Transport Management & Accessibility Plan

Westlink Industrial Estate Stage 2

1030-1048 & 1050-1064 Mamre Road, Kemps Creek
3/11/2023
P2056r01

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Contents

contents continued

Figures

Tables

APPENDICES

Glossary

Acronym	Description
AGRD	Austroads Guide to Road Design
AGTM	Austroads Guide to Traffic Management
CC	Construction Certificate
Council	Penrith City Council
DA	Development Application
DCP	Development Control Plan
DoS	Degree of Saturation
DPE	Department of Planning and Environment
EIS	Environmental Impact Statement
FSR	Floor space ratio
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
LOG-E	Land Owners Group East
LoS	Level of Service
MRP	Mamre Road Precinct
MRV	Medium Rigid Vehicle (as defined by AS2890.2:2018)
NHVR	National Heavy Vehicle Regulator
OC	Occupation Certificate
RTA Guide	Transport for NSW (formerly Roads and Traffic Authority), Guide to Traffic Generating Developments, 2002
SEAR	Secretary's Environmental Assessment Requirements
SRV	Small Rigid Vehicle (as defined by AS2890.2:2018)
SSD	State Significant Development
TfNSW	Transport for New South Wales
TIA	Transport Impact Assessment
veh/hr	Vehicle movements per hour (1 vehicle in & out = 2 movements)

1 Introduction

1.1 Overview

Ason Group has been engaged by ESR Developments (Australia) Pty Ltd (ESR) to prepare a Transport Management & Accessibility Plan (TMAP) in relation to the State Significant Development (SSD) for the ESR Westlink Industrial Estate Stage 2. The Stage 2 site is located at 1030-1048 & 1050-1064 Mamre Road and 59-62 & 63 Abbotts Road, Kemps Creek (the Site) and is being developed for a specific, long-term tenant.

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 subdivision of the land, provision of 2 warehouse developments on Lot 2 and, provision of the relevant access roads. Full details are provided in the Environmental Impact Statement (EIS), which this TMAP accompanies.

1.2 Mamre Road Precinct Road Network Requirements

1.2.1 Strategic Road Network Requirements

The background traffic modelling to identify the required road network layout to facilitate the development of the MRP, was finalised in late 2021. The results of this modelling assessment have underpinned the road network layout detailed within the MRP DCP and considered the traffic growth associated within the wider Western Sydney area.

Ason Group worked with the Land Owners Group (LOG, being a group with 40-50% of the land holdings available in the MRP), DPE and Transport for New South Wales (TfNSW) collectively, to deliver this assessment (herein referred to as the MRP modelling assessment).

Therefore, a key purpose of this report is to ensure that the Proposal remains consistent with the assumptions that have informed the MRP modelling assessment, which was undertaken for the future assessment years of 2031 and 2036.

As such, the key forecast year for assessment of the Proposal is 2026.

1.2.2 Interim Intersection Requirements

While the MRP DCP identifies the ultimate road network (by 2036), no staging strategy has been identified which allows for the initial stages of development in the interim period prior to delivery of the ultimate road network.

Therefore, a group of landowners who have significant landholdings on Aldington Road have worked together to identify the relevant upgrades to the Abbotts Road and Aldington Road corridor. Referred to as the Land Owners Group East (LOG-E) the sites include:

- FPI, developing 2 land holdings known as Edge North (99-111 Aldington Road) and Edge South.

- ESR Australia, developing the Westlink Industrial Estate at 59-63 Abbotts Road & 290-308 Aldington Road, Kemps Creek. Stage 1 has received development consent (SSD-9138102[1]);
- Fife Kemps Creek, developing the 200 Aldington Road Estate. The Concept Masterplan and Stage 1 development has received development consent (SSD- 10479[2]).

Ason Group worked on behalf of LOG-E to deliver the modelling assessment of the interim road network (summarised in **Section 6.5**). The scope of this modelling was discussed with Transport for New South Wales (TfNSW) and DPE, and the results have been documented separately within the following report:

- Ason Group, *P1815 – Mamre Road Precinct – LOG East – Revised Modelling*, P1815m03_v4 MRP_LOG East 2026 Revised Modelling, 19 September 2022 (LOG-E Modelling Memo).

TfNSW have now endorsed this modelling assessment.

The road upgrades proposed by LOG-E have formed the basis for approval of the Westlink Industrial Estate Stage 1 as well as the 200 Aldington Road Estate. They will be delivered through a joint Voluntary Planning Agreement (VPA) between LOG-E and Council for Aldington Road, and Abbotts Road and DPE for the Mamre Road / Abbotts Road intersection.

1.3 Assessment Objectives

The key objectives of this SSDA 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 Estate can appropriately be accommodated by interim upgrades to the local road network.
- 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.

1.4 Secretary's Environmental Assessment Requirements

Industry Specific Secretary's Environmental Assessment Requirements (SEARs) were issued by the NSW Department of Planning, Industry & Environmental (DPIE) on 10 August 2022 in relation to the SSD.

The 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.

[1] https://www.planningportal.nsw.gov.au/major-projects/projects/westlink-industrial-estate-stage-1
[2] https://www.planningportal.nsw.gov.au/major-projects/projects/200-aldington-road-industrial-estate

TABLE 1: DEPARTMENT OF PLANNING & ENVIRONMENT SEARS

SEAR	Response Summary	Section
SEAR 6 Traffic, Transport and Accessibility		
Provide a transport and accessibility impact assessment, which includes:	N/A	
Details of all traffic types and volumes likely to be generated during construction and operation, including a description of key access and haul routes.	A breakdown of the daily flows anticipated to be generated by the operational the development are provided in Table 7. Construction traffic flows cannot be confirmed at this time; however, the anticipated construction vehicle mix, Site access provisions and potential haul routes have been clearly identified. The Preliminary Construction Traffic Management Plan (CTMP) provided as Appendix C will be updated to include traffic volumes at the appropriate stage.	6
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 industry standard modelling).	See Section 6.	6
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 detailed architectural plans prepared separately. The proposed gates at each of the driveways are for security during non-operational hours and will always be open during operation. Therefore, access to hardstands will be unfettered and queueing would not occur. Further, it is noted that the tenant is expected to generate a demand of up to a peak of 14 heavy vehicles per hour, which would be serviced by up to 45 different loading bays across the 3 Warehouses that will be occupied (being the Stage 2 Proposal as well as Warehouse 4 of Stage 1, see Sections 1.6 and 2). As such, it is evident that the Site would operate in an efficient manner. Construction traffic management is covered by the Preliminary CTMP.	Appendix A Appendix C
Details and plans of any proposed internal road network, loading dock provision and servicing, on-site parking provisions, and sufficient pedestrian and cyclist facilities, in accordance with the relevant Australian Standards.	Refer to detailed architectural plans and civil plans prepared separately. Parking requirements are confirmed in Section 8. All parking, loading areas and access points have been designed in accordance with the relevant Australian Standards.	8 9
Swept path analysis for the largest vehicle requiring access to the development.	Refer to Appendix A.	Appendix A
Details of road upgrades, infrastructure works, or new roads or access points required for the development if necessary.	As detailed through this report, LOG-E are proposing upgrades to the Aldington Road and Abbotts Road corridor, including delivery of the required intersections.	1.2.2 2 7

	Further detail regarding the design of these upgrades can be found within the civil engineering plans prepared separately. Assessment of the intersections is further detailed in the LOG-E Modelling Memo. The relevant sections of road, as required by the MRP DCP are also being provided for.	
Documentation requirements: • **TA: Transport and Accessibility Impact Assessment** • **GTP: Green travel Plan** • **CTMP: Construction Traffic Management Plan**	• TA: Presented within this document. • GTP: A Framework GTP is attached to this report. • CTMP: A Preliminary CTMP is attached to this report.	Appendix B Appendix C
Consultation	As an SSD, consultation is required with TfNSW. We note that ESR and Ason Group have liaised heavily with TfNSW regarding assessment of the ESR lands, most recently being the agreement and review process of the LOG-E Modelling Memo.	N/A

1.5 Reference Documents

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

- DPE, *Western Sydney Employment Area, Mamre Road precinct, Development Control Plan*, November 2021 (MRP DCP).

Further to the above, the Site lies within the Penrith City Council Local Government Area (LGA); as such, Ason Group has referenced the following key Council controls in preparing this TMAP:

- Penrith City Council Local Environmental Plan 2010 (Penrith LEP).
- Penrith City Council Development Control Plan 2014 (Penrith 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).
- State Environmental Planning Policy (Industry and Employment) 2021 (Industry SEPP).
- 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 2890.6:2022 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).
- Ason Group, *Transport Management & Accessibility Plan, Stage 1 Westlink, Mamre Road Precinct*, 1323r06v1, 31 August 2022 (Stage 1 TMAP).
- Ason Group, *P1815 – Mamre Road Precinct – LOG East – Revised Modelling*, P1815m03_v4 MRP_LOG East 2026 Revised Modelling, 19 September 2022 (LOG-E Modelling Memo).

1.6 Westlink Estate

The Westlink Estate is being developed in 2 key stages. The wider Westlink Estate is shown by **Figure 1**.

Figure 1: Westlink Industrial Estate Staging

The Stage 1 development was approved in April 2023 under SSD-9138102[3] and provides for the following:

- Stage 1 Masterplan inclusive of 2 warehouse developments, detention basin and internal roads, including connection Abbotts Road;
- Demolition and clearing of all existing built form structures and existing vegetation, subdivision of land;
- Construction of 2 industrial warehouse buildings comprising:
  - A total warehouse Gross Floor Area (GFA) of 78,906m^2 (including battery charging chamber GFA of 850m^2)
  - A total ancillary and dock office GFA of 2,736m^2
  - Provision of 381 parking spaces
  - Associated site landscaping
  - 1 x detention basin

The proposed Stage 1 Masterplan (prepared by Nettletontribe Architects) is shown in **Figure 3**.

Access to Stage 1 will be provided by the extension of Abbotts Road. Included within the VPA offer ESR and LOG-E have put forward to Council is the signalisation of the Abbotts Road / Aldington Road intersection.

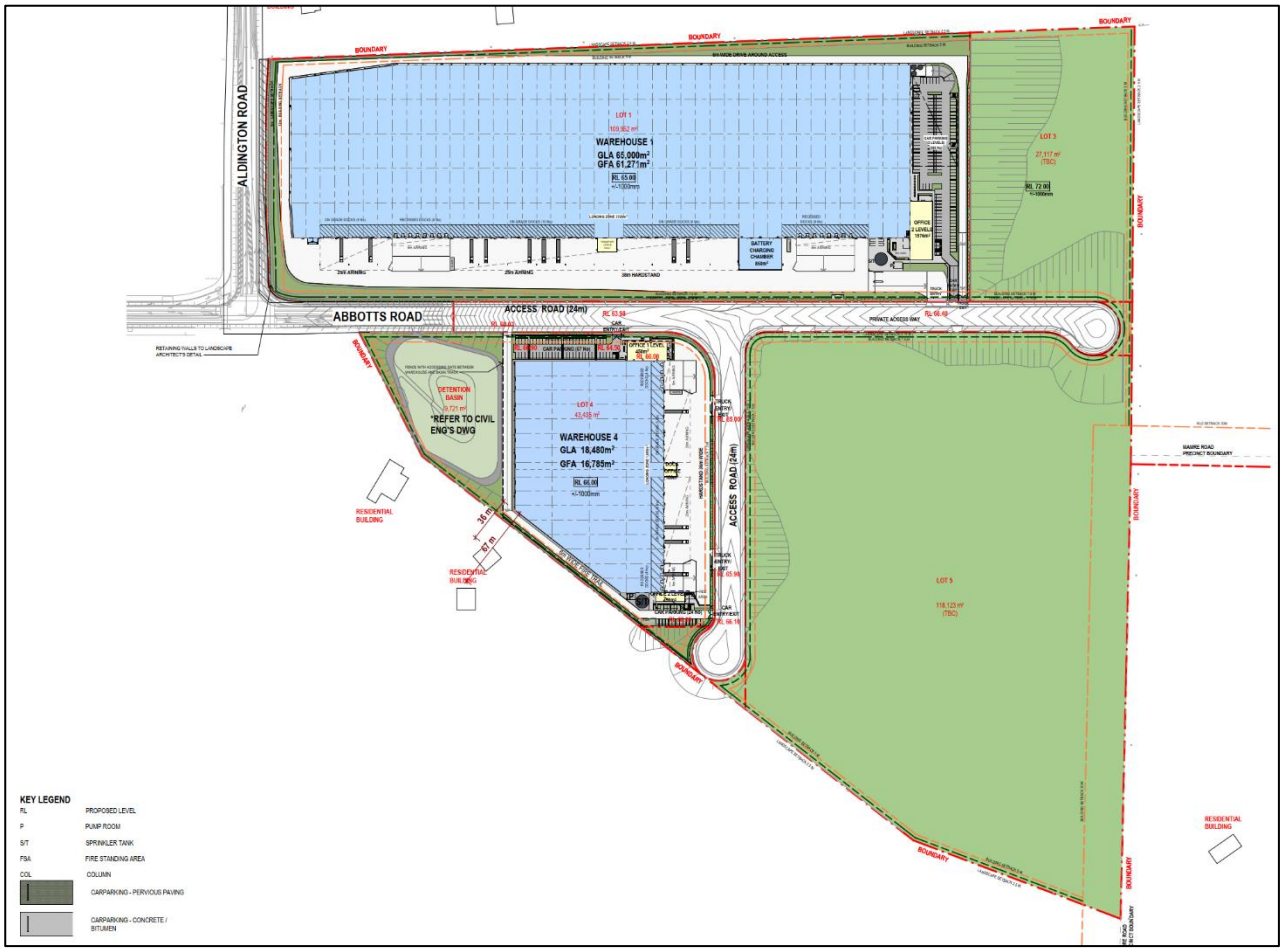


Figure 2: Stage 1 Masterplan

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

2 The Proposal

2.1 Stage 2 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:

- A total building area of 38,640m^2, comprising:
  - A total of 37,540m^2 warehouse Gross Floor Area (GFA),
  - A total of 1,000m^2 of ancillary office GFA,
- 1 development lot and 1 x detention basin;
- Internal road connections, with access to the external network to be provided via Stage 1;
- Provision for 153 car parking spaces; and
- Associated site landscaping.

The proposed Warehouse 2 development (prepared by Nettletontribe Architects) is shown in **Figure 3.**

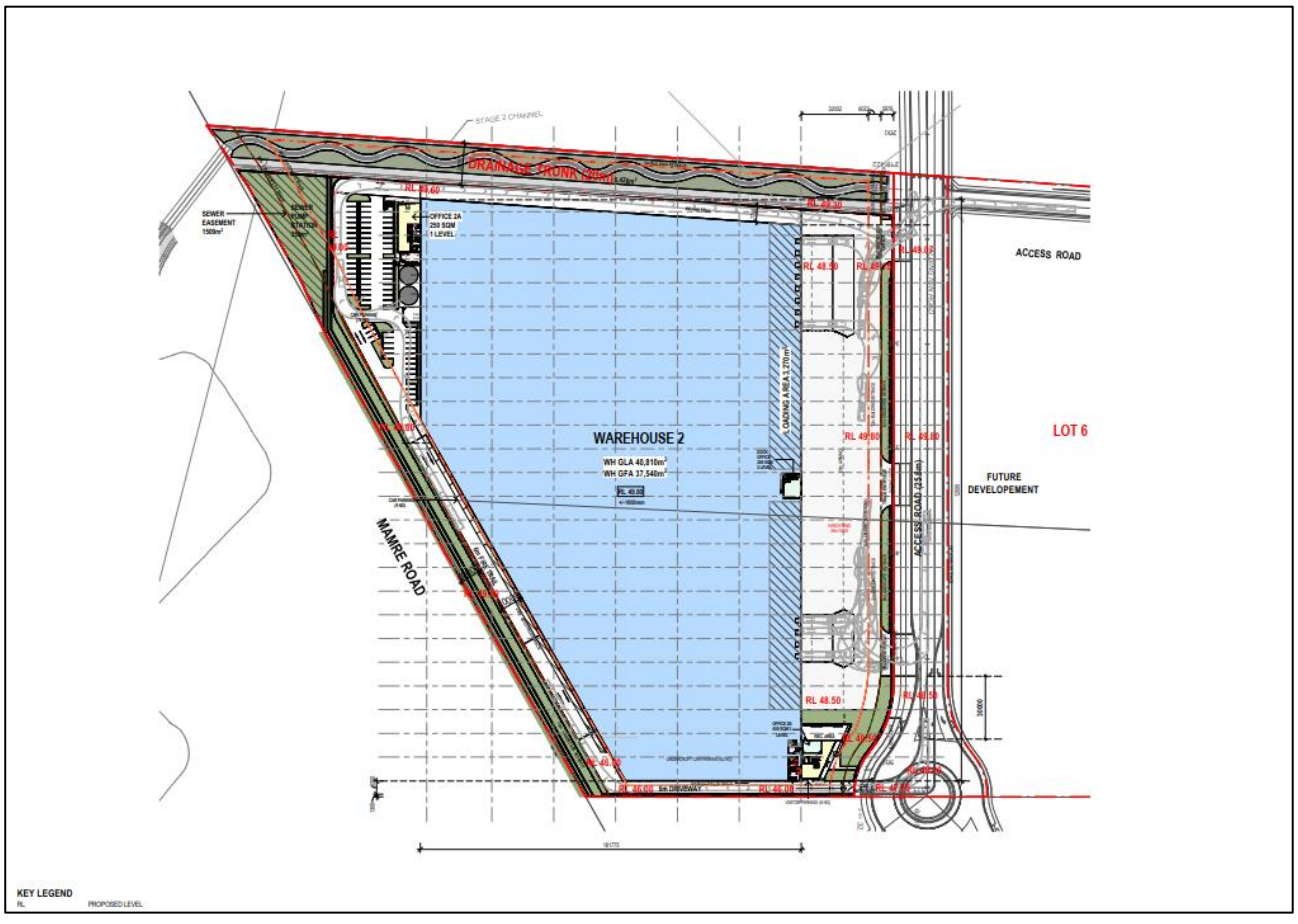


Figure 3: Proposed Development

2.1.1 Operational Requirements

It is noted the Proposal has been developed for a tenant (being Silk Logistics) which has an agreed long-term lease.

In terms of the Proposal, Silk Logistics have indicated that there will be a total of 125 staff required to operate the Site, spread across the shifts as detailed in the table below.

It is worthy of note that Silk Logistics will be occupying both the Stage 2 Proposal, as well as Warehouse 4 of Stage 1 (as per Figure 2). This has been considered in the traffic generation assessment detailed in **Section 6**.

TABLE 2: TENANT SHIFT PATTERNS

#	1	2	3	4	5	6
Shift	Warehouse	Warehouse	Warehouse	Office	Office	Office
Start	06:00	10:00	14:00	07:00	06:00	14:00
Finish	14:00	18:00	22:00	15:00	14:00	22:00
Staff Number	39	26	13	13	10	8

3 The Existing Site

3.1 Location

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. The land is approximately 217,670m^2 in area and is irregular in shape.

The Site context is shown by **Figure 4**.

3.2 Site Access

The Site currently has an access point onto Mamre Road, which provides access to 1 residential property. From Mamre Road, access is available north to the M4 Motorway, Great Western Highway, Lenore Drive and M7 Motorway; and south to Elizabeth Drive, the M7 Motorway and the future M12 Motorway.

Figure 4: Site Location

3.3 The Existing Road Network

3.3.1 Key Roads

The existing road network providing access to the Site is shown in **Figure 5**, and detailed further below:

- **Mamre Road** is 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 provides 1 traffic lane in each direction, and has a posted speed limit of 80km/h.
- **Bakers Lane** is a local access road that runs east-west (to the east of Mamre Road) and currently provides access for a number of rural residential, educational and retirement sites. Bakers Lane provides 1 traffic lane in each direction and has a posted speed limit of 60km/h, with School Zone restrictions (40km/h during school peaks) adjacent to the Trinity Primary School and Emmaus College.
- **Abbotts Road** is a local access road that runs east-west connecting to Mamre Road (to the east of Mamre Road) and currently provides access for a number of rural residential properties. Abbotts Road provides 1 traffic lane in each direction and has a posted speed limit of 60km/h,
- **Aldington Road** is a local access road that runs north-west (to the east of Mamre Road) and currently provides for a number of rural residential properties. Aldington Road provides 1 traffic lane in each direction and has a posted speed limit of 60km/hr.
- **Elizabeth Drive** is a sub-arterial road that runs east-west between Hume Highway and M7, and Mamre Road and The Northern Road respectively. In the vicinity of Mamre Road, Elizabeth Drive provides 1 -2 traffic lanes in each direction, and has a posted speed limit of 80km/h.

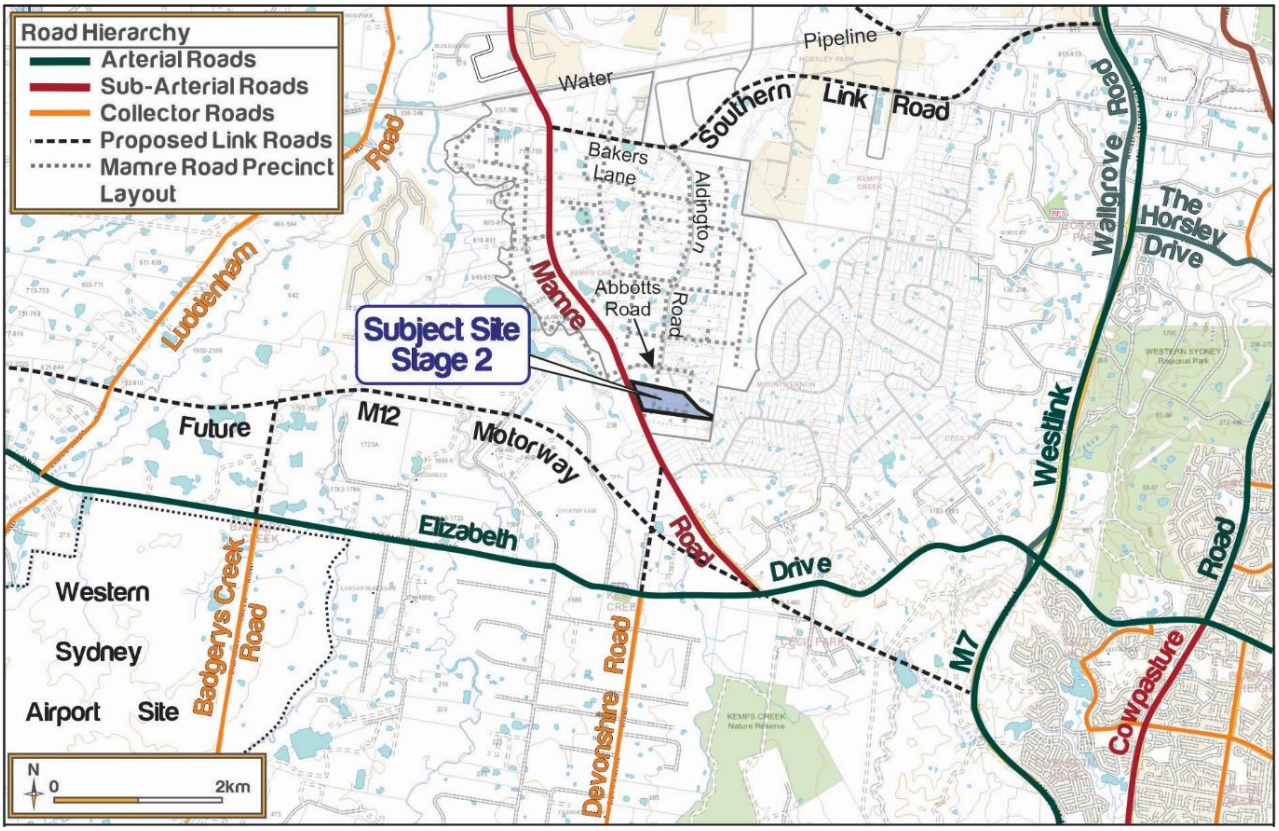


Figure 5: Site Road Hierarchy

4 Mamre Road Precinct Rezoning

4.1 Strategic Context

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 6**.

4.2 Key Infrastructure

The key infrastructure in relation to travel within and to / from the MRP is as follows:

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

  The design of the Proposal 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 shared paths along its full length.

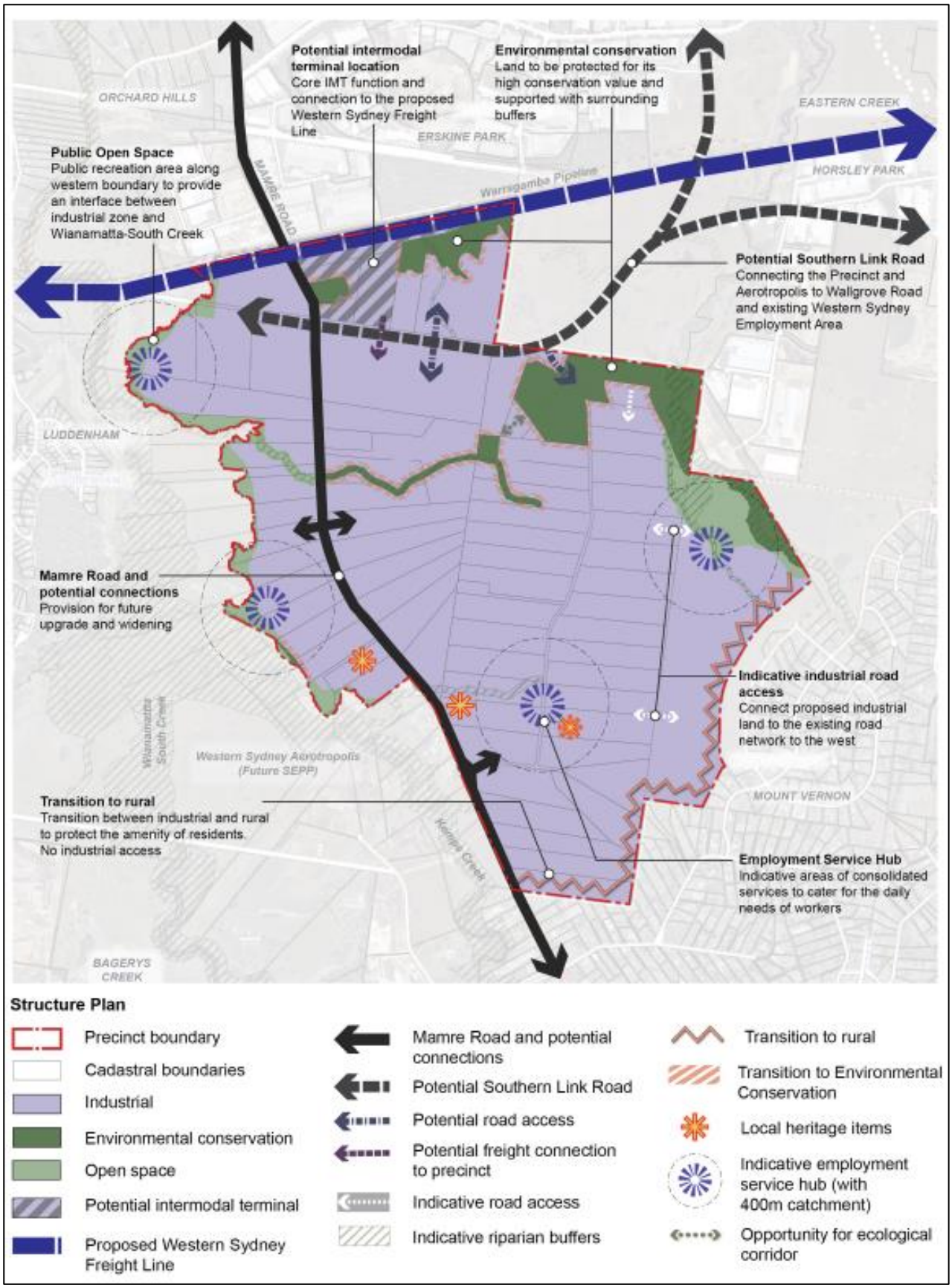


Figure 6: Mamre Road Precinct Structure Plan

Source: NSW Government

4.3 Mamre Road Upgrade

4.3.1 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 – which essentially mirror those of the broader MRP Rezoning Paper - 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 NSW Government has committed $248 million to Stage 1 of the Mamre Upgrade between the M4 Motorway and Erskine Park Road.

4.3.2 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 7.**

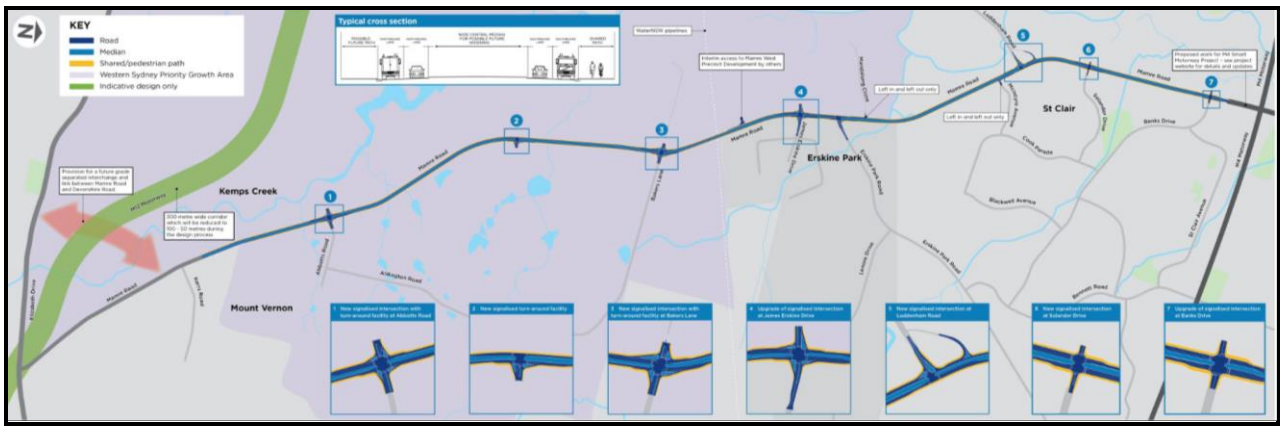


Figure 7: Mamre Road Upgrade

Source: Mamre Road Upgrade Report

4.3.3 Abbotts Road & Bakers Lane Intersection Upgrades

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

While the capacity requirements have been determined as part of the MRP modelling assessment for the future years of 2031 and 2036 (which has been confirmed as part of the finalisation of the MRP DCP), it is noted that the detailed design is yet to be finalised.

Therefore, the LOG-E are proposing an upgrade to the Mamre Road / Abbots Road intersection, with the relevant VPA currently being agreed following development consents being granted for both the Westlink and 200 Aldington Road Estates.

Acquisition of land is currently being facilitated by LOG-E to support the ultimate road upgrade per TfNSW's directive for the ultimate road network to be delivered. The ultimate intersection developed is shown by **Figure 8.**

The intersection (minus the western leg) will be delivered collectively by the LOG-E.

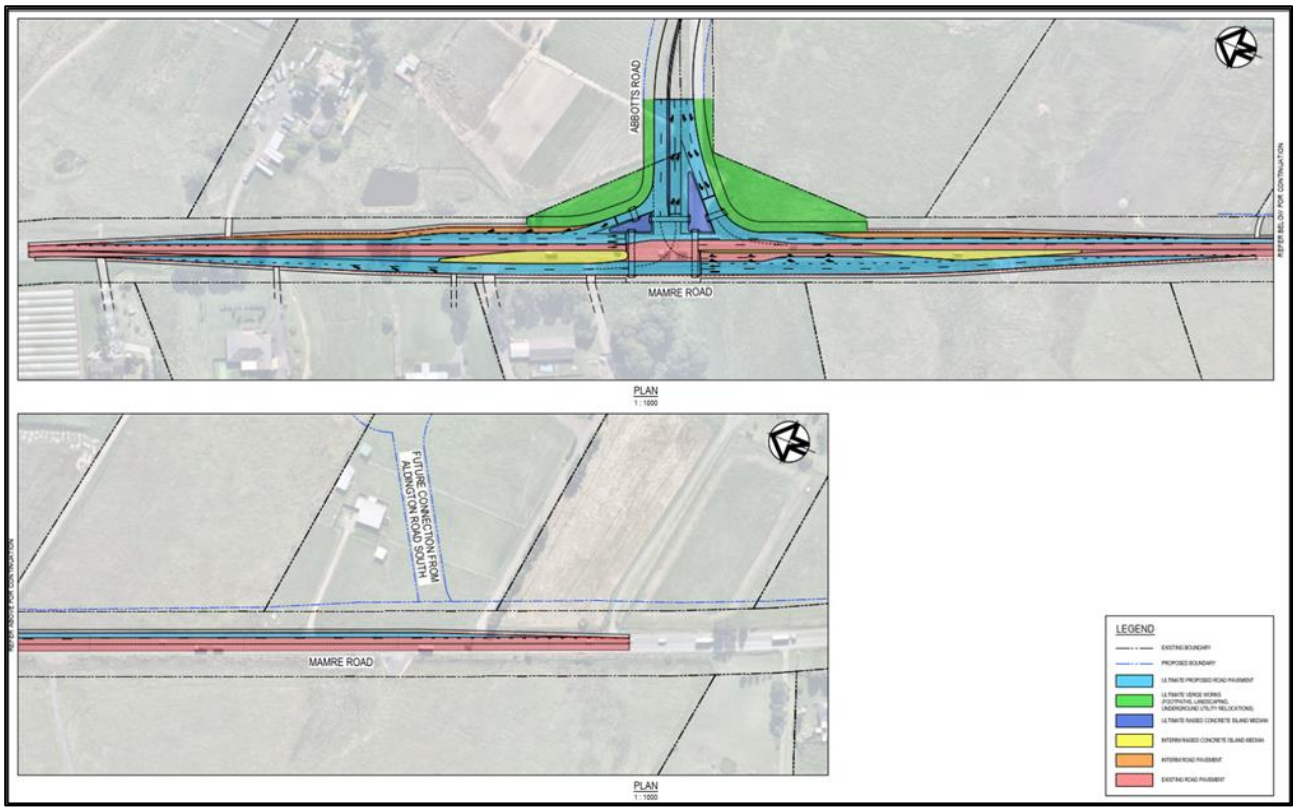


Figure 8: Abbotts Road / Mamre Road - Currently Proposed Ultimate Intersection

Further to the upgrades planned to Mamre Road / Abbotts Road, the approved development located at 657-769 Mamre Road (SSD 9522[4]) includes a requirement to upgrade the Mamre Road / Bakers Lane intersection by 2025, in advance of the delivery of the ultimate intersection.

The approved intersection design, to be delivered by 2025, is reproduced in **Figure 9.**

[4] https://www.planningportal.nsw.gov.au/major-projects/project/10376

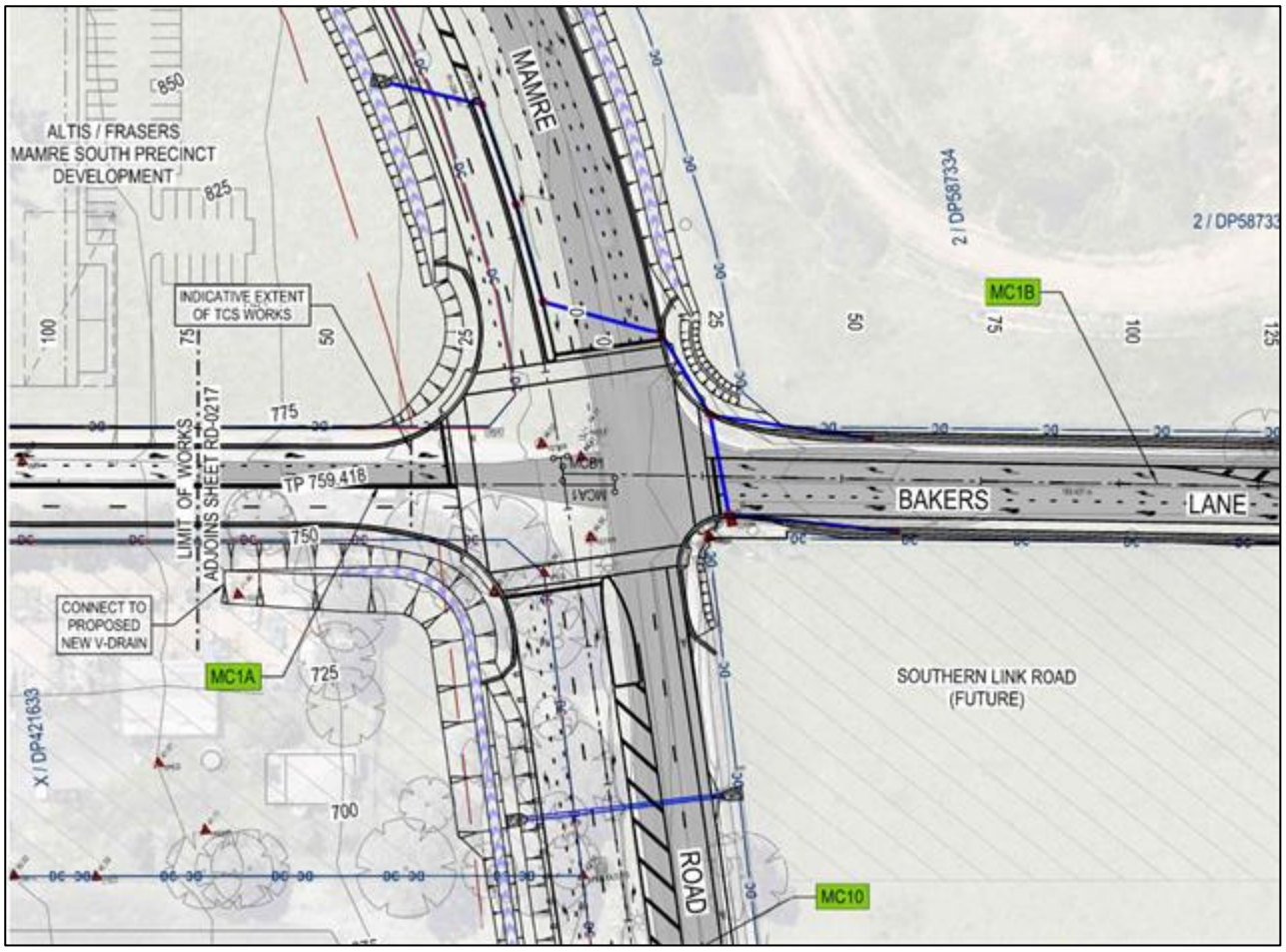


Figure 9: Approved Bakers Lane / Mamre Road Intersection

4.3.4 Mamre Road / Aspect Industrial Estate Approved Intersection

Further to the above, a new signalised intersection is to be delivered as part of the approved SSD-10448[5] located at Lots 54 - 58 in DP 259135, on Mamre Road. The intersection relates intersection 2 of the Mamre Road Upgrade (**Figure 7**) The approved intersection is shown by **Figure 10** and will provide a key access to the internal MRP road network.

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

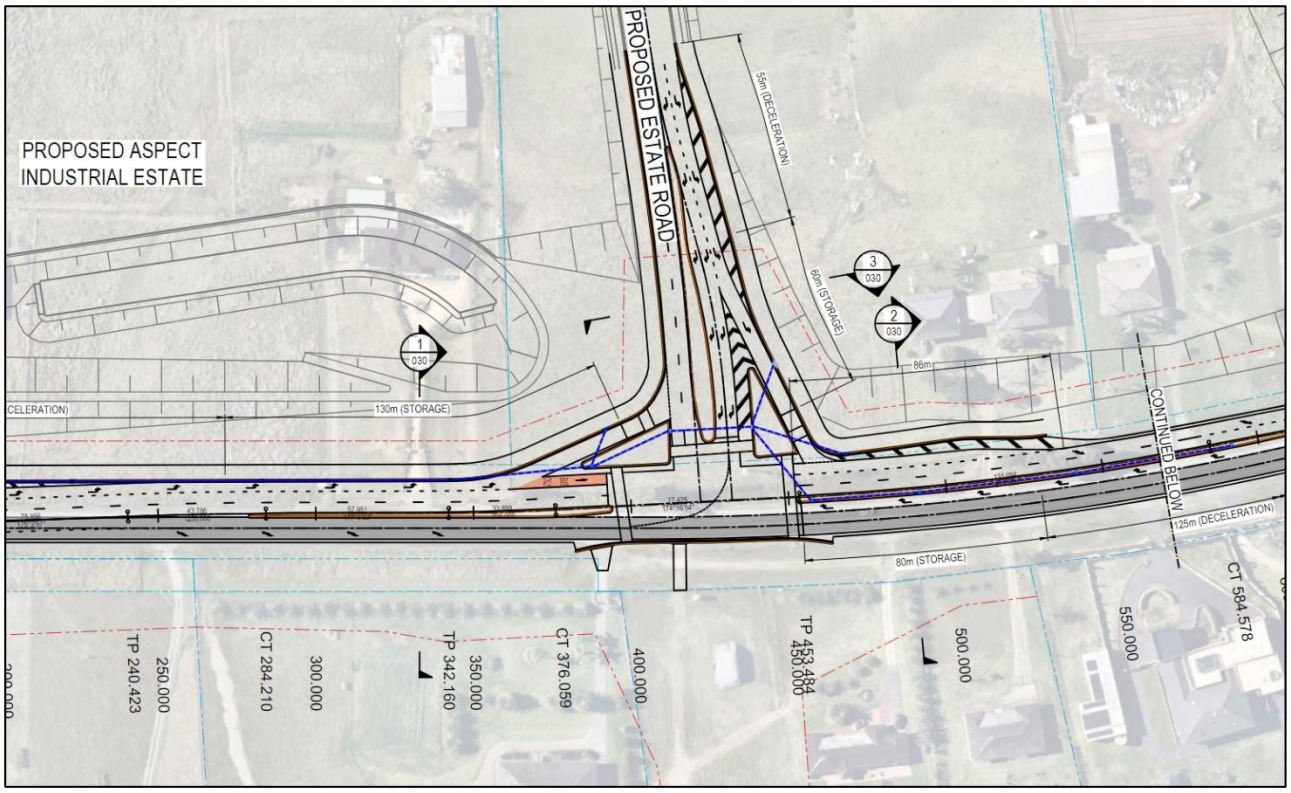


Figure 10: Approved Mamre Road / Aspect Industrial Estate Intersection

4.4 Mamre Road Development Control Plan

The MRP DCP has now been finalised and provides the planning controls for future development in the MRP including building design controls, the road network and parking requirements. The currently proposed road network is shown by **Figure 11.**

As is shown, the existing section of Abbotts Road and Aldington Road form distributor roads and the internal north-south Site road would eventually form an industrial collector road.

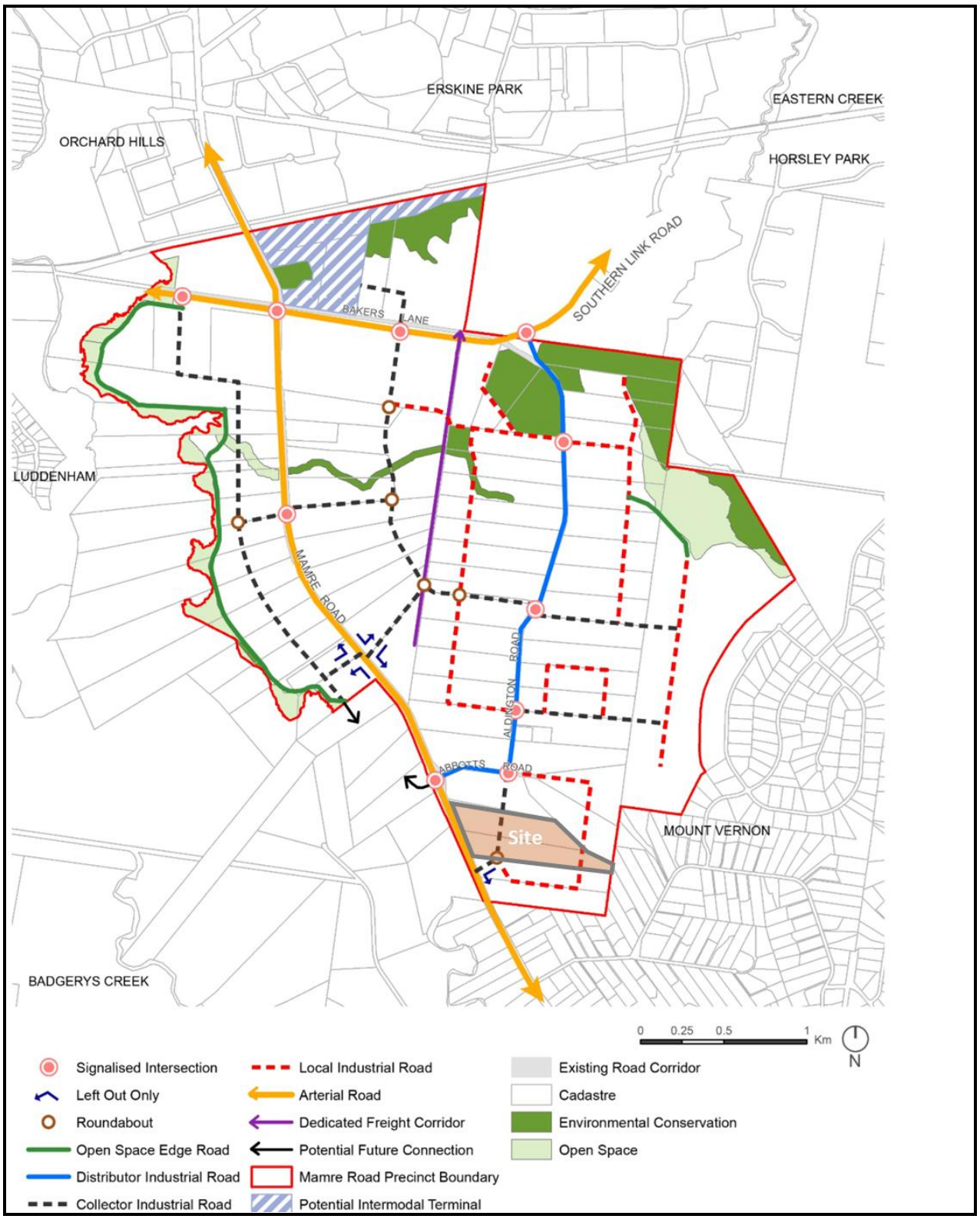


Figure 11: DCP Precinct Road Network

The requirements for the preferred industrial collector road, as per the MRP DCP, is shown by **Figure 12.**

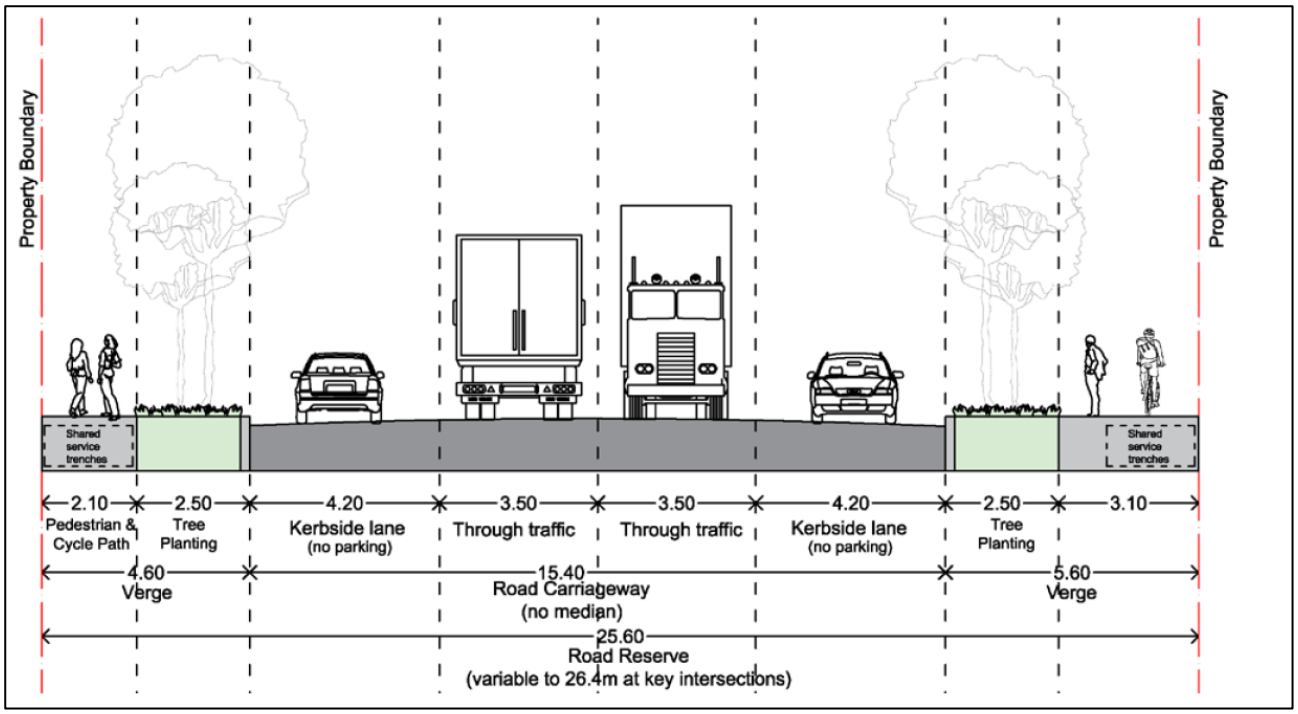


Figure 12: MRP DCP Typical Collector Industrial Road

Source: Mamre Road Precinct DCP 2021

5 Public & Active Transport

5.1 Public Transport

5.1.1 Introduction

It is evident that the Site is not directly serviced by public transport at this time (**Figure 13**); notwithstanding, opportunities for future connections have been identified, noting again that the MR Upgrade specifically provides for new bus stops along its entire route.

Establishment of public transport services as early as possible in the development stages of the MRP 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.

However, it should be noted that as this stage there is no immediate priority for the MRP to be serviced by new bus services. Due to the availability of new buses and drivers, additional services are being prioritised in other growth areas within the Aerotropolis.

Nevertheless, the 779-bus route was extended in 2022 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. If a connection to Compass Drive is delivered (via the SLR) then this could present an opportunity to extend this service further.

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 13. While the closest station to the Site will likely 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.

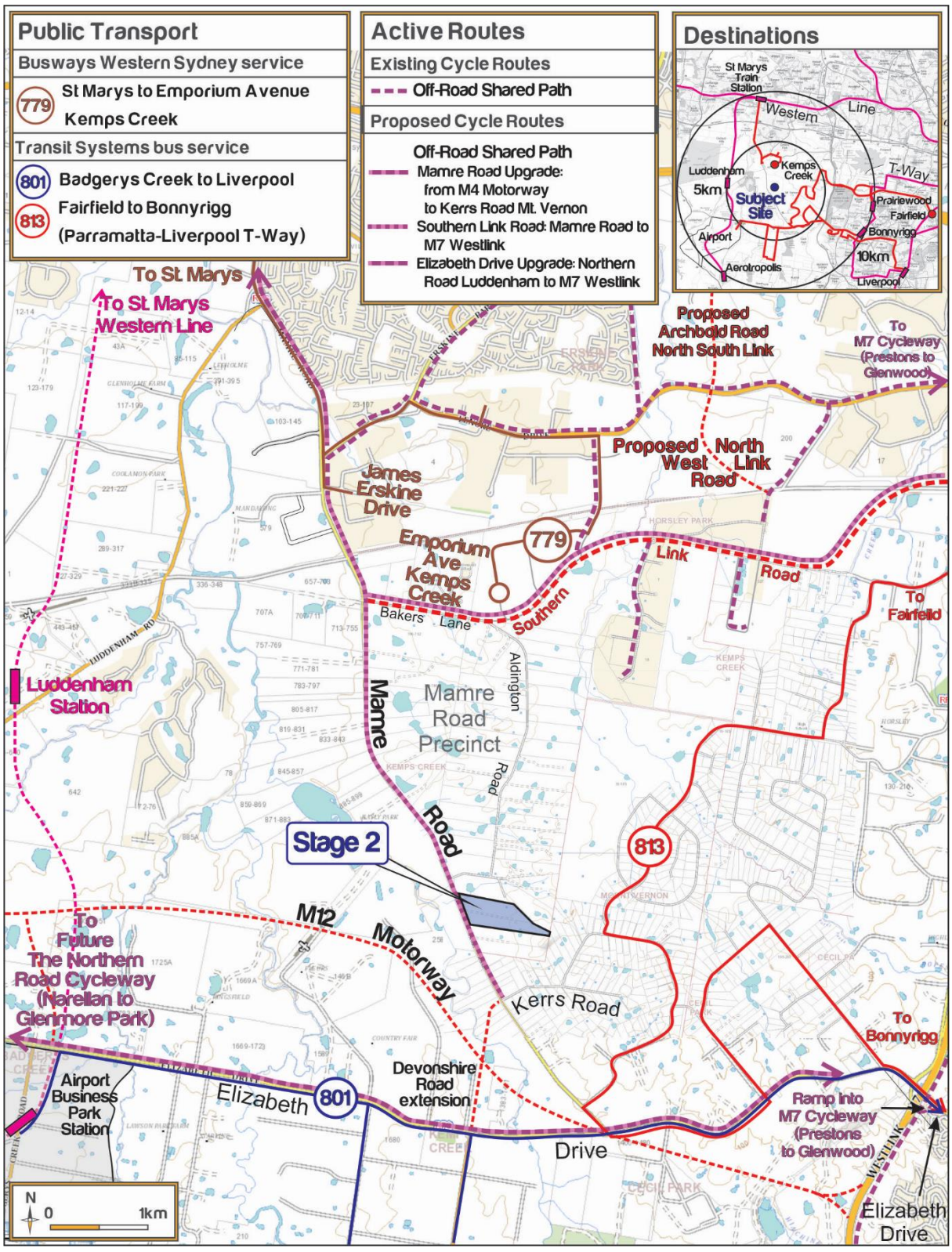


Figure 13: Public & Active Transport Network

5.1.2 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 with the MRP.

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 14,** noting again that the Mamre Road upgrade Project will provide shared paths along at least one side of the road for its entire length.

Further, the MRP DCP requires internal roads to provide a footpath of 1.5m on one side (minimum) and shared path of 2.5m (minimum) on the opposing side of the road. It also requires roads to be provided with shared cycle and footpaths.

5.1.3 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 being largely industrial and therefore not representing key destinations and attractions for people to walk to.

In this regard, it is noted that the upgraded Mamre Road will include shared cycle and pedestrian pathways along its length. Further, the MRP DCP requires internal roads to provide a footpath of 1.5m on one side (minimum) and shared path of 2.5m (minimum) on the opposing side of the road. It also requires roads to be provided with shared cycle and footpaths.

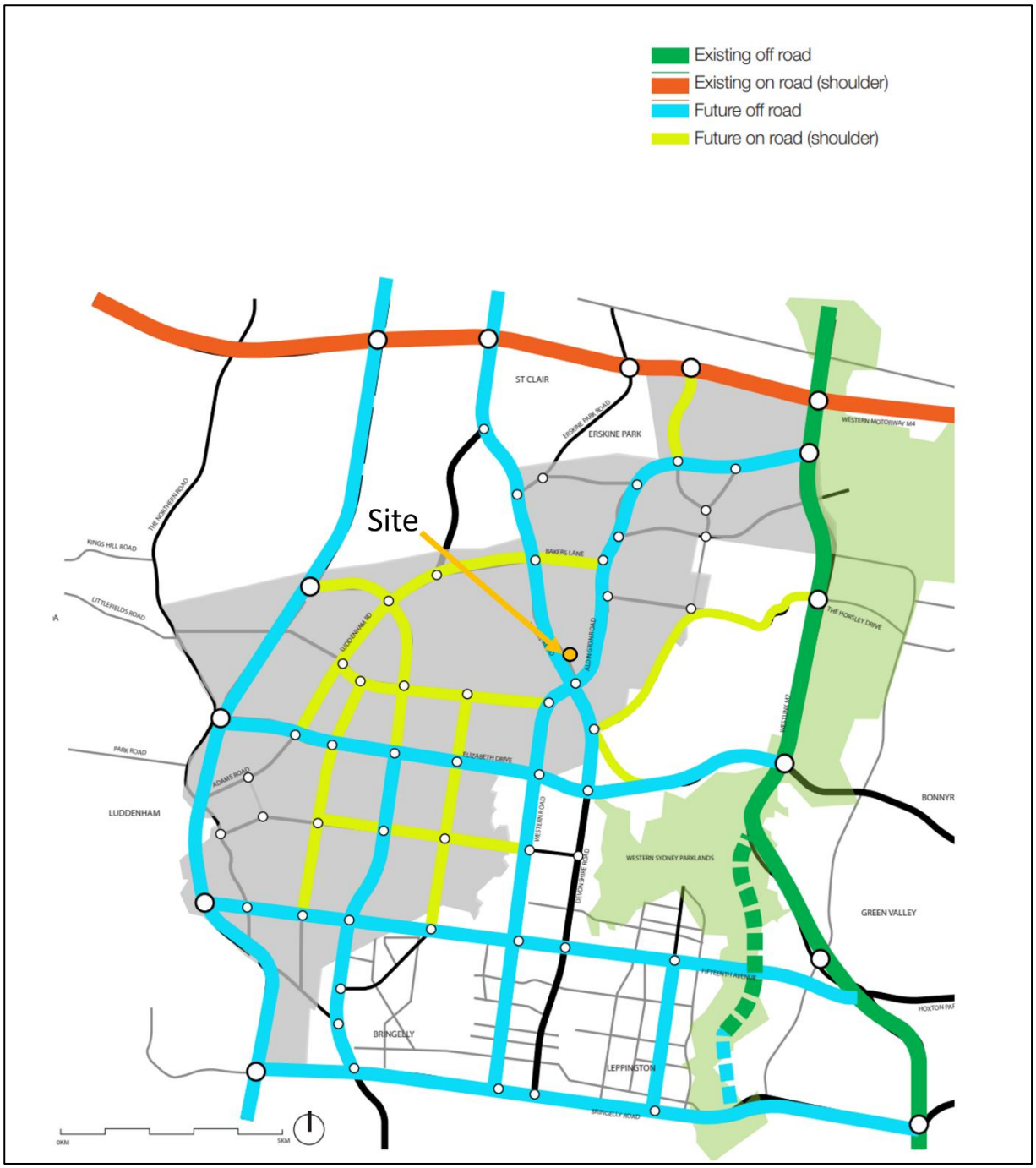


Figure 14: BWSEA Cycle Routes

Source: BWSEA Structure Plan

6 Traffic Impact Assessment

6.1 Assessment Methodology

As discussed, the road layout detailed within the MRP DCP network has been informed by the MRP modelling assessment. Accordingly, the traffic generation impact assessment for the Proposal has considered the following separately:

- The wider MRP modelling assessment in relation to the Ultimate MRP DCP road network, of which development of the Site was considered (see Section 6.4); and
- The MRP DCP does not provide for a staging strategy. As such, the operation of the road network in 2026 (i.e. the "interim" scenario") has been considered.

The results of the most recently undertaken modelling assessment undertaken by Ason Group for LOG-E has been submitted separately to DPE and TfNSW is detailed in the LOG-E Modelling Memo.

The key results of this assessment are summarised below. It is worthy of note that the methodology for the modelling assessment was presented to, and agreed, with TfNSW prior to its commencement. Further, the assessment has now been endorsed by TfNSW.

6.2 Trip Rates

6.2.1 TfNSW MRP Trip Rates

For the MRP modelling assessment, TfNSW provided Ason Group with trip rates for adoption, as shown by **Table 3**.

The purpose of these trip rates was to provide for some consideration to a range of uses that may be permissible under the current IN1 General Industrial land zoning (i.e., retail uses which generally have higher traffic generating characteristics than warehousing uses).

TABLE 3: TFNSW TRIP RATES

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

6.2.2 WSEA 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.

The average trip generation rates for general warehousing developments found by the surveys are summarised in **Table 4** below. These have been provided for context only, noting the MRP modelling assessment adopted the above rates.

TABLE 4: SURVEYED TRIP RATES – WAREHOUSE DEVELOPMENTS IN WSEA

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

6.3 Traffic Generation

6.3.1 Silk Logistics Operational Requirements - Heavy Vehicles

While adoption of average trip rates provides the most appropriate assessment of speculative warehouse developments (i.e. with no tenant secured) it is noted that there is a long-term tenant committed to Proposal in this instance. It is notable that Silk Logistics were working with the previous landowner on planning for a development on the Site.

Therefore, the traffic generation assessment has been informed by Silk Logistics' operational requirements.

For heavy vehicles, a total of 70 vehicle movements are expected with:

- 30% heavy rigid vehicles;
- 40% articulated vehicles; and
- 30% 26m B-Double vehicles.

Table 5 details the daily breakdown of heavy vehicle movements across the day, as provided by Silk Logistics.

TABLE 5: HEAVY VEHICLE MOVEMENTS

Start Time	Total	Inbound	Outbound
6:00	6	4	2
7:00	14	6	8
8:00	10	4	6
9:00	7	4	3
10:00	7	4	3
11:00	4	2	2
12:00	4	2	2
13:00	6	2	4
14:00	6	2	4
15:00	5	1	4
16:00	5	1	4
17:00	5	2	3
Total	**79**	**34**	**45**

Silk Logistics currently occupies a similar site at 54 Eastern Creek Drive, Eastern Creek. Their existing operations have therefore been surveyed to validate the information provided to inform this assessment. It is critical to note that the operations are expected to be different on this site, as it has been designed to meet their specific operational requirements. However, it assists to provide validation to the information provided.

The Traffic surveys were undertaken between 28 October 2023 – 14 November 2023. The surveys found that the existing Site was serviced by an average of 40 heavy vehicle movements per day, which is less than Silk Logistics have forecast for the Proposal.

6.3.2 Silk Logistics Operational Requirements - Light Vehicles

Light vehicle trip generation would largely be related to the staff travelling to and from the Site (shift patterns are detailed in **Table 2**). Silk Logistics will require 125 staff to service the Site, based on Journey to Work Census Data, 91% of these are expected to drive to Site.

Therefore, taking account of other light vehicle movements required through the day (visitors / external work-related trips / personal trips by staff on lunch breaks), **Table 6** details the daily breakdown of light vehicle across the day.

TABLE 6: LIGHT VEHICLE MOVEMENTS

Start Time	Total	Inbound	Outbound
0:00	0	0	0
1:00	0	0	0
2:00	0	0	0
3:00	0	0	0
4:00	0	0	0
5:00	47	47	0
6:00	12	12	0
7:00	0	0	0
8:00	0	0	0
9:00	71	47	24
10:00	12	6	6
11:00	0	0	0
12:00	0	0	0
13:00	54	43	12
14:00	47	0	47
15:00	12	0	12
16:00	0	0	0
17:00	0	0	0
18:00	54	15	39
19:00	0	0	0
20:00	0	0	0
21:00	0	0	0
22:00	31	0	31
23:00	0	0	0
Total	**340**	**170**	**170**

6.3.3 Silk Logistics Traffic Generation

On this basis, **Table 7** details the daily breakdown of traffic across the day. As shown, during the road network peak hours the tenant would generate 14 veh/hr in the AM peak and 5 veh/hr in the PM peak.

TABLE 7: TRAFFIC GENERATION TRAFFIC PROFILE

Start Time	All Vehicle	Light Vehicle	Heavy Vehicle	Rigid	Semi-trailer	B-double
0:00	0	0	0	0	0	0
1:00	0	0	0	0	0	0
2:00	0	0	0	0	0	0
3:00	0	0	0	0	0	0
4:00	0	0	0	0	0	0
5:00	47	47	0	0	0	0
6:00	18	12	6	2	2	2
7:00	**14**	**0**	**14**	**4**	**6**	**4**
8:00	10	0	10	3	4	3
9:00	78	71	7	2	3	2
10:00	19	12	7	2	3	2
11:00	4	0	4	1	2	1
12:00	4	0	4	1	2	1
13:00	60	54	6	2	2	2
14:00	53	47	6	2	2	2
15:00	17	12	5	2	2	2
16:00	**5**	**0**	**5**	**2**	**2**	**2**
17:00	5	0	5	2	2	2
18:00	54	54	0	0	0	0
19:00	0	0	0	0	0	0
20:00	0	0	0	0	0	0
21:00	0	0	0	0	0	0
22:00	31	31	0	0	0	0
23:00	0	0	0	0	0	0
Total	**420**	**341**	**79**	**24**	**32**	**24**

6.3.4 Westlink Estate Traffic Generation

The traffic generation of the Westlink Estate Stage 1 was detailed in the Stage 1 TMAP and assessed both Warehouse 1 and 4 based on adoption of the trip rates as detailed in Section 6.2. However, Silk Logistics will also be occupying Warehouse 4 of Stage 1.

Therefore, the total traffic generation of the initial Stages of the Estate have been reviewed for the purposes of this assessment and are provided as **Table 8**.

TABLE 8: WESTLINK ESTATE STAGE 1 & 2 TRAFFIC GENERATION

Stage	GFA	Period	Method	Trips
Stage 1, Warehouse 1	63,857	AM	TfNSW Trip Rate per 100m^2	147
		PM		153
Stage 1, Warehouse 4*	17,785	AM	Based on Operational Information	14
Stage 2*	38,640	PM		5
Total	**120,282**	**AM**	**-**	**161**
		PM	**-**	**158**

** Warehouse 2 of Stage 1, and the whole of Stage 2 is to be occupied by the same tenant.*

6.4 Traffic Assessment – Ultimate Road Network

In terms of 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 the MRP modelling assessment was 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; and
- Trips rates adopted (detailed in Table 3), 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.

Of particular note to the Proposal is the assumption that 55% of the Site area represented developable GFA. With a Site area of 71,611m^2, this equates to a GFA of 39,386m^2.

The current Proposal includes a GFA 38,640m^2 which represents 54% of the total Site area. Therefore, the Proposal is within the level of development that was assumed as part of the MRP modelling assessment which informed the MRP DCP.

The assessment undertaken for the MRP DCP has already determined the road layout and intersection capacity requirements for the assessment years of 2031 and 2036, based on a precinct-wide cumulative assessment. As such, further assessment of the Site with consideration to the ultimate road network, is not deemed necessary.

6.5 Traffic Assessment – 2026 Interim Assessment

The road network which was adopted for the LOG-E modelling assessment (reported in the LOG-E Modelling Memo), forms part of the relevant applications currently under consideration by DPE, as shown in **Figure 15**.

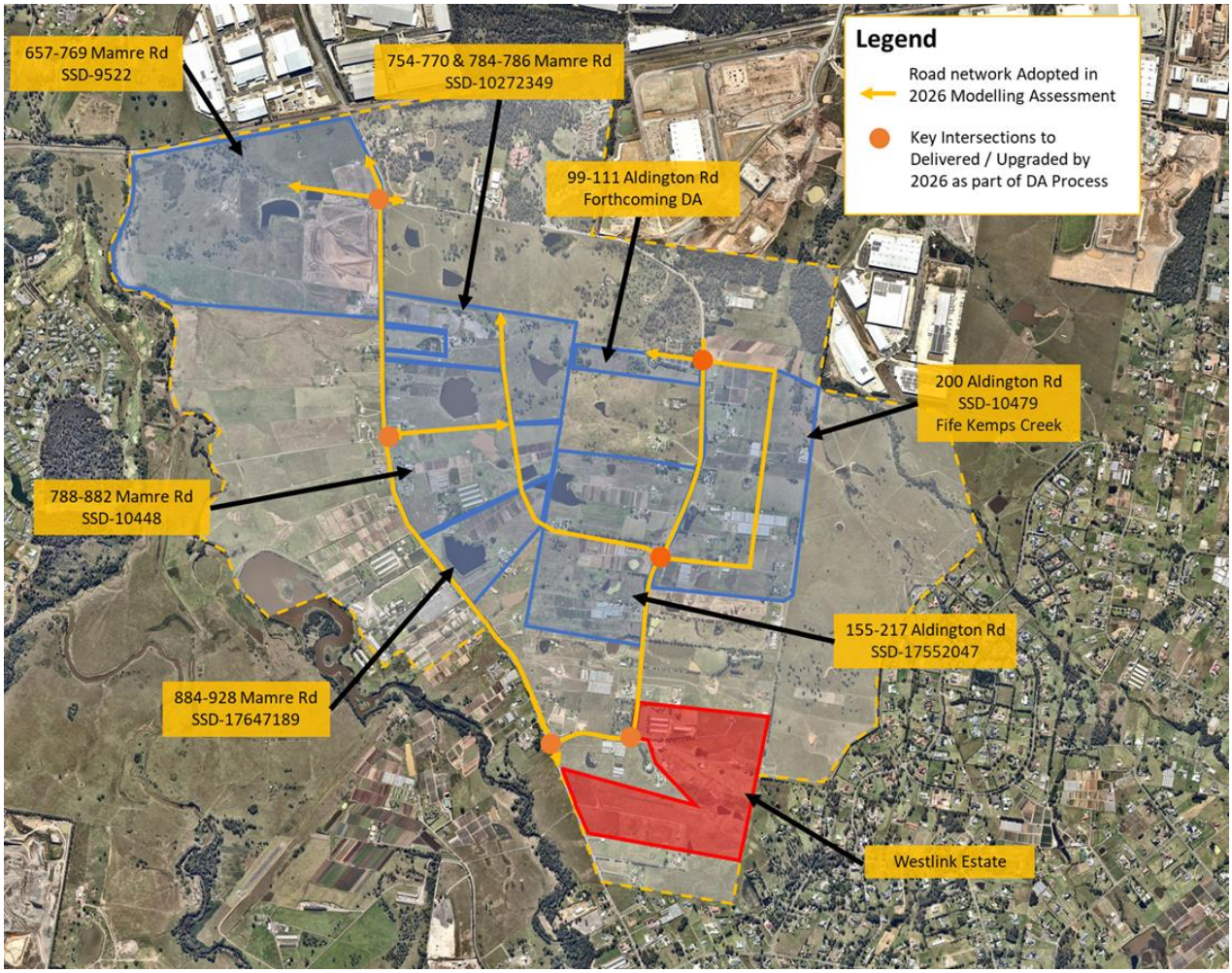


Figure 15: 2026 Interim Modelling Assessment Road Network

Of relevance to the project Site, SIDRA intersection results of the key intersections are summarised below for:

- Mamre Road / Abbotts Road; and
- Aldington Road / Abbotts Road.

These are the two key intersections that the Proposal will have the most direct impact. As such, interim upgrades are included within the LOG-E VPA.

The key inputs into the 2026 assessment were as follows:

- Approximately 990,215m^2 of the total GFA within the MRP would be delivered;

- Trip rates as provided by TfNSW (Table 3);
- The road network as currently proposed. That is, completely consistent with either the current SSD applications, approved intersection layouts or current VPA offers (as per Figure 15).

6.5.1 Modelled Trip Generation

Within the LOG-E modelling assessment, traffic generation assumptions for each of the relevant sites was included. For the ESR landholdings, the following peak hour trip generation was adopted:

- 188 veh/hr in the AM peak; and
- 196 veh/hr in the PM peak.

With reference to Table 8, the forecast trip generation for Stages 1 & 2 of the Estate represents:

- 86% of the modelled trip generation in the AM peak; and
- 81% of the modelled trip generation in the PM peak.

6.5.2 Intersection Performance

A summary of the modelling results (as detailed in the LOG-E Modelling Memo) for key intersections are provided in **Table 9.**

TABLE 9: 2026 KEY INTERSECTION PERFOMANCE

Intersection	Control	AM		PM	
		DOS	LOS	DOS	LOS
Mamre Road / Abbotts Road	Signal	0.51	A	0.84	B
Aldington Road / Abbotts Road	Signal	0.21	B	0.46	B

The modelling demonstrates that the upgraded intersections would perform well in the assessment year of 2026, with spare capacity. It is therefore evident that, subject to the upgrades currently proposed by LOG-E to the Abbotts Road / Mamre Road and Abbotts Road / Mamre Road intersections, the Proposal is acceptable from a traffic generation perspective.

7 Transport Assessment

7.1 Existing Travel Patterns

7.1.1 Journey to Work Data Analysis

Journey-to-Work (JTW) data from the Australian Bureau of Statistics (ABS) 2021 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 **Table 10.**

TABLE 10: TRAVEL MODE SUMMARY (JOURNEY TO WORK)

Travel Mode	Mode Share of Employees
Car as driver	91%
Train	1%
Bus	0%
Walked only	1%
Car as passenger	5%
Motorbike/Scooter	0%
Bicycle	0%
Taxi	0%
Other Modes	1%

With reference to **Table 10**, 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 96% travel to work by car with 91% as the driver and 5% 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.

7.2 Measures to Reduce Private Vehicle Use

7.2.1 Delivering the Vision of the Aerotropolis

The MRP forms of one of the initial precincts of the Aerotropolis (although subject to separate planning controls), the background studies provide some context with regards to travel demand management.

Specifically the AECOM *Western Sydney Aerotropolis Transport Planning and Modelling Stage 2 Report* from October 2020 (AECOM Report) highlights the importance of implementing transport policies and strategies that promote a shift to sustainable modes of transportation.

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.

7.2.2 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 sites within the Estate (refer to **Appendix B**). Each of the end users within the Estate 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.

Each of the end users within the Estate will have slightly different travel characteristics and therefore individual travel plans will be prepared by the future occupiers on site to address their own specific needs.

7.2.3 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 11** 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 portion of the Site to be developed at this stage totals 6.36 hectares. On this basis therefore, it is assumed that the Site could accommodate approximately 127 employees.

TABLE 11: SITE TRAVEL MODE TARGETS & PERSON ONE-WAY TRIPS BY 2026

Travel Mode	Mode Share Target	Daily
Car as driver	86%	110
Car as passenger	8%	10
Train	2%	3
Bus	1%	1
Walked only	1%	1
Motorbike/Scooter	0%	0
Bicycle	1%	1
Taxi	0%	0
Other Modes	1%	1

The analysis indicates that 5 people would use bus to access the Estate during peak hours, or trips when accounting for arrivals and departures.

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.

8 Parking Assessment

8.1 Car Parking

8.1.1 Precinct 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 12**.

TABLE 12: DCP PARKING RATES

Land Use	Minimum Parking Rate
Warehouse	1 space per 300m^2 or 1 space per 4 employees, whichever is the greater.
Office	1 space per 40m^2

8.1.2 Parking Requirements & Provision

The below details the requirements for Proposal, based on the parking rates detailed in Table 12.

TABLE 13: CAR PARKING REQUIREMENTS & PROPOSED PROVISION

Land Use	GFA (m^2)	Requirement	Proposed
Warehouse	37,540	125	153
Office	1,100	28	
Total	**38,640**	**153**	

As shown**,** the Proposal requires 153 parking spaces, and 153 formal parking spaces are provided. Therefore, the Proposal is compliant with the parking requirements of the MRP DCP.

8.1.3 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, 1 accessible parking space is to be provided per every 100 spaces; therefore, 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.

The Proposal seeks to provide 2 accessible parking spaces and is therefore in full compliance with the requirements stated in the MRP DCP.

8.1.4 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 parking provision be designated as electric vehicle charging bays.

8.2 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 14**.

TABLE 14: MRP DCP CYCLE PARKING RATES

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

The below details the requirements for Proposal, based on the parking rates detailed in Table 14. As shown, the Proposal is required to provide a total of 36 bicycle parking spaces. It is anticipated that this could be ensured via a suitable Condition of Consent.

TABLE 15: BICYCLE PARKING REQUIREMENTS & PROPOSED PROVISION

Land Use	GFA (m^2)	Requirement
Warehouse	37,540	36
Office	1,100	-
Total	**38,640**	**36**

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

TABLE 16: END-OF-TRIP PARKING RATES

Land-Use	Requirement
Office	For ancillary office and retail space with a gross floor area over 2500m^2, at least 1 shower cubicle with ancillary change rooms
Warehouse	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 17** demonstrates the provision of EoT facilities for the Site 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 17: BICYCLE PARKING REQUIREMENTS

Lot	GFA (m^2)	Requirement
Warehouse	37,540	1
Office	1,100	N/A
Total	**38,640**	**1**

9 Access Parking and Servicing Design

9.1 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 2890.5:2020: Parking Facilities – On Street Parking (AS2890.5)
- Australian Standard 2890.6:2022 Parking Facilities – Off Street Parking for People with Disabilities (AS 2890.6); and
- NSW Department of Planning, Industry and Environment, Mamre Road Precinct Development Control Plan, November 2021

9.2 Design Vehicles

The design vehicle adopted for the development is a 20m long articulated vehicle.

The check vehicle adopted for the development is a 30m long PBS Type 2 vehicle.

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.

9.3 Access Driveways

All access driveways 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.

The Proposal includes the following vehicular driveways:

- 1 combined entry/exit access driveway providing access to 30m long PBS Type 2 vehicles, located to the north of the eastern frontage;
- 1 combined entry/exit access driveway providing access to 30m long PBS Type 2 vehicles, located to the centre of the eastern frontage; and
- 1 exit-only access driveway providing access to 30m long PBS Type 2 vehicles, located to the south of the eastern frontage.

Car access driveways have been designed to provide for B99 vehicles, assuming simultaneous movements 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.

9.4 Parking Areas

All parking areas, including access aisles and parking modules have been 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.

9.5 Service Areas

All service areas have been 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.

10 Conclusions

Ason Group has been engaged by ESR Developments (Australia) Pty Ltd (ESR) to prepare a Transport & Accessibility Management Plan in relation to the State Significant Development for an industrial development located on Abbotts 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 the local industrial road connections as per the MRP DCP. In the first instance, access to the wider road network will be via the Stage 1 development, which provides for an extension to Abbotts Road.
- The Site has been designed for a specific tenant, who will be occupying the proposed warehouse, as well as Warehouse 4 of the Westlink Estate Stage 1 (see Figure 2).
- Based on a surveyed site the future tenant currently operates in, the tenant would generate some 14 veh/hr in the road network AM peak hour and 5 veh/hr in the PM peak.
- The LOG-E SIDRA modelling assessment assumed the Westlink Estate would generate 188 veh/hr in the AM peak and 196 veh/hr in the PM peak.
- The SIDRA analysis undertaken has demonstrated that the proposed Mamre Road / Abbotts Road and Abbotts Road / Aldington Road would operate well under in the assessment year of 2026. Noting that the traffic generation of the Proposal is within the thresholds assumed, it is concluded that the Stage 2 Proposal is acceptable from a traffic generation perspective.
- Parking has been provided in accordance with the rates detailed in the MRP DCP and includes an appropriate allocation of accessible parking spaces.
- All internal 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.
- 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.

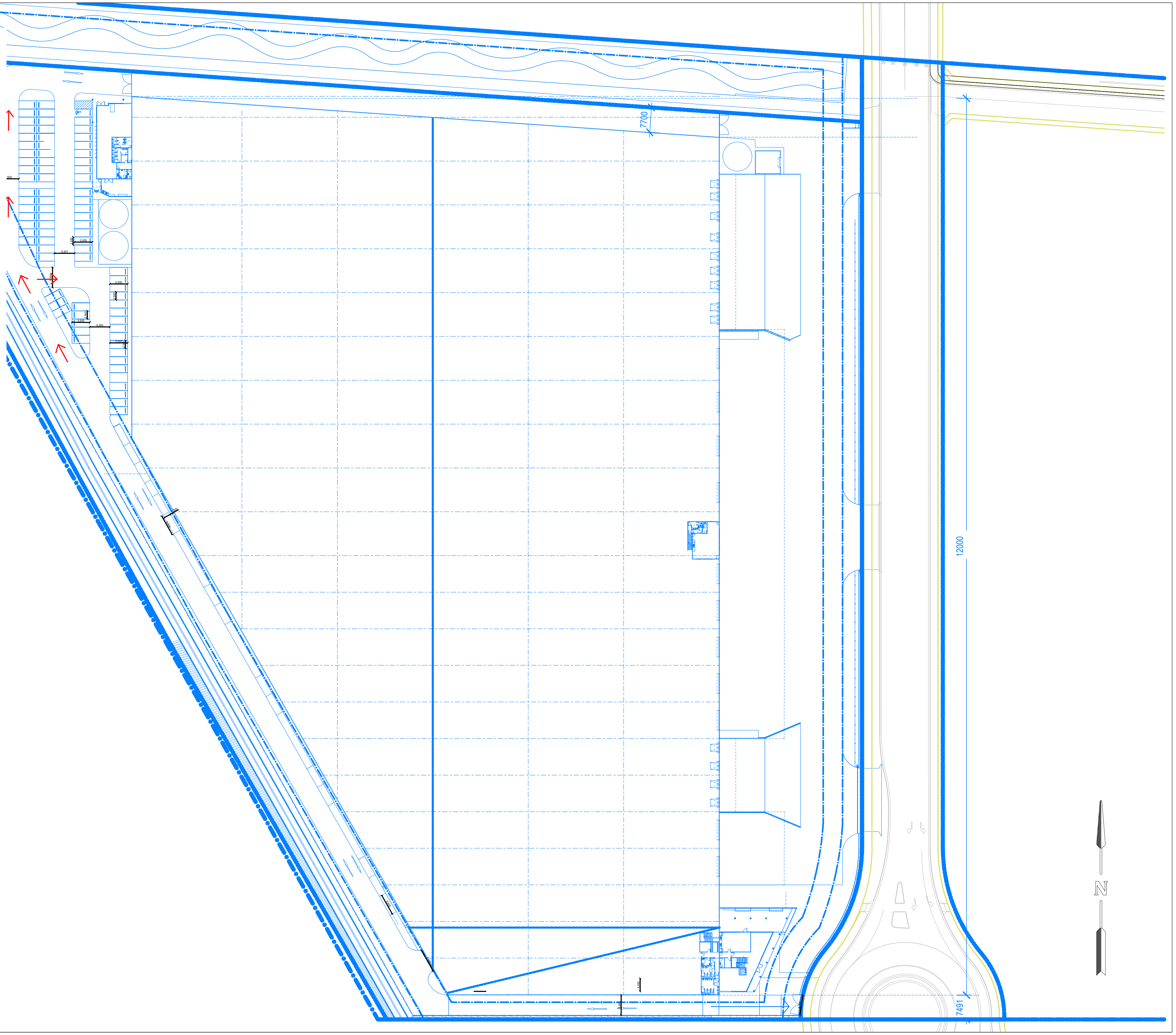
Appendix A. Swept Path Analysis

NOTE:

1. 1. PARKING MODULES HAVE BEEN DESIGNED AS USER CLASS 2 AS PER AS2890.1:2004, THE EXISTING DESIGN ALLOWS FOR THE SPACES TO BE USER CLASS 1 & 1A.

2. DESIGN VEHICLES ADOPTED:
   - 2.1 30.0m A-DOUBLES: SITE ACCESS
   - 2.2 20.0m AVS RECESS DOCKS
   - 2.3 HRV: FOR FIRE CIRCULATION AND RSD USE.
   - 2.4 MRV: RSD USE.

3. CONTENTS:
   - 3.1. AG01 - ACCESS ASSESSMENT
   - 3.2. AG02 & AG03 - FIRE CIRCULATION
   - 3.3. AG04 - AG06 - HARDSTAND AREA ASSESSMENT
   - 3.4. AG07 & AG08 - CAR PARK ASSESSMENT



GENERAL NOTES

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Base Plan prepared by Nettletontribe, dated 12.09.2023.
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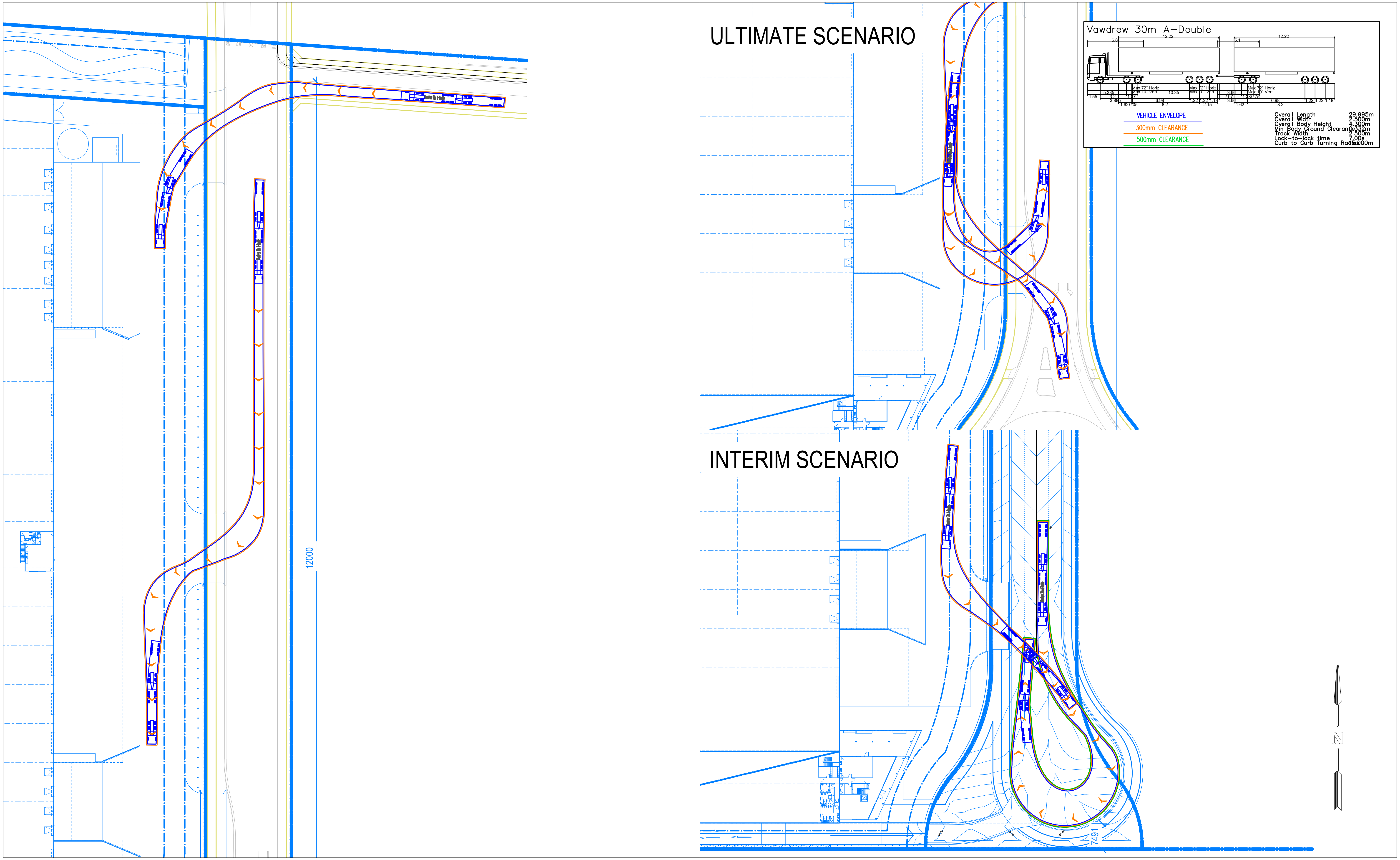

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PAPER SIZE	A3
APPROVED BY	X.XXXX
DATE	15.09.2023
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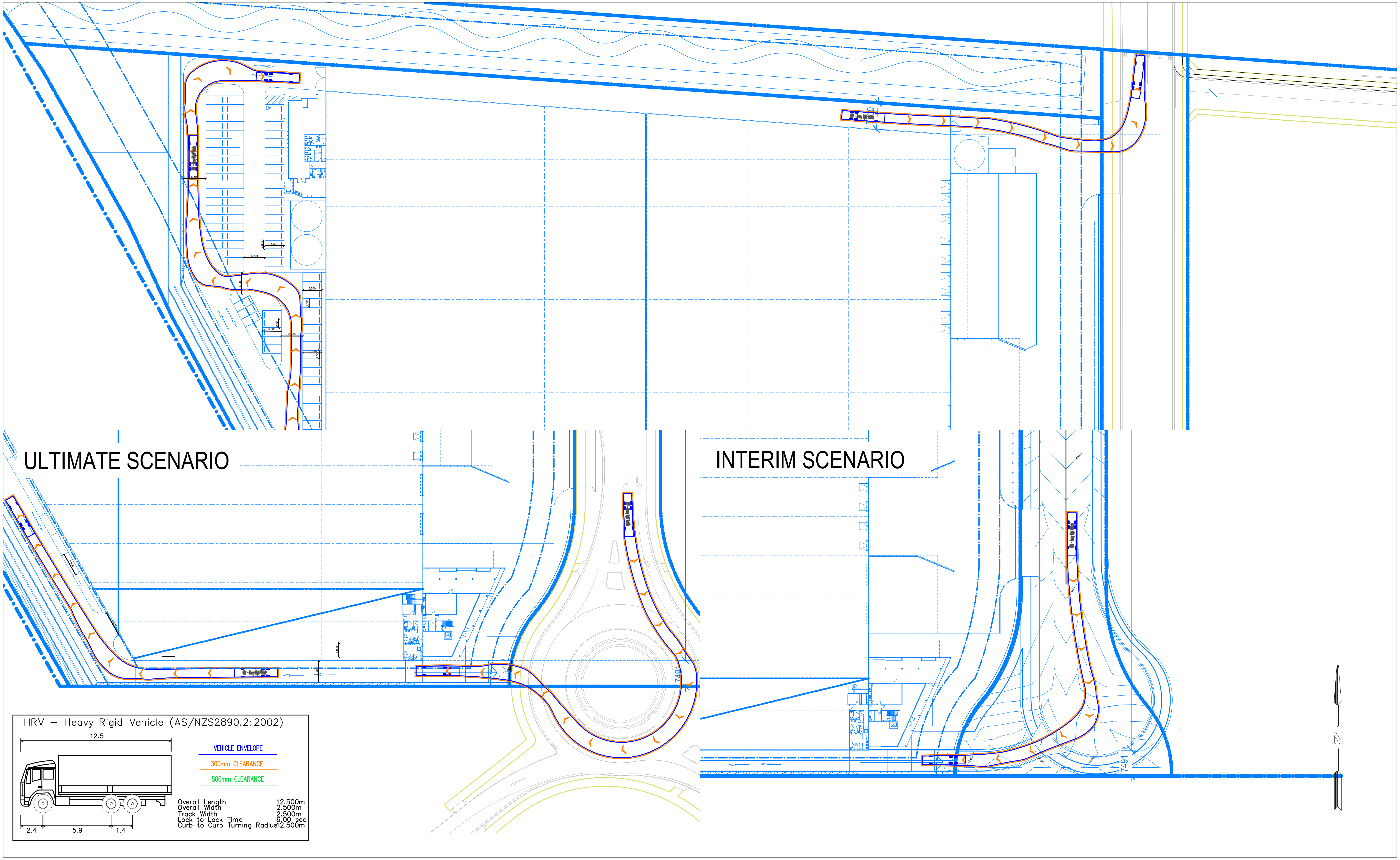

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FIRE CIRCULATION - CLOCKWISE

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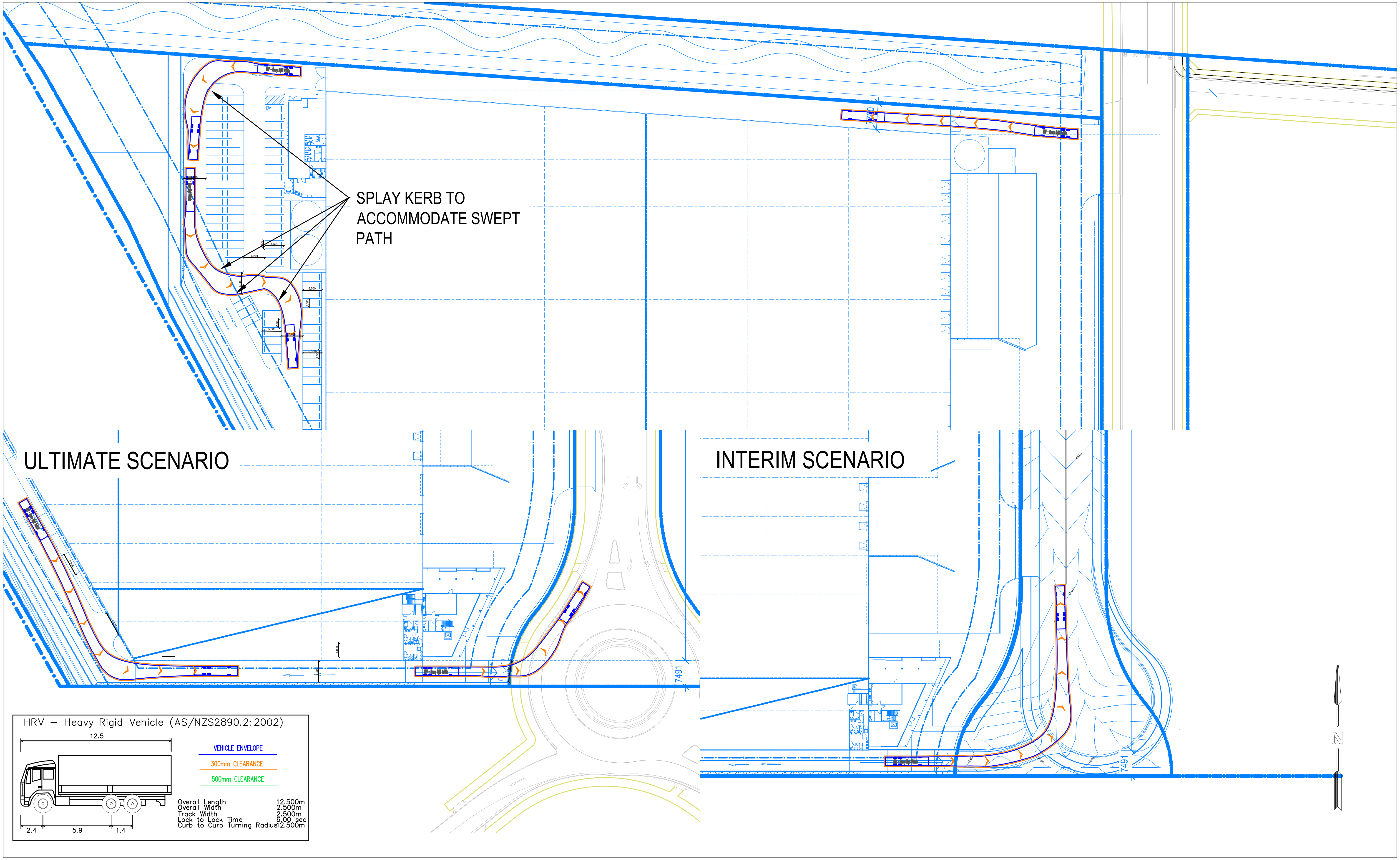

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2056
Westlink, Mamre Road, Kemps Creek

DOCUMENT INFORMATION
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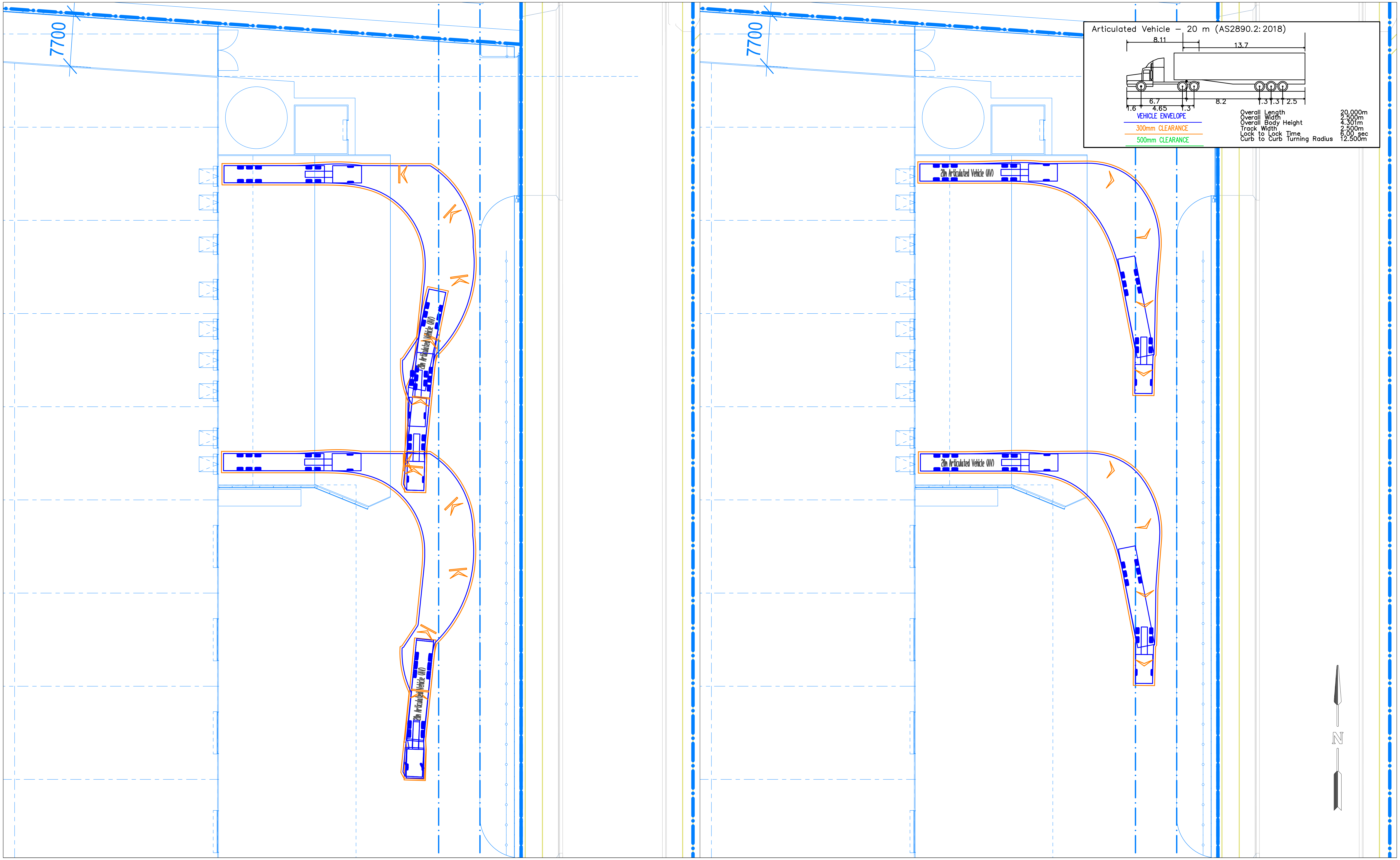

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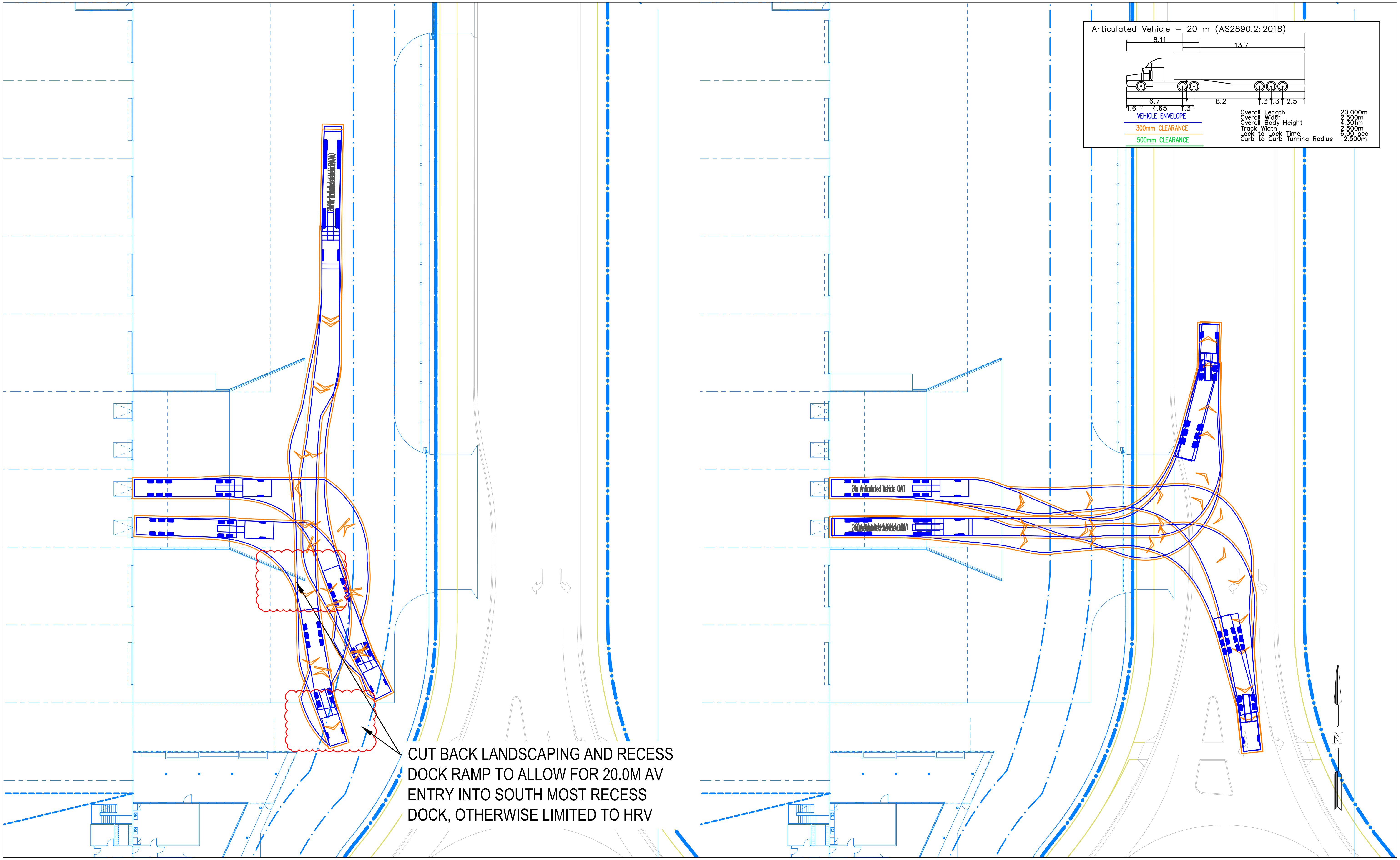

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DATE	15.09.2023
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PROJECT
2056
Westlink, Mamre Road, Kemps Creek

DOCUMENT INFORMATION
SWEPT PATH ASSESSMENT
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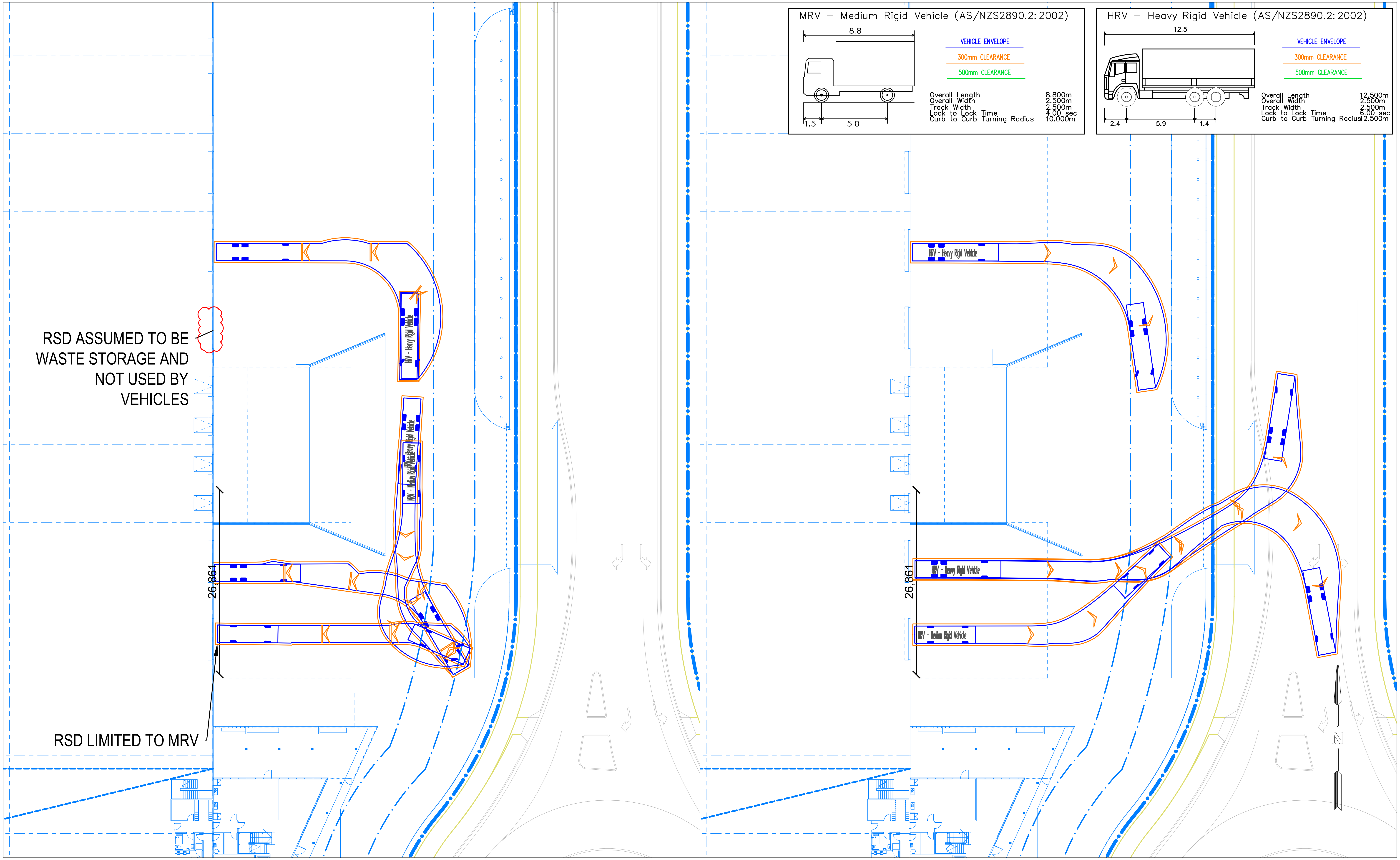

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Westlink, Mamre Road, Kemps Creek

DOCUMENT INFORMATION
SWEPT PATH ASSESSMENT

HARDSTAND RSD

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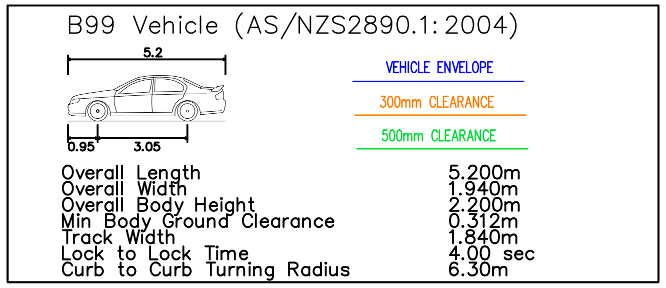

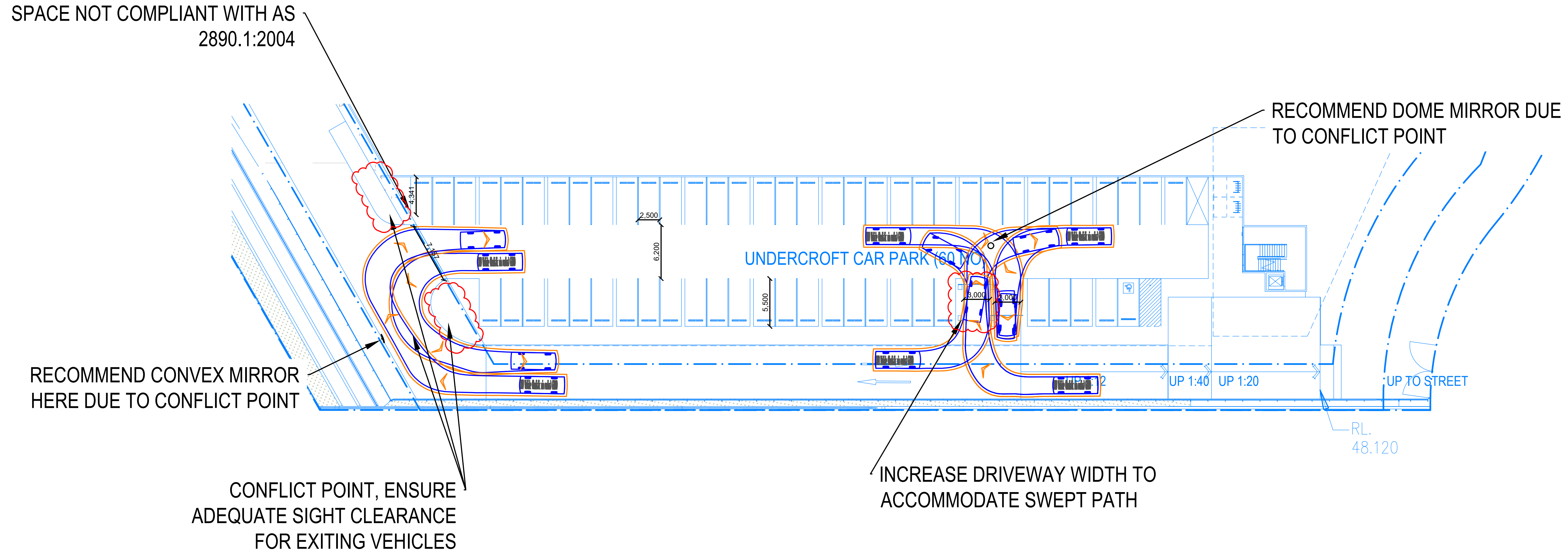

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DESIGNED: Rebecca BMadden	PAPER SIZE: A3	CLIENT: ESR	DOCUMENT INFORMATION: SWEPT PATH ASSESSMENT
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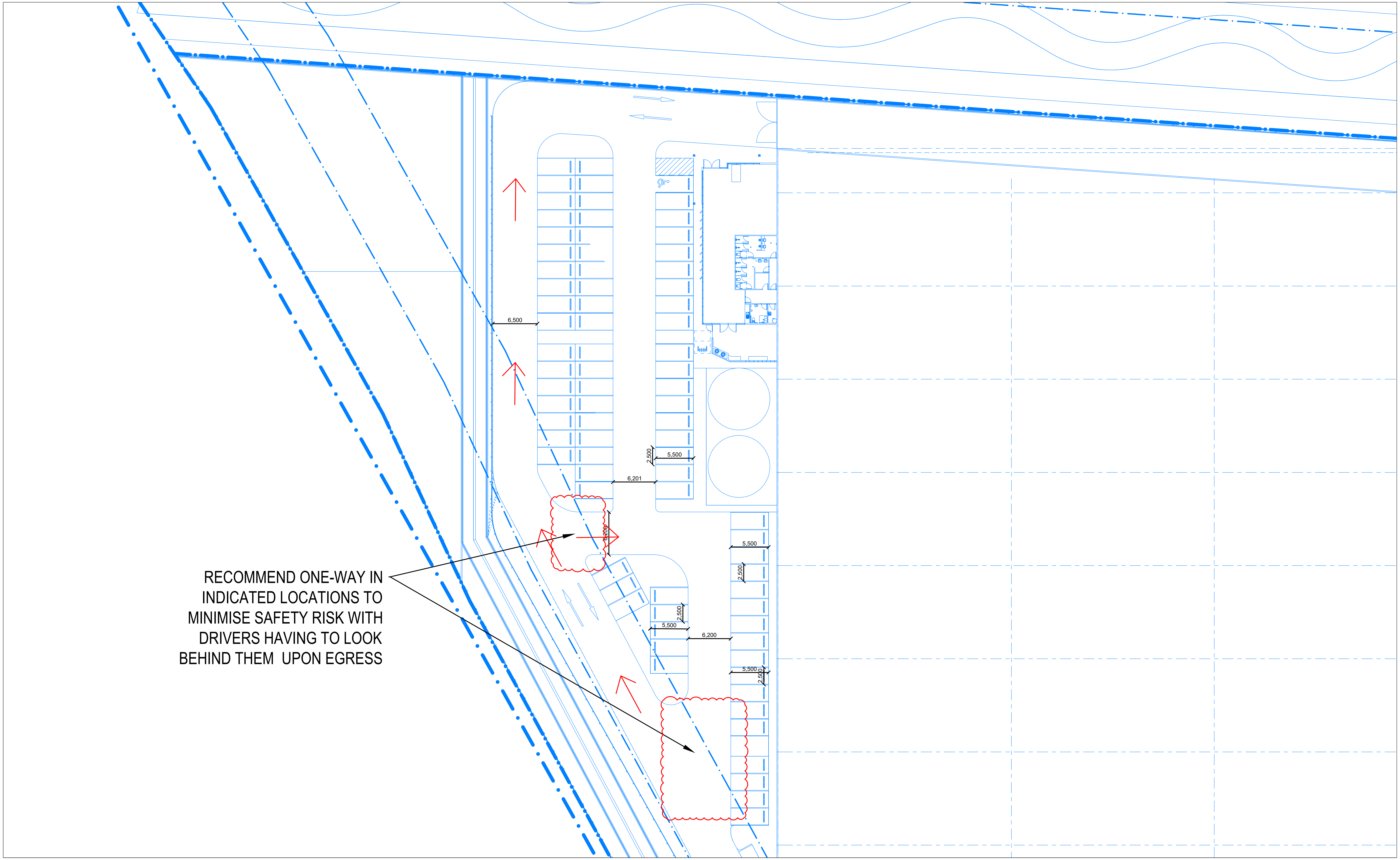

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PROJECT
2056

Westlink, Mamre Road, Kemps Creek

DOCUMENT INFORMATION
DESIGN ADVICE

AT GRADE CAR PARK

FILE NAME	SHEET
AG2056-03-v04.dwg	AG08

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Appendix B. Framework Sustainable Travel Plan

Framework Sustainable Travel Plan

Westlink Industrial Estate Stage 2

1030-1048 & 1050-1064 Mamre Road, Kemps Creek
21/09/2023
P2056r02

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Document Control

Project No	2056
Project	ESR Kemps Creek Industrial Estate, Abbotts Road, Kemps Creek
Client	ESR Developments (Australia) Pty Ltd
File Reference	2056r02v2 FTP_Weslink Stage 2, Issue

Revision History

Revision No.	Date	Details	Author	Approved by
-	12/10/2022	Draft	M. Abdullah	R. Butler-Madden
I	24/10/2022	Issue	M. Abdullah	R. Butler-Madden
II	21/09/2023	Issue	S. Bandaranayake	R. Butler-Madden

contents

contents continued

Figures

Tables

APPENDICES

1 Introduction

1.1 Context

This Framework Sustainable Travel Plan (FSTP) has been developed to support the State Significant Development Application (SSD- 9138102) in relation to the proposed Westlink Industrial Estate Stage 2 (the Estate). The Stage 2 site is located at 1030-1048 & 1050-1064 Mamre Road and 59-62 & 63 Abbotts 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 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 currently well connected by travel modes other than the private vehicle. However, the MRP 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.

The purpose of this FSTP is therefore to complement the intent the of the MRP DCP, by outlining the overarching requirements for a future Sustainable Travel Plan package for the Estate. This FSTP will inform the future site-specific Plans, expected to be implemented as part of a Condition of Consent relating to any detailed development approval.

1.2 Background

The MRP forms one of the initial precincts of the broader Western Sydney Aerotropolis. It is recognised that the land has been incorporated into the controls of the State Environmental Planning Policy (Industry and Employment) 2021. Therefore, it is not covered by the State Environmental Planning Policy (Precincts—Western Parkland City) 2021 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 FSTP, 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 and Agribusiness Precincts. Of the 5 Aerotropolis Precincts covered, Badgerys Creek and Agribusiness have the lowest sustainable mode share targets (by 2056) of 20% and 18% respectively.

This reflects the planned land uses, which are anticipated to support warehousing and logistic uses. Notably, the Agribusiness precinct will not be served by rail, but a number of bus services are planned. **Figure 1** below reproduces the mode share detailed by the AECOM Report for the Agribusiness Precinct for 2056.

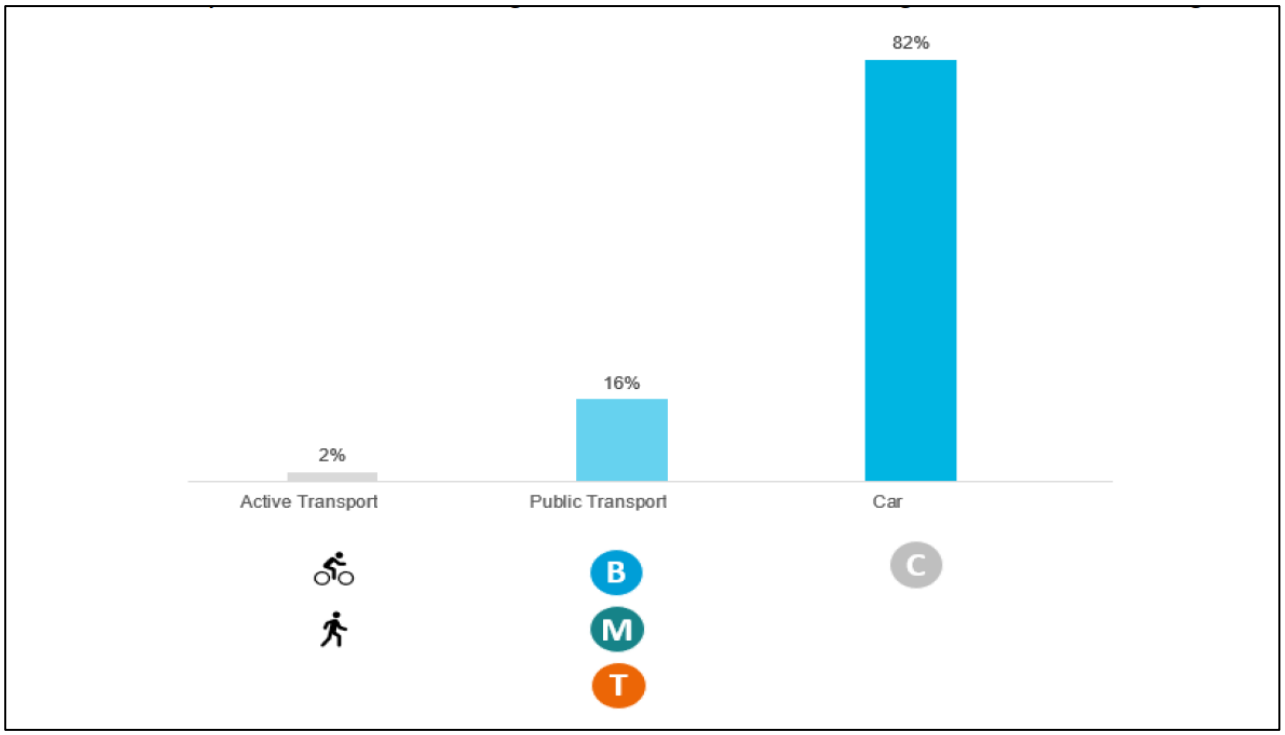

Figure 1: 2056 Agribusiness Precinct Mode Share Targets (Source: AECOM Report)

Further to the above, the finalised Western Sydney Aerotropolis Precinct Plan 2022 (Precinct Plan) details the same targets, as shown by **Figure 2**.

It is expected that these mode shares are reflective of the anticipated public and active transport links planned. Given the similarities between the MRP and the land uses of these Aerotropolis Precincts, the mode share from the Precinct Plan have informed the targets of this FSTP.

Precinct	Target mode share		
	Active transport	Public transport	Private Vehicle
2026			
Aerotropolis Core	4%	20%	76%
Northern Gateway	3%	16%	81%
Agribusiness	2%	16%	82%
Badgerys Creek	2%	18%	80%
Aerotropolis wide (average)	**3%**	**18%**	**79%**
2036			
Aerotropolis Core	6%	34%	60%
Northern Gateway	5%	31%	64%
Agribusiness	2%	16%	82%
Badgerys Creek	2%	18%	80%
Aerotropolis wide (average)	**5%**	**30%**	**65%**
2056			
Aerotropolis Core	9%	52%	39%
Northern Gateway	7%	43%	50%
Agribusiness	2%	16%	82%
Badgerys Creek	2%	18%	80%
Aerotropolis wide (average)	**7%**	**43%**	**50%**

Figure 2: Precinct Plan Objective MFO5 Travel Mode Share Targets

1.3 Goals

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

a. 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;
b. Suggest specific tools and actions to help achieve the objectives and mode share targets;
c. (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;
d. Suggest a methodology and monitoring/review program to measure the effectiveness of the objectives and mode share targets of the future STP, including the frequency of monitoring and the requirement for travel surveys to identify travel behaviours at appropriate times.

1.4 Objectives

Underpinning this FSTP 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 FSTP 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 comprised of 1 allotment and is legally described as Lots 2, 6 and 7 in DP250002. 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.

Its sub-regional context is shown in **Figure 3**.

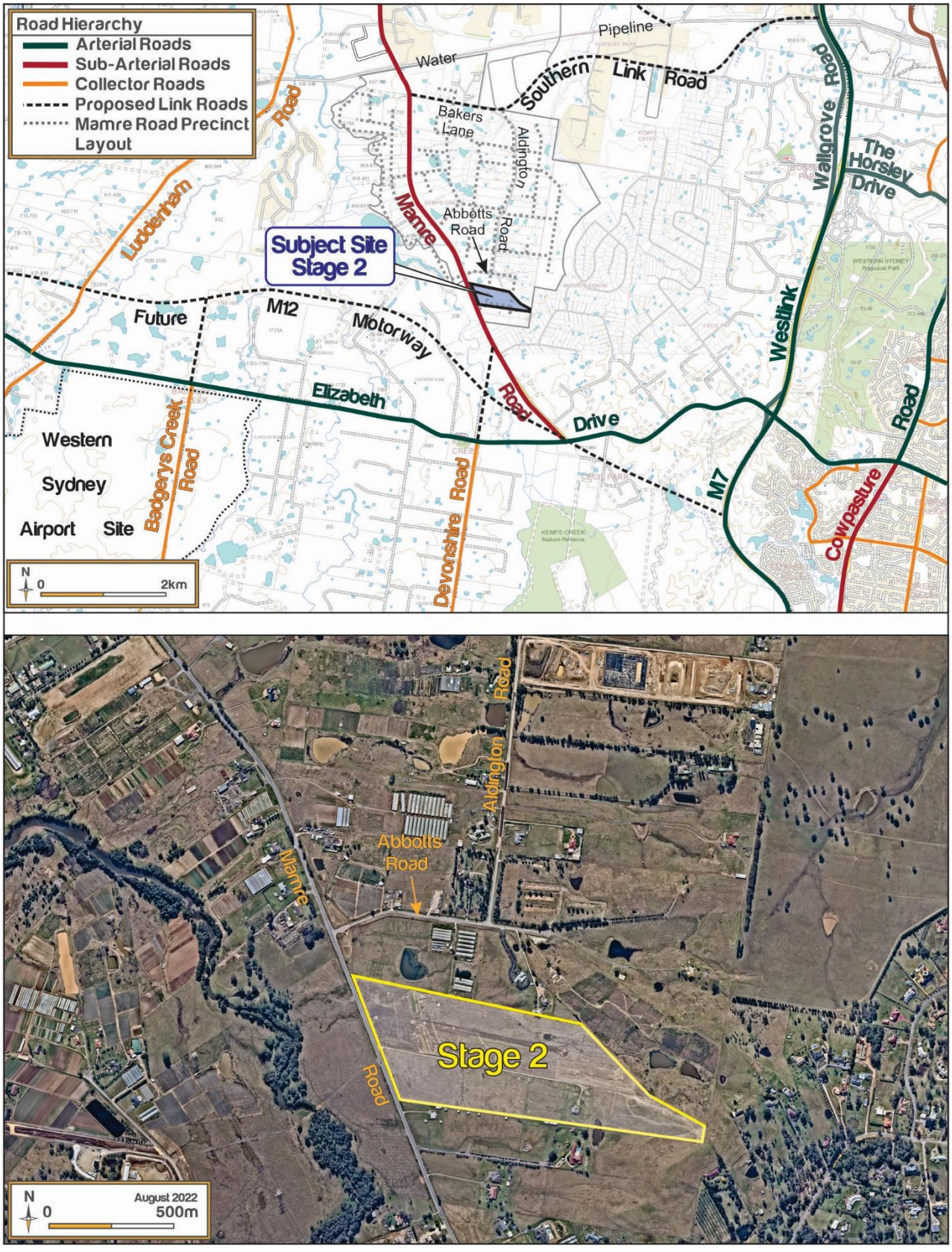

Figure 3: Site Location & Road Hierarchy

2.3 Proposed Development

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:

- A total building area of 38,640m^2, comprising:
  - A total of 37,540m^2 warehouse Gross Floor Area (GFA),
  - A total of 1,000m^2 of ancillary office GFA,
- 1 developments lot and 1 x detention basin;
- Internal road connections, with access to the external network to be provided via Stage 1;
- Provision for 153 car parking spaces; and
- Associated site landscaping.

The proposed development (prepared by Nettletontribe Architects) is shown in **Figure 4.**

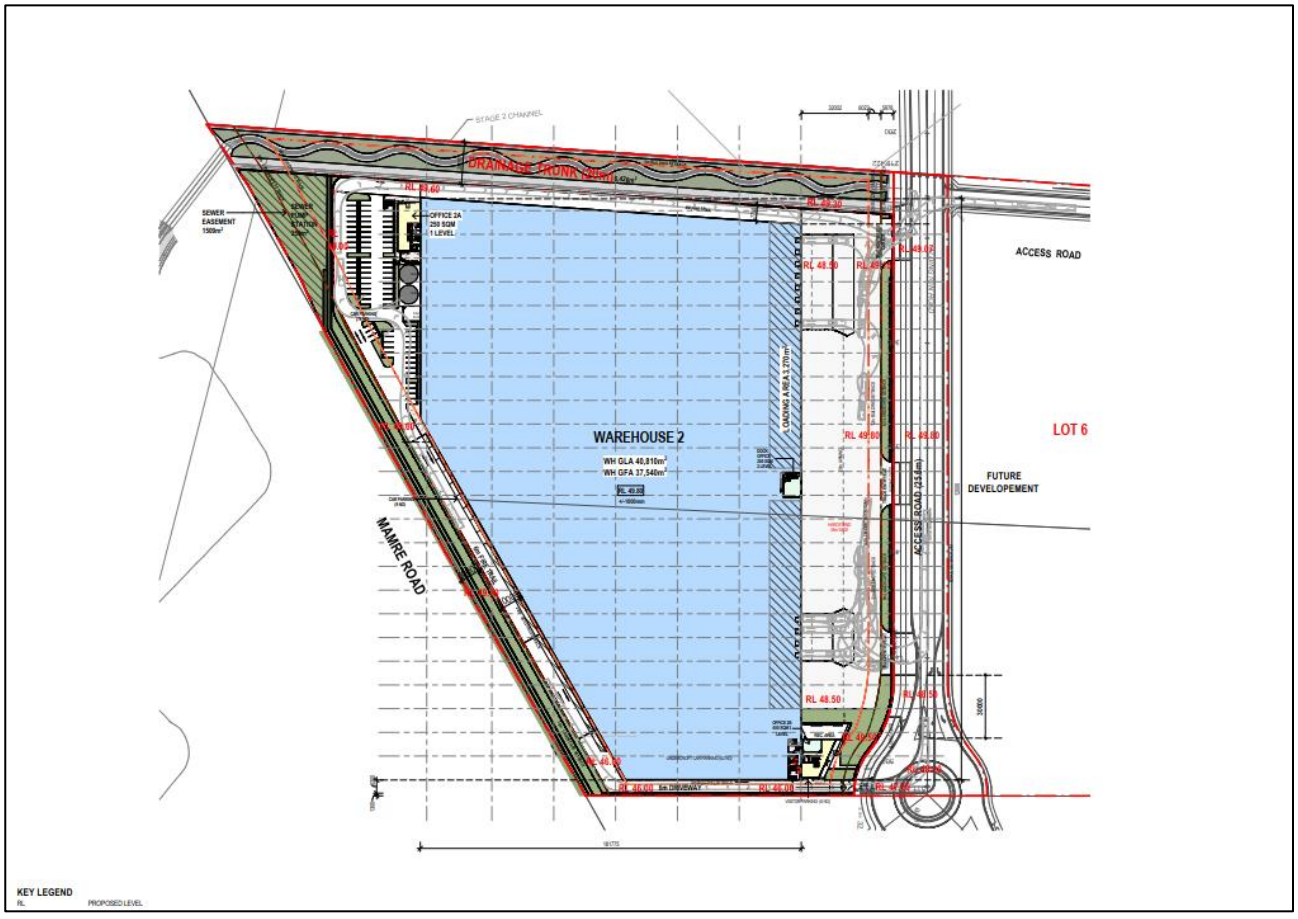

Figure 4: Proposed Development

2.4 Public & Active Transport Opportunities

2.4.1 Introduction

It is evident that the Site is not directly serviced by public transport at this time (**Figure 5**); notwithstanding, opportunities for future connections have been identified, noting again that the MR Upgrade specifically provides for new bus stops along its entire route.

Establishment of public transport services as early as possible in the development stages of the MRP 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.

However, it should be noted that as this stage there is no immediate priority for the MRP to be serviced by new bus services. Due to the availability of new bus and drivers, additional services are being prioritised in other growth areas within the Aerotropolis.

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. If a connection to Compass Drive is delivered (via the SLR) then this could present an opportunity to extend this service further.

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 5**. While the closest station to the Site will likely 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

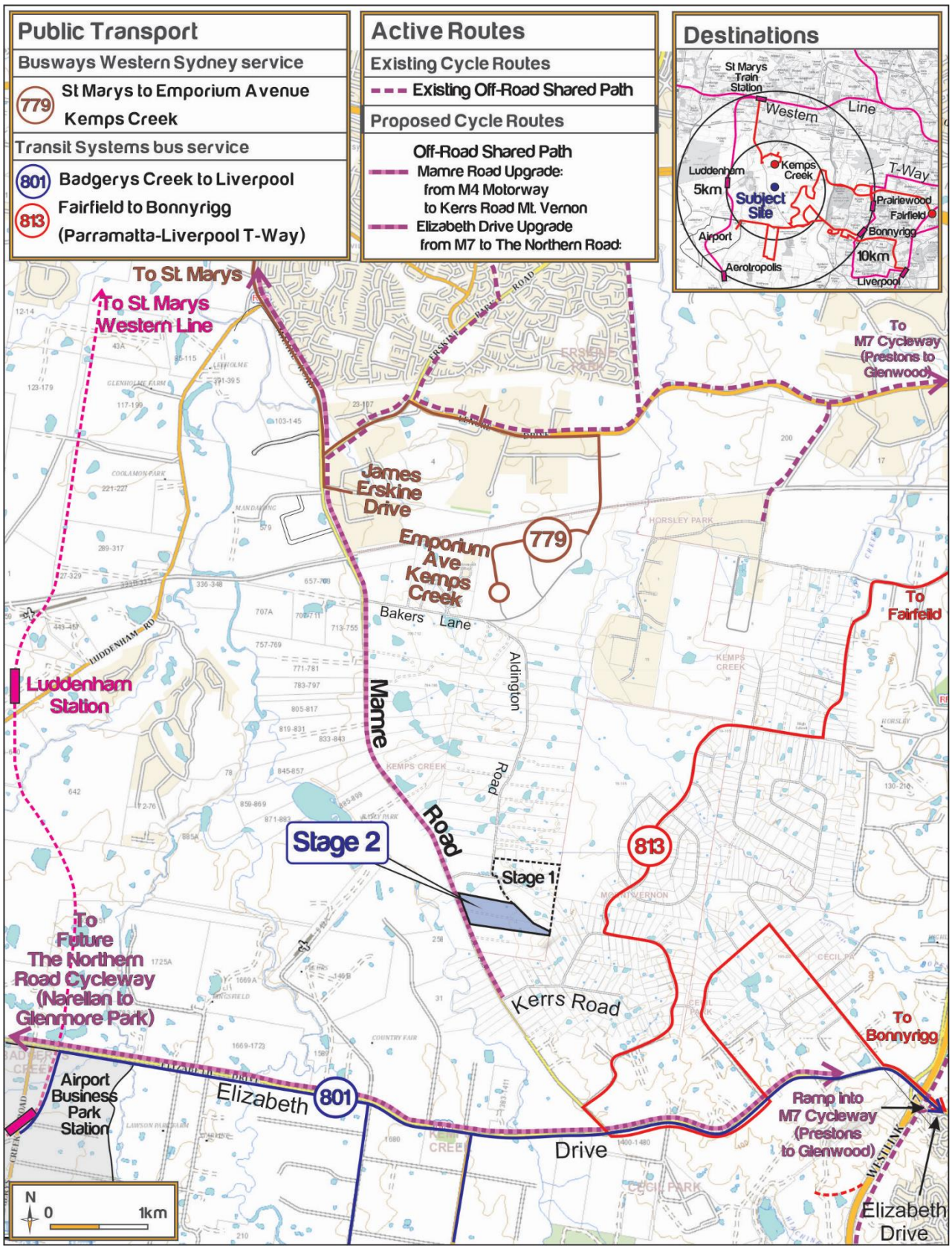

Figure 5: Existing Public and Active transport Network

2.4.2 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 6, noting again that the Mamre Road upgrade Project will provide shared paths along at least one side of the road for its entire length.

Further, the MRP DCP requires internal roads to provide a footpath of 1.5m on one side (minimum) and shared path of 2.5m (minimum) on the opposing side of the road. It also requires roads to be provided with shared cycle and footpaths.

2.4.3 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 being largely industrial and therefore not representing key destinations and attractions for people to walk to.

In this regard, it is noted that the upgraded Mamre Road will include shared cycle and pedestrian pathways along its length. Further, the MRP DCP requires internal roads to provide a footpath of 1.5m on one side (minimum) and shared path of 2.5m (minimum) on the opposing side of the road. It also requires roads to be provided with shared cycle and footpaths.

Figure 6: BWSEA Cycle Routes

Source: BWSEA Structure Plan

2.5 On Demand Services

2.5.1 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.

2.6 Existing Travel Patterns

2.6.1 Journey to Work Data Analysis

Journey-to-Work (JTW) data from the Australian Bureau of Statistics (ABS) 2021 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 **Table 1**.

TABLE 1: TRAVEL MODE SUMMARY (JOURNEY TO WORK)

Travel Mode	Mode Share of Employees
Car as driver	91%
Train	1%
Bus	0%
Walked only	1%
Car as passenger	5%
Motorbike/Scooter	0%
Bicycle	0%
Taxi	0%
Other Modes	1%

With reference to Table 1, 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 96% travel to work by car with 91% as the driver and 5% as passenger i.e. car-pooling.

3 Development, Scope and Implementation

3.1 Introduction

This section sets out in broad terms how the FSTP will be developed into site-specific STPs and the scope of the FSTP.

3.2 Responsibility

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

3.3 FSTP Scope

The future STP 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 STPs 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 STPs, this will be at the discretion of site management. The TPC will manage all aspects of the specific STP, including the co-ordination and joint working practices between those on-site.

The TPC will promote participation in and commitment to the future STP 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 FSTP.

- Internal liaison to promote awareness of the FSTP 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 FSTP.
- Providing updated travel information to staff and visitors, as necessary.
- Monitoring, review and (if necessary) updates to the FSTP.

3.5 Consultation

It is essential that any parties that may play a part in the future of STP'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 STPs 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 2.6, 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 STPs 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 Precinct Plan provides a mode share target for public & active transport of 18% and by car of 82% by 2056 for the Agribusiness Precinct. Sites within the MRP should ideally reflect a similar target.

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 2**, which represents a 5-year target to coincide with the minimum 5 years of monitoring and review.

TABLE 2: PRELIMINARY 2026 MODE SHARE TARGETS

Travel Mode	Mode Share of Existing Employees	Proposed Targets	Relative Change
Car as driver	91%	86%	-5%
Car as passenger	5%	8%	+2%
Train	1%	2%	+1%
Bus	0%	1%	+1%
Walked only	1%	1%	–
Motorbike/Scooter	0%	0%	-
Bicycle	0%	1%	+1%
Taxi	0%	0%	–
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 FSTP. 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 STP 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) and / or provision of a business “pool car” while public car share operators are limited in the area.
- 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

Six main strategies are identified and the actions required for each are detailed in Table 3. The table details specific actions that could be implemented as part of a future site-specific STP (subject to tenant requirements) and the party responsible for implementing each action.

These 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 living 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 3: PROPOSED STP ACTION STRATEGIES

STRATEGY	HOW IT WORKS	RESOURCES / RESPONSIBILITY	TIMELINE	FUNDING
1 Travel Planning and Demand Management				
1.1 Green / Sustainable Travel Plans	• Develop a STP to provide information for Travel Access Guide (TAG) (See Appendix A) • Management of STPs. • Promotion of STPs.	Building Manager to be responsible for overall implementation of final STP and providing annual reporting on STP outcomes to Council. Tenant to develop Company specific travel plan based on Final STP 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 STP 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 STPs • Provision of travel and transport information options	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.	Tenant / Business Owner	Subject to employer preference. Action to be considered by employers / Visitors as part of an Employer specific STP to be developed and forwarded to Council prior to building occupation.	Tenant / Business Owner
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.	Tenant / Business Owner	Subject to employer preference. Action to be considered by employers / visitors	Tenant / Business Owner

STRATEGY	HOW IT WORKS	RESOURCES / RESPONSIBILITY	TIMELINE	FUNDING
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.	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 STP 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 – Developer to recommend improvements to the proposed / implemented bus stops along Aldington 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 development having access to Opal Cards.	TPC	Subject to employer. Can be implemented at building occupation	Tenant / Business Owner
2.5 Lobby for Precinct wide shuttle service	Shuttle service initiative that would transport staff to / from the MRP to the Railway Station.	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.	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	Company, TPC	Ongoing in the workplace. Updates can be made to organisation as appropriate	Tenant / Business Owner
3.3 Third-party Car Sharing Program	Companies such as Liftshare are an online service that facilitates journey sharing	Staff – encouraged by TPC	Ongoing in the workplace	Staff

STRATEGY	HOW IT WORKS	RESOURCES / RESPONSIBILITY	TIMELINE	FUNDING
	between individual users, as well as providing separate services for businesses, organisations and events.			
3.4 Carpool week	Arrange for a dedicated carpool campaign week to promote the benefits of carpooling.	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.	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 compliant with the relevant controls, and as the Site develops further, they should be reviewed as part of the STP monitoring process to meet any increase in demand.	Developer / Estate &/or warehouse Owner / Manager	To be provided at completion	Developer / Estate &/or warehouse Owner / Manager
4.3 Promote Bicycle Initiatives	Promotion of bicycle initiatives – NSW bicycle week, Ride to Work etc.	TPC	To be promoted annually	Developer / Estate &/or warehouse Owner / Manager
4.4 Advertise Bicycle Routes	Promotion of bike lanes through the TAG.	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.	Developer	To be provided at completion of development	Tenant / Business Owner

STRATEGY	HOW IT WORKS	RESOURCES / RESPONSIBILITY	TIMELINE	FUNDING
5.2 Walking routes	Incentivise travelling by foot by highlighting possible routes particularly those to nearest bus stops	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 site and to / from public transport points.	Tenant / Business Owner, TPC	To be implemented monthly or as appropriate throughout the calendar year.	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 STP and provides information on walking and cycling routes, and travel by bus & train, timetables, and access routes. 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 STP Pamphlet and other information in relation to sustainable transport choices. This pack shall include an electronic copy of the STP 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.

5.3.2 Accurate Transport Information

In addition to these 'welcome packs', a copy of the TAG (Appendix A) shall be clearly displayed in communal areas of the site including (but not limited to):

- Staff lunch room
- Lift lobby area and entrances to buildings
- Any marketing material associated with the Site, such as websites and newsletters.

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 STP would occur every 1-2 years.

The key considerations when reviewing or monitoring the STP 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 STP is to be conducted at regular intervals. The TPC will act as the primary point of contact for all enquiries relating to the STP's progress.

The STP will 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 will 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 STP will be reviewed, new measures introduced and would be reassessed at the next monitoring stage.

Appendix A. Travel Access Guide

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. Draft Construction Traffic Management Plan

Preliminary Construction Traffic Management Plan

Westlink Industrial Estate Stage 2

1030-1048 & 1050-1064 Mamre Road, Kemps Creek
3/11/2023
2056r03

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-	15/06/2022	Draft	Musstafa Abdullah	R. Butler-Madden
I	24/10/2022	Issue	Musstafa Abdullah	R. Butler-Madden
II	21/09/2023	Issue	S. Bandaranayake	R. Butler-Madden
III	03/11/2023	Issue	R. Butler-Madden	R. Butler-Madden

contents

contents continued

Figures

Tables

APPENDICES

1 Introduction

1.1 Overview

Ason Group has been engaged by ESR Developments (Australia) Pty Ltd (ESR) to prepare a Preliminary Construction Traffic Management Plan (CTMP) in regard to the future construction of industrial development known as the ESR Westlink Industrial Estate Stage 2. The Stage 2 site is located at 1030-1048 & 1050-1064 Mamre Road and 59-62 & 63 Abbotts Road, Kemps Creek (the Site).

This Preliminary 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 the 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 ESR Australia and / or the designated construction Project Manager.

1.2 Proposed Development

The proposed Stage 2 is shown in **Figure 1**. The following summarises key aspects of the Proposal:

- A total building area of 38,640m^2, comprising:
  - A total of 37,540m^2 warehouse Gross Floor Area (GFA),
  - A total of 1,000m^2 of ancillary office GFA,
- 1 developments lot and 1 x detention basin;
- Internal road connections, with access to the external network to be provided via Stage 1;
- Provision for 153 car parking spaces; and
- Associated site landscaping.

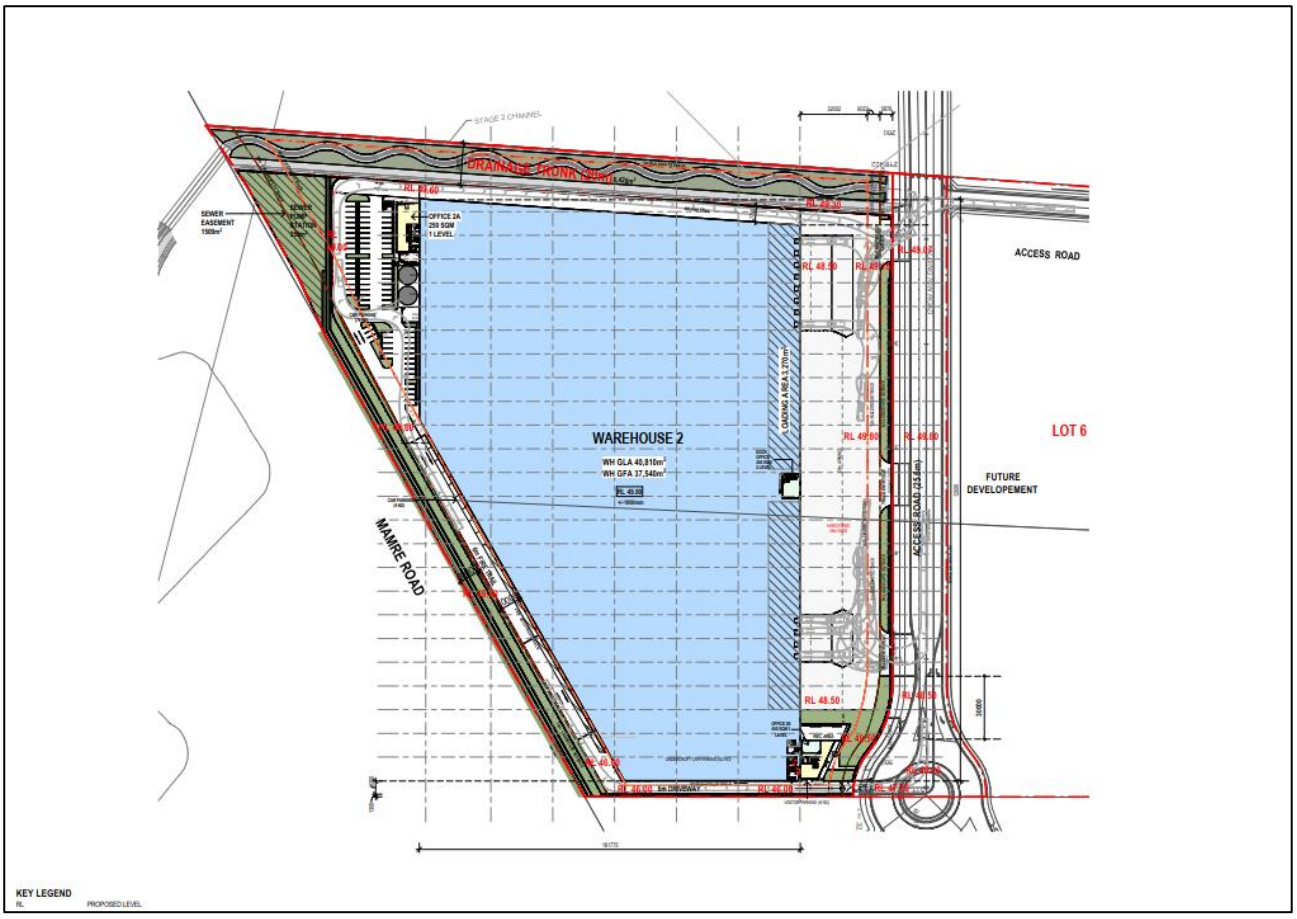


Figure 1: Proposed Development

2 The Site

2.1 Site Location

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 1030-1050 Mamre Road. The land is approximately 217,670m^2 in area and is irregular 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.

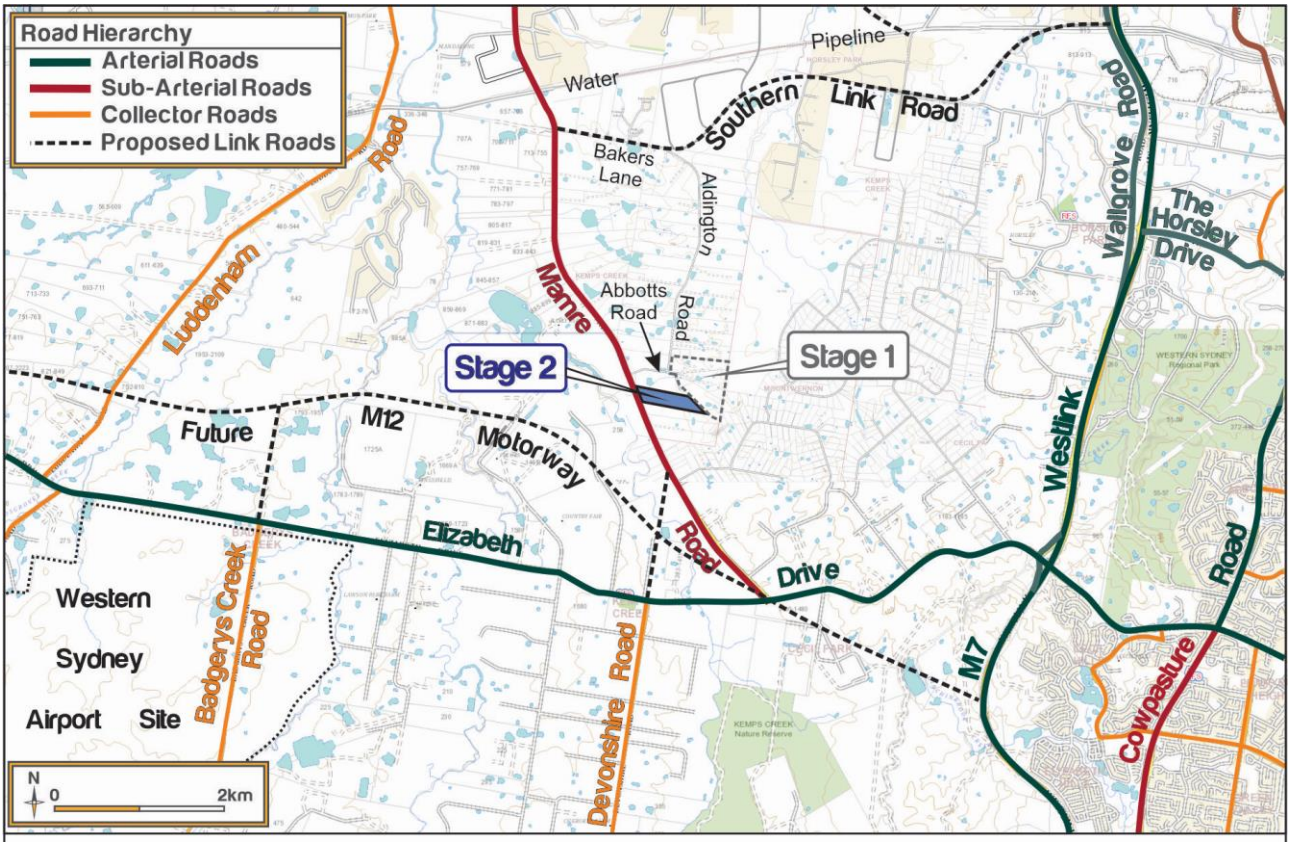
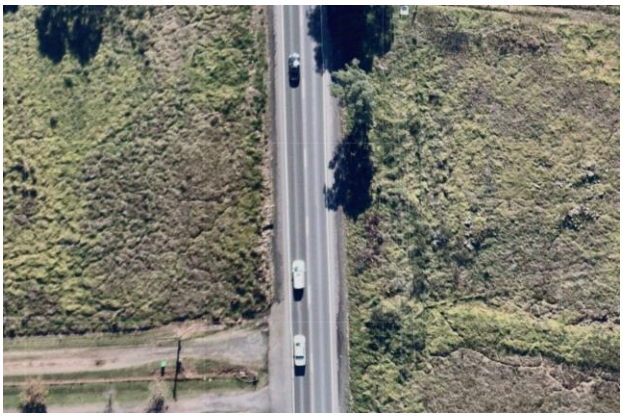


Figure 2: Site Location

2.2 Road Network

Key roads in the vicinity of the Site are shown in **Figure 2** and include:

TABLE 1: 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.	
Abbotts Road	A local access road that runs east-west connecting to Mamre Road (to the east of Mamre Road) and currently provides access for a number of rural residential properties. Abbotts Road provides 1 traffic lane in each direction and has a posted speed limit of 60km/h,	

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 3** with specific reference to the current TfNSW Restricted Access Vehicle (RAC) routes, which allow for up to 25m/26m B-Double combinations.

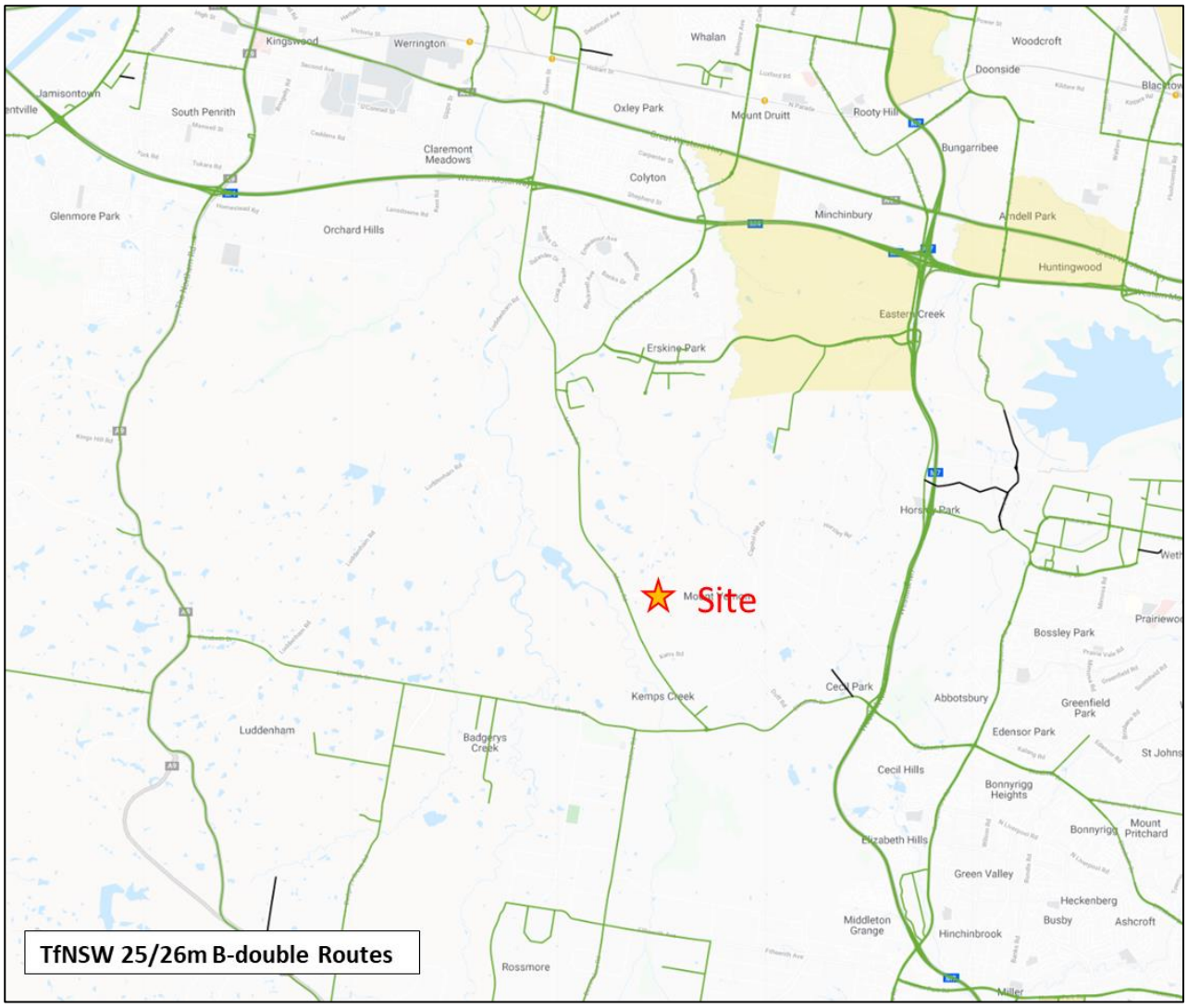


Figure 3: TfNSW Approved 25/26m B-Double Routes

3 Overview of Construction Works

3.1 Staging and Duration of Works

3.1.1 Site Works

In advance of a Development Consent, the construction strategy and staging has not yet been finalised. However, preliminary advice from ESR Australia and a Contractor has been used to inform the potential staging of the development. Based on this, it is anticipated that construction works for the preliminary stages would commence in April 2024 and be completed over a duration between 12-18 months, subject to authority approvals and inclement weather delays.

The following summarises key aspects of the construction phases:

- Early works are set to have a duration for 8-12 weeks.
- Internal civil and site road works would continue for 13 months.
- General Construction works are estimated to continue for 13 months.

The preliminary construction staging is provided in **Table 2.**

TABLE 2: STAGING OVERVIEW

Stage	Early Works and Bulk Earthworks	Internal Road and Civil Works	Main Construction
Timeframe	9 months (April 2024 to December 2025)	14 months (June 2024 to August 2025)	13 months (July 2024 to August 2025)
Peak Workers On-site Numbers	50	60	30
Light Vehicle Movements / Day	94	70	50
Truck Movements / Day	32	164	0

3.1.2 Additional External Road and Intersection Works

It is noted that ESR, alongside other landowners along Aldington Road (known as LOG-E), are working collectively to deliver interim upgrades to the Aldington Road / Abbotts Road corridor, as well as to the Mamre Road / Abbotts Road intersection.

A preliminary programme and staging plan have been developed to inform the preliminary construction traffic information. It is noted that this will need to be updated at the at the time that all the relevant approvals have been gained from the relevant roads authorities to allow the road works to commence.

In considering the road upgrades, the staging suits various factors including:

- Maximising cut / fill site areas to ensure the project is utilising directly cut material to an area of the Site that requires fill material. This will minimise overall construction traffic as it does not require material to be transported to a staging compound area and be double handled to Site at a later date.
- Directly loading and hauling material off site that is not being utilised on the site. This minimises construction traffic by not hauling the material to a staging yard to be re-loaded at a future date to be disposed of off-site.
- Providing maximum work area possible whilst maintaining two-way traffic on the roadways, this strategy will minimise the overall project duration.
- Relocating utilities as early as possible to ensure efficient work areas are available to the subsequent work activities.
- Maintaining at all times access to existing properties along the alignment.

Table 3 details the proposed staging. It has been developed to incorporate the previously defined staging considerations. This is subject to change following detailed design and engagement of the roadworks contractor however the overriding principle of minimising construction traffic volumes whilst maintaining constant 2-way traffic flow on the roads.

TABLE 3: INTERSECTION WORKS STAGING OVERVIEW

Stage	Name	Description	Timing
1	Utility Relocations	Utility relocations will be undertaken along the full alignment of the works during this stage. The relocations consist of electrical assets being moved from overhead to underground, water assets being relocated behind the new kerb line, communication assets being relocated form overhead to underground behind the new kerb line. These works will be undertaken in a combination of day shift (primarily) and during approved out of hours periods where required, to minimise disruption to the local consumers. The works will be undertaken where possible behind concrete barriers, and where this is not possible under traffic management utilising approved Road Occupancy Licenses via the road authority. This stage will run concurrently with other stages as the works progress.	6 Months (March 2024 to August 2024)
2.1	Abbotts Rd – Southern Carriageway, Mamre Rd Southbound Carriageway	Construct temporary pavement where required, realign traffic, construct half road width. These works will be a combination of interim works and ultimate works. During this stage, there will be a temporary intersection established via an approval pathway with the road authority to better control the traffic flow at the intersection. During these works, the existing configuration of the Mamre Road / Abbotts Road intersection is maintained. All access to residential properties is maintained. The construction contractor will directly co-ordinate with the residential properties to agree access conditions.	3 Months (May 2024 to September 2024)
2.2	Abbotts Rd – Northern Carriageway, Mamre Rd Northbound Carriageway	Traffic is realigned to the newly constructed pavement, construct half road width. These works will be a combination of interim works and ultimate works. During this stage, there will be a temporary intersection established via approval pathway with the road authority to better control the traffic flow in the intersection. During these works, the existing configuration of the Mamre Road / Abbotts Road intersection is maintained. All access to residential properties is maintained. The construction contractor will directly co-ordinate with the residential properties to agree access conditions.	3 Months (August 2024 to October 2024)
2.3	Abbotts Rd / Mamre Rd Completion Works	During this stage, any works that were not possible to be constructed in stage 2.1 and 2.2 will be constructed. Completion works will also include pavement wearing course works which will be primarily completed during nights under traffic management. Traffic signals for both the Mamre Road / Abbotts Road and Abbotts Road / Aldington Road intersections will be commissioned during this stage. Permanent Linemarking will be the final step in this stage with a handover to the road authority signalling the completion of both Mamre Road / Abbotts Road intersection and Abbotts Road upgrade.	2 Months (November 2024 to January 2025)

3.1	Aldington Rd Southbound / Aldington Rd Northbound	Construct temporary pavement where required, realign traffic, construct half road width. These works will be a combination of interim works and ultimate works. During this stage, all access to residential properties is maintained. The construction contractor will directly co-ordinate with the residential properties to agree access conditions.	3 Months (July 2024 to October 2024)
3.2	Aldington Rd Northbound / Aldington Rd Southbound	Traffic is realigned to the newly constructed pavement, and construction of the remaining half road width is completed. These works will be a combination of interim works and ultimate works. During this stage, all access to residential properties is maintained. The construction contractor will directly co-ordinate with the residential properties to agree access conditions.	3 Months (November 2024 to January 2025)
3.3	Aldington Rd Northbound / Aldington Rd Southbound	During this stage, any works that were not possible to be constructed in stage 3.1 and 3.2 will be constructed. Completion works will also include pavement wearing course works which will be primarily completed during nights under traffic management. Permanent Linemarking will be the final step in this stage with a handover to the road authority signalling the completion of both Mamre Rd / Abbotts intersection and Abbotts Rd upgrade	2 Months (February 2025 to April 2025)

A further CTMP has been prepared by White Group (see **Appendix A**) to address the first stage of construction by the developer, prior to any upgrades at the Mamre Road/Abbotts Road intersection. This CTMP will be updated as additional developers accessing sites off Abbotts Road commence work (which is subject to development consent being issued); when the Mamre Road/Abbotts Road and Aldington Road upgrades commence; and during various stages of construction of these external roads. The additional traffic control measures applicable during the intersection upgrade will be determined based on the construction methodology and determined with input from TfNSW during the Works Authorisation Deed process.

3.2 Construction Hours

The type of work being undertaken will remain consistent throughout the duration of construction and associated activities. All works will be undertaken within the following hours:

- 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

It is noted that ESR are also developing Stage 1 of the Estate, which is to the north of the Site. Therefore, construction access is intended to be provided entirely through the Stage 1 site. However, it is noted that the initial period of construction may require access via the existing driveway on Mamre Road. This would be subject to the final CTMP, at the time when the approvals and construction process for both Stage 1 and Stage 2 are further advanced.

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 4** shows the indicative Site access location and **Figure 5** details the likely key access strategy into the routes between the Site and the regional road network.

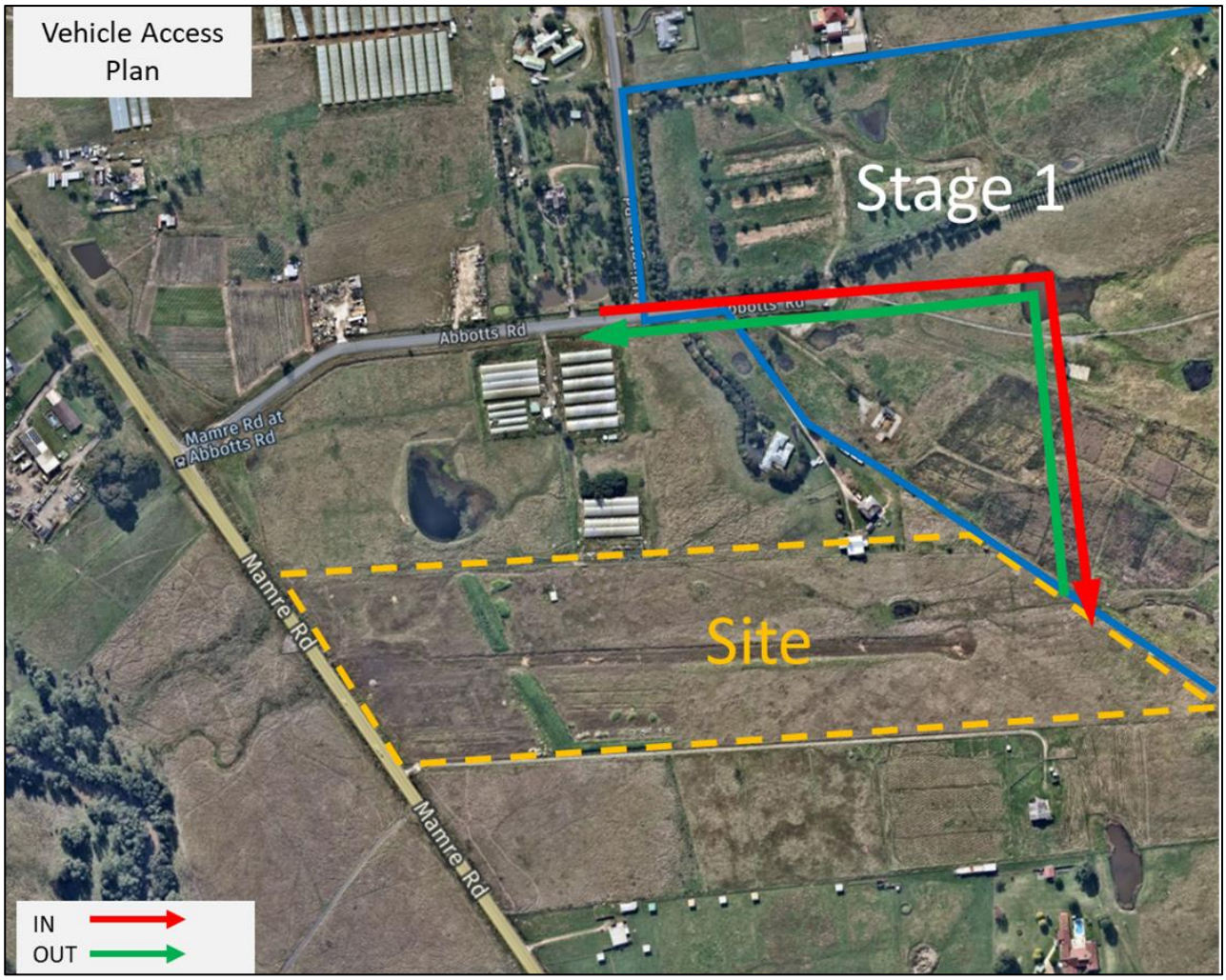


Figure 4: Indicative Vehicle Access Plan

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 Abbotts Road and Mamre Road.

Construction access will be limited to movements left-in and left-out of Abbotts Road. Therefore, 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 and left into Abbotts Road.
  - Route 2: From Westlink M7, westbound on Old Wallgrove Road, Lenore Drive and Erskine Park Road, then south along Mamre Road and left into Abbotts Road. Access will be via the Stage 1 site.

- Departure Trips:
  - Route 1: From the Site, onto Abbotts Road via the Stage 1 site then south on Mamre Road to Elizabeth Drive and left to the M7 Motorway and sub-regional routes to the east.
  - Route 2: From the Site, onto Abbotts Road via the Stage 1 site then south on Mamre Road to Elizabeth Drive and right to Badgerys Creek and The Northern Road to the west.

These routes are shown in **Figure 5**. 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.

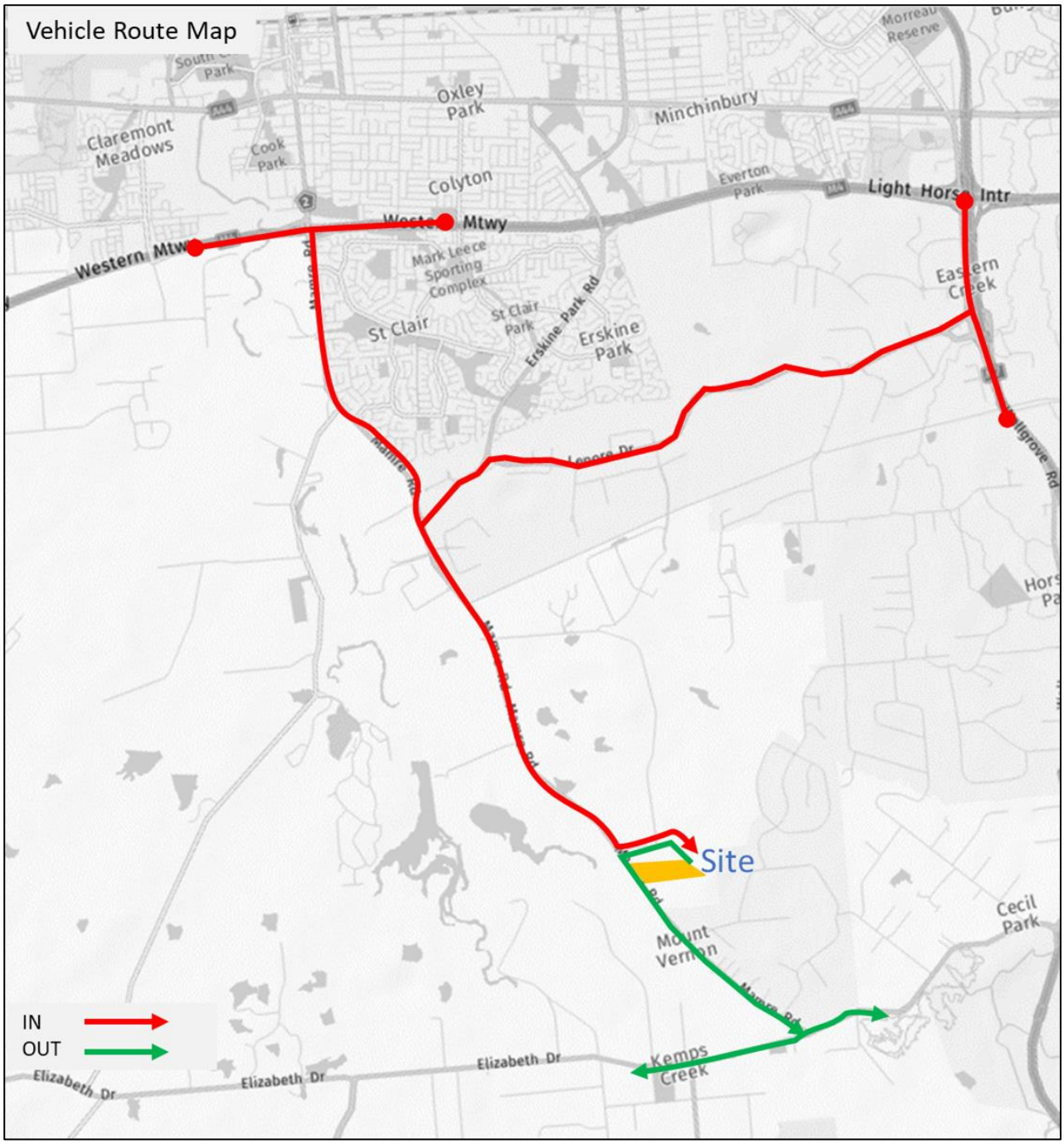


Figure 5: Construction Vehicle Routes

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. Abbotts Road) 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 Aldington Road. 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 Aldington Road 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 Forecast Cumulative Traffic Movements

It is expected that the other landowners in LOG-E will also be undertaking construction works accessed via Abbotts and Aldington Road at a similar time to the subject site and upgrades to external roads and intersections.

Following discussions with the relevant land owners, indicative construction traffic numbers have been collated for consideration in this assessment.

The relevant sites are:

- Subject site: Westlink Stage 2 – Abbotts Road SSD-46983729 (ESR)
- Approved Stage 1 site: Westlink – Abbotts Road SSD-9138102 (ESR)
- Approved Fife Kemps Creek 200 Aldington Road, SSD-10479 (FKC); and
- Frasers Property Industrial site at 155-251 Aldington Rd, SSD-17552047 (Frasers).

Actual timing and traffic movements will be updated as conditions of consent are issued, and construction programs finalised. However, **Table 4** provides an updated forecast of staging and daily traffic generation for each stage, for each development site and the associated road upgrade works.

TABLE 4: DAILY CUMULATIVE TRAFFIC FORECAST (*MOVEMENTS PER DAY*)

Site Timeframe	FKC 200 Aldington (SSD-10479)	ESR – Westlink Stage 1	ESR – Westlink Stage 2	Frasers (SSD-17552047)	External Road & Intersection Works	Cumulative	Status of Abbotts / Mamre Intersection
0-3 months **Sept-Nov 2023**	Light 70 Heavy 70	Light 224 Heavy 196				**Light 294** **Heavy 266**	Existing Mamre Intersection
3-6 months **Dec 2023-Feb 2024**	Light 100 Heavy 100	Light 224 Heavy 196				**Light 324** **Heavy 296**	Existing Mamre Intersection
6-9 months **March-May 24**	Light 100 Heavy 100	Light 130 Heavy 164	Light 164 Heavy 196		Light 120 Heavy 140	**Light 514** **Heavy 404**	Under construction 40km/hr restriction Temp intersection
9-12 months **June-August 2024**	Light 100 Heavy 100	Light 130 Heavy 164	Light 214 Heavy 196		Light 120 Heavy 140	**Light 350** **Heavy 600**	Under construction 40km/hr restriction Temp intersection
12-15 months **Sept-Nov 2024**	Light 100 Heavy 100	Light 130 Heavy 164	Light 214 Heavy 196	Light 30 Heavy 10	Light 120 Heavy 140	**Light 594** **Heavy 610**	Under construction 40km/hr restriction Temp intersection
15-18 months **Dec 2024-Feb 2025**	Light 150 Heavy 100	Light 130 Heavy 164	Light 120 Heavy 164	Light 30 Heavy 10	Light 120 Heavy 140	**Light 550** **Heavy 578**	Intersection and Aldington Road/Abbotts Road upgrade complete
18-21 months **Mar-May 2025**	Light 150 Heavy 100	Light 130 Heavy 164	Light 120 Heavy 164	Light 80 Heavy 20		**Light 480** **Heavy 448**	Complete

When considering the cumulative impacts of the road / intersection works and the above LOG-E development site construction traffic, the peak period (prior to completion of the upgrade of the Mamre Road/Abbotts Road intersection) is estimated as September 2024-November 2024, when the intersection is under construction but nearing completion. During this period there would be a peak of 1,204 vehicle movements per day.

Based on an 11-hour day for construction activities (between 7am to 6pm), this equates to 110 vehicle movements per hour (i.e. 55 inbound vehicles / 55 outbound vehicles).

Until such a time that the Mamre Road/Abbotts Road intersection works commence, speed restriction and traffic controls will be established via an approval pathway with the relevant road authority to control the traffic flow and mitigate the risks, as is proposed in the appended CTMP.

Further consideration to the operation of the intersection during construction will be determined during the relevant Works Authorisation Deed process required prior to the commencement of works. When this intersection is under construction it is expected the CTMP will identify the speed be reduced to 40km/hr during construction.

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 Aldington 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 **B**.

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 Guidance Schemes

Any Traffic Guidance Scheme (TGS), 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 TGSs shall be updated to respond to any changes to prevailing traffic conditions throughout the life of the works.

Site-specific versions of the TGS as shown in **Appendix C** are to be implemented for the duration of the works. The final TGSs will be coordinated with the other works in the area, once timeframes are better understood.

Once approved, 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 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. White Group Roadworks CTMP

Construction Traffic Management Plan (CTMP)

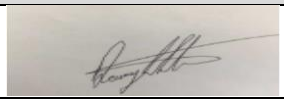
Westlink Estate, Kemps Creek, NSW

Prepared by: White Group

8/24/22

Danny White
RMS License: 0052250460

Revision Record

Issue No.	Author	Reviewed/Approved	Description	Date
0.	Danny White		Rev 01	24/08/22
1.			Rev 02	
2.			Rev 03	
3.			Rev 04	
4.			Rev 05	
5.			Rev 06	
6.			Rev 07	
7.			Rev 08	

Author: Danny White

Ticket Number: 0052250460

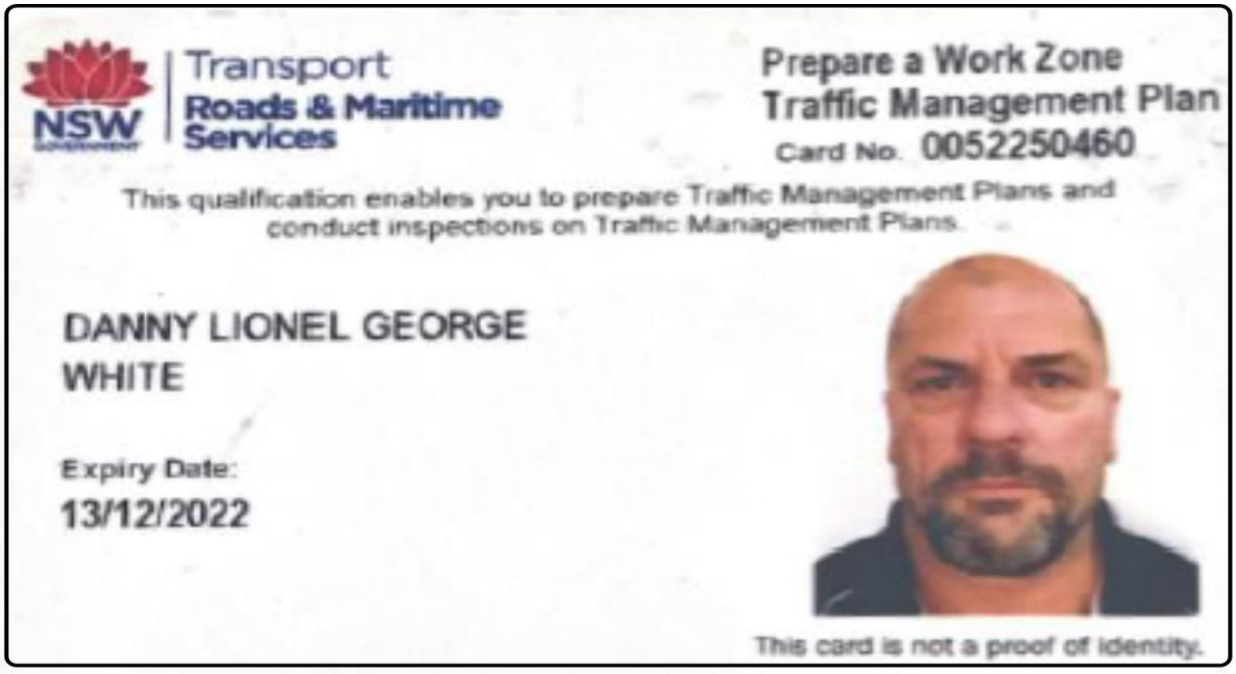


TABLE OF CONTENTS

1. Introduction

This CTMP covers stages for the new Westlink estate at 292-308 Aldington Road & 59-62 Abbotts Road, Kemps Creek, NSW.

1.1 Executive Summary

Construction Consent provides for the creation of the Construction Traffic Management Plan (CTMP) for the works at 292-308 Aldington Road & 59-62 Abbotts Road, Kemps Creek, NSW.

The works will cover the construction of the proposed new Westlink estate.

Within this Construction Traffic Management Plan (CTMP), all relevant Conditions relating to traffic management have been addressed.

1.2 Background

Westlink Estate, Kemps Creek – Development is subject to approval by Dept Planning & Environment.

White Group has been engaged by ESR, to prepare a Construction Traffic Management Plan (CTMP) to be implemented during the on-site work.

1.3 Site Location

The site is located at 292-308 Aldington Road & 59-62 Abbotts Road, Kemps Creek, NSW, as shown in Figure 1-1.

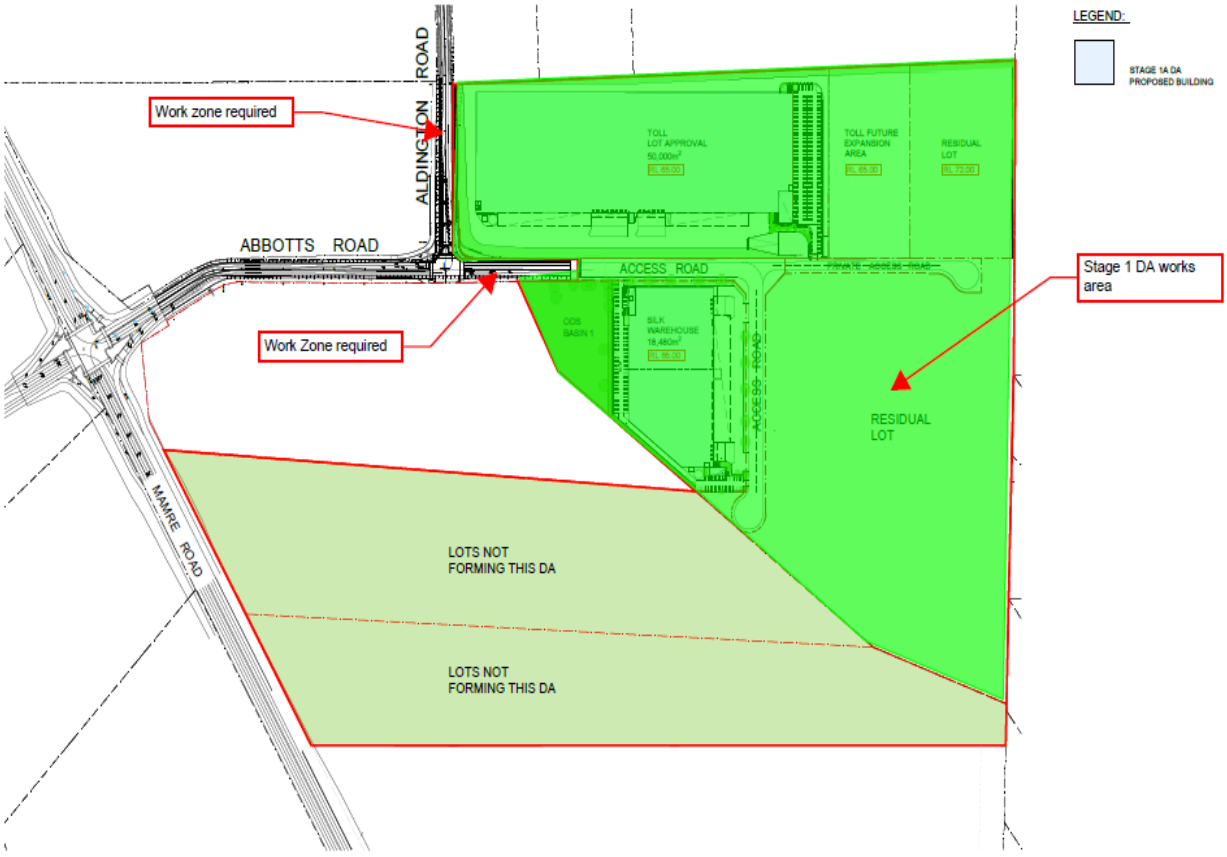


Figure 1-1: Site Location

1.4 Scope

The works within the site will include clearing of the land, leveling, haulage of soil both to & from the site, excavation, instillation of stormwater, sewage, roads, driveways, car parks & footpaths.

External works will include upgrades to the local road network. These are currently subject to design & approval by PCC & TfNSW. This CTMP will be updated when these works commence.

1.5 Objective of this Plan

The Primary objective of this Construction Traffic Management Plan (CTMP) is to ensure safe & efficient movement of vehicles & pedestrians on to, off & around the site, whilst minimising disruptions / impacts & maintaining a safe environment for both vehicular & pedestrian traffic

1.6 Guideline & Design Standards – Reference Documents

The Construction Traffic Management Plan (CTMP) has been developed in accordance with the requirements of Transport for NSW (RMS) Traffic Control at Works Sites Manual (Version 6.1, issued February 2022) and are referenced in this report:

- NSW Roads and Maritime Services Traffic Control at Worksites Manual V6.1.
- AS1742.3 Manual of Uniform Traffic Control Devices: Works on Roads & in accordance with the relevant legislation, codes of practice or other requirements.

This document will:

- Ensure the project establishes and maintains best practice to manage traffic & pedestrians during all stages of work.
- Ensure a safe environment for members of the public & construction personnel is maintained at all times.
- Ensure compliance with relevant specifications and the RMS's - "Traffic Control at Work Sites" (TCAWS V-6.1) Manual.
- Deliver a high standard of community engagement and awareness during the works.

1.7 Limitations of this Construct

The Construction Traffic Management Plan (CTMP) developed by White Group only considers the impact of works on traffic & pedestrians. Impacts on other aspects in the local environments, such as noise, are not considered here but will be in other parts of the Construction Environmental Management Plan. The CTMP is based on information provided by ESR regarding the expected characteristics & requirements of the construction program.

2. ROLES AND RESPONSIBILITIES

2.1 Key Personnel & Contact Details

2.1.1 Project Manager

Name:

Mobile Phone:

Email:

2.1.2 Site Supervisor

Name:

Mobile Phone:

Email:

2.1.3 Emergency Contact

Name:

Mobile Phone:

Email:

2.1.4 Traffic Control Contractor

Company: White Group

Name: Danny White

Mobile Phone: 0427 281 171

Email: whitegroupops@outlook.com

2.1.5 TfNSW Project Manager

Name:

Mobile Phone:

Email:

2.1.6 Project Verifier/Penrith Council Inspector

Name:

Mobile Phone:

Email:

2.1.7 Transport Management Centre

Phone: 02 8396 1513

Email: tmc_piu@tmc.transport.nsw.gov.au

2.2 Responsibilities

All site personnel have a responsibility to,

- Ensure a safe workplace and safe environment during works.
- Report any hazards to a supervisor immediately.
- Advise supervisory personnel immediately of any concerns.

2.2.1 Project Manager

The Project Manager has ultimate responsibility to,

- Promote at all times the company's policies, procedures and standards relating to health, safety and environmental management and ensure that they are complied with.
- Ensure sufficient resources are available to achieve the CTMP, objectives and targets and that those resources have sufficient skills to conduct the roles competently.
- Ensuring the Project achieves compliance with the CTMP.
- Providing leadership in the development and implementation of the CTMP.
- Ensure that all staff and contractors engaged to work on the Project are appropriately inducted and trained in all relevant CTMP issues and controls.
- Organise and coordinate construction activities in accordance with the CTMP.
- Ensure that staff have been trained appropriately for the tasks that they are undertaking prior to commencing work.

2.2.2 Site Supervisor

The Site Supervisor has the responsibility to,

- Support the Project Manager in providing leadership in the implementation of the CTMP.
- Conduct surveillance with the aim to identify unusual, non-conforming conditions.
- Perform investigations of construction sites and temporary traffic control schemes, prepare necessary reports, as well as maintain incident records and inspections logs.
- Ensures receipt of the relevant approvals for construction activities and traffic control.
- Ensures the relevant Supervisors and workforce are familiar with the approval conditions and requirements prior to implementation.
- Ensures the Supervisors and workforce are re-familiarised in the approval conditions and requirements at regular intervals during the period of the approvals.
- Liaises with the Traffic Control Company and crews in the planning and implementation of the required traffic management arrangements.
- Conducts regular inspections (including pre-starts) of traffic controls and where necessary instructs the rectification of deficiencies.
- Allocates plant, equipment and human resources for the works including the provision of the temporary traffic control arrangements.
- Conducts and keeps records of daily and weekly (day and night) inspections of the traffic control arrangements, assist audits and where necessary rectifies deficiencies.
- Inform and assist with the management of unplanned incidents, providing initial response to make the site safe.
- Assist with the implementation of mitigation measures to address unsafe or unusual conditions.
- Records unplanned incident details, and when traffic controls are in operation, including the installation and removal of regulatory signage.

2.2.3 Nominated Traffic Officer

The Nominated Traffic Officer has the responsibility to,

- has authority to stop work on any activity if it is considered to be necessary to prevent a traffic accident, or to comply with the direction of RMS, Council or Police.
- Ensure that the approved traffic control measures are established, implemented and maintained in accordance with the approved plan.
- Carrying out regular inspections and auditing (TCAWS V-6.1 Section 8.1.3) of the traffic control measures to ensure that they are effective and are being followed.
- Monitoring traffic conditions.
- Ensuring and monitoring conformance to time and period of operation.
- Maintaining current copies of the construction Traffic Management Plan, Traffic Guidance Schemes, approvals, and their controlled distribution.
- Facilitate traffic awareness and giving toolbox talks to the site personnel.
- Managing the dedicated Traffic Control Crew in the delivery of required maintenance activities, incident and emergency support, and providing support/resources during implementation.
- Updating the CTMP in response to any incidents arising from the Contractor's Works.
- Develop a strategy for the dissemination of changed traffic condition information to potentially affected stakeholders, including road users, local communities and residents.

3. EXISTING TRANSPORT INFRASTRUCTURE

3.1 The Road Network

3.1.1 Key Roads

The roads in the immediate vicinity of the site are administered by Penrith City Council & TfNSW. The characteristics of roads in the immediate vicinity of the site are shown below in Table 1-1.

Road	Speed limit	Lanes	Road Authority
Aldington Road	60 kph	Two lanes north & south bound, un-divided.	Council
Abbotts Road	60 kph	Two lanes east & west bound, un-divided.	Council
Mamre Road	80 kph	Two lanes north & south bound, un-divided.	TfNSW

Table 1-1: Road Characteristics

3.2 Existing Traffic Controls

Key features of the existing traffic controls which apply to the road network in the vicinity of the site are:

- No right turn from Abbotts Road onto Mamre Rd between 0800 – 0930 & 1430 – 1600, Monday to Friday.

3.3 Parking

All construction work vehicles as well as staff & visitors, will be parked on-site only.

3.4 Public Transport

3.4.1 Bus routes

There are currently no bus stops or bus routes within the area affected by the works, no consultation with bus companies will be required at this time:

3.5 Pedestrian Infrastructure

The project site will have no impact on footpaths as there are currently no formed footpaths on Aldington Road, Abbotts Road or Mamre Road at this location, pedestrian management will be in place as required.

3.6 Cyclist Infrastructure

Cyclists will not be affected & are to comply with the road conditions & rules and shall adhere to any posted regulatory signage.

4. CONSTRUCTION METHODOLOGY

4.1 Duration of works and Daily / Weekly schedule

The construction site works for the proposed stage are expected to take 15 months and will be undertaken as per the following condition:

- Construction works between:

  Monday to Friday 7:00am to 6:00pm
  Saturday 7:00am to 1:00pm, if inaudible to adjoining properties otherwise 8:00am to 1:00pm
  No work to be undertaken on Sunday or public Holiday's.

4.1.2 Construction Traffic management plan compliance

In compliance with TfNSW & Penrith Council conditions, across the entire duration of the project the Contractor and all subcontractors and employees will obey any direction or notice from the Prescribed Certifying Authority.

4.2 STAGING

ESR propose the following staging of works:

- Demolition & clearing of any existing structures
- Drainage & infill of existing dams & any ground dewatering
- Clearing of existing trees & vegetation from site
- Bulk earthworks for site preparation & stabilisation works
- Create individual sub-division lots
- Roadworks & access infrastructure
- Stormwater & drainage
- Sewers
- Road & boundary retaining walls

4.2.1 Type and Number of Construction Vehicles

The construction works for the Initial site infrastructure will be over a 15-month construction period. Throughout the main stages, the maximum number of trucks accessing the site on any given day will be 100 truck & dogs.

Stage	Times per day	Movement numbers	Largest vehicles
Haulage	7am to 6pm Minimise heavy traffic movements during peak times of 7-9am & 4-6pm.	100 movements	Semi / Truck & dog

4.3 TRUCK ROUTES

4.3.1 Haulage Routes

Haulage vehicle traveling to site will travel from the M4 Motorway or Lenore Drive, south along Mamre Road for approx. 9km left onto Abbotts Road, continue along Abbotts Road, turning left onto Aldington Road & continue to the work site turning right & entering the work site at the marked site entry point.

Haulage vehicles leaving 200A development site will turn left onto Aldington Road & then right onto Abbotts Road, continue to Mamre Road & turn left only, continue Elizabeth Drive & turn left heading towards the M7 Motorway.

No construction traffic is permitted to use Bakers Lane to enter or exit the site.

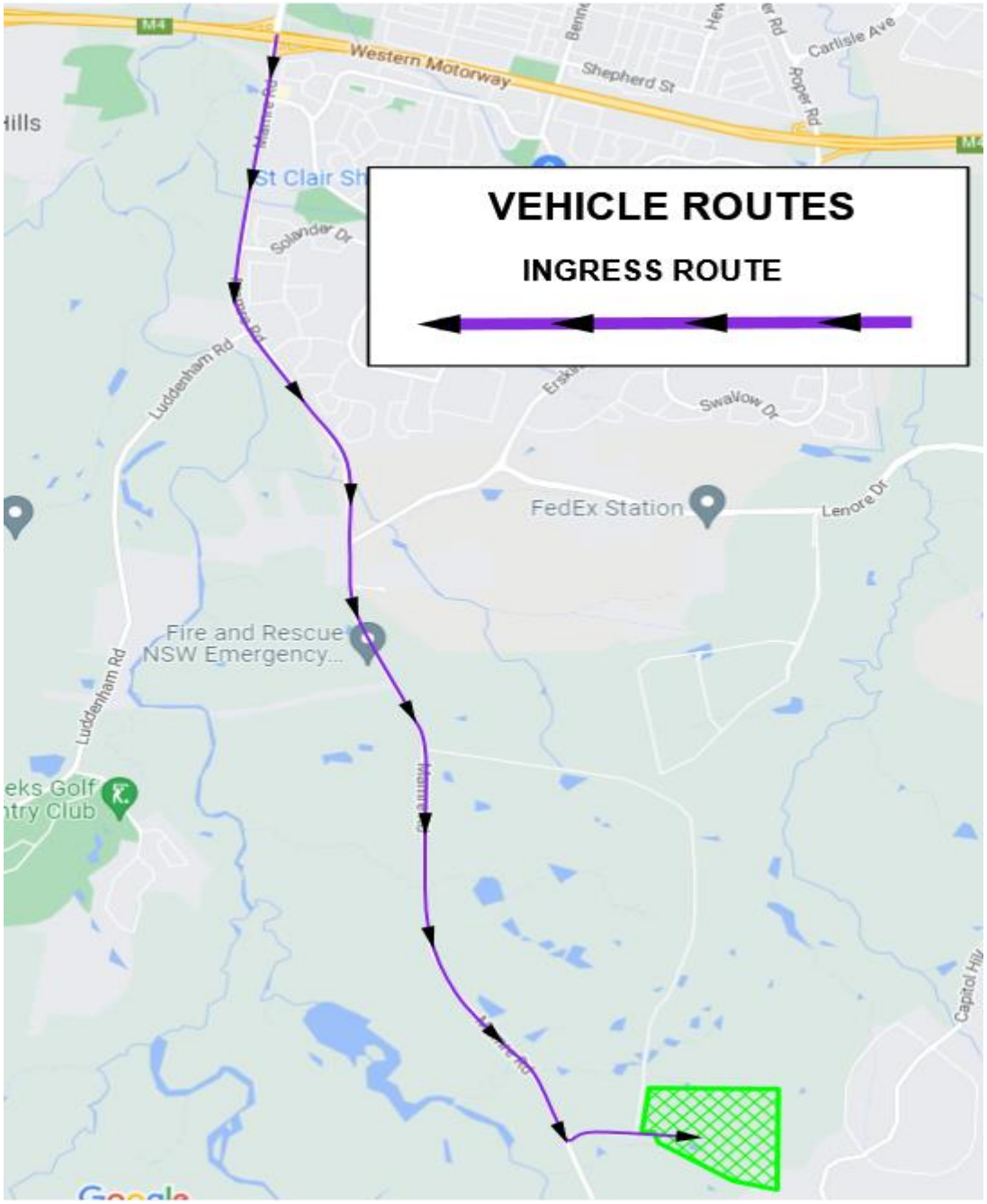


Figure 1-2: Haulage Ingress

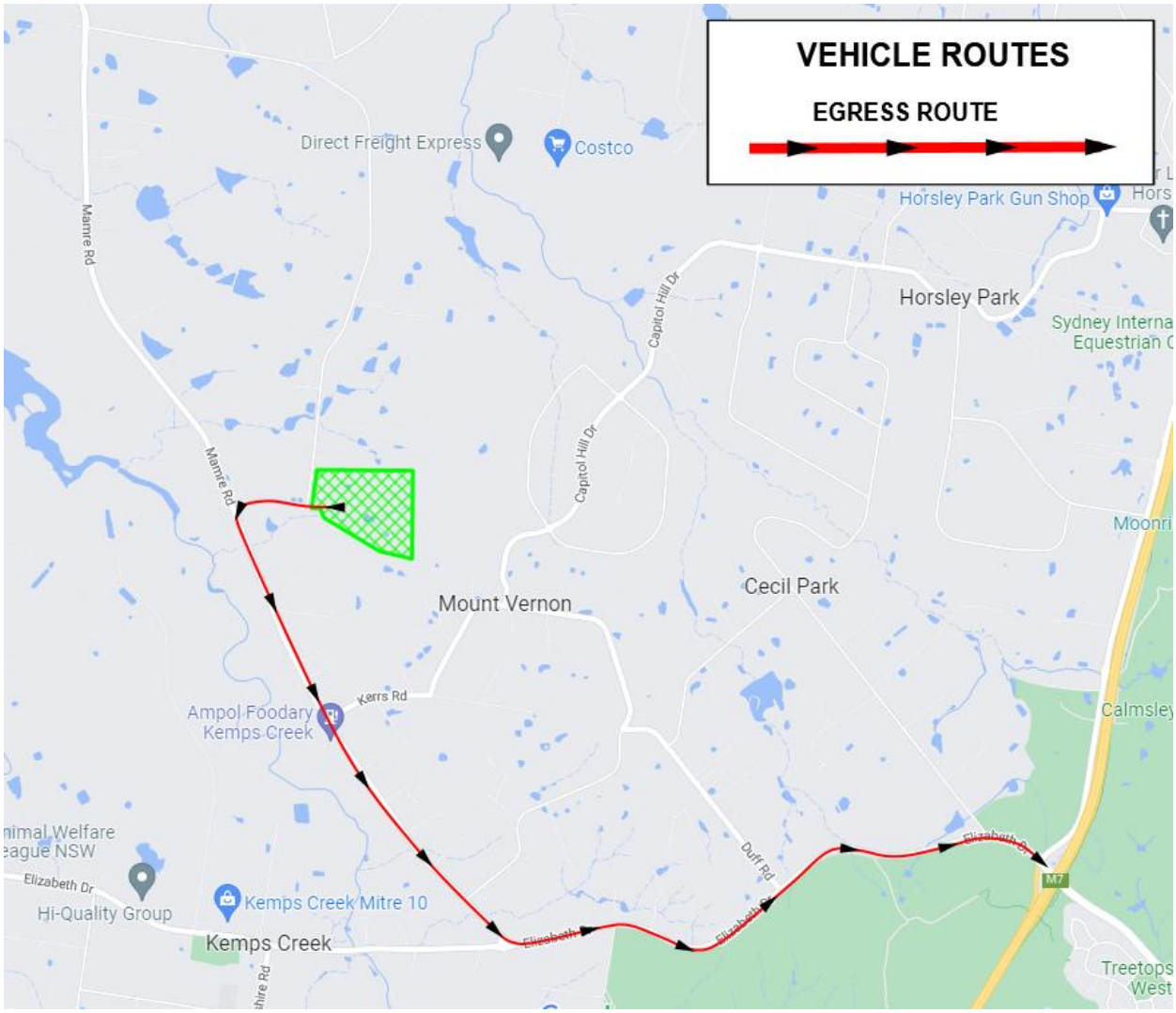


Figure 1-3: Haulage egress

4.4 Materials on site

4.1.1 Building Materials

All construction materials are to be stored in the designated storage areas.

4.1.2 Materials on Road Reserve

No building materials, work sheds, vehicles, machines or the like shall be allowed to remain in the road reserve area unless they are behind authorised traffic barriers.

4.5 Scrub & Dry

4.5.1 Mud & Sediment Control

Wheel wash to be in place at site egress point to remove mud from vehicle tyres before allowing them to re-enter the public traffic lanes, a water cart may also be used to clean tyres if required, if a risk assessment highlights the possibility of mud or sediment being trafficked onto the road, a street sweeper is to be placed on standby to clean the road.

4.5.2 Unexpected Finds & Soil Contamination

Any unexpected finds or contaminated soil will be controlled and dealt with in accordance with the on-site Environmental Management Plan.

5. TRAFFIC MANAGEMENT STRATEGY

5.1 Traffic Management Options

The traffic management strategy prioritises the free flowing, unimpeded movement of vehicles past the worksite.

5.1.1 Continuous Flow of traffic on Aldington Road

Trucks and the like will be brought onto the site at the designated entry points for safety & to avoid interruptions to the traffic flow on Aldington Road, Abbotts Road & Mamre Road.

5.1.2 Stop / Slow Control Measures

Stop/Slow traffic control measures will not be required.

5.2 Temporary Road Closure

There will not be a requirement for any road closures.

5.3 Working on Footpaths

There are no footpaths at this location.

5.4 Pedestrian & Cyclist Management

During the construction works there will be limited movements of pedestrian and cyclists on the verge & road reserve, this is to be monitored to maintain a safe area for them.

5.5 Emergency Services

Access must be available at all times for emergency services to adjacent properties & to the site itself. No access will be impeded by the works at this location.

5.6 ROL's & SZA's

TfNSW Road Occupancy Licences (ROL) & Speed Zones (SZA) are to be obtained prior to the commencement of any works that will affect traffic movements on TfNSW roads, they are to be activated as per TfNSW requirements & deactivated at the end of each shift.

5.7 Road Barriers

Road barriers ranging from Concrete Jersey Barriers to water filled barriers may be used on this project.

5.8 Line Marking

N/A.

5.9 Lighting

N/A.

6. INSPECTION, AUDITING AND REPORTING

6.1 Inspections & Audits

Daily site checks of signs and devices to be undertaken prior to work commencing.

The specific requirements for safety inspection and audits will meet with the requirements of the Traffic Control at Worksite Manual V6.1, Traffic audits will be undertaken after every major traffic change.

Inspection of traffic control devices for short term traffic management will be completed on weekly basis by a site supervisor with 2 years or more experience with work carried out on, in or adjacent to a road, railway, shipping lane or other traffic corridor that is used by traffic other than pedestrians.

Reporting will be in a format provided in the Traffic Control at Worksite Manual.

6.2 TMP Up-dates & Amendments

Update of this plan will occur as necessary and reasons for update of the plan may include the following,

- Consideration of monitoring, inspection and audit results.
- Consideration of incidents and any lessons learnt.
- Consideration of any new regulatory issues.
- A review of the effectiveness of traffic management controls.
- Consideration of changes in operational needs such as resourcing.
- Feedback from management reviews.
- At the request of the Principal or their representative.
- Commencement of construction by additional developers on Aldington or Abbotts Road or Mamre / Abbotts Road upgrade.

A copy of the updated plan and changes will be distributed to all relevant stakeholders in accordance with the approved document control procedure.

7. CONSULTATION AND COMMUNICATION

For businesses & residences impacted by the works, a letterbox drop providing details of the works and the timing will be provided a minimum 7 days in advance of any changes to traffic conditions.

7.1 Site Contact Details

The site shall be clearly posted with a sign erected in a prominent position on the site perimeter, it is to be maintained & removed at the completion of works. The sign must contain the following information,

- Name, address, contractor licence number and telephone number of the *principal contractor*, including a telephone number at which the person may be contacted outside working hours, or *owner-builder* permit details.
- Name, address and telephone number of the *Principal Certifying Authority*
- A statement stating that ‘unauthorised entry to the work site is prohibited”.
- A notice with contact names and mobile phone numbers of site supervisors be displayed at the entrance to the site for community to make contacts regarding work activities.

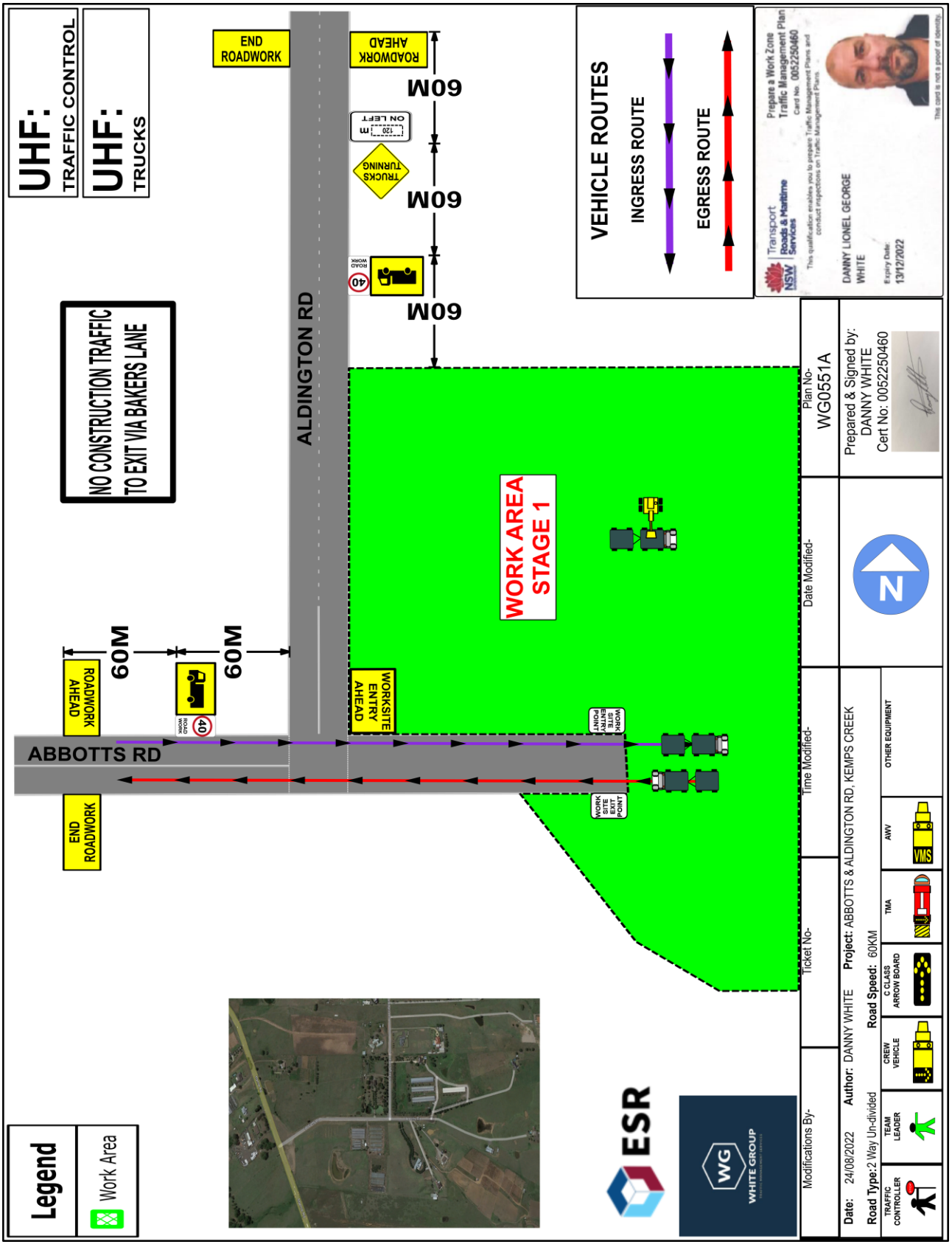
7.2 VMS

Variable message signs may be used to notify motorists of the changed traffic conditions both prior & during works at this location.

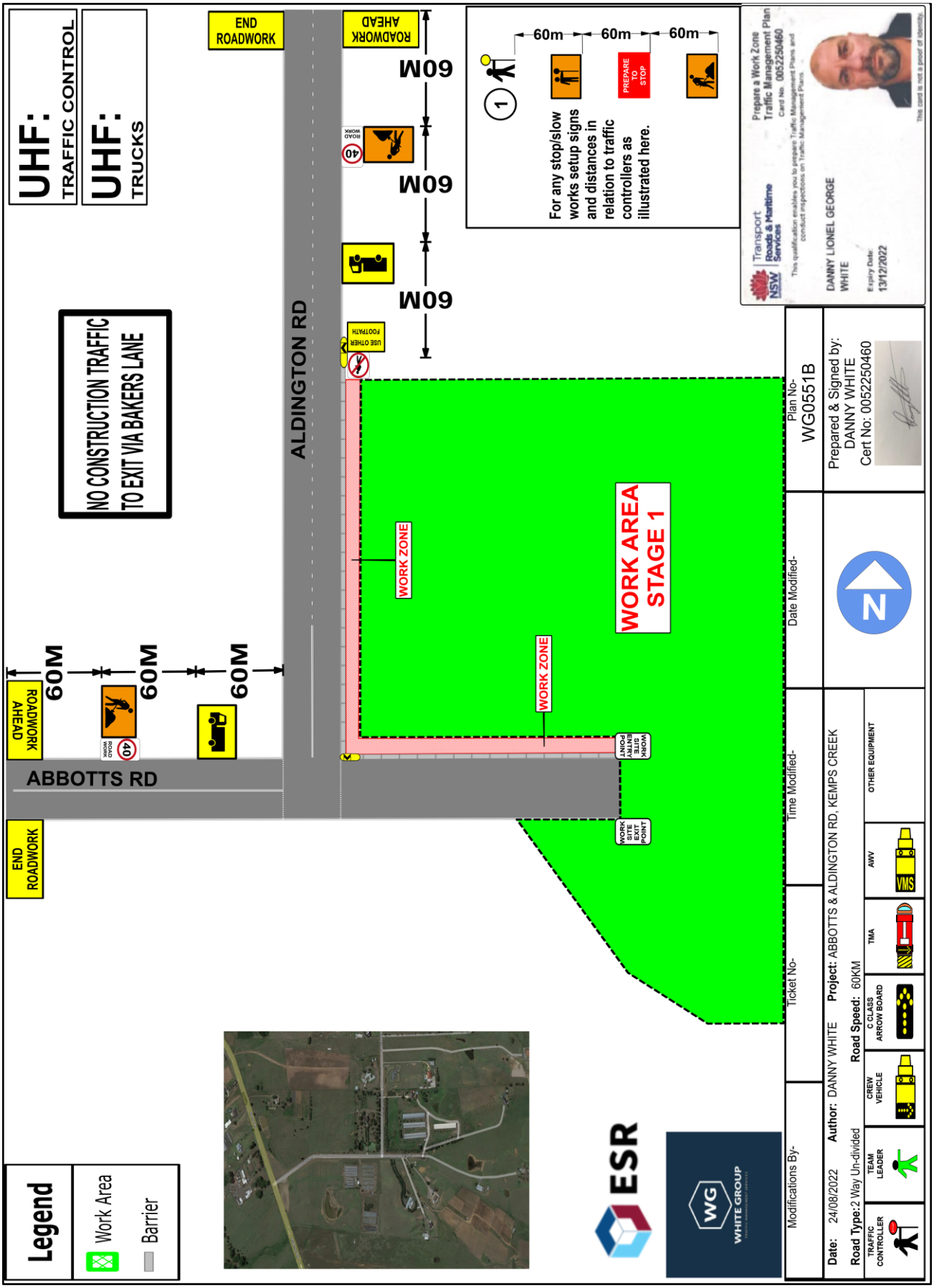
APPENDIX A

Traffic Control Plans

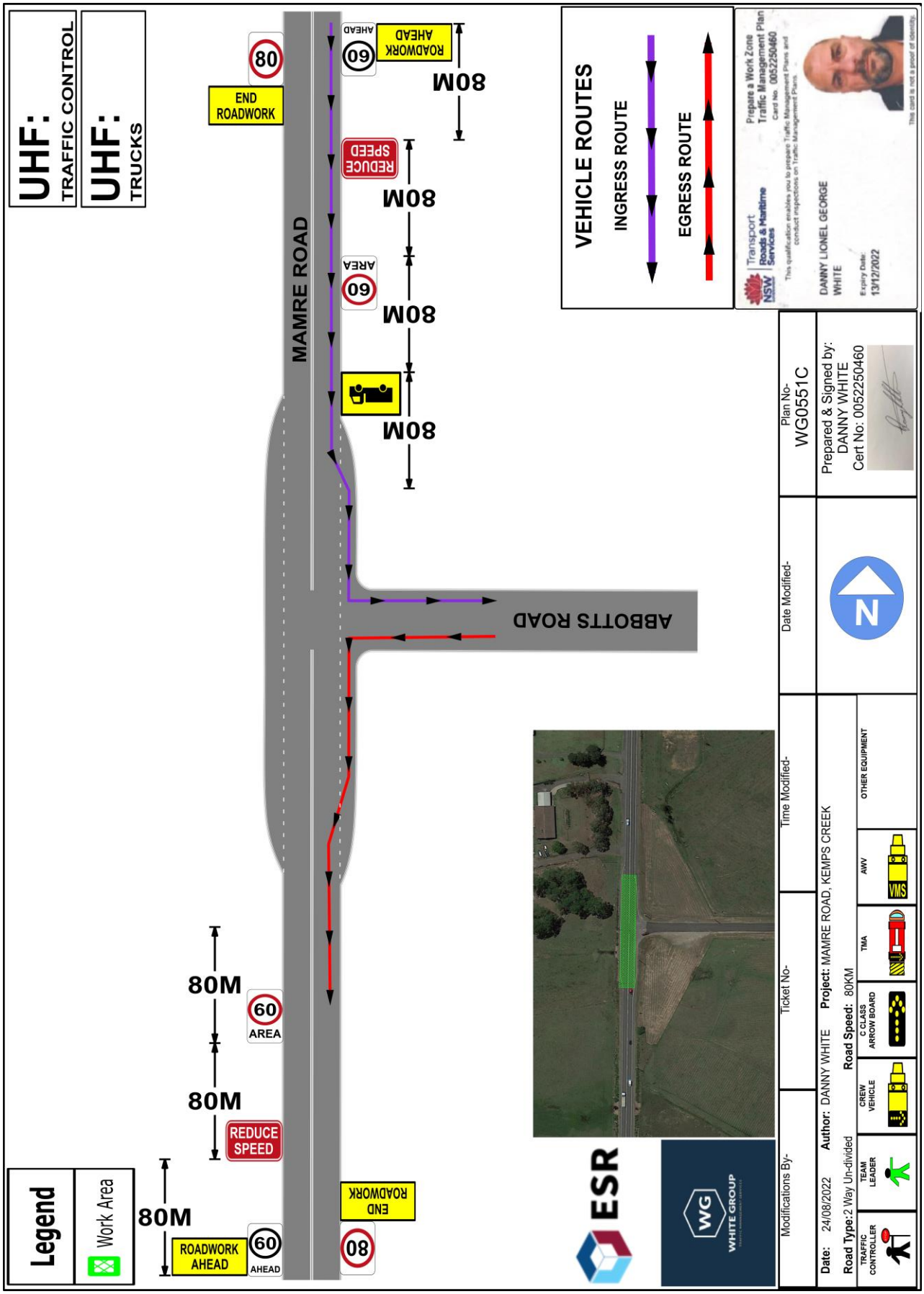
A 1.1 – Long Term Signage & Vehicle Movements on Abbotts & Adlington Road



A 1.2 – Work Zones



A 1.3 – Mamre Road Signage & Speed Reduction



APPENDIX B

B 1.1 – RISK ASSESSMENT

No	Risks	Rate	Potential consequences	Evaluate	Proposed risk treatment
1	Work vehicles, truck & dog, moving in & out of site	3 H	Traffic accidents, unfamiliarity with area	1 L	• Site will require appropriate signs, all drivers to be given written directions on entry & exit procedures. • UHF communication with traffic marshal on approach to site
2	Access to site for receiving deliveries	2 M	Traffic disruption or interference, Incidents due to unfamiliarity within site	1 L	• Regular check of Traffic Management Plan implementation. • Limit deliveries during peak times. • Have procedures in place for rapid recovery.
3	Working in close proximity to Intersections	2 M	Traffic delays, work vehicles pulling out of site, queuing.	1 L	• Vehicles leaving site to be aware of traffic flow & conditions. • Limit vehicle movements at peak times.
4	Speed Reduction	2 M	Speed reduction on Mamre Road due to slow moving trucks entering from Abbotts Road & possible collisions if speed remains at 8okph	1 L	• Speed reduced to 60kph to allow for safer vehicle breaking distance when trucks are entering traffic flow on Mamre Road. • Ensure speed reduction signage is in place at correct distance & height on approaches to intersection.
5	Pedestrian access	2 M	Potential disruption to progress causing pedestrians to not comply with pedestrian provisions.	1 L	• Ensure pedestrian access provisions are adequately addressed, well established and maintained.
6	Cyclist access	2 M	Potential disruption to progress causing cyclists to not comply with cyclist provisions.	1 L	• Ensure cyclist access provisions are adequately addressed, well established and maintained.
7	Noise pollution	1 L	Noise affecting residents & community.	1 L	• Limit noise near residential areas where possible. • Have vehicles are not to use compression braking when entering site.
8	Access for emergency services restricted	2 M	Emergency vehicles & personnel unable to attend to an emergency situation.	1 L	• Make emergency services in the local area aware of the works & provide them with a copy of the Construction Traffic Management Plan (CTMP)

Step 1: Determine Likelihood What is the possibility that the effect will occur?		
	Criteria	Description
Almost certain	Expected in most circumstances.	Effect is a common result
Likely	Will probably occur in most circumstances	Effect is known to have occurred at this site or it has happened
Possible	Might occur at some time	Effect could occur at the site or I've heard of it happening
Unlikely	Could occur at some time	Effect is not likely to occur at the site or I have not heard of it happening
Rare	May occur only in exceptional circumstances	Effect is practically impossible

Step 2: Determine Consequence What will be the expected effect?	
Level of Effect:	Example of each level:
Insignificant/Acceptable	No effect – or so minor that effect is acceptable
Minor	First Aid treatment only; no lost time injury
Moderate	Medical treatment; serious injuries, temporary partial disability; lost time injury < 7 days
Major	Hospital admittance; extensive injuries; lost time injury > 7 days; Permanent Total Disability injury; death
Catastrophic	Permanent Total Disability; Loss of life

Step 3 Determine the risk score					
Consequence					
Likelihood	Insignificant	Minor	Moderate	Major	Catastrophic
Almost certain	3 High	3 High	4 Acute	4 Acute	4 Acute
Likely	2 Moderate	3 High	3 High	4 Acute	4 Acute
Possible	1 Low	2 Moderate	3 High	4 Acute	4 Acute
Unlikely	1 Low	1 Low	2 Moderate	3 High	4 Acute

Step 4 Record risk score on worksheet (Note – Risk scores have no absolute value and should only be used for comparison and to engender discussion.)	
Score	Action
4 A: Acute	DO NOT PROCCED. Requires immediate attention. Introduce further high level controls to lower the risk level. Re-assess before proceeding.
3 H: High	Review before commencing work. Introduce new controls and/or maintain high level controls to lower the risk level. Monitor frequently to ensure control measures are working.
2 M: Moderate	Maintain control measures. Proceed with work. Monitor and review regularly, and if any equipment/people/materials/work processes or procedures change.
1 L: Low	Record and monitor. Proceed with work. Review regularly, and if any equipment/people/materials/work processes or procedures change.

APPENDIX C

C 1.1 – SITE PHOTOS

Abbotts Road – West bound

Abbotts Road – East bound

Aldington Road – North bound

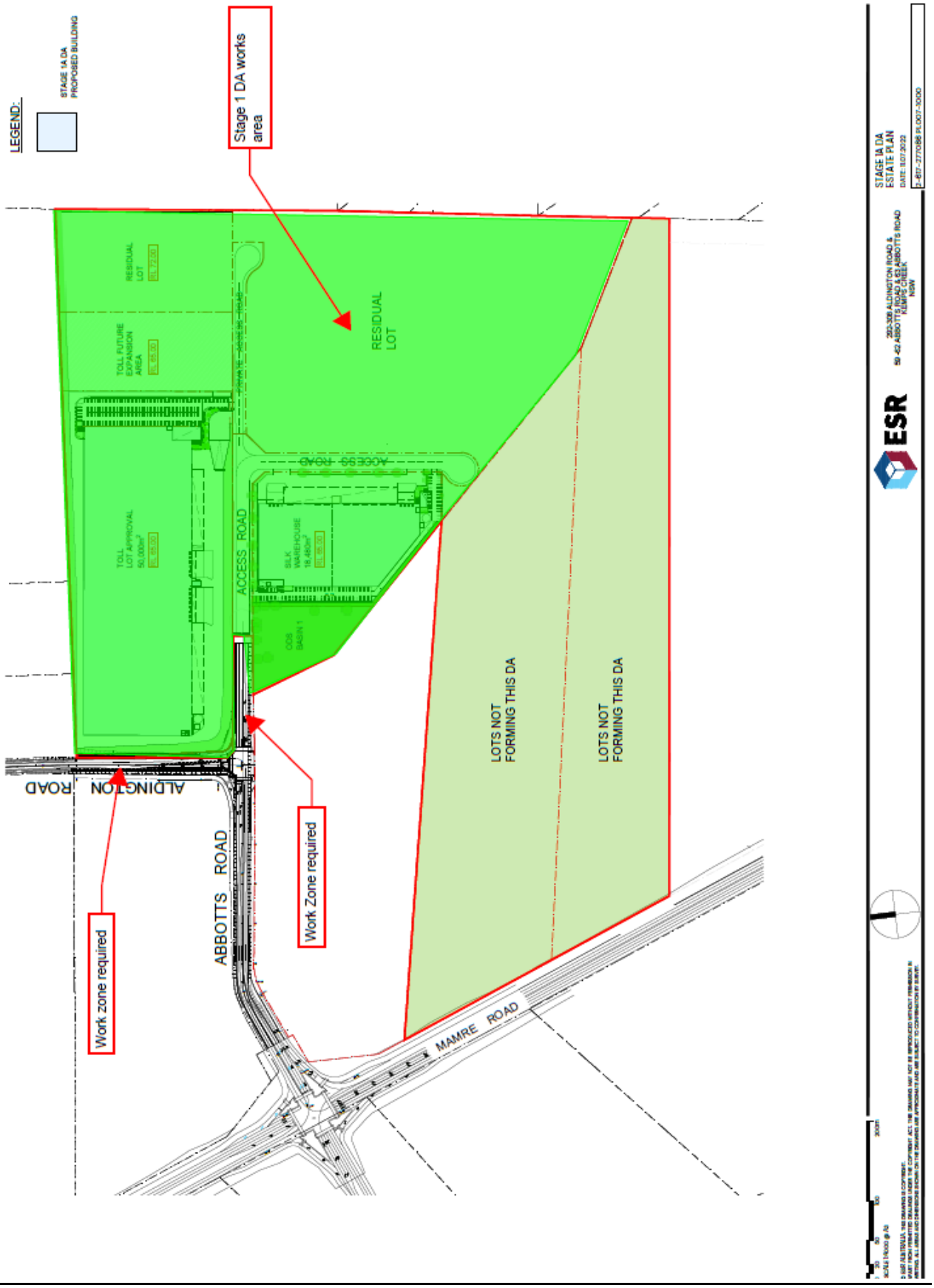
Aldington Road – South bound

Mamre Road & Abbotts Road – Intersection

APPENDIX D

D 1.1 – Site Plans

Site Work Zone Locations



Site Ariel View

APPENDIX E

E 1.1 – Traffic Volumes

Bulk Earthworks

Stage Name / Description (e.g., demolition, excavation, structure, fit out etc.)	**Westlink Stage 1 - Lot 1, Lot 4, Lot 3, Lot 1B**					
Construction Management Plan Provided?? (showing site sheds, materials storage etc.)	Site Cut to Fill, No external import and export, External infrastructure to be used only for employees to access site during work hours. Roads used during work hours only to be used for fuel and maintenance and machine/plant floatage					
Timing(s)	**Dates:**	Start	End	**Work Times:**	Start	End
		Nov-22	Aug-23		6:00	18:00
Work Zone required? If yes, please provide details: - location (sketch) - length - time (if different to the above)	Yes Abbotts Road, Aldington Road frontages to estate					
Truck types (sizes) i.e. Small (<6.4m), Medium (>6.4, <8.8m), Heavy (>12.5m) rigid trucks, truck and dog, semi-trailer etc.	Small, Medium, Heavy, Semi					
Worker numbers - maximum on-site at any one time	Average over stage:		30	Peak Times:		50
Details regarding any proposed measures to limit contractor parking on-street in the vicinity of the site (if any).	On-site parking will be provided.					
Details of any proposed hoarding and pedestrian protection/ control	N/A					
Crane required? - crane location - crane swing radius, and - times that a crane is required for the project.	N/A					
Are any road (lane closure) occupancies required? Please specify location / duration of specific works, where possible.	No					
Are any footpath / verge works required? Please specify location / duration of specific works.	No					

Typcial Peak Vehicle Movement Profile (1 truck = 1 in movement + 1 out movement = 2 movements)	Light Vehicles (cars)		Rigid Trucks/ Commercial Vans		Articulated Vehicles/ Truck + Dog Combination	
Time (hour starting)	IN	OUT	IN	OUT	IN	OUT
0:00						

1:00						
2:00						
3:00						
4:00						
5:00						
6:00	10	0	0	0	0	0
7:00	10	0	0	0	0	0
8:00	10	2	0	0	0	0
9:00	2	2	2	2	0	0
10:00	2	2	2	2	0	0
11:00	2	2	2	2	0	0
12:00	2	2	2	2	0	0
13:00	2	2	2	2	0	0
14:00	2	2	2	2	0	0
15:00	2	2	2	2	0	0
16:00	2	2	2	2	0	0
17:00	0	15	0	0	0	0
18:00	0	15	0	0	0	0
19:00						
20:00						
21:00						
22:00						
23:00						
TOTAL	**46**	**48**	**16**	**16**	**0**	**0**

Retaining Wall Road Works

Stage Name / Description (e.g., demolition, excavation, structure, fit out etc.)	**Westlink Stage 1**					
Construction Management Plan Provided?? (showing site sheds, materials storage etc.)	Import supplies for road construction and retaining wall construction. Utility works to be undertaken which will require work zones on ESR frontage on Abbotts and Aldington. Traffic control will be present on site to manage this. These works to be undertaken at night.					
Timing(s)	**Dates:**	Start	End	**Work Times:**	Start	End
		Nov-22	May-24		6:00	6:00
Work Zone required? If yes, please provide details: - location (sketch) - length - time (if different to the above)	Yes Abbotts Road, Aldington Road frontages to estate					
Truck types (sizes) i.e., Small (<6.4m), Medium (>6.4, <8.8m), Heavy (>12.5m) rigid trucks, truck and dog, semi-trailer etc.	Small, Medium, Heavy, Truck and Dog, Semi					
Worker numbers - maximum on-site at any one time	Average over stage:		40	Peak Times:		60
Details regarding any proposed measures to limit contractor parking on-street in the vicinity of the site (if any).	Parking to be contained on site.					
Details of any proposed hoarding and pedestrian protection/ control	N/A					
Crane required? - crane location - crane swing radius, and - times that a crane is required for the project.	N/A					
Are any road (lane closure) occupancies required? Please specify location / duration of specific works, where possible.	Only during the utility works and road tie in with Abbotts Road					
Are any footpath / verge works required? Please specify location / duration of specific works.	Yes					
Typical Peak Vehicle Movement Profile (1 truck = 1 in movement + 1 out movement = 2 movements)	Light Vehicles (cars)		Rigid Trucks/ Commercial Vans		Articulated Vehicles/ Truck + Dog Combination	
Time (hour starting)	IN	OUT	IN	OUT	IN	OUT
0:00						
1:00						
2:00						

3:00						
4:00						
5:00						
6:00	10	0	4	4	4	4
7:00	20	0	4	4	4	4
8:00	10	0	4	4	4	4
9:00	0	0	4	4	4	4
10:00	0	0	4	4	4	4
11:00	0	0	4	4	4	4
12:00	0	0	4	4	4	4
13:00	0	0	4	4	4	4
14:00	0	0	4	4	4	4
15:00	0	0	4	4	4	4
16:00	0	0	2	2	2	2
17:00	0	20	0	0	0	0
18:00	0	20	0	0	0	0
19:00						
20:00						
21:00						
22:00						
23:00						
TOTAL	**40**	**40**	**42**	**42**	**42**	**42**

APPENDIX F

F 1.1 – Driver Code of Conduct

- Driver Code of Conduct -

Drivers Code of Conduct

Safe Driving Policy for the 200 Aldington Road, Kemps Creek.

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.

All vehicle operators leaving the site:

- Drivers are not to turn right when leaving the site, heavy vehicles are not to use Bakers Lane.
- Vehicle are not to turn right at the intersection of Abbotts Road & Mamre Road, this is a left turn only onto Mamre Road.

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. 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.
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- 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 C. Traffic Guidance Scheme(s)

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