STANBURY
TRAFFIC PLANNING
TRAFFIC, PARKING & TRANSPORT CONSULTANTS

TRAFFIC & PARKING IMPACT ASSESSMENT

PROPOSED COBRA WASTE SOLUTIONS RESOURCE RECOVERY FACILITY
30 LOFTUS ROAD
YENNORA

PREPARED FOR CARLO RANIERI & ASSOCIATES PTY. LTD.
OUR REF: 21-023

FEBRUARY 2022

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1. INTRODUCTION

1.1 Scope of Assessment

Stanbury Traffic Planning has been commissioned by Carlo Ranieri & Associates Pty. Ltd. to prepare a Traffic & Parking Impact Assessment to accompany an Environmental Impact Statement for State Significant Development (SSD) 9320662. The proposal seeks approval for a Resource Recovery Facility (RRF) at Warehouse B of 30 Loftus Road in Prestons (hereafter referred to as the 'subject site').

The aim of this assessment is to investigate and report upon the potential traffic and parking consequences of the SSD and to recommend appropriate ameliorative measures where required.

This report has also been prepared to address the Planning Secretary's Environmental Assessment Requirements issued 9/10/20 and the Pre-lodgement meeting advice issued by Cumberland City Council dated 3/5/21. A summary of the relevant requirements along with the section of this report where the comments are addressed is provided in **Table 1**.

TABLE 1
RELEVANT ASSESSMENT REQUIREMENTS AND CORRESPONDING REPORT SECTIONS

PLANNING SECRETARY'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS	
Traffic and Transport	**Report Section Comment Addressed**
Details of all traffic types and volumes likely to be generated during construction and operation, including a description of key access / haul routes	Section 3.4, 5.2, 6.1
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 SIDRA or similar traffic model	Section 5.3
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	Section 5.5, 6.6.3.2
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	Section 6.2, 6.3, 6.4, 6.5, and 6.6
Details of the largest vehicle anticipated to access and move within the site, including swept path analysis	Section 6.6.2, Appendix 5
Swept path diagrams depicting vehicles entering, exiting and manoeuvring throughout the site and	Appendix 5
Details of road upgrades, infrastructure works or new roads or access points required for the development if necessary.	Section 5.4 and 5.5

TABLE 1 (CONTINUED) RELEVANT COUNCIL COMMENTS AND CORRESPONDING REPORT SECTIONS	
CUMBERLAND CITY COUNCIL PRE-LODGEMENT REQUIREMENTS	
Transport and Manoeuvring	**Report Section Comment Addressed**
j) A Traffic Impact Assessment (TIA) report must be prepared. The TIA report shall address the impacts of the proposed development, and must address the issues related to queuing, parking, traffic generation, entry and exit related matters including the following information. • details of all traffic types and volumes likely to be generated during construction and operation, including a description of key access / haul routes.	Section 3.4, 5.2, 6.1
• 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 SIDRA or similar traffic model.	Section 5.2.4, 5.3, 5.4, 5.5
• numbers and location of loading dock, waiting/queuing bay, on-site parking provisions, and sufficient pedestrian and cyclist facilities, in accordance with the relevant Australian Standards.	Section 6.2, 6.3, 6.4, 6.5, and 6.6
• details of the largest vehicle anticipated to access and move within the site, including internal movement swept path analysis.	Section 6.6.2, Appendix 5
• swept path clearance diagrams depicting vehicles entering, exiting, and manoeuvring throughout the site.	Appendix 5
k) The pedestrian access to and from the car parking spaces to the building/work area must be safe with nil or minimal chances of being in collision with oncoming traffic. They must be line marked to guide pedestrian safely to the car spaces.	Section 6.2
l) The sight line and sight distance at the entry/exit location must demonstrate compliance with requirements as specified in AS2890.1.2004, AS2890.2.2004, and AS2890.6-2009. Details such as heights of fencing/obstructions, parked vehicles on the road, or other structures adjacent to the driveway (entry/exit), shall be taken into considered in the design.	Section 6.1.2
m) The vehicular manoeuvrings must not encroach or overrun into adjacent parking spaces of structure. Swept path clearance diagrams must demonstrate the provisions. The submitted plan cannot be assessed as the reduction scale in inconsistent with the dimension shown on the plan. However, it is noted that the manoeuvring of truck into the parking aisle for the car is not acceptable. The manoeuvring / turning area for the trucks must be separated from the car parking area.	Appendix 5

TABLE 1 (CONTINUED) RELEVANT COUNCIL COMMENTS AND CORRESPONDING REPORT SECTIONS	
CUMBERLAND CITY COUNCIL PRE-LODGEMENT REQUIREMENTS	
Parking and Car Spaces	**Report Section Comment Addressed**
n) The parking provision must comply with the requirements and controls as outlined under Holroyd DCP 2013 together with the general requirements as specified in AS2890.	Section 6.2 to Section 6.4 – Assessment based on Cumberland DCP 2021
o) Provision for the car parking spaces must comply with the Holroyd DCP 2013. Based on the car parking rate for the factories use, 1 space will be required per 300m², and 1 space will be required per 40m² for the office use. Reconfiguration of the car parking spaces based on the car parking rates will allow for the car parking spaces to be located outside the drainage easement encroachment area. Provision for parking space for heavy vehicle will depend on its operation plan.	
p) The parking provision must comply with the requirements as outlined in "AS2890.1-2004", and "Holroyd DCP 2013". The aisle width of parking modules and the parking space dimensions are to be based on the type of user (e.g. resident guests, employee, or non-resident visitors using the facilities.	

This report has been prepared pursuant to State Environmental Planning Policy (Infrastructure) 2007 and provides the following scope of assessment:

- Section 1 provides a summary of the scope of the assessment and reference documents;
- Section 2 describes the site location, details, existing and surrounding land-uses;
- Section 3 describes the existing / proposed site use;
- Section 4 assesses the existing traffic, parking and transport conditions surrounding and servicing the subject site including a description of the surrounding road network, traffic demands, operational performance and available public transport infrastructure;
- Section 5 estimates the traffic generating ability of the existing / proposed site use and assesses the ability or otherwise of the surrounding road network to be capable of accommodating the altered demand in a safe and efficient manner during operation and construction; and
- Section 6 assesses the adequacy of the existing site access arrangements, parking provision, internal circulation and servicing arrangements with reference to relevant Council, Transport for NSW (TfNSW, formally Roads & Maritime Services) and Australian Standard specifications.

1.2 Reference Documents

Reference is made to the following documents throughout this report:

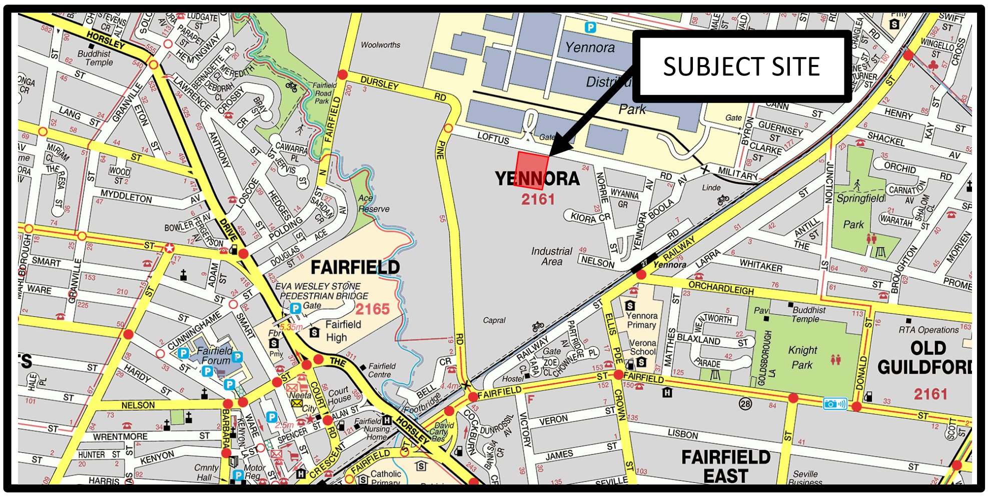
- Planning Secretary's Environmental Assessment Requirements issued 9/10/20;
- Pre-lodgment meeting advice issued by Cumberland City Council dated 3/5/21;
- Transport for NSW's (TfNSW, formerly Roads & Maritime Services) Guide to Traffic Generating Developments;
- Cumberland City Council's Development Control Plan 2021 (CDCP 2021);
- Australian Standard for Parking Facilities Part 1: Off-Street Car Parking (AS2890.1:2004);
- Australian Standard for Parking Facilities Part 2: Off-Street Commercial Vehicle Facilities (AS2890.1:2018);
- Australian Standard for Parking Facilities Part 6: Off-Street Parking for People with Disabilities (AS2890.6:2009);
- 25 Dunheved Circuit, St Marys Traffic Impact Assessment, prepared by The Transport Planning Partnership (TTPP) dated 26 November 2020;
- Wetherill Park Resource Recovery Park, Transport Impact Assessment, prepared by PeopleTrans dated 23 March 2016;
- Austroads Guide to Traffic Management Part 2, Austroads 2020; and
- Architectural plans prepared by Carlo Ranieri & Associates Pty. Ltd. for the proposed development, a selection of which are included as **Appendix 1** for reference.

2. EXISTING SITE CONDITIONS

2.1 Site Location

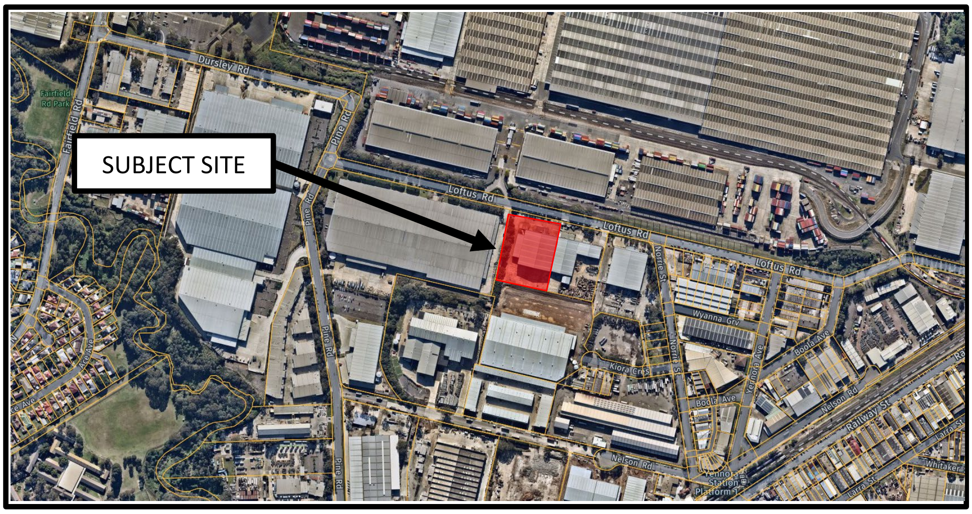
The subject site is situated on the southern side of Loftus Road between the junctions of Loftus Road / Norrie Street and Loftus Road / Pine Road. The site location is illustrated within a local and aerial context by **Figure 1** and within an aerial context by **Figure 2**.

FIGURE 1
SITE LOCATION WITHIN A LOCAL CONTEXT



Source: UBD's Australian City Streets – Version 8

FIGURE 2
SITE LOCATION WITHIN AN AERIAL CONTEXT



Source: Nearmap.com aerial taken Sat 5/6/21 11:45am

2.2 Site Description

The subject site provides a real property description of Warehouse B, Lot 8 within DP1233715 and a street address of 30 Loftus Road, Yennora.

The subject site forms a rectangular shaped parcel of land, providing an approximate frontage of 91m along its northern boundary to Loftus Road. The site provides a total area in the order of approximately 12,112m^2.

2.3 Existing Site Use

The subject site is currently vacant and a review indicates that the site was previously occupied by PFM Corp which are a logistics, warehousing and consulting business.

The site contains and existing office (419m^2), warehouse (4,142m^2) and concrete hard stand areas suitable for car parking or materials storage. The total site has an area of 12,112m^2.

The existing site is shown in **Figure 3**.

FIGURE 3
EXISTING SITE – PHOTO TAKEN ON 2/6/21

2.3.1 Surrounding Uses

The subject site is situated within the Yennora Industrial Area and is immediately surrounded by industrial development on all sides. The industrial land is a mixture of warehouses, distribution and logistics centres and other light industrial uses. The closest residential land is approximately 600m to the south of the site on the southern side of Railway Street.

3. DESCRIPTION OF PROPOSED USE

3.1 Proposed Development Description

The facility is proposed to receive, handle and process Construction and Demolition (C&D) and Commercial and Industrial (C&I) waste. The amount of waste to be received and processed is estimated to be up to 150,000 tonnes per year.

The following process steps are proposed to be undertaken:

1. All trucks arriving at the site are to be directed over the weighbridge and inspected for any abnormal contamination;

2. Trucks with conforming loads are to be weighed on the weighbridge then directed inside the building. Non-conforming loads are to be turned away;

3. Loads of waste material are to be unloaded in the pre-sorted area inside the building for initial separation;

4. A front-end loader is to transfer the pre-sorted material to the in-feed hopper / shredder at the start of the process or larger items to the appropriate storage bunker;

5. The material is to be fed into the system and conveyed to an electrical magnet for the removal of steel. Any ferrous material is to be separated at this point and transferred into a storage bin;

6. The waste stream is then to be fed into the system and conveyed through a waste screen where aggregate is to be removed and further screened into varying sizes;

7. The waste stream is to be directed to the manual picking station where it is separated into paper/cardboard, wood, plastic and other waste;

8. The remaining waste stream is to be conveyed where it is further separated into heavy and light wastes; and

9. Recovered waste is to be loaded into trucks for transport to various facilities for reuse or further processing.

3.2 Proposed Hours of Operation

The site use is proposed to operate 24-hours per day, seven days per week.

Deliveries by trucks are proposed to be only between 6:00am and 6:00pm.

3.3 Staffing

The proposed site operations result in the following staffing levels as summarised in **Table 2**.

TABLE 2 SUMMARY OF PROPOSED STAFFING LEVELS			
Title	**Day Shift**	**Afternoon Shift**	**Night Shift**
Plant Manager	1	0	0
Supervisor/Leading Hand	1	1	0
Office & Sales Staff	5	0	0
Loader/Excavator Operators	3	2	0
Pickers	6	6	0
Allocator/Weighbridge	1	1	0
Truck Drivers	5	0	0
Maintenance	1	1	*0-2**
Total Shift Numbers	**23**	**11**	**2**
TOTAL	**34**		

* Maintenance staff on night shift will be overtime staff from day or afternoon shift.

It is noted that there will be a total of 15 truck drivers. The Cobra Waste Solutions St. Marys site will be used as a truck parking location for 10 of the trucks, resulting in the number of truck drivers driving to the site to start their shift being 5 per day.

3.4 Vehicle Fleet Details

Cobra Waste Solutions owns, operates and stores a total of 15 trucks that regularly deliver to and from the site as follows:

- Hooklifts – 6 each 8.7m long;
- Large Skips – 5 each 8.0m long; and
- Small Skips – 4 each 6.5m long.

Occasionally the following vehicles may deliver or remove materials from the site:

- Refuelling truck - 1 per week, approximately 8m long; and
- Semi-trailer - up to 3 vehicles per day, up to 20m long.

3.5 Other Servicing

Waste generated by the subject site will be processed along with the material processed on-site and no separate waste collection is required for the site.

Occasionally, deliveries to the office could occur via van or Small Rigid Vehicle (SRV). There is adequate room on-site to support this occasional delivery on the concrete hard stand area adjacent to the office area.

4. EXISTING TRANSPORT CONDITIONS

4.1 Surrounding Road Network

The following provides a general description of the surrounding public road network:

- **Loftus Road** adjacent to the subject site performs a collector function and is a local road under the care and control of Cumberland City Council. Loftus Road provides an east-west alignment connecting the junction of Pine Road / Loftus Road with Military Road to the east on the eastern side of the railway line to the Yennora Distribution Centre.

  Loftus Road generally provides a 12.8m wide pavement width, providing one through lane of traffic in each direction in conjunction with parallel parking along both kerb alignments within a 20m road reserve. Traffic flow within Loftus Road adjacent to the site is governed by the default speed limit of 50km/h.

- **Pine Road** performs a collector function and is a local road under the care and control of Cumberland City Council. Pine Road provides a north-south alignment connecting the junction of Fairfield Street / Pine Road with the junction of Pine Road and Loftus Road.

  Pine Road generally provides a 12 to 12.8m wide pavement width, providing one through lane of traffic in each direction in conjunction with parallel parking along both kerb alignments within a 20m to 21m road reserve. Traffic flow within Pine Road adjacent to the site is governed by the default speed limit of 50km/h.

- **Dursley Road** performs a collector function and is a local road under the care and control of Cumberland City Council. Dursley Road provides an east-west alignment connecting the junction of Fairfield Road / Dursley Road with the Pine Road.

  Dursley Road generally provides a 12.8m wide pavement width, providing one through lane of traffic in each direction in conjunction with parallel parking along both kerb alignments, within a 20m road reserve. Parking is not permitted at the western end near the signalised junction and around the bend where Dursley Road becomes Pine Road. Traffic flow within Dursley Road adjacent to the site is governed by the default speed limit of 50km/h.

- **Fairfield Road** links the The Horsley Drive to the south and Woodpark Road to the north and is unclassified regional road (7222). The junction of Fairfield Road / Dursley Road, Fairfield Road is under the care and control of Cumberland City Council.

  Fairfield Road forms a 12m wide pavement providing two through lanes of traffic in each direction whereby signposted 'No Stopping' restrictions ensure

two traffic lanes are available during peak commuter periods, within a 21m road reserve. Traffic flow within Fairfield Road at this location is governed by a sign posted speed limit of 60km/h.

- **Fairfield Street** links the The Horsley Drive in the west with Woodville Road in the east and a local road under the care and control of Fairfield City Council.

  In the vicinity of the junction of Fairfield Street / Pine Road, Fairfield Street provides two through lanes of traffic in each direction with additional turning lanes provided at the junction of Fairfield Street (underpass) / Fairfield Street and Fairfield Street / Pine Road. Traffic flow within Fairfield Street at this location is governed by a sign posted speed limit of 60km/h.

4.2 Existing Traffic Volumes

This Practice commissioned traffic surveys of the following junctions:

- Pine Road / Loftus Road;
- Military Road / Byron Road;
- Pine Road / Fairfield Street;
- Fairfield Street (underpass) / Fairfield Street; and
- Fairfield Road / Dursley Road.

Surveys were undertaken on Wednesday 16 June 2021 from 6:30am to 9:00am and from 3:00pm to 5:00pm and Saturday 12 June from 11:00am to 1:00pm.

A summary of the turning movement volumes is provided in **Figure 4** with full results provided in **Appendix 2**.

FIGURE 4
EXISTING WEEKDAY AND SATURDAY PEAK HOUR TRAFFIC VOLUMES

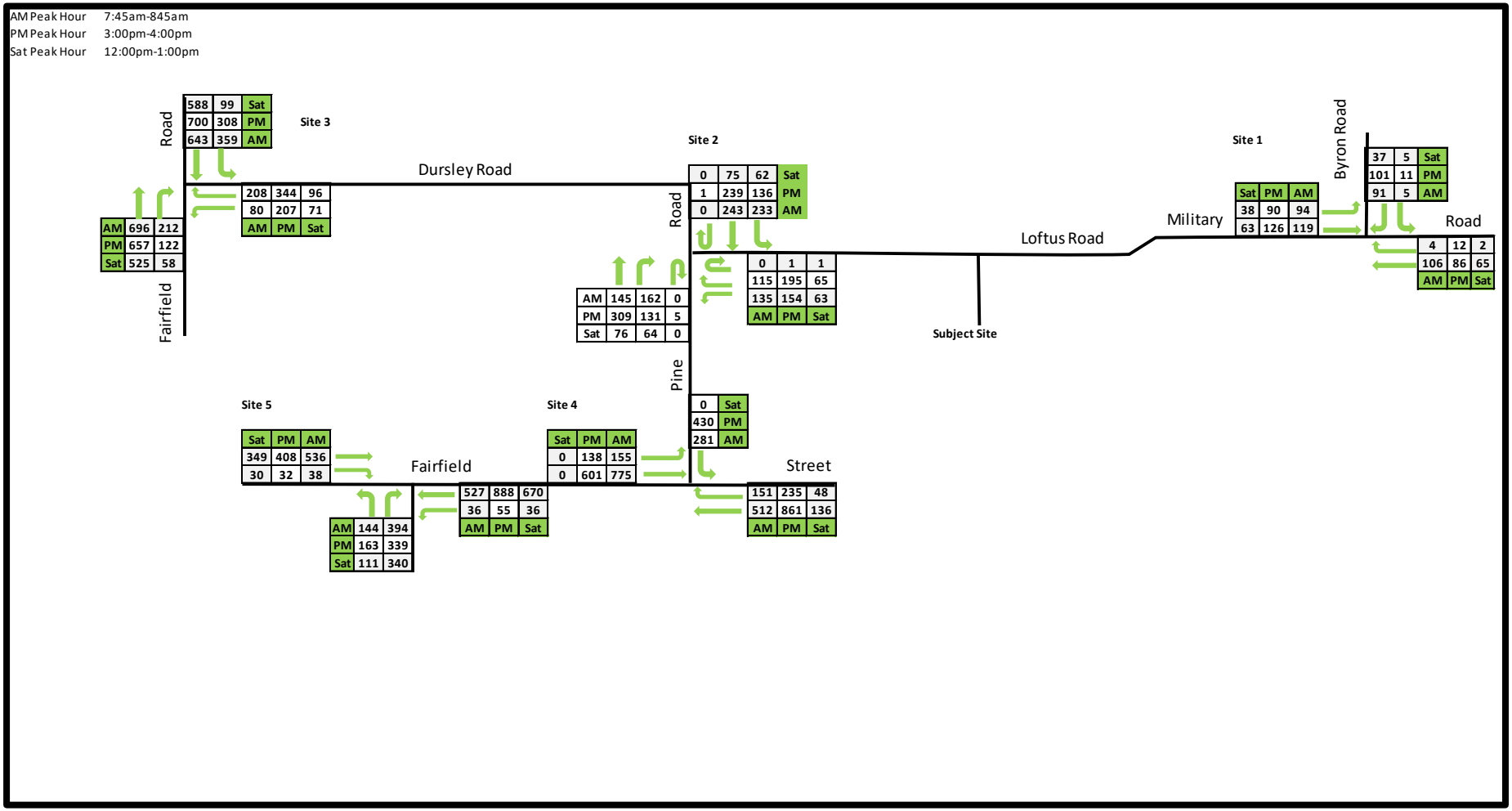
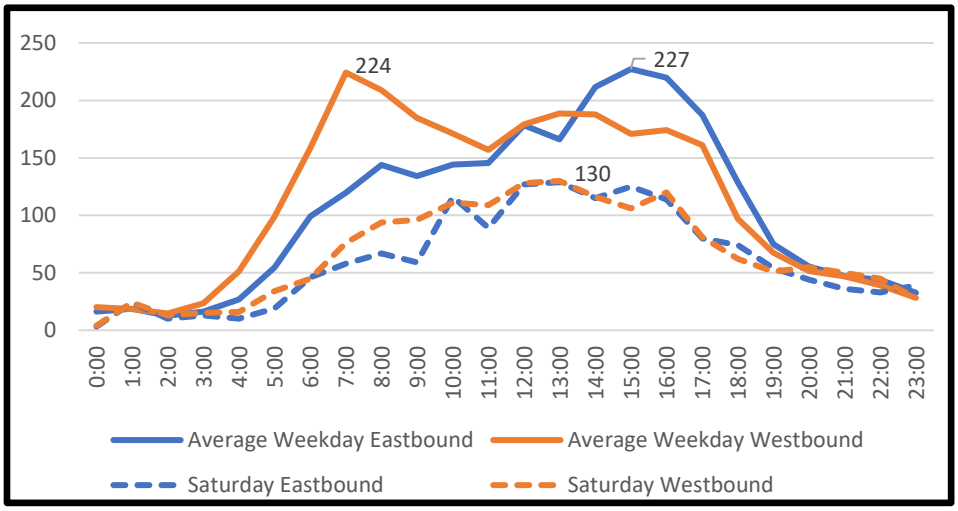


Figure 4 indicates that the peak hour volumes on the surveyed weekdays are higher than the surveyed Saturdays.

A seven-day automatic tube count was also undertaken adjacent to the subject site. A summary of the results is provided in **Figure 5** with detailed results provided in **Appendix 2**.

FIGURE 5
SUMMARY OF TUBE COUNT SURVEY DATA
LOFTUS ROAD ADJACENT TO THE SUBJECT SITE



Note: Average weekday is from Tuesday 15 to Friday 18 June 2021 inclusive

Figure 5 indicates that traffic adjacent to the subject site on Loftus Road is higher in the westbound direction during the average weekday AM peak period and is higher in the eastbound in the PM average weekday peak period.

On the surveyed Saturday, traffic volumes were approximately the same in each direction, with a peak of 130 in the westbound direction between 2:00pm and 3:00pm and 129 vehicles in the eastbound direction during the same period.

4.3 Existing Road Network Operation

4.3.1 Determination of Peak Hour

To determine the peak hour during the weekday AM, weekday PM and Saturday surveys, the hourly volumes at each of the intersections were added and the total vehicles across the study area was used as the basis for future analysis. The peak hours determined were:

- Weekday AM – 7:45am to 8:45am;
- Weekday PM – 3:00pm to 4:00pm; and
- Saturday Midday – 12:00pm to 1:00pm.

4.3.2 Intersection Operation

The surveyed intersections have been analysed utilising the SIDRA computer intersection analysis program in order to objectively assess the operation of the nearby public road intersection. SIDRA is a computerised traffic arrangement program which, when volume and geometrical configurations of an intersection are imputed, provides an objective assessment of the operation efficiency under varying types of control (i.e. signs, signal and roundabouts). Key indicators of SIDRA include level of service where results are placed on a continuum from A to F, with A providing the greatest intersection efficiency and therefore being the most desirable by TfNSW.

SIDRA uses detailed analytical traffic models coupled with an iterative approximation method to provide estimates of the abovementioned key indicators of capacity and performance statistics. Other key indicators provided by SIDRA are average vehicle delay, the number of stops per hour and the degree of saturation. Degree of saturation is the ratio of the arrival rate of vehicles to the capacity of the approach. Degree of saturation is a useful and professionally accepted measure of intersection performance.

The NSW modelling guidelines 2013 sets out the method which should be followed for Sidra modelling. The relevant criteria are listed in **Table 3** and the calibration procedures undertaken by this Practice.

TABLE 3 LEVEL OF SERVICE CRITERIA FOR INTERSECTIONS PRIORITY CONTROLLED JUNCTIONS	
Detail	**Adopted Modelling Parameters and Assumptions**
Getting Started	• The latest version of Sidra Intersection 9 (version 9.0.3.9771) was used.
Input	• Data was input for a 60-minute period with a maximum peak flow period of 30 minutes
Geometry	• All intersection geometry was based on measurements taken on-site and measured through aerial photography from Nearmap.
Saturation Flow	• The default saturation flow was adopted for all lanes.
Volumes	• Volumes were input as light vehicles and heavy vehicles separately • The default 95% peak flow factor was adopted for all movements with the exception of the right turn from Dursley Rd to Fairfield Rd in the AM peak hour which was set at 91%, based on the count data, to assist with calibration.
Movement Data	• Approach and exit speed data were updated as per the posted speed limits or where no signage exists, a 50km/h default speed was adopted. • The heavy vehicle length and queue length were increased by 2m to account for the observed higher number of long vehicles.
Priorities	• Where they existed, priority was given to pedestrian crossings over vehicle movements
Gap Acceptance	• The Sidra default gap acceptance values were adopted
Pedestrians	• Pedestrian crossing speed of 1.2m/s was adopted for all sites • Due to the observed volume of pedestrians, signalised crossings were not included in the models and the average delays as a result of pedestrians were modelled through additional start delay
Phasing and Timing	• Existing phasing at all signalised intersection was recorded from the surveys and the cycle time was set according to the observed values. • At the junction of Fairfield Road / Dursley Street the following minimum green times and start delay were input to match the observed operation. • At the junction of Fairfield street / Pine road minimum green times were added to approximate the phasing caused by the nearby railway line. For Phase A that didn't run every cycle, the average value was input into the model.
Phasing	• Phasing was input based on observations ad recordings of phase times from the survey day.
Model Settings	• All signalised intersection were set as isolated operation as the average cycle times were all different.

SIDRA provides analysis of the operating conditions that can be compared to the performance criteria set out in **Table 4** (being the TfNSW NSW method of calculation of Level of Service).

TABLE 4
LEVEL OF SERVICE CRITERIA FOR SIGNALISED INTERSECTIONS, ROUNDABOUTS AND PRIORITY CONTROLLED JUNCTIONS

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

The existing conditions have been modelled utilising the peak hour traffic volumes presented within F**igure 4**.

Table 5 to **Table 9** provide a summary of the SIDRA output data whilst more detailed summaries are included as **Appendix 3**.

TABLE 5 SIDRA OUTPUT – EXISTING 2021 WEEKDAY PEAK HOUR PERFORMANCE		
INTERSECTION OF MILITARY RD & BYRON RD		
	AM	**PM**
Military Rd East Approach		
Delay (seconds / vehicle)	5.7 (W)	5.5 (W)
Degree of Saturation	0.06 (W)	0.06 (W)
Level of Service	A (W)	A (W)
95th Percentile Queue	0m	0m
Byron Rd North Approach		
Delay (seconds / vehicle)	6.6 (W)	6.1 (W)
Degree of Saturation	0.12 (W)	0.13 (W)
Level of Service	A (W)	A (W)
95th Percentile Queue	2m	1m
Military Rd West Approach		
Delay (seconds / vehicle)	4.9 (W)	4.8 (W)
Degree of Saturation	0.13 (W)	0.13 (W)
Level of Service	A (W)	A (W)
95th Percentile Queue	0m	0m
Total Intersection		
Delay (seconds / vehicle)	6.6 (W)	6.1 (W)
Degree of Saturation	0.13 (W)	0.13 (W)
Level of Service	A (W)	A (W)
95th Percentile Queue	2m	1m

Note: (W) – Worst movement

Table 5 indicates that the junction of Military Road / Byron Road currently operates well with minimal queues and delays on all approaches in both the AM and PM peak hours.

TABLE 6 SIDRA OUTPUT – EXISTING 2021 WEEKDAY PEAK HOUR PERFORMANCE		
INTERSECTION OF PINE RD & LOFTUS RD		
	AM	**PM**
Pine Rd South Approach		
Delay (seconds / vehicle)	9.5 (W)	11.3 (W)
Degree of Saturation	0.33 (W)	0.48 (W)
Level of Service	A (W)	A (W)
95th Percentile Queue	8m	11m
Loftus Rd East Approach		
Delay (seconds / vehicle)	10.9 (W)	10.5 (W)
Degree of Saturation	0.35 (W)	0.42 (W)
Level of Service	A (W)	A (W)
95th Percentile Queue	10m	10m
Pine Rd North Approach		
Delay (seconds / vehicle)	10 (W)	9.5 (W)
Degree of Saturation	0.5 (W)	0.39 (W)
Level of Service	A (W)	A (W)
95th Percentile Queue	13m	10m
Total Intersection		
Delay (seconds / vehicle)	10.9 (W)	11.3 (W)
Degree of Saturation	0.5 (W)	0.48 (W)
Level of Service	A (W)	A (W)
95th Percentile Queue	13m	11m

Note: (W) – Worst movement

Table 6 indicates that the junction of Pine Road / Loftus Road currently operates well with minimal queues and delays on all approaches in both the AM and PM peak hours.

TABLE 7 SIDRA OUTPUT – EXISTING 2021 WEEKDAY PEAK HOUR PERFORMANCE		
INTERSECTION OF FAIRFIELD RD & DURSLEY RD		
	AM	**PM**
Fairfield Rd South Approach		
Delay (seconds / vehicle)	24.5	22.0
Degree of Saturation	0.94	0.82
Level of Service	B	B
95th Percentile Queue	86m	95m
Dursley Rd East Approach		
Delay (seconds / vehicle)	52.0	32.9
Degree of Saturation	0.91	0.77
Level of Service	D	C
95th Percentile Queue	97m	85m
Fairfield Rd North Approach		
Delay (seconds / vehicle)	16.8	18.9
Degree of Saturation	0.42	0.50
Level of Service	B	B
95th Percentile Queue	47m	55m
Total Intersection		
Delay (seconds / vehicle)	24.7	23.2
Degree of Saturation	0.94	0.82
Level of Service	B	B
95th Percentile Queue	97m	95m

Table 7 indicates that the junction of Fairfield Road / Dursley Road currently operates with acceptable delays in both the AM and PM peak hours. The east approach was observed to operate near capacity at Level of Service D in the AM peak hour and Level of Service C in the PM peak hour with notable queuing at times.

TABLE 8 SIDRA OUTPUT – EXISTING 2021 WEEKDAY PEAK HOUR PERFORMANCE		
INTERSECTION OF FAIRFIELD ST & PINE RD		
	AM	**PM**
Fairfield St East Approach		
Delay (seconds / vehicle)	12.1	8.3
Degree of Saturation	0.52	0.59
Level of Service	A	A
95th Percentile Queue	50m	51m
Pine Rd North Approach		
Delay (seconds / vehicle)	23.4	21.5
Degree of Saturation	0.38	0.55
Level of Service	B	B
95th Percentile Queue	60m	72m
Fairfield St West Approach		
Delay (seconds / vehicle)	51.6	27.8
Degree of Saturation	0.89	0.69
Level of Service	D	B
95th Percentile Queue	73m	73m
Total Intersection		
Delay (seconds / vehicle)	33.4	17.2
Degree of Saturation	0.89	0.69
Level of Service	C	B
95th Percentile Queue	73m	73m

Table 8 indicates that the junction of Fairfield Road / Pine Road currently operates acceptable delays on all approaches in both the AM and PM peak hours. During the AM peak hour, the west approach queue was modelled to extend back past the intersection to the west, approximately to The Horsley Drive Overpass.

TABLE 9 SIDRA OUTPUT – EXISTING 2021 WEEKDAY PEAK HOUR PERFORMANCE INTERSECTION OF FAIRFIELD ST (THD) & FAIRFIELD ST (UNDERPASS)		
	AM	**PM**
Fairfield St (THD) South Approach		
Delay (seconds / vehicle)	25.9	22.1
Degree of Saturation	0.70	0.53
Level of Service	B	B
95th Percentile Queue	71m	33m
Fairfield St East Approach		
Delay (seconds / vehicle)	15.0	18.1
Degree of Saturation	0.41	0.69
Level of Service	B	B
95th Percentile Queue	36m	70m
Fairfield St (Underpass) West Approach		
Delay (seconds / vehicle)	75.1	17.0
Degree of Saturation	1.03	0.53
Level of Service	F	B
95th Percentile Queue	144m	42m
Total Intersection		
Delay (seconds / vehicle)	39.1	18.9
Degree of Saturation	1.03	0.69
Level of Service	C	B
95th Percentile Queue	144m	70m

Table 9 indicates that the junction of Fairfield Road / Fairfield Road currently operates satisfactorily with acceptable delays on all approaches in both the AM and PM peak hours. During the AM peak hour, the west approach queue was modelled to extend back past the intersection to the west, approximately to The Horsley Drive Overpass.

4.4 Public Transport

4.4.1 Trains

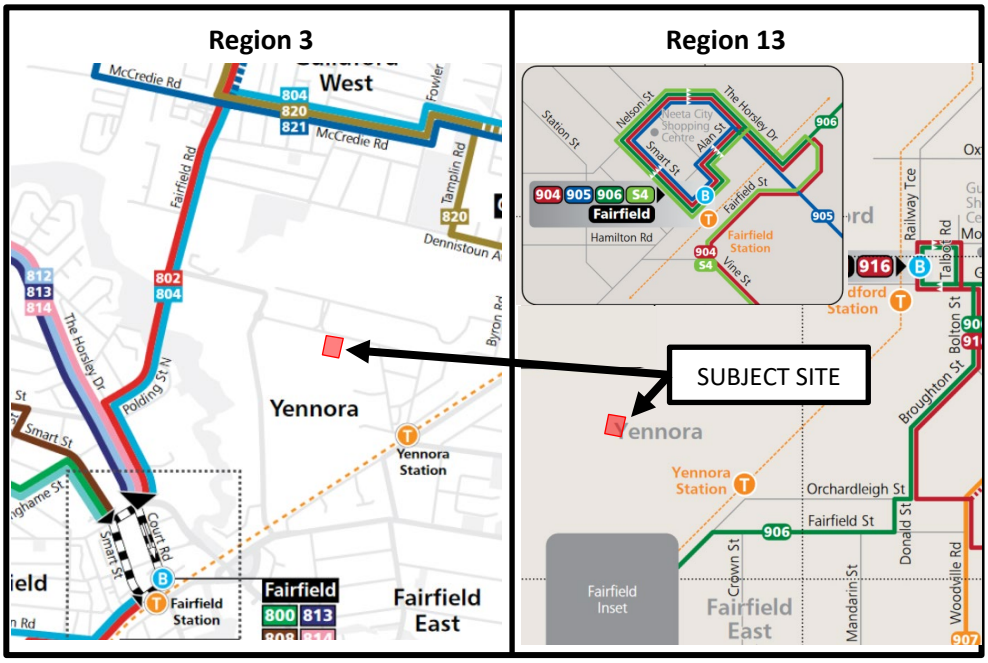
The nearest train station to the subject site is Yennora Station which is distance of approximately 700m walking distance (an 8-minute walk). Access to Yennora Station is via Loftus Road, Norrie Road and Nelson Road.

Yennora Station is on the T2, Inner West and Leppington Line which and on the T5 Cumberland Line. Trains from Yennora Station provide access to Leppington, Campbelltown, Parramatta, Richmond and the Sydney CBD.

4.4.2 Buses

The subject site is near the border of two bus contract regions which are Region 3 and Region 13. The bus networks in the vicinity of the subject site is shown in **Figure 6**.

FIGURE 6
EXISTNG BUS NETWORKS IN THE VICINITY OF THE SUBJECT SITE



The nearest buses are shown in **Figure 6**.

FIGURE 7
NEAREST BUS STOPS TO THE SUBJECT SITE

Figure 7 indicates that the nearest bus stops to the west are located on Fairfield Road near the junction with Dursley Road, approximately 950m walking distance (10-minute walk) from the site.

The nearest bus stops to the east are located on Fairfield Street near the junction with Matthes Street, approximately 1.4km walking distance (17-minute walk) from the site.

5. PROJECTED TRAFFIC CONDITIONS

5.1 Traffic Generation

5.1.1 Previous Site Use

The existing site structures are currently vacant, however it is understood that the site was previously occupied by PFM Corp, which are a logistics, warehousing and consulting business.

An aerial image from the site taken on 29 December 2018 is shown in **Figure 8**.

FIGURE 8
AERIAL PHOTO OF THE PREVIOUS SITE USE

Source: Nearmap.com 29/12/18 10:08am

Figure 8 indicates that the previous site at the time of the photo had 17 trucks parked with all vehicles less than 12.5m in length.

Unfortunately, no data is available on the previous traffic generation of the site.

5.1.2 Standard Industrial Use

In order undertake an assessment of the traffic generating capacity of the proposed site based on standard traffic generation rates, reference is made to TfNSW's Guide to Traffic Generating Developments. This publication provides the

following average traffic generation rates relevant to the existing building floor area, based on extensive surveys undertaken throughout NSW:

- Warehouse (Industry) - 0.5 trips per 100m^2 of gross floor area; and
- Office - 2 peak hour trips per 100m^2 of gross floor area.

Based on the above standard rates, the traffic generation of the site accommodating a standard industrial use is summarised in **Table 10**.

TABLE 10
SUMMARY OF TRAFFIC GENERATING POTENTIAL OF EXISTING SITE STRUCTURES BASED UPON STANDARD INDUSTRIAL USAGE

Use	Size GFA	Rate	Peak Hour Trips
Office	419m^2	2 trips per 100m^2 GFA	8
Warehouse	4,142m^2	0.5 trips per 100m^2 GFA	21
Total			**29**

Table 10 indicates that based on standard rates, the site could be expected to generate 29 trips during the peak hour.

5.2 First Principles Assessment of Operational Traffic Generation

Schedule 3 of the State Environmental Planning Policy (Infrastructure) 2007 specifies that a waste or resource management facility of any size is considered a transport generating development which must be referred to TfNSW for an assessment of the transport impact of the development.

The standard traffic generation rates discussed within Section 5.1.2 of this report are not considered appropriate for use in the assessment of the proposed use as the transport impact of the proposed development will be affected primarily on the amount of material processed by the site and the type of vehicles that will deliver to the site.

The site is proposed to accept 150,000 tonnes per annum of material and site is proposed to operate 24 hours per day 7 days per week, with truck deliveries accepted between 6:00am and 6:00pm Monday to Saturday.

The following sub-sections of this report provide discussion with respect to the traffic generating potential of the proposed site use based on the specific operational characteristics.

5.2.1 Truck Fleet

Information provided by the Applicant on their truck fleet is summarised in **Table 11**.

TABLE 11 SUMMARY OF TRUCK FLEET		
Vehicle Type	**Number in Fleet**	**Max Payload**
Semi-Trailer (20m)	1	20 tonnes
Hooklift	6	10 tonnes
Skip Loaders	9	9 tonnes

The following assumptions and information provided by the Applicant were included in the traffic assessment:

- The site will accept and process material 51 weeks per year;
- An average of 18% of material will be accepted and processed on a weekday with 10% on a Saturday;
- Semi-trailers are only used to transport processed material out of the site (maximum of 3 per day);
- 60% of the trucks delivering material will be skip loaders with 40% hooklifts;
- Trucks will carry an average of 75% of their maximum payload on each trip;
- 75% of trucks that leave the site to pick up a bin will also transport material out of the site; and
- Of the 15 trucks in the fleet, 10 of the trucks will be parked at another site owned by the Applicant in St Marys. The remaining trucks will be parked on-site at the end of the day.

5.2.2 Weekday Traffic Generation

The weekday traffic generation for the site has been based on a similar site at 25 Dunheved Circuit, St Marys as assessed by TTPP in their transport impact assessment report dated 26/11/20.

The site at 25 Dunheved Circuit has been assessed to accept waste 24 hours per day. To account for the acceptance of material between 6:00am and 6:00pm, the amount of waste expected to be accepted at that site was redistributed across the day.

Three staff shifts are proposed which are summarised in **Table 12**.

TABLE 12
SUMMARY OF PROJECTED STAFFING SHIFTS

Title	Day Shift (6:00am-2:00pm)	Afternoon Shift (2:00pm-10:00pm)	Night Shift (10:00am-6:00am)
Plant Manager	1	0	0
Supervisor/Leading Hand	1	1	0
Office & Sales Staff	5	0	0
Loader/Excavator Operators	3	2	0
Pickers	6	6	0
Allocator/Weighbridge	1	1	0
Truck Drivers	5	0	0
Maintenance	1	1	*0-2**
Total Shift Numbers	**23**	**11**	**2**

* Maintenance staff on night shift will be overtime staff from day or afternoon shift.
Note: Shift times are subject to change based on operational requirements.

The anticipated daily traffic generation is provided in **Table 13**.

TABLE 13 SUMMARY OF PROJECTED TRAFFIC GENERATION						
Hour Starting	**Estimated Delivery Percentage**	**Trucks In**	**Trucks Out**	**Staff In**	**Staff Out**	**Total**
5:00	0%	0	0	18	0	18
6:00	4.76%	4	4	0	2	10
7:00	9.52%	8	8	5	0	21
8:00	9.52%	8	8	0	0	16
9:00	9.52%	8	8	0	0	16
10:00	9.52%	8	8	0	0	16
11:00	9.52%	8	8	0	0	16
12:00	9.52%	8	8	0	0	16
13:00	9.52%	8	8	11	0	27
14:00	9.52%	8	8	0	18	34
15:00	9.52%	8	8	0	0	16
16:00	4.76%	4	4	0	5	13
17:00	4.76%	4	4	0	0	8
	Total	**84**	**84**	**34**	**25**	**227**

Note: 11 afternoon staff would leave at the completion of their shift. Based on Table 12, this would be approximately 10:00pm.

Table 13 indicates that the site is expected to generate a total of 16 truck and 5 light vehicle movements during the road network AM peak hour of 7:45am to 8:45am and 16 truck movements during the road network PM peak hour from 3:00pm to 4:00pm. It is noted that the 7:00am to 8:00am peak hour has been selected for analysis. This is because the road network peak hour is 7:45am to 8:45am and it is expected that staff that commence at 8:00am will arrive between 7:45am and 8:00am.

It should be acknowledged at this point that the weekday commuter peak hour traffic generating ability of the proposed development is less than a standard industrial use as detailed within Section 5.1.2 of this report.

5.2.3 Weekday Traffic Distribution

In order to provide a conservative assessment, it is assumed that all vehicles will access the site from the junction of Loftus Road / Pine Road. Traffic at the study intersections was distributed based on the existing traffic patterns of light and heavy vehicles for each movement.

5.2.4 Cumulative Impact

This Practice has searched the Major Projects NSW website for determinations for 2021, 2020 and 2019 to identify any nearby projects that may add significantly to the existing study intersections. No developments were identified.

A nearby development was also identified on the Cumberland Council website at 7 Kiora Crescent, Yennora. The development appears to be nearly constructed and is a 13,100m^2 warehouse development. The Transport Impact Assessment prepared by GTA Consultants dated 31/5/19 indicates that the site is expected to generate 68 vehicle trips in the AM peak hour and 73 in the PM peak hour.

A total of 80% of trips were estimated by GTA Consultants to travel west along Loftus Road with 12% heavy vehicles. These additional trips were added to the post development modelling scenario undertaken by this Practice as reported in Section 5.3.

5.3 Operational Traffic Impacts

The proposed development has been projected to generate up to 21 AM peak hour trips and 16 PM peak hour trips to and from the site from the site. Such a traffic generating capacity is similar order of magnitude to that which would be expected to be generated by a standard industrial use of the site (29 peak hour trips from Table 10). The traffic associated with the development as well as the traffic from the cumulative development has been combined as the post development traffic volumes which are shown in **Figure 9** with the full Post Development volumes shown in Figure 10.

As previously mentioned as the existing traffic volumes on a Saturday are lower than a weekday and the amount of material that is to be processed on a Saturday is lower than a weekday the Saturday was not modelled.

In order to model the impact of the additional traffic on the surrounding road network, the additional traffic volumes were input into the Sidra models previously summarised in Section 4.3.2 of this report.

The results are summarised in **Table 14** to **Table 18** with detailed results provided in **Appendix 4** of this report.

FIGURE 9
CUMULATIVE DEVELOPMENT TRAFFIC

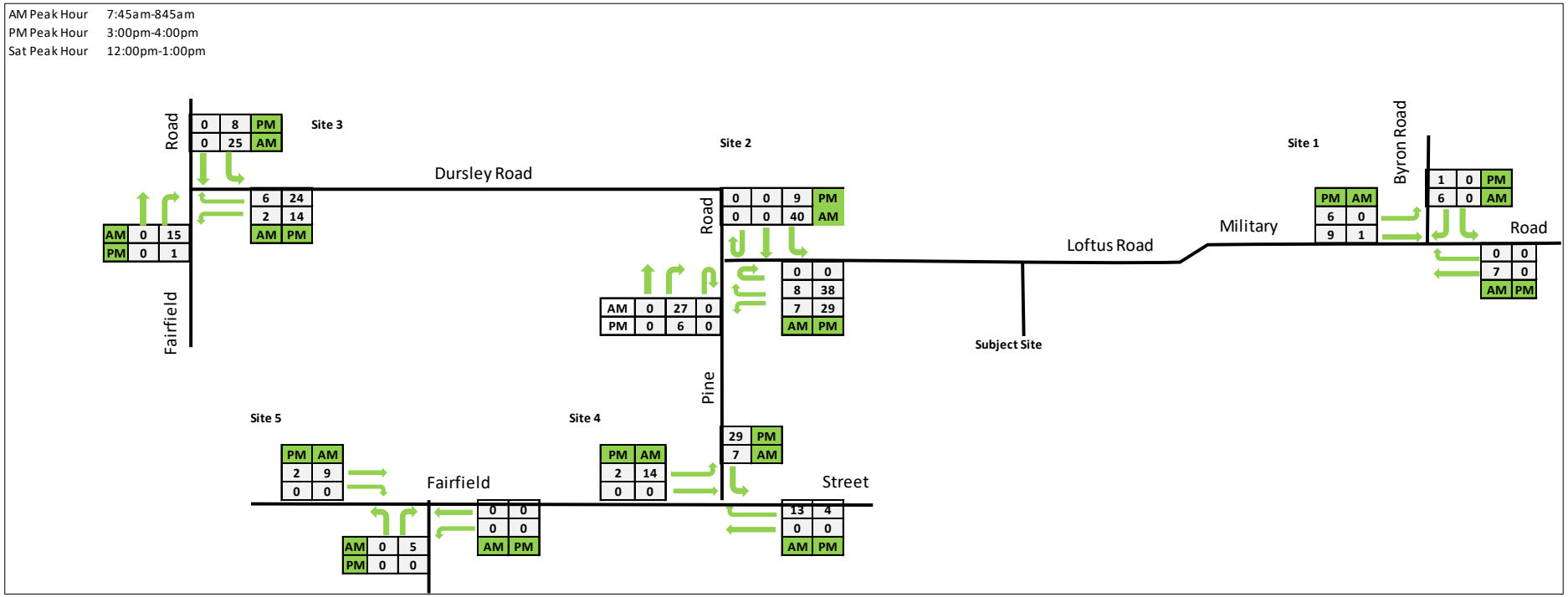


FIGURE 10
CUMULATIVE POST DEVELOPMENT TRAFFIC VOLUMES

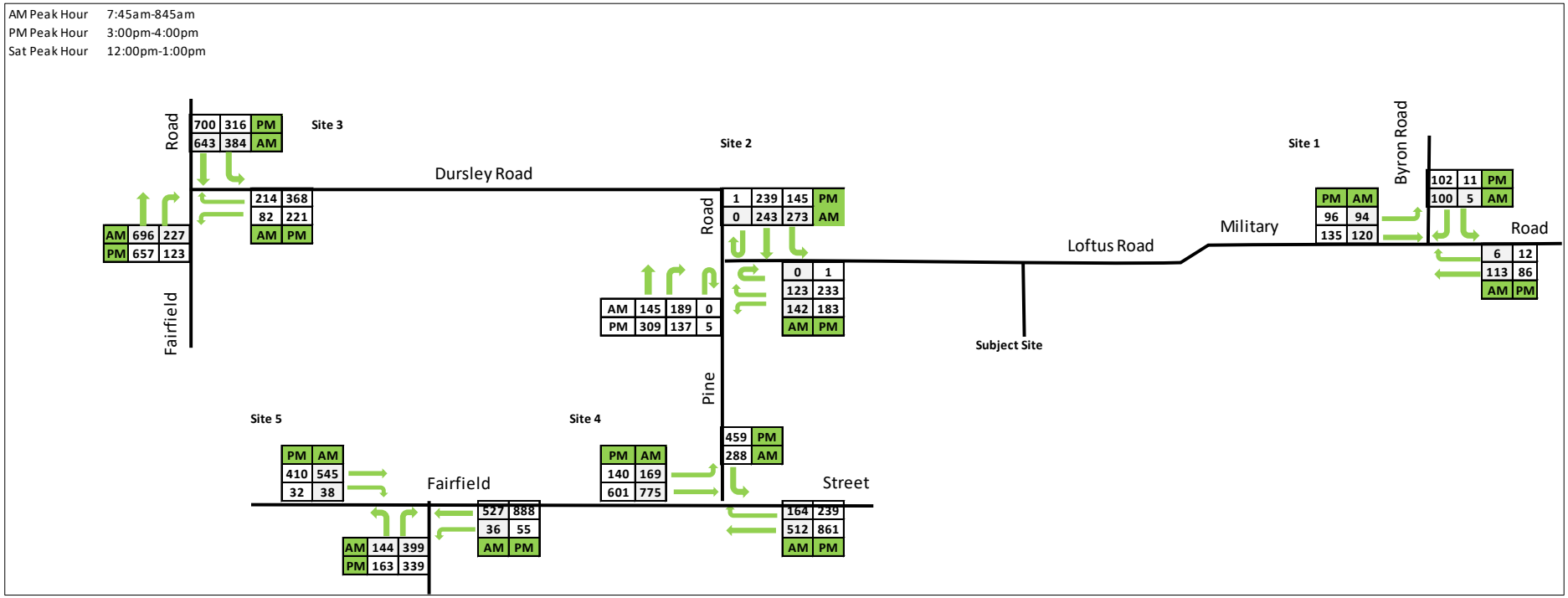


TABLE 14 SIDRA OUTPUT – POST DEVELOPMENT PEAK HOUR PERFORMANCE				
INTERSECTION OF MILITARY RD & BYRON RD				
	AM Existing	**PM Existing**	**AM Post Development**	**PM Post Development**
Military Rd East Approach				
Delay (seconds / vehicle)	5.7 (W)	5.5 (W)	5.7 (W)	5.5 (W)
Degree of Saturation	0.06 (W)	0.06 (W)	0.07 (W)	0.06 (W)
Level of Service	A (W)	A (W)	A (W)	A (W)
95th Percentile Queue	0m	0m	0m	0m
Byron Rd North Approach				
Delay (seconds / vehicle)	6.6 (W)	6.1 (W)	6.7 (W)	6.2 (W)
Degree of Saturation	0.12 (W)	0.13 (W)	0.14 (W)	0.13 (W)
Level of Service	A (W)	A (W)	A (W)	A (W)
95th Percentile Queue	2m	1m	2m	1m
Military Rd West Approach				
Delay (seconds / vehicle)	4.9 (W)	4.8 (W)	4.9 (W)	4.8 (W)
Degree of Saturation	0.13 (W)	0.13 (W)	0.13 (W)	0.13 (W)
Level of Service	A (W)	A (W)	A (W)	A (W)
95th Percentile Queue	0m	0m	0m	0m
Total Intersection				
Delay (seconds / vehicle)	6.6 (W)	6.1 (W)	6.7 (W)	6.2 (W)
Degree of Saturation	0.13 (W)	0.13 (W)	0.14 (W)	0.13 (W)
Level of Service	A (W)	A (W)	A (W)	A (W)
95th Percentile Queue	2m	1m	2m	1m

Table 14 indicates that the junction of Military Road / Byron Road is expected to see minimal change as a result of the proposed development and remain at Level of Service A in both the AM and PM peak hours.

TABLE 15 SIDRA OUTPUT – POST DEVELOPMENT PEAK HOUR PERFORMANCE				
INTERSECTION OF PINE RD & LOFTUS RD				
	AM Existing	**PM Existing**	**AM Post Development**	**PM Post Development**
Pine Rd South Approach				
Delay (seconds / vehicle)	9.5 (W)	11.3 (W)	9.6 (W)	11.8 (W)
Degree of Saturation	0.33 (W)	0.48 (W)	0.37 (W)	0.51 (W)
Level of Service	A (W)	A (W)	A (W)	A (W)
95th Percentile Queue	8m	11m	9m	13m
Loftus Rd East Approach				
Delay (seconds / vehicle)	10.9 (W)	10.5 (W)	11 (W)	10.7 (W)
Degree of Saturation	0.35 (W)	0.42 (W)	0.37 (W)	0.49 (W)
Level of Service	A (W)	A (W)	A (W)	A (W)
95th Percentile Queue	10m	10m	11m	13m
Pine Rd North Approach				
Delay (seconds / vehicle)	10 (W)	9.5 (W)	10.4 (W)	9.6 (W)
Degree of Saturation	0.5 (W)	0.39 (W)	0.56 (W)	0.41 (W)
Level of Service	A (W)	A (W)	A (W)	A (W)
95th Percentile Queue	13m	10m	16m	11m
Total Intersection				
Delay (seconds / vehicle)	10.9 (W)	11.3 (W)	11 (W)	11.8 (W)
Degree of Saturation	0.5 (W)	0.48 (W)	0.56 (W)	0.51 (W)
Level of Service	A (W)	A (W)	A (W)	A (W)
95th Percentile Queue	13m	11m	16m	13m

Table 15 indicates that the junction of Pine Road / Loftus Road is expected to see minimal change as a result of the proposed development and remain at Level of Service A in both the AM and PM peak hours.

TABLE 16 SIDRA OUTPUT – POST DEVELOPMENT PEAK HOUR PERFORMANCE				
INTERSECTION OF FAIRFIELD RD & DURSLEY RD				
	AM Existing	**PM Existing**	**AM Post Development**	**PM Post Development**
Fairfield Rd South Approach				
Delay (seconds / vehicle)	24.5	22.0	24.0	22.1
Degree of Saturation	0.94	0.82	0.93	0.83
Level of Service	B	B	B	B
95th Percentile Queue	86m	95m	84m	95m
Dursley Rd East Approach				
Delay (seconds / vehicle)	52.0	32.9	73.7	35.4
Degree of Saturation	0.91	0.77	0.99	0.83
Level of Service	D	C	F	C
95th Percentile Queue	97m	85m	124m	98m
Fairfield Rd North Approach				
Delay (seconds / vehicle)	16.8	18.9	16.9	18.8
Degree of Saturation	0.42	0.50	0.42	0.50
Level of Service	B	B	B	B
95th Percentile Queue	47m	55m	47m	55m
Total Intersection				
Delay (seconds / vehicle)	24.7	23.2	27.5	23.9
Degree of Saturation	0.94	0.82	0.99	0.83
Level of Service	B	B	B	B
95th Percentile Queue	97m	95m	124m	98m

Table 16 indicates that delays on the eastern approach are expected to increase as a result of both the proposed development and additional nearby development. Overall, the junction of Fairfield Road / Dursley Road is expected to see minimal change as a result of the proposed development and remain at Level of Service B in both the AM and PM peak hours.

TABLE 17 SIDRA OUTPUT – POST DEVELOPMENT PEAK HOUR PERFORMANCE				
INTERSECTION OF FAIRFIELD ST & PINE RD				
	AM Existing	**PM Existing**	**AM Post Development**	**PM Post Development**
Fairfield St East Approach				
Delay (seconds / vehicle)	12.1	8.3	13.0	8.5
Degree of Saturation	0.52	0.59	0.57	0.60
Level of Service	A	A	A	A
95th Percentile Queue	50m	51m	54m	52m
Pine Rd North Approach				
Delay (seconds / vehicle)	23.4	21.5	24.2	22.0
Degree of Saturation	0.38	0.55	0.40	0.59
Level of Service	B	B	B	B
95th Percentile Queue	60m	72m	64m	79m
Fairfield St West Approach				
Delay (seconds / vehicle)	51.6	27.8	49.2	28.1
Degree of Saturation	0.89	0.69	0.88	0.69
Level of Service	D	B	D	B
95th Percentile Queue	73m	73m	73m	73m
Total Intersection				
Delay (seconds / vehicle)	33.4	17.2	32.6	17.5
Degree of Saturation	0.89	0.69	0.88	0.69
Level of Service	C	B	C	B
95th Percentile Queue	73m	73m	73m	79m

Table 17 indicates that the junction of Fairfield Road / Pine Road is expected to see minimal change as a result of the proposed development and remain at Level of Service C in the AM peak hour and B in the PM peak hour.

TABLE 18 SIDRA OUTPUT – POST DEVELOPMENT PEAK HOUR PERFORMANCE				
INTERSECTION OF FAIRFIELD ST (THD) & FAIRFIELD ST (UNDERPASS)				
	AM Existing	**PM Existing**	**AM Post Development**	**PM Post Development**
Fairfield St (THD) South Approach				
Delay (seconds / vehicle)	25.9	22.1	26.3	22.1
Degree of Saturation	0.70	0.53	0.71	0.53
Level of Service	B	B	B	B
95th Percentile Queue	71m	33m	69m	33m
Fairfield St East Approach				
Delay (seconds / vehicle)	15.0	18.1	15.0	18.1
Degree of Saturation	0.41	0.69	0.41	0.69
Level of Service	B	B	B	B
95th Percentile Queue	36m	70m	36m	70m
Fairfield St (Underpass) West Approach				
Delay (seconds / vehicle)	75.1	17.0	83.8	17.1
Degree of Saturation	1.03	0.53	1.05	0.54
Level of Service	F	B	F	B
95th Percentile Queue	144m	42m	157m	43m
Total Intersection				
Delay (seconds / vehicle)	39.1	18.9	42.4	18.9
Degree of Saturation	1.03	0.69	1.05	0.69
Level of Service	C	B	C	B
95th Percentile Queue	144m	70m	157m	70m

Table 18 indicates that the junction of Fairfield Road / Fairfield Road is expected to see minimal change as a result of the proposed development and remain at Level of Service C in the AM peak hour and B in the PM peak hour.

5.4 Summary of Operational Traffic Impacts

Based on the analysis undertaken, it is not expected that the proposed development will result in any significant impacts on the overall safety and efficiency of the surrounding public road network.

The traffic generating capacity of the proposed site use equates to approximately one vehicle movement approximately every three minutes during commuter peaks. This less than a standard industrial development could be expected to generate which was calculated to be 29 movements per hour or approximately 1 vehicle every 2 minutes.

In consideration of the above, the impact of the development is most likely to be a result of the safety and efficiency with which motorists are capable of entering and exiting the development.

5.5 Summary of Construction Traffic Impacts

A summary of the construction traffic impacts is provided in the following sections.

5.5.1 Overview

The method of construction would be determined following approval of the project and appointment of a main contractor.

All construction would be completed as required by the development conditions of consent and the approved construction traffic management plan and other required construction plans. The construction stages could potentially include:

- Earthworks;
- Driveway and parking works; and
- Installation of weighbridges and machinery.

5.5.2 Construction Work Force

A construction work force of approximately 10 (with a maximum of 20) is expected to be employed on the site during the construction phase.

5.5.3 Construction Vehicles

The construction vehicles are expected to similar in size to the vehicles that would deliver the facility during the operational phase. The construction vehicles would likely be a combination of trucks, delivery vans, utility vehicles and standard passenger cars.

Any large deliveries of plant or equipment that require special permits would be obtained prior to delivery.

5.5.4 Construction Hours and Duration

The construction hours would be confirmed with the appointed main contractor, however at this stage are proposed to be 7:00am to 5:00pm Monday to Saturday.

The construction phase duration is expected to be 4 to 8 weeks.

5.5.5 Construction Traffic Impact

Following consideration of the type of construction activities proposed on the site, the traffic volume is expected to be lower than the volume of vehicles that would access the site during the operational phase.

The site is not expected to be operational during the construction phase and based on this, the impact on the surrounding road network is expected to be less during construction than when the site is operational.

6. SITE ACCESS & INTERNAL CIRCULATION

6.1 Vehicular Access

Vehicular access between the site and Loftus Road is provided via an existing driveway which has large splays. The width of the crossover at the property boundary is proposed to be increased and the size of the splays reduced approximately as shown in **Figure 11**.

FIGURE 11
PROPOSED DRIVEWAY WIDENING

Source: maps.google.com.au

The proposed widening would result in a driveway width of approximately 12.6m at the property boundary.

Whilst passenger vehicles are proposed to approach and depart the site from the east and west on Loftus Road and proceed via their chosen route, heavy transport vehicles will be instructed to travel to and from the site via Pine Road and Dursley Road to the external road network.

It is noted that Byron Road has a 5-tonne load limit with signs provided in a southbound direction with signs adjacent to 50 Byron Road and 54 Byron Road facing southbound traffic. Military Road also has a 5-tonne load limit with a sign at the intersection of Military Road / Trenton Road.

Both roads also provide a physical narrowing of the carriageway through traffic islands.

This means that heavy trucks servicing the site cannot using Byron Road and Military Road and are required to use Pine Road and Dursley Road to access the site.

6.1.1 Access Design

AS2890.2:2018 provides driveway design specifications based on the largest vehicle required to be serviced and the functional order of the access road. On the basis of Loftus Road providing a minor (non-arterial) function and the development being expected to accommodate vehicles up to and including AVs,

Figure 3.1 of AS2890.2:2018 specifies, at minimum, a 12.5m wide combined ingress / egress driveway be provided.

The above driveway width requirement is however predicated on the driveway being required to accommodate left turn site entry and exit movements by AVs. It has previously been presented that all heavy vehicle entry movements are to occur right turn in from the west. Similarly, heavy vehicle exit movements are to occur via a left turn out of the site.

In order to undertake a functional assessment of the suitability or otherwise of the abovementioned existing site access arrangements, a series of swept path plans have been prepared, copies of which are included as **Appendix 5** with excerpts provided in **Figure 12** to **Figure 14**.

FIGURE 12
SWEPT PATH ASSESSMENT (SEMI-TRAILER RIGHT IN PASSING AN MRV)

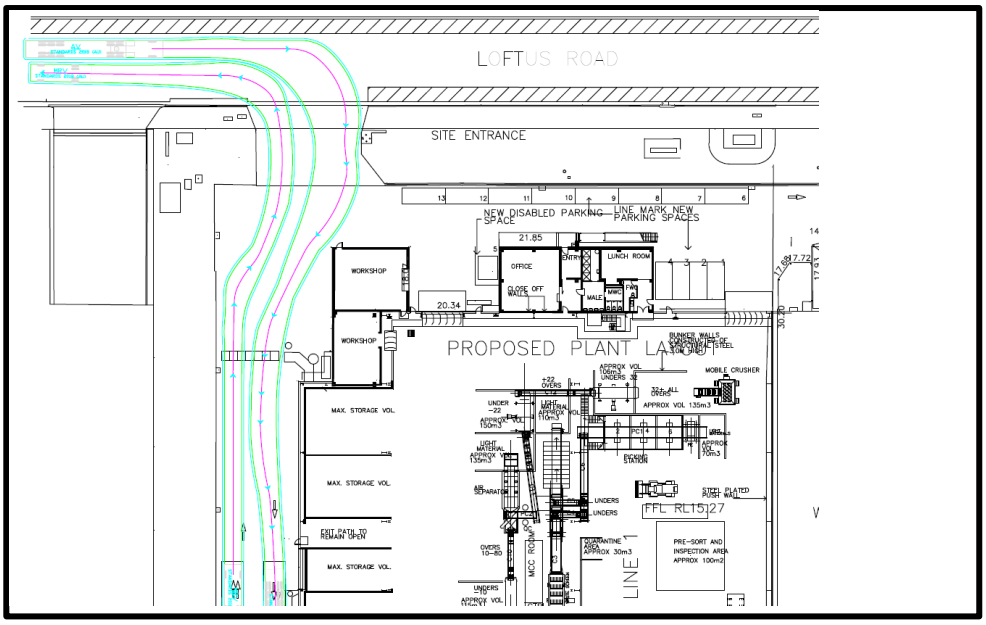


FIGURE 13
SWEPT PATH ASSESSMENT (SEMI-TRAILER LEFT OUT PASSING AN MRV)

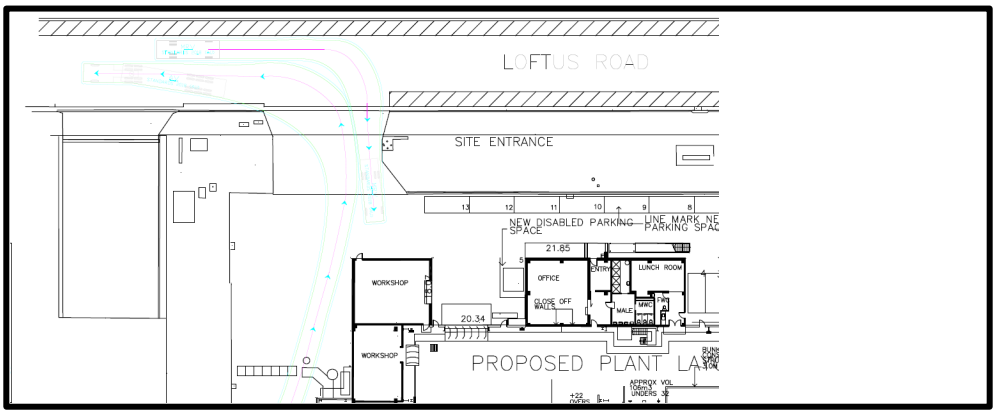


FIGURE 14
SWEPT PATH ASSESSMENT (MRV)

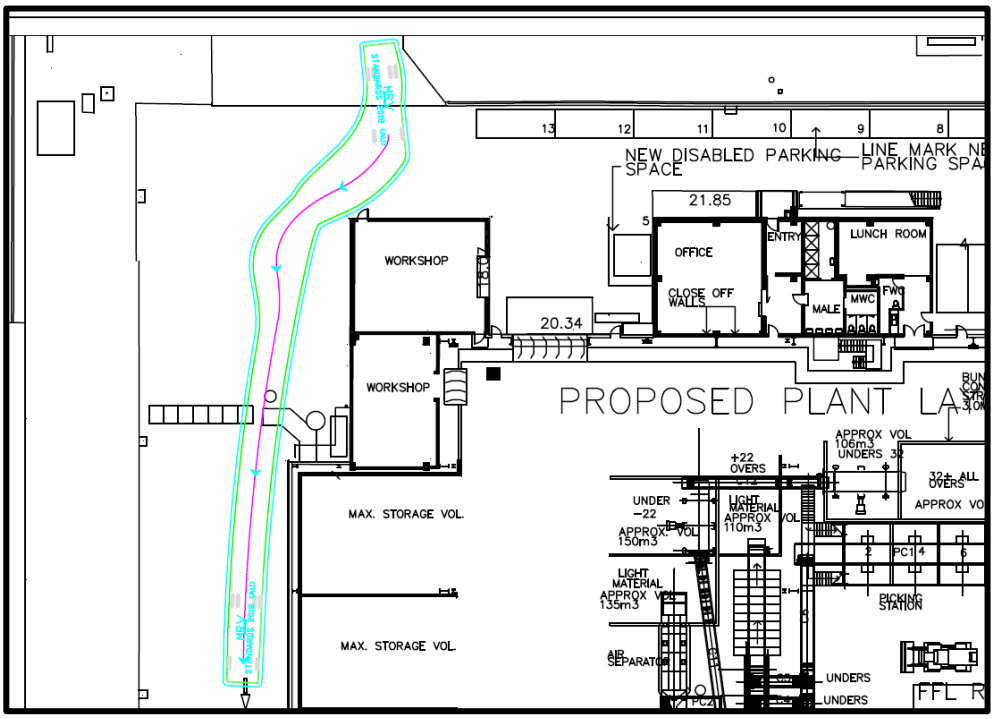


FIGURE 15
SWEPT PATH ASSESSMENT (AV)

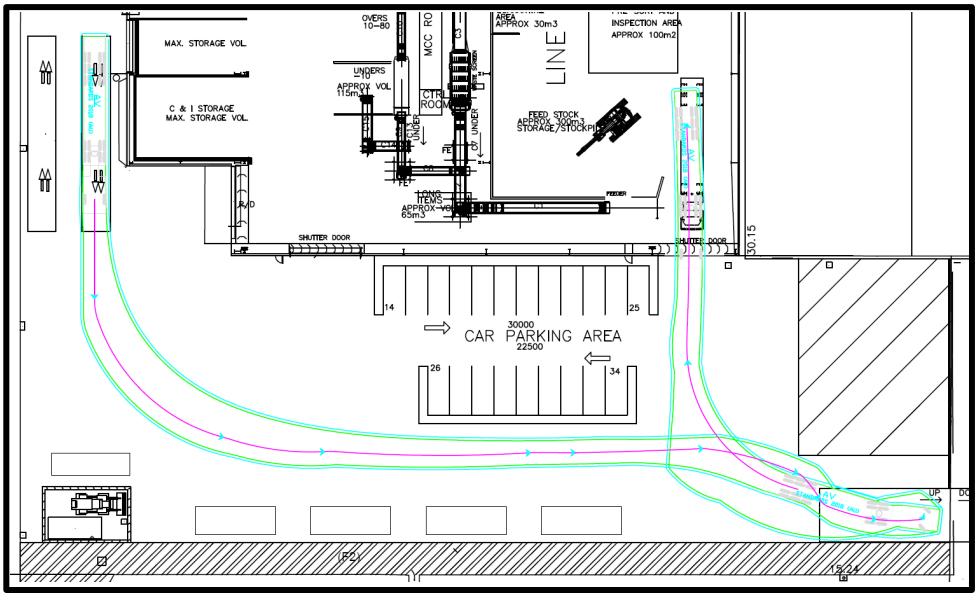


Figure 12 to **Figure 15** indicate the following:

- There is sufficient room and clearance for a semi-trailer turning right into the site and an MRV to pass each on the driveway and between the driveway and the weighbridge;

- There is sufficient room with clearance to allow a semi-trailer turning left out of the site to pass an MRV entering the site at the same time;

- In the event that an MRV is entering the site while a semi-trailer is exiting, there are sufficient passing opportunities inside the site where the MRV can wait to let the semi-trailer pass; and

- That the AV is required to drive over part of the bitumen ramp in the south-east corner of the site. Information provided by the Applicant indicates that this ramp has a gradient of 3% and will be gently sloped at the edges ensuring that trucks can driver over it.

To assess the likelihood of two vehicles passing between Loftus Road and the north-west corner of the building, a distance of approximately 40m, this Practice has undertaken a probability of conflict assessment using Austroads Guide to Traffic Management Part 2 equation 5.1.

Considering the average speed of vehicles through the conflict area, the length of the conflict area and the volume of vehicles from each direction, the probability of vehicles conflicting can be calculated.

Assuming 8 heavy vehicles per hour in each direction across the conflict area of 40m with an average speed of 5km/h results in the potential for two vehicles to pass 0.38% or 1 in 260.

As there is sufficient width for two vehicles to pass at all times except when a semi-trailer exits the site and the entering vehicle would have to wait inside the site, the probability of this occurring, assuming 1 semi-trailer exiting in the hour and 8 entering vehicles is approximately 1 in 2,000 or 0.05%.

The safety and efficiency of access / egress movements are also proposed to be assisted by the provision of a relatively level (maximum of 1:20) grade within the development on immediate approach to the property boundary.

The existing site access arrangements are therefore considered to be capable of accommodating the required site access manoeuvring of the largest vehicles expected to service the site.

6.1.2 Access Location

The existing site access driveway is situated at the north-west corner of the site on Loftus Road and is shown in **Figure 3**.

AS2890.1:2004 and AS2890.2:2018 outline the minimum sight distance requirements for vehicles exiting a driveway. For a 50km/h road, a desirable minimum sight distance of 69m for cars and a minimum of 69m for trucks is required.

A review of the available sight distance on-site from the existing driveway location is shown in **Figure 16**.

FIGURE 16
SIGHT DISTANCE PHOTOS

LOOKING WEST LOOKING EAST

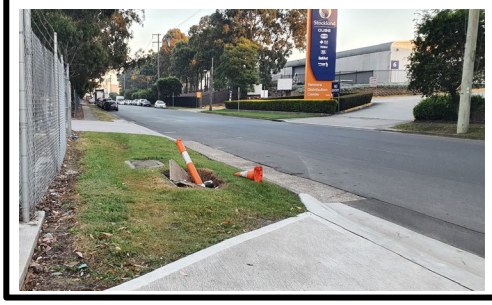


Figure 15 indicates that sight distance looking to the left (west) provides a sight distance, measured at over 100m. The consistent vertical and horizontal geometry of Loftus Road provides for a similar sight distance when looking to the right (east).

The proposed site access location is considered to be satisfactory for the following reasons:

- The site access driveway is an existing arrangement; and
- The positioning of the driveway provides a significant extent of sight distance to the east and west along Loftus Road, given the consistent vertical and horizontal alignment of the roadway in that direction.

In consideration of the abovementioned discussion, it is concluded that the existing site access location facilitates safe and efficient site access / egress and accordingly, is considered satisfactory.

6.2 Pedestrian Facilities

Pedestrian paths are proposed to connect the truck parking area, the car parking area and the main building. Pedestrian paths are also proposed across the roller shutters on the southern side of the building to improve the safety for pedestrians walking around the site.

The proposed pedestrian facilities on-site combined with appropriate occupational health and safety training for all staff that work on the site are considered satisfactory for pedestrians walking around the site.

6.3 Staff Bicycle Parking Provision

The CDCP 2021 Part G Miscellaneous Development Controls, outlines the requirements for bicycle parking. For Commercial – Business and Office a staff rate of 1 space per 10 employees is identified. As outlined in **Table 2**, 5 staff are expected to be in the office with a total of 34 staff at any one time.

Based on the number of staff, two bicycle rails, capable of catering for 4 bicycle parking spaces are to be provided on-site in a secure location inside the building.

CDCP 2021 nominates a visitor bicycle parking requirement of 1 space per 750m^2. Application to the building area of 4,561m^2 results in a requirement of 6 visitor bicycle parking spaces. This is considered excessive based on the proposed site use and the number of employees that may accept deliveries or visitors that will ride to the site at the same time.

Accordingly, it is considered more appropriate for the development to provide one bicycle rail near the entrance to the office for visitors. This is proposed to be shown on the plans at the detailed design stage and could reasonably be managed via a condition of consent.

6.4 Passenger Vehicle Parking Provision

The existing on-site passenger vehicle parking provision of 34 spaces (including one disabled space) is proposed.

Cumberland Council provides the following locally sensitive minimum parking requirements within CDCP 2021. This document however doesn't provide specific parking requirements for a resource recovery facility thereby indicating that assessment should be based on the operational characteristics of the proposed site operations.

Parking demand associated with the subject use is considered to be limited to that generated by staff and any potential visitors. It has previously been presented that the existing and proposed site operations will generate a demand for up to 34 employees on-site at any one time.

The number of visitors is expected to be negligible. Assuming a worst-case scenario that all staff drive themselves to and from the site, a peak passenger vehicle parking demand of 34 is anticipated. The proposed parking provision of 34 spaces is therefore expected to accommodate operational demands and accordingly, is considered to be satisfactory.

Notwithstanding the above, assessment should also be undertaken of the proposed parking provision based on a standard industrial use in the event of the building be utilised in that nature in the future. Council's DCP 2021 requirements provide the following parking requirements for these standard industrial uses:

- Warehouses - 1 space per 300m^2 GFA; and
- Office - 1 space per 40m^2.

Section 2.3 of this report presents that the site currently accommodates the following:

- An existing office component comprising a total floor area of 419m^2; and a single storey warehouse component providing a floor area of 4,142m^2.

Application of CDCP 2021 parking requirements to the existing site building floor area, assuming a warehouse use, results in the following parking requirements:

(419m^2 /40m^2 = 10.5 spaces) + (4,142 /300m^2 = 13.8 spaces) = 24.3 (adopt 25) spaces.

A standard industrial use of the subject site as a warehouse and office use is required to provide 25 passenger vehicle parking spaces.

The proposed passenger vehicle parking provision of 34 spaces is more than required in CDCP 2021 and having consideration to the proposed use it is accordingly considered satisfactory and meets objective O1 of the DCP which is to provide parking which is sufficient, accessible and safe to all user groups.

6.5 Heavy Vehicle Parking Provision

Information provided by the Applicant indicates that up to 5 truck parking spaces may be required on-site with the remainder of their truck fleet being parked at their site in St Marys.

Parking for heavy vehicles will only be required after 6:00pm or after when all deliveries to and from the site are completed for the day. An informal truck parking area is provided along the southern boundary of the site with the capacity for up to 5 hooklift trucks.

Information provided by the Applicant is that truck drivers typically stop to have breaks while out on the road, between deliveries.

On occasion where truck drivers do need to park their vehicle on-site, there is sufficient room to accommodate 33% of the vehicle fleet within the truck parking area.

The proposed heavy vehicle parking provision is accordingly concluded to be capable of accommodating the projected peak operational demand.

6.6 Internal Circulation and Manoeuvrability

6.6.1 Passenger Vehicle Circulation

Passenger vehicles gain entry to the site via the single combined ingress / egress driveway, connecting with Loftus Road in the north-western corner of the site. The development access driveway provides direct connectivity to formalised passenger vehicle parking spaces within the northern and southern portion of the site.

Spaces in the northern portion of the site, between the building and Loftus Road are a combination of parallel and 90-degree angled parking.

Parking within the southern portion of the site is provided within standard 90-degree angled parking rows, being servicing by adjoining circulation. The staff parking areas are separate from the truck manoeuvring areas.

The passenger vehicle parking spaces have been designed to accord with the relevant requirements of AS2890.1:2004 and AS2890.6:2009, providing the following minimum dimensions:

- Standard vehicular parking space width = 2.5m;
- Disabled vehicular parking space width = 2.4m (with adjoining 2.4m wide shared area);
- Additional vehicular space width where parking spaces adjoins an obstruction = 0.3m;
- Standard and disabled vehicular parking space length = 5.5m; and
- Aisle width servicing parking spaces = 5.8m.

Safe and efficient internal manoeuvring and parking space accessibility is anticipated to result, taking into consideration the above compliance with the relevant AS2890.1:2004 and AS2890.6:2009 specifications.

In order to demonstrate the internal passenger vehicle manoeuvrability within the internal parking areas and that the car park is separate from truck manoeuvres, a number of swept path plans have been prepared which are included as **Appendix 5**. The turning paths provided on the plans have been generated using Autoturn software and derived from B85 vehicle specifications provided within AS2890.1-2004.

Section B4.4 of AS2890.1-2004 states the following with regard to the use of templates to assess vehicle manoeuvring:

"Constant radius swept turning paths, based on the design vehicle's minimum turning circle are not suitable for determining the aisle width needed for manoeuvring into and out of parking spaces. Drivers can manoeuvre vehicles within smaller spaces than swept turning paths would suggest."

It would therefore appear that whilst the turning paths provided within AS 2890.1 - 2004 can be utilised to provide a 'general indication' of the suitability or otherwise of internal parking and manoeuvring areas, vehicles can generally manoeuvre more efficiently than the paths indicate.

Notwithstanding this, the swept path plans illustrate that passenger vehicles can manoeuvre throughout and enter and exit the most difficult passenger vehicle

parking spaces within the parking area. The proposed site layout as it relates to passenger vehicle manoeuvrability is considered satisfactory.

6.6.2 Heavy Vehicle Circulation

Section 3.4 of this report presents that the site operations propose generate a requirement for the following heavy vehicle servicing:

- Semi-trailers up to 20m long;
- Refuelling trucks up to 8m long; and
- Hooklift and skip trucks up to 8.8m long.

All heavy vehicles servicing site are to travel in and out via the site driveway while staying on the left as per standard road rules.

All heavy vehicles accessing the site, except the refuelling truck and occasional service vehicles, are required to stop on the entry weighbridge.

All heavy vehicles will then proceed in a forward direction to the southern side of the warehouse where they will reverse into one of the two roller shutters.

To manage the reversing of heavy vehicles safely, it is recommended that a staff member on-site ensure that pedestrians are kept clear of reversing vehicles. Procedures for managing the safe reversing of vehicles on-site should be included in a site operational management plan.

The heavy vehicles will then unload and reload before driving forward to exit the warehouse and be weighed again, before proceeding forward to exit the site.

Further to the above, refuelling tankers ranging in size from SRVs to an 8m long rigid vehicle may be required to occasionally directly access the diesel tank in the south-west corner of the site.

The heavy vehicle servicing / parking arrangements have been designed to comply with the relevant requirements of AS2890.2:2018, providing the following minimum dimensions:

- Minimum roller door width = 5.8m;
- Minimum roller shutter height = 5.2m; and
- Minimum width of external heavy vehicle parking bay = 3.5m.

A series of swept path plans have been prepared and included as **Appendix 5** which demonstrate the manoeuvring of vehicles to and from the loading / parking areas. These paths indicate that the proposed building and site design is capable of accommodating the manoeuvring requirements of the vehicles required to service the specific site components.

6.6.3 Truck Scheduling and Weighbridge Operation

6.6.3.1 Truck Scheduling

As outlined in **Table 12**, there is an Allocator dedicated to manage truck movements to and from site to maximise the efficiency of the site operation.

All deliveries to and from the site are proposed to be managed by a computer program. The site's operator currently uses a program called Waste Edge. This program allows the site operator to manage all truck scheduling, pick-ups and deliveries so that no vehicle simply turn up expecting to unload.

In-built into the program are the timings that are required for trucks to deliver and be serviced at the site which were provided by the Applicant as follows:

- The Hooklifts and Skip trucks will require an average of 10 minutes to be weighed on entry, unload, load and be weighed on exit;
- The larger semi-trailers will require 15 to 20 minutes on average to be weighed on entry, unload, load and be weighed on exit; and
- The fuel truck will require approximately 20 to 30 minutes to deliver to the site approximately once per week.

The computer program used, currently Waste Edge, is to ensure the following:

- That trucks do not turn up to the site without being scheduled;
- There is room on-site for them to deliver; and
- That the weighbridge can be managed to contain vehicle queues inside the subject site.

6.6.3.2 Weighbridge Operation

A double weighbridge is proposed to provide weighing services to all heavy vehicles entering the proposed development except the fuel trucks. One weighbridge is proposed for entering vehicles with the other proposed for exiting vehicles. Both weighbridges can accommodate a 20m semi-trailer.

Information on weighbridge timings for vehicles has been sourced from surveys undertaken by PeopleTrans at the Wetherill Park waste transfer facility in their report dated 23/3/16. The surveys found an average of 56 seconds per vehicle.

Conservatively assuming a 120 second time on average for entering vehicles, this equates to a capacity of 30 vehicles per hour. Based on 8 trucks per hour requiring the use of the entry weighbridge, this equates to a utilisation ratio (p) of 26.67%.

This Practice has undertaken a queuing assessment for the busiest hour using the queueing theory formula 4.3 provided in the Austroads Guide to Traffic Management Part 2, Austroads 2020.

Using the formula P(n)=(1-p)p^n where n is the number of units in the system and the probabilities of 0 to 3 vehicles in the system as is follows:

- 0 vehicles – 73.33%;
- 1 vehicle – 19.56%;
- 2 vehicles – 5.21%; and
- 3 vehicles – 1.39%.

Based on this approach, the 98th percentile queue of the entry weighbridge was determined to be 2.7 vehicles.

As outlined in Section 3.4, the vehicles that deliver material to the site are Hooklifts (8.7m long), Large Skips (8m long) and Small Skips (6.5m long).

A maximum of 3 semi-trailers per day, up to 20m long, are anticipated to transport material out of the site and only one semi-trailer will be present at any one time.

Based on a semi-trailer and two Hooklifts, assuming 2m between trucks for safety, and conservatively assuming a hooklift is on the weighbridge, this equates to a distance of 32.7m.

The distance from the weighbridge to the property boundary on Loftus Road is approximately 60m which means that including the vehicles on the weighbridge, there is sufficient room to cater for more than the required 3 vehicles at any one time.

In consideration of this and the above discussion, the subject development design is considered to be capable of accommodating the existing / proposed internal circulation arrangements in a safe and efficient manner.

7. CONCLUSION

This report assesses the potential traffic and parking implications associated with an SSD for a resource recovery facility at 30 Loftus Road in Yennora. Based on this assessment, the following conclusions are now made:

- The existing site access arrangements are sufficiently capable of accommodating the largest vehicles (20m semi-trailer) expected to service the site in a safe and efficient manner;

- Loftus Road has consistent horizontal and vertical geometry and can provide sufficient sight distance from the site driveway for exiting vehicles in accordance with AS2890.1 and AS2890.2;

- The proposed off-street passenger vehicle and bicycle parking provision complies with the specific operational requirements of the proposed site use and the relevant requirements of CDCP 2021;

- As outlined in Section 6.3 of this report, one visitor bicycle parking space is recommended which will be documented once the specific product is selected at the detailed design stage of this project. It is considered that this could reasonably be managed via a condition of consent;

- The proposed off street heavy vehicle servicing and parking provision is capable of accommodating the specific operational requirements of the proposed site use;

- The internal passenger and heavy vehicle circulation arrangements are capable of providing for safe and efficient internal manoeuvring, with respect to the specific operational requirements of the use;

- To manage the reversing of heavy vehicles safely, it is recommended that a staff member on-site ensure that pedestrians are kept clear of reversing vehicles. Procedures for managing the safe reversing of vehicles on-site should be included in a site operational management plan;

- The immediately adjoining road network currently operates with a satisfactory level of service during peak periods;

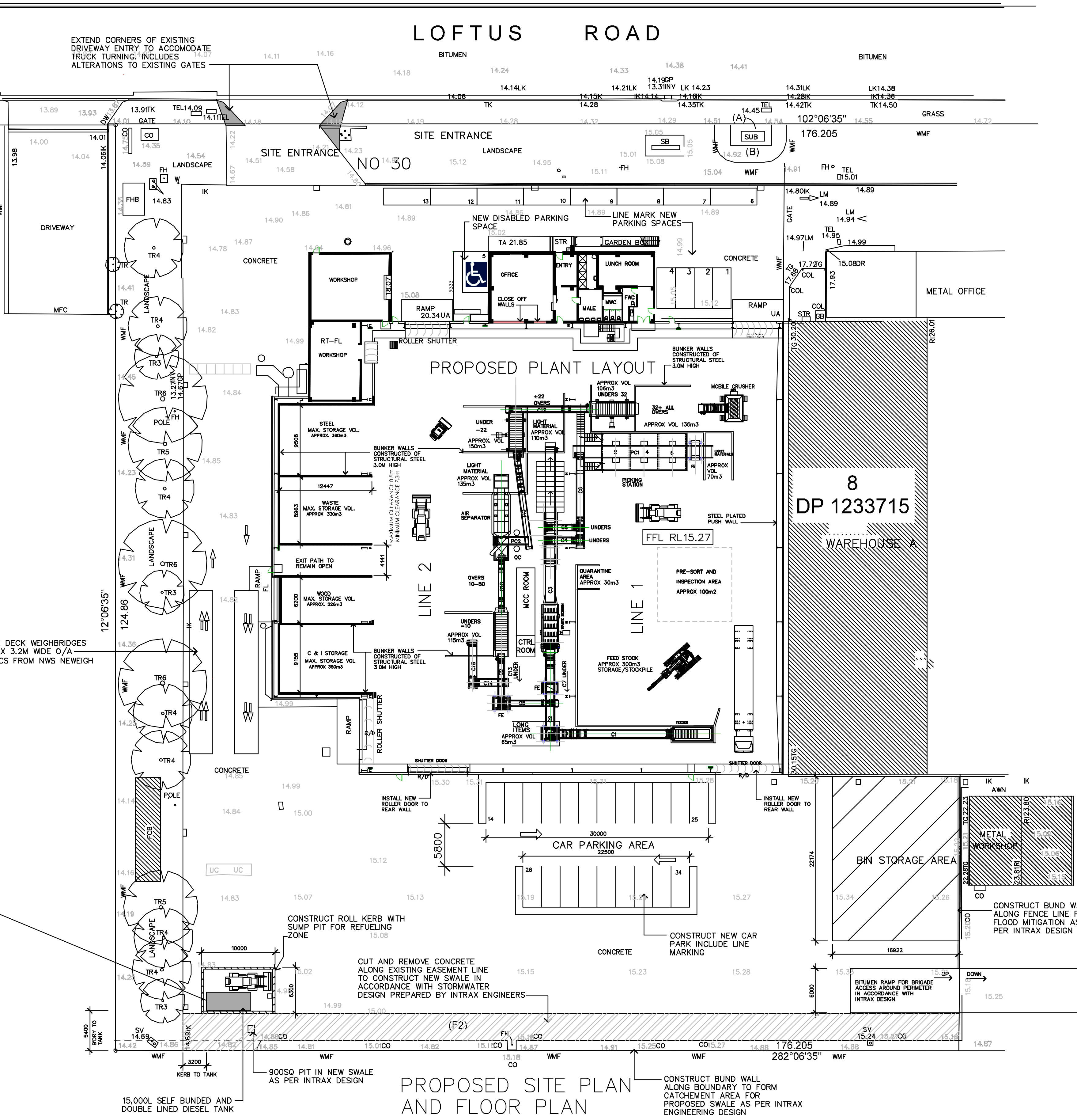
- The proposed site has been projected to generate up to 21 peak hour vehicle trips on a weekday AM with 16 during the weekday PM peak hour to and from the subject site;

- The abovementioned traffic generating ability of the proposed use is consistent with a standard industrial use of the existing site infrastructure; and

- The adjoining road network is capable of accommodating the traffic projected to be generated by the subject development.

Based on the contents of this report, there are no traffic or parking related issues that should prevent approval of the subject use of the site.

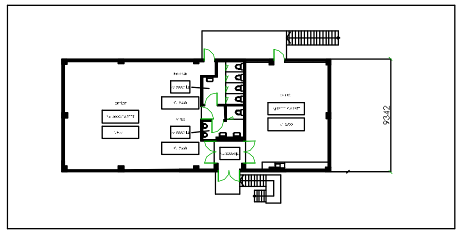
APPENDIX 1



NOTE: TYPICAL SELF BUNDED DIESEL TANK TO BE USED ON SITE

PROPOSED SITE PLAN AND FLOOR PLAN

CONSTRUCT BUND WALL ALONG BOUNDARY TO FORM CATCHEMENT AREA FOR PROPOSED SWALE AS PER INTRAX ENGINEERING DESIGN



EXISTING FIRST FLOOR OFFICES TO REMAIN UNCHANGED

AREAS:
OFFICE TOTAL 419m2
MAIN BUILDING 4,142m2
SITE AREA APPROX 12,112m2

NOTE:
CARPARKING AS PER THE FOLLOWING REQUIREMENTS:
COUNCIL DCP
ALLOWANCE OF 1 SPACE PER 40m2 OF OFFICE
1 SPACE PER 300m2 OF FACTORY
TOTAL MIN. 25 PARKING SPACES REQUIRED INCLUDES 1 X DISABLED

SITE ALLOWANCE OF 34 SPACES HAS BEEN PROVIDED IN ACCORDANCE WITH STAFFING AND OPERATIONAL REQUIREMENT

PARKING BAYS 5.5M X 2.5M AS PER AUSTRALIAN STANDARDS

ISSUE	BY	DESCRIPTION	DATE
A	GR	ISSUE FOR DEPARTMENT OF PLANNING	8-9-2020
B	GR	AMEND BIN STORAGE	11-9-2020
C	GR	AMEND CAR PARKING	14-9-2020
D	GR	AMEND CAR PARKING AND FLOOR PLAN	10-5-2021
E	GR	ISSUE FOR DEPARTMENT OF PLANNING	19-7-2021
F	GR	ISSUE FOR DEPARTMENT OF PLANNING	19-7-2021
G	GR	ISSUE FOR DEPARTMENT OF PLANNING	26-7-2021
H	GR	ISSUE FOR DEPARTMENT OF PLANNING	18-1-2022

CLIENT: cobra waste solutions

DIAL BEFORE YOU DIG www.1100.com.au

GENERAL NOTES:
1. ALL DIMENSIONS AND FLOOR AREAS ARE TO BE VERFIED BY THE BUILDER PRIOR TO THE COMMENCEMENT OF ANY BUILDING WORKS. ANY DISCREPANCIES ARE TO BE BROUGHT TO THE ATTENTION OF THE DESIGNER
2. LEVELS SHOWN ARE APPROXIMATE UNLESS ACCOMPANIED BY REDUCED LEVELS FROM A DETAILED SURVEY
3 FIGURED DIMENSIONS MUST BE TAKEN IN PREFERENCE TO SCALING
4. ALL BOUNDARY CLEARANCES MUST BE VERIFIED BY THE SURVEYOR PRIOR TO COMMENCEMENT OF ANY BUILDING WORK
5. WHERE ENGINEERING DRAWINGS ARE REQUIRED SUCH MUST TAKE PRECEDENT OVER THIS DRAWING
6 STORMWATER TO BE DISCHARGED TO COUNCILS'S REQUIREMENTS AND AS 3500.3–2003
7 ALL SERVICES TO BE LOCATED AND VERIFIED BY THE BUILDER WITH RELEVANT AUTHORITIES BEFORE ANY BUILDING WORK COMMENCES
8 ALL WORKS TO BE COMPLETED IN ACCORDANCE WITH THE AUSTRALIAN STANDARDS
9 TERMITE PROTECTION TO BE INSTALLED IN ACCORDANCE WITH AS3660.1–1995 PART 1 NEW BUILDINGS
10. SMOKE DETECTORS TO BE INSTALLED BY A LICENSED ELECTRICIAN IN ACCORDANCE WITH THE

Carlo Ranieri & Associates
STRUCTURAL & CIVIL ENGINEERING
DESIGN CONSULTANTS
BUILDING CONSULTANTS
ENVIRONMENTAL CONSULTANTS
2051–2053 THE NORTHERN ROAD
GLENMORE PARK NSW 2745
TEL: (02)47367966 MOB: 0418256285
e-mail: carlo@carloranieri.com.au

DRAWING: PROPOSED SITE PLAN AND FLOOR PLAN

PROJECT: RESOURCE RECOVERY FACILITY
30 LOFTUS ROAD YENNORA
LOT 8 DP1233715

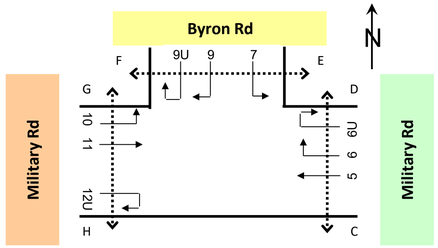
PROJECT NO.	SCALE	DATE	JOB NO.	SHEET NO.	ISSUE
0820	1: 600	18-1-2022	CW/080920	A02	H

A1 SHEET

APPENDIX 2

Job No.	: AUNSW1103
Client	: Stanbury Traffic Planning
Suburb	: Yennora
Location	: 1. Military Rd / Byron Rd
Day/Date	: Sat, 12th June 2021
Weather	: Fine
Description	: Classified Intersection Count
	: 15 mins Data

	Class 1	Class 2
Classifications	Lights	Heavies



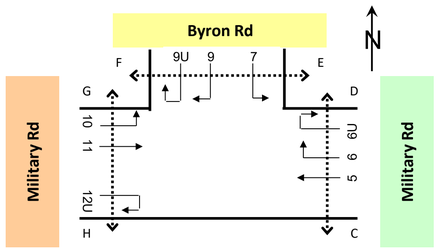
MATRIX Traffic and Transport Data

Approach		Military Rd								
Direction		Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)		
Time Period		Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
11:00	to 11:15	11	0	**11**	0	0	**0**	1	0	**1**
11:15	to 11:30	13	0	**13**	0	0	**0**	0	0	**0**
11:30	to 11:45	15	1	**16**	1	0	**1**	0	0	**0**
11:45	to 12:00	11	0	**11**	0	0	**0**	0	0	**0**
12:00	to 12:15	13	0	**13**	1	0	**1**	0	0	**0**
12:15	to 12:30	17	0	**17**	0	0	**0**	0	0	**0**
12:30	to 12:45	15	2	**17**	0	0	**0**	0	0	**0**
12:45	to 13:00	17	1	**18**	1	0	**1**	0	0	**0**
Total		**112**	**4**	**116**	**3**	**0**	**3**	**1**	**0**	**1**

Approach	Byron Rd									Military Rd									Crossing Pedestrians						
Direction	Direction 7 (Left Turn)				Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12U (U Turn)									
Time Period	Lights	Heavies	Total		Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total		D to C	C to D	F to E	E to F	H to G	G to H	Total
11:00 to 11:15	1	0	**1**		6	1	**7**	0	0	**0**	6	0	**6**	17	1	**18**	0	0	**0**		0	0	0	0	0	0	**0**
11:15 to 11:30	0	0	**0**		7	2	**9**	0	0	**0**	17	0	**17**	11	0	**11**	0	0	**0**		0	0	0	0	0	0	**0**
11:30 to 11:45	1	0	**1**		3	0	**3**	0	0	**0**	12	0	**12**	15	0	**15**	0	0	**0**		0	0	0	0	0	0	**0**
11:45 to 12:00	2	0	**2**		6	1	**7**	0	0	**0**	8	0	**8**	16	0	**16**	0	0	**0**		0	0	0	0	0	0	**0**
12:00 to 12:15	1	0	**1**		12	1	**13**	0	0	**0**	9	2	**11**	10	2	**12**	0	0	**0**		0	0	0	0	0	0	**0**
12:15 to 12:30	2	0	**2**		5	1	**6**	0	0	**0**	11	0	**11**	22	2	**24**	0	0	**0**		0	0	0	0	0	0	**0**
12:30 to 12:45	1	0	**1**		8	0	**8**	1	0	**1**	6	1	**7**	17	0	**17**	0	0	**0**		0	0	0	0	0	0	**0**
12:45 to 13:00	1	0	**1**		9	0	**9**	0	0	**0**	9	0	**9**	10	0	**10**	0	0	**0**		0	0	0	0	0	0	**0**
Total	**9**	**0**	**9**		**56**	**6**	**62**	**1**	**0**	**1**	**78**	**3**	**81**	**118**	**5**	**123**	**0**	**0**	**0**		**0**	**0**	**0**	**0**	**0**	**0**	**0**

Job No. : AUNSW1103
Client : Stanbury Traffic Planning
Suburb : Yennora
Location : 1. Military Rd / Byron Rd

Day/Date : Sat, 12th June 2021
Weather : Fine
Description : Classified Intersection Count
: Hourly Summary



MATRIX Traffic and Transport Data

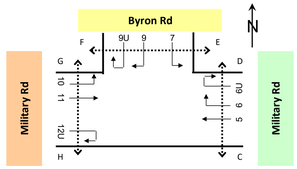
Approach		Military Rd									
Direction		Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)		
Time Period		Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
11:00	to 12:00	50	1	**51**	1	0	**1**	1	0	**1**
11:15	to 12:15	52	1	**53**	2	0	**2**	0	0	**0**
11:30	to 12:30	56	1	**57**	2	0	**2**	0	0	**0**
11:45	to 12:45	56	2	**58**	1	0	**1**	0	0	**0**
12:00	to 13:00	62	3	**65**	2	0	**2**	0	0	**0**
Total		**112**	**4**	**116**	**3**	**0**	**3**	**1**	**0**	**1**

Approach	Byron Rd									Military Rd									Crossing Pedestrians						
Direction	Direction 7 (Left Turn)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12U (U Turn)									
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	D to C	C to D	F to E	E to F	H to G	G to H	Total
11:00 to 12:00	4	0	**4**	22	4	**26**	0	0	**0**	43	0	**43**	59	1	**60**	0	0	**0**	0	0	0	0	0	0	**0**
11:15 to 12:15	4	0	**4**	28	4	**32**	0	0	**0**	46	2	**48**	52	2	**54**	0	0	**0**	0	0	0	0	0	0	**0**
11:30 to 12:30	6	0	**6**	26	3	**29**	0	0	**0**	40	2	**42**	63	4	**67**	0	0	**0**	0	0	0	0	0	0	**0**
11:45 to 12:45	6	0	**6**	31	3	**34**	1	0	**1**	34	3	**37**	65	4	**69**	0	0	**0**	0	0	0	0	0	0	**0**
12:00 to 13:00	5	0	**5**	34	2	**36**	1	0	**1**	35	3	**38**	59	4	**63**	0	0	**0**	0	0	0	0	0	0	**0**
Total	**9**	**0**	**9**	**56**	**6**	**62**	**1**	**0**	**1**	**78**	**3**	**81**	**118**	**5**	**123**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Job No. : AUNSW1103
Client : Stanbury Traffic Planning
Suburb : Yennora
Location : 1. Military Rd / Byron Rd

Day/Date : Wed, 16th Jun 2021
Weather : Fine
Description : Classified Intersection Count
: 15 mins Data

Classifications	Class 1	Class 2
	Lights	Heavies



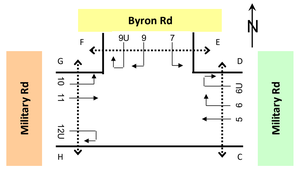
MATRIX Traffic and Transport Data

Approach	Military Rd											
Direction	Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)		
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
6:30 to 6:45	20	1	**21**	2	0	**2**	0	0	**0**
6:45 to 7:00	28	2	**30**	1	0	**1**	0	0	**0**
7:00 to 7:15	19	1	**20**	1	0	**1**	0	0	**0**
7:15 to 7:30	11	2	**13**	1	1	**2**	0	0	**0**
7:30 to 7:45	22	0	**22**	0	0	**0**	0	0	**0**
7:45 to 8:00	31	2	**33**	2	0	**2**	0	0	**0**
8:00 to 8:15	20	2	**22**	1	1	**2**	0	0	**0**
8:15 to 8:30	20	0	**20**	1	0	**1**	0	0	**0**
8:30 to 8:45	29	2	**31**	1	0	**1**	0	0	**0**
8:45 to 9:00	23	0	**23**	0	0	**0**	0	0	**0**
AM Totals	**223**	**12**	**235**	**10**	**2**	**12**	**0**	**0**	**0**
15:00 to 15:15	15	2	**17**	5	0	**5**	0	0	**0**
15:15 to 15:30	18	1	**19**	2	0	**2**	0	0	**0**
15:30 to 15:45	27	0	**27**	2	0	**2**	0	0	**0**
15:45 to 16:00	21	2	**23**	2	1	**3**	1	0	**1**
16:00 to 16:15	18	0	**18**	2	0	**2**	0	0	**0**
16:15 to 16:30	31	1	**32**	2	0	**2**	0	0	**0**
16:30 to 16:45	15	1	**16**	2	0	**2**	0	0	**0**
16:45 to 17:00	16	3	**19**	0	1	**1**	0	0	**0**
PM Totals	**161**	**10**	**171**	**17**	**2**	**19**	**1**	**0**	**1**

Approach	Byron Rd									Military Rd									Crossing Pedestrians						
Direction	Direction 7 (Left Turn)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12U (U Turn)									
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	D to C	C to D	F to E	E to F	H to G	G to H	Total
6:30 to 6:45	1	0	**1**	4	8	**12**	0	0	**0**	14	4	**18**	18	1	**19**	0	0	**0**	0	2	0	0	0	0	**2**
6:45 to 7:00	1	0	**1**	13	4	**17**	0	0	**0**	20	7	**27**	7	0	**7**	0	0	**0**	0	4	0	0	0	0	**4**
7:00 to 7:15	2	0	**2**	7	6	**13**	0	0	**0**	14	5	**19**	18	3	**21**	0	0	**0**	0	0	0	0	0	0	**0**
7:15 to 7:30	1	0	**1**	10	6	**16**	0	0	**0**	17	11	**28**	16	1	**17**	0	0	**0**	0	0	0	0	0	0	**0**
7:30 to 7:45	3	0	**3**	14	8	**22**	0	0	**0**	14	5	**19**	25	1	**26**	0	0	**0**	0	1	0	0	0	0	**1**
7:45 to 8:00	1	0	**1**	13	8	**21**	0	0	**0**	23	6	**29**	22	4	**26**	0	0	**0**	2	6	0	1	0	2	**11**
8:00 to 8:15	2	0	**2**	16	8	**24**	0	0	**0**	13	8	**21**	25	3	**28**	0	0	**0**	5	1	2	1	0	0	**9**
8:15 to 8:30	0	1	**1**	22	8	**30**	0	0	**0**	18	6	**24**	32	3	**35**	0	0	**0**	1	0	0	0	0	0	**1**
8:30 to 8:45	1	0	**1**	12	4	**16**	0	0	**0**	12	8	**20**	27	3	**30**	0	0	**0**	1	0	0	0	0	0	**1**
8:45 to 9:00	0	1	**1**	13	11	**24**	0	0	**0**	17	7	**24**	16	1	**17**	0	0	**0**	0	1	0	0	0	0	**1**
AM Totals	**12**	**2**	**14**	**124**	**71**	**195**	**0**	**0**	**0**	**162**	**67**	**229**	**206**	**20**	**226**	**0**	**0**	**0**	**9**	**15**	**2**	**2**	**0**	**2**	**30**
15:00 to 15:15	6	0	**6**	28	2	**30**	0	0	**0**	20	5	**25**	29	2	**31**	0	0	**0**	1	1	0	1	0	0	**3**
15:15 to 15:30	2	0	**2**	21	9	**30**	0	0	**0**	19	3	**22**	27	1	**28**	0	0	**0**	0	0	0	1	0	0	**1**
15:30 to 15:45	1	0	**1**	20	2	**22**	0	0	**0**	20	2	**22**	37	0	**37**	0	0	**0**	0	0	0	0	0	0	**0**
15:45 to 16:00	2	0	**2**	16	3	**19**	0	0	**0**	19	2	**21**	27	3	**30**	0	0	**0**	1	0	0	0	0	0	**1**
16:00 to 16:15	1	1	**2**	24	0	**24**	0	0	**0**	16	5	**21**	41	1	**42**	0	0	**0**	0	0	0	0	0	1	**1**
16:15 to 16:30	0	0	**0**	14	4	**18**	0	0	**0**	15	1	**16**	27	0	**27**	0	0	**0**	4	0	0	0	0	0	**4**
16:30 to 16:45	1	0	**1**	14	5	**19**	0	0	**0**	23	2	**25**	31	2	**33**	0	0	**0**	2	0	0	0	0	0	**2**
16:45 to 17:00	0	0	**0**	7	2	**9**	0	0	**0**	31	1	**32**	26	1	**27**	0	0	**0**	0	0	0	0	0	0	**0**
PM Totals	**13**	**1**	**14**	**144**	**27**	**171**	**0**	**0**	**0**	**163**	**21**	**184**	**245**	**10**	**255**	**0**	**0**	**0**	**8**	**1**	**0**	**2**	**0**	**1**	**12**

Job No. : AUNSW1103
Client : Stanbury Traffic Planning
Suburb : Yennora
Location : 1. Military Rd / Byron Rd

Day/Date : Wed, 16th Jun 2021
Weather : Fine
Description : Classified Intersection Count
: Hourly Summary



MATRIX Traffic and Transport Data

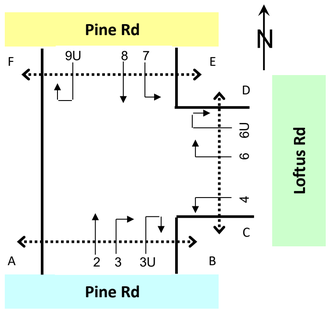
Approach		Military Rd								
Direction		Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)		
Time Period		Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
6:30	7:30	78	6	**84**	5	1	**6**	0	0	**0**
6:45	7:45	80	5	**85**	3	1	**4**	0	0	**0**
7:00	8:00	83	5	**88**	4	1	**5**	0	0	**0**
7:15	8:15	84	6	**90**	4	2	**6**	0	0	**0**
7:30	8:30	93	4	**97**	4	1	**5**	0	0	**0**
7:45	8:45	100	6	**106**	5	1	**6**	0	0	**0**
8:00	9:00	92	4	**96**	3	1	**4**	0	0	**0**
AM Totals		**223**	**12**	**235**	**10**	**2**	**12**	**0**	**0**	**0**
15:00	16:00	81	5	**86**	11	1	**12**	1	0	**1**
15:15	16:15	84	3	**87**	8	1	**9**	1	0	**1**
15:30	16:30	97	3	**100**	8	1	**9**	1	0	**1**
15:45	16:45	85	4	**89**	8	1	**9**	1	0	**1**
16:00	17:00	80	5	**85**	6	1	**7**	0	0	**0**
PM Totals		**161**	**10**	**171**	**17**	**2**	**19**	**1**	**0**	**1**

Approach		Byron Rd									Military Rd									Crossing Pedestrians						
Direction		Direction 7 (Left Turn)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12U (U Turn)									
Time Period		Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total		D to C	C to D	F to E	E to F	H to G	G to H	Total
6:30	7:30	5	0	**5**	34	24	**58**	0	0	**0**	65	27	**92**	59	5	**64**	0	0	**0**		0	6	0	0	0	0	**6**
6:45	7:45	7	0	**7**	44	24	**68**	0	0	**0**	65	28	**93**	66	5	**71**	0	0	**0**		0	5	0	0	0	0	**5**
7:00	8:00	7	0	**7**	44	28	**72**	0	0	**0**	68	27	**95**	81	9	**90**	0	0	**0**		2	7	0	1	0	2	**12**
7:15	8:15	7	0	**7**	53	30	**83**	0	0	**0**	67	30	**97**	88	9	**97**	0	0	**0**		7	8	2	2	0	2	**21**
7:30	8:30	6	1	**7**	65	32	**97**	0	0	**0**	68	25	**93**	104	11	**115**	0	0	**0**		8	8	2	2	0	2	**22**
7:45	8:45	4	1	**5**	63	28	**91**	0	0	**0**	66	28	**94**	106	13	**119**	0	0	**0**		9	7	2	2	0	2	**22**
8:00	9:00	3	2	**5**	63	31	**94**	0	0	**0**	60	29	**89**	100	10	**110**	0	0	**0**		7	2	2	1	0	0	**12**
AM Totals		**12**	**2**	**14**	**124**	**71**	**195**	**0**	**0**	**0**	**162**	**67**	**229**	**206**	**20**	**226**	**0**	**0**	**0**		**9**	**15**	**2**	**2**	**0**	**2**	**30**
15:00	16:00	11	0	**11**	85	16	**101**	0	0	**0**	78	12	**90**	120	6	**126**	0	0	**0**		2	1	0	2	0	0	**5**
15:15	16:15	6	1	**7**	81	14	**95**	0	0	**0**	74	12	**86**	132	5	**137**	0	0	**0**		1	0	0	1	0	1	**3**
15:30	16:30	4	1	**5**	74	9	**83**	0	0	**0**	70	10	**80**	132	4	**136**	0	0	**0**		5	0	0	0	0	1	**6**
15:45	16:45	4	1	**5**	68	12	**80**	0	0	**0**	73	10	**83**	126	6	**132**	0	0	**0**		7	0	0	0	0	1	**8**
16:00	17:00	2	1	**3**	59	11	**70**	0	0	**0**	85	9	**94**	125	4	**129**	0	0	**0**		6	0	0	0	0	1	**7**
PM Totals		**13**	**1**	**14**	**144**	**27**	**171**	**0**	**0**	**0**	**163**	**21**	**184**	**245**	**10**	**255**	**0**	**0**	**0**		**8**	**1**	**0**	**2**	**0**	**1**	**12**

Job No. : AUNSW1103
Client : Stanbury Traffic Planning
Suburb : Yennora
Location : 2. Pine Rd / Loftus Rd

Day/Date : Sat, 12th June 2021
Weather : Fine
Description : Classified Intersection Count
: 15 mins Data

	Class 1	Class 2
Classifications	Lights	Heavies



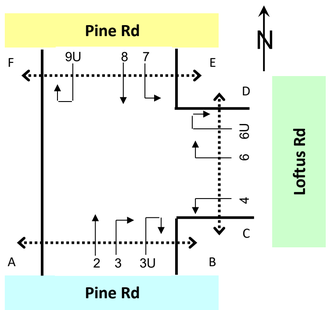
MATRIX Traffic and Transport Data

Approach	Pine Rd									Loftus Rd								
Direction		Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)				Direction 6 (Right Turn)			Direction 6U (U Turn)		
Time Period		Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total		Lights	Heavies	Total	Lights	Heavies	Total
11:00 to 11:15		17	2	**19**	21	1	**22**	0	0	**0**	10	0	**10**		14	3	**17**	0	0	**0**
11:15 to 11:30		18	1	**19**	14	1	**15**	0	0	**0**	11	3	**14**		13	0	**13**	0	0	**0**
11:30 to 11:45		18	4	**22**	13	0	**13**	0	0	**0**	7	0	**7**		9	2	**11**	0	0	**0**
11:45 to 12:00		16	5	**21**	12	0	**12**	0	0	**0**	7	1	**8**		15	1	**16**	0	0	**0**
12:00 to 12:15		13	5	**18**	15	3	**18**	0	0	**0**	16	0	**16**		13	1	**14**	0	0	**0**
12:15 to 12:30		17	7	**24**	18	2	**20**	0	0	**0**	13	1	**14**		15	1	**16**	0	0	**0**
12:30 to 12:45		13	2	**15**	9	1	**10**	0	0	**0**	16	1	**17**		17	1	**18**	0	0	**0**
12:45 to 13:00		16	3	**19**	16	0	**16**	0	0	**0**	15	1	**16**		16	1	**17**	0	1	**1**
Total		**128**	**29**	**157**	**118**	**8**	**126**	**0**	**0**	**0**	**95**	**7**	**102**		**112**	**10**	**122**	**0**	**1**	**1**

Approach	Pine Rd										Crossing Pedestrians							
Direction	Direction 7 (Left Turn)			Direction 8 (Through)				Direction 9U (U Turn)										
Time Period	Lights	Heavies	Total	Lights	Heavies	Total		Lights	Heavies	Total		B to A	A to B	D to C	C to D	F to E	E to F	Total
11:00 to 11:15	7	0	**7**	21	0	**21**		0	0	**0**		0	0	0	0	0	0	**0**
11:15 to 11:30	13	4	**17**	23	4	**27**		0	0	**0**		0	0	0	0	0	0	**0**
11:30 to 11:45	14	0	**14**	7	2	**9**		0	0	**0**		0	0	0	0	0	0	**0**
11:45 to 12:00	9	0	**9**	13	3	**16**		0	0	**0**		0	0	0	0	0	0	**0**
12:00 to 12:15	9	3	**12**	13	3	**16**		0	0	**0**		0	0	0	0	0	0	**0**
12:15 to 12:30	22	0	**22**	11	1	**12**		0	0	**0**		0	0	0	0	0	0	**0**
12:30 to 12:45	15	3	**18**	16	3	**19**		0	0	**0**		0	0	0	0	0	0	**0**
12:45 to 13:00	10	0	**10**	28	0	**28**		0	0	**0**		0	0	0	0	0	0	**0**
Total	**99**	**10**	**109**	**132**	**16**	**148**		**0**	**0**	**0**		**0**	**0**	**0**	**0**	**0**	**0**	**0**

Job No. : AUNSW1103
Client : Stanbury Traffic Planning
Suburb : Yennora
Location : 2. Pine Rd / Loftus Rd

Day/Date : Sat, 12th June 2021
Weather : Fine
Description : Classified Intersection Count
: Hourly Summary



MATRIX Traffic and Transport Data

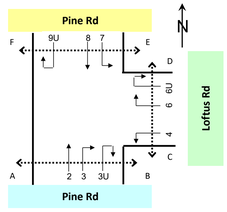
Approach	Pine Rd									Loftus Rd								
Direction		Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)				Direction 6 (Right Turn)			Direction 6U (U Turn)		
Time Period		Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total		Lights	Heavies	Total	Lights	Heavies	Total
11:00 to 12:00		69	12	**81**	60	2	**62**	0	0	**0**	35	4	**39**		51	6	**57**	0	0	**0**
11:15 to 12:15		65	15	**80**	54	4	**58**	0	0	**0**	41	4	**45**		50	4	**54**	0	0	**0**
11:30 to 12:30		64	21	**85**	58	5	**63**	0	0	**0**	43	2	**45**		52	5	**57**	0	0	**0**
11:45 to 12:45		59	19	**78**	54	6	**60**	0	0	**0**	52	3	**55**		60	4	**64**	0	0	**0**
12:00 to 13:00		59	17	**76**	58	6	**64**	0	0	**0**	60	3	**63**		61	4	**65**	0	1	**1**
Total		**128**	**29**	**157**	**118**	**8**	**126**	**0**	**0**	**0**	**95**	**7**	**102**		**112**	**10**	**122**	**0**	**1**	**1**

Approach	Pine Rd										Crossing Pedestrians							
Direction	Direction 7 (Left Turn)			Direction 8 (Through)				Direction 9U (U Turn)										
Time Period	Lights	Heavies	Total	Lights	Heavies	Total		Lights	Heavies	Total		B to A	A to B	D to C	C to D	F to E	E to F		Total
11:00 to 12:00	43	4	**47**	64	9	**73**		0	0	**0**		0	0	0	0	0	0		**0**
11:15 to 12:15	45	7	**52**	56	12	**68**		0	0	**0**		0	0	0	0	0	0		**0**
11:30 to 12:30	54	3	**57**	44	9	**53**		0	0	**0**		0	0	0	0	0	0		**0**
11:45 to 12:45	55	6	**61**	53	10	**63**		0	0	**0**		0	0	0	0	0	0		**0**
12:00 to 13:00	56	6	**62**	68	7	**75**		0	0	**0**		0	0	0	0	0	0		**0**
Total	**99**	**10**	**109**	**132**	**16**	**148**		**0**	**0**	**0**		**0**	**0**	**0**	**0**	**0**	**0**		**0**

Job No. : AUNSW1103
Client : Stanbury Traffic Planning
Suburb : Yennora
Location : 2. Pine Rd / Loftus Rd

Day/Date : Wed, 16th Jun 2021
Weather : Fine
Description : Classified Intersection Count
: 15 mins Data

Classifications	Class 1	Class 2
	Lights	Heavies

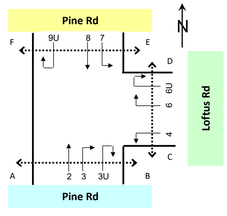


Approach	Pine Rd										Loftus Rd									
Direction		Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)				Direction 6 (Right Turn)			Direction 6U (U Turn)		
Time Period		Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total		Lights	Heavies	Total	Lights	Heavies	Total
6:30 to 6:45		17	9	**26**	15	6	**21**	0	0	**0**	7	11	**18**		9	20	**29**	0	0	**0**
6:45 to 7:00		20	11	**31**	23	6	**29**	0	0	**0**	16	6	**22**		9	11	**20**	1	0	**1**
7:00 to 7:15		16	8	**24**	18	12	**30**	0	0	**0**	9	11	**20**		5	10	**15**	0	1	**1**
7:15 to 7:30		22	12	**34**	27	10	**37**	0	1	**1**	14	6	**20**		14	17	**31**	0	0	**0**
7:30 to 7:45		12	8	**20**	22	11	**33**	0	0	**0**	15	10	**25**		14	20	**34**	0	0	**0**
7:45 to 8:00		14	11	**25**	31	8	**39**	0	0	**0**	25	15	**40**		5	17	**22**	0	0	**0**
8:00 to 8:15		18	12	**30**	24	13	**37**	0	0	**0**	17	6	**23**		8	17	**25**	0	0	**0**
8:15 to 8:30		26	16	**42**	37	15	**52**	0	0	**0**	28	12	**40**		6	28	**34**	0	0	**0**
8:30 to 8:45		36	12	**48**	23	11	**34**	0	0	**0**	23	9	**32**		13	21	**34**	0	0	**0**
8:45 to 9:00		34	9	**43**	19	10	**29**	1	0	**1**	18	6	**24**		11	23	**34**	0	0	**0**
AM Totals		**215**	**108**	**323**	**239**	**102**	**341**	**1**	**1**	**2**	**172**	**92**	**264**		**94**	**184**	**278**	**1**	**1**	**2**
15:00 to 15:15		86	10	**96**	21	6	**27**	1	0	**1**	28	8	**36**		42	12	**54**	0	0	**0**
15:15 to 15:30		59	14	**73**	30	7	**37**	1	2	**3**	26	11	**37**		33	7	**40**	1	0	**1**
15:30 to 15:45		55	12	**67**	29	7	**36**	0	0	**0**	40	11	**51**		40	10	**50**	0	0	**0**
15:45 to 16:00		62	11	**73**	25	6	**31**	1	0	**1**	26	4	**30**		34	17	**51**	0	0	**0**
16:00 to 16:15		85	9	**94**	22	7	**29**	0	1	**1**	33	5	**38**		53	6	**59**	0	0	**0**
16:15 to 16:30		54	7	**61**	23	1	**24**	1	0	**1**	23	9	**32**		45	13	**58**	1	0	**1**
16:30 to 16:45		56	8	**64**	28	6	**34**	0	0	**0**	21	5	**26**		43	12	**55**	0	0	**0**
16:45 to 17:00		54	8	**62**	37	8	**45**	0	0	**0**	15	6	**21**		33	14	**47**	0	0	**0**
PM Totals		**511**	**79**	**590**	**215**	**48**	**263**	**4**	**3**	**7**	**212**	**59**	**271**		**323**	**91**	**414**	**2**	**0**	**2**

Approach	Pine Rd									Crossing Pedestrians						
Direction	Direction 7 (Left Turn)			Direction 8 (Through)				Direction 9U (U Turn)										
Time Period	Lights	Heavies	Total	Lights	Heavies	Total		Lights	Heavies	Total		B to A	A to B	D to C	C to D	F to E	E to F	Total
6:30 to 6:45	47	7	**54**	43	11	**54**		1	0	**1**		0	0	0	0	0	0	**0**
6:45 to 7:00	40	14	**54**	44	10	**54**		1	0	**1**		4	0	0	0	0	0	**4**
7:00 to 7:15	59	19	**78**	40	9	**49**		0	0	**0**		2	0	0	0	0	0	**2**
7:15 to 7:30	45	21	**66**	34	9	**43**		0	0	**0**		0	0	0	0	0	0	**0**
7:30 to 7:45	58	10	**68**	43	12	**55**		0	0	**0**		1	0	0	0	0	0	**1**
7:45 to 8:00	57	21	**78**	53	12	**65**		0	0	**0**		0	0	0	0	1	0	**1**
8:00 to 8:15	25	14	**39**	51	13	**64**		0	0	**0**		0	0	0	0	0	0	**0**
8:15 to 8:30	45	21	**66**	42	13	**55**		0	0	**0**		0	0	0	0	0	0	**0**
8:30 to 8:45	35	15	**50**	49	10	**59**		0	0	**0**		0	0	0	0	0	0	**0**
8:45 to 9:00	27	16	**43**	56	17	**73**		0	0	**0**		0	0	0	0	0	0	**0**
AM Totals	**438**	**158**	**596**	**455**	**116**	**571**		**2**	**0**	**2**		**7**	**0**	**0**	**0**	**1**	**0**	**8**
15:00 to 15:15	24	16	**40**	54	13	**67**		0	0	**0**		0	2	1	0	0	1	**4**
15:15 to 15:30	17	13	**30**	44	14	**58**		0	0	**0**		0	1	0	0	1	1	**3**
15:30 to 15:45	23	15	**38**	53	13	**66**		0	0	**0**		0	1	0	0	0	0	**1**
15:45 to 16:00	16	12	**28**	37	11	**48**		1	0	**1**		1	0	0	0	0	0	**1**
16:00 to 16:15	22	14	**36**	30	11	**41**		1	0	**1**		0	1	3	0	3	0	**7**
16:15 to 16:30	17	17	**34**	38	11	**49**		1	1	**2**		0	0	0	0	0	0	**0**
16:30 to 16:45	17	11	**28**	40	4	**44**		0	0	**0**		0	0	0	0	0	0	**0**
16:45 to 17:00	12	12	**24**	37	5	**42**		0	0	**0**		0	0	0	0	0	0	**0**
PM Totals	**148**	**110**	**258**	**333**	**82**	**415**		**3**	**1**	**4**		**1**	**5**	**4**	**0**	**4**	**2**	**16**

Job No. : AUNSW1103
Client : Stanbury Traffic Planning
Suburb : Yennora
Location : 2. Pine Rd / Loftus Rd

Day/Date : Wed, 16th Jun 2021
Weather : Fine
Description : Classified Intersection Count
: Hourly Summary



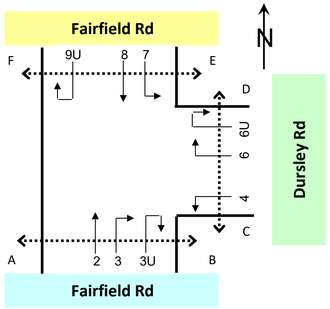
MATRIX Traffic and Transport Data

Approach	Pine Rd									Loftus Rd								
Direction		Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)				Direction 6 (Right Turn)			Direction 6U (U Turn)		
Time Period		Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total		Lights	Heavies	Total	Lights	Heavies	Total
6:30 to 7:30		75	40	**115**	83	34	**117**	0	1	**1**	46	34	**80**		37	58	**95**	1	1	**2**
6:45 to 7:45		70	39	**109**	90	39	**129**	0	1	**1**	54	33	**87**		42	58	**100**	1	1	**2**
7:00 to 8:00		64	39	**103**	98	41	**139**	0	1	**1**	63	42	**105**		38	64	**102**	0	1	**1**
7:15 to 8:15		66	43	**109**	104	42	**146**	0	1	**1**	71	37	**108**		41	71	**112**	0	0	**0**
7:30 to 8:30		70	47	**117**	114	47	**161**	0	0	**0**	85	43	**128**		33	82	**115**	0	0	**0**
7:45 to 8:45		94	51	**145**	115	47	**162**	0	0	**0**	93	42	**135**		32	83	**115**	0	0	**0**
8:00 to 9:00		114	49	**163**	103	49	**152**	1	0	**1**	86	33	**119**		38	89	**127**	0	0	**0**
AM Totals		**215**	**108**	**323**	**239**	**102**	**341**	**1**	**1**	**2**	**172**	**92**	**264**		**94**	**184**	**278**	**1**	**1**	**2**
15:00 to 16:00		262	47	**309**	105	26	**131**	3	2	**5**	120	34	**154**		149	46	**195**	1	0	**1**
15:15 to 16:15		261	46	**307**	106	27	**133**	2	3	**5**	125	31	**156**		160	40	**200**	1	0	**1**
15:30 to 16:30		256	39	**295**	99	21	**120**	2	1	**3**	122	29	**151**		172	46	**218**	1	0	**1**
15:45 to 16:45		257	35	**292**	98	20	**118**	2	1	**3**	103	23	**126**		175	48	**223**	1	0	**1**
16:00 to 17:00		249	32	**281**	110	22	**132**	1	1	**2**	92	25	**117**		174	45	**219**	1	0	**1**
PM Totals		**511**	**79**	**590**	**215**	**48**	**263**	**4**	**3**	**7**	**212**	**59**	**271**		**323**	**91**	**414**	**2**	**0**	**2**

Approach	Pine Rd									Crossing Pedestrians							
Direction	Direction 7 (Left Turn)			Direction 8 (Through)				Direction 9U (U Turn)										
Time Period	Lights	Heavies	Total	Lights	Heavies	Total		Lights	Heavies	Total		B to A	A to B	D to C	C to D	F to E	E to F	Total
6:30 to 7:30	191	61	**252**	161	39	**200**		2	0	**2**		6	0	0	0	0	0	**6**
6:45 to 7:45	202	64	**266**	161	40	**201**		1	0	**1**		7	0	0	0	0	0	**7**
7:00 to 8:00	219	71	**290**	170	42	**212**		0	0	**0**		3	0	0	0	1	0	**4**
7:15 to 8:15	185	66	**251**	181	46	**227**		0	0	**0**		1	0	0	0	1	0	**2**
7:30 to 8:30	185	66	**251**	189	50	**239**		0	0	**0**		1	0	0	0	1	0	**2**
7:45 to 8:45	162	71	**233**	195	48	**243**		0	0	**0**		0	0	0	0	1	0	**1**
8:00 to 9:00	132	66	**198**	198	53	**251**		0	0	**0**		0	0	0	0	0	0	**0**
AM Totals	**438**	**158**	**596**	**455**	**116**	**571**		**2**	**0**	**2**		**7**	**0**	**0**	**0**	**1**	**0**	**8**
15:00 to 16:00	80	56	**136**	188	51	**239**		1	0	**1**		1	4	1	0	1	2	**9**
15:15 to 16:15	78	54	**132**	164	49	**213**		2	0	**2**		1	3	3	0	4	1	**12**
15:30 to 16:30	78	58	**136**	158	46	**204**		3	1	**4**		1	2	3	0	3	0	**9**
15:45 to 16:45	72	54	**126**	145	37	**182**		3	1	**4**		1	1	3	0	3	0	**8**
16:00 to 17:00	68	54	**122**	145	31	**176**		2	1	**3**		0	1	3	0	3	0	**7**
PM Totals	**148**	**110**	**258**	**333**	**82**	**415**		**3**	**1**	**4**		**1**	**5**	**4**	**0**	**4**	**2**	**16**

Job No.	: AUNSW1103
Client	: Stanbury Traffic Planning
Suburb	: Yennora
Location	: 3. Fairfield Rd / Dursley Rd
Day/Date	: Sat, 12th June 2021
Weather	: Fine
Description	: Classified Intersection Count
	: 15 mins Data

	Class 1	Class 2
Classifications	Lights	Heavies



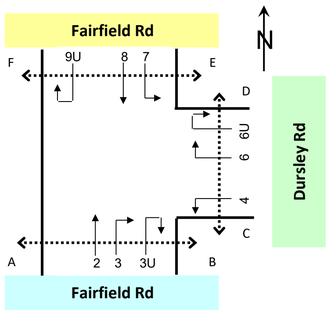
MATRIX Traffic and Transport Data

Approach	Fairfield Rd									Dursley Rd								
Direction		Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)				Direction 6 (Right Turn)			Direction 6U (U Turn)		
Time Period		Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total		Lights	Heavies	Total	Lights	Heavies	Total
11:00 to 11:15		118	3	**121**	7	0	**7**	0	0	**0**	20	1	**21**		18	8	**26**	0	0	**0**
11:15 to 11:30		135	2	**137**	11	0	**11**	0	0	**0**	17	0	**17**		14	2	**16**	0	0	**0**
11:30 to 11:45		135	3	**138**	13	0	**13**	0	0	**0**	13	0	**13**		16	5	**21**	0	0	**0**
11:45 to 12:00		108	3	**111**	9	0	**9**	0	0	**0**	15	0	**15**		16	7	**23**	0	0	**0**
12:00 to 12:15		136	2	**138**	15	2	**17**	0	0	**0**	18	2	**20**		17	7	**24**	0	0	**0**
12:15 to 12:30		126	1	**127**	10	0	**10**	0	0	**0**	13	1	**14**		23	7	**30**	0	0	**0**
12:30 to 12:45		114	0	**114**	16	0	**16**	0	0	**0**	16	1	**17**		20	2	**22**	0	0	**0**
12:45 to 13:00		144	2	**146**	15	0	**15**	0	0	**0**	20	0	**20**		15	5	**20**	0	0	**0**
Total		**1,016**	**16**	**1,032**	**96**	**2**	**98**	**0**	**0**	**0**	**132**	**5**	**137**		**139**	**43**	**182**	**0**	**0**	**0**

Approach	Fairfield Rd									Crossing Pedestrians						
Direction	Direction 7 (Left Turn)			Direction 8 (Through)				Direction 9U (U Turn)								
Time Period	Lights	Heavies	Total	Lights	Heavies	Total		Lights	Heavies	Total	B to A	A to B	D to C	C to D	F to E	E to F	Total
11:00 to 11:15	23	1	**24**	146	5	**151**		0	0	**0**	0	0	0	0	0	0	**0**
11:15 to 11:30	22	9	**31**	111	5	**116**		0	0	**0**	0	0	0	0	0	0	**0**
11:30 to 11:45	10	2	**12**	148	3	**151**		0	0	**0**	0	0	0	0	0	0	**0**
11:45 to 12:00	13	6	**19**	147	2	**149**		0	0	**0**	0	0	1	0	0	0	**1**
12:00 to 12:15	18	4	**22**	139	2	**141**		0	0	**0**	0	0	0	0	0	0	**0**
12:15 to 12:30	21	2	**23**	148	2	**150**		0	0	**0**	0	0	0	0	0	0	**0**
12:30 to 12:45	18	7	**25**	136	3	**139**		0	0	**0**	0	0	0	0	0	0	**0**
12:45 to 13:00	28	1	**29**	158	0	**158**		0	0	**0**	0	0	0	1	0	0	**1**
Total	**153**	**32**	**185**	**1,133**	**22**	**1,155**		**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**2**

Job No. : AUNSW1103
Client : Stanbury Traffic Planning
Suburb : Yennora
Location : 3. Fairfield Rd / Dursley Rd

Day/Date : Sat, 12th June 2021
Weather : Fine
Description : Classified Intersection Count
: Hourly Summary



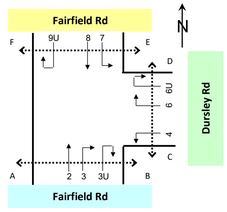
MATRIX Traffic and Transport Data

Approach	Fairfield Rd									Dursley Rd								
Direction		Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)				Direction 6 (Right Turn)			Direction 6U (U Turn)		
Time Period		Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total		Lights	Heavies	Total	Lights	Heavies	Total
11:00 to 12:00		496	11	**507**	40	0	**40**	0	0	**0**	65	1	**66**		64	22	**86**	0	0	**0**
11:15 to 12:15		514	10	**524**	48	2	**50**	0	0	**0**	63	2	**65**		63	21	**84**	0	0	**0**
11:30 to 12:30		505	9	**514**	47	2	**49**	0	0	**0**	59	3	**62**		72	26	**98**	0	0	**0**
11:45 to 12:45		484	6	**490**	50	2	**52**	0	0	**0**	62	4	**66**		76	23	**99**	0	0	**0**
12:00 to 13:00		520	5	**525**	56	2	**58**	0	0	**0**	67	4	**71**		75	21	**96**	0	0	**0**
Total		**1,016**	**16**	**1,032**	**96**	**2**	**98**	**0**	**0**	**0**	**132**	**5**	**137**		**139**	**43**	**182**	**0**	**0**	**0**

Approach	Fairfield Rd										Crossing Pedestrians							
Direction	Direction 7 (Left Turn)			Direction 8 (Through)				Direction 9U (U Turn)										
Time Period	Lights	Heavies	Total	Lights	Heavies	Total		Lights	Heavies	Total		B to A	A to B	D to C	C to D	F to E	E to F		Total
11:00 to 12:00	68	18	**86**	552	15	**567**		0	0	**0**		0	0	1	0	0	0		**1**
11:15 to 12:15	63	21	**84**	545	12	**557**		0	0	**0**		0	0	1	0	0	0		**1**
11:30 to 12:30	62	14	**76**	582	9	**591**		0	0	**0**		0	0	1	0	0	0		**1**
11:45 to 12:45	70	19	**89**	570	9	**579**		0	0	**0**		0	0	1	0	0	0		**1**
12:00 to 13:00	85	14	**99**	581	7	**588**		0	0	**0**		0	0	0	1	0	0		**1**
Total	**153**	**32**	**185**	**1,133**	**22**	**1,155**		**0**	**0**	**0**		**0**	**0**	**1**	**1**	**0**	**0**		**2**

Job No.	: AUNSW1103
Client	: Stanbury Traffic Planning
Suburb	: Yennora
Location	: 3. Fairfield Rd / Dursley Rd
Day/Date	: Tues, 22nd Jun 2021
Weather	: Fine
Description	: Classified Intersection Count
	: 15 mins Data

	Class 1	**Class 2**
Classifications	Lights	Heavies

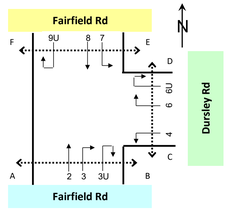


Approach	**Fairfield Rd**										**Dursley Rd**										
Direction		**Direction 2 (Through)**			**Direction 3 (Right Turn)**			**Direction 3U (U Turn)**			**Direction 4 (Left Turn)**				**Direction 6 (Right Turn)**			**Direction 6U (U Turn)**			
Time Period		**Lights**	**Heavies**	**Total**	**Lights**	**Heavies**	**Total**	**Lights**	**Heavies**	**Total**	**Lights**	**Heavies**	**Total**		**Lights**	**Heavies**	**Total**	**Lights**	**Heavies**	**Total**	
6:30 to 6:45		174	9	**183**	54	5	**59**	0	0	**0**	6	1	**7**		17	24	**41**	0	0	**0**	
6:45 to 7:00		214	9	**223**	54	4	**58**	0	0	**0**	7	2	**9**		18	25	**43**	0	0	**0**	
7:00 to 7:15		161	11	**172**	48	5	**53**	0	0	**0**	12	6	**18**		18	12	**30**	0	0	**0**	
7:15 to 7:30		148	6	**154**	59	3	**62**	0	0	**0**	14	3	**17**		16	26	**42**	0	0	**0**	
7:30 to 7:45		157	10	**167**	68	0	**68**	0	0	**0**	17	3	**20**		11	27	**38**	0	0	**0**	
7:45 to 8:00		194	4	**198**	68	3	**71**	0	0	**0**	15	3	**18**		14	35	**49**	0	0	**0**	
8:00 to 8:15		176	9	**185**	43	5	**48**	0	0	**0**	6	5	**11**		14	31	**45**	0	0	**0**	
8:15 to 8:30		157	2	**159**	40	5	**45**	0	0	**0**	22	4	**26**		23	39	**62**	0	0	**0**	
8:30 to 8:45		149	5	**154**	47	1	**48**	0	0	**0**	21	4	**25**		24	28	**52**	0	0	**0**	
8:45 to 9:00		137	11	**148**	34	0	**34**	0	0	**0**	8	3	**11**		18	31	**49**	0	0	**0**	
AM Totals		**1,667**	**76**	**1,743**	**515**	**31**	**546**	**0**	**0**	**0**	**128**	**34**	**162**		**173**	**278**	**451**	**0**	**0**	**0**	
15:00 to 15:15		144	5	**149**	34	2	**36**	0	0	**0**	60	3	**63**		63	21	**84**	0	0	**0**	
15:15 to 15:30		168	2	**170**	28	3	**31**	0	0	**0**	36	3	**39**		63	24	**87**	0	0	**0**	
15:30 to 15:45		173	2	**175**	29	1	**30**	0	0	**0**	47	2	**49**		68	20	**88**	0	0	**0**	
15:45 to 16:00		155	8	**163**	22	3	**25**	0	0	**0**	50	6	**56**		62	23	**85**	0	0	**0**	
16:00 to 16:15		183	6	**189**	17	1	**18**	0	0	**0**	76	2	**78**		60	31	**91**	0	0	**0**	
16:15 to 16:30		168	12	**180**	24	0	**24**	0	0	**0**	42	4	**46**		81	20	**101**	0	0	**0**	
16:30 to 16:45		157	3	**160**	17	0	**17**	0	0	**0**	55	1	**56**		62	19	**81**	0	0	**0**	
16:45 to 17:00		172	9	**181**	14	0	**14**	0	0	**0**	48	1	**49**		44	18	**62**	0	0	**0**	
PM Totals		**1,320**	**47**	**1,367**	**185**	**10**	**195**	**0**	**0**	**0**	**414**	**22**	**436**		**503**	**176**	**679**	**0**	**0**	**0**	

Approach	**Fairfield Rd**										**Crossing Pedestrians**						
Direction	**Direction 7 (Left Turn)**			**Direction 8 (Through)**				**Direction 9U (U Turn)**									
Time Period	**Lights**	**Heavies**	**Total**	**Lights**	**Heavies**	**Total**		**Lights**	**Heavies**	**Total**	**B to A**	**A to B**	**D to C**	**C to D**	**F to E**	**E to F**	**Total**
6:30 to 6:45	46	17	**63**	97	12	**109**		0	0	**0**	3	4	0	1	1	0	**9**
6:45 to 7:00	49	21	**70**	113	6	**119**		0	0	**0**	17	1	0	0	0	0	**18**
7:00 to 7:15	56	24	**80**	87	11	**98**		0	0	**0**	2	1	0	0	0	0	**3**
7:15 to 7:30	37	33	**70**	130	7	**137**		0	0	**0**	1	0	0	0	0	0	**1**
7:30 to 7:45	47	19	**66**	157	4	**161**		0	0	**0**	1	0	0	0	0	0	**1**
7:45 to 8:00	71	34	**105**	142	6	**148**		0	0	**0**	3	0	0	0	0	1	**4**
8:00 to 8:15	57	22	**79**	160	6	**166**		0	0	**0**	1	0	1	0	0	0	**2**
8:15 to 8:30	61	35	**96**	165	6	**171**		0	0	**0**	0	1	0	1	0	0	**2**
8:30 to 8:45	55	24	**79**	153	5	**158**		0	0	**0**	1	0	0	1	0	0	**2**
8:45 to 9:00	62	35	**97**	145	4	**149**		0	0	**0**	0	0	1	0	1	0	**2**
AM Totals	**541**	**264**	**805**	**1,349**	**67**	**1,416**		**0**	**0**	**0**	**29**	**7**	**2**	**3**	**2**	**1**	**44**
15:00 to 15:15	61	31	**92**	182	7	**189**		0	0	**0**	5	28	0	2	0	2	**37**
15:15 to 15:30	50	28	**78**	158	7	**165**		0	0	**0**	2	0	0	0	0	1	**3**
15:30 to 15:45	52	28	**80**	191	5	**196**		0	0	**0**	4	1	0	0	1	0	**6**
15:45 to 16:00	39	19	**58**	143	7	**150**		0	0	**0**	4	0	0	0	0	2	**6**
16:00 to 16:15	26	30	**56**	188	5	**193**		0	0	**0**	0	7	0	0	0	0	**7**
16:15 to 16:30	29	32	**61**	188	6	**194**		0	0	**0**	0	0	0	0	0	1	**1**
16:30 to 16:45	36	15	**51**	199	5	**204**		0	0	**0**	0	1	0	1	0	1	**3**
16:45 to 17:00	33	20	**53**	177	3	**180**		0	0	**0**	0	0	0	0	0	1	**1**
PM Totals	**326**	**203**	**529**	**1,426**	**45**	**1,471**		**0**	**0**	**0**	**15**	**37**	**0**	**3**	**1**	**8**	**64**

Job No. : AUNSW1103
Client : Stanbury Traffic Planning
Suburb : Yennora
Location : 3. Fairfield Rd / Dursley Rd

Day/Date : Tues, 22nd Jun 2021
Weather : Fine
Description : Classified Intersection Count
: Hourly Summary



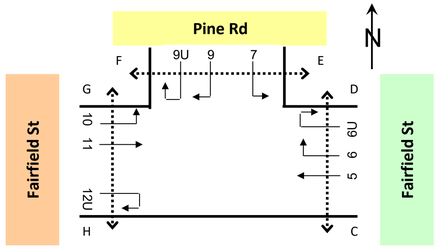
MATRIX Traffic and Transport Data

Approach	Fairfield Rd										Dursley Rd									
Direction		Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)				Direction 6 (Right Turn)			Direction 6U (U Turn)		
Time Period		Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total		Lights	Heavies	Total	Lights	Heavies	Total
6:30 to 7:30		697	35	**732**	215	17	**232**	0	0	**0**	39	12	**51**		69	87	**156**	0	0	**0**
6:45 to 7:45		680	36	**716**	229	12	**241**	0	0	**0**	50	14	**64**		63	90	**153**	0	0	**0**
7:00 to 8:00		660	31	**691**	243	11	**254**	0	0	**0**	58	15	**73**		59	100	**159**	0	0	**0**
7:15 to 8:15		675	29	**704**	238	11	**249**	0	0	**0**	52	14	**66**		55	119	**174**	0	0	**0**
7:30 to 8:30		684	25	**709**	219	13	**232**	0	0	**0**	60	15	**75**		62	132	**194**	0	0	**0**
7:45 to 8:45		676	20	**696**	198	14	**212**	0	0	**0**	64	16	**80**		75	133	**208**	0	0	**0**
8:00 to 9:00		619	27	**646**	164	11	**175**	0	0	**0**	57	16	**73**		79	129	**208**	0	0	**0**
AM Totals		**1,667**	**76**	**1,743**	**515**	**31**	**546**	**0**	**0**	**0**	**128**	**34**	**162**		**173**	**278**	**451**	**0**	**0**	**0**
15:00 to 16:00		640	17	**657**	113	9	**122**	0	0	**0**	193	14	**207**		256	88	**344**	0	0	**0**
15:15 to 16:15		679	18	**697**	96	8	**104**	0	0	**0**	209	13	**222**		253	98	**351**	0	0	**0**
15:30 to 16:30		679	28	**707**	92	5	**97**	0	0	**0**	215	14	**229**		271	94	**365**	0	0	**0**
15:45 to 16:45		663	29	**692**	80	4	**84**	0	0	**0**	223	13	**236**		265	93	**358**	0	0	**0**
16:00 to 17:00		680	30	**710**	72	1	**73**	0	0	**0**	221	8	**229**		247	88	**335**	0	0	**0**
PM Totals		**1,320**	**47**	**1,367**	**185**	**10**	**195**	**0**	**0**	**0**	**414**	**22**	**436**		**503**	**176**	**679**	**0**	**0**	**0**

Approach	Fairfield Rd										Crossing Pedestrians							
Direction	Direction 7 (Left Turn)			Direction 8 (Through)				Direction 9U (U Turn)										
Time Period	Lights	Heavies	Total	Lights	Heavies	Total		Lights	Heavies	Total		B to A	A to B	D to C	C to D	F to E	E to F	Total
6:30 to 7:30	188	95	**283**	427	36	**463**		0	0	**0**		23	6	0	1	1	0	**31**
6:45 to 7:45	189	97	**286**	487	28	**515**		0	0	**0**		21	2	0	0	0	0	**23**
7:00 to 8:00	211	110	**321**	516	28	**544**		0	0	**0**		7	1	0	0	0	1	**9**
7:15 to 8:15	212	108	**320**	589	23	**612**		0	0	**0**		6	0	1	0	0	1	**8**
7:30 to 8:30	236	110	**346**	624	22	**646**		0	0	**0**		5	1	1	1	0	1	**9**
7:45 to 8:45	244	115	**359**	620	23	**643**		0	0	**0**		5	1	1	2	0	1	**10**
8:00 to 9:00	235	116	**351**	623	21	**644**		0	0	**0**		2	1	2	2	1	0	**8**
AM Totals	**541**	**264**	**805**	**1,349**	**67**	**1,416**		**0**	**0**	**0**		**29**	**7**	**2**	**3**	**2**	**1**	**44**
15:00 to 16:00	202	106	**308**	674	26	**700**		0	0	**0**		15	29	0	2	1	5	**52**
15:15 to 16:15	167	105	**272**	680	24	**704**		0	0	**0**		10	8	0	0	1	3	**22**
15:30 to 16:30	146	109	**255**	710	23	**733**		0	0	**0**		8	8	0	0	1	3	**20**
15:45 to 16:45	130	96	**226**	718	23	**741**		0	0	**0**		4	8	0	1	0	4	**17**
16:00 to 17:00	124	97	**221**	752	19	**771**		0	0	**0**		0	8	0	1	0	3	**12**
PM Totals	**326**	**203**	**529**	**1,426**	**45**	**1,471**		**0**	**0**	**0**		**15**	**37**	**0**	**3**	**1**	**8**	**64**

Job No.	: AUNSW1103
Client	: Stanbury Traffic Planning
Suburb	: Yennora
Location	: 4. Fairfield St / Pine Rd
Day/Date	: Sat, 12th June 2021
Weather	: Fine
Description	: Classified Intersection Count
	: 15 mins Data

	Class 1	Class 2
Classifications	Lights	Heavies



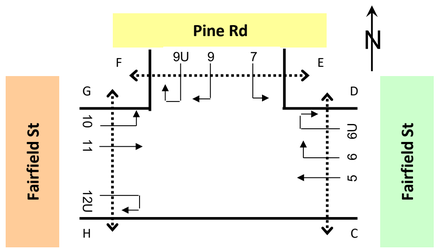
MATRIX Traffic and Transport Data

Approach		Fairfield St									
Direction		Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)		
Time Period		Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
11:00	11:15	150	5	**155**	26	6	**32**	0	0	**0**
11:15	11:30	147	6	**153**	21	5	**26**	0	0	**0**
11:30	11:45	150	2	**152**	23	2	**25**	0	0	**0**
11:45	12:00	170	5	**175**	17	5	**22**	0	0	**0**
12:00	12:15	163	5	**168**	22	4	**26**	0	0	**0**
12:15	12:30	182	4	**186**	27	7	**34**	0	0	**0**
12:30	12:45	154	5	**159**	12	4	**16**	0	0	**0**
12:45	13:00	170	3	**173**	21	2	**23**	0	0	**0**
Total		**1,286**	**35**	**1,321**	**169**	**35**	**204**	**0**	**0**	**0**

Approach		Pine Rd									Fairfield St									Crossing Pedestrians						
Direction		Direction 7 (Left Turn)				Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)				Direction 12U (U Turn)								
Time Period		Lights	Heavies	Total		Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total		Lights	Heavies	Total		D to C	C to D	F to E	E to F	H to G	G to H	Total
11:00	11:15	35	1	**36**		0	0	**0**	0	0	**0**	17	4	**21**	141	4	**145**		0	0	**0**		0	0	3	1	0	0	**4**
11:15	11:30	37	6	**43**		0	0	**0**	0	0	**0**	12	1	**13**	151	3	**154**		0	0	**0**		0	0	0	0	0	0	**0**
11:30	11:45	28	5	**33**		0	0	**0**	0	0	**0**	12	0	**12**	164	3	**167**		0	0	**0**		0	0	1	2	0	0	**3**
11:45	12:00	23	2	**25**		0	0	**0**	0	0	**0**	15	0	**15**	142	3	**145**		0	0	**0**		0	0	0	0	0	0	**0**
12:00	12:15	27	5	**32**		0	0	**0**	0	0	**0**	12	2	**14**	170	2	**172**		0	0	**0**		0	0	2	1	0	0	**3**
12:15	12:30	34	1	**35**		0	0	**0**	0	0	**0**	14	3	**17**	159	8	**167**		0	0	**0**		0	0	0	3	0	0	**3**
12:30	12:45	28	5	**33**		0	0	**0**	0	0	**0**	10	0	**10**	132	7	**139**		0	0	**0**		0	0	0	2	0	0	**2**
12:45	13:00	43	4	**47**		0	0	**0**	0	0	**0**	21	1	**22**	143	4	**147**		0	0	**0**		0	1	2	0	0	0	**3**
Total		**255**	**29**	**284**		**0**	**0**	**0**	**0**	**0**	**0**	**113**	**11**	**124**	**1,202**	**34**	**1,236**		**0**	**0**	**0**		**0**	**1**	**8**	**9**	**0**	**0**	**18**

Job No. : AUNSW1103
Client : Stanbury Traffic Planning
Suburb : Yennora
Location : 4. Fairfield St / Pine Rd

Day/Date : Sat, 12th June 2021
Weather : Fine
Description : Classified Intersection Count
: Hourly Summary



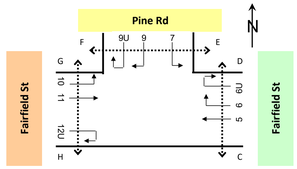
MATRIX Traffic and Transport Data

Approach		Fairfield St								
Direction		Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)		
Time Period		Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
11:00 to 12:00		617	18	**635**	87	18	**105**	0	0	**0**
11:15 to 12:15		630	18	**648**	83	16	**99**	0	0	**0**
11:30 to 12:30		665	16	**681**	89	18	**107**	0	0	**0**
11:45 to 12:45		669	19	**688**	78	20	**98**	0	0	**0**
12:00 to 13:00		669	17	**686**	82	17	**99**	0	0	**0**
Total		**1,286**	**35**	**1,321**	**169**	**35**	**204**	**0**	**0**	**0**

Approach	Pine Rd									Fairfield St									Crossing Pedestrians						
Direction	Direction 7 (Left Turn)				Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)				Direction 12U (U Turn)							
Time Period	Lights	Heavies	Total		Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total		Lights	Heavies	Total		D to C	C to D	F to E	E to F	H to G	G to H	Total
11:00 to 12:00	123	14	**137**		0	0	**0**	0	0	**0**	56	5	**61**	598	13	**611**		0	0	**0**		0	0	4	3	0	0	**7**
11:15 to 12:15	115	18	**133**		0	0	**0**	0	0	**0**	51	3	**54**	627	11	**638**		0	0	**0**		0	0	3	3	0	0	**6**
11:30 to 12:30	112	13	**125**		0	0	**0**	0	0	**0**	53	5	**58**	635	16	**651**		0	0	**0**		0	0	3	6	0	0	**9**
11:45 to 12:45	112	13	**125**		0	0	**0**	0	0	**0**	51	5	**56**	603	20	**623**		0	0	**0**		0	0	2	6	0	0	**8**
12:00 to 13:00	132	15	**147**		0	0	**0**	0	0	**0**	57	6	**63**	604	21	**625**		0	0	**0**		0	1	4	6	0	0	**11**
Total	**255**	**29**	**284**		**0**	**0**	**0**	**0**	**0**	**0**	**113**	**11**	**124**	**1,202**	**34**	**1,236**		**0**	**0**	**0**		**0**	**1**	**8**	**9**	**0**	**0**	**18**

Job No.	: AUNSW1103
Client	: Stanbury Traffic Planning
Suburb	: Yennora
Location	: 4. Fairfield St / Pine Rd
Day/Date	: Wed, 16th Jun 2021
Weather	: Fine
Description	: Classified Intersection Count
	: 15 mins Data

Classifications	**Class 1**	**Class 2**
	Lights	Heavies



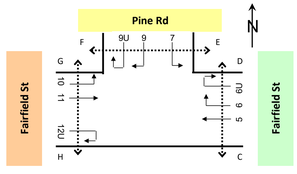
MATRIX Traffic and Transport Data

Approach	**Fairfield St**											
Direction	**Direction 5 (Through)**			**Direction 6 (Right Turn)**			**Direction 6U (U Turn)**		
Time Period	**Lights**	**Heavies**	**Total**	**Lights**	**Heavies**	**Total**	**Lights**	**Heavies**	**Total**
6:30 to 6:45	72	8	**80**	14	7	**21**	0	0	**0**
6:45 to 7:00	75	8	**83**	32	8	**40**	0	0	**0**
7:00 to 7:15	68	7	**75**	17	6	**23**	0	0	**0**
7:15 to 7:30	80	6	**86**	20	7	**27**	0	0	**0**
7:30 to 7:45	109	6	**115**	26	12	**38**	0	0	**0**
7:45 to 8:00	113	6	**119**	17	10	**27**	0	0	**0**
8:00 to 8:15	105	3	**108**	20	17	**37**	0	0	**0**
8:15 to 8:30	123	13	**136**	37	11	**48**	0	0	**0**
8:30 to 8:45	141	8	**149**	29	10	**39**	0	0	**0**
8:45 to 9:00	126	9	**135**	34	10	**44**	0	0	**0**
AM Totals	**1,012**	**74**	**1,086**	**246**	**98**	**344**	**0**	**0**	**0**
15:00 to 15:15	196	6	**202**	52	15	**67**	0	0	**0**
15:15 to 15:30	185	10	**195**	41	12	**53**	0	0	**0**
15:30 to 15:45	231	8	**239**	34	6	**40**	0	0	**0**
15:45 to 16:00	217	8	**225**	63	12	**75**	0	0	**0**
16:00 to 16:15	253	4	**257**	60	7	**67**	0	0	**0**
16:15 to 16:30	229	6	**235**	33	6	**39**	0	0	**0**
16:30 to 16:45	259	5	**264**	43	8	**51**	0	0	**0**
16:45 to 17:00	263	7	**270**	42	7	**49**	0	0	**0**
PM Totals	**1,833**	**54**	**1,887**	**368**	**73**	**441**	**0**	**0**	**0**

Approach	**Pine Rd**									**Fairfield St**									**Crossing Pedestrians**						
Direction	**Direction 7 (Left Turn)**			**Direction 9 (Right Turn)**			**Direction 9U (U Turn)**			**Direction 10 (Left Turn)**			**Direction 11 (Through)**			**Direction 12U (U Turn)**									
Time Period	**Lights**	**Heavies**	**Total**	**Lights**	**Heavies**	**Total**	**Lights**	**Heavies**	**Total**	**Lights**	**Heavies**	**Total**	**Lights**	**Heavies**	**Total**	**Lights**	**Heavies**	**Total**	**D to C**	**C to D**	**F to E**	**E to F**	**H to G**	**G to H**	**Total**
6:30 to 6:45	31	22	**53**	0	0	**0**	0	0	**0**	19	7	**26**	130	5	**135**	0	0	**0**	0	0	0	0	0	0	**0**
6:45 to 7:00	21	19	**40**	0	0	**0**	0	0	**0**	36	6	**42**	167	6	**173**	0	0	**0**	0	0	0	0	0	0	**0**
7:00 to 7:15	31	19	**50**	0	0	**0**	0	0	**0**	20	9	**29**	163	9	**172**	0	0	**0**	0	0	0	0	0	0	**0**
7:15 to 7:30	30	12	**42**	0	0	**0**	0	0	**0**	25	10	**35**	183	11	**194**	0	0	**0**	0	0	0	0	0	0	**0**
7:30 to 7:45	31	19	**50**	0	0	**0**	0	0	**0**	19	4	**23**	184	10	**194**	0	0	**0**	0	0	2	1	0	0	**3**
7:45 to 8:00	39	30	**69**	0	0	**0**	0	0	**0**	33	9	**42**	204	8	**212**	0	0	**0**	0	0	0	1	0	0	**1**
8:00 to 8:15	46	18	**64**	0	0	**0**	0	0	**0**	25	8	**33**	194	10	**204**	0	0	**0**	0	0	0	1	0	0	**1**
8:15 to 8:30	52	20	**72**	0	0	**0**	0	0	**0**	33	11	**44**	168	10	**178**	0	0	**0**	0	0	2	0	0	0	**2**
8:30 to 8:45	54	22	**76**	0	0	**0**	0	0	**0**	29	7	**36**	173	8	**181**	0	0	**0**	0	0	0	1	0	0	**1**
8:45 to 9:00	60	26	**86**	0	0	**0**	0	0	**0**	31	8	**39**	151	3	**154**	0	0	**0**	0	0	1	2	0	0	**3**
AM Totals	**395**	**207**	**602**	**0**	**0**	**0**	**0**	**0**	**0**	**270**	**79**	**349**	**1,717**	**80**	**1,797**	**0**	**0**	**0**	**0**	**0**	**5**	**6**	**0**	**0**	**11**
15:00 to 15:15	96	23	**119**	0	0	**0**	0	0	**0**	37	3	**40**	127	6	**133**	0	0	**0**	0	0	0	1	0	0	**1**
15:15 to 15:30	77	24	**101**	0	0	**0**	0	0	**0**	34	7	**41**	170	7	**177**	0	0	**0**	0	0	2	0	0	0	**2**
15:30 to 15:45	93	22	**115**	0	0	**0**	0	0	**0**	30	7	**37**	154	11	**165**	0	0	**0**	0	0	2	0	0	0	**2**
15:45 to 16:00	82	13	**95**	0	0	**0**	0	0	**0**	18	2	**20**	121	5	**126**	0	0	**0**	0	0	0	0	0	0	**0**
16:00 to 16:15	77	11	**88**	0	0	**0**	0	0	**0**	21	6	**27**	139	8	**147**	0	0	**0**	0	0	0	0	0	0	**0**
16:15 to 16:30	73	18	**91**	0	0	**0**	0	0	**0**	15	3	**18**	158	13	**171**	0	0	**0**	0	0	0	0	0	0	**0**
16:30 to 16:45	76	12	**88**	0	0	**0**	0	0	**0**	24	6	**30**	152	8	**160**	0	0	**0**	0	0	0	0	0	0	**0**
16:45 to 17:00	58	10	**68**	0	0	**0**	0	0	**0**	16	6	**22**	165	4	**169**	0	0	**0**	0	0	0	1	0	0	**1**
PM Totals	**632**	**133**	**765**	**0**	**0**	**0**	**0**	**0**	**0**	**195**	**40**	**235**	**1,186**	**62**	**1,248**	**0**	**0**	**0**	**0**	**0**	**4**	**2**	**0**	**0**	**6**

Job No. : AUNSW1103
Client : Stanbury Traffic Planning
Suburb : Yennora
Location : 4. Fairfield St / Pine Rd

Day/Date : Wed, 16th Jun 2021
Weather : Fine
Description : Classified Intersection Count
: Hourly Summary



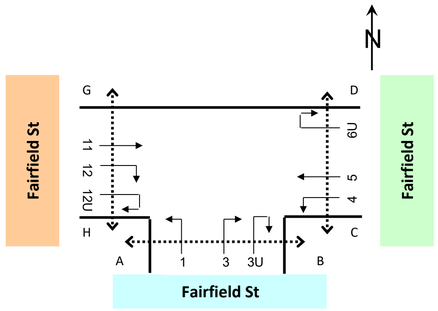
MATRIX Traffic and Transport Data

Approach		Fairfield St								
Direction		Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)		
Time Period		Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
6:30 to 7:30		295	29	**324**	83	28	**111**	0	0	**0**
6:45 to 7:45		332	27	**359**	95	33	**128**	0	0	**0**
7:00 to 8:00		370	25	**395**	80	35	**115**	0	0	**0**
7:15 to 8:15		407	21	**428**	83	46	**129**	0	0	**0**
7:30 to 8:30		450	28	**478**	100	50	**150**	0	0	**0**
7:45 to 8:45		482	30	**512**	103	48	**151**	0	0	**0**
8:00 to 9:00		495	33	**528**	120	48	**168**	0	0	**0**
AM Totals		**1,012**	**74**	**1,086**	**246**	**98**	**344**	**0**	**0**	**0**
15:00 to 16:00		829	32	**861**	190	45	**235**	0	0	**0**
15:15 to 16:15		886	30	**916**	198	37	**235**	0	0	**0**
15:30 to 16:30		930	26	**956**	190	31	**221**	0	0	**0**
15:45 to 16:45		958	23	**981**	199	33	**232**	0	0	**0**
16:00 to 17:00		1,004	22	**1,026**	178	28	**206**	0	0	**0**
PM Totals		**1,833**	**54**	**1,887**	**368**	**73**	**441**	**0**	**0**	**0**

Approach	Pine Rd									Fairfield St									Crossing Pedestrians							
Direction	Direction 7 (Left Turn)				Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)				Direction 12U (U Turn)								
Time Period	Lights	Heavies	Total		Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total		Lights	Heavies	Total		D to C	C to D	F to E	E to F	H to G	G to H	Total
6:30 to 7:30	113	72	**185**		0	0	**0**	0	0	**0**	100	32	**132**	643	31	**674**		0	0	**0**		0	0	0	0	0	0	**0**
6:45 to 7:45	113	69	**182**		0	0	**0**	0	0	**0**	100	29	**129**	697	36	**733**		0	0	**0**		0	0	2	1	0	0	**3**
7:00 to 8:00	131	80	**211**		0	0	**0**	0	0	**0**	97	32	**129**	734	38	**772**		0	0	**0**		0	0	2	2	0	0	**4**
7:15 to 8:15	146	79	**225**		0	0	**0**	0	0	**0**	102	31	**133**	765	39	**804**		0	0	**0**		0	0	2	3	0	0	**5**
7:30 to 8:30	168	87	**255**		0	0	**0**	0	0	**0**	110	32	**142**	750	38	**788**		0	0	**0**		0	0	4	3	0	0	**7**
7:45 to 8:45	191	90	**281**		0	0	**0**	0	0	**0**	120	35	**155**	739	36	**775**		0	0	**0**		0	0	2	3	0	0	**5**
8:00 to 9:00	212	86	**298**		0	0	**0**	0	0	**0**	118	34	**152**	686	31	**717**		0	0	**0**		0	0	3	4	0	0	**7**
AM Totals	**395**	**207**	**602**		**0**	**0**	**0**	**0**	**0**	**0**	**270**	**79**	**349**	**1,717**	**80**	**1,797**		**0**	**0**	**0**		**0**	**0**	**5**	**6**	**0**	**0**	**11**
15:00 to 16:00	348	82	**430**		0	0	**0**	0	0	**0**	119	19	**138**	572	29	**601**		0	0	**0**		0	0	4	1	0	0	**5**
15:15 to 16:15	329	70	**399**		0	0	**0**	0	0	**0**	103	22	**125**	584	31	**615**		0	0	**0**		0	0	4	0	0	0	**4**
15:30 to 16:30	325	64	**389**		0	0	**0**	0	0	**0**	84	18	**102**	572	37	**609**		0	0	**0**		0	0	2	0	0	0	**2**
15:45 to 16:45	308	54	**362**		0	0	**0**	0	0	**0**	78	17	**95**	570	34	**604**		0	0	**0**		0	0	0	0	0	0	**0**
16:00 to 17:00	284	51	**335**		0	0	**0**	0	0	**0**	76	21	**97**	614	33	**647**		0	0	**0**		0	0	0	1	0	0	**1**
PM Totals	**632**	**133**	**765**		**0**	**0**	**0**	**0**	**0**	**0**	**195**	**40**	**235**	**1,186**	**62**	**1,248**		**0**	**0**	**0**		**0**	**0**	**4**	**2**	**0**	**0**	**6**

Job No.	: AUNSW1103
Client	: Stanbury Traffic Planning
Suburb	: Yennora
Location	: 5. Fairfield St / Fairfield St
Day/Date	: Sat, 12th June 2021
Weather	: Fine
Description	: Classified Intersection Count
	: 15 mins Data

	Class 1	Class 2
Classifications	Lights	Heavies

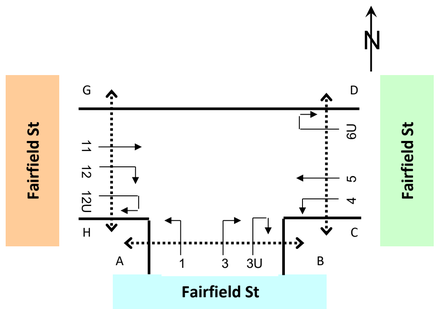


Approach	Fairfield St									Fairfield St								
Direction	Direction 1 (Left Turn)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6U (U Turn)		
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
11:00 to 11:15	18	0	**18**	75	2	**77**	0	0	**0**	8	2	**10**	148	4	**152**	1	0	**1**
11:15 to 11:30	10	1	**11**	91	3	**94**	0	0	**0**	9	0	**9**	152	6	**158**	0	0	**0**
11:30 to 11:45	23	1	**24**	100	3	**103**	0	0	**0**	9	0	**9**	146	1	**147**	0	0	**0**
11:45 to 12:00	42	0	**42**	72	3	**75**	0	0	**0**	14	0	**14**	168	6	**174**	1	0	**1**
12:00 to 12:15	28	1	**29**	84	1	**85**	0	0	**0**	6	2	**8**	153	3	**156**	0	0	**0**
12:15 to 12:30	25	1	**26**	93	4	**97**	0	0	**0**	10	0	**10**	182	4	**186**	1	0	**1**
12:30 to 12:45	27	2	**29**	75	5	**80**	0	0	**0**	5	1	**6**	159	4	**163**	0	0	**0**
12:45 to 13:00	27	0	**27**	76	2	**78**	0	0	**0**	12	0	**12**	162	3	**165**	0	0	**0**
Total	**200**	**6**	**206**	**666**	**23**	**689**	**0**	**0**	**0**	**73**	**5**	**78**	**1,270**	**31**	**1,301**	**3**	**0**	**3**

Approach				Fairfield St									Crossing Pedestrians						
Direction				Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)									
Time Period				Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	B to A	A to B	D to C	C to D	H to G	G to H	Total
11:00	to	11:15		84	6	**90**	2	0	**2**	0	0	**0**	0	1	0	0	0	1	**2**
11:15	to	11:30		69	1	**70**	4	0	**4**	0	0	**0**	1	0	0	0	1	0	**2**
11:30	to	11:45		75	0	**75**	6	0	**6**	0	0	**0**	0	0	0	0	0	0	**0**
11:45	to	12:00		90	0	**90**	3	0	**3**	0	0	**0**	2	0	0	0	2	0	**4**
12:00	to	12:15		96	3	**99**	7	1	**8**	0	0	**0**	2	1	0	0	2	0	**5**
12:15	to	12:30		78	7	**85**	6	0	**6**	0	0	**0**	2	1	0	0	2	1	**6**
12:30	to	12:45		66	5	**71**	6	1	**7**	1	0	**1**	0	0	0	0	0	0	**0**
12:45	to	13:00		91	3	**94**	8	0	**8**	0	0	**0**	0	0	0	0	0	0	**0**
Total				**649**	**25**	**674**	**42**	**2**	**44**	**1**	**0**	**1**	**7**	**3**	**0**	**0**	**7**	**2**	**19**

Job No. : AUNSW1103
Client : Stanbury Traffic Planning
Suburb : Yennora
Location : 5. Fairfield St / Fairfield St

Day/Date : Sat, 12th June 2021
Weather : Fine
Description : Classified Intersection Count
: Hourly Summary



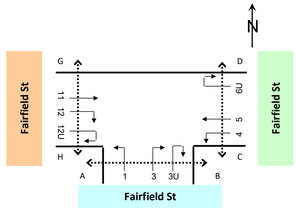
MATRIX Traffic and Transport Data

Approach	Fairfield St									Fairfield St								
Direction	Direction 1 (Left Turn)				Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)				Direction 6U (U Turn)	
Time Period	Lights	Heavies	Total		Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total		Lights	Heavies	Total
11:00 to 12:00	93	2	**95**		338	11	**349**	0	0	**0**	40	2	**42**	614	17	**631**		2	0	**2**
11:15 to 12:15	103	3	**106**		347	10	**357**	0	0	**0**	38	2	**40**	619	16	**635**		1	0	**1**
11:30 to 12:30	118	3	**121**		349	11	**360**	0	0	**0**	39	2	**41**	649	14	**663**		2	0	**2**
11:45 to 12:45	122	4	**126**		324	13	**337**	0	0	**0**	35	3	**38**	662	17	**679**		2	0	**2**
12:00 to 13:00	107	4	**111**		328	12	**340**	0	0	**0**	33	3	**36**	656	14	**670**		1	0	**1**
Total	**200**	**6**	**206**		**666**	**23**	**689**	**0**	**0**	**0**	**73**	**5**	**78**	**1,270**	**31**	**1,301**		**3**	**0**	**3**

Approach		Fairfield St									Crossing Pedestrians						
Direction		Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)									
Time Period		Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	B to A	A to B	D to C	C to D		H to G	G to H	Total
11:00 to 12:00		318	7	**325**	15	0	**15**	0	0	**0**	3	1	0	0		3	1	**8**
11:15 to 12:15		330	4	**334**	20	1	**21**	0	0	**0**	5	1	0	0		5	0	**11**
11:30 to 12:30		339	10	**349**	22	1	**23**	0	0	**0**	6	2	0	0		6	1	**15**
11:45 to 12:45		330	15	**345**	22	2	**24**	1	0	**1**	6	2	0	0		6	1	**15**
12:00 to 13:00		331	18	**349**	27	2	**29**	1	0	**1**	4	2	0	0		4	1	**11**
Total		**649**	**25**	**674**	**42**	**2**	**44**	**1**	**0**	**1**	**7**	**3**	**0**	**0**		**7**	**2**	**19**

Job No.	: AUNSW1103
Client	: Stanbury Traffic Planning
Suburb	: Yennora
Location	: 5. Fairfield St / Fairfield St
Day/Date	: Wed, 16th Jun 2021
Weather	: Fine
Description	: Classified Intersection Count
	: 15 mins Data

Classifications	**Class 1**	**Class 2**
	Lights	Heavies



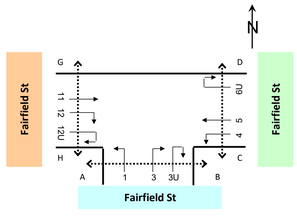
MATRIX Traffic and Transport Data

Approach	**Fairfield St**									**Fairfield St**									
Direction	**Direction 1 (Left Turn)**			**Direction 3 (Right Turn)**			**Direction 3U (U Turn)**			**Direction 4 (Left Turn)**			**Direction 5 (Through)**			**Direction 6U (U Turn)**		
Time Period	**Lights**	**Heavies**	**Total**	**Lights**	**Heavies**	**Total**	**Lights**	**Heavies**	**Total**	**Lights**	**Heavies**	**Total**	**Lights**	**Heavies**	**Total**	**Lights**	**Heavies**	**Total**
6:30 to 6:45	8	2	**10**	56	6	**62**	0	0	**0**	5	0	**5**	70	8	**78**	0	0	**0**
6:45 to 7:00	15	1	**16**	67	5	**72**	0	0	**0**	3	0	**3**	71	8	**79**	0	0	**0**
7:00 to 7:15	19	3	**22**	66	6	**72**	0	0	**0**	5	0	**5**	68	7	**75**	0	0	**0**
7:15 to 7:30	21	1	**22**	73	8	**81**	0	0	**0**	1	0	**1**	76	8	**84**	0	0	**0**
7:30 to 7:45	17	0	**17**	89	8	**97**	0	0	**0**	5	1	**6**	107	5	**112**	0	0	**0**
7:45 to 8:00	28	3	**31**	98	7	**105**	0	0	**0**	2	0	**2**	113	6	**119**	0	0	**0**
8:00 to 8:15	29	1	**30**	91	8	**99**	0	0	**0**	8	0	**8**	105	3	**108**	0	0	**0**
8:15 to 8:30	25	2	**27**	79	9	**88**	0	0	**0**	14	1	**15**	124	12	**136**	0	0	**0**
8:30 to 8:45	54	2	**56**	93	9	**102**	0	0	**0**	11	0	**11**	156	8	**164**	0	0	**0**
8:45 to 9:00	48	1	**49**	86	5	**91**	0	0	**0**	11	1	**12**	132	8	**140**	0	0	**0**
AM Totals	**264**	**16**	**280**	**798**	**71**	**869**	**0**	**0**	**0**	**65**	**3**	**68**	**1,022**	**73**	**1,095**	**0**	**0**	**0**
15:00 to 15:15	46	3	**49**	76	5	**81**	0	0	**0**	23	0	**23**	200	5	**205**	0	0	**0**
15:15 to 15:30	35	2	**37**	89	3	**92**	0	0	**0**	10	2	**12**	194	8	**202**	0	0	**0**
15:30 to 15:45	33	3	**36**	86	7	**93**	0	0	**0**	8	1	**9**	237	8	**245**	0	0	**0**
15:45 to 16:00	41	0	**41**	68	5	**73**	0	0	**0**	11	0	**11**	227	9	**236**	0	0	**0**
16:00 to 16:15	43	2	**45**	81	10	**91**	0	0	**0**	7	0	**7**	236	3	**239**	0	0	**0**
16:15 to 16:30	31	0	**31**	97	10	**107**	0	0	**0**	7	1	**8**	234	6	**240**	0	0	**0**
16:30 to 16:45	25	1	**26**	98	7	**105**	0	0	**0**	8	0	**8**	242	5	**247**	0	0	**0**
16:45 to 17:00	29	1	**30**	96	2	**98**	0	0	**0**	10	2	**12**	264	5	**269**	1	0	**1**
PM Totals	**283**	**12**	**295**	**691**	**49**	**740**	**0**	**0**	**0**	**84**	**6**	**90**	**1,834**	**49**	**1,883**	**1**	**0**	**1**

Approach		**Fairfield St**								**Crossing Pedestrians**						
Direction		**Direction 11 (Through)**			**Direction 12 (Right Turn)**			**Direction 12U (U Turn)**								
Time Period		**Lights**	**Heavies**	**Total**	**Lights**	**Heavies**	**Total**	**Lights**	**Heavies**	**Total**	**B to A**	**A to B**	**D to C**	**C to D**	**H to G**	**G to H**	**Total**
6:30 to 6:45		96	7	**103**	1	0	**1**	0	0	**0**	1	0	0	0	0	0	**1**
6:45 to 7:00		132	6	**138**	1	0	**1**	0	0	**0**	0	0	0	0	0	0	**0**
7:00 to 7:15		121	10	**131**	2	1	**3**	0	0	**0**	0	0	0	0	0	0	**0**
7:15 to 7:30		134	13	**147**	4	1	**5**	0	0	**0**	0	0	0	0	0	1	**1**
7:30 to 7:45		112	6	**118**	1	0	**1**	0	0	**0**	1	2	0	0	2	2	**7**
7:45 to 8:00		142	10	**152**	6	0	**6**	0	0	**0**	0	0	0	0	0	0	**0**
8:00 to 8:15		126	10	**136**	5	0	**5**	0	0	**0**	1	0	0	0	1	0	**2**
8:15 to 8:30		127	11	**138**	10	0	**10**	0	0	**0**	5	1	0	0	3	1	**10**
8:30 to 8:45		104	6	**110**	17	0	**17**	0	0	**0**	10	0	0	0	7	0	**17**
8:45 to 9:00		99	8	**107**	7	0	**7**	0	0	**0**	4	0	0	0	3	0	**7**
AM Totals		**1,193**	**87**	**1,280**	**54**	**2**	**56**	**0**	**0**	**0**	**22**	**3**	**0**	**0**	**16**	**4**	**45**
15:00 to 15:15		82	4	**86**	9	0	**9**	0	0	**0**	1	1	0	0	0	1	**3**
15:15 to 15:30		118	11	**129**	13	0	**13**	0	0	**0**	1	10	0	0	0	1	**12**
15:30 to 15:45		96	12	**108**	6	0	**6**	0	0	**0**	1	1	0	0	1	2	**5**
15:45 to 16:00		81	4	**85**	4	0	**4**	0	0	**0**	0	1	0	0	0	1	**2**
16:00 to 16:15		78	2	**80**	5	0	**5**	0	0	**0**	0	7	0	0	0	2	**9**
16:15 to 16:30		74	6	**80**	4	1	**5**	0	0	**0**	1	1	0	0	1	1	**4**
16:30 to 16:45		75	7	**82**	5	0	**5**	0	0	**0**	0	2	0	0	0	2	**4**
16:45 to 17:00		92	8	**100**	2	0	**2**	0	0	**0**	3	0	0	0	2	0	**5**
PM Totals		**696**	**54**	**750**	**48**	**1**	**49**	**0**	**0**	**0**	**7**	**23**	**0**	**0**	**4**	**10**	**44**

Job No. : AUNSW1103
Client : Stanbury Traffic Planning
Suburb : Yennora
Location : 5. Fairfield St / Fairfield St

Day/Date : Wed, 16th Jun 2021
Weather : Fine
Description : Classified Intersection Count
: Hourly Summary



MATRIX Traffic and Transport Data

Approach	Fairfield St									Fairfield St								
Direction	Direction 1 (Left Turn)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6U (U Turn)		
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
6:30 to 7:30	63	7	**70**	262	25	**287**	0	0	**0**	14	0	**14**	285	31	**316**	0	0	**0**
6:45 to 7:45	72	5	**77**	295	27	**322**	0	0	**0**	14	1	**15**	322	28	**350**	0	0	**0**
7:00 to 8:00	85	7	**92**	326	29	**355**	0	0	**0**	13	1	**14**	364	26	**390**	0	0	**0**
7:15 to 8:15	95	5	**100**	351	31	**382**	0	0	**0**	16	1	**17**	401	22	**423**	0	0	**0**
7:30 to 8:30	99	6	**105**	357	32	**389**	0	0	**0**	29	2	**31**	449	26	**475**	0	0	**0**
7:45 to 8:45	136	8	**144**	361	33	**394**	0	0	**0**	35	1	**36**	498	29	**527**	0	0	**0**
8:00 to 9:00	156	6	**162**	349	31	**380**	0	0	**0**	44	2	**46**	517	31	**548**	0	0	**0**
AM Totals	**264**	**16**	**280**	**798**	**71**	**869**	**0**	**0**	**0**	**65**	**3**	**68**	**1,022**	**73**	**1,095**	**0**	**0**	**0**
15:00 to 16:00	155	8	**163**	319	20	**339**	0	0	**0**	52	3	**55**	858	30	**888**	0	0	**0**
15:15 to 16:15	152	7	**159**	324	25	**349**	0	0	**0**	36	3	**39**	894	28	**922**	0	0	**0**
15:30 to 16:30	148	5	**153**	332	32	**364**	0	0	**0**	33	2	**35**	934	26	**960**	0	0	**0**
15:45 to 16:45	140	3	**143**	344	32	**376**	0	0	**0**	33	1	**34**	939	23	**962**	0	0	**0**
16:00 to 17:00	128	4	**132**	372	29	**401**	0	0	**0**	32	3	**35**	976	19	**995**	1	0	**1**
PM Totals	**283**	**12**	**295**	**691**	**49**	**740**	**0**	**0**	**0**	**84**	**6**	**90**	**1,834**	**49**	**1,883**	**1**	**0**	**1**

Approach	Fairfield St									Crossing Pedestrians						
Direction	Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)									
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	B to A	A to B	D to C	C to D	H to G	G to H	Total
6:30 to 7:30	483	36	**519**	8	2	**10**	0	0	**0**	1	0	0	0	0	1	**2**
6:45 to 7:45	499	35	**534**	8	2	**10**	0	0	**0**	1	2	0	0	2	3	**8**
7:00 to 8:00	509	39	**548**	13	2	**15**	0	0	**0**	1	2	0	0	2	3	**8**
7:15 to 8:15	514	39	**553**	16	1	**17**	0	0	**0**	2	2	0	0	3	3	**10**
7:30 to 8:30	507	37	**544**	22	0	**22**	0	0	**0**	7	3	0	0	6	3	**19**
7:45 to 8:45	499	37	**536**	38	0	**38**	0	0	**0**	16	1	0	0	11	1	**29**
8:00 to 9:00	456	35	**491**	39	0	**39**	0	0	**0**	20	1	0	0	14	1	**36**
AM Totals	**1,193**	**87**	**1,280**	**54**	**2**	**56**	**0**	**0**	**0**	**22**	**3**	**0**	**0**	**16**	**4**	**45**
15:00 to 16:00	377	31	**408**	32	0	**32**	0	0	**0**	3	13	0	0	1	5	**22**
15:15 to 16:15	373	29	**402**	28	0	**28**	0	0	**0**	2	19	0	0	1	6	**28**
15:30 to 16:30	329	24	**353**	19	1	**20**	0	0	**0**	2	10	0	0	2	6	**20**
15:45 to 16:45	308	19	**327**	18	1	**19**	0	0	**0**	1	11	0	0	1	6	**19**
16:00 to 17:00	319	23	**342**	16	1	**17**	0	0	**0**	4	10	0	0	3	5	**22**
PM Totals	**696**	**54**	**750**	**48**	**1**	**49**	**0**	**0**	**0**	**7**	**23**	**0**	**0**	**4**	**10**	**44**

APPENDIX 3

MOVEMENT SUMMARY

Site: 1 [Military Rd / Byron Rd (Site Folder: Existing AM)]

Network: EX-AM [Existing AM (Network Folder: Existing)]

21-023 30 Loftus Rd Yennora
Existing AM
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Military Rd														
5	T1	112	5.7	112	5.7	0.065	0.1	LOS A	0.0	0.2	0.05	0.03	0.05	49.4
6	R2	6	16.7	6	16.7	0.065	5.7	LOS A	0.0	0.2	0.05	0.03	0.05	48.4
Approach		118	6.3	118	6.3	0.065	0.4	NA	0.0	0.2	0.05	0.03	0.05	49.3
North: Byron Rd														
7	L2	5	80.0	5	80.0	0.123	6.1	LOS A	0.2	1.6	0.37	0.64	0.37	44.5
9	R2	96	30.8	96	30.8	0.123	6.6	LOS A	0.2	1.6	0.37	0.64	0.37	42.7
Approach		101	33.3	101	33.3	0.123	6.6	LOS A	0.2	1.6	0.37	0.64	0.37	42.9
West: Military Rd														
10	L2	99	29.8	99	29.8	0.133	4.9	LOS A	0.0	0.0	0.00	0.23	0.00	48.7
11	T1	125	10.9	125	10.9	0.133	0.1	LOS A	0.0	0.0	0.00	0.23	0.00	49.2
Approach		224	19.2	224	19.2	0.133	2.2	NA	0.0	0.0	0.00	0.23	0.00	49.0
All Vehicles		443	19.0	443	19.0	0.133	2.7	NA	0.2	1.6	0.10	0.27	0.10	48.3

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

MOVEMENT SUMMARY

Site: 2 [Pine Rd / Loftus Rd (Site Folder: Existing AM)]

Network: EX-AM [Existing AM (Network Folder: Existing)]

21-023 30 Loftus Rd Yennora
Existing AM
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Pine Rd														
2	T1	153	35.2	153	35.2	0.334	5.3	LOS A	0.8	7.8	0.43	0.59	0.43	45.8
3	R2	171	29.0	171	29.0	0.334	8.5	LOS A	0.8	7.8	0.43	0.59	0.43	45.8
3u	U	1	0.0	1	0.0	0.334	9.5	LOS A	0.8	7.8	0.43	0.59	0.43	45.8
Approach		324	31.8	324	31.8	0.334	7.0	LOS A	0.8	7.8	0.43	0.59	0.43	45.8
East: Loftus Rd														
4	L2	142	31.1	142	31.1	0.350	6.3	LOS A	0.9	9.8	0.60	0.69	0.60	46.0
6	R2	121	72.2	121	72.2	0.350	10.9	LOS A	0.9	9.8	0.60	0.69	0.60	46.0
6u	U	1	0.0	1	0.0	0.350	10.4	LOS A	0.9	9.8	0.60	0.69	0.60	46.0
Approach		264	49.8	264	49.8	0.350	8.4	LOS A	0.9	9.8	0.60	0.69	0.60	46.0
North: Pine Rd														
7	L2	245	30.5	245	30.5	0.499	5.6	LOS A	1.5	13.3	0.53	0.57	0.53	43.7
8	T1	256	19.8	256	19.8	0.499	5.4	LOS A	1.5	13.3	0.53	0.57	0.53	43.7
9u	U	1	0.0	1	0.0	0.499	10.0	LOS A	1.5	13.3	0.53	0.57	0.53	43.7
Approach		502	24.9	502	24.9	0.499	5.5	LOS A	1.5	13.3	0.53	0.57	0.53	43.7
All Vehicles		1091	33.0	1091	33.0	0.499	6.7	LOS A	1.5	13.3	0.52	0.61	0.52	45.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 3 [Fairfield Rd / Dursley Rd (Site Folder: Existing AM)]

Network: EX-AM [Existing AM (Network Folder: Existing)]

21-023 30 Loftus Rd Yennora
Existing AM
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %		Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Fairfield Rd															
2	T1	733	2.9	733	2.9		0.615	11.1	LOS A	12.0	86.4	0.66	0.60	0.66	54.0
3	R2	223	6.6	223	6.6	*	0.944	68.6	LOS E	7.8	58.9	1.00	1.09	1.65	25.7
Approach		956	3.7	956	3.7		0.944	24.5	LOS B	12.0	86.4	0.74	0.72	0.89	46.9
East: Dursley Rd															
4	L2	84	20.0	84	20.0		0.120	21.3	LOS B	1.3	11.4	0.62	0.69	0.62	44.3
6	R2	229	63.9	229	63.9	*	0.913	63.3	LOS E	8.0	96.7	1.00	1.12	1.55	31.4
Approach		313	52.1	313	52.1		0.913	52.0	LOS D	8.0	96.7	0.90	1.01	1.30	34.1
North: Fairfield Rd															
7	L2	378	32.0	378	32.0		0.341	11.0	LOS A	3.6	34.2	0.38	0.69	0.38	49.7
8	T1	677	3.6	677	3.6	*	0.421	20.1	LOS B	6.4	46.6	0.75	0.65	0.75	50.1
Approach		1055	13.8	1055	13.8		0.421	16.8	LOS B	6.4	46.6	0.62	0.66	0.62	50.0
All Vehicles		2323	14.8	2323	14.8		0.944	24.7	LOS B	12.0	96.7	0.71	0.73	0.82	45.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Fairfield Rd											
P1	Full	6	39.2	LOS D	0.0	0.0	0.93	0.93	204.7	215.2	1.05
East: Dursley Rd											
P2	Full	3	39.2	LOS D	0.0	0.0	0.93	0.93	204.7	215.2	1.05
North: Fairfield Rd											
P3	Full	1	39.2	LOS D	0.0	0.0	0.93	0.93	207.3	218.5	1.05
All Pedestrians		11	39.2	LOS D	0.0	0.0	0.93	0.93	205.0	215.5	1.05

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: 4 [Pine Rd / Fairfield St (Site Folder: Existing AM)]

Network: EX-AM [Existing AM (Network Folder: Existing)]

21-023 30 Loftus Rd Yennora
Existing AM
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %		Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Fairfield St															
5	T1	539	5.9	539	5.9		0.143	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
6	R2	159	31.8	159	31.8	*	0.525	53.1	LOS D	5.2	49.7	0.94	0.81	0.94	23.2
Approach		698	11.8	698	11.8		0.525	12.1	LOS A	5.2	49.7	0.22	0.18	0.22	44.0
North: Pine Rd															
7	L2	296	32.0	296	32.0		0.379	23.4	LOS B	6.3	60.4	0.64	0.75	0.64	42.6
Approach		296	32.0	296	32.0		0.379	23.4	LOS B	6.3	60.4	0.64	0.75	0.64	42.6
West: Fairfield St															
10	L2	163	22.6	163	22.6	*	0.886	61.8	LOS E	9.0	73.0	1.00	1.05	1.27	4.8
11	T1	816	4.6	816	4.6	*	0.886	49.6	LOS D	9.9	73.0	1.00	1.03	1.18	25.7
Approach		979	7.6	979	7.6		0.886	51.6	LOS D	9.9	73.0	1.00	1.03	1.19	23.0
All Vehicles		1973	12.8	1973	12.8		0.886	33.4	LOS C	9.9	73.0	0.67	0.69	0.76	32.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
North: Pine Rd											
P3	Full	5	54.2	LOS E	0.0	0.0	0.95	0.95	214.6	208.6	0.97
All Pedestrians		5	54.2	LOS E	0.0	0.0	0.95	0.95	214.6	208.6	0.97

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: 5 [Fairfield St / Fairfield St (Site Folder: Existing AM)]

Network: EX-AM [Existing AM (Network Folder: Existing)]

21-023 30 Loftus Rd Yennora
Existing AM
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 70 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Fairfield St (THD)														
1	L2	152	5.6	152	5.6	0.702	24.3	LOS B	5.4	40.9	0.87	0.90	0.95	29.3
3	R2	415	8.4	415	8.4	* 0.702	26.5	LOS B	9.2	70.6	0.88	0.89	0.98	17.9
Approach		566	7.6	566	7.6	0.702	25.9	LOS B	9.2	70.6	0.88	0.89	0.98	21.6
East: Fairfield St														
4	L2	38	2.8	38	2.8	0.414	19.1	LOS B	3.6	26.8	0.73	0.66	0.73	29.7
5	T1	555	5.5	555	5.5	0.414	14.7	LOS B	4.9	36.4	0.74	0.64	0.74	33.2
Approach		593	5.3	593	5.3	0.414	15.0	LOS B	4.9	36.4	0.74	0.64	0.74	33.0
West: Fairfield St (Underpass)														
11	T1	564	6.9	564	6.9	* 1.034	78.7	LOS F	19.1	144.4	0.93	1.36	1.88	9.1
12	R2	40	0.0	40	0.0	0.128	24.7	LOS B	0.6	4.3	0.75	0.72	0.75	28.8
Approach		604	6.4	604	6.4	1.034	75.1	LOS F	19.1	144.4	0.91	1.32	1.81	9.8
All Vehicles		1763	6.4	1763	6.4	1.034	39.1	LOS C	19.1	144.4	0.84	0.95	1.18	17.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Fairfield St (THD)											
P1	Full	18	29.3	LOS C	0.0	0.0	0.91	0.91	196.4	217.2	1.11
West: Fairfield St (Underpass)											
P4	Full	13	29.3	LOS C	0.0	0.0	0.91	0.91	198.9	220.5	1.11
All Pedestrians		31	29.3	LOS C	0.0	0.0	0.91	0.91	197.4	218.6	1.11

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: 1 [Military Rd / Byron Rd (Site Folder: Existing PM)]

Network: EX-AM [Existing PM (Network Folder: Existing)]

21-023 30 Loftus Rd Yennora
Existing PM
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Military Rd														
5	T1	91	5.8	91	5.8	0.058	0.2	LOS A	0.0	0.3	0.10	0.07	0.10	48.7
6	R2	13	8.3	13	8.3	0.058	5.5	LOS A	0.0	0.3	0.10	0.07	0.10	48.2
Approach		103	6.1	103	6.1	0.058	0.8	NA	0.0	0.3	0.10	0.07	0.10	48.6
North: Byron Rd														
7	L2	12	0.0	12	0.0	0.126	5.0	LOS A	0.2	1.4	0.33	0.61	0.33	45.8
9	R2	106	15.8	106	15.8	0.126	6.1	LOS A	0.2	1.4	0.33	0.61	0.33	43.1
Approach		118	14.3	118	14.3	0.126	6.0	LOS A	0.2	1.4	0.33	0.61	0.33	43.6
West: Military Rd														
10	L2	95	13.3	95	13.3	0.126	4.8	LOS A	0.0	0.0	0.00	0.22	0.00	48.8
11	T1	133	4.8	133	4.8	0.126	0.1	LOS A	0.0	0.0	0.00	0.22	0.00	49.2
Approach		227	8.3	227	8.3	0.126	2.0	NA	0.0	0.0	0.00	0.22	0.00	49.0
All Vehicles		448	9.4	448	9.4	0.126	2.8	NA	0.2	1.4	0.11	0.29	0.11	48.2

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

MOVEMENT SUMMARY

Site: 2 [Pine Rd / Loftus Rd (Site Folder: Existing PM)]

Network: EX-AM [Existing PM (Network Folder: Existing)]

21-023 30 Loftus Rd Yennora
Existing PM
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Pine Rd														
2	T1	325	15.2	325	15.2	0.476	5.7	LOS A	1.4	11.4	0.57	0.63	0.57	45.7
3	R2	138	19.8	138	19.8	0.476	9.2	LOS A	1.4	11.4	0.57	0.63	0.57	45.7
3u	U	5	40.0	5	40.0	0.476	11.3	LOS A	1.4	11.4	0.57	0.63	0.57	45.7
Approach		468	16.9	468	16.9	0.476	6.8	LOS A	1.4	11.4	0.57	0.63	0.57	45.7
East: Loftus Rd														
4	L2	162	22.1	162	22.1	0.416	6.2	LOS A	1.1	10.1	0.61	0.70	0.61	45.7
6	R2	205	23.6	205	23.6	0.416	9.6	LOS A	1.1	10.1	0.61	0.70	0.61	45.7
6u	U	1	0.0	1	0.0	0.416	10.5	LOS A	1.1	10.1	0.61	0.70	0.61	45.7
Approach		368	22.9	368	22.9	0.416	8.1	LOS A	1.1	10.1	0.61	0.70	0.61	45.7
North: Pine Rd														
7	L2	143	41.2	143	41.2	0.389	5.3	LOS A	1.1	10.0	0.46	0.53	0.46	43.9
8	T1	252	21.3	252	21.3	0.389	4.9	LOS A	1.1	10.0	0.46	0.53	0.46	43.9
9u	U	1	0.0	1	0.0	0.389	9.5	LOS A	1.1	10.0	0.46	0.53	0.46	43.9
Approach		396	28.5	396	28.5	0.389	5.0	LOS A	1.1	10.0	0.46	0.53	0.46	43.9
All Vehicles		1233	22.4	1233	22.4	0.476	6.6	LOS A	1.4	11.4	0.55	0.62	0.55	45.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 3 [Fairfield Rd / Dursley Rd (Site Folder: Existing PM)]

Network: EX-AM [Existing PM (Network Folder: Existing)]

21-023 30 Loftus Rd Yennora
Existing PM
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %		Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Fairfield Rd															
2	T1	692	2.6	692	2.6		0.662	15.6	LOS B	13.2	95.1	0.77	0.69	0.77	51.8
3	R2	128	7.4	128	7.4	*	0.819	56.2	LOS D	3.9	29.3	1.00	0.93	1.35	28.7
Approach		820	3.3	820	3.3		0.819	22.0	LOS B	13.2	95.1	0.81	0.73	0.86	48.4
East: Dursley Rd															
4	L2	218	6.8	218	6.8		0.257	20.8	LOS B	3.5	26.2	0.63	0.73	0.63	44.9
6	R2	351	25.6	351	25.6	*	0.774	40.3	LOS C	9.4	85.4	0.98	0.91	1.09	37.3
Approach		569	18.4	569	18.4		0.774	32.9	LOS C	9.4	85.4	0.84	0.84	0.92	39.9
North: Fairfield Rd															
7	L2	324	34.4	324	34.4		0.280	9.2	LOS A	2.4	23.9	0.30	0.66	0.30	51.1
8	T1	737	3.7	737	3.7	*	0.498	23.1	LOS B	7.5	54.9	0.81	0.70	0.81	48.9
Approach		1061	13.1	1061	13.1		0.498	18.9	LOS B	7.5	54.9	0.65	0.69	0.65	49.3
All Vehicles		2450	11.1	2450	11.1		0.819	23.2	LOS B	13.2	95.1	0.75	0.74	0.78	46.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Fairfield Rd											
P1	Full	6	39.2	LOS D	0.0	0.0	0.93	0.93	204.7	215.2	1.05
East: Dursley Rd											
P2	Full	3	39.2	LOS D	0.0	0.0	0.93	0.93	204.7	215.2	1.05
North: Fairfield Rd											
P3	Full	1	39.2	LOS D	0.0	0.0	0.93	0.93	207.3	218.5	1.05
All Pedestrians		11	39.2	LOS D	0.0	0.0	0.93	0.93	205.0	215.5	1.05

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: 4 [Pine Rd / Fairfield St (Site Folder: Existing PM)]

Network: EX-AM [Existing PM (Network Folder: Existing)]

21-023 30 Loftus Rd Yennora
Existing PM
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %		Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Fairfield St															
5	T1	906	3.7	906	3.7		0.363	0.2	LOS A	0.0	0.0	0.00	0.00	0.00	59.6
6	R2	247	19.1	247	19.1	*	0.592	38.1	LOS C	6.0	51.0	0.93	0.82	0.93	28.0
Approach		1154	7.0	1154	7.0		0.592	8.3	LOS A	6.0	51.0	0.20	0.18	0.20	48.0
North: Pine Rd															
7	L2	453	19.1	453	19.1		0.554	21.5	LOS B	8.4	71.9	0.74	0.79	0.74	43.4
Approach		453	19.1	453	19.1		0.554	21.5	LOS B	8.4	71.9	0.74	0.79	0.74	43.4
West: Fairfield St															
10	L2	145	13.8	145	13.8	*	0.688	32.8	LOS C	6.6	51.1	0.96	0.86	0.99	8.7
11	T1	633	4.8	633	4.8		0.688	26.6	LOS B	9.9	73.0	0.92	0.81	0.93	34.8
Approach		778	6.5	778	6.5		0.688	27.8	LOS B	9.9	73.0	0.93	0.82	0.94	31.9
All Vehicles		2384	9.1	2384	9.1		0.688	17.2	LOS B	9.9	73.0	0.54	0.50	0.54	41.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
North: Pine Rd											
P3	Full	5	39.2	LOS D	0.0	0.0	0.93	0.93	199.7	208.6	1.04
All Pedestrians		5	39.2	LOS D	0.0	0.0	0.93	0.93	199.7	208.6	1.04

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: 5 [Fairfield St / Fairfield St (Site Folder: Existing PM)]

Network: EX-AM [Existing PM (Network Folder: Existing)]

21-023 30 Loftus Rd Yennora
Existing PM
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 70 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %		Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Fairfield St (THD)															
1	L2	172	4.9	172	4.9		0.533	21.2	LOS B	4.4	32.9	0.79	0.86	0.79	31.3
3	R2	357	5.9	357	5.9	*	0.533	22.5	LOS B	4.4	32.9	0.80	0.83	0.80	20.0
Approach		528	5.6	528	5.6		0.533	22.1	LOS B	4.4	32.9	0.80	0.84	0.80	24.6
East: Fairfield St															
4	L2	58	5.5	58	5.5		0.689	22.9	LOS B	7.4	54.1	0.86	0.80	0.89	26.4
5	T1	935	3.4	935	3.4	*	0.689	17.8	LOS B	9.7	70.3	0.87	0.78	0.88	30.5
Approach		993	3.5	993	3.5		0.689	18.1	LOS B	9.7	70.3	0.87	0.78	0.88	30.2
West: Fairfield St (Underpass)															
11	T1	429	7.6	429	7.6		0.533	15.8	LOS B	5.6	42.3	0.77	0.66	0.77	28.4
12	R2	34	0.0	34	0.0		0.188	32.4	LOS C	0.6	4.4	0.87	0.73	0.87	25.0
Approach		463	7.0	463	7.0		0.533	17.0	LOS B	5.6	42.3	0.77	0.66	0.77	27.9
All Vehicles		1984	4.9	1984	4.9		0.689	18.9	LOS B	9.7	70.3	0.83	0.77	0.83	28.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Fairfield St (THD)											
P1	Full	18	29.3	LOS C	0.0	0.0	0.91	0.91	196.4	217.2	1.11
West: Fairfield St (Underpass)											
P4	Full	13	29.3	LOS C	0.0	0.0	0.91	0.91	198.9	220.5	1.11
All Pedestrians		31	29.3	LOS C	0.0	0.0	0.91	0.91	197.4	218.6	1.11

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

APPENDIX 4

MOVEMENT SUMMARY

Site: 1 [Military Rd / Byron Rd (Site Folder: Post Dev AM)]

Network: PD-AM [Post Development AM (Network Folder: Post Development)]

21-023 30 Loftus Rd Yennora
Post Development AM
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Military Rd														
5	T1	119	5.3	119	5.3	0.068	0.1	LOS A	0.0	0.2	0.05	0.03	0.05	49.5
6	R2	6	16.7	6	16.7	0.068	5.7	LOS A	0.0	0.2	0.05	0.03	0.05	48.5
Approach		125	5.9	125	5.9	0.068	0.4	NA	0.0	0.2	0.05	0.03	0.05	49.4
North: Byron Rd														
7	L2	5	80.0	5	80.0	0.138	6.1	LOS A	0.2	1.9	0.38	0.65	0.38	44.5
9	R2	105	33.0	105	33.0	0.138	6.7	LOS A	0.2	1.9	0.38	0.65	0.38	42.6
Approach		111	35.2	111	35.2	0.138	6.7	LOS A	0.2	1.9	0.38	0.65	0.38	42.8
West: Military Rd														
10	L2	99	29.8	99	29.8	0.134	4.9	LOS A	0.0	0.0	0.00	0.23	0.00	48.7
11	T1	126	10.8	126	10.8	0.134	0.1	LOS A	0.0	0.0	0.00	0.23	0.00	49.2
Approach		225	19.2	225	19.2	0.134	2.2	NA	0.0	0.0	0.00	0.23	0.00	49.0
All Vehicles		461	19.4	461	19.4	0.138	2.8	NA	0.2	1.9	0.10	0.28	0.10	48.2

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

MOVEMENT SUMMARY

Site: 2 [Pine Rd / Loftus Rd (Site Folder: Post Dev AM)]

Network: PD-AM [Post Development AM (Network Folder: Post Development)]

21-023 30 Loftus Rd Yennora
Post Development AM
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Pine Rd														
2	T1	153	35.2	153	35.2	0.365	5.4	LOS A	0.9	8.7	0.46	0.61	0.46	45.6
3	R2	199	27.5	199	27.5	0.365	8.7	LOS A	0.9	8.7	0.46	0.61	0.46	45.6
3u	U	1	0.0	1	0.0	0.365	9.6	LOS A	0.9	8.7	0.46	0.61	0.46	45.6
Approach		353	30.7	353	30.7	0.365	7.3	LOS A	0.9	8.7	0.46	0.61	0.46	45.6
East: Loftus Rd														
4	L2	149	31.7	149	31.7	0.373	6.3	LOS A	1.0	10.8	0.62	0.70	0.62	46.0
6	R2	129	72.4	129	72.4	0.373	11.0	LOS A	1.0	10.8	0.62	0.70	0.62	46.0
6u	U	1	0.0	1	0.0	0.373	10.4	LOS A	1.0	10.8	0.62	0.70	0.62	46.0
Approach		280	50.4	280	50.4	0.373	8.5	LOS A	1.0	10.8	0.62	0.70	0.62	46.0
North: Pine Rd														
7	L2	287	29.3	287	29.3	0.559	6.1	LOS A	1.7	15.7	0.59	0.61	0.59	43.3
8	T1	256	19.8	256	19.8	0.559	5.8	LOS A	1.7	15.7	0.59	0.61	0.59	43.3
9u	U	1	0.0	1	0.0	0.559	10.4	LOS A	1.7	15.7	0.59	0.61	0.59	43.3
Approach		544	24.8	544	24.8	0.559	6.0	LOS A	1.7	15.7	0.59	0.61	0.59	43.3
All Vehicles		1177	32.6	1177	32.6	0.559	7.0	LOS A	1.7	15.7	0.56	0.63	0.56	45.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 3 [Fairfield Rd / Dursley Rd (Site Folder: Post Dev AM)]

Network: PD-AM [Post Development AM (Network Folder: Post Development)]

21-023 30 Loftus Rd Yennora
Post Development AM
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %		Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Fairfield Rd															
2	T1	733	2.9	733	2.9		0.604	10.4	LOS A	11.6	83.9	0.64	0.58	0.64	54.3
3	R2	239	6.6	239	6.6	*	0.933	65.7	LOS E	8.2	61.7	1.00	1.07	1.59	26.3
Approach		972	3.8	972	3.8		0.933	24.0	LOS B	11.6	83.9	0.73	0.70	0.88	47.1
East: Dursley Rd															
4	L2	86	20.7	86	20.7		0.124	21.3	LOS B	1.4	11.8	0.62	0.70	0.62	44.2
6	R2	235	64.5	235	64.5	*	0.995	92.9	LOS F	10.2	124.3	1.00	1.31	1.93	26.4
Approach		321	52.7	321	52.7		0.995	73.7	LOS F	10.2	124.3	0.90	1.14	1.58	29.7
North: Fairfield Rd															
7	L2	404	32.0	404	32.0		0.370	11.5	LOS A	4.1	39.1	0.41	0.70	0.41	49.3
8	T1	677	3.6	677	3.6	*	0.421	20.1	LOS B	6.4	46.6	0.75	0.65	0.75	50.1
Approach		1081	14.2	1081	14.2		0.421	16.9	LOS B	6.4	46.6	0.62	0.67	0.62	49.9
All Vehicles		2374	15.2	2374	15.2		0.995	27.5	LOS B	11.6	124.3	0.70	0.75	0.86	44.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Fairfield Rd											
P1	Full	6	39.2	LOS D	0.0	0.0	0.93	0.93	204.7	215.2	1.05
East: Dursley Rd											
P2	Full	3	39.2	LOS D	0.0	0.0	0.93	0.93	204.7	215.2	1.05
North: Fairfield Rd											
P3	Full	1	39.2	LOS D	0.0	0.0	0.93	0.93	207.3	218.5	1.05
All Pedestrians		11	39.2	LOS D	0.0	0.0	0.93	0.93	205.0	215.5	1.05

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: 4 [Pine Rd / Fairfield St (Site Folder: Post Dev AM)]

Network: PD-AM [Post Development AM (Network Folder: Post Development)]

21-023 30 Loftus Rd Yennora
Post Development AM
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %		Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Fairfield St															
5	T1	539	5.9	539	5.9		0.143	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
6	R2	173	31.1	173	31.1	*	0.568	53.6	LOS D	5.7	54.3	0.95	0.82	0.95	23.1
Approach		712	12.0	712	12.0		0.568	13.0	LOS A	5.7	54.3	0.23	0.20	0.23	43.1
North: Pine Rd															
7	L2	303	32.3	303	32.3		0.395	24.2	LOS B	6.6	63.6	0.66	0.75	0.66	42.3
Approach		303	32.3	303	32.3		0.395	24.2	LOS B	6.6	63.6	0.66	0.75	0.66	42.3
West: Fairfield St															
10	L2	178	21.9	178	21.9	*	0.877	59.2	LOS E	9.0	73.0	1.00	1.04	1.24	5.0
11	T1	816	4.6	816	4.6	*	0.877	47.0	LOS D	9.9	73.0	1.00	1.01	1.15	26.4
Approach		994	7.7	994	7.7		0.877	49.2	LOS D	9.9	73.0	1.00	1.01	1.17	23.5
All Vehicles		2008	12.9	2008	12.9		0.877	32.6	LOS C	9.9	73.0	0.68	0.69	0.76	32.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
North: Pine Rd											
P3	Full	5	54.2	LOS E	0.0	0.0	0.95	0.95	214.6	208.6	0.97
All Pedestrians		5	54.2	LOS E	0.0	0.0	0.95	0.95	214.6	208.6	0.97

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: 5 [Fairfield St / Fairfield St (Site Folder: Post Dev AM)]

Network: PD-AM [Post Development AM (Network Folder: Post Development)]

21-023 30 Loftus Rd Yennora
Post Development AM
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 70 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Fairfield St (THD)														
1	L2	152	5.6	152	5.6	0.710	24.7	LOS B	5.5	41.9	0.88	0.90	0.96	29.1
3	R2	420	8.3	420	8.3	* 0.710	26.9	LOS B	9.0	68.6	0.89	0.89	1.00	17.7
Approach		572	7.6	572	7.6	0.710	26.3	LOS B	9.0	68.6	0.88	0.89	0.99	21.4
East: Fairfield St														
4	L2	38	2.8	38	2.8	0.414	19.1	LOS B	3.6	26.8	0.73	0.66	0.73	29.7
5	T1	555	5.5	555	5.5	0.414	14.7	LOS B	4.9	36.4	0.74	0.64	0.74	33.2
Approach		593	5.3	593	5.3	0.414	15.0	LOS B	4.9	36.4	0.74	0.64	0.74	33.0
West: Fairfield St (Underpass)														
11	T1	574	7.2	574	7.2	* 1.053	87.9	LOS F	20.7	156.7	0.93	1.42	1.99	8.3
12	R2	40	0.0	40	0.0	0.128	24.7	LOS B	0.6	4.3	0.75	0.72	0.75	28.8
Approach		614	6.7	614	6.7	1.053	83.8	LOS F	20.7	156.7	0.91	1.37	1.91	9.0
All Vehicles		1778	6.5	1778	6.5	1.053	42.4	LOS C	20.7	156.7	0.85	0.98	1.22	16.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Fairfield St (THD)											
P1	Full	18	29.3	LOS C	0.0	0.0	0.91	0.91	196.4	217.2	1.11
West: Fairfield St (Underpass)											
P4	Full	13	29.3	LOS C	0.0	0.0	0.91	0.91	198.9	220.5	1.11
All Pedestrians		31	29.3	LOS C	0.0	0.0	0.91	0.91	197.4	218.6	1.11

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: 1 [Military Rd / Byron Rd (Site Folder: Post Dev PM)]

Network: EX-AM [Post Development PM (Network Folder: Post Development)]

21-023 30 Loftus Rd Yennora
Existing PM
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Military Rd														
5	T1	91	5.8	91	5.8	0.058	0.2	LOS A	0.0	0.3	0.10	0.07	0.10	48.7
6	R2	13	8.3	13	8.3	0.058	5.5	LOS A	0.0	0.3	0.10	0.07	0.10	48.2
Approach		103	6.1	103	6.1	0.058	0.8	NA	0.0	0.3	0.10	0.07	0.10	48.6
North: Byron Rd														
7	L2	12	0.0	12	0.0	0.129	5.0	LOS A	0.2	1.5	0.35	0.62	0.35	45.8
9	R2	107	15.7	107	15.7	0.129	6.2	LOS A	0.2	1.5	0.35	0.62	0.35	43.0
Approach		119	14.2	119	14.2	0.129	6.1	LOS A	0.2	1.5	0.35	0.62	0.35	43.5
West: Military Rd														
10	L2	101	13.5	101	13.5	0.135	4.8	LOS A	0.0	0.0	0.00	0.22	0.00	48.8
11	T1	142	5.2	142	5.2	0.135	0.1	LOS A	0.0	0.0	0.00	0.22	0.00	49.2
Approach		243	8.7	243	8.7	0.135	2.0	NA	0.0	0.0	0.00	0.22	0.00	49.0
All Vehicles		465	9.5	465	9.5	0.135	2.8	NA	0.2	1.5	0.11	0.29	0.11	48.2

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

MOVEMENT SUMMARY

Site: 2 [Pine Rd / Loftus Rd (Site Folder: Post Dev PM)]

Network: EX-AM [Post Development PM (Network Folder: Post Development)]

21-023 30 Loftus Rd Yennora
Existing PM
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Pine Rd														
2	T1	325	15.2	325	15.2	0.512	6.2	LOS A	1.5	12.6	0.63	0.68	0.63	45.5
3	R2	144	21.2	144	21.2	0.512	9.7	LOS A	1.5	12.6	0.63	0.68	0.63	45.5
3u	U	5	40.0	5	40.0	0.512	11.8	LOS A	1.5	12.6	0.63	0.68	0.63	45.5
Approach		475	17.3	475	17.3	0.512	7.3	LOS A	1.5	12.6	0.63	0.68	0.63	45.5
East: Loftus Rd														
4	L2	193	21.9	193	21.9	0.491	6.4	LOS A	1.5	12.9	0.66	0.72	0.66	45.7
6	R2	245	23.6	245	23.6	0.491	9.8	LOS A	1.5	12.9	0.66	0.72	0.66	45.7
6u	U	1	0.0	1	0.0	0.491	10.7	LOS A	1.5	12.9	0.66	0.72	0.66	45.7
Approach		439	22.8	439	22.8	0.491	8.3	LOS A	1.5	12.9	0.66	0.72	0.66	45.7
North: Pine Rd														
7	L2	153	42.8	153	42.8	0.405	5.4	LOS A	1.1	10.7	0.48	0.54	0.48	43.8
8	T1	252	21.3	252	21.3	0.405	5.0	LOS A	1.1	10.7	0.48	0.54	0.48	43.8
9u	U	1	0.0	1	0.0	0.405	9.6	LOS A	1.1	10.7	0.48	0.54	0.48	43.8
Approach		405	29.4	405	29.4	0.405	5.1	LOS A	1.1	10.7	0.48	0.54	0.48	43.8
All Vehicles		1319	22.8	1319	22.8	0.512	7.0	LOS A	1.5	12.9	0.59	0.65	0.59	45.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 3 [Fairfield Rd / Dursley Rd (Site Folder: Post Dev PM)]

Network: EX-AM [Post Development PM (Network Folder: Post Development)]

21-023 30 Loftus Rd Yennora
Existing PM
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Fairfield Rd														
2	T1	692	2.6	692	2.6	0.662	15.6	LOS B	13.2	95.1	0.77	0.69	0.77	51.8
3	R2	129	7.3	129	7.3	* 0.825	56.5	LOS E	3.9	29.6	1.00	0.94	1.36	28.6
Approach		821	3.3	821	3.3	0.825	22.1	LOS B	13.2	95.1	0.81	0.73	0.86	48.4
East: Dursley Rd														
4	L2	233	7.2	233	7.2	0.276	21.0	LOS B	3.7	28.4	0.64	0.73	0.64	44.8
6	R2	376	25.8	376	25.8	* 0.829	44.2	LOS D	10.8	98.2	1.00	0.96	1.19	36.2
Approach		608	18.7	608	18.7	0.829	35.4	LOS C	10.8	98.2	0.86	0.87	0.98	39.1
North: Fairfield Rd														
7	L2	333	35.4	333	35.4	0.288	9.3	LOS A	2.5	24.9	0.31	0.67	0.31	51.0
8	T1	737	3.7	737	3.7	* 0.498	23.1	LOS B	7.5	54.9	0.81	0.70	0.81	48.9
Approach		1069	13.6	1069	13.6	0.498	18.8	LOS B	7.5	54.9	0.65	0.69	0.65	49.3
All Vehicles		2499	11.5	2499	11.5	0.829	23.9	LOS B	13.2	98.2	0.75	0.75	0.80	46.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Fairfield Rd											
P1	Full	6	39.2	LOS D	0.0	0.0	0.93	0.93	204.7	215.2	1.05
East: Dursley Rd											
P2	Full	3	39.2	LOS D	0.0	0.0	0.93	0.93	204.7	215.2	1.05
North: Fairfield Rd											
P3	Full	1	39.2	LOS D	0.0	0.0	0.93	0.93	207.3	218.5	1.05
All Pedestrians		11	39.2	LOS D	0.0	0.0	0.93	0.93	205.0	215.5	1.05

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: 4 [Pine Rd / Fairfield St (Site Folder: Post Dev PM)]

Network: EX-AM [Post Development PM (Network Folder: Post Development)]

21-023 30 Loftus Rd Yennora
Existing PM
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %		Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Fairfield St															
5	T1	906	3.7	906	3.7		0.363	0.2	LOS A	0.0	0.0	0.00	0.00	0.00	59.6
6	R2	252	19.7	252	19.7	*	0.604	38.3	LOS C	6.1	52.4	0.93	0.83	0.93	28.0
Approach		1158	7.2	1158	7.2		0.604	8.5	LOS A	6.1	52.4	0.20	0.18	0.20	47.8
North: Pine Rd															
7	L2	483	19.2	483	19.2		0.591	22.0	LOS B	9.2	78.9	0.76	0.80	0.76	43.2
Approach		483	19.2	483	19.2		0.591	22.0	LOS B	9.2	78.9	0.76	0.80	0.76	43.2
West: Fairfield St															
10	L2	147	14.3	147	14.3	*	0.690	33.6	LOS C	6.6	51.5	0.96	0.87	1.00	8.5
11	T1	633	4.8	633	4.8		0.690	26.8	LOS B	9.9	73.0	0.92	0.81	0.93	34.7
Approach		780	6.6	780	6.6		0.690	28.1	LOS B	9.9	73.0	0.93	0.83	0.94	31.6
All Vehicles		2421	9.4	2421	9.4		0.690	17.5	LOS B	9.9	78.9	0.55	0.51	0.55	41.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
North: Pine Rd											
P3	Full	5	39.2	LOS D	0.0	0.0	0.93	0.93	199.7	208.6	1.04
All Pedestrians		5	39.2	LOS D	0.0	0.0	0.93	0.93	199.7	208.6	1.04

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: 5 [Fairfield St / Fairfield St (Site Folder: Post Dev PM)]

Network: EX-AM [Post Development PM (Network Folder: Post Development)]

21-023 30 Loftus Rd Yennora
Existing PM
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 70 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %		Deg. Satn v/c	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Fairfield St (THD)															
1	L2	172	4.9	172	4.9		0.535	21.2	LOS B	4.4	32.9	0.79	0.86	0.79	31.3
3	R2	357	5.9	357	5.9	*	0.535	22.5	LOS B	4.4	32.9	0.80	0.83	0.80	20.0
Approach		528	5.6	528	5.6		0.535	22.1	LOS B	4.4	32.9	0.80	0.84	0.80	24.6
East: Fairfield St															
4	L2	58	5.5	58	5.5		0.689	22.9	LOS B	7.4	54.1	0.86	0.80	0.89	26.4
5	T1	935	3.4	935	3.4	*	0.689	17.8	LOS B	9.7	70.3	0.87	0.78	0.88	30.5
Approach		993	3.5	993	3.5		0.689	18.1	LOS B	9.7	70.3	0.87	0.78	0.88	30.2
West: Fairfield St (Underpass)															
11	T1	432	7.8	432	7.8		0.541	15.9	LOS B	5.6	42.7	0.77	0.66	0.77	28.3
12	R2	34	0.0	34	0.0		0.188	32.4	LOS C	0.6	4.4	0.87	0.73	0.87	25.0
Approach		465	7.2	465	7.2		0.541	17.1	LOS B	5.6	42.7	0.78	0.67	0.78	27.9
All Vehicles		1986	4.9	1986	4.9		0.689	18.9	LOS B	9.7	70.3	0.83	0.77	0.83	28.1

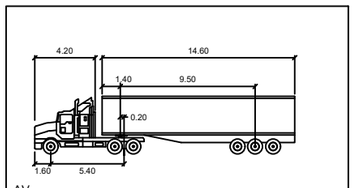
Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Fairfield St (THD)											
P1	Full	18	29.3	LOS C	0.0	0.0	0.91	0.91	196.4	217.2	1.11
West: Fairfield St (Underpass)											
P4	Full	13	29.3	LOS C	0.0	0.0	0.91	0.91	198.9	220.5	1.11
All Pedestrians		31	29.3	LOS C	0.0	0.0	0.91	0.91	197.4	218.6	1.11

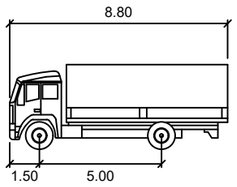
Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

APPENDIX 5



AV

meters			
Tractor Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 28.3
Tractor Track	: 2.50	Articulating Angle	: 72.0
Trailer Track	: 2.50		



MRV

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

LEGEND

VEHICLE BODY PATH (INCLUDING OVERHANG)

MANOEUVRING CLEARANCE (300mm)

LOFTUS ROAD

SITE ENTRANCE

NEW DISABLED PARKING SPACE

LINE MARK NEW PARKING SPACES

PROPOSED PLANT LAYOUT

WORKSHOP

WORKSHOP

OFFICE

CLOSE OFF WALLS

ENTRY

LUNCH ROOM

MALE

MWC

FWC

BUNKER WALLS CONSTRUCTED OF STRUCTURAL STEEL 3.0M HIGH

MOBILE CRUSHER

APPROX VOL 106m3 UNDERS 32

32+ ALL OVERS

APPROX VOL 135m3

+22 OVERS

UNDER -22 APPROX VOL 150m3

LIGHT MATERIAL APPROX VOL 110m3

LIGHT MATERIAL APPROX VOL 135m3

PICKING STATION

APPROX VOL 70m3

AIR SEPARATOR

UNDERS

UNDERS

STEEL PLATED PUSH WALL

FFL RL15.27

WAREHOUSE A

MAX. STORAGE VOL.

MAX. STORAGE VOL.

EXIT PATH TO REMAIN OPEN

MAX. STORAGE VOL.

C & I STORAGE MAX. STORAGE VOL.

OVERS 10-80

MCC ROOM

QUARANTINE AREA APPROX 30m3

PRE-SORT AND INSPECTION AREA APPROX 100m2

LINE 1

UNDERS -10 APPROX VOL 115m3

CTRL ROOM

FEED STOCK APPROX 300m3 STORAGE/STOCKPILE

FEEDER

LONG ITEMS APPROX VOL 65m3

SHUTTER DOOR

SHUTTER DOOR

21.85

20.34

15.01

14.95

14.99

17.72

17.93

26.01

30.40

30.15

STANBURY TRAFFIC PLANNING	
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STANBURY TRAFFIC PLANNING

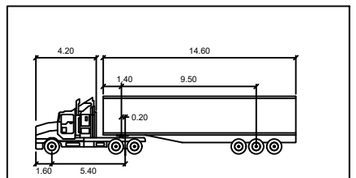
MEDIUM RIGID & ARTICULATED VEHICLE SWEPT PATHS

SITE INGRESS / EGRESS MOVEMENTS

PROPOSED COBRA WASTE SOLUTIONS RESOURCE RECOVERY FACILITY

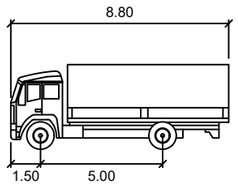
30 LOFTUS ROAD, YENNORA

SCALE: 1:500 AT A3		ISSUE A
FILE: 21-023	SUPERSEDES SHEET/ISSUE -	
DATE: 1/02/2022		SHEET 1



AV

	meters		
Tractor Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 28.3
Tractor Track	: 2.50	Articulating Angle	: 72.0
Trailer Track	: 2.50		



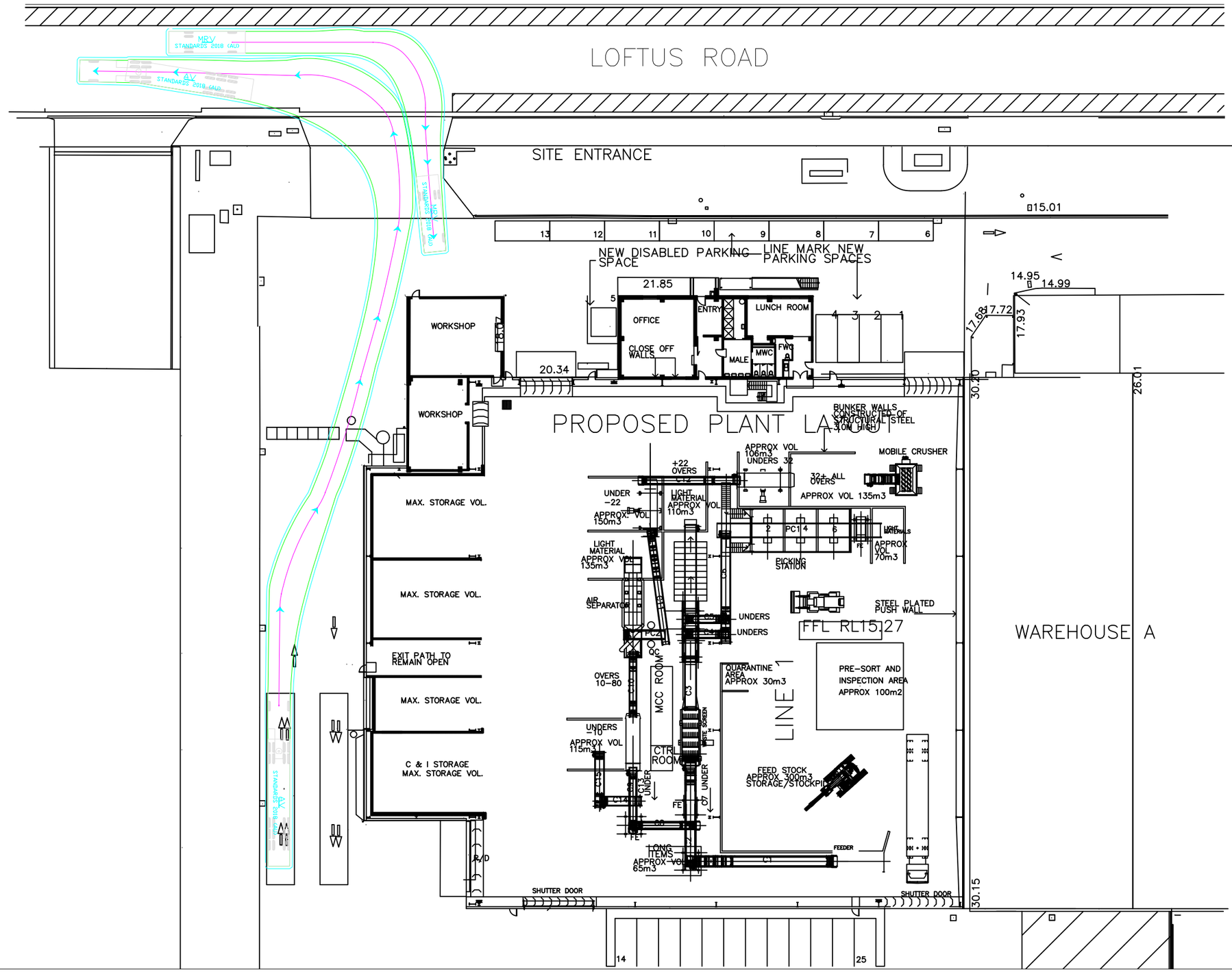
MRV

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

LEGEND

VEHICLE BODY PATH (INCLUDING OVERHANG)

MANOEUVRING CLEARANCE (300mm)



STANBURY TRAFFIC PLANNING TRAFFIC, PARKING & TRANSPORT CONSULTANTS	STANBURY TRAFFIC PLANNING ADDRESS: 302/166 GLEBE POINT RD, GLEBE PH: (02) 8971 8314 MOB: 0410 561 848 EMAIL: info@stanburytraffic.com.au WEBSITE: www.stanburytraffic.com.au	NOTES: 1. THIS PLAN IS BASED ON ARCHITECTURAL PLANS PREPARED BY CARLO RANIERI & ASSOCIATES PTY. LTD. 2. THE SWEPT PATHS PROVIDED ON THIS PLAN HAVE BEEN GENERATED UTILISING AUTOTURN PRO VERSION 11 IN CONJUNCTION WITH MEDIUM RIGID VEHICLE & ARTICULATED VEHICLE MANOEUVRING SPECIFICATIONS IN ACCORDANCE WITH THE AUSTRALIAN STANDARD FOR PARKING FACILITIES PART 2: OFF-STREET COMMERCIAL VEHICLE FACILITIES (AS2890.2:2018).

STANBURY TRAFFIC PLANNING

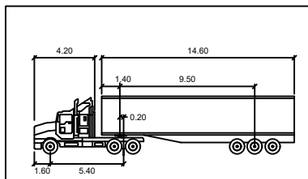
MEDIUM RIGID & ARTICULATED VEHICLE SWEPT PATHS

SITE INGRESS / EGRESS MOVEMENTS

PROPOSED COBRA WASTE SOLUTIONS RESOURCE RECOVERY FACILITY

30 LOFTUS ROAD, YENNORA

SCALE: 1:500 AT A3		ISSUE A
FILE: 21-023	SUPERSEDES SHEET/ISSUE -	
DATE: 1/02/2022		SHEET 2



AV

meters

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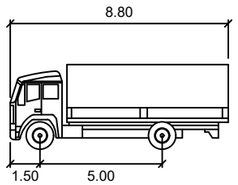
Trailer Width	: 2.50	Steering Angle	: 28.3
Tractor Track	: 2.50	Articulating Angle	: 72.0
Trailer Track	: 2.50		



MRV

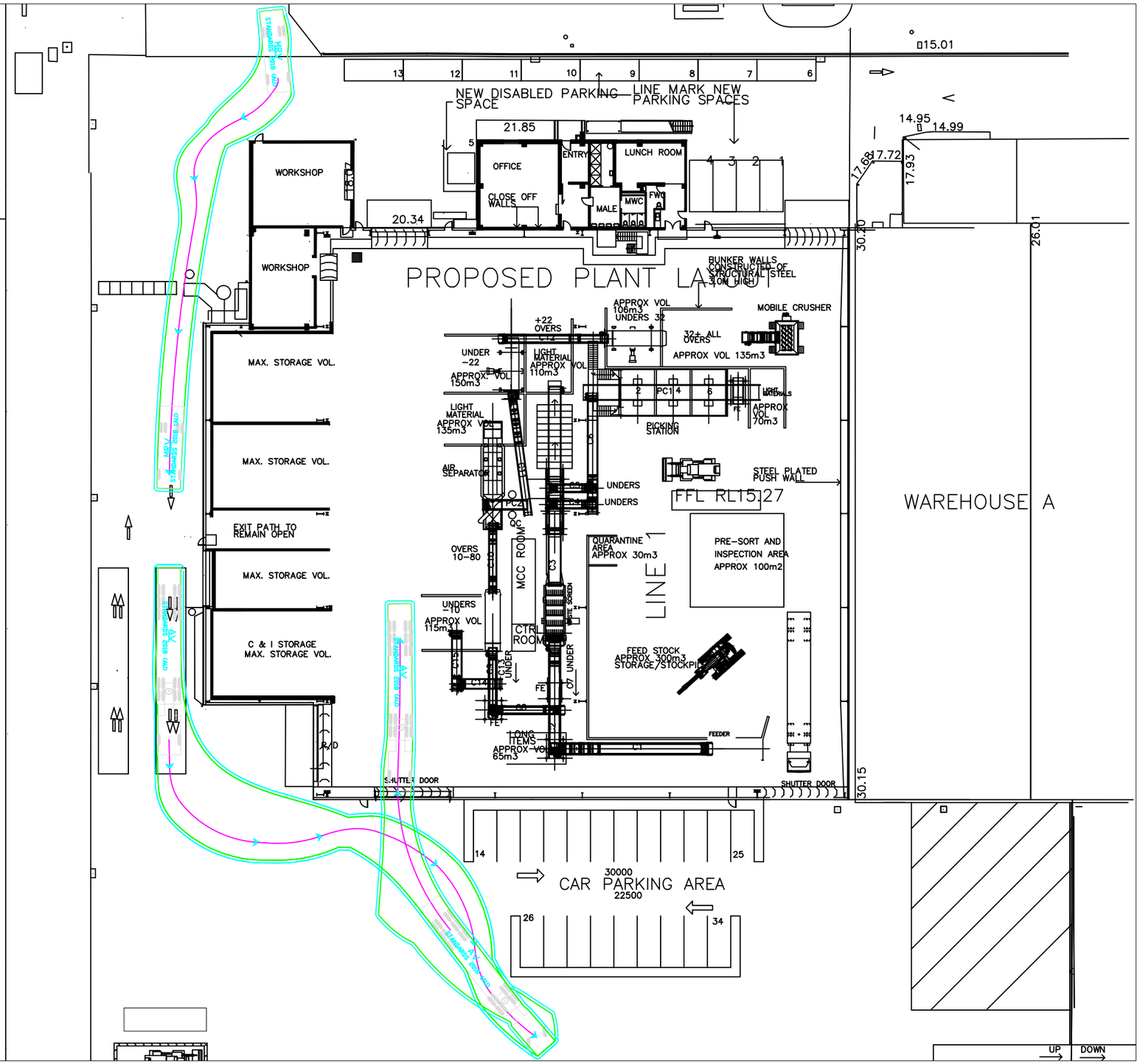
meters

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

LEGEND

VEHICLE BODY PATH (INCLUDING OVERHANG)

MANOEUVRING CLEARANCE (300mm)



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STANBURY TRAFFIC PLANNING

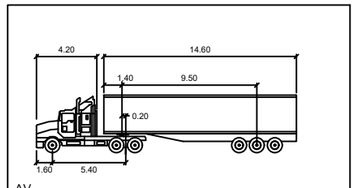
MEDIUM RIGID & ARTICULATED VEHICLE SWEPT PATHS

INTERNAL SITE MANOEUVRING

PROPOSED COBRA WASTE SOLUTIONS RESOURCE RECOVERY FACILITY

30 LOFTUS ROAD, YENNORA

SCALE: 1:500 AT A3		ISSUE A
FILE: 21-023	SUPERSEDES SHEET/ISSUE -	
DATE: 1/02/2022		SHEET 3



AV

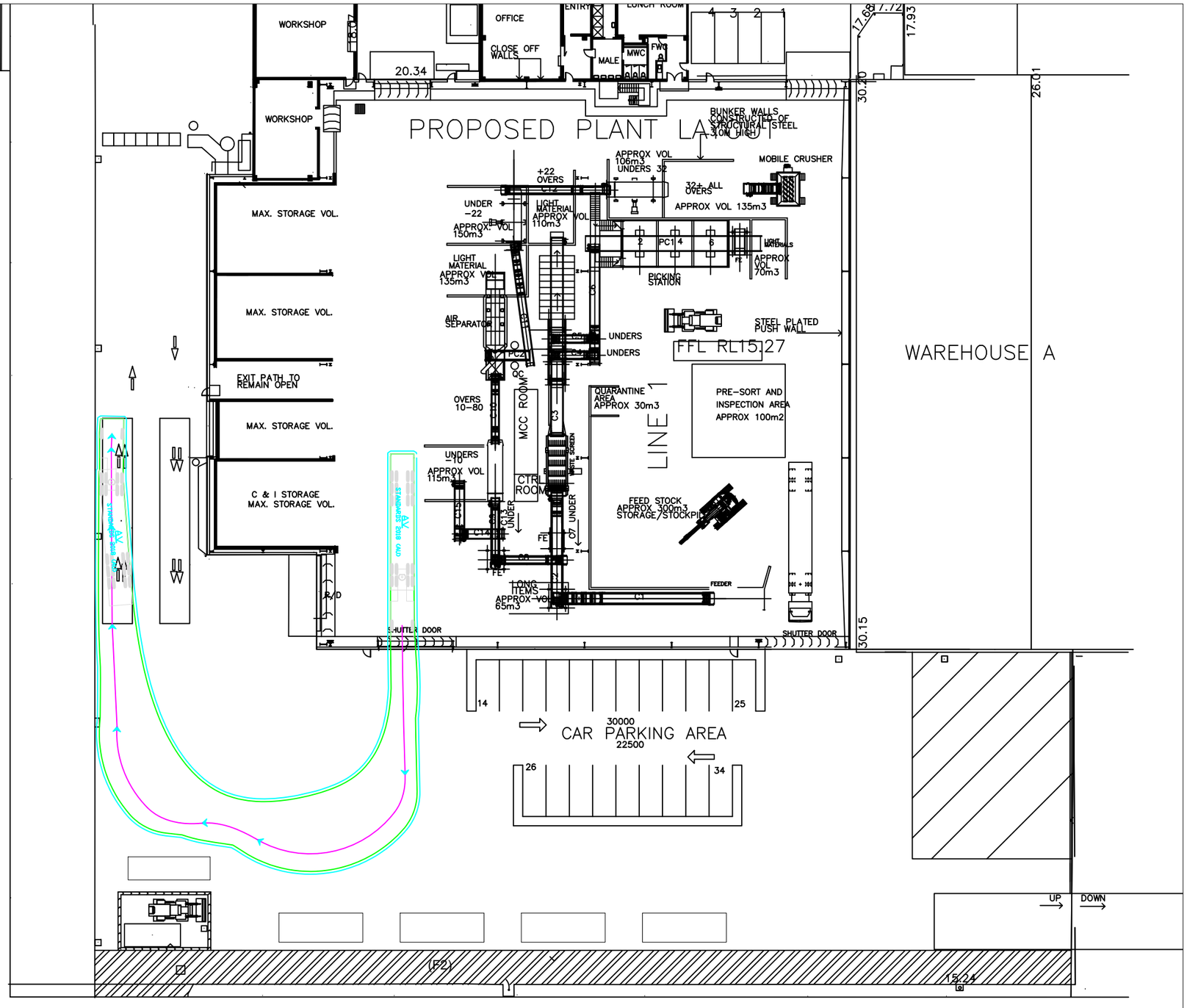
meters

Tractor Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 28.3
Tractor Track	: 2.50	Articulating Angle	: 72.0
Trailer Track	: 2.50		

LEGEND

VEHICLE BODY PATH (INCLUDING OVERHANG)

MANOEUVRING CLEARANCE (300mm)



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STANBURY TRAFFIC PLANNING

ARTICULATED VEHICLE SWEPT PATHS

INTERNAL SITE MANOEUVRING

PROPOSED COBRA WASTE SOLUTIONS RESOURCE RECOVERY FACILITY

30 LOFTUS ROAD, YENNORA

SCALE: 1:500 AT A3

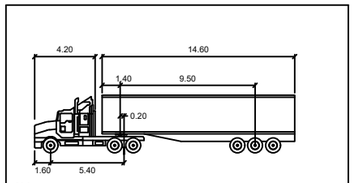
FILE: 21-023

SUPERSEDES SHEET/ISSUE -

DATE: 1/02/2022

ISSUE A

SHEET 4



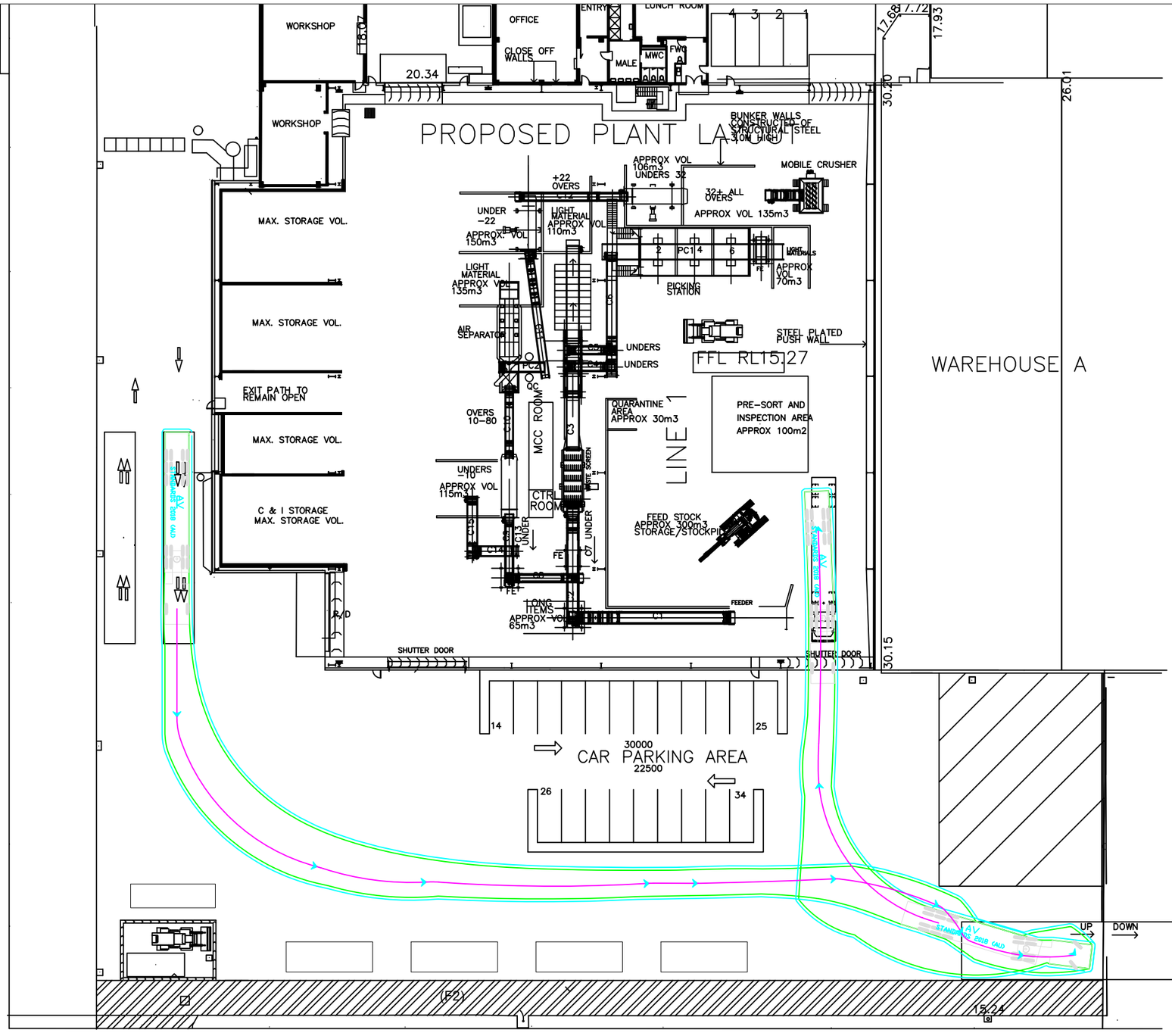
AV

meters			
Tractor Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 28.3
Tractor Track	: 2.50	Articulating Angle	: 72.0
Trailer Track	: 2.50		

LEGEND

VEHICLE BODY PATH (INCLUDING OVERHANG)

MANOEUVRING CLEARANCE (300mm)



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STANBURY TRAFFIC PLANNING

ARTICULATED VEHICLE SWEPT PATHS

INTERNAL SITE MANOEUVRING

PROPOSED COBRA WASTE SOLUTIONS RESOURCE RECOVERY FACILITY

30 LOFTUS ROAD, YENNORA

SCALE: 1:500 AT A3

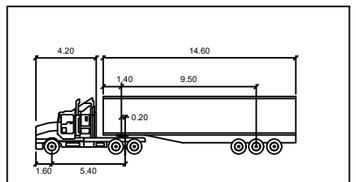
FILE: 21-023

SUPERSEDES SHEET/ISSUE -

DATE: 1/02/2022

ISSUE A

SHEET 5



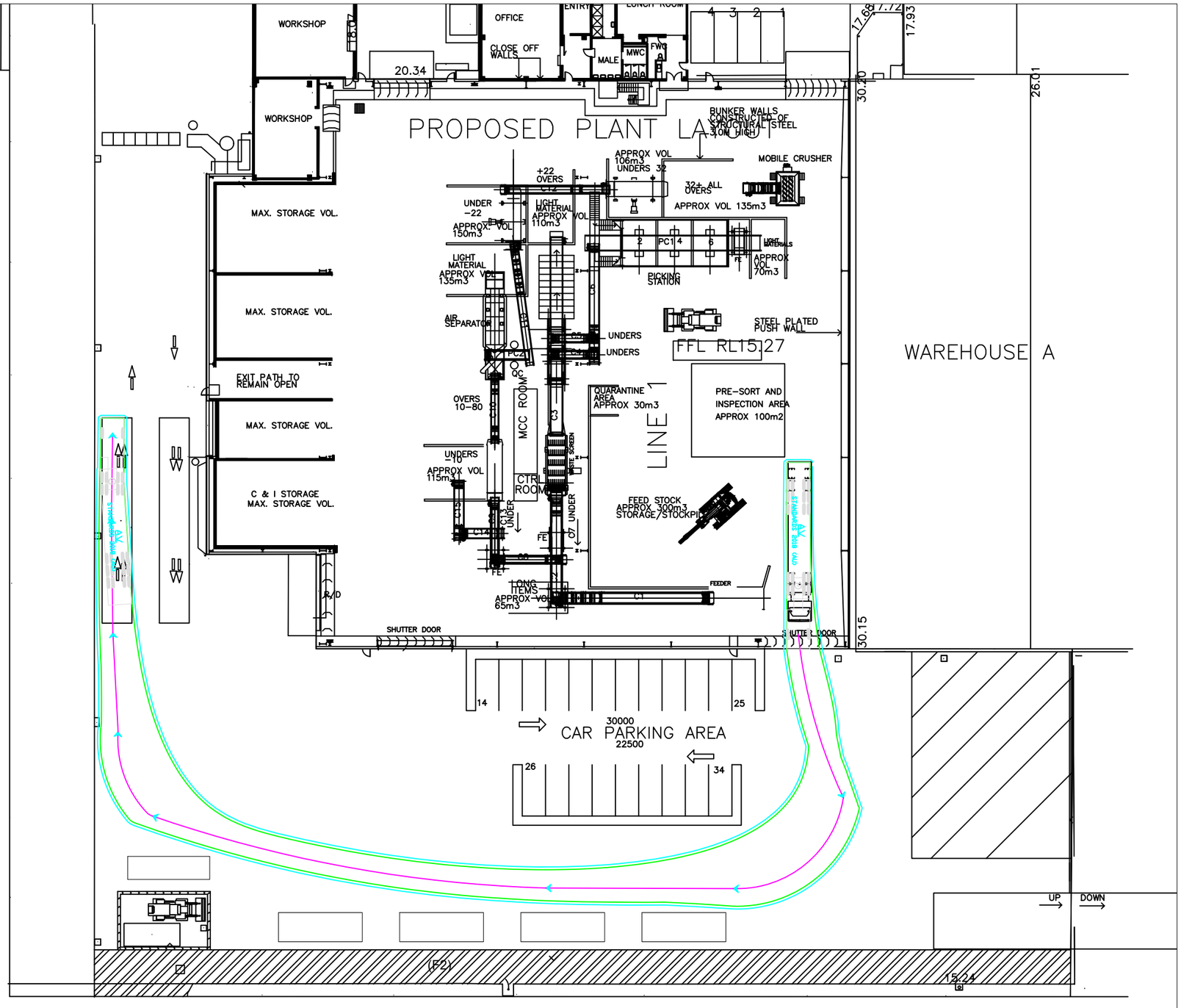
AV

meters			
Tractor Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 28.3
Tractor Track	: 2.50	Articulating Angle	: 72.0
Trailer Track	: 2.50		

LEGEND

VEHICLE BODY PATH (INCLUDING OVERHANG)

MANOEUVRING CLEARANCE (300mm)



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STANBURY TRAFFIC PLANNING

ARTICULATED VEHICLE SWEPT PATHS

INTERNAL SITE MANOEUVRING

PROPOSED COBRA WASTE SOLUTIONS RESOURCE RECOVERY FACILITY

30 LOFTUS ROAD, YENNORA

SCALE: 1:500 AT A3

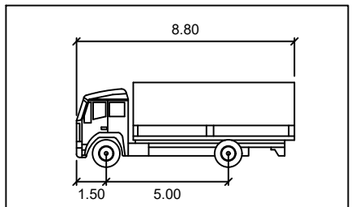
FILE: 21-023

SUPERSEDES SHEET/ISSUE -

ISSUE A

DATE: 1/02/2022

SHEET 6



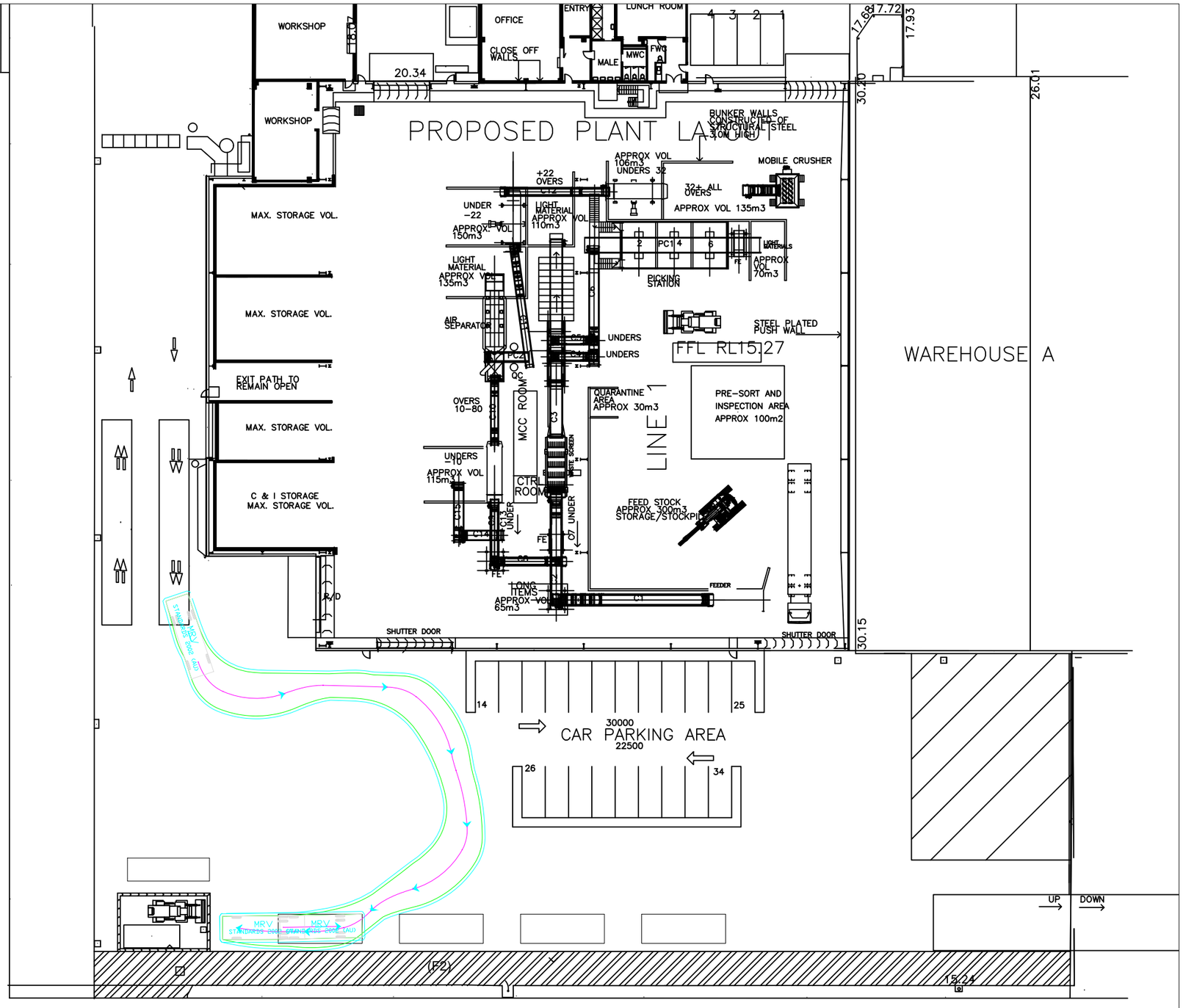
MRV

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

LEGEND

VEHICLE BODY PATH (INCLUDING OVERHANG)

MANOEUVRING CLEARANCE (300mm)



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STANBURY TRAFFIC PLANNING

MEDIUM RIGID VEHICLE SWEPT PATHS

INTERNAL SITE MANOEUVRING

PROPOSED COBRA WASTE SOLUTIONS RESOURCE RECOVERY FACILITY

30 LOFTUS ROAD, YENNORA

SCALE: 1:500 AT A3

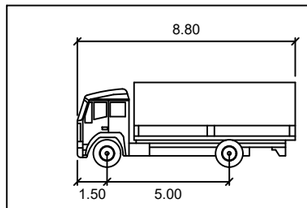
FILE: 21-023

SUPERSEDES SHEET/ISSUE -

ISSUE A

DATE: 1/02/2022

SHEET 7



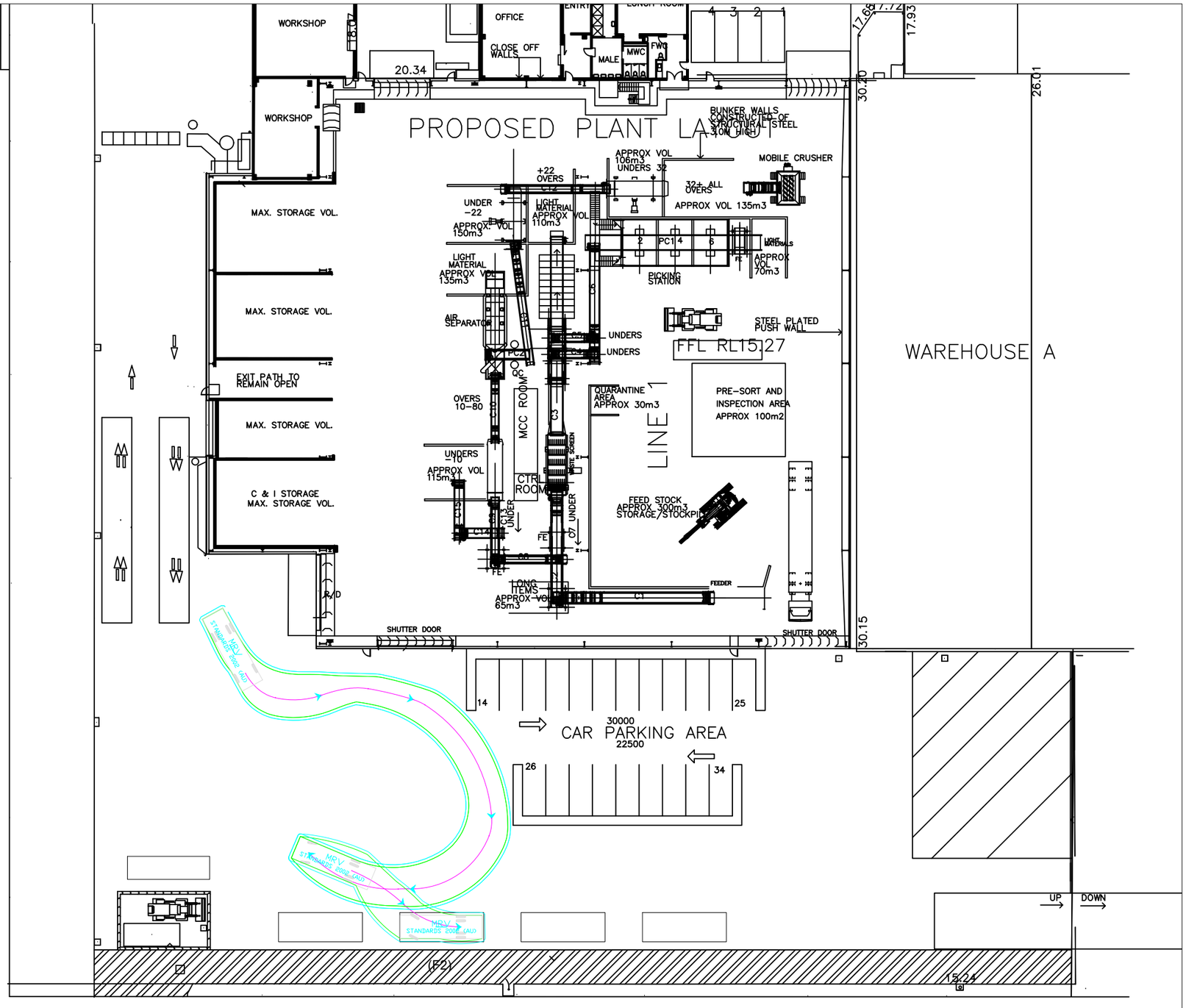
MRV

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

LEGEND

VEHICLE BODY PATH (INCLUDING OVERHANG)

MANOEUVRING CLEARANCE (300mm)



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STANBURY TRAFFIC PLANNING

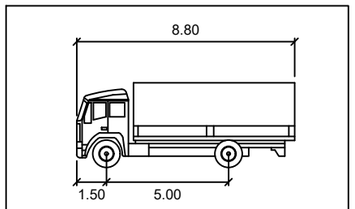
MEDIUM RIGID VEHICLE SWEPT PATHS

INTERNAL SITE MANOEUVRING

PROPOSED COBRA WASTE SOLUTIONS RESOURCE RECOVERY FACILITY

30 LOFTUS ROAD, YENNORA

SCALE: 1:500 AT A3		ISSUE	A
FILE: 21-023	SUPERSEDES SHEET/ISSUE -		
DATE: 1/02/2022		SHEET	8



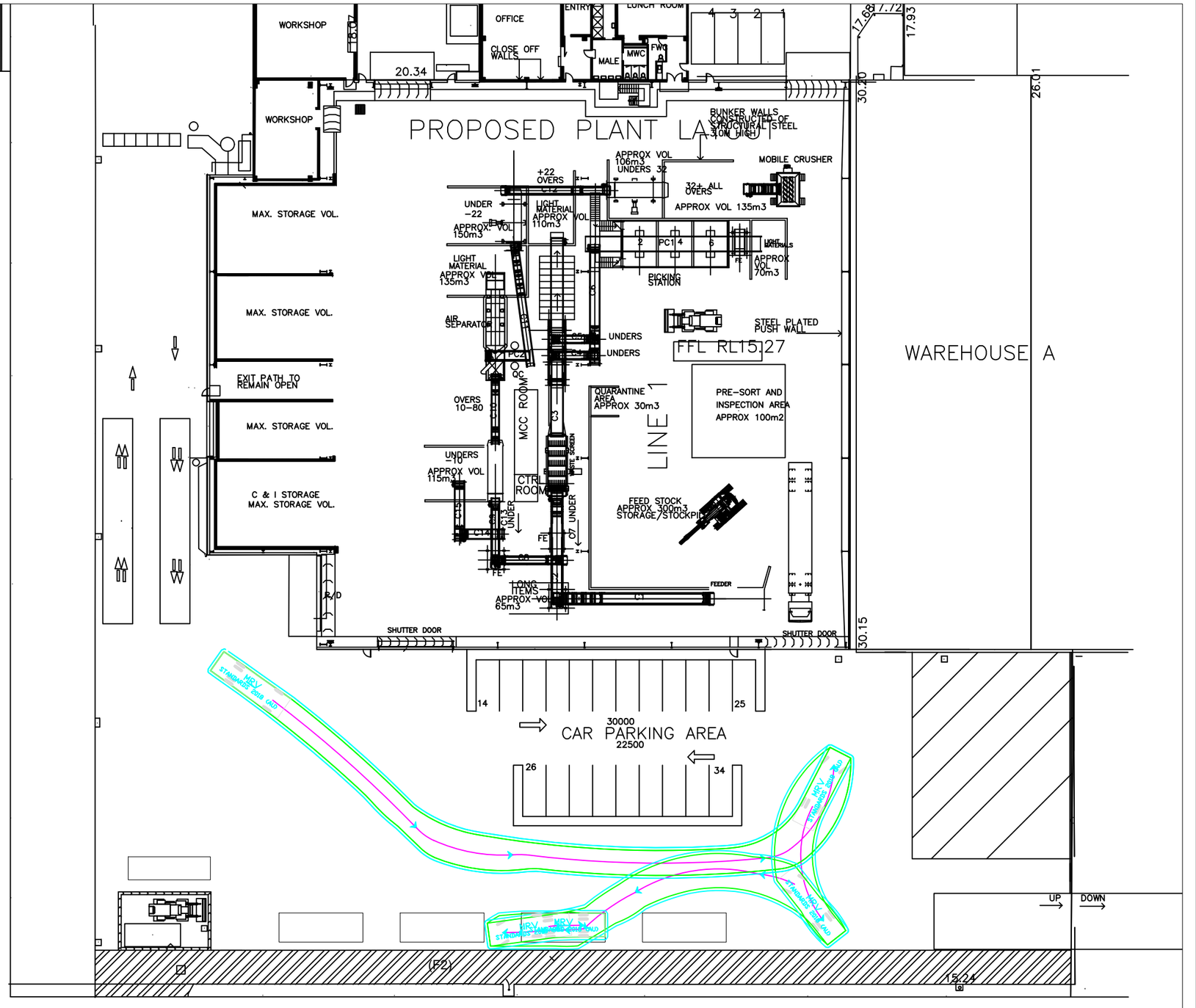
MRV

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

LEGEND

VEHICLE BODY PATH (INCLUDING OVERHANG)

MANOEUVRING CLEARANCE (300mm)



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STANBURY TRAFFIC PLANNING

MEDIUM RIGID VEHICLE SWEPT PATHS

INTERNAL SITE MANOEUVRING

PROPOSED COBRA WASTE SOLUTIONS RESOURCE RECOVERY FACILITY

30 LOFTUS ROAD, YENNORA

SCALE: 1:500 AT A3

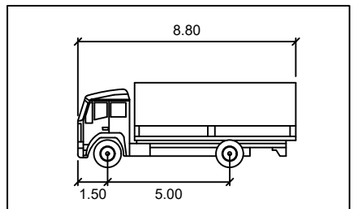
FILE: 21-023

SUPERSEDES SHEET/ISSUE -

ISSUE A

DATE: 1/02/2022

SHEET 9



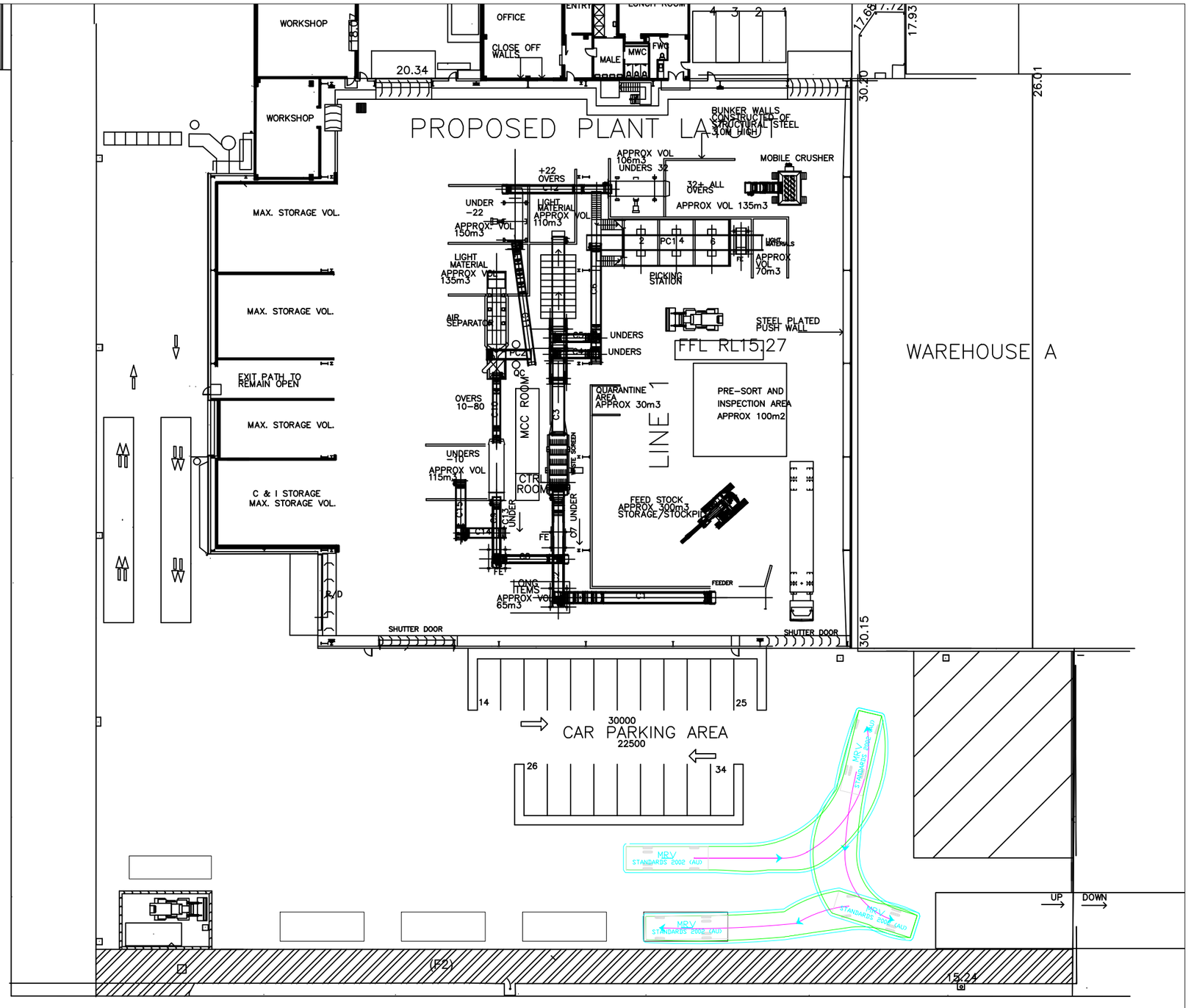
MRV

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

LEGEND

VEHICLE BODY PATH (INCLUDING OVERHANG)

MANOEUVRING CLEARANCE (300mm)



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STANBURY TRAFFIC PLANNING

MEDIUM RIGID VEHICLE SWEPT PATHS

INTERNAL SITE MANOEUVRING

PROPOSED COBRA WASTE SOLUTIONS RESOURCE RECOVERY FACILITY

30 LOFTUS ROAD, YENNORA

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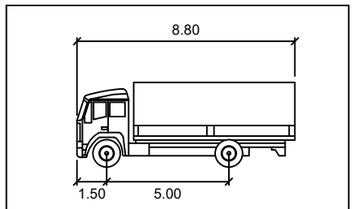
FILE: 21-023

SUPERSEDES SHEET/ISSUE -

DATE: 1/02/2022

ISSUE A

SHEET 10



MRV

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

LEGEND

VEHICLE BODY PATH (INCLUDING OVERHANG)

MANOEUVRING CLEARANCE (300mm)

PROPOSED PLANT LAYOUT

WAREHOUSE A

WORKSHOP

WORKSHOP

OFFICE

CLOSE OFF WALLS

ENTRY

LUNCH ROOM

MALE

MWC

FWC

20.34

18.07

17.68

17.72

17.93

30.40

26.01

30.15

BUNKER WALLS CONSTRUCTED OF STRUCTURAL STEEL 3.0m HIGH

MOBILE CRUSHER

APPROX VOL 106m3 UNDERS 32

32± ALL OVERS

APPROX VOL 135m3

+22 OVERS

UNDER -22

APPROX. VOL 150m3

LIGHT MATERIAL APPROX VOL 110m3

LIGHT MATERIAL APPROX VOL 135m3

PC1

PICKING STATION

LIGHT MATERIALS

APPROX VOL 70m3

AIR SEPARATOR

STEEL PLATED PUSH WALL

UNDERS

UNDERS

FFL RL15.27

PC2

QC

OVERS 10-80

MCC ROOM

QUARANTINE AREA APPROX 30m3

PRE-SORT AND INSPECTION AREA APPROX 100m2

LINE 1

UNDERS -10

APPROX VOL 115m3

CTRL ROOM

PRE SCREEN

FEED STOCK APPROX 300m3 STORAGE/STOCKPILE

UNDER

FE

FEEDER

LONG ITEMS APPROX VOL 65m3

MAX. STORAGE VOL.

MAX. STORAGE VOL.

EXIT PATH TO REMAIN OPEN

MAX. STORAGE VOL.

C & I STORAGE MAX. STORAGE VOL.

R/D

SHUTTER DOOR

SHUTTER DOOR

14

25

30000

CAR PARKING AREA

22500

26

34

MRV STANDARDS 2018 (AU)

UP

DOWN

(F2)

15.24

STANBURY TRAFFIC PLANNING	
ADDRESS:	302/166 GLEBE POINT RD, GLEBE
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EMAIL:	info@stanburytraffic.com.au
WEBSITE:	www.stanburytraffic.com.au

NOTES:

1. THIS PLAN IS BASED ON ARCHITECTURAL PLANS PREPARED BY CARLO RANIERI & ASSOCIATES PTY. LTD.
2. THE SWEPT PATHS PROVIDED ON THIS PLAN HAVE BEEN GENERATED UTILISING AUTOTURN PRO VERSION 11 IN CONJUNCTION WITH MEDIUM RIGID VEHICLE MANOEUVRING SPECIFICATIONS IN ACCORDANCE WITH THE AUSTRALIAN STANDARD FOR PARKING FACILITIES PART 2: OFF-STREET COMMERCIAL VEHICLE FACILITIES (AS2890.2:2018).

STANBURY TRAFFIC PLANNING

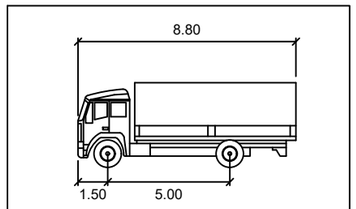
MEDIUM RIGID VEHICLE SWEPT PATHS

INTERNAL SITE MANOEUVRING

PROPOSED COBRA WASTE SOLUTIONS RESOURCE RECOVERY FACILITY

30 LOFTUS ROAD, YENNORA

SCALE: 1:500 AT A3		ISSUE A
FILE: 21-023	SUPERSEDES SHEET/ISSUE -	
DATE: 1/02/2022		SHEET 11



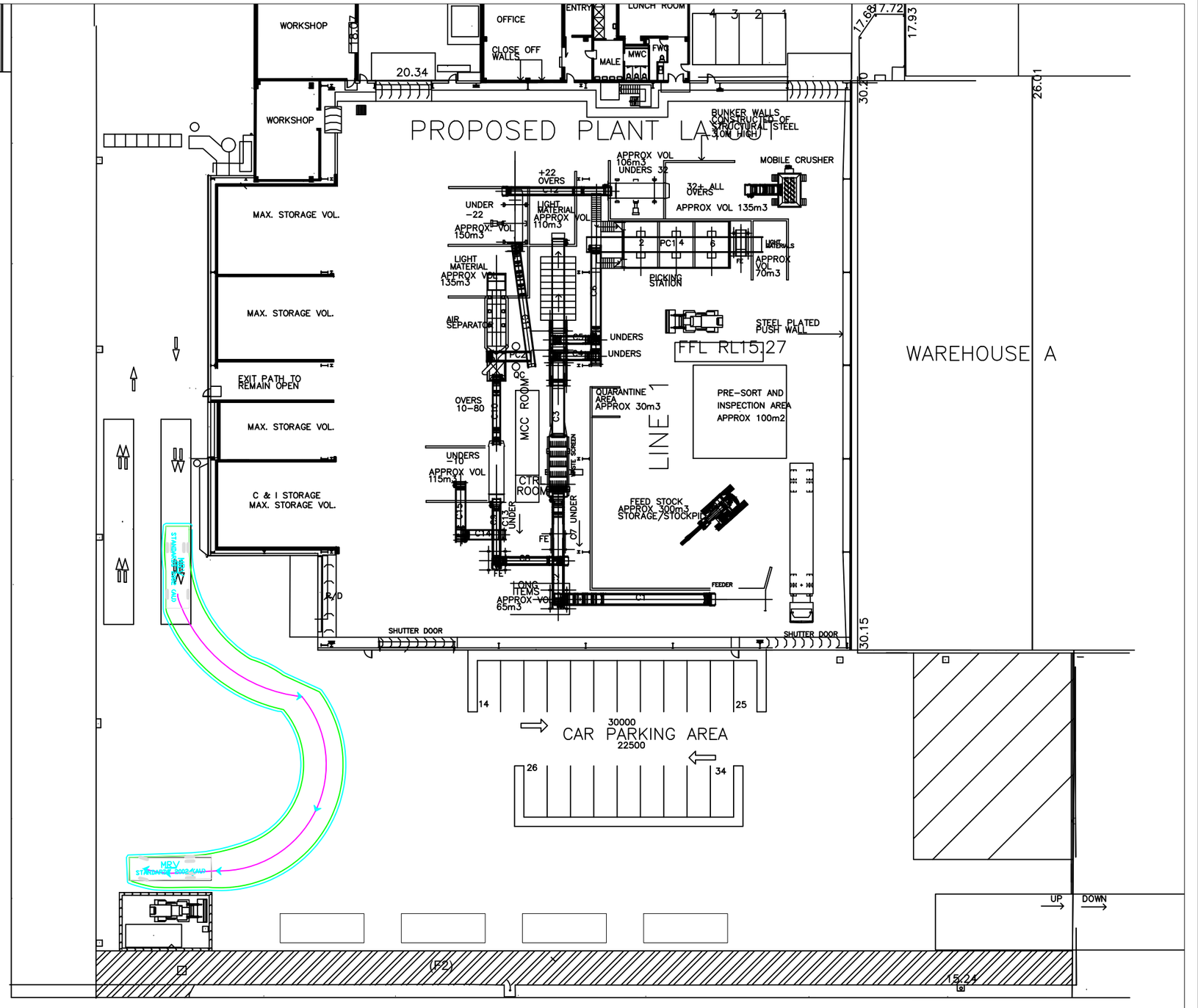
MRV

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

LEGEND

VEHICLE BODY PATH (INCLUDING OVERHANG)

MANOEUVRING CLEARANCE (300mm)



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INTERNAL SITE MANOEUVRING

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SCALE: 1:500 AT A3

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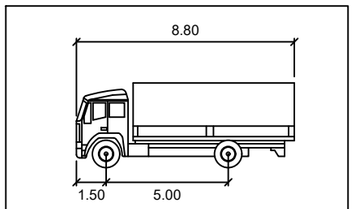
SUPERSEDES SHEET/ISSUE -

ISSUE A

DATE: 1/02/2022

SHEET 12



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	meters
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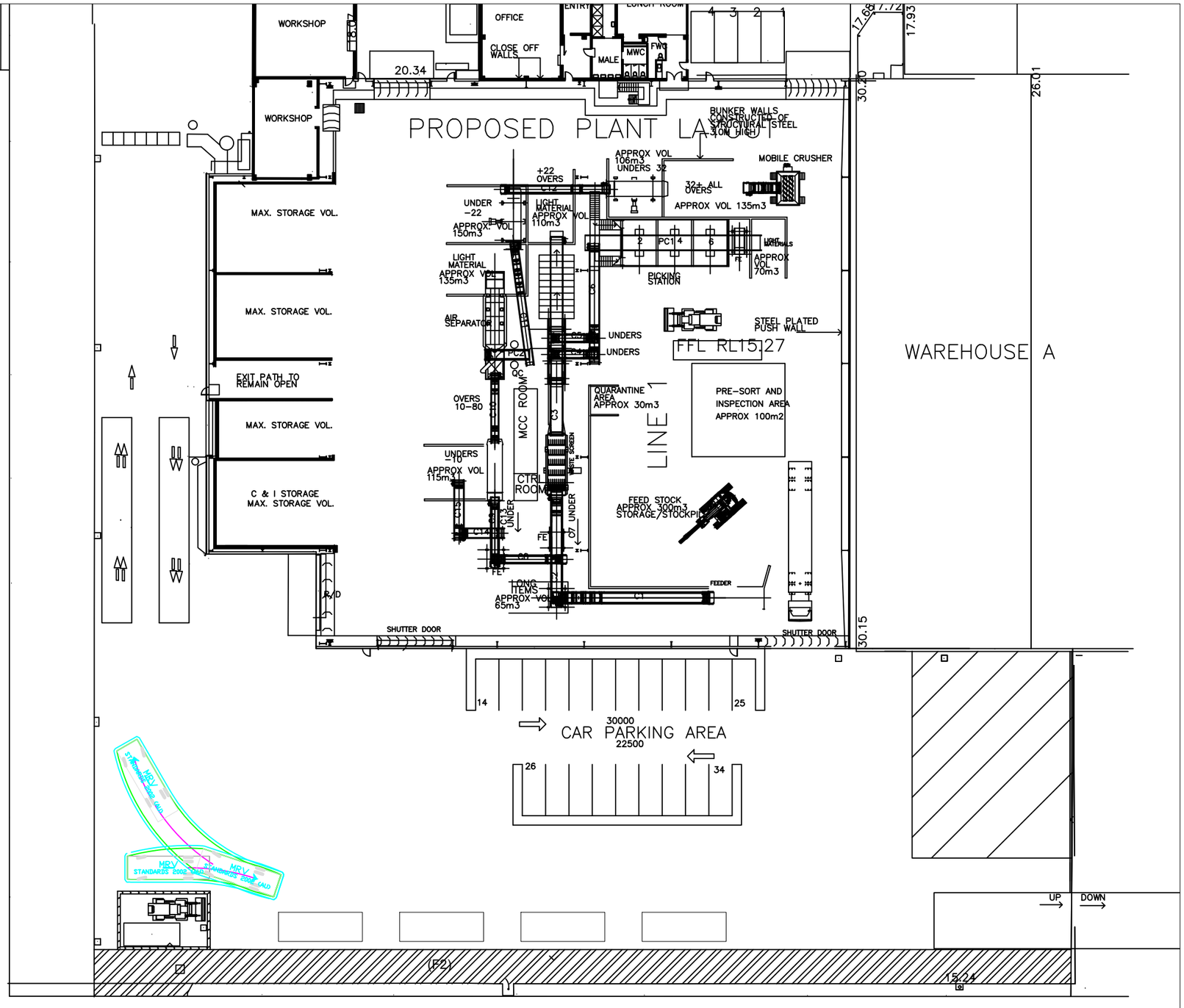
LEGEND

VEHICLE BODY PATH (INCLUDING OVERHANG)

MANOEUVRING CLEARANCE (300mm)



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