Transport Management & Accessibility Plan

Summit at Kemps Creek

706-752 Mamre Road, Kemps Creek
20/12/2023
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1	15/09/2022	Issue I	M. Abdullah	R. Butler-Madden
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6	20/12/2023	Issue VI	K. Ballurkar	R. Butler-Madden

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Glossary

Acronym	Description
CC	Construction Certificate
Council	Penrith City Council
DCP	Development Control Plan
DOS	Degree of Saturation
DPE	Department of Planning and Environment
GFA	Gross Floor Area
HRV	Heavy Rigid Vehicle (as defined by AS2890.2:2018)
LEP	Local Environmental Plan
LGA	Local Government Area
LOG	Land Owners Group
LOS	Level of Service
RTA Guide	Transport for NSW (formerly Roads and Traffic Authority), Guide to Traffic Generating Developments, 2002
SSD	State Significant Development
TfNSW	Transport for New South Wales
TMAP	Transport Management & Accessibility Plan
veh/hr	Vehicle movements per hour (1 vehicle in & out = 2 movements)

1 Introduction

1.1 Overview

Ason Group has been engaged by ISPT Pty Ltd (ISPT) to prepare a Transport Management & Accessibility Plan (TMAP) in relation to the State Significant Development (SSD) 30628110 for the proposed industrial estate, to be known as the Summit at Kemps Creek, located at 706-752 Mamre Road, Kemps Creek (the Site).

The Site is within the Mamre Road Precinct (MRP), which was rezoned in June 2020 for primarily industrial uses. The Department of Planning and Environment (DPE) adopted a precinct-wide Development Control Plan on the 19 November 2021 (herein referred to as the MRP DCP).

The SSD proposed development seeks consent for a Concept Masterplan, with Stage 1 works (the Proposal). A detailed description of the SSD is in the Environmental Impact Statement (EIS) which this TMAP accompanies, prepared by Ethos Urban.

Aliro (on behalf of ISPT), as part of the Land Owners Group – North (LOG-N) consortium, has also made a separate planning submission for the delivery of interim road network upgrades by 2026. This will facilitate access to Mamre Road for developments (including the Site) at the northern end of the MRP, prior to the delivery of the ultimate MRP road network by 2036.

1.2 Assessment Objectives

The key objectives of this SSD TMAP are as follows:

- To establish that the development of the Site further to the Proposal is compliant and consistent with the relevant access, traffic and parking requirements.
- To establish that the trip generation of the Proposal is consistent to that assumed as part of the MRP modelling assessment.
- To establish that the MRP road network will be suitably developed during interim and ultimate stages to accommodate future traffic volumes.
- To demonstrate that there is an appropriate and sustainable provision of car parking across the Site.
- To demonstrate that the proposed access driveways, internal roads, car parks and service facilities can provide a design compliant with the relevant Australian Standards.

1.3 Secretary's Environmental Assessment Requirements

Secretary's Environmental Assessment Requirements (SEARs) were issued by DPE in November 2021 regarding the Proposal, with additional SEARs provided in March 2022.

The DPE SEARs relating to transport issues are outlined in **Table 1** below, Ason Group has provided a summary response to each SEAR, and reference to the section of this TMAP providing a more detailed analysis of each SEAR.

TABLE 1: DEPARTMENT OF PLANNING & ENVIRONMENT SEARS

SEAR	Response Summary
Details of all daily and peak traffic volumes likely to be generated during all key stages of construction and operation, including a description of key access / haul routes, vehicle types and potential queuing impacts **Traffic flows are to be shown diagrammatically to a level of detail sufficient for easy interpretation**	Operational traffic flows have been determined in Section 7 and are shown at the key intersections of Mamre Road & Bakers Lane and Mamre Road & Abbotts Road. Refer to the SIDRA model submitted separately, as well as the LOG Ason Group Mamre Road LOG-N Memo. Construction traffic flows cannot be accurately determined at this time; however, indicative flows, Site access provisions and potential haul routes have been clearly identified in the Preliminary Construction Traffic Management Plan (Appendix D).
An assessment of the predicted impacts of this traffic on road safety and the capacity of the road network, including consideration of cumulative traffic impacts at key intersections using SIDRA or similar traffic model. **This is to include the identification and consideration of approved and proposed developments/planning proposals/road upgrades in the vicinity of the site in the 2026, 2031 and 2036 scenarios**	See Section 7. As discussed, the broader operation of the MRP in the assessment years of 2031 and 2036 has been determined as part of the MRP modelling assessment. The Estate is entirely consistent with the assumptions that underpinned this assessment. Assessment for the 2026 road network is provided in Section 7.
Consideration of clause 33C of the Western Sydney Employment Area State Environmental Planning Policy, specifically integration with the Mamre Road Precinct dedicated freight corridor, including consultation with TfNSW	Recent discussions with TfNSW suggest that there is no detailed strategy for how access would occur for the relevant Automated Guided Vehicle network. Therefore, the corridor has been provided for within the Estate. This is consistent with the approach taken to the recently approved SSD-10448[1]. Further, it is noted that Figure 17 of the MRP DCP provides indicative access locations. In relation to the Estate, it has been designed as such that the indicative access location, which is between Warehouse 1 and 2 could be provided for. Finally, the pad levels proposed for Estate have been designed as such to not preclude access to the dedicated freight network (refer to civil engineering drawings prepared by AT&L for detailed design information.
Details of road upgrades, infrastructure works or new roads or access points required for the development. Provide details of consultation with adjoining landowners with regard to road connections on the site boundary	Refer to Section 3.2 for proposed access arrangements. Section 7 provides an assessment of the access arrangements, with the civil engineering package prepared by AT&L providing the detailed design for the proposed upgrades. The internal road network is to be delivered as per the MRP DCP. ISPT is working with other landowners to upgrade the Aldington Road corridor as per Council's requirements, as well delivering the first 4 lanes of the SLR. Refer to the wider Environmental Impact Statement (EIS) for consultation undertaken to date.
Clearly describe the proposed interim site access arrangement via Bakers Lane and ultimate access via the Southern Link Road. This is to include details on how other landowners and users on Bakers Lane have been consulted on the proposed works and the potential traffic and access impacts	See Section 3.2. As part of the Proposal, 4 lanes of the SLR are to be delivered. This will provide for access to the Site at the permanent location, via a signalised intersection. Refer to the civil engineering package, prepared by AT&L, for mor detail on the proposed design. Refer to wider EIS for consultation details.

[1] https://www.planningportal.nsw.gov.au/major-projects/projects/aspect-industrial-estate

Plans demonstrating how all vehicles likely to be generated during construction and operation and awaiting loading, unloading or servicing can be accommodated on the site to avoid queuing in the street network.	Refer to the architectural plan set provided separately, which demonstrates the access arrangements for each warehouse. Swept path analysis for each Lot is provided as Appendix C. For the Stage 1 development, each warehouse provides for queueing are prior to entering the hardstand. Any security gates will remain open during operational hours. The remaining warehouses are currently conceptual only, with access arrangements to be confirmed during the detailed application stages. However, it will be ensured that for each warehouse, there would be no queuing onto the external road network. Refer to the AT&L civil design for the internal road network design detail and swept path analysis.
Details and plans of any proposed the internal road network, loading dock servicing and provisions, on-site parking provisions, and sufficient pedestrian and cyclist access and facilities, in accordance with the relevant Australian Standards	Refer to architectural plan set provided separately which demonstrate the pedestrian connections (it is noteworthy that all warehouses provide pedestrian footpaths from the road network direct to the office entries). The AT&L civil engineering designs provide the road layout, which is be delivered in compliance with the MRP DCP. Refer to Sections 9 and 10 for parking and design compliance.
Detailed plans of all proposed site access points, justification for their location and an assessment of potential traffic impacts from the proposed access points	Refer to plan set. All access points have been designed in accordance with the MRP DCP, AS2890.1:2004 and AS2890.2:2018.
Details of the largest vehicle anticipated to access and move within the site, including swept path analysis.	Swept path analysis has been prepared to illustrate the largest vehicle entering / exiting the development, being a 30.0m PBS Level 2 vehicle.
Swept path diagrams depicting vehicles entering, exiting and manoeuvring throughout the site	Refer to Appendix C
Additional SEAR received 25 March 2022** ***Traffic / infrastructure requirements **A key consideration in the Mamre Road Precinct is the capacity of the regional and local road network (namely Mamre Road, Aldington Road and Abbotts Road) to safely accommodate the number of developments in the precinct and to ensure the functionality of the roads and associate intersections are maintained at an acceptable standard and level of performance. Your project needs to adequately assess and demonstrate both construction and operational traffic, on these regional and local roads, can be accommodated to ensure safety, functionality and performance is maintained to acceptable standards.**	The ultimate road network has been identified by the finalisation of the MRP DCP. It is understood that TfNSW are working on the Concept Design for the upgrade of the Mamre Road corridor, and is ultimately required to accommodate the forecast background traffic growth. As per Section 7.4, the Estate is entirely consistent with the assumptions made within the MRP modelling assessment which underpinned the MRP DCP road network. Section 7.5 provides consideration to the interim solution and the impacts of the development of the network in 2026 accordingly. In regard to construction traffic, as above, flows cannot be accurately determined at this time. Initial traffic flows have however been identified within the Preliminary CTMP (Appendix D).
***Additional SEAR received 25 March 2022** **Transport for NSW and Penrith City Council must be closely consulted during preparation of the EIS on any interim and ultimate infrastructure upgrades required to the road network and any traffic modelling requirements. Additionally, neighbouring landowners must be closely consulted on the design and timing of delivery of precinct roads.**	Briefing information, and a subsequent consultation meeting with Council was held on 30 June 2022. TfNSW have extensively been consulted with through the assessment process. A meeting was held on 6 July 2022 to discuss the proposed interim upgrades as well as the modelling methodology undertaken and initial modelling results. Following this discussion, the modelling assessment was updated by the project team and issued to TfNSW in September 2022 for formal review. TfNSW provided

	commentary in December 2022; and the modelling assessment updated and resubmitted separately to TfNSW. Further consultation has been undertaken throughout 2023 to agree the appropriate direction. See wider EIS package for further information all consultation undertaken.

1.4 Reference Documents

As discussed, the Site lies with the MRP; as such, Ason Group has referenced the MRP DCP as it will ultimately provide the overarching controls for the Site and the wider MRP:

- DPE, *Mamre Road Precinct Development Control Plan*, November 2021 (MRP DCP).

Ason Group has also referenced the following additional policies and guidelines relevant to the assessment of the Proposal:

- TfNSW (formerly Roads Traffic Authority) Guide to Traffic Generating Developments 2002 (RTA Guide).
- TfNSW (formerly Roads and Maritime Services) Guide to Traffic Generating Developments Updated Traffic Surveys, August 2013 (RMS Guide Update).
- Department of Planning & Environment (DPE) Western Sydney Aerotropolis Land Use and Infrastructure Implementation Plan Stage 1: Initial Precincts (WSA Stage 1 Plan).
- State Environmental Planning Policy (Industry and Employment) 2021
- DPE Mamre West Land Investigation Area Development Control Plan 2016 (Mamre West DCP).
- Australian Standard 2890.1:2004: Parking Facilities – Off Street Car Parking (AS 2890.1:2004).
- Australian Standard 2890.2:2018 Parking Facilities – Off Street Commercial Vehicle Facilities (AS 2890.2:2018).
- Australian Standard 2890.3:2015: Parking Facilities – Bicycle Parking (AS 2890.3:2015).
- Australian Standard 2890.6:2009 Parking Facilities – Off Street Parking for People with Disabilities (AS 2890.6:2009).

Finally, Ason Group has specifically referenced the most recent assessments available in regard to the recent rezoning of the MRP, including:

- NSW Government *Mamre Road Precinct Rezoning Exhibition Discussion Paper*, November 2019 (MRP Rezoning Paper).
- NSW Government *Mamre Road Precinct Rezoning Finalisation Report*, June 2020 (MRP Finalisation Report).
- Roads & Maritime *Mamre Road Upgrades Kerrs Road to M4 Motorway*, November 2017 (MR Upgrade Report).
- Roads & Maritime *Mamre Road Upgrade Community Consultation Report* May 2019 (MR Upgrade CC Report).
- AECOM *Western Sydney Aerotropolis Transport Planning and Modelling Stage 2 Report*, October 2020 (AECOM Report).
- Transport for New South Wales (TfNSW), Mamre Road Precinct – Modelling Outcomes (TfNSW MRP modelling memo).
- Ason Group Mamre Road Precinct LOG North – Transport Assessment - P2054m01_v4 MRP_Log North 2026 Transport Assessment, December 2023 (Ason Group Mamre Road LOG-N Memo)

2 Planning Context

2.1 Overview

The MRP was rezoned by DPE in June 2022 and will comprise approximately 850 hectares of industrial land and provide up to 17,000 jobs when fully developed.

The respective MRP DCP formalises a road network to be delivered by 2036. However, no staging strategy had been identified to allow for the initial stages of development in the interim period. Therefore, a number of landowners within the MRP, who have significant land holdings, have been working collectively to identify and deliver interim road network upgrades to facilitate the initial stages of development by the year 2026.

The Land Owners Groups (which includes Aliro) involved in the delivery of the interim road network upgrades are outlined below, with TfNSW and / or Council to subsequently deliver the ultimate requirements.

2.2 Land Owners Group – East (LOG-E)

Ason Group worked with the landowners' group known as Land Owners Group – East (LOG-E) to complete a precinct-wide modelling assessment for the assessment year of 2026. This informed the design of the interim road network for the southern end of the MRP, with particular consideration for accessing Mamre Road via intersections at Abbotts Road and the 'Mirvac' site at 788-882 Mamre Road (SSD-10448).

The LOG-E interim road network was supported by an Ason Group modelling assessment and was endorsed by TfNSW. It accounted for a total development yield of 990,215m^2 gross floor area (GFA) for the MRP by the year 2026.

2.3 Land Owners Group – North (LOG-N)

A second consortium known as Land Owners Group – North, herein referred to as LOG-N, was thus formed between the following landowners at the northern end of the MRP:

- ISPT (Aliro): applicant for subject proposal at 706-752 Mamre Road (SSD-30628110[2])
- Dexus: applicant for the proposed development at 113-153 Aldington Road (SSD-32722834[3]), and
- Gibb Group: applicant for proposed development at 1-51 Aldington Road (SSD-22595032[4]).

The LOG-N Group has been working collaboratively with TfNSW and DPE to establish access to these sites from a northerly direction and to provide an additional link to Mamre Road. This relieves the pressure on Aldington Road and the use of a southern connection via Abbotts Road to Mamre Road and would be an enhancement of the LOG-E Interim Road Network.

[2] https://www.planningportal.nsw.gov.au/major-projects/projects/summit-kemps-creek-706-752-mamre-road
[3] https://pp.planningportal.nsw.gov.au/major-projects/projects/dexus-kemps-creek-113-153-aldington-road
[4] https://www.planningportal.nsw.gov.au/major-projects/projects/1-51-aldington-road-estate

There has been a detailed modelling exercise undertaken by Ason Group using SIDRA which accounts for staged development of a minimum of 250,000m^2 GFA across the three LOG-N sites. This yield includes 125,000m^2 GFA for the subject ISPT (Aliro) development although it is emphasised this starting point, with opportunities to review the GFA to be further investigated during detailed design. In this regard, ISPT (Aliro) will continue to collaborate with DPE and TfNSW with respect to the capabilities of the LOG-N enhanced network.

In mid-2023 it was determined by TfNSW that the proposed construction of part of the Southern Link Road (SLR), as well as required southern connections to link up the development sites, was feasible from a traffic perspective. This has enabled the three landowners to proceed with the lodgement of their respective State Significant Development Applications for warehousing and distribution facilities with reference to the same LOG-N Plans.

The intention is that the LOG-N group will collaborate to deliver the roads in line with the proposed development. This will involve the preparation of a State level Voluntary Planning Agreement to provide recognition to the construction of the permanent sections of the Southern Link Road, which is a Special Infrastructure (SIC) Road. The non-permanent or interim sections of connecting road will be partially funded and progressively delivered by the three landowners over a period of time which matches in with the development of the sites.

Reference should be made to the separate planning submission for the LOG-N improvements, including the accompanying Ason Group Mamre Road LOG-N Memo (December 2023).

3 The Proposal

3.1 Overview

A detailed description of the SSD Proposal is included in the EIS which this TMAP accompanies. In summary, the application relates to the construction of an industrial estate with associated hardstand and parking. The following summarises key aspects of the Proposal:

- Concept Masterplan including 8 industrial warehouse, distribution and general industrial buildings and associated internal road network, comprising a total gross floor area (GFA) of 244,413m^2, including:
  - Provision of the north-south industrial collector road as required by the MRP DCP;
  - A total warehouse GFA of 235,887m^2;
    - A total ancillary and dock office GFA of 8,284m^2; and
    - A café with a GFA of 242m^2.
  - Subdivision of land into individual “two super lots” either side of the collector road.
- Stage 1 consent for Warehouse 1 to 3, to the east of the north-south road including:
  - Demolition and clearing of all existing built form structures and existing vegetation;
  - Construction of MRP DCP roads with external connections, and internal estate local industrial roads;
  - Construction of 3 warehouse buildings with ancillary offices (‘Warehouse 1’, ‘Warehouse 2’ and ‘Warehouse 3’ under the Concept Masterplan) comprising a total floor area of 79,263m^2, including:
    - 76,248m^2 of warehouse GFA;
    - 3,015m^2 of ancillary and dock office GFA;
    - Hardstand area for loading and vehicle manoeuvring; and
    - Car parking and landscaping.

The proposed plans (prepared by Watson Young) are shown in **Figure 1** and **Figure 2**.

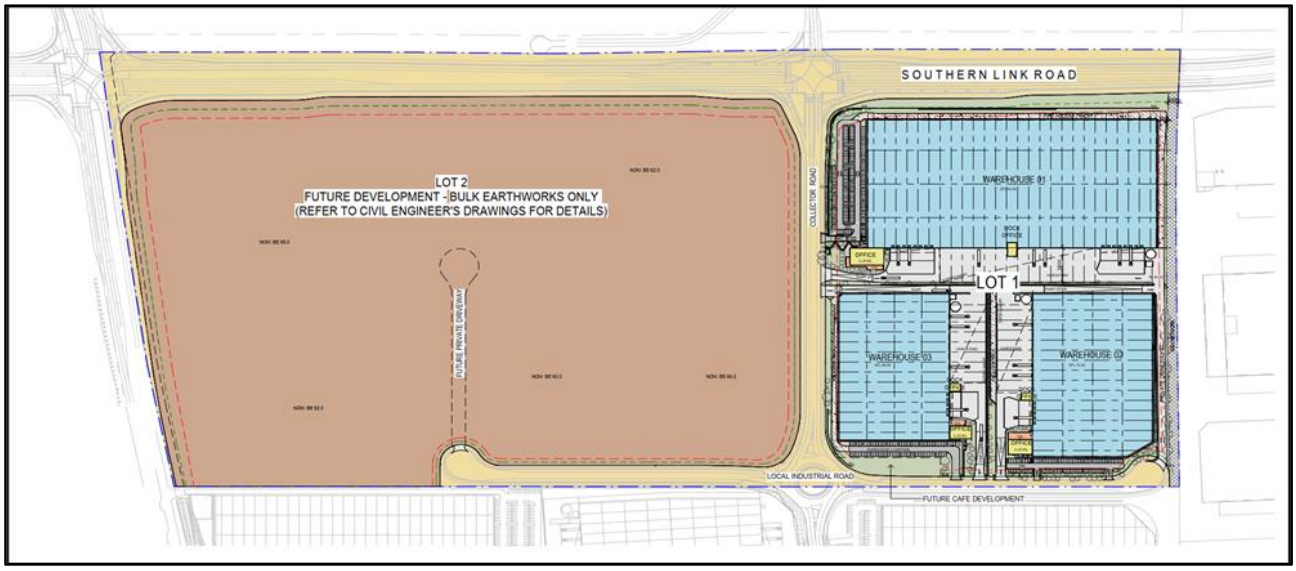


Figure 1: Stage 1 Works

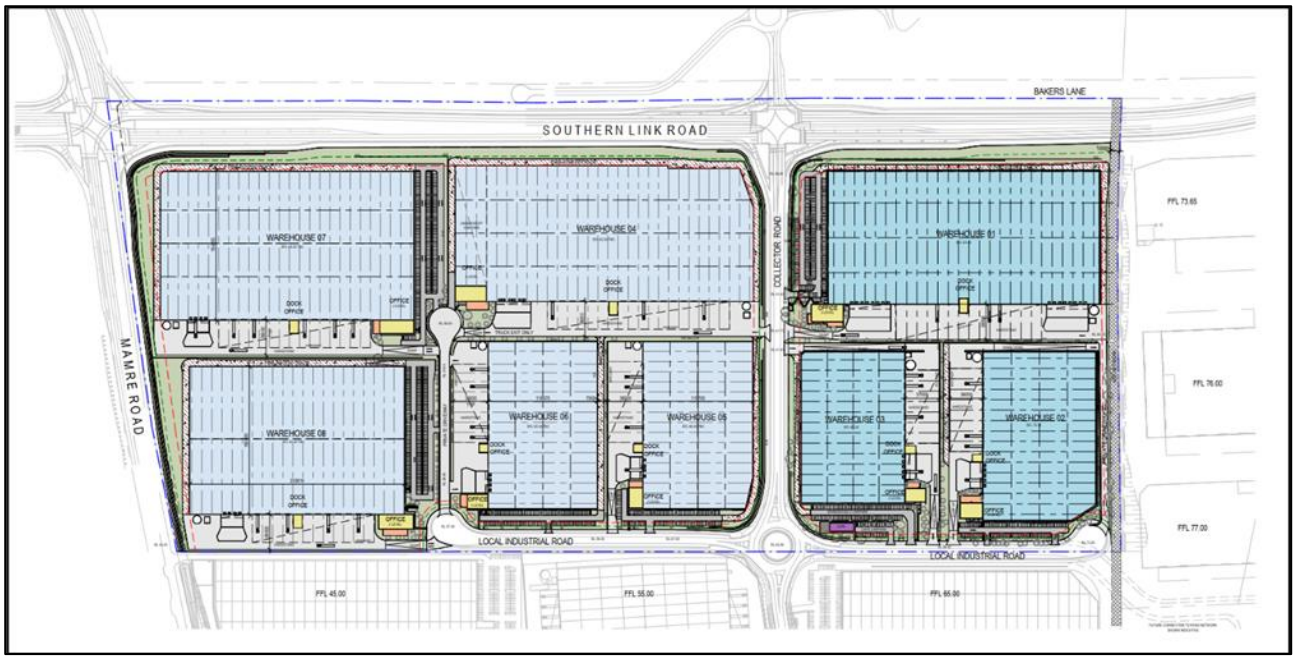


Figure 2: Proposed Masterplan

3.2 Site Access Arrangements

The ultimate access arrangements will provide for a signalised intersection between the future SLR and the north-south collector road, as per the MRP DCP (see Figure 2 alongside Figure 14).

Prior to completion of the ultimate SLR and intersection arrangement by TfNSW, ISPT is proposing a staged upgrade as part of this submission. This proposal includes delivery of 4 lanes (2 in each direction) of the future SLR along ISPT's Site frontage, as well as an interim access intersection between the SLR and Estate access road as part of the proposed LOG-N package of works. The final arrangement for the intersection will be subject to agreement with TfNSW however, it is currently proposed to be signalised.

Further to the main Site access via the SLR, it is also noted that internal access connections to the wider MRP will also be provided to the south and the south east of the Estate. Notwithstanding, following consultation with TfNSW, the interim road network for the year 2026 will prohibit the through movements to the south of the Site, with the intent of minimising impacts on Mamre Road at the current location of the intersection with Bakers Lane. The neighbouring site is currently subject to SSD-10272349[5].

There is currently no application for development of the site to the south east of the Estate, therefore it is unknown when the east west-east connection can be delivered. Therefore, as shown by **Figure 1**, a turning head will be delivered at the Estate boundary, until the connection can be delivered. The ultimate connections are shown by **Figure 3**.

[5] https://www.planningportal.nsw.gov.au/major-projects/projects/yiribana-logistics-estate

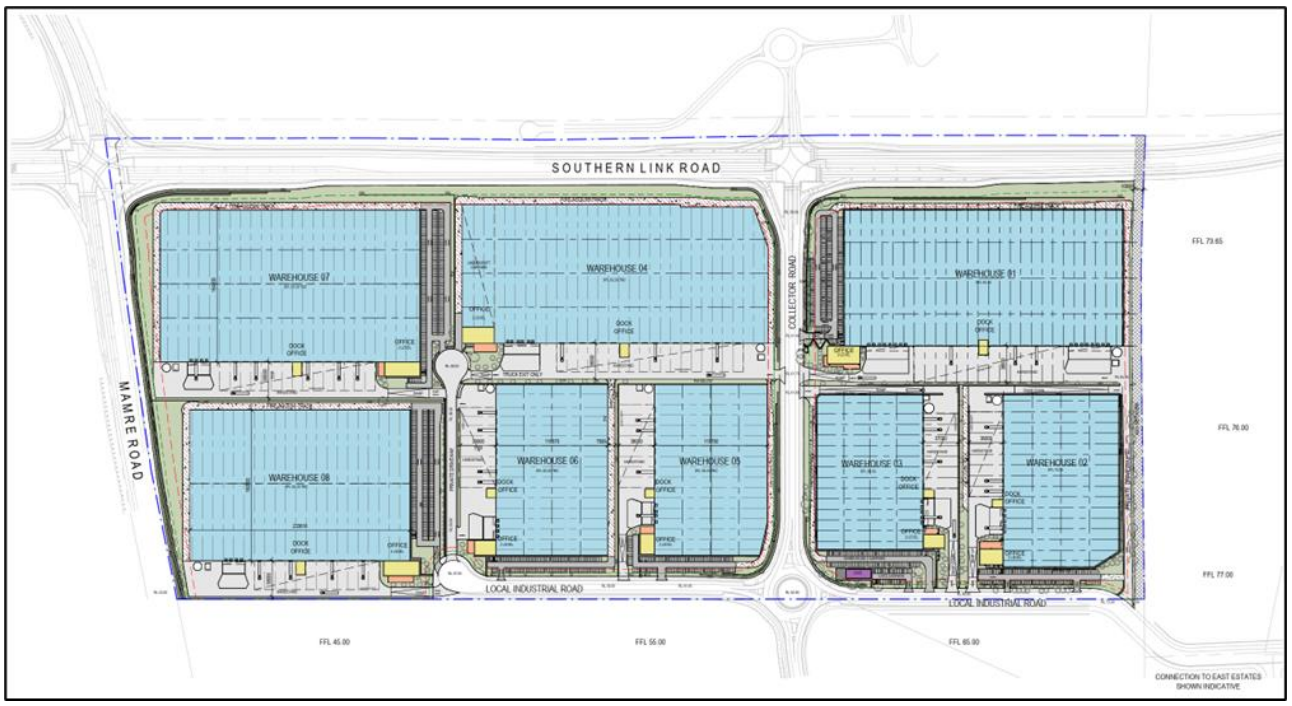


Figure 3: Masterplan with Ultimate Road Connectivity

4 The Existing Site

4.1 Location

The Site is legally described as Lots 1 in DP 104958. The Site is located approximately 4km north-west of the future Western Sydney International (Nancy-Bird Walton) Airport (WSA), 12km south-east of the Penrith CBD and 40km west of the Sydney CBD. It is located at 706-752 Mamre Road, Kemps Creek. The land is approximately 522,477m^2 in area and is rectangular in shape.

The Site is shown in its sub-regional context in **Figure 4** as well as the broader MRP area in which it lies.

4.2 Current Site Land Usage

The Site currently provides for a single rural residential dwelling. The properties along the length of Aldington Road and Bakers Lane can be categorised in this manner. It is noted that there is also a retirement village and 3 schools located to the north of Bakers Lane.

4.3 Site Access

The Site currently has an access point onto Bakers Lane. Bakers Lane connects with Mamre Road to the west of the Site, and Aldington Road to the east.

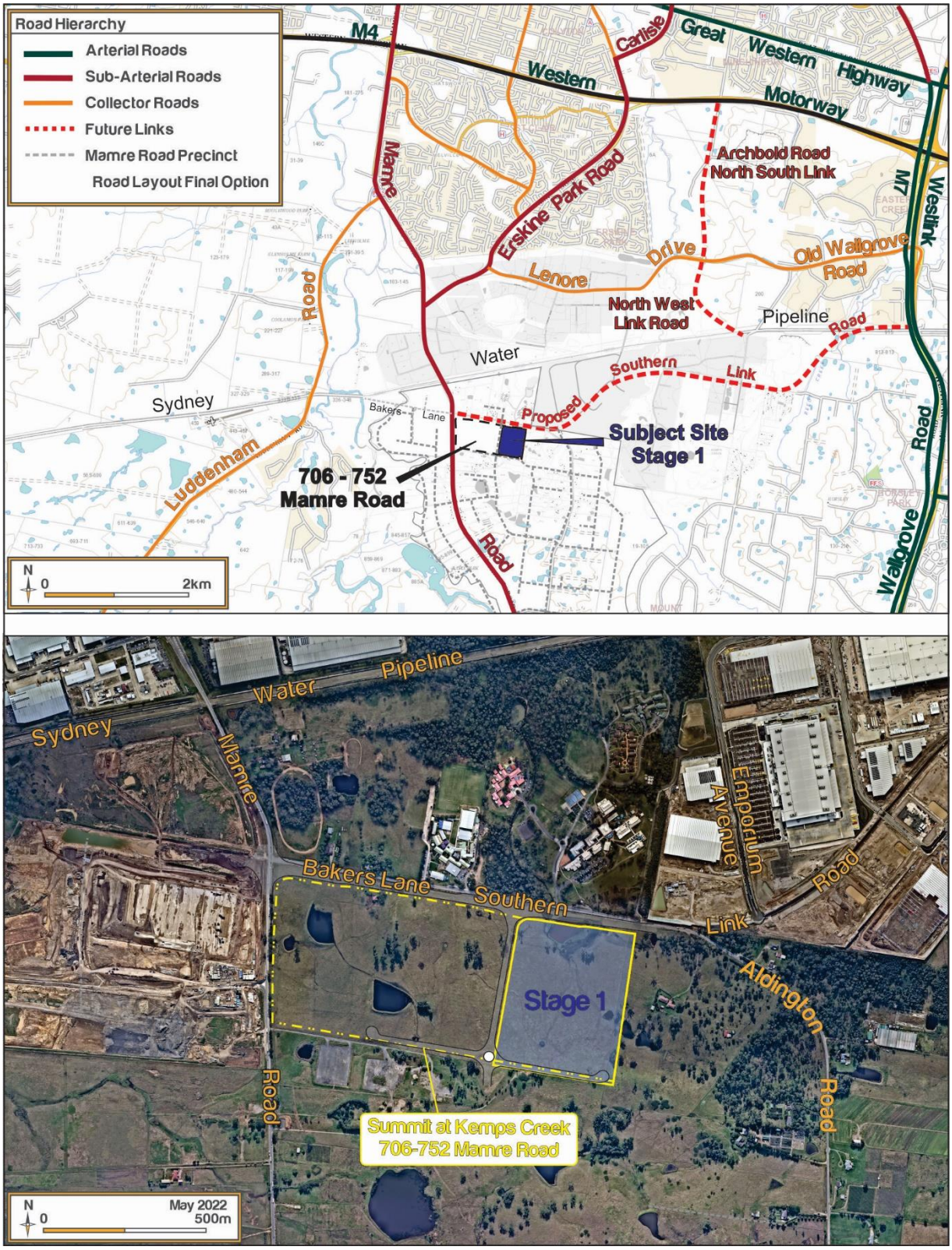


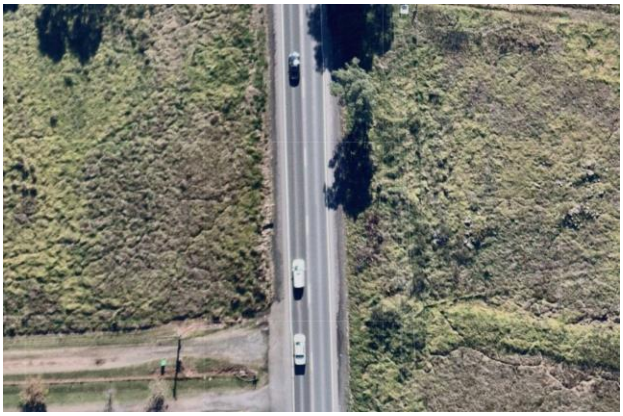
Figure 4: Site Location & Road Hierarchy

4.4 The Existing Road Network

4.4.1 Key Roads

The existing road network providing access to the Site is shown in **Figure 4,** and detailed further below:

TABLE 2: KEY ROAD NETWORK

Road	Description	Typical Road Characteristics
Mamre Road	An arterial road which runs north-south between the Great Western Highway and M4, and Elizabeth Drive respectively. In the vicinity of the Site, Mamre Road has a posted speed limit of 80km/h.	
Aldington Road	A local access that runs north-south (to the east of Mamre Road) and currently provides access for a number of rural residential properties. It connects with Bakers Lane to the north and Abbots Road to the south. It provides 1 traffic lane in each direction and has a posted speed limit of 80km/h.	
Bakers Lane	A local access that runs east-west (to the east of Mamre Road) and currently provides access for a number of rural residential, educational and retirement sites. It provides 1 traffic lane in each direction and has a posted speed limit of 60km/h.	

4.4.2 Existing Traffic Flows

Ason Group conducted AM and PM peak period traffic surveys in Mamre Road south of Bakers Lane in 2018; based on the minimum number of traffic generating developments in the vicinity of the Site, these flows provide a good representation of current traffic flows in Mamre Road west of the Site.

The results of the surveys are shown in **Table 3**.

TABLE 3: 2018 MAMRE ROAD TRAFFIC FLOWS

Peak Period	Total Volumes	Directional Volumes
AM	1,391	NB: 782 vph
		SB: 609 vph
PM	1,541	NB: 678 vph
		SB: 863 vph

Figure 5 provides the baseline (2020) turning movements at the Mamre Road / Bakers Lane intersection as per the MRP modelling assessment.

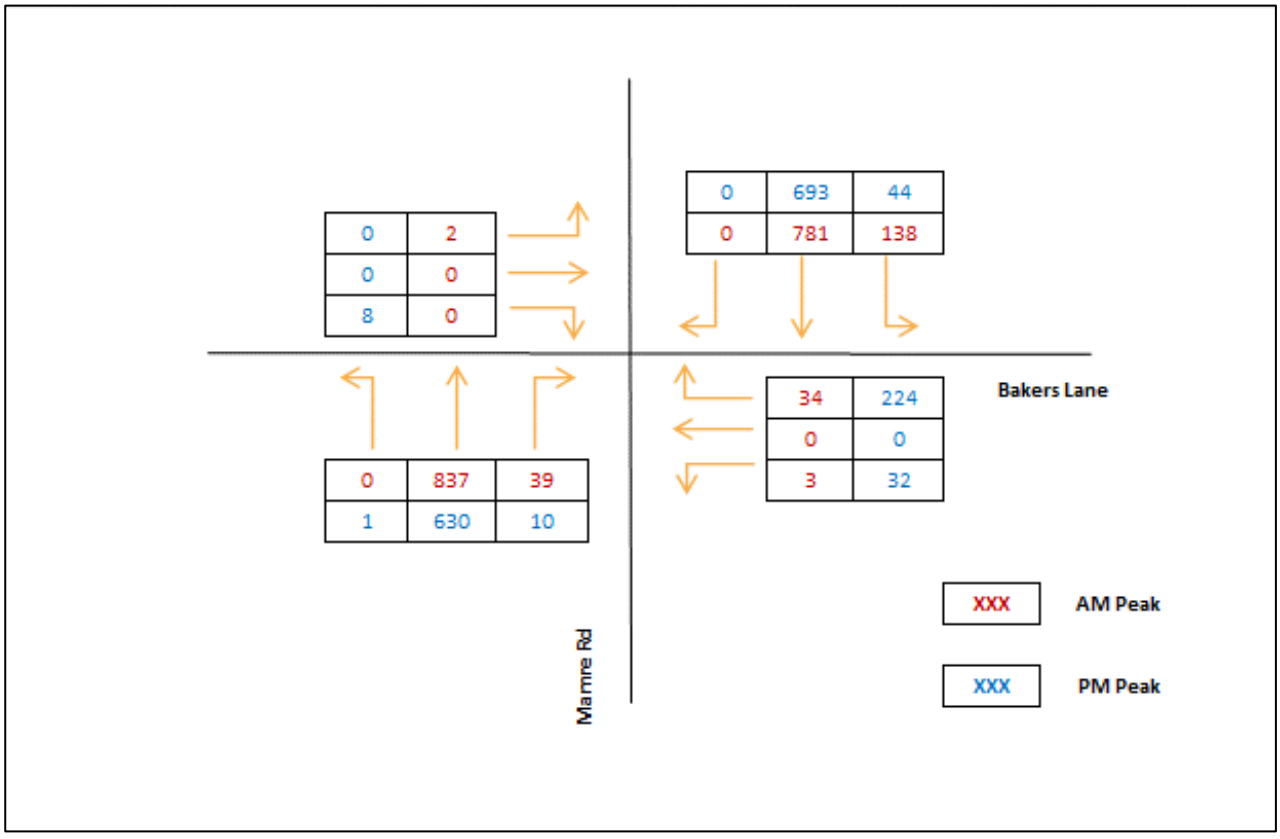


Figure 5: Existing Baseline Traffic Flows

4.5 Key Intersections

The key intersections in the vicinity of the Site include:

- Mamre Road / Abbotts Road; and
- Mamre Road / Bakers Lane.

The existing configuration for the Mamre Road / Bakers Lane intersection is shown in **Figure 6**. However, it is currently in the process of being upgraded.

Figure 6: Existing Mamre Road / Bakers Lane intersection

The existing configuration for the Mamre Road / Abbotts Road intersection is shown in **Figure 7**. The existing intersection is currently subject to a restriction to right-turn movements for all vehicles during the AM and PM peak periods.

Figure 7: Existing Mamre Road / Abbotts Road intersection

5 Mamre Road Precinct Strategic Context

5.1 Strategic Context

5.1.1 Strategic Policies

In June 2020, the NSW Government rezoned MRP from rural uses to IN1 General Industrial. In summary, the rezoning sought to:

- Respond to the demand for industrial land in Western Sydney, as well as the future freight, logistics and industrial needs of Greater Sydney.
- Facilitate the NSW Government's vision for the Western Parkland City.
- Facilitate the delivery of a 30-minute city as detailed in the Western City District Plan.

The rezoning provides for approximately 850 hectares of industrial land with an approximate capacity of 17,000 jobs, and the creation of new environmental conservation areas and public open space.

The Mamre Road Precinct Structure Plan (the MRP Structure Plan) is shown in **Figure 8**.

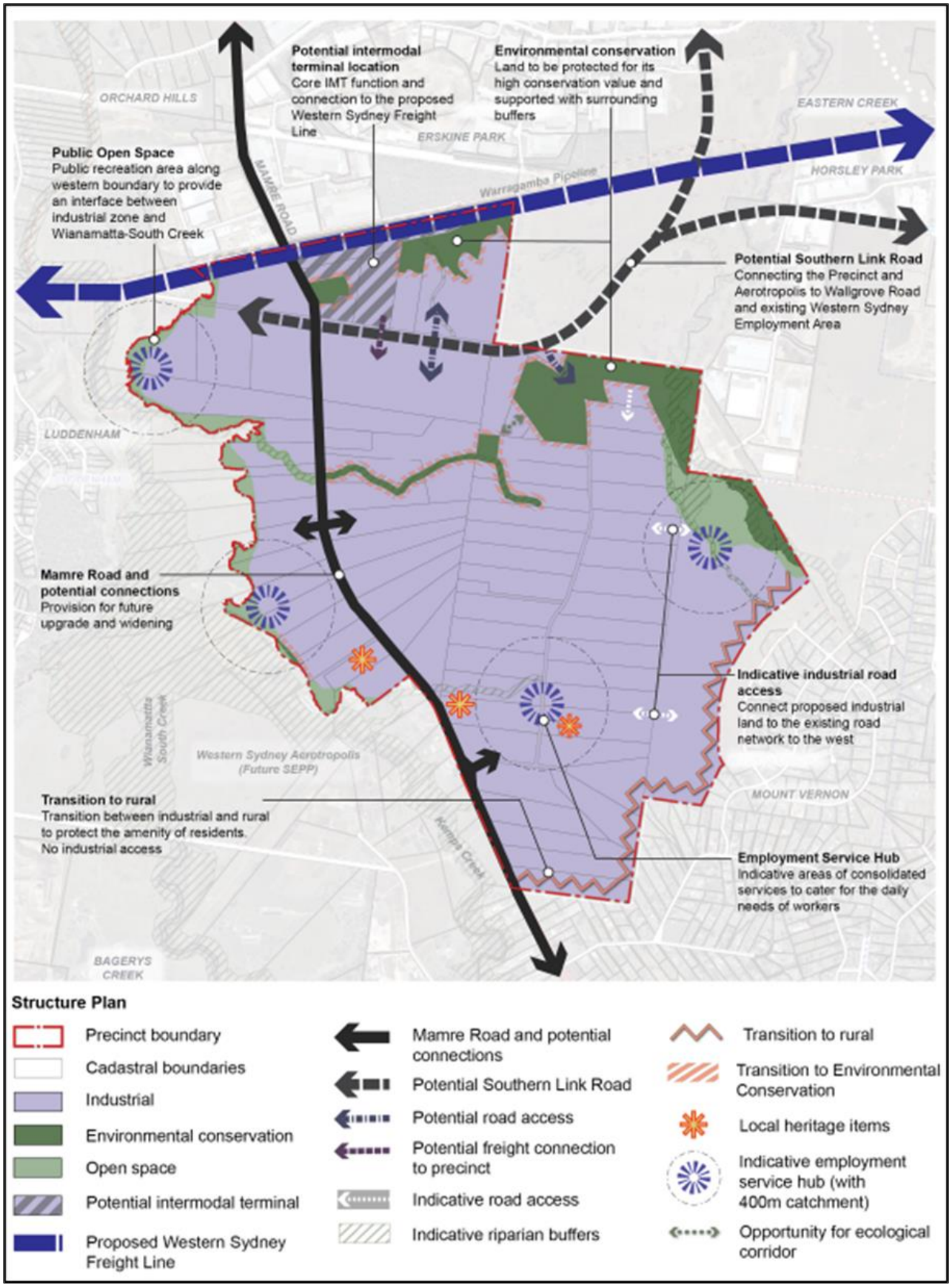


Figure 8: Mamre Road Precinct Structure Plan

Source: NSW Government

5.1.2 Key Infrastructure

- **Mamre Road**: Mamre Road provides the central north-west access corridor to/through the MRP.
- **Southern Link Road**: The Southern Link Road is a proposed east-west link from Wallgrove Road to Mamre Road, connecting the MRP to the existing WSEA lands (Oakdale, Eastern Creek etc).
- **Future Internal Roads**: The internal network for the MRP is detailed within the MRP DCP.

  The design of the Estate provides for full integration with the future internal MRP road network.
- **Active & Public Transport**: As discussed further below, there is very little active transport infrastructure within the MRP at this time.

  The future primary active transport corridor is expected to be designed around Mamre Road itself, with the MR Upgrade proposing a shared path along its full length, and cycle paths branching along creek lines and into the central portions of the MRP.

5.2 Mamre Road Upgrade

5.2.1 Overview

The MR Upgrade Report details the proposed MR Upgrade (the MR Upgrade) between the M4 Motorway and Kerrs Road (south of the Site, and north of Elizabeth Drive). The objectives of the MR Upgrade are stated as:

- *Meeting the future transport demand associated with the Western Sydney Priority Growth Area and the Western Sydney Airport at Badgerys Creek;*
- *Reducing future road transport costs by improving corridor performance;*
- *Improving liveability and sustainability and support economic growth and productivity by providing road capacity for projected freight and general traffic volumes;*
- *Improving road safety in line with the NSW Road Safety Strategy;*
- *Improving quality of service, sustainability and liveability by providing facilities for walking and cycling and future public transport needs;*
- *Delivering good urban design outcomes; and*
- *Minimising environmental and community impacts.*

The recent NSW 2022-2023 Budget included funding for Stage 1 of the MR Upgrade between the M4 Motorway and Erskine Park Road as part of the Western Sydney Growth Roads Program (which totals $1.5 billion over four years, including $220.1 million in 2022-23).

5.2.2 Mamre Road Upgrade Design Components

The MR Upgrade provides the following key infrastructure proposals:

- **A typical cross section** that includes:

- 2 traffic lanes in each direction with a wide central median between the M4 Motorway and Kerrs Road;
- Provisions for the central median to provide third traffic lane in each direction to meet growing demand; and
- Shared bicycle and pedestrian paths to promote active transport.

- **New or upgraded intersections**

The broader MR Upgrade proposal (per the MR Upgrade Report) is shown in **Figure 9**.

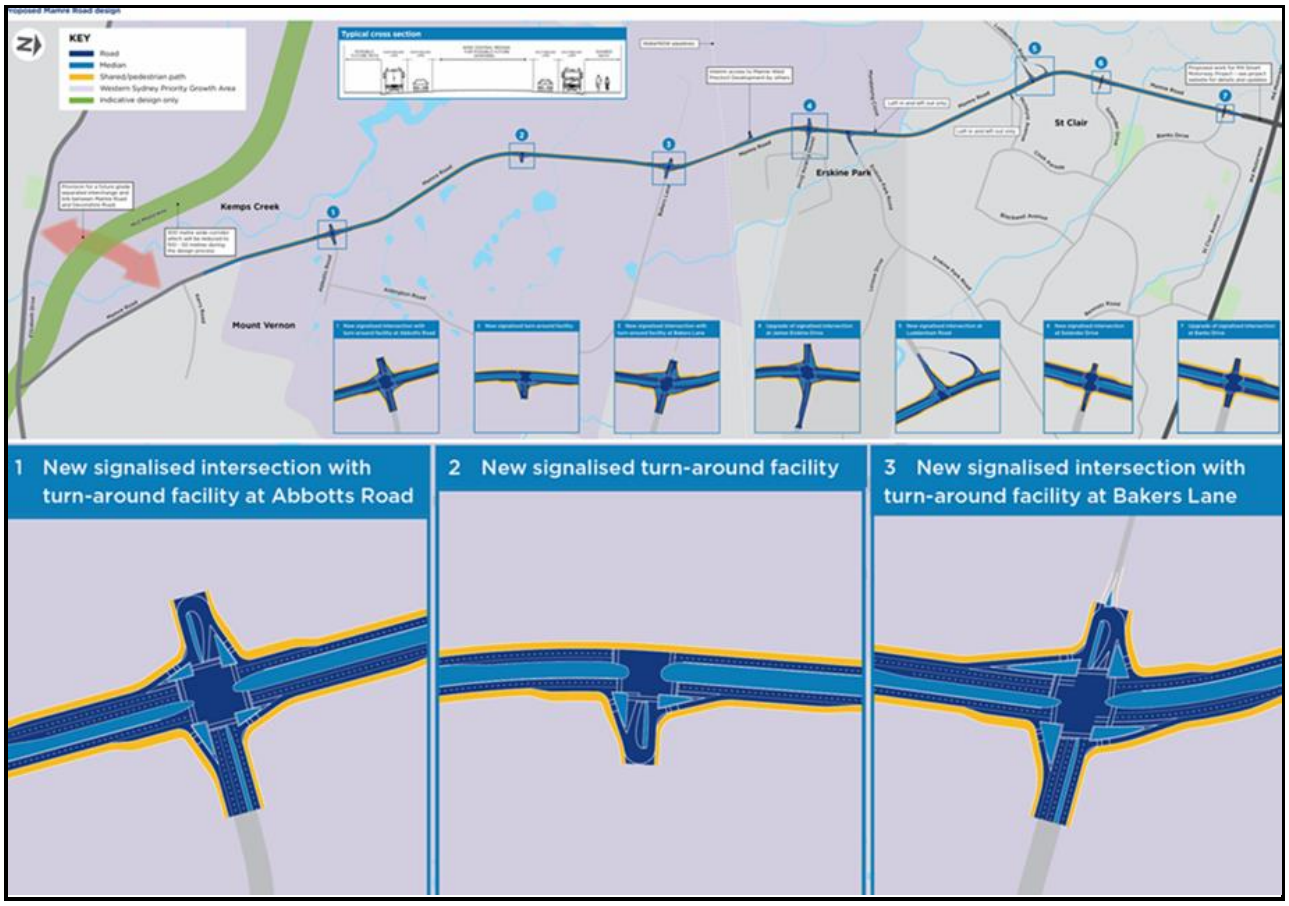


Figure 9: Mamre Road Upgrade

Source: Mamre Road Upgrade Report

5.2.3 Abbotts Road & Bakers Lane Intersection Upgrade

The ultimate future signalised intersection capacity requirements at the Abbotts Road and Bakers Lane intersections with Mamre Road have been identified as part of the modelling assessment process for the wider MRP.

As such, there are other plans by other developers in the MRP to provide for a staged upgrade to the intersection, with the relevant VPA currently being agreed. The intersection being developed is shown by **Figure 10**.

The intersection (minus the western leg) will be delivered collectively by other landowners within the LOG-E consortium; two of which have received development consent (SSD-9138102[6] and SSD-10479[7]).

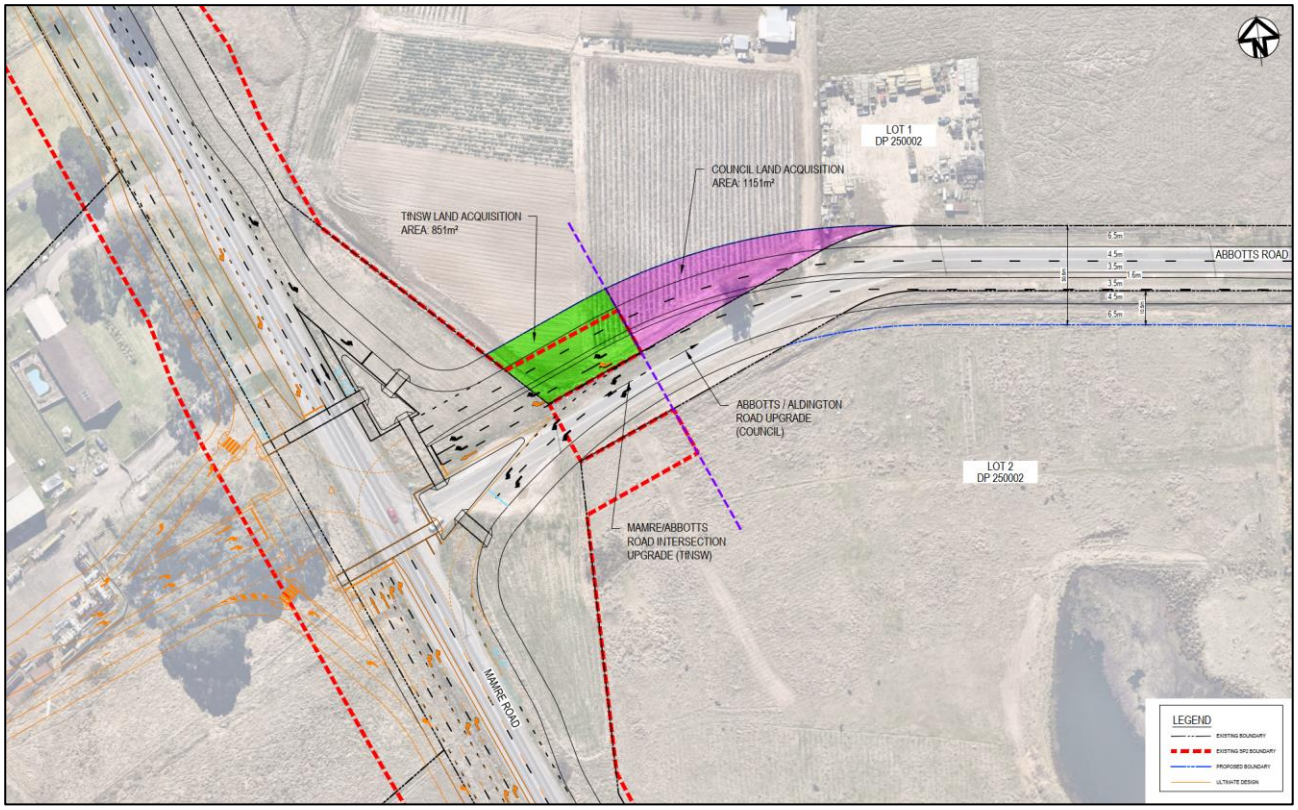


Figure 10: Abbotts Road / Mamre Road Intersection – Currently Proposed Ultimate Intersection

Further to the upgrades planned to Mamre Road / Abbotts Road, the approved development located at 657-769 Mamre Road (SSD 9522[8]) includes a requirement to upgrade the Mamre Road / Bakers Lane intersection by 2025, in advance of the delivery of the ultimate intersection. It is noted that this will form a key intersection for the MRP, with the future Southern Link Road (SLR) planned to be provided along the current alignment of Bakers Lane.

The approved intersection design, to be delivered by 2025, is reproduced in **Figure 11.** Construction has recently commenced on this interim upgrade.

[6] https://www.planningportal.nsw.gov.au/major-projects/projects/westlink-industrial-estate
[7] https://www.planningportal.nsw.gov.au/major-projects/projects/200-aldington-road-industrial-estate
[8] https://www.planningportal.nsw.gov.au/major-projects/project/10376

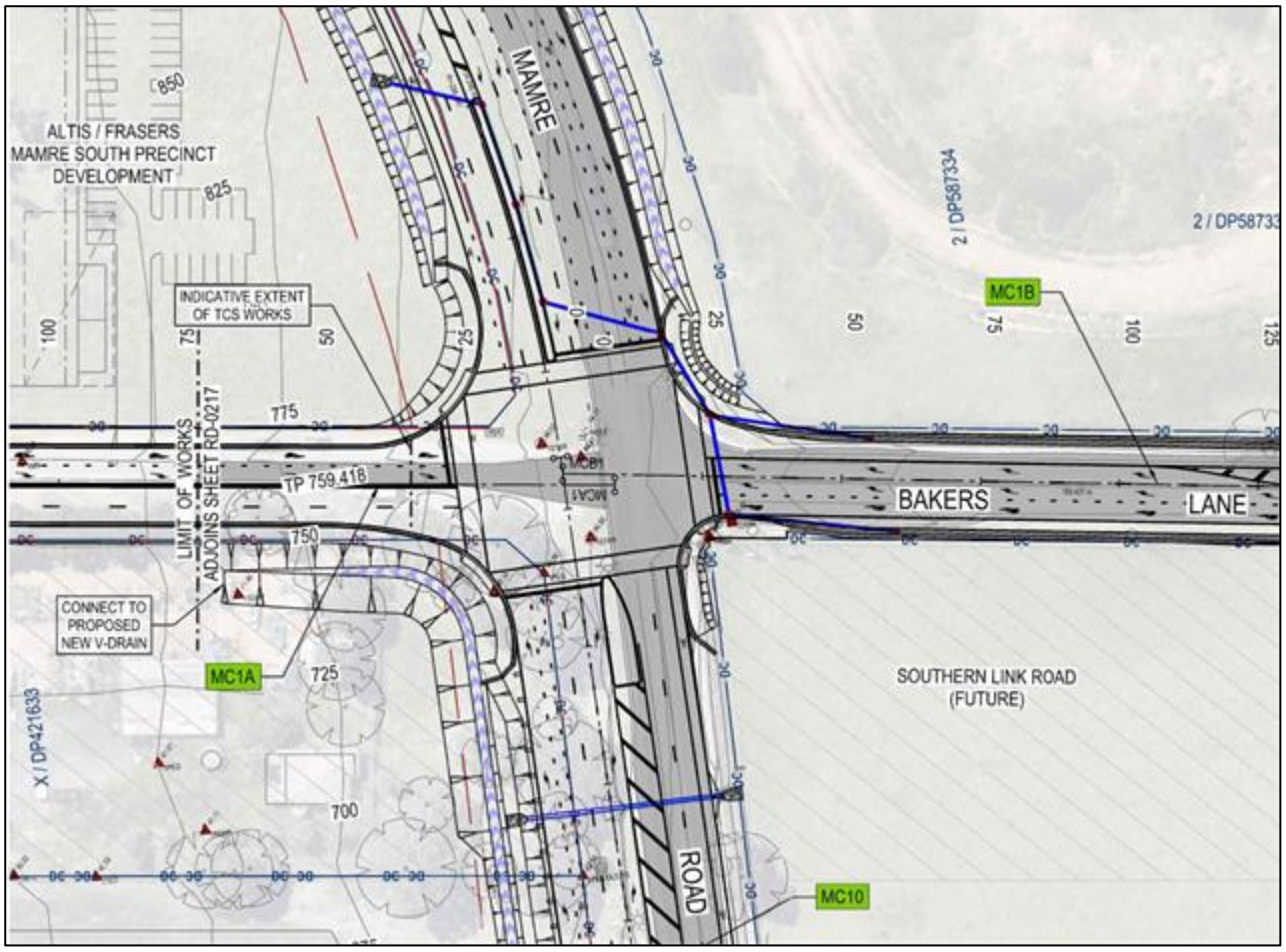


Figure 11: Approved Bakers Lane / Mamre Road Intersection

5.3 Public & Active Transport Opportunities

5.3.1 Future Public Transport Opportunities

While it is apparent that the Site will be well serviced by the future road network outlined in the Mamre Road DCP; it is also important that people are provided opportunity to use public transport. In the first instance, this requires improved connectivity to the broader area, noting the current lack of connectivity to the Site.

Establishment of public transport services as early as possible in the development stages of the area is important to achieve a culture of public transport use from the outset. To make public transport a viable choice in the study area, the services should ideally:

- integrate with existing bus services in the area;
- connect to regional centres of Penrith, Mt Druitt and Blacktown; and
- in the long term connect to areas such as Leppington in the South West Growth Centre, Prairiewood and the Liverpool to Parramatta T-Way.

Further to the bus connectivity, it is noted that the closest train station to the Site is currently some 10km away. However, the Metro Western Sydney Airport will provide 23km of new railway to link residential areas with jobs hubs and the rest of Sydney's public transport network.

The alignment of the Metro is shown by **Figure 12**. While the closest station to the Site will be Luddenham Station, located approximately 4km west of the Site, it will undoubtedly improve public transport accessibility to the wider area. This provides an opportunity for bus services to combine with the Metro to improve connectivity to/from the residential areas to the north of the Site.

It is noted that the 779 bus route has recently been extended from a route that terminated at James Erskine Drive to connect with the Amazon Fulfilment Centre on Emporium Avenue. This route provides a key connection to the St Mary's railway station and to the broader transport network. In addition, the future Metro stations proposed to west of the MRP improve connectivity with interconnecting services.

The internal MRP road network provides for heavy vehicle movements and, as such, would also be bus capable. Therefore, there are many opportunities to provide improved bus services; Mamre Road provides a significant opportunity to provide sub-regional services, as well as possible services within the MRP itself will maximise the number of sites that lie within 400m of a viable bus service. **Figure 12** demonstrates the future, potential bus routes for the internal MRP and public transport options, alongside the existing routes.

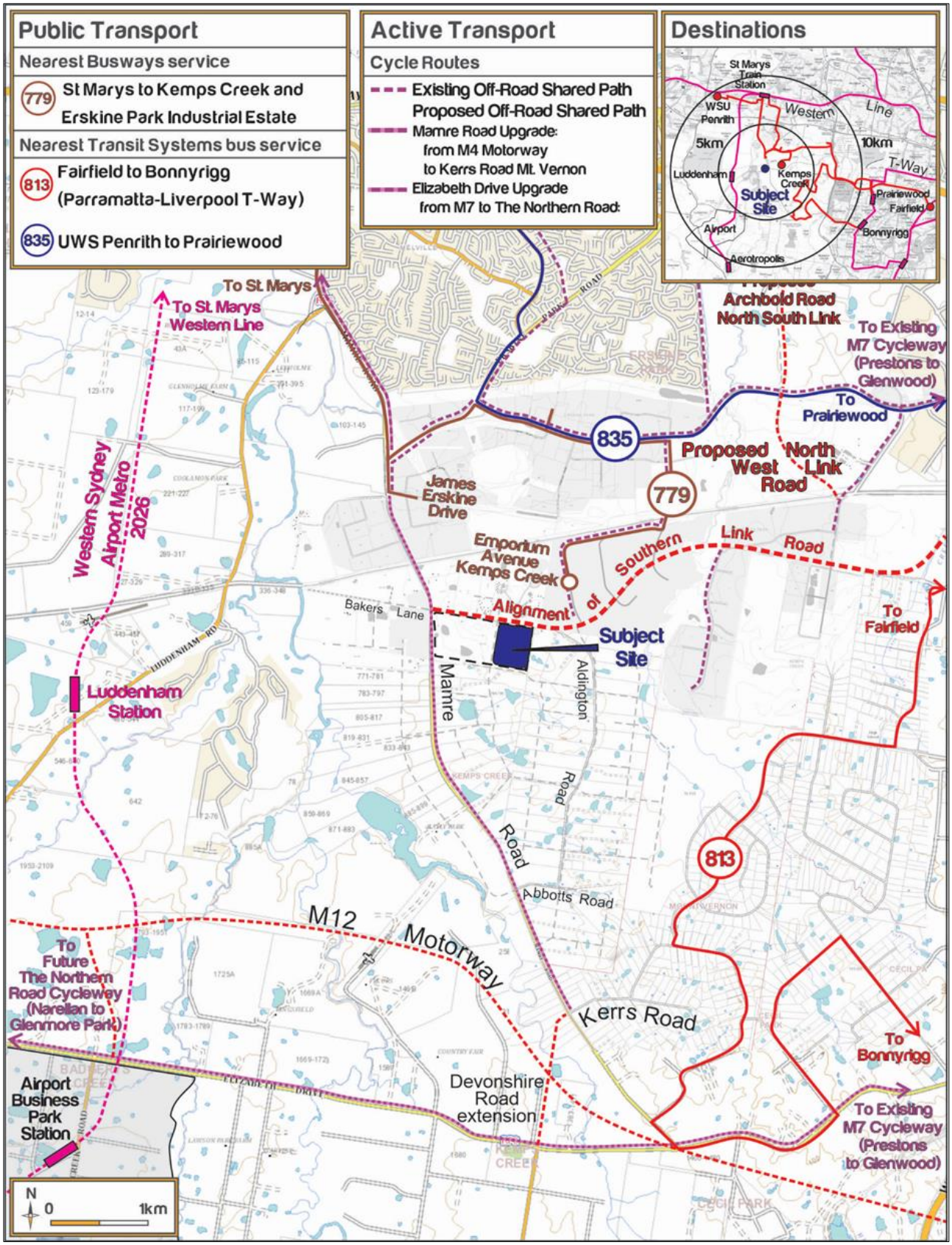


Figure 12: Existing and Future Public Transport Opportunities for MRP

5.3.2 Bicycle Network & Pedestrian Connectivity

At present, shared paths (pedestrian and cycle) are provided along Erskine Park Road and sections of Mamre Road to the north of the Site, but there is little cycling infrastructure in Mamre Road between Distribution Drive to the north and Elizabeth Drive to the south.

Further to the existing bicycle connections, pedestrian infrastructure is currently non-existent, due to the current largely undeveloped nature of the land immediately surrounding the Site. Future key pedestrian desire lines in the vicinity of the Site would be triggered by connections to future public transport infrastructure, noting the nature of the area being largely industrial and therefore not representing key destinations and attractions for people to walk to.

In this regard, the MRP roads are all to include shared cycle and pedestrian pathways, presenting a significant opportunity to provide strong connectivity through the Precinct for both pedestrians and cyclists. Beyond the internal roads, Mamre Road will provide for sub-regional bicycle connections to the north and south of the MRP. These future connections are shown in Figure 11.

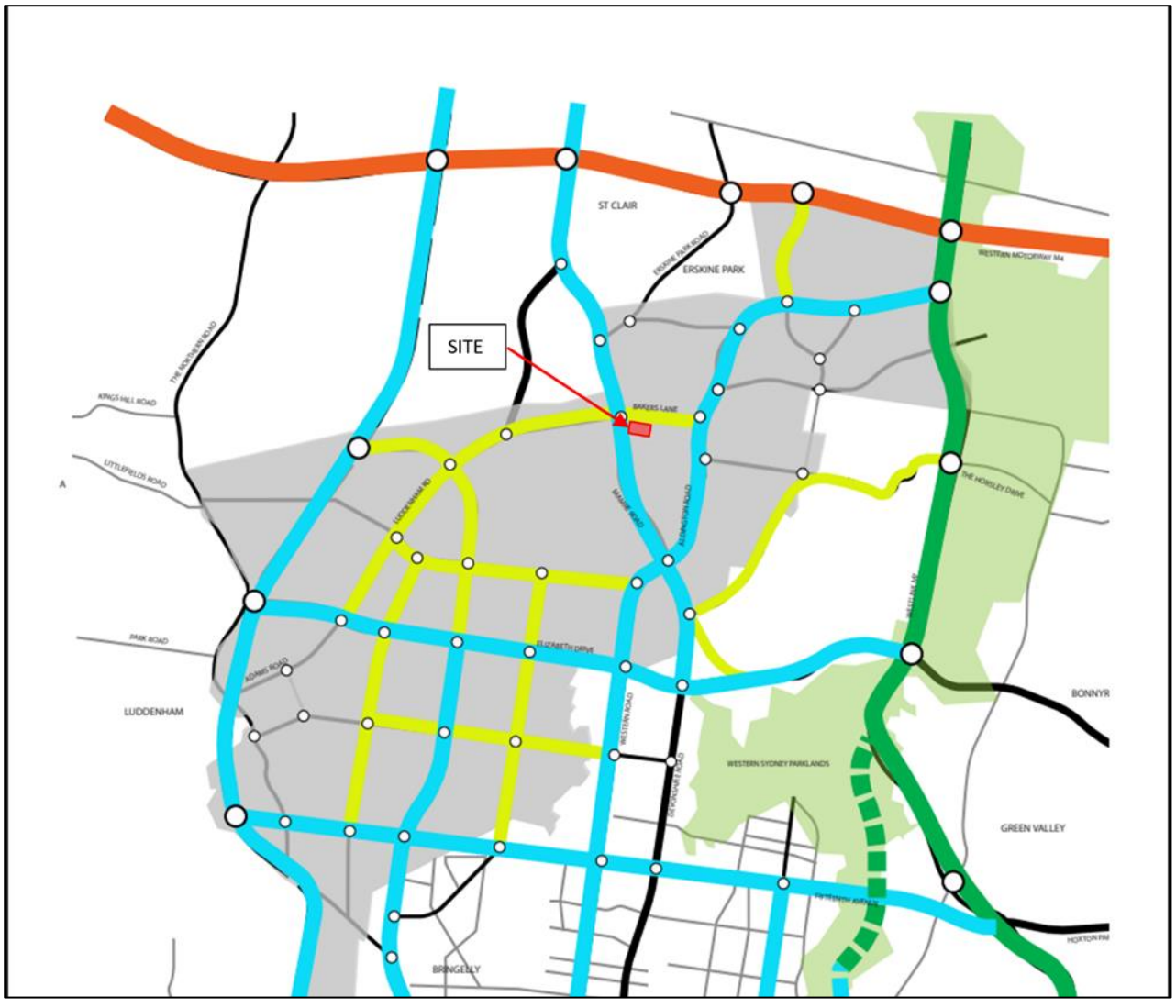


Figure 13: BWSEA Cycle Routes

6 Mamre Road Precinct Road Network

6.1 Ultimate Road Network

Ason Group worked with DPE and TfNSW to deliver a modelling assessment (herein referred to as the MRP modelling assessment) which accounted for MRP under full development in the years 2031 and 2036. The modelled layout was endorsed and adopted within the MRP DCP as the ultimate road network for the year 2036.

The road network outlined within the MRP DCP is shown by **Figure 14**, which provides context to the configuration of MRP roads and confirms a north-south connection through the Site as a local industrial road.

The requirements for the Local and Collector Industrial Road typology, as per the Mamre Road DCP, is shown further below.

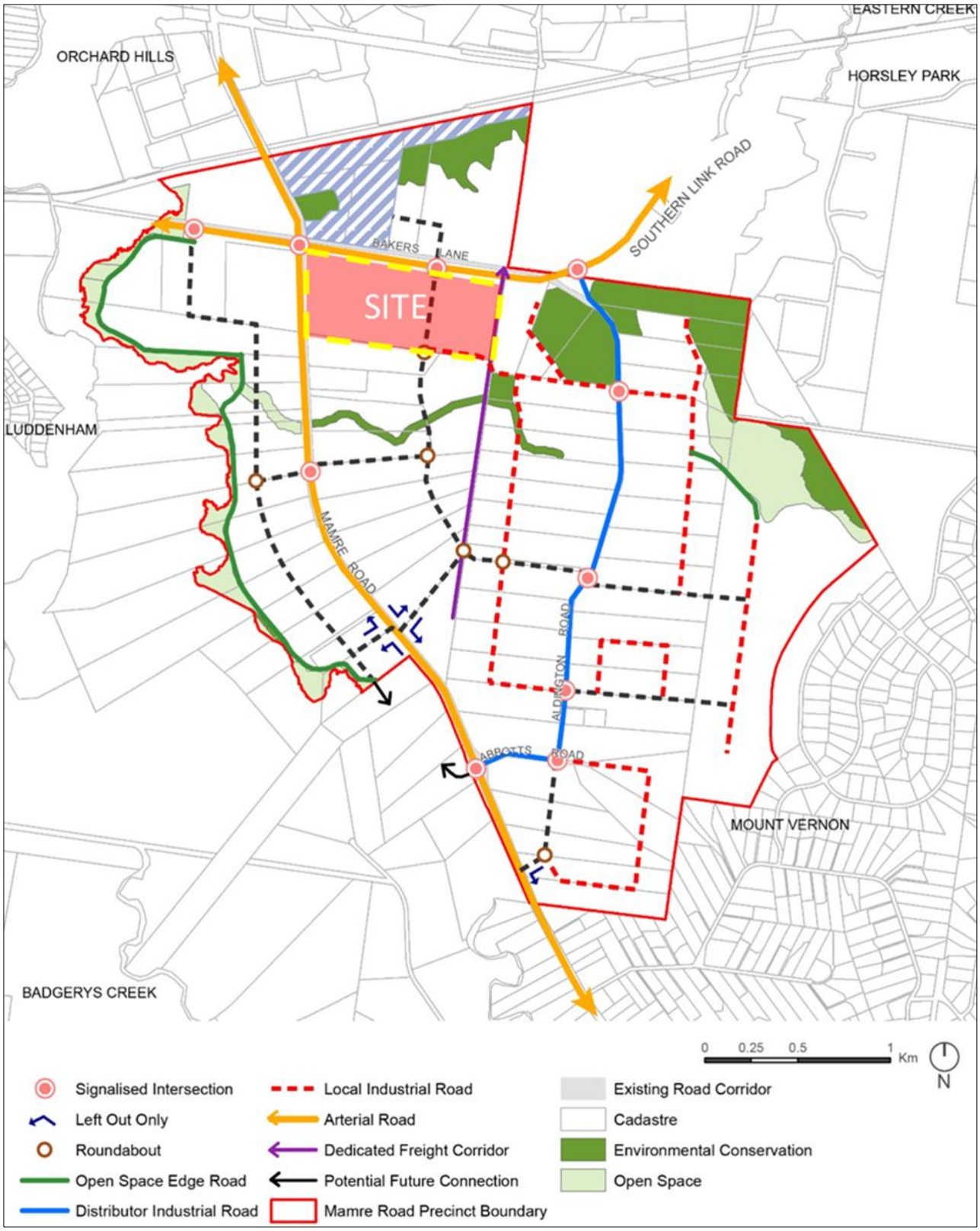


Figure 14: Indicative Road Network and Access Plan (Source: Mamre Road DCP 2021)

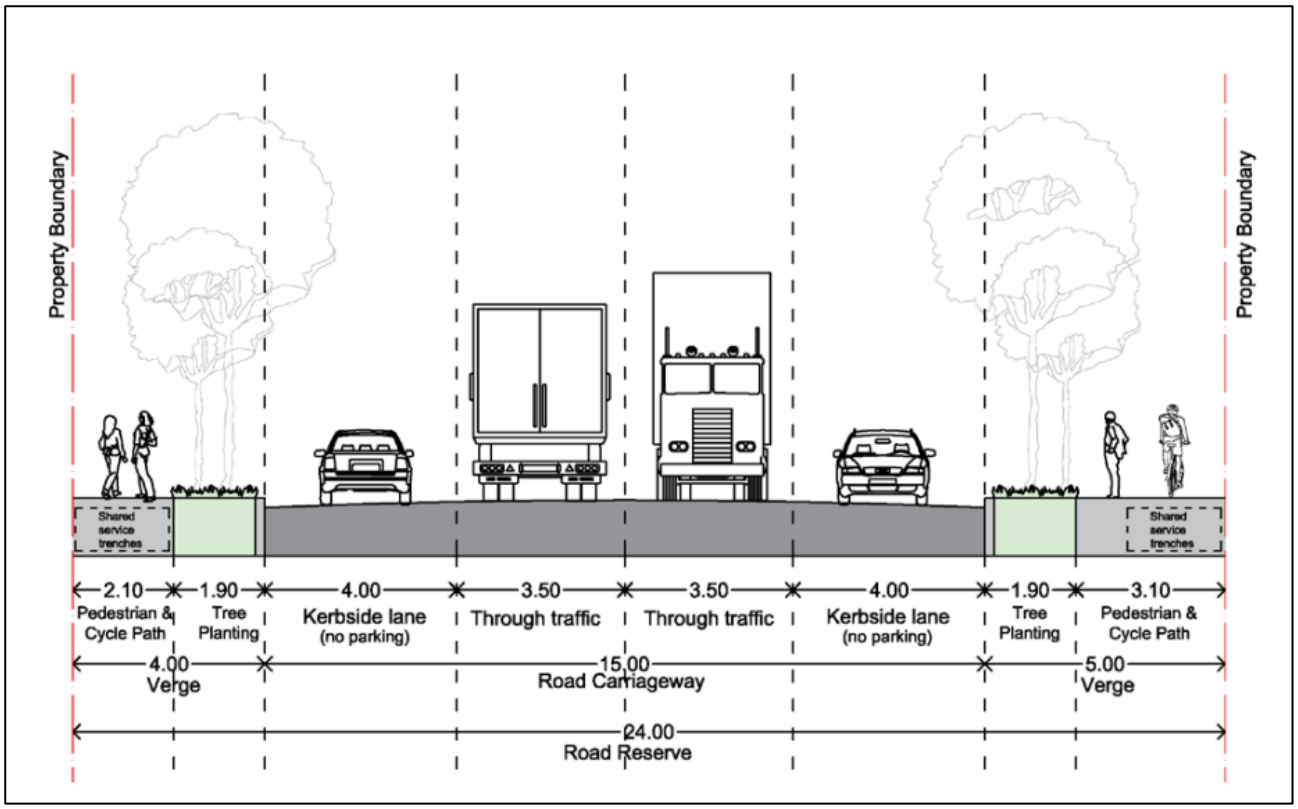


Figure 15: MRP DCP Typical Local Industrial Road

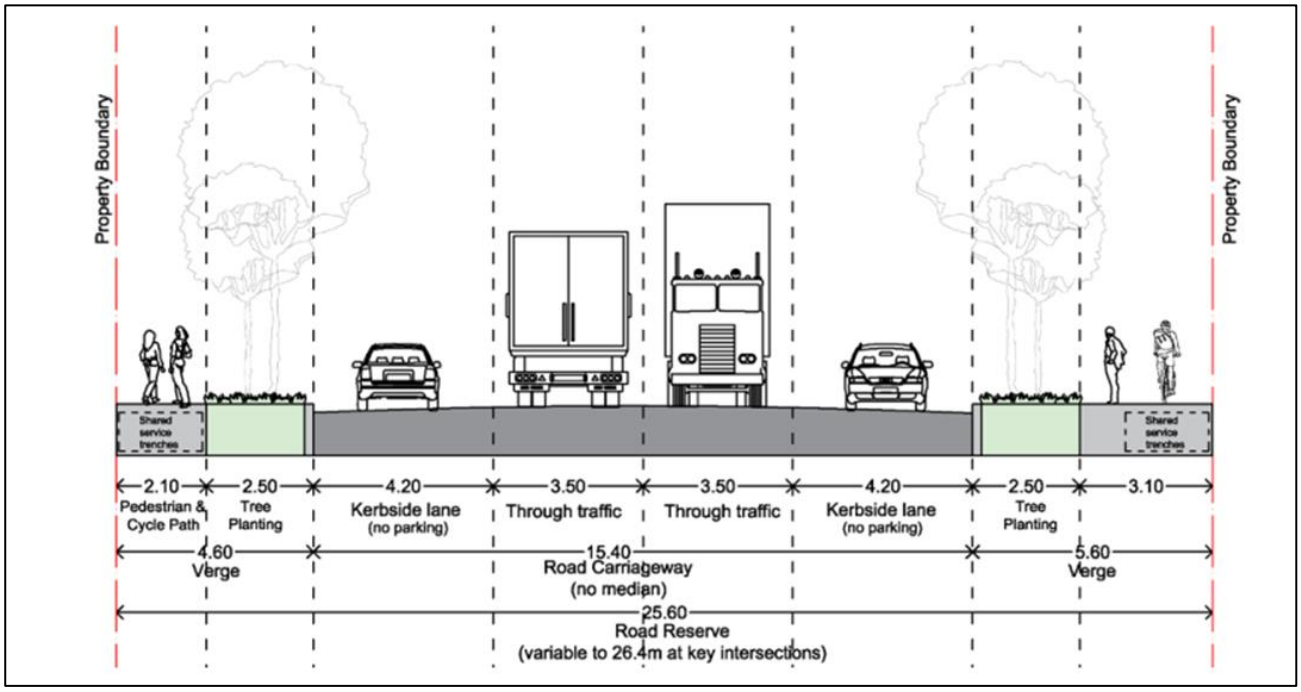


Figure 16: MRP DCP Typical Collector Industrial Road

6.2 Interim Road Network

As mentioned earlier, the MRP DCP does not provide consideration for an interim road network that would facilitate early development of the MRP. In this regard, Ason Group has separately worked with LOG-E and LOG-N to progress an interim road network for the year 2026.

Details of the road and intersection upgrades for the LOG-E enhanced road network (which forms the baseline assessment) and additional LOG-N enhancements are outlined in the Ason Group Mamre Road LOG-N Memo. This document accompanies the separate planning submission for the LOG-N enhancements and provides a summary of the modelling assessment for the cumulative impacts of the LOG-N associated developments.

The objective of the LOG-N enhanced interim road network is to facilitate and additional access to Mamre Road via the current Bakers Lane intersection. A summary of the key upgrades provided under the LOG-N enhanced interim road network is provided below, which includes the partial delivery of the SLR:

- The SLR would replace Bakers Lane as a complete dual carriageway (two lanes each direction) between Mamre Road and the Gibb Group access (**Figure 17** to **Figure 20**). The existing Bakers Lane along the frontage of the existing Mamre Anglican school and Emmaus Catholic College will be retained as a parallel road, with a left-in/ left-out connection to the west (**Figure 17**) and a new roundabout to the east (**Figure 19**).
- The proposed Mamre Road/ Bakers Lane intersection is largely similar to the intersection being delivered now, however, with:
  - A new left turn slip lane on the east approach.
  - A new left turn slip lane on the west approach.
- A signalised intersection is to be delivered between the SLR and the ISPT (Aliro) site access (**Figure 19**).

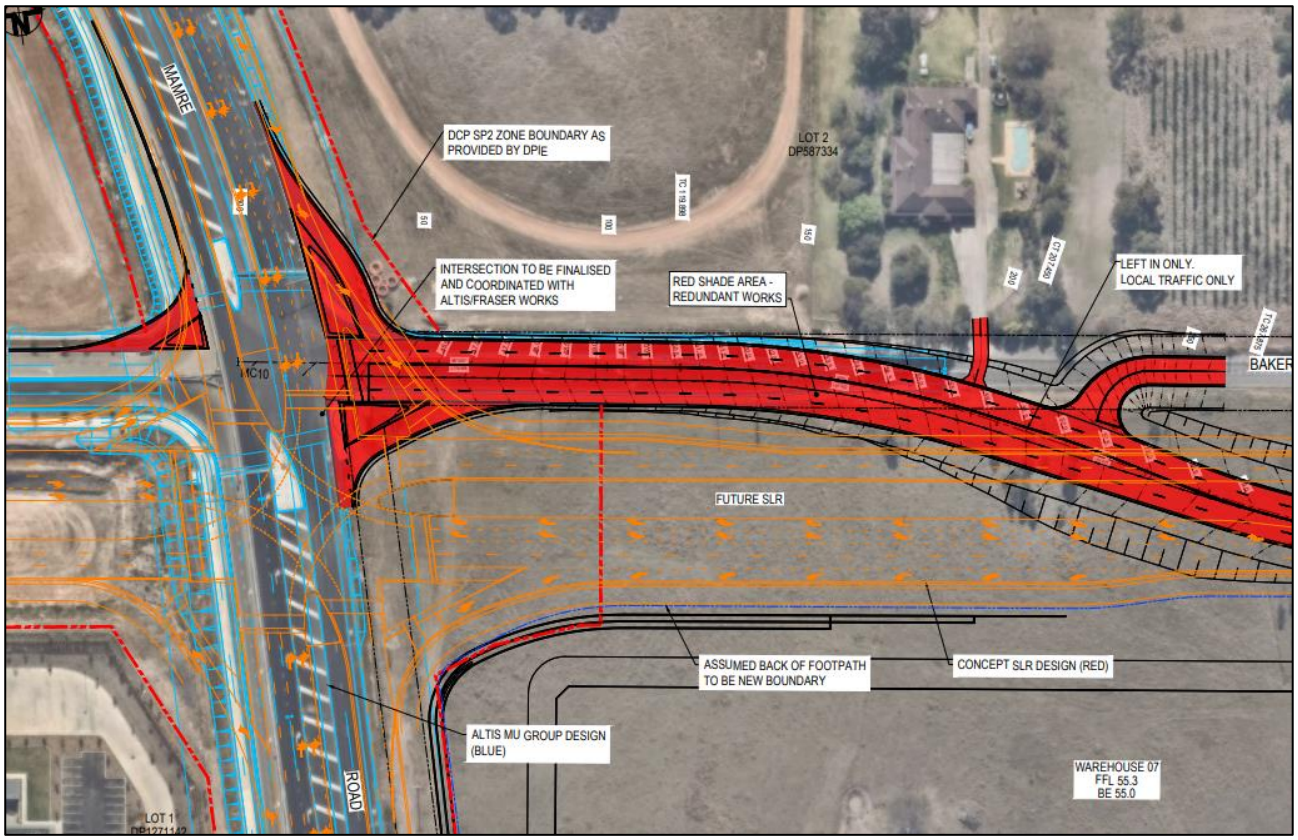


Figure 17: Mamre Road/ SLR and left-in/ left-out to the existing Bakers Lane

Figure 18: SLR between Mamre Road and ISPT/ Aliro Access

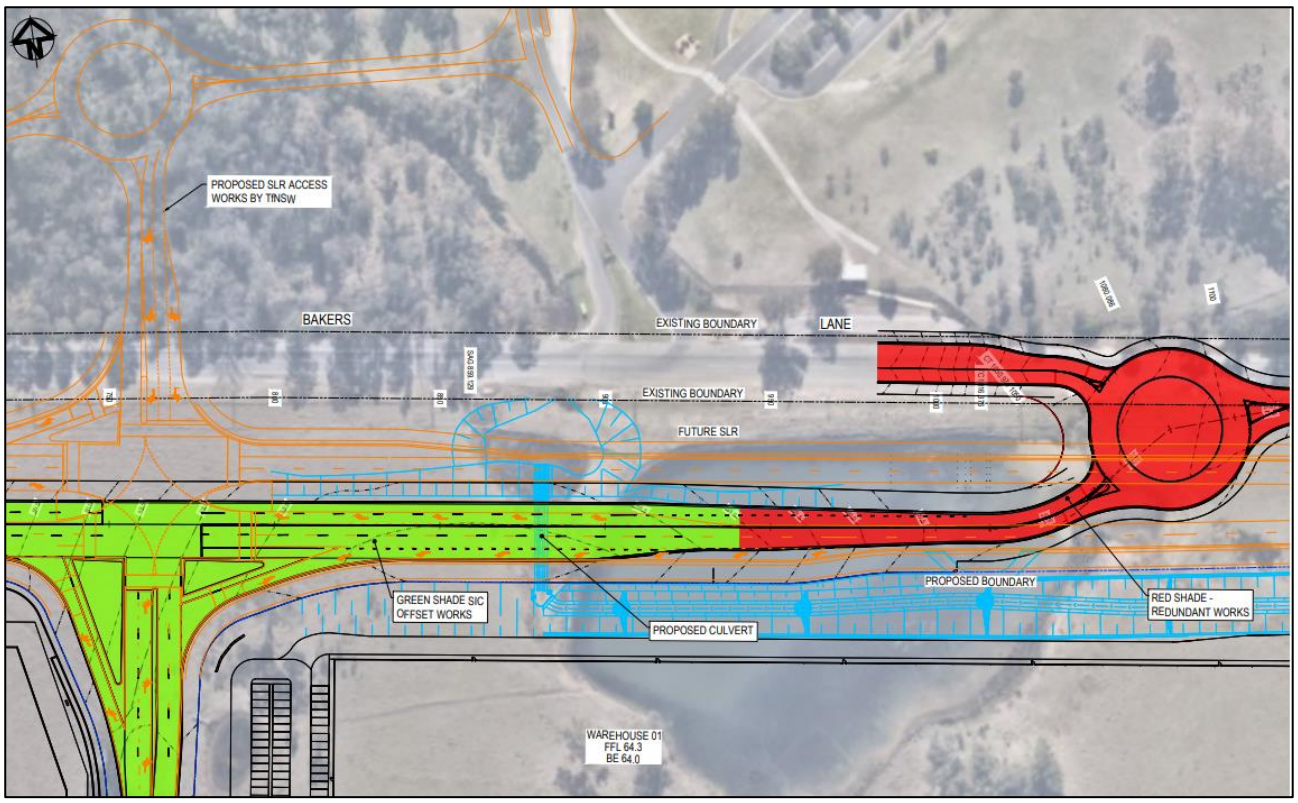


Figure 19: SLR/ ISPT/ Aliro Access and new roundabout further east

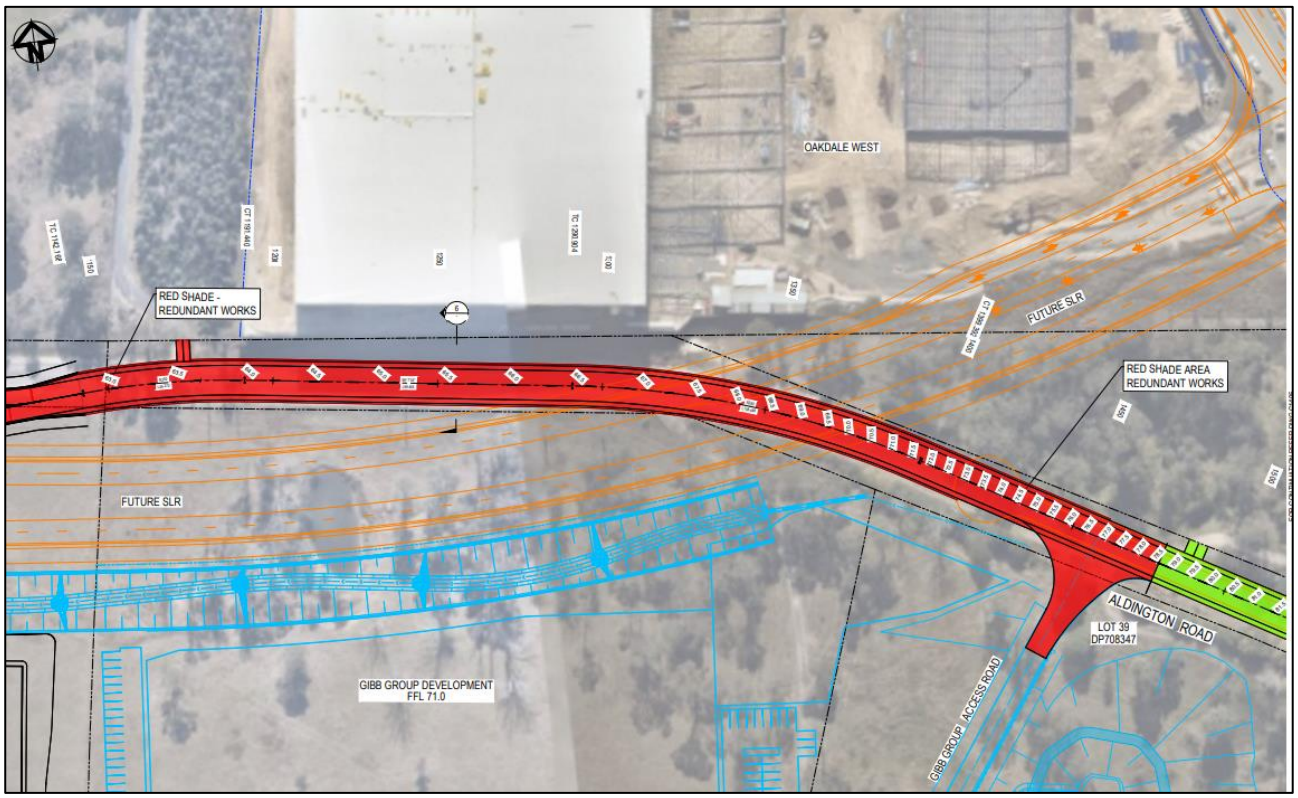


Figure 20: SLR between SLR/ ISPT/ Aliro Access and Gibb Group access road

7 Traffic Impact Assessment

7.1 Network Study Area

As discussed previously, Ason Group has undertaken an assessment of the interim road network with LOG-N enhancements, as part of a separate planning submission. A summary of the assessment methodology has been provided in this TMAP, however reference should be made to the Ason Group Mamre Road LOG-N Memo supporting the submission for full details,

The additional connections currently proposed by LOG-N for the 2026 Interim Road Network are shown by **Figure 21**. This figure also identifies key network connections already committed for the 2026 baseline network, which correspond to the approved LOG-E enhancements as previously modelled by Ason Group.

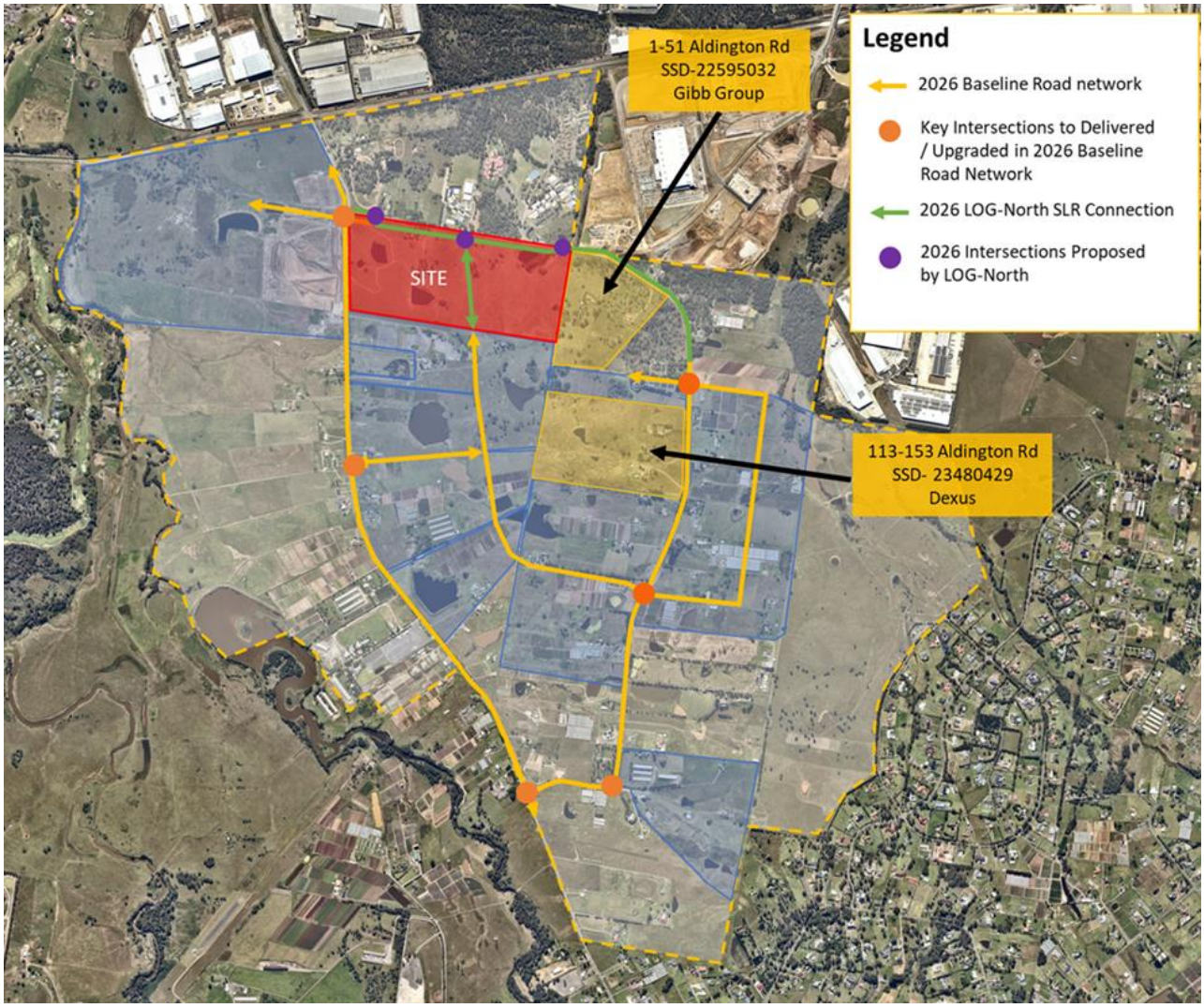


Figure 21: 2026 with LOG-North Development Road Network

With respect to the development potential of the MRP in the year 2026, the LOG-N interim road network assumes an additional minimum of 250,000m^2 GFA of staged development for the LOG-N sites (including 125,000m^2 GFA for the subject ISPT site). This is in addition to the 990,215m^2 GFA assessed for the baseline LOG-E interim road network.

7.1.1 Intersection Assessment Criteria

The performance of the key intersections has been analysed using the SIDRA Intersection 9.0 model. SIDRA provides a range of performance measures, including:

- **Degree of Saturation (DOS)**: DOS is defined as the ratio of demand (arrival) flow to capacity. The DOS is used to measure the performance of intersections where a value of 1.0 represents an intersection at theoretical capacity.
- **Average Vehicle Delay (AVD)**: Provides a measure of the operational performance of an intersection and is used to determine an intersection's Level of Service (see below). For signalised intersections, the AVD reported relates to the average of all vehicle movements through the intersection. For priority (Give Way, Stop & Roundabout controlled) intersections, the AVD reported is that for the movement with the highest AVD.
- **Level of Service (LOS)**: Comparative measure that provides an indication of the operating performance, based on AVD. For signalised and roundabout intersections, it's based on average delay to all vehicles, while at priority-controlled intersections it's based on the worst approach delay.

Table 4 provides a summary of the SIDRA LOS parameters, which are based the RTA Guide.

TABLE 4: INTERSECTION ASSESSMENT CRITERIA

Level of Service	Average Delay (sec)	Traffic Signals, Roundabouts	Give way and stop sign
A	less than 14	Good operation	Good operation
B	15 to 28	Good with acceptable delays & spare capacity	Acceptable delays & spare capacity
C	29 to 42	Satisfactory	Satisfactory, but accident study required
D	43 to 56	Operating near capacity	Near capacity & accident study required
E	57 to 70	At capacity; at signals, incidents will cause excessive delays. Roundabouts require other control mode	At capacity, requires other control mode
F	More than 70	Unsatisfactory and requires additional capacity.	Unsatisfactory and requires other control mode or major treatment

7.2 Trip Generation

7.2.1 TfNSW MRP Trip Rates

For the MRP modelling assessment, TfNSW provided Ason Group with trip rates for adoption, as shown by **Table 5**.

The purpose of these trip rates were to provide for some consideration to a range of uses that may be permissible under the current IN1 General Industrial land zoning.

TABLE 5: TFNSW PROVIDED TRIP RATES

Time Period	Rate per 100m^2
Daily Trips	2.91
Local Road AM Peak (7am – 8am)	0.23
Local Road PM Peak (4pm – 5pm)	0.24
Site Maximum Generation Rate (All Vehicles)	0.26
Site Maximum Generation Rate (Heavy Vehicles)	0.07

7.2.2 Surveyed Trip Rates

It is however noted that Ason Group conducted a number of surveys of industrial warehouses in the WSEA for the purposes of the MRP modelling assessment, including:

- Mirvac Calibre
- Huntingwood Drive
- Eastern Creek Drive
- Roussell Road
- First Estate; and
- Sarah Andrews Close

The average trip generation rate for general warehousing developments found by the surveys are summarised in **Table 6** below.

While adoption of conservative rates is deemed appropriate for strategic level assessment, where limited information is known on the ultimate development, it is noted that the Proposal has been designed with the intent for general warehouses and logistics uses. Therefore, adoption of a rate more aligned with the actual use of the Site is considered appropriate.

TABLE 6: SURVEYED TRIP RATES – WAREHOUSE DEVELOPMENT

Time Period	Rate per 100m^2
Daily Trips	2.31
Local Road AM Peak (7am – 8am)	0.18
Local Road PM Peak (4pm – 5pm)	0.16

7.3 Proposal Traffic Generation

7.3.1 Stage 1

Further to the adoption of the above trip rates, **Table 7** provides a summary of the Site's traffic generation by the proposed Stage 1 proposal.

A breakdown of the Site's daily traffic profile based on the TfNSW trip rate available significant survey date is shown in **Appendix A**. It is noted that there are minor differences between the peak hour volumes reported in Table 7 and those reported in Appendix A further to minor rounding changes.

TABLE 7: STAGE 1 TRAFFIC GENERATION

Period	GFA (m^2)	TfNSW Rate per 100m^2	TfNSW Based Trips	Survey Rate per 100m^2	Survey Based Trips
Daily	79,263	2.91	2,307	2.31	1,831
AM		0.23	182	0.18	143
PM		0.24	190	0.16	127

7.3.2 Concept Masterplan

Further to the adoption of the above trip rates, **Table 8** provides a summary of the Site's traffic generation by the proposed concept masterplan.

A breakdown of the Site's daily traffic profile based on adoption of the TfNSW trip rate and significant survey data collected is shown in **Appendix A**. It is noted that there are minor differences between the peak hour volumes reported in Table 8 and those reported in Appendix A further to minor rounding changes.

TABLE 8: CONCEPT MASTERPLAN TRAFFIC GENERATION

Stage	GFA (m^2)	TfNSW Rate per 100m^2	TfNSW Based Trips	Survey Rate per 100m^2	Survey Based Trips
Daily	244,171*	2.91	7,105	2.31	5,640
AM		0.23	562	0.18	440
PM		0.24	586	0.16	391

**Café GFA (242m^2) is excluded from the traffic generation calculations as it is expected that the trips would be linked to employment uses on the Site*

7.4 Traffic Assessment – Ultimate Road Network (2036)

With regard to the ultimate road layout and intersection configuration, it is notable that development of the Site was considered within the MRP modelling assessment.

It is understood that the assumptions that underpinned this modelling assessment were as follows:

- The majority of land use will take the form of a large format industrial warehousing;
- The land was separated into smaller land parcels for the purposes of identifying any constraints which will impact the developable GFA;

- The sub-precinct in which the Site lies was assumed to be able to accommodate a GFA which represented 55% of the total site area. The Site has an area of 522,478m^2, this would equate to an assumed GFA of 287,363m^2; and
- Trip rates adopted (detailed in **Table 5**), included a level of conservatism to allow for more intensive uses that may be located in the MRP, which are permissible under the land use zoning.

An indicative total GFA of 244,413m^2 is expected to be achieved on the Site, for the Concept Masterplan. This equates to 49% of the total Site area. Therefore, it is clear that the Proposal is, not only consistent with the MRP modelling assessment, but it actually represents a slightly less intensive development than was previously assumed. As such, the traffic impact of the Site will be less than previously considered for the MRP modelling assessment.

7.5 Traffic Impact Assessment - Interim Road Network (2026)

The SIDRA modelling assessment of LOG-N enhancements was undertaken by Ason Group on the above basis, with key performance results summarised in **Table 9**.

TABLE 9: SCENARIO 2 – KEY INTERSECTION PERFORMANCE

Intersection	Control	AM		PM	
		DOS	LOS	DOS	LOS
Mamre Road / Bakers Lane (SLR)	Signal	0.81	B	0.86	B
Mamre Road / Mirvac Access	Signal	0.75	B	0.70	B
Mamre Road / Abbotts Road	Signal	0.47	A	0.57	A
SLR / ISPT (Aliro) Access	Signal	0.24	B	0.29	B
SLR / Bakers Lane	Roundabout	0.30	A	0.37	A

The modelling demonstrates that subject to the delivery of the nominated infrastructure, including the partial delivery of internal road networks (which form part of the current SSDA's) and the upgrades as proposed to the Mamre Road corridor (including those currently under construction) the network can accommodate the proposed development.

It is also relevant to note that the modelling assumes a higher number of trips for the subject site than what has been assessed for the Stage 1 development in the preceding section. Specifically, the model assumes a traffic generation for the site of:

- 288 vehicle trips per hour during the AM peak period (versus 182 vehicle trips per hour as assessed in this report for Stage 1) and
- 300 vehicle trips per hour during the PM peak period (versus 190 vehicle trips per hour as assessed in this report Stage 1).

When based on the surveyed trip rates, the differences in the additional number of modelled trips would be even more pronounced.

8 Transport Assessment

8.1 Existing Travel Patterns

8.1.1 Journey to Work Data Analysis

Journey-to-Work (JTW) data from the Australian Bureau of Statistics (ABS) 2016 Census and specifically aggregated Destination Zones (DZ) have been referenced to understand the baseline travel characteristics of the Site.

A summary of key travel modes for those travelling to the locality for work have been reviewed with regard for the surrounding Destination Zone 115184210, within the Horsley Park – Kemps Creek statistical area. The travel modes are presented in **Figure 22**.

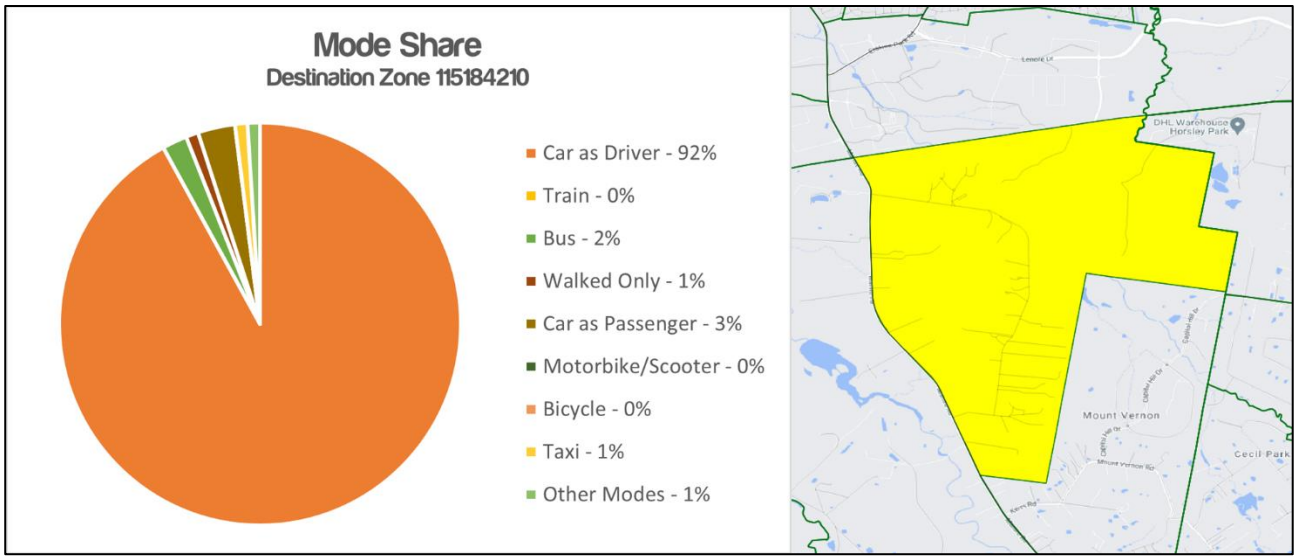


Figure 22: Travel Mode Share

It is evident that the private vehicle (car) is the overwhelming preferred mode of choice for commuters travelling to work in in the area. The data indicates that 95% travel to work by car with 92% as the driver and 3% as passenger i.e. car-pooling.

This is reflective of the current nature of the area, which accommodates rural residential properties and agricultural businesses only. However, noting the future land use of the Site as industrial in nature, it is expected that the JTW data accurately reflects the current trends for travel to places of work at industrial sites.

The RMS Guide Update itself provides details in relation to the principal mode of travel used by staff at the Erskine Park and Eastern Creek warehouses surveyed by TfNSW. These surveys indicate that 90% of all workers would travel via private vehicles, with 8% travelling as passengers. Therefore, the existing census data is reflective of existing travel patterns of industrial development.

8.2 Measures to Reduce Private Vehicle Use

8.2.1 Delivering the Vision of the Aerotropolis

The MRP forms of one of the initial precincts of the Aerotropolis (although not included within SEPP WSA), the background studies provide some context with regards to travel demand management.

The AECOM Report is one of the technical reports supporting the delivery of the Draft Aerotropolis Precinct Plan (November 2020) vision, which aims to create "Sustainable urban connections including efficient and accessible public transport links, walking and cycling facilities". The AECOM Report provides 2 key "enablers" being "Transport Policies and Strategies", which includes travel demand strategies; and "Transport Infrastructure and Services" which requires planning of a multi-modal, connected network.

Of most relevance to the Site are the following objectives identified for Travel Demand Strategies:

- Provide excellent travel choices and encourage walking, cycling and public transport trips;
- Limit unnecessary car trips, particularly for shorter trips;
- Promote alternatives to vehicle ownership;
- Reduce the need to travel, especially in peak periods;
- Facilitate the efficient use of land, through road space allocation and proximity of jobs and services to people; and
- Create a liveable community, with excellent local environmental quality and community cohesion.

Measures include implementation of Travel Plans and provision of adequate bicycle parking and End of Trip Facilities.

8.2.2 Implementation at Subject Site

A Framework Sustainable Travel Plan (FSTP) has been prepared that will inform future site-specific travel plans, expected to be implemented for each of the warehouse lots within the Site (refer to **Appendix C**). Each of the end users within the Site will have slightly different travel characteristics and therefore individual travel plans will be prepared to address the specific needs of the occupier.

A travel plan is a package of measures to assist in managing the transport needs of an organisation. It promotes the uptake of realistic choices of sustainable travel modes to and from a site, thereby reducing reliance upon single occupancy car travel. The travel plans will set targets, a series of measures to meet these targets and the process for monitoring and reviewing the travel plan, including the allocation of a Travel Plan Coordinator.

8.2.3 Future Travel Patterns

The FSTP within **Appendix B** has identified an initial 5-year target for reducing travel by private vehicle on the Site.

These will be subject to review, prior to finalisation of any travel plan. Nevertheless, **Table 10** presents the relevant mode share details and the results of the application of these target percentages to the Proposal.

With regards to understanding the number of employees on the Site, at this stage in the development it is not clear how many employees the Site would accommodate. However, to inform this assessment, it is understood that the approximate 850 hectares of industrial land within the MRP could accommodate an approximate capacity of 17,000 jobs, based on information provided by DPE. The developable land within the Estate totals 52 hectares. On this basis therefore, it is assumed that the Site could accommodate approximately 1,040 employees.

TABLE 10: SITE TRAVEL MODE TARGETS & PERSON ONE-WAY TRIPS BY 2026

Travel Mode	Mode Share Target	Daily
Car as driver	88%	915
Car as passenger	3%	31
Train	0%	0
Bus	4%	42
Walked only	1%	10
Motorbike/Scooter	1%	10
Bicycle	1%	10
Taxi	1%	10
Other Modes	1%	10

The analysis indicates that 42 persons would use bus to access the Site during peak hours.

While these targets are not set, and while the bus services for the MRP are still being planned, it is not anticipated that this level of public transport travel would not be able to be accommodated. It would be recommended to try to exceed the level of bus travel to the Estate; however, this would be subject to the implementation of appropriate services, which would be facilitated by TfNSW as the MRP develops and becomes better connected to the wider network.

9 Parking Assessment

9.1 Precinct Car Parking Rates

Parking rates from the MRP DCP have been adopted to assess the parking requirements of the Proposal. The requirements are provided within **Table 11**.

TABLE 11: DCP PARKING RATES

Land Use	Minimum Parking Rate
Warehouse	1 space per 300m^2 or 1 space per 4 employees, whichever is the greater.
Factory	1 space per 200m^2 of gross floor area or 1 space
Office	1 space per 40m^2
Neighbourhood Shops	1 space per 40m^2

9.2 Parking Requirements & Provision

Table 12 details the requirements for Stage 1 and the overall Concept Masterplan, based on the DCP parking rates detailed in Table 11.

TABLE 12: CAR PARKING REQUIREMENTS & PROPOSED PROVISION

Stage	Land Use	GFA (m^2)	Requirement (spaces)	Currently Proposed
1	Warehouse	76,248	254	322
	Office	3,015	75	
	Sub Total	**79,263**	**329**	
Concept Masterplan	Warehouse	235,887	786	1,011
	Office	8,284	207	
	Café	242	6	
	Sub Total	**244,413**	**999**	

As per Table 12, the Stage 1 development requires 329 parking spaces, and 322 parking spaces are provided. Similarly, the overall Concept Masterplan requires a total of 999 parking spaces, with 1,011 currently provided. Therefore, the Proposal can provide full compliance with the adopted rate.

9.2.1 Accessible Parking

The MRP DCP provides the following in regard to accessible parking:

Accessible parking should be in accordance with the Access to Premises Standards, Building Code of Australia and AS2890.

In this regard, 2 accessible parking spaces are to be provided per every 100 spaces, providing compliance with the Disability (Access to Premises – Buildings) Standards 2010 from the BCA, as well as the accessible parking requirements provided in Appendix B of AS 2890.6.

It is expected that this would form a Condition of Consent.

9.2.2 Electric Vehicle Parking

Section 4.6.1(8) of the MRP DCP notes the following:

Parking areas should incorporate dedicated parking bays for electric vehicle charging.

However, it does not provide for guidance on the specific number of bays. Therefore, it is proposed that a total of 5% of the total parking provision be designated as electric vehicle charging bays.

9.3 Bicycle Parking

Bicycle parking rates from the MRP DCP have been adopted to assess the parking requirements of the Proposal.

The requirements of the MRP DCP are provided within **Table 13**.

TABLE 13: MRP DCP CYCLE PARKING RATES

Land Use	Minimum Parking Rate
Industrial Activities	1 space per 1000m^2 of gross floor area of industrial activities (over 2000m^2 gross floor area)
Office and Retail Space	1 space per 600m^2 of gross floor area of office and retail space (over 1200m^2 gross floor area)

Table 14 details the requirements for the proposed Stage 1, based on the parking rates detailed in Table 13.

As shown, the proposed Stage 1 is required to provide 81 bicycle spaces. In addition, the Concept Masterplan is required to provide a total of 250 bicycle parking spaces based on the total GFA (refer to **section 3.1**) and on the parking rates detailed in Table 13.

It is anticipated that this could be ensured via a suitable Condition of Consent.

TABLE 14: BICYCLE PARKING REQUIREMENTS

Warehouse	GFA m^2	Requirement
Stage 1 (Warehouse 1-3)	79,263	78
Masterplan (Warehouse 4-8)	176,554	177
Total	**262,814**	**255**

Additionally, the MRP DCP also references the following rates for End of Trip (EoT) facilities:

TABLE 15: MRP DCP END-OF-TRIP FACILITIES RATES

Land Use	Minimum Rate
Ancillary Office and Retail Space	For ancillary office and retail space with a gross floor area over 2500m^2, at least 1 shower cubicle with ancillary change rooms
Industrial Activities	For industrial activities with a gross floor area over 4000m^2, at least 1 shower cubicle with ancillary change rooms)

Having regard for the Proposal, Table 16 demonstrates the provision of EoT facilities required for the Proposal against the outlined MRP DCP rates. It is anticipated that provision of these EoT facilities could be ensured via a suitable Condition of Consent.

TABLE 16: END-OF-TRIP PARKING REQUIREMENTS

Stage	GFA m^2	Requirement
Stage 1 (Warehouse 1-3)	79,263	3
Masterplan (Warehouse 4-8)	176,554	5
Total	**262,814**	**8**

10 Access Parking and Servicing Design

10.1 Design Standards

The Site's access, car park and loading areas have been generally designed with reference to the following Australian Standards:

- Australian Standard 2890.1:2004: Parking Facilities – Off Street Car Parking (AS 2890.1);
- Australian Standard 2890.2:2018 Parking Facilities – Off Street Commercial Vehicle Facilities (AS 2890.2);
- Australian Standard 2890.3:2015: Parking Facilities – Bicycle Parking (AS 2890.3);
- Australian Standard 2890.6:2009 Parking Facilities – Off Street Parking for People with Disabilities (AS 2890.6);
- MRP DCP; and
- Fire + Rescue NSW, Fire Safety Guideline: Access for fire brigade vehicles and firefighters, Version 05, 4 October 2019 (NSW Fire Safety Guidelines).

10.2 Design Vehicles

As per Table 13, 4.6.1 of the MRP DCP, the design vehicle required to service the Site is a 30.0m PBS Level 2.

The 12.5 metre Heavy Rigid Vehicle has been adopted for the design of fire access trails in accordance with the NSW Fire + Rescue Guidelines.

The proposed car parking area has been designed to accommodate B99 Vehicles as per AS2890.1:2004.

In regard to the above, **Appendix C** provides the relevant swept path analysis.

10.3 Access Driveways

All access driveways (to the proposed road network within the MRP) have been, and shall be, designed with reference to AS 2890.1, AS 2890.2, and any other relevant published road design / road engineering guidelines.

Truck access driveways shall be designed to provide for vehicles up to and including a 30m long PBS Type 2 with maximum gradients, maximum rates of change of grades, and maximum crossfalls in accordance with relevant standards applicable at the time when Construction Certification drawings are prepared and/or in accordance with standards applicable at the time of construction. Appendix C provides the relevant swept path analysis.

Car access driveways shall be designed in accordance with AS 2890.1 and any other relevant Council Engineering Guidelines.

It is anticipated that full access driveway design compliance with AS 2890.1 and AS 2890.2 would form a standard Condition of Consent further to approval.

10.4 Parking Areas

All parking areas, including access aisles and parking modules shall be designed with reference to AS 2890.1 and AS 2890.6. It is anticipated that full parking area design compliance with AS 2890.1 and AS 2890.6 would form a standard Condition of Consent further to approval.

10.5 Service Areas

All service areas shall be designed with reference to AS 2890.2, and again provide for the movement of vehicles up to and including a 30m long PBS Type 2 as check vehicle, and 20m Articulated Vehicle as design vehicle.

It is anticipated that service area design compliance with AS 2890.2 would form a standard Condition of Consent further to approval.

11 Conclusions

Ason Group has been engaged by ISPT / Aliro to prepare a Transport Management & Accessibility Plan in relation to the State Significant Development for an industrial development located on 706-752 Mamre Road Kemps Creek (the Site). Further to a detailed assessment of all relevant traffic and transport issues, Ason Group provides the following conclusions

- The Site is well located for industrial development, with excellent existing and future connections to the sub-regional and regional network, as well as key growth centres across Western Sydney.
- Access to the Site will be provided via a signalised intersection with a partially completed Southern Link Road, with access to the wider road network provided via Mamre Road. Internal road connections will be by way of the internal north-south industrial collector road under the Ultimate Road Network, however will be limited to the Site (Summit at Kemps Creek development) under the 2026 Interim Road Network in order to limit traffic impacts.
- The Stage 1 Proposal is expected to generate between 182 to 190 veh/hr in the peak hours, with the Master plan generating between 562 and 586 veh/hr.
- The MRP DCP road network has been informed by the MRP modelling assessment; undertaken by Ason Group in conjunction with TfNSW and DPE. The Proposal is, not only consistent with the MRP modelling assessment, but it represents a less intensive development than previously assumed.

  Therefore, the Proposal is acceptable from a traffic generation perspective in respect to the ultimate MRP DCP road network.
- It is noted that the MRP DCP does not specify a staging strategy to facilitate the initial phases of development across the MRP. Therefore, Ason Group worked with landowner groups LOG-N & LOG-E, DPE and TfNSW to identify a suitable staging strategy for the forecast year of 2026.
- In consideration to the interim road network, Ason Group has assessed the network improvements proposed by the LOG-N consortium which form additional upgrades to the approved LOG-E enhanced interim road network. Reference should be made to the Ason Group Memo, which outlines the results of the modelling assessment to support the LOG-N upgrades and accounts for a minimum of 250,000m^2 GFA across three development sites (including the subject site). This yield includes 125,000m^2 GFA for the subject ISPT (Aliro) development although it is emphasised this starting point, with opportunities to review the GFA to be further investigated during detailed design. In this regard, ISPT (Aliro) will continue to collaborate with DPE and TfNSW with respect to the capabilities of the LOG-N enhanced network.
- All internal Lots circulation, hardstand and parking areas have been designed with reference to the Australian Standards and provide for vehicles up to and including a 30m long PBS Type 2, as required by the MRP DCP.
- Parking has been provided in accordance with the rates detailed in the MRP DCP and includes an appropriate allocation of accessible parking spaces.
- All future operators will be encouraged to maximise the use of public and active transport, noting the future pedestrian, cycle and bus provisions included in the MR Upgrade design.
- All access driveways, parking areas and service areas have been designed with reference to the appropriate Australian Standards. It is anticipated that full design compliance with the relevant Australian Standards would form a standard Condition of Consent further to approval, which will also provide for any design changes if required.

Appendix A. Hourly Traffic Generation

Masterplan Traffic Generation Daily Profile							
Start Time	All Vehicle	Light Vehicle	Heavy Vehicle	Rigid	Semi-trailer	B-double	A-double
0:00	63	44	19	12	1	0	5
1:00	56	37	19	13	1	0	5
2:00	61	41	20	13	1	0	5
3:00	68	52	16	11	1	0	4
4:00	216	179	37	24	2	1	9
5:00	412	330	82	54	6	1	21
6:00	558	443	115	76	8	2	29
7:00	553	416	137	91	9	2	35
8:00	511	353	158	104	11	3	40
9:00	444	271	173	115	12	3	44
10:00	416	249	167	111	11	3	42
11:00	436	266	170	113	12	3	43
12:00	476	322	154	102	10	3	39
13:00	572	416	156	103	11	3	40
14:00	623	484	139	92	9	2	35
15:00	533	410	123	81	8	2	31
16:00	443	344	99	65	7	2	25
17:00	366	283	83	55	6	1	21
18:00	218	160	58	38	4	1	15
19:00	130	95	35	23	2	1	9
20:00	96	68	28	18	2	0	7
21:00	125	104	21	14	1	0	5
22:00	159	134	25	17	2	0	6
23:00	112	90	22	15	1	0	6
Total	7,648	5,591	2,057	1,361	139	35	522

Note: Minor discrepancies between sum numbers due to 'rounding'.

Stage 1 Traffic Generation Daily Profile							
Start Time	All Vehicle	Light Vehicle	Heavy Vehicle	Rigid	Semi-trailer	B-double	A-double
0:00	21	15	6	4	0	0	2
1:00	18	12	6	4	0	0	2
2:00	20	13	7	4	0	0	2
3:00	22	17	5	4	0	0	1
4:00	71	59	12	8	1	0	3
5:00	135	108	27	18	2	0	7
6:00	183	145	38	25	3	1	10
7:00	182	136	45	30	3	1	11
8:00	168	116	52	34	4	1	13
9:00	146	89	57	38	4	1	14
10:00	137	82	55	36	4	1	14
11:00	143	87	56	37	4	1	14
12:00	156	106	50	33	3	1	13
13:00	188	136	51	34	3	1	13
14:00	205	159	46	30	3	1	12
15:00	175	135	40	27	3	1	10
16:00	145	113	32	21	2	1	8
17:00	120	93	27	18	2	0	7
18:00	71	53	19	13	1	0	5
19:00	43	31	12	8	1	0	3
20:00	32	22	9	6	1	0	2
21:00	41	34	7	5	0	0	2
22:00	52	44	8	5	1	0	2
23:00	37	30	7	5	0	0	2
Total	**2,510**	**1,835**	**675**	**447**	**46**	**11**	**171**

Note: Minor discrepancies between sum numbers due to 'rounding'.

Appendix B. Framework Travel Plan

Framework Travel Plan

ISPT Pty Ltd

706-752 Mamre Road, Kemps Creek
19/12/2023
P1163

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Document Control

Project No	1163
Project	Summit at Kemps Creek - 706-752 Mamre Road
Client	ISPT Pty Ltd
File Reference	1163r02v04 FTP_Summit Industrial Estate, Issue

Revision History

Revision No.	Date	Details	Author	Approved by
-	16/08/2022	Draft	M. Abdullah	R. Butler-Madden
I	16/09/2022	Issue	M. Abdullah	R. Butler-Madden
II	26/09/2022	Issue	M. Abdullah	R. Butler-Madden
III	09/02/2023	Issue	M. Abdullah	R. Butler-Madden
IV	19/12/2023	Issue	R. Butler-Madden	R. Butler-Madden

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contents continued

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APPENDICES

1 Introduction

1.1 Context

This Framework Travel Plan (FTP) has been developed to support the State Significant Development Application (SSDA) in relation to Summit at Kemps Creek (the Estate, SSD-30628110). The Estate is located at 706-752 Mamre Road, Kemps Creek (the Site), within the Penrith Local Government Area (LGA).

The proposed development consists of a Concept Masterplan and a proposed Stage 1. This FTP provides the overarching framework in which all further Travel Plans should be based.

Furthermore, it is important to note that this FTP has been prepared to address the following requirement within the Mamre Road Precinct DCP 2021, Section 3.4.1, Control 1:

- *"Development applications shall be accompanied by a Traffic and Transport Report. The Traffic and Transport Report shall include a Green Travel Plan and Travel Access Guide, and assess the impact of projected pedestrian and vehicular traffic associated with the proposal, and outline the extent and nature of traffic facilities necessary to preserve or improve the safety and efficiency of the road system."*

The Site is located to the east of Mamre Road and lies within the Mamre Road Precinct (the MRP). The Department of Planning, Industry and Environment (DPIE) rezoned the MRP, in June 2020. As such, the Site is primarily zoned IN1 General Industrial with an area of land zoned C2 Environmental Conservation traversing Site from the north-west corner to the centre.

The MRP Structure Plan was finalised in June 2020, followed by the release and finalisation of the MRP Development Control Plan (Mamre Road DCP) on 19 November 2021.

The land which forms the MRP is largely made up of rural residential properties, as well as small scale agricultural industry businesses, at present. Consequently, the Site itself is therefore not well connected by travel modes other than the private vehicle. However, the Mamre Road DCP outlines a number of objectives to ensure that, as the MRP develops, an integrated public and active transport network also develops to service future development such as the subject Site.

1.2 Background

The MRP forms one of the initial precincts of the broader Western Sydney Aerotropolis. However, as the land has already been rezoned and incorporated into the controls of the WSEA SEPP, it is not covered by the State Environmental Planning Policy (Western Sydney Aerotropolis) 2020 or the background policy which establishes the strategic direction for the Aerotropolis.

Nevertheless, the background studies provide some context with regards to travel demand management, specifically the following report:

- AECOM Western Sydney Aerotropolis Transport Planning and Modelling Stage 2 Report, October 2020 (AECOM Report).

The AECOM Report is one of the technical reports supporting the delivery of the Draft Aerotropolis Precinct Plan (November 2020), which is currently on exhibition. One of the key "enablers" detailed in the AECOM Report includes the implementation of transport policies and strategies which foster a mode shift to sustainable transport and recommends the inclusion of Travel Plans for new development applications within the future Aerotropolis Development Control Plan.

As detailed in the AECOM report Travel Plans should include the following

- Baseline travel data on the existing modal share.
- Targets.
- Action plan to achieve targets.
- Commitment to on-going review of the Travel Plan.
- Monitoring and review strategy.

Of particular relevance to this FTP, are the mode share targets set by the AECOM Report for each of the Aerotropolis precincts, the most comparable precinct to the MRP being the Badgerys Creek Precinct. Of the 5 Aerotropolis Precincts covered, Badgerys Creek has the lowest mode share target (by 2056) to non-car travel of 20% (as shown by **Figure 1**).

This reflects the planned land uses, which are anticipated to support warehousing and logistics, as noted by the AECOM Report. This is a long-term target, which is ambitious but achievable based on the policy framework, actions, initiatives, infrastructure and services defined through the precinct planning process. These targets have been given consideration in setting targets for this FTP.

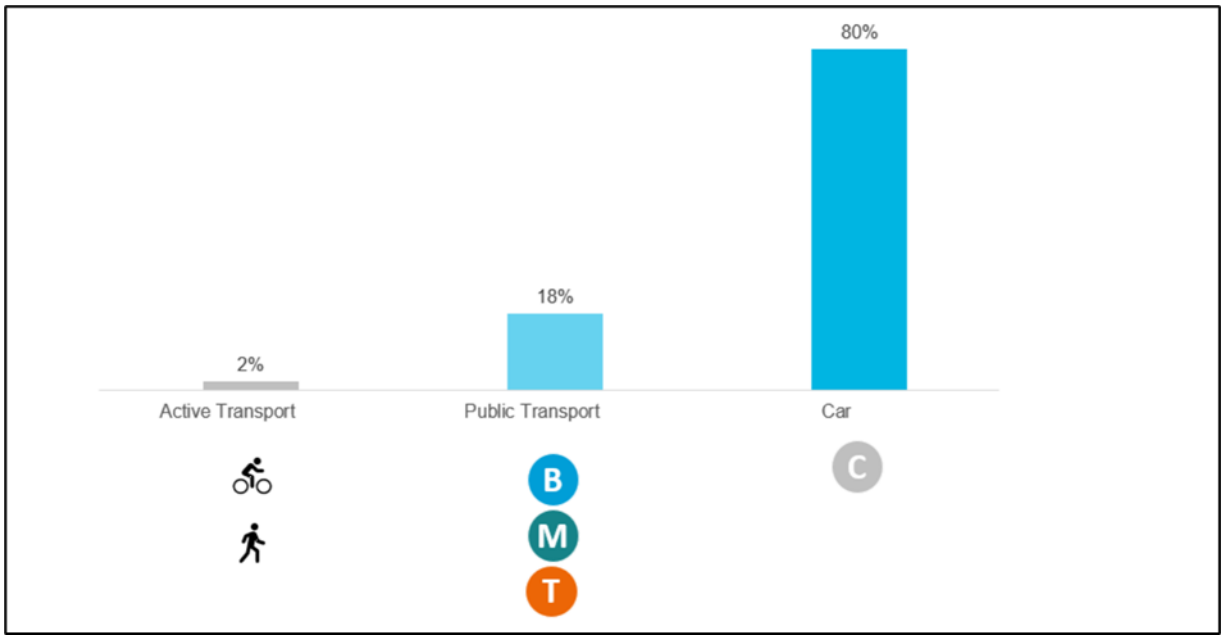


Figure 1: 2056 Badgerys Creek Mode Share Targets

Source: AECOM Report

1.3 Goals

This FTP has specifically been prepared to achieve the following key goals:

1. Identify objectives and modes share targets (i.e., site and land use specific, measurable and achievable and timeframes for implementation) to define the direction and purpose of the future site-specific Plans;
2. Suggest specific tools and actions to help achieve the objectives and mode share targets;
3. Suggest measures to promote and support the implementation of the plan, including financial and human resource requirements, roles and responsibilities for relevant employees involved in the implementation of the future site-specific Plans;
4. Suggest a methodology and monitoring/review program to measure the effectiveness of the objectives and mode share targets of the future FTP, including the frequency of monitoring and the requirement for travel surveys to identify travel behaviours at appropriate times.

1.4 Objectives

Underpinning this FTP comprises a package of measures which could be adopted and designed to address the specific travel needs of the Site. In this regard, the overall intention is to encourage and facilitate the use of alternative and sustainable modes of transport and to reduce single-occupancy car travel for journeys to and from the Site.

The primary objectives of the FTP will be to:

- Reduce the environmental footprint of the Estate.
- Set future staff travel mode share targets.
- Improve access, amenity, convenience, and safety of sustainable transport modes to/from the Site.
- Promote the use of 'active transport' modes such as walking and cycling, particularly for short-medium distance journeys.
- Reduce reliance on the use of private vehicles for all journeys.
- Encourage a healthier, happier and more active & public transport use culture.

2 Site Audit

2.1 Introduction

An audit of the Site is required to determine the existing facilities in the area and review existing transport choices. This section will need to be updated prior to implementation of any site-specific Plan, and at appropriate times as the MRP developed, during period of review. The audit should consider the following:

- Site conditions, once the Estate is complete
- Public transport services in the area, including proximity to the Site, frequency of services and accessibility.
- Bicycle and pedestrian facilities, including accessibility, connectivity, and safety; and
- Mode-split data for the Site and local area.

2.2 Development Site

2.2.1 Location & Description

The Site is legally described as Lots 1 in DP 104958. The Site is located approximately 4km north-west of the future Western Sydney International (Nancy-Bird Walton) Airport (WSA), 12km south-east of the Penrith CBD and 40km west of the Sydney CBD. It is located at 706-752 Mamre Road, Kemps Creek. The land is approximately 522,417m^2 in area and is rectangular in shape. Its sub-regional context is shown in **Figure 2** as well as the broader MRP Structure Plan area in which the Site lies.

The Site currently largely consists of unoccupied green landscape with a single residential dwelling.

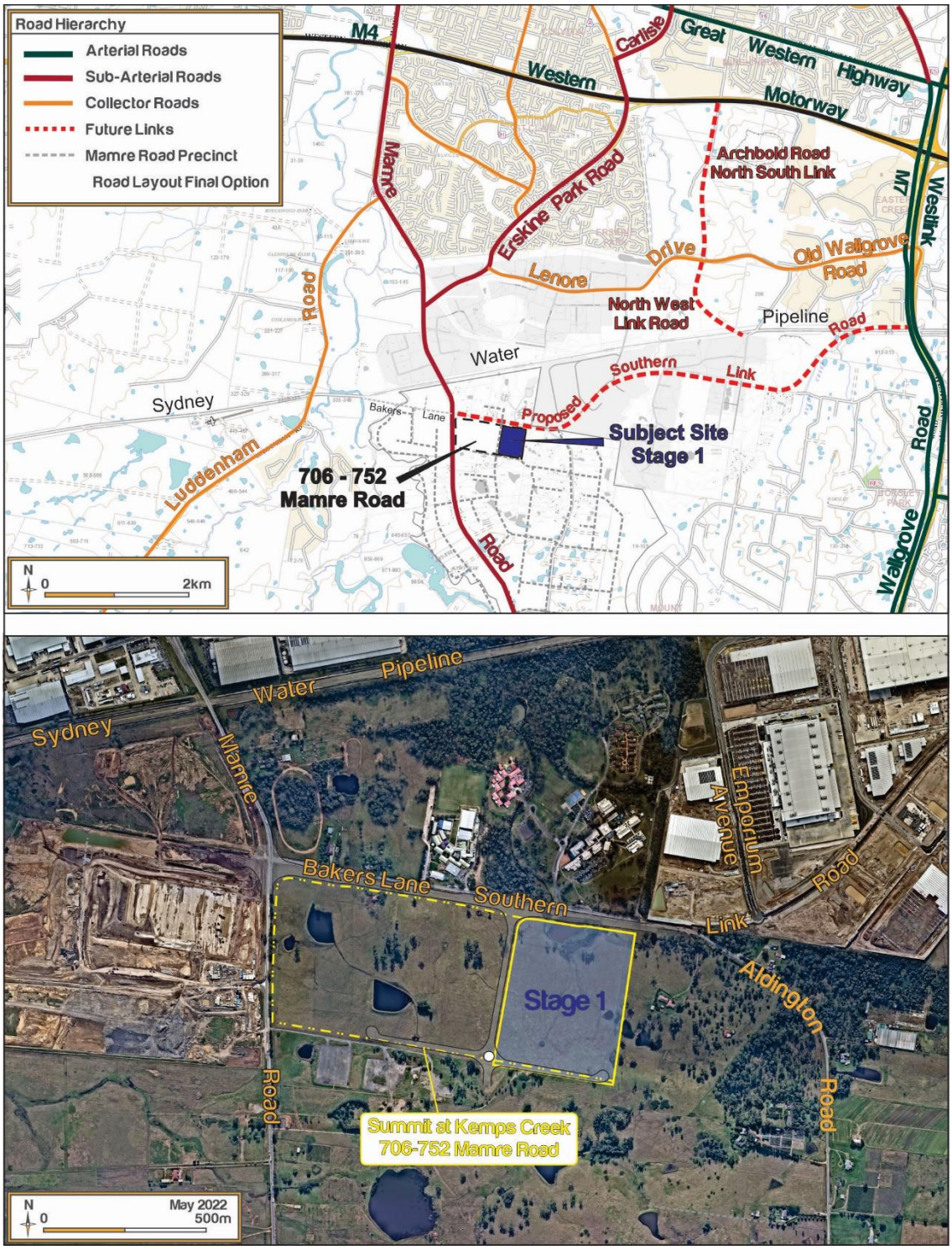


Figure 2: Site Location & Road Hierarchy

2.3 Public & Active Transport Opportunities

2.3.1 Existing Bus Services

The Site is limited with the current public transport service offering, as shown in **Figure 3**. Therefore, for this Site Audit, the public & active transport opportunities have been identified, noting that there are a number of projects and plans which relate to the strategic development of the MRP and more broadly the Western Sydney Employment Area (WSEA) and Broader Western Sydney Employment Area (BWSEA).

One such project is the Mamre Road Upgrade Project, which will see Mamre Road upgraded between the M4 Motorway and Kerrs Road (south of the Site, and north of Elizabeth Drive). The upgrade specifically provides for new bus stops along its entire route, with bus jump lanes at intersections also included in the strategic design.

This section will need to be updated prior to the finalisation of any future FTP, and accordingly as part of the review process, as the wider area develops.

2.3.2 Bus Services

The planning of bus services in Sydney is governed by the NSW Service Planning Guidelines, which aim to establish Strategic Transport Corridors and a hierarchy of bus route types that:

Link to regional centres (such as Penrith and Mt Druitt);

- Link to regional centres (such as Penrith and Mt Druitt);
- Pass through patronage generators such as district centres, TAFE colleges, hospitals and universities;
- Connect with other transport modes (trains, ferries and other buses);
- Are multifunctional (serving journeys to work, education, shopping and recreation);
- Are direct and frequent; and
- Meet the network planning principles.

It is also the case that the establishment of public transport services as early as possible in the development stages of the MR Precinct is important to achieve a culture of public transport use from the outset. To make public transport a viable choice in the study area, the services will ideally:

- Integrate with existing bus services in the area;
- Connect to regional centres of Penrith, Mt Druitt and Blacktown; and
- In the long term, connect to areas such as Leppington in the South West Growth Centre, Prairiewood and the Liverpool to Parramatta T-Way.

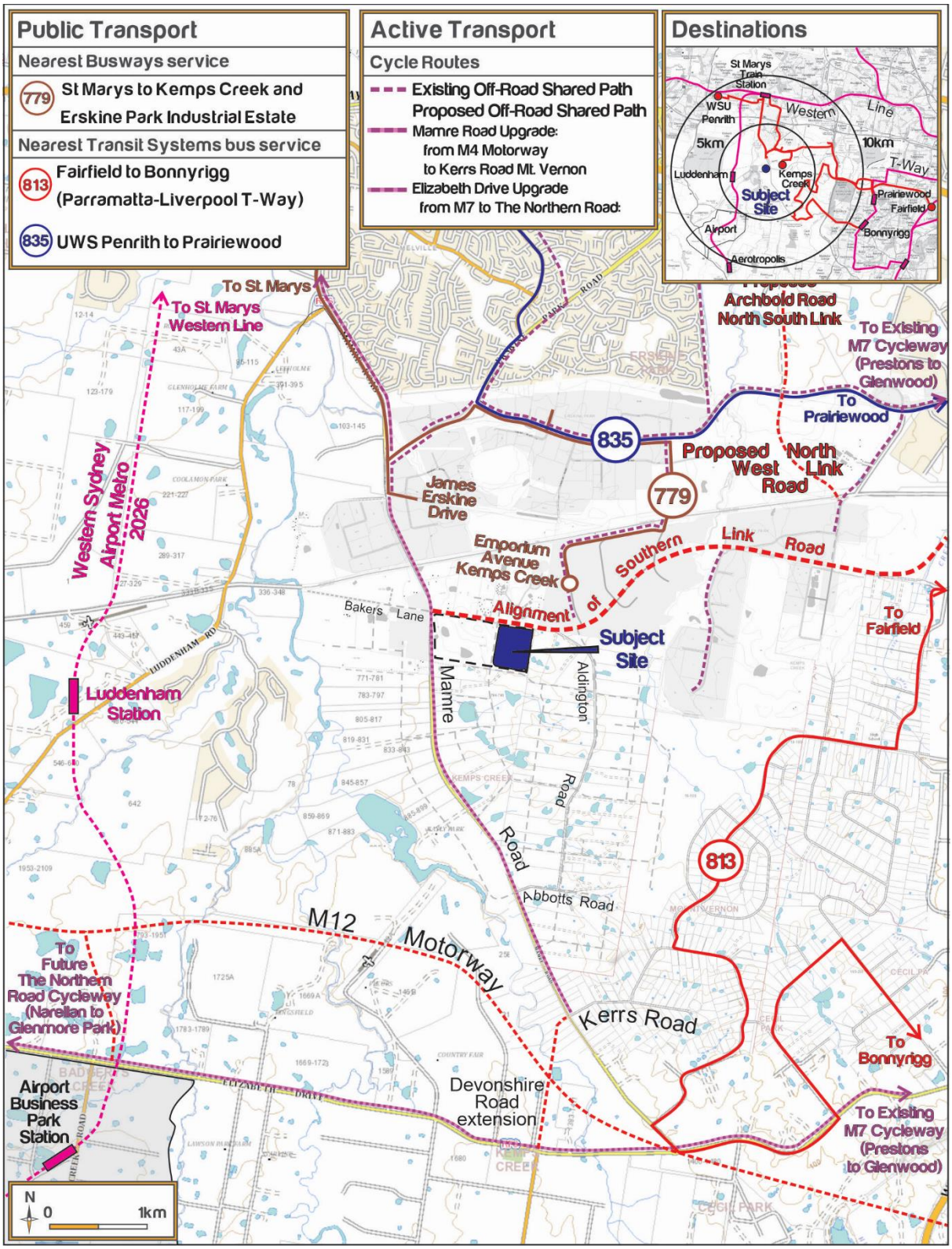


Figure 3: Existing Public and Active transport Network

While the internal MRP road network has yet to be finalised, it is clear from the intent of the objectives contained within the Mamre Road DCP that a connected bus network will be provided. As per the Mamre Road DCP, as all internal roads will accommodate heavy vehicles, they should also be capable of accommodating bus services (although no allowance has been provided at this time). Therefore, there are significant opportunities to provide sub-regional services along Mamre Road, as well as services within the internal MRP road network to maximise the number of sites that lie within 400m of a viable bus service.

Noting that TfNSW Guidelines state that bus services influence the travel mode choices of sites within 400m (approximately 5 minutes' walk) of a bus stop, access to bus services will be a key factor in influencing travel behaviour.

2.3.3 Train Services – Metro Western Sydney Airport

The closest train station to the Site is currently 10km away. However, the Metro Western Sydney Airport will provide 23 kilometres of new railway to link residential areas with jobs hubs and the rest of Sydney's public transport network.

The alignment of the Metro is shown by **Figure 4**. While the closest station to the Site will likely be Luddenham Station, located approximately 4km to the west of the Site, it will undoubtedly improve public transport accessibility to the wider area. This provides an opportunity for bus services to combine with the Metro to improve connectivity to/from the residential areas to the north of the Site.

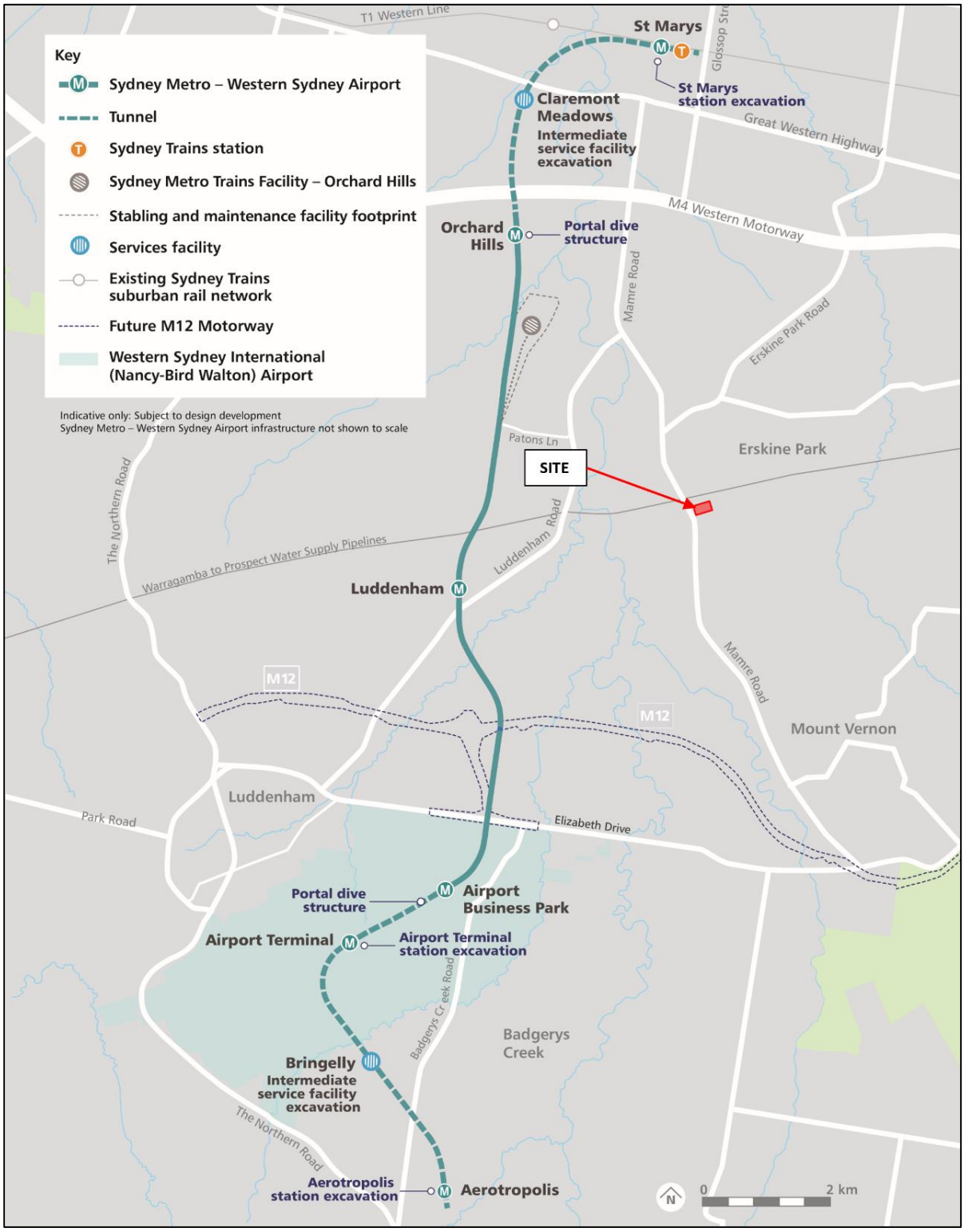


Figure 4: Metro Western Sydney Airport Alignment

2.3.4 Bicycle Network

At present, shared paths (pedestrian and cycle) are provided along Erskine Park Road and sections of Mamre Road to the north of the Site, but there is little cycling (or pedestrian) infrastructure in Mamre Road between Distribution Drive to the north and Elizabeth Drive to the south.

The BWSEA Structure Plan provides a detailed outline of future active transport objectives and strategies, acknowledging that the provision of such will be essential to encourage the use of active transport from the outset. In this regard, the BWSEA provides the following key objectives:

- Provide quality pedestrian and cycling environments around transit corridors and facilities.
- Understand the key walking and cycling needs in the region and the need for the separation of pedestrians and cyclists from motor vehicle traffic.
- Recognise that all trips involve walking at either the beginning or end of the journey, resulting in the need for connections between parking and public transport areas and destinations.
- Recognise that walking and cycling paths can form key routes between destinations.
- Understand that walking and cycling trips perform a variety of functions, not only travel from an origin to a destination, but such trips are also undertaken for recreation and/or health benefits, which can be influenced by the amenity of the route.

Key active transport routes identified in the BWSEA Structure Plan are shown in **Figure 5**, noting again that the Mamre Road upgrade Project will provide shared paths along at least one side of the road for its entire length.

2.3.5 Pedestrian Connectivity

Due to the current largely undeveloped nature of the land immediately surrounding the Site, pedestrian infrastructure is currently non-existent. Key pedestrian desire lines in the vicinity of the Site would be triggered by connections to future public transport infrastructure, noting the nature of the area is largely industrial and therefore does not have key destinations and attractions for people to walk to.

The Mamre Road DCP provides planning controls for future development in the MRP including building design controls, the road network and parking requirements. The road network outlined within the Mamre Road DCP is shown by **Figure 6**, which provides context to the configuration of MRP roads and confirms a north-south connection through the Site as a local industrial road.

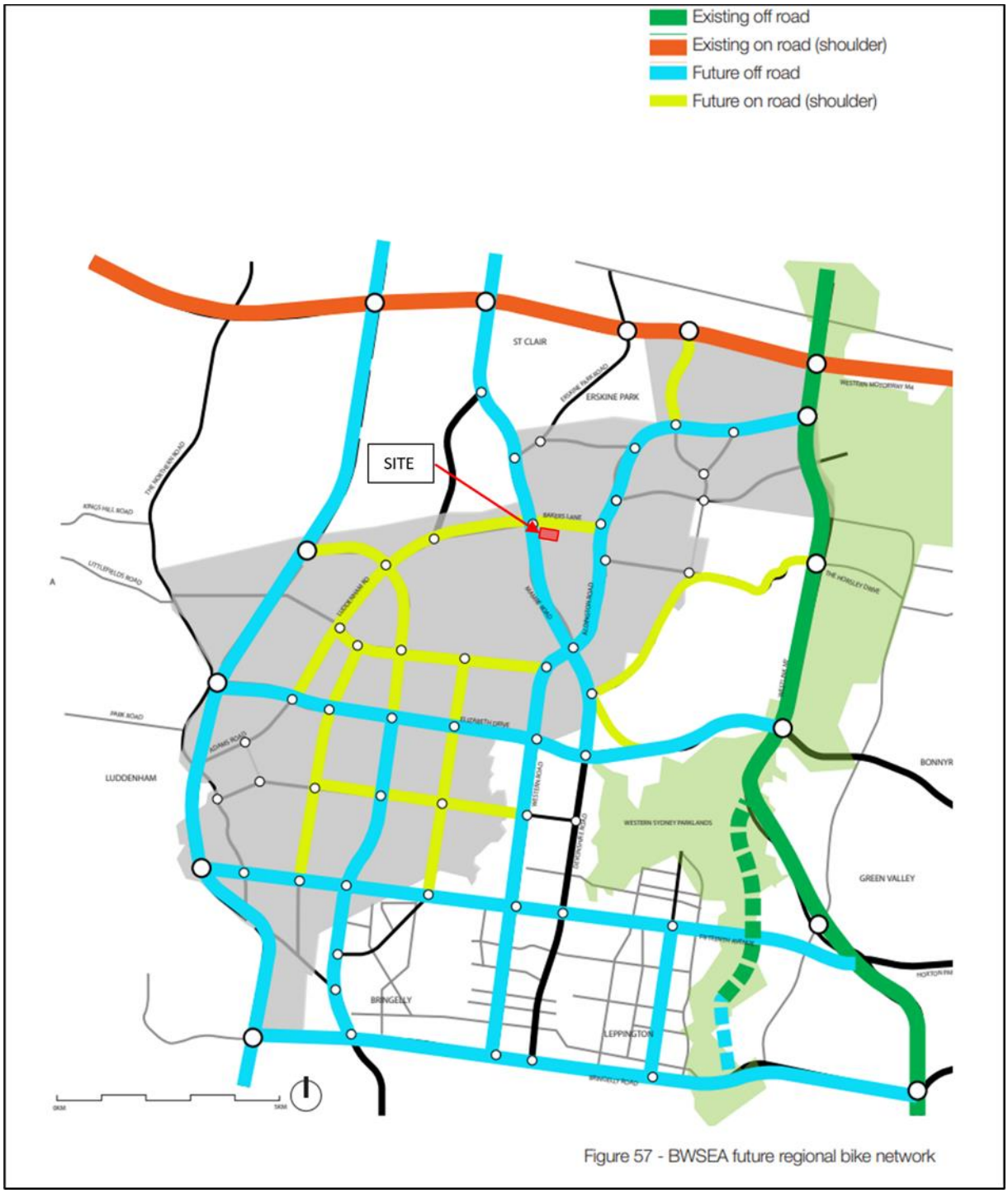


Figure 5: BWSEA Cycle Routes

Source: BWSEA Structure Plan

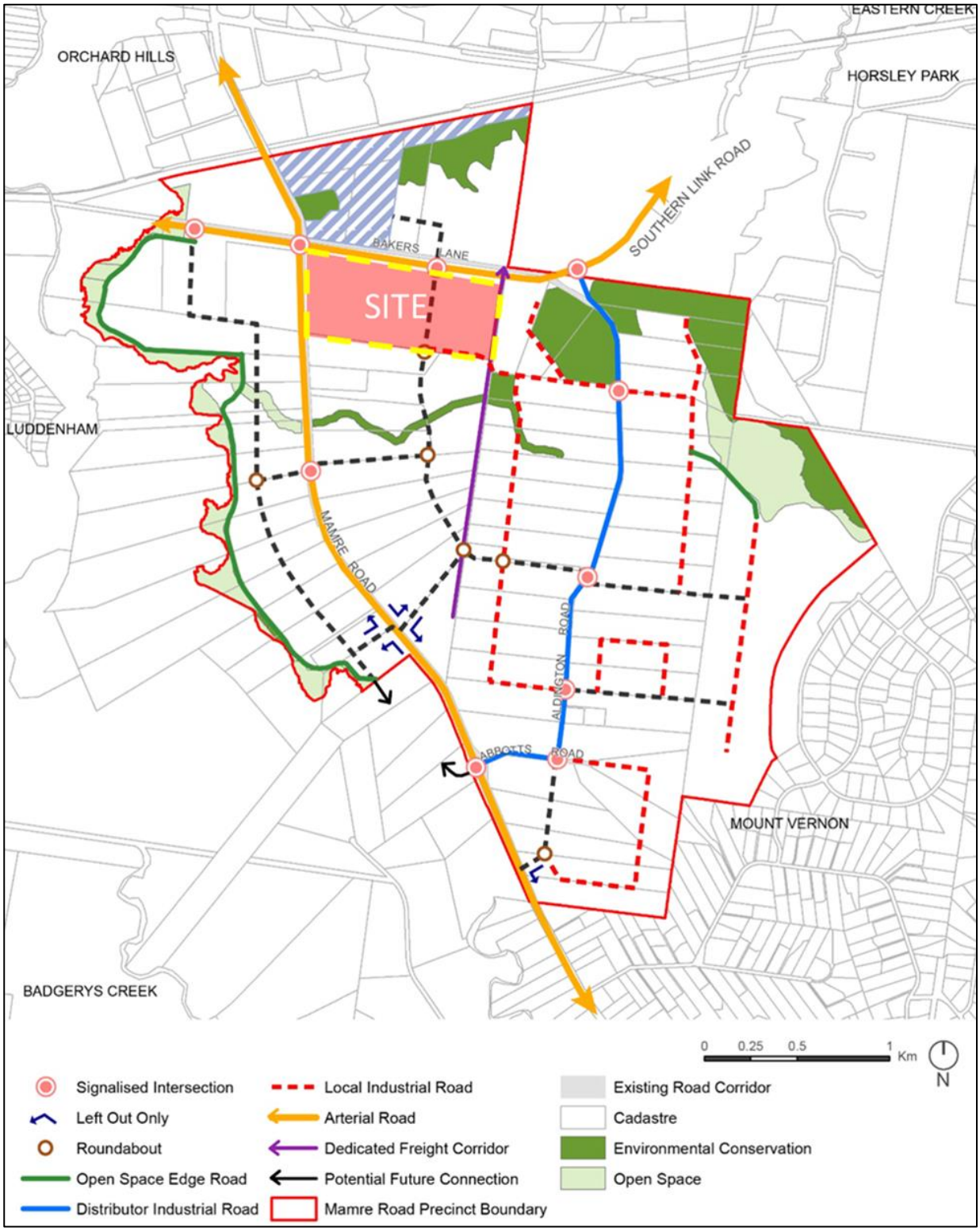


Figure 6: Road Network and Access Plan (Source: Mamre Road DCP 2021)

The requirements for the Industrial Collector and Local Road typologies, as per the Mamre Road DCP, is shown below.

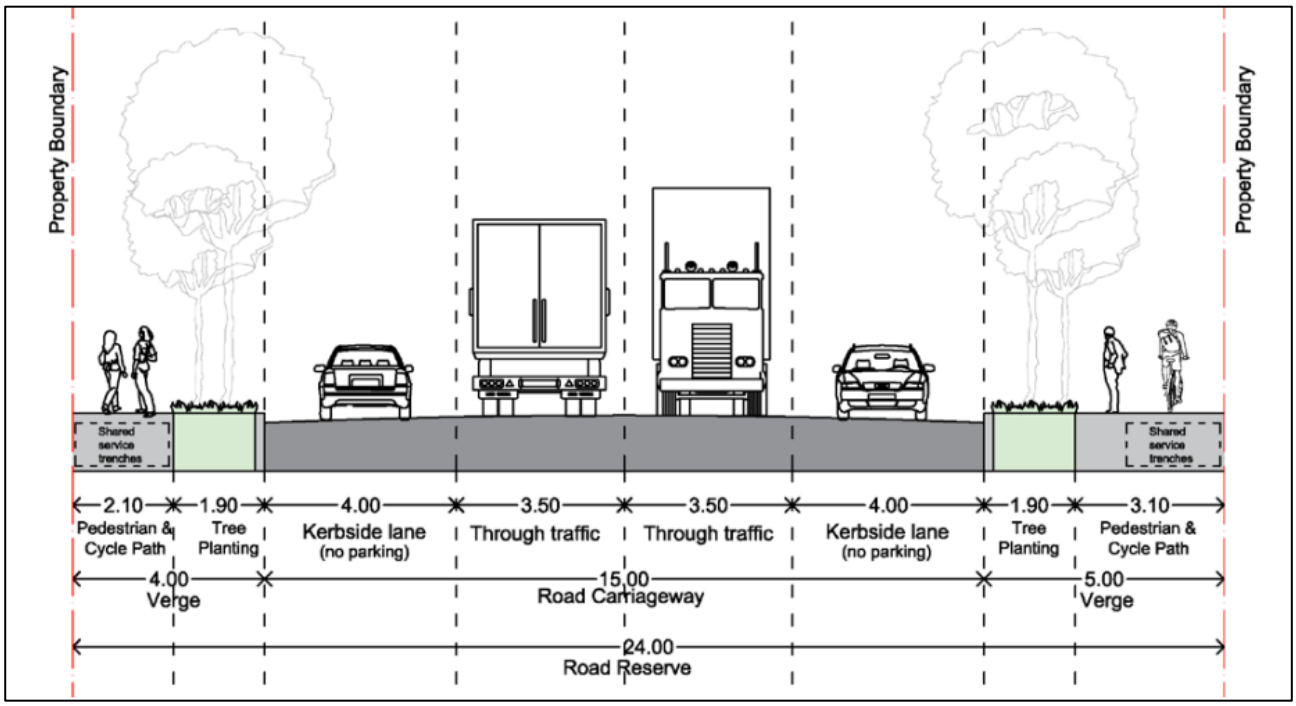


Figure 7: MRP DCP Typical Local Industrial Road

Source: Mamre Road Precinct DCP 2021

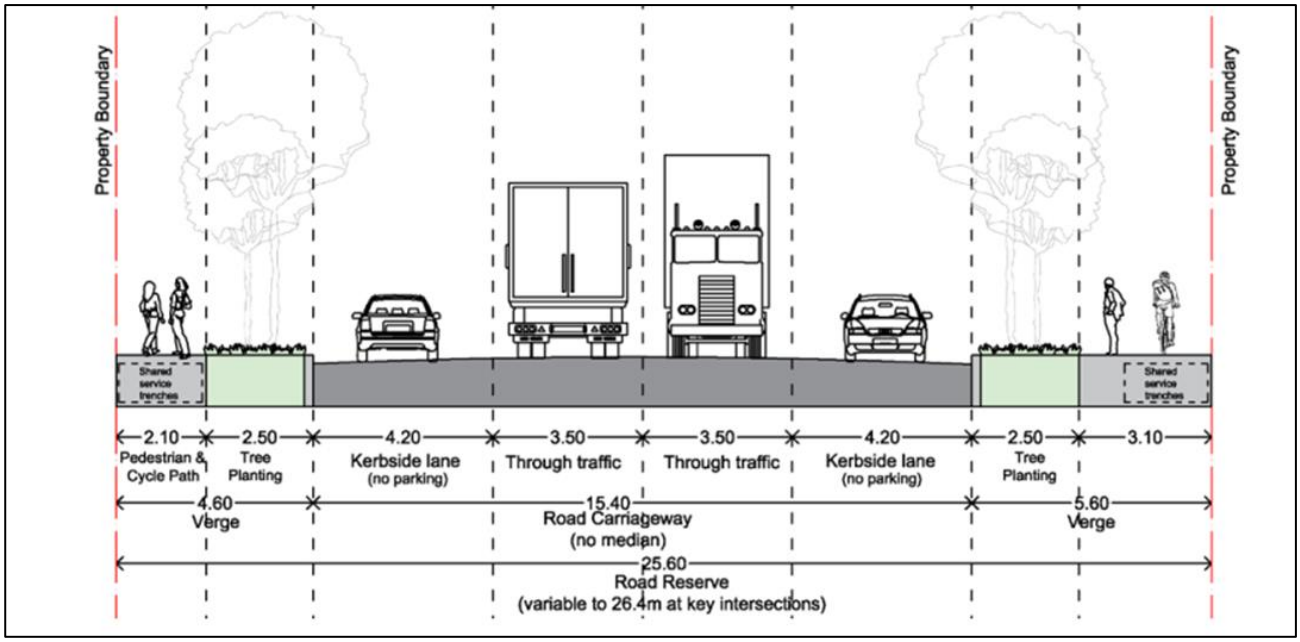


Figure 8: MRP DCP Typical Collector Industrial Road

Source: Mamre Road Precinct DCP 2021

Furthermore, it is noted that the upgraded Mamre Road will include shared cycle and pedestrian pathways along its length. As shown, the Mamre Road DCP requires internal roads to provide a minimum footpath of 2.1m on one side and a minimum shared path of 3.1m on the opposing side of the road. It also requires roads to provide shared cycle and footpaths.

2.4 On Demand Services

2.4.1 Car Share

Car sharing has emerged as a cost effective, flexible alternative to private vehicle ownership. Provision of car share in the area could facilitate intermittent work trips that may need to be made by car such that staff can commute by other modes.

One of the prominent providers of car sharing in NSW is GoGet. GoGet provides a car share service allowing members to book cars for private use. Each vehicle has a home location which is referred to as a 'pod'. These are typically located in a parking lot or on-street and generally in a highly populated urban neighbourhood.

As a future industrial area, it is not anticipated that car shares such as GoGet would be particularly successful. Nonetheless, given the benefits to reducing the need for a private vehicle, it will be worth considering its appropriateness as the area develops.

2.5 Existing Travel Patterns

2.5.1 Journey to Work Data Analysis

Journey-to-Work (JTW) data from the Australian Bureau of Statistics (ABS) 2016 Census and specifically aggregated Destination Zones (DZ) has been referenced to understand the baseline travel characteristics of the Site. This data informs the initial targets and should be refined and updated as part of the monitoring process.

A summary of key travel modes for those travelling to the locality for work have been reviewed with regard for the surrounding Destination Zone 115184210, within the Horsley Park – Kemps Creek statistical area.

The travel modes are presented in **Figure 9**.

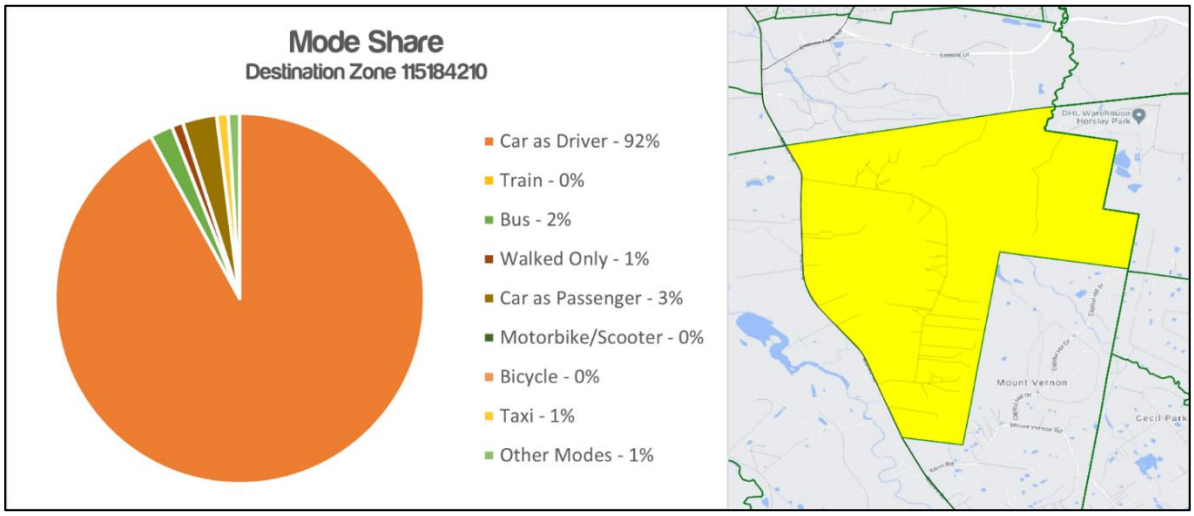


Figure 9: Travel Mode Share

With reference to **Figure 9** it is evident that the private vehicle (car) is the overwhelming preferred mode of choice for commuters travelling to work in in the area. The data indicates that 95% travel to work by car with 92% as the driver and 3% as passenger i.e. car-pooling.

This is reflective of the current nature of the area, which accommodates rural residential properties and agricultural businesses only. However, noting the future land use of the Site as industrial in nature, it is expected that the JTW data accurately reflects the current trends for travel to places of work at industrial sites.

The TfNSW (formerly Roads and Maritime Services) Guide to Traffic Generating Developments Updated Traffic Surveys, August 2013, provides details in relation to the principal mode of travel used by staff at the Erskine Park and Eastern Creek warehouses surveyed by TfNSW. These surveys indicate that 90% of all workers would travel via private vehicles, with 8% travelling as passengers. Therefore, the existing census data is reflective of existing travel of industrial development.

3 Development, Scope &Implementation of the Plan

3.1 Introduction

This section sets out in broad terms how the FTP will be developed and the scope of the FTP.

3.2 Responsibility

The responsibility for the future Travel Plans will lie with site management and should form part of organisational policies. Future FTPs should include a statement on company policy in relation to travel, and should be endorsed by senior management.

3.3 Future FTP Scope

The future FTP address the following types of travel generated by the development:

- Commuter journeys by staff;
- Visitor journeys;
- Business travel; and
- Site related deliveries from contractors etc.

The future FTPs are expected to have most effect on commuter journeys by staff. While the operator will aim to encourage sustainable travel by visitors, ultimately staff travel is easier to influence.

The aim is to develop practical measures that are effective in reducing car use for all journeys to the Site.

3.4 Implementation

A Travel Plan Coordinator (TPC) should be appointed to act as the primary point of contact for enquiries relating to the progress of the future Plans. It is recommended that a consistent TPC be appointed for the Estate so as to achieve a coordinated approach across the Site. However, as the individual sites will be responsible for implementing their own FTPs, this will be at the discretion of site management. The TPC will manage all aspects of the FTP, including the co-ordination and joint working practices between those on-site.

The TPC will promote participation in and commitment to the future FTP from site tenants and will work in partnership with all stakeholders to deliver the strategies and actions.

The TPC should be appointed before the Site becomes occupied, or within 1 month of the site becoming occupied. Contact details for the TPC should be provided in the implemented Plan.

The main duties of the TPC are envisaged to be:

- Overseeing final development and implementation of the FTP.
- Internal liaison to promote awareness of the FTP amongst businesses and staff within the Estate.
- Liaison with outside bodies, such as Penrith City Council (Council) and local bus operators, as required regarding the operation of the FTP.
- Providing updated travel information to staff and visitors, as necessary.
- Monitoring, review and (if necessary) updates to the FTP.

3.5 Consultation

It is essential that any parties that may play a part in the future of FTP's and their actions are aware and have an opportunity to discuss. This would enable equitable input and feedback as well maximising their overall efficacy. For this reason, a coordinated approach to FTPs across the Estate should be implemented (subject to individual tenant participation) to assist in the consultation with the relevant parties, which could include the following:

- Council Traffic & Transport Department and Traffic Committee
- Local Bus Operators
- Transport for New South Wales

Other organisations may be added to this list as the Plans evolve.

4 Travel Mode Targets

4.1 Introduction

Based on the existing travel mode splits identified in **Section 2.5**, the Site and the surrounding areas are considered to have a low dependency on public and active transport. This is reflective of the current nature of the area, which accommodates rural residential properties and agricultural businesses.

However, noting the future land use of the Site as industrial in nature, it is expected that the JTW data accurately reflects the current trends for travel to places of work at industrial sites. The RMS Guide to Traffic Generating Developments – Updated Traffic Surveys itself provides details in relation to the principal mode of travel used by staff at the Erskine Park and Eastern Creek warehouses surveyed by TfNSW. These surveys indicate that 90% of all workers would travel via private vehicles with 8% travelling as passengers.

This section therefore sets out the targets for the reduction in car journeys associated with the Site, with consideration to the future land use in the area. Targets are the means of measuring the achievement of the objectives. They need to be clear, directly linked to the objectives, monitored and reviewed.

Questionnaire surveys will be conducted in the future that will form the updated travel mode baseline to further develop site-specific targets. The first surveys will be undertaken shortly after occupation. These surveys will be repeated at a suitable time to assess the effectiveness of the implemented Travel Plan; the targets are to be reviewed to align with the most up-to-date information.

The implemented FTPs are to be in place for the lifetime of the development. The initial timeframe in which targets need to be monitored and reviewed will be reviewed every 1-2 years, for a minimum of 5 years.

4.2 Mode Share Targets

It is essential that Mode Share targets be achievable with consideration for the public transport, walking and cycling opportunities available within proximity to the Site. Targets should also be factoring in what future transport options could reasonably be used to access the Site, and also the nature of the development itself.

As per **Section 1.2,** the AECOM Report provides a mode share target for public & active transport of 20% and by car of 80% by 2056 for the nearby Badgerys Creek Precinct. Sites within the MRP should reflect a similar target. While at least maintaining the existing carpooling mode share of 3%, this represents a decrease in travel by car (as a driver) by 15% by 2056.

Further, it should be recognised that during the earlier stages in development of the MRP, it would be anticipated that change in travel behaviour will be slower than in other areas, while the public and active transport networks are still being integrated.

The targets should therefore be revisited and updated after the opening of the relevant development as part of the monitoring process. The preliminary targets are nominated in **Table 1,** which represents a 5-year target to coincide with the minimum 5 years of monitoring and review.

TABLE 1: PRELIMINARY 2026 MODE SHARE TARGETS

Travel Mode	Mode Share of Existing Employees	Proposed Targets	Relative Change
Car as driver	92%	88%	-4%
Train	0%	0%	–
Bus	2%	4%	+2%
Walked only	1%	1%	–
Car as passenger	3%	3%	–
Motorbike/Scooter	0%	1%	+1%
Bicycle	0%	1%	+1%
Taxi	1%	1%	–
Other Modes	1%	1%	–

5 Measures and Action Strategies

5.1 Measures

The below is a range of measures which could achieve the objectives of this FTP . It is critical to note that these are suggested measures and are not necessarily likely to be applicable in the early stages of development in the MRP.

This section needs to be reviewed and confirmed prior to implementation of any future Plan.

- An introduction to the FTP for all staff, setting out its purpose and objectives.
- Provision of public transport travel information for staff, customers and visitors.
- Encouragement of car sharing, both amongst staff on site and in the wider context.
- Provision of car share spaces (future potential measure).
- Assisted cycle purchase schemes.
- Interest free loans to assist with cycle purchase, cycle equipment purchase etc.
- A transport section on the company website with links to local bus operator sites, to ensure that travel information is always up to date.
- The provision of transport information for visitors to the Site.

5.2 Strategies

Seven (7) main strategies are identified, and the actions required for each are detailed in **Table 2**. The table details specific actions that could be implemented as part of a future site-specific FTP (subject to finalisation with the Developer and / or future site tenant) and the party responsible for implementing each action.

These proposed actions must be reviewed at regular intervals to ensure that the mode split targets are being met. By that principle, this document is classed as a live document and subject to regular review. It is important to note, that the actions should not be taken as mandatory but rather potential options that should be investigated and implemented by future inhabitants of the development.

TABLE 2: PROPOSED FTP ACTION STRATEGIES

STRATEGY	HOW IT WORKS	IMPLEMENTATION	RESOURCES / RESPONSIBILITY	TIMELINE	FUNDING
1 Travel Planning and Demand Management					
1.1 Green Travel Plans	• Develop a FTP to provide information for Travel Access Guide (TAG). Refer to .Appendix A. • Management of FTPs. • Promotion of FTPs.	Provide information resources and implement a range of additional initiatives to reward and encourage those who travel actively to help develop a healthy, active culture and meet travel targets. Continued support of the person/organisation in charge of managing the FTP. This would happen with the appointment of a TPC. • Undertake a FTP event annually. • Promote the following initiatives via bulletins, web pages, social media: - Travel Survey Results; and - Progress and update of FTP. Retain a current copy of the TAG to be relevant, useable, and accessible. TAG should be displayed in communal areas.	Building Manager to be responsible for overall implementation of final FTP and providing annual reporting on FTP outcomes to Council. Tenant to develop Company specific travel plan based on final FTP prior to the commencement of a new lease/sale of property. Company/Staff/Visitors shall be responsible for ongoing implementation of Company assigned actions and participation in annual monitoring and reporting process to Council	Upon completion of the development and ongoing annual FTP events	Tenant / Business Owner
1.2 Travel Information Points	• Establish locations such as travel information points where staff and visitors and others can access travel information via interactive platforms. • Promotion of FTPs • Provision of travel and transport information options	Establish locations such as travel information points where staff, visitors and others can access travel information via interactive platforms. These can be similar to wayfinding kiosks provided at public transport stations, shopping centres etc. Information could include walking and cycling routes, bicycle parking, public transport availability, routes, real-time timetables and shared vehicles.	Tenant / Business Owner	Subject to employer preference.	Tenant / Business Owner
1.3 Flexible Working Hours	Allow employees the flexibility to commute outside peak periods to reduce overall congestion and travel time.	Manage staff rosters where possible.	Tenant / Business Owner	Subject to employer preference. Action to be considered by employers / visitors as part of an employer specific FTP to be developed and	Tenant / Business Owner

STRATEGY	HOW IT WORKS	IMPLEMENTATION	RESOURCES / RESPONSIBILITY	TIMELINE	FUNDING
				forwarded to Council prior to building occupation.	
1.4 Teleworking	Provide the option to work remotely (where possible) to reduce the number of vehicles travelling to the development and encourage teleconferencing rather than travelling to meetings.	Manage staff rosters and develop work-from-home policies and procedures, where possible.	Tenant / Business Owner	Subject to employer preference. Action to be considered by employers / visitors	Tenant / Business Owner
2 Promoting Public Transport					
2.1 Opal Card Loan Schemes / Subsidising Schemes for Public Transport Travel through Pre-paid Credit Cards	Company may consider subsidising staff public transport travel. Alternatively, staff can pay for their own Opal Cards / pre-paid travel card through their salary, spreading the cost over the year to make it more affordable.	Subject to owner / User negotiations and incentives.	Tenant / Business Owner / TPC	Subject to employer. Can be implemented at building occupation	Tenant / Business Owner
2.2 Maximise Bus Service Frequency	Meet or exceed Transport NSW bus planning guidelines.	Decrease headway where possible, especially during peak periods. Report back to Transport for NSW on perception of bus service adequacy	TfNSW	Developer to hold on-going discussions with TfNSW after each annual review of FTP and report on relevant findings	TfNSW
2.3 Provide Bus Stops with Shelter Facilities	Ensuring provision of bus stops suitable for waiting areas for commuters, the majority of which would likely be workers associated with the development.	Propose or recommend improvements to the proposed / implemented bus stops along Mamre Road to TfNSW.	TfNSW	Subject to discretion of TfNSW. Advisable to be prior to the opening of the development	TfNSW
2.4 Public Transport for Work Travel	The company and the TPC can promote public transport as one of the main preferences for work travel. This should be supported by all users and visitors to	Subject to owner / User negotiations and incentives.	TPC	Subject to employer. Can be implemented at building occupation	Tenant / Business Owner

STRATEGY	HOW IT WORKS	IMPLEMENTATION	RESOURCES / RESPONSIBILITY	TIMELINE	FUNDING
	development having access to Opal Cards.				
2.5 Lobby for Precinct Wide Shuttle Service	Shuttle service initiative that would transport staff to / from the MRP to the Railway Station.	Provision of bus shuttle service running between the development and either nearby homes or proposed Luddenham Station. Tenant / Business Owner on the Site would arrange for a bus shuttle service that would travel between the development / Site and the homes / Station at a dedicated time / interval. Persons signing onto the program or service would be accountable for turning up at the appropriate times so as to not delay the service. This should be promoted as part of the FTP and on communal locations such as main website or notice boards.	TPC to lobby Estate Manager / Owner	Ongoing in the workplace. Updates can be made to organisation as appropriate	Estate Owner / Manager
3 Promoting Carpooling					
3.1 Open Car Sharing	Where anyone in a defined geographical area can join a ride sharing scheme. This involves no input from the employer and should be on the onus of staff to schedule.	This can usually be accomplished by having notice boards in business premises which are a good place for employees to find colleagues looking to share journeys. Utilise car share spaces provided and actively promote on site to staff and visitors.	Staff	Ongoing in the workplace	Fuel costs can be arranged and split equitably by those involved
3.2 Closed Car Sharing	The company / department sets up an in-house car-matching scheme	The company / department sets up an in-house car-matching scheme and gets staff to participate. A points system can be setup to encourage friendly competition between staff and overall reduce carbon footprint from single car usage. Utilise car share spaces provided and actively promote on Site to staff and visitors. Reward regular car sharers by providing gifts such as free car washes.	Company, TPC	Ongoing in the workplace. Updates can be made to organisation as appropriate	Tenant / Business Owner

STRATEGY	HOW IT WORKS	IMPLEMENTATION	RESOURCES / RESPONSIBILITY	TIMELINE	FUNDING
3.3 Third-party Car Sharing Program	Companies such as Liftshare are an online service that facilitates journey sharing between individual users, as well as providing separate services for businesses, organisations and events.	They allow users to search for and post details online of journeys; by car, bike, taxi or walking, for which they wish to find someone else with which to share the journey with. Users can search for people who have entered similar journeys and contact them, wait to be contacted by someone searching for a journey of their own.	Staff – encouraged by TPC	Ongoing in the workplace	Staff
3.4 Carpool Week	Arrange for a dedicated carpool campaign week to promote the benefits of carpooling.	One week of the year where a carpool theme is emphasised around the workplace including promotion such as a launch event. Intention is to show that carpooling is a real alternative to travel to work. Provide prize incentive as part of competition to promote raise awareness.	Tenant / Business Owner	One week per calendar year	Tenant / Business Owner
4 Promoting Cycling					
4.1 Create a Bicycle Users Group (BUG)	BUGs are local groups of like-minded bike riders who get together generally for social riding in their area. For the purposes of the workplace, this can be adapted as a way of creating as social and healthy aspect of travelling to work. As a minimum, the establishment of the BUGs should be promoted as Precinct wide initiative.	The BUGs can set up amongst employees and arranged with the help of TPC. An online group such as an email thread, Teams Chat group would be the main channel where participants can communicate and organise rides, suggest areas for improvement. A designated leader would be appointed and ideally affiliated with Bicycle NSW who would manage queries and support in enabling a comfortable riding experience for all wishing to partake. BUG would be made aware of the recent upgrades to cycling infrastructure in the area.	Tenant / Business Owner, TPC	Ongoing in the workplace	Tenant / Business Owner
4.2 Providing & Maintaining End of Trip Facilities	Providing facilities such as showers, change rooms, lockers. For the initial stages of development, it is recommended to provide facilities	Bicycle parking spaces will be provided for residents and staff. Access to other facilities such as showers will also be made.	Developer / Estate &/or warehouse Owner / Manager	To be provided at construction of warehouses	Developer / Estate &/or warehouse Owner / Manager

STRATEGY	HOW IT WORKS	IMPLEMENTATION	RESOURCES / RESPONSIBILITY	TIMELINE	FUNDING
	compliant with the relevant controls, and as the Site develops further, they should be reviewed as part of the FTP monitoring process to meet any increase in demand.	Developer to provide bicycle parking spaces in the parking area together with male and female lockers, male and female showers and an accessible shower as per Building Plans. Accordingly, the following bicycle rates should be considered under the Mamre Road DCP: • Office Bicycle Parking requirement: 1 space per 600m^2 GFA (over 1,200m^2 GFA); and • Warehouse Bicycle Parking requirement: 1 space per 1,000m^2 GFA (over 2,000m^2 GFA).			
4.3 Promote Bicycle Initiatives	Promotion of bicycle initiatives – NSW bicycle week, Ride to Work etc.	Promote and encourage cycling in the precinct and should actively participate in recognised NSW government bicycle initiatives such as bicycle week and cycle to workday.	TPC	To be promoted annually	Developer / Estate &/or warehouse Owner / Manager
4.4 Advertise Bicycle Routes	Promotion of bike lanes through the TAG.	Prepare Site specific maps with guidance on the most optimal way of travelling to/from the Site by bicycle	TPC	To be promoted and provided at communal areas such as key information kiosks within facility	Tenant / Business Owner
5 Promoting Walking					
5.1 Providing End of Journey Facilities	Provision of sufficient end of trip facilities such as showers, change rooms, lockers etc to maximise pedestrian activity throughout the Site and the wider precinct.	Provide pedestrian facilities and amenities in close proximity in the Site and at the bus stops. Developers to provide male and female lockers, male and female showers and an accessible shower as per Building Plans.	Developer	To be provided at completion of development	Tenant / Business Owner

STRATEGY	HOW IT WORKS	IMPLEMENTATION	RESOURCES / RESPONSIBILITY	TIMELINE	FUNDING
5.2 Walking Routes	Incentivise travelling by foot by highlighting possible routes particularly those to nearest bus stops	Prepare Site specific maps highlighting pedestrian desire lines and optimal routes to provide guidance to pedestrians to key public transport and car sharing locations.	Tenant / Business Owner	To be promoted and provided at communal areas such as key information kiosks within facility	Tenant / Business Owner
5.3 Promote Walking Initiatives	Promotion of walking initiatives: walk to game / training day, pedometers / step challenge / gamification of walking / reward programs based on steps to elevate pedestrian activity throughout the Site and to / from public transport points.	Promote and encourage walking in the complex and should actively participate in recognised NSW government initiatives such as walk to workday and pedometer / step challenges. Friendly challenge competitions can be organised to incentivise and encourage increased walking activity amongst users and visitors to the facilities.	Tenant / Business Owner, TPC	To be implemented monthly or as appropriate throughout the calendar year.	Tenant / Business Owner
6 Restraining Parking					
6.1 Limited Parking Allocation On Site	Parking availability will inherently generate vehicle trips. By restricting parking supply, you can discourage non-essential car use.	Limiting the number of car parking spaces either in actual terms or managing access via permit parking, paid parking or needs based parking policies, is one of the most direct and effective ways of reducing car use.	Lot by Lot Management	To be provided at completion of development	Tenant / Business Owner
7 Influencing Travel Behaviour					
7.1 Provision of Sustainable Travel Packs to Employees and Visitors	Introduces employees and visitors alike to the FTP and provides information on walking and cycling routes, and travel by bus & train, timetables, and access routes. This would include a TAG.	To be distributed to staff, visitors, and neighbouring properties. Contact details as to who is responsible for the FTP will also be provided. This would include a TAG.	Tenant / Business Owner, TPC	Travel Packs to be provided upon occupancy of building to employees.	Tenant / Business Owner

5.3 Communications Strategy

5.3.1 Welcome Packs

New staff shall be provided with a 'welcome pack' as part of the on-site induction process which includes a FTP Pamphlet and other information in relation to sustainable transport choices. This pack shall include an electronic copy of the FTP and a Travel Access guide (TAG) as provided in **Appendix A**, as well as general information regarding the health and social benefits of active transport and advice on where to seek further information.

6 Monitoring Strategy

6.1 Plan Maintenance

This Plan shall be subject to ongoing reviews and will be updated accordingly. Regular reviews will be undertaken by the TPC. As a minimum, a review of the FTP would occur every 1-2 years.

The key considerations when reviewing or monitoring the FTP are as follows:

- Update baseline conditions to reflect any changes to the transport environment in the vicinity of the Site such as changes to bus services, new cycle routes etc.
- Track progress against target travel mode targets.
- Identify any shortfalls and develop an updated action plan to address issues.
- Ensure travel modes targets are updated (if necessary) to ensure they are realistic and remain ambitious.

6.2 Monitoring

So as to record the overall success, as well as the effectiveness of the individual measures, monitoring and review of the FTP should be conducted at regular intervals. The TPC will act as the primary point of contact for all enquiries relating to the FTP's progress.

The FTP should be monitored around every 1-2 years, with the first survey being carried out shortly after first occupation of the Development. Travel mode surveys would determine the proportion of persons travelling to/from the Site by each transport mode. This should be in the form of annual travel mode questionnaire surveys to be completed by all persons attending the site, as far as practicable. A sample of a typical travel mode questionnaire form is included in **Appendix B**

If targets are not met at the end of the initial period of monitoring, the FTP should be reviewed, new measures introduced and would be reassessed at the next monitoring stage.

Appendix A. Travel Access Guide

Travel Access Guide

Stage 1
Warehouses 01, 02 and 03

Summit on Kemps Creek

706 - 752 Mamre Road
Kemps Creek
NSW 2178

Existing Public Transport Routes

Busways Western Sydney

779 St Marys to Kemps Creek via Erskine Park Industrial Estate

Transit Systems

835 Fairfield to Bonnyrigg via Horsley Park, Mt Vernon

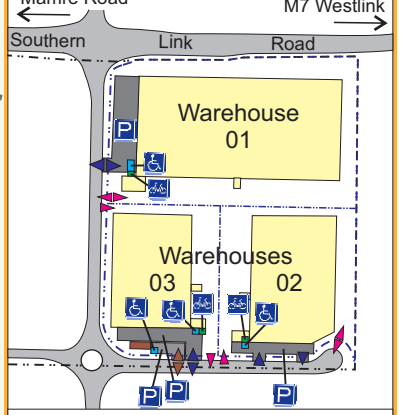
813 Prairiewood to University of Western Sydney Penrith via Wetherill Park, Horsley Park, Eastern Creek, Erskine Park, St Clair, Colyton and St Marys

Existing and Proposed Potential Active Transport Routes

- Existing Shared Paths
- Motorway Cycle Lanes
- Proposed Mamre Road Upgrades -Stages 1 and 2
- Proposed Southern Link Road Cycleway
- Elizabeth Drive (M7 to The Northern Road)
- Mamre Road Log Road Layout - May '21

To Penrith
To St Marys
To UWS via S Marys
Western Motorway
To Old Windsor Road Glenwood
Orchard Hills Metro Station to St Marys Train Station (T1 Western and North Shore Line)
Western Sydney Airport Metro Line - 2026
Proposed Archibold Road North South Link
To Wentworthville
779
Upgrade Stage 1
Upgrade Stage 2
Erskine Park Road
John Morphett Place
Lenore Drive
835
Proposed North West Link Road
Old Wallgrove Road
James Erskine Drive
Pipeline
Sydney Water
Emporium Avenue Kemps Creek
Bakers Lane
Southern Link Road
Millner Avenue
Burley Road
Luddenham Road
Luddenham Metro Station
Stage 1 See Detail
Mamre Road Precinct
Aldington Road
Bus to Prairiewood to Fairfield
To Fairfield
Westlink M7
Wallgrove Road
813
Upgrade Stage 2
Abbotts Road
Kerrs Road
Mount Lennon Road
Duff Road
To Bonnyrigg
To Liverpool
To Prestons
To Future The Northern Road Cycleway (Narellan to Glenmore Park)
Potential M12 Motorway
Elizabeth Drive
Devonshire Road extension
Aerotropolis
Airport Business Park Station
N 0 2km

Stage 1 Detail



	Warehouse			
	Café	01	02	03
Car Entry/Exit	◆	◆	◥	◆
Total Parking	25	163	81	76
Accessible	1	2	1	1
Truck Entry/Exit	N / A	◆	◆	◥
Bicycle Racks	N / A	?	?	?

August 2022

Appendix B. Sample Questionnaire

Instructions for Surveyor(s)

1. The Survey Form (over page) should be completed by EVERY PERSON attending the site on a particular day.
2. This survey should be completed SEPARATELY for EACH TRIP undertaken

Travel Mode Questionnaire Survey Form

Date: **Approximate Time:**

Q1. Are you one of the following?

☐ Warehouse staff

☐ Office staff

☐ Courier / office delivery

☐ Casual contractor

☐ Company driver / sub-contractor

☐ Other (Please specify) ……..…..

Q2. How did you travel to / from the site today?

☐ Walked only

☐ Bicycle only

☐ Train

☐ Bus

☐ Taxi

☐ Car share vehicle

☐ Motorcycle / scooter

☐ Car (as passenger)

☐ Car (as driver)

☐ Other (Please specify) ……...

Q3. If you drove to the site, where did you park?

☐ Not applicable – did not drive

☐ On-site car park

☐ On-site within truck hardstand

☐ Other (Please specify) ……

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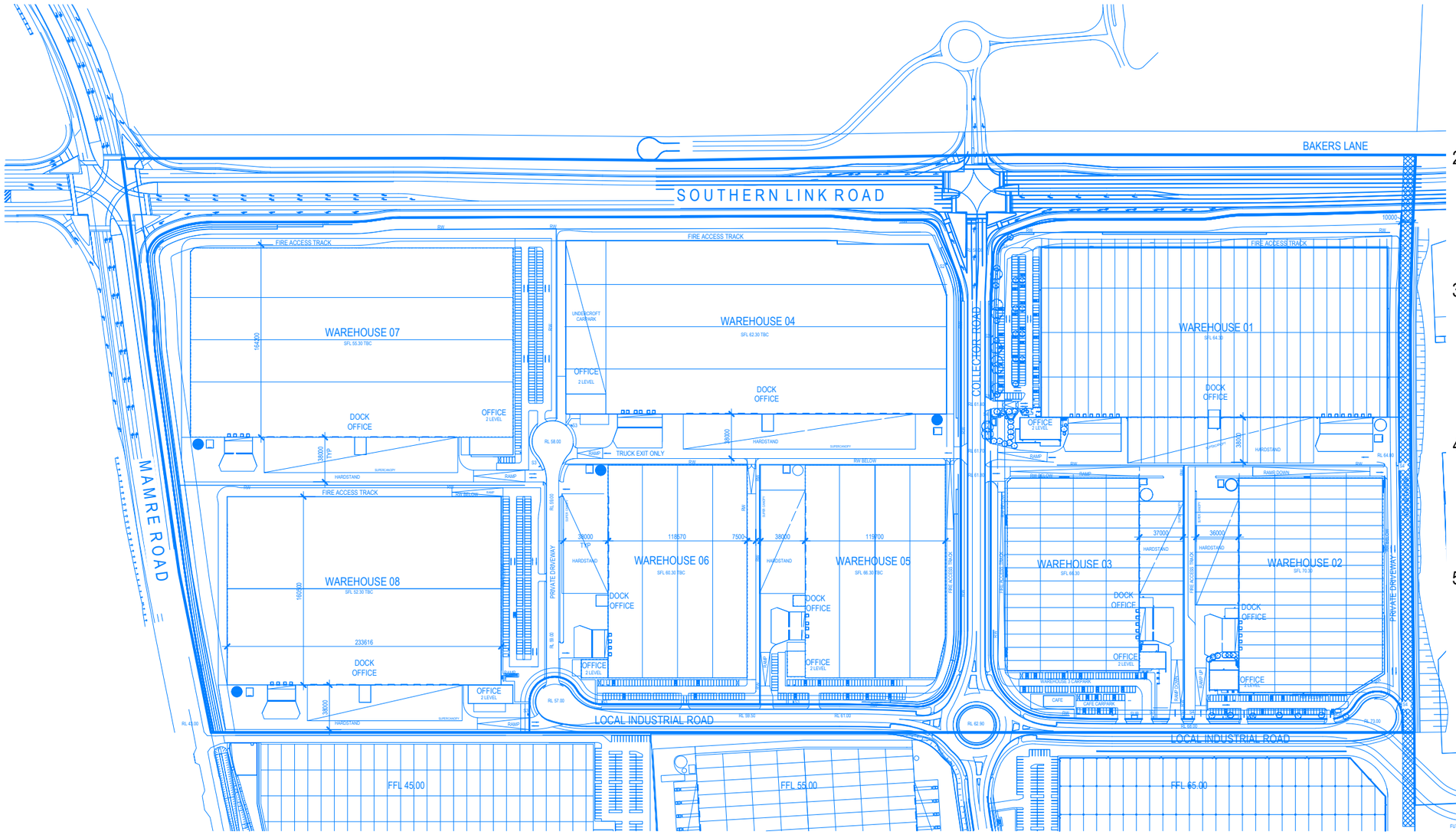
Appendix C. Swept Path Analysis



NOTE:

1. HARDSTANDS SHOWN HAVE BEEN REVIEWED AND WE NOTE THAT:
   - 1.1. HARDSTANDS HAVE BEEN REVIEWED FOR THE LARGEST VEHICLE, 30.0m A-DOUBLE.
   - 1.2. RECESSED DOCKS AND RSDs HAVE BEEN TESTED FOR REAR LOADING 20.0m AVs.
2. CAR PARKING AREAS HAVE BEEN REVIEWED AGAINST AS2890.1:2004 AND WE NOTE:
   - 2.1. CAR PARKING SPACES ARE OF USER CLASS 1/1A (2.4m x 5.4m).
3. GRADIENTS ARE NOT SHOWN ON PLANS AND, AS SUCH, NOT ASSESSED. FURTHER DETAILED REVIEW OF RAMP GRADES (AND ASSOCIATED TRANSITIONS) SHALL BE REQUIRED PRIOR TO CONSTRUCTION CERTIFICATE (CC), TO ENSURE COMPLIANCE WITH AS2890 (SERIES).
4. CIVIL TO ENSURE THAT PUBLIC ROADS ALIGN WITH THE ULTIMATE PRECINCT AND SLR DESIGNS TO ENSURE CONSISTENCY WITH ADJOINING LANDOWNERS AND MINIMISE EXTENT OF REDUNDANT WORKS.
5. ROAD DESIGN INCLUDING RELEVANT SWEPT PATHS, DEFERRED TO CIVIL ENGINEER. THIS ADVICE RELATES TO ON LOT WORKS ONLY.

N

GENERAL NOTES

This drawing is provided for information purposes only and should not be used for construction.
Base Plan prepared by Watson Young, received 14/10/2022.
The Local Industrial Road has a speed limit of 50km/h.
Swept path assessments completed at 10 km/h and 300mm clearance.

DESIGNED: Musstafa Abdullah	PAPER SIZE: A3
APPROVED BY: x.XXXX	DATE: 21.10.2022
SCALE: 1:4000	NTS

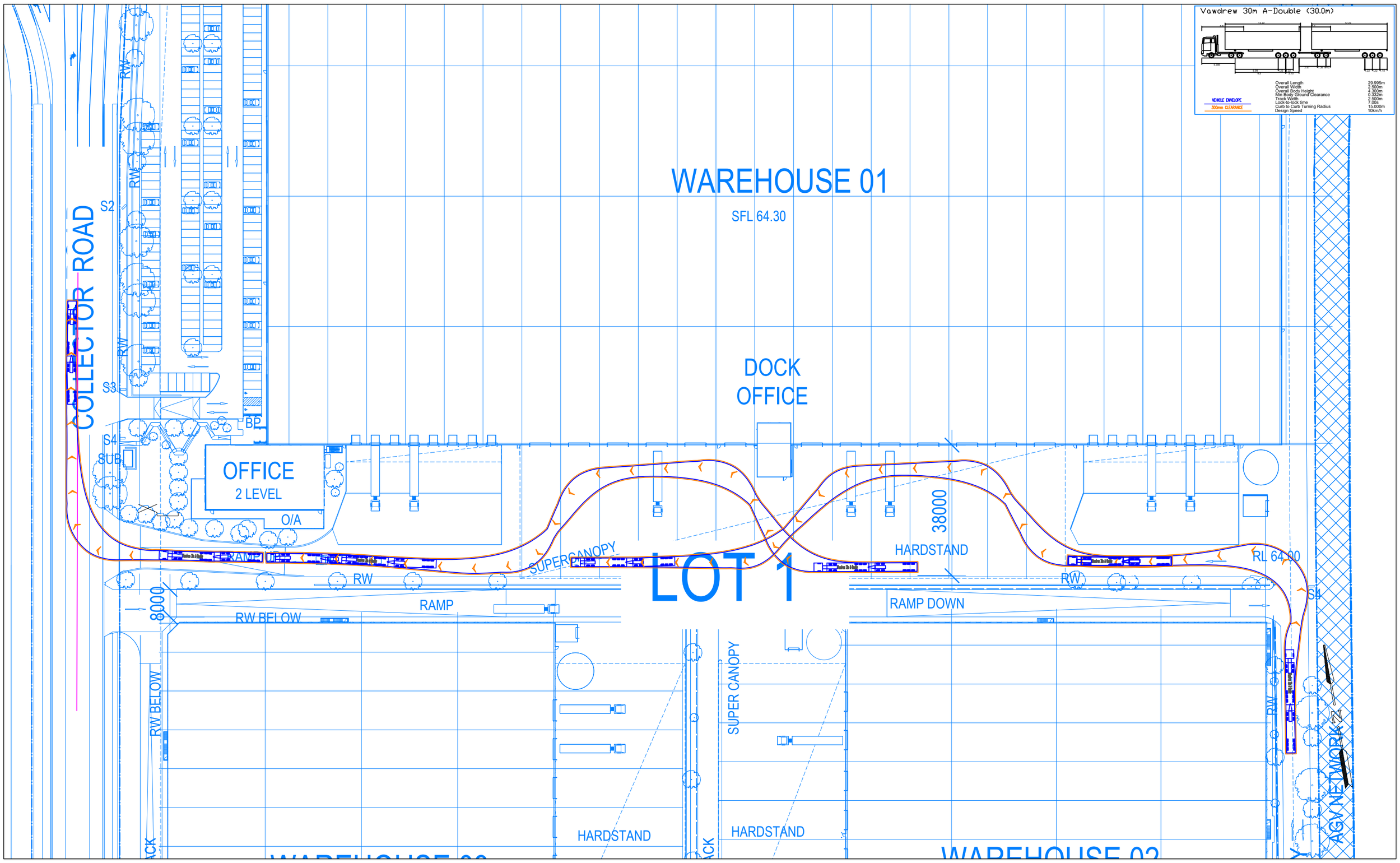
CLIENT
Aliro Group

PROJECT
P1163
706-752 Mamre Road, Kemps Creek

DOCUMENT INFORMATION
DESIGN REVIEW
SITE OVERVIEW

FILE NAME	SHEET
AG1163-01-v07.dwg	AG00

asongroup
Suite 17.02, Level 17, 1 Castlereagh St
Sydney NSW 2000
info@asongroup.com.au



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PAPER SIZE	A3
APPROVED BY	x.XXXX
DATE	21.10.2022
SCALE	1:1000
	0 10 20

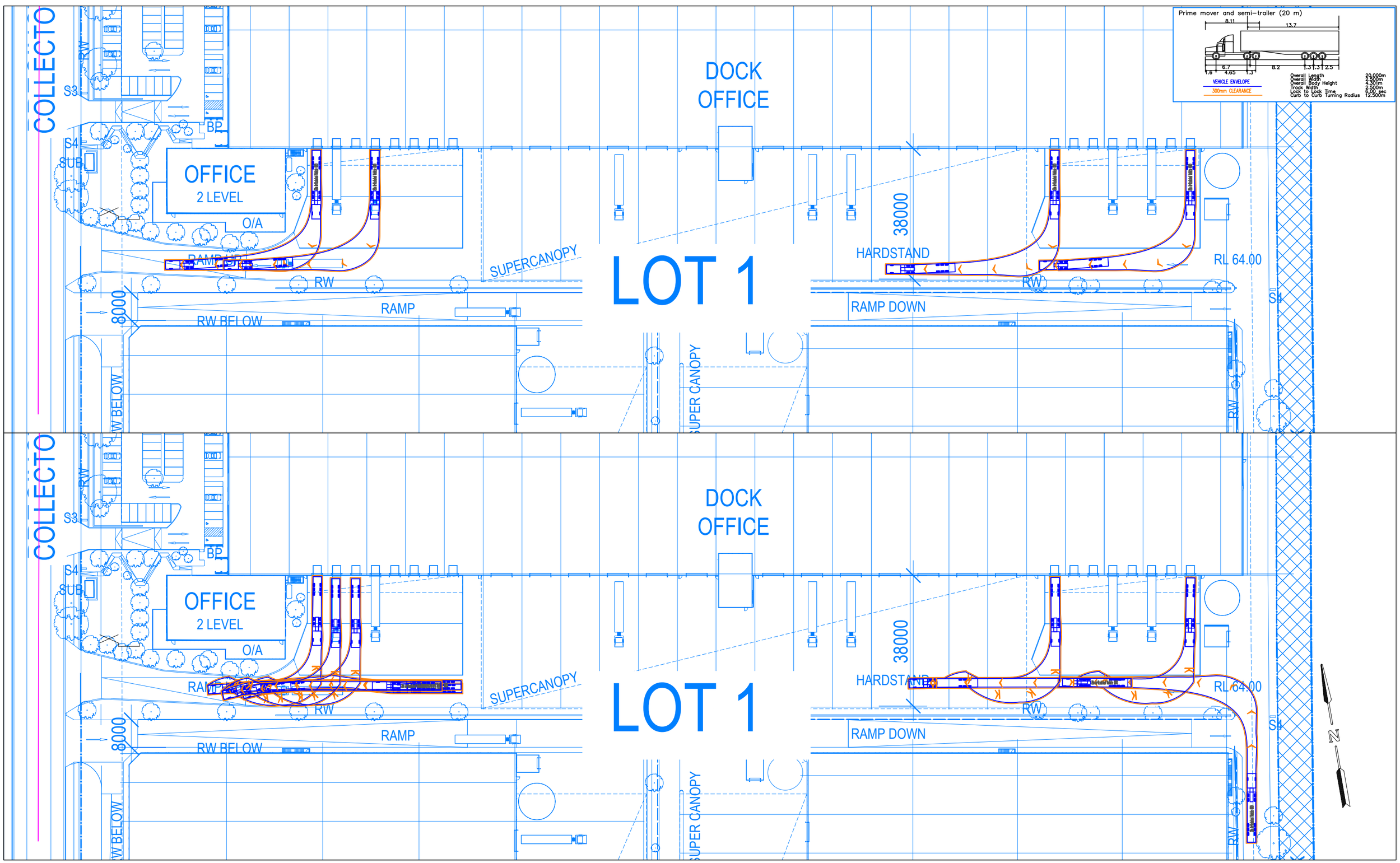
CLIENT
Aliro Group

PROJECT
P1163
706-752 Mamre Road, Kemps Creek

DOCUMENT INFORMATION
DESIGN REVIEW
WAREHOUSE 1 30m AD SWEPT PATHS

FILE NAME	SHEET
AG1163-01-v07.dwg	AG01

asongroup
Suite 17.02, Level 17, 1 Castlereagh St
Sydney NSW 2000
info@asongroup.com.au



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DESIGNED	Musstafa Abdullah
PAPER SIZE	A3
APPROVED BY	x.XXXX
DATE	21.10.2022
SCALE	1:1000
	0 10 20

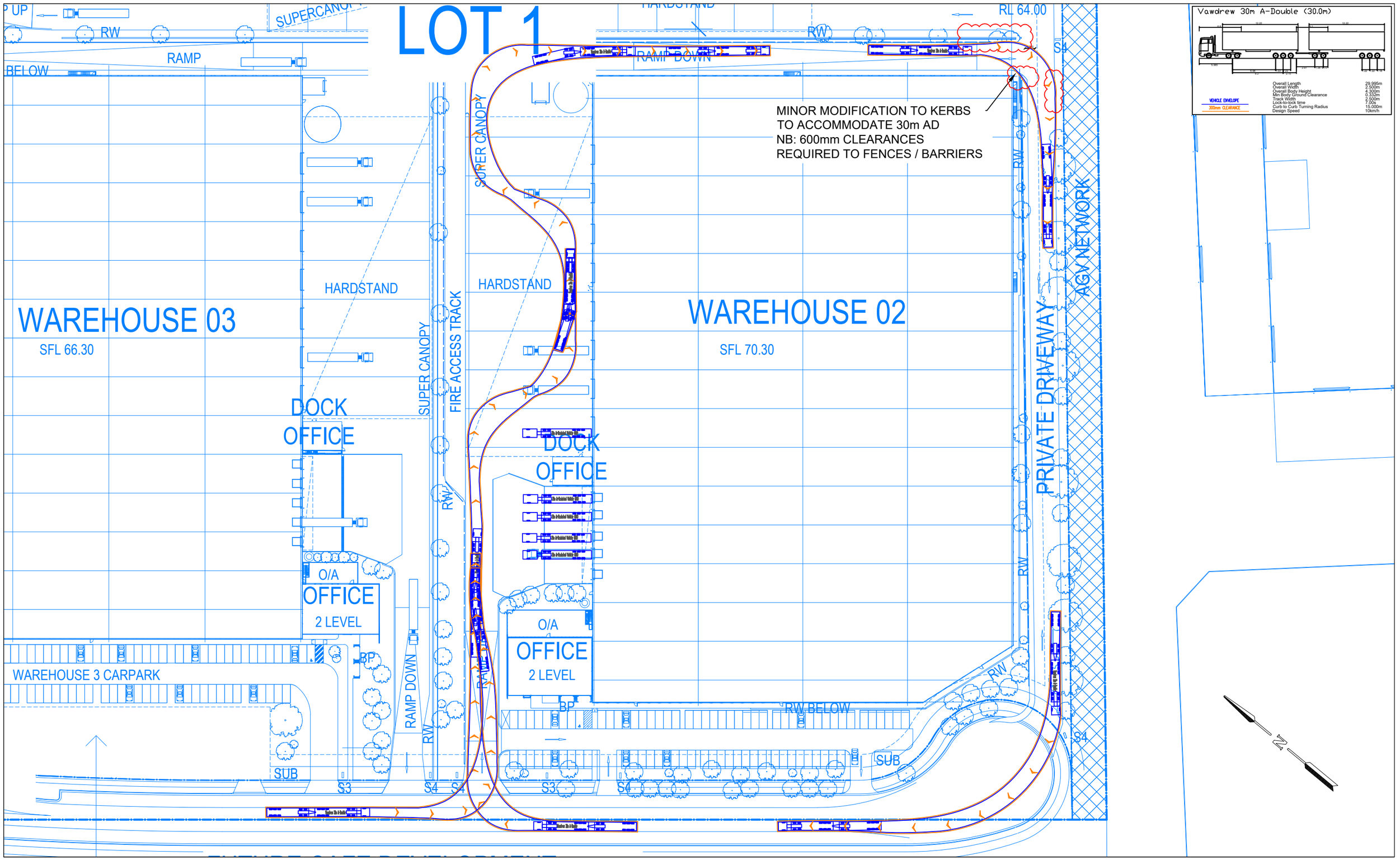
CLIENT
Aliro Group

PROJECT
P1163
706-752 Mamre Road, Kemps Creek

DOCUMENT INFORMATION
DESIGN REVIEW
WAREHOUSE 1 20m AV SWEPT PATHS (ENTRY)

FILE NAME	SHEET
AG1163-01-v07.dwg	AG02

asongroup
Suite 17.02, Level 17, 1 Castlereagh St
Sydney NSW 2000
info@asongroup.com.au



Overall Length	29.995m
Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.332m
Track Width	2.500m
Lock-to-lock time	7.00s
Curb to Curb Turning Radius	15.000m
Design Speed	10km/h

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DESIGNED
Musstafa Abdullah

PAPER SIZE
A3

APPROVED BY
x.XXXX

DATE
21.10.2022

SCALE
1:1000

0 10 20

CLIENT
Aliro Group

PROJECT
P1163

706-752 Mamre Road, Kemps Creek

DOCUMENT INFORMATION
DESIGN REVIEW

WAREHOUSE 2 30m AD SWEPT PATHS

FILE NAME
AG1163-02-v07.dwg

SHEET
AG01

asongroup
Suite 17.02, Level 17, 1 Castlereagh St
Sydney NSW 2000
info@asongroup.com.au

LOT 1

SUPERCANOPY

RW

RAMP

OW

HARDSTAND

RL 64.00

RAMP DOWN

SUPER CANOPY

HARDSTAND

WAREHOUSE 03

SFL 66.30

WAREHOUSE 02

SFL 70.30

SUPER CANOPY

FIRE ACCESS TRACK

DOCK OFFICE

DOCK OFFICE

AGV NETWORK

PRIVATE DRIVEWAY

O/A OFFICE

2 LEVEL

2 LEVEL

REHOUSE 3 CARPARK

BP

RAMP DOWN

RW BELOW

SUB

SUB

S3

S4

S4

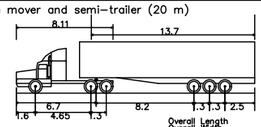
S3

S4

S4

ASSUMED THAT THIS AREA OF RECESSED DOCKS ALLOWS FOR VEHICLES TO MANOEUVRE THIS AREA OR WIDENING HARDSTAND IN FRONT OF RECESSED DOCKS

Prime mover and semi-trailer (20 m)



VEHICLE ENVELOPE
300mm CLEARANCE

Overall Length	20.000m
Overall Width	2.500m
Overall Body Height	4.300m
Track Width	2.500m
Lock to Lock Time	6.00 sec
Curb to Curb Turning Radius	12.500m

N

GENERAL NOTES

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Base Plan prepared by Watson Young, received 14/10/2022.
The Local Industrial Road has a speed limit of 50km/h.
Swept path assessments completed at 10 km/h and 300mm clearance.

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PAPER SIZE	A3
APPROVED BY	x.XXXX
DATE	21.10.2022
SCALE	1:1000
	0 10 20

CLIENT: Aliro Group

PROJECT: P1163

706-752 Mamre Road, Kemps Creek

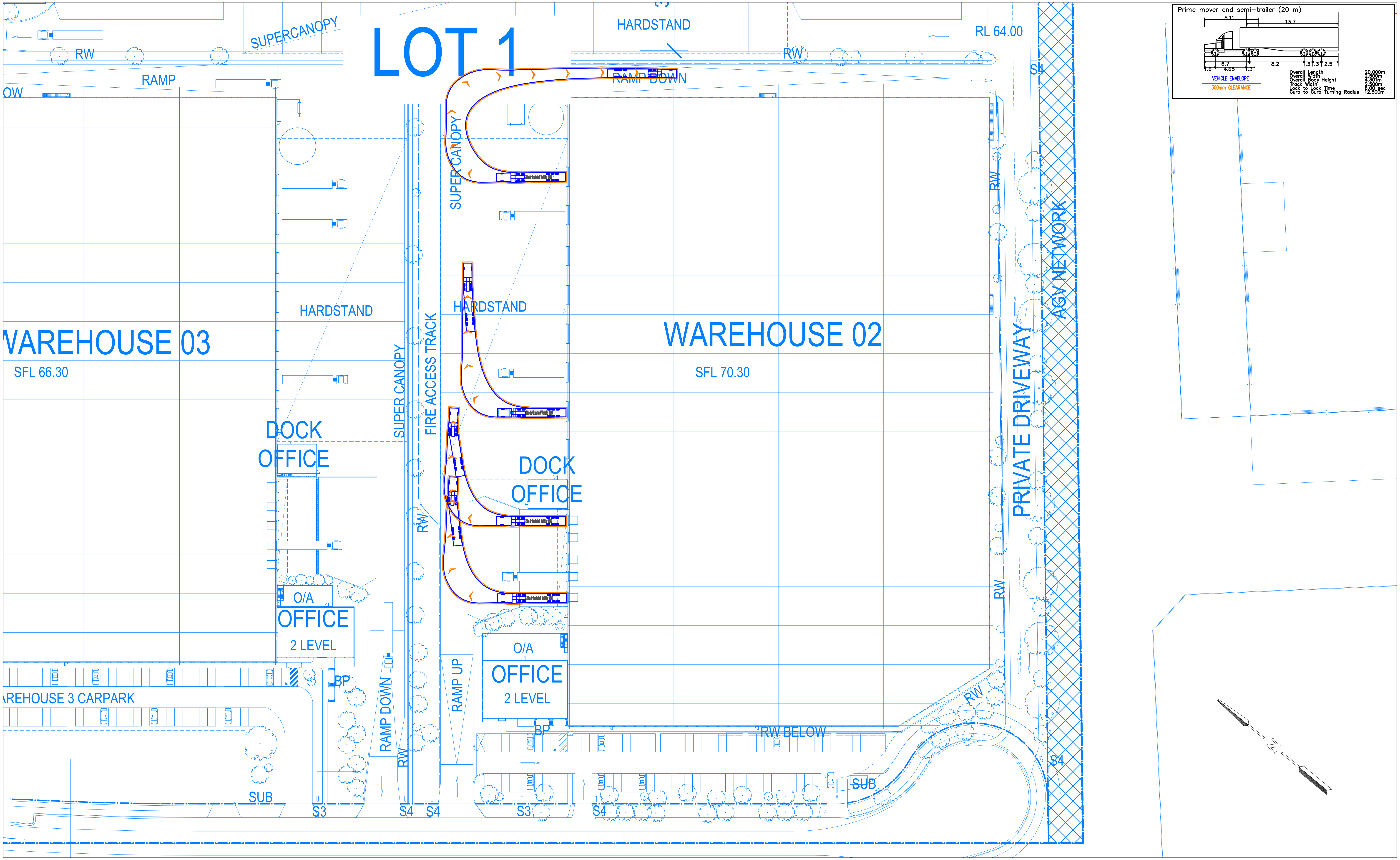
DOCUMENT INFORMATION

DESIGN REVIEW

WAREHOUSE 2 20m AV SWEPT PATHS (ENTRY)

FILE NAME	SHEET
AG1163-02-v07.dwg	AG02

asongroup
Suite 17.02, Level 17, 1 Castlereagh St
Sydney NSW 2000
info@asongroup.com.au



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SCALE	1:1000

0 10 20

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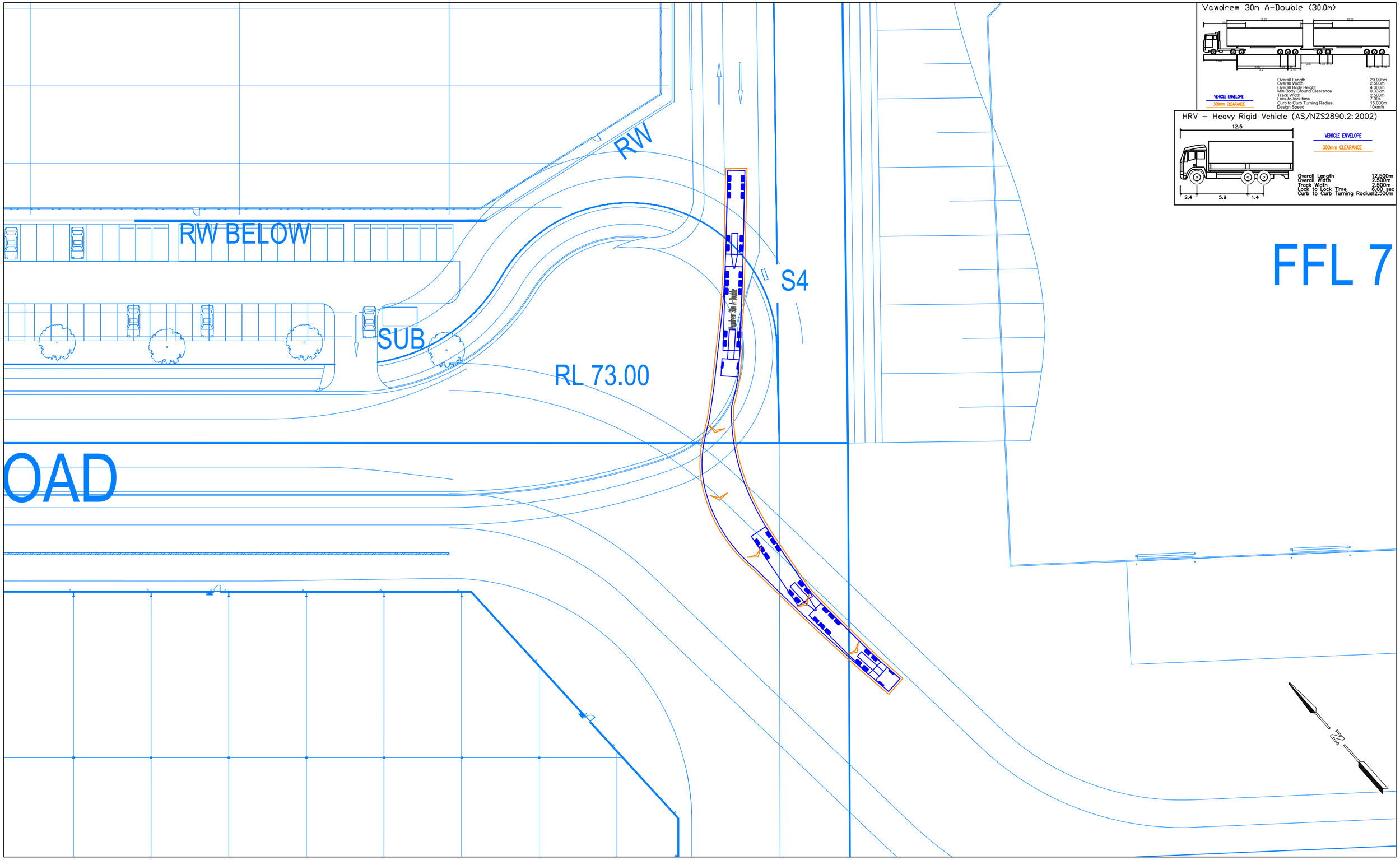
Aliro Group

PROJECT
P1163
706-752 Mamre Road, Kemps Creek

DOCUMENT INFORMATION
DESIGN REVIEW
WAREHOUSE 2 20m AV SWEPT PATHS (EXIT)

FILE NAME	AG1163-02-v07.dwg
SHEET	AG03

asongroup
Suite 17.02, Level 17, 1 Castlereagh St
Sydney NSW 2000
info@asongroup.com.au



Vawdrew 30m A-Double (30.0m)

Overall Length	29.995m
Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.332m
Track Width	2.500m
Lock-to-lock time	7.00s
Curb to Curb Turning Radius	15.000m
Design Speed	10km/h

VEHICLE ENVELOPE
300mm CLEARANCE

HRV – Heavy Rigid Vehicle (AS/NZS2890.2:2002)

VEHICLE ENVELOPE
300mm CLEARANCE

Overall Length	12.500m
Overall Width	2.500m
Track Width	2.500m
Lock to Lock Time	6.00 sec
Curb to Curb Turning Radius	12.500m

GENERAL NOTES

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	0 10 20

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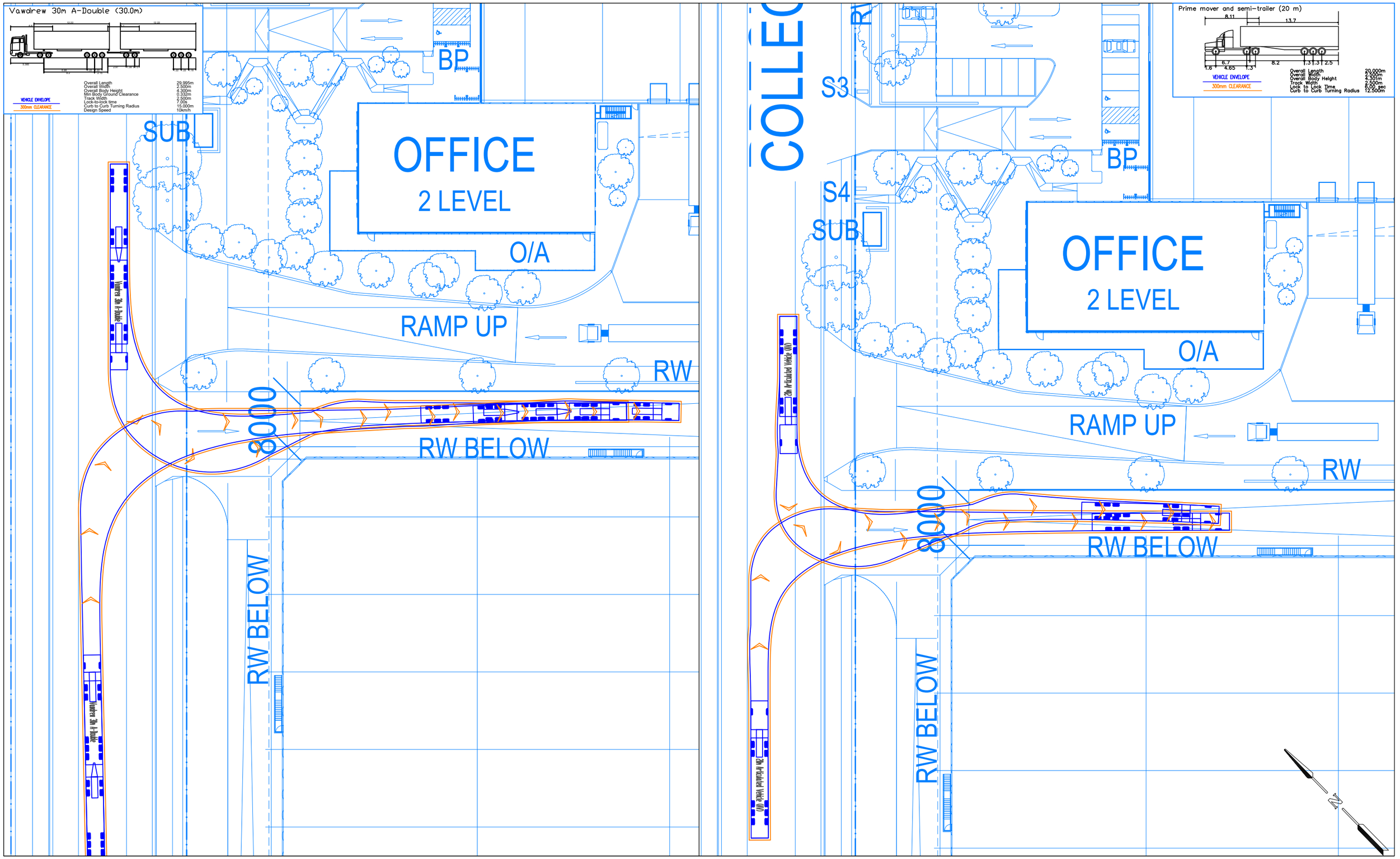
Aliro Group

PROJECT
P1163
706-752 Mamre Road, Kemps Creek

DOCUMENT INFORMATION
DESIGN REVIEW
WAREHOUSE 2 ULTIMATE ACCESS

FILE NAME	SHEET
AG1163-02-v07.dwg	AG04

asongroup
Suite 17.02, Level 17, 1 Castlereagh St
Sydney NSW 2000
info@asongroup.com.au



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CLIENT: Aliro Group

PROJECT: P1163

706-752 Mamre Road, Kemps Creek

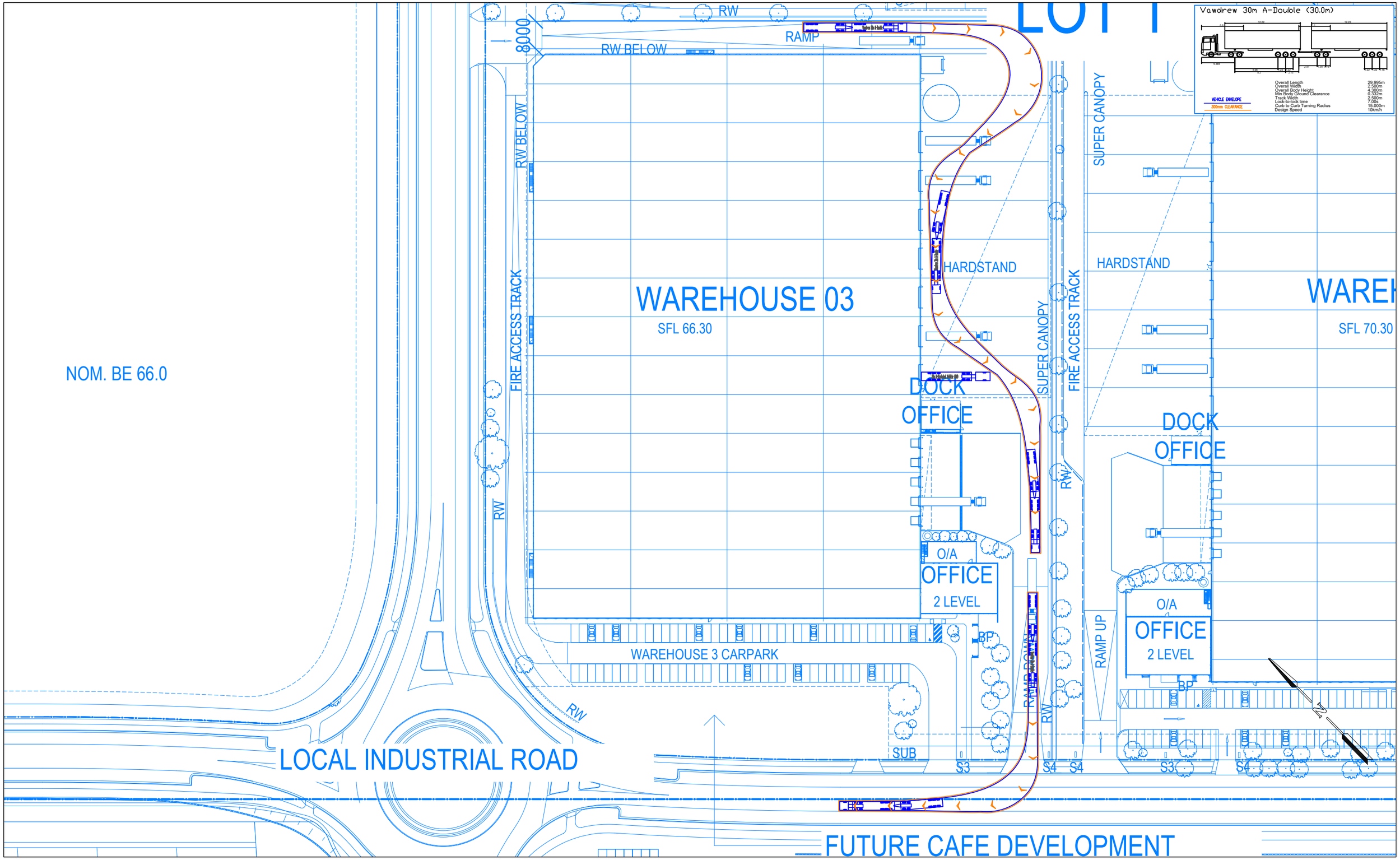
DOCUMENT INFORMATION

DESIGN REVIEW

WAREHOUSE 3 30m AD SWEPT PATHS (ACCESS)

FILE NAME	SHEET
AG1163-03-v07.dwg	AG01

asongroup
Suite 17.02, Level 17, 1 Castlereagh St
Sydney NSW 2000
info@asongroup.com.au



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706-752 Mamre Road, Kemps Creek

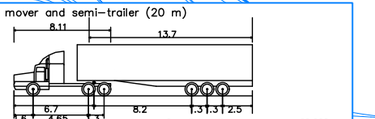
DOCUMENT INFORMATION
DESIGN REVIEW
WAREHOUSE 3 30m AD SWEPT PATHS (ACCESS)

FILE NAME	SHEET
AG1163-03-v07.dwg	AG02

asongroup
Suite 17.02, Level 17, 1 Castlereagh St
Sydney NSW 2000
info@asongroup.com.au

RAMP UP
RW
SUPERCANOPY
RAMP
RW BELOW
8000
RW BELOW
FIRE ACCESS TRACK
WAREHOUSE 03
SFL 66.30
HARDSTAND
SUPER CANOPY
FIRE ACCESS TRACK
SUPER CANOPY
DOCK OFFICE
RW
O/A
OFFICE
2 LEVEL
BP
WAREHOUSE 3 CARPARK
RAMP DOWN
RAMP UP
RW
SUB
S3
S4
S4
RW
USTRIAL ROAD

Prime mover and semi-trailer (20 m)



VEHICLE ENVELOPE
300mm CLEARANCE

Overall Length	20.000m
Overall Width	2.500m
Overall Body Height	4.301m
Track Width	2.500m
Lock to Lock Time	6.00 sec
Curb to Curb Turning Radius	12.500m

GENERAL NOTES

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CLIENT: Aliro Group

PROJECT: P1163

706-752 Mamre Road, Kemps Creek

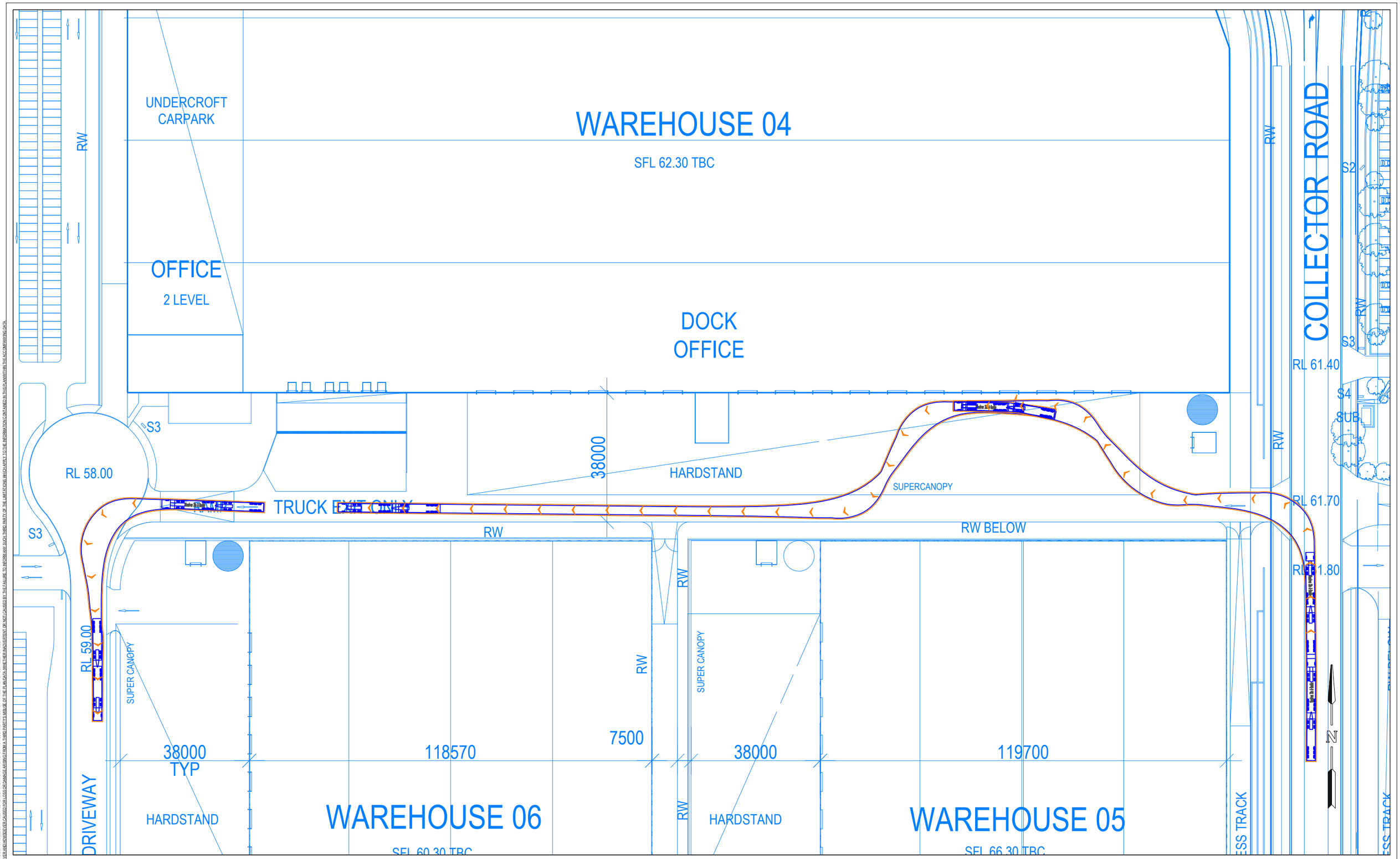
DOCUMENT INFORMATION

DESIGN REVIEW

WAREHOUSE 3 20m AV SWEPT PATHS (ENTRY & EXIT)

FILE NAME	SHEET
AG1163-03-v07.dwg	AG03

asongroup
Suite 17.02, Level 17, 1 Castlereagh St
Sydney NSW 2000
info@asongroup.com.au



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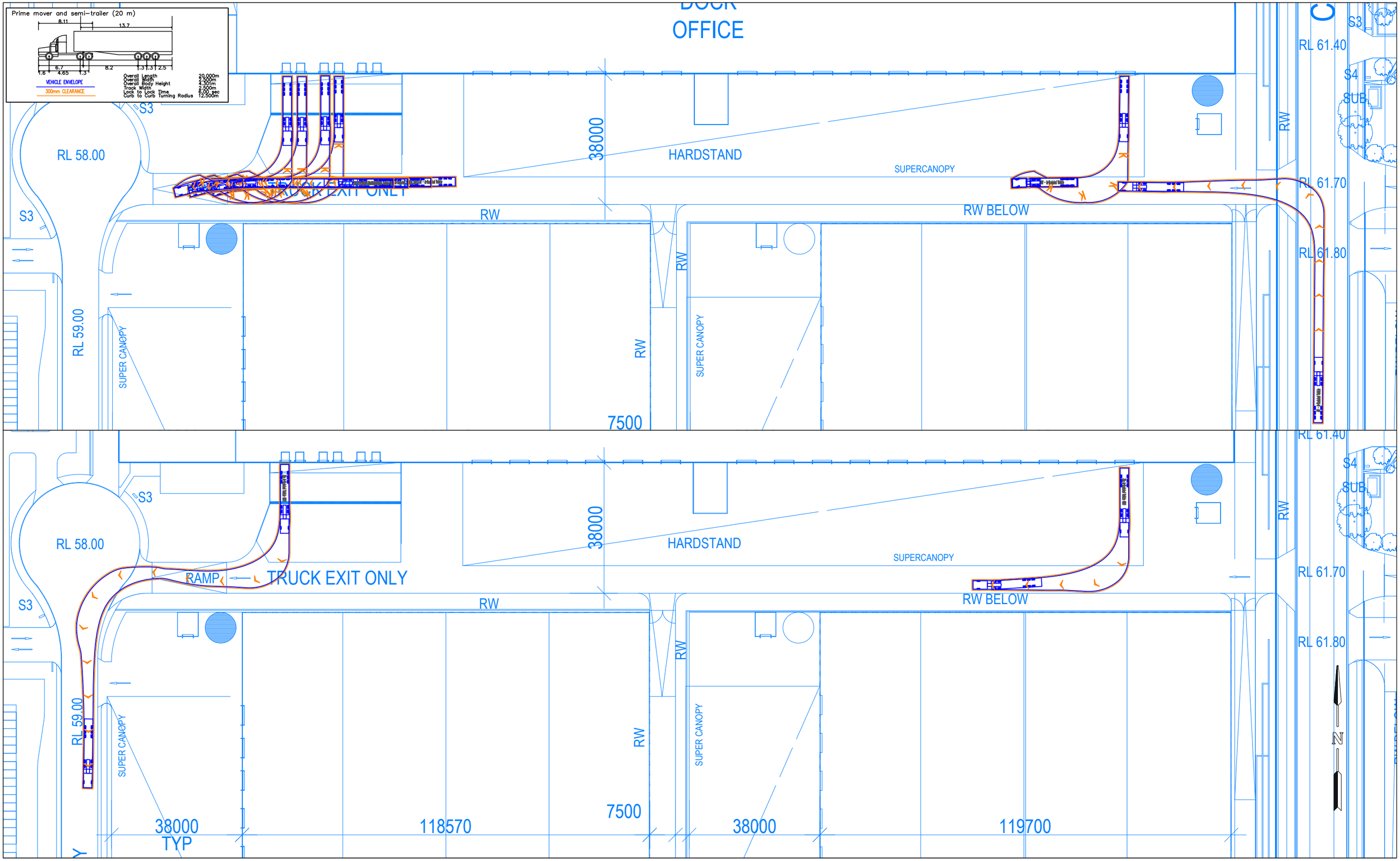
PROJECT: P1163
706-752 Mamre Road, Kemps Creek

DOCUMENT INFORMATION
DESIGN REVIEW
WAREHOUSE 4 20m AV SWEPT PATHS (ENTRY & EXIT)

FILE NAME	SHEET
AG1163-04-v07.dwg	AG01

asongroup
Suite 17.02, Level 17, 1 Castlereagh St
Sydney NSW 2000
info@asongroup.com.au



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	NTS

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PROJECT: P1163
706-752 Mamre Road, Kemps Creek

DOCUMENT INFORMATION
DESIGN REVIEW
WAREHOUSE 4 20m AV SWEPT PATHS (ENTRY & EXIT)

FILE NAME	SHEET
AG1163-04-v07.dwg	AG02

asongroup
Suite 17.02, Level 17, 1 Castlereagh St
Sydney NSW 2000
info@asongroup.com.au

EHOUSE 06

SFL 60.30 TBC

HARDSTAND

RW

DOCK OFFICE

OFFICE
2 LEVEL

S3

STRIAL ROAD

RL 59.50

RL 61.

18570

7500

38000

OUSE 06

30 TBC

HARDSTAND

RW

DOCK OFFICE

OFFICE
2 LEVEL

S3

AL ROAD

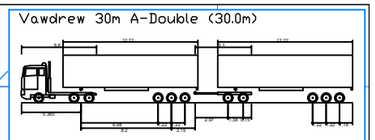
RL 59.50

RL 61.60

WARE

SFL

Vawdrew 30m A-Double (30.0m)



Overall Length	29.995m
Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.332m
Track Width	2.500m
Lock-to-lock time	7.00s
Curb to Curb Turning Radius	15.000m
Design Speed	10km/h

VEHICLE ENVELOPE
300mm CLEARANCE

N

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APPROVED BY: Tim Lewis	DATE: 21.10.2022
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CLIENT: Aliro Group

PROJECT: P1163

706-752 Mamre Road, Kemps Creek

DOCUMENT INFORMATION

DESIGN REVIEW

WAREHOUSE 5 30m AD SWEPT PATHS (ACCESS)

FILE NAME	SHEET
AG1163-05-v07.dwg	AG01

asongroup
Suite 17.02, Level 17, 1 Castlereagh St
Sydney NSW 2000
info@asongroup.com.au

TRUCK EXIT ONLY

HARDSTAND

SUPERCANOPY

RW

RW BELOW

RL 61.70

RL 61.80

Vawdrew 30m A-Double (30.0m)

Overall Length	29.995m
Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.332m
Track Width	2.500m
Lock-to-lock time	7.00s
Curb to Curb Turning Radius	15.000m
Design Speed	10km/h

VEHICLE ENVELOPE
300mm CLEARANCE

118570

7500

38000

119700

WAREHOUSE 06

SFL 60.30 TBC

SUPER CANOPY

HARDSTAND

WAREHOUSE 05

SFL 66.30 TBC

FIRE ACCESS TRACK

RW BELOW

WAREHO

SFL 66.30

DOCK OFFICE

DOCK OFFICE

OFFICE
2 LEVEL

WAREHOUSE 3 CAR

N

CAFE

RW

S3

S3

RW

RW

RW

RW

OCAL INDUSTRIAL ROAD

RL 59.50

RL 61.00

RL 62.90

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APPROVED BY	Tim Lewis
DATE	21.10.2022
SCALE	1:1000
	0 10 20

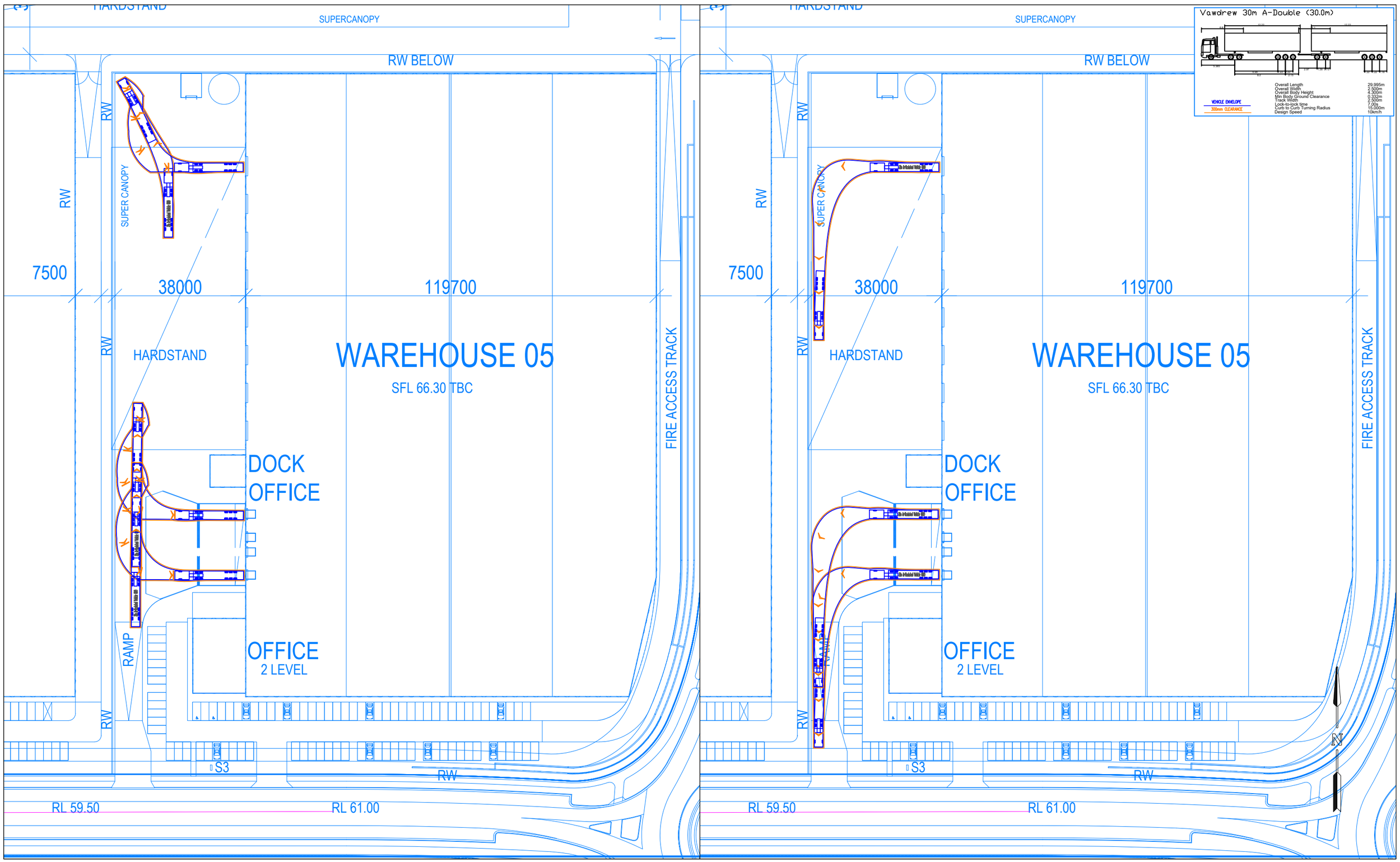
CLIENT
Aliro Group

PROJECT
P1163
706-752 Mamre Road, Kemps Creek

DOCUMENT INFORMATION
DESIGN REVIEW
WAREHOUSE 5 30m AD SWEPT PATHS

FILE NAME	SHEET
AG1163-05-v07.dwg	AG02

asongroup
Suite 17.02, Level 17, 1 Castlereagh St
Sydney NSW 2000
info@asongroup.com.au



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SCALE	1:1000
	0 10 20

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706-752 Mamre Road, Kemps Creek

DOCUMENT INFORMATION
DESIGN REVIEW
WAREHOUSE 5 20m AV SWEPT PATHS (ENTRY & EXIT)

FILE NAME	SHEET
AG1163-05-v07.dwg	AG03

asongroup
Suite 17.02, Level 17, 1 Castlereagh St
Sydney NSW 2000
info@asongroup.com.au

RL 58.00
RAMP
TRUCK EXIT ONLY
HARDSTAND
RW
S3
ANOPY
RAMP
RW
RW BELOW
RAMP
RL 59.00
SUPER CANOPY
38000 TYP
118570
7500
38000
RW
RW
SUPER CANOPY
HARDSTAND
HARDSTAND
08
RW BELOW
CENTRELINE
PRIVATE DRIVEWAY
WAREHOUSE 06
SFL 60.30 TBC
WARE
SFL
DOCK OFFICE
DOCK OFFICE
OFFICE 2 LEVEL
OFFICE 2 LEVEL
RAMP
RAMP
RW
OFFICE 2 LEVEL
RL 57.00
S3
S3
S3
SUPERCANOPY
RAMP
LOCAL INDUSTRIAL ROAD
RL 59.50
RL 61.00
N

Vawdrew 30m A-Double (30.0m)

Overall Length	29.995m
Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.332m
Track Width	2.500m
Lock-to-lock time	7.00s
Curb to Curb Turning Radius	15.000m
Design Speed	10km/h

VEHICLE ENVELOPE
300mm CLEARANCE

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SCALE	1:1000
	NTS

CLIENT: Aliro Group

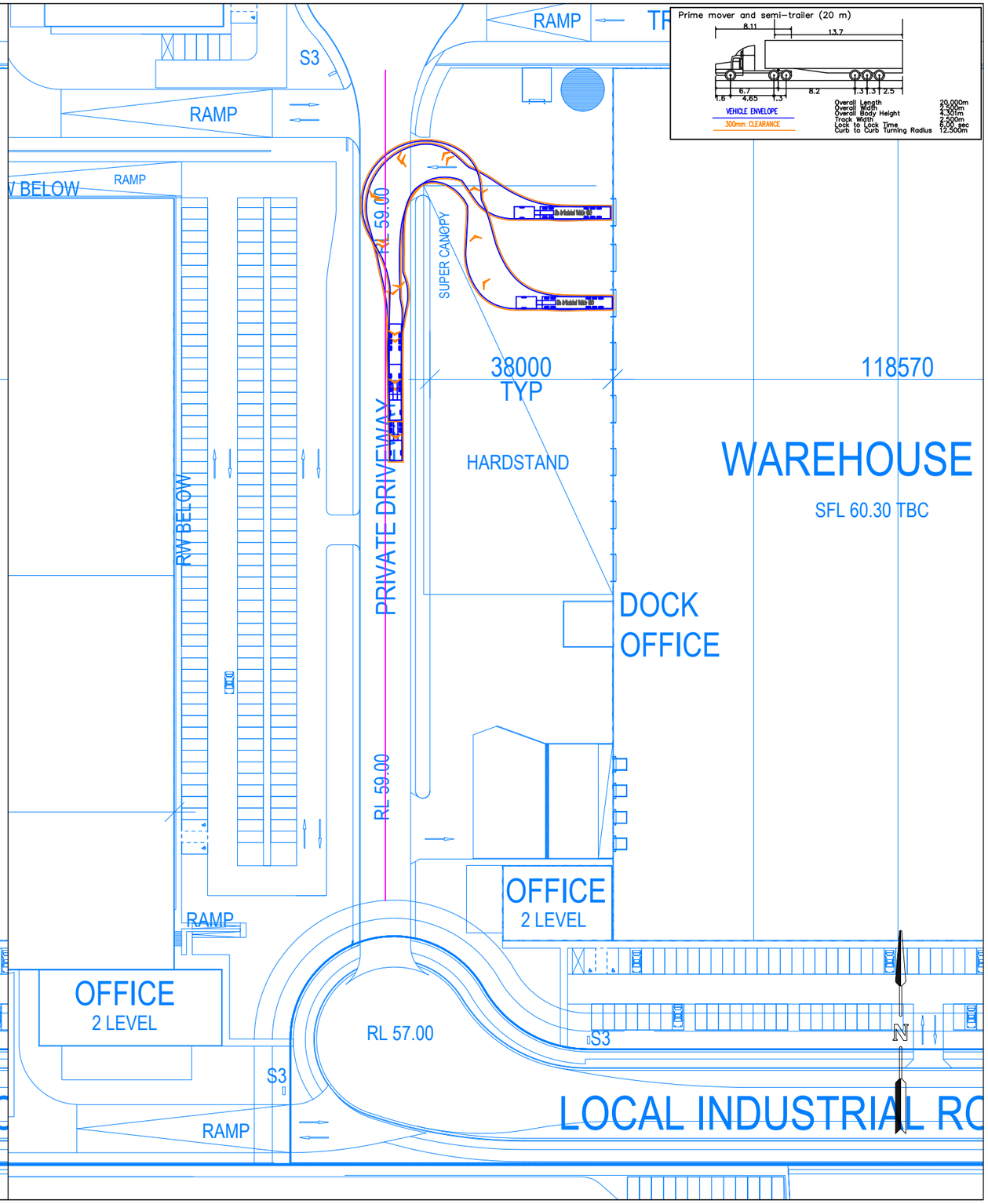
PROJECT: P1163
706-752 Mamre Road, Kemps Creek

DOCUMENT INFORMATION
DESIGN REVIEW
WAREHOUSE 6 30m AD SWEPT PATHS

FILE NAME	SHEET
AG1163-06-v07.dwg	AG01

asongroup
Suite 17.02, Level 17, 1 Castlereagh St
Sydney NSW 2000
info@asongroup.com.au

RAMP
TRUCK EXIT ONLY
RW
S3
RAMP
V BELOW
RAMP
RW BELOW
RL 59.00
PRIVATE DRIVEWAY
SUPER CANOPY
38000
TYP
118570
HARDSTAND
WAREHOUSE
SFL 60.30 TBC
DOCK
OFFICE
RL 59.00
OFFICE
2 LEVEL
RAMP
OFFICE
2 LEVEL
RL 57.00
S3
S3
RAMP
LOCAL INDUSTRIAL RO



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APPROVED BY	X.XXXX
DATE	21.10.2022
SCALE	1:1000
	0 10 20

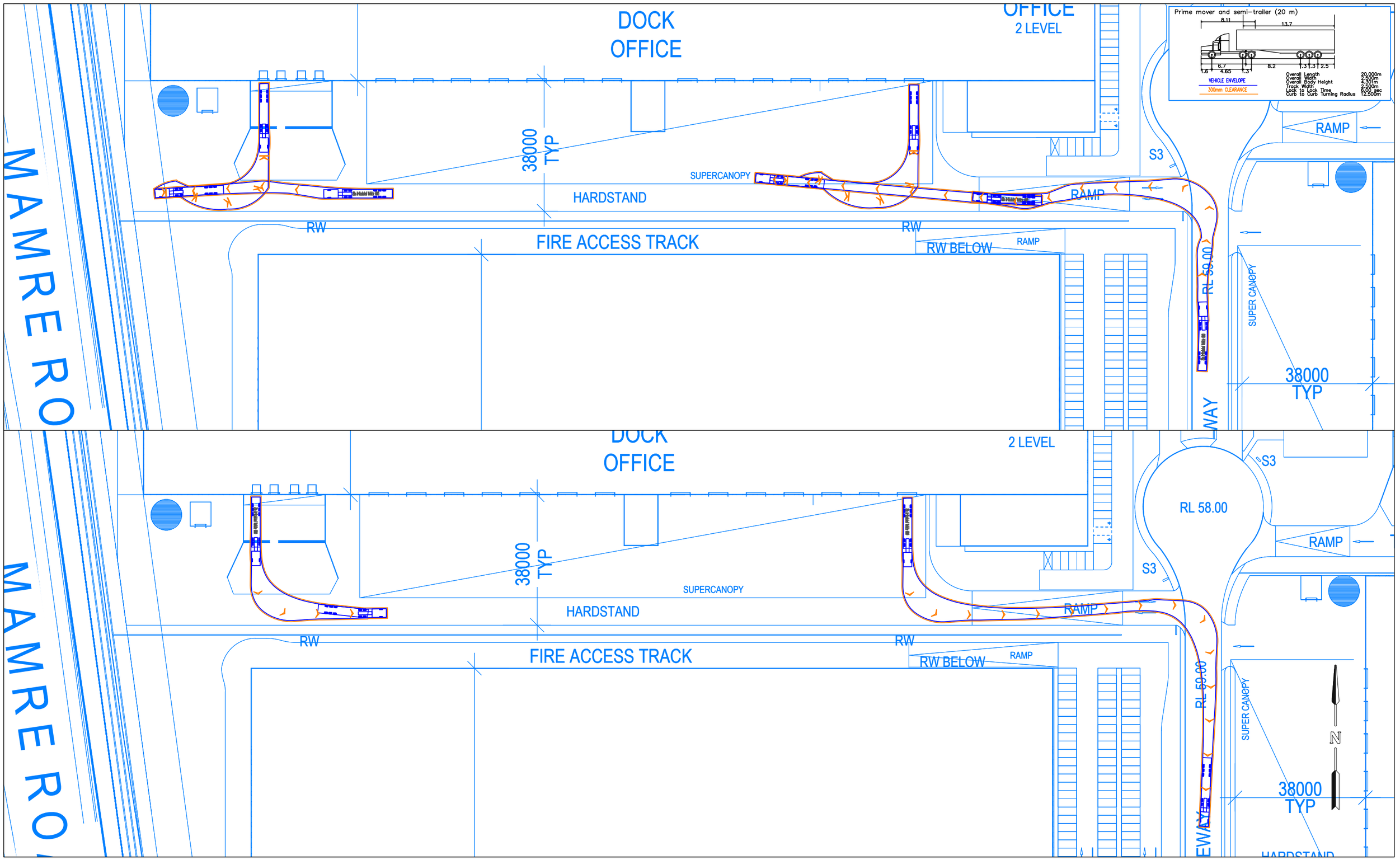
CLIENT
Aliro Group

PROJECT
P1163
706-752 Mamre Road, Kemps Creek

DOCUMENT INFORMATION
DESIGN REVIEW
WAREHOUSE 6 20m AV SWEPT PATHS (ENTRY & EXIT)

FILE NAME	SHEET
AG1163-06-v07.dwg	AG02

asongroup
Suite 17.02, Level 17, 1 Castlereagh St
Sydney NSW 2000
info@asongroup.com.au



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APPROVED BY	X.XXXX
DATE	21.10.2022
SCALE	1:1000
	0 10 20

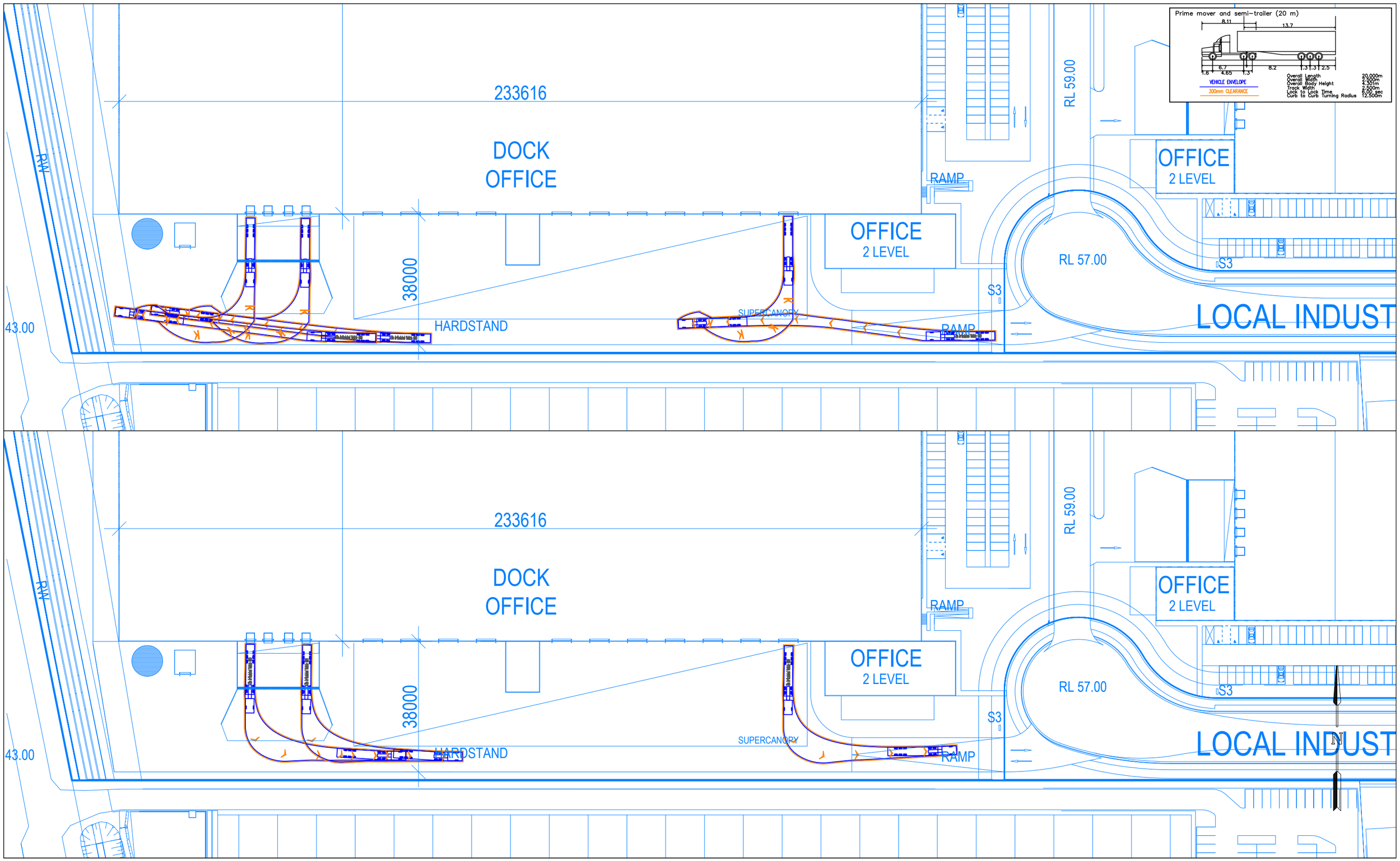
CLIENT: Aliro Group

PROJECT: P1163
706-752 Mamre Road, Kemps Creek

DOCUMENT INFORMATION
DESIGN REVIEW
WAREHOUSE 7 20m AV SWEPT PATHS (ENTRY & EXIT)

FILE NAME	SHEET
AG1163-07-v07.dwg	AG01

asongroup
Suite 17.02, Level 17, 1 Castlereagh St
Sydney NSW 2000
info@asongroup.com.au



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DATE	21.10.2022
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	0 10 20

CLIENT: Aliro Group

PROJECT: P1163
706-752 Mamre Road, Kemps Creek

DOCUMENT INFORMATION
DESIGN REVIEW
WAREHOUSE 8 20m AV SWEPT PATHS (ENTRY & EXIT)

FILE NAME	SHEET
AG1163-08-v07.dwg	AG02

asongroup
Suite 17.02, Level 17, 1 Castlereagh St
Sydney NSW 2000
info@asongroup.com.au

Appendix D. Preliminary Construction Traffic Management Plan

Summit at Kemps Creek, Preliminary Construction Traffic Management Plan

706-752 Mamre Road, Kemps Creek
19/12/2023
P1163

Info@asongroup.com.au
+61 2 9083 6601
Suite 17.02, Level 17,
1 Castlereagh Street,
Sydney, NSW 2000

Document Control

Project No	1163
Project	Summit at Kemps Creek - 706-752 Mamre Road
Client	ISPT Pty Ltd
File Reference	1163r03v02 CTMP_Summit Industrial Estate, Issue

Revision History

Revision No.	Date	Details	Author	Approved by
-	16/08/2022	Draft	M. Abdullah	R. Butler-Madden
I	15/09/2022	Issue	M. Abdullah	R. Butler-Madden
II	19/12/202319/12/2023	Issue	M. Abdullah	R. Butler-Madden

contents

contents continued

Figures

Tables

APPENDICES

1 Introduction

1.1 Overview

Ason Group has been engaged by ISPT Pty Ltd (ISPT) to prepare a preliminary Construction Traffic Management Plan (CTMP) in regard to the future construction of industrial development known as the Summit at Kemps Creek (the Estate, SSD-30628110), at 706-752 Mamre Road, Kemps Creek (the Site).

This Draft CTMP details the proposed construction management strategies which would provide for the safe and efficient completion of the proposed works while minimising construction traffic impacts on the surrounding road network and public road network users.

From the outset, it is noted that this CTMP is designed to be updated over time as additional details in regard to the construction proposal are revised / finalised as is standard in any major construction project, noting that all such updates would be completed in consultation with Penrith City Council (Council) in whose Local Government Area (LGA) the Site lies; and / or with the relevant authorities such as Transport for NSW (TfNSW) where special road occupancy or the like are required.

Importantly, Ason Group has been responsible for the preparation of this preliminary CTMP, which has been prepared with reference to all available information in regard to the construction program, and all relevant CTMP preparation guidelines. The implementation of the recommendations and strategies detailed in this CTMP are the strict responsibility of ISPT and / or the designated construction Project Manager.

2 The Site

2.1 Site Location

The Site is legally described as Lots 1 in DP 104958. The Site is located approximately 4km north-west of the future Western Sydney International (Nancy-Bird Walton) Airport (WSA), 12km south-east of the Penrith CBD and 40km west of the Sydney CBD. It is located at 706-752 Mamre Road, Kemps Creek. The land is approximately 522,477 m^2 in area and is rectangular in shape.

The Site is shown in its sub-regional context in **Figure 2,** as well as the broader MRP area in which it lies.

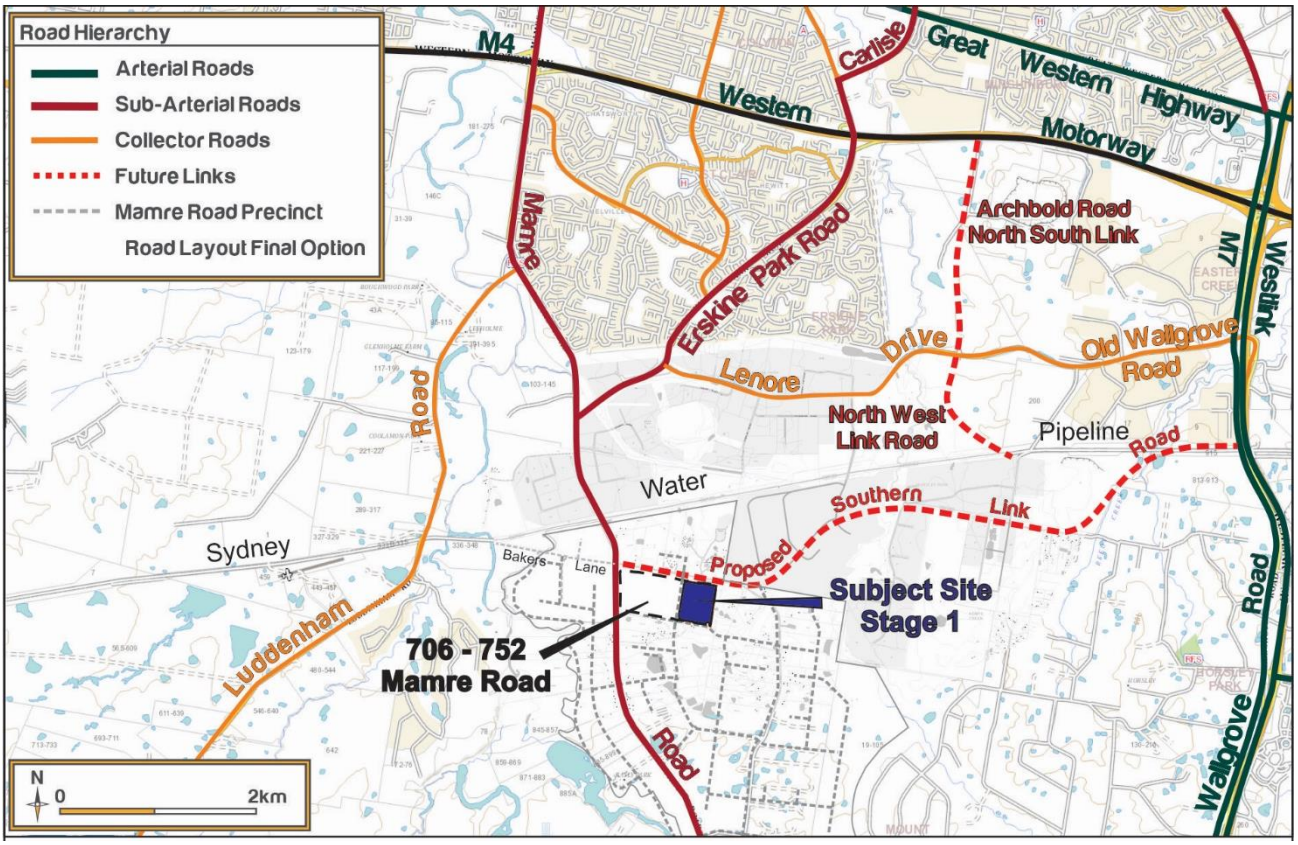

Figure 1: Site Location

2.2 Road Network

Key roads in the vicinity of the Site are shown in **Figure 1** and include:

- **Westlink M7 Motorway**: M7 Motorway is a high-capacity road link of state significance and was built to accommodate future traffic growth in the Western Sydney region. It provides a key north-south link between the M2 Motorway to the north and the M5 Motorway to the south as part of the Sydney orbital road network. A major interchange between the M7 Motorway and M4 Western Motorway is located approximately 3.5 km north of the Site, which connects the Sydney CBD and western Sydney suburbs. The M7 Motorway provides 4 lanes (2 lanes per direction, divided carriageway) and has a posted speed limit of 100 km/h

- **(Future) M12 Motorway:** A proposed 16km motorway generally running in an east-west between the existing M7 motorway and the Northern Road. It is expected to run in parallel with Elizabeth Drive and is to have 2 lanes in each direction separated by a central median. Construction has commenced.
- **Wallgrove Road**: Wallgrove Road is an arterial road that runs in a north-south direction to the east of the Site and parallel (to the west of) the M7, functioning as a service road. The 2-lane, two-way road provides a link between the Great Western Highway to the north and Elizabeth Drive to the south. As with the M7, Wallgrove Road connects to the M4 motorway approximately 2.5 kilometres to the north of the Site.
- **Elizabeth Drive:** An TfNSW classified main road (MR 535) that runs in an east-west direction to the south of the site. Elizabeth Drive in the vicinity of the site generally provides 2 lanes (1 lane per direction) and has a posted speed limit of 80km/h.
- **The Northern Road**: The Northern Road is TfNSW classified main road (MR 154) that runs in a north-south direction to the west of the site. The Northern Road generally provides 3 lanes (1 to 2 lanes per direction) and has a posted speed limit of 80km/h. Currently, The Northern Road is undergoing multiple stages of road upgrades by RMS, including a realignment of the road in the south. The road upgrades between The Old Northern Road, Narellan and Peter Brock Drive, Oran Park, has been completed.
- **Mamre Road:** Mamre Road is an arterial road servicing traffic between the Great Western Highway and M4 to the north and Elizabeth Drive to the south. In the vicinity of the Site, Mamre Road generally provides 2 lanes for two-way traffic, with additional through movement and turning infrastructure at key intersections to the north through the Erskine Park and Mamre West industrial precincts, and at Elizabeth Drive to the south. Mamre Road has a posted speed limit of 80km/h in the vicinity of the Site. TfNSW has confirmed road upgrades will be undertaken for Mamre Road between Elizabeth Drive and Luddenham Road.
- **Bakers Lane**: Bakers Lane is a local access that runs east-west (to the east of Mamre Road) and currently provides access for a number of rural residential, educational and retirement sites. It provides 1 traffic lane in each direction and has a posted speed limit of 60km/h. This road forms the Site's northern frontage.

Further to the above, it is clear that the Site is well located in regard to immediate access to the local and sub-regional road network, as shown in Figure 2 with specific reference to the current TfNSW Restricted Access Vehicle (RAV) routes, which allow for up to 25m/26m B-Double combinations.

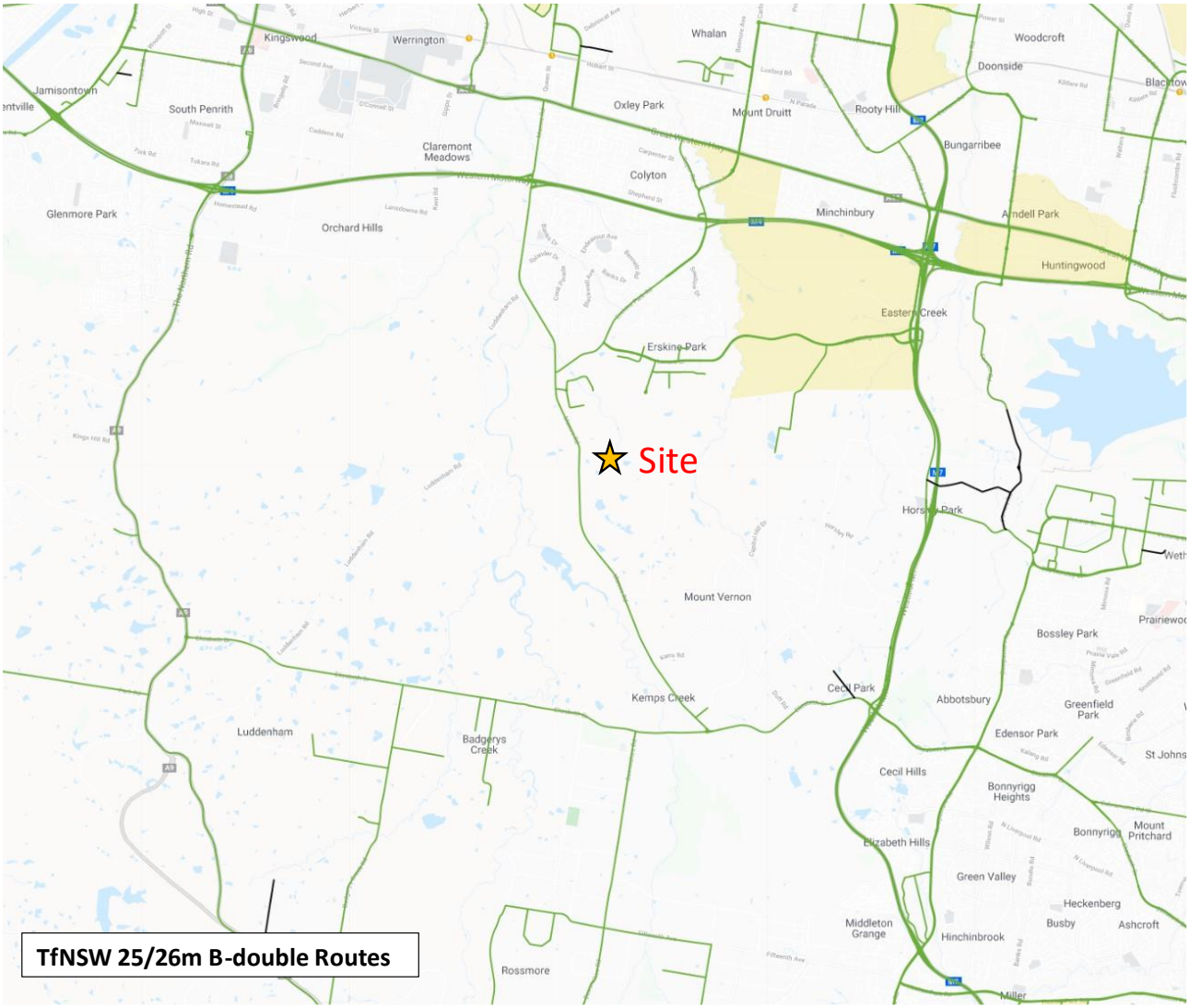

Figure 2: TfNS0W Approved 25/26m B-Double Routes

3 Overview of Construction Works

3.1 Staging and Duration of Works

While there is no Contractor engaged for the project, for the purposes of the Draft CTMP, staging and duration of works has been based on similar developments in the area. Based on this, it is anticipated that construction works for the preliminary stages would commence approximately 12 months from the date of this report, and be completed over a duration between 1-2 years, subject to authority approvals and inclement weather delays.

The following summarises key aspects of the construction phases:

- Demolition works are set to have a duration for 6-10 weeks.
- Excavation activities would continue for approximately 12 months.
- General Construction works are estimated to continue concurrently to excavation activities for 12 months.

Further to on-site works, the required roads works and upgrades will also be undertaken concurrently. These works will be subject to a separate CTMP. However, it is noted that a significant proportion of these works will occur within the existing Site boundary, noting that the proposed alignment of reh Southern Link is separate from Bakers Lane (i.e. Bakers Lane will remain intact).

3.2 Construction Hours

The type of work being undertaken will remain consistent throughout the duration of construction and associated activities. Works are likely to be undertaken within the following hours or as approved by DPE

- Monday to Friday (other than Public Holidays): 7:00am – 6:00pm.
- Saturday: 8:00am – 1:00pm
- Sunday & Public Holidays: No works to be undertaken.

Any work to be undertaken outside of the standard construction hours will be required to obtain an Out of Hours (OOH) approval; any such works would necessarily be undertaken in accordance with the appropriate OOH protocols and approval processes.

3.3 Site Access

3.3.1 Construction Vehicle Access

Construction traffic will access the Site via an temporary access on Bakers Lane. However, access to the Site will be to and from Mamre Road, with no construction vehicles to travel eastwards along Bakers Lane.

It is anticipated that the largest vehicle accessing the Site would be a 19.6m Truck & Dog combination, which the temporary access driveway will be designed for.

The following **Figure 3** shows the indicative Site access location and **Figure 4** details the likely key access strategy into the routes between the Site and the regional road network

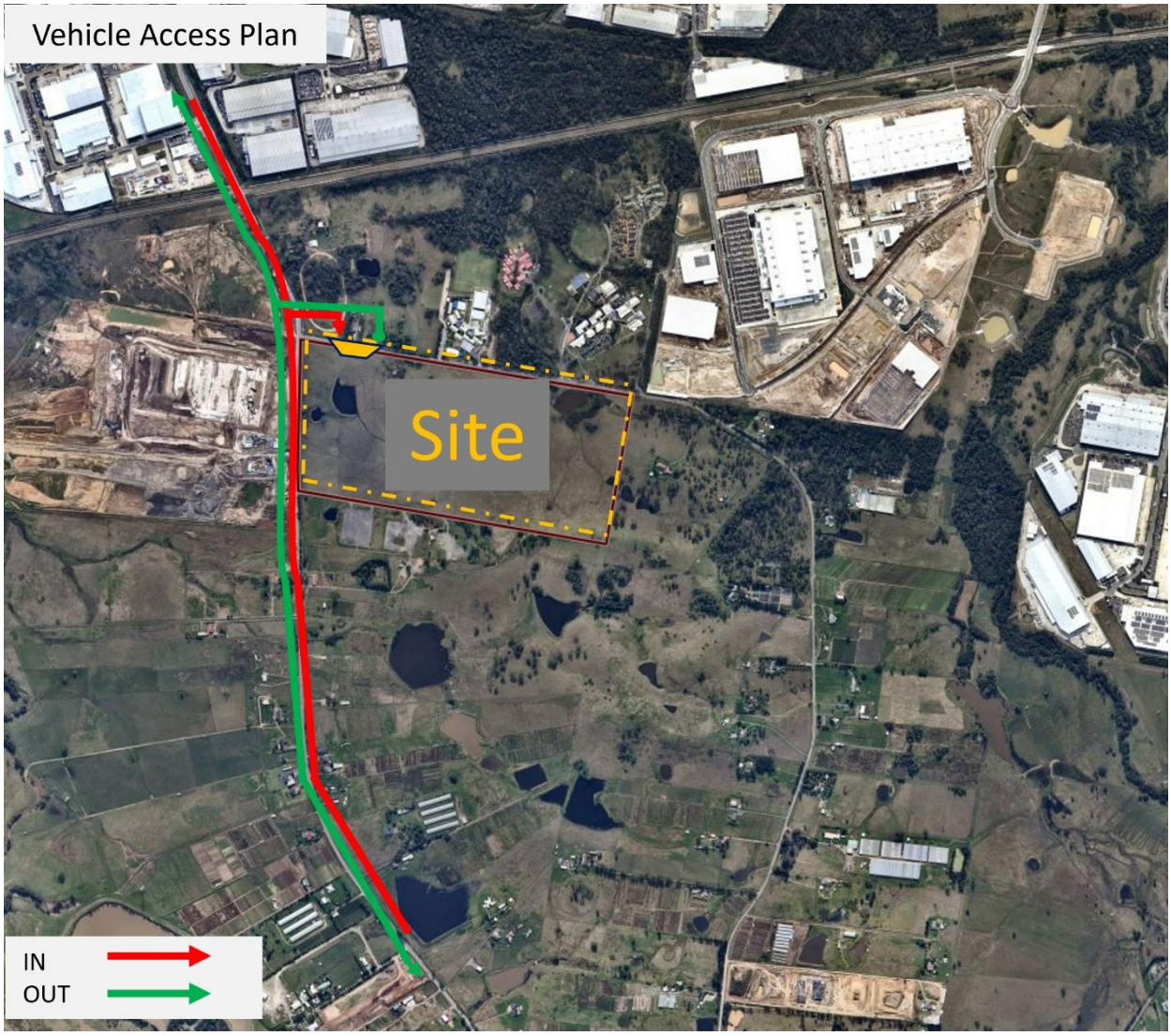

Figure 3: Indicative Vehicle Access Plan

3.3.2 Emergency Vehicle Access

Emergency vehicle access to and from the Site will be available at all times while the Site is occupied by construction workers; emergency protocols during the works will be developed by the Project Manager for inclusion within the final CTMP.

3.3.3 Pedestrian Access

There are currently no pedestrian amenities or footpaths along Mamre Road adjacent to the Site. However, the grassed verge on both sides of the road remains usable for any pedestrian that may wish to walk along Mamre Road.

Further to the above, while there is no expectation of pedestrians crossing the future construction access road, pedestrian safety will be managed through the provision of appropriate signage and pedestrian barriers. Construction personnel will also be able to access the Site by foot via a secure access gate along the temporary access road, though with all construction staff (and vehicle) parking to be provided within the Site there is again little potential for such pedestrian demand.

3.4 Construction Vehicle Access Routes

As discussed, all construction vehicles will enter and exit the Site via Bakers Lane.

It is anticipated that all heavy vehicles will access Site via the following routes:

- Arrival Trips:
  - Route 1: From M4 Western Motorway, southbound along Mamre Road, then left into Bakers Lane.
  - Route 2: From Westlink M7, westbound on Old Wallgrove Road, Lenore Drive and Erskine Park Road, then south along Mamre Road, then left into Bakers Lane.
  - Route 3: From Westlink M7, westbound on Elizabeth Drive, then north along Mamre Road, and right into Bakers Lane

- Departure Trips:
  - Route 1: From the Site, onto Bakers Lane, then left into Mamre Road to Elizabeth Drive and left to the M7 Motorway and sub-regional routes to the east.
  - Route 2: From the Site, onto Bakers Lane, then left into Mamre Road to Elizabeth Drive and right to Badgerys Creek and The Northern Road to the west.

These routes are shown in **Figure 4**. A copy of the approved routes will be distributed by the Project Manager to all drivers as part of their induction process.

In the event that an oversized or over-mass vehicles is required to travel to and / or from the Site, a permit from Roads and Maritime Services and / or the National Heavy Vehicle Register (NHVR) will be required prior to arrival to the site. Notwithstanding, this CTMP relates to general construction which does not seek the use of oversize vehicles; a separate application would be submitted if such access is required.

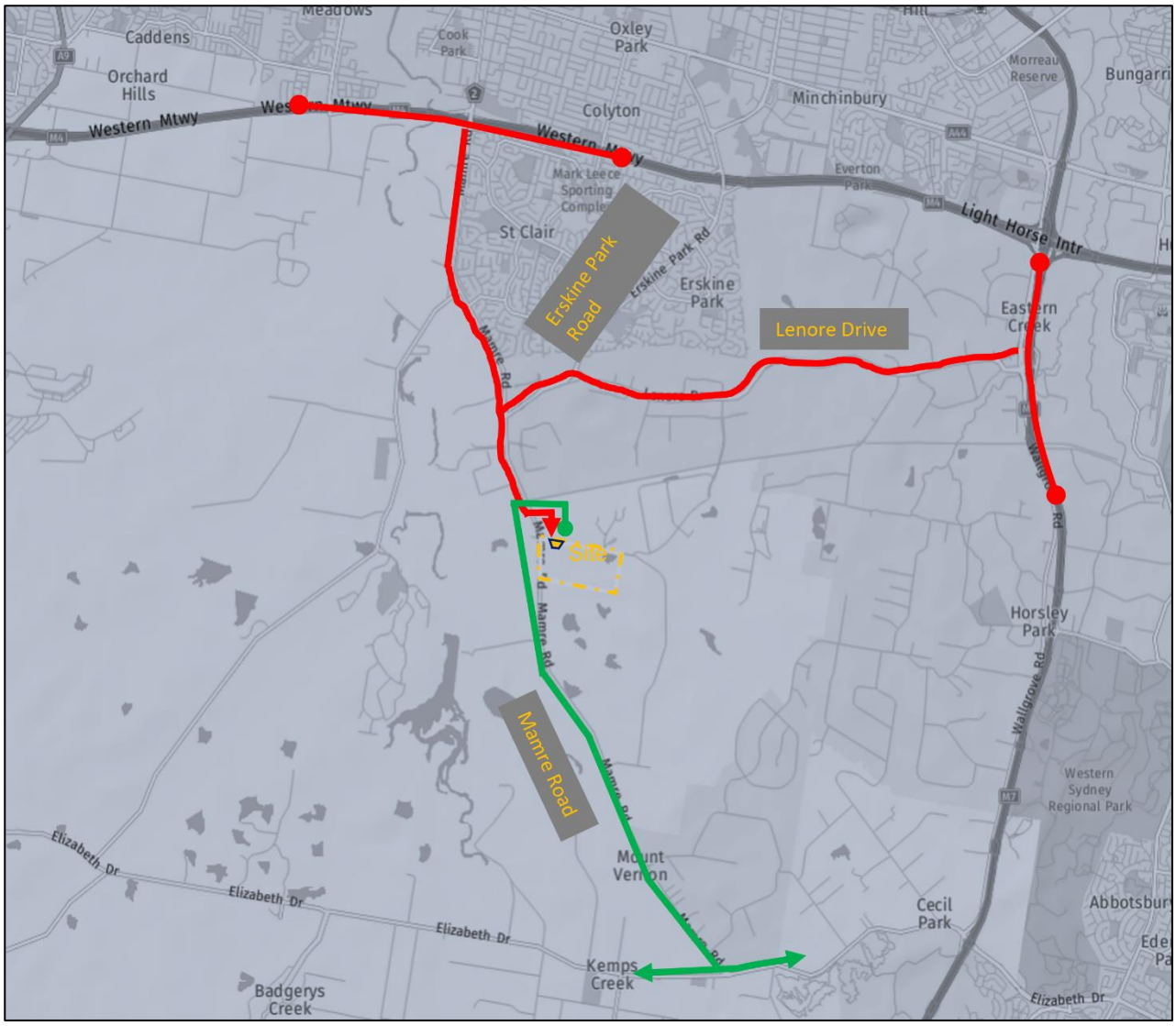

Figure 4: Construction Vehicle Routes

3.5 Fencing Requirements

Security fencing will be erected along the entire boundary of the Site and will be maintained for the duration of the construction works to ensure that unauthorised persons are kept out of the Site. The fencing will either be ATF or 2.4m chain wires.

Site access gates would be provided at the temporary driveway which would remain closed at all times outside of the permitted construction hours.

3.6 Materials Handling

All material loading will be undertaken wholly within the Site, and all construction equipment, materials and waste will similarly be strictly kept within the Site.

While not anticipated, should any materials handling (or other constructed related activity) be required from the public roadway (i.e. Bakers Lane) then prior approval shall be sought and obtained from the appropriate authorities.

3.7 Additional Site Management

Although it is not expected, in the event that any Site construction traffic management outside of that described in this CTMP is required, the Project Manager will be required to notify adjacent properties of any temporary traffic restrictions (or the like) at least fourteen (14) days in advance.

3.8 Road Occupancy

The potential exists for future road occupancy requirements to facilitate the construction of the temporary driveway, and then any further upgrades to the intersection of Bakers Lane. Road occupancy permits will necessarily be procured prior to starting intersection construction works, while a detailed intersection-specific CTMP would be prepared in consultation with Council and Roads & Maritime to ensure traffic along Bakers Lane would continue to operate adequately during any such occupancy period.

3.9 CTMP – Monitoring & Review Process

This CTMP has been prepared referencing the existing Site conditions. Consultation with Council, Roads and Maritime and neighbouring developments will continue to be undertaken to ensure that the cumulative traffic impacts of construction within the area do not adversely impact the operations of the neighbouring developments or the local road network.

4 Assessment of Traffic & Transport Impacts

4.1 Construction Vehicle Traffic Generation

Table 1 provides a breakdown of potential vehicle movements throughout the proposed works (to be confirmed by Contractor once appointed, based on similar projects in area):

TABLE 1: MOVEMENT OVERVIEW

Stage	Demolition	Excavation	General Construction
Maximum on-site at any one time	50 - 100	50 – 200	50 – 400
Truck Frequency (Maximum movements per day)	100 (50 in / 50 out)	600 (300 in / 300 out)	600 (300 in / 300 out)
Peak Hour Heavy Vehicle Movements	50 (25 in / 25 out)	120 (60 in / 60 out)	120 (60 in / 60 out)
Largest Vehicle Size	Truck & Dog	Truck & Dog	Truck & Dog

4.1.1 Light Vehicle Movements

It is anticipated that a peak construction workforce of up to 400 workers on-site at any one time (based on the specific constructions tasks being undertaken). Light vehicle traffic generation would generally be associated with construction staff movements to and from the Site, including Project Managers, trade and general employees.

With respect to the potential impacts of light vehicle traffic, the overwhelming majority of trips would occur in the short workforce arrival and departure periods, being (based on the proposed construction hours) 6:30am – 7:00am and 6:00pm – 6:30pm respectively; as such, these

4.1.2 Heavy Vehicle Movements

As indicated in **Table 1,** the construction works are estimated to generate a peak demand for up to 600 truck movements per day (300 vehicles arriving / 300 vehicles departing). To provide a conservative assessment of intersection operations, a peak hour truck generation of up to 120 movements (60 vehicles arriving / 60 vehicles departing) has been assigned; on average, it is expected there would be approximately 60 truck movements per hour (30 vehicles arriving / 30 vehicles departing).

Vehicle movements into the Site will be unfettered to ensure no queuing onto Bakers Lane.

4.2 Vehicle Management – Principles

In accordance with TfNSW requirements, all vehicles transporting loose materials would have the entire load covered and/or secured to prevent any large items, excess dust or dirt particles depositing onto the roadway during travel to and from the Site.

Further to covering/securing the load to prevent deposits onto the roadway, a Shaker Grid is proposed and installed at the point of vehicle egress to minimise the risk of dirt tracking out onto Bakers Lane and Mamre Road. The responsibility of the driver to ensure that the Shaker Grid is driven over would be included as part of the Driver Code of conduct; this requirement, and indeed all driver requirements, will be detailed during an induction process for all drivers prior to commencing work at the Site, and will be further detailed in the Driver Code of Conduct, a copy of which included in Appendix A.

4.3 Construction Staff Parking

All construction staff and contractors will be required to park wholly within the Site, noting that there will be significant area available (at all times) to meet the peak parking demand.

5 Traffic Control

5.1 Traffic Control

Any Traffic Guidance Scheme (TGS's), associated risk assessment, consultation schedules, TGS verification checklist, and inspection checklists shall be prepared by an accredited person, in accordance with the TfNSW Traffic Control at Worksites Manual (Issue 6.0) and AS1742.3:2019.

All TGSs involving signage or impacts to public roads shall be approved by the Traffic Management Centre (TMC), prior to the works for which they relate. These TCPs shall be updated to respond to any changes to prevailing traffic conditions throughout the life of the works.

With regard to the proposed temporary access road, a site-specific TGS (as shown in **Appendix B**) would be implemented for the duration of the works. A copy of all approved TGSs shall be kept on-site for reference at all times.

5.2 Authorised Traffic Controller

An authorised Traffic Controller(s) is to be present on-site throughout the proposed works. Responsibilities of the Traffic Controller will include:

- The supervision of all construction vehicle movements into and out of site at all times,
- The supervision of all loading and unloading of construction materials during the deliveries in the construction phase of the project, and
- Pedestrian management, to ensure that adverse conflicts between vehicle movements and pedestrians do not occur, while maintaining radio communication with construction vehicles at all times.

6 Monitoring and Communication Strategies

6.1 Development of Monitoring Program

The development of a program to monitor the effectiveness of this CTMP shall be established by the Project Manager and should consider scheduled reviews as well as additional reviews should construction characteristics be substantially changed (from those outlined in the Final CTMP). All and any reviews of the CTMP should be documented, with key considerations expected to include:

- Tracking heavy vehicle movements against the estimated heavy vehicle flows during the Stage 1 works.
- The identification of any shortfalls in the CTMP, and the development of revised strategies / action plans to address such issues.
- Ensuring that all TCPs are updated (if necessary) by “Prepare a Work Zone Traffic Management Plan” card holders to ensure they remain consistent with the set-up on-site.
- Regular checks to ensure all loads are departing the Site covered as outlined within this CTMP

6.2 Communications Strategy

A Communications Strategy shall be established by the Project Manager for implementation throughout the construction works; this strategy will outline the most effective communication methods to ensure adequate information within the community and assist the Project Team to ensure the construction works have minimal disruption on the road network. The Communications Strategy will include:

- The erection of appropriate signage providing advanced notice of works and any traffic control measures to be implemented.
- Written notices to surrounding landowners (and tenants) likely to be directly affected by the works, prior to commencement.

Ongoing communication is also required so that all stakeholders are kept up to date of works and potential impacts.

7 Summary

This draft CTMP has been prepared to ensure appropriate traffic management is undertaken during the proposed industrial development.

Ultimately, this CTMP report has been prepared with regard to the management principles outlined in the RMS Traffic Control at Worksites Manual (2018) and AS1742.3, and per the detailed strategies outlined in the CTMP is recommended for adoption at the Site.

In summary though – and further to a determination that the proposal's construction traffic will not impact the local road network - the following measures are recommended to minimise the potential traffic impacts associated with the proposal:

- Traffic control would be required to manage and regulate construction vehicle traffic movements to and from the Site during construction.
- All vehicles transporting loose materials will have the load covered and/or secured to prevent any items depositing onto the roadway during travel to and from the Site.
- All vehicles are to enter and depart the Site in a forward direction, with reverse movements to occur only within the Site boundary.
- All contractor parking is to be contained wholly within the Site, and.
- Pedestrian and cyclist traffic along the Site frontage will be managed appropriately at all times.

In summary, the CTMP report is proposed in accordance with the RMS TCAW.

Appendix A. Driver Code of Conduct

Driver Code of Conduct

Objectives of the Drivers Code of conduct

- To minimise the impact of earthworks and construction on the local and regional road network;
- Minimise conflict with other road users;
- Minimise road traffic noise; and
- Ensure truck drivers use specified routes

Code of Conduct

All vehicle operators accessing the site must:

- Take reasonable care for his or her own personal health and safety.
- Not adversely, by way of actions or otherwise, impact on the health and safety of other persons.
- Notify their employer if they are not fit for duty prior to commencing their shift.
- Obey all applicable road rules and laws at all times.
- In the event an emergency vehicle behind your vehicle, pull over and allow the emergency vehicle to pass immediately.
- Obey the applicable driving hours in accordance with legislation and take all reasonable steps to manage their fatigue and not drive with high levels of drowsiness.
- Obey all on-site signposted speed limits and comply with directions of traffic control supervisors in relation to movements in and around temporary or fixed work areas.
- Ensure all loads are safely restrained, as necessary.
- Drive over cattle grids – located at the Site's access – to vibrate off any loose material attached to construction vehicles.
- Operate their vehicles in a safe and professional manner, with consideration for all other road users.
- Hold a current Australian State or Territory issued driver's licence.
- Notify their employer or operator immediately should the status or conditions of their driver's license change in any way.
- Comply with other applicable workplace policies, including a zero tolerance of driving while under the influence of alcohol and/or illicit drugs.
- Not use mobile phones when driving a vehicle or operating equipment. If the use of a mobile device is required, the driver shall pull over in a safe and legal location prior to the use of any mobile device.
- Advise management of any situations in which you know, or think may, present a threat to workplace health and safety.
- Drive according to prevailing conditions (such as during inclement weather) and reduce speed, if necessary.
- Have necessary identification documentation at hand and ready to present to security staff on entry and departure from the site, as necessary, to avoid unnecessary delays to other vehicles.

Crash or incident Procedure.

- Stop your vehicle as close to it as possible to the scene, making sure you are not hindering traffic. Ensure your own safety first, then help any injured people and seek assistance immediately if required.
- Ensure the following information is noted:
    - Details of the other vehicles and registration numbers
    - Names and addresses of the other vehicle drivers
    - Names and addresses of witnesses
    - Insurers details
- Give the following information to the involved parties:
    - Name, address, and company details
- If the damaged vehicle is not occupied, provide a note with your contact details for the owner to contact the company.
- Ensure that the police are contacted should the following circumstances occur:
    - If there is a disagreement over the cause of the crash.
    - If there are injuries.
    - If you damage property other than your own.
- As soon as reasonably practical, report all details gathered to your manager.

Appendix B. Traffic Guidance Scheme

D.4.7 **Static: Access to depot, stockpile, quarry, gravel pit etc. all roads (formerly TCP 195)**