

# 5 Kiora Crescent, Yennora (NSW)

## Traffic Impact Assessment Report

Client: MRA Consulting Group

Prepared by

**Evan Boloutis**  
**Director**  
**EB Traffic Solutions Pty Ltd**  
B.Eng (Civil), MEng Sc (Traffic), MBA

**evan@ebtraffic.com.au**  
**www.ebtraffic.com.au**  
**0408 395 729**

3 November 2025  
Rev H

---

## 1. INTRODUCTION

### 1.1 Purpose of this report

This report sets out an assessment of the traffic and parking implications of the proposed development, with specific consideration of the following:

- the existing conditions and a description of the proposed development;
- an assessment of the development's car parking requirements;
- adequacy of the on-site car parking supply to accommodate the development's parking requirements;
- the ability for trucks to access the loading bay areas and weighbridge and then exit from the site in a forward manner;
- the impact of construction activity upon the development site; and
- an assessment of the traffic anticipated to be generated by the proposed development.

### 1.2 Referenced documents

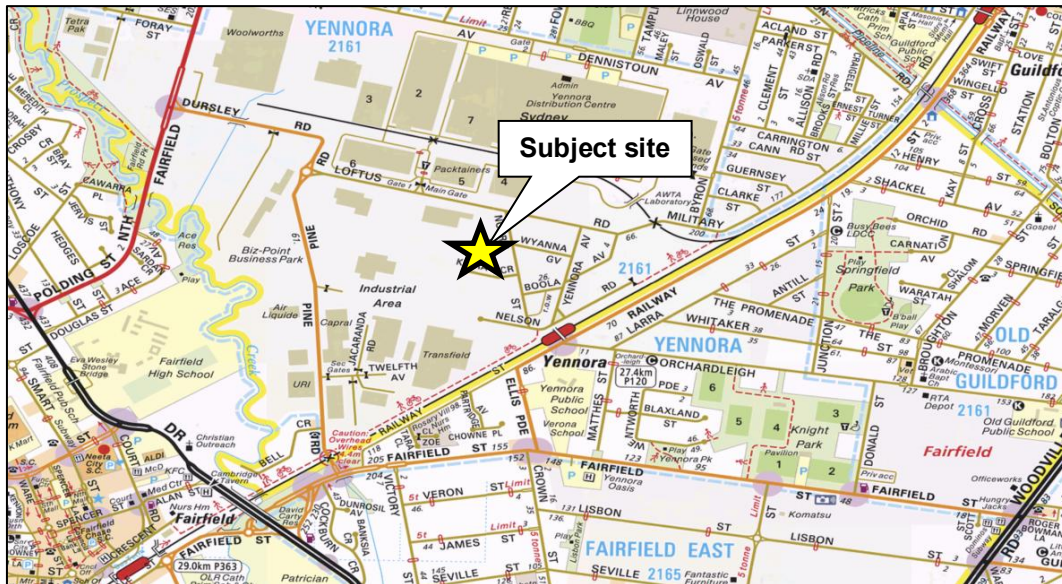
This report has been based upon a number of sources. These include:

- Information provided by the applicant, Melways maps, nearmap and Google maps;
- Australian Standards AS 2890.1 (2004), AS 2890.6 (2009) and AS 2890.2 (2018);
- SIDRA Intersection analysis computer software and AutoTURN computer software for the swept path analysis;
- Traffic and Parking Impact Assessment report prepared by Stanbury Traffic Planning, Ref: 18-106-2, dated November 2019;
- Planning Secretary's Environmental Assessment Requirements, Application SSD-40425066, dated 17 June 2022;
- Letter from Cumberland Council to MRA, Appln OA2022/0001, dated 3 June 2022;
- SEARS scoping report, MRA Consulting Group on behalf of Kiora One Pty Ltd, Ver 1.1, dated 13 April 2022;
- Notice of Determination, Application: DA2019/457/1, endorsed 31 May 2020;
- Turning movement counts undertaken at the intersection of Loftus Road and Norrie Street on Wednesday 30 November 2022 and on Thursday 16 October 2025 between 7 am–9 am and between 4 pm - 6 pm;
- Cumberland Development Control Plan (2021), Cumberland Local Environmental Plan (2021) and Building Code of Australia; and
- Layout plans prepared by baini design, Project 20113, Rev G, dated 16 August 2023.

## 2. EXISTING CONDITIONS

### 2.1 Location and Land use

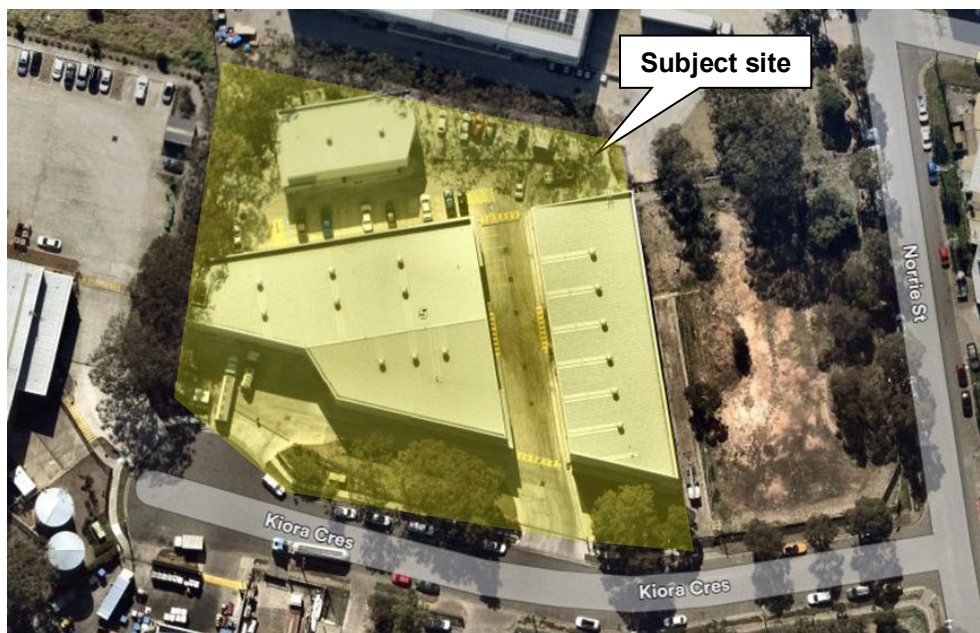
The existing site is an irregular parcel of land located on the north side of Kiara Crescent approximately 40 m west of Norrie Street. The location of the subject site is shown in **Figure 2.1**.



Source: Copyright Melways Publishing Pty, Ltd. Reproduced from Melways online with permission

**Figure 2.1: Location of the subject site**

The site, which is currently vacant, has a site area of 7,220 sqm and is occupied by an unused bitumen overflow car park and storage for shipping containers with approx. 150 car spaces. The area immediately surrounding the site is industrial in nature as shown in **Figures 2.2** and **2.3**.



Source: google maps

**Figure 2.2: Nature of the subject site and surrounding land uses**

The site is identified as Lot 10 of DP 1233715 in the Cumberland Local Environmental Plan (LEP) 2021 and is zoned E4, as shown in **Figure 2.3**.



Source: SEARs Report (13 April 2022)

**Figure 2.3: Land use zoning of the subject site**

## 2.2 Road Network

Kiora Crescent is classified as a local road and contains an undivided cross section with a 13 m wide pavement width and has a traffic lane and a parking lane in each direction. Unrestricted parking exists along both sides of the roadway. The default speed limit along the road is 50 km/hr.

Photos showing the cross section of Kiora Crescent looking to the west and east in close proximity to the site are shown in **Figures 2.4** and **2.5**, respectively.



Source: google maps street view

**Figure 2.4: Kiora Crescent looking west**



Source: google maps street view

**Figure 2.5: Kiora Crescent looking north**

## 2.3 Traffic Volumes

To gauge the existing traffic volumes on the immediately surrounding road network, turning movement count undertaken at the intersection of Loftus Road and Norrie Street on Wednesday 30 November 2022 between 7 am – 9 am and between 4 pm and 6 pm

The results of the turning movement count surveys at the intersection of Loftus Road and Norrie Street are shown summarised in **Attachment A** and indicate that:

- The commuter peak periods occurred in the morning period between 8 am – 9 am and in the late afternoon period between 4.15 pm – 5.15 pm;
- During the am peak hour, Loftus Road carried around 220 vehicles eastbound and around 180 vehicles westbound and during the pm peak hour there were around 250 vehicles east bound and around 170 vehicles west bound; and
- During the am peak hour, Norrie Street carried around 35 vehicles northbound and around 80 vehicles southbound and during the pm peak hour there were around 60 vehicles northbound and around 30 vehicles southbound.

A supplementary turning movement count undertaken at the intersection of Loftus Road and Norrie Street on Thursday 16 October 2025 between 7 am – 9 am and between 4 pm and 6 pm to determine the growth rate along both Loftus Road and Norrie Street and to be able to undertake an updated intersection analysis for the existing conditions (refer Section 2.5) and future conditions (refer Section 6.3).

The results of the turning movement count surveys at the intersection of Loftus Road and Norrie Street are shown summarised in **Attachment B** and indicate that:

- The commuter peak periods occurred in the morning period between 7.30 am – 8.30 am and in the late afternoon period between 4 pm – 5 pm;
- During the am peak hour, Loftus Road carried around 250 vehicles eastbound and around 130 vehicles westbound and during the pm peak hour there were around 190 vehicles east bound and around 165 vehicles west bound; and
- During the am peak hour, Norrie Street carried around 35 vehicles northbound and around 70 vehicles southbound and during the pm peak hour there were around 65 vehicles northbound and around 30 vehicles southbound.

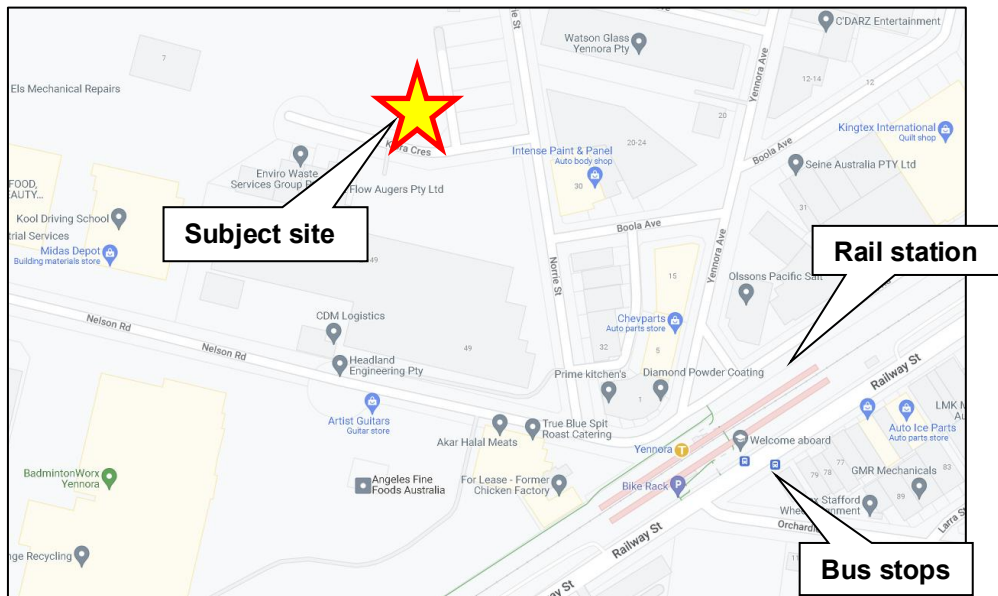
Having regard to the survey data collected in November 2022 and October 2025, there a negligible change in the way traffic flows, albeit a slight decrease in the overall two traffic flows between the two survey periods.

## 2.4 Public Transport

The site has access to a conveniently located public transport services. This comprises of the Yennora railway station located 500 m south of the site and two bus routes operating in close proximity to the site. Details of the bus services are summarised as follows:

- Bus route 4T2 is a train replacement bus service which operates from Yennora railway station; and
- Bus route N60 is a night service which operates between Fairfield and City Town Hall

The bus stops located in close proximity to the site are shown in **Figure 2.6**.



Source: google maps

**Figure 2.6: Bus stops in close proximity to the site**

## 2.5 Existing Operating Conditions

An assessment was undertaken of the existing operating conditions at the intersection of Loftus Road and Norrie Street using the SIDRA intersection analysis computer program (Version 10).

Intersection performance is generally reported by the intersection degree of saturation ( $x$ ), which provides a measure of the relationship of volume to capacity for all movements at the intersection.

The relationship between level of service criteria and degree of saturation for the various intersection types are summarised in **Table 2.1**.

**Table 2.1: Relationship between level of service and degree of saturation ( $x$ )**

Level of Service		Intersection Degree of Saturation ( $x$ )		
		Unsignalised intersections	Roundabouts	Signalised intersections
A	Excellent	$\leq 0.6$	$\leq 0.6$	$\leq 0.6$
B	Very good	0.6 – 0.7	0.6 – 0.7	0.6 – 0.7
C	Good	0.7 – 0.8	0.7 – 0.85	0.7 – 0.9
D	Acceptable	0.8 – 0.9	0.85 – 0.95	0.9 – 0.95
E	Poor	0.9 – 1.0	0.95 – 1.0	0.95 – 1.0
F	Very poor	$\geq 1.0$	$\geq 1.0$	$\geq 1.0$

The existing performance of the intersections were assessed using the SIDRA computer program, with the intersection layout, commuter peak hour volumes (October 2025) and performance measures of critical degrees of saturation and 95 th % ile queue lengths shown in **Attachment C** and summarised in **Table 2.2**.

**Table 2.2: Existing Intersection performance - Loftus Rad and Norrie Street**

Peak Hour (Intersection)	Intersection Performance			
	Critical Movement (Directions)	Degree of Sat (x)	95 <sup>th</sup> % ile queue (m)	Level of Service
AM peak	Right turn (from Loftus Rd West)	0.209	4.6	A
PM peak	Right turn (from Loftus Rd West)	0.144	1.9	A

On the basis of the above analysis, the intersection of Loftus Road and Norrie Street currently operates at an excellent level of operation during the am and pm commuter peak hours.

### 3. THE PROPOSAL

It is proposed to refurbish the existing buildings on the site to provide a liquid waste treatment, storage, transfer and destruction facility. The proposed uses of the three buildings on the site are summarised as follows:

- Building 1 – Liquid waste treatment
- Building 2 – Chemical and Clinical Waste Transfer
- Building 3 – Product destruction

Information provided by the applicant indicates that the proposed facility will be capable of accepting and processing up to 220,000 tonnes per annum (tpa) of material waste across all proposed uses, in accordance with the following distribution:

- 180,000 tpa of liquid waste
- 20,000 tpa of product destruction; and
- 20,000 tpa hazardous liquid waste

The three buildings on the site encompasses:

- Unit 1 with 1,495 sqm of warehouse area and 252 sqm of ancillary office area
- Unit 2 with 950 sqm, of warehouse area and 50 sqm of ancillary office area
- Unit 3 with 290 sqm of warehouse area and 40 sqm of ancillary office area

A total of 51 spaces are proposed on the site, of which 41 spaces are allocated for staff parking, eight visitor spaces and two accessible bays. It is noted that, as part of the previous DA (Notice of Determination, Application: DA2019/457/1, endorsed 31 May 2020), a total of 51 spaces were approved for the proposed waste recycling development.

In addition, a weighbridge is located abutting the south side of Unit 1 and a wash bay is provided within the warehouse to accommodate articulated trucks up to 20 m in length.

The proposed development will operate 24 hours per day/seven days per week which will include material delivery, offtake and operation of machinery involved in processing operations during these times. The office administration and management will operate on weekdays between 8 am and 6 pm.

Information provided by the applicant indicate that there will be a maximum of 18 staff comprising of three office employees and 15 warehouse staff at any one time. It is anticipated

that there will be two shifts, that is between 4 am – 4 pm and between 4 pm – 4 am. During shift changeover times (two shifts), there will be a maximum of 30 warehouse staff and three office staff on site at any one time.

Information provided by the applicant indicates that during one operational day, it is expected that the liquid waste facility will generate a maximum of up to 86 trucks per day at an average distribution of around seven inbound and seven outbound trucks per hour.

The applicant has further advised that the weighbridge will be capable of accommodating trucks up to 20 m in length and will not be available to the general public. One employee will be on site to manage the operation of the weighbridge facility.

The layout of the proposed development is shown in **Attachment D**.

## 4. CAR PARKING CONSIDERATIONS

### 4.1 Car Parking Requirements

The car parking requirements for the proposal are set out in the Cumberland Development Control Plan (2021), specifically in Part G3, Section 3, Table 1.

Further, reference to the Cumberland LEP (2021), indicates that the proposed development is considered to correspond to a *'waste transfer station* which is defined as:

*'a building or place used for the collection and transfer of waste material or resources, including the receipt, sorting, compacting, temporary storage and distribution of waste or resources and the loading or unloading of waste or resources onto or from road or rail transport.'*

Reference to the Cumberland Development Plan (2021), specifically Chapter 12, indicates that a waste transfer station is not a development type listed in the Cumberland Development Control Plan (2021), specifically in Part G3, Section 3, Table 1.

Further, the Cumberland DCP (2021), states amongst other things that for a land use not defined in Section 3, Table 1, the car parking requirements can be determined by referencing the RTA Guide to Traffic Generating Developments or alternatively, a car parking survey of a comparable facility, subject to Council approval.

Given that the proposed land use is not defined in the TANSW Guide to Traffic Generating Developments, case study data has been sourced to derive the anticipated car parking demands for the proposed development.

Information provided by the applicant who operate similar facilities, indicate that there will be a maximum of up to three office staff and 15 warehouse staff at the facility at any one time. At shift changeover times, there will be a maximum of up to 30 warehouse staff on site at any one time.

The applicant has further advised that visitors to the facility will be minimal. For the purpose of the analysis, it is assumed that there will be a maximum of one visitor correspond to each unit on site at any one time.

On the basis of the above, the total peak staff parking demand will correspond to a maximum of 33 vehicles (at shift changeover times) and say three visitor spaces, which can be comfortably accommodated within the on-site parking supply of 51 spaces.

Further, reference to the Building Code of Australia indicates that, for a class 8 building, there is a requirement to provide '1 car space for every 100 car parking spaces or part thereof', resulting in the requirement to provide one disabled parking space, which is proposed to be provided.

## 4.2 Car Park Layout

No changes are proposed to the existing (approved) car park layout.

## 5. COMMERCIAL VEHICLES

### 5.1 Loading Bay Requirements

Reference to the Cumberland Development Control Plan (2021), specifically Part G3, Section 4.6 indicates the following loading requirements for the proposed development:

*Industrial/warehouse uses*                      *1 space/800 sqm GFA up to 8,000 sqm GFA plus,  
1 space/1,000 sqm thereafter.*

Based upon the respective areas of the three warehouses, the proposed development is required to provide the following number of loading bays:

- Unit 1                      2 loading bays
- Unit 2                      2 loading bays
- Unit 3                      1 loading bay

Reference to the layout plans indicate that the required number of loading bays have been provided which accord with the requirements specified in Part G3, Section 4.6 of the Cumberland Development Control Plan (2021).

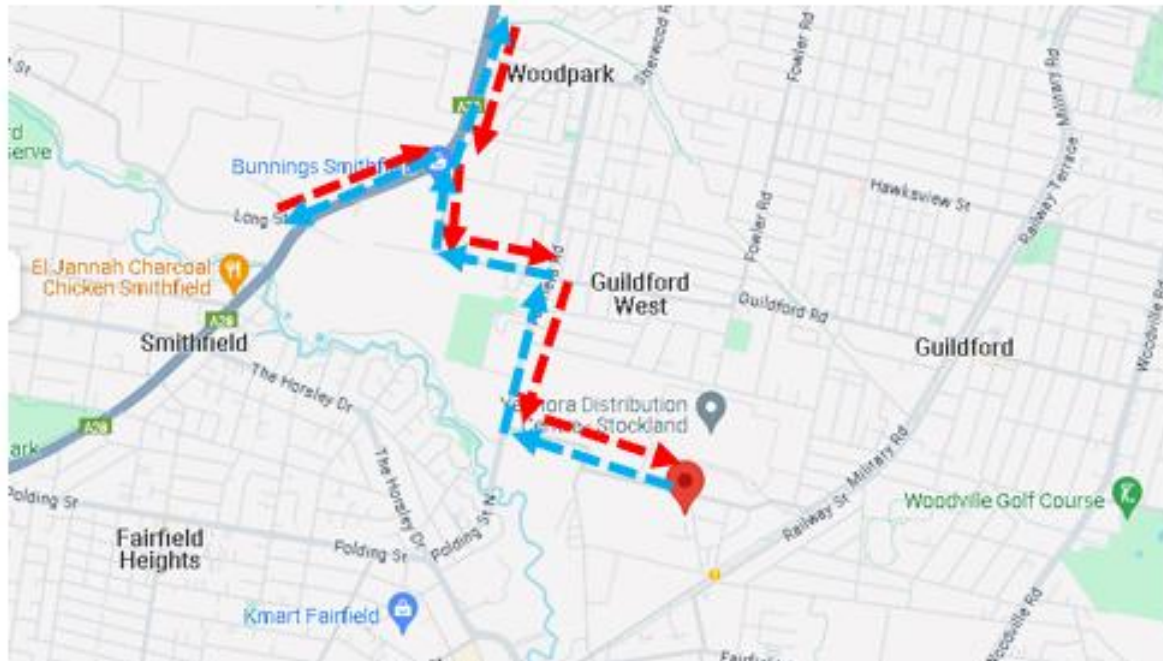
### 5.2 Headroom clearance

Information provided by the applicant indicates that there is a minimum height clearance of 4.5 m within the three units, which accords with that specified in Australian Standard AS 2890.2 (2018).

### 5.3 Accessibility to/from the site

Information provided by the client indicates that the majority of truck movements generated by Unit 1 will have a maximum overall length of a 20 m Articulated Vehicle and Units 2 and 3 will be a 12.5 m HRV.

Further, the client has advised that the key haulage routes to and from the development site are as shown depicted in **Figure 5.1**.



Source: MRA

**Figure 5.1: Haulage routes to/from the site**

Specifically, the truck movements circulating within the site are summarised as follows:

### *Building 1*

The proposed liquid waste treatment plant will involve the acceptance of liquid waste inputs, while outputs will predominately consist of treated water which will be discharged to sewer.

The liquid waste treatment plant will have a small proportion of outputs in solid (filter cake material) and liquid (grease trap and sludge).

Solid wastes will be transferred to Building 2 for temporary storage in a bin prior to being removed from the site while liquid grease trap and sludge wastes that are not able to be processed in Building 1 would be removed by a liquid tanker truck.

Since all inputs and outputs requiring a truck for the building 1 use are liquids, flow meters are expected to be the best method for measuring input and output liquid materials from this component of the proposed development to assist in keeping the flow of traffic efficient through the site. No trucks delivering liquid waste to Building 1 are required to use the weighbridge.

Outgoing solid waste as a byproduct of the liquid waste treatment plant would be required to weigh on the weighbridge.

Specifically, removal of solid waste is predicted to generate 3-5 truck movements per day in accordance with the breakdown shown in Table 6.1.

### *Buildings 2 and 3*

The proposed input material trucks for buildings 2 and 3 would be weighed in on the site weighbridge prior to delivering materials to the respective buildings.

Trucks delivering materials to the site would utilise a tare weight to determine the material deliver weight. Tare weights are preferred to re-weighing outgoing, empty trucks to avoid trucks need to leave the site and circulate back through to the weighbridge to weight off.

Outgoing material would require vehicles to enter the site, weigh on, pick-up materials, and leave and re-enter the site to weigh off for an accurate measurement of material removed from the site. Therefore, as Building 2 & 3 offtake vehicles will have to weigh on and off, they will be required to enter the site twice.

The ability for the trucks to enter/exit the site in a forward manner, manoeuvre on-site and then exit from the site in a forward manner was assessed with the use of the AutoTURN swept path computer software, the analysis of which is shown in **Attachment E** and supplemented with that documented in the Traffic and Parking Impact Assessment report prepared by Stanbury Traffic Planning (2019) for Units 1 and 3.

The analysis undertaken by EB Traffic Solutions indicates that the 12.5 m HRV and 20 m AV trucks are able to safely enter the site, circulate around the site and exit in a forward manner.

#### 5.4 Accessibility to/from weighbridge

The swept path analysis undertaken in Section 5.1 indicates that a 20 m Articulated Vehicle is able to enter the site in a forward manner, manoeuvre on site onto and off the weighbridge to then exit from the site in a forward manner, as shown in **Attachment E (sheet A3.01)**.

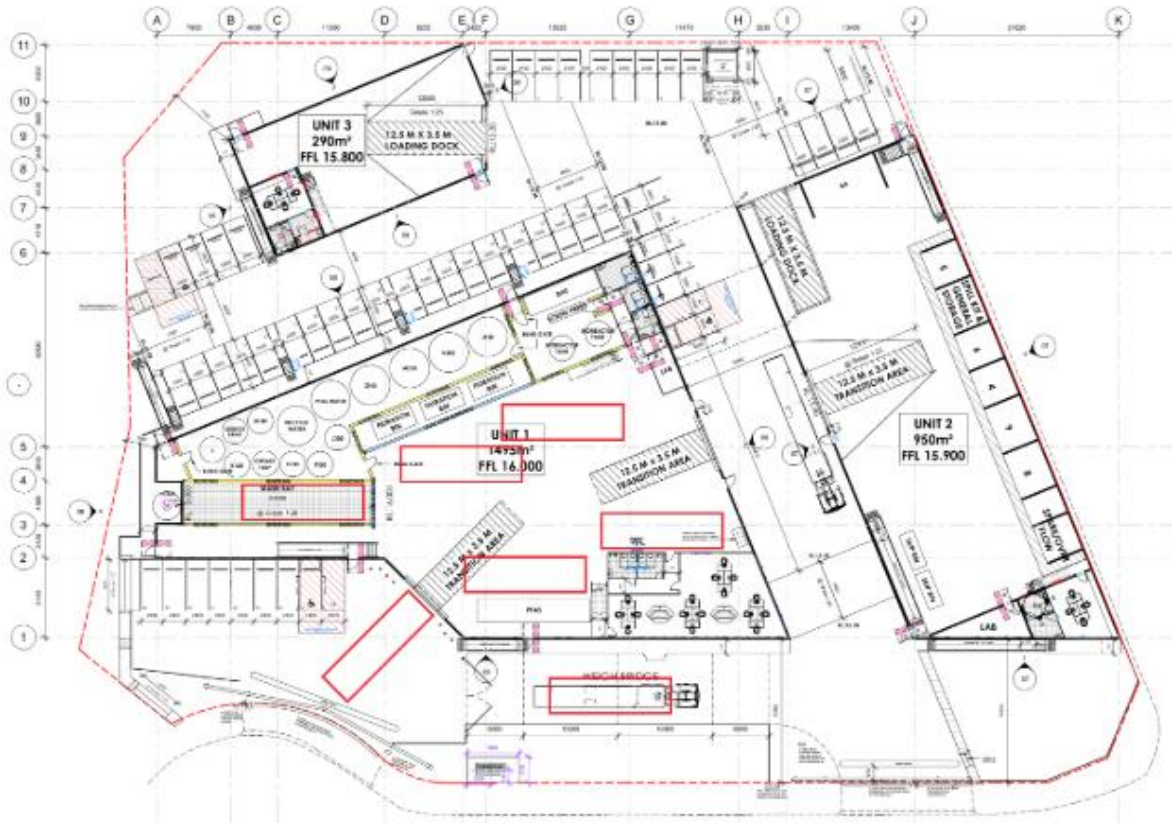
#### 5.5 Layover bays for trucks arriving at the site

In the event that the loading bays within the respective units are occupied, truck layover parking bays have been identified as shown in **Figure 5.1**.

It is recognised that there could be a maximum of up to five 12.5 HRV trucks generated by Unit 1 in a peak hour.

While the stacking arrangement shown in **Figure 5.1** conservative shows four trucks stored internally and two trucks stored within the external car park accessway, this scenario is unlikely to occur.

Operationally, the site manager would be regulating truck arrivals with the use of two-way radio communications to ensure that there would not be in excess of three 12.5 m HRV trucks on site at any one time, which are able to be easily stored either internally or externally without adversely impacting upon the operation of the Unit.



Source: MRA

**Figure 5.1: Layover truck parking bays within Unit 1 (12.5 m HRV)**

The applicant has further advised that trucks volumes for units 2 and 3 will be quite low and as a result, it is unlikely that there will be two trucks on site at any one time.

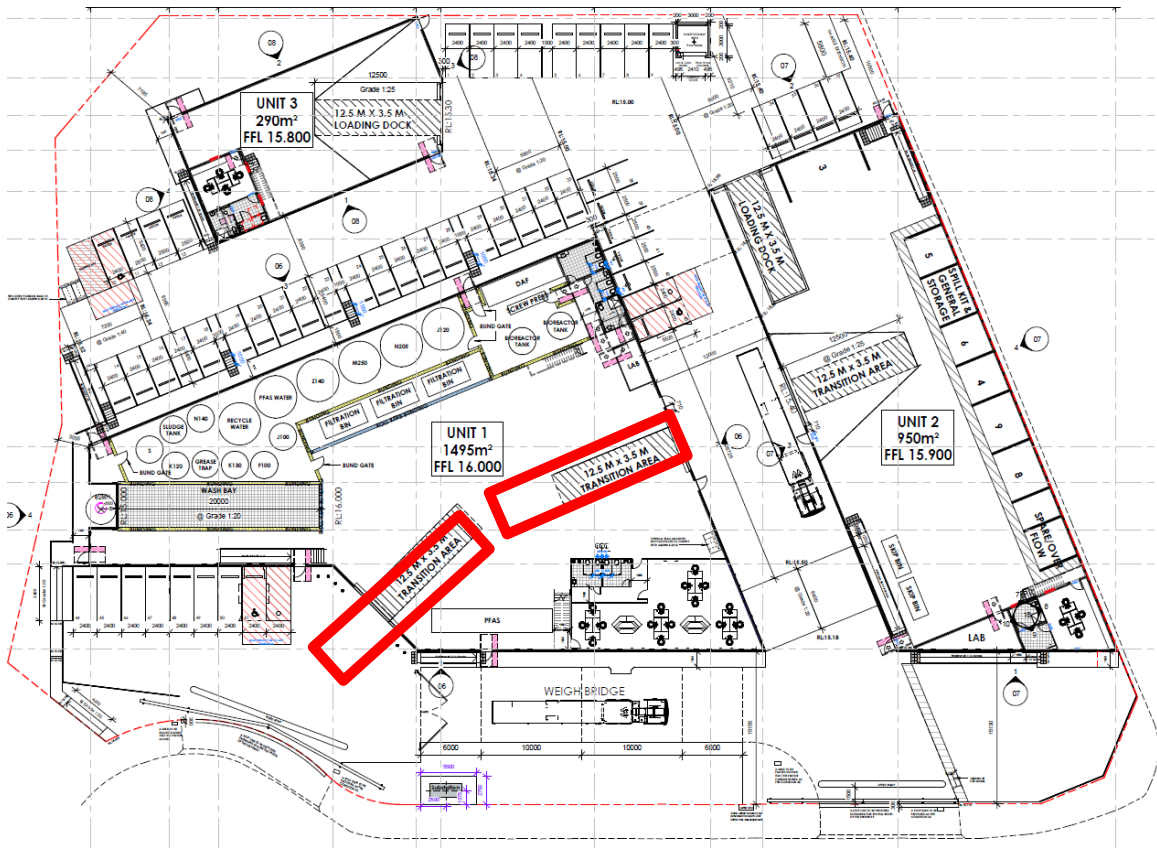
Further, given the volume of trucks anticipated to travel to and from Unit 1, an assessment was undertaken to examine the ability for trucks to be accommodated within layover bays adjacent to and within Unit 1.

The ability for trucks to manoeuvre into and out of the layover truck bays in Unit 1 have been assessed, the results of which are shown in **Attachment E (sheets A3.07 and A3.08)**.

The results indicate that trucks up to 12.5 m in length are able to safely manoeuvre into and out of the truck layover bays to then safely exit from the site in a forward manner.

It is expected that there will be around 3-5 x 20 m Articulated trucks generated by Unit 1 on a typical day.

While there is a low probability of two 20 m AV trucks arriving on site concurrently, there is scope to accommodate two 20 m AV trucks within Unit 1 in the stacking arrangement shown in **Figure 5.2**.



Source: MRA

**Figure 5.2: Layover truck parking bays within Unit 1 (20 m AV)**

## 5.6 Site Access assessment and sight lines

The project number of vehicle movements at the site access is not anticipated to have an adverse impact upon the operation of Kiara Crescent.

Further, the vertical and horizontal alignment of Kiara Crescent results in good sight lines for exiting cars/trucks and as such vehicles are anticipated to be able to exit the development access in a safe and efficient manner.

## 5.7 Duration of vehicle stay

Heavy vehicles visiting the site would be onsite from between 5-30 minutes depending on their purpose. For example:

- Smaller tanker trucks (<10,000L) will access building 1 to unload liquid waste material and will take between 5-10 minutes to do so.
- Medium to larger sized (10,000L+) tanker trucks would take between 10-30 minutes to unload their tankers of liquid waste.
- Offtake vehicles for residual waste would hook on skip bins and generally be in and out of the site in under 5 minutes.
- Material delivery and offtake for buildings 2 and 3 would take between 10-20 minutes but are less frequent the liquid waste deliveries.

- There is a dedicated vehicle washing bay in building 1 that would be used if and as required (not all vehicles will need to use the wheel wash bay) to prevent tracking of sediment and material to the street.
- Lab processing times would vary; however, these would be batch labelled to be able to determine the source of the material. If there are any issues with the materials received, these materials would be stored and disposed of (if required) according to material type needs and the relevant costs and burden passed onto the deliverer of that material. This process is not expected to impede on the operational efficiency of the delivery and acceptance of materials to the site.

With reference to the total daily traffic flows outlined in Table 6.1, the vehicles attending Building 1 will comprise of a range of vehicle sizes with larger heavy rigid trucks likely to be less frequent while taking more time to unload. Smaller trucks will be more frequent which in turn will be unloaded in a shorter time frame. This means that the likelihood of larger rigid trucks and tanker trucks generated within building 1 will be quite low.

With respect to the above and consideration to **Attachment F** as an estimate of hourly truck movements, it is expected that at a maximum, the site may have up to 7 heavy vehicles onsite at any one peak time if we assume:

- 3 vehicles in building 1 actively depositing material
- 1 vehicle waiting to enter building 1
- 1 vehicle actively depositing/loading material at building 2
- 1 vehicle actively depositing/loading material at building 3
- 1 vehicle exiting/re-entering the site over the weighbridge to weigh off.

The swept path analysis documented in **Attachment E** of this report confirms that the above manoeuvres can be undertaken within the respective buildings.

## 6. TRAFFIC IMPACT

### 6.1 Anticipated Vehicle Movements

The impact of the proposed development can be assessed having regard to the anticipated number of vehicle movements likely to be generated at the development access during the commuter peak periods.

Additionally, staff and visitor movements will correspond to around 18 vehicle movements during each of the commuter peak hours, that is, 15 arriving warehouse employees, 15 departing warehouse staff departing and three office staff arriving, assuming that the shift changeover times occur during the morning peak hour.

Assuming that the shift changeover time occurs during the late afternoon peak hour, the converse distribution of vehicle movements would apply.

Information provided by the applicant indicates that during one operational day, it is expected that the liquid waste facility will generate a maximum of up to 86 trucks per day in accordance with the breakdown of trucks summarised in **Attachment F** and in **Table 6.1**:

**Table 6.1: Summary of anticipated truck movements**

Warehouse Space	Type of truck	No. of trucks/day	No. of truck trips (in/out)
<b>Building 1 – Liquid Waste plant</b>	Truck sizes range between 2,000 to 30,000 litre capacity trucks. 90% of input liquid waste is treated and discharged to sewer, with a small component of solids and other non-compliant liquids to be removed via tanker.  Typical incoming truck sizes will range from between SRV 6.4m, MRV 8.8m, HRV 12.5m.  Outgoing trucks will be primarily 20m AV.	<b>Inputs</b> 25-50 trucks	<b>Inputs</b> Ingress – 25-50 Egress – 25-50
		<b>Outputs</b> 3-5 trucks	<b>Outputs</b> Ingress – 6-10 Egress – 6-10
<b>Product Destruction</b>	Typically delivered in 4-8t loads and removed from the site in a HRV flatbed/skip container (12-18t).	<b>Inputs</b> 8-10 trucks	<b>Inputs</b> Ingress – 8-10 Egress – 8-10
		<b>Outputs</b> 3-4 trucks	<b>Outputs</b> Ingress – 6-8 Egress – 6-8
<b>Hazardous materials</b>	Typically delivered in smaller 2-6t loads (some larger quantities may also be delivered) and removed from the site in bulk in IBCs (12-40t).	<b>Inputs</b> 10-14 trucks	<b>Inputs</b> Ingress – 10-14 Egress – 10-14
		<b>Outputs</b> 2-3 trucks	<b>Outputs</b> Ingress – 4-6 Egress – 4-6
<b>Total (Median)</b>		<b>69 trucks</b>	<b>79 ingress / 79 egress trips</b>
<b>Total (Max.)</b>		<b>86 trucks</b>	<b>98 ingress / 98 egress trips</b>

It should be noted that the proposed development will generate between 86 trucks (or 172 truck entry/exit trips) and 98 trucks (or total of 196 truck entry/exit trips), with approximately 12 trucks per day required to re-enter the site to weigh off outgoing material.

Based upon the above, the site will generate a maximum of 98 trucks entering the site per day and 98 trucks exiting the site per day, or based upon the information provided in **Attachment F**, a maximum of up to five inbound and five outbound truck trips per hour.

Conservatively, for the purpose of the analysis, an additional 30 % of truck trips have been estimated to be generated by the proposed development per hour, or a total of 7 truck trips as inbound and 7 outbound trips during a commuter peak hour.

A summary of the light and heavy vehicle traffic movements anticipated to be generated by the development site is shown summarised below as follows:

	AM peak hour	
	IN	OUT
Cars	18	15
Trucks	7	7

	PM peak hour	
	IN	OUT
Cars	15	18
Trucks	7	7

## 6.2 Directional Distribution

For the purpose of the analysis, the directional distribution adopted for the analysis has been sourced from Traffic and Parking Impact Assessment report prepared by Stanbury Traffic Planning (2019) and corresponds to 65 % of the traffic arriving/departing from the west along Loftus Road and 35 % arriving/departing the site from the east along Loftus Road.

On the basis of the above assumed directional distribution, it is anticipated that the following additional movements will be generated by the development site onto the surrounding road network:

### Loftus Road and Norrie Street

#### AM Peak

- 10 cars/5 trucks – Left turn from Norrie St South to Loftus Rd West
- 5 cars/2 trucks – Right turn from Norrie St South to Loftus Rd East
- 6 cars/2 trucks – Left turn from Loftus Rd East to Norrie Rd South
- 12 cars/5 trucks – Right turn from Loftus Rd West to Norrie Rd South

#### PM Peak

- 12 cars/5 trucks – Left turn from Norrie St South to Loftus Rd West
- 6 cars/2 trucks – Right turn from Norrie St South to Loftus Rd East
- 5 cars/2 trucks – Left turn from Loftus Rd East to Norrie Rd South
- 10 cars/5 trucks – Right turn from Loftus Rd West to Norrie Rd South

## 6.3 Future Operating Conditions (2025)

The intersection of Loftus Road and Norrie Street was assessed using the SIDRA intersection computer program having regard to the existing traffic volumes (November 2025) and the assumptions outlined above for the additional traffic flows to determine the future (2025) performance measures of critical degrees of saturation and 95<sup>th</sup> % ile queue lengths.

The future (2025) operating conditions of the intersection for the am and pm commuter peak hours are shown in **Attachment G** and summarised in **Table 6.2**.

**Table 6.2: Future Intersection Performance (2025)**

Peak Hour	Intersection Performance			
	Critical Movement (Direction)	Degree of Sat (x)	95 <sup>th</sup> % ile queue (m)	Level of Service
AM peak	Right turn (from Loftus Rd West)	0.228	6.0	A
PM peak	Right turn (from Loftus Rd West)	0.161	3.6	A

On the basis of the above forecast traffic movements, it is considered that the additional traffic movements in either the morning or afternoon commuter peak hours are minimal and well within the road carrying capacity of the road network and would not represent an adverse impact upon the operation of the surrounding road network or the intersection of Loftus Road and Norrie Street.

The conclusions drawn from the intersection analysis are consistent with what was assessed by Stanbury Traffic Planning (Ref: 18-106-2, dated November 2019), as part of the previous DA report for the proposed recycling facility, which concluded amongst other things that:

**Table 4** indicates that the additional traffic generated by the development is not projected to have noticeable impacts on operation of the junction of Norrie Street and Loftus Road with only minor alterations projected with respect to delay and degree of saturation. In this regard, the intersection levels of service are projected to remain unaltered at 'A', representing good conditions with spare capacity.

The adjoining road network has been previously assessed to provide motorists with a good level of service with spare capacity. The abovementioned level of additional traffic is not projected to, in itself, result in any unreasonable impacts on the existing operational performance of the surrounding road network.

#### 6.4 Future Operating Conditions (2035)

The intersection of Loftus Road and Norrie Street was assessed using the SIDRA intersection computer program having regard to the existing traffic volumes (November 2025) and the assumptions outlined above for the additional traffic flows to determine the future (2035) performance measures of critical degrees of saturation and 95<sup>th</sup> % ile queue lengths.

Notwithstanding the above, while there was little change (albeit a slight decrease) in overall traffic flows along both Loftus Road and Norrie Street between the period November 2022 and October 2025, a growth rate of 2 % per annum was conservatively applied to all of the November 2025 turning movement counts to factor the existing traffic volumes to the future year 2035.

The future operating conditions of the intersection for the am and pm commuter peak hours, for the future year 2035, are shown in **Attachment H** and summarised in **Table 6.3**.

**Table 6.3: Future Intersection Performance (2035)**

Peak Hour	Intersection Performance			
	Critical Movement (Direction)	Degree of Sat (x)	95 <sup>th</sup> % ile queue (m)	Level of Service
AM peak	Right turn (from Loftus Rd West)	0.277	7.6	A
PM peak	Right turn (from Loftus Rd West)	0.201	5.0	A

On the basis of the above forecast traffic movements, it is considered that the additional traffic movements in either the morning or afternoon commuter peak hours are minimal and well within the road carrying capacity of the road network and would not represent an adverse impact upon the future (year 2035) operation of the surrounding road network or the intersection of Loftus Road and Norrie Street.

## 7. CONSTRUCTION TRAFFIC CONSIDERATIONS

### 7.1 Construction process, volume of trucks and duration of the works

The applicant has indicated the following key stages of the construction process, volume of construction vehicles and the respective time frame, as shown summarised in **Attachment J**.

The construction works are anticipated to occur over an approximate seven-week period.

Having regard to the above, the construction works will generate a maximum of one to two trucks per day.

## 7.2 Construction works hours

It is understood that the permitted hours for construction activity will be between:

- Monday – Friday 7 am – 5 pm
- Saturday 7 am – 1 pm

No construction work is to be carried out on Sundays or public holidays.

## 7.3 Construction vehicles

The maximum length of the trucks associated with the construction site will be an 18 m truck and dog trailer/flatbed semi-trailer and a 12.5 m heavy rigid truck which will access the construction site during the excavation and construction stages.

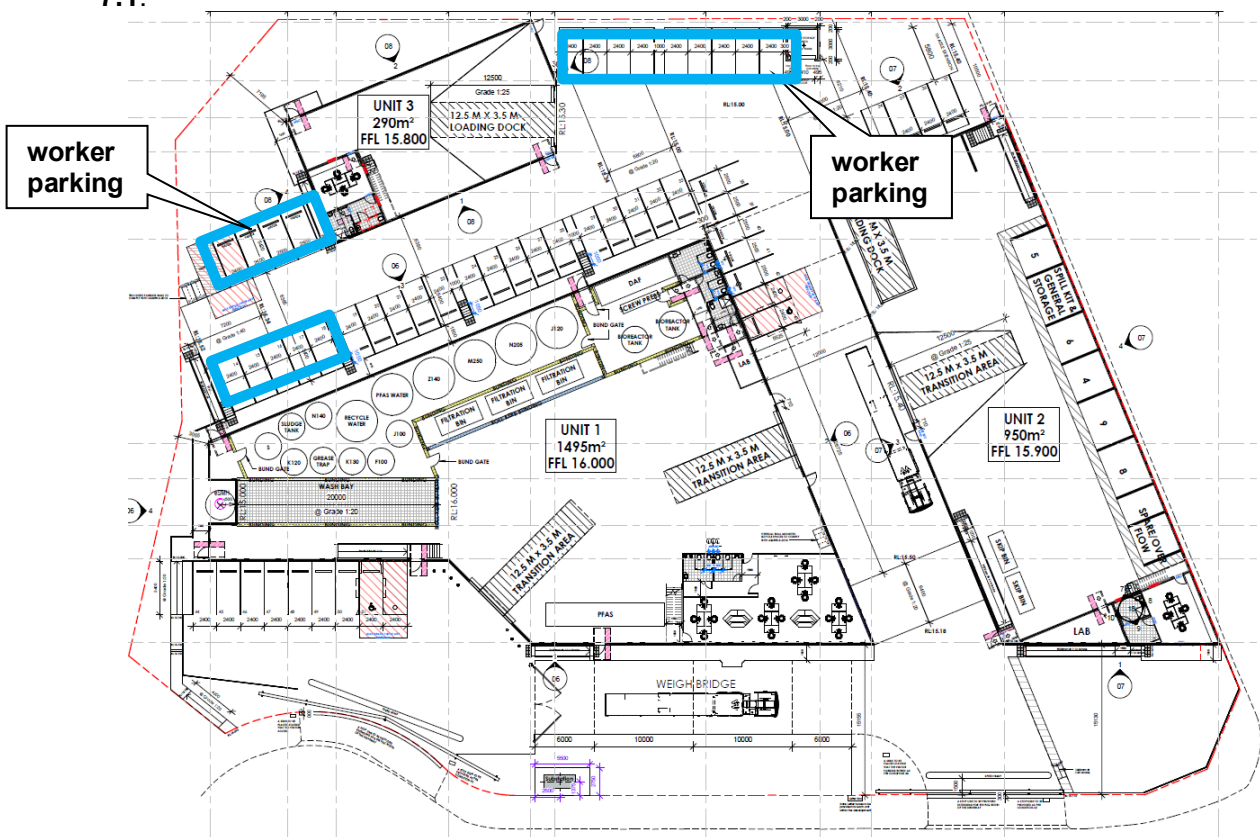
## 7.4 Construction workers

Information provided by the project manager indicates the following number of construction vehicles which are anticipated to be generated during the construction stage, as shown summarised in **Table 7.1**.

## 7.5 Parking for construction workers

Information provided by the client indicates that during the construction stage, there will be a maximum of up to 20 workers on site at any one time.

The workers will be able to park their vehicles on site, the location of which is shown in **Figure 7.1**.



Source: MRA Consulting

**Figure 7.1: Location of worker parking**

## 7.6 Ingress/egress routes to and from the construction site

The ingress and egress routes to and from the construction site will occur via the routes shown in **Figure 5.1**.

## 7.7 Facility for loading/unloading goods at the construction site

During the installation phase of the proposed facilities equipment and building materials will be unloaded directly to relevant industrial buildings where possible. For any larger deliveries, a loading zone will be designated nearby the weighbridge for the unloading of equipment and materials by a mobile crane (see Section 7.8).

Once unloaded by crane, materials and equipment would be moved internally to the relevant industrial building by forklift or mobile crane, into position for installation works.

Given that the warehouses have been constructed, the building materials/fit out items will be stored within each of the constructed warehouses.

An assessment was undertaken to examine the largest truck which is able to access the loading bay area during the construction stage with the use of the AutoTURN computer software.

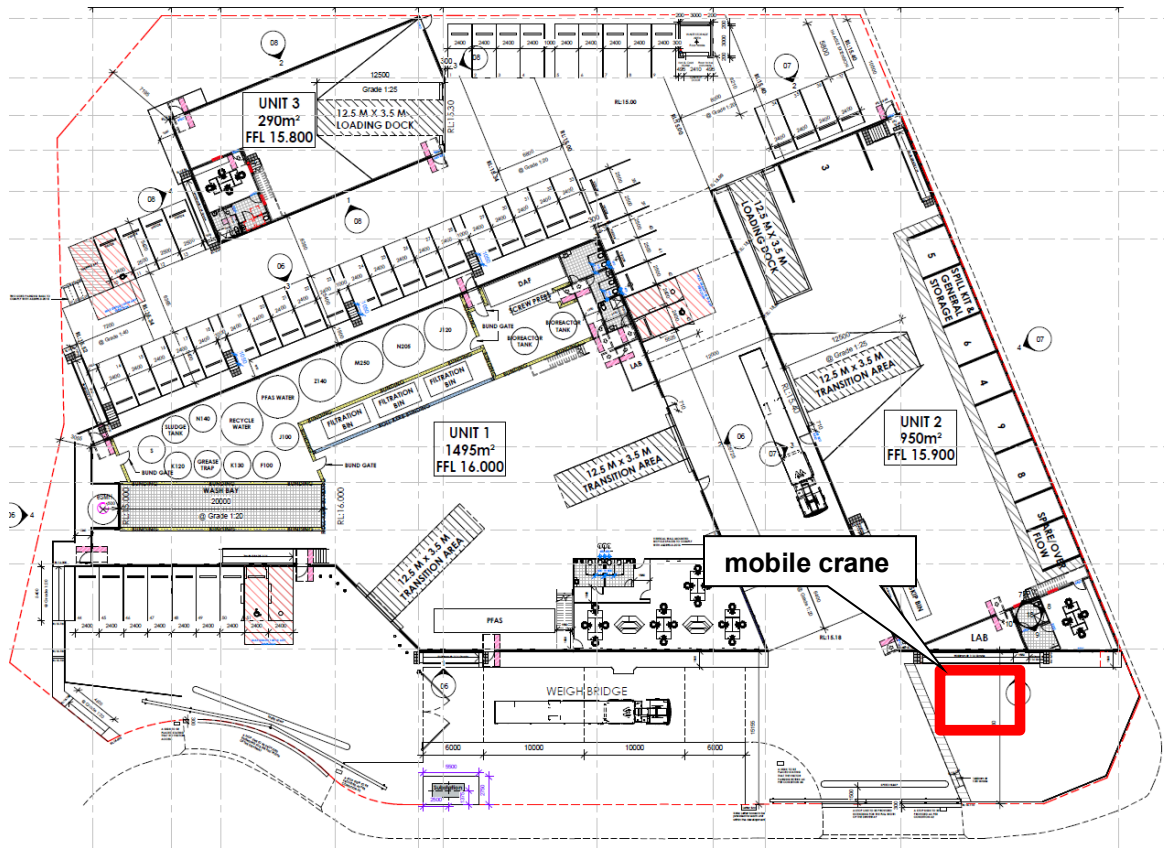
The analysis, which is shown in **Attachment E (sheet A3.01)**, indicates that an articulated vehicle up to 20 m in length is able to manoeuvre into the on-site loading bay area to then be able to safely exit the loading zone in a forward manner.

## 7.8 Mobile Crane

A tower crane will not be used on the construction site.

The applicant has advised that an 11.63 m mobile crane which will be used to unload building materials/fit out items from the rear of the delivery trucks. The specification for the largest crane is shown in **Attachment K**.

The mobile crane will be positioned within the site the location of which is shown in **Figure 7.3**.



Source: MRA Consulting

**Figure 7.3: Location of mobile crane**

## 7.9 Location of site amenities

Given that the warehouses have been constructed, the amenities for the workers will be contained within the each of the warehouses.

## 8. CONCLUSIONS

Having regard to the above, it is considered that:

- The development's peak staff parking demand will correspond to a maximum of 33 vehicles (at shift changeover times) and say three visitor spaces, which can be comfortably accommodated within the on-site parking supply of 51 spaces; and
- The additional traffic movements in either the morning or afternoon commuter peak hours are minimal and well within the road carrying capacity of the road network and would not represent an adverse impact upon the operation of the surrounding road network or the intersection of Loftus Road and Norrie Street.

Evan Boloutis  
**Director**  
**EB Traffic Solutions Pty Ltd**

B.Eng (Civil), MEng Sc (Traffic), MBA

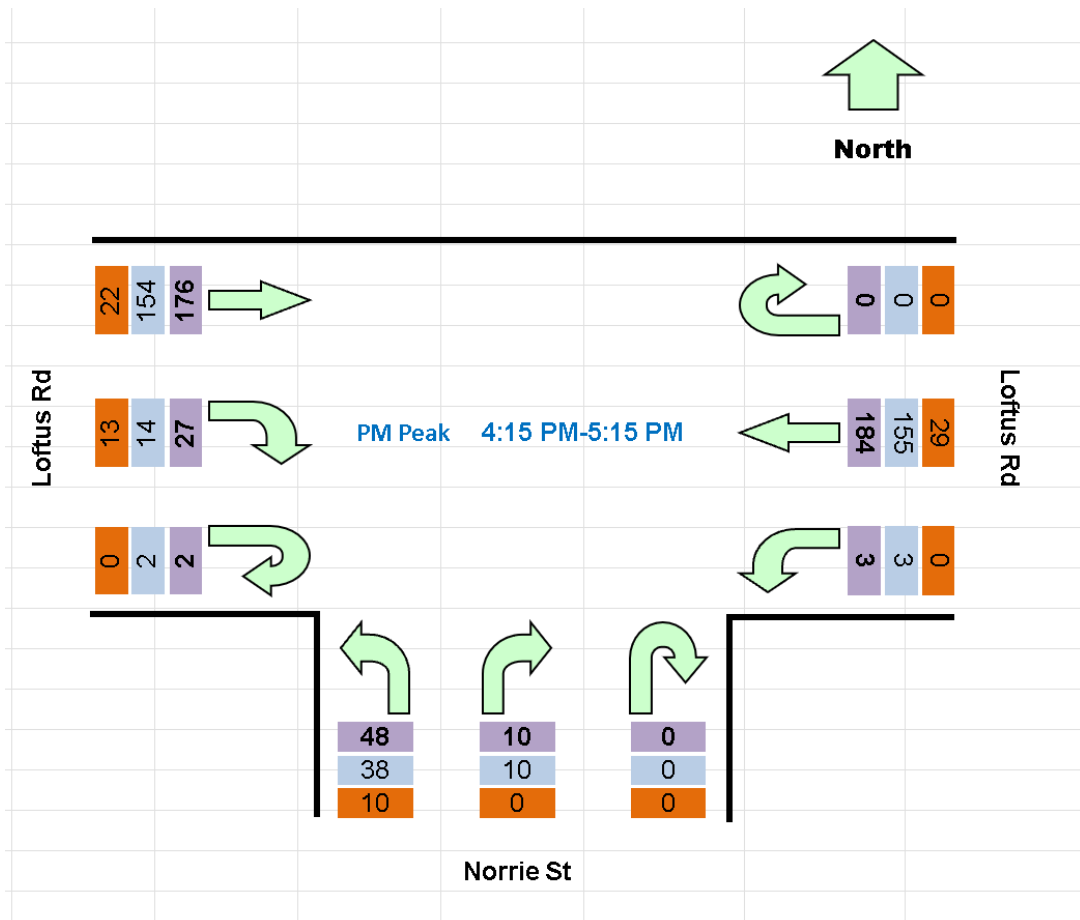
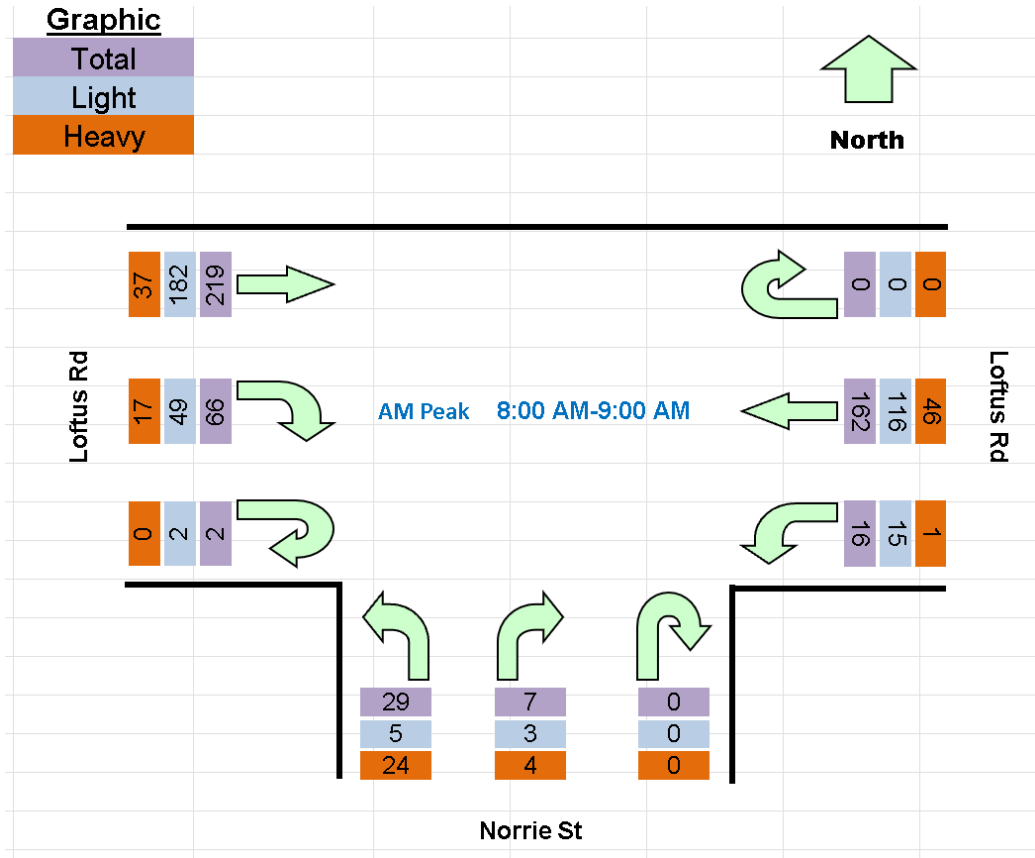
**Copyright**

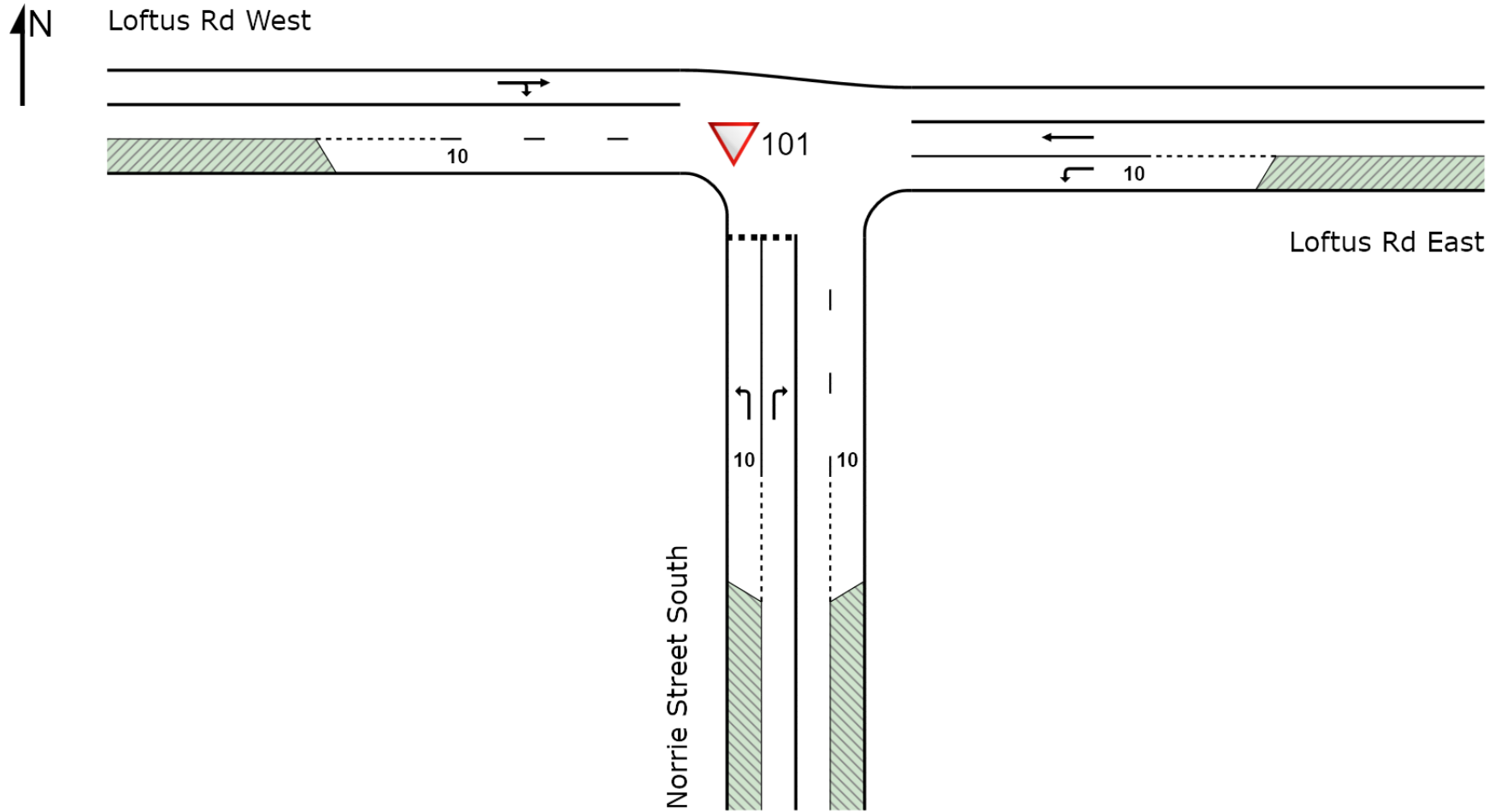
The information contained in this report is confidential and intended for the use of the client specified on the front of the report. No representation is made or is implied to be made to any third party. No part of this report may be reproduced or used without the written permission of EB Traffic Solutions Pty Ltd. Any unauthorised use of this report will constitute an infringement of copyright.

**Disclaimer**

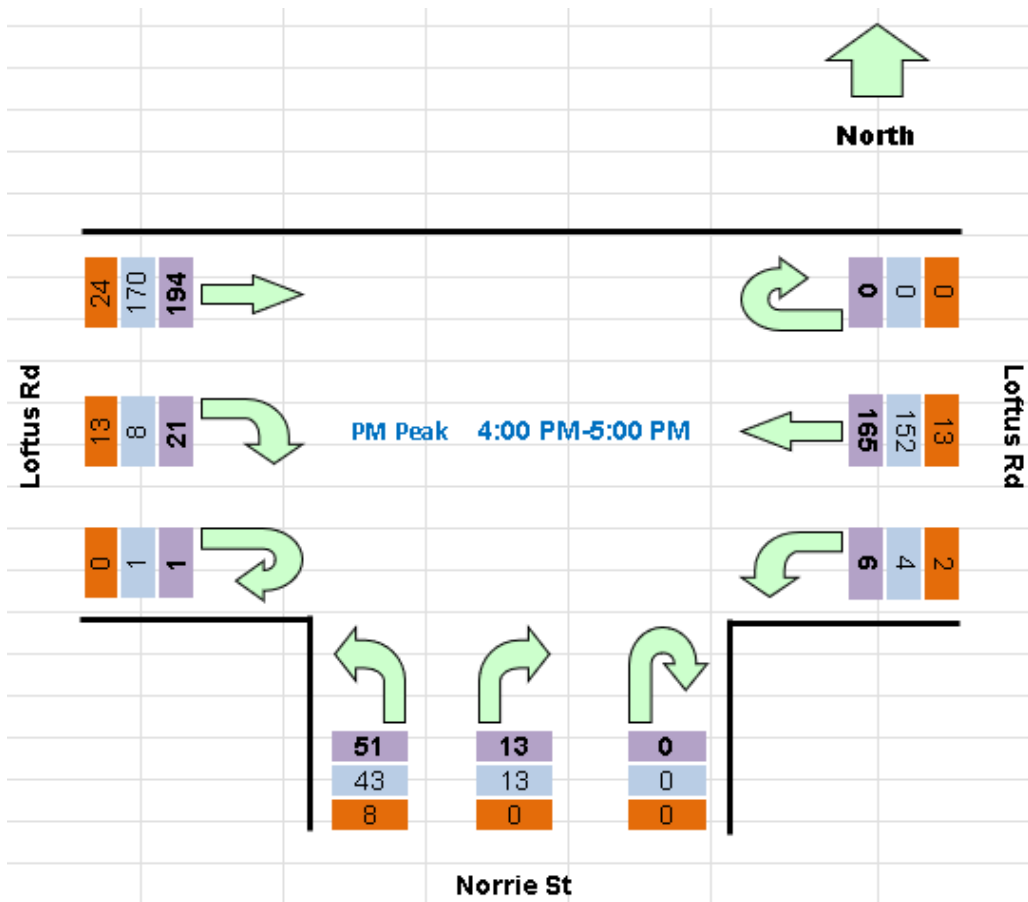
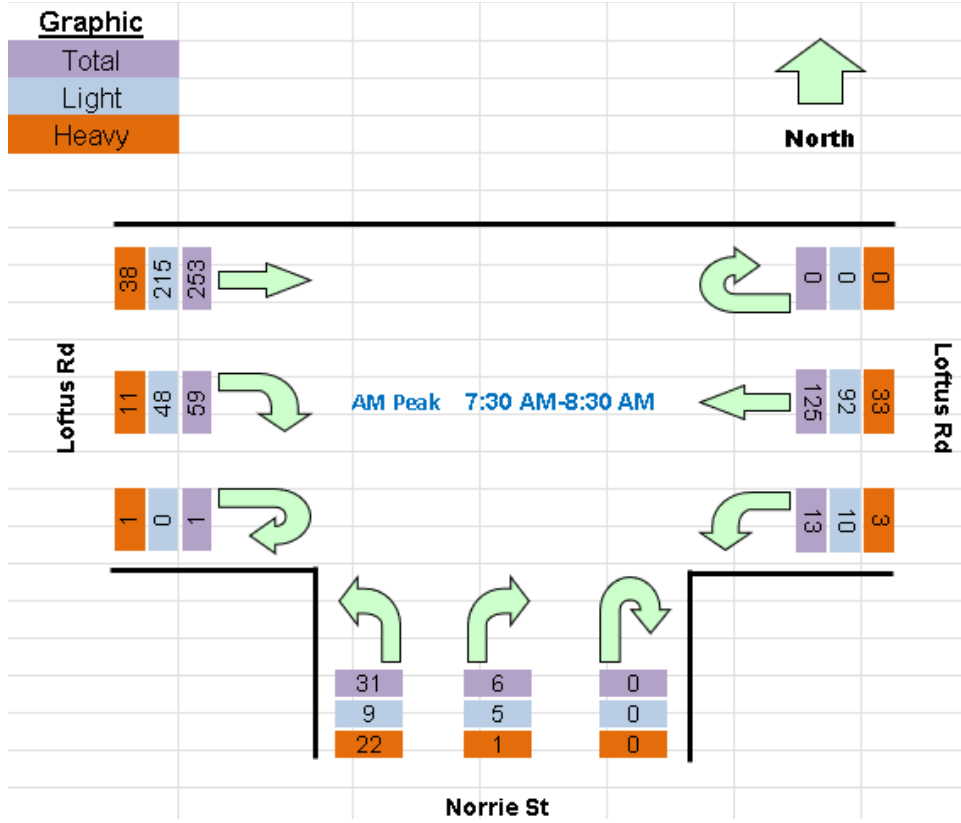
EB Traffic Solutions Pty Ltd takes no responsibility in any way to any person or organisation, other than that for which the report has been prepared, in respect of the information contained in this report, including any omissions or errors.

**ATTACHMENT A**  
**SUMMARY OF TURNING MOVEMENT COUNTS AND LAYOUT**  
**LOFTUS ROAD AND NORRIE STREET – 30 NOVEMBER 2022**





**ATTACHMENT B**  
**SUMMARY OF TURNING MOVEMENT COUNTS**  
**LOFTUS ROAD AND NORRIE STREET – 16 OCTOBER 2025**



**ATTACHMENT C**  
**EXISTING OPERATING CONDITIONS**

## LOFTUS ROAD AND NORRIE STREET

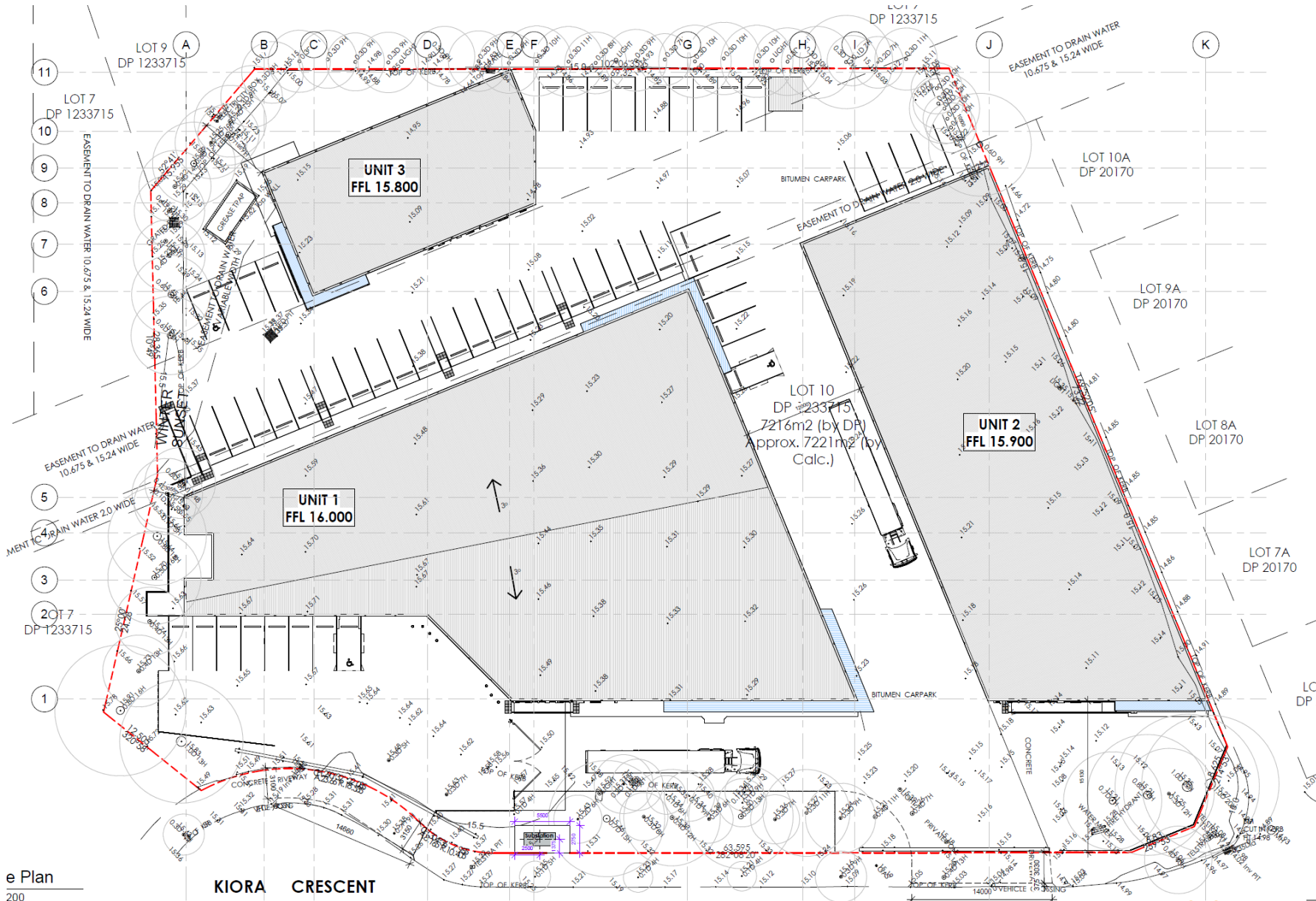
### AM PEAK

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed
			[ Total	HV ]	[ Total	HV ]				[ Veh.	Dist ]				
			veh/h	%	veh/h	%	v/c	sec		veh	m				km/h
South: Norrie Street South															
1	L2	All MCs	42	77.5	42	77.5	0.043	7.3	LOS A	0.2	2.0	0.29	0.55	0.29	47.8
3	R2	All MCs	6	16.7	6	16.7	0.012	10.0	LOS A	0.0	0.3	0.53	0.66	0.53	46.8
Approach			48	69.6	48	69.6	0.043	7.7	LOS A	0.2	2.0	0.32	0.57	0.32	47.7
East: Loftus Rd East															
4	L2	All MCs	14	23.1	14	23.1	0.009	5.9	LOS A	0.0	0.0	0.00	0.57	0.00	51.9
5	T1	All MCs	132	26.4	132	26.4	0.079	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
Approach			145	26.1	145	26.1	0.079	0.6	NA	0.0	0.0	0.00	0.05	0.00	59.1
West: Loftus Rd West															
11	T1	All MCs	266	15.0	266	15.0	0.209	0.3	LOS A	0.6	4.6	0.15	0.18	0.15	56.5
12	R2	All MCs	62	18.6	62	18.6	0.209	6.7	LOS A	0.6	4.6	0.15	0.18	0.15	53.5
Approach			328	15.7	328	15.7	0.209	1.5	NA	0.6	4.6	0.15	0.18	0.15	55.9
All Vehicles			522	23.6	522	23.6	0.209	1.8	NA	0.6	4.6	0.12	0.18	0.12	55.9

### PM PEAK

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed
			[ Total	HV ]	[ Total	HV ]				[ Veh.	Dist ]				
			veh/h	%	veh/h	%	v/c	sec		veh	m				km/h
South: Norrie Street South															
1	L2	All MCs	42	77.5	42	77.5	0.043	7.3	LOS A	0.2	2.0	0.29	0.55	0.29	47.8
3	R2	All MCs	6	16.7	6	16.7	0.012	10.0	LOS A	0.0	0.3	0.53	0.66	0.53	46.8
Approach			48	69.6	48	69.6	0.043	7.7	LOS A	0.2	2.0	0.32	0.57	0.32	47.7
East: Loftus Rd East															
4	L2	All MCs	14	23.1	14	23.1	0.009	5.9	LOS A	0.0	0.0	0.00	0.57	0.00	51.9
5	T1	All MCs	132	26.4	132	26.4	0.079	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
Approach			145	26.1	145	26.1	0.079	0.6	NA	0.0	0.0	0.00	0.05	0.00	59.1
West: Loftus Rd West															
11	T1	All MCs	266	15.0	266	15.0	0.209	0.3	LOS A	0.6	4.6	0.15	0.18	0.15	56.5
12	R2	All MCs	62	18.6	62	18.6	0.209	6.7	LOS A	0.6	4.6	0.15	0.18	0.15	53.5
Approach			328	15.7	328	15.7	0.209	1.5	NA	0.6	4.6	0.15	0.18	0.15	55.9
All Vehicles			522	23.6	522	23.6	0.209	1.8	NA	0.6	4.6	0.12	0.18	0.12	55.9

**ATTACHMENT D**  
**LAYOUT OF THE PROPOSED DEVELOPMENT**

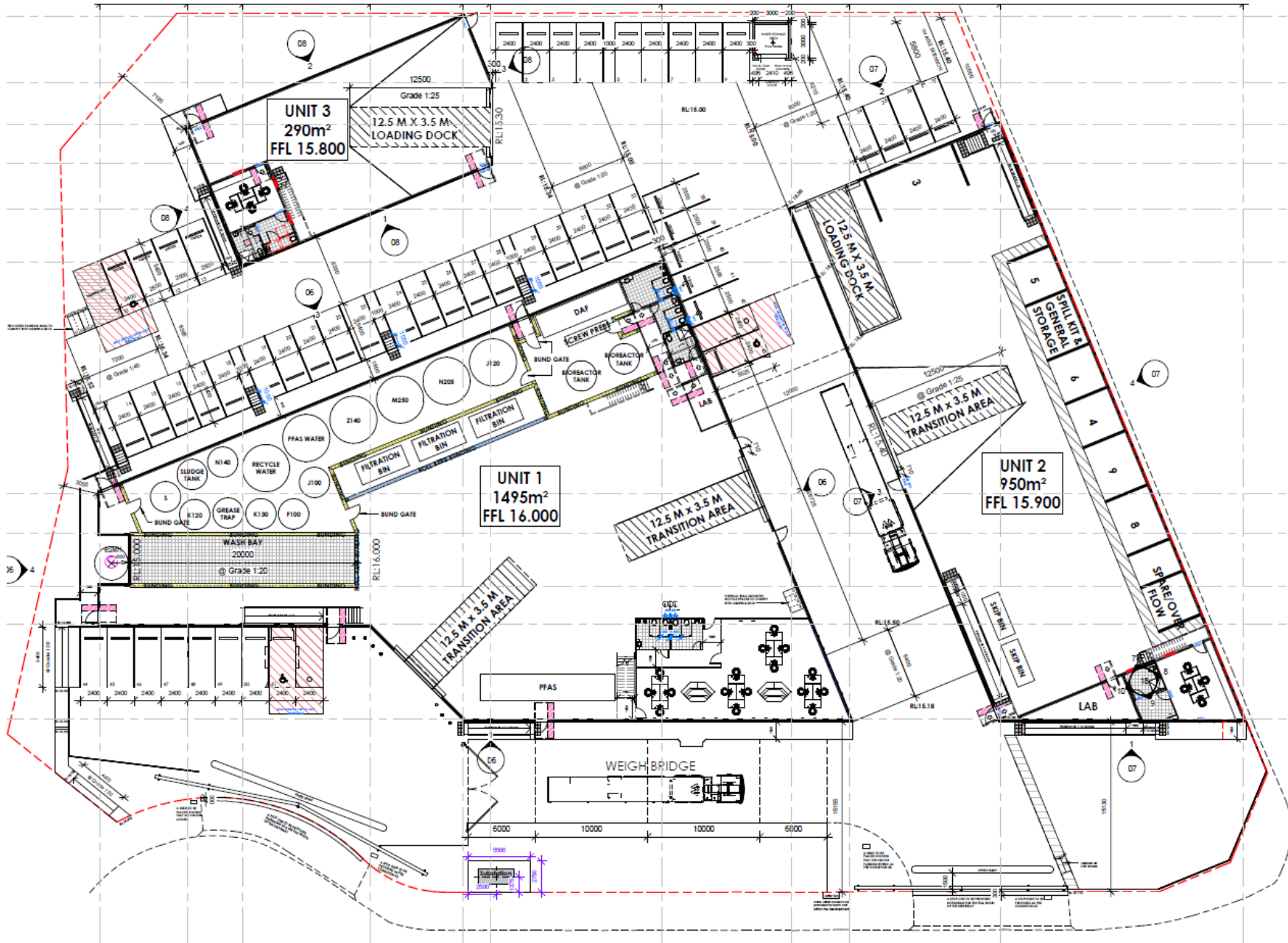


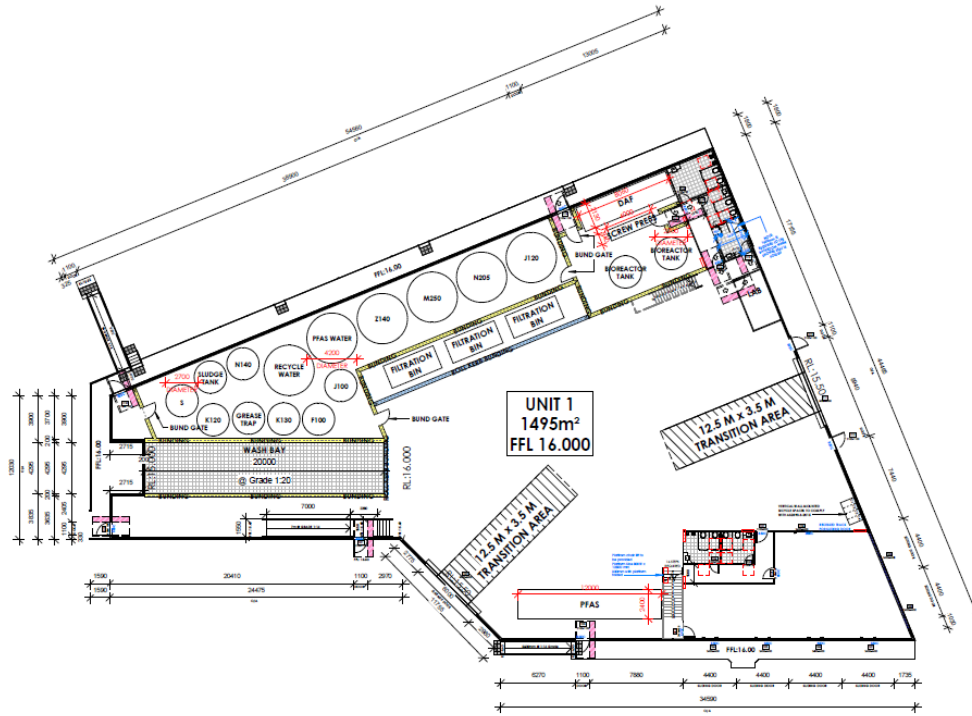
Site Plan  
200

DESCRIPTION	DATE	BY
FOR CLIENT REVIEW	16/12/22	MP
FOR CLIENT REVIEW	16/01/23	MP
FOR CLIENT REVIEW	20/01/23	MP

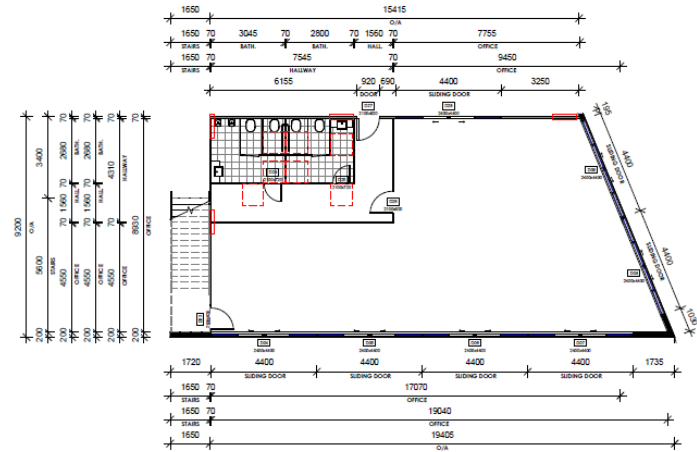
KIORA CRESCENT

KIORA CRESCENT

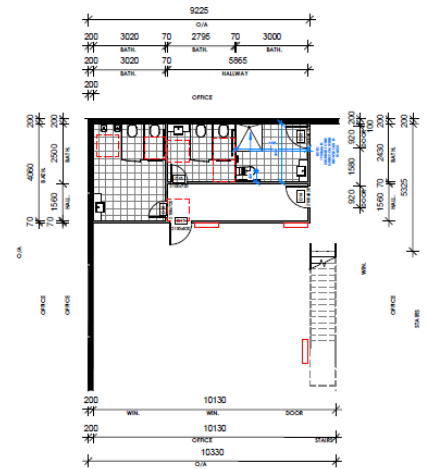




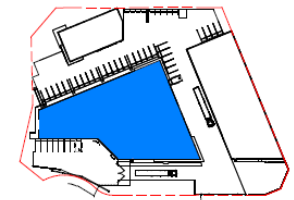
1 Unit 1 Floor Plan  
1 : 200



2 Unit 1 GF - Dimension.  
1 : 100



3 Unit 1 GF Dimension  
1 : 100



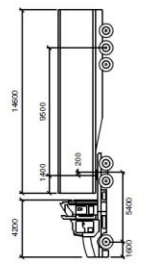
4 Unit 1 Key  
1 : 1000  
NOT FOR CONSTRUCTION



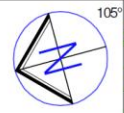


**ATTACHMENT E**  
**SWEPT PATH ANALYSIS – 12.5M HRV AND 20M AV TRUCKS**

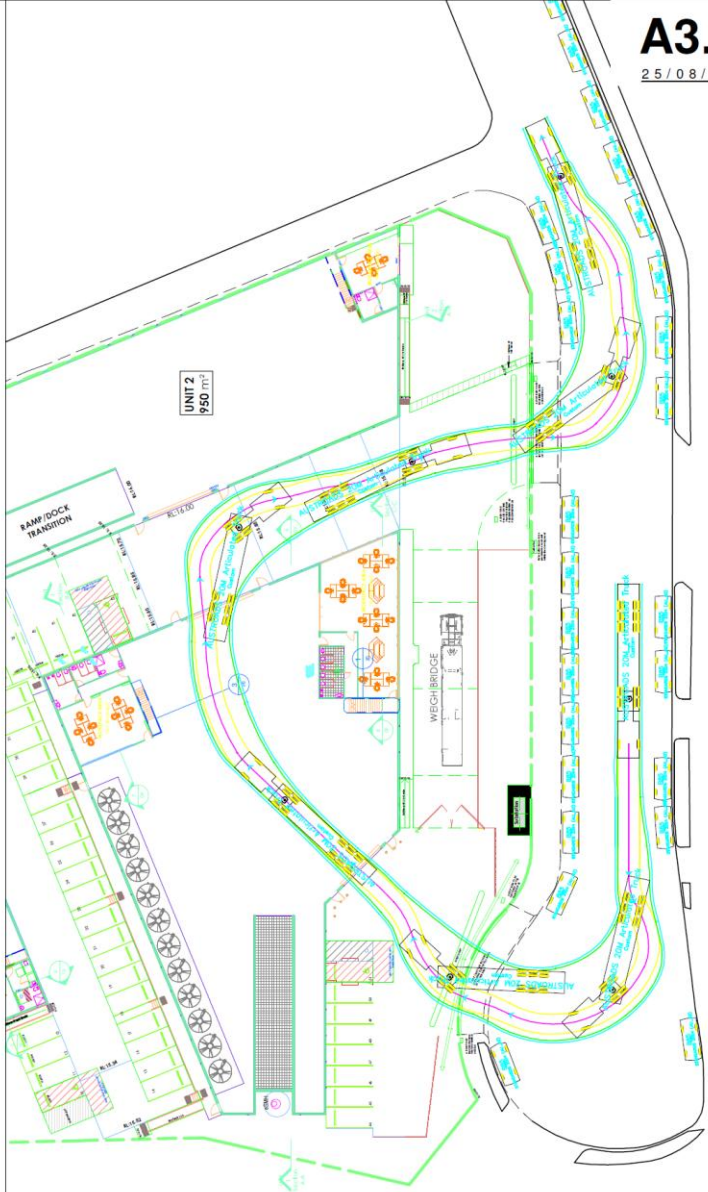
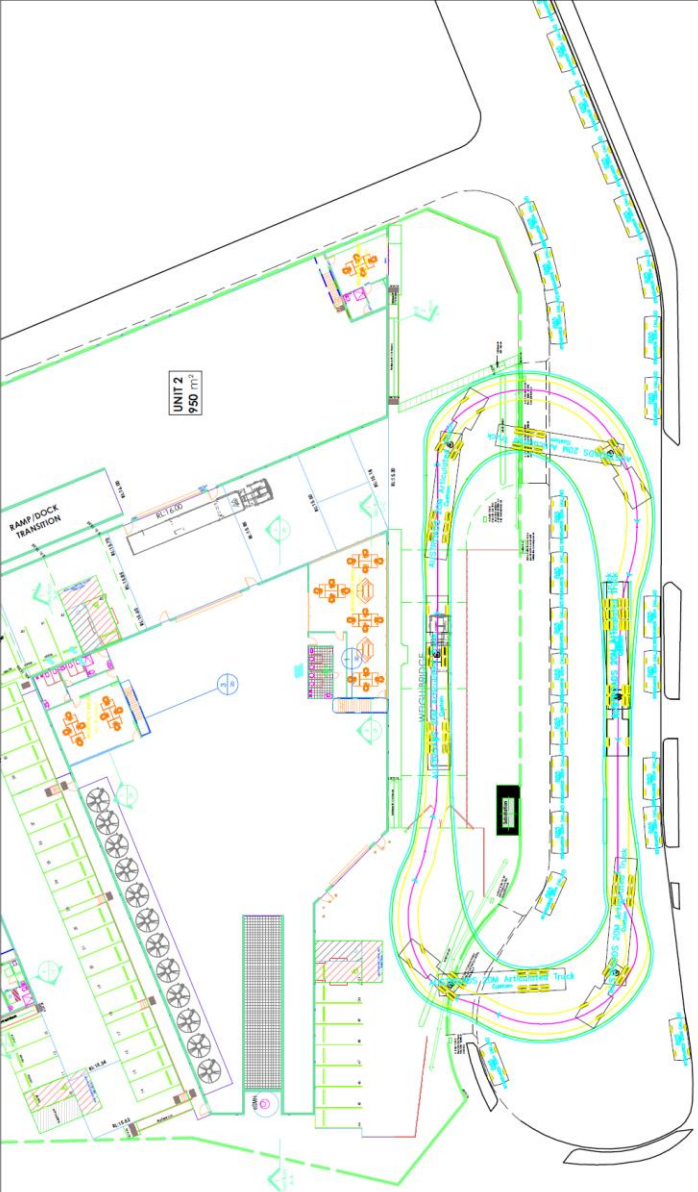
EB Traffic Solutions  
Design Vehicle



- AUSTROADS PMS 20M
- Tractor Width : 2500
  - Trailer Width : 2500
  - Lock to Lock : 6.0
  - Steering Angle : 27.8
  - Tractor Track : 2500
  - Articulating Angle : 70.0

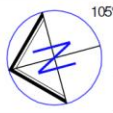


5 Kiara Crescent, Yennora (NSW)  
Scale 1:500 @ A3  
Swept Path Analysis (Articulated Truck)  
Plan prepared by EB Traffic Solutions Pty Ltd

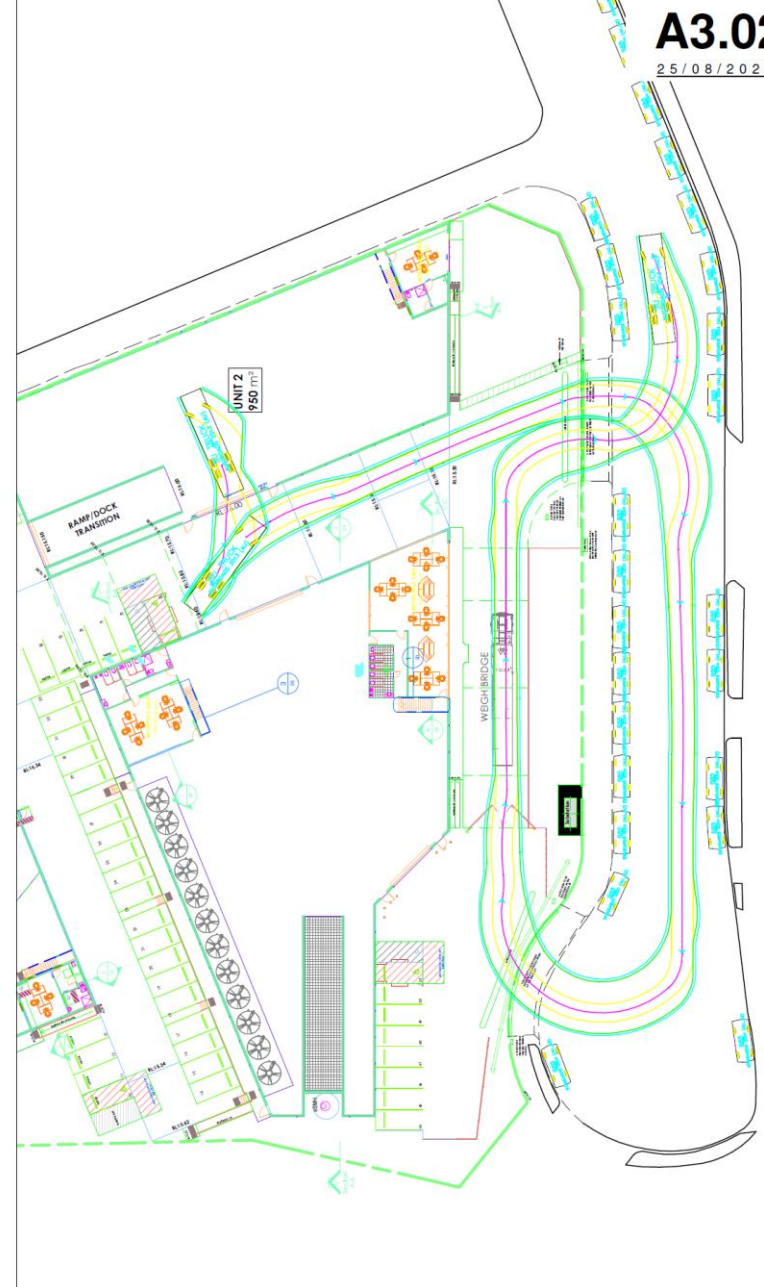
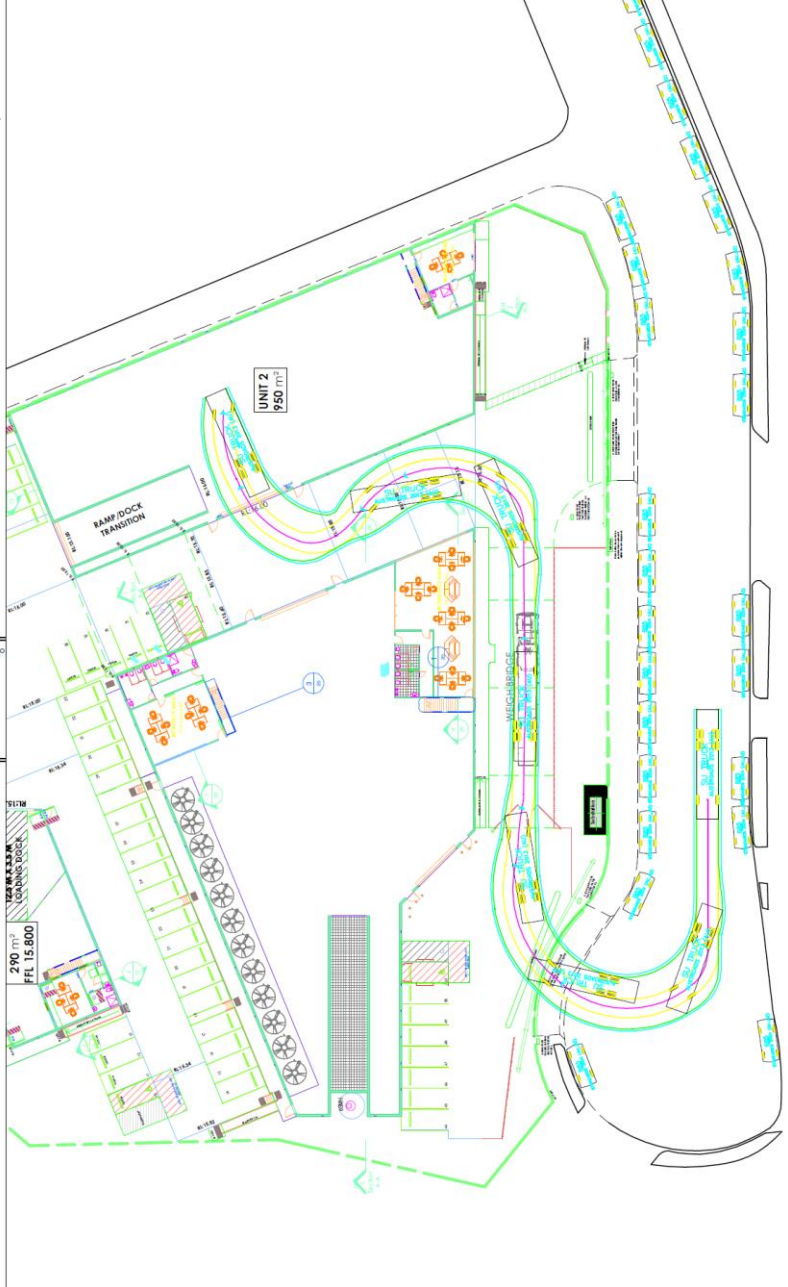


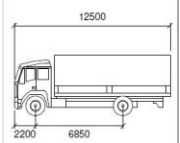
EB Traffic Solutions  
Design Vehicle

SU TRUCK	mm
Width	2500
Track	2500
Lock to Lock Time	6.0

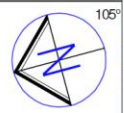


5 Kiora Crescent, Yennora (NSW)  
Scale 1:500 @ A3  
Swept Path Analysis (Rigid Truck)  
Plan prepared by EB Traffic Solutions Pty Ltd

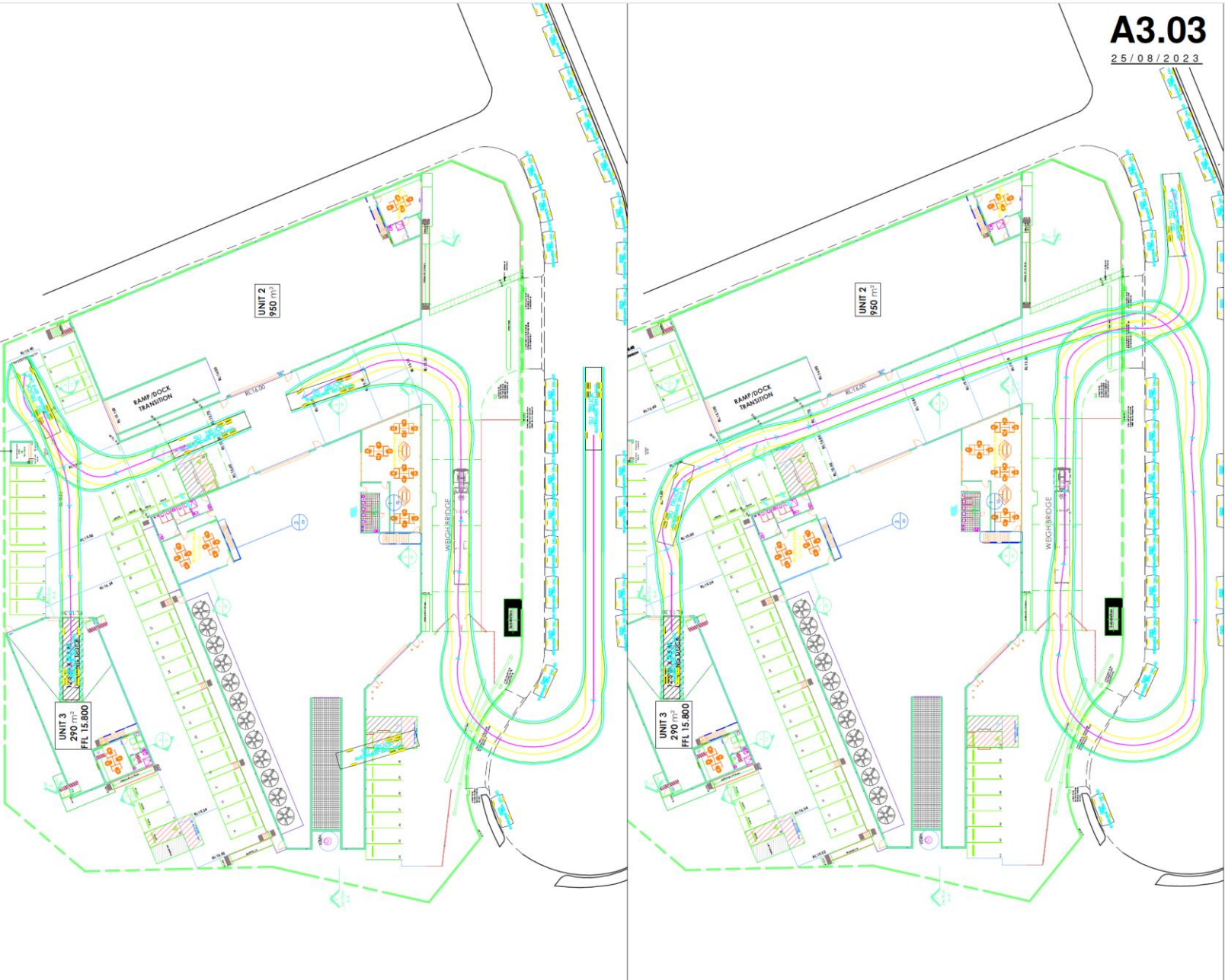




SU TRUCK mm  
 Width : 2500  
 Track : 2500  
 Lock to Lock Time : 6.0

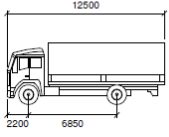


5 Kiara Crescent, Yennora (NSW)  
 Scale 1:500 @ A3  
 Swept Path Analysis (Rigid Truck)  
 Plan prepared by EB Traffic Solutions Pty Ltd

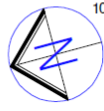


UNIT 2  
950m<sup>2</sup>

EB Traffic Solutions  
Design Vehicle

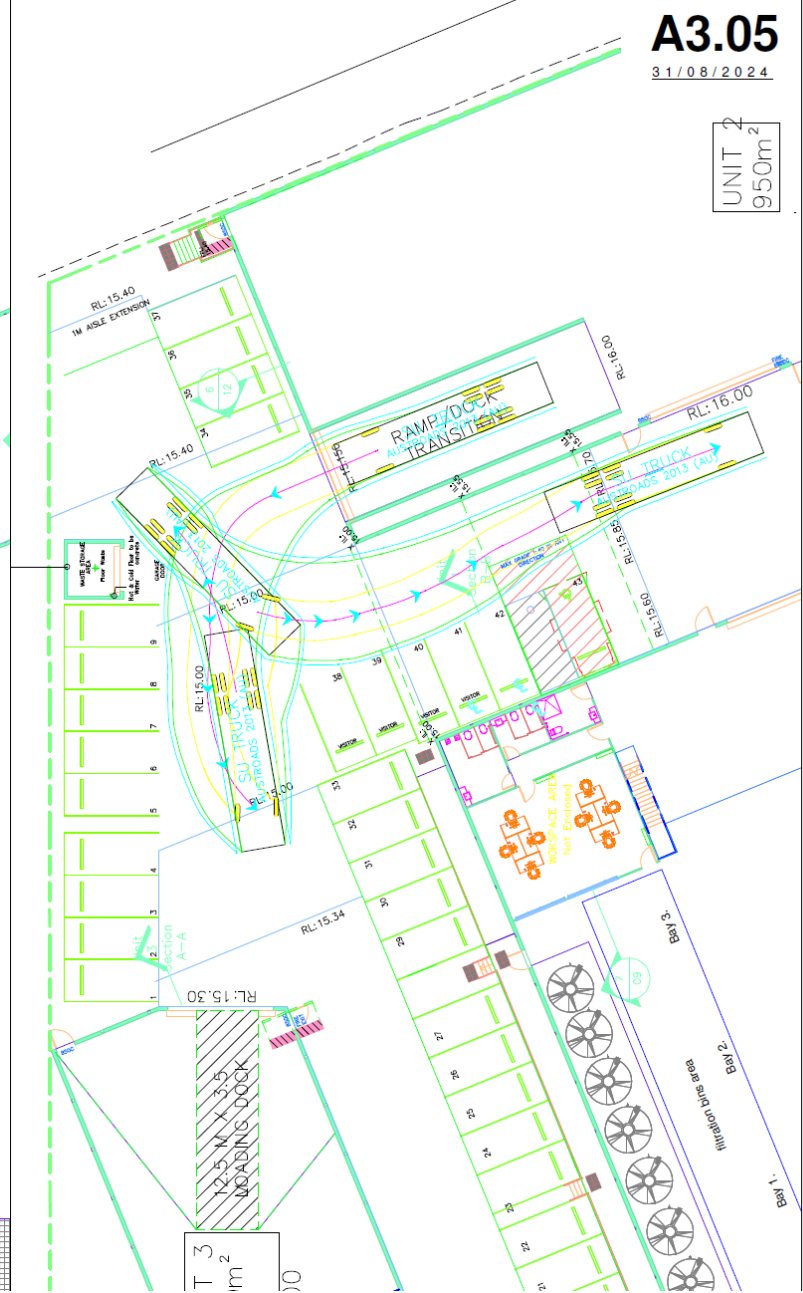
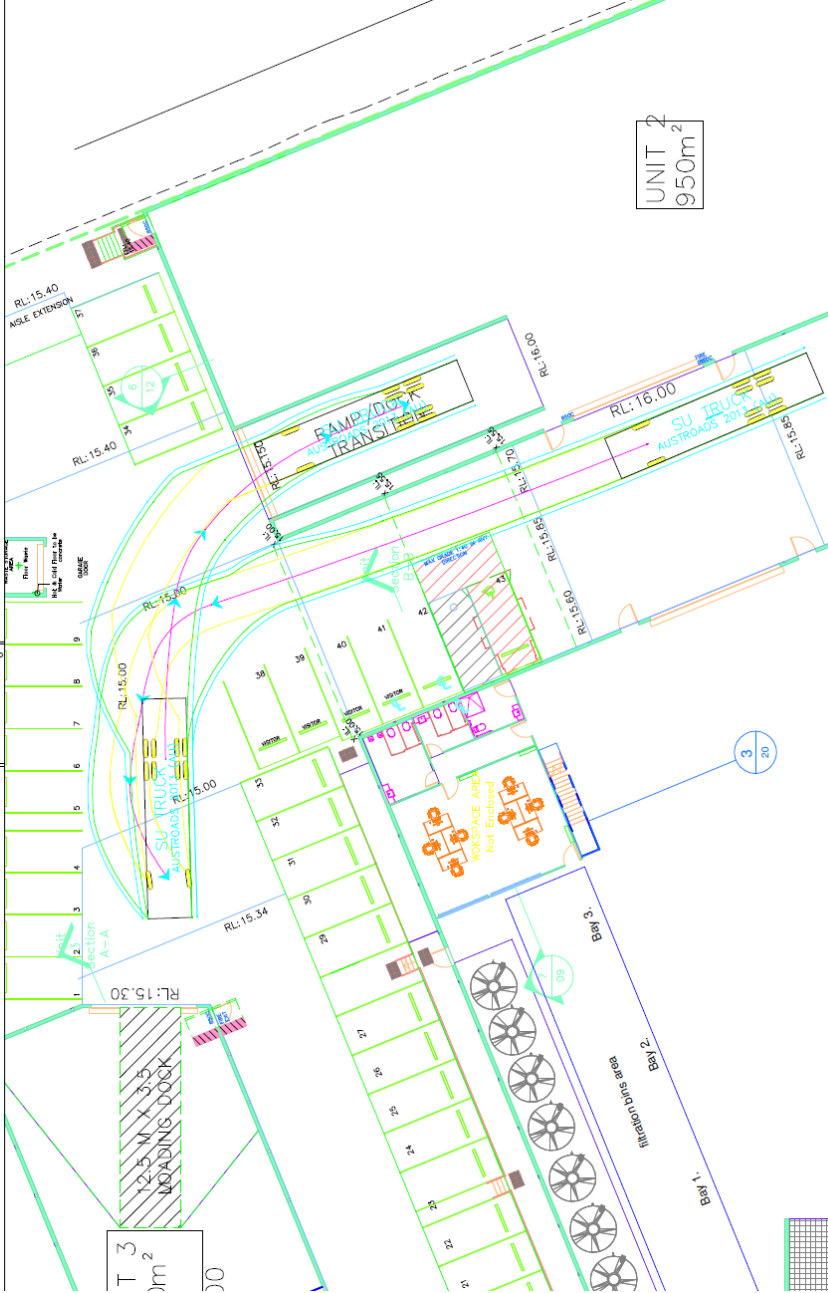


SU TRUCK mm  
Width : 2500  
Track : 2500  
Lock to Lock Time : 6.0



5 Kiara Crescent, Yennora (NSW)

Scale 1:250 @ A3  
Swept Path Analysis (Rigid Truck)  
Plan prepared by EB Traffic Solutions Pty Ltd

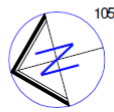


**5 Kiora Crescent, Yennora (NSW)**

**Scale 1:500 @ A3**

Swept Path Analysis (Rigid Truck)

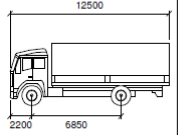
Plan prepared by EB Traffic Solutions Pty Ltd



105°

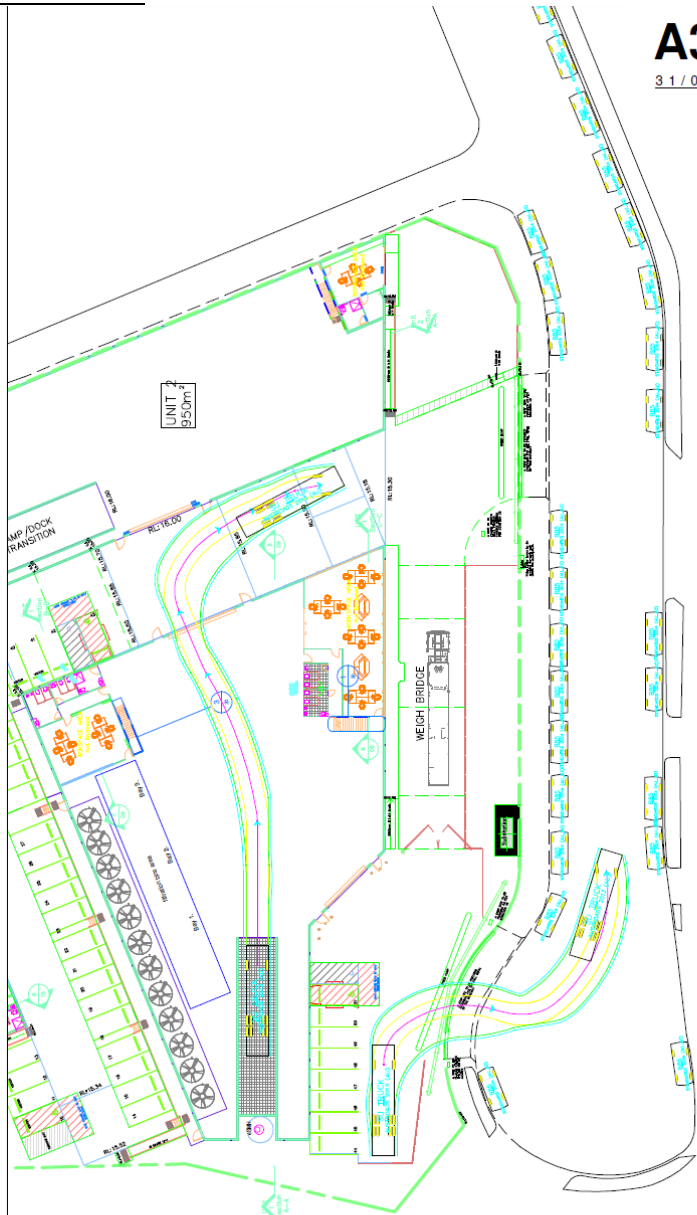
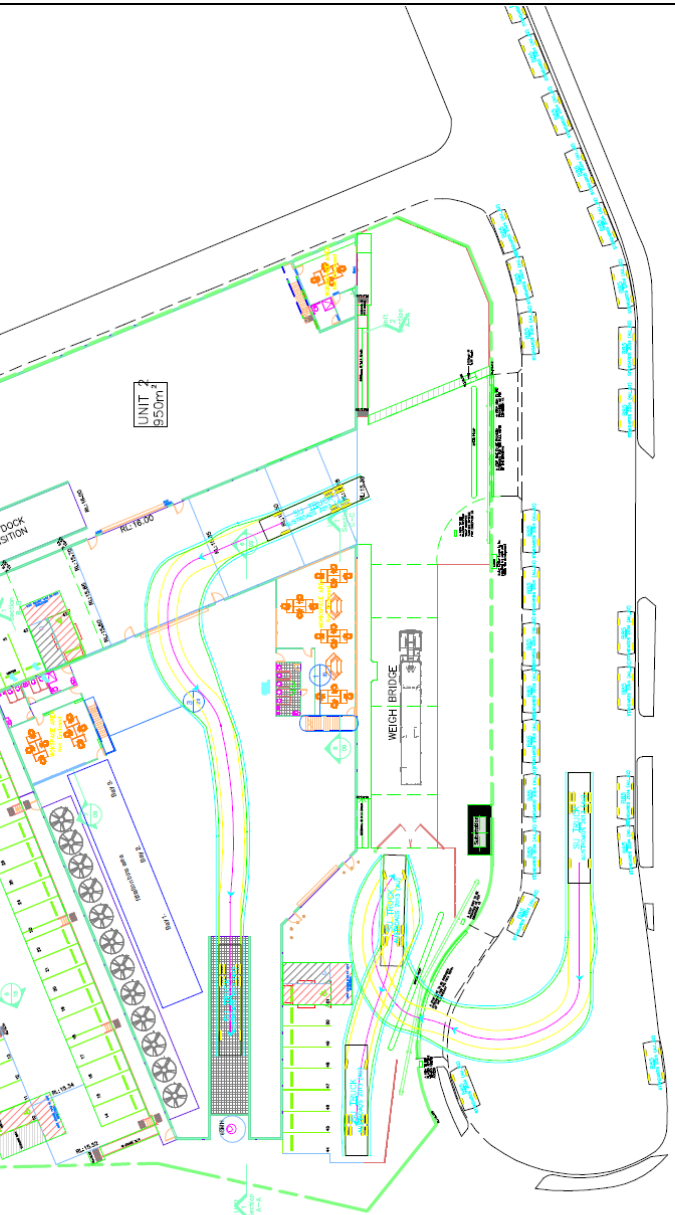
EB Traffic Solutions

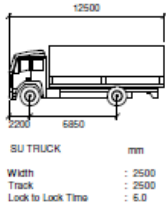
Design Vehicle



SU TRUCK

	mm
Width	2500
Track	2500
Lock to Lock Time	6.0

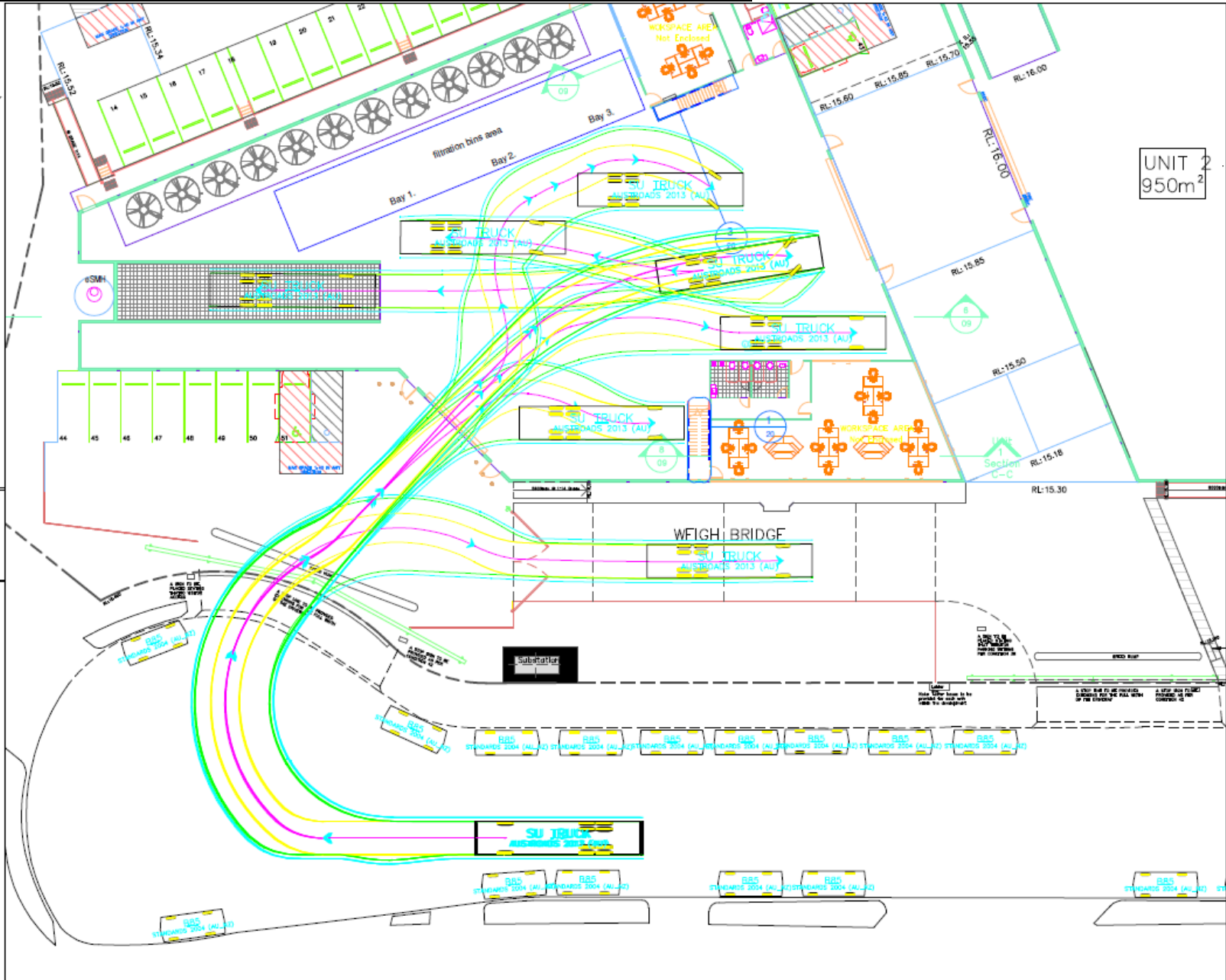




**A3.07**  
28/01/2025

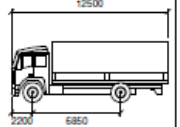


5 Kiara Crescent, Yennora (NSW)  
Scale 1:250 @ A3  
Swept Path Analysis (Rigid Truck)  
Plan prepared by EB Traffic Solutions Pty Ltd



UNIT 2  
950m<sup>2</sup>

EB Traffic Solutions  
Design Vehicle

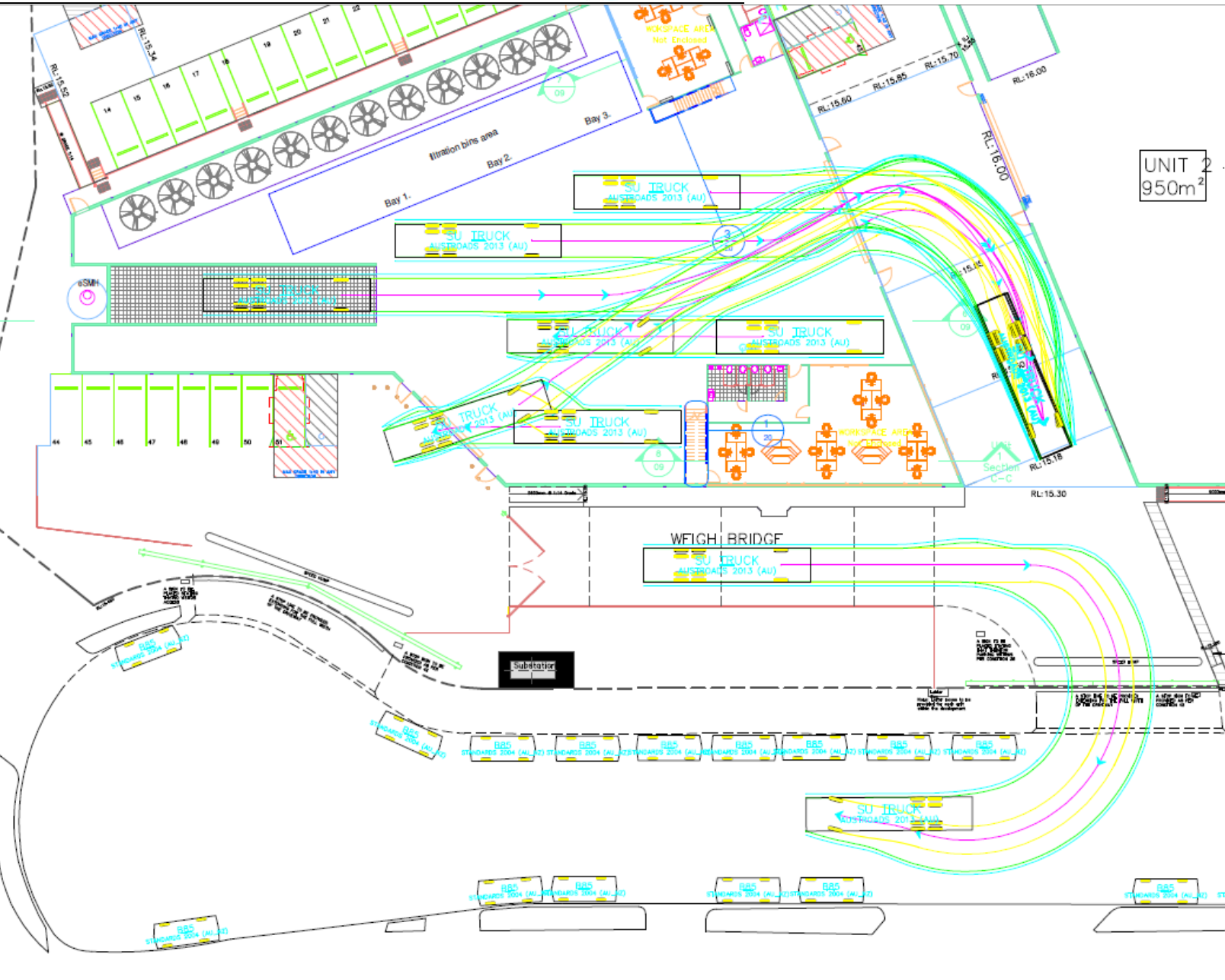


SU TRUCK	mm
Width	: 2500
Track	: 2500
Lock to Lock Time	: 6.0

**A3.08**  
28/01/2025



5 Kiora Crescent, Yennora (NSW)  
Scale 1:250 @ A3  
Swept Path Analysis (Rigid Truck)  
Plan prepared by EB Traffic Solutions Pty Ltd



**ATTACHMENT F**  
**SUMMARY OF ANTICIPATED TRUCK MOVEMENTS**



**ATTACHMENT G**  
**FUTURE OPERATING CONDITIONS (2025)**

## LOFTUS ROAD AND NORRIE STREET

### AM PEAK

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed
			[ Total	HV ]	[ Total	HV ]				[ Veh.	Dist ]				
			veh/h	%	veh/h	%	v/c	sec			veh	m			
South: Norrie Street South															
1	L2	All MCs	48	58.7	48	58.7	0.045	7.0	LOS A	0.2	1.9	0.28	0.55	0.28	48.6
3	R2	All MCs	14	23.1	14	23.1	0.028	10.9	LOS B	0.1	0.8	0.55	0.72	0.55	45.9
Approach			62	50.8	62	50.8	0.045	7.9	LOS A	0.2	1.9	0.34	0.59	0.34	48.0
East: Loftus Rd East															
4	L2	All MCs	22	23.8	22	23.8	0.014	6.0	LOS A	0.0	0.0	0.00	0.57	0.00	51.9
5	T1	All MCs	132	26.4	132	26.4	0.079	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
Approach			154	26.0	154	26.0	0.079	0.9	NA	0.0	0.0	0.00	0.08	0.00	58.7
West: Loftus Rd West															
11	T1	All MCs	266	15.0	266	15.0	0.228	0.4	LOS A	0.8	6.0	0.19	0.22	0.19	56.2
12	R2	All MCs	80	21.1	80	21.1	0.228	6.8	LOS A	0.8	6.0	0.19	0.22	0.19	53.1
Approach			346	16.4	346	16.4	0.228	1.9	NA	0.8	6.0	0.19	0.22	0.19	55.5
All Vehicles			562	22.8	562	22.8	0.228	2.3	NA	0.8	6.0	0.15	0.22	0.15	55.3

### PM PEAK

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed
			[ Total	HV ]	[ Total	HV ]				[ Veh.	Dist ]				
			veh/h	%	veh/h	%	v/c	sec			veh	m			
South: Norrie Street South															
1	L2	All MCs	69	16.7	69	16.7	0.055	6.4	LOS A	0.2	1.7	0.28	0.56	0.28	50.5
3	R2	All MCs	21	10.0	21	10.0	0.033	9.0	LOS A	0.1	0.9	0.50	0.68	0.50	47.9
Approach			91	15.1	91	15.1	0.055	7.0	LOS A	0.2	1.7	0.33	0.59	0.33	49.9
East: Loftus Rd East															
4	L2	All MCs	14	30.8	14	30.8	0.009	6.0	LOS A	0.0	0.0	0.00	0.57	0.00	51.6
5	T1	All MCs	174	7.9	174	7.9	0.094	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
Approach			187	9.6	187	9.6	0.094	0.5	NA	0.0	0.0	0.00	0.04	0.00	59.3
West: Loftus Rd West															
11	T1	All MCs	204	12.4	204	12.4	0.161	0.4	LOS A	0.4	3.6	0.16	0.17	0.16	56.2
12	R2	All MCs	38	50.0	38	50.0	0.161	7.6	LOS A	0.4	3.6	0.16	0.17	0.16	51.9
Approach			242	18.3	242	18.3	0.161	1.5	NA	0.4	3.6	0.16	0.17	0.16	55.5
All Vehicles			520	14.6	520	14.6	0.161	2.1	NA	0.4	3.6	0.13	0.20	0.13	55.7

**ATTACHMENT H**  
**FUTURE OPERATING CONDITIONS (2035)**

## LOFTUS ROAD AND NORRIE STREET

### AM PEAK

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed
			[ Total	HV ]	[ Total	HV ]				[ Veh.	Dist ]				
			veh/h	%	veh/h	%	v/c	sec		veh	m				km/h
South: Norrie Street South															
1	L2	All MCs	56	60.4	56	60.4	0.055	7.2	LOS A	0.2	2.3	0.31	0.57	0.31	48.3
3	R2	All MCs	15	21.4	15	21.4	0.036	12.7	LOS B	0.1	1.0	0.61	0.78	0.61	44.8
Approach			71	52.2	71	52.2	0.055	8.4	LOS A	0.2	2.3	0.38	0.61	0.38	47.6
East: Loftus Rd East															
4	L2	All MCs	25	25.0	25	25.0	0.016	6.0	LOS A	0.0	0.0	0.00	0.57	0.00	51.9
5	T1	All MCs	160	26.3	160	26.3	0.096	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Approach			185	26.1	185	26.1	0.096	0.8	NA	0.0	0.0	0.00	0.08	0.00	58.7
West: Loftus Rd West															
11	T1	All MCs	324	14.9	324	14.9	0.277	0.5	LOS A	1.0	7.6	0.21	0.24	0.21	55.9
12	R2	All MCs	94	20.2	94	20.2	0.277	7.1	LOS A	1.0	7.6	0.21	0.24	0.21	52.9
Approach			418	16.1	418	16.1	0.277	2.0	NA	1.0	7.6	0.21	0.24	0.21	55.2
All Vehicles			674	22.7	674	22.7	0.277	2.3	NA	1.0	7.6	0.17	0.23	0.17	55.2

### PM PEAK

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed
			[ Total	HV ]	[ Total	HV ]				[ Veh.	Dist ]				
			veh/h	%	veh/h	%	v/c	sec		veh	m				km/h
South: Norrie Street South															
1	L2	All MCs	80	15.8	80	15.8	0.065	6.6	LOS A	0.3	2.1	0.32	0.58	0.32	50.3
3	R2	All MCs	25	8.3	25	8.3	0.045	10.0	LOS B	0.2	1.2	0.55	0.73	0.55	47.1
Approach			105	14.0	105	14.0	0.065	7.4	LOS A	0.3	2.1	0.37	0.61	0.37	49.5
East: Loftus Rd East															
4	L2	All MCs	14	30.8	14	30.8	0.009	6.0	LOS A	0.0	0.0	0.00	0.57	0.00	51.6
5	T1	All MCs	212	8.0	212	8.0	0.114	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Approach			225	9.3	225	9.3	0.114	0.4	NA	0.0	0.0	0.00	0.03	0.00	59.4
West: Loftus Rd West															
11	T1	All MCs	248	12.3	248	12.3	0.201	0.6	LOS A	0.6	5.0	0.19	0.20	0.19	55.7
12	R2	All MCs	46	54.5	46	54.5	0.201	8.1	LOS A	0.6	5.0	0.19	0.20	0.19	51.3
Approach			295	18.9	295	18.9	0.201	1.8	NA	0.6	5.0	0.19	0.20	0.19	55.0
All Vehicles			625	14.6	625	14.6	0.201	2.2	NA	0.6	5.0	0.15	0.21	0.15	55.4

**ATTACHMENT J**  
**CONSTRUCTION ACTIVITY, VEHICLE TYPES, FREQUENCY AND PERSONNEL**

Construction/Install Stage	Installation Activity	Duration (weeks)	Personnel (Max No.)	No. Trucks (average) per day	Maximum length of truck
<b>Building 1 Install</b>					
Tankers	Install pre-fabricated tankers, piping and connections	up to 4 weeks	4-6	2	Max Length 18m + 12m mobile crane
PFAS unit	Deliver and install PFAS treatment unit contained within shipping container and connection to plant	<1 week	2-3	1	Max Length 18m
MF, Screw press, Filter Boxes, Biotrickling tanks	Deliver and install equipment for liquid waste treatment process (apart from settling and storage)	2 weeks	2-4	2	Max Length 18m
Prefab Lab	Install/construct small testing lab	1 week	2-3	1	Max Length 18m
<b>Building 2 Install</b>					
Prefab Lab	Install/construct small testing lab	1 week	2-3	1	Max Length 18m
Bunkers/bays	Construct/install concrete or prefabricated storage bays	2 weeks	2-4	2	Max length 12.5m
<b>Building 3 Install</b>					
Shredders, hopper, conveyors	Deliver and install product destruction shredders and ancillary infrastructure	1 week	2-3	1	Max Length 18m
Temp Shelving	install storage shelving	<1 week	2-4	1	Max length 12.5m

**ATTACHMENT K**  
**SPECIFICATIONS FOR MOBILE CRANE**



**AC60/3** | All Terrain Crane 60 t Lifting Capacity



**AC60/3**  
ALL TERRAIN CRANE

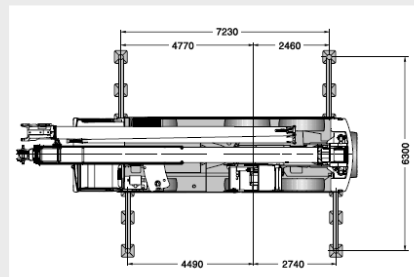
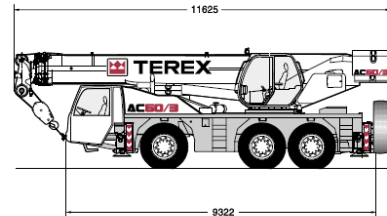




AC60/3

HIGHLIGHTS

- ▶ With 40 m and a maximum tip height of 58 m great lifting heights and radii
- ▶ Fully hydraulic boom system provides shortest telescoping times and high telescoping capacities
- ▶ Possibility of telescoping under load
- ▶ State-of-the-art DaimlerChrysler engine technology type OM 501 LA - EURO MOT 3a
- ▶ Spacious comfortable cab, 20° tiltable with sliding door and large hinged windscreen (superstructure)
- ▶ 2 seat-carrier cabin with air-conditioning
- ▶ Mit 40 m und einer max. Rollenhöhe von 58 m große Hubhöhen und Reichweiten möglich
- ▶ Kürzeste Teleskopierzeiten und hohe teleskopierbare Lasten durch vollhydraulisches Ausleger-system
- ▶ Möglichkeit unter Last zu teleskopieren
- ▶ Neueste DaimlerChrysler Motorentechnik vom Typ OM 501 LA - EURO MOT 3a
- ▶ Großräumige, um 20° kippbare Komfortkabine mit Schiebetür und ausstellbarem Frontfenster (Oberwagen)
- ▶ 2-Mann Unterwagenkabine mit Klimaanlage
- ▶ Avec 40 m atteignant une hauteur maxi de poulies de 58 m
- ▶ Temps de télescopage ultracourt grâce à un système de flèche entièrement hydraulique
- ▶ Télescopage sous charge
- ▶ Motorisation DaimlerChrysler la plus récente, type OM 501 LA - EURO MOT 3a
- ▶ Cabine spacieuse, inclinable 20° avec porte coulissante et large pare-brise relevable (partie supérieure)
- ▶ Cabine porteur bi-place climatisée
- ▶ Il braccio più lungo della sua categoria con i suoi 40 m ed una altezza massima di 58 m raggiungibile con ausilio di prolunghe.
- ▶ Brevissimi tempi di sfilo del braccio telescopico con enormi pesi al gancio grazie ad un sistema di sfilo braccio totalmente idraulico
- ▶ Possibilità di uscita telescopica sotto carico
- ▶ Motore DaimlerChrysler tipo OM 501 LA, EURO MOT 3a
- ▶ D'ultima generazione, cabina torretta inclinabile 20°, spaziosa e confortevole con porta scorrevole e grande parabrezza sollevabile (torretta)
- ▶ Cabina carro a due posti con impianto di condizionamento
- ▶ Con 40 m de pluma y una altura máxima de 58 m se consiguen extraordinarias alturas de elevación y radios de carga
- ▶ El sistema de pluma totalmente hidráulico permite, telescopajes mas rápidos y mayores capacidades al telescopar con carga
- ▶ Posibilidad de telescopaje con carga
- ▶ Tecnología según el estado-de la-técnica del motor DaimlerChrysler, modelo OM 501 LA – sujeto a la normativa europea EURO MOT 3a
- ▶ Cabina superior espaciosa y confortable con puerta corredera y parabrisas panorámico, abatible 20° hacia atrás
- ▶ Cabina del chasis climatizada, con dos asientos

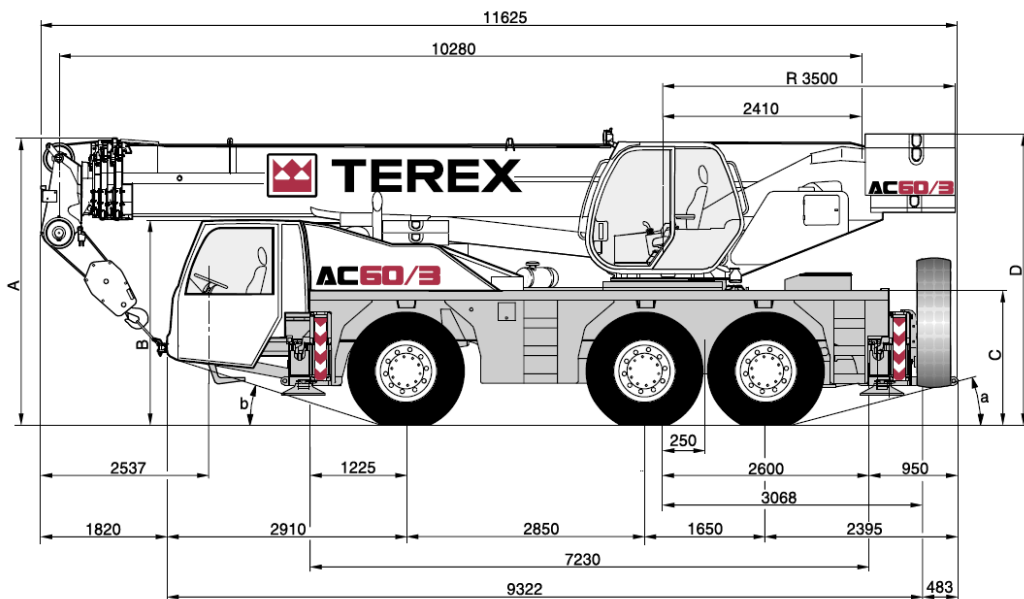




**DIMENSIONS · ABMESSUNGEN · ENCOMBREMENT · DIMENSIONI · DIMENSIONES**

Type of tyres Bereifung Type de pneus Tipo di pneumatici Tipo de neumáticos	A*	B*	C*	D*	E	a	b
14.00 x 25	3850	2660	1730	3767	2550	20°	19°
16.00 x 25	3900	2710	1781	3817	2550	22°	21°
20.5 x 25	3900	2710	1781	3817	2750	22°	21°

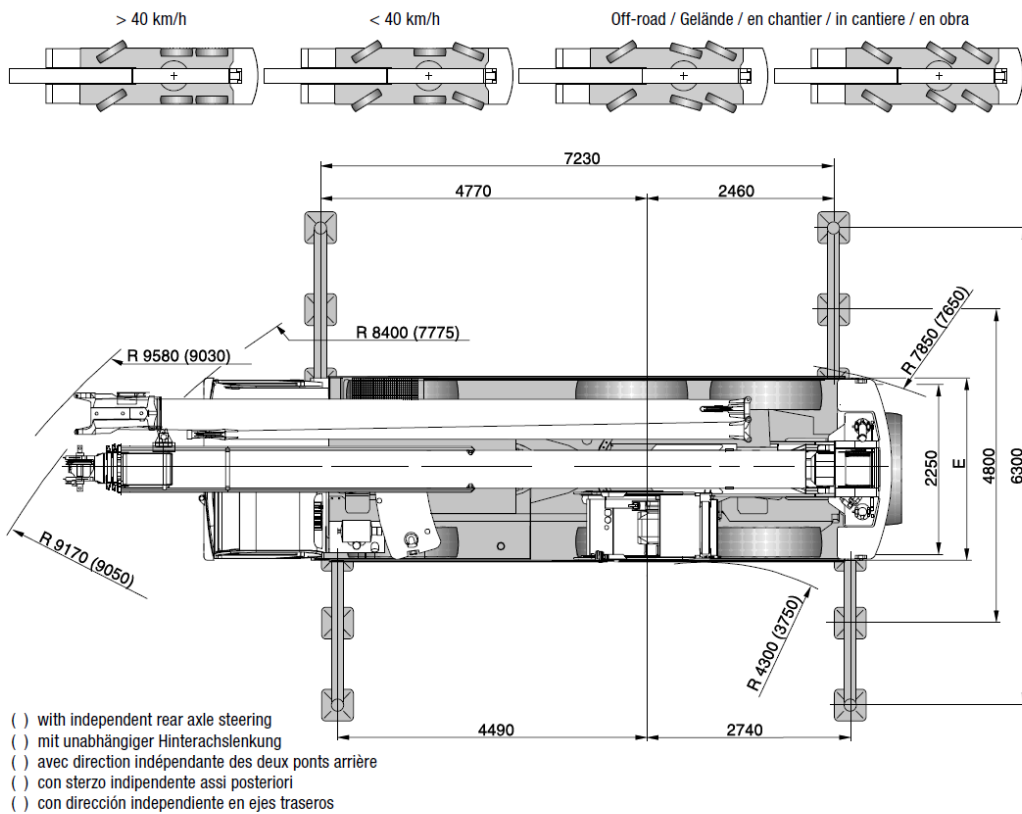
\* 80 mm down suspension  
 \* 80 mm Federung abgesenkt  
 \* 80 mm suspension abaissée  
 \* 80 mm sospensioni abbassate  
 \* 80 mm con suspensión baja





**AC60/3**  
ALL TERRAIN CRANE

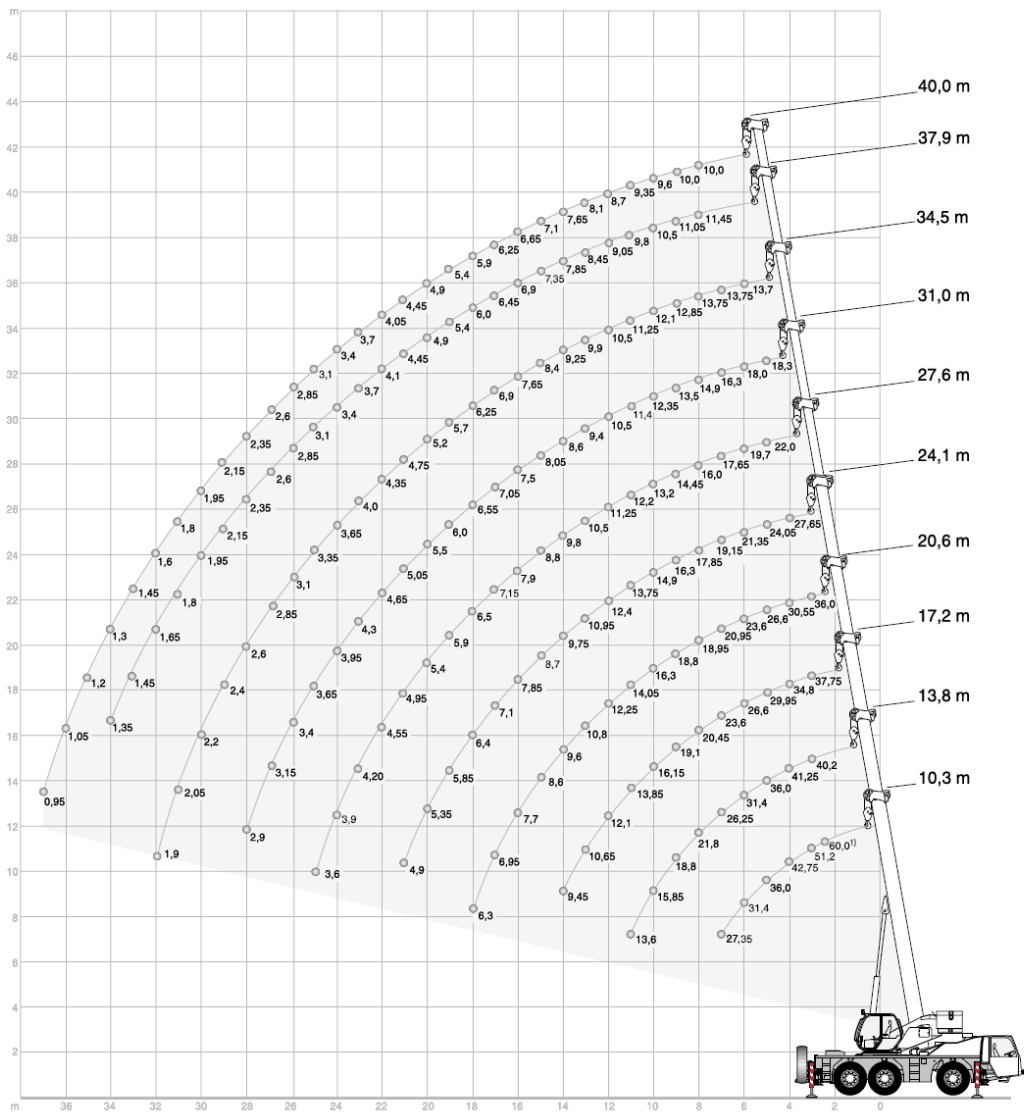
**DIMENSIONS · ABMESSUNGEN · ENCOMBREMENT · DIMENSIONI · DIMENSIONES**





**AC60/3**  
ALL TERRAIN CRANE

**HA** WORKING RANGES · ARBEITSBEREICHE · PORTÉES · CAMPO DI LAVORO · RANGOS DE TRABAJO



<sup>1)</sup> over rear · nach hinten · sur l'arrière · sul retro · hacia atrás