

## Sydney Business Park

# OLG Facility

## Traffic Impact Assessment

Reference: 253779-00

B | 16 October 2022

This report takes into account the particular instructions and requirements of our client. It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 253779-00

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# 1. Introduction

Sydney Business Park commissioned Arup to undertake a traffic and transport assessment for a proposed industrial development in the Marsden Park Industrial Precinct on Astoria Street (OLG Facility). This report assesses the traffic and transport impacts of the proposed development (the site) and supports the Development Application (DA) submission.

The location of the site is shown in Figure 1. The project includes the following scope of works:

- Subdivision of the lot into 2 lots (1 development and 1 residual).
- Earthworks, clearing and service relocation.
- Construction of the facility.



**Figure 1 Subject site**

## 1.1 Scope

This report covers the following scope of works:

- Vehicle access.
- Car parking arrangements.
- Pedestrian and bicycle access.
- Traffic generation and road network impacts.
- Outline construction traffic management plan.



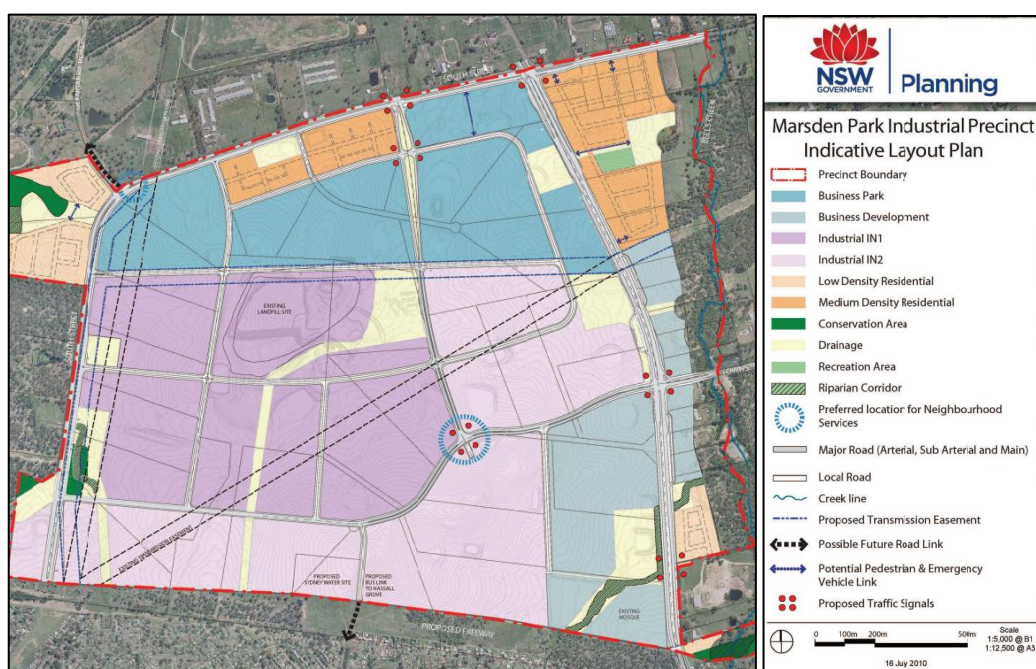
## 1.2 Background

The vision for the Marsden Park Industrial Precinct is to create an attractive employment precinct that provides for a diverse range of job opportunities to support the growing residential areas in Sydney's North West. The precinct will be characterised by a mix of employment generating uses such as general and light industrial, business parks, and commercial uses. It will also consist of some smaller medium and low-density residential areas near the future Marsden Park Town Centre to the north.

The industrial land uses will form the majority of the precinct. It is intended to support a range of light and general industrial uses from large floor-plate warehousing and storage facilities which capitalise on the precinct's location near Richmond Road, to smaller factory unit style developments for more intensive trade-based activities.

Industrial uses are to operate to best practice industry standards and not impose any adverse impacts on the nearby residential lands. Buildings are to be appropriately designed to address the street and other public domain areas, and all street frontages will contain quality landscaping that establishes a high standard of character and design.

The precinct will accommodate 6-7 storey buildings set in a campus environment. This area is envisaged to be vibrant and pedestrian friendly, focused along the main street with key active frontages along South Street. The business parks are to complement Marsden Park Town Centre by providing a commercial focus of high-value employment within a short walking distance of the retail activity provided in the Town Centre.



**Figure 2 Marsden Park industrial Precinct**

### 1.2.1 Stage 1 Transport Impact Assessment

A transport impact assessment master plan was developed for the Stage 1 phase of the Marsden Park Industrial Precinct in 2010 by AECOM. The report was submitted to Blacktown City Council as documentation for the Statement of Environmental Effects for Stage 1 of the Marsden Park Employment Area (Lot 1 and Townson Road intersection).

### 1.2.2 Stage 2 Transport Impact Assessment

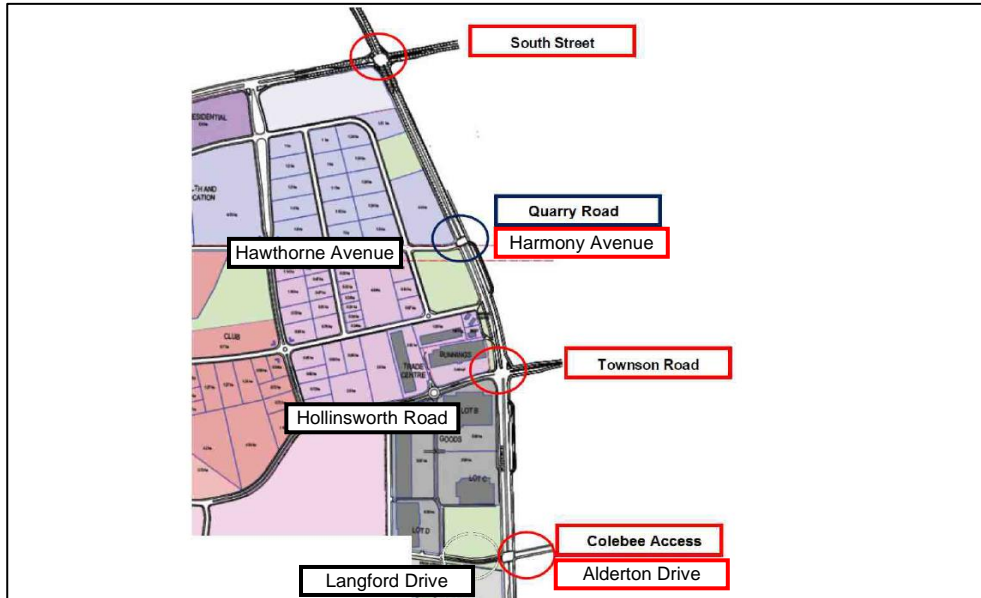
The Stage 2 report built on the work previously undertaken in Stage 1. It was prepared to determine the internal intersection layouts required to support development for a 10-year horizon (2021), and to support the full development of the Marsden Park Industrial Precinct (2036). The report carried out traffic modelling for the interim 2021 and final 2036 intersection layout requirements for the internal road network to perform satisfactorily.

The report stated that the provision of South Street and Townson Road intersections along Richmond Road would have insufficient capacity for the demand forecasted to access the Marsden Park Industrial Precinct by 2036.

The report identified the need to provide additional accesses to Richmond Road between Bells Creek and South Street. It recommended a new central collector road along Richmond Road be built (now known as Hawthorne Avenue).

### 1.2.3 Stage 2B Transport Impact Assessment

The Stage 2B assessment included SIDRA traffic modelling for the new Richmond Road / Hawthorne Road intersection. The modelling indicated a level of service C in a 2036 scenario.



**Figure 3: Eastern entry points**

### 1.2.4 Report Findings

Traffic modelling has gone through an iterative process in order to accommodate the forecast 2021 interim and 2036 final growth numbers. The intersections are predicted to operate efficiently according to the AECOM reports with the 2021 and 2036 scenario results summarised in Table 1.

**Table 1: Summary of AECOM modelled intersection performance**

No.	Intersection Name	Level of service and control type	
		2021 (AM peak/PM peak)	2036 (AM peak/PM peak)
1	Main North-South Road / Central Collector	A/A Roundabout	A/A Roundabout
2	Main North-South Road / Eastern	A/A Roundabout	A/A Roundabout
3	Townson Road / Southern Collector	B/B Priority Controlled	B/B Signalised
4	Townson Road / Main North-South Road	B/B Priority Controlled	A/B Signalised
5	Richmond Road / Hawthorne Road	N / A	C/C Signalised



**Figure 4: Modelled intersection locations**



## 2. Existing Conditions

### 2.1 Location

The site is located in Marsden Park Industrial Precinct in the Blacktown City Council local government area. The location of the site relative to the surrounding area is shown in Figure 5.

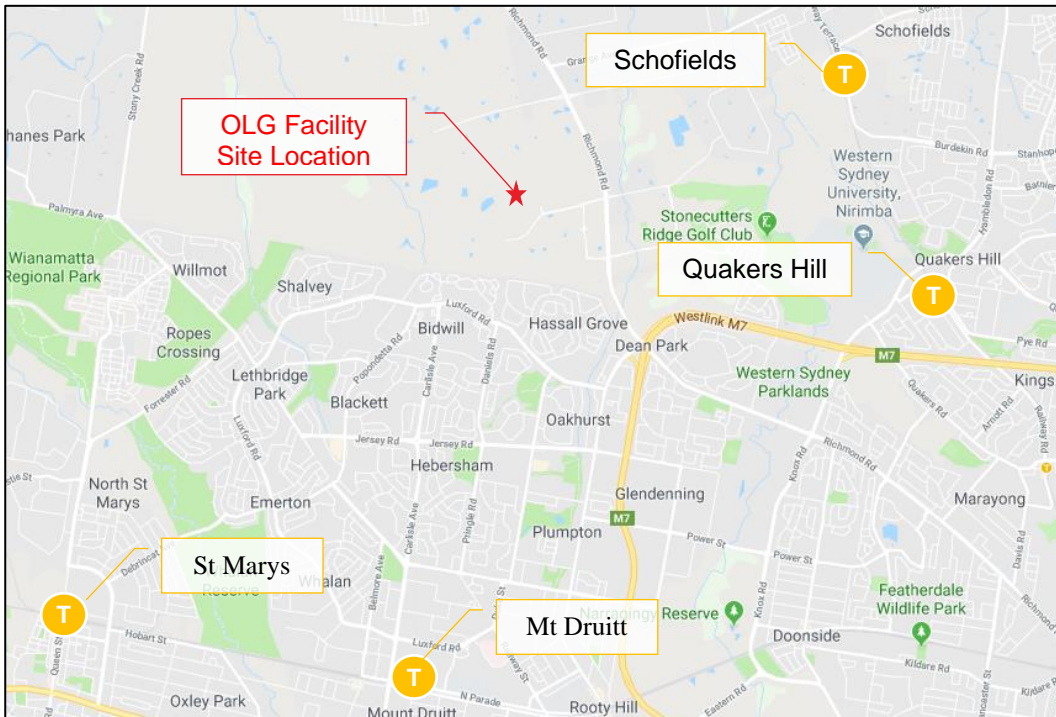


Figure 5: Marsden Park, OLG Facility location

### 2.2 Public Transport

Bus stops are located on Harris Avenue and Hollinsworth Road and within 600 metres walking distance from the site. These bus stops service bus routes 742, 747 and 751 which provide feeder connections to nearby train stations including Riverstone and Mount Druitt train stations and Tallawong and Rouse Hill metro stations. These bus services typically operate with one to two buses every hour.



Figure 6 Existing public transport accessibility to the site

### 2.3 Road Network

The site is accessed from Astoria Street, which is classified as a local road. Richmond Road is classified as a state road and connects the site to the wider road network. Rooty Hill Road North and the M7 Motorway are accessible via Richmond Road to the south of the site. Other lower order roads around the site are unclassified.

The internal road network consisting of Hawthorne Avenue and Hollinsworth Road, both connecting to Richmond Road as signalised intersections, connect through to Harris Avenue. Internal intersections are priority controlled by roundabouts and give-way intersections.

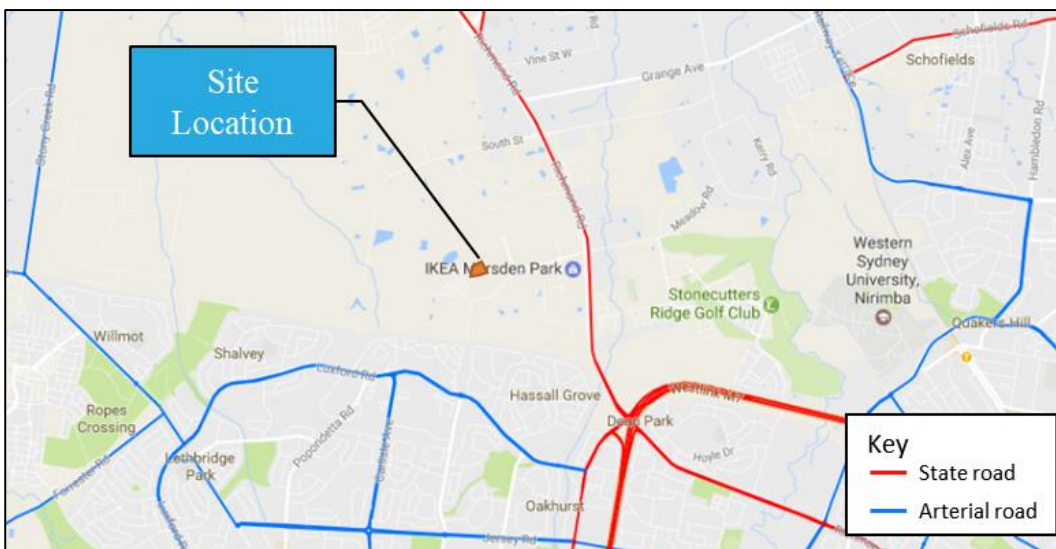


Figure 7 Road classifications around the site

### 2.4 Pedestrians and Cyclists

Pedestrian access to the site is well-developed with a comprehensive network of footpaths and signalised crossing locations. Richmond Road has a shared pedestrian and bicycle path providing access to the site as shown in Figure 8.



**Figure 8: Pedestrian and bicycle shared path along Richmond Road (north of Hollinsworth Road, facing north)**



### 3. Proposed Development

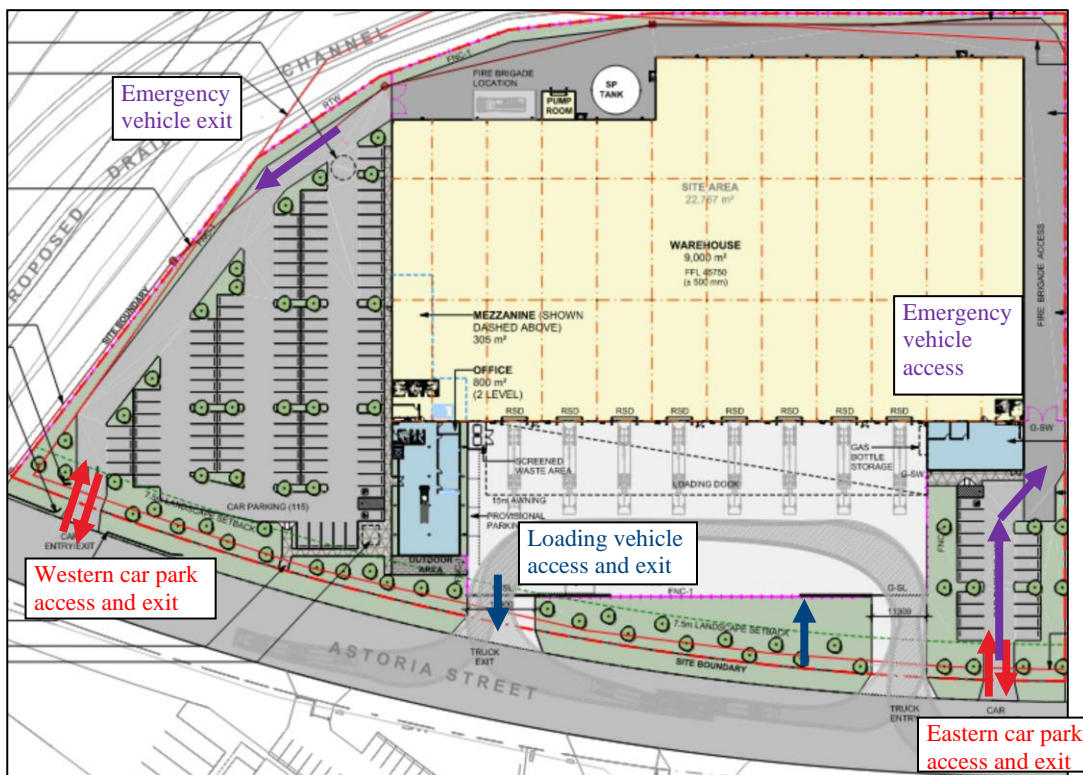
The proposed development consists of a warehouse and office. The breakdown of the floor area for each component is shown in Table 2.

**Table 2: Breakdown of the proposed development**

Site breakdown	Area
Warehouse	9,000 m <sup>2</sup>
Warehouse office	1,105 m <sup>2</sup>
Dock office	200 m <sup>2</sup>
<b>Total building area (excluding pump room)</b>	<b>10,305 m<sup>2</sup></b>

#### 3.1 Proposed Site Access

The proposed site access is shown in Figure 9 and detailed below.



**Figure 9 OLG Facility Car park**

#### Private vehicles

Car parking for private vehicles is provided via two car parks at the western and eastern extents of the site. Both car parks are accessible from Astoria Street and allow combined entries and exits.

#### Loading vehicles

Loading vehicles are proposed to access the site via Astoria Street. Loading vehicles accessing the loading dock within the site include vans, rigid trucks, semi-trailers and B-double trucks.

Vans, rigid trucks and semi-trailers would reverse into individual loading dock bays and exit in a forward manoeuvre. B-doubles are expected to travel in a forward direction only within the site.



## **Emergency vehicles**

Emergency vehicles (up to a 12.5m specialist appliance fire truck) are proposed to access the site via Astoria Street to the east through the eastern car park and exit via the car park access to the west. The eastern entrance as shown in Figure 9 is connected to the eastern car park, and this entrance will be maintained only for emergency vehicle access. Emergency vehicles will exit via the western carpark through the same exit as for private vehicles.

## 4. Transport and Parking Assessment

The *Blacktown City Council Growth Centre Precincts Development Control Plan* (DCP) (Blacktown City Council, 2010) was adopted by the Deputy Director General Strategies and Land Release (or delegate) of the Department of Planning on 14 May 2010 and came into force on 19 May 2010. The Marsden Park Industrial Precinct applies to this DCP.

### 4.1 Parking Guidelines

The parking rates recommended by the DCP are shown in Table 3.

**Table 3: Parking rates Blacktown City Council Growth Centre Precincts DCP**

Blacktown Local Environmental Plan Zoning	Car Parking Requirements	Bicycle Parking Requirements
IN2 (Light Industrial)	Buildings 7,500sqm or less – 1 space per 75sqm GFA.	Employees: 1 bicycle locker or another suitable form of secure bicycle accommodation is to be provided per 200 m <sup>2</sup> GFA.
IN1 (General Industrial)	Buildings greater than 7500sqm – 1 space per 200sqm GFA only for the area in excess of 7500sqm where there is a specific end user which would not demand a higher rate and where employee parking is adequately catered for. 1 space per 40sqm GFA for the Office Component.	

### 4.2 Parking Assessment

#### 4.2.1 Car Parking

Based on the DCP guidelines, the site needs to provide a minimum of 140 parking spaces with the breakdown shown in Table 4.

**Table 4: DCP guideline requirements**

Use	Area	DCP Rate	Car parking required
Warehouse	9,000 m <sup>2</sup>	Up to 7,500 m <sup>2</sup> - 1 space per 75 m <sup>2</sup> Above 7,500 m <sup>2</sup> – 1 space per 200m <sup>2</sup>	107.5
Warehouse office	1,105 m <sup>2</sup>	1 space per 40 m <sup>2</sup>	27.5
Dock office	200 m <sup>2</sup>	1 space per 40 m <sup>2</sup>	5
<b>Total requirement</b>			<b>140</b>

Based on the *Guide to Traffic Generating Developments* (TfNSW, 2002) for a warehouse and office facility, the site needs to provide a minimum of 61 car parking spaces, with the breakdown shown in Table 5.

**Table 5: Guide to Traffic Generating Developments requirements**

Use	Area	Guide to Traffic Generating Developments Rate	Car parking required
Warehouse	9,000 m <sup>2</sup>	1 space per 300 m <sup>2</sup>	30
Warehouse office	1,105 m <sup>2</sup>	1 space per 40 m <sup>2</sup>	27.5
Dock office	200 m <sup>2</sup>	1 space per 40 m <sup>2</sup>	5
<b>Total requirement</b>			<b>63</b>

The DCP and TfNSW guidelines are based on the assumption that the size of each component of a mixed-use building is directly proportional to the number of employees by use, and hence car spaces. These rates are useful as a guide when the number of employees or tenants within a future development are unknown, and as such an estimate for the number of parking spaces required can be provided using the guidelines.

The site proposes a total of 140 car spaces, 3 being DDA parking bays and 6 provisional parking bays in addition, with the breakdown shown in the above Table 4 (DCP requirements) and Table 5 (TfNSW). This provision meets the 140 spaces required by the DCP and vastly exceeds the 63 spaces required by the TfNSW *Guide to Traffic Generating Developments*. Furthermore, it is estimated that the total peak number of staff across the site is approximately 50 people. Therefore, the provision of 140 car spaces is considered sufficient to cater for the expected parking demand at the site.

#### 4.2.2 Bicycle parking

Based on a GFA of 10,305 m<sup>2</sup>, a total of 52 secure bicycle parking spaces are required by the DCP as shown in Table 6.

**Table 6 DCP Bicycle parking requirements**

Area	DCP rate	Bicycle Parking Required
10,305 m <sup>2</sup>	1 bicycle locker or another suitable form of secure bicycle accommodation is to be provided per 200m <sup>2</sup> GFA	52

It is estimated that the total peak hour estimate of staff is at approximately 50 people. With a bicycle parking supply at 52 required by the DCP, this requirement would be highly excessive for this location as it would imply a mode share of 96% for cycling.

A 10% cycle mode share has been allocated, resulting in approximately 6 bicycle parking spaces which will be provided to better allocate resources of the development. The design does not preclude provision of additional parking if required.

The provision of appropriate cycle facilities will further encourage the use of the existing networks and will assist in the reduction of private vehicle travel for the journey to work for staff.

### 4.3 Access

Loading provision has been designed for 19m Articulated Vehicles (AVs). Occasional use for 25m B-doubles has been allowed as well. Entry/exit will be via Astoria Street into one of the 2 car parks or loading areas. Road access driveways have been designed in accordance with AS2890.2 for the largest vehicle being the Austroads 25m B-double vehicle into the loading docks and the Austroads B99 vehicle for car parks.

All vehicles smaller than the 25m B-double will reverse into the loading docks and will exit in a forward manoeuvre. The B-doubles are expected to travel in a forward direction only within the sites. A swept path analysis was undertaken for the relevant manoeuvres and is shown in Appendix A.

All entry/exit movements to/from each site will be in a forward direction. Combined entry/exit accesses have been designed so that two cars will be able to pass at the site driveway. Sight triangles have been provided as per AS2890 to permit safe access into and out of the loading areas/car parks.

### 4.4 Internal Design

The internal parking and arrangements associated with the development have been assessed in accordance with AS/NZS 2890.1 (2004) and AS/NZS 2890.6: (2009) with the following characteristics noteworthy:

- 90° angle car parking spaces are provided with a dimension of minimum 2.4m × 5.4m within a minimum 5.8m wide aisle, which accords with the requirements for user class 1 & 1A for long term parking.
- 90° angle accessible car parking space(s) are provided with a dimension of 2.4m × 5.4m with an adjoining shared space of the same dimension set within a minimum 5.8m wide aisle.

- An additional 300mm width are provided clear of all obstructions greater than 150mm in height.
- Dead-end aisles are provided a 1.0m aisle extension beyond the last parking space.
- A minimum clear head height of 2.2m are provided throughout all trafficable areas by light vehicles.
- A minimum clear head height of 2.5m are provided directly above all accessible car parking spaces.
- All columns (if any) are located outside of the parking space design envelope shown in Figure 5.2 of AS/NZS 2890.1: 2004.

In summary, the internal configuration of the car park is designed in accordance with AS 2890.1 (2004) and AS2890.6 (2009).

## 4.5 Traffic Generation

Traffic generated from the Sydney Business Park within the Marsden Park Industrial Precinct was based on the land use assumptions identified in the *Sydney Business Park – Road Network Staging Modelling Report* (AECOM, June 2014). The ultimate development form is assumed in 2036.

Traffic generated by the site is based on the Transport for NSW *Technical Direction: Guide to Traffic Generating Developments – Updated Surveys* (TfNSW, May 2013) using the generation of traffic from ‘business parks’ and ‘industrial estates’.

The proposed yield for this site is consistent with the Floor Space Ratio and DCP controls for the site and the permitted land use. On this basis, the site will generate trips during the peak hours shown in Table 7.

**Table 7 Peak hour traffic generation from the site**

Peak	Area	Trip rate (GFA)	Site	Marsden Park total <sup>1</sup>
AM	10,305 m <sup>2</sup> (GFA)	0.52 trips / 100 sqm	<b>54 trips / hour</b>	4,021 trips / hour
PM		0.56 trips / 100 sqm	<b>58 trips / hour</b>	4,487 trips / hour
Weekend		0.35 trips / 100 sqm	<b>36 trips / hour</b>	5,227 trips / hour

The table also shows the number of trips generated by the entire Marsden Park area. In relation to the entire Marsden Park area, the site is expected to generate a minimal number of trips.

## 4.6 Traffic Impacts

As discussed in Section 1.2.4, traffic modelling has been previously undertaken through an iterative process in order to determine the road improvements needed to accommodate the forecast 2021 interim and 2036 final growth numbers. The intersections are predicted to operate efficiently according to the AECOM reports with the results summarised in Table 1 in Section 1.2.

The forecast traffic generation for the site is consistent with the AECOM modelling inputs and hence no further negative impacts are expected on the Richmond Road intersections. The site is expected to have minimal impacts on the surrounding road network performance, which is anticipated to perform efficiently in the 2021 interim and 2036 final built form.

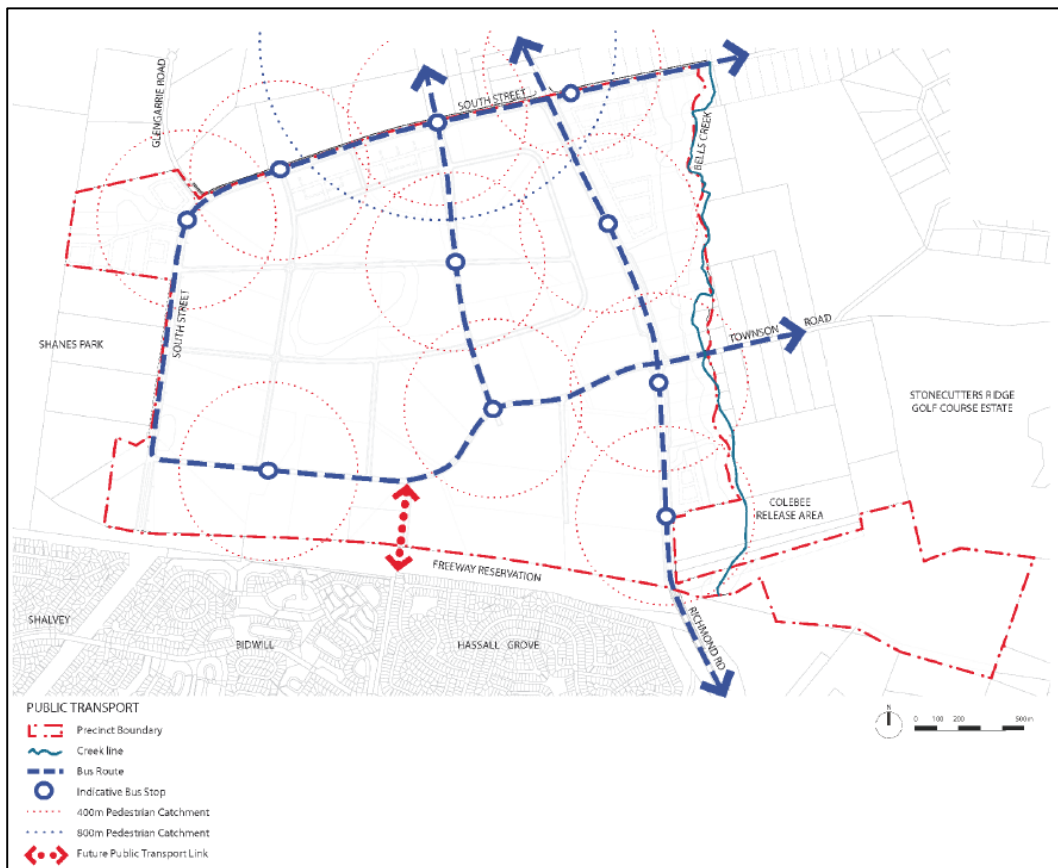
## 4.7 Public Transport and Pedestrian Cycle Management Plan

The DCP has the objective of encouraging the use of public transport through the provision of integrated bus routes, pedestrian and cycle routes, improving accessibility to the site.

<sup>1</sup> AECOM - Quarry Road Intersection Development Application, 10 July 2014

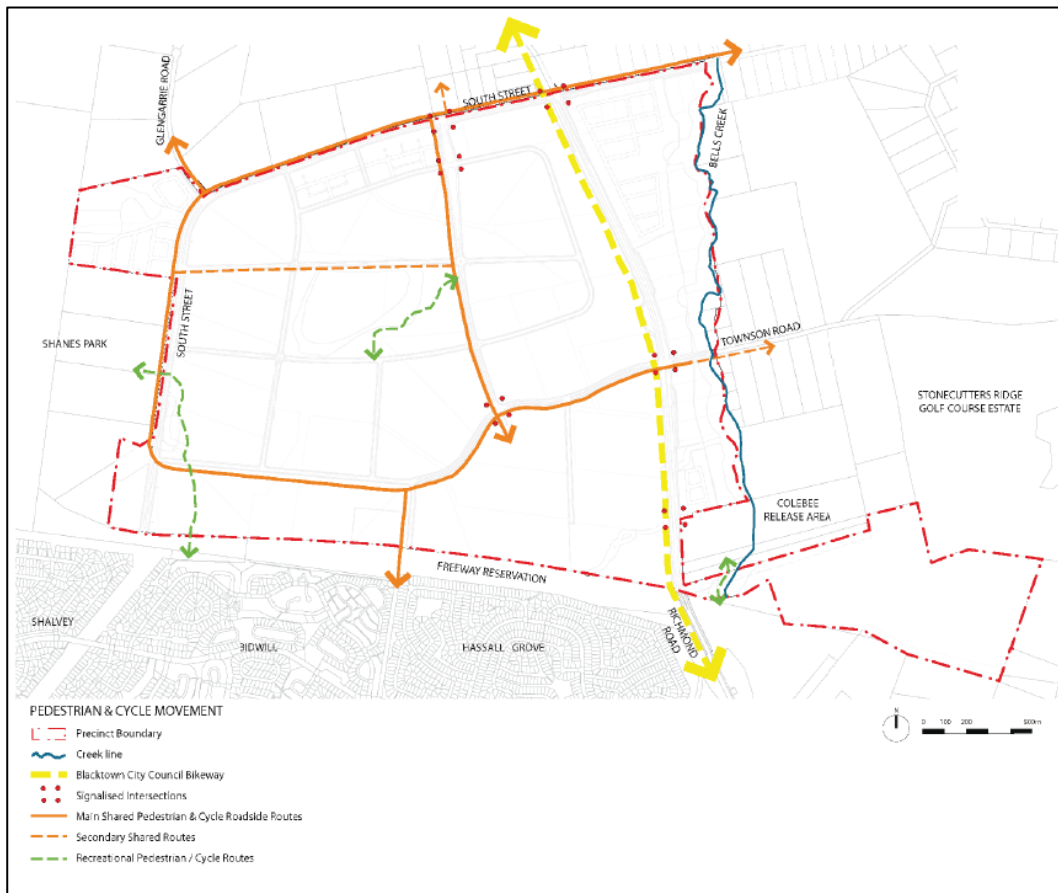


The general schematic of the bus routes and stops planned are shown in Figure 10, with a potential to connect the southern residential precinct in the south. This is subject to discussion with bus operators and Blacktown City Council.



**Figure 10: Public transport access, Marsden Park Industrial Precinct, Schedule 3 DCP**

Pedestrian and cycle plans for Marsden Park are shown in Figure 11. Richmond Road forms the main pedestrian and bicycle access spine throughout the industrial precinct.



**Figure 11: Pedestrian and cycle routes, Marsden Park Industrial Precinct, Schedule 3 DCP**

## 5. Outline Construction Traffic Management Plan (CTMP)

The following proposed traffic management principles would be adopted during the construction period:

- Disruption to all road users during the construction period would be kept to a minimum.
- Traffic control would need to be provided to manage and regulate traffic movements during construction.
- Construction and delivery vehicles entering or leaving the site compound and/or stockpile sites would use arterial roads. These movements would be restricted to non-peak traffic periods.
- In most cases, property access would be maintained throughout the construction period with suitable alternative access arrangements provided otherwise.
- Clear signage and alternate pedestrian routes should be organised if footpaths are affected.
- It is recommended that a detailed CTMP is developed as part of the detailed design stage.

### 5.1 Proposed Working Hours

Depending on the construction stage, the workforce which includes both construction and design personnel will vary. Construction would be undertaken during standard working hours which are assumed to be as follows:

- Monday to Friday: between 7am-6pm.
- Saturday: between 8am-1pm.
- Sunday and public holidays: no work.

In some cases, it may be necessary to undertake night works to minimise disruption to traffic. Further assessments of these requirements would be undertaken once the detailed design stage is undertaken, and the requirements are known. All night works would be undertaken in accordance with the Transport for NSW *Environmental Noise Management Manual* (Transport for NSW, 2001): *Practice Note vii – Road works outside normal working hours*, as well as the *Office of Environment and Heritage Interim Construction Noise Guideline* (Department of Environment Climate Change 2009).

Prior notice would be given to the community if any works are planned to be undertaken outside normal construction hours.

## 6. Conclusion

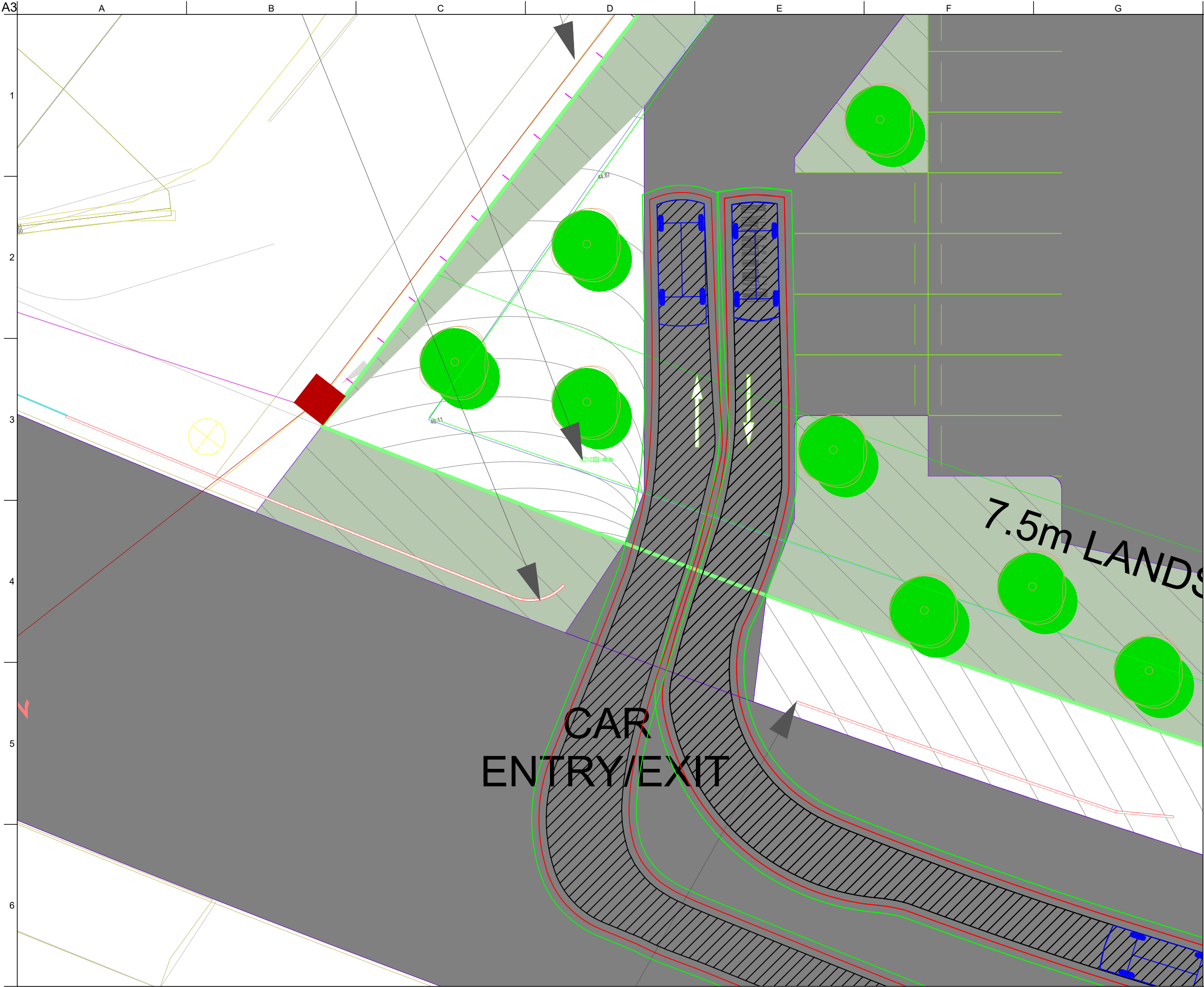
This traffic and transport assessment supports the proposed industrial development in the Marsden Park Industrial Precinct at the OLG facility. The report assesses the traffic and transport impacts of the proposed development (the site) and supports the Development Application (DA) submission.

- The site will consist of a warehouse (9,000 m<sup>2</sup>), warehouse office (1,105 m<sup>2</sup>) and dock office (200 m<sup>2</sup>).
- Access, internal circulation and parking arrangements have been designed in accordance with relevant Australian Standards including AS 2890.1:2004 and AS 2890.2:2018.
- Prior traffic and transport reports have been reviewed. Traffic modelling has been previously undertaken through an iterative process in order to determine the road improvements needed to accommodate the forecast 2021 interim and 2036 final growth numbers. The intersections are predicted to operate efficiently according to the AECOM reports.
- The site will provide 140 car spaces, which is compliant with Transport for NSW guideline requirements and DCP guidelines and will cater for the estimated total peak number of staff of 50 people.
- The site will provide 6 bicycle parking spaces. This is below the DCP requirements for 52 bicycle parking bays but will be provided to better allocate resources of the development.
- Traffic generated by the site is expected to be minimal and consistent with traffic generation assumptions for the site in the wider estate traffic modelling with a maximum of 58 vehicle trips per hour expected during the PM peak hour.
- The site is consistent with the original traffic modelling forecasts and is expected to have minimal impacts on the surrounding road network performance, which is anticipated to perform efficiently in the 2021 interim and 2036 final built form.
- Part of the 2036 final built form of Marsden Park Industrial Precinct includes the signalisation of intersections on Hollinsworth Road, which will accommodate anticipated traffic growth efficiently.
- The Marsden Park Industrial Precinct DCP has the objective of encouraging the use of public transport through the provision of integrated bus routes, pedestrian and cycle routes, improving accessibility to the site which has been accommodated.



# Appendix A

## Swept Path Analysis



**Legend**

- Body Envelope
- 300mm Envelope
- 600mm Envelope
- Wheel Envelope

**Design Vehicle(s)**

**B99 Vehicle (Realistic min radius) (2011)**  
Overall Length 5.200m  
Overall Width 1.950m  
Overall Body Height 1.433m  
Min Body Ground Clearance 0.171m  
Track Width 1.840m  
Lock-to-lock time 4.00s  
Curb to Curb Turning Radius 6.250m

**B85 Vehicle (Realistic min radius) (2004)**  
Overall Length 4.910m  
Overall Width 1.870m  
Overall Body Height 1.421m  
Min Body Ground Clearance 0.120m  
Track Width 1.770m  
Lock to Lock Time 4.00 sec  
Curb to Curb Turning Radius 5.750m

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B	04/11/22	EY	CL	CL
A	30/09/22	EY	CL	CL

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**Sydney Business Park**

Job Title  
**OLG Facility**

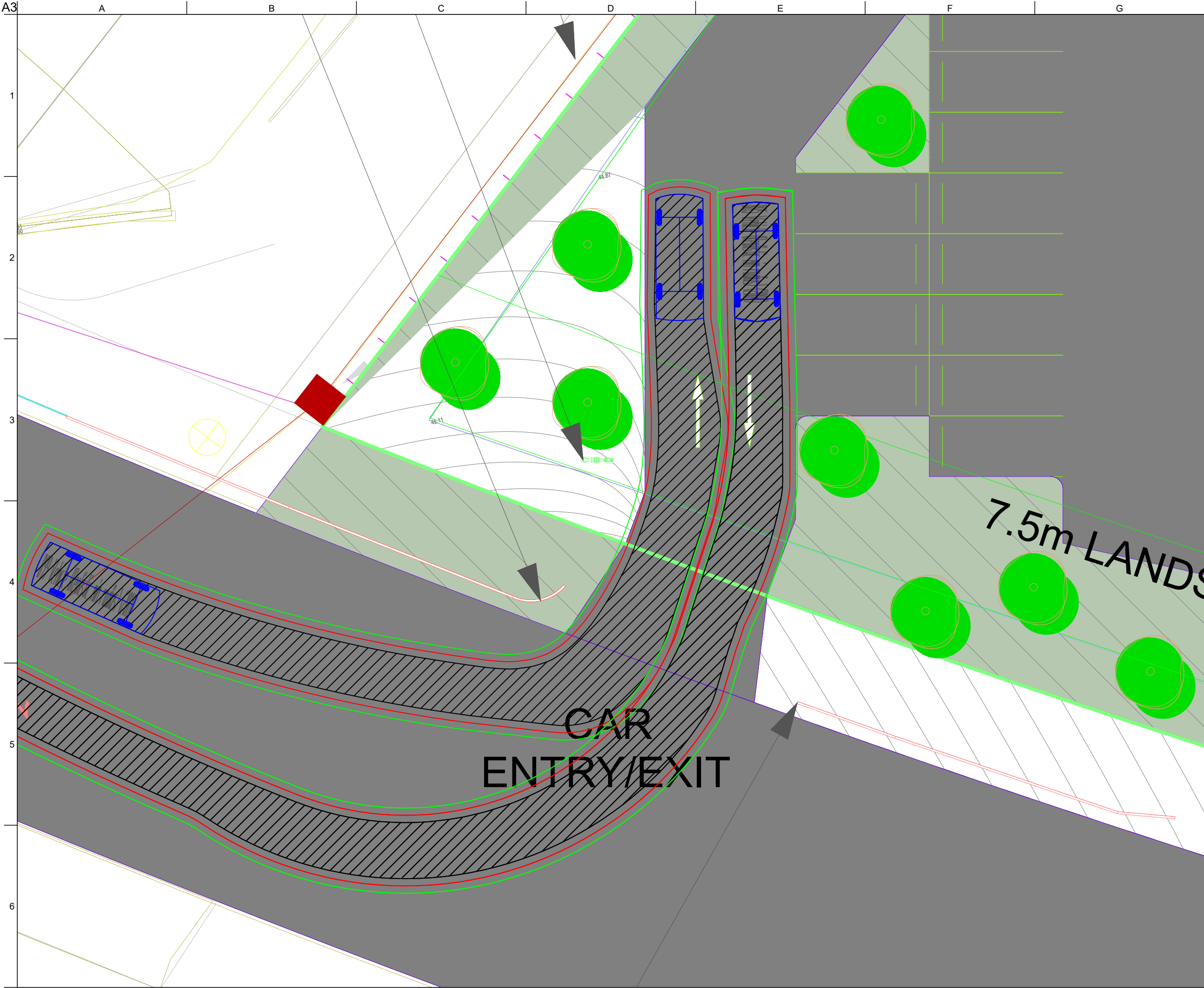
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Carpark 1 Entry/Exit**

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Discipline  
Transport

Drawing Status  
**Draft**

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**Legend**

- Body Envelope
- 300mm Envelope
- 600mm Envelope
- Wheel Envelope

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B	04/11/22	EY	CL	CL
A	30/09/22	EY	CL	CL

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Client  
**Sydney Business Park**

Job Title  
**OLG Facility**

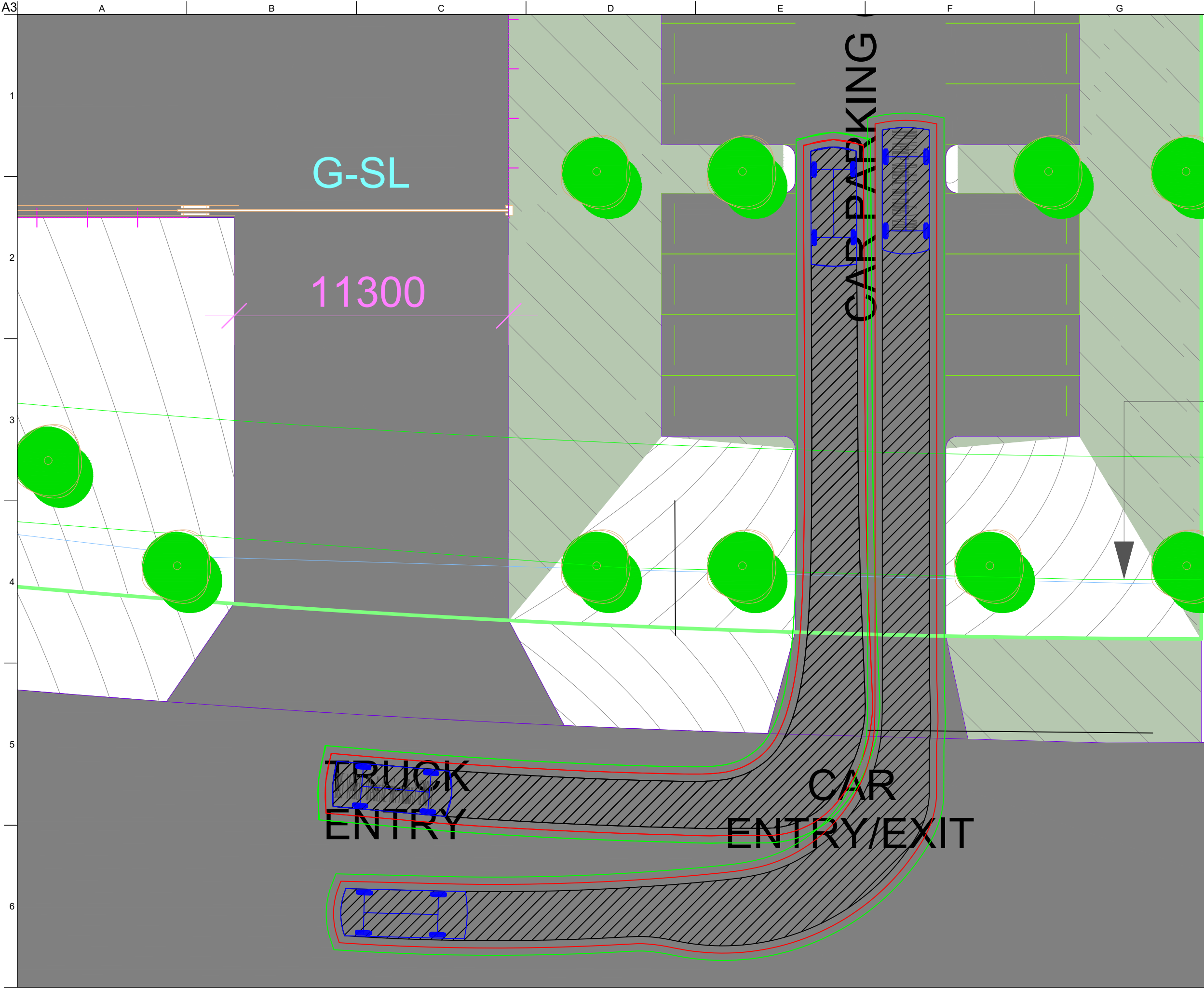
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Carpark 1 Entry/Exit**

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Discipline Transport

Drawing Status  
**Draft**

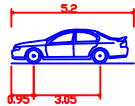
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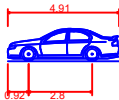
Legend

- Body Envelope
- 300mm Envelope
- 600mm Envelope
- Wheel Envelope

Design Vehicle(s)



B99 Vehicle (Realistic min radius) (2011)  
Overall Length 5.200m  
Overall Width 1.940m  
Overall Body Height 1.433m  
Min Body Ground Clearance 0.171m  
Track Width 1.840m  
Lock-to-lock time 4.00s  
Curb to Curb Turning Radius 6.250m



B85 Vehicle (Realistic min radius) (2004)  
Overall Length 4.910m  
Overall Width 1.870m  
Overall Body Height 1.421m  
Min Body Ground Clearance 0.120m  
Track Width 1.770m  
Lock to Lock Time 4.00 sec  
Curb to Curb Turning Radius 5.750m

C	16/11/22	EY	CL	CL
B	04/11/22	EY	CL	CL
A	30/09/22	EY	CL	CL

For Information				
Issue	Date	By	Chkd	Appd

ARUP

Arup, Level 5, 151 Clarence Street  
Sydney, NSW, 2000  
Tel +61(02)9320 9320 Fax +61(02)9320 9321  
www.arup.com.au

Client  
Sydney Business Park

Job Title  
OLG Facility

Drawing Title  
Turning Paths  
Carpark 2 Entry/Exit

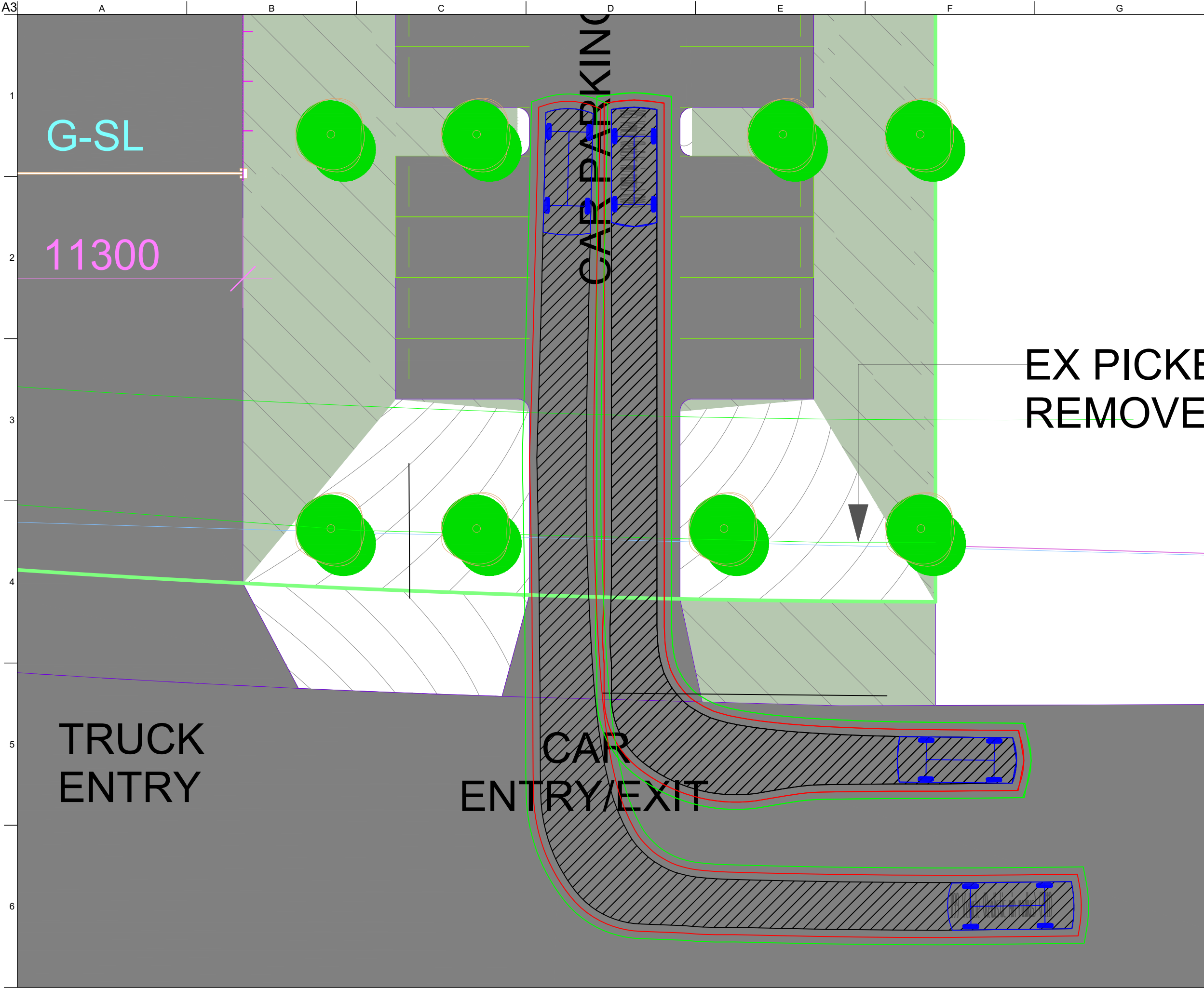
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Discipline  
Transport

Drawing Status

Draft

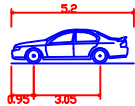
Job No 253779	Drawing No SKT002a	Issue C
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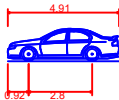
Legend

- Body Envelope
- 300mm Envelope
- 600mm Envelope
- Wheel Envelope

Design Vehicle(s)



B99 Vehicle (Realistic min radius) (2011)  
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C	16/11/22	EY	CL	CL
B	04/11/22	EY	CL	CL
A	30/09/22	EY	CL	CL

For Information				
Issue	Date	By	Chkd	Appd

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Client  
Sydney Business Park

Job Title  
OLG Facility

Drawing Title  
Turning Paths  
Carpark 2 Entry/Exit

Scale at A3  
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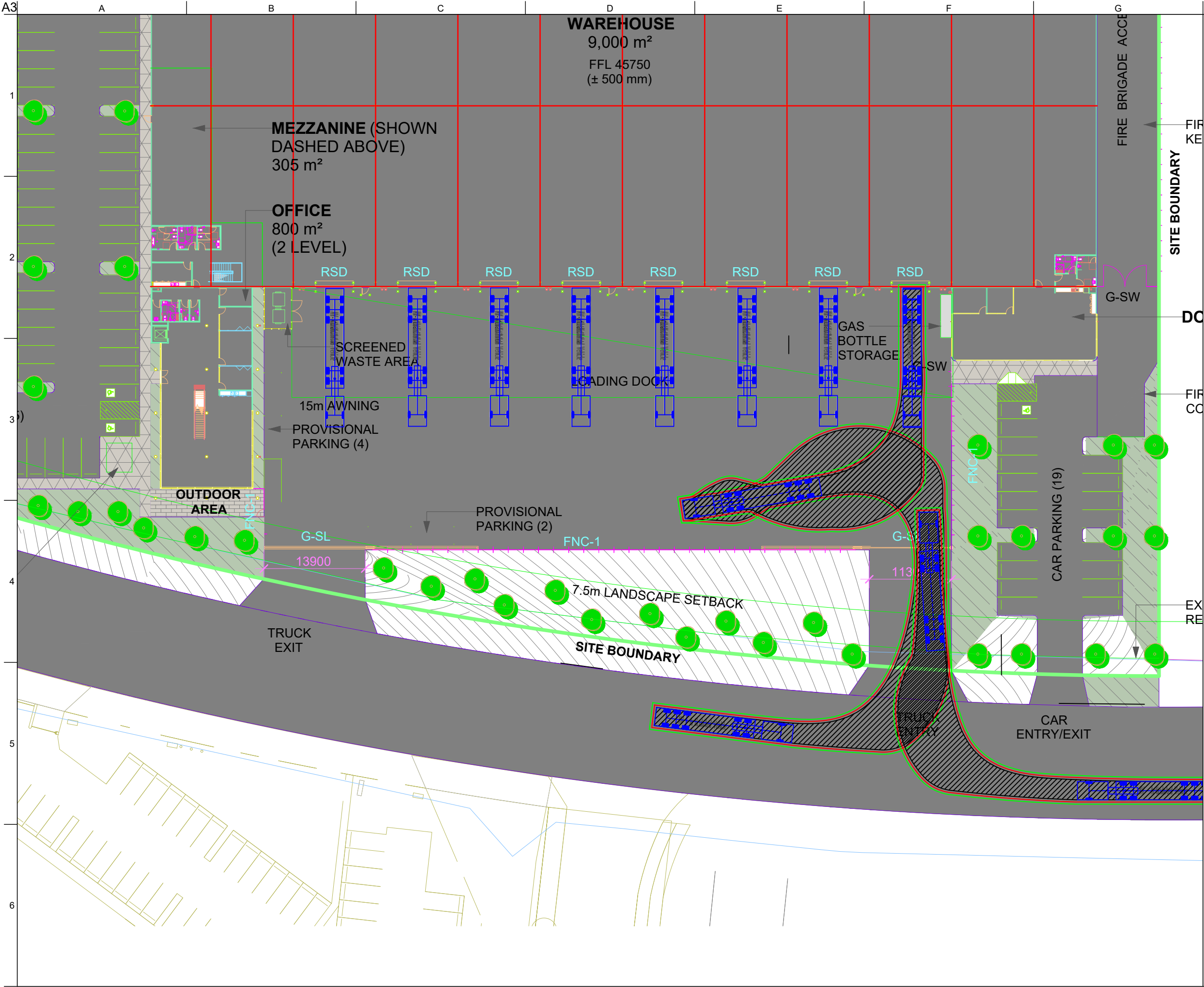
Discipline  
Transport

Drawing Status

Draft

Job No 253779	Drawing No SKT002b	Issue C
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**Legend**

- Body Envelope
- 300mm Envelope
- 600mm Envelope
- Wheel Envelope

**Design Vehicle(s)**

AV - Articulated Vehicle  
Overall Length 19.000m  
Overall Width 2.500m  
Overall Body Height 4.301m  
Min Body Ground Clearance 0.418m  
Track Width 2.500m  
Lock to Lock Time 6.00 sec  
Curb to Curb Turning Radius 12.500m

C	16/11/22	EY	CL	CL
B	04/11/22	EY	CL	CL
A	30/09/22	EY	CL	CL
For Information				
Issue	Date	By	Chkd	Appd

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Client  
**Sydney Business Park**

Job Title  
**OLG Facility**

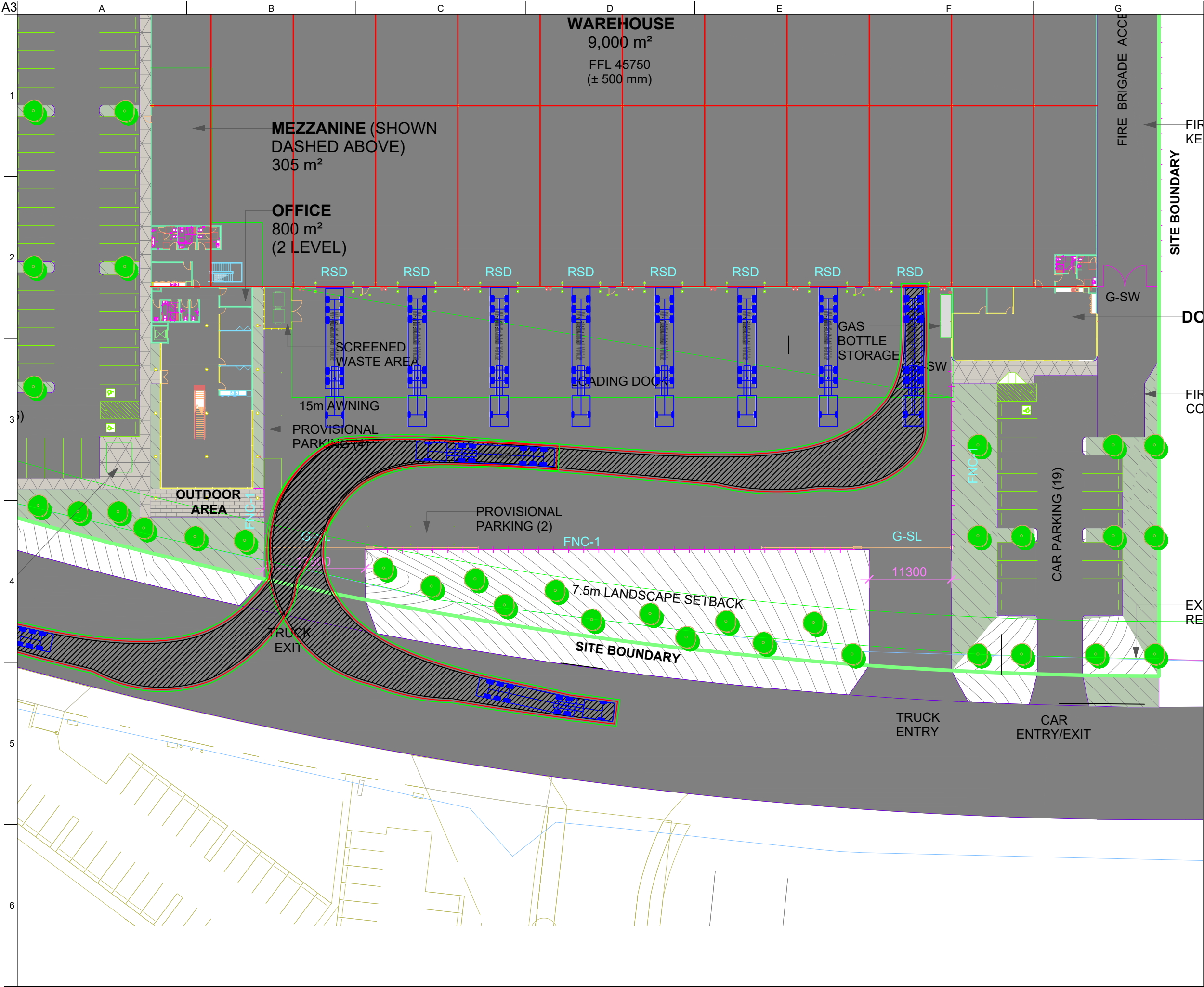
Drawing Title  
**Turning Paths  
Loading Dock Access**

Scale at A3 1:300

Discipline Transport

Drawing Status  
**Draft**

Job No <b>253779</b>	Drawing No <b>SKT003a</b>	Issue <b>C</b>
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**Legend**

- Body Envelope
- 300mm Envelope
- 600mm Envelope
- Wheel Envelope

**Design Vehicle(s)**

AV - Articulated Vehicle

Overall Length	19.000m
Overall Width	2.500m
Overall Body Height	4.301m
Min Body Ground Clearance	0.418m
Track Width	2.500m
Lock to Lock Time	6.00 sec
Curb to Curb Turning Radius	12.500m

C	16/11/22	EY	CL	CL
B	04/11/22	EY	CL	CL
A	30/09/22	EY	CL	CL

For Information

Issue	Date	By	Chkd	Appd
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**ARUP**

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www.arup.com.au

Client

Sydney Business Park

Job Title

OLG Facility

Drawing Title

Turning Paths  
Loading Dock Access

Scale at A3

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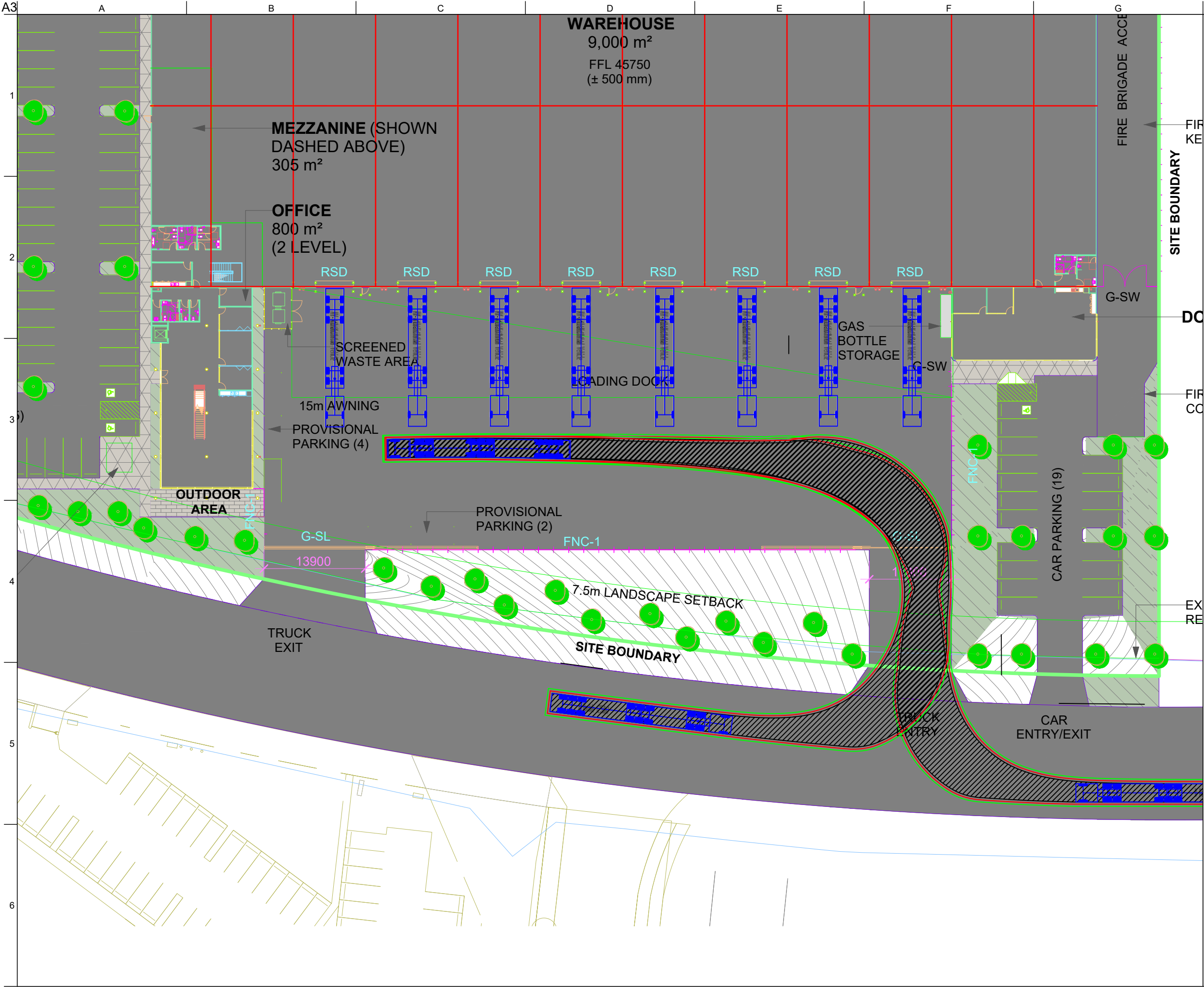
Discipline

Transport

Drawing Status

**Draft**

Job No	Drawing No	Issue
<b>253779</b>	<b>SKT003b</b>	<b>C</b>



**Legend**

- Body Envelope
- 300mm Envelope
- 600mm Envelope
- Wheel Envelope

**Design Vehicle(s)**

B-Double (25.0m)  
Overall Length 25.00m  
Overall Width 4.50m  
Overall Body Height 4.50m  
Min Body Ground Clearance 2.50m  
Track Width 2.50m  
Lock to Lock Time 6.00 sec  
Curb to Curb Turning Radius 15.00m

Issue	Date	By	Chkd	Appd
C	16/11/22	EY	CL	CL
B	04/11/22	EY	CL	CL
A	30/09/22	EY	CL	CL

**For Information**

**ARUP**

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www.arup.com.au

Client  
**Sydney Business Park**

Job Title  
**OLG Facility**

Drawing Title  
**Turning Paths  
Loading Dock Access**

Scale at A3  
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Discipline  
Transport

Drawing Status  
**Draft**

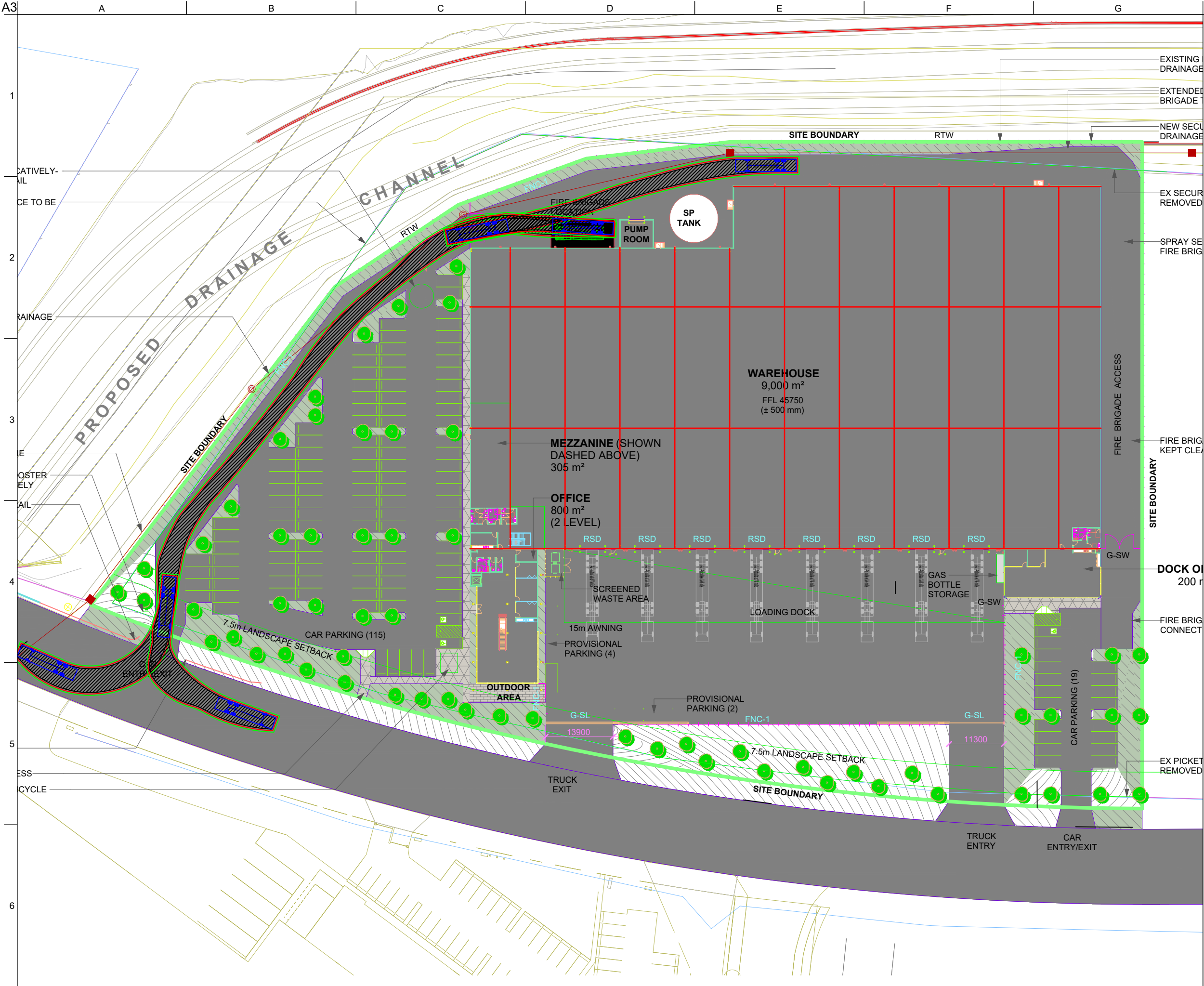
Job No	Drawing No	Issue
<b>253779</b>	<b>SKT004a</b>	<b>C</b>











**Legend**

- Body Envelope
- 300mm Envelope
- 600mm Envelope
- Wheel Envelope

**Design Vehicle(s)**

HRV Fire Aerial Appliance

Overall Length	12.500m
Overall Width	2.500m
Overall Body Height	4.500m
Min Body Ground Clearance	0.418m
Track Width	2.500m
Lock to Lock Time	6.00 sec
Curb to Curb Turning Radius	12.500m

D	16/11/22	EY	CL	CL
C	08/11/22	EY	CL	CL
B	04/11/22	EY	CL	CL
A	30/09/22	EY	CL	CL
For Information				
Issue	Date	By	Chkd	Appd

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Sydney, NSW, 2000  
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www.arup.com.au

Client  
**Sydney Business Park**

Job Title  
**OLG Facility**

Drawing Title  
**Turning Paths  
Specialist Fire Truck Access**

Scale at A3  
1:750

Discipline  
Transport

Drawing Status  
**Draft**

Job No <b>253779</b>	Drawing No <b>SKT005b</b>	Issue <b>D</b>
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