

Transport Assessment

ESR Horsley Logistics Park – SSD 10436 (Modification 1)
327-355 Burley Road, Horsley Road (Lots 201–204)

Ref: P1328r03v2
3/05/2021

Document Control

Project No: P1328

Project: 327-355 Burley Road, Horsley Park

Client: ESR

File Reference: P1328r03v2 SSD MOD 1 TA_327-355 Burley Rd, Horsley Park (Lots 201-204)

Revision History

Revision	Date	Details	Author	Approved by
-	16/02/2021	Draft	S.Hu	A. Rasouli
1	27/04/2021	Draft	M. Tran S. Hu	
2	03/05/2021	Issue I	S. Hu	

This document has been prepared for the sole use of the Client and for a specific purpose, as expressly stated in the document. Ason Group does not accept any responsibility for any use of or reliance on the contents on this report by any third party. This document has been prepared based on the Client's description of its requirements, information provided by the Client and other third parties.

Table of Contents

1	INTRODUCTION	1
1.1	OVERVIEW	1
1.2	STUDY PURPOSE.....	1
1.3	REFERENCE DOCUMENTS	2
2	EXISTING CONDITIONS	3
2.1	SITE & LOCATION	3
2.2	ROAD HIERARCHY	5
2.3	RESTRICTED ACCESS VEHICLE (RAV)	6
3	REGIONAL UPGRADES	8
3.1	COMPLETED WORKS.....	8
3.2	PLANNED WORKS	9
3.3	INTERSECTION ARRANGEMENTS	12
4	SSD 10436 APPROVAL	14
4.1	OVERVIEW OF THE APPROVAL	14
4.2	RESPONSE TO SEARS.....	15
4.3	RESPONSE TO CONDITIONS OF CONSENT	16
4.4	RESPONSE TO DPIE'S COMMENTS	19
4.5	APPROVED TRAFFIC GENERATION	20
5	MOD 1 DESCRIPTION.....	22
5.1	MOD 1 MASTER PLAN	22
5.2	PROPOSED BUILDING CHARACTERISTICS	23
6	PARKING PROVISIONS.....	25
6.1	CAR PARKING.....	25
6.2	BICYCLE PARKING	26
6.3	SERVICING AND WASTE COLLECTION.....	28
7	TRAFFIC ASSESSMENT.....	29
7.1	APPROVED TRAFFIC GENERATION	29
7.2	MOD 1 TRAFFIC GENERATION.....	29
7.3	TRAFFIC IMPACTS.....	30
8	CONSTRUCTION TRAFFIC MANAGEMENT.....	31
9	DESIGN COMMENTARY	32
9.1	RELEVANT DESIGN STANDARDS	32
9.2	DESIGN VEHICLE	32
9.3	ACCESS DESIGN.....	32
9.4	ACCESS SIGHT DISTANCE	35
9.5	VEHICLE QUEUEING	35
9.6	INTERNAL DESIGN.....	36
9.7	PRELIMINARY LOADING DOCK MANAGEMENT.....	36
9.8	EMERGENCY / FIRE TRUCK VEHICLE ACCESS.....	38
10	SUMMARY AND CONCLUSION.....	39
10.1	KEY FINDINGS	39
10.2	CONCLUSION.....	42

Appendices

Appendix A: Swept Path Analysis

1 Introduction

1.1 Overview

Ason Group has been engaged by ESR to prepare a Transport Assessment (TA) to support a proposed Modification (MOD 1) to the approved State Significant Development Application (SSD 10436, approved on 31 March 2021) of the ESR Horsley Logistics Park at 327-355 Burley Road (Lots 201-204), Horsley Park (the Site). The approved SSD Site is located within the Fairfield City Council Local Government Authority (LGA). More specifically, the SSD subject site forms Lot 201, Lot 202, Lot 203 and Lot 204 in DP 106143.

It is noted that the Approved Plan of the Site includes:

- Eight warehouse and distribution tenancies in four buildings with a total provision of 112,819 m² Gross Floor Area (GFA), and
- 636 on-site car parking spaces,

The MOD 1 is proposed to mainly amend the design and built form of Lot 201 of the approved Concept Plan with minor changes to Lot 204 and no changes to the remaining Lots (**the Proposal**).

In summary, main amendments as a result of the proposed MOD 1 are as follows:

- Lot 201:
 - Reduction of GFA by 2,774 m² (from 43,350 m² to 40,576 m²),
 - Modify the design by breaking it down to 3 standalone warehouses and associated offices,
 - Introduction of a new estate café,
 - Increase of on-site parking by 2 spaces (as provisional spaces).
 - Modify the proposed vehicular access crossovers.
- Lot 204:
 - Minor changes to the hardstand area to allow fire brigade accessing Lot 201, resulting:
 - Reduction of GFA by 66 m² (from 16,579 m² to 16,513 m²), and
 - Reduction of on-site parking by 3 car parking spaces.

1.2 Study Purpose

From the outset, it is critical to state that – given the recent approval of SSD 10436 by Department of Planning, Industry and Environment (DPIE) – MOD 1 has been assessed in this TA against the ‘benchmark’ conditions as detailed in the SSD application, given that these conditions have inherently

been considered and validated by the key consent authorities, including the DPIE and Transport for NSW (TfNSW).

This TA therefore provides an assessment of the traffic characteristics of the Site further to MOD 1, which have then been compared to the approved characteristics of the Site to determine any significant departures from the current approval.

1.3 Reference Documents

In preparing this TA, Ason Group has referenced the following key documents including:

- Western Sydney Employment Area – Fairfield Development Control Plan 2016 (WSEA FDCP).
- Roads & Maritime Services (RMS), Southern Link Road / WSEA RNS – Key Stakeholder Briefing, 10 July 2019 (the Stakeholder Report).
- State Environmental Planning Policy (Western Sydney Employment Area) 2009, *Transport and Arterial Road Infrastructure Plan Map*, [Sheet TAI 001](#).
- Environmental Planning and Assessment (Special Infrastructure Contribution – Western Sydney Aerotropolis) Draft Determination 2020 ([Western Sydney Aerotropolis SIC](#))
- Ason Group, *Traffic Impact Assessment Report, Oakdale East Industrial Precinct - Oakdale East Estate Development Control Plan (0743r01v1)*, 03/10/2018 (the approved [DCP report](#)).
- Ason Group, *Transport Assessment Report, Proposed Oakdale East Industrial Estate (0771r01v2)*, 8/03/2019 (the approved [OEIE report](#)).
- Ason Group, *Transport Assessment Report, Proposed Nu-Pure Warehouse and Industrial Facility at 327-335 Burley Road, Horsley Park (0843r01v1)*, 18/02/2019 (the Nu-Pure TA).
- Ason Group, *Transport Assessment Report, SSD 10436_ESR Horsley Logistics Park_ Lots 201-204, 327-335 Burley Road, Horsley Park, (1328r02v3)*, 30/10/2020 ([the approved SSD TA](#))

This TA also references general access, traffic and parking guidelines, including:

- Roads and Maritime Services, *Guide to Traffic Generating Developments* (RMS Guide)
- Australian Standard 2890.1:2004, *Parking Facilities – Off Street Car Parking* (AS 2890.1)
- Australian Standard 2890.2:2018, *Parking Facilities – Off Street Commercial Vehicle Facilities* (AS 2890.2)
- Australian Standard 2890.6:2006, *Parking Facilities – Off Street Parking for People with Disabilities* (AS 2890.6)

2 Existing Conditions

2.1 Site & Location

The approved SSD Site is located in Fairfield City Council LGA and is known as 327-355 Burley Road, Horsley Park. The subject site forms Lot 201, Lot 202, Lot 203 and Lot 204 in DP 106143. The Site is zoned as *IN1 General Industrial*. Furthermore, the Western Sydney Employment Area (WSEA) Fairfield Development Control Plan 2016 (WSEA FDCP 2016) identifies the Site within the Stage 2 development of the Staging Plan (further discussed in Section 2.1.1), which totals of 20.79 ha of land (Site Area).

Figure 1 provides an appreciation of the Site location and the existing road network condition. The Site is currently vacant and is bounded by future Stage 3 developments to the north, Johnston Crescent and other vacant lands to the west, vacant lands to the south and Lot 205 (bush) to the immediate east. Figure 1 shows Lots 201 and 204 locations which are amended by this MOD 1.



Figure 1: Location Plan

2.1.1 Site Location with Respect to WSEA

The proposed development is located within the WSEA and has a site-specific WSEA FDCP 2016 which applies to 327-335 Burley Road.

The DCP proposes that the overarching subdivision will be undertaken in 3 stages to progressively develop the land. With reference to the subdivision plan included in the WSEA FDCP, the proposed

site is located within Stage 2 (refer **Figure 2**). Furthermore, the entire subdivision will be accessed via two internal roads referred as Access Road 1 (Johnston Crescent) and Access Road 2. Johnston Crescent is partially constructed and is anticipated to provide as the primary access point for the SSD and the MOD 1.

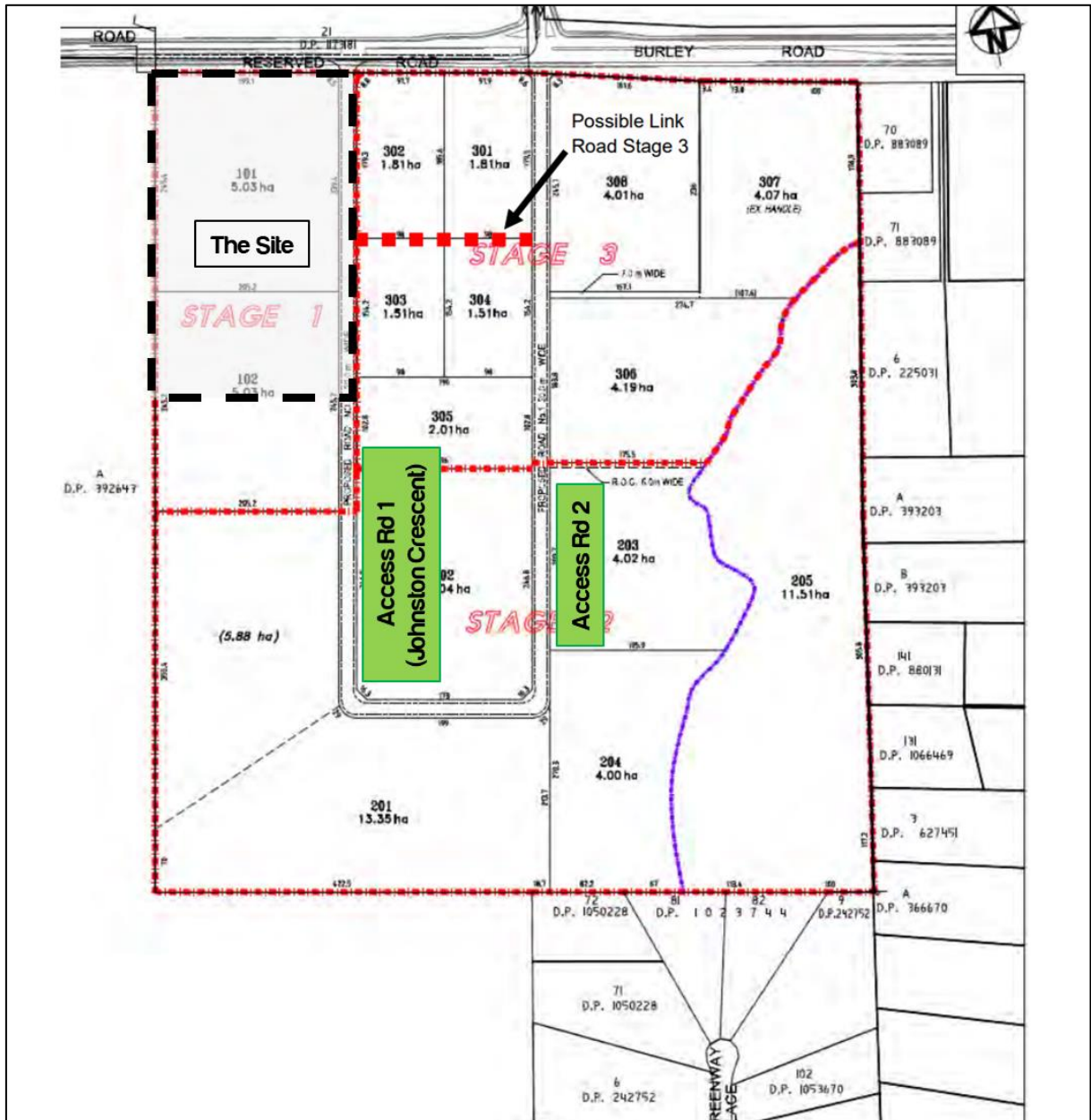


Figure 2: WSEA FDCP 2016 – Subdivision Proposal

2.1.2 Existing Land-use

The Site has historically been used as a quarry and brick manufacturing facility. The Site including the MOD 1 Proposal is currently undergoing earthworks and servicing as part of a separate subdivision approval.

Notwithstanding, the site forms part of the WSEA and is zoned IN1 General Industrial.

2.2 Road Hierarchy

The existing and proposed key roads in the vicinity of the Site are shown in **Figure 3**.

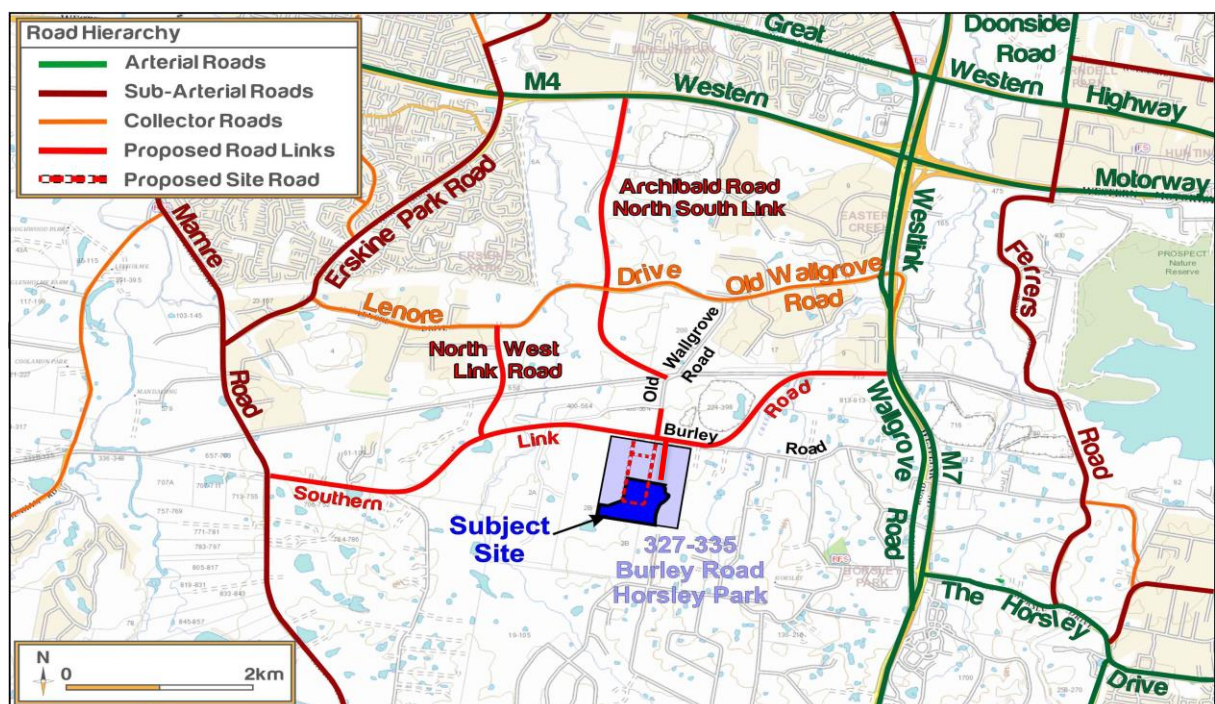


Figure 3: Road Hierarchy

With reference to the above proposed road links, the following is noteworthy:

- Southern Link Road (SLR) is subject to confirmation and may undergo changes to alignment. It is important to note that the final resolution of the SLR alignment will be determined by the State and Local authorities,
- The Western North-South Link Road has already been constructed from Lenore Drive to the under-construction Oakdale West Industrial Estate.

The development will be accessed to/from Access Roads 1 and 2. Johnston Crescent (Access Road 1) is currently connected to Burley Road. However, there are significant regional road upgrades includes

the future connection of Southern Link Road (SLR). This road connection is critical to the ultimate delivery of the Site. A detailed discussion can be found in Section 3 of this TA.

Old Wallgrove Road is an existing Collector Road which runs north-south in the vicinity of the Site. Old Wallgrove Road is currently a two-way divided road which will provide accessibility for the Site to other significant routes such as M7 through an existing interchange. Furthermore, Old Wallgrove Road will provide direct accessibility for the Site to Eastern Creek to the north of the Site, and other surrounding suburbs to the west (such as Orchard Hill and Kemps Creek) through the existing Lenore Drive. Old Wallgrove Road has recently experienced a number of regional upgrades which will be discussed further in Section 3. Old Wallgrove Road to the north of Milner Avenue includes concrete pedestrian path to its western verge and landscape to its eastern verge. East of Lenore Drive, Old Wallgrove Road forms part of a Classified Road connection between Erskine Park Road and Wallgrove Road.

Burley Road provides a 7-metre two-way divided carriageway in this vicinity which runs east-west to the north of the Site. Burley Road operates under a speed limit of 60 km/h in this general vicinity. However, it is anticipated that this road will eventually connect to the proposed Southern Link Road extension, with upgrades required for this extension. The existing use of Burley Road is primarily to provide local access for the surrounding developments and it is anticipated to have a weekday traffic flow of less than 1,000 veh/day.

Johnston Crescent forms the western boundary of the Site and is one of the two main north-south routes to service the DCP subdivision (shown as Access Road 1 in Figure 2). This road is partially completed with pedestrian paths on both sides and provides access to the approved Nu-Pure development (under construction). However, it will ultimately be extended further south and intersect with Access Road 2. This road will eventually be a public road with its care and control to be vested with Council.

2.3 Restricted Access Vehicle (RAV)

A review of the RMS Restricted Access Vehicle (RAV) mapping confirms that Old Wallgrove Road, to the north of the Site, is classified as an approved B-Double route (refer **Figure 4**). Therefore, the subject site currently has access to an approved B-double route.

However, the Site will be accessed via public roads which will not automatically be approved for B-Double access. Therefore upon dedication of the estate roads to Council, further consultation with the National Heavy Vehicle Regulator (NHVR), TfNSW and Council is required to ensure these roads will be included in future updates to the approved B-double network.

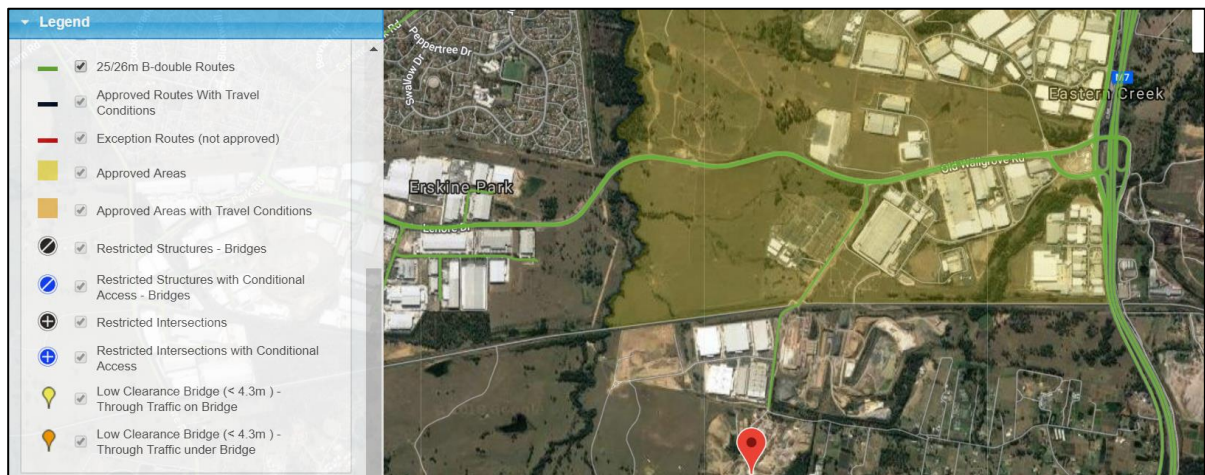


Figure 4: RAV Map

3 Regional Upgrades

The latest regional road network upgrades envisaged for the general vicinity is discussed in the “*Old Wallgrove Road Upgrade*” documents (prepared by RMS in July 2015). These upgrade works have been largely progressed and delivered between 2017-2018. However, a number of regional works are still envisaged for the broader WSEA area.

3.1 Completed Works

As it relates to the Site the following upgrade works have been completed:

- Old Wallgrove Road has been upgraded to three-lanes in each direction between Southridge Street and the M7 Motorway, and
- Old Wallgrove Road has been upgraded to two-lanes in each direction between Southridge Street and Robert Street with a central median to allow for potential three lanes in future.

Reduced copies of the regional road and intersection upgrades in this general proximity are presented in **Figure 5**.

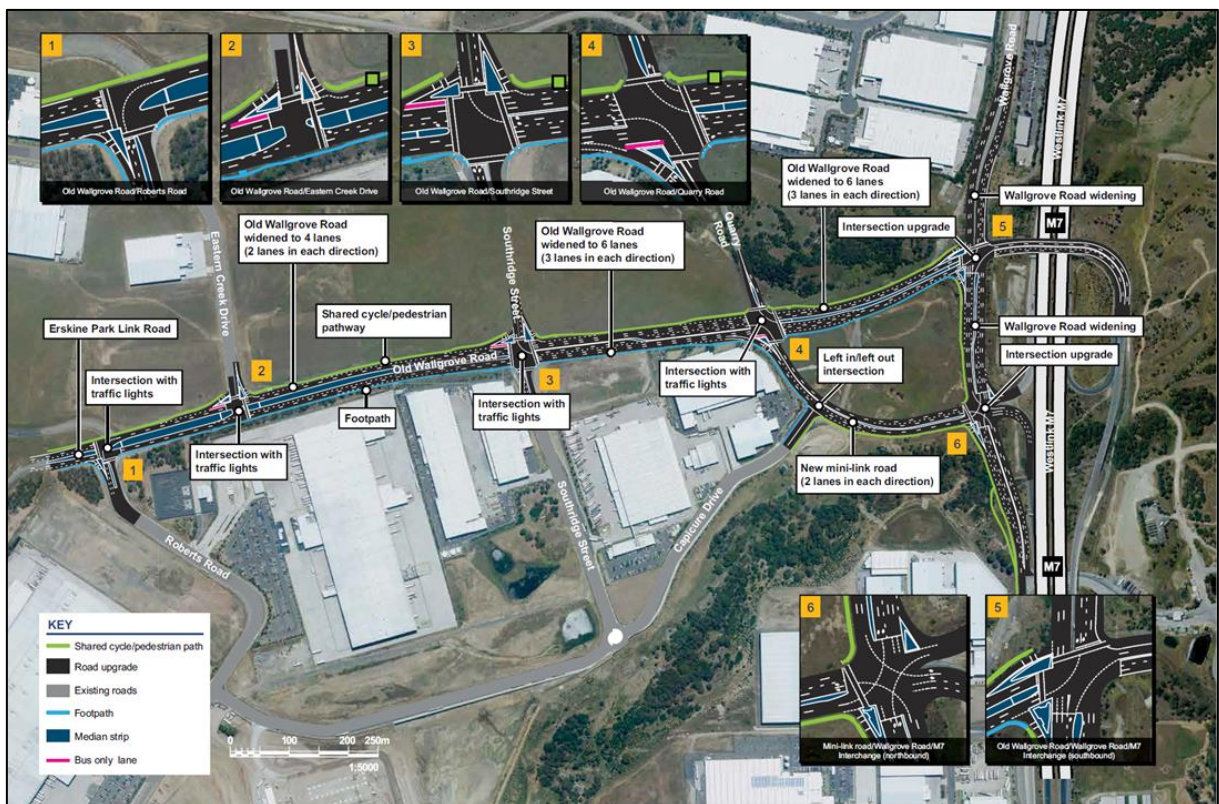


Figure 5: Regional Upgrade Plan

3.2 Planned Works

The Southern Link Road is a significant future regional road envisaged to run along the northern boundary of the precinct and will be connected to the future Burley Road, it will provide the precinct and the Site with a greater access to the broader WSEA particularly to Mamre Road – to the west – which will also be a major corridor in the future.

With reference to the DCP and the recently documented Southern Link Road / WSEA RNS Key Stakeholder Briefing (RMS 2019), the following staged road and intersection arrangements for the precinct and the proposed Southern Link Road are envisaged.



Figure 6: Stage 1 Indicative Road and Intersection Arrangements

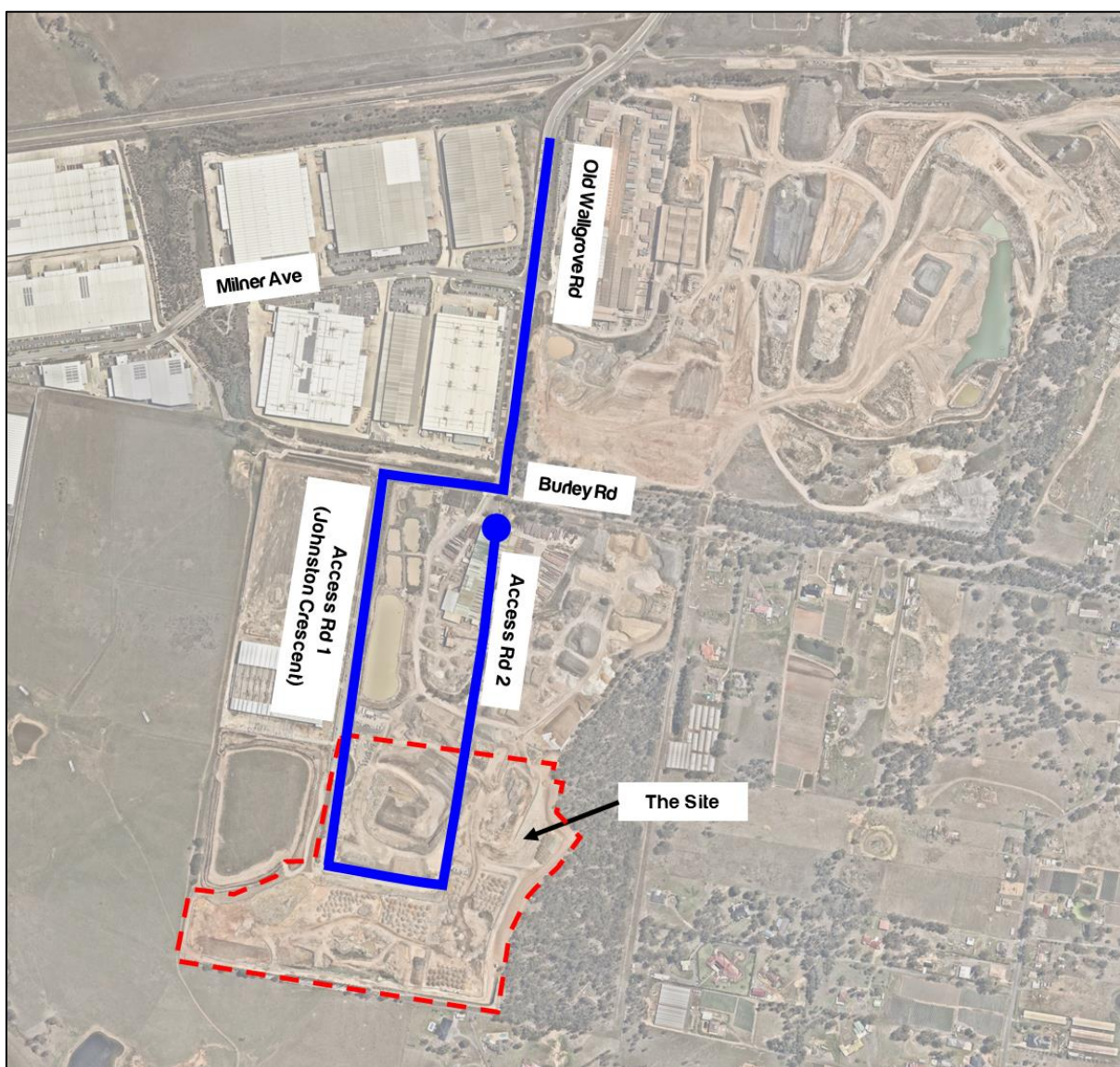


Figure 7: Stage 2 Indicative Road and Intersection Arrangements

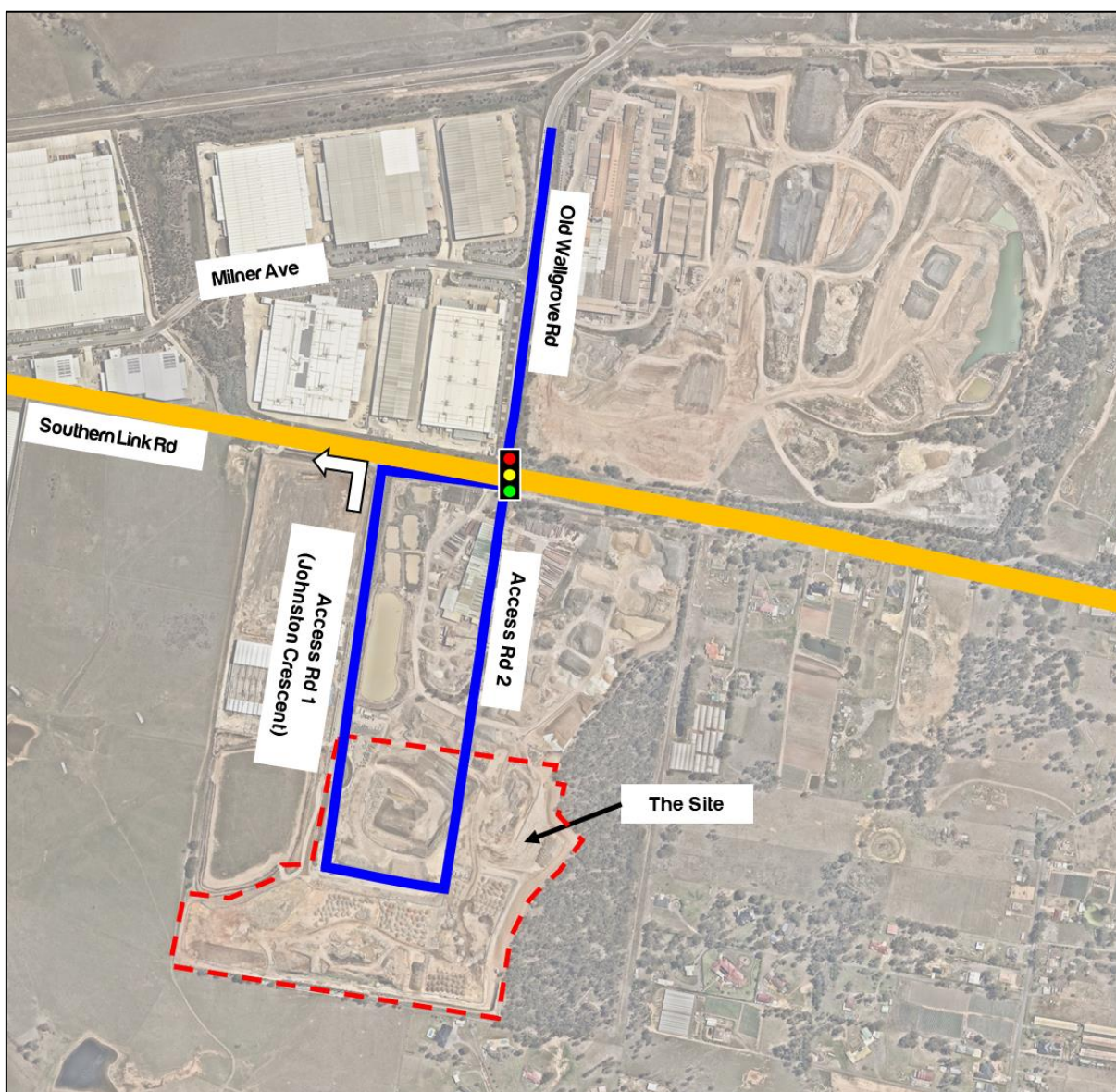


Figure 8: Stage 3 Indicative Road and Intersection Arrangements

It is noted that the Southern Link Road Upgrade has also been identified as part of the proposed Special Infrastructure Contribution (SIC) for Western Sydney Aerotropolis¹. However, at this point of time, Ason Group is unaware of any commitments to timeframes, funding or ultimate design solutions of the upgrade for this section of Southern Link Road.

¹ Environmental Planning and Assessment (Special Infrastructure Contribution – Western Sydney Aerotropolis) Draft Determination 2020 – Schedule 3

3.3 Intersection Arrangements

3.3.1 Interim Scenario

According to the approved SSD TA, the entire precinct will temporarily be accessed via Burley Road and Johnston Crescent (Access Road 01).

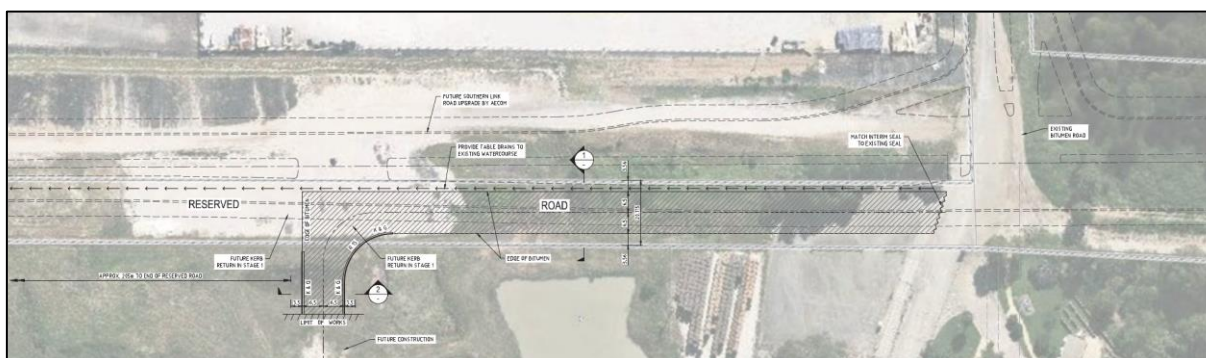


Figure 9: Interim Arrangement

During the interim stage, a turning head will be provided at the southern end of the Johnston Crescent to enable vehicles to make U-turns if required.

3.3.2 Ultimate Scenario

In ultimate scenario and when the Southern Link Road is opened, the precinct will only be accessed via a (4-way) signalised intersection at Access Road 2. The other intersection at Johnston Crescent (Access Road 01) will be restricted to left out only movement, as shown in **Figure 10**.

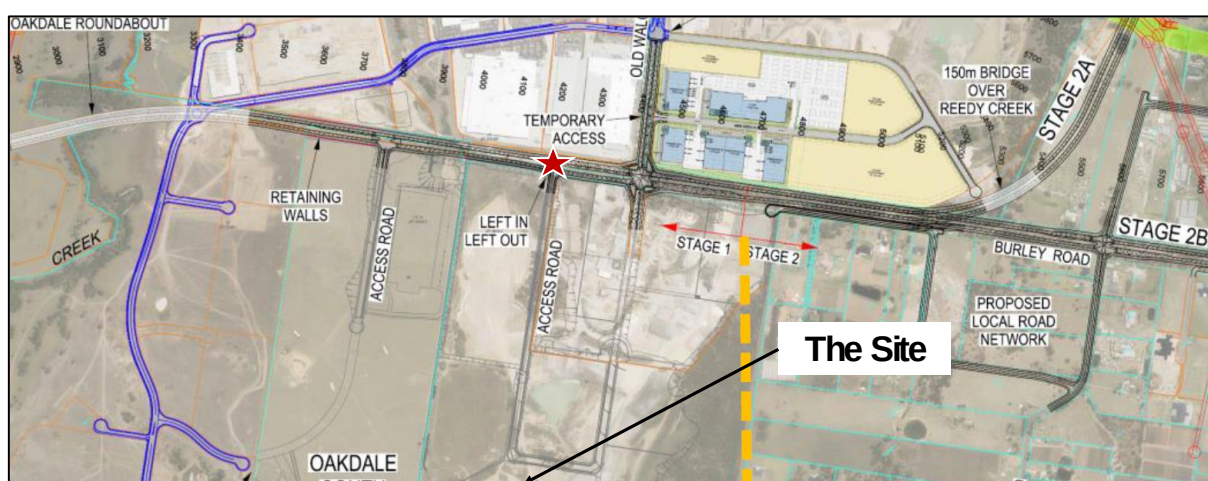


Figure 10: Burley Road / Johnston Crescent (the Stakeholder Report)

NOTE: based on the advice provided to Ason Group, the ultimate intersection of Burley Road / Johnston Crescent will be in the form of left out only.

It is acknowledged that, as far as Ason Group is aware, there is no committed timing for the above upgrades and the final resolution of the intersection treatments are yet to be determined.

Nonetheless, having regard for the traffic impact assessment undertaken as part of this TA, it is acknowledged that the ultimate resolution of the surrounding road network will not have any material impact to the operation of the MOD 1.

4 SSD 10436 Approval

4.1 Overview of the Approval

The development (SSD 10436) was determined in March 2021 and approved with Conditions of Consent. The approved plan provides for the construction of 4 single storey warehouse / industrial buildings, with associated car parking and loading areas. All vehicular accesses will be to/from the Access Roads 1 and 2 , as discussed in Section 3.2.

For reference, a copy of the approved Concept Plan is provided in **Figure 11**.

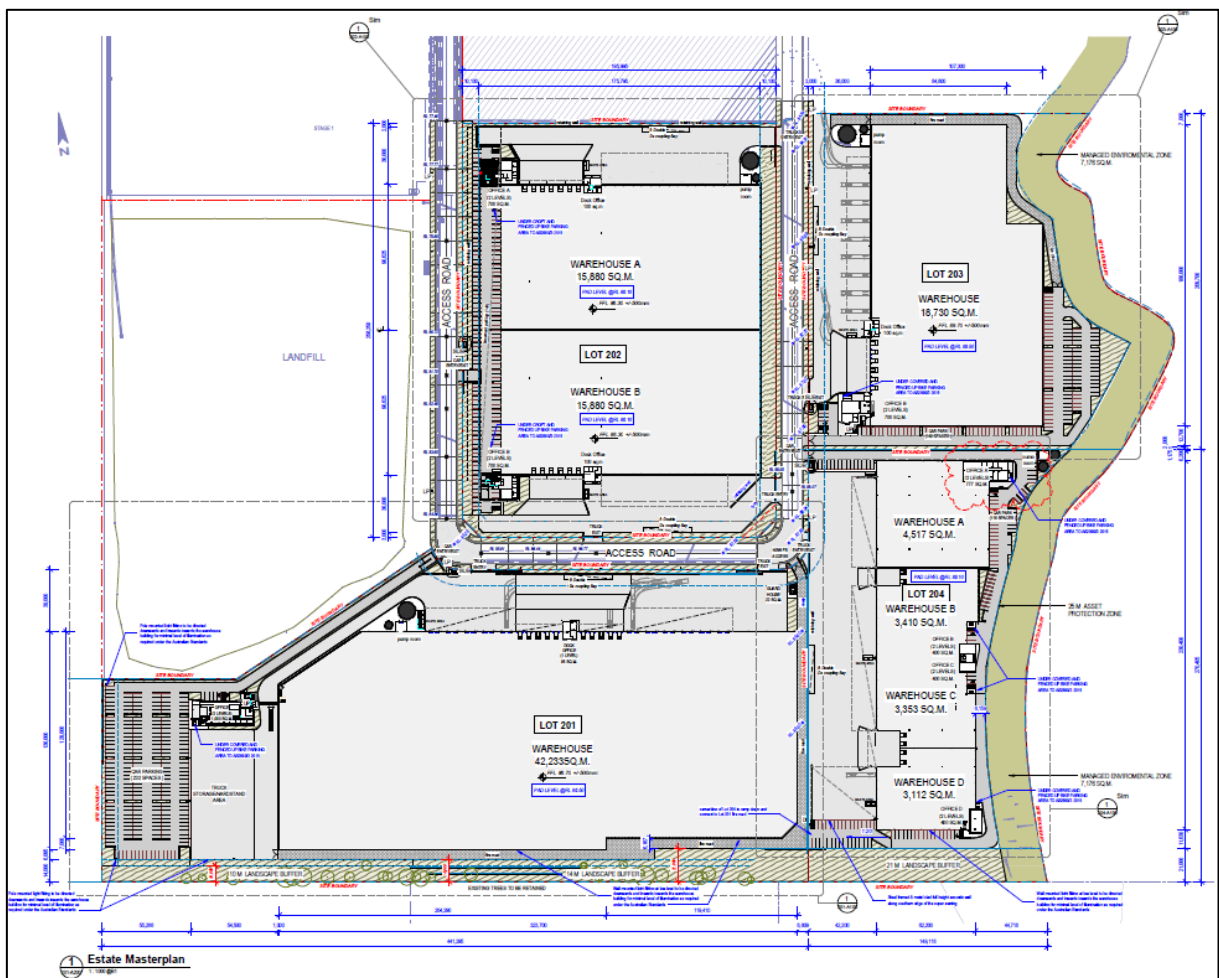


Figure 11: Approved Concept Plan (SSD 10436)

Key details of the approved Concept Plan are provided in the following **Table 1**.

Table 1: Summary of the Approved Concept Plan

Lot	Warehouse	Office (m ²)	Total Built Form (m ²)	On-site Car Parking Spaces
201	42,233	1,117	43,350	232
202	31,760	1,600	33,360	147
203	18,730	800	19,530	140
204	14,602	1,977	16,579	117
Total	107,325	5,494	112,819	636

It is noted that MOD 1 is proposed to mainly amend the design and built form of **Lot 201** of the Concept Plan, minor changes to Lot 204 and no changes to the remaining Lots.

4.2 Response to SEARs

Relevant responses to the latest Secretary's Environmental Assessment Report (SEAR) SSD 10436 – issued in June 2020 – has been provided in the following table. Responses have been formulated in appreciation to this MOD.

Table 2: Ason Group Response to SEARs

#	SEARs - Traffic and Transport	Ason Group Response
1	A traffic impact assessment detailing: a) all daily and peak traffic and transport movements likely to be generated (vehicle, public transport, pedestrian and cycle trips) during construction and operation of the development, b) including a description of vehicle access routes for both construction and operational vehicles and c) the impacts on local and regional road network and nearby intersections;	Noted. Accordingly, this Traffic Assessment (TA) addresses the requested information as outlined in the SEAR's in the following sections: a) It is noted that the approved SSD TA included a detailed analysis of Journey-to-Work 2016 and provided a general perspective of anticipated operational travel patterns between private vehicles, public transport and active modes in the absence of anticipated staff numbers. - Additionally, details of daily and peak vehicular traffic generation of the MOD 1 has been reviewed (against the approved SSD traffic generation) is presented in Section 7. - Section 8 of this TA provides a high level assessment of construction impacts associated with MOD 1. It should be noted that the total construction volumes are anticipated to be less than overall operational traffic – thus, the traffic assessment undertaken for operational traffic is sufficient to demonstrate that the lower volume of construction traffic would warrant lower levels of impact. - It is noteworthy that a detailed CTMP is expected to be provided post DA approval and in response to a suitable condition of consent. By that time, it is expected that more detailed information regarding construction program will be available. b) Descriptions of vehicle access routes for operation traffic is referenced in Section 9.3. Additionally, an assessment of TfNSW's (former RMS) RAV maps has been conducted to ensure that the roads anticipated for routes are accessible for restricted vehicle sizes.

#	SEARs - Traffic and Transport	Ason Group Response
		c) As discussed in Section 7, the estimated traffic generation of the proposed MOD 1 is less than the approved SSD 10436 traffic generation. Therefore, the proposed MOD 1 is not expected to result in any further impact on the performance of surrounding road network comparing to the approved SSD 10436.
2	a) Details of access to the site from the road network including intersection locations, b) design and sight distance;	a) Details to proposed Site access is referred in Section 2, with a detailed figure demonstrating proposed access roads and connectivity to the existing network (Refer Figure 2 and Figure 3). Furthermore, Section 9.3 details the access plan for the Lot 201 (Figure 15 to Figure 18), which is expected to be impacted by the MOD 1. b) As discussed in section 9, in consideration of AS2890.2, the minimum sight distance along a 50km/h road requires 69-metres in both directions of egress. It should be considered that sight angles within these areas should not contain any permanent obstructions to impact visibility. It is expected that detailed design reviews would occur as part of the Construction Certificate (CC) and in response to a suitable Condition of Consent.
3	Detailed plans of the proposed site access and parking provision on site in accordance with the relevant Australian Standards; and	Review of design matters relating to the proposed MOD 1 has been undertaken in accordance with relevant Australian Standards. Reference should also be made to the design commentary included in Appendix A . However, it is expected that detailed design reviews would occur as part of the Construction Certificate (CC) and in response to a suitable Condition of Consent. Additionally, detailed review has been conducted in Section 6 to ensure that the parking provision is sufficient.
4	A queuing impact assessment of the proposed site access to demonstrate sufficient storage has been provided for light and heavy vehicle driveways in each lot and queuing on public road is effectively minimised.	Noting the MOD 1 would only modify the design of Lot 201 - as discussed in Section 9.5 - it has been considered that the proposed Lot 201: a) has been designed with more than enough area internal queue storage such that queueing will not occur over the crossover and onto the public carriageway. b) security gates will be remain open during operation of the proposed development. Accordingly, there will be no queueing onto local road network as a result of the proposed site accesses. c) a loading dock management figure has been included in section 9 which shows restriction of loading bays to specific truck sizes to ensure that all time trucks can undertake U-turns and exit the tenancy in any unlikely event that all other loading bays are occupied. c) any further details regarding operational management can readily be provided at site-specific Operational Traffic Management Plan (OTMP) which can be provided prior to the Occupation Certificate.

4.3 Response to Conditions of Consent

As mentioned in Section 4.1, Conditions of Consent (CoC) has been issued as part of the SSD 10436 Approval by the Department of Planning, Industry and Environment (DPIE).

Accordingly, the Conditions of Consent relevant to this TA, as well as brief responses regarding the MOD 1, are outlined in the following table.

Table 3: Ason Group Response to CoC

#	CoC - Traffic and Transport	Ason Group Response
Limits of Consent		
A8	The Applicant must ensure the development provides car parking in accordance with the following rates: a) 1 space per 300 m² of warehouse GFA; b) 1 space per 40 m² of office GFA; and c) 1 space for accessible parking for every 100 car parking spaces.	Refer to Section 6. All future warehouses under MOD 1 are provided with sufficient car parking spaces to readily meet (and in many cases exceed) the provisions set out by the conditions of consent.
A9	The Applicant must ensure that heavy vehicles entering and exiting Lot 204 are limited to two inbound and two outbound movements during any 15-minute period during the night.	Noted. It is understood that a loading Area Management Plan will be prepared prior to the commencement of operation of the Lot 204 warehouse detailing the management measures to restrict the number of heavy vehicles accessing Lot 204.
Construction Traffic Management Plan		
B23	Prior to the commencement of construction of each warehouse building, the Applicant must prepare a Construction Traffic Management Plan (CTMP) for the development to the satisfaction of the Planning Secretary. The plan must form part of the CEMP required by Condition C2 and must: a) be prepared by a suitably qualified and experienced person(s); b) be prepared in consultation with Council; c) detail the measures that are to be implemented to ensure road safety and network efficiency during construction; d) detail heavy vehicle routes, access and parking arrangements; e) include a Driver Code of Conduct to: (i) minimise the impacts of earthworks and construction on the local and regional road network; (ii) minimise conflicts with other road users; (iii) minimise road traffic noise; and (iv) ensure truck drivers use specified routes; f) include a program to monitor the effectiveness of these measures; and g) if necessary, detail procedures for notifying residents and the community (including local schools), of any potential disruptions to routes.	Refer to Section 8. As discussed in the approved SSD TA, it is expected that a detailed Construction Traffic Management Plan (CTMP) will be provided (for the MOD 1) as part of the Construction Certificate (CC) stage of the project and when detailed construction programme for the development is better defined.
B24	The Applicant must: a) not commence construction until the CTMP required by Condition B23 is approved by the Planning Secretary; and b) implement the most recent version of the CTMP approved by the Planning Secretary for the duration of construction	Noted.

#	CoC - Traffic and Transport	Ason Group Response
Access		
B25	Prior to the commencement of construction, the Applicant must submit design plans and swept path analysis to the satisfaction of the Certifier which demonstrates each access driveway is: a) designed to accommodate the turning path of a 26 m B-Double heavy vehicle and to avoid vehicle conflicts on Johnston Crescent; and b) designed to be consistent with the most recent version of the relevant AUSTROADS guidelines.	Review of design matters relating to the proposed MOD 1 has been undertaken in accordance with relevant Australian Standards and AUSTROADS guidelines. Reference should be made to the design commentary included in Appendix A.
Parking		
B26	Prior to the commencement of construction, the Applicant must submit a plan to the Certifier showing the locations and dimensions of the proposed bicycle parking provision within the development showing compliance with Australian Standard AS 2890.3:2015 Bicycle parking and access arrangements. The bicycle parking must be secure and located undercover with convenient access from the street and building entries.	Refer to Section 6.2. The current proposal provides for a total of 75 bicycle parking spaces in proximity of office locations of each lot. Provision of additional bicycle parking, if required by future anticipated staff numbers, can readily be accommodated for at a later stage of development.
Operating Conditions		
B27	The Applicant must ensure: a) internal roads, driveways and parking (including grades, turn paths, sight distance requirements, aisle widths, aisle lengths and parking bay dimensions) associated with the development are constructed and maintained in accordance with the latest version of AS 2890.1:2004 Parking facilities Off-street car parking (Standards Australia, 2004) and AS 2890.2:2002 Parking facilities Off-street commercial vehicle facilities (Standards Australia, 2002); b) the swept path of the longest vehicle entering and exiting the site, as well as manoeuvrability through the site, is in accordance with the relevant AUSTROADS guidelines; c) the development does not result in any vehicles queuing on the public road network; NSW Government 9 ESR Horsley Logistics Park Department of Planning, Industry and Environment (SSD-10436) d) heavy vehicles and bins associated with the development are not parked on local roads or footpaths in the vicinity of the site; e) all vehicles are wholly contained on site before being required to stop; f) all loading and unloading of materials is carried out on-site; g) all trucks entering or leaving the site with loads have their loads covered and do not track dirt onto the public road network; and h) the proposed turning areas in the car park are kept clear of any obstacles, including parked cars, at all times.	Review of design matters relating to the proposed MOD 1 has been undertaken in accordance with relevant Australian Standards and AUSTROADS guidelines. Reference should be made to the design commentary included in Appendix A. Additionally, as discussed in Table 2, noting the MOD 1 would only modify the design of Lot 201, and the proposed Lot 201: a) has been designed with more than enough area internal queue storage such that queueing will not occur over the crossover and onto the public carriageway. b) security gates will be remain open during operation of the proposed development. Accordingly, there will be no queueing onto local road network as a result of the proposed site accesses. c) a loading dock management figure has been included in section 9 which shows restriction of loading bays to specific truck sizes to ensure that all time trucks can undertake U-turns and exit the tenancy in any unlikely event that all other loading bays are occupied. Any further details regarding operational management can readily be provided at site-specific Operational Traffic Management Plan (OTMP) which can be provided as part of the Occupation Certificate (OC) stage of the project.

#	CoC - Traffic and Transport	Ason Group Response
Green Travel Plan		
B28	Prior to the commencement of operation of any part of the development, the Applicant must prepare a Green Travel Plan (GTP) to the satisfaction of the Planning Secretary. The GTP must form part of the OEMP required by condition C5 and must: a) be prepared in consultation with TfNSW; b) detail parking provision for each tenancy; c) outline facilities and measures to promote public transport usage, such as car share schemes and employee incentives; d) include specific accessibility requirements for employees with mobility impairments, and the measures that are in place to address the requirements including any priority arrangements; e) include a map of preferred walking and cycling routes and preparation of a Transport Access Guide that details access arrangements for employees and visitors detailing: (i) cycle parking provision at each site and recommended last mile cycle route from local cycle network to each site; and (ii) a website link to TfNSW trip planner; f) a communication strategy for engaging employees and visitor regarding sustainable transport use to the site; g) measures to promote the health and wellbeing benefits of active travel to the site; h) identification of the number of staff who can reasonably access the site from walking or cycling; and (i) describe pedestrian and bicycle linkages and end of trip facilities available on-site.	Noted. It is expected that a detailed Green Travel Plan (GTP) will be provided as part of the Occupation Certificate (OC) stage of the project.
B29	The Applicant must: a) not commence operation until the GTP is approved by the Planning Secretary; b) implement the most recent version of the GTP approved by the Planning Secretary for the duration of the development; and c) provide a copy of the latest GTP and Transport Access Guide to each tenancy within the development.	Noted.

4.4 Response to DPIE's Comments

Initial consultation has been undertaken with DPIE in relation to the proposed MOD 1. Responses to DIPE's traffic and transport related comments are provided in the following table.

Table 4: Ason Group Response to DPIE's Comments

#	DPIE's Comments	Ason Group Response
1	The Department raises concerns of driveways proposed along Johnston Crescent with associated impacts on traffic efficiency and safety. Please ensure the traffic impact assessment address the Department's concern.	The proposed MOD 1 would only modify the design of Lot 201. A total of 6 access driveways are proposed for Lot 201 along Johnston Crescent as a result of breaking Lot 201 down to 3 standalone warehouses and associated offices, and the provision of an estate café. However, as discussed in Section 7.2, the overall Lot 201 is expected to generate approximately 103 trips and 77 trips per hour during AM and PM peak hour, separately. This is equivalent to about 1-2 trips (inbound and outbound) per minute during road network peak hours, which will be distributed onto 6 access points, and is therefore considered minor and unlikely to result in major conflicts between these multiple site accesses. Additionally, design review has been undertaken for Lot 201 to confirm that the access and egress for commercial vehicles into and out from all warehouses within Lot 201 are feasible, as included in Appendix A.

4.5 Approved Traffic Generation

Following traffic generation rates have been adopted as part of the approved SSD studies having regard for the RMS Guide:

- AM Peak: 0.247 trips per 100m² of GFA,
- PM Peak: 0.182 trip per 100m² of GFA, and
- Daily: 2.641 trip per 100m² of GFA.

Accordingly, the approved SSD TA estimates the following traffic generation for the Site:

Table 5: SSD 10436 Approved Traffic Generation (two-ways)

Lot	Total Built Form (GFA m ²)	Road Network AM Peak (veh/hour)	Road Network PM Peak (veh/hour)	Daily (veh/day)
<u>201</u>	<u>43,350</u>	<u>107</u>	<u>79</u>	<u>1,145</u>
202	33,360	82	61	881
203	19,530	48	36	516
204	16,579	41	30	438
Total	112,819	278	206	2,980

Therefore, the following peak hour and daily traffic figures readily have been approved for Lot 201:

- AM Peak: 107 vehicular trips per hour,
- PM Peak: 79 vehicular trips per hour, and
- Daily: 1,145 vehicular trips per day.

5 MOD 1 Description

5.1 MOD 1 Master Plan

A reduced scale of Master Plan based on MOD 1 is provided in the figure below.

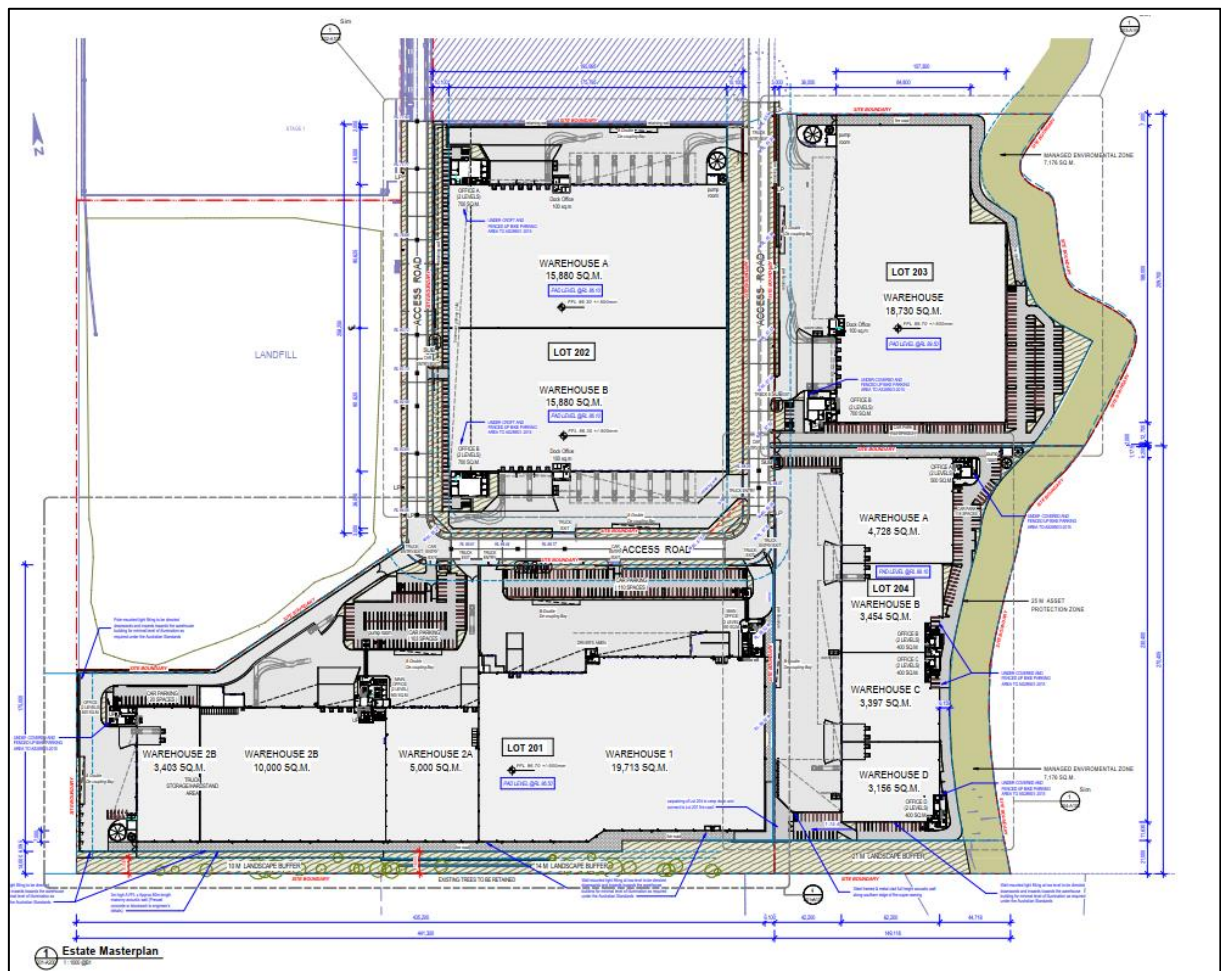


Figure 12: Modification 1 Master Plan

MOD 1 will primarily affect the design and built form of Lot 201 and Lot 204, including:

- Lot 201:
 - Reduction of GFA by 2,774 m²,
 - Modify the design by breaking it down to 3 standalone warehouses and associated offices,
 - Introduction of a new café,
 - Increase of on-site parking by 2 car parking spaces (as provisional spaces).
 - Modify the proposed vehicular access crossovers.

- Lot 204:
 - Minor changes to the hardstand area to allow fire brigade accessing Lot 201, resulting:
 - Reduction of GFA by 66 m², and
 - Reduction of on-site parking by 3 car parking spaces.

For clarity, extent of the modified Lot 201 when compared to the approved Concept Plan is demonstrated in **Figure 13**.

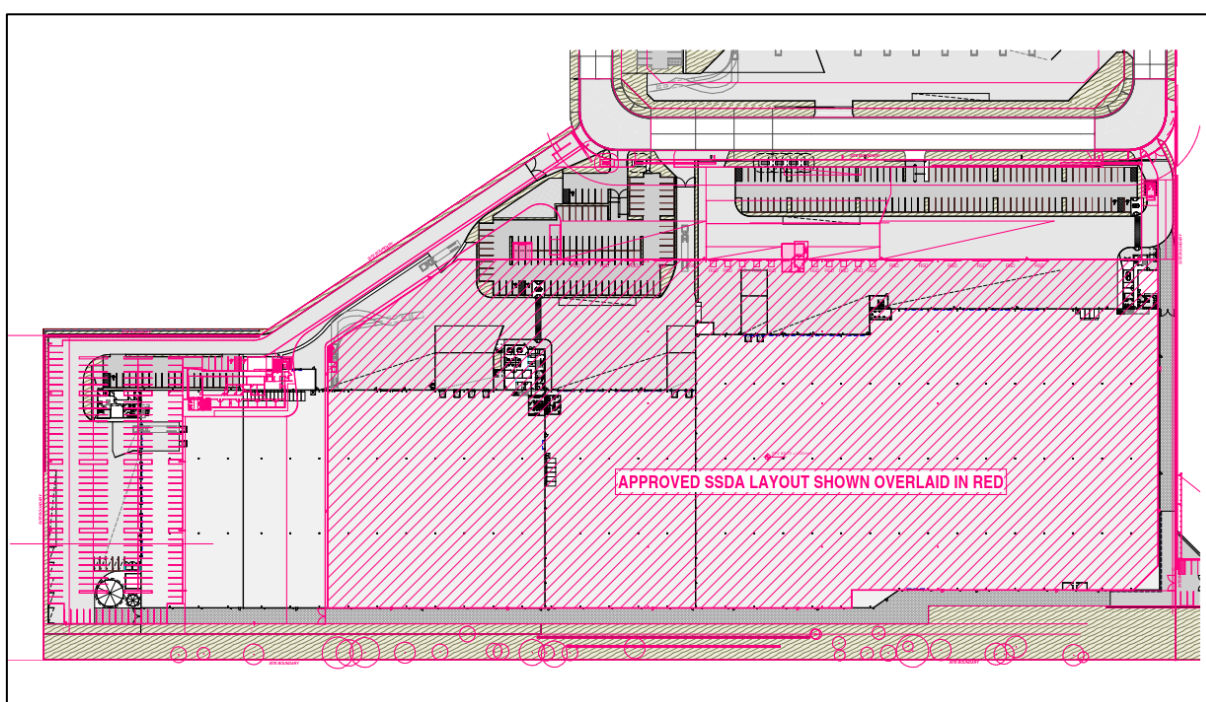


Figure 13: Approved Concept Plan vs MOD 1 (LOT 201)

5.2 Proposed Building Characteristics

The following table outlines a comparison between area schedules related to the proposed MOD 1 and the approved Concept Plan. According to below table, the proposed MOD 1 will **REDUCE** the total GFA of the Site from what has already been approved as part of the SSD-10436.

Table 6: Area Comparison

Lot		Approved GFA (m ²)	MOD 1 GFA (m ²)	Difference of GFA (m ²)
201	Warehouse 1	-	20,820	-
	Warehouse 2	-	15,878	-
	Warehouse 3	-	3,818	-
	Estate Cafe	-	60	-
	Total	43,350	40,576	(-) 2,774
202		33,360	33,360	-
203		19,530	19,530	-
204		16,579	16,513	(-) 66
Total		112,819	109,979	(-) 2,840

6 Parking Provisions

6.1 Car Parking

6.1.1 Car Parking Requirement

According to the Condition A8 of the SSD 10436 Approval, car parking should be provided at the following rate:

- 1 space per 300 m² of warehouse GFA, and
- 1 space per 40 m² of office GFA

Additionally, for the proposed estate cafe, the WSEA FDCP 2016 has outlines the following car parking requirement:

- Industrial Retail Outlet: 1 space per 50 m² Gross Leasable Area (GLA)

In response, MOD 1 proposes the following on-site car parking spaces.

Table 7: MOD 1 Car Parking Provision

Lot		GFA (m²)					Parking Requirement	Parking Provision
		Warehouse	Office	Amenity	Retail	Total		
201	Warehouse 1	19,731	536	553	-	20,820	80	108
	Warehouse 2	15,000	878	-	-	15,878	72	98
	Warehouse 3	3,403	415	-	-	3,818	22	22 ¹
	Estate Cafe	-	-	-	60	60	1 ²	6
	Total	38,134	1,829	553	60	40,576	175	234
202		31,760	1,600	-	-	33,360	146	147
203		18,730	800	-	-	19,530	83	140
204		14,735	1,700	78	-	16,513	92	114
Total		103,359	5,929	631	60	109,979	496	635

Note: 1) including 2 provisional car parking spaces.

2) based on RMS guide, it is assumed that 100 m² GFA equals to 75 m² GLA.

As indicated in **Table 7**, the car parking provided as part of proposed MOD 1 for each Lot and for the Estate overall readily satisfies and indeed exceed the required parking provisions.

6.1.2 Accessible Parking

According to the Condition A8 of the SSD 10436 Approval, accessible car parking should be provided at the following rate:

- 1 space for accessible parking for every 100 car parking spaces.

In this regard the following accessible parking spaces are provided for each Lot:

Table 8: MOD 1 Accessible Car Parking Provision

Lot		On-Site Car Parking Provision	Accessible Car Parking Requirement	Accessible Car Parking Provision
201	Warehouse 1	108	2	2
	Warehouse 2	98	1	2
	Warehouse 3	22	1	1
	Estate Cafe	6	1	1
	Total	234	5	6
202		147	2	4
203		140	2	2
204		114	2	4
Total		635	11	16

It is indicated that the proposed accessible car parking provision for each lot comply with the requirements. Additionally, it is anticipated that detailed assessments of accessible car parking provision can be undertaken as part of the Development Application (DA) stage of individual lots.

6.2 Bicycle Parking

According to the approved SSD TA, bicycle parking should be provided at the following rate:

- Light Industry: 1 per 1,000 m² GFA

Application of the above rate to the proposed MOD 1 would result in the following requirements:

6.3 Servicing and Waste Collection

All loading and servicing, including waste collection will occur on-site. The site layout has been designed to accommodate access and circulation by up to 30 metre Super B-Double trucks (Performance Based Vehicles PBS-Level 2).

7 Traffic Assessment

7.1 Approved Traffic Generation

As discussed before the subject site has been approved for the following traffic generation estimations:

Table 10: SSD 10436 Approved Traffic Generation

Lot	Total Built Form (GFA m ²)	Road Network AM Peak (veh/hour)	Road Network PM Peak (veh/hour)	Daily (veh/day)
201	43,350	107	79	1,145
202	33,360	82	61	881
203	19,530	48	36	516
204	16,579	41	30	438
Total	112,819	278	206	2,980

7.2 MOD 1 Traffic Generation

As discussed in Section 4.4, following traffic generation rates for warehouse and office have been adopted as part of the approved SSD studies having regard for the RMS Guide:

- AM Peak 0.247 trips per 100m² of GFA,
- PM Peak 0.182 trips per 100m² of GFA, and
- Daily 2.641 trips per 100m² of GFA.

Furthermore, RMS Guide outlines the following trip generation rates for restaurants (include cafes)²:

- PM Peak 5 trips per 100m² of GFA, and
- Daily 60 trips per 100m² of GFA.

The above rates have been adopted to estimate the traffic generation for Lots 201 to 204 and outlined in **Table 11**.

² Restaurant: a refreshment room where food is served to customers. It can either be licensed or unlicensed and can include cafes, tea rooms, eating houses or the like. (RMS Guide – Schedule 10 – Reference Material)

Table 11: MOD 1 Traffic Generation

Lot		MOD 1 GFA (m ²)	Traffic Generation		
			AM Peak	PM Peak	Daily
201	Warehouse 1	20,820	51	38	550
	Warehouse 2	15,878	39	29	419
	Warehouse 3	3,818	9	7	101
	Estate Cafe	60	3	3	36
	Total	40,576	103	77	1,106
202		33,360	82	61	881
203		19,530	48	36	516
204		16,513	41	30	436
Total		109,979	274	204	2,939

7.3 Traffic Impacts

With reference to Section 4.4, a comparison between SSD 10436 approved generation with the MOD 1 traffic generation estimation.

Table 12: Traffic Generation Comparison

Lot	SSD 10436 Approval			MOD 1			Difference		
	AM	PM	Daily	AM	PM	Daily	AM	PM	Daily
201	107	79	1,145	103	77	1,106	(-) 4	(-) 2	(-) 39
202	82	61	881	82	61	881	-	-	-
203	48	36	516	48	36	516	-	-	-
204	41	30	438	41	30	436	-	-	(-) 2
Total	278	206	2,980	274	204	2,939	(-) 4	(-) 2	(-) 41

As indicated above, the estimated traffic generation of the proposed MOD 1 is less than the approved SSD 10436 traffic generation. Therefore, the proposed MOD 1 is not expected to result in any further impact on the performance of surrounding road network comparing to the approved SSD 10436 and therefore does not warrant any additional modelling assessment and any additional infrastructure upgrades beyond that already constructed and planned for the locality.

8 Construction Traffic Management

As discussed in the approved SSD TA, a detailed Construction Traffic Management Plan (CTMP) will be provided (for the MOD 1) as part of the Construction Certificate (CC) stage of the project and when detailed construction programme for the development is better defined.

Notwithstanding, the approved SSD TA included several general principles for managing construction traffic have been assumed and provide an understanding of the likely traffic impacts during the construction period.

It should be noted that the MOD 1 does not propose any changes to these general principles, and as stated in the approved SSD TA, the construction traffic volumes are expected to be lower than the anticipated operational traffic volumes; therefore, there will be no additional traffic impacts to the wider road network as a result of the MOD 1 construction works.

9 Design Commentary

9.1 Relevant Design Standards

The site access, car park and loading areas for each Lot should be designed to comply with the following relevant Australian Standards:

- AS2890.1 for car parking areas,
- AS2890.2 for commercial vehicle loading areas, and
- AS2890.6 for accessible (disabled) parking.

It is expected that any detailed construction drawings in relation to the car park or site access would comply with these Standards.

Swept path analysis has been undertaken for Lot 201 and is provided in **Appendix A**.

9.2 Design Vehicle

In line with recent advice reflecting consultation with DPIE, access and internal circulation of the proposed SSD commercial areas have been designed to accommodate up to 19 metre articulated vehicles for rear loading, and up to 30 metre Super B-Doubles for side loading (refer Appendix A for detailed design commentary and restrictions). This vehicle has been adopted as the relevant 'design vehicle' when assessing the heavy vehicle access driveways for each stage separately. Access and internal car parking facilities have been designed for B99's cars as the light 'design vehicle'.

Relevant paths analysis is included in Appendix A.

9.3 Access Design

9.3.1 Car Park Access

Each car parking access point serves between 100 – 240 car parking spaces (refer **Figure 17**), typically used by staff (User Class 1A), expected for Lot 201 Warehouse 3 (20 spaces). Accordingly, a Category 2 access driveway — being a 6–9 metre combined entry and exit driveway is nominally required by AS2890.1.

In response, this provision has generally been met across the 4 lots.

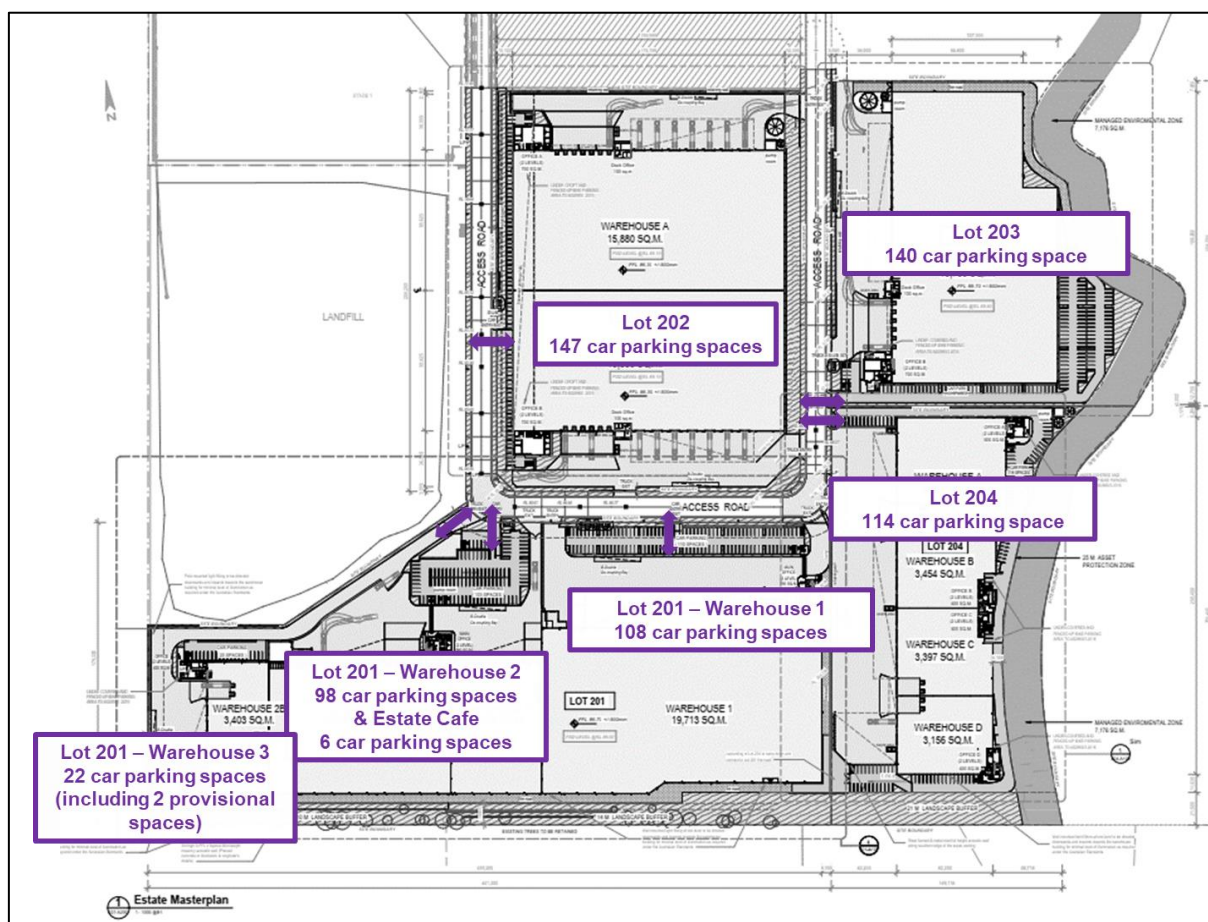


Figure 15: Car Parking Access Arrangement

9.3.2 Commercial Vehicle Access

Noting the MOD 1 will only modify the design of Lot 201, design review has been undertaken for Lot 201 to confirm that the access and egress for commercial vehicles into and out from all warehouses within Lot 201 are feasible. The design of these accesses has been assessed by swept path analysis for Super B-Doubles (similar to the approved TA).

For context, commercial vehicle access plan is presented in figures below for warehouses within Lot 201.

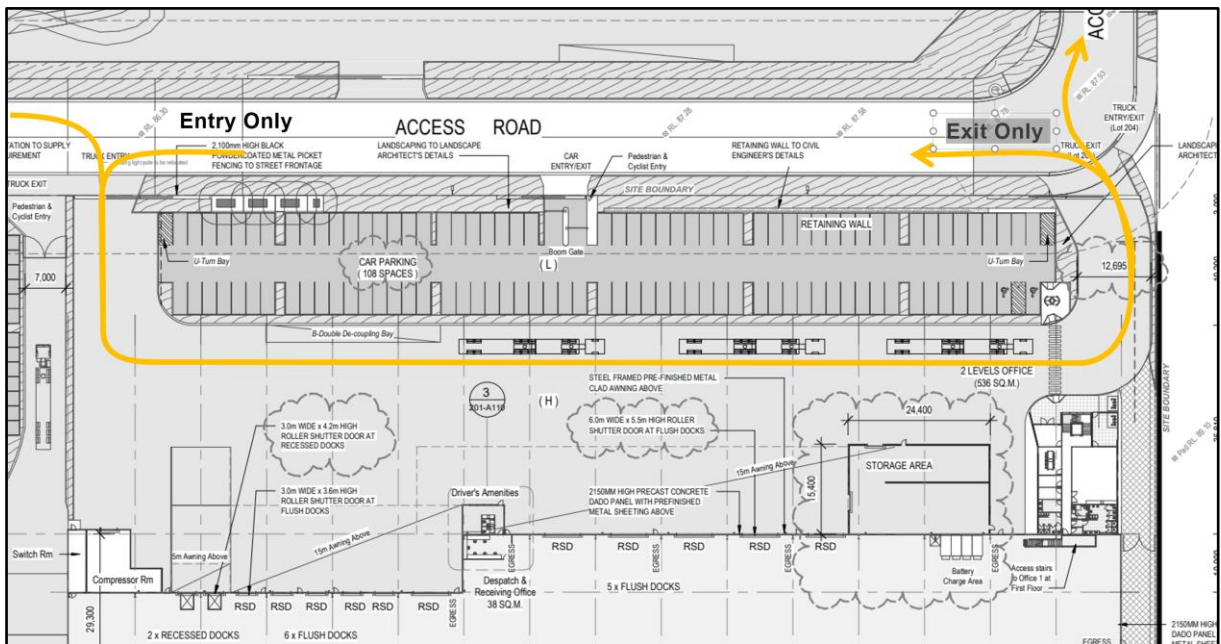


Figure 16: Lot 201 (Warehouse 1) Commercial Vehicle Access Plan

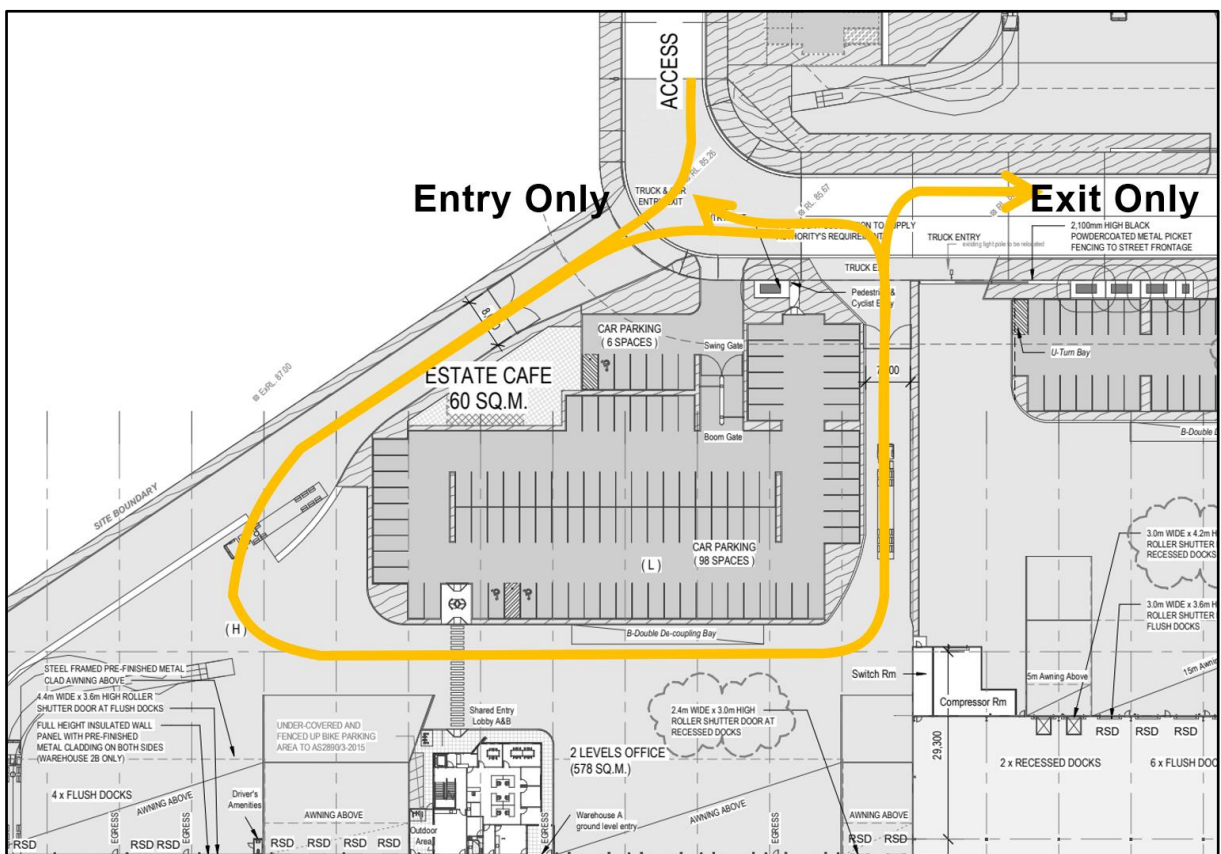


Figure 17: Lot 201 (Warehouse 2) Commercial Vehicle Access Plan

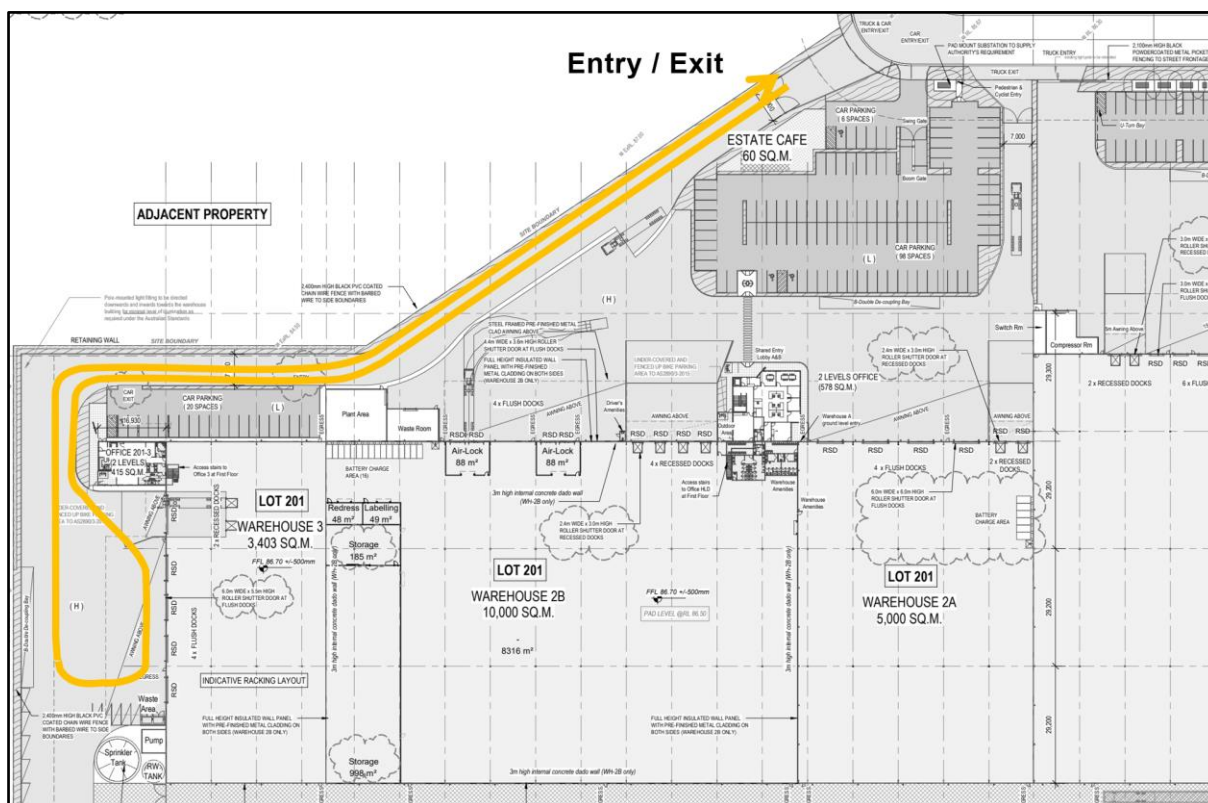


Figure 18: Lot 201 (Warehouse 3) Commercial Vehicle Access Plan

Reference should also be made to the design commentary and swept paths included in Appendix A demonstrating access and egress to/from the MOD 1 warehouses.

9.4 Access Sight Distance

In consideration of AS2890.2, the minimum sight distance along a 50km/h road requires 69-metres in both directions of egress. It should be considered that sight angles within these areas should not contain any permanent obstructions to impact visibility. In this regard, detailed sight distance analysis has been undertaken for MOD 1 with the results included Appendix A.

9.5 Vehicle Queueing

It has been considered that all lots have been designed to keep the gates open during the operation of the warehouses to minimise the potential queueing of light and heavy vehicles accessing the sites and associated car parking areas. Accordingly, queueing onto the surrounding local road network is not anticipated during operational hours of these Lots. Furthermore, the design of the warehouses includes sufficient space to accommodate the need for the proposed heavy vehicle movements on the Site.

9.6 Internal Design

Final resolution of the internal design would be expected to occur as part of CC and design coordination phase for each lot and in response to a general condition of consent requiring compliance with AS2890. It is noteworthy that the loading docks will be utilised by 19.0 metre semi-trailers for reverse movements and Super B-Doubles for side-loading.

9.7 Preliminary Loading Dock Management

As specified above, the following maximum size trucks should be implemented in loading dock management practices –

- 19m Articulated Vehicles for rear-loading; and
- 30m Super B-Doubles for side-loading.

It should be considered that under circumstances, a number of bays are recommended to be reserved for a maximum vehicle size of 12.5m Heavy Rigid Vehicles. Reference should be made to the plans demonstrated in the figures below for Lot 201.

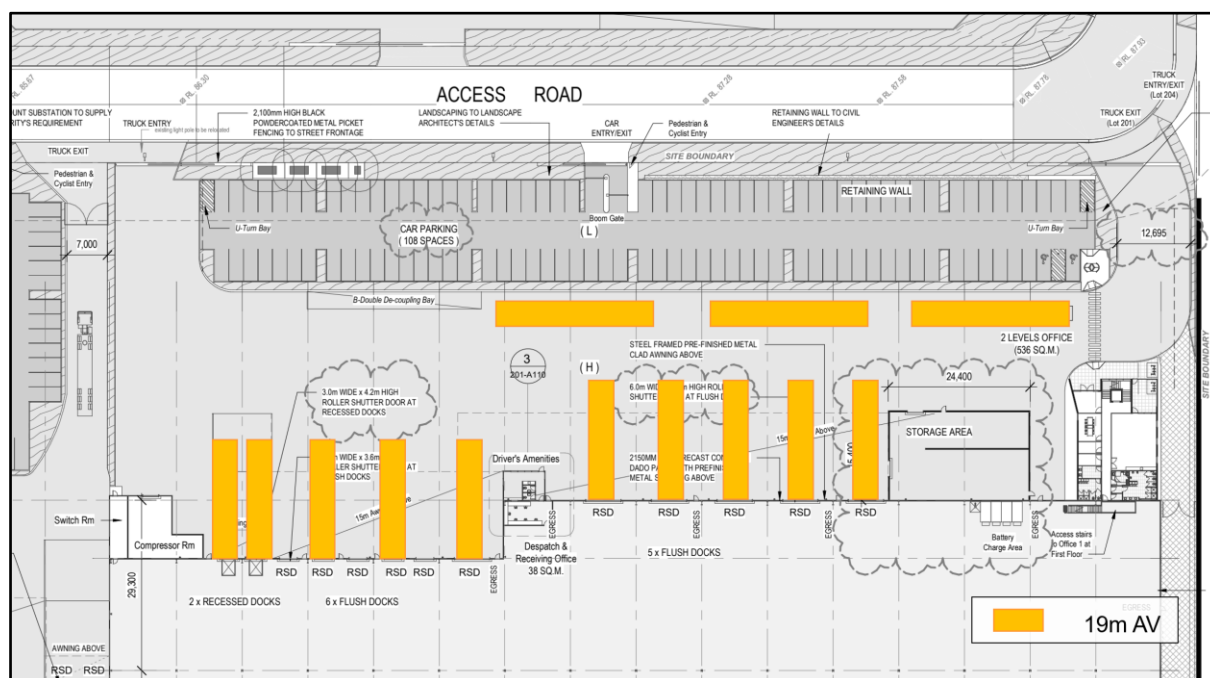


Figure 19: Warehouse 1 Loading Plan (19m AV's)

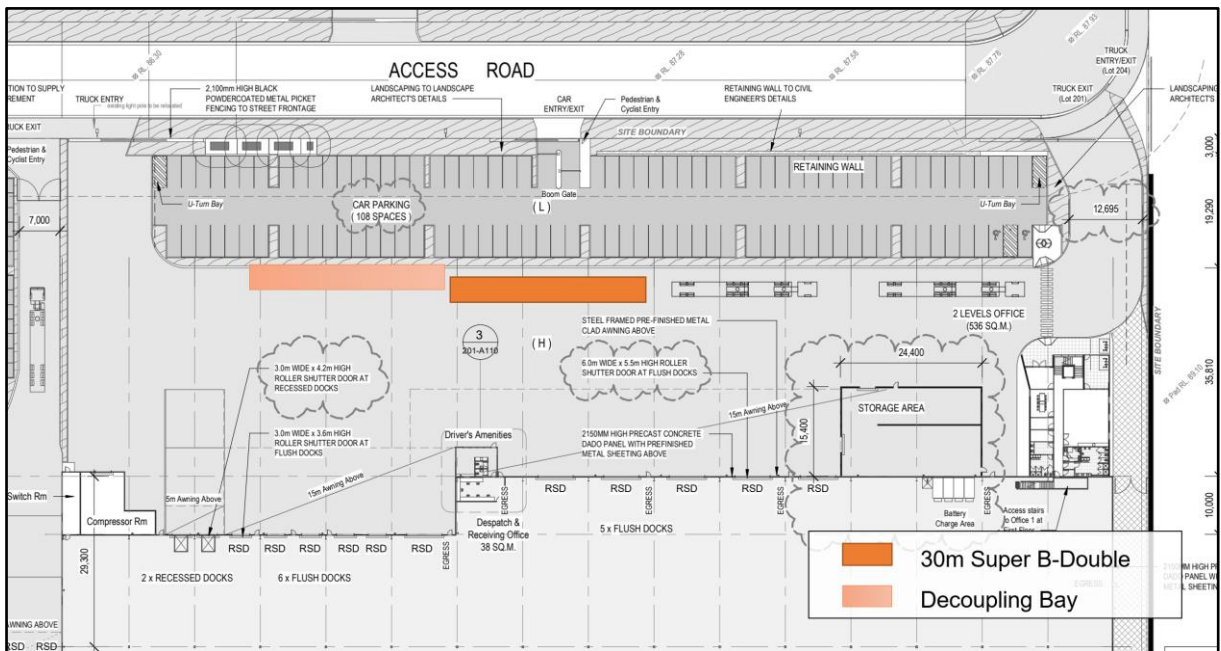


Figure 20: Warehouse 1 Loading Plan (30m Super B-Doubles)

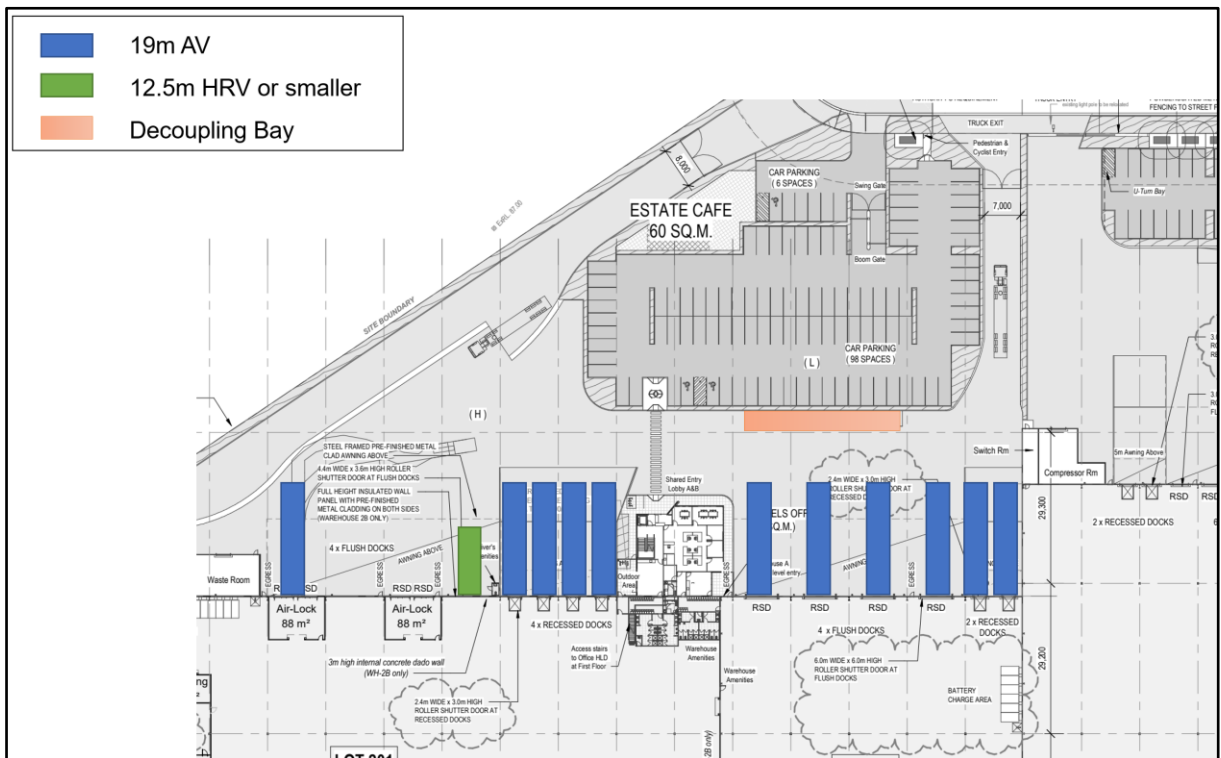


Figure 21: Warehouse 2 Loading Plan

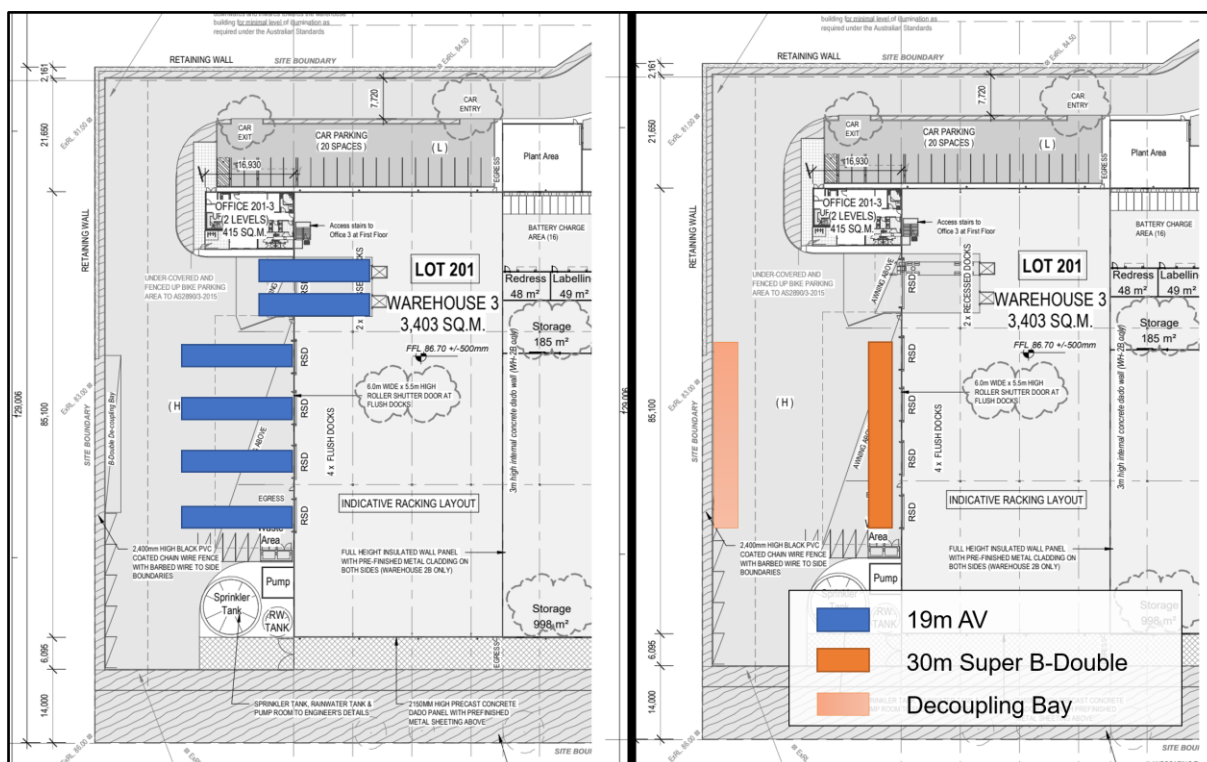


Figure 22: Warehouse 3 Loading Plan

Having regard to the above, warehouse 1 and warehouse 3 can both accommodate 1 x 30 metres Super B-Double on-site.

The entry and exit of commercial vehicles to the warehouses should be facilitated by a hardstand operator to maintain operational controls and ensure permeability of the hardstand. Such detailed operational measures will be provided as part of the Operational Traffic Management Plans (OTMPs).

It is expected that detailed operational management measures would be required for all 3 warehouses, and these measures can be readily provided as suitable CoC.

9.8 Emergency / Fire Truck Vehicle Access

Reference should be made to the design commentary and swept paths included in Appendix A demonstrating fire truck routes for Lot 201.

10 Summary and Conclusion

Ason Group has been engaged by ESR to prepare a Transport Assessment (TA) to support a proposed Modification (MOD 1) to the approved State Significant Development Application (SSD 10436, approved in March 2021) of the ESR Horsley Logistics Park at 327-355 Burley Road (Lots 201-204), Horsley Park (the Site).

10.1 Key Findings

The key findings of this Traffic Impact Assessment are:

- The development (SSD 10436) was determined in March 2021 and approved with Conditions of Consent. The approved Concept Plan provides for the construction of 4 single storey warehouse / industrial buildings, with associated car parking and loading areas. All vehicular accesses will be to/from the Local Access Roads.
- Following traffic generation rates have been adopted as part of the approved SSD studies having regard for the RMS Guide:
 - Warehouse and office:
 - AM Peak: 0.247 trips per 100m² of GFA,
 - PM Peak: 0.182 trips per 100m² of GFA, and
 - Daily: 2.641 trips per 100m² of GFA.

Accordingly, the approved SSD TA estimates the following traffic generation for the Site:

Lot	Total Built Form (GFA m ²)	Road Network AM Peak (veh/hour)	Road Network PM Peak (veh/hour)	Daily (veh/day)
201	43,350	107	79	1145
202	33,360	82	61	881
203	19,530	48	36	516
204	16,579	41	30	438
Total	112,819	278	206	2,980

- The MOD 1 is proposed to mainly amend the design and built form of Lot 201 of the approved Concept Plan with minor changes to the other Lots
 - Lot 201:
 - Reduction of GFA by 2,774 m²,

- Modify the design by breaking it down to 3 standalone warehouses and associated offices,
- Introduction of a new estate café,
- Increase of on-site parking by 2 spaces (as provisional spaces).
- Modify the proposed vehicular access crossovers.
- Lot 204:
 - Minor changes to the hardstand area to allow fire brigade accessing Lot 201, resulting:
 - Decrease of GFA by 66 m², and
 - Reduction of on-site parking by 3 car parking spaces.
- Key changes to Gross Floor Areas (GFA) are summarised in the below table.

Lot		Approved GFA (m ²) ¹	MOD 1 GFA (m ²)	Difference of GFA (m ²)
201	Warehouse 1	-	20,820	-
	Warehouse 2	-	15,878	-
	Warehouse 3	-	3,818	-
	Estate Cafe	-	60	-
	Total	43,350	40,576	(-) 2,774
202		33,360	33,360	-
203		19,530	19,530	-
204		16,579	16,513	(-) 66
Total		112,819	109,979	(-) 2,840

Note: 1) – As per Stamped Plans for SSD 10436

- Car Parking spaces have been provided in accordance with the SSD 10436 Approval Conditions of Consent for the proposed warehouse and office use and the WSEA FDCP 2016 for the proposed estate cafe.

Lot		GFA (m²)					Parking Requirement	Parking Provision
		Warehouse	Office	Amenity	Retail	Total		
201	Warehouse 1	19,731	536	553	-	20,820	80	108
	Warehouse 2	15,000	878	-	-	15,878	72	98
	Warehouse 3	3,403	415	-	-	3,818	22	22
	Estate Cafe	-	-	-	60	60	1	6
	Total	38,134	1,829	553	60	40,576	175	242
202		31,760	1,600	-	-	33,360	146	147
203		18,730	800	-	-	19,530	83	140
204		14,735	1,700	78	-	16,513	92	114
Total		103,359	5,929	631	60	109,979	496	635

- RMS Guide outlines the following trip generation rates for restaurants (include cafes):
 - PM Peak: 5 trips per 100m² of GFA, and
 - Daily: 60 trips per 100m² of GFA.
- Accordingly, application of the approved SSD traffic generation rates for the proposed warehouse and office and RMS Guide rates for the proposed estate cafe results in the following:

Lot		MOD 1 GFA (m²)	Traffic Generation		
			AM Peak	PM Peak	Daily
201	Warehouse 1	20,820	51	38	550
	Warehouse 2	15,878	39	29	419
	Warehouse 3	3,818	9	7	101
	Estate Cafe	60	3	3	36
	Total	40,576	103	77	1,106
202		33,360	82	61	881
203		19,530	48	36	516
204		16,513	41	30	436
Total		109,979	274	204	2,939

- A comparison between SSD 10436 approved traffic generation with the MOD 1 traffic generation estimation is provided in below table.

Lot	SSD 10436 Approval			MOD 1			Difference		
	AM	PM	Daily	AM	PM	Daily	AM	PM	Daily
201	107	79	1,145	103	77	1,106	(-) 4	(-) 2	(-) 39
202	82	61	881	82	61	881	-	-	-
203	48	36	516	48	36	516	-	-	-
204	41	30	438	41	30	436	-	-	(-) 2
Total	278	206	2,980	274	204	2,939	(-) 4	(-) 2	(-) 41

- As indicated above, the estimated traffic generation of the proposed MOD 1 is less than the approved SSD 10436 traffic generation. Therefore, the proposed MOD 1 is not expected to result in any further impact on the performance of surrounding road network comparing to the approved SSD 10436 and therefore does not warrant any additional modelling assessment and any additional infrastructure upgrades beyond that already constructed and planned for the locality.

- Noting the MOD 1 will only modify the design of Lot 201, a preliminary design review has been undertaken for Lot 201:

- The largest vehicle anticipated to access the Site is a 30 metre Super B-double. Accordingly, the proposed site access and internal site design have been undertaken to accommodate this vehicle.
- It is proposed that the associated gates for all lots within the Site will be open during operational hours. Accordingly, there will be negligible queueing onto the surrounding local road network.
- Final resolution of the internal site design for all lots is anticipated to occur as part of the Construction Certificate phase, subject to a suitable condition of consent. Notwithstanding, our initial design reviews confirm that the swept path analysis for the design vehicles is generally satisfactory. Reference should be made to design commentary and swept paths included in Appendix A.

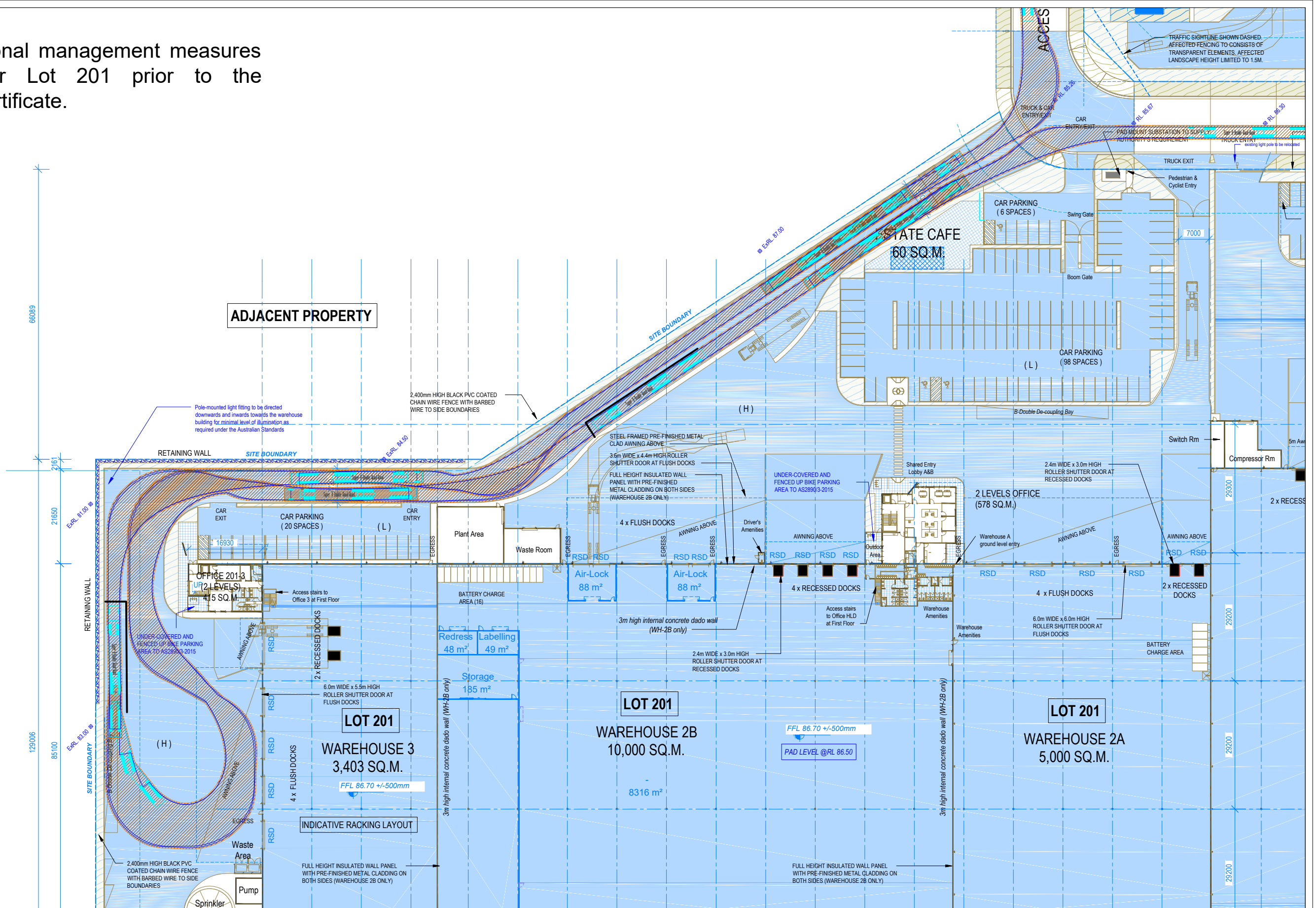
10.2 Conclusion

In summary, it concluded that the proposed MOD 1 generally result in no material departure from the approved SSD 10436, and it is supportable on the basis of traffic impact and proposed parking provision and will not result in any unacceptable impacts on the surrounding road network.

Appendix A

Swept Paths and Design Commentary

Note:
Detailed operational management measures is expected for Lot 201 prior to the Occupational Certificate.



Notes:

The swept path assessment was undertaken at 10 km/hr with 300 mm clearance
The plan assessed was provided by ESR on 30.04.2021

Drawn By:

O HASHMI

Client:

ESR

Project:

P1328	327-355 Burley Road, Horsley Park
-------	-----------------------------------

	Drawing Title:
--	----------------

LOT 201 SITE & FACILITY PLAN
Super B-Double 30 m

Date:

3-May-21

Scale @ A3:

1:850

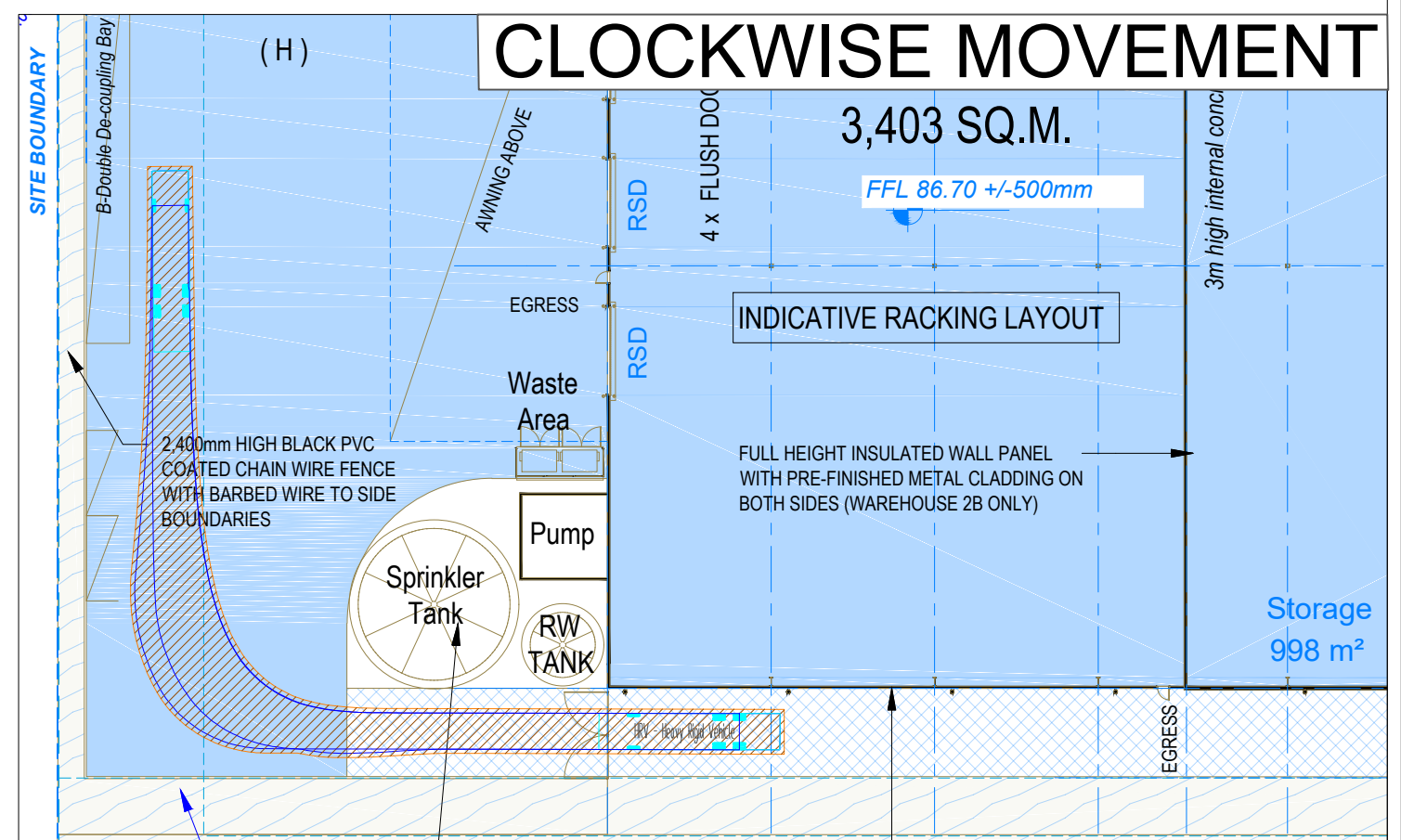
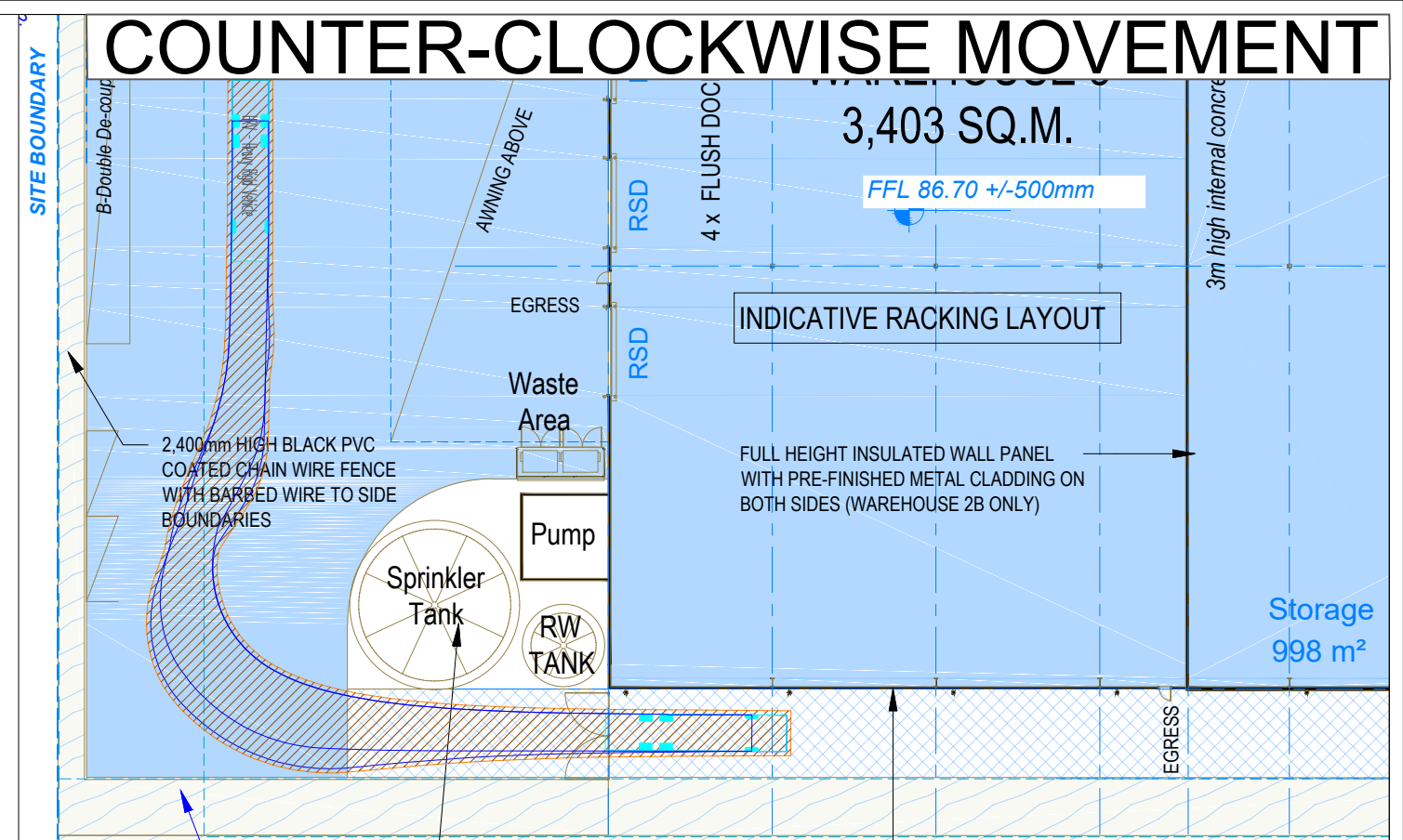
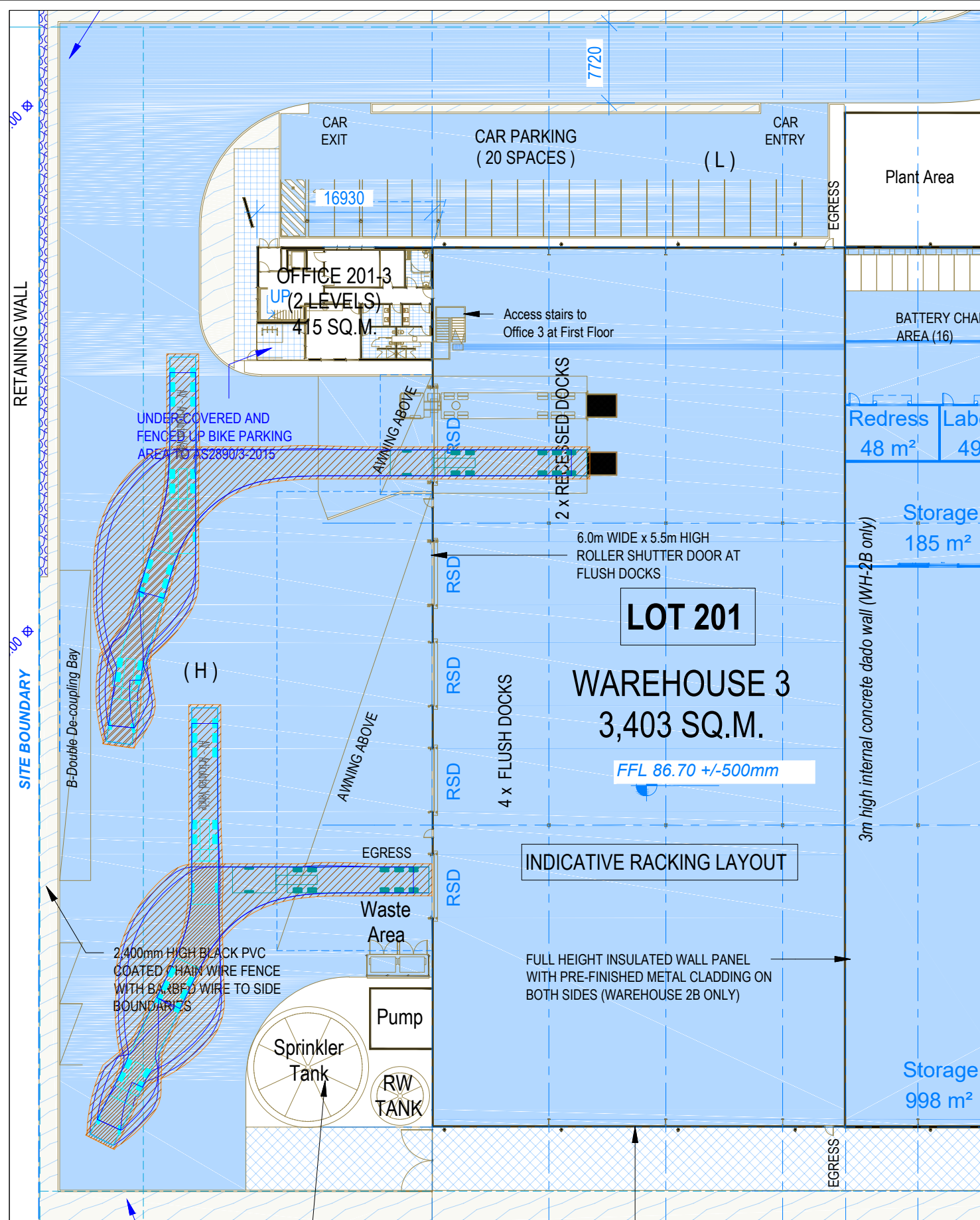
Drawing Number:

AG01

asongroup

Suite 5.02, Level 5, 1 Castlereagh Street
Sydney NSW 2000

info@asongroup.com.au



Notes:
 The swept path assessment was undertaken at 10 km/hr with 300 mm clearance
 The plan assessed was provided by ESR on 30.04.2021

Drawn By:
 O HASHMI

Client:
 ESR

Project:
 P1328
 327-355 Burley Road, Horsley Park

Drawing Title:
 LOT 201 SITE & FACILITY PLAN
 19 m AV and 12.5 m HRV

Date:
 3-May-21

Scale @ A3:
 1:500

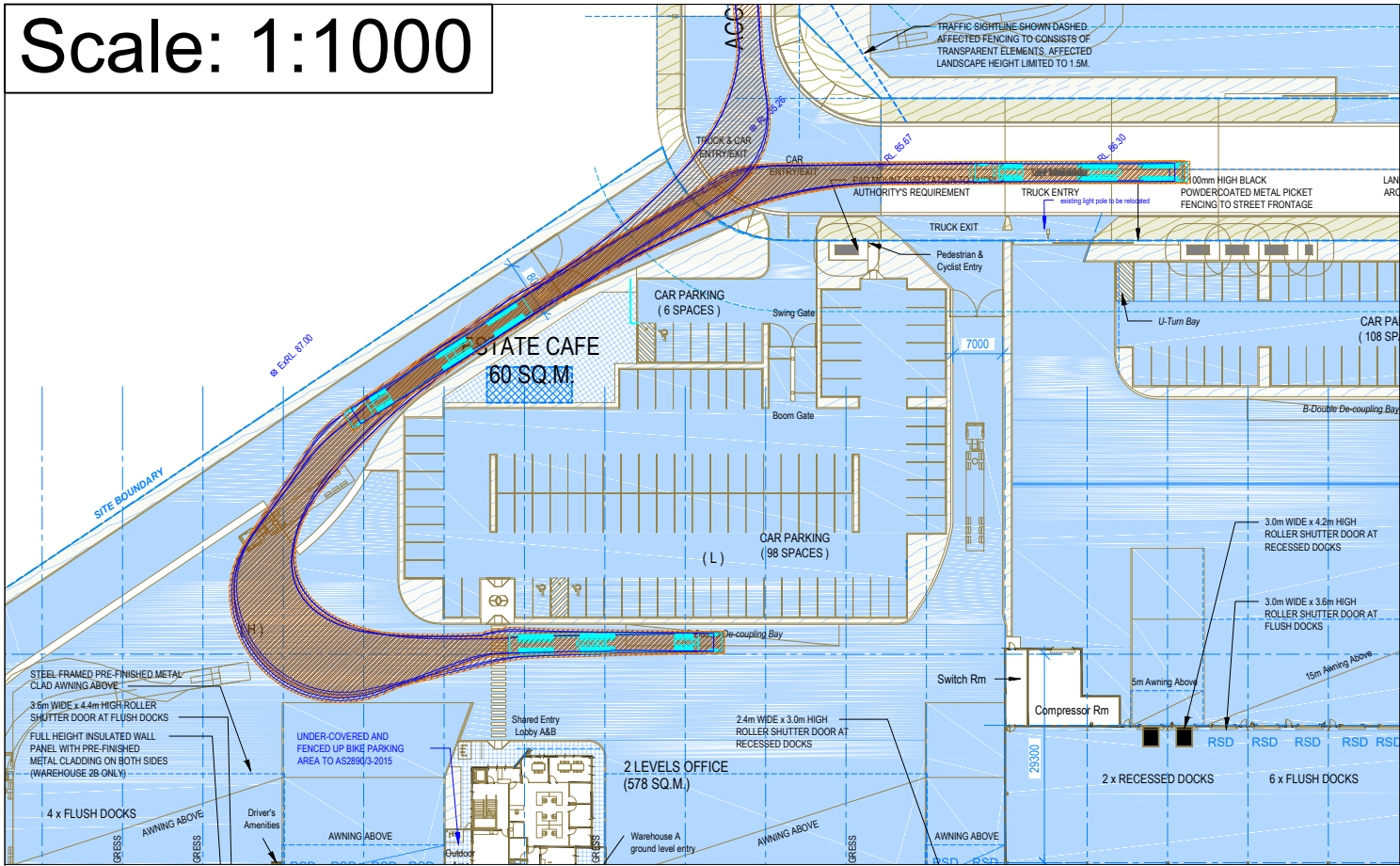
Drawing Number:
 AG02

asongroup

Suite 5.02, Level 5, 1 Castlereagh Street
 Sydney NSW 2000

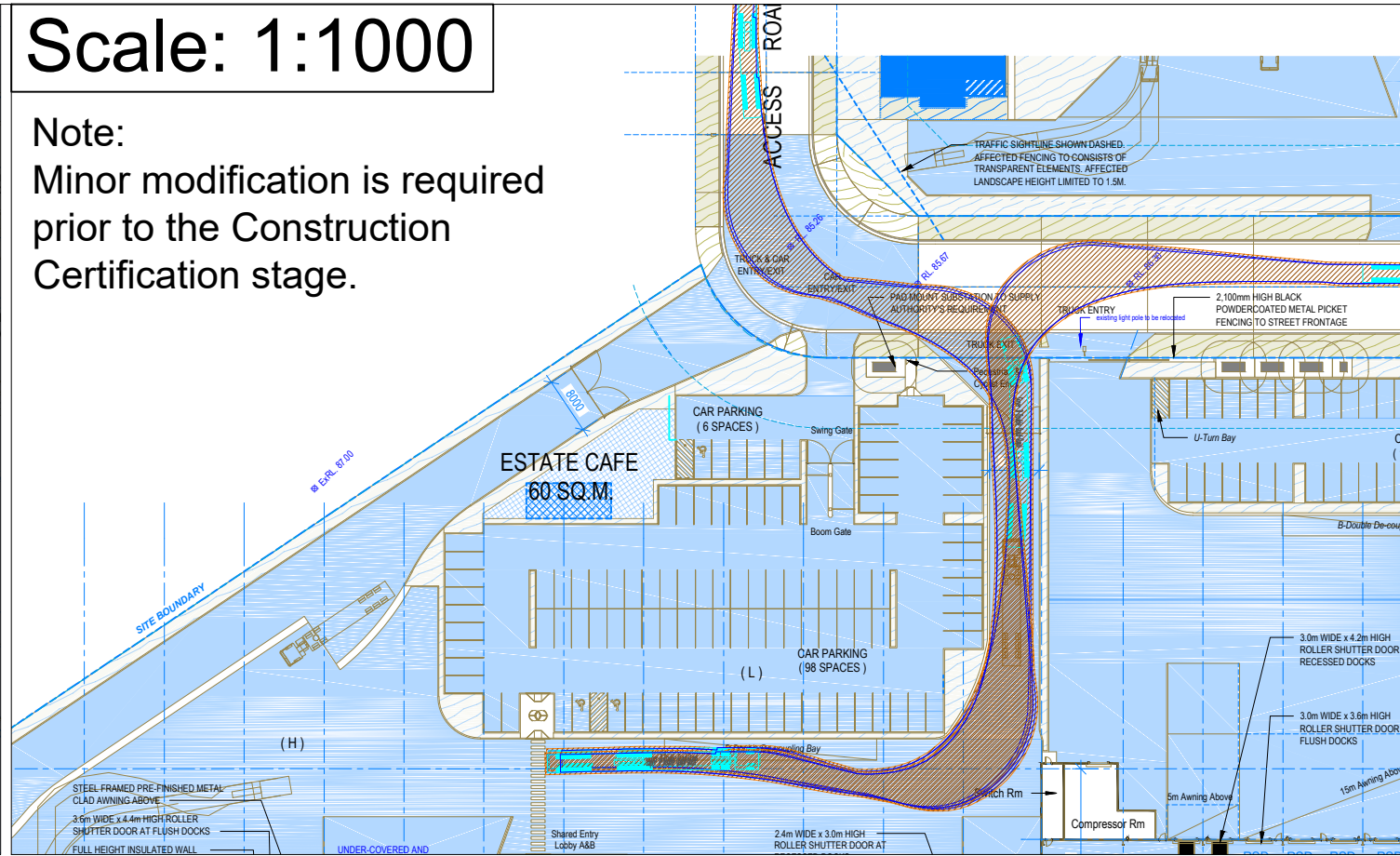
info@asongroup.com.au

Scale: 1:1000

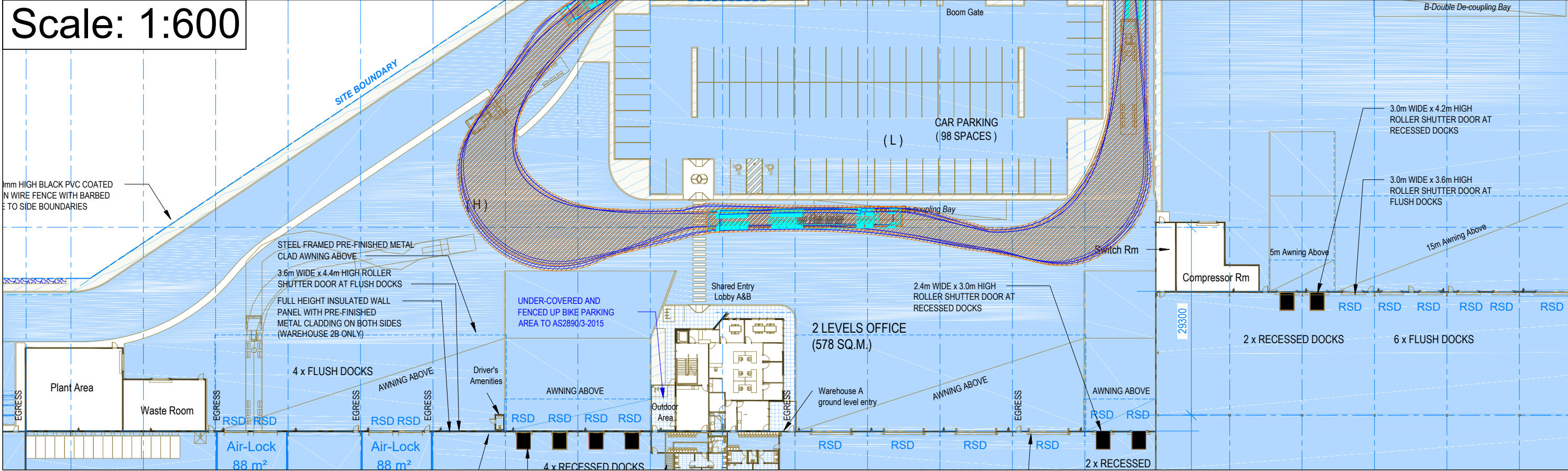


Scale: 1:1000

Note:
Minor modification is required
prior to the Construction
Certification stage.



Scale: 1:600



Notes:
The swept path assessment was undertaken at 10 km/hr with 300 mm clearance
The plan assessed was provided by ESR on 30.04.2021

Drawn By:
O HASHMI

Client:
ESR

Project:
P1328
327-355 Burley Road, Horsley Park

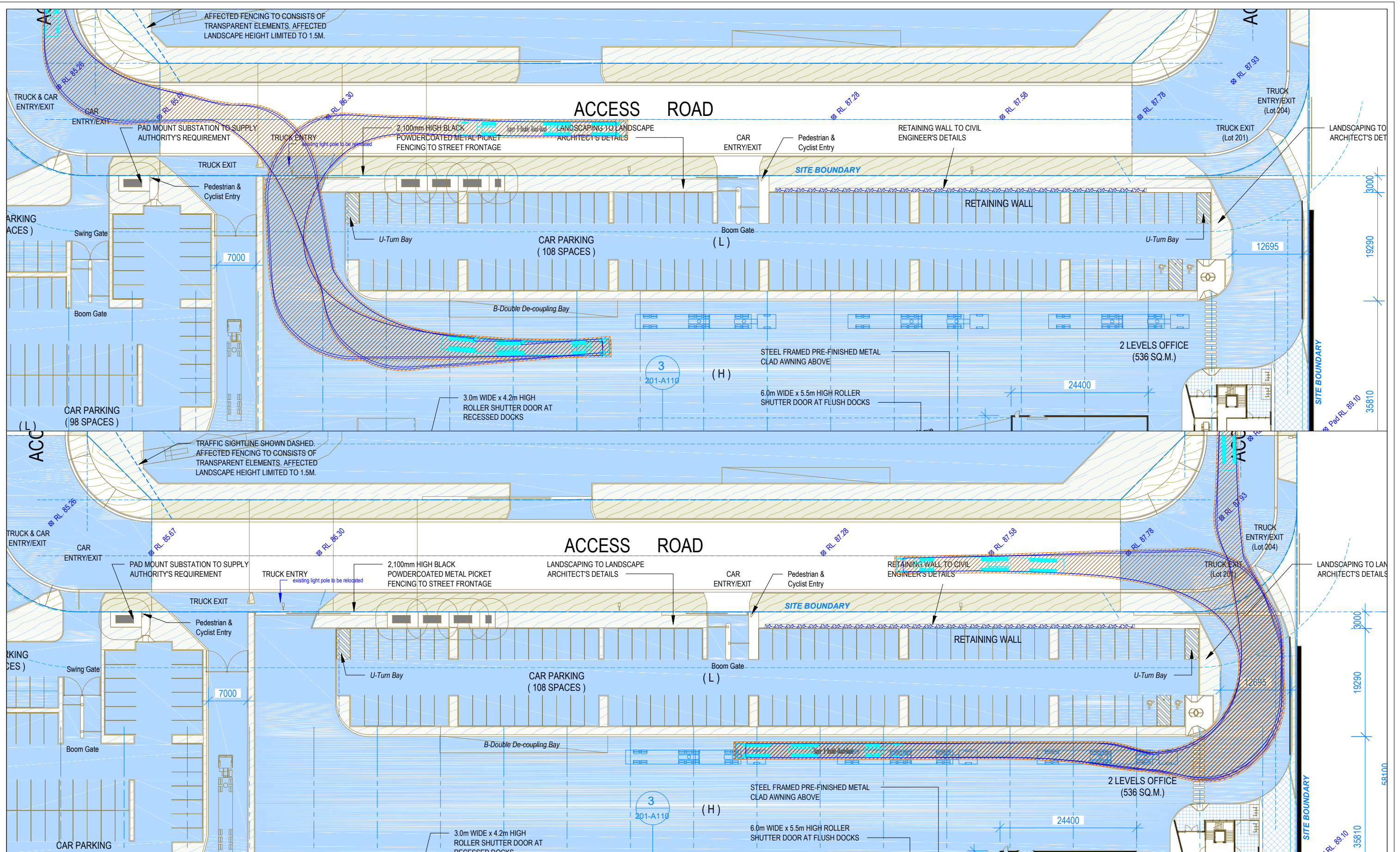
Drawing Title:
LOT 201 SITE & FACILITY PLAN
Super B-Double 30 m

Date:
3-May-21

Scale @ A3:
Refer to viewports

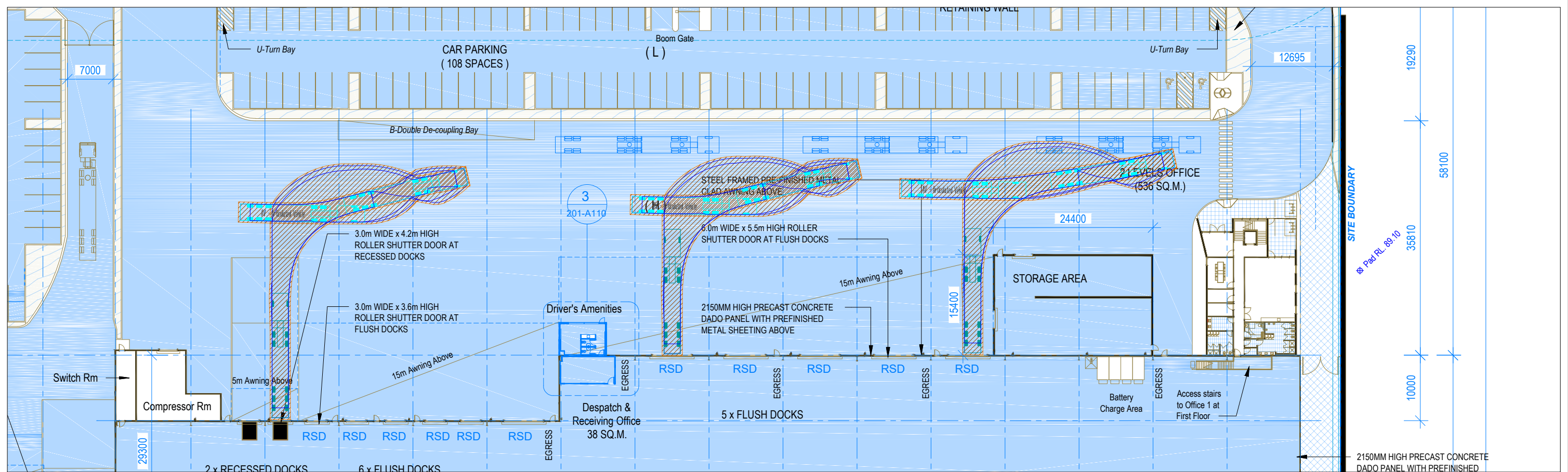
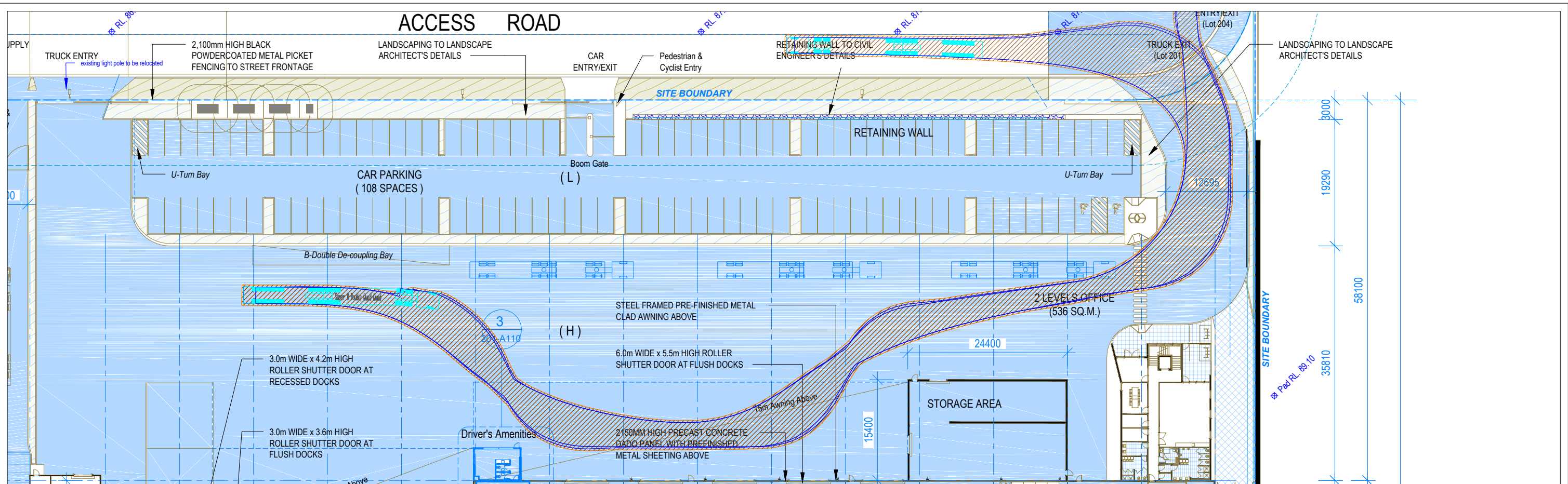
Drawing Number:
AG03

asongroup
Suite 5.02, Level 5, 1 Castlereagh Street
Sydney NSW 2000
info@asongroup.com.au



Notes: The swept path assessment was undertaken at 10 km/hr with 300 mm clearance The plan assessed was provided by ESR on 30.04.2021	Drawn By: O HASHMI	Project: P1328 327-355 Burley Road, Horsley Park	Date: 3-May-21
	Client: ESR	Drawing Title: LOT 201 SITE & FACILITY PLAN Super B-Double 30 m	Scale @ A3: 1:600 Drawing Number: AG05

Suite 5.02, Level 5, 1 Castlereagh Street
Sydney NSW 2000
info@asongroup.com.au



Notes:
 The swept path assessment was undertaken at 10 km/hr with 300 mm clearance
 The plan assessed was provided by ESR on 30.04.2021

Drawn By:
 O HASHMI

Client:
 ESR

Project:
 P1328
 327-355 Burley Road, Horsley Park

Drawing Title:
 LOT 201 SITE & FACILITY PLAN
 19 m AV, Super BDouble 30 m

Date:
 3-May-21

Scale @ A3:
 1:600

Drawing Number:
 AG06

asongroup

Suite 5.02, Level 5, 1 Castlereagh Street
 Sydney NSW 2000

info@asongroup.com.au

195196

WAREHOUSE 1
19,731 SQ.M.

FFL 86.70 +/-500mm

The gradients of the ramp (around the corner of the building) shall be reviewed prior to the Construction Certification stage.

EGRESS

SITE BOUNDARY

FOR EMERGENCY ACCESS ONLY
RETAINING WALL

RAMP

drainage channel behind
vil engineer's details

RETAINING WALL

EMERGENCY ACCESS
GATES FOR USE BY
FIRE BRIGADE ONLY

21M LANDSCAPE BUFFER

2150MM HIGH PRECAST CONCRETE
DADO PANEL WITH PREFINISHED
METAL SHEETING ABOVE

FIRE ROAD FOR EMERGENCY ACCESS ONLY

WH Amen.

⊕ ExRL. 82.00

Wall mounted light fitting at low level to be directed downwards and inwards towards the warehouse building for minimal level of illumination as required

COUNTER-CLOCKWISE MOVEMENT

The swept path assessment was undertaken at 10 km/hr with 300 mm clearance
The plan assessed was provided by ESR on 30.04.2021

Client:
ESR

P1328
327-355 Burley Road, Horsley Park

LOT 201 SITE & FACILITY PLAN
12.5 m HRV

Scale @ A3:
1:500

Drawing Number:
AG07

asongroup

Suite 5.02, Level 5, 1 Castlereagh Street
Sydney NSW 2000

info@asongroup.com.au

195196

WAREHOUSE 1
19,731 SQ.M.

FFL 86.70 +/-500mm

The gradients of the ramp (around the corner of the building) shall be reviewed prior to the Construction Certification stage.

EGRESS

FIRE ROAD FOR EMERGENCY ACCESS ONLY

SITE BOUNDARY

RAMP

109900

6196

21000

WH Amen.

2150MM HIGH PRECAST CONCRETE
DADO PANEL WITH PREFINISHED
METAL SHEETING ABOVE

FIRE ROAD FOR EMERGENCY ACCESS ONLY

RETAINING WALL

retaining wall below fire road
with drainage channel behind
to civil engineer's details

21M LANDSCAPE BUFFER

EMERGENCY ACCESS
GATES FOR USE BY
FIRE BRIGADE ONLY

⊕ ExRL. 82.00

Wall mounted light fitting at low level to be directed downwards and inwards towards the warehouse building for minimal level of illumination as required

SITE BOUNDARY

CLOCKWISE MOVEMENT

The swept path assessment was undertaken at 10 km/hr with 300 mm clearance
The plan assessed was provided by ESR on 30.04.2021

Client:
ESR

P1328
327-355 Burley Road, Horsley Park

LOT 201 SITE & FACILITY PLAN
12.5 m HRV

Scale @ A3:
1:500

Drawing Number:
AG08

asongroup

Suite 5.02, Level 5, 1 Castlereagh Street
Sydney NSW 2000

info@asongroup.com.au