

Transport Assessment

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

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Introduction

1.1 Overview

Ason Group has been engaged by ESR to prepare a Transport Assessment (TA) to support a State Significant Development Application (SSDA 10436) for the proposed ESR Horsley Logistics Park (the Proposal) at 327-355 Burley Road (Lots 201-204), Horsley Park (the Site). The Site is located within the Fairfield City Council Local Government Authority (LGA).

This TA provides an assessment of the relevant traffic, transport and parking implications of the Proposal.

1.2 Reference Material

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

- Western Sydney Employment Area – Fairfield Development Control Plan 2016 (WSEA FDCP 2016).
- Southern Link Road / WSEA RNS – Key Stakeholder Briefing (Roads & Maritime Services, 10 July 2019).
- State Environmental Planning Policy (Western Sydney Employment Area) 2009, *Transport and Arterial Road Infrastructure Plan Map*, [Sheet TAI 001](#).
- Ason Group, *Traffic Impact Assessment Report, Oakdale East Industrial Precinct (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](#)).
- P0843r01v01 DA TA_ 327-335 Burley Road, Horsley Park – Transport Assessment (Ason Group, 2019) – the Nu-Pure 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: Parking Facilities – Off Street Car Parking (AS 2890.1)
- Australian Standard 2890.2: Parking Facilities – Off Street Commercial Vehicle Facilities (AS 2890.2)
- Australian Standard 2890.6: Parking Facilities – Off Street Parking for People with Disabilities (AS 2890.6)

Response to SEARs

This report also aims to address key requirements of the Secretary’s Environmental Assessment Requirements (SEARs) in relation to traffic and transport elements of the SSD 10436, dated on 26 March 2020. A copy of the relevant requirements are extracted from the document and are presented in **Table 1** below.

Table 1: Ason Group Response to SEARs

Element	SEARs - Traffic and Transport	Ason Group Response
1	<p>A traffic impact assessment detailing:</p> <ul style="list-style-type: none"> 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; 	<p>Noted. Accordingly, this Traffic Impact Assessment (TIA) addresses the requested information as outlined in the SEAR’s in the following sections:</p> <ul style="list-style-type: none"> a) Details of daily and peak traffic and transport movements to be generated during operation is presented in Section 8. Reference is made to a conducted Journey-to-Work 2016 to provide a general perspective of anticipated operational travel patterns between private vehicles, public transport and active modes in the absence of anticipated staff numbers. <p>High level assessment for construction traffic is referred in Section 9. However, 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.</p> <ul style="list-style-type: none"> b) Descriptions of vehicle access routes for both construction and operation are referenced in Section 4. 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. c) An impact assessment on the nearby intersection of Old Wallgrove Road / Milner Avenue and the associated road network is presented in Section 8. The SIDRA analysis (for the year 2026) confirms that the cumulative traffic from the Proposal and other developments in the area can be accommodated without the need for further upgrades even when considering additional 38 veh/hr from the Site.

Element	SEARs - Traffic and Transport	Ason Group Response
2	<ul style="list-style-type: none"> a) Details of access to the site from the road network including intersection locations, b) design and sight distance; 	<ul style="list-style-type: none"> a) Details to proposed Site access is referred in Section 4, with a detailed figure demonstrating proposed access roads and connectivity to the existing network (Refer Figure 3 and Figure 4). b) Detailed review of the architectural plans against relevant Australian Standards have been conducted and are inclusive of traffic design elements and sight distance checks as specified in the SEARs. Outcome of our design review are included in section 10. 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.
3	Detailed plans of the proposed site access and parking provision on site in accordance with the relevant Australian Standards; and	<p>Details of the proposed Site access for light vehicles is referred in Section 4. As mentioned above, detailed review has been conducted to ensure that the parking provision is sufficient.</p> <p>Furthermore, review of design matters has been undertaken in accordance with relevant Australian Standards. Reference should also be made to the design commentary included in Appendix A.</p> <p>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.</p>
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.	<p>As discussed in Section 10.4, it has been considered that all proposed lots:</p> <ul style="list-style-type: none"> 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 Appendix A 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.

In addition to the above, Transport for NSW have provided their response to the SEARs outlining further detailed requirements in relation to traffic and transport related elements in their letter of 27 March 2020 (*TfNSW Reference: SYD20/00298/02*). These requirements our outlined in Table below.

Table 2: Ason Group Response to TfNSW

Element	TfNSW Requirements	Ason Group Response
1	Daily and peak traffic movements likely to be generated by the proposed development including the impact on nearby intersections and the need/associated funding for upgrading or road improvement works (if required).	Noted. Reference to traffic movements of the proposed development and their impacts are referred in Section 8.
2	Details of the proposed accesses and the parking provisions associated with the proposed development including compliance with the requirements of the relevant Australian Standards (ie: turn paths, sight distance requirements, aisle width, etc).	<p>The design of the Site has been assessed on the basis of the requirements of AS2890.1 for off-street parking and AS2890.2 for commercial hardstand areas. Summary of the design review is included in Section 10, with swept paths analysis provided in Appendix A.</p> <p>As discussed before, 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.</p>
3	The transport and traffic study must properly ascertain the cumulative study area traffic impacts associated with the development (and any other known proposed developments in the area). This process provides an opportunity to identify a package of traffic and transport infrastructure measures required to support future development. Regional and local intersection and road improvements, vehicular access options for adjoining sites, public transport needs, the timing and cost of infrastructure works and the identification of funding responsibilities associated with the development should be identified.	Noted. This TIA assesses the cumulative traffic impact from the proposed master plan for all Lots. The impact assessment includes a traffic generation comparison between the approved WSEA for the Site and the projected traffic generation of the proposal. The outcome of this TIA confirms that no additional road network upgrade is anticipated to accommodate the traffic from this proposal. Furthermore, SIDRA analysis for the Old Wallgrove Road / Milner Avenue intersection (for the year 2026) confirms that the cumulative traffic from the Proposal and other developments in the area can be accommodated.
4	Proposed number of car parking spaces and compliance with the appropriate parking codes.	Proposed parking for the Site has been assessed against the relevant council DCP, as well as the RMS Guides and included in Section 7.
5	Details of light and heavy vehicle movements (including vehicle type, e.g. B-doubles, and likely arrival and departure times), including service movements during the operation of the development and the impacts of vehicles on nearby intersections.	<p>It should be considered that individual tenancies have yet to be determined at this stage. In this respect, operational detail relating to specific light and heavy vehicle distribution and movements, as well as operational schedules is subject to site-specific OTMP for individual tenancies.</p> <p>It is noted that this SSD establishes the cumulative maximum anticipated traffic from the proposed master plan having regard for the generic RMS Guide trip rates.</p>
6	Impact of the proposed development on existing and future public transport and walking and cycling infrastructure within and surrounding the site.	An assessment of existing and future public and active transport is referred in Section 5.
7	Appropriate provision, design and location of on-site bicycle parking, and how bicycle provision will be integrated with the existing bicycle network.	With referenced in Section 7, the current proposal provides for 70 spaces. It should be considered that the current proposal refers to dedicated spaces for bicycle parking in proximity of office locations, and the provision of additional bicycle parking, if required by future anticipated staff numbers, can readily be accommodated for at a later stage of development.
8	Details of access and parking arrangements for emergency vehicles.	<p>Noted. The site plans consider access, circulation and parking arrangements for emergency service vehicles.</p> <p>Reference should be made to the design commentary and swept paths included in Appendix A demonstrating fire truck routes. Any additional design related matter can readily be assessed as part of the</p>

Element	TfNSW Requirements	Ason Group Response
		CC stage of the project and in response to a suitable condition of consent.
9	Details of any likely dangerous good to be transported on arterial and local roads to/from the site, if any, and the preparation of an incident management strategy, if necessary.	Noted.
10	The existing and proposed pedestrian and bicycle routes and end of trip facilities within the vicinity of and surrounding the site and to public transport facilities as well as measures to maintain road and personal safety in line with CPTED principles.	Noted. As referred in Section 7, End of Trip Facilities are readily accounted for and situated in areas accessible by staff and in proximity of bicycle parking.
11	<p>Preparation of a Travel Demand Management Strategy and Travel Plan that considers the following:</p> <p>a. Measures to encourage workers and visitors to travel to the site by public transport, walking, cycling and car sharing;</p> <p>b. Provision of adequate bicycle parking and end of trip facilities and improved connections between the development and public transport nodes and pedestrian and bicycle networks.</p>	<p>In line with Section 8, undertaking a 'Travel Demand Management Strategy' and Travel Plan is recommended to reduce dependency on private vehicle reliance for staff movements and promote behavioural shift towards shared, public, and active modes of transport.</p> <p>In consideration of this, a Journey-To-Work 2016 assessment has already been conducted in Section 8 with the intention of future preparation of a Travel Plan. The development of a Travel Plan and accompanying management strategies are planned to be undertaken at a later stage.</p>
12	<p>Preparation of a draft Construction Management Plan which includes:</p> <p>a. Details of vehicle routes, number of trucks, hours of operation, access management and traffic control measures for all stages of construction;</p> <p>b. Assessment of cumulative impacts associated with other construction activities;</p> <p>c. Assessment of road safety at key intersections;</p> <p>d. Details of anticipated peak hour and daily truck movements to and from the site, emergency vehicles and service vehicle movements;</p> <p>e. Details of temporary cycling and pedestrian access during construction; and</p> <p>f. Assessment of traffic and transport impacts during construction and how these impacts will be mitigated for any associated traffic, pedestrians, cyclist and public transport operations.</p>	Noted. It should be considered that detailed construction information is not presently available and will be assessed in detail at a later stage. Notwithstanding, a preliminary construction management plan has been provided in Section 9.

Furthermore, Fairfield City Council and Penrith City Council have also provided their response to the SEARs outlining further detailed requirements in relation to traffic and transport related elements. These requirements are outlined in Tables below.

Table 3: Ason Group Response to Fairfield City Council

Element	Fairfield City Council Requirements	Ason Group Response
1	All internal road design and drainage works shall be in conjunction with previous approvals relating to the subject site.	Noted. As discussed in Section 4.1.1, internal road design is generally consistent with the subdivision plan included in the Western Sydney Employment Area-Fairfield Development Control Plan (WSEA FDCP 2016).
2	Safety and capacity impacts of the development on the surround road network and access points shall be determined. A quantitative Traffic Impact Assessment shall be prepared in accordance with AUSTROADS and Transport for NSW Guidelines.	An impact assessment on nearby intersections and the associated road network is presented in Section 8. Furthermore, SIDRA analysis for the Old Wallgrove Road / Milner Avenue intersection (for the year 2026) confirms that the cumulative traffic from the Proposal and other developments in the area can be accommodated.
3	The provision of parking shall comply with the Fairfield Citywide Development Control Plan 2013. Any variation to the parking requirement shall be justified by a parking survey of a development with similar operating characteristics and scale.	Proposed parking for the Site has been assessed against the relevant council DCP, as well as the RMS Guides and outlined in Section 7.
4	Details of all daily and peak traffic and transport movements likely to be generated by the development (vehicle type, public transport) during construction and indicative operation shall be determined. Traffic modelling assessment shall be undertaken to assess the impact of the development traffic on the adjoining road network (nearby intersections) under the existing and forecasted conditions/ SIDRA intersection files (electronic copy of the files) shall be submitted to Council for assessment.	<p>High level construction traffic assessment is referred in Section 9. However, 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.</p> <p>As discussed before, it is expected that detailed construction traffic impact assessment would occur as part of the Construction Certificate (CC) and in response to a suitable Condition of Consent.</p>
5	<p>Details and a justification of the proposed access to, from and within the site shall be provided.</p> <p>The proposed vehicle access for the development shall comply with the requirement of AS 2890.2:2018 and the size of the vehicle access shall be based on the swept path analysis.</p>	<p>The design of these accesses has been assessed by swept path analysis for 30 m Super B-Doubles. Reference should be made to the design commentary and swept paths included in Appendix A demonstrating access and egress to/from the Site by the specified vehicle.</p> <p>As discussed before, it is expected that detailed design matters can be reviewed as part of the Construction Certificate (CC) and in response to a suitable Condition of Consent.</p>
6	The internal site layout shall comply with AS 2890.2:2018 and the designed for the largest vehicle manoeuvring into, within and out of the site. Any potential conflicts between vehicles and trucks manoeuvring within the site shall be minimised.	<p>Final resolution of the internal design would be expected to occur as part of Construction Certificate and design coordination phase for each lot and in response to a general condition of consent requiring compliance with AS2890.</p> <p>Notwithstanding, a general review of design matters have been undertaken in accordance with AS2890.1. Reference should also be made to the design commentary included in Appendix A.</p> <p>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.</p>
7	Detailed of road upgrades, new roads or access points required for the development, if necessary.	Detailed discussion of road upgrades, new roads or access points required for the development is included in Section 6.2.

Element	Fairfield City Council Requirements	Ason Group Response
8	The development shall demonstrate sufficient loading/unloading, car parking, pedestrian and cyclist facilities have been provided for the development if required.	Detailed discussion regarding the proposed provision of sufficient loading/unloading, car parking, pedestrian and cyclist facilities is provided in Section 7.
9	A loading management plan shall be prepared. Service vehicles shall only undertake loading and unloading activities from the service bay/ hard stand area and shall not obstruct traffic flow into within and out of the site. Determination on the size of the loading bays or manoeuvring areas shall be based on relevant Australian Standards and turning path analysis.	A Loading Dock Management Plan is included in Appendix A demonstrating the restrictions of truck sizes for each loading bay.

Table 4: Ason Group Response to Penrith City Council

Element	Fairfield City Council Requirements	Ason Group Response
1	Further detail on operational traffic generation, including staff and operational vehicles, as well as details of heavy vehicle volumes specifically, and intended travel routes for heavy vehicles.	It should be considered that individual tenancies have yet to be determined at this stage. In this respect, operational detail relating to specific light and heavy vehicle distribution and movements, as well as operational schedules is subject to site-specific OTMP for individual tenancies. It is anticipated that this SSD establishes the cumulative maximum anticipated traffic associated with the Proposal. Descriptions of vehicle access routes for both construction and operation are referenced in Section 4. 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.
2	The Construction Traffic Management Plan should also address the volume and travel routes of all construction traffic, provides adequately prepared traffic control plans (TCPs) and specific timeframes (days/hours of week) that heavy vehicles (and in what volumes) are anticipated on nominated travel routes within the surrounding road network.	Noted. It should be considered that detailed construction information is not presently available and will be assessed in detail at a later stage. Notwithstanding, a preliminary construction management plan has been provided in Section 9.

Following initial submission of this TA, DPIE has undertaken a Test of Adequacy (TOA) and confirmed that most of the traffic-related matters have readily been addressed in this TA, with 3 additional comments; a response to each provided in the below table:

Table 5: Ason Group Response to DPIE TOAs

Element	DPIE TOA Requirements	Ason Group Response
1	The traffic assessment suggest that the proposed development exceed the previously approved by 50 trips. However, no other assessment of the potential impact of the interim or future intersections has been provided.	<p>Refer Section 8.3.</p> <p>AM peak hour traffic moderately exceeds the approved WSEA threshold by 38 veh/hr with the afternoon peak remaining below approved threshold. This is considered an minor increase in terms of the broader road network and does not have any material traffic impact to wider precinct.</p> <p>SIDRA analysis undertaken for Old Wallgrove Road / Milner Avenue confirms that the additional 38 veh/hr from the Site and the broader precinct (during AM peak hour) can be accommodated within the existing signal by 2026 at LoS B.</p> <p>Accordingly, the current configuration of this signal is sufficient to accommodate the traffic from the proposed development traffic and other surrounding developments.</p>
2	A SIDRA analysis of the interim intersection arrangements considering the cumulative impacts of all developments relying on Burley Road / Old Wallgrove Road should be provided.	<p>It is noteworthy that at the interim stage (before SLR connection) Old Wallgrove Road forms a bend with the current Burley Road configuration (<i>refer Figure 9</i>).</p> <p>Accordingly, interim SIDRA analysis has been undertaken for the next intersection servicing the precinct, being the Old Wallgrove Road / Milner Avenue intersection which is now provided in Section 8.5.</p>
3s	A queuing impact assessment of the proposed site access to demonstrate sufficient storage has been provided for light and heavy vehicle driveway in each Lot and queuing on public road is effectively minimised.	<p>Refer Section 10.5.</p> <p>All lots will have their gates open during the operation of the facilities. Accordingly, the potential queueing impact of the proposed site access driveways has been assessed as negligible.</p>

On April 8th 2020, application for the SSD received further commentary from DPIE relating to the development. Commentary relating to traffic and transport elements of the development are highlighted in the table below.

Table 6: Ason Group Response to Commentary

Element	DPIE Comment	Ason Group Response
13.2	<p><i>Access, Traffic and Parking</i></p> <p><u>Restricted Vehicle Access</u></p> <p>A review of the TfNSW Restricted Access vehicle (RAV) map confirms that Old Wallgrove Road to the north if the site is classifies as an approved B-Double route. However, the site will be accessed via public road which will not automatically be approved for B-Double access. Upon dedication of estate roads to Council, further consultation with the National heavy Vehicle Regulator (NHVR) and Council is required to ensure that these roads will be included in future updates to the approved B-Double network.</p>	<p>Noted. Requests for NHVR should be submitted following dedication of the roads to Council and through sufficient liaison with Council. This can form a Condition of Consent (CoC) for approval.</p>

Element	DPIE Comment	Ason Group Response
	<p><u>Southern Link Road Upgrade</u></p> <p>The Southern Link Road upgrade remains in a concept phase with no funding or commitments made by Transport for NSW. Currently, access into the site is via the Old Wallgrove Road and Burley Road intersection into Johnston Crescent. Ultimately, access will be via the four-way signalised intersection of Southern Link Road and Access Road 2 with Johnston Crescent being restricted to a left-in/left-out configuration.</p>	<p>Noted. The TA has accordingly been revised to reflect that the Stage 3 road network plan is updated to demonstrate Left out only at SLR / Johnston Crescent intersection.</p>
	<p><u>Parking Requirements</u></p> <p>The applicant has utilised an average rate of 1 space per 169m² GFA for the provision of on-site parking. Due to there being no specific tenancies assigned to the lots, it is not possible to determine tenant specific parking demand. Hence, parking provision must be made to accommodate future peak parking demand generated by the development in accordance with the requirement of section 4.5.4 Car Parking of the 327-335 Burley Road, Horsley Park Development Control Plan, March 2016.</p> <p>Parking spaces and aisle widths shall be designed in accordance with AS 2890.1:2004 and shall be reflected on the plans. In addition, revised plans shall reflect the layout, ramp grade and dimensions of the proposed basement car park to Council for review and comment.</p>	<p>It is understood that there is no known immediate tenant for either of the Lots 201-204. It is noted that this TA suggests that the proposed parking provision subject for this SSD is sufficient to accommodate the demand for future tenancies on the following grounds:</p> <ul style="list-style-type: none"> • approved developments within the broader area (as discussed in relevant sections of the report), • RMS Guide parking rates (already satisfied) • TfNSW's support for providing parking in accordance with RMS Guide rates, • requirements for Green Travel Plan (GTP – requested by TfNSW) which is intended to reduce reliance on the use of motorised vehicles and inherently is more in line with provision of parking in accordance with RMS rates. <p>Parking shall be designed in accordance with AS2890.1:2004 can this requirement can form part of a future Conditions of Consent for the development.</p>
	<p><u>Accessible and Bicycle Parking</u></p> <p>The accessible parking spaces shall be designed in accordance with AS 2890.6:2009. The dimensions of the proposed accessible spaces shall be reflected on the plan.</p> <p>A copy of the plan showing the locations and dimensions of the proposed bicycle parking spaces within the development shall be submitted to Council for assessment. On-site bicycle parking facilities shall comply with AS 2890.3:2015. Bicycle parking and access arrangements shall ensure that the potential conflicts with vehicles are minimised. Furthermore, bicycle parking is to be secure and located undercover with convenient access from the street and building entries.</p>	<p>Noted. Regarding bicycle parking the following provision should be considered as requested by TfNSW (in below comments) as appropriate:</p> <ul style="list-style-type: none"> - Light Industry – 1 per 1,000 m² GFA. <p>As referred in Section 7.6, it is anticipated that additional provision of bicycle parking required by staff during operations over the currently proposed can readily be provided within areas in proximity of office locations.</p>
13.2	<p><u>Site Servicing</u></p> <p>All loading and servicing will occur on-site with access and circulation designed for 26m B-Double trucks manoeuvring within and out of the site.</p> <p>Loading bays and docks shall be designed in accordance with AS 2890.2:2002 and the dimensions shall be clearly reflected on the plan.</p> <p>The allotment of loading dock spaces is to be managed by the Dock Traffic Manager and any increases in daily activity of the proposed service trucks must be communicated to the Traffic Consultant in order to verify and amend the loading dock management plan accordingly.</p>	<p>Noted.</p> <p>Loading bay and hardstand design in accordance with AS2890.2:2002 can be included as a Condition of Consent.</p> <p>Furthermore, requirements for a tenant-specific Loading Dock Management Plan (LDMP) and appropriate monitoring system can form part of the Conditions of Consent at a later stage. However, Appendix A of this TA provides high-level advice on loading dock restrictions and how to manage the service areas for each individual Lot.</p>

Element	DPIE Comment	Ason Group Response
	<p>Service vehicles shall only undertake loading and unloading activities from the service bay/hard stand area and shall not obstruct traffic flow into, within and out of the site. Determination on the size of the loading bays or manoeuvring areas shall be based on relevant Australian Standards and turning path analysis.</p>	
	<p>Construction Traffic Management Plan</p> <p>Prior to the issue of a Construction Certificate, a Construction Traffic Management Plan (CTMP) report shall be prepared by RMS accredited person and be submitted to and approved by the Manager of Development Planning of Fairfield City Council.</p>	<p>Requirements for a Construction Traffic Management Plan (CTMP) can form part of the Conditions of Consent at a later stage.</p>
17.1	<p>Active Transport Considerations</p> <p><u>Comment</u></p> <p>Future Transport 2056 emphasises the importance of walking and cycling for short trips and reinforces the importance of walking and cycling to increase the catchment of public transport as part of the whole customer journey.</p> <p>Building Momentum - State Infrastructure Strategy 2018-2038 includes recommendations related to walking and cycling, including integrating transport with land use; managing travel demand; unlocking capacity in existing assets; and improving population health outcomes through more active transport.</p> <p>The Western Sydney Employment Area-Fairfield Development Control Plan (WSEA DCP) 2016, Section 4.5.4: Car Parking – Industrial Controls (7) states:</p> <ul style="list-style-type: none"> • New developments should incorporate appropriate bicycle parking/storage facilities. Bicycle racks can be placed around the perimeter of a building in areas where they will not act as obstructions. Bicycle parking/storage facilities should be provided in accordance with the provisions of Australian Standard 2890.3:1993 – Parking facilities - Bicycle parking facilities. <p>The Transport Assessment (TA), states that provision and yield of bicycle parking is anticipated to fully satisfy requirements on confirmation of the Construction Certificate. Additionally, end of trip facilities will be situated within a secured area for personnel access only and the design can be deferred to Certificate of Construction stage.</p> <p><u>Recommendation</u></p> <p>It is requested that the applicant provide off-street bicycle parking and amenity and change room facilities for cyclists in accordance with AS 2890.3:1993 - Bicycle Parking Facilities and RMS' NSW Bicycle Guidelines.</p>	<p>Noted and considered.</p> <p>Requirements for a Green Travel Plan (GTP) and can form part of the Conditions of Consent at a later stage.</p> <p>The architectural drawings include the provision of bicycle parking and EoTF for each Lot. Notwithstanding, it should be considered at this stage that tenancy is currently speculative in nature with no indication of provision for staff numbers. Reference should be made to Section 7 for bicycle parking and EoTF provision.</p>
17.2	<p>Road Network Considerations</p> <p><u>General Comment</u></p> <p>Figure 5: RAV Map - Rather than a prescriptive heavy vehicle combination it would be better generalise in terms of PBS vehicle access. e.g Millner Avenue is an approved PBS 2A route that does not appear on this map. This precinct should accommodate at least PBS level 2B vehicles.</p>	<p>It is noteworthy that the PBS Level 2 (30 m super B-Doubles) are considered to have a similar performance as B-Doubles (already tested for the proposed warehouses). Notwithstanding, swept paths analysis based on PBS Level 2, 30 m Super B-Double trucks have been undertaken and are included in Appendix A.</p>

Element	DPIE Comment	Ason Group Response										
	<p><u>Comment</u></p> <p>In the TA, Figure 4 - Road Hierarchy – there is no explanation of how the classification provided in this functional hierarchy was determined.</p> <p><u>Recommendation</u></p> <p>It is requested that the TA be revised to provide the reference documentation from which the functional classification of proposed road links was derived.</p>	<p>It should be noted that upon clarification with DPIE, Figure 4 no longer requires updating.</p> <p>Notwithstanding, relevant sources of information have been provided with references to several future roads within this Figure.</p>										
	<p><u>Comment</u></p> <p>In the TA, Section 10.2- Design Vehicle states ‘a 26 metre B-double has been adopted as the relevant ‘design vehicle’ when assessing the heavy vehicle access...’</p> <p>PBS vehicles are becoming increasingly common with PBS level 2B vehicles up to 30m already operating in Western Sydney. The ‘design vehicle’ assessment should be based upon the most current PBS level 2B vehicles up to 30m.</p> <p><u>Recommendation</u></p> <p>It is requested that the TA be revised to adopt the PBS level 2B 30m vehicle as the ‘design vehicle’ and analysed to ensure that future tenants can take advantage of the productivity benefits of PBS vehicles. Swept path analysis for a PBS level 2B 30m vehicle should be provided.</p>	<p>Noted. As per above comments, swept path analysis have been undertaken for 30 m Super B-Doubles.</p>										
	<p><u>Comment</u></p> <p>In the TA, Section -10.7 Loading Dock Management states B-doubles should undertake side loading activities on-site.</p> <p>Appendix A includes swept paths but does not show:</p> <ul style="list-style-type: none"> • Where B-doubles will be located to be loaded/unloaded; • How many B-doubles can be accommodated simultaneously; • If loading bays are effectively blocked while a B-double is being loaded/unloaded; and • If there is sufficient space to split trailers if required, and where would this occur. <p><u>Recommendation</u></p> <p>It is requested that the TA be updated to include swept path analysis for PBS level 2B 30m vehicles and demonstrate:</p> <ol style="list-style-type: none"> 1. Where B-doubles will be located to be loaded/unloaded; 2. How many B-doubles can be accommodated simultaneously; 3. If loading bays are effectively blocked while a B-double is being loaded/unloaded, how will the development mitigate this; and 4. Is there sufficient space to split trailers if required, and where would this occur. 	<p>Noted.</p> <p>With reference to the recommendations –</p> <ol style="list-style-type: none"> 1. The swept path analysis in Appendix A demonstrates where these areas are located and the amount of side-loading positions each Lot has for Super B-Doubles. 2. Reference should be made for individual swept paths for side-loading of Super B-Doubles. The following table summarises total provision – <table border="1" data-bbox="904 1440 1430 1713"> <thead> <tr> <th data-bbox="904 1440 1166 1496">Lot</th> <th data-bbox="1166 1440 1430 1496">Side-Loading Positions</th> </tr> </thead> <tbody> <tr> <td data-bbox="904 1496 1166 1552">Lot 201</td> <td data-bbox="1166 1496 1430 1552">1</td> </tr> <tr> <td data-bbox="904 1552 1166 1608">Lot 202</td> <td data-bbox="1166 1552 1430 1608">2 (1 per warehouse)</td> </tr> <tr> <td data-bbox="904 1608 1166 1664">Lot 203</td> <td data-bbox="1166 1608 1430 1664">2 (conditional)</td> </tr> <tr> <td data-bbox="904 1664 1166 1713">Lot 204</td> <td data-bbox="1166 1664 1430 1713">1 (conditional)</td> </tr> </tbody> </table> <ol style="list-style-type: none"> 3. The management of side-loading procedures is referred in this document and should be included with lot-specific LDMP’s and managed by site operators. 4. <p>In line with comments, the architectural plans have been updated to show designated areas for Super B-Double coupling/uncoupling.</p>	Lot	Side-Loading Positions	Lot 201	1	Lot 202	2 (1 per warehouse)	Lot 203	2 (conditional)	Lot 204	1 (conditional)
Lot	Side-Loading Positions											
Lot 201	1											
Lot 202	2 (1 per warehouse)											
Lot 203	2 (conditional)											
Lot 204	1 (conditional)											

Element	DPIE Comment	Ason Group Response
17.3	<p data-bbox="354 342 874 409">Stage 3 Indicative Rd and Intersection Arrangements <u>Comment</u></p> <p data-bbox="354 423 874 521">In the TA, Section 6.2 Proposed Works – Figure 10: Stage 3 Indicative Rd and Intersection Arrangements shows left-in, left-out only Johnson Crescent/ Burley Road (Southern Link Road).</p> <p data-bbox="354 537 874 757">On 5 December 2019, TfNSW sent a letter to Calibre Consulting referring to Stage 3 Future ultimate Southern Link Road (SLR)/ Johnston Crescent Intersection Interface indicating TfNSW does not support a left-in/out intersection arrangement at Johnston Crescent once the four-leg signalised intersection is developed at Old Wallgrove Road/ Southern Link Road, providing access through the ESR site to service all businesses within the development site.</p> <p data-bbox="354 772 874 896">Once the four-leg signalised intersection is operational at Old Wallgrove Road/ Southern Link Road and all the ESR stages are completed then the acceptable option to TfNSW is left-out only from Johnston Crescent turning onto Southern Link Road.</p> <p data-bbox="354 911 523 934"><u>Recommendation</u></p> <p data-bbox="354 949 874 1070">It is requested that upon completion of all stages of the ESR and the four-leg signalised intersection is operational at Old Wallgrove Road/ Southern Link Road, Johnston Crescent is configured as left out-only onto the Southern Link Road.</p>	<p data-bbox="906 342 1426 387">Noted. We have updated the Stage 3 plan to show a left-out intersection at SLR / Johnston Crescent.</p>
17.4	<p data-bbox="354 1106 529 1128">Green Travel Plan <u>Comment</u></p> <p data-bbox="354 1189 874 1431">TfNSW notes that there is currently limited public and active transport connectivity to the site, but that this may change in the future. A Green Travel Plan, along with a Travel Access Guide are tools that will help the tenancies within ESR Horsley Logistics Park manage demand on the transport network. The recommendations below will help promote travel choices for employees and visitors that support the achievement of State Plan targets and reduce the use of single vehicle trips.</p> <p data-bbox="354 1447 523 1469"><u>Recommendation</u></p> <p data-bbox="354 1485 874 1608">It is requested that prior to the issue of the first Occupation Certificate for each tenancy, the applicant be conditioned to prepare a Green Travel Plan in consultation with TfNSW. The Green Travel Plan should be aimed at staff and visitors and include:</p> <ul data-bbox="354 1624 874 1964" style="list-style-type: none"> <li data-bbox="354 1624 683 1646">• Proposed parking arrangements; <li data-bbox="354 1662 874 1785">• Information regarding site accessibility, including any specific accessibility requirements for staff/ visitors with mobility impairments, and the measures that are in place to address them, including any priority arrangements; <li data-bbox="354 1800 874 1899">• Strategies that encourage the use of public and active transport to help reduce the use of single occupant car travel to access the site for staff and visitors, where appropriate; <li data-bbox="354 1915 874 1964">• Predicted and aspirational mode share targets for staff and visitors; 	<p data-bbox="906 1106 1426 1151">Noted. Requirements for a GTP can form part of a Conditions of Consent at a later stage.</p>

Element	DPIE Comment	Ason Group Response
17.5	<p>Carpooling</p> <p><u>Comment</u></p> <p>TfNSW considers that carpooling is likely to be the main travel demand management strategy likely to reduce single occupant car travel in the short to medium term.</p> <p><u>Recommendation</u></p> <p>That the Green Travel Plan includes a firm commitment and timeframe for each tenant to implement a carpooling scheme.</p>	<p>Noted. GTP requirements as well as carpooling scheme can form part of the Conditions of Consent at a later stage.</p>

Overview of Proposal

The Proposal seeks approval for construction of single storey warehouse and industrial buildings, with associated car parking and loading areas. All vehicular access for the Proposal will be to/from the proposed 2 Access Roads. It is noted that according to our site inspection on 11 March 2020, Johnston Crescent to the west of the Site has been partially completed and connected to Burley Road, providing access to the newly constructed Nu-Pure development.

Key details of the proposed concept master plan have been obtained from the following site plan:

- HLA Architects, *ESR Logistics Park_200226-DA-MS-A010-ESTATE MASTERPLAN-P9*, 15 June 2020

Accordingly, the key details relevant to this concept master plan is provided in the following **Table 7**.

Table 7: Summary of Concept Master 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	14,392	2,027	16,419	117
Total	107,115	5,544	112,659	636

Detailed plans undertaken by HLA Architects form a separate part of the application submission. For reference, a copy of the site plan is reproduced at a reduced scale for context below.

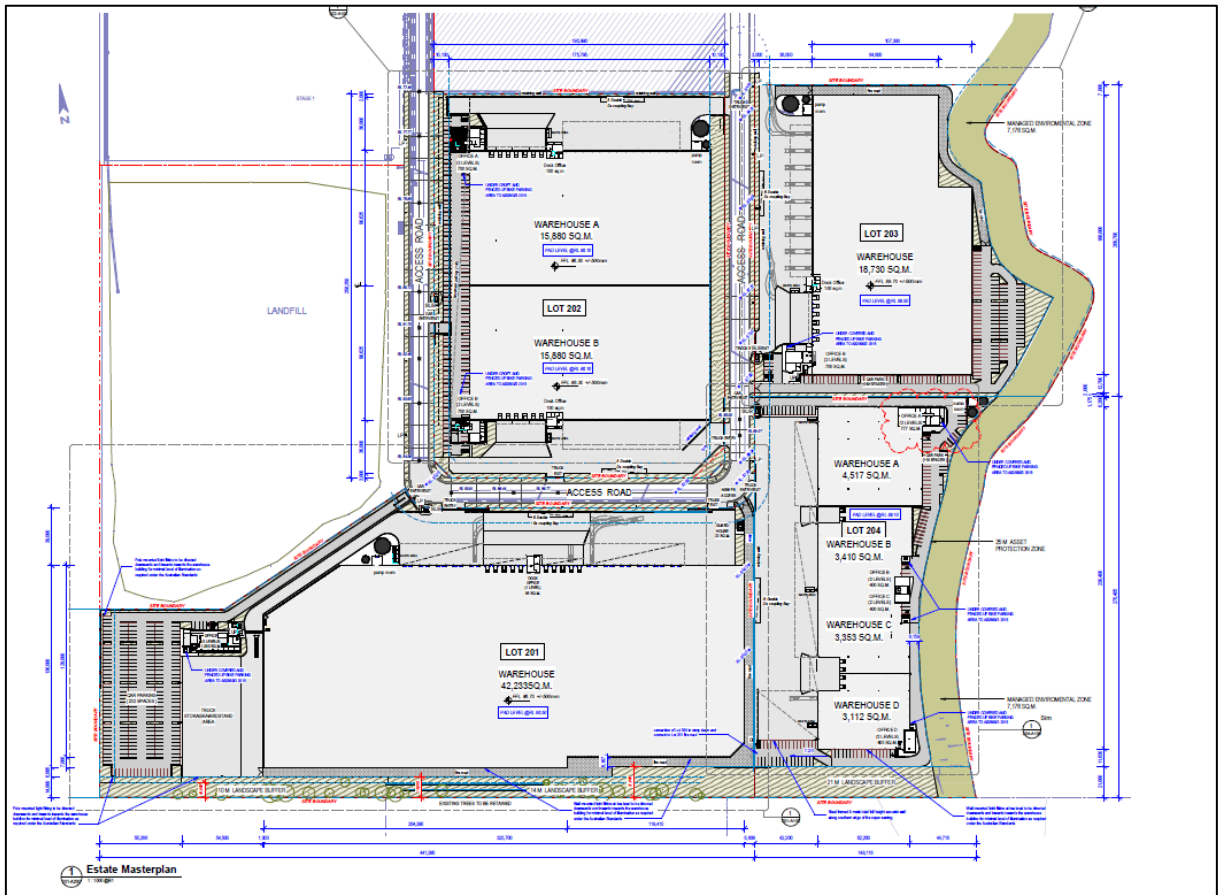


Figure 1: Proposed Site Plan

Existing Conditions

4.1 Site & Location

The Site is located in Fairfield City Council LGA and is known as 327-355 Burley Road, Horsley Park. More specifically, the subject site forms Lot 201, Lot 202, Lot 203 and Lot 204 in DP 106143. The Site is zoned as *IN1 General Industrial* in WSEA FDCP 2016 and according to this document it sits within the Stage 2 development of the Staging Plan (further discussed in Section 4.1.1), which encompasses a total of 20.79 ha of land (Site Area).

A location Plan is presented in **Figure 2** which provides an appreciation of the Site location and the existing road network condition. As can be seen below, 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 2: Location Plan

4.1.1 Site Location with Respect to WSEA

The proposal is located within the Western Sydney Employment Area (WSEA) and it is important to note that there is a site-specific WSEA - Fairfield Development Control Plan (WSEA FDCP 2016) for the entire site, 327-335 Burley Road, which therefore covers the subject site.

The DCP also proposes that the overarching subdivision(s) 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 of the overarching subdivision (refer **Figure 3**). Furthermore, the entire subdivision will be accessed via two internal roads referred as Access Road 1 (Johnston Crescent) and Access Road 2 in below figure. Johnston Crescent is partially constructed at present and is anticipated to provide as the primary access point until the longer-term road network is delivered (under separate approvals).

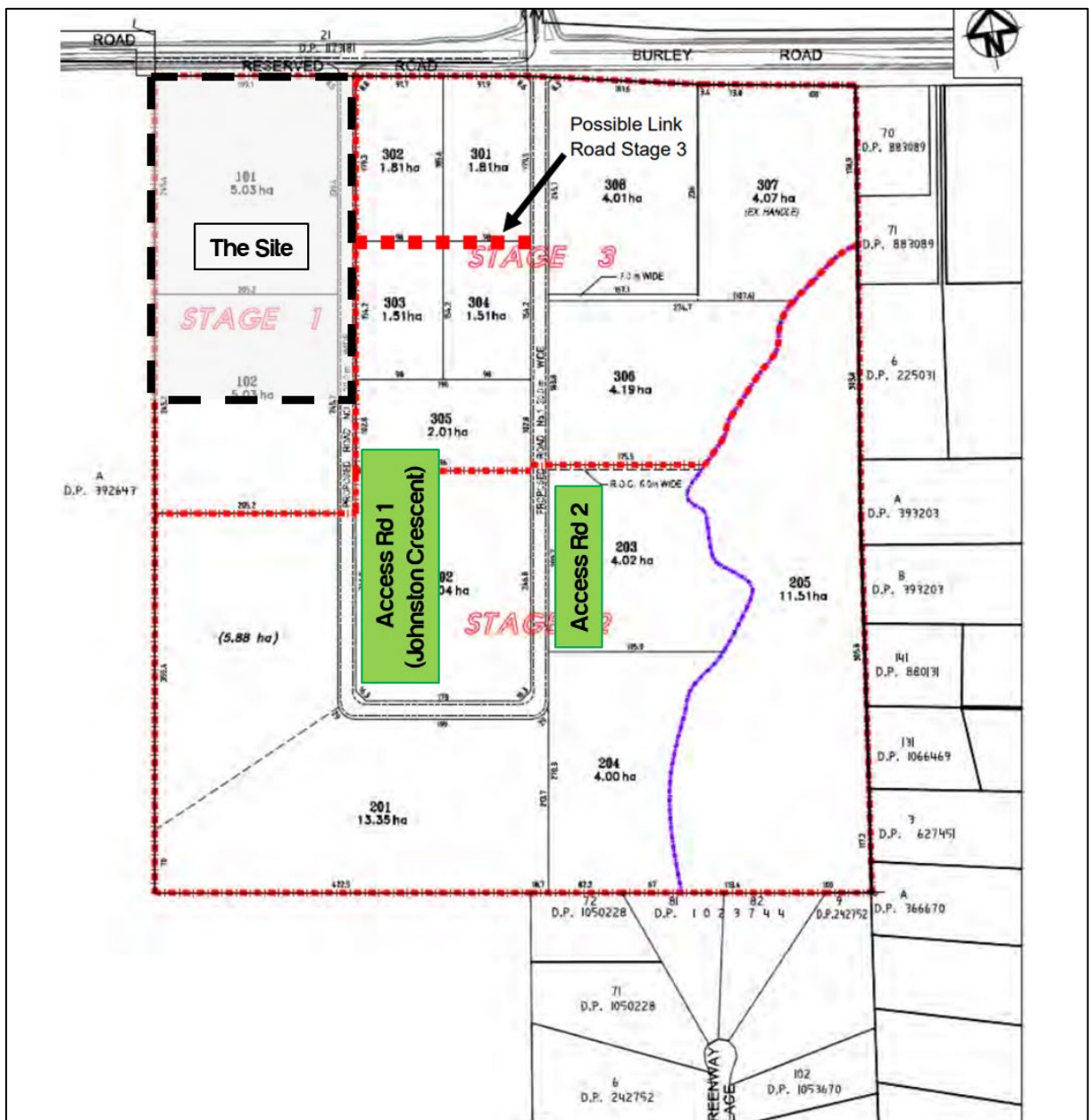


Figure 3: WSEA FDCP 2016 – Subdivision Proposal

4.1.2 Existing Land-use

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

Notwithstanding, the site forms part of the WSEA with IN1 General industrial zoning suitable for future industrial development.

4.2 Existing Site Generation

Having regard for the above, the Site does not currently generate any operational traffic. Accordingly, the anticipated traffic resulting from the proposed development will also be the NET increase of traffic on the surrounding road network.

Notwithstanding, as indicated in Section 3.1.2, the subject site has inherent traffic generating potential envisaged by previous planning for the WSEA. This is discussed further in Section 5.

4.3 Road Hierarchy

The existing and proposed key roads in the vicinity of the Site are shown in Figure 4.

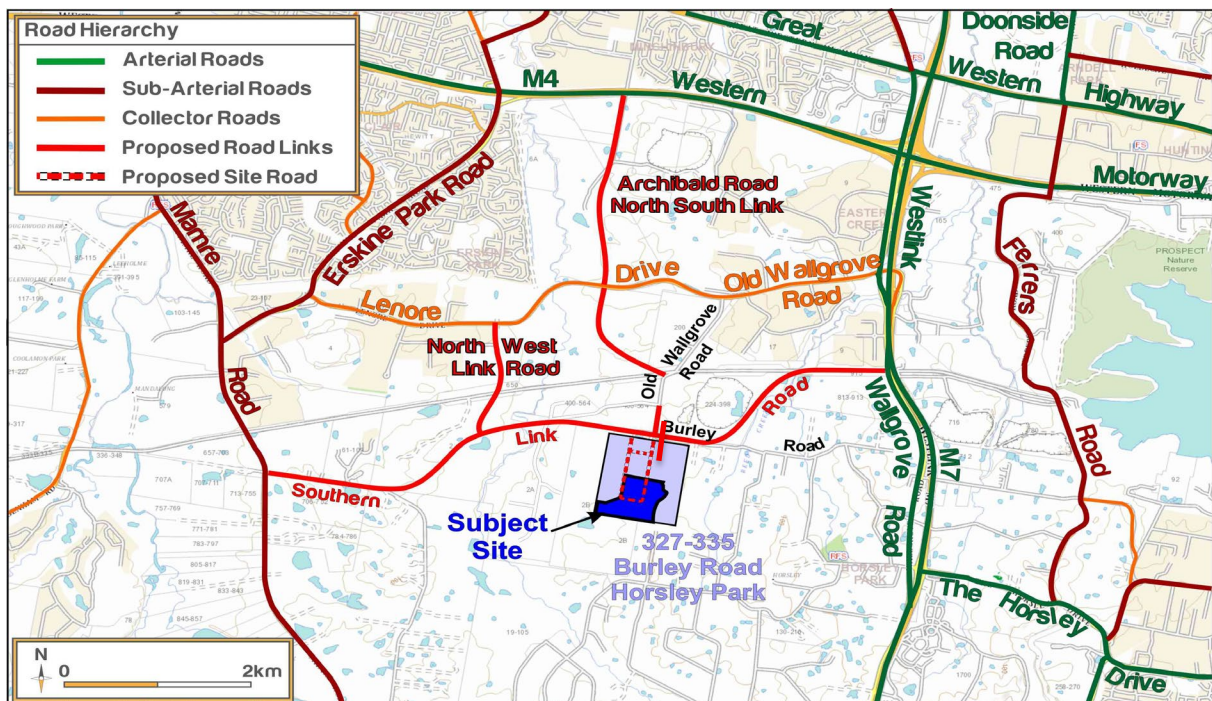


Figure 4: Road Hierarchy

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

- Southern Link Road (SLR) references the stakeholder report as well as the SEPP WSEA Map. The road alignment 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 alignment has been sourced from the the stakeholder report, SEPP WSEA Map and furthermore, it is noted that parts of this link have already been constructed.

The development will be accessed to/from Access Roads 1 and 2 and as such the associated vehicular movements will primarily be distributed onto this road. Johnston Crescent (Access Road 1) is currently connected to Burley Road. However, there are significant regional road upgrades anticipated for this area of which the future connection of Southern Link Road (SLR) is the most critical in relation to the Site (detailed discussion can be found in Section 5 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 5. Old Wallgrove Road to the north of Milner Avenue includes concrete pedestrian path to its western verge and landscape verge 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. At the moment, Burley Road operates under a speed limit of 60 km/r in this general vicinity. However, it is anticipated that this road will eventually connect to the proposed Southern Link Road extension, hence more regional road upgrade standards are anticipated for this road in future. The existing use of Burley Road is primarily to provide local access for the surrounding developments in the area 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 proposed DCP subdivision (shown as Access Road 1 in Figure 8). At present, 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 will intersect with Access Road 2 (ideally the extension of Johnston Crescent). This road will eventually be a public road and its care and control will be vested to the Council.

4.4 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 5**). 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.

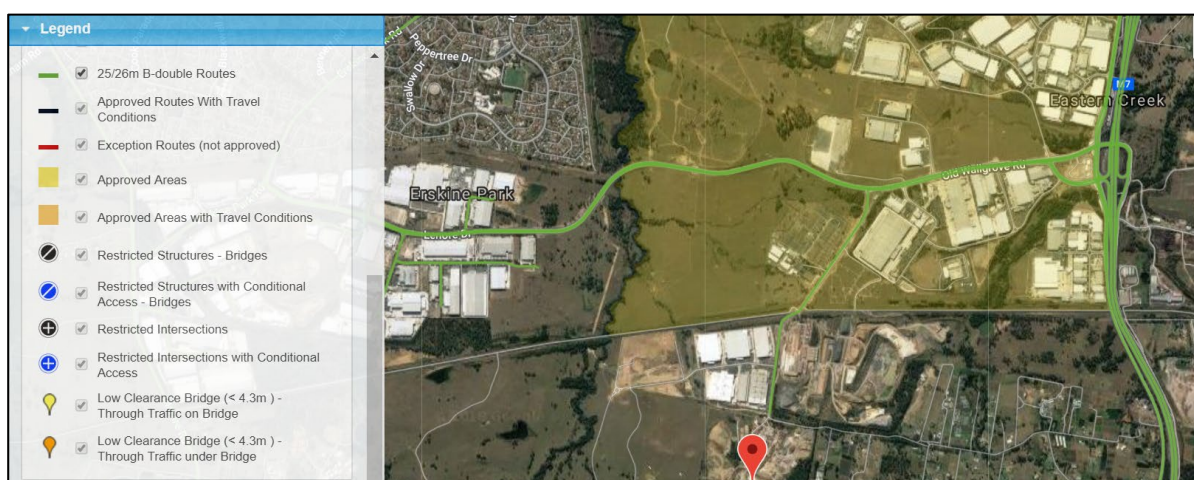


Figure 5: RAV Map

Public Transport, Cycling and Pedestrian Access

5.1 Railway Services

The Site is not located in proximity (800 metres) of any existing train stations, with the closest train station at Rooty Hill Station being approximately 11 kilometres (or 17 - 25 minutes' driving distance) from the Site.

5.2 Bus Services

With regard to bus travel, the *Integrated Public Transport Service Planning Guidelines* state that bus services influence the travel mode choices of sites within 400 metres of a bus stop (approximately 5 minutes' walk). However, the entire subdivision including the Site is serviced by 2 bus stops within 800 metres, as shown in **Figure 6**. This comprises bus service 813 which provides connections between Fairfield Station, South West Sydney TAFE, Prairiewood T-way, Horsley Park shops and Bonnyring T-way. Another 2 bus routes (738 and 835) are more than 1 kilometre away from the Site.

5.3 Existing Pedestrian Accessibility

Johnston Crescent currently provides pedestrian paths in the subject site's vicinity. It is expected that Burley Road and other estate roads will provide pedestrian connection to facilitate a permeable and convenient walking opportunity to connect Old Wallgrove Road pedestrian network.

Furthermore, Old Wallgrove Road includes concrete footpaths to the north of Milner Avenue, with the western verge landscaped to the south of Milner Avenue.

5.4 Existing Cycle Routes

There are currently limited cycling facilities and routes provided within the immediate proximity of the development. With reference to below figure, off-road cycleways are provided along Old Wallgrove Road further to the north of the Site.

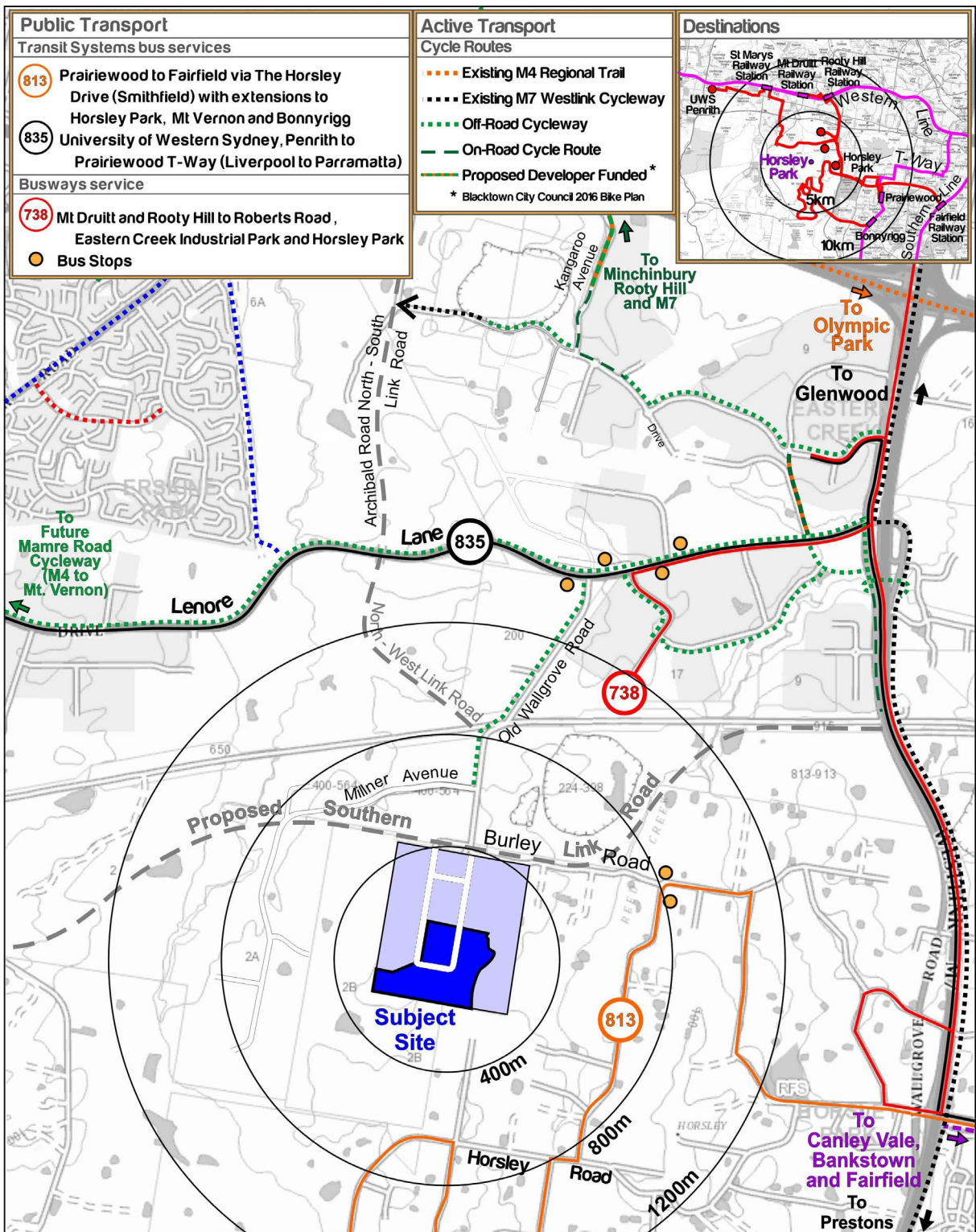


Figure 6: Public and Active Transport

Future Context (Without Proposal)

The Site is located within the Western Sydney Employment Area (WSEA) for which the New South Wales (NSW) Government established a vision to provide a wide range of businesses in a commercial/industrial core with the lands proposed for number of employment opportunities including transport and logistics, industrial warehousing and office spaces.

To deliver the Government vision for the WSEA, a number of regional traffic modelling and impact studies have been undertaken by different consultants on behalf of TfNSW (formerly RMS), Council and Department of Planning, Industrial and Environment (DPIE). As part of the holistic traffic studies, EMME and Paramics models had been developed by GHD to analyse the impact of traffic on a comprehensive scale. Accordingly, it is understood that project approval has been granted in consideration of these traffic studies and, as such, the traffic modelling and assumptions for the area have been deemed acceptable to the assessing Authorities.

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.

6.1 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 Southbridge 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 following **Figure 7**.

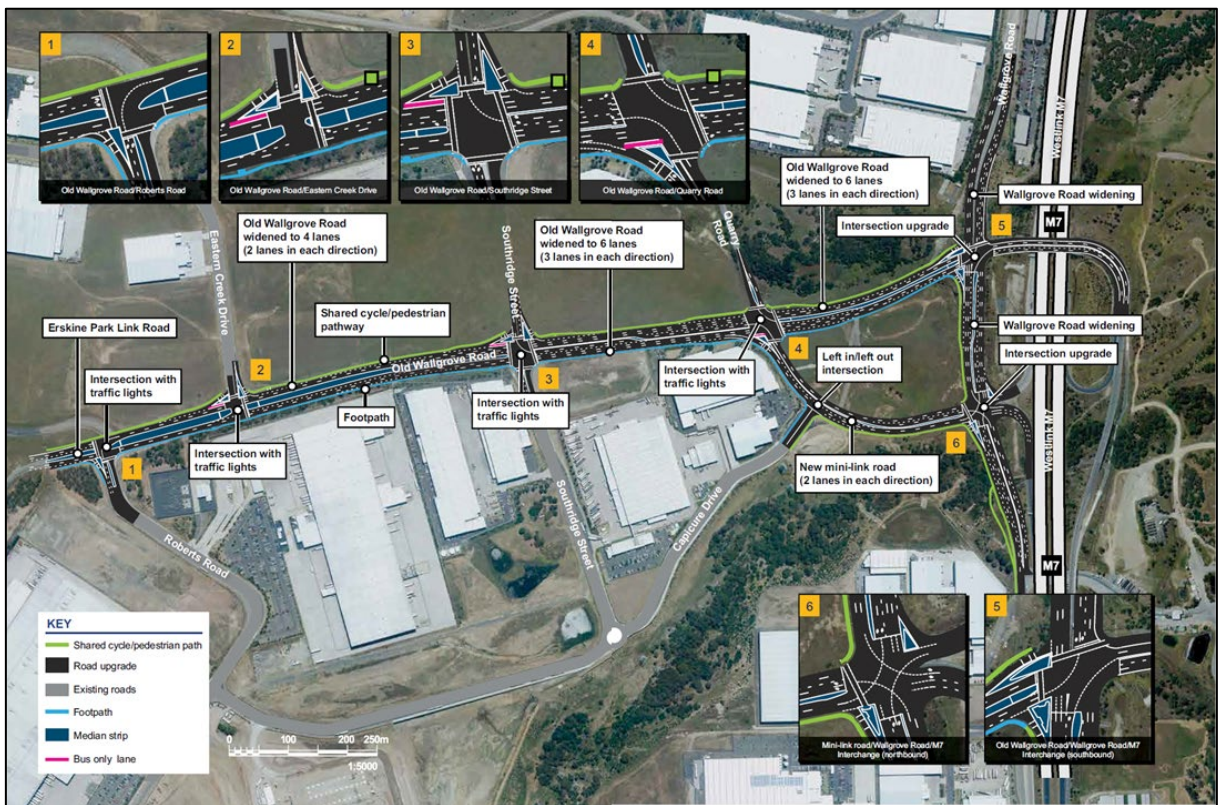


Figure 7: Regional Upgrade Plan

6.2 Proposed 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, hence providing 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 north-south 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. It is important to note that the Southern Link Road upgrade has not been funded, nor has there been any commitment to timeframes for the upgrade at the time of preparation of this TA.



Figure 8: Stage 1 Indicative Road and Intersection Arrangements



Figure 9: Stage 2 Indicative Road and Intersection Arrangements



Figure 10: Stage 3 Indicative Road and Intersection Arrangements

6.3 Intersection Arrangements

6.3.1 Interim Scenario

It is intended that the entire precinct will primarily be accessed via a 4-way intersection between Old Wallgrove Road / Burley Road (Southern Link Road) and the Access Road 2 (refer **Figure 11**).

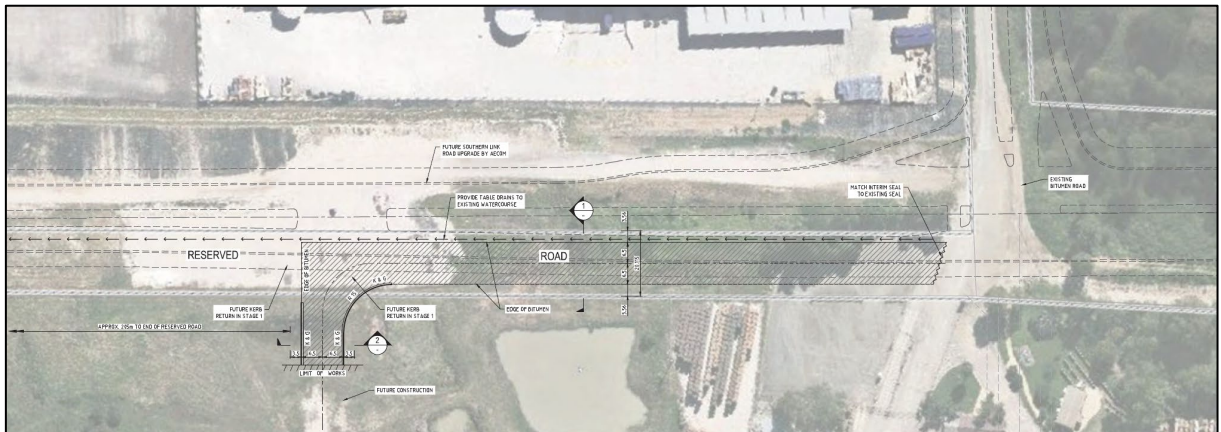


Figure 11: Interim Arrangement

Furthermore – during the interim stage – it is proposed that a turning head will be provided at the southern end of the Johnston Crescent to enable the vehicles to make U-turns if required.

6.3.2 Ultimate Scenario

In ultimate scenario and when the Southern Link Road is opened at this end, it is anticipated that the precinct will only be accessed via a (4-way) signalised intersection at Access Road 2. At such time, the other intersection at Johnston Crescent (Access Road 01) will be restricted to left out only movement.

The ultimate intersection of Burley Road / Johnston Crescent (left out only) can also be referred to as indicated in RMS key stakeholder briefing document (July 2019) which is shown in the following **Figure 13**.

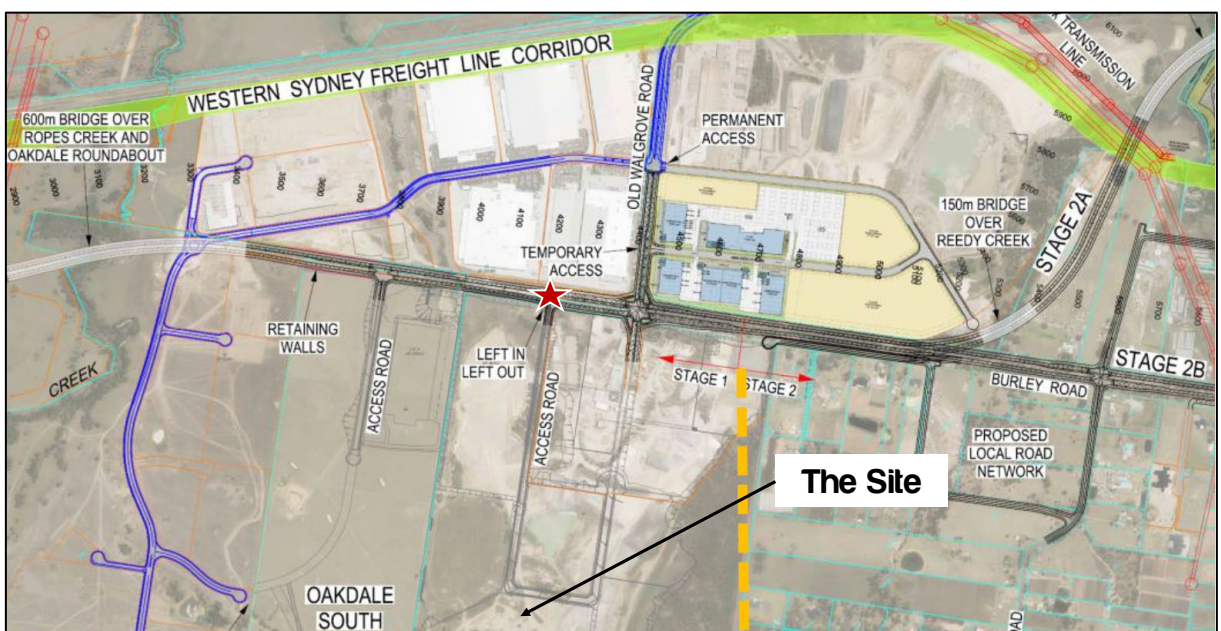


Figure 12: Burley Road / Johnston Crescent – Source: RMS Stakeholder Briefing Document

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 assessments 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 this SSD. This matter will be clarified by means of detailed traffic generation assessment later in this TA.

Parking Provisions

Parking provision of the proposed SSD has been reviewed against Council DCP and RMS *Guide to Traffic Generating Developments* (RMS Guides). Furthermore, comparison has been made between these controls and the recently approved comparable sites in the broader WSEA area. In recent discussion with TfNSW, general sentiment indicates support for reduced car parking provisions to encourage the use of non-car travel modes where available.

7.1 Nominal Council Requirement

The Site is located within the Fairfield City Council and as such the WSEA FDCP 2016 is theoretically applicable to the proposed SSD. According to the DCP, the following car parking rate is applicable to the Site:

- 1 space per 70 m² gross leasable area including ancillary plus 1 space per unit for factory units.

It is noted that the above site-specific DCP rate is actually higher than that referred in Section 9.7.4 of the Fairfield Citywide DCP (1 space per 80m² GLA), suggesting some acknowledgement of varying demands for varying types of development.

These generic rates are more suitable to small tenancies, industrial business parks with high proportion of office areas and/or other specific tenants with high staffing levels and not the large-format industrial warehouse type facilities proposed. It is acknowledged that at the time of this TA, no specific tenancies have been assigned to the Lots within the Site, hence, no tenant-specific parking demand is available.

However, in general, significantly lower tenant parking requirements associated with these large-format warehouses demonstrate that the DCP rates are generally far in excess of the anticipated actual parking demand for likely users of this scale noting the parking provisions for similar industrial properties recently approved in broader WSEA as well as those currently operating. Furthermore, from a commercial perspective, provision of such significant number of (surplus) parking for the development is not reasonable and does not accord with sustainable development principles. Therefore, reference should be made to other parking guidelines to identify a suitable car parking provision for typical users of such facilities, as discussed in Section 7.2.

Notwithstanding, for completeness, a summary of nominal DCP requirements for each Lot is provided in **Table 8**.

Table 8: Car Parking Requirement - Nominal Council Requirement

Lot	Warehouse	Office (m ²)	Total Built Form (m ²)	Total GLA ¹ (m ²)	Car Parking Requirement	On-site Parking Supply
201	42,233	1,117	43,350	32,513	464	232
202	31,760	1,600	33,360	25,020	357	147
203	18,730	800	19,530	14,648	209	140
204	14,392	2,027	16,419	12,314	176	117
Total	107,115	5,544	112,659	84,494	1,207	636

Note: 1) It is assumed that $GLA=0.75 \times GFA$.

The table above indicates that application of the Council nominated theoretical parking rate to the proposed development yield results in a total parking requirement of 1,207 car parking spaces.

A more realistic assessment of future parking demands is discussed below.

7.2 Merit-based Parking Assessment

7.2.1 RMS Guides Parking Requirement

It is noteworthy that a number of other warehouse and distribution centres within the broader WSEA area have been approved which provided car parking in accordance with the RMS Guide, being more representative of the typical demands for the type of development proposed. Accordingly, the theoretical parking demand of the development has also been assessed in accordance with the RMS Guide rates—which are summarised in **Table 9**.

Table 9: Applicable Car Parking Rates – RMS Guides

Land Use	RMS Parking Rate
Warehouse/Industrial	1 space per 300 m ² GFA
Office	1 space per 40 m ² GFA

Application of the above RMS Guide rates to the development yield at each stage is provided below.

Table 10: Car Parking Requirement - RMS Guides Parking Requirement

Lot	Warehouse	Office (m ²)	Total Built Form (m ²)	Car Parking Requirement (RMS Guides)	On-site Parking Supply	Parking Surplus
201	42,233	1,117	43,350	169	232	+ 63
202	31,760	1,600	33,360	146	147	+ 1
203	18,730	800	19,530	82	140	+ 58
204	14,392	2,027	16,419	99	117	+ 18
Total	107,115	5,544	112,659	496	636	+ 140

It is evident from the above that the RMS Guide parking requirements (496 spaces) is significantly less than the Council DCP rates. It is important to note that the proposed SSD will meet and exceed the RMS Guide parking requirements for each individual warehouse. In fact, the proposed surplus of parking provision will future proof the warehouses in the event that ANY of the proposed tenancies would require more car parking spaces compared to the RMS Guide parking requirements.

It is again emphasised that in our recent liaison with RMS on a similar SSD project in Blacktown area we have been notified that TfNSW supports provision of RMS Guide parking rates when reviewing SSDs of similar nature.

7.2.2 Parking Approvals for Similar Developments

Reference is also made to the approved parking rates for a number of similar developments within Fairfield and Penrith LGA which are as outlined in **Table 11** — the most recent approval of relevance being the Nu-Pure development, located within the precinct of which the Site is located; also within the Fairfield City Council LGA.

Table 11: Previously Approved Development Car Parking

Site	DA Number	GFA (sqm)	Car Parking Provided	Proposed Car Parking Space / sqm GFA
Fairfield LGA				
Nu-Pure	DA 58.1/2019	Warehouse: 20,000 Office: 575	159	1 space / 129 sqm
Lot 4, Oakdale Central, Horsley Park (Lot 21 DP 1173181)	DA 451.1/2016 Refer Condition 61	Warehouse: 12,380 Office: 1,020	114	1 space / 118 sqm

Site	DA Number	GFA (sqm)	Car Parking Provided	Proposed Car Parking Space / sqm GFA
400-564 Burley road, Horsley Park (Lot 21 DP1173181)	DA 699.1/2013	Warehouse: 30,600 Office: 1,600	195	1 space / 165 sqm
Lot 3, Oakdale Central, Horsley Park (Lot 21 DP1173181)	SSD 7491	Warehouse: 35,840 Office: 1,125	207	1 space / 173 sqm
Cnr The Horsley Drive & Cowpasture Road, Horsley Park	SSD 7564	Warehouse: 17,670 Office: 1,100	117	1 space / 160 sqm
Average Proposed Carparking Space / GFA sqm:				1 space / 149 sqm
Penrith LGA - Oakdale West				
Lot 1A, Oakdale West	SSD 7348	Warehouse (including office): 22,485	117	1 space / 192 sqm
Lot 1B, Oakdale West	SSD 7348	Warehouse (including office): 16,180	106	1 space / 153 sqm
Lot 1C, Oakdale West	SSD 7348	Warehouse (including office): 79,360	386	1 space / 206 sqm
Average Proposed Carparking Space / GFA sqm:				1 space / 183 sqm

It is evident that the approved parking rates for a number of similar developments within the broader area are generally between approximately 1 space / 118 sqm GFA and 1 space / 206 sqm GFA, which are significantly lower than the Council nominated car parking rate (1 space / 70 sqm GLA, equating to approximately 1 space / 93.33 sqm GFA).

7.3 Car Parking Provision

With regard to the above, a summary of car parking provision at each stage, comparing to Council and RMS parking requirement, has been provided in **Table 12**:

Table 12: Car Parking Provision

Lot	Warehouse	Office (m ²)	Total Built Form (m ²)	On-site Parking Supply	Proposed Car Parking Space / sqm GFA
201	42,233	1,117	43,350	232	1 space / 187 sqm
202	31,760	1,600	33,360	147	1 space / 227 sqm
203	18,730	800	19,530	140	1 space / 140 sqm
204	14,392	2,027	16,419	117	1 space / 140 sqm
Total	107,115	5,544	112,659	636	1 space / 177 sqm

As evident from the above table, the proposed on-site car parking is provided at an average rate of 1 space per 177 sqm GFA which is in excess of RMS Guide rate and sits within the recently approved parking range discussed above.

7.4 Parking Assessment Summary

In summary, the proposed car parking provisions are generally less than nominally required by the DCP. Notwithstanding, the proposed car parking provision is **SUPPORTABLE** having regard for the following:

- Proposed car parking is provided at an average rate of 1 space per 177 sqm GFA which is within the range for the car parking provisions of number of recently approved similar developments within Fairfield and Penrith LGA.
- Comparing the above figure to the RMS Guide rates (1 space per 300m²) — themselves forming the basis of more recent controls approved by DPIE for nearby precincts such as Oakdale — the proposed parking is significantly more than typical demands for which it would be reasonable to design. In this regard, the proposed parking provision is considered sufficient to accommodate potential parking demand on-site.
- The proposed parking provision at each lot generally exceeds the RMS Guide parking requirements which will ensure a suitable provision to ‘future-proof’ the facility, in case the parking demand increase in the longer term.

In summary, this TA concludes that the proposed parking provision will satisfy the future demands of the development for each individual warehouse. As such, the development is not expected to create any adverse parking impacts on-street.

7.5 Accessible Parking

The WSEA FDCP 2016 requires accessible car parking to be provided at the following rate:

- 2% of car parking provision (or part thereof) for car parks in excess of 50 spaces.

Furthermore, according to the National Construction Code (NCC) for Class 7b (*for storage, or display of goods or produce for sale by wholesale*) the following accessible car parking is required:

- 1 space for every 100 car parking spaces, or part thereof.

In this regard the following accessible parking spaces will be required for the proposed SSD:

Table 13: Accessible Car Parking Requirements

Lot	On-site Parking Supply	WSEA Requirements	NCC Requirements	Accessible Car Parking Provision
201	232	5	3	2
202	147	3	2	4
203	140	3	2	2
204	117	3	2	4
Total	636	14	9	12

Notes) Parking requirements have been rounded up to the nearest whole number.

The proposed accessible car parking provision for each lot generally comply with the requirements, except for Lot 201; however, provision of accessible car parking bays in accordance with the above range for each warehouse can easily be dealt with at Construction Certificate stage of the project and in response to the suitable condition of consent.

7.6 Bicycle Parking

In line with consideration for bicycle parking provision as specified by TfNSW, the following rates have been specified with reference to light industrial developments –

- Light Industry 1 per 1,000 m² GFA

Application of Light Industry bicycle parking rates would result in the following requirements:

Table 14: Bicycle Provision

Lot	Total Built Form (m ²)	Bicycle Parking Requirements	Bicycle Provision
201	43,350	43	20
202	33,360	33	20
203	19,530	20	10
204	16,419	16	20
Total	112,659	113	70

The current proposal provides for 70 spaces, indicating a deficit to the outlined requirements as above of 43 spaces. It should be considered that the current proposal indicates for dedicated spaces for bicycle parking in proximity of office locations, and the provision of additional bicycle parking, if required by future anticipated staff numbers, can readily be accommodated for at a later stage of development. The map below highlights the locations of bicycle parking throughout the precinct.

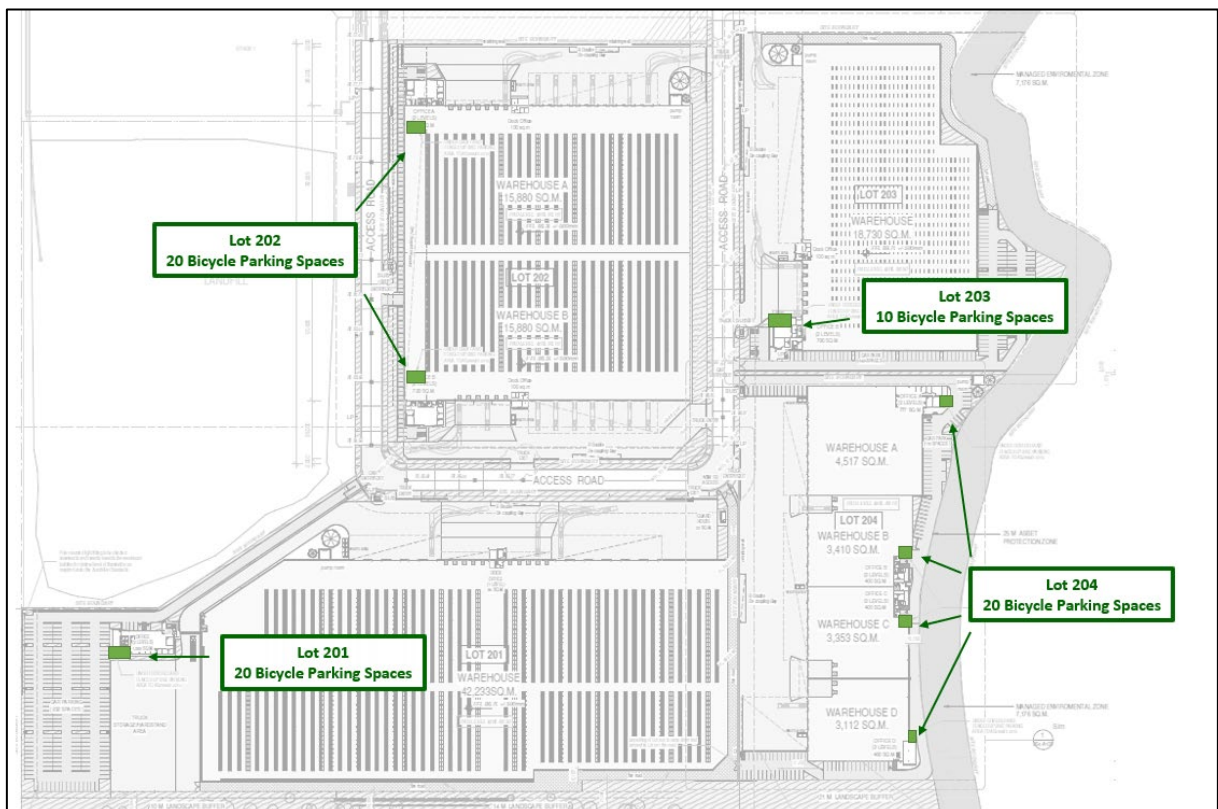


Figure 13: Bicycle Parking

7.7 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).

Traffic Assessment

8.1 Traffic Generation Rates

8.1.1 WSEA Adopted Rates

It is understood that the approved traffic modelling undertaken for the broader WSEA adopts the following trip generation rates:

- Eastern Creek Precinct: 21 trips per hectare for two-hour peak period,
- Ropes Creek Precinct: 10 trips per hectare for two-hour peak period,
- Erskine Park Employment Area: 10 trips per hectare for two-hour peak period, and
- Lands south of Sydney Water Pipeline: 21 trips per hectare for two-hour peak period.

Furthermore, a conversion factor of 0.55 peak two-hour volumes to one-hour peak volume has been assumed for the strategic analysis. In this instance the “*Lands south of Sydney Water Pipeline*” rate is applicable to the Proposal. This means a “one-hour peak generation rate of 11.6 trips per hectare of the site area”.

8.1.2 RMS Rates

The likely traffic generation of *any* warehouse/industrial facility type developments on this Site can be estimated through application of the suggested RMS generation rates. In this instance, the applicable rates are for the following three (3) business park and industrial estates in *Sydney Areas* included in Appendix E of the Technical Direction TDT 2013/04a:

- Site 1: Erskine Park Industrial Estate, Erskine Park,
- Site 3: Wonderland Business Park, Eastern Creek; and
- Site 4: Riverwood Business Park, Riverwood.

Accordingly, the average AM, PM and daily two-way vehicular trip rates are as follows:

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

8.2 Previously Planned (WSEA) Traffic Generation

As discussed before, the Site has an area of 20.79 hectares and, accordingly, an inherent traffic generation has previously been assumed for the Site as summarised below.

Table 15: Traffic Generation (two-ways) – Planned under WSEA

Yield	WSEA Traffic Generation	
	Road Network AM Peak	Road Network PM Peak
20.79 ha	241	241

The above traffic volumes are understood to have formed the basis for which regional infrastructure — resulting from broader WSEA development — has been planned. It should be noted that these are based on average rates across the precinct(s) and it is expected that some variance on an individual site basis would occur.

8.3 Proposed Traffic Generation

The traffic generation of the development under the current proposal has been assessed having regard for RMS Guide rates; intended to identify what ‘potential’ traffic volumes could be generated by the development in the future.

Table 16: Traffic Generation (two-ways) – Proposal

Lot	Total Built Form (GFA m ²)	Road Network AM Peak	Road Network PM Peak	Daily (veh/day)
201	43,488	107	79	1,145
202	31,760	83	61	881
203	18,730	48	35	516
204	16,197	41	30	434
Total	112,659	279	205	2,975

Notes) 1. Minor variation in summated totals due to rounding.

According to the above table the traffic likely to be generated by the Site at full operation will exceed that of the previously approved for WSEA assessment (241 trips during both AM and PM peaks) in the **AM Peak** by 38 vehicle trips. It is emphasised that this exceedance will only occur at AM peak with PM peak hour traffic being lower than the approved threshold. As such it is considered that the exceedance of trips in this instance is only moderate and will not have any material traffic impact on the surrounding

road network. SIDRA analysis undertaken for Old Wallgrove Road / Milner Avenue confirms that this additional 38 veh/hr during AM peak hour can be accommodated by the existing signal configuration (refer Section 8.5).

Furthermore, establishing a Travel Plan (TP) strategy for the Site in line with the Travel Demand Management Strategy required by TfNSW can also be a mitigation measure if deemed necessary at later stage of the project. The purpose of this strategy is to minimise reliance on private vehicles accessing the workplace by employing a variety of operational strategies and incentives to reduce dependency. In this instance, a TP would assist to mitigate the moderate exceedance over WSEA traffic and additionally would work to support environmental and green initiatives of Council and the wider region.

Regardless, SIDRA analysis suggests that the traffic associated with the Site will have no adverse impact on the surrounding area.

8.4 Traffic Mode Choice

The proposed traffic generation for the development as above is likely to facilitate light vehicle traffic in line with existing modal choice behaviour for the locale as capture in the Australian Bureau of Statistics' Journey-To-Work (JTW) data set for 2016. The results of the JTW 2016 are demonstrated below.

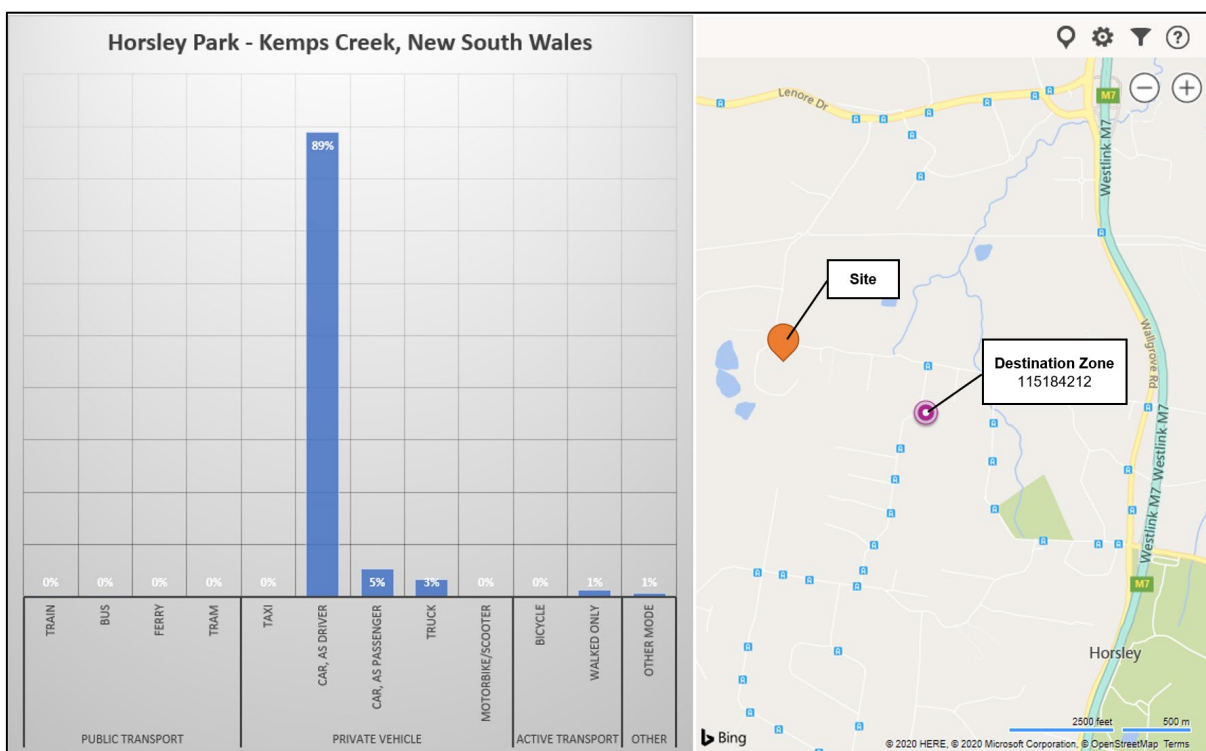


Figure 14: Journey-To-Work 2016 Results

The JTW assessment demonstrates that the locale has a high dependence on private vehicle trips, accounting for approximately 97% of movements from place of residence to workplaces in the area. This has been validated against surrounding zones to demonstrate that the mode share is relatively consistent. Of the assessment, a further 2% of movements rely on public transport, while less than 1% rely on active transport modes.

In this context, it is considered that the above modal share will likely reflect the operational workforce employed by tenancies within the Site.

Implementation of a Travel Plan in line with a Travel Demand Management strategy suggested by TfNSW will take into consideration the JTW mode share and provides a means of reducing dependence of journey to work trips by private vehicle. To this extent, total peak period trips would be accordingly reduced.

However, the SIDRA analysis undertaken for 2026, shows that the exceedance of 38 veh/hr during AM peak hour can be accommodated by the existing road network with a LoS B. Accordingly, no additional road upgrades will be required over what has been approved and constructed already.

8.5 Traffic Impacts

As discussed above, the expected traffic generation of the Site exceeds the approved WSEA during the AM peak period by only 38 vehicle trips. However, the PM peak hour traffic generation remains below approved threshold. It is our view that the exceedance of 38 veh/hr will not have any material impact onto the surrounding road network. However, for conservatives and in response to TOA requested by DPIE, SIDRA analysis has been undertaken for the signalised intersection of Old Wallgrove Road / Milner Avenue for 2026.

8.5.1 SIDRA Results

In this regard a background review has been undertaken, with the following to present a summary:

- With reference to the traffic study undertaken for the **approved DA number 93.1/2019** (the approved OEIE report), the 2026 projected traffic volumes at this intersection are demonstrated in the **Figure 16**.
- This traffic profile considers the cumulative traffic volumes from the Site and the other developments in the area and can set as a basis for the additional modelling (2026 approved baseline).
- According to the approved OEIE report, SIDRA analysis has been undertaken for the signalised intersection of Old Wallgrove Road / Milner Avenue with the results outlined as follows:

Table 17: 2026 SIDRA Results – Base Case (Approved SIDRA Results)

Intersection	Peak Period	Degree of Saturation (DoS)	Average Delay (AVD)	LoS
Old Wallgrove Rd / Milner Ave	AM	0.75	13.4	A
	PM	0.83	24.7	B

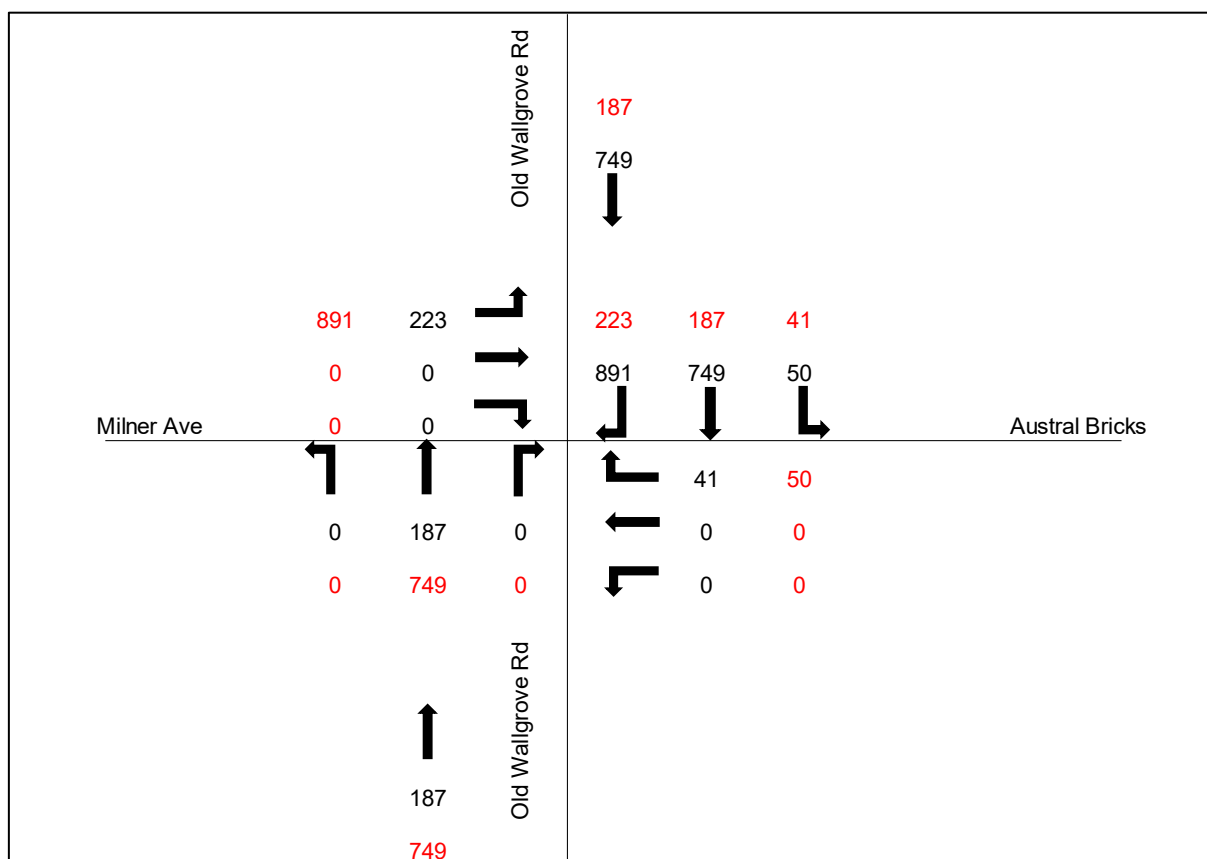


Figure 15: Projected Traffic Volume (Cumulative Traffic) - 2026

- Noting that the PM peak hour traffic generation is lower than the approved threshold, additional modelling has been undertaken for the morning peak hour to assess the impact of the exceedance from the Site traffic.
- Accordingly, additional 38 veh/hr has been added to the southbound through traffic during AM peak hour to allow for the exceedance from the Site and the SIDRA results are provided as follows:

Table 18: 2026 SIDRA Results – Project Case

Intersection	Peak Period	Degree of Saturation (DoS)	Average Delay (AVD)	LoS
Old Wallgrove Rd / Milner Ave	AM	0.77	21.0	B

- As can be seen from the above table, the additional 38veh/hr over and above the approval, will keep the operation of this intersection at an acceptable LoS B with minimum delays and significant spare capacity.

In summary, having regard for the assessments included in this section, it can be concluded that the traffic associated with the proposed development (even when accounting for the additional 38veh/hr during AM peak hour) as well as the cumulative traffic from all developments in the area will not have any adverse traffic impact from what has already been approved and constructed. Furthermore, it is expected that a Travel Plan (as requested by TfNSW) will be prepared for the Proposal which can further assist in reducing vehicular traffic demand from the Site.

As such, the proposal DOES NOT warrant any additional infrastructure upgrades beyond that already constructed and planned for the locality.

Preliminary Construction Traffic Management Plan

A detailed Construction Traffic Management Plan (**CTMP**) will be provided as part of detailed construction planning. For the purposes of this report, the following 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 construction programme for the development has not yet been finalised.

9.1 Potential Haulage Routes

The primary potential haulage route to and from the Site would occur along Old Wallgrove Road, with trucks accessing the Site from the M7 Motorway to the east or Lenore Drive and Mamre Road to the West. RMS currently identifies both routes as heavy vehicle routes. Construction of the Proposal would generate additional truck movements along these routes. Given that these routes currently carry high volumes of heavy vehicles, construction of the development would not have a significant impact on the performance of the abovementioned roads.

The movement of materials would be managed through the scheduling of deliveries and would aim to minimise the number of heavy vehicles accessing the Site during peak network periods and weekends. Earthworks quantities would be balanced as far as practicable during detailed design to ensure that transfer of material to/from off-site and on the external road network is minimised.

9.2 Proposed Working Hours

The construction work would vary depending on the phase of construction and associated activities and includes both construction and design personnel. The size of the on-site workforce has not been finalised and as a result, the peak working population on-site at any given time during the construction period may vary. Construction works would be undertaken during standard construction-working hours, which are likely to be as follows:

- Monday to Friday: 7.00AM to 6.00PM
- Saturday: 7.00AM to 1.00PM
- Sunday and Public holidays: No planned work.

It may (on occasions) be necessary to undertake night works to minimise disruption to traffic.

9.3 Construction Traffic Generation

Light vehicle traffic generation would be generally associated with staff movements to and from the Site. Staff would be comprised of project managers, various trades, and general construction staff. Over the full construction period, the peak workforce represents the worst-case scenario for vehicle movements during the morning or evening road network peak hour. The workforce arrival and departure periods (6.30-7.00AM and 5.00-5.30PM) represent the peak construction traffic generation periods.

Light vehicle construction trips are expected to arrive in the morning and depart in the evening and the number of trips would be based on the workforce numbers. Parking for these construction-related vehicles would be provided on-site.

Heavy vehicle traffic would mainly be generated by activities associated with the delivery of construction equipment and delivery of material for construction works. As the construction programme has yet to be finalised, a worst-case scenario for heavy vehicle movements per day required for the delivery of construction materials to the Site cannot be accurately determined.

However, these deliveries are likely to occur outside of the peak network traffic periods and would have limited (if any) impact to traffic on Old Wallgrove Road, Lenore Drive, M7 Motorway and Mamre Road, which currently have high proportions of heavy vehicles.

Importantly, the construction traffic volumes are expected to be lower than the volumes anticipated for the Stage 1 Proposal once it becomes operational. Therefore, recognising that the key intersection is anticipated to perform satisfactorily once the Proposal is completed, it can be assumed that the intersection would satisfactorily accommodate the lower volumes of construction traffic.

9.4 Construction Mitigation Measures

While the traffic impacts of construction of the development are likely to be negligible, the following measures should be undertaken to minimise the impacts of the construction activities of the development:

- Traffic control would be required to manage and regulate traffic movements into and out of the site during construction.
- Disruption to road users would be kept to a minimum by scheduling intensive delivery activities outside of peak network hours.
- Construction and delivery vehicles would be restricted to using Old Wallgrove Road, Lenore Drive, M7 Motorway and Mamre Road.

Design Commentary

10.1 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. Furthermore, compliance with the above Standards would be expected to form a standard condition of consent to any development approval.

10.2 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. 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'.

10.3 Access Design

10.3.1 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). 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.

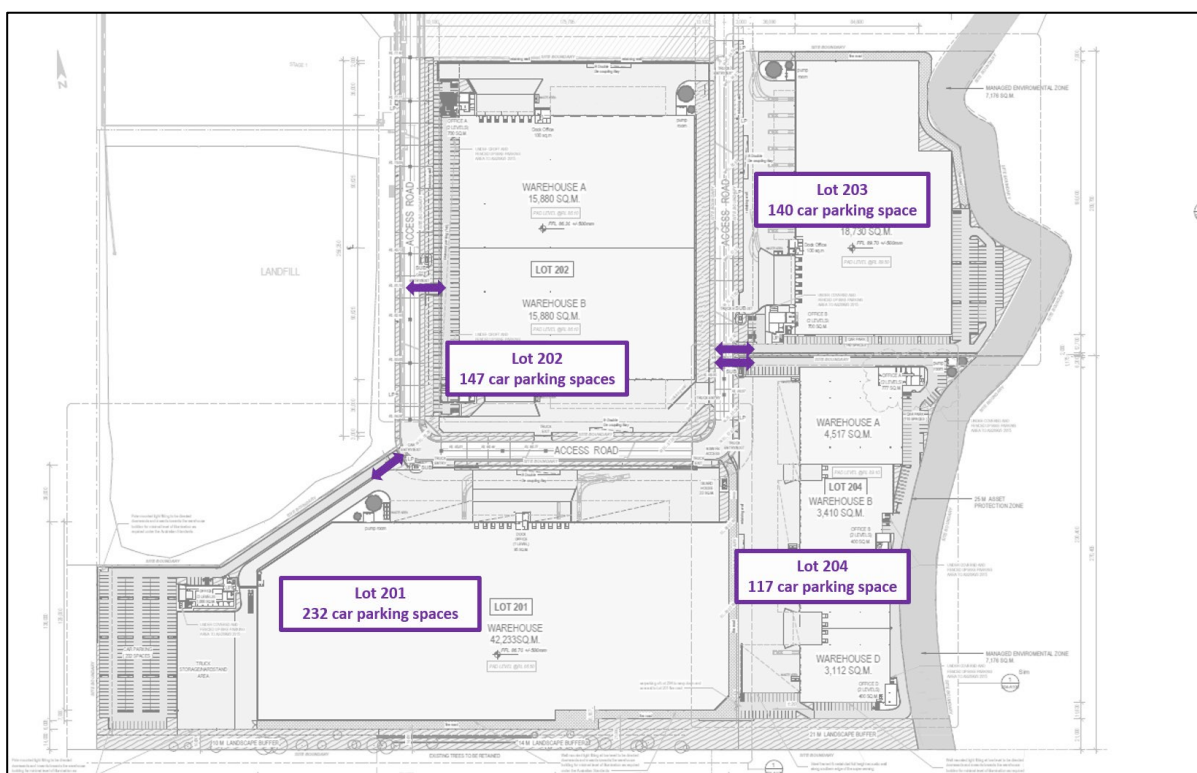


Figure 16: Car Parking Access Arrangement

10.3.2 Commercial Vehicle Access

Access and egress for commercial vehicles into and out from all lots are via Access Roads. The design of these accesses has been assessed by swept path analysis for Super B-Doubles. In this regard, reference should be made to the design commentary and swept paths included in **Appendix A** demonstrating access and egress to/from the Site.

10.4 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.

10.5 Vehicle Queuing

It has been considered that all lots have been designed to keep the gates open during the operation of the Site to minimise the potential queuing of light and heavy vehicles accessing the Sites and associated parking. Accordingly, queuing 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.

10.6 Internal Design

Final resolution of the internal design would be expected to occur as part of Construction Certificate 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.

10.7 Loading Dock Management

As specified above, the following maximum sizes 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 several circumstances, a number of bays are recommended to be reserved for a maximum vehicle size of 12.5m Heavy Rigid Vehicles. In this instance, reference should be made to the loading dock management plan in Appendix A.

10.8 Emergency Vehicle Access

Reference should be made to the design commentary and swept paths included in **Appendix A** demonstrating fire truck routes within each lot.

Summary and Conclusion

11.1 Key Findings

The key findings of this Traffic Impact Assessment are:

- The Site is located with the Western Sydney Employment Area (WSEA); with a site-specific Council Development Control Plan (WSEA FDCP 2016) applicable to the Proposal. Nominal Council parking requirements are specified by this site-specific DCP.
- Notwithstanding, these generic rates are more suitable to small tenancies, industrial business parks with high proportion of office areas and/or other specific tenants with high staffing levels and not the large-format industrial warehouse type facilities proposed.
- Indeed, these rates are generally far in excess of the anticipated actual parking demand for likely users—WSEA FDCP requirements are considered onerous, noting the parking provisions for similar industrial properties recently approved in broader WSEA as well as those currently operating. Furthermore, from a commercial perspective provision of such significant number of (surplus) parking spaces for each and every stage of the development is not reasonable and does not accord with sustainable development principles. Therefore, reference should be made to other parking guidelines to identify a suitable car parking provision for typical users of such facilities.
- A summary of parking requirements arising under the DCP and RMS Guide and the proposed provision is summarised below.

Lot	Warehouse	Office (m ²)	Total Built Form (m ²)	DCP Requirements	RMS Requirements	On-site Parking Supply
201	42,233	1,117	43,350	464	169	232
202	31,760	1,600	33,360	357	146	147
203	18,730	800	19,530	209	82	140
204	14,392	2,027	16,419	176	99	117
Total	107,115	5,544	112,659	1,207	496	636

- In summary, the proposed car parking provisions are generally less than nominally required by the DCP. Notwithstanding, the proposed car parking provision are **SUPPORTABLE** having regard for the following:
 - Proposed car parking is provided at an average rate of 1 space per 177m² GFA which is within the range for the car parking provisions of number of recently approved similar developments within Fairfield and Penrith LGA.

- Comparing the above figure to the RMS Guide rates (1 space per 300m²) — themselves forming the basis of more recent controls approved by DPIE for nearby precincts such as Oakdale — the proposed parking is significantly more than typical demands for which it would be reasonable to design. In this regard, the proposed parking provision is considered sufficient to accommodate potential parking demand on-site.
 - The proposed parking provision at each lot generally exceeds the RMS Guide parking requirements which will ensure a suitable provision to ‘future-proof’ the facility in case the parking demand increase in the longer term.
- Accordingly, this TA concludes that the proposed parking provision will satisfy the future demands of the development for each individual warehouse. As such, the development is NOT expected to create any adverse parking impacts on-street.
 - To assess the impact of the proposed development traffic, consideration has been given to the WSEA approved traffic generation rate for this Site and comparison between the WSEA approved traffic generation and more detailed RMS traffic generation estimations.
 - The total projected traffic volumes resulting from the proposed development during the road network PM peak hour is LESS than the WSEA traffic generation estimation adopted for the Site. During the AM peak hour, however, the likely operational traffic may exceed the approved threshold by approximately 38 veh/hr.
 - With reference to the traffic study undertaken for the approved DA number 93.1/2019, the 2026 projected traffic volumes and SIDRA analysis has been obtained for the base approval at Old Wallgrove Road / Milner Avenue intersection. The traffic profile and SIDRA analysis sufficiently consider the cumulative traffic volumes from the Site and the other developments in the area.
 - According to the approved DA 93.1/2019, SIDRA analysis undertaken for the signalised intersection of Old Wallgrove Road / Milner Avenue will operate at LoS A and B during AM and PM peak hours respectively by 2026.
 - Furthermore, as part of this study, SIDRA analysis has been undertaken for the 2026 AM peak hour with additional 38 veh/hr to allow for the Site’s exceeded traffic generation during morning peak hour.
 - The additional SIDRA modelling suggest that the existing approved configuration of Old Wallgrove Road / Milner Avenue can operate at LoS B with minimum delay by 2026.
 - Accordingly, the impact of the cumulative traffic from the Proposal and other developments in the area on the surrounding road network during the AM and PM peak periods is considered to be within the approved WSEA traffic generation range and as such no additional road upgrade is deemed required from what has already been constructed.

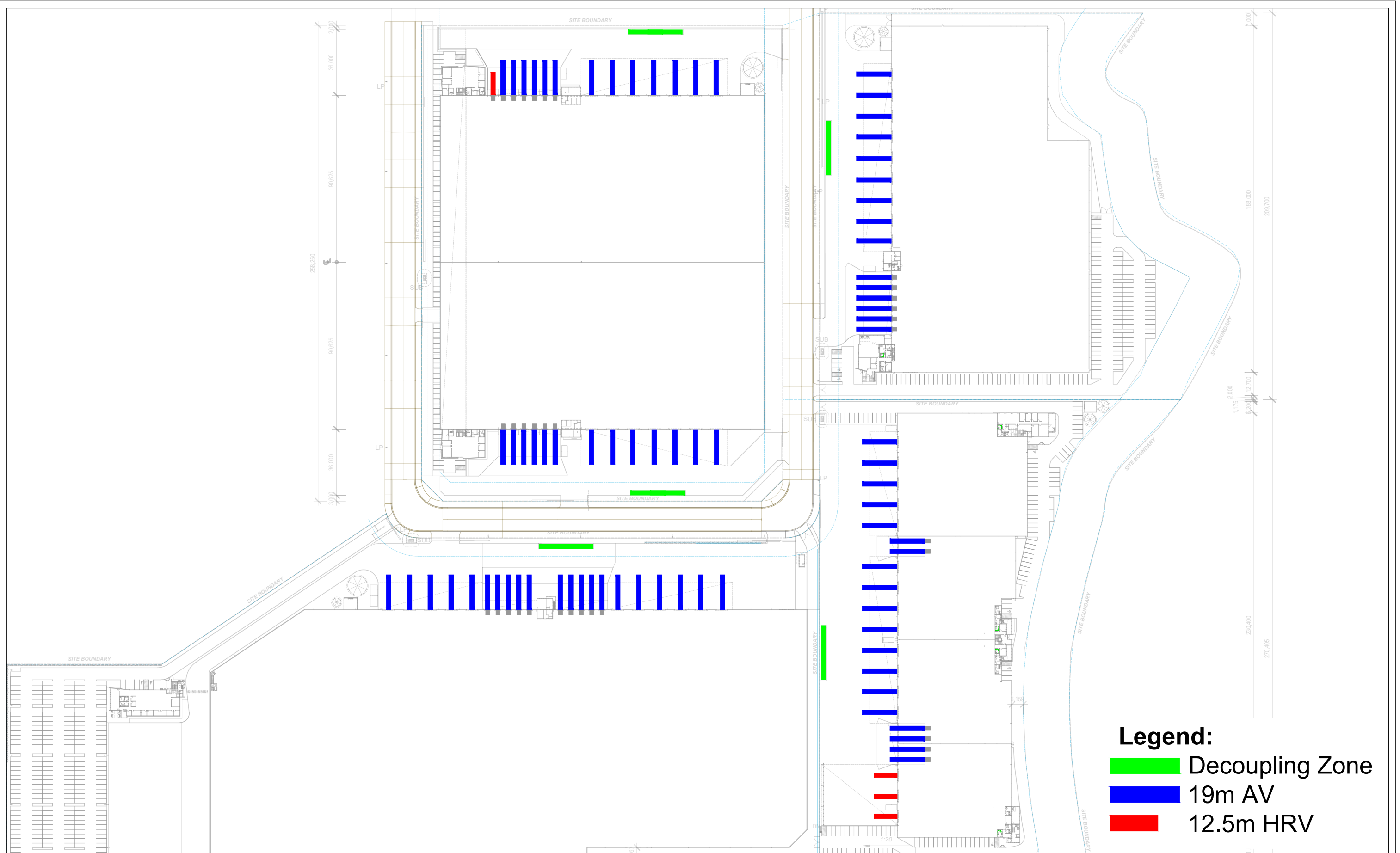
- The largest vehicle anticipated to access the Site is a 30 metre Super B-double. Accordingly, the proposed site access and internal site design have been undertaken to accommodate this vehicle.
- It is proposed that the associated gates for all lots within the Site will be open during operational hours. 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**.

11.2 Conclusion

In summary, it concluded that the proposed SSD 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



- Legend:**
- Decoupling Zone
 - 19m AV
 - 12.5m HRV

Revision notes:

Rev:	Date:	Notes:

For information purposes only - not for construction

Drawn By:
M TANGONAN

Client:
ESR

Project:
P1328
327-355 Burley Road, Horsley Park

Drawing Title:
Masterplan - Dock Management

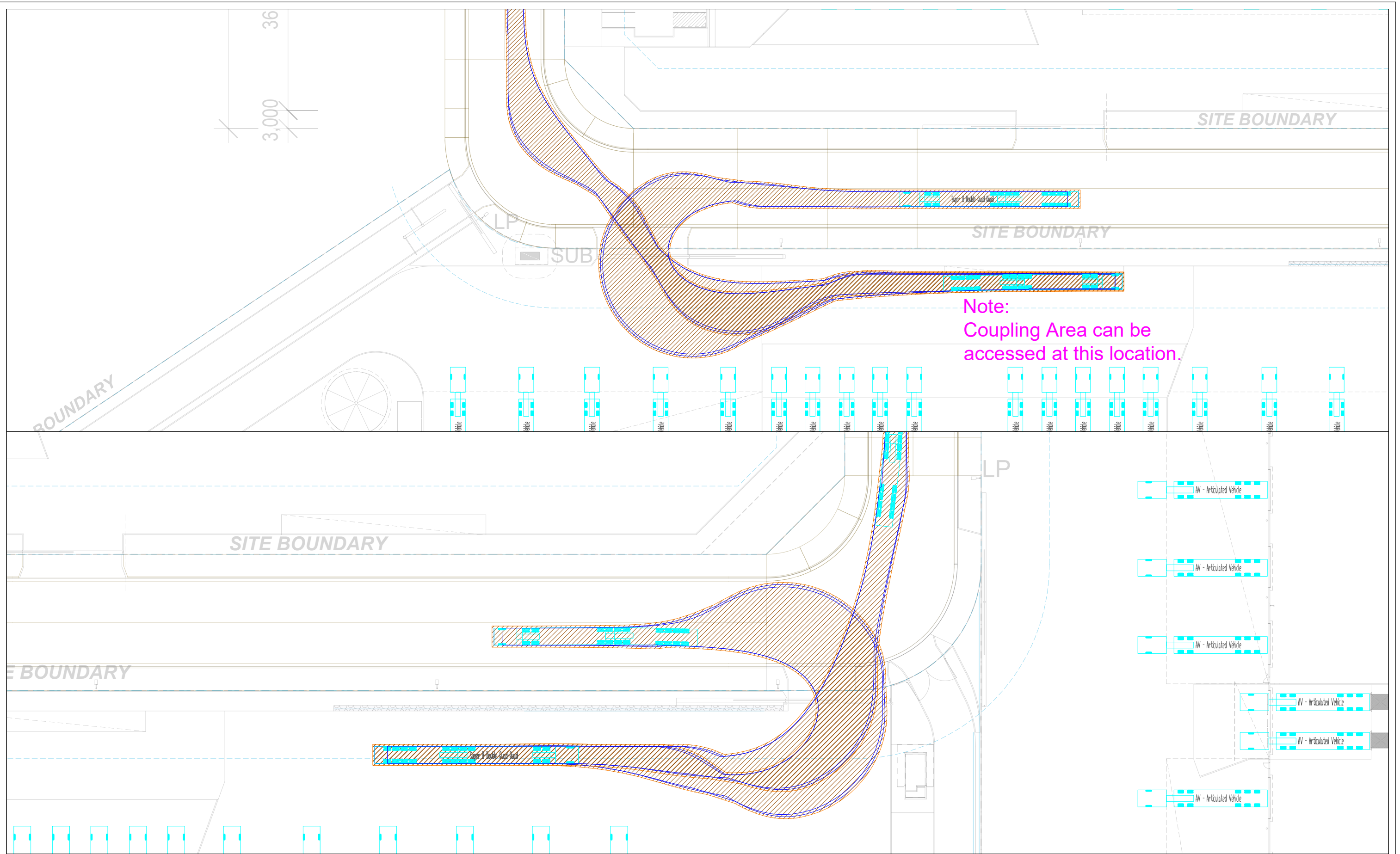
Date:
27-Oct-20

Scale @ A3:
[scale]

Drawing Number:
AG0

asongroup

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



Note:
Coupling Area can be
accessed at this location.

Revision notes:

Rev:	Date:	Notes:

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Drawn By:
M TANGONAN

Client:
ESR

Project:
P1328
327-355 Burley Road, Horsley Park

Drawing Title:
Lot 201 Crossover Entry / Exit & Coupling Area
30m SB-Double

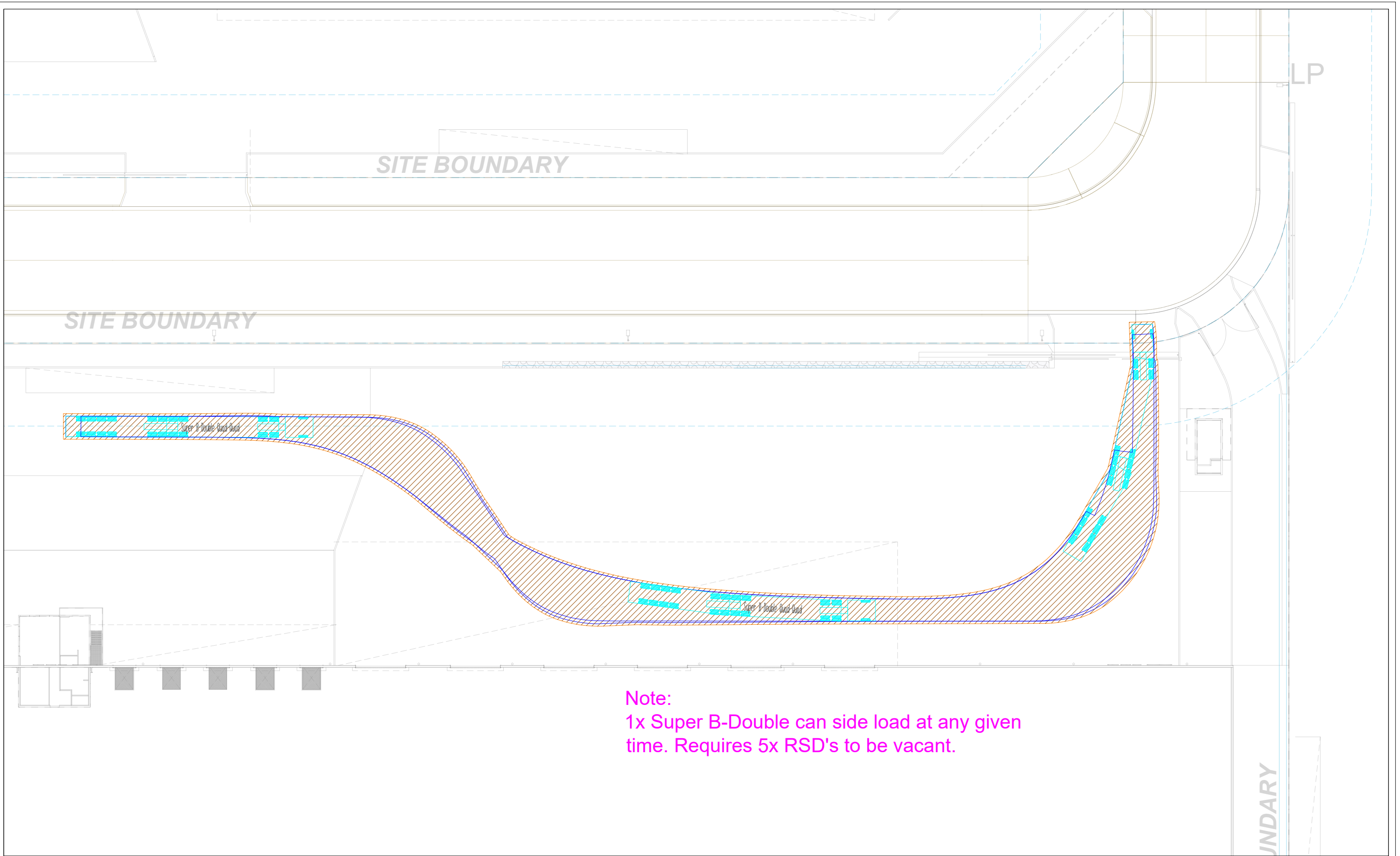
Date:
27-Oct-20

Scale @ A3:
[scale]

Drawing Number:
AG201_00

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Sydney NSW 2000
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Note:
 1x Super B-Double can side load at any given time. Requires 5x RSD's to be vacant.

Revision notes:		
Rev:	Date:	Notes:

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Drawn By: M TANGONAN
Client: ESR

Project: P1328 327-355 Burley Road, Horsley Park
Drawing Title: Lot 201 Side-Loading Position 30m SB-Double

Date: 27-Oct-20
Scale @ A3: [scale]
Drawing Number: AG201_01

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 Sydney NSW 2000
info@asongroup.com.au



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Drawn By:
M TANGONAN

Client:
ESR

Project:
P1328
327-355 Burley Road, Horsley Park

Drawing Title:
Lot 201 Trailer Parking and U-Turn
30m SB-Double

Date:
27-Oct-20

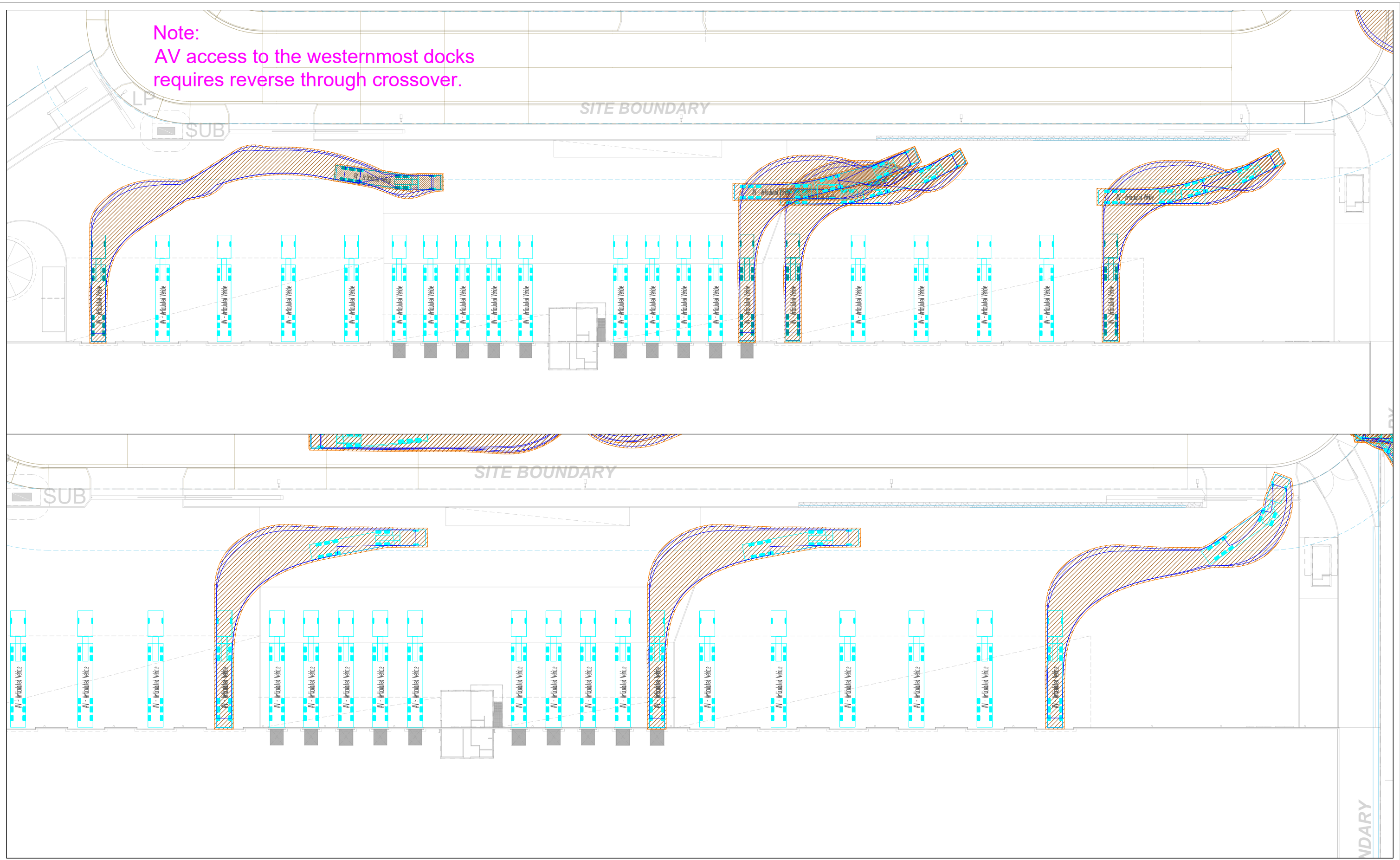
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Drawing Number:
AG201_02

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Sydney NSW 2000
info@asongroup.com.au

Note:
AV access to the westernmost docks
requires reverse through crossover.



Revision notes:

Rev:	Date:	Notes:

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Drawn By:
M TANGONAN

Client:
ESR

Project:
P1328
327-355 Burley Road, Horsley Park

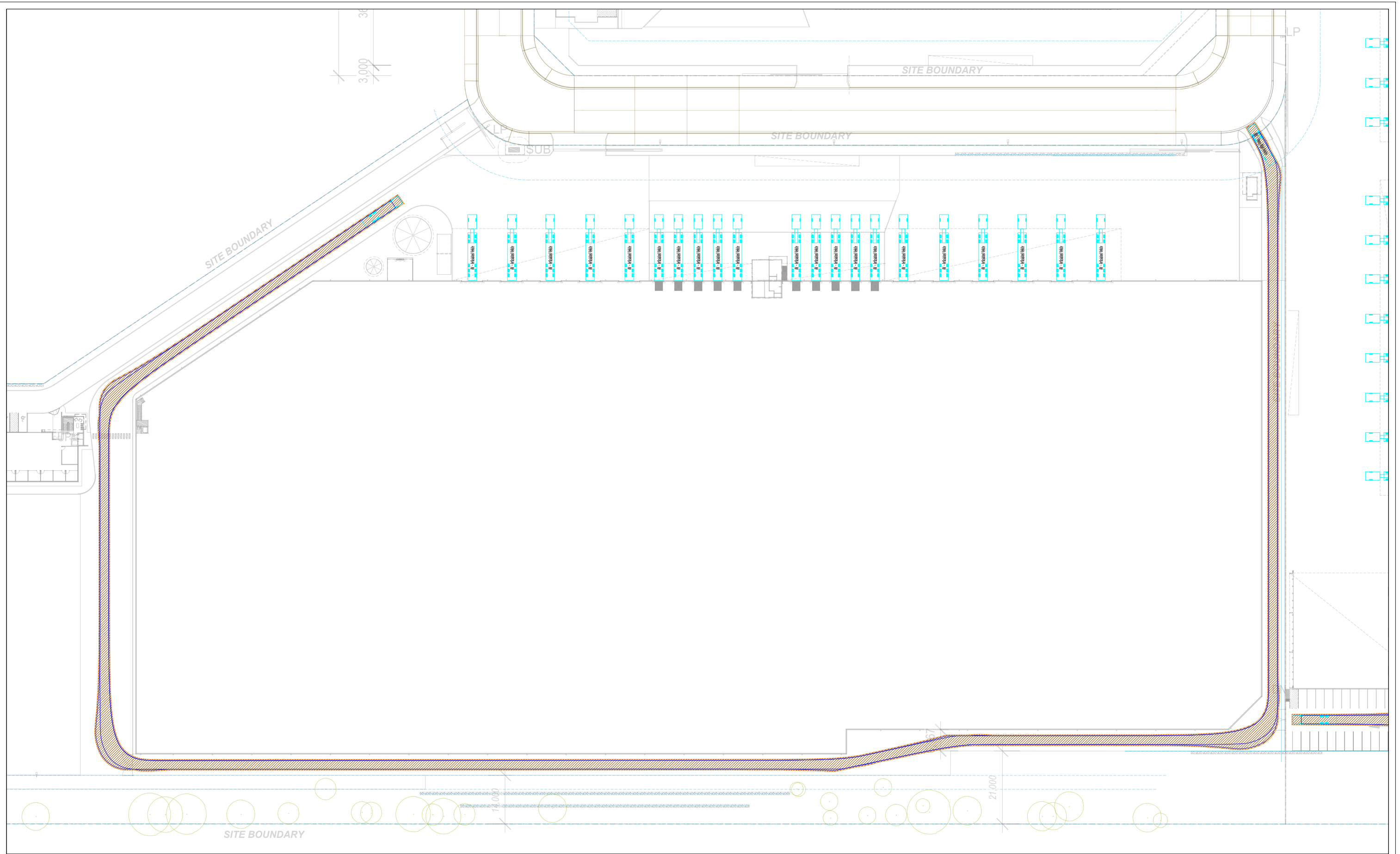
Drawing Title:
Lot 201 Dock Entry & Exit
19m AV

Date:
27-Oct-20

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Drawing Number:
AG201_03

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Sydney NSW 2000
info@asongroup.com.au



Revision notes:

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Drawn By:
M TANGONAN

Client:
ESR

Project:
P1328
327-355 Burley Road, Horsley Park

Drawing Title:
Lot 201 Fire Trail
12.5m HRV

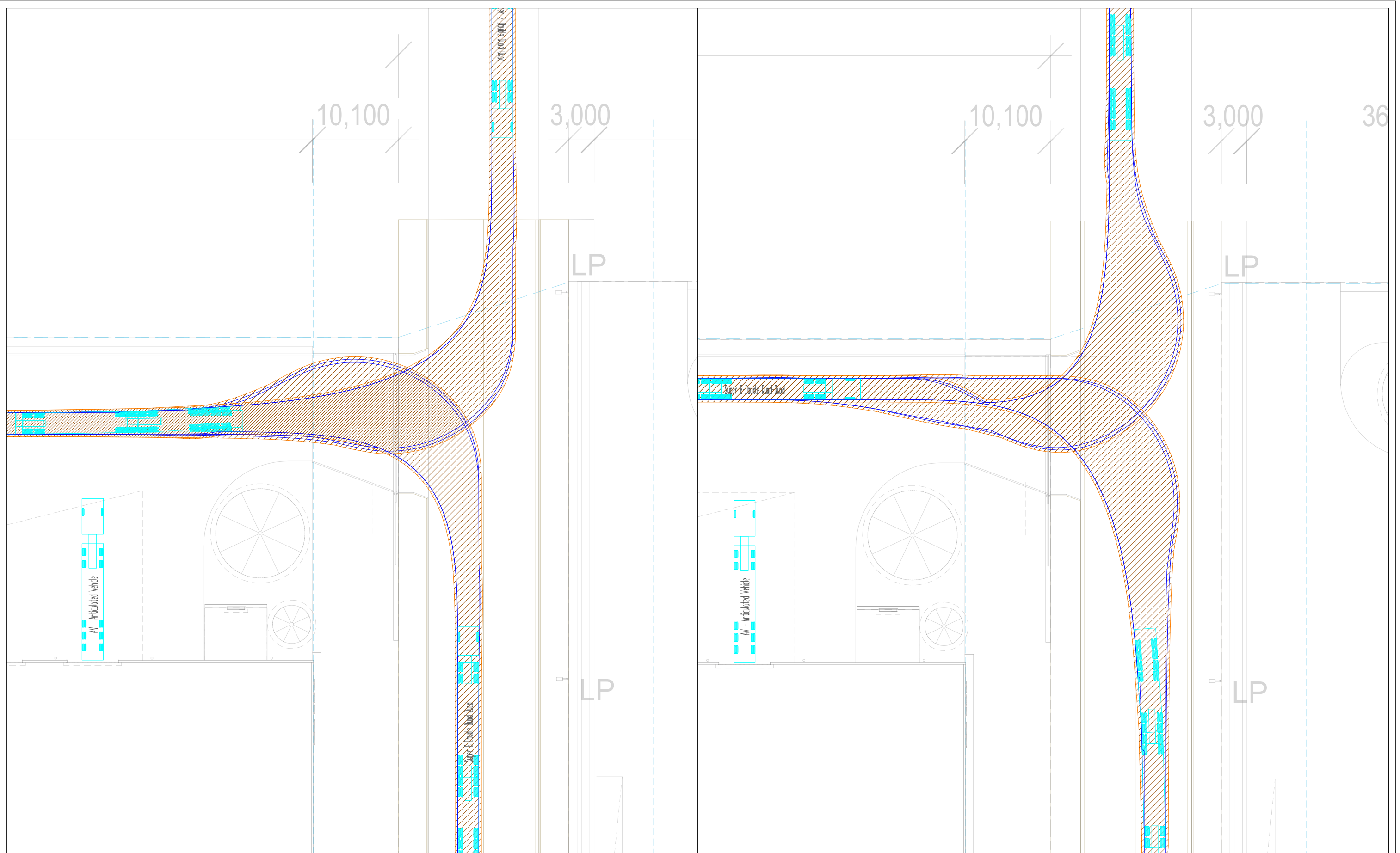
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27-Oct-20

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Drawing Number:
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Revision notes:

Rev:	Date:	Notes:

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Drawn By:
M TANGONAN

Client:
ESR

Project:
P1328
327-355 Burley Road, Horsley Park

Drawing Title:
Lot 202A Crossover Entry / Exit
30m SB-Double

Date:
27-Oct-20

Scale @ A3:
[scale]

Drawing Number:
AG202A_00

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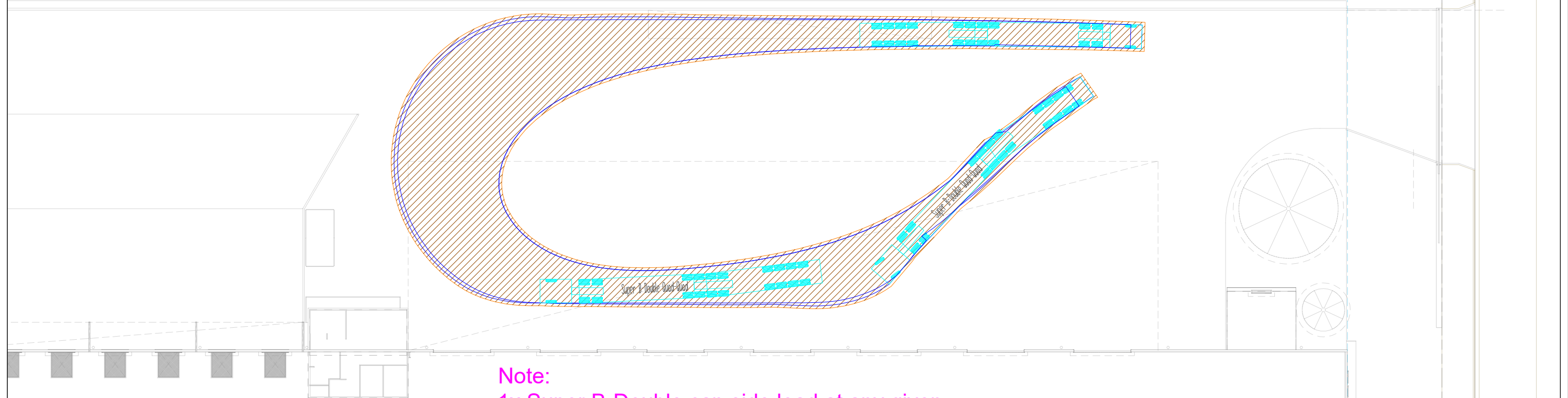
Suite 5.02, Level 5, 1 Castlereagh Street
Sydney NSW 2000
info@asongroup.com.au

175,795

10,100

SITE BOUNDARY

Note:
Coupling Area can be
accessed at this location.



Note:
1x Super B-Double can side load at any given
time. Requires 6x RSD's to be vacant.

Revision notes:

Rev:	Date:	Notes:

For information purposes only - not for construction

Drawn By:
M TANGONAN

Client:
ESR

Project:
P1328
327-355 Burley Road, Horsley Park

Drawing Title:
Lot 202A Side Loading Position & Coupling Area
30m SB-Double

Date:
27-Oct-20

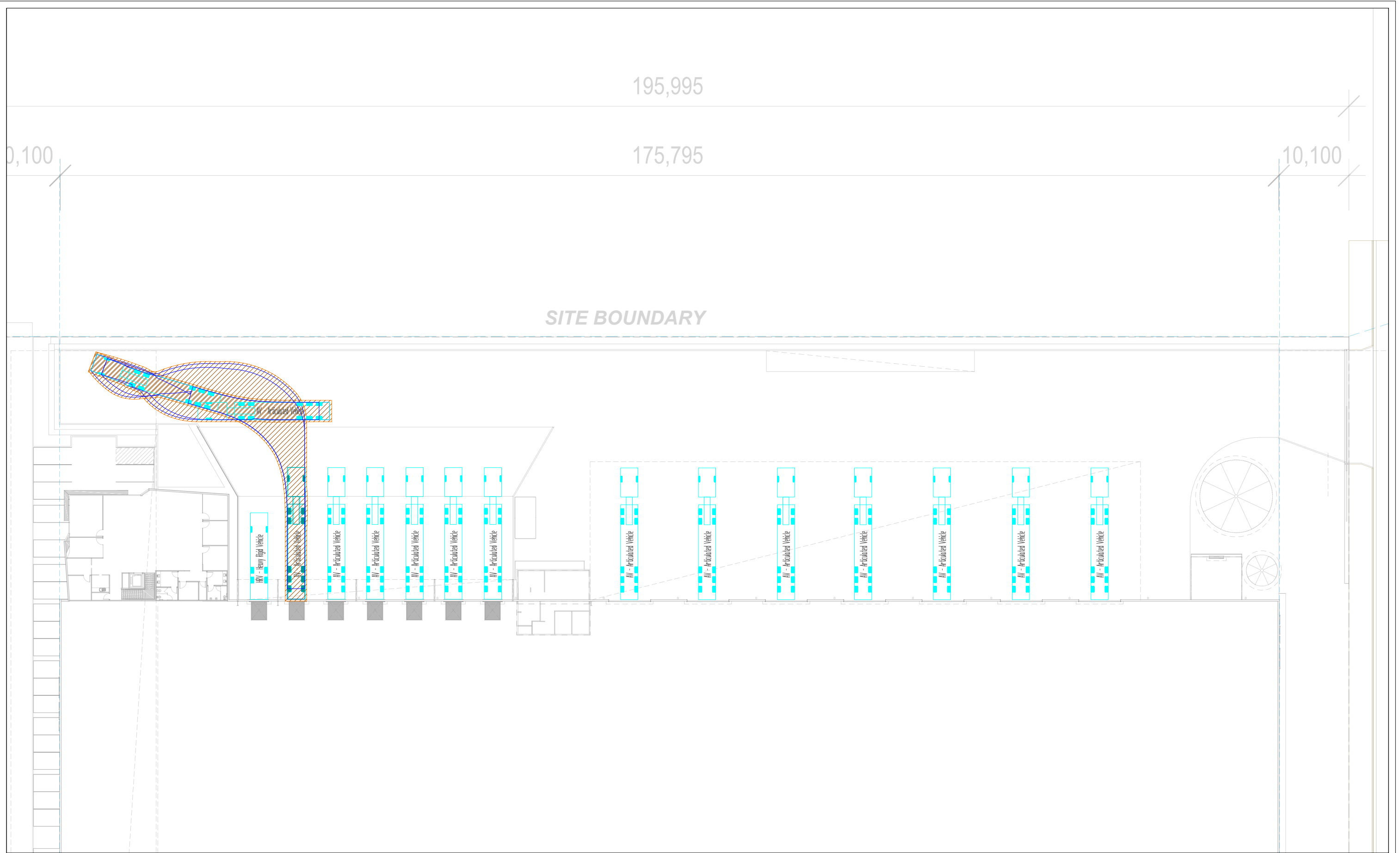
Scale @ A3:
[scale]

Drawing Number:
AG202A_01

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Sydney NSW 2000

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Revision notes:

Rev:	Date:	Notes:

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Drawn By:
M TANGONAN

Client:
ESR

Project:
P1328
327-355 Burley Road, Horsley Park

Drawing Title:
Lot 202A Dock Entry
19m AV

Date:
27-Oct-20

Scale @ A3:
[scale]

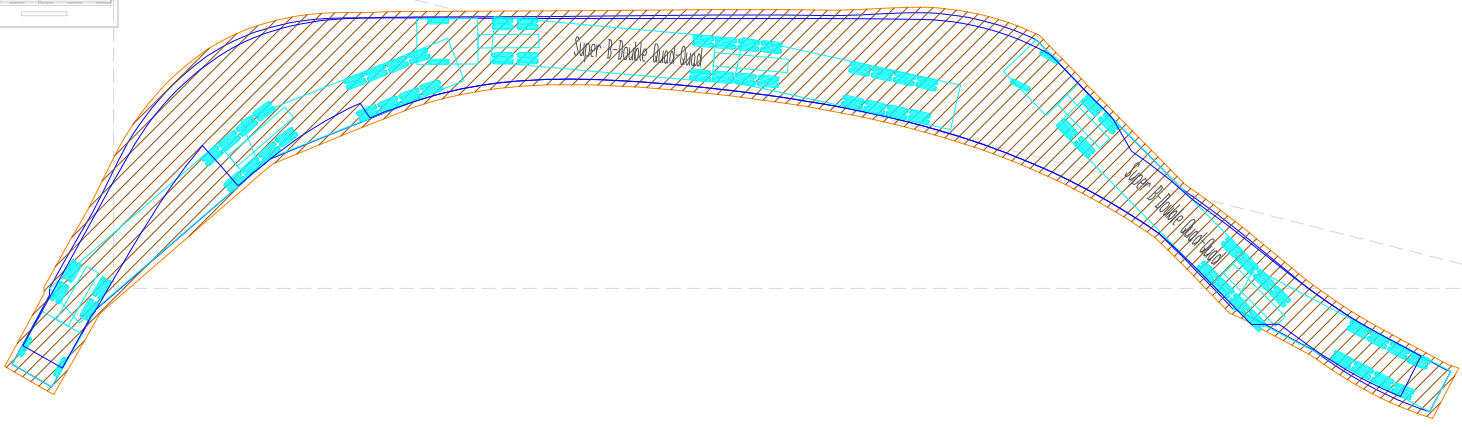
Drawing Number:
AG202A_02



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Note:
 1x Super B-Double can side load at any given time. Requires 6x RSD's to be vacant.



SITE BOUNDARY

SITE BOUNDARY

Revision notes:

Rev:	Date:	Notes:

For information purposes only - not for construction

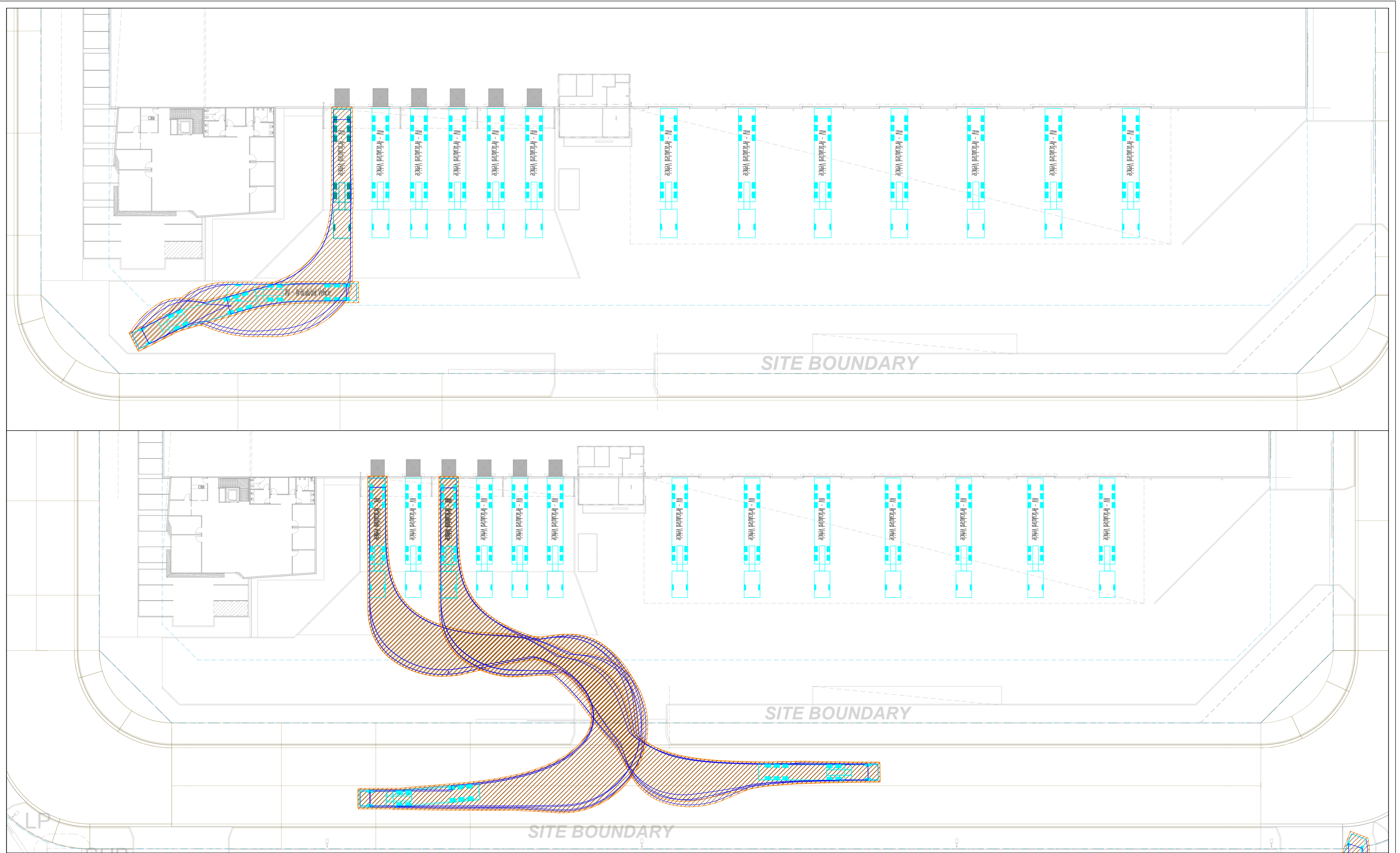
Drawn By: M TANGONAN	Client: ESR
--------------------------------	-----------------------

Project: P1328 327-355 Burley Road, Horsley Park	Drawing Title: Lot 202B Side Loading Position 30m SB-Double
---	--

Date: 27-Oct-20	Scale @ A3: [scale]
Drawing Number: AG202B_01	

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Revision notes:

Rev:	Date:	Notes:

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Drawn By:
M TANGONAN

Client:
ESR

Project:
P1328
327-355 Burley Road, Horsley Park

Drawing Title:
Lot 202B Dock Entry and Exit
19m AV

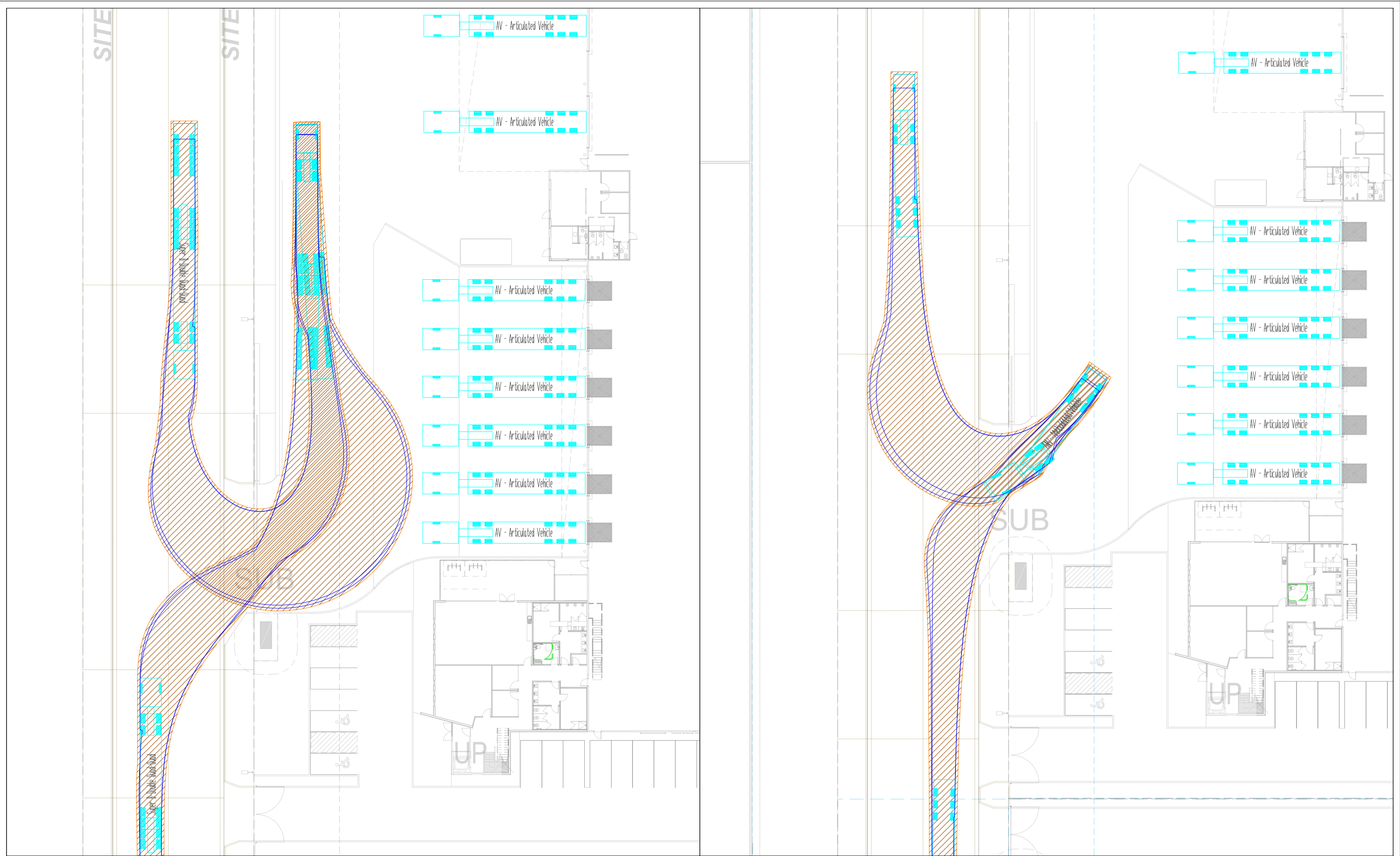
Date:
27-Oct-20

Scale @ A3:
[scale]

Drawing Number:
AG202B_02

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Revision notes:

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Drawn By:
M TANGONAN

Client:
ESR

Project:
P1328
327-355 Burley Road, Horsley Park

Drawing Title:
Lot 203 Crossover Entry / Exit
30m SB-Double

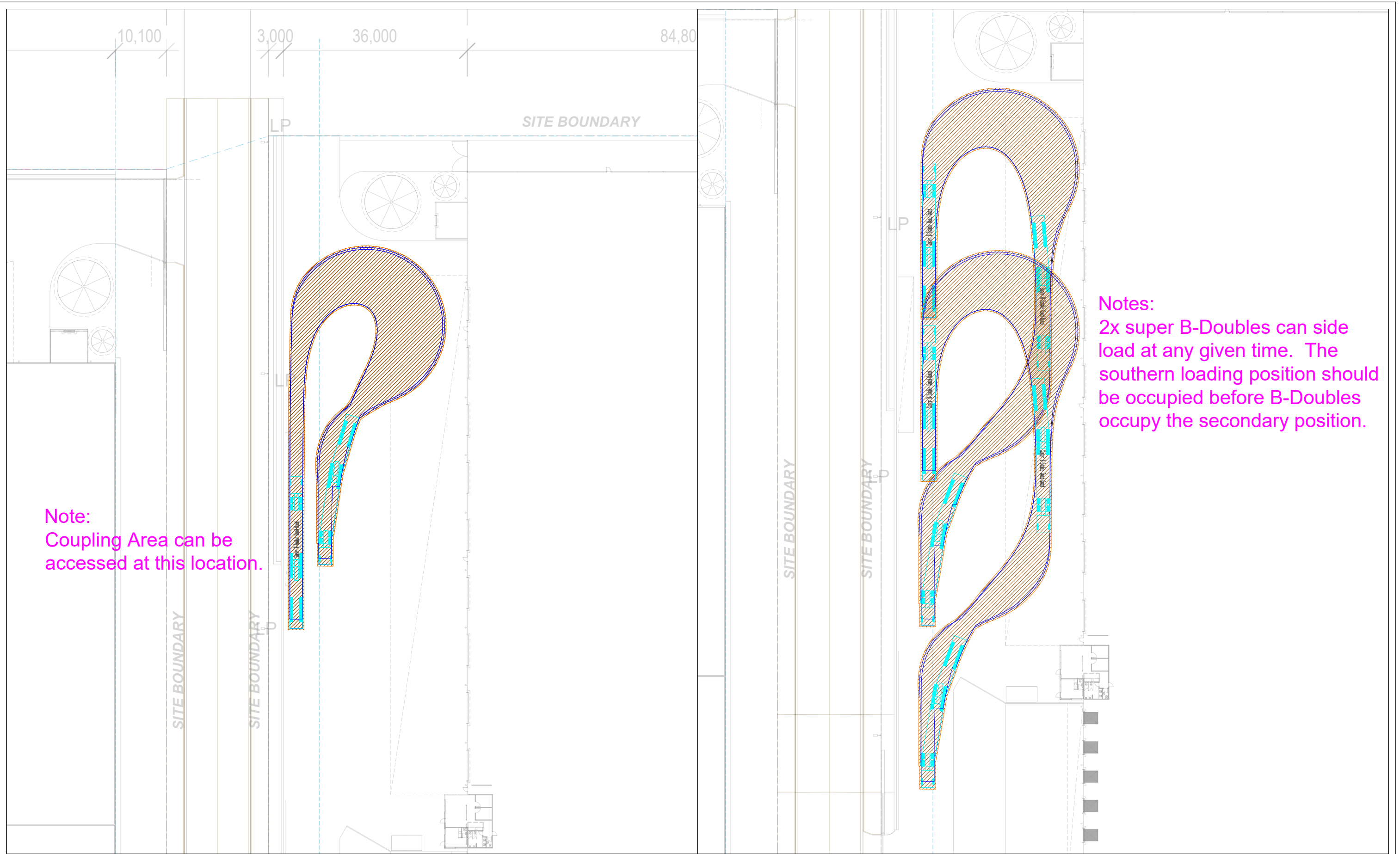
Date:
27-Oct-20

Scale @ A3:
[scale]

Drawing Number:
AG203_00

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Note:
Coupling Area can be
accessed at this location.

Notes:
2x super B-Doubles can side
load at any given time. The
southern loading position should
be occupied before B-Doubles
occupy the secondary position.

Revision notes:

Rev:	Date:	Notes:

For information purposes only - not for construction

Drawn By:

M TANGONAN

Client:

ESR

Project:

P1328
327-355 Burley Road, Horsley Park

Drawing Title:

Lot 203 Side Loading & Coupling Area
30m SB-Double

Date:

27-Oct-20

Scale @ A3:

[scale]

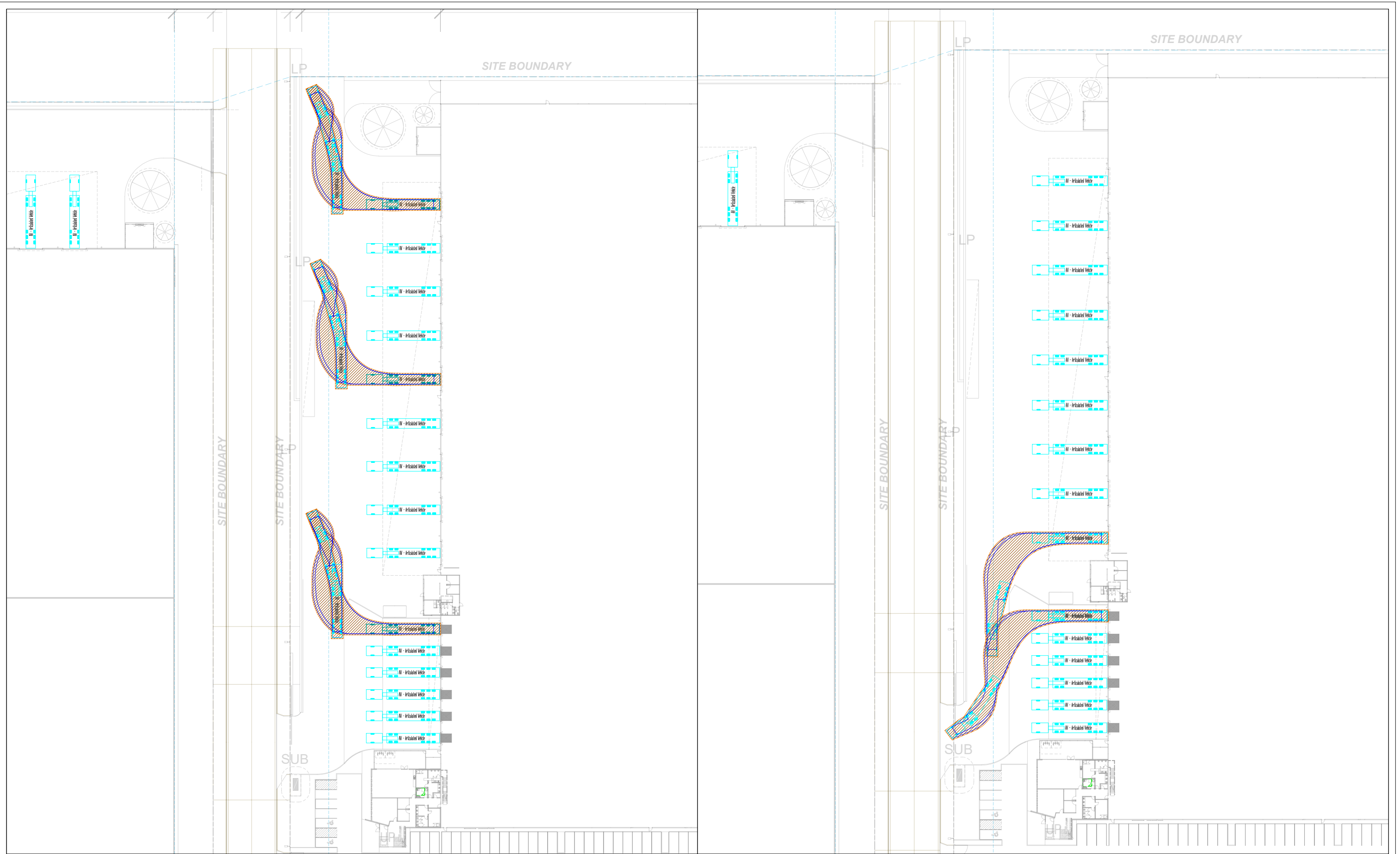
Drawing Number:

AG203_01

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Revision notes:

Rev:	Date:	Notes:

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Drawn By:

M TANGONAN

Client:

ESR

Project:

P1328
327-355 Burley Road, Horsley Park

Drawing Title:

Lot 203 Dock Entry / Exit
19m AV

Date:

27-Oct-20

Scale @ A3:

[scale]

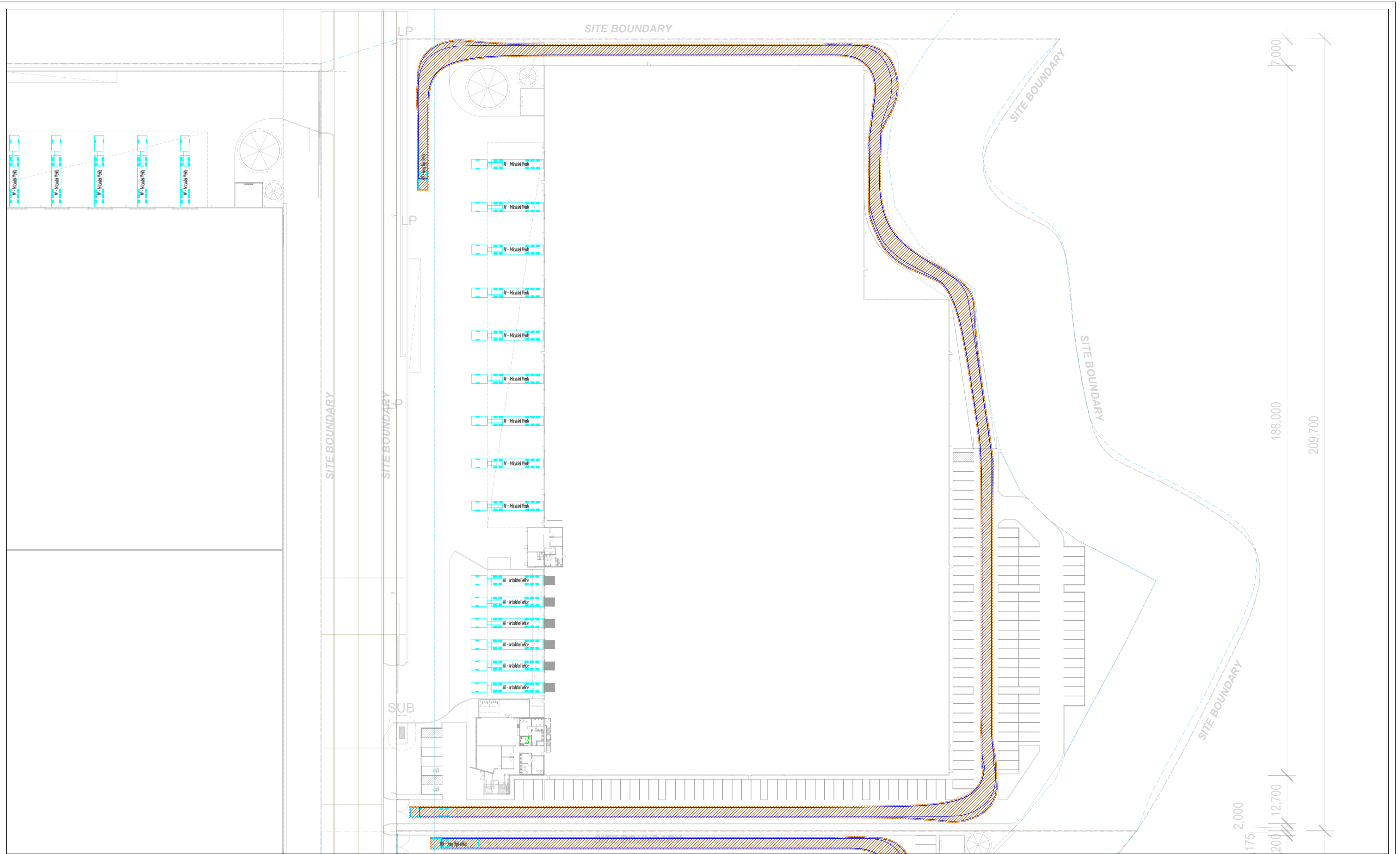
Drawing Number:

AG203_02



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Revision notes:

Rev:	Date:	Notes:

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Drawn By:

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Client:

ESR

Project:

P1328
327-355 Burley Road, Horsley Park

Drawing Title:

Lot 203 Fire Trail
12.5m HRV

Date:

27-Oct-20

Scale @ A3:

[scale]

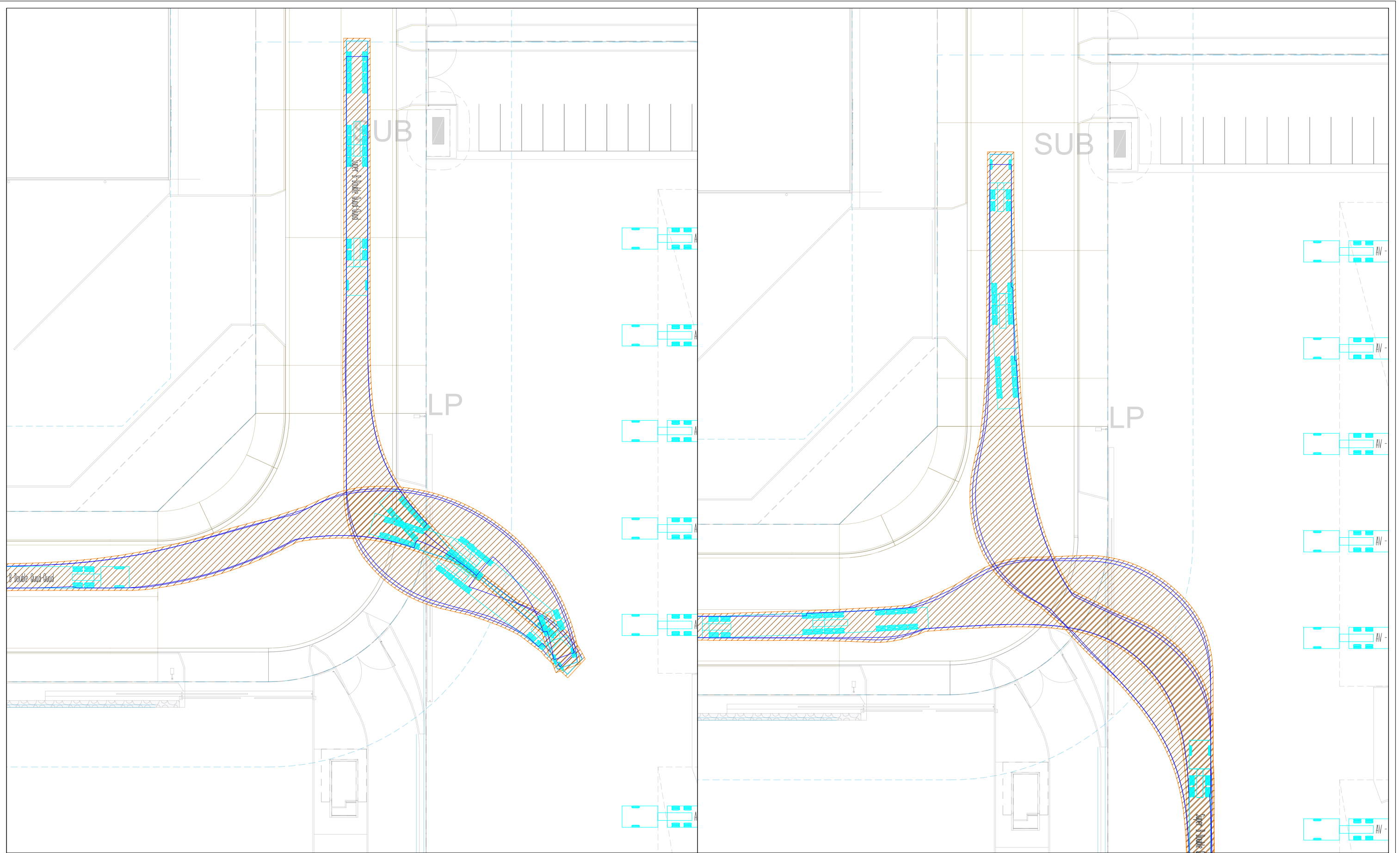
Drawing Number:

AG203_04



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Revision notes:

Rev:	Date:	Notes:

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Drawn By:
M TANGONAN

Client:
ESR

Project:
P1328
327-355 Burley Road, Horsley Park

Drawing Title:
Lot 204 Crossover Entry / Exit
30m SB-Double

Date:
27-Oct-20

Scale @ A3:
[scale]

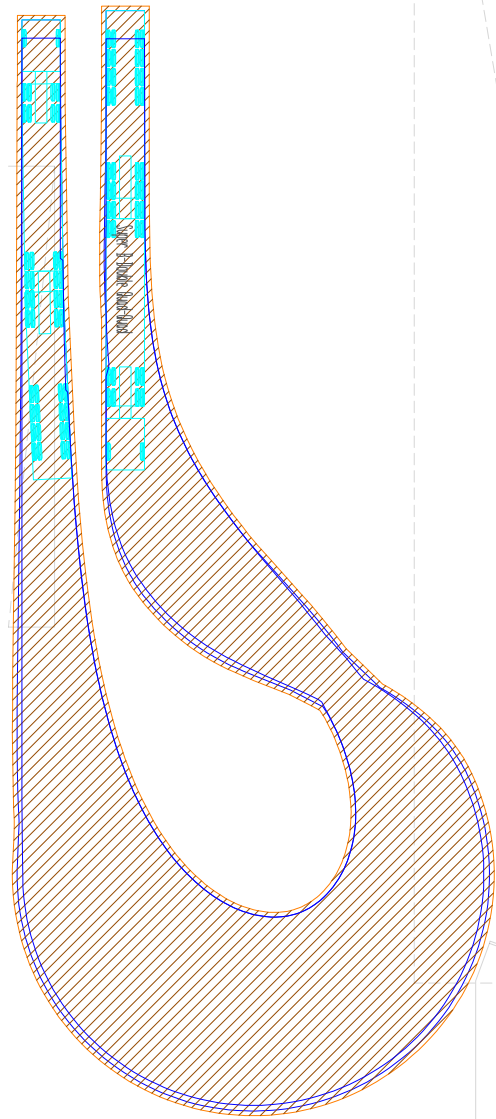
Drawing Number:
AG204_00

asongroup

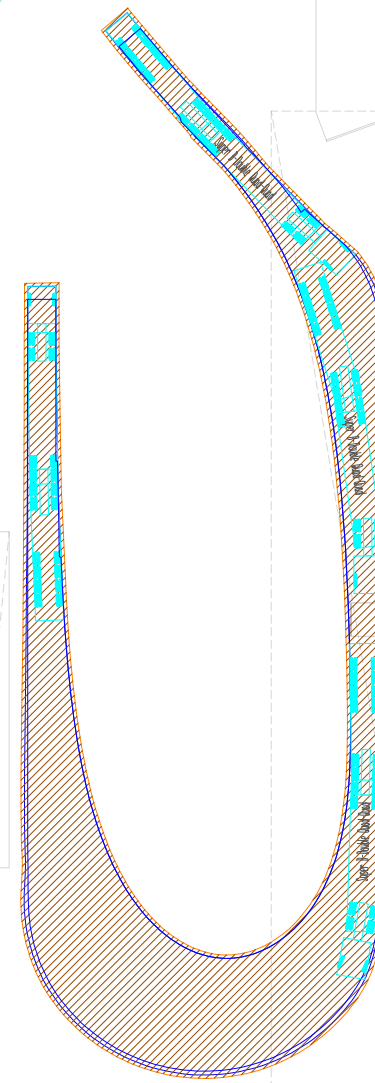
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Sydney NSW 2000
info@asongroup.com.au

Note:
Coupling Area can be accessed at this location

SITE BOUNDARY



SITE BOUNDARY



Note:
1x Super B-Double can side load at any given time, for warehouse B and C only.
Only one Super-B can load at any given time.

Revision notes:

Rev:	Date:	Notes:

For information purposes only - not for construction

Drawn By:

M TANGONAN

Client:

ESR

Project:

P1328
327-355 Burley Road, Horsley Park

Drawing Title:

Lot 204 Side Loading Position & Coupling Area
30m SB-Double

Date:

27-Oct-20

Scale @ A3:

[scale]

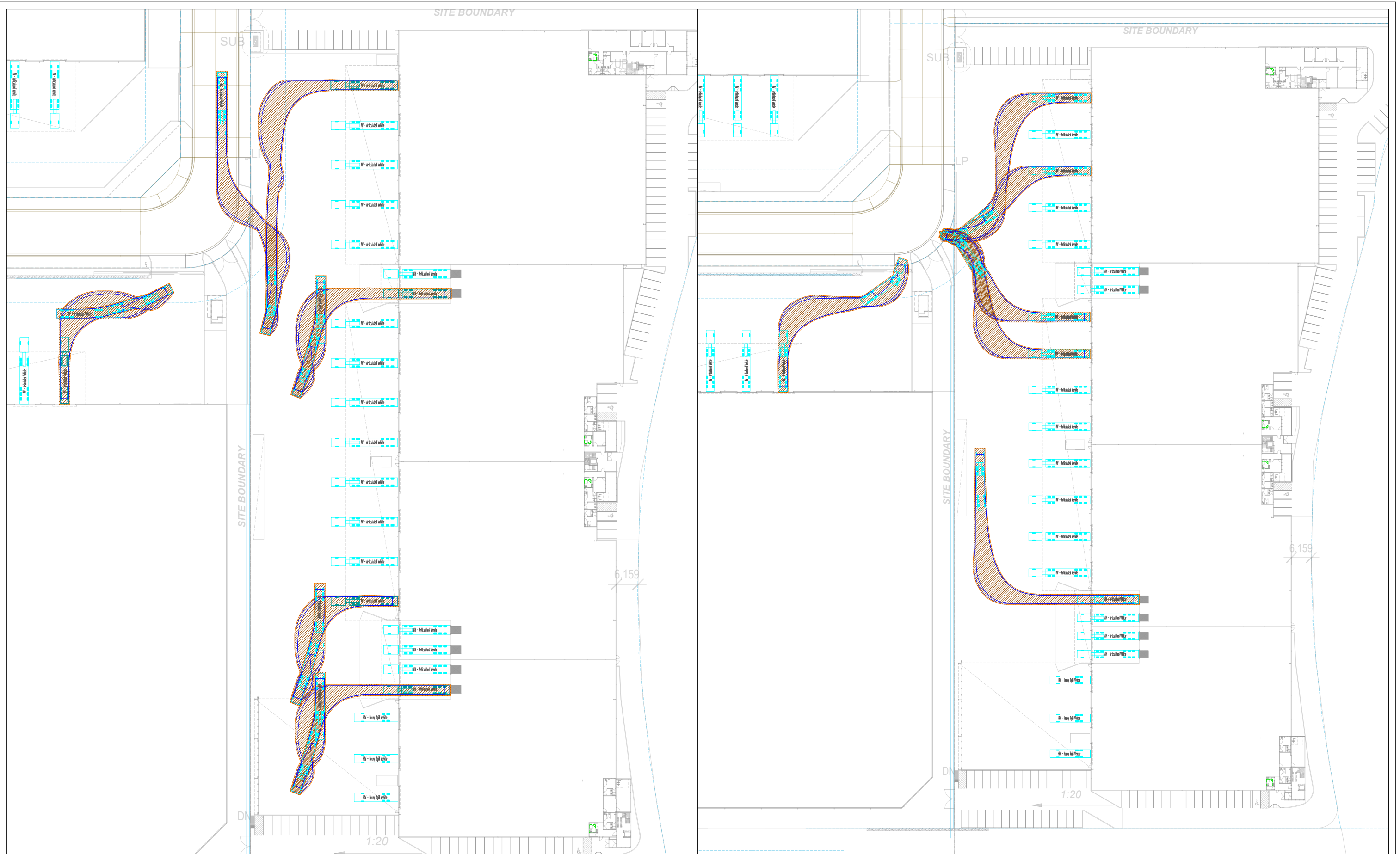
Drawing Number:

AG204_01



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Revision notes:

Rev:	Date:	Notes:

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Drawn By:
M TANGONAN

Client:
ESR

Project:
P1328
327-355 Burley Road, Horsley Park

Drawing Title:
Lot 204 Dock Entry and Exit
19m AV

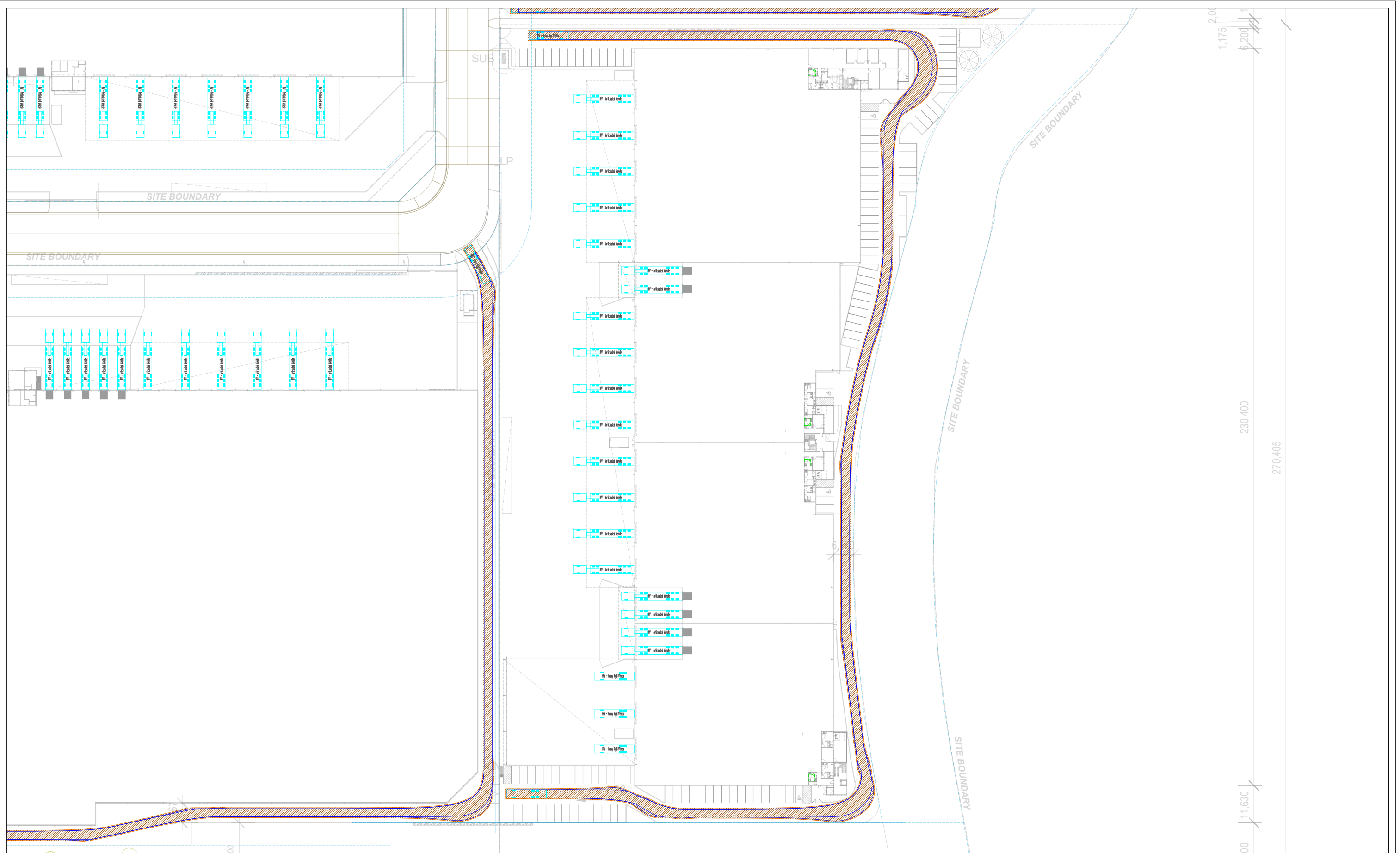
Date:
27-Oct-20

Scale @ A3:
[scale]

Drawing Number:
AG204_02



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Revision notes:

Rev:	Date:	Notes:

For information purposes only - not for construction

Drawn By:

M TANGONAN

Client:

ESR

Project:

P1328
327-355 Burley Road, Horsley Park

Drawing Title:

Lot 204 Fire Trail
12.5m HRV

Date:

27-Oct-20

Scale @ A3:

[scale]

Drawing Number:

AG204_03



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