNED BY
N.BORJA / L.NG

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B.LO

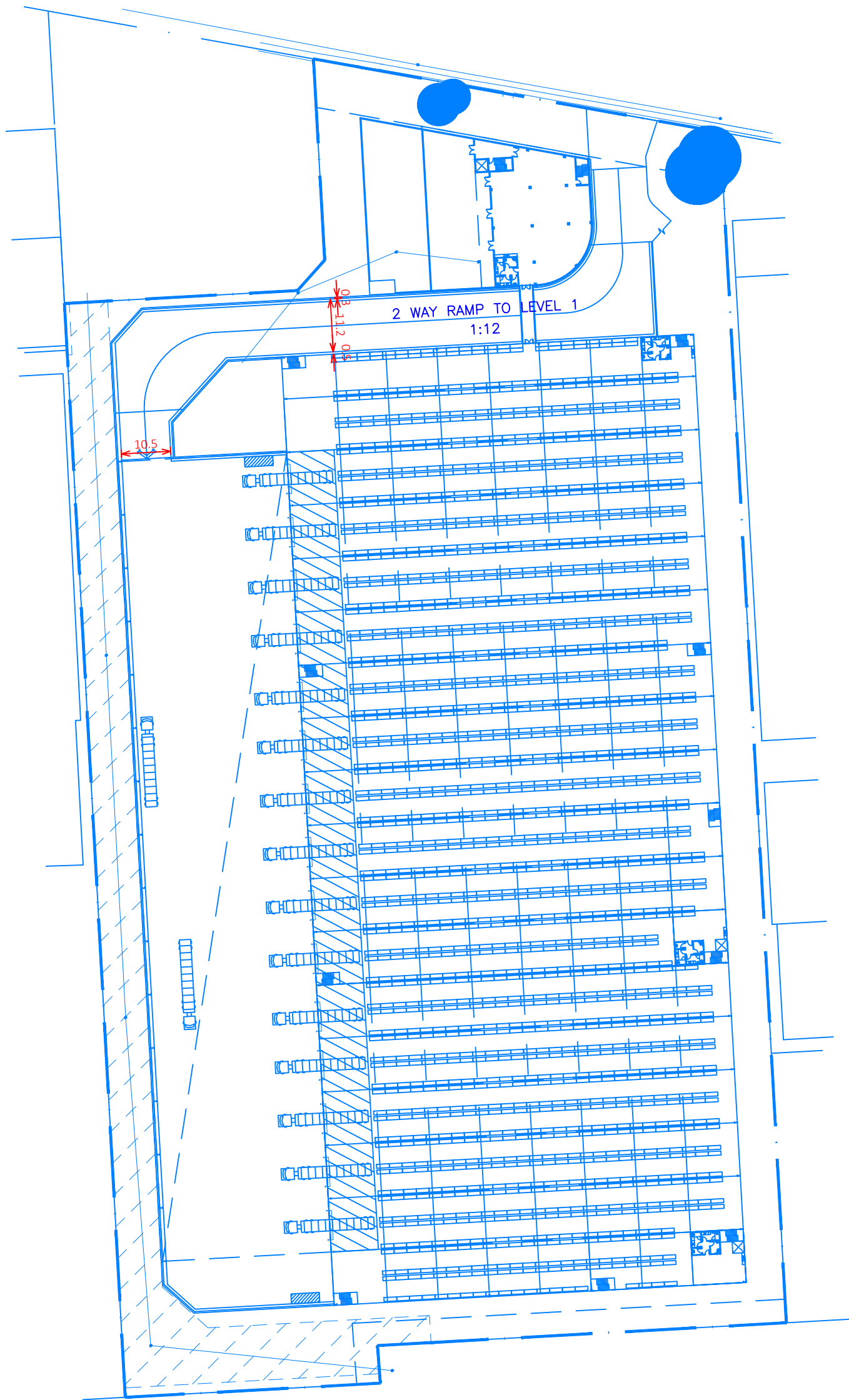
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20 KELSO CRESCENT, MOOREBANK
LEVEL 1

CAR PARK DESIGN ASSESSMENT

DRAWING REF NO. 23016-V1.6-SP

SHEET NO. 04 OF 15

ISSUE DATE 8 September 2023

DESIGNED BY
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SCALE
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PRELIMINARY PLAN

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WARNING

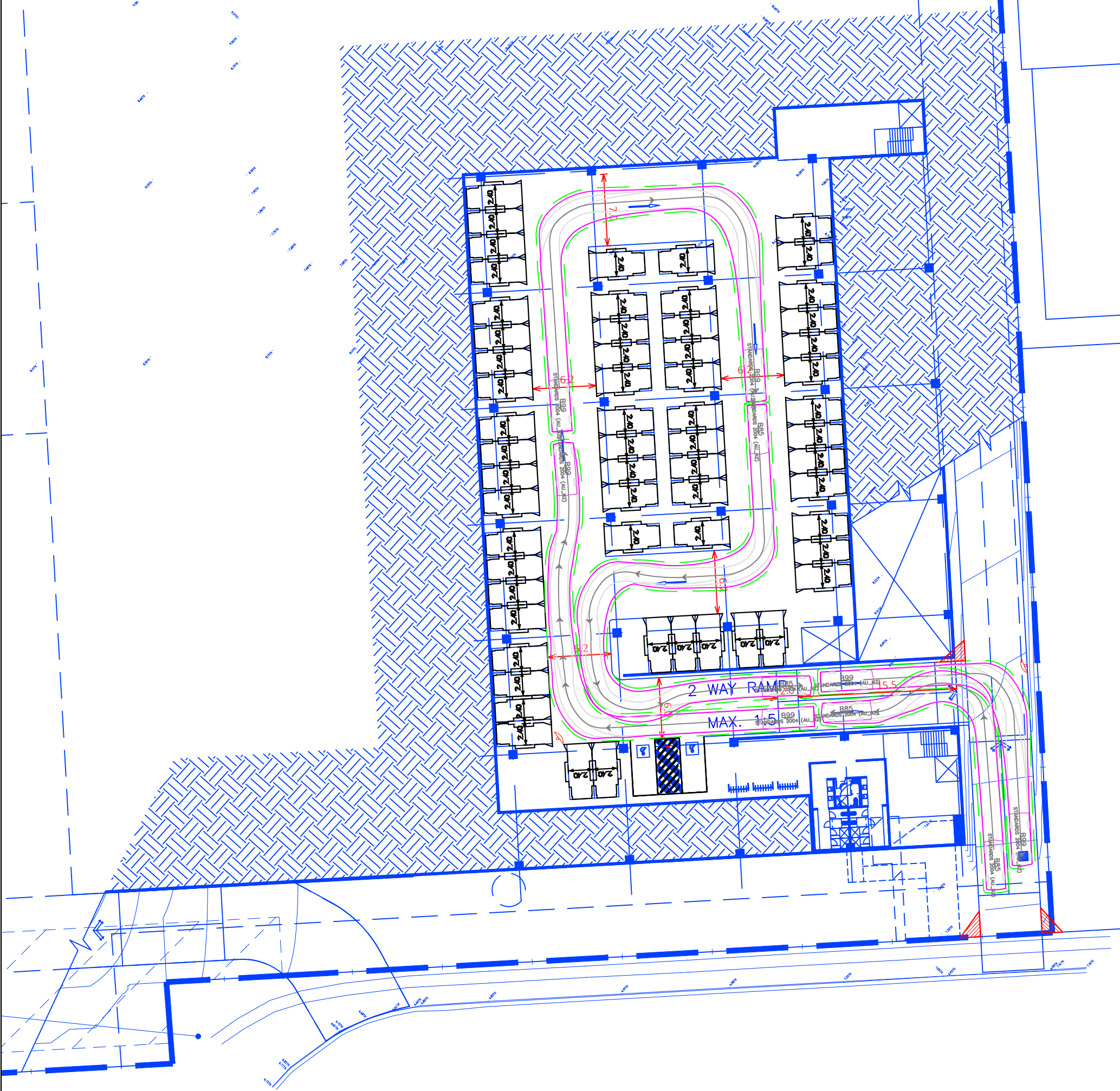
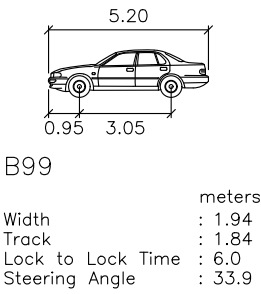
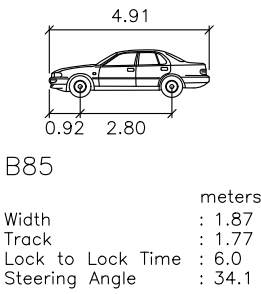
THE LOCATIONS OF UNDERGROUND SERVICES
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THE EXACT LOCATIONS SHALL BE PROVIDED ON SITE
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SWEPT PATH KEY:

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



20 KELSO CRESCENT, MOOREBANK
BASEMENT LEVEL
SWEPT PATH ASSESSMENT- STANDARD B85 AND B99 VEHICLE

DRAWING REF NO. 23016-V1.6-SP SHEET NO. 05 OF 15 ISSUE DATE 8 September 2023

DESIGNED BY
N.BORIA / L.NG

REVIEWED BY
B.LO

SCALE
A3

0 4.0 8.0
1:400

PRELIMINARY PLAN

FOR DISCUSSION PURPOSES
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WARNING

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20 KELSO CRESCENT, MOOREBANK
GROUND MEZZANINE LEVEL - ENTERING AND EXITING SITE
SWEEP PATH ASSESSMENT - 19m ARTICULATED VEHICLE

DRAWING REF NO. 23016-V1.6-SP SHEET NO. 06 OF 15 ISSUE DATE 8 September 2023

DESIGNED BY
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REVIEWED BY
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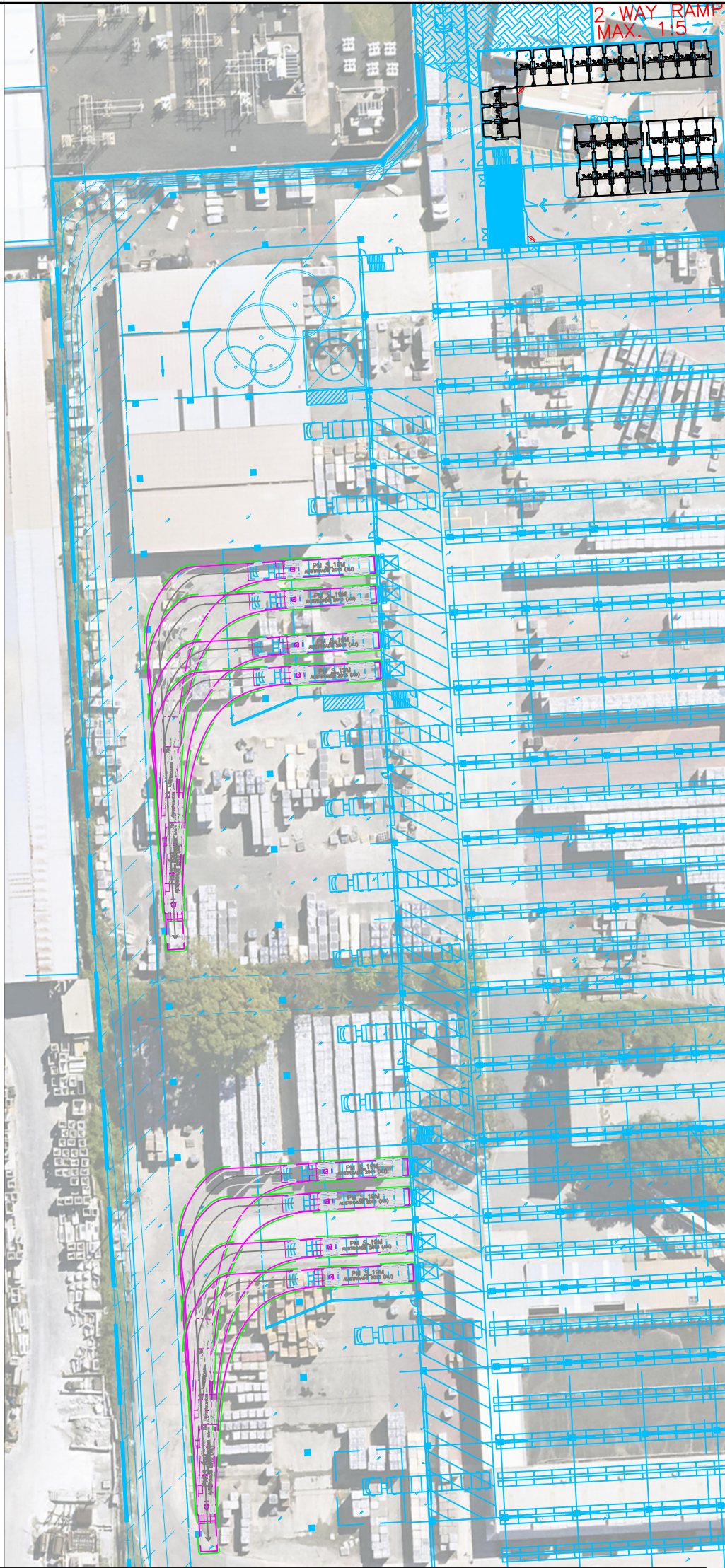
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PRELIMINARY PLAN
FOR DISCUSSION PURPOSES
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WARNING
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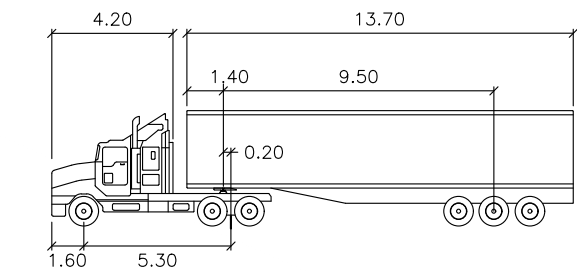


 **Genesis Traffic**



SWEPT PATH KEY:

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



PM S 19M

Tractor Width
Trailer Width
Tractor Track
Trailer Track

meters

: 2.50
: 2.50
: 2.50
: 2.50

Lock to Lock Time : 6.0
Steering Angle : 27.8
Articulating Angle : 70.0

20 KELSO CRESCENT, MOOREBANK
GROUND LEVEL

SWEPT PATH ASSESSMENT - 19m ARTICULATED VEHICLE (AV)

DRAWING REF NO. 23016-V1.6-SP

SHEET NO. 07 OF 15

ISSUE DATE 8 September 2023

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B.LO

SCALE
A3
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PRELIMINARY PLAN

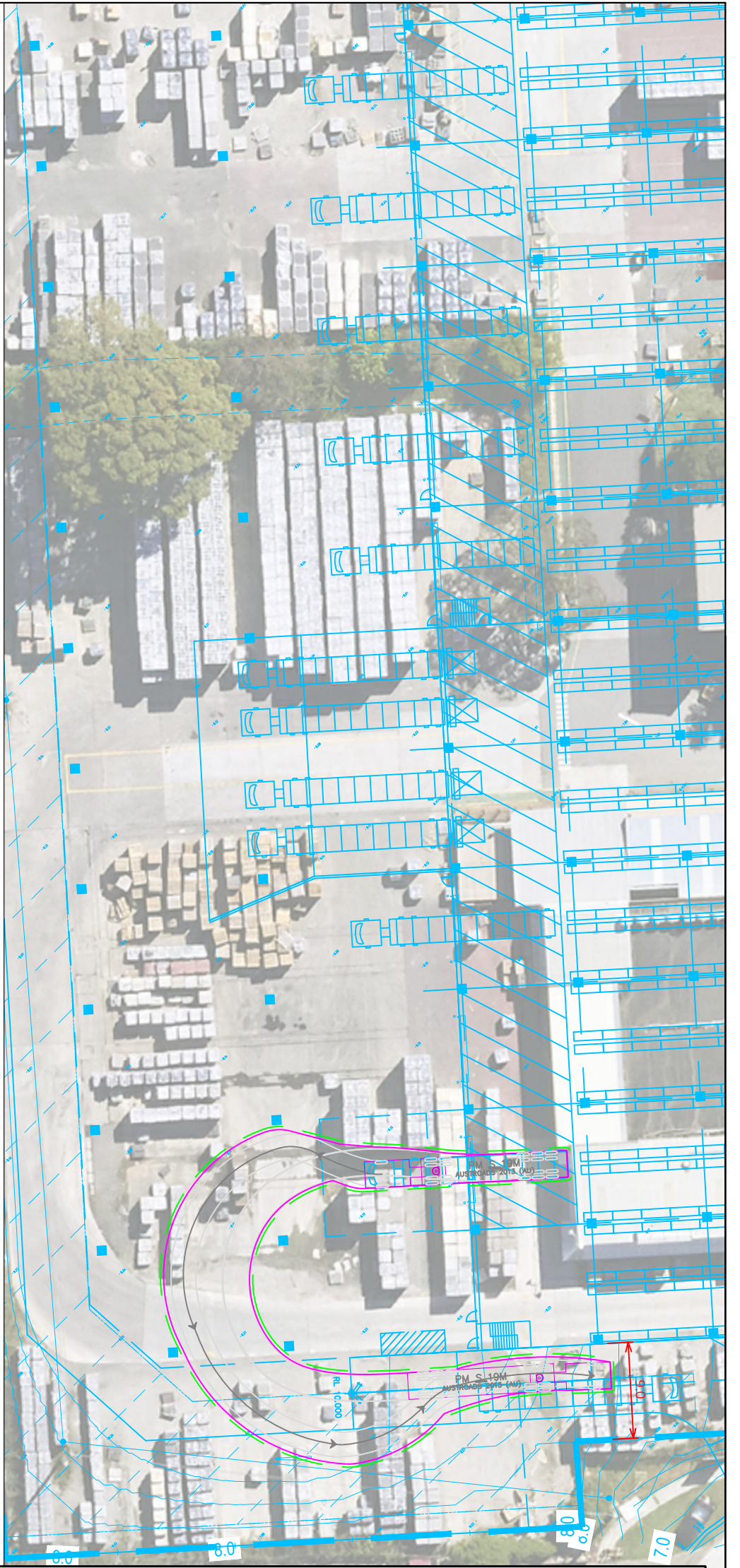
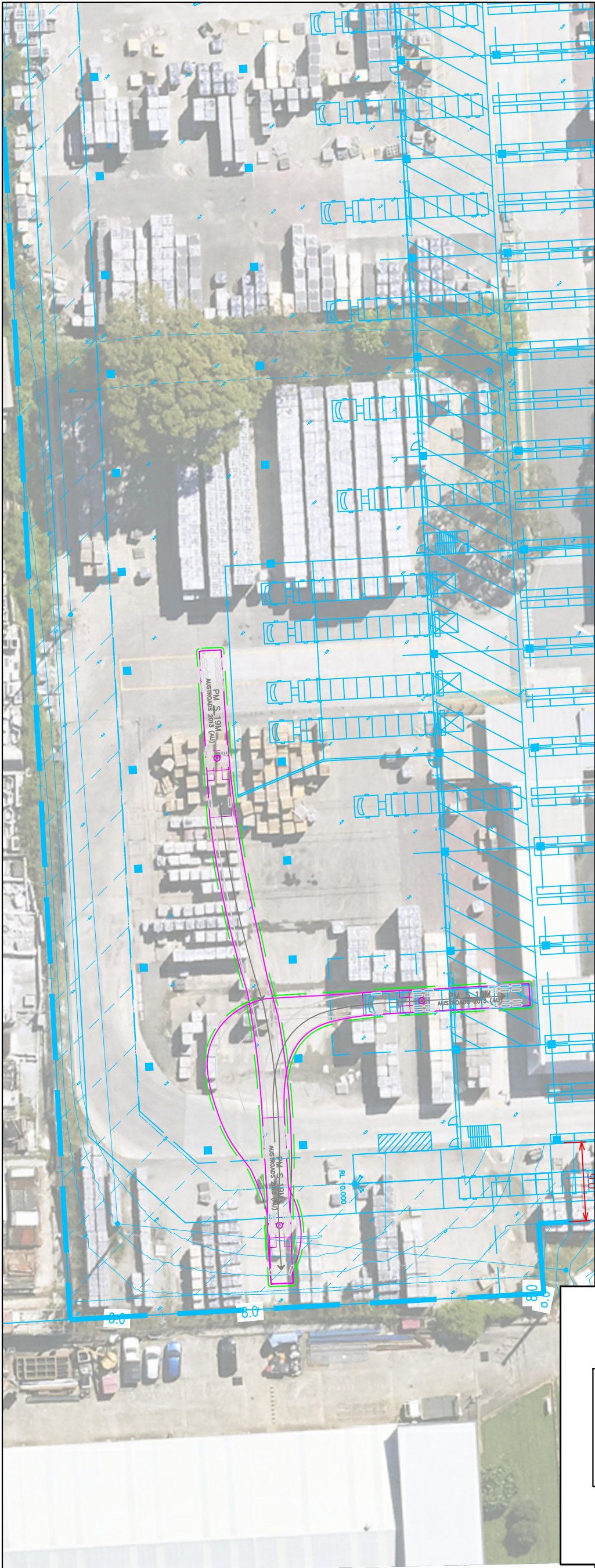
FOR DISCUSSION PURPOSES
ONLY SUBJECT TO CHANGE
WITHOUT NOTIFICATION

WARNING

THE LOCATIONS OF UNDERGROUND SERVICES
ARE APPROXIMATE ONLY
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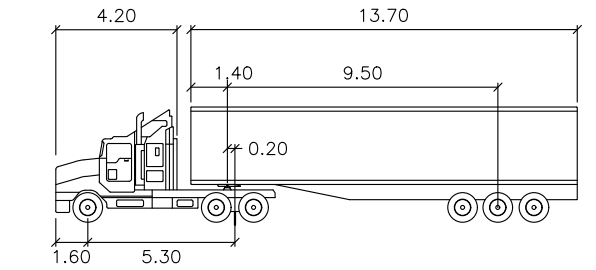


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SWEPT PATH KEY:

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



PM S 19M

Tractor Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 27.8
Tractor Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.50		

20 KELSO CRESCENT, MOOREBANK
GROUND LEVEL
SWEPT PATH ASSESSMENT - 19m ARTICULATED VEHICLE (AV)

DRAWING REF NO. 23016-V1.6-SP SHEET NO. 08 OF 15 ISSUE DATE 8 September 2023

DESIGNED BY
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B.LO

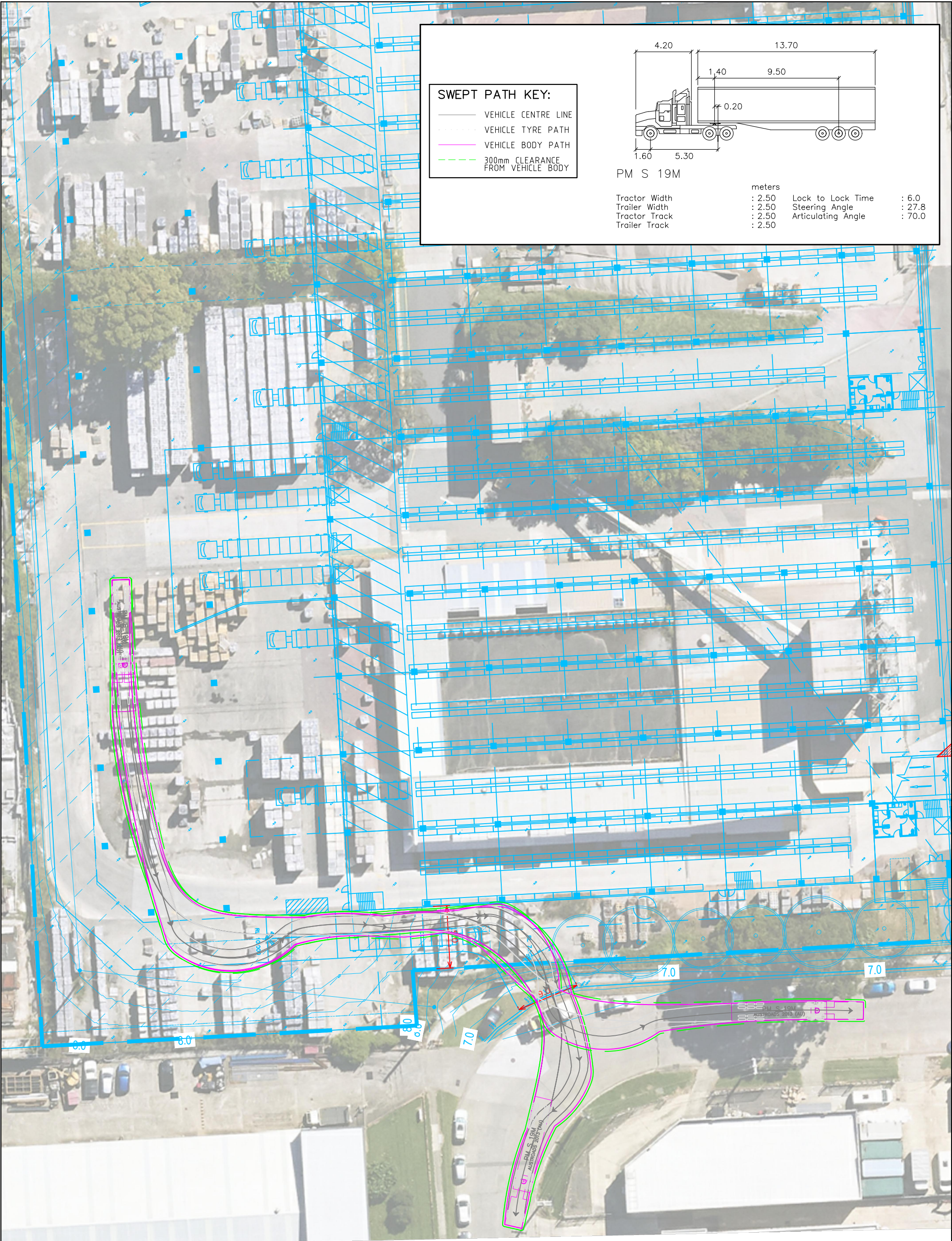
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PRELIMINARY PLAN
FOR DISCUSSION PURPOSES
ONLY SUBJECT TO CHANGE
WITHOUT NOTIFICATION

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



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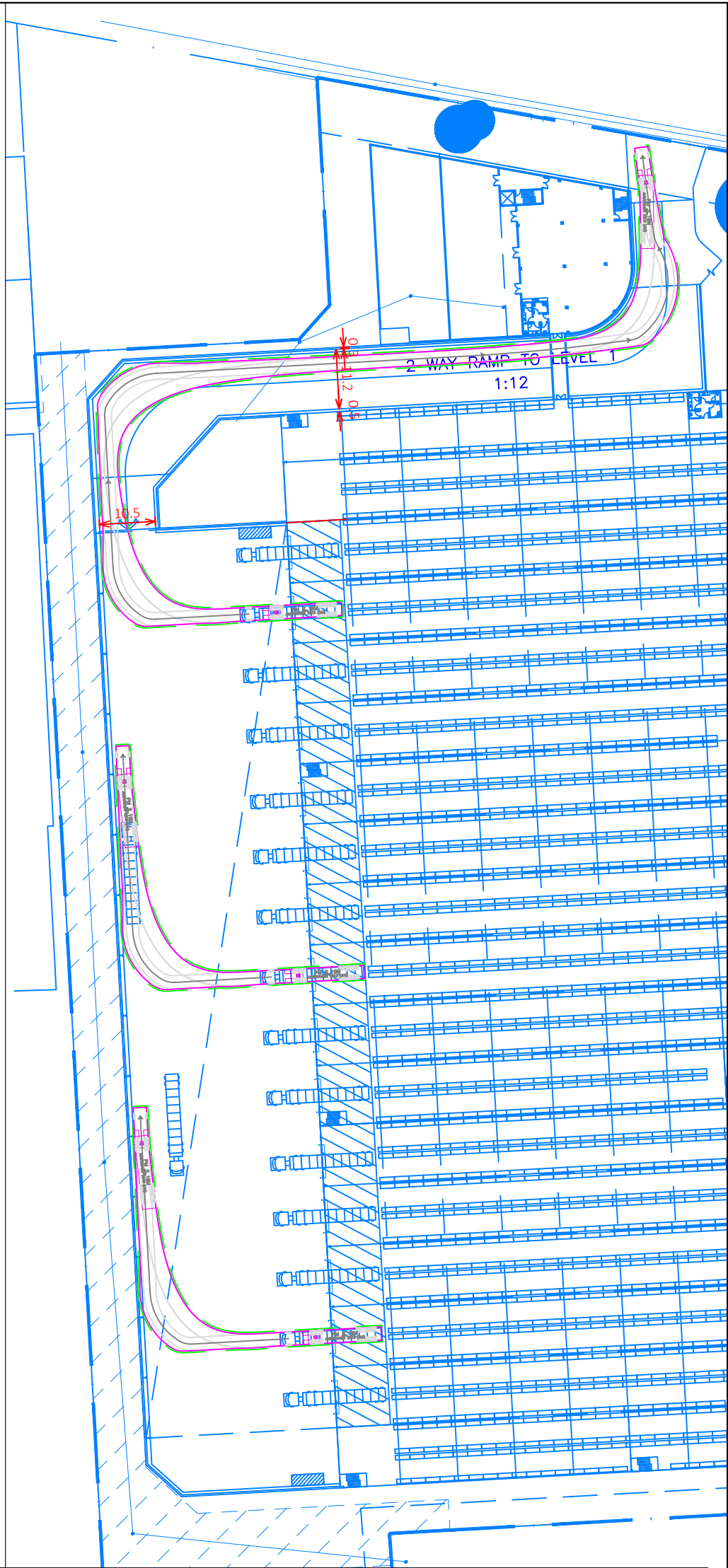
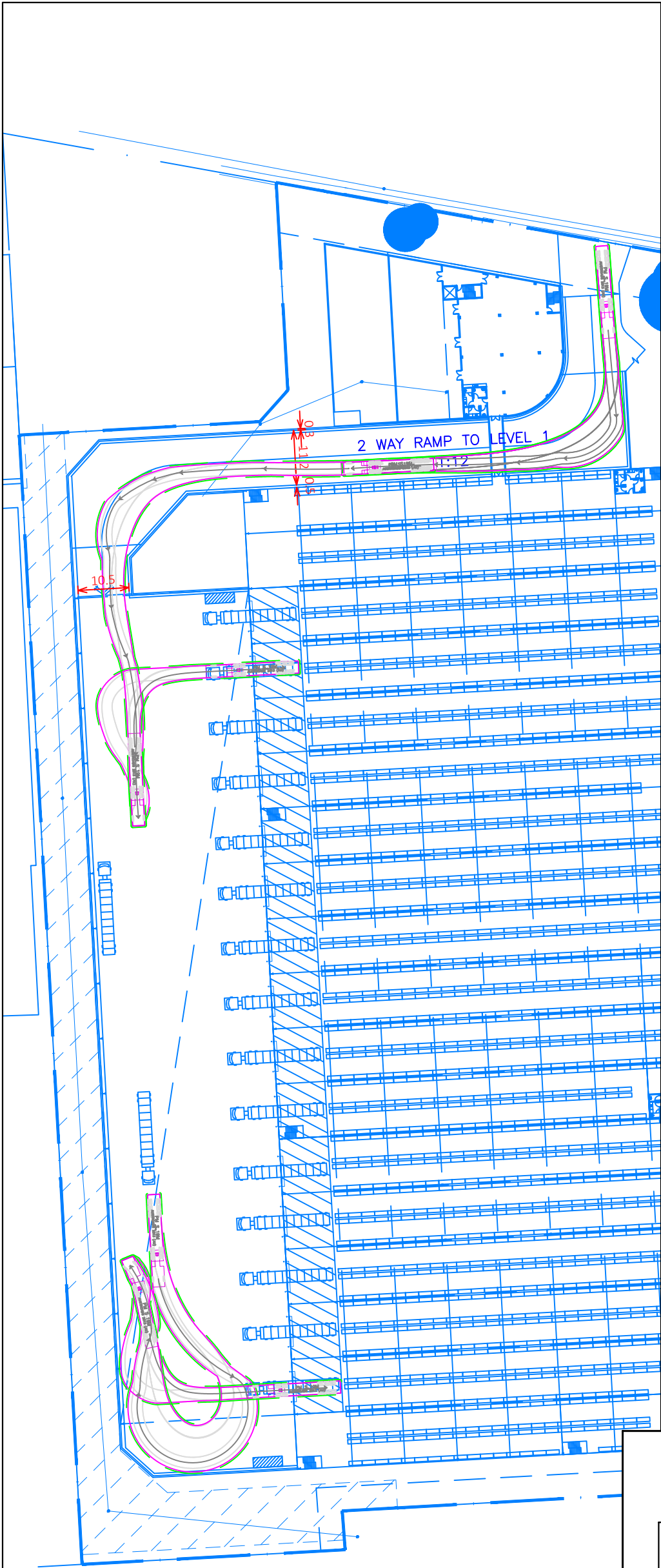
20 KELSO CRESCENT, MOOREBANK
GROUND LEVEL
SWEPT PATH ASSESSMENT - 19m ARTICULATED VEHICLE
DRAWING REF NO. 23016-V1.6-SP SHEET NO. 09 OF 15 ISSUE DATE 8 September 2023

DESIGNED BY
N.BORJA / L.NG
REVIEWED BY
B.L.O
SCALE
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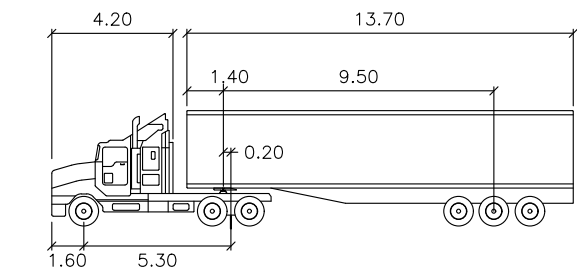
PRELIMINARY PLAN
FOR DISCUSSION PURPOSES
ONLY SUBJECT TO CHANGE
WITHOUT NOTIFICATION

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





- SWEPT PATH KEY:**
- VEHICLE CENTRE LINE
 - - - - - VEHICLE TYRE PATH
 - VEHICLE BODY PATH
 - - - - - 300mm CLEARANCE FROM VEHICLE BODY



PM S 19M

Tractor Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 27.8
Tractor Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.50		

20 KELSO CRESCENT, MOOREBANK
LEVEL 1

SWEPT PATH ASSESSMENT - 19m ARTICULATED VEHICLE (AV)

DRAWING REF NO. 23016-V1.6-SP SHEET NO. 12 OF 15 ISSUE DATE 8 September 2023

DESIGNED BY
N.BORJA / L.NG

REVIEWED BY
B.LO

SCALE
A3 0 10.0 20.0 1:1000

PRELIMINARY PLAN

FOR DISCUSSION PURPOSES
ONLY SUBJECT TO CHANGE
WITHOUT NOTIFICATION

WARNING

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



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SWEPT PATH KEY:

—

VEHICLE CENTRE LINE

VEHICLE TYRE PATH

VEHICLE BODY PATH

300mm CLEARANCE FROM VEHICLE BODY

4.91

B85

Width : 1.87 meters

Track : 1.77 meters

Lock to Lock Time : 6.0

Steering Angle : 34.1

5.20

B99

Width : 1.94 meters

Track : 1.84 meters

Lock to Lock Time : 6.0

Steering Angle : 33.9

20 KELSO CRESCENT, MOOREBANK

GROUND MEZZANINE LEVEL

SWEPT PATH ASSESSMENT - ACCESS TO CAR PARK

DRAWING REF NO. 23016-V1.6-SP

SHEET NO. 13 OF 15

ISSUE DATE 8 September 2023

DESIGNED BY
N.BORIA / L.NG

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B.LO

SCALE
A3
0 2.5 5.0
1:250

PRELIMINARY PLAN

FOR DISCUSSION PURPOSES
ONLY SUBJECT TO CHANGE
WITHOUT NOTIFICATION

WARNING

THE LOCATIONS OF UNDERGROUND SERVICES
ARE APPROXIMATE ONLY
THE EXACT LOCATIONS SHALL BE PROVIDED ON SITE
ALLERGING SERVICES SHOWN ARE NOT GUARANTEED

— VEHICLE CENTRE LINE

- - - VEHICLE TYRE PATH

— VEHICLE BODY PATH

- - - 300mm CLEARANCE FROM VEHICLE BODY

4.91

B85

Width : 1.87 meters

Track : 1.77 meters

Lock to Lock Time : 6.0

Steering Angle : 34.1

5.20

B99

Width : 1.94 meters

Track : 1.84 meters

Lock to Lock Time : 6.0

Steering Angle : 33.9

20 KELSO CRESCENT, MOOREBANK

GROUND LEVEL

SWEPT PATH ASSESSMENT

DRAWING REF NO. 23016-V1.6-SP

SHEET NO. 14 OF 15

ISSUE DATE 8 September 2023

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N.BORIA / L.NG

REVIEWED BY
B.L.O

SCALE
A3

0 2.5 5.0
1:250

PRELIMINARY PLAN

FOR DISCUSSION PURPOSES
ONLY SUBJECT TO CHANGE
WITHOUT NOTIFICATION

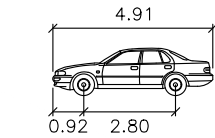
WARNING

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

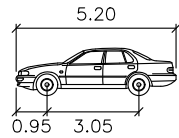
Plotted by Genesis605
G:\2023\23016 - 20 Kelso Crescent, Moorebank\Drawings\23016-V1.6-SP.dwg



SWEEP PATH KEY:	
	VEHICLE CENTRE LINE
	VEHICLE TYRE PATH
	VEHICLE BODY PATH
	300mm CLEARANCE FROM VEHICLE BODY



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



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

CARS SITE ACCESS

20 KELSO CRESCENT, MOOREBANK
GROUND LEVEL - SITE ACCESS FROM / TO SETON ROAD
SWEEP PATH ASSESSMENT - STANDARD B99 AND B85 VEHICLE

DRAWING REF NO. 23016-V1.6-SP SHEET NO. 15 OF 15 ISSUE DATE 8 September 2023

DESIGNED BY
N.BORJA / L.NG

REVIEWED BY
B.LO

SCALE
A3 0 2.0 4.0 1:200

PRELIMINARY PLAN
FOR DISCUSSION PURPOSES
ONLY SUBJECT TO CHANGE
WITHOUT NOTIFICATION

WARNING
THE LOCATIONS OF UNDERGROUND SERVICES
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ALLERGING SERVICES SHOWN ARE NOT GUARANTEED



Genesis Traffic®



Attachment 5

TfNSW Consultation

Documents/Correspondence



From: Zeliha Cansiz
To: Bernard Lo; Development Sydney
Cc: TAN Eng Khoon; Edwin CHEW; Kent Lewis WILLIAMS
Subject: RE: Re SSDA: Proposed Industrial Warehouse - 20 Kelso Crescent, Moorebank TfNSW reference: SYD23/00912/01
Date: Tuesday, 29 August 2023 2:07:24 PM
Attachments: [image001.png](#)
[image002.png](#)

Hi Bernard,

Reference is made to your e-mail dated 7 August 2023 requesting Transport for NSW (TfNSW) to provide details of key issues and assessment requirements regarding the abovementioned development for inclusion in the Secretary's Environmental Assessment Requirements (SEARs).

TfNSW has reviewed the information and would like the requirements listed below to be included in any Traffic Impact Assessment (TIA) submitted with the SEARs application:

- details of all daily and peak traffic volumes likely to be generated during all key stages of construction and operation, including a description of key access / haul routes, vehicle types and potential queuing impacts.
- an assessment of the predicted impacts of this traffic on road safety and the capacity of the road network, including consideration of cumulative traffic impacts on performance levels of nearby intersections, using SIDRA or similar traffic model.
- modelling should be provided for both existing and future scenario (+5 and +10 years post operation of the site) with and without development.
- the assessment of the impacts of the proposal at key intersections including (but not limited to) Kelso Cres and Newbridge Road intersection taking into consideration the existing condition and future scenarios of the intersection.
- turning paths for the largest vehicle using the site should be provided at the Kelso Cres/ Newbridge Road intersection. A full analysis should be undertaken of the performance of this intersection as well.
- plans demonstrating how all vehicles likely to be generated during construction and operation and awaiting loading, unloading or servicing can be accommodated on the site to avoid queuing in the street network.
- details and plans of any proposed the internal road network, loading dock servicing and provisions, on-site parking provisions, and sufficient pedestrian and cyclist facilities, in accordance with the relevant Australian Standards.
- details of the largest vehicle anticipated to access and move within the site, including swept path analysis.
- swept path diagrams depicting vehicles entering, exiting and manoeuvring throughout the site.
- details of road upgrades, infrastructure works or new roads or access points required for the development if necessary.
- the proposal must take into consideration the cumulative traffic impacts from any surrounding approved development(s).

If you have any further queries with regards to the above, please do not hesitate to contact me.

Please send additional information to development.sydney@transport.nsw.gov.au for registration and reference SYD23/00912.

Kind regards,

Zeliha
Zeliha Cansiz
Development Assessment Officer
Planning and Programs
Greater Sydney
Transport for NSW

M 0460 427 977
Level 5, 27 Argyle Street Parramatta NSW 2150



Transport
for NSW



I acknowledge the Aboriginal people of the country on which I work, their traditions, culture and a shared history and identity. I also pay my respects to Elders past and present and recognise the continued connection to country.

OFFICIAL

From: Bernard Lo <bernard@genesistraffic.com.au>
Sent: Monday, 7 August 2023 10:50 AM
To: Development Sydney <Development.Sydney@transport.nsw.gov.au>
Cc: TAN Eng Khoon <tan.engkhon@mapletree.com.sg>; Edwin CHEW <edwin.chew@mapletree.com.sg>; Kent Lewis WILLIAMS <kent.williams@mapletree.com.sg>
Subject: Re SSDA: Proposed Industrial Warehouse - 20 Kelso Crescent, Moorebank

CAUTION: This email is sent from an external source. Do not click any links or open attachments unless you recognise the sender and know the content is safe.

Dear colleague,

I am writing to address the subject matter above, which pertains to a proposed industrial warehouse at 20 Kelso Crescent, Moorebank.

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

The proposal involves demolition of existing structures on the site and constructing 5 warehouses alongside corresponding ancillary office units. The development yield is summarised as follows:

Warehouse GFA: 34,690 sqm

Office GFA: 2,400 sqm

Car park: 180 spaces

Vehicle access will be provided as follows:

1. Kelso Crescent - Truck entry to mezzanine level
2. Kelso Crescent - Truck entry/exit to ground level
3. Kelso Crescent - North Car park entry/exit
4. Seton Road - Truck exit
5. Seton Road - South Car park entry/exit

As part of the submission, a Traffic Impact Assessment is being documented. TfNSW's feedback is highly appreciated as part of the engagement process. Should you wish to speak with me directly, please don't hesitate to contact me at 7255 8198. Alternatively, I await your advice via email.

Thank you

My kind regards,

Bernard Lo BE (Civil), MTrans, PRE 0001491
Principal

T 02 7255 8198 (Direct)
E bernard@genesistraffic.com.au



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ABN 34 660 055 532

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